



Traffic & Parking Management Plan

Project: Albany Motorsport Park (AMP)
Client: City of Albany
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1. Introduction

1.1. Background

The City of Albany (CoA) has engaged GHD to prepare an Application for Planning Approval for the staged construction of the Albany Motorsport Park (AMP) at Lot 5780 (No. 54) Down Road South, Drome (the Site) (Figure 1, Appendix A). The project Proponent is the Great Southern Motorplex Group Inc. (GSMG).

At full development, the proposed AMP will consist of:

- Sealed, configurable multi-use track (3.5 km long x 12 m wide) for motor car racing, motorcycle racing, drifting, driver training and cycling:
 - Designed to comply with Motorsport Australia Track Operator's Safety Guide [1] and Motorcycling Australia (MA) Track Guidelines [2].
 - To be licensed by Motorsport Australia for Fédération Internationalé de l'Automobile (FIA) Grade 2 and Fédération Internationalé Motocyclisme (FIM) Grade B (i.e. up to second-tier international motor racing).
- A motocross circuit designed and constructed in association with MA guidelines.
- An off-road four-wheel drive (4WD) and all-terrain vehicle (ATV) training area.
- Associated buildings and infrastructure.

Due to the scale and nature of the proposed development, the construction works have been broken down into two key stages which comprise of the following:

- Stage 1 (this Development Application):
 - Stage 1A: Construction of motocross track, 4WD driver training area, all-terrain vehicle (ATV) area and associated infrastructure.
 - Stage 1B: Construction of racetrack and associated infrastructure (subject to funding).
- Future Development: Construction and replacement of final permanent structures to support the function of the motorsports complex (subject to funding). Stage 2 will be addressed as a separate Development Application.



1.2. Appendices

This report includes:

- Construction Traffic Management Plan for the construction of Albany Motorsport Park including earth works, car park construction, utilities installation and pavement construction.
- Event traffic management plan.
- Traffic assessment (GHD)

2. Proposed Development

2.1. Site Location

The site is in the corner of Down Road and Down Road South in Drome WA 5330 as shown in **Figure 1**.



Figure 1: Site Location

2.2. Vehicle Access and Parking Provision

Vehicle entry will be provided on Down Road, exits are provided on Down Road and Down Road South and there is an emergency exit on south east corner of the property. Approximately a total of 250 car parking spaces will be provided on-site on each parking complex (Motocross Precinct and Race Track Precinct). The site layout is shown in **Figure 2**.

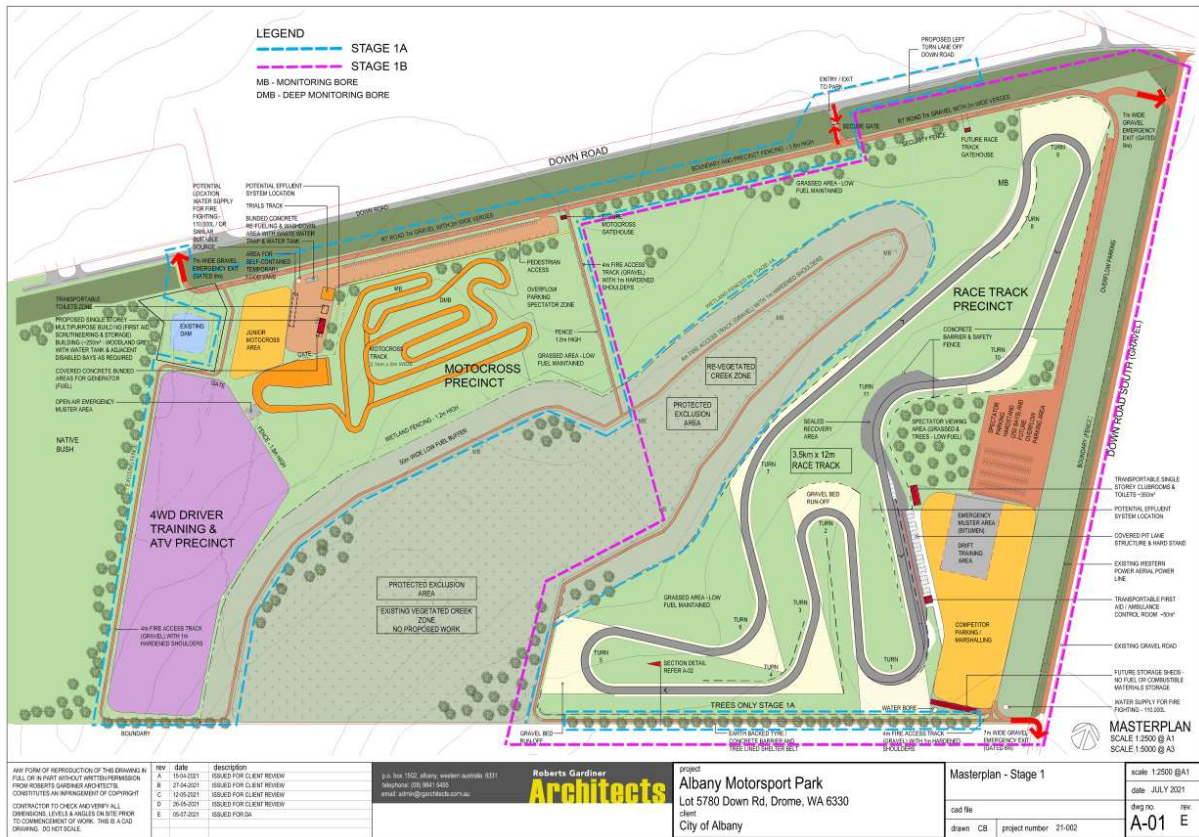


Figure 2: Site Layout



3. Traffic and Parking Assessment

3.1. City of Albany Requirements

The City of Albany Local Planning Scheme No.1 Section 4.8.1 sets out the car parking requirements for various land uses, however this does not include motorsport facilities.

3.2. Existing Road Network

Down Road is a single carriageway road approximately 9 metres wide with one lane in each direction. It is designated as an access road under the Main Roads WA Road information Mapping system, it is under the control of the City of Albany and existing speed limit is 110km/h.

Down Road South is a gravel road approximately 5.5 metres wide. It is designated as a local access road, it is under control of the City of Albany, there is no speed limit on this road. During the site inspection, it is confirmed that the road condition only suitable for speed up to 50km/h.

3.3. RAV network

Down Road forms parts of the RAV network 7 and accommodates vehicles up to 36.5m in length. Down Road accommodates RAV7 vehicles serving the CBH grain storage facility and the wood chipping facility.

3.4. Traffic Data

Traffic data has been sourced from the Main Roads WA web site and the City of Albany.

Location	Average weekday (vpd)	Trucks	Average weekend (vpd)	Trucks
Down Rd (West of Albany Hwy)	844 vpd (2017)	34%	419 vpd (2017)	40%
Albany Highway	4,950 vpd (2017)	20%	3,520 vpd (2017)	16%

The existing high percentage of trucks in Down Road reflects the truck activity associated with the woodchip and CBH facilities.

Woodchip company and CBH facilities will operate during the weekend and public holiday.

3.5. Traffic Assessment from GHD

A traffic assessment has been provided by GHD as a part of Development Application, the assessment assumes 500 spectators/competitors in total. Events with larger numbers will be subject to specific traffic management measures. The indicative use of the venue based on the business plan of Albany Motorsport Park (AMP) is shown in the figures 3 & 4 below:

Use	Level	Frequency	Duration	Entrants	Spectators
Driver training (2WD & 4WD), schools, manufacturer testing		Weekdays	Day	50	0
Car test & tune day	Club	4 week days/ month	Day	30	30
Car speed events	Club	1 weekend / month	Day	100	200 – 500
Car speed events	State	1 weekend / month	Day	100 – 200	200 – 1,000
Car speed events	National	1 weekend / year	Day	200 – 300	2,000 – 5,000
Super cars events	National	1 x 3 day weekend / year	Day	200 – 300	10,000 – 20,000
Bike test & tune day	Club	4 week days / month	Day	50	50
Bike speed events (MRCWA)	Club	1 weekend / month	Day	100	200 – 500
Bike speed events – Champions Ride Day	State	1 weekend / month	Day	100	200 – 1,000
Bike speed events	National	1 weekend / year	Day	200	1,000 – 5,000
Motocross events	Club	3 days / week training 4 single days / month	Day	100 – 200	200 – 400
Motocross events	State	1 weekend / month	Day	200 – 300	500 – 1,000
Cycling events	Club		Day		
Cycling events	State		Day		
Drifting day	Club	2 days / month	Day and Evening	30	30
Drifting day	State	1 weekend / month	Day and Evening	50	200 – 500

Figure 3: indicative event profile 1

Duration of events:

- Typical day is 8:00am – 6:00pm

Based on an overall attendance of 500 spectators, total of 250 vehicles as the assumption of the vehicles generated during the event. The assessment also assumed that 5% (13 vehicles) are heavy vehicles transporting competition vehicles.

Vehicle type	In (vph)	Out (vph)
Light vehicle	237	237
Heavy vehicle	13	13
Total	250	250

The traffic assessment provided from GHD also indicated that there are no capacity issues are therefore anticipated and It is also confirmed that each event will only allow up to 250 vehicles.



3.6. Parking Assessment

It is confirmed with the developer on site that the proposal is to create approximately 250 bays on each Precinct, only 1 precinct will be open for each event. It is assumed that up to 250 bays are required for the event. Therefore, the proposed number of bays are adequate.

If there are events with more than 500 spectators or 250 vehicles, extra measures that shall be considered include:

- Shuttle buses to a satellite parking area
- Overspill parking area
- Open parking bays from the Precinct, increase the parking capacity from 250 bays
- Traffic Management requirement at the intersection of Albany Highway and Down Road
- Coordination with City of Albany and Main Road WA



4. Construction Traffic Management

4.1. Construction Staging

Albany Motorsport Park will be constructed within 2 stages.

4.1.1. Stage 1: Motocross Precinct

Stage 1 Motocross Precinct of the entry and exit will be completed under verge works scenario with various speed reduction to on Down Road due to the Oversize vehicles and Down Road is a high-speed road. Existing speed will be reinstated once the entry and exit are completed, and symbolic truck signs will be installed for the internal works.

4.1.2. Stage 2: Race Track Precinct

Stage 2 Race Track Precinct construction will be progressed while Motocross Precinct is in operation. Down Road South exits will be constructed for construction vehicles use. Temporary traffic management with accredited Traffic controllers will be implemented for tie-in works on Down Road South.

Event Traffic Management will be in place on Motocross Precinct and there are no construction activities during the event, all signage relates to roadworks will be removed or covered.

A Traffic Management Plan (TMP) for the construction works is attached in Appendix A.



5. Parking Management Plan

5.1. Motocross Precinct On-site Parking

Based on the Indicative event profile for AMP, Motocross events will generate up to 250 vehicles during a day event between 8:00am to 6:00pm. As the event will generate up to 250 extra vehicles within an hour (in and out) on Down Road, it is considered to reduce the speed temporarily at Down Road on the approaching and past the entry and exit of the Motocross Precinct the duration of the event, due to queuing on Down Road may occur and the chance of potential rear end crash will increase. Traffic Wardens will be stationed to direct the event traffic after the entry, and event traffic management plan (TMP) for Motocross Precinct is detailed in the Appendix B. The construction of the Race Track Precinct will be postponed during the event.

5.2. Race Track Precinct On-site Parking

Based on the Indicative event profile for AMP, Racetrack events will generate up to 250 vehicles during the event. Event traffic will enter from Down Road and Exit to Down Road South, detail of traffic management for the event is attached in Appendix B. Temporary speed reduction will be imposed on Down Road on the approach and past the event site, Traffic Wardens will be stationed at the entry to the car park and exit location to direct event traffic. Temporary traffic management is detailed in the Traffic Guidance Schemes of event traffic management plan in Appendix B.



6. Implementation and Communication

Event organiser shall liaise with City of Albany to assess the event and any potential risks associated. Following the event approval guidelines and event application shall be submitted 60 days before the proposed date of the event. The event application shall include:

- Running sheet (including bump-in/bump-out and event timings)
- Public liability insurance
- Site plan
- List of approved food vendors
- Communication plan
- Traffic management plan for event
- Emergency management plan
- Risk management plan
- Evacuation plan

7. Conclusion

GHD has engaged Shawmac to prepare Traffic and Parking Management Plan based on the Traffic Assessment provided in Appendix C. In formulating the plan, various aspects that had to be considered include:

- City of Albany Town Planning Scheme
- Traffic Assessment provided by GHD
- Master Plan of the Albany Motorsport Park
- Site inspection & discussion with developer
- City of Albany Event Guideline

The following traffic and parking management measures for construction and operation of the site, including consideration of peak parking and traffic management during larger and special events have been recommended below:

- The implement temporary traffic management for:
 - 1) Construction of Albany Motorsport Park (AMP) attached in Appendix A
 - 2) Events attached in Appendix B
- Temporary speed reduction to be imposed during the construction and events.
- Symbolic truck signs shall be installed for construction vehicles entering and exiting Down Road and Down Road South.
- The traffic generated by the event has no capacity issues as per the traffic assessment attached in Appendix C, both Motocross and Race Track Precinct will not be operational at the same time.
- Liaise with stakeholders (eg. City of Albany) prior to the commencement of the construction or event.
- For events with more than 500 spectators, extra measures to be considered include:
 - 1) Shuttle buses to a satellite parking area
 - 2) Overspill parking area
 - 3) Open parking bays from the Precinct, increase the parking capacity from 250 bays
 - 4) Traffic Management requirements at the intersection of Albany Highway and Down Road
 - 5) Coordination with Main Road WA is required.



Appendix A – Construction Traffic Management Plan



WORKS ON ROADS TRAFFIC MANAGEMENT PLAN

ALBANY MOTORSPORT PARK DEVELOPMENT
PREPARED FOR

GHD



I, YUYANG KE (AUS AWTM-19-6370-02), that I have designed this Traffic Management Plan following a site inspection on 18/03/2021 The Traffic Management Plan has been prepared, subject to the variations approved, in accordance with the Main Roads Traffic Management for Works on Roads Code of Practice, Austroads Guide to Temporary Traffic Management and AS 1742.3 2019.

	Name/Company	Accreditation Details	Date	Signature
TMP designed by:	ANTHONY ANASTAS Shawmac Consulting Civil and Traffic Engineers	AUS AWTM-20-4573-02	14/04/2021	
TMP Reviewed by:	YUYANG KE Shawmac Consulting Civil and Traffic Engineers	AUS AWTM-19-6370-02	14/04/2021	
RTM Reviewed and Endorsed by:				
Compliance Audit to be undertaken by:				
Road Authority Review by:				
Road Authority Authorisation:	Road authority authorisation of the implementation of traffic signs and devices is given for Traffic Management Plan No. 2103019			
	Signed By:		Date:	
	Signature:		Position:	

TMP No.	2103019	Revision No.	1	Date	14/04/2021
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Glossary

Table 1: Glossary

Acronym	Definition
AGTMM	Austroroads Guide to Temporary Traffic Management
AS	Australian Standard
AS/NZS	Australian and New Zealand Standard
AWTM	Advanced Worksite Traffic Management / Manager
CoP	Traffic Management for Works on Roads Code of Practice (MRWA)
MRWA	Main Roads Western Australia
OS&H	Occupational Safety and Health
RTM	Roadworks Traffic Manager (accredited by MRWA)
SRSA	Senior Road Safety Auditor
TGS	Traffic Guidance Schemes
TMP	Traffic Management Plan
TCP	Traffic Control Plan



1. Introduction

1.1. Purpose and Scope

This Traffic Management Plan (TMP) outlines the traffic control and traffic management procedures to be implemented by the Project Manager and Project Contractors to manage potential hazards associated with the traffic environment during the project.

The proposed project is for the development of a multipurpose motorsport park in Albany on Lot 5780 Down Road, Drome.

1.2. Objectives and Strategies

The objectives of the Traffic Management Plan is to ensure:

- The safety of the road workers.
- All road users, including vulnerable road users, are safely guided around, through or past the work site.
- The performance of the road network is not unduly impacted and the disruption and inconvenience to all road users are minimised for the duration of the works.
- Impacts on users of the road reserve and adjacent properties and facilities are minimised.

In an effort to meet these objectives the Traffic Management Plan will incorporate the following strategies:

- Providing a sufficient number of traffic lanes to accommodate vehicle volumes.
- Ensuring delays are minimised.
- Ensuring all road users are managed including motorists, pedestrians, cyclists, people with disabilities and people using public transport.
- Ensuring work activities are carried out sequentially to minimise adverse impacts.
- Provision will be made for works personnel to enter the work area in a safe manner in accordance with safety procedures.
- All entry and exit movements to and from traffic streams shall be in accordance with the requirements of safe working practices.

2. Project Overview

2.1. Project Location

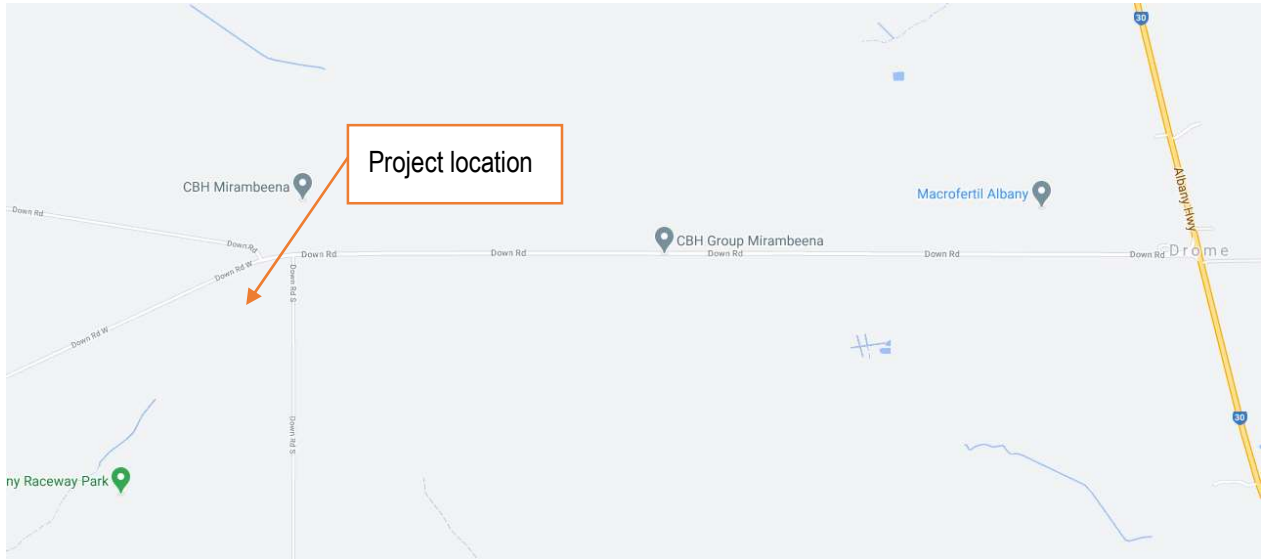


Figure 1: Location of Works

2.2. Project Details and Site Constraints/Impacts

Table 2: Project Details and Site Constraints/Impacts

Item	Description
Project Title:	Albany Motorsport Park Development
Location:	Lot 5780 Down Road, Drome, WA 6330
Road Classification & Existing Speed Limit:	Down Road – Access Road: 110km/h Down Road South - local access road (Gravel):
Road Authority:	City of Albany
Local Government:	City of Albany
Prime Contractor:	GHD
Scope of Works:	Construction of Albany Motorsport Park including earth works, car park construction, utilities installation and pavement construction.
Staging of Works:	Stage 1: western development construction Stage 2: eastern development construction
Project Date:	TBA
Hours/Days of Work:	9am to 7pm / 7 days a week
Duration of Works	8 months
Other Constraints:	Ongoing events during the construction of stage 2
Concurrent/Adjacent Works	N/A



or Projects	
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2.3. Existing Traffic and Road Environment

Item	Description
Traffic Volume and Composition	Down Road: 844 vpd(2017) Down Road South: no data
Existing Road Configuration	Down Road: single carriageway with one lane in each direction approximately 9m wide. Down Road South: Gravel approximately 5m wide.
Existing Pedestrian / Cyclists Facilities	N/A

2.4. Overview of Proposed Temporary Traffic Management

Item	Description
Temporary Traffic Management Descriptions:	Verge works with various speed reductions depending on the clearance between edge of traffic and work site is required.
Speed Zone Dates and Times	40km/h to 80km/h speed reduction during work shift and 80km/h for after care Dates: TBC
Lane Closures Dates and Times	N/A
Road Closures Dates and Times	N/A
Signal Modifications Description	N/A
Proposed Lane Widths	Minimum 3.2m lane width is required.
Road Safety Barrier	N/A

2.5. Project Representatives

Table 3: Project Representatives

Position	Name	Contact Details
Road Authority Representative	City of Albany	Phone: (08) 6820 3000 Email: staff@albany.wa.gov.au Post: PO Box 484, ALBANY, WA 6331
Local Government	City of Albany	Phone: (08) 6820 3000 Email: staff@albany.wa.gov.au Post: PO Box 484, ALBANY, WA 6331
Project Manager / Prime Contractor	TBC	
Site Supervisor/Manager	TBC	



TMP Design	Yuyang Ke Shawmac Pty Ltd	Email: yyke@shawmac.com.au mob: 0421591428
TMP Implementation	TBC	

GHD have engaged Shawmac Pty Ltd to prepare this Traffic Management Plan and associated controls for the works.

The TMP will be implemented by TBC.



3. Risk Management

The following details the preliminary assessment of site hazards likely to be encountered, the level of risk associated with each and the control proposed. Note that the risk level is the level of assessed risk without the controls in place. The controls listed have been determined as being appropriate in reducing the risk to a level that is acceptable. The hierarchy of control has been utilised to ensure that the highest practicable level of protection and safety is selected:

- Elimination
- Substitution
- Isolation
- Engineering
- Administration
- Personal Protection Equipment

In evaluating the options, a key consideration is whether the option takes traffic around, through or past the worksite.

3.1. Risk Classification Tables

3.1.1. QUALITATIVE MEASURES OF CONSEQUENCE OR IMPACT

Table 4: Risk Classification Damage/Impact

Level	Consequence	Description
1	Insignificant	<ul style="list-style-type: none"> • Mid-block hourly traffic flow per lane is equal to or less than the allowable lane capacity detailed in AGTTM. No impact to the performance of the network. • Affected intersection leg operates at a Level of Service (LoS) of A or B. • No property damage.
2	Minor	<ul style="list-style-type: none"> • Mid-block hourly traffic flow per lane is greater than the allowable road capacity and less than 110% of the allowable road capacity as detailed in AGTTM. Minor impact to the performance of the network. • Intersection performance operates at a Level of Service (LoS) of C. • Minor property damage.
3	Moderate	<ul style="list-style-type: none"> • Midblock hourly traffic flow per lane is equal to and greater than 110% and less than 135% of allowable road capacity as detailed in AGTTM. Moderate impact to the performance of the network. • Intersection performance operates at a Level of Service (LoS) of D. • Moderate property damage.
4	Major	<ul style="list-style-type: none"> • Midblock hourly traffic flow per lane is equal to and greater than 135% and less than 170% of allowable road capacity as detailed in AGTTM. Major impact to the performance of the network. • Intersection performance operates at a Level of Service (LoS) of E. • Major property damage.
5	Catastrophic	<ul style="list-style-type: none"> • Midblock hourly traffic flow per lane is equal to and greater than 170% of allowable road capacity as detailed in AGTTM. Unacceptable impact to the performance of the network. • Intersection performance operates at a Level of Service (LoS) of F. • Total property damage

3.1.2. OSH QUALITATIVE MEASURES OF CONSEQUENCE OR IMPACT

Table 5: Risk Classification Damage OSH



Level	Consequence	Description
1	Insignificant	No treatment required.
2	Minor	First aid treatment required.
3	Moderate	Medical treatment required or Lost Time Injury.
4	Major	Single fatality or major injuries or severe permanent disablement.
5	Catastrophic	Multiple fatalities.

3.1.3. QUALITATIVE MEASURES OF LIKELIHOOD

Table 6: Risk Classification Rarity

Level	Likelihood	Description
A	Almost certain	The event or hazard: <ul style="list-style-type: none"> is expected to occur in most circumstances, will probably occur with a frequency more than 10 times per year.
B	Likely	The event or hazard: <ul style="list-style-type: none"> will probably occur in most circumstances, will probably occur with a frequency of between 1 and 10 times per year.
C	Possible	The event or hazard: <ul style="list-style-type: none"> might occur at some time, will probably occur with a frequency of 0.1 to 1 times per year (i.e. once in 1 to 10 years).
D	Unlikely	The event or hazard: <ul style="list-style-type: none"> could occur at some time, will probably occur with a frequency of 0.02 to 0.1 times per year (i.e. once in 10 to 50 years).
E	Rare	The event or hazard: <ul style="list-style-type: none"> may occur only in exceptional circumstances, will probably occur with a frequency of less than 0.02 times per year (i.e. less than once in 50 years).

IMPORTANT NOTE: The likelihood of an event or hazard occurring shall first be assessed over the duration of the activity (i.e. “period of exposure”). For risk assessment purposes the assessed likelihood shall then be proportioned for a “period of exposure” of one year.

Example: An activity has a duration of 6 weeks (i.e. “period of exposure” = 6 weeks). The event or hazard being considered is assessed as likely to occur once every 20 times the activity occurs (i.e. likelihood or frequency = 1 event/20 times activity occurs = 0.05 times per activity). Assessed annual likelihood or frequency = 0.05 times per activity x 52 weeks/6 weeks = 0.4 times per year. Assessed likelihood = Possible.

3.1.4. QUALITATIVE RISK ANALYSIS MATRIX – RISK RATING

Table 7: Risk Classification Severity

Likelihood	Consequences				
	Insignificant 1	Minor 2	Moderate 3	Major 4	Catastrophic 5
A (almost certain.)	Low 5	High 10	High 15	Very High 20	Very High 25



B (Likely)	Low 4	Medium 8	High 12	Very High 16	Very High 20
C (Possible)	Low 3	Low 6	Medium 9	High 12	High 15
D (Unlikely)	Low 2	Low 4	Low 6	Medium 8	High 10
E (Rare)	Low 1	Low 2	Low 3	Low 4	Medium 7

3.1.5. MANAGEMENT APPROACH FOR RESIDUAL RISK RATING

Table: 8: Residual Risk Rating

Residual Risk Rating	Required Treatment
Very High	Unacceptable risk. HOLD POINT. Work cannot proceed until risk has been reduced.
High	High priority, OSH MR and Roadworks Traffic Manager (RTM) must review the risk assessment and approve the treatment and endorse the TGS prior to its implementation.
Medium	Medium Risk, standard traffic control and work practices subject to review by accredited AWTM personnel prior to implementation.
Low	Managed in accordance with the approved management procedures and traffic control practices.



3.2. Risk Register

Table 9: Risk Register

Item	Risk Event	Consequence	Pre - treatment Risk			Treatment	Residual Risk		
			L	C	RR		L	C	RR
3.2.1 Environmental									
3.2.1.1	Sun glare causing decreased visibility of traffic control delineation and signage for motorists resulting in serious injury or fatality.	Serious injury or fatality.	C	4	H12	Where sun glare is identified as adversely affecting a driver's ability to sight signage and / or traffic control devices, sign locations may need to be adjusted and additional delineation and/or traffic control devices provided to address the risk from glare. Where traffic control is adversely affected by glare at sunset and sunrise, traffic controllers may need to assist in maintaining low traffic speeds. All changes are to be noted in the daily diary.	D	4	M8
3.2.1.2	Headlight glare from night works causing decreased visibility of traffic control delineation and signage for motorists resulting in serious injury or fatality.	Serious injury or fatality.	C	3	M9	Traffic control personnel and site supervisor to conduct site drive assessments of temporarily installed signage and delineation to ensure devices are visible for all motorists. Where traffic control is adversely affected by head light glare from night works, traffic controllers may move or angle devices. All changes are to be noted in the daily diary.	D	3	L6
3.2.1.3	Reduced motorist's visibility of worksite due to night works causing an increase of interactions between workers and live traffic resulting in serious injury or fatality.	Serious injury or fatality.	C	4	H12	Traffic control and workers to wear High Visibility Retroreflective Vests at all time and to use night work batons. All traffic controller signs to be Class 1 Retro-reflective material. Temporary speed zones to be implemented where required for advanced warning of the worksite. Contractor to install temporary lighting towers through poorly illuminated sections of worksite if required.	D	4	M8
3.2.1.4	Inclement weather causing hazardous environments through the worksite or	Serious injury or fatality.	C	4	H12	Where adverse weather conditions are encountered during the works, the following may	D	4	M8



Item	Risk Event	Consequence	Pre - treatment Risk			Treatment	Residual Risk		
			L	C	RR		L	C	RR
	reduced visibility of implemented traffic control resulting in serious injury or fatality.					be implemented: 1. Signage and tapers extended by 25%. 2. 'Slippery When Wet' signs may be implemented. 3. Where the road becomes impassable work may cease and traffic control implemented. Any adjustments to the plan shall be risk assessed and approved by someone holding a WTM or AWTM accreditation.			
3.2.1.5	Crests and curves causing reduced visibility of the worksite and implemented traffic control resulting in serious injury or fatality.	Serious injury or fatality.	C	4	H12	Sign locations can be staggered to assist driver's visibility, in accordance with Australian Standards and under the supervision of an accredited AWTM. All signs shall be regularly inspected and re-positioned as required to reduce the effects of shadows. All changes shall be recorded in the daily diary.	D	4	M8
3.2.1.6	Vegetation causing reduced visibility of the worksite and implemented traffic control resulting in serious injury or fatality.	Serious injury or fatality.	C	4	H12	Where vegetation impacts on the effectiveness of the traffic management, signage may be extended by 25% or reduced by 10% in order to increase visibility. Vegetation may be pruned to increase visibility as required and approved by LGA. All signage adjustments will be recorded within the daily diary.	D	4	M8
3.2.1.7	Temporary lighting installed adjacent to residential properties causing adverse environmental impacts for locals resulting in adverse public reaction.	Adverse public reaction.	C	3	M9	Lights to be positioned where illumination doesn't adversely affect residents. Temporary lights to be used only as required to light the worksite and temporary delineation.	D	3	L6
3.2.2 Temporary Speed Zones									
3.2.2.1	Traffic speed on affected routes in traffic lanes adjacent to the worksite creating hazardous worksites and unsafe worksite access.	Potential injury or fatality to road users, project personnel or sub-contractors.	C	4	H12	Introduction of temporary speed zones will be implemented where required to reduce risk to motorists, workers and plant. Temporary speed zones and adequate delineation will be implemented as per the Traffic Guidance	D	4	M8



Item	Risk Event	Consequence	Pre - treatment Risk			Treatment	Residual Risk		
			L	C	RR		L	C	RR
						Schemes and in accordance with AS 1742.3 and MRWA CoP.			
3.2.2.2	Traffic not adhering to proposed temporary speed zones causing an increase potential for conflicts between workers and motorists resulting in serious injury or fatality.	Serious injury or fatality.	C	4	H12	Repeater signage and VMS boards to be implemented through the worksite as required. Speed zones should follow the minimum and maximum lengths provided in AS1742.3 and MRWA CoP.	D	4	M8
3.2.3 Excavations									
3.2.3.1	Excavations associated with the works being inadequately protected causing an increase of property damage resulting in adverse public reaction and serious injury.	Serious injury and adverse public reaction.	B	3	H12	Delineation and devices to be provided as per the Traffic Guidance Schemes and in accordance with AGTTM and MRWA CoP. Where standard delineation cannot adequately protect the work site, close delineation or safety barrier may be required. Edge clearances and protection to be installed as per Table 6.1, Page 101 of AGTTM – Part 3.	C	3	M9
3.2.4 Traffic Control/Construction Plant & Workers/Traffic Management Design									
3.2.4.1	Incorrect implementation of temporary signage and linemarkings causing an increase of interactions between traffic control and live traffic resulting in serious injury or fatality.	Serious injury or fatality.	C	4	H12	Before work commences, signs and devices at approaches to the work area shall be erected in accordance with the adopted TGS, in the following order: <ol style="list-style-type: none"> 1. Advanced warning signs. 2. All intermediate advanced warning and regulatory signs and devices required in advance of the taper or start of the work area. 3. All delineating devices required to form a taper including flashing arrow signs or temporary hazard markers where required. 4. Delineation past the work area or into a side track. 5. Other warning signs or regulatory signs. Delineation devices such as cones and bollards	D	4	M8



Item	Risk Event	Consequence	Pre - treatment Risk			Treatment	Residual Risk		
			L	C	RR		L	C	RR
						should be placed in the same sequence, i.e. those furthest in advance of the work placed first.			
3.2.4.2	Incorrect design of temporary signage and linemarkings causing an increase of speed and errant vehicles through the worksite resulting in serious injury or fatality.	Serious injury and fatality.	C	4	H12	Traffic Management Plan and associated Traffic Guidance Schemes to be designed and endorsed by suitably accredited AWTM and RTM as required for the proposed works. Plans to be reviewed and approved by relevant LGA and road authorities prior to the implementation of the works.	D	4	M8
3.2.4.3	The interaction of work personnel with through traffic may causing an increase of conflicts resulting in serious injury or fatality.	Serious injury or fatality	C	4	H12	Traffic control and delineation to be installed as per the Traffic Guidance Schemes in accordance with AS 1742.3 and MRWA CoP. Edge clearance spacing to be provided between live traffic and workers per the posted or implemented speed zones. Temporary speed zones, lane closures, road closures or reversible flow may be provided to maintain edge clearances. A TMA may be provided for where workers are within 1.2m of live traffic to protect them from oncoming vehicles. TMA's to be installed 20m prior to the work area and 40m where site entrances are required. Workers to be within 100m of TMA for protection to be affective. Daily toolbox meetings to ensure that workers are educated on the dangers of working around live traffic.	D	4	M8
3.2.4.4	Construction traffic entering and leaving the construction site causing an increase of rear end crashes through the worksite resulting in serious injury.	Serious injury.	B	3	H12	Site entry and exit points will be provided for construction traffic at strategic locations. Vehicles shall: <ol style="list-style-type: none"> 1. Decelerate slowly and signal their intention by indicator to leave the traffic stream; 2. Activate the vehicle's rotating yellow lamp, where fitted, once a speed of 20 km/h. has been reached and at least 50m prior to the 	C	3	M9



Item	Risk Event	Consequence	Pre - treatment Risk			Treatment	Residual Risk		
			L	C	RR		L	C	RR
						exit location. 3. Switch on the vehicle hazard lights once the vehicle is stationary. 4. Where risks associated with unassisted exit or entry to or from the traffic stream are high, Traffic Controllers should be used to assist entry and exit movements. Spotters may be used to assist drivers enter the traffic stream. Restrictions may be put in place to restrict truck movements entering traffic flows during periods of high traffic flows from site			
3.2.4.5	Parking of construction plant causing an increase of crashes through the worksite resulting in serious injury or fatality.	Serious injury or fatality.	C	4	H12	Work practices will be developed to outline provisions for: 1. Short term parking of work plant. 2. Long term parking of work plant. 3. Short term parking for workers and LV's. Construction access have been shown on the Traffic Guidance Schemes.	D	4	M8
3.2.4.6	Workmen may be hit by vehicles during the setting out of traffic management control devices resulting in serious injury or fatality.	Serious injury or fatality.	C	4	H12	No work shall commence until the approved traffic management has been implemented. Traffic management to be setup prior to arrival of workers to site and taken down after they leave to avoid excessive congestion.	D	4	M8
3.2.5 Lane Closures (N/A)									
3.2.6 Reversible Flow/Stop Control/Contra-flow N/A									
3.2.7 Temporary/Existing Barrier									
3.2.8 Temporary Linemarking/Ulimate Design/Existing Road Environment									
3.2.8.1	A road user may misread the proposed temporary alignment causing through	Serious injury or fatality.	C	4	H12	Traffic planning requires traffic controls to be installed to direct traffic around the work site and	D	4	M8



Item	Risk Event	Consequence	Pre - treatment Risk			Treatment	Residual Risk		
			L	C	RR		L	C	RR
	vehicles colliding with work personnel or work vehicles resulting in serious injury or fatality.					a reduction in the speed zone of the carriageways approaching and passing the works. Temporary alignments to be installed as per the TGS and in accordance with AS 1742.3 and MRWA CoP. Temporary controls, advanced warning and directional signage to be installed as per the TGS and in accordance with the requirements of AS 1742.3 and MRWA CoP. All lane closures to use a Flashing Arrow Boards at end of taper as per TGSs. Traffic control personnel shall conduct a drive through assessment of devices to evaluate the effectiveness following initial opening, any changes to be recorded in the daily diary. Temporary alignment to be designed to meet speed requirements.			
3.2.9 Temporary/Existing Signage and Structures									
3.2.9.1	Existing signage and structures causing reduced visibility of the worksite and temporary traffic control resulting in serious injury or fatality.	Serious injury or fatality.	C	4	H12	All existing signage that is contradictory to the temporary signage implemented in the TGS's are to be covered with opaque material for the duration of the works. Regular drive throughs should ensure the integrity of the worksite and all traffic management. Where signs cannot be covered and conflict with the temporary signage, it will be removed. Temporary devices may be extended 25% to accommodate for road side structures, all changes to the signage will be recorded in the daily diary.	D	4	M8
3.2.9.2	Defective temporary signage causing inadequate advanced warning of proposed works resulting in serious injury or fatality.	Serious injury or fatality.	C	4	H12	Regular site inspections of signs to be conducted by Traffic Controllers and site supervisor to ensure integrity of proposed signage. All signs to be made of retroreflective material to ensure signs can be seen during night works.	D	4	M8
3.2.10 Road Closures									



Item	Risk Event	Consequence	Pre - treatment Risk			Treatment	Residual Risk		
			L	C	RR		L	C	RR
3.2.11 Heavy Vehicles Network									
3.2.11.1	Restrictions placed on traffic lane widths and corner geometries by temporary traffic management impacting heavy haulage traffic routes resulting in adverse public reaction and property damage.	Property damage and adverse public reaction.	C	3	M9	Details and impacts to the heavy haulage route to be communicated to MRWA HVO prior to the implementation of any works. Where corner geometry or lane widths cannot accommodate heavy vehicles, detours or provisions to escort trucks through site may be provided. Where large or oversized vehicles are moving through the worksite, traffic controllers shall be used to ensure sufficient carriageway width is provided and any workers adjacent to the traffic lanes or within a hazardous area are instructed to move clear of the traffic. Temporary alignment swept paths to be checks. Existing RAV network to be accommodated where possible.	D	3	L6
3.2.12 Public Transport Authority (N/A)									
3.2.13 Emergency Services/Emergency Arrangements and Contingencies									
3.2.13.1	Restrictions and delays associated with the traffic control causing a failure to respond for emergency services resulting in an increase severity in emergency situations.	Failure to respond to emergency situations.	C	4	H12	Pre-communication to be given to all emergency services prior to the implementation of any works in the form of the Notification of Roadworks. Details to be provided for any proposed detours, predicted increases in congestion and any works that may increase delays to the emergency network. Where safe, workers and Traffic Control to respond to emergency services to facilitate an unhindered passage through or around the worksite.	D	4	M8
3.2.13.2	Dangerous goods, damage to services or failure of services causing restricted access through the worksite resulting in adverse	Adverse public reaction.	B	3	H12	Should any incident arise involving vehicles transporting dangerous goods, damage or failure of services; all work shall cease immediately, machinery and vehicles turned off	C	3	M9



Item	Risk Event	Consequence	Pre - treatment Risk			Treatment	Residual Risk		
			L	C	RR		L	C	RR
	public reaction.					and the area cleared of personnel as soon as possible. Traffic Controllers (and other personnel if necessary) shall be deployed immediately to ensure no traffic or other road users approach the area. All site personnel shall be briefed on evacuation and control procedures.			
3.2.14 Public Interactions and Impacts									
3.2.14.1	Temporary traffic management devices restricting access to local properties and commercial premises resulting in an adverse public reaction.	Adverse public reaction	C	3	M9	Local and commercial access to be maintained where possible. Pre-communication to be provided where adverse impacts may restrict access with the associated works. Provisions including; temporary tracks, temporary closures and local access may be provided to maintain access.	D	3	L6
3.2.15 Pedestrians and Cyclists									
3.2.16 Variations to the Standards									



4. Traffic Management Planning and Assessment

4.1. Traffic Assessment and Analysis

4.1.1. Traffic and Speed data

4.1.1.1 Summarised Traffic Counts

A summary of recent traffic data is provided below:

Table 10: Summarised Traffic Volumes

Location	Average weekday (vpd)	Trucks	Average weekend (vpd)	Trucks
Down Road	844 vpd (2017)	34%	419 vpd (2017)	40%
Albany Highway	4,950 vpd (2017)	20%	3,520 vpd (2017)	16%

Volumes used in the above summary can be found in *Appendix D – Volumes*.

4.1.2. Traffic Flow Analysis

General Comments

Volumes used in this report are based on average traffic figures derived from historical counts. AGTTM - Part 2, Section 3.2.3 (refer to Table 3.1) indicates that the mid-block capacity of multi-lane roadways is 1,000 vehicles per lane per hour (vpl/ph) and 500 vehicles per hour within 200m of an intersection for each lane. These design lane capacities have been used when analysing the effects of associated with the works. Where a departure from the AGTTM regarding lane capacities is required for the works to proceed a variation form will be filled out and attached to the close of this document.

Due to expected traffic volumes (see above) it is anticipated there will only be minor delays provided the Traffic Management setup follows the instructions set out in this document.

Traffic flow should be maintained wherever possible. Traffic volumes and movements will be analysed against the requirements detailed in AGTTM - Part 2, Section 3.2.3 (refer to Table 3.1) and Section 3.3.4 (refer to table 3.4).and MRWA CoP risk tables (see section 6) to ensure levels of service are acceptable to the Road Authority. The works are expected to have very minor impacts on the impacted roads.

4.1.2.1 Traffic Impacts and Assessment:

The impact will be minor as all of the works will be completed within the verge with various speed reduction and reduced lane width on Down Road.

4.1.3. Temporary Speed Zones

A worksite speed limit of 40km/h, 60km/h and 80km/h will be implemented at Down Road due to for the property access construction.



After work hours the posted speed will be 80km/h and the road will be left clean and free of debris.

4.1.4. Existing Traffic Signals

N/A

4.1.5. Impact to Adjoining Network

There is no impact to adjoining network during the construction.

4.1.5.1 Road Closure Traffic Distribution

N/A

4.1.6. End of Queue Treatment

N/A

4.1.7. Temporary Traffic Signals

N/A

4.2. Road Users

4.2.1. Pedestrians

There are no pedestrian facilities.

4.2.2. Cyclists

There are no cyclists' facilities.

4.2.3. Public Transport

There are no public transport facilities.

4.2.4. Heavy and Oversized Vehicles

There are no impacts to the heavy and oversized vehicles.

4.2.5. Existing Parking Facilities

There are no impacts to existing parking facilities.

4.2.6. Access to Adjoining Properties/Business

There are no impacts to adjoining properties.

4.2.7. Rail Crossings

There are no impacts to railway crossings.

4.2.8. School Crossings

There are no school crossings.



4.2.9. Special Events and Other Works

There are no special event and other works.

4.2.10. Emergency Vehicle Access

Emergency vehicle access will be maintained for the duration of the works.

4.2.11. Night Work Provisions

There is no provision for night shift works.

4.2.12. Road Safety Barriers

N/A

4.3. Consultation and Communication / Notification

Contractor to liaise with stakeholders for public consultation and communication for the duration of the work shift.

4.3.1. Other Agencies

All relevant authorities to be notified prior to the commencement of any works via; email, phone or Notification of Roadworks. This includes: City of Albany, Main Roads Western Australia (MRWA), MRWA Traffic Operations Centre, MRWA Heavy Vehicle Services, Public Transport Authority.

Emergency services to be notified prior to the commencement of any works via the Notification of Roadworks.

4.3.2. Public

The public shall be notified of the works and traffic management arrangements which will affect journey times via:

- Notice to motorists in the weekend West Australian placed two weeks in advanced, one week in advance and at the commencement of works;
- Letter drop to all residents and businesses within the traffic control zone one week ahead of the scheduled works;
- VMS boards during the works; and
- Significant works may require radio advertising.



5. Site Assessment

5.1. Provision to Address Environmental Conditions

5.1.1. Adverse Weather

Weather is not expected to adversely impact on the effectiveness of the traffic control detailed on the attached TGS's. Notwithstanding this, should adverse weather conditions be encountered during the works, the following contingency plans should be activated. Note: any adjustments to the plan shall be risk assessed and approved by someone holding a WTM or AWTM accreditation. Major changes will require road authority approval.

5.1.1.1 Rain

In the event of rain, an on-site assessment shall be made and sign spacing and tapers may be extended by 25% to account for increased stopping distances. Slippery (T3-3) signs may be placed as required and all changes shall be recorded in the daily diary.

If rain occurs, Traffic Management Personnel shall inspect the site and where signage and / or devices are not clearly visible, signage may need to be adjusted to improve visibility or if necessary, provide additional signage and delineation. Where stopping distances are adversely affected by wet surfaces, spacing between signs may need to be adjusted to provide increased reaction time for drives. In cases where it is determined that the rain is so heavy that the risk is considered unacceptable, all work shall cease until rain has cleared. All changes shall be noted in the daily diary.

5.1.1.2 Floods

Should works be affected by flooding to the extent that the worksite becomes impassable or risk is considered unacceptable, all work shall cease immediately and Traffic Controllers (and other personnel if necessary) shall be deployed immediately to close the site and direct traffic around the flooded area (under the direction of the project manager or traffic manager). Emergency services and the Road Authority shall be notified immediately and Traffic Controllers shall remain onsite until emergency services and the Road Authority personnel arrive and take control of the site.

5.1.1.3 Other Adverse Weather (strong winds, thunder storms etc.)

Should strong winds or thunder storms occur, all signs are to be weighted down to prevent blowing over or debris entering the roadway causing hazards for motorists. Periodically site inspections to be conducted during storms to ensure integrity of all Traffic Management devices.

5.1.2. Sun Glare

Where sun glare is identified as adversely affecting a driver's ability to sight signage and / or traffic control devices, sign locations may need to be adjusted and additional delineation and/or traffic control devices provided to address the risk from glare. Additionally, in the event that traffic control is adversely affected by glare at sunset and sunrise,



traffic controllers may need to assist in maintaining low traffic speeds.

All changes are to be noted in the daily diary.

5.1.3. Fog/Dust/Smoke

Where fog, dust or smoke is identified as adversely affecting a driver's ability to sight signage and / or traffic control devices, sign locations may need to be adjusted and additional delineation and/or traffic control devices provided to address the risk. All changes are to be noted in the daily diary.

Should works be affected by fog, dust or smoke to the extent that risk is considered unacceptable, all work shall cease immediately and Traffic Controllers (and other personnel if necessary) shall be deployed immediately to close the site.

5.1.4. Road Geometry, Terrain, Vegetation and Structures

5.1.4.1 Road Geometry

There is a curve on the approaching to the project site on Down Road towards Down Road south and straight after Down Road south.

Sign locations can be staggered to assist driver's visibility, in accordance with Australian Standards and under the supervision of an accredited AWTM. All signs shall be regularly inspected and re-positioned as required to reduce the effects of shadows. All changes shall be recorded in the daily diary.

5.1.4.2 Terrain

The vertical geometry through the site is flat.

Sign locations can be staggered to assist driver's visibility, in accordance with Australian Standards and under the supervision of an accredited AWTM. All signs shall be regularly inspected and re-positioned as required to reduce the effects of shadows. All changes shall be recorded in the daily diary.

5.1.4.3 Vegetation

Where vegetation impacts on the effectiveness of the traffic management, signage may be extended by 25% or reduced by 10% in order to increase visibility. Where this occurs, it should be recorded within the daily diary.

5.1.4.4 Structures

Where structures impede on the temporary signage it should be moved to accommodate under the supervision of an accredited AWTM and recorded in the daily diary.

5.2. Existing Traffic and Adverting Signs

All existing signage that is contradictory to the temporary signage implemented in the TGS's are to be covered with opaque material for the duration of the works. Regular drive throughs should ensure the integrity of the worksite and all traffic management. Where signs cannot be covered and conflict with the temporary signage, it



is to be removed.



6. Safety Plan

6.1. Occupational Safety and Health

All persons and organisations undertaking these works or using the roadwork site have a duty of care under statute and common law to themselves, their employees and all site users, lawfully using the site, to take all reasonable measures to prevent accident or injury.

This TMP forms part of the overall project Safety Management Plan, and provides details on how all road users considered likely to pass through, past, or around the worksite will be safely and efficiently managed for the full duration of the site occupancy and works.

6.2. Roles and Responsibilities

6.2.1. Responsibilities

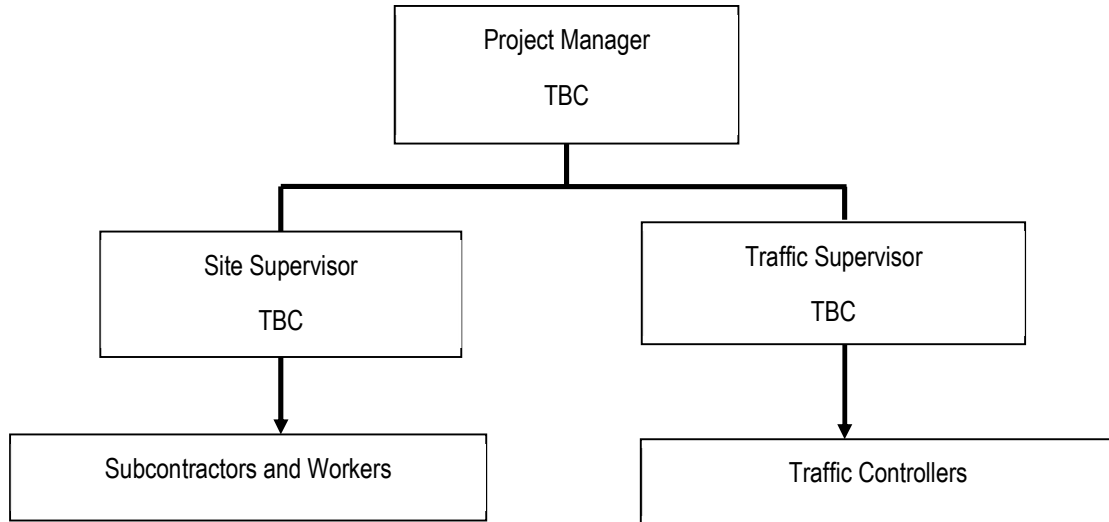
The Project Manager has the ultimate responsibility to ensure the TMP is implemented for the prevention of injury and property damage to employees, contractors, sub-contractors, road users and all members of the public. The Project Manager will ensure all site personnel are fully aware of their responsibilities, and that Traffic Controllers are appropriately trained and accredited and that sufficient controllers are available to ensure appropriate breaks are taken.

All personnel engaged in the field activities will follow the correct work practices as required by the CoP, AGTTM and AS1742.3. All personnel will not commence or continue work until all signs, devices and barricades are in place and operational in accordance with the requirements of the TMP.

All personnel responsible for temporary traffic management shall ensure that the number, type and location of signs, devices and barricades are to a standard not less than Appendix F of this plan, CoP, AGTTM and AS1742.3 (except where specifically detailed in this TMP with reasons for the variations). Should a situation arise that is not covered by this TMP, CoP, AGTTM or AS1742.3, the Road Authority Representative shall be notified.

6.2.2. Roles

The following diagram outlines the responsibility hierarchy of this contact.



6.2.2.1 Project Manager

The project manager shall:

- Ensure all traffic control measures of this TMP are placed and maintained in accordance with this plan and the relevant Acts, Codes, Standards and Guidelines
- Ensure suitable communication and consultation with the affected stakeholders is maintained at all times
- Ensure inspections of the temporary traffic management are undertaken in accordance with the TMP, and results recorded. Any variations shall be detailed together with reasons
- Review feedback from field inspections, worksite personnel and members of the public, and take action to amend the traffic control measures as appropriate following approval from the Road Authority's Representative
- Arrange and/or undertake any necessary audits and incident investigations

6.2.2.2 Site Supervisor

The site supervisor is responsible for overseeing the day-to-day activities, and is therefore responsible for the practical application of the TMP, and shall:

- Instruct workers on the relevant safety standards, including the correct wearing of high visibility safety vests
- Ensure traffic control measures are implemented and maintained in accordance with the TMP
- Undertake and submit the required inspection and evaluation reports to management
- Render assistance to road users and stakeholders when incidences arising out of the works affect the network performance or the safety of road users and workers
- Take appropriate action to correct unsafe conditions, including any necessary modifications to the TMP.

6.2.2.3 Traffic Management Personnel

- At least one person on site shall be accredited in Basic Worksite Traffic Management, and shall have the responsibility of ensuring the traffic management devices are set out in accordance with the TMP



- At least one person accredited in Advanced Worksite Traffic Management shall be available to attend the site at short notice at all times to manage variations, contingencies and emergencies, and to take overall responsibility for traffic management.

6.2.2.4 Traffic Controllers

Traffic Controllers shall be used to control road users to avoid conflict with plant, workers, traffic and pedestrians, and to stop and direct traffic in emergency situations.

Traffic Controllers shall:

- Operate in accordance with AGTTM Part 7: Traffic Controllers
- Be accredited in Basic Worksite Traffic Management
- Hold a current Traffic Controller's accreditation
- Be relieved from their duty after not more than 2 hours for a period of rest or "other duties" of at least 15 minutes as required by AGTTM and/or OS&H Regulations.
- Shall be site specific inducted (If Required)

6.2.2.5 Workers and Subcontractors

Workers and Subcontractors shall

- Correctly wear high visibility vests, in addition to other protective equipment required (e.g. footwear, eye protection, helmet sun protection etc.), at all times whilst on the worksite
- Comply with the requirements of the TMP and ensure no activity is undertaken that will endanger the safety of other workers or the general public
- Enter and leave the site by approved routes and in accordance with safe work practices

6.3. Personal Protective Equipment (PPE)

All personnel entering the work site shall correctly wear high visibility vests to AS/NZS 4602, in addition to other protective equipment required on a site-by-site basis (e.g. protective footwear, eye protection, helmet, sun protection, respiratory devices etc.) at all times whilst on the worksite.

6.4. Plant and Equipment

All plant and equipment at the workplace shall meet statutory requirements and have the required registration, licences or certification where required. All mobile equipment shall be fitted with suitable reversing alarms. All mobile plant and vehicles shall be fitted with a pair of rotating flashing yellow lamps in accordance with AS1742.3 clause 4.14. All workers will be made aware of the safe work practice at the time of the site induction.

6.5. Trip Hazards

The worksite and its immediate surroundings shall be suitably protected and free of hazards, which could result in tripping by cyclists or pedestrians. Hazards, which cannot be removed, shall be suitably protected to prevent injury to road users, including those with sight impairment. Where level differences are significant, suitable barriers, which preclude pedestrian access shall be used.



Where works extend beyond daylight hours and adjacent lighting is insufficient to illuminate hazards to cyclists or pedestrians, appropriate temporary lighting shall be installed.

The worksite shall be kept tidy to reduce the risk to workers.

7. Implementation

7.1. Traffic Guidance Schemes

The Traffic Guidance Scheme (TGS) outlined in Appendix “F” and listed below have been provided for the following stages to demonstrate the type of controls that will be implemented throughout the term of the contract. All sign and device requirements are shown on each TGS. Should the use of additional (not shown on the TGS or listing of devices) or reduced number of devices be required due to unforeseen needs, they shall be recorded within the Daily Diary as a variation to the TMP, following prior approval.

Table 11: Traffic Guidance Scheme Register

Staging	TGS Number & Revision	Details	Construction Works
Stage 1	2103019-TGS-01	Verge works at 40km/h	Main entry construction
	2103019-TGS-02	Verge works at 40km/h	Main entry construction
	2103019-TGS-03	Verge works at 60km/h	Main entry construction
	2103019-TGS-04	Verge works at 60km/h	Main entry construction
	2103019-TGS-05	Verge works after care at 60km/h	Main entry construction
	2103019-TGS-06	Verge works after care at 60km/h	Main entry construction
	2103019-TGS-07	Verge works at 80km/h	Main entry construction
	2103019-TGS-08	Verge works at 80km/h	Main entry construction
	2103019-TGS-09	Verge works after care at 80km/h	Main entry construction
	2103019-TGS-10	Verge works after care at 80km/h	Stage 1 exit construction
	2103019-TGS-11	Verge works at 40km/h	Stage 1 exit construction
	2103019-TGS-12	Verge works at 40km/h	Stage 1 exit construction
	2103019-TGS-17	Stage 1 internal works	Stage 1 internal works
Stage 2	2103019-TGS-13	Verge works	Down Road south exit construction
	2103019-TGS-14	Verge works temporary holding traffic with traffic controllers	Down Road south exit construction
	2103019-TGS-15	Verge works after care	Down Road south exit construction
	2103019-TGS-16	Stage 2 internal works	Stage 2 internal works

7.2. Sequence and Staging

The sequence of temporary traffic management installation, work activities and temporary traffic management removal are detailed below:

Table 12: Sequence and Staging

Step	Details
Pre-start	Contact 138 111 and advise of works.
Stage 1	Implement advanced warning signage.
Stage 2	Proceed construction works



Stage 3	Finish construction works and clear roadway.
Stage 4	Install after care signs
Stage 5	Pack up of TTM

7.3. Traffic Control Devices

7.3.1. Sign Requirements

All signs used shall conform to the designs and dimensions as shown in Australian Standard AS 1742.3, AGTTM and the CoP.

Prior to installation, all signs and devices shall be checked by the Site Supervisor or a suitably qualified person to ensure that they are in good condition and meet the following requirements:

- Mechanical condition - Items that are bent, broken or have surface damage shall not be used.
- Cleanliness - Items should be free from accumulated dirt, road grime or other contamination.
- Colour of fluorescent signs - Fluorescent signs whose colour has faded to a point where they have lost their daylight impact shall be replaced.
- Retroreflectivity. - Signs for night-time use whose retroreflectivity is degraded either from long use or surface damage and does not meet the requirements of AS 1906 shall be replaced.
- Battery operated devices - shall be checked for lamp operation and battery condition.

Where signs do not conform either to the requirements of AS 1742.3, AGTTM and the CoP, or would fail to pass any of the above checks, they shall be replaced on notice.

Signs and devices shall be positioned and erected in accordance with the locations and spacing's shown on the drawings. All signs shall be positioned and erected such that:

- They are properly displayed and securely mounted;
- They are within the driver's line of sight;
- They cannot be obscured from view;
- They do not obscure other devices from the driver's line of sight;
- They do not become a possible hazard to workers or vehicles; and
- They do not deflect traffic into an undesirable path.

Signs and devices that are erected before they are required shall be covered by a suitable opaque material. The cover shall be removed immediately prior to the commencement of work.

Where there is a potential for conflict of information between existing signage and temporary signage erected for the purpose of traffic control, the existing signs shall be covered. The material covering the sign shall ensure that the sign cannot be seen under all conditions i.e. day, night and wet weather. Care will be taken to ensure existing signs are not damaged by the covering material or by adhesive tape.

7.3.2. Tolerances on Positioning of Signs and Devices

Where a specific distance for the longitudinal positioning of signs or devices with respect to other items or features is stated, for the spacing of delineating devices or for the length of tapers or markings, the following tolerances



may be applied: -

(a) Positioning of signs, length of tapers or markings:

- (i) Minimum, 10% less than the distances or lengths given.
- (ii) Maximum, 25% more than the distances or lengths given.

(b) Spacing of delineating devices:

- (i) Maximum, 10% more than the spacing shown.
- (ii) No minimum.

These tolerances shall not apply where a distance, length or spacing is already stated as a maximum, a minimum or a range.

7.3.3. Flashing Arrow Signs

Where flashing arrow signs are required to better delineate lane tapers, these signs will comprise a matrix of lamps or light emitting elements in the form of an arrow that is flashed in a cyclical manner to provide advance warning. The sign shall have a minimum dimension of 2400 mm. x 1200 mm. and conform to the requirements of AS/NZS 4192. The Project Site Supervisor shall ensure that all equipment used meets the Australian Standard.

7.3.4. Delineation

7.3.4.1 General

Cones shall be used for delineation unless other treatment is specified in the Traffic Management Plan or on the Traffic Guidance Schemes. All cones shall be at least 700 millimetres in height and constructed from fluorescent orange or red material that is resilient to impact and will not damage vehicles when hit at low speed. Cones will be fitted with suitable white retro-reflective tape placed in accordance with AS 1742.3, AS 1742.3, AGTTM and the CoP.

Cones shall be designed to be stable under reasonably expected wind conditions and air turbulence from passing traffic.

The base of the cones will be secured so that they are not dislodged by traffic. Cones will be inspected at intervals necessary to ensure any mis-alignment or displacement is identified and corrected prior to this causing disruption to traffic.

Where specified, temporary frangible or otherwise non-hazardous delineator posts or bollards may be used for edge protection and taper delineation. Posts or bollards shall have a maximum dimension of 60 millimetres when measured along the longest side of a square or rectangular section or across the diameter of a circular section. Base design shall permit easy fixing to either sealed or unsealed surfaces and not intrude into traffic lanes greater than 50 millimetres from the face of the post or bollard.

All posts or bollards shall be erected in accordance with the Traffic Guidance Schemes. Posts and bollards shall



be a minimum of 1000 mm. high, capable of being fixed to the road pavement by a suitable road adhesive or by fastening bolts or spikes. Fixing shall be in accordance with manufacturer's recommendations.

Posts and bollards shall be fitted with suitable white retro-reflective tape placed in accordance with AS 1742.3, AGTTM and the CoP.

All posts or bollards will be inspected daily and where displaced or missing made good immediately. All delineator posts are to be completely removed at the completion of all stages of construction and prior to the placement of asphalt surfacing. If adhesive is used to affix the posts this shall be completely removed from the road surface so that a flush surface is obtained.

7.3.4.2 Delineation Spacing

All cones and post type delineators shall be spaced according to Table 4.7 of AS 1742.3-2019 and the Traffic Guidance Schemes.

7.4. Site Access for Work Vehicles

Construction and/or traffic management vehicles entering and exiting the traffic stream shall be mindful of the conditions that may affect the safety of these movements.

Access points shall be noted on the TGS and traffic controllers, work personnel and suppliers notified. Traffic Controllers may assist work vehicles enter and exit the work area.

All entry and exit movements will be in accordance with the Road Traffic Code and shall be undertaken in the following manner:

Vehicles shall:

- Decelerate slowly and signal their intention by indicator to leave the traffic stream;
- Activate the vehicle's rotating yellow lamp, where fitted, once a speed of 20 km/h. has been reached and at least 50m prior to the exit location.
- Switch on the vehicle hazard lights once the vehicle is stationary.
- Where risks associated with unassisted exit or entry to or from the traffic stream are high, Traffic Controllers should be used to assist entry and exit movements.

Vehicles fitted with rotating amber lamps shall have the vehicle's rotating lamp activated prior to entering the traffic stream and shall undertake the following.

- Switch off the vehicle hazard lights;
- Indicate intention to enter the traffic stream using direction indicators;
- Ensure there is a suitable gap from oncoming traffic to allow for a safe entry manoeuvre; and,
- Turn off the rotating yellow lamp(s) once a speed of 40 km/h is reached.

Entry and exit manoeuvres shall be avoided in close proximity to intersections. Work personnel shall not cross traffic streams on foot unless absolutely necessary.

Construction or traffic management vehicles shall only be parked where indicated on the Traffic Guidance



Scheme. Vehicles shall not obstruct paths and be parked an adequate distance from intersections or driveways to ensure clear sight lines remain for all road users.

7.5. Communication TMP Requirements

Contractor to liaise with stakeholders and submit notification to City of Albany for each of the work stages.



8. Emergency Arrangements and Contingencies

8.1. Traffic Incident Procedures

In the event of an incident or accident, whether or not involving traffic or road users, all work shall cease and traffic shall be stopped as necessary to avoid further deterioration of the situation. First Aid shall be administered as necessary, and medical assistance shall be called for if required.

Road plant within the work area that may impact on any services requiring access to a crash site will be cleared from the area quickly as necessary.

8.1.1. Serious Injury or Fatality

In the case of serious injury or fatality occurring within the traffic management site all work shall cease immediately, machinery and vehicles turned off and the area cleared of personnel as soon as possible. Traffic Controllers (and other personnel if necessary) shall be deployed immediately to ensure no traffic or other road users approach the area.

An Ambulance and Police shall be called on telephone number 000 where life threatening injuries are apparent.

All road workers and traffic management personnel shall preserve the scene leaving everything in situ, until direction is given by Police or WorkSafe.

A site-specific detour route and/or road closure point will be determined, signed and controlled by traffic management personnel and advised to Police, who will take charge of the site upon arrival. Detour routes will be determined so as to cater for all types of vehicles required to use them. An example of how to manage an emergency can be found in AGTTM – Part 10, Section 5.

All site personnel shall be briefed on control procedures covering incidents and crashes that result in serious injury or fatalities.

8.1.2. Minor Incident or Vehicle Break Down within Site

Broken down vehicles and vehicles involved in minor non-injury crashes shall be temporarily moved to the verge as soon as possible after details of the crash locations have been gathered and noted. Where necessary to maintain traffic flow, vehicles shall be temporarily moved into the closed section of the work area behind the cones, providing there is no risk to vehicles and their occupants or workers. Suitable recovery systems shall be used to facilitate prompt removal of broken down or crashed vehicles. Assistance shall be rendered to ensure the impact of the incident on the network is minimised.

Any traffic crash resulting in non-life threatening injury shall be reported to the WA Police Service on 131 444.

Details of all incidents and accidents shall be reported to the Site Supervisor and Project Manager using the incident report form at Appendix "C" (or similar).



8.2. Emergency Services

Emergency services shall be notified of the proposed works nature, location, date and times as well as contact details for the site supervisor.

On-site traffic controllers will be equipped with mobile communications to advise and/or liaise with emergency services to ensure a prompt response should the need arise.

8.3. Dangerous Goods

Should any incident arise involving vehicles transporting dangerous goods, all work shall cease immediately, machinery and vehicles turned off and the area cleared of personnel as soon as possible. Traffic Controllers (and other personnel if necessary) shall be deployed immediately to ensure no traffic or other road users approach the area.

Emergency services shall be notified of the proposed works nature, location, date and times as well as contact details for the site supervisor. All site personnel shall be briefed on evacuation and control procedures.

8.4. Damage to Services

In the event that gas services are damaged, all work shall cease immediately, machinery and vehicles turned off and the area cleared of personnel as soon as possible. Traffic Controllers (and other personnel if necessary) shall be deployed immediately to ensure no traffic or other road users approach the area. The Police Service and relevant supply authority shall be called immediately. Damage to any other services shall be treated in a similar manner except machinery may remain operational and access may be maintained where it is safe to do so.

All site personnel shall be briefed on evacuation and control procedures.

8.5. Failure of Services

8.5.1. Failure of Traffic Signal

In the event that traffic signal infrastructure near the worksite is damaged or fails to operate correctly, all work shall cease immediately and Main Roads WA Road Network Operation Centre (RNOC) shall be notified immediately (phone 138 111).

8.5.2. Failure of Street Lighting

In the event that street lighting is damaged and fails to operate or operates incorrectly, Traffic Controllers (and other personnel if necessary with appropriate temporary lighting) shall be deployed immediately if the lighting failure adversely affects road user safety to control traffic movements as required. Western Power shall be notified immediately.

8.5.3. Failure of Power

In the event that power infrastructure is damaged and poses a risk through live current, Traffic Controllers (and



other personnel if necessary) shall be deployed immediately to secure the site and prevent entry to the area affected by live power. Western Power shall be notified immediately (phone 13 13 51).

8.6. Emergency Contacts

In the event of an emergency the following relevant authorities must be contacted and advised of the nature of works, location, type of emergency and contact details for the site supervisor.

Emergency Service	E-mail/Website	Phone (Emergency)
WA Police Service	State.Traffic.Intelligence.Planning.&.Co-ordination.Unit@police.wa.gov.au	000
St John Ambulance	ambulanceoperations@stjohnambulance.com.au	000
DFES	dfes@dfes.wa.gov.au	000
Power	http://www.westernpower.com.au/customerservice/contactus/	13 13 51
Gas	enquiries@atcoqas.com.au	13 13 52



9. Monitoring and Measurement

9.1. Daily Inspections

Prior to works commencing the Site Supervisor shall undertake to communicate the Traffic Management Plan to all key stakeholders and affected parties.

On completion of setting out the traffic control measures, the site is to be monitored for a suitable period of time. If traffic speeds on the approaches to the work site are assessed as being above the temporary posted speed zone for the work site, the Site Supervisor is to initiate action to modify the approach signage and tapers in accordance with the requirements of AS1742.3. All such actions are to be recorded in the Daily Diary. Should road users be observed to continue to travel in excess of the posted speed limit, the police may be requested to attend the site to enforce the temporary posted speed limit.

The Advanced Worksite Traffic Management accredited supervisory person at the worksite may conditionally approve changes made to a complex traffic management plan subject to review and endorsement of the change by an RTM as soon as practicably possible.

The Traffic Management Contractor shall ensure that all temporary signs, devices and controls are maintained at all times. To achieve this, procedures in line with the requirements outlined in AGTTM Part 6 will be instituted.

The monitoring program shall incorporate inspections:

- Before the start of work activities on site,
- During the hours of work,
- Closing down at the end of the shift period, and
- After hours.

A daily record of the inspections shall be kept indicating

- When traffic controls were erected,
- When changes to controls occurred and why the changes were undertaken,
- Any significant incidents or observations associated with the traffic controls and their impacts on road users or adjacent properties.

The Traffic Management Contractor shall ensure that personnel are assigned to monitor the traffic control scheme. Inspections shall at least satisfy the following requirements.

9.1.1. Before Works Start

- Confirm TMP and TGS are suitable for the day's activities;
- Inspect all signs and devices to ensure they are undamaged, clean and comply with the requirements depicted on the TGS;
- All lamps should be checked and cleaned as necessary;
- After any adjustments have been made to the signs and devices, conduct a drive through inspection to confirm effectiveness.

9.1.2. During Work Hours

- Designate and ensure that appropriate work personnel drive through the site periodically to inspect all signs and devices and ensure they are undamaged and comply with the requirements depicted on the Traffic Guidance Schemes;
- Attend to minor problems as they occur;
- Conduct on the spot maintenance/repairs as required;
- When traffic controllers are on the job, ensure they remain in place at all times. Relieve controllers as necessary to ensure attentiveness is retained;
- During breaks or changes in work activities remove or cover any signs that do not apply (e.g. PREPARE TO STOP, Workers symbolic);
- Re-position signs and devices as required by work processes throughout the day and keep records of any changes.

9.1.3. Closing Down Each Day

- Conduct a pre-close down inspection, allowing time for any appropriate maintenance works;
- Remove any unnecessary signage (e.g. Prepare to Stop, Symbolic Workers);
- Replace any unnecessary signage with appropriate delineation;
- Install barriers and lights where required;
- Drive through site and confirm all signs and devices are operating correctly with no misleading visual cues;
- Record details of inspection and any changes made to layout.

9.1.4. After Hours

- Appoint personnel to conduct after dark checks. Replace any signs / devices not working, missing or damaged and record in diary.
- Appoint personnel to conduct checks on non-work days (e.g. weekends). Replace any signs / devices not working, missing or damaged and record in diary.
- The frequency of inspections needs to align with the amount of traffic management on site, weather conditions, vehicle types and volumes, road user behaviour and site specific risks.

9.2. TMP Audits and Inspections

One compliance audit (using the 'Compliance Audit Checklist for Traffic Management for Works on Roads' – found on the MRWA website) shall be conducted following setting up of the traffic management and prior to commencement of the works.

Audit findings, recommendations and actions taken shall be documented and copies forwarded to the Project Manager and the Road Authority's Representative

9.3. Records

A daily diary recording all inspections including variations to the approved TMP shall be kept using the Daily Diary.

The Traffic Supervisor is to record all inspections made on a daily basis and at those times prescribed by the Traffic Management Implementation Standards. Upon completion of each day the Traffic Supervisor shall provide copies of the daily diary record to the Project Manager.

The Traffic Supervisor is to record all variations made to the approved Traffic Management Plan on a daily basis



and indicate clearly the nature of the variations and the reason for the variations. Upon completion of each day the Traffic Supervisor shall provide copies of the variation record to the Project Manager.

9.4. Public Feedback

Contractor shall liaise with stakeholders for any public feedback.



10. Management Review and Approvals

10.1. TMP Review and Improvement

The Project Manager will ensure that the Traffic Management Plan is implemented and evaluated for effectiveness. The Supervisor shall inspect and monitor traffic movements around the site in conjunction with the personnel who have erected the control measures.

The Project Manager will implement a procedure that ensures comments and complaints received from the public are registered. The Supervisor shall be responsible for the monitoring of the Register on a daily basis.

TCP to be reviewed and updated every 3-6 months to ensure proposed long term Traffic Management complies with changing site environment.

10.2. Variations

There are no variations.

10.3. Approvals

Before to works commencing it is necessary to seek approval from the following:

- City of Albany;
- Utility Service Providers (e.g. Western Power, Water Corp, etc.)



Appendix A - Notification of Roadworks

To be completed by contractor



NOTIFICATION OF ROADWORKS

Notifications are to be distributed at least one (1) week in advance of works

Where the traffic management is to interfere with traffic signal operation, prior approval is required 3wks in advance via enquiries@mainroads.wa.gov.au.

Where the works will place restrictions on Oversize and/or Restricted Access Vehicles Main Roads HVS requires at least 2 weeks notice.

TMP reference		Communication plan sent to Main Roads	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>		
Anticipated start date:	Anticipated finish date:						
Daily work hours:	Is weekend work applicable?:			Yes <input type="checkbox"/>	No <input type="checkbox"/>		
Location of works (Road/Street, Suburb):							
Description of works:							
Description of traffic management arrangements:	To accommodate the proposed works, traffic control are to install the following stages of work;						
Posted Speed Limit:		Worksite speed limit:		After hours speed limit:			
What is the anticipated effect on traffic flows?:				Will there be restricted width for oversize escorted vehicles?:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Are lanes closed at signals?:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	Are signal loops or hardware affected?:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Will signal phases need time changes?:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	Will signals need to revert automatically?:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Date of signal 'black out':				Times of signal 'black out':			
Will Police attendance be required?:	Yes <input type="checkbox"/>	No <input type="checkbox"/>		Dates for Police attendance :			
Are bridges located in area of works, (inc detours)?:	Yes <input type="checkbox"/>	No <input type="checkbox"/>		Will changes to traffic flows/composition occur on bridges?:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Are the works located within a School Zone?:	Yes <input type="checkbox"/>	No <input type="checkbox"/>		Will children's crossings be altered during works?:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	

Oversize and/or Restricted Access Vehicle Roadwork Restrictions

Location of works (include – road name, nearest intersection or marked location and SLKs)					
Road Name(s)					
Bridge number if applicable					
Nearest Intersection / marked location / SLKs					
Additional information					
Will there be a width restriction for oversize vehicles exceeding 2.5m in width?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Will there be a height restriction for oversize vehicles exceeding 4.3m in height?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
If yes, what width limit is to be imposed on oversize vehicles travelling through the site?					



Will the width restrictions be in place outside the daily work hours?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	If yes, what is the minimum height of the structure causing the restriction?	
Can the width restrictions be removed if operators provide prior notice?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	If the width restrictions are fixed in place, are operators able to have a wider oversize combination if a 1.2m ground clearance can be achieved? Do not complete if width restrictions can be removed.	Yes <input type="checkbox"/> No <input type="checkbox"/>
If yes, how much notice will be required? (i.e. 24/48 hours' notice).			If yes, how much notice will be required? (i.e. 24/48 hours' notice).	
Please provide the name and phone number of the best contact for further details in relation to these works.	Name: Contact number (mobile):			
Please provide the name and phone number of the contact for prior notification of movements.	Name: Contact number (mobile):			
Will the work result in a road closure that will impact on Restricted Access Vehicles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	If yes, have discussions been held with Main Roads Heavy Vehicle Services (HVS) in regards to a suitably approved RAV network detour. If no, please contact HVS Route Assessments on 138 486 for assistance. Note: an assessment request for a proposed detour may take up to a week to be processed.	Yes <input type="checkbox"/> No <input type="checkbox"/>

Road Authority:			
Postal Address:			
Telephone:	Email:	Facsimile:	
Contact:			
Telephone:	Email:	Mobile:	

Construction Contractor:			
Postal Address:			
Telephone:	Email:	Facsimile:	
Contact:			
Telephone:	Email:	Mobile:	
After hours contact:	Telephone:	Mobile:	

Traffic Management Contractor:			
Postal Address:			
Telephone:	Email:	Facsimile:	
Contact:			
Telephone:	Email:	Mobile:	
After hours contact:	Telephone:	Mobile:	

Distribution List	Email/Website
WA Police State Traffic Coordination	State.Traffic.Intelligence.Planning.&Co-ordination.Unit.SMIL@police.wa.gov.au
Children's Crossing Unit	childrenscrossingunitsmail@police.wa.gov.au mailto:student.pedestrian.policy.unit@police.wa.gov.au
Main Roads Customer Information Centre	enquiries@mainroads.wa.gov.au
Main Roads Road Network Operations Centre	RNOC.Control.Room.Information.Desk@mainroads.wa.gov.au
Main Roads Heavy Vehicle Services	hvs@mainroads.wa.gov.au
Main Roads Engineer Bridge Loading	DLSEHeavyLoadsGroup@mainroads.wa.gov.au
St John Ambulance	BusinessSupportServices@stjohnwa.com.au
Fire & Emergency Services	Dfes@dfes.wa.gov.au



Public Transport Authority	transperth.servicedisruptions@pta.wa.gov.au
Arc Infrastructure	thirdparty.notifications@arcinfra.com
Main Roads Digital Communications	communications@mainroads.wa.gov.au
Local Government	

Note: the above distribution list is an example and should be modified as required. See section 4.4 of the Code of Practice





Appendix B - Variation to Standards

NOT APPLICABLE



**APPLICATION FOR APPROVAL TO VARY REQUIREMENTS OF
AS1742.3, AGTMM OR MRWA TRAFFIC MANAGEMENT CODES OF PRACTICE**

Form Instruction

1. **Section A** – Identify the Principal Agency / person commissioning the activity. (Does not include contractors, subcontractors or **traffic** management company/traffic planners etc).
2. **Section B** – Identify activity location, start / finish date and time, type of traffic management, description location of activity.
3. **Section C** – Identify the person that has prepared the Traffic Management Plan, this person shall have AWTM accreditation.
4. **Section D** – For Works undertaken on a State road or on behalf of Main Roads Western Australia the details of the risk assessment process identified in this application form must be documented and endorsed by an accredited Roadworks Traffic Manager¹.
All applications to be addressed to the applicable Main Roads Regional office. For contact information please refer to the online Application kits and guidelines to undertake works. (www.mainroads.wa.gov.au > Technical & Commercial > Working on roads > Third Party Works).
For all other applications the details of the risk assessment process identified in this application form must be documented and endorsed¹ by the person responsible for approving the traffic management plan.
Contact with the appropriate road authority should be made prior to lodgement of this application to determine its suitability and for any additional requirements.
5. **Section E** - Risk implication, identification and assessment process must be undertaken in accordance with Risk Management – Principles and Guidelines AS/NZS ISO 31000. The likelihood and consequences should be rated after the application of any additional counter measures taken utilising Tables from Annexure's 202B and 203B, Main Roads WA - Specification 202 and 203 respectively.
6. **Incomplete or applications not signed** by the RTM¹ will not be processed.

A	Applicant (Principal for the Works)					
	Postal address					
	Suburb		State		Postcode	
	Project Manager				Telephone	
	Email					

B	Anticipated start date				Anticipated finish date				
	Daily work hours; From			Weekend work applicable	Yes	<input type="checkbox"/> Sat	<input type="checkbox"/> Sun	No <input type="checkbox"/>	
	Location of works (Road/Street Suburb),								
	Road type (eg undivided, two lane)								
	Description of works								
	Are alterations to permanent traffic signals required?			Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	N/A	<input type="checkbox"/>
	Posted Speed Limit			Worksite speed limit			After hours speed limit		

C	TMP Designer							
	Accreditation Number							
	Postal address	Level 1 / 908 Albany Highway						
	Suburb	East Victoria Park	State	WA	Postcode	6101		
	Email			Telephone	(08) 9355 1300	Facsimile	N/A	

¹A person with AWTM accreditation is permitted to endorse a variation of less than 135 % of the allowable lane capacity as outlined in table 4.10 of AS 1742.3. See section 4.5 of the Code of Practice.



	Endorsement Signature		Date Click here to enter a date.
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**APPLICATION FOR APPROVAL TO VARY REQUIREMENTS OF
AS1742.3, AGTTM OR MRWA TRAFFIC MANAGEMENT CODES OF PRACTICE**

D	RTM Endorsing Variation					
	Accreditation Number					
	Postal address					
	Suburb		State		Postcode	
	Email		Telephone		Facsimile	
	Endorsement signature				Date	

For Internal Use Only							
Approving Road Authority							
Approving Officer Position							
Application Approved	Yes <input type="checkbox"/>	No <input type="checkbox"/>	If Not Why Not				
Additional Conditions							
Approved By: Signature		Title		Date		File Num	



E	Description of Variation Requested	Specify Point of Departure from Standard / Code of Practice (List section and page number)	Justification (Why is this necessary)	Additional Counter Measures to be Taken (Identify additional counter measures to be used to negate the lesser treatment)	Residual Risk*		
					L	C	RR





Appendix C - Record Forms

Daily Diary

Location: _____		Client: _____		Date: _____	
TMP No: _____	TGS No: _____	Weather Conditions: _____		Diary Sheet: _____ of _____	
Start Time at Depot: _____	Time Arrive Onsite: _____	Commencement of Site Setup: _____		Site Setup and Operational: _____	
Site Pulled Down at: _____	Time Aftercare signs setup: _____	TGS No: _____	Time left site: _____	Finish time at Depot: _____	
<input type="checkbox"/> Day Works	<input type="checkbox"/> Night Works	<input type="checkbox"/> Emergency Response	Site Setup as per TGS <input type="checkbox"/> Yes <input type="checkbox"/> No (if not comment on next page)		
<input type="checkbox"/> Attendance at Pre-Start Meeting	Did an incident occur (if yes complete incident report form) <input type="checkbox"/> Yes <input type="checkbox"/> No				
I confirm that the above times of 'setup' and 'pulldown' of traffic management signs and devices are a true and correct					
Name (Site Supervisor): _____		Signed: _____			
Drive Through Checks (Checks must be conducted at least every 2 hours)					
Time of check entered. Rule off and leave blank if the check does not apply to the site. Make a note of any issues on the next page.					

Traffic Management Site Checks	1	2	3	4	5	6	7	8	9	10
Time										
Are signs upright, clean, visible, level & stable										
Are taper lengths correct										
Are speed limit signs correct and doubled up										
Are sign spacings correct										
Are cone/bollard alignments straight & spaced correctly										
Are devices operating correctly										
Are pedestrians, cyclists and other vulnerable road users catered for										
Are lane widths adequate										



Are vehicle queue lengths acceptable											
Is road surface condition adequate											
Is the work area clearly defined?											
Are the travel paths for both directions of traffic clearly defined? Is the work area appropriately separated from passing traffic? Check the transition at the interface of the modified alignment.											
Are centre lines/lane lines/edge lines clear and unambiguous?											
Are sight and stopping distances adequate at works, at intersections and driveways?											
Are traffic lanes clearly delineated?											
Are lighting for night-time controls operating correctly?											
Have other risks associated with traffic management at night been catered for, e.g. placement of lighting towers											





No. of TTM Vehicles Onsite: _____

No. of TTM Personnel Onsite: _____

TTM Personnel Names & Accreditations:

Name	Accreditation Details (tick)					Time of Break from Stop/Slow (Traffic controllers must have a 15 minute break every two hours of constant stop/slow operation)							
	TC	BWTM	WTM	AWTM	OTMA	On	Off	On	Off	On	Off	On	Off
						:	:	:	:	:	:	:	:
						:	:	:	:	:	:	:	:
						:	:	:	:	:	:	:	:
						:	:	:	:	:	:	:	:
						:	:	:	:	:	:	:	:
						:	:	:	:	:	:	:	:

Additional Comments

I confirm that the details contained herein are true and correct

Name: (TTM Leader): _____ Signed: _____





Incident Report Form.

Region:
Contract No.:

Incident Report No.:
Contractor:

Safety Incident Report No:

Major Incident Reports must be forwarded to the Superintendent within 48 hours of the incident occurring or becoming apparent.

Contractors shall use this Form for reporting of traffic Incidents on works under Contract and this form supplements the Safety Incident Report Form.

1.0 Details of Incident	Reported to:	<input type="checkbox"/> Supervisor	<input type="checkbox"/> TMR	<input type="checkbox"/> Other
Date of incident		Time of Incident		
Work Being Undertaken				
Location (include direction and lane if applicable)				
Crash Type				
Incident type	Near Miss	Property Damage	Injury	Fatality
Atmospheric Conditions	Clear	Overcast	Raining	Fog/Smoke/Dust
Light Conditions	Day Light		Night Time	Dawn/Dusk
Road Surface	Unsealed		Sealed	





Date TGS Approved: _____

Date TMP Approved: _____



3.0 Descriptions of Vehicles:

Detail (make, model/ped/cyclist/VRU)	Registration No	Direction of Travel	Age of Driver
3.1 Vehicle 1			
3.2 Vehicle 2			
3.3 Vehicle 3			

Comments:

4.0 Description of Incident:

Draw the Incident including the direction of travel, traffic control signs, fixed structures and north point.





5.0 Attachments: The following copies MUST be submitted with this Incident Report.

Approved TMP Approved TGS Approvals for temporary speed restrictions Daily Diary

6.0 Police Report:

Accident reported to Police: YES NO Report made by Phone Fax Mail or E-mail

Date Report Made Day Month Year Police WA Reference Number

7.0 Details of Person Completing this Incident Form:

Name: _____ Contractor Name: _____

Position: _____

Date: _____ Signature: _____



Appendix D - Traffic Analysis and Volume Counts

Volumes

Location	Average weekday (vpd)	Trucks	Average weekend (vpd)	Trucks
Down Road	844 vpd (2017)	34%	419 vpd (2017)	40%
Albany Highway	4,950 vpd (2017)	20%	3,520 vpd (2017)	16%



Appendix E - Roadway Access Authorisation Permit

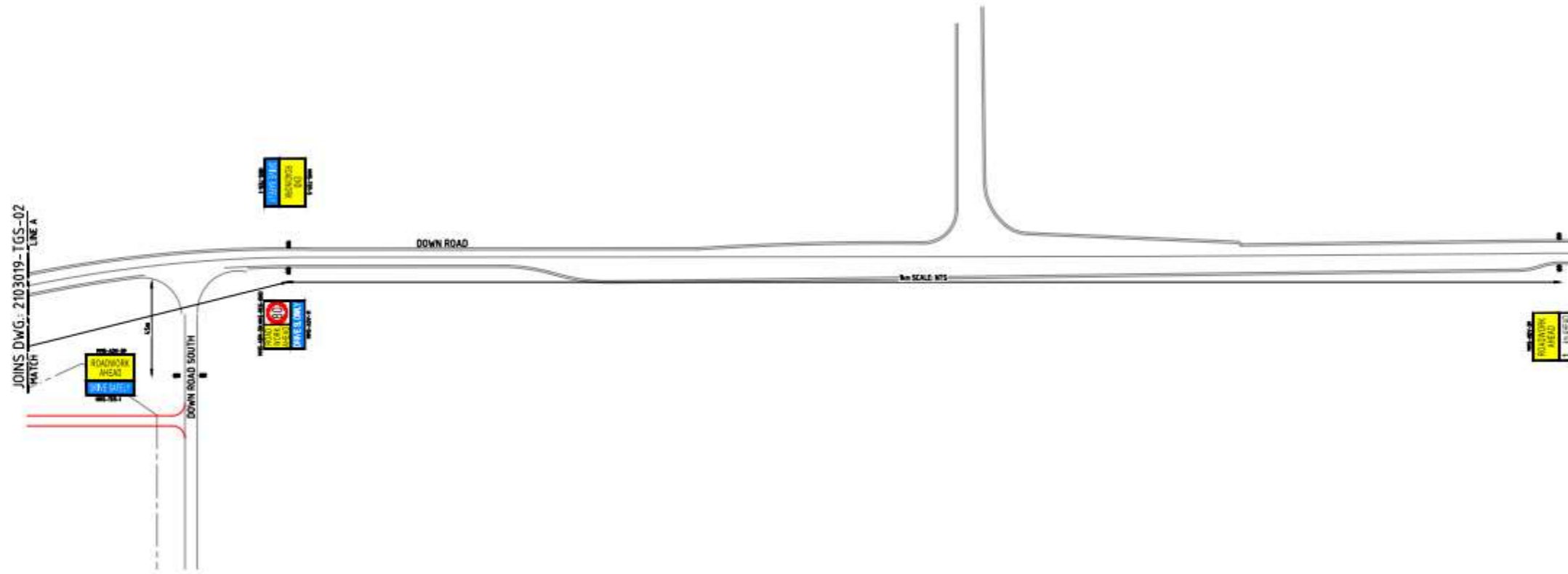
Appendix F - Traffic Guidance Schemes

NOTES:

1. ALL SIGN LOCATIONS ARE TO BE CHECKED ON SITE PRIOR TO SETOUT AND POSITIONS ADJUSTED TO ALLOW FOR SPECIFIC SITE CONSTRAINTS SUCH AS VEGETATION, OTHER SIGNS AND ROADSIDE FURNITURE. WHERE SIGNIFICANT CHANGES IN SIGN SPACING IS REQUIRED SHAWMAC SHOULD BE CONSULTED.
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6. TEMPORARY LIGHTING TOWERS TO BE ERECTED THROUGH THE WORKSITE WHERE VISIBILITY IS DEEMED INSUFFICIENT.



CONE SPACING:
4m @ 40km/h



HOURS OF ALLOWABLE IMPLEMENTATION:
DAY SHIFT: 0700 -1900 HOURS

LEGEND	
	EXISTING ROAD
	PROPOSED ULTIMATE DESIGN
	PROPOSED CONES/BOLLARDS
	WORK ZONE

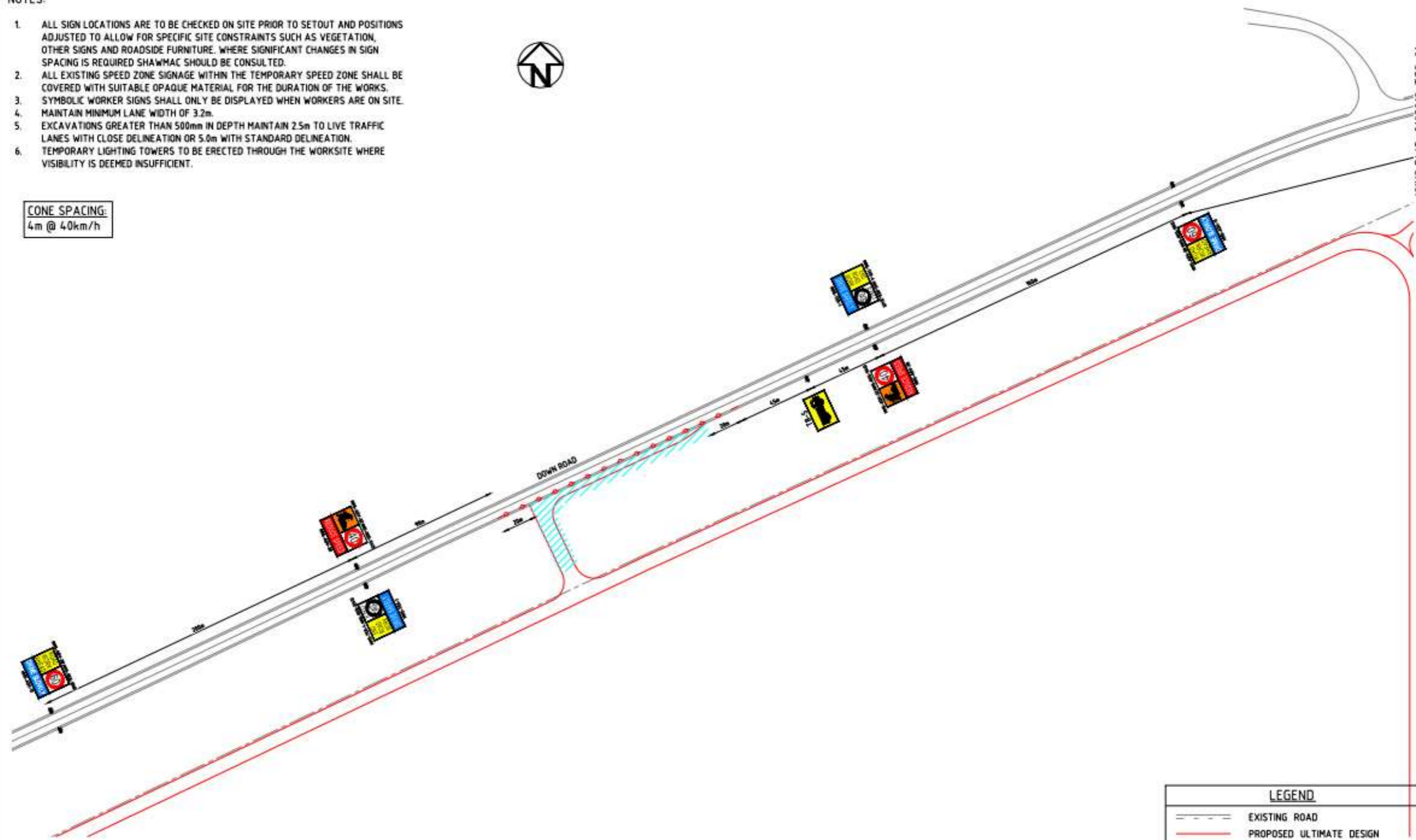
<table border="1"> <thead> <tr> <th>No.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>APPR.</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>06.04.2021</td> <td>ISSUED FOR CLIENT REVIEW</td> <td>YK</td> </tr> </tbody> </table>			No.	DATE	DESCRIPTION	APPR.	A	06.04.2021	ISSUED FOR CLIENT REVIEW	YK	<p>CLIENT:</p>	<p>1ST FLOOR 938 ALBANY HIGHWAY EAST VICTORIA PARK WA 6101 P. 9355 1930 E. admin@shawmac.com.au</p> <p>CONSULTING CIVIL AND TRAFFIC ENGINEERS</p>	<p>AWTM NAME: A.ANASTAS</p> <p>AWTM NO.: 19-6370-02</p> <p>AWTM DATE: 06.04.21</p> <p>REVIEWED BY: Y.KE</p> <p>AWTM NO.: 17-4573-02</p> <p>REVIEWED DATE: 06.04.21</p>	<p>TITLE:</p> <p>ALBANY MOTORSPORT PARK ACCESS CONSTRUCTION WORKS VERGE WORKS - 40km/h SCENARIO TRAFFIC GUIDANCE SCHEME</p>
No.	DATE	DESCRIPTION	APPR.											
A	06.04.2021	ISSUED FOR CLIENT REVIEW	YK											
<p>ISSUE AND REVISION HISTORY</p>			<p>SCALE: 1:1000</p>	<p>DRAWING NUMBER: 2103019-TGS-01</p>	<p>REV: A</p>									

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CONE SPACING:
4m @ 40km/h



HOURS OF ALLOWABLE IMPLEMENTATION:
DAY SHIFT: 0700 - 1900 HOURS

LEGEND	
	EXISTING ROAD
	PROPOSED ULTIMATE DESIGN
	PROPOSED CONES/BOLLARDS
	WORK ZONE

No.	DATE	DESCRIPTION	APPR
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ISSUE AND REVISION HISTORY			

CLIENT:

SCALE: 1:1000

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E adam@shawmac.com.au

CONSULTING CIVIL AND TRAFFIC ENGINEERS

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AWTM NO.: 19-6370-02
AWTM DATE: 06.04.21
REVIEWED BY: Y.KE
AWTM NO.: 17-4573-02
REVIEWED DATE: 06.04.21

Anthony Anastas

Y.KE

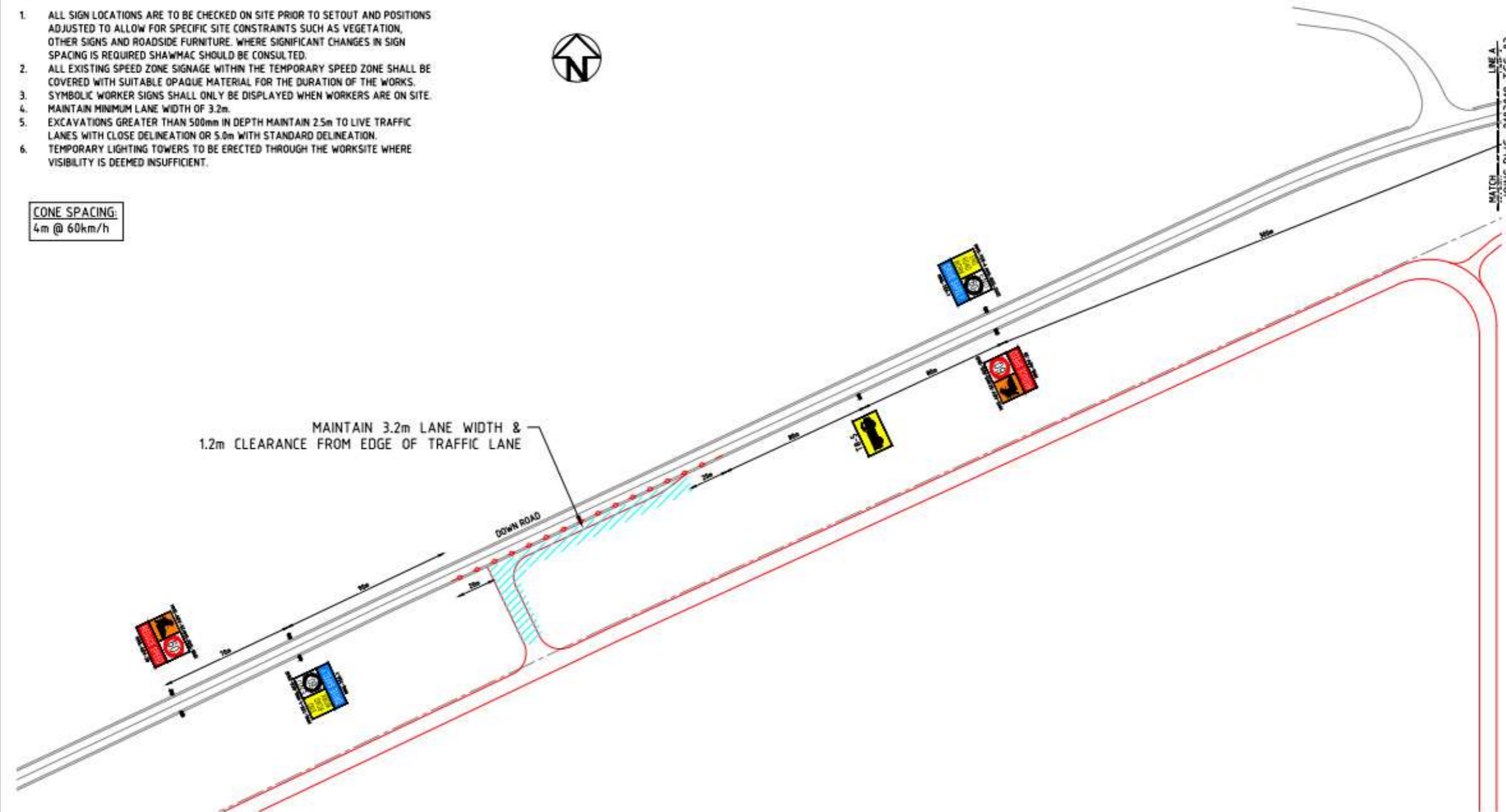
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DRAWING NUMBER:	2103019-TGS-02
REV:	A

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CONE SPACING:
4m @ 60km/h



HOURS OF ALLOWABLE IMPLEMENTATION:
DAY SHIFT: 0700 -1900 HOURS

LEGEND	
	EXISTING ROAD
	PROPOSED ULTIMATE DESIGN
	PROPOSED CONES/BOLLARDS
	WORK ZONE

No.	DATE	DESCRIPTION	APPR.
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AWTM NAME: A.ANASTAS
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AWTM DATE: 06.04.21
REVIEWED BY: Y.KE
AWTM NO.: 17-4573-02
REVIEWED DATE: 06.04.21

Anthony Anastas
Y.KE

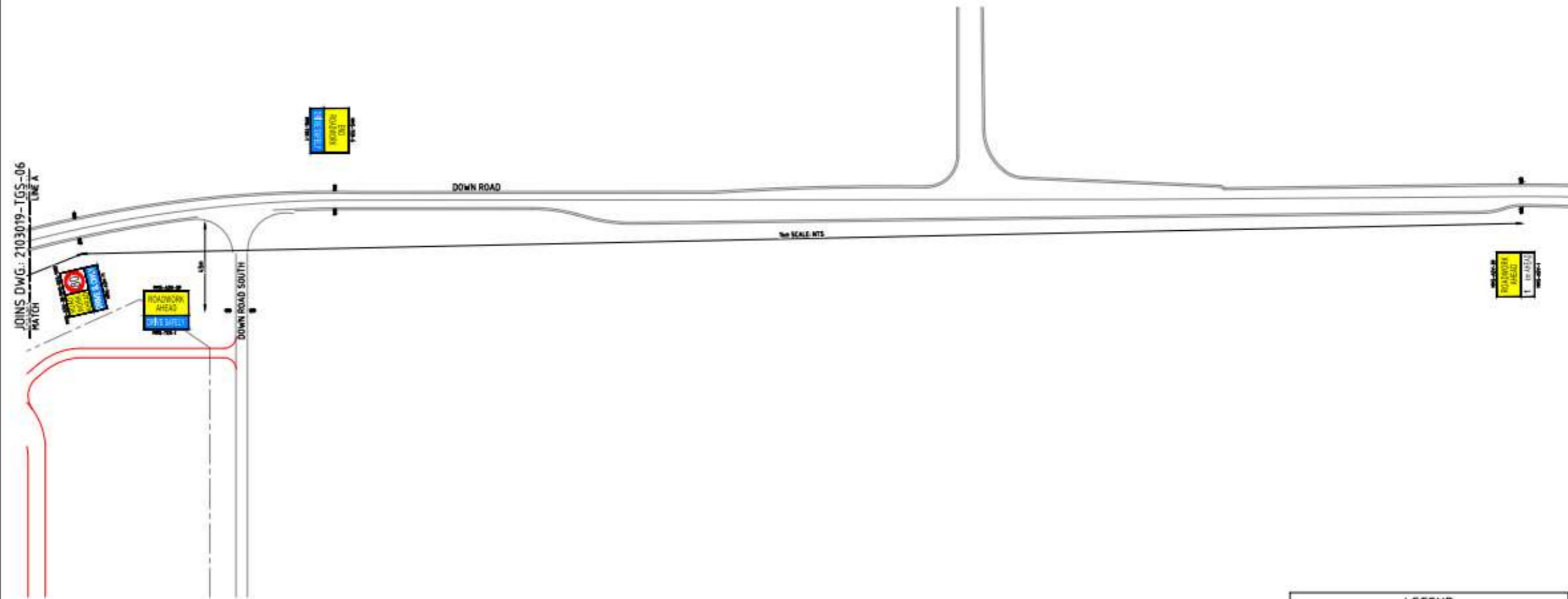
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DRAWING NUMBER:	2103019-TGS-04
REV:	A

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CONE SPACING:
4m @ 60km/h



HOURS OF ALLOWABLE IMPLEMENTATION:
DAY SHIFT: 0700 - 1900 HOURS

LEGEND	
	EXISTING ROAD
	PROPOSED ULTIMATE DESIGN
	PROPOSED CONES/BOLLARDS
	WORK ZONE

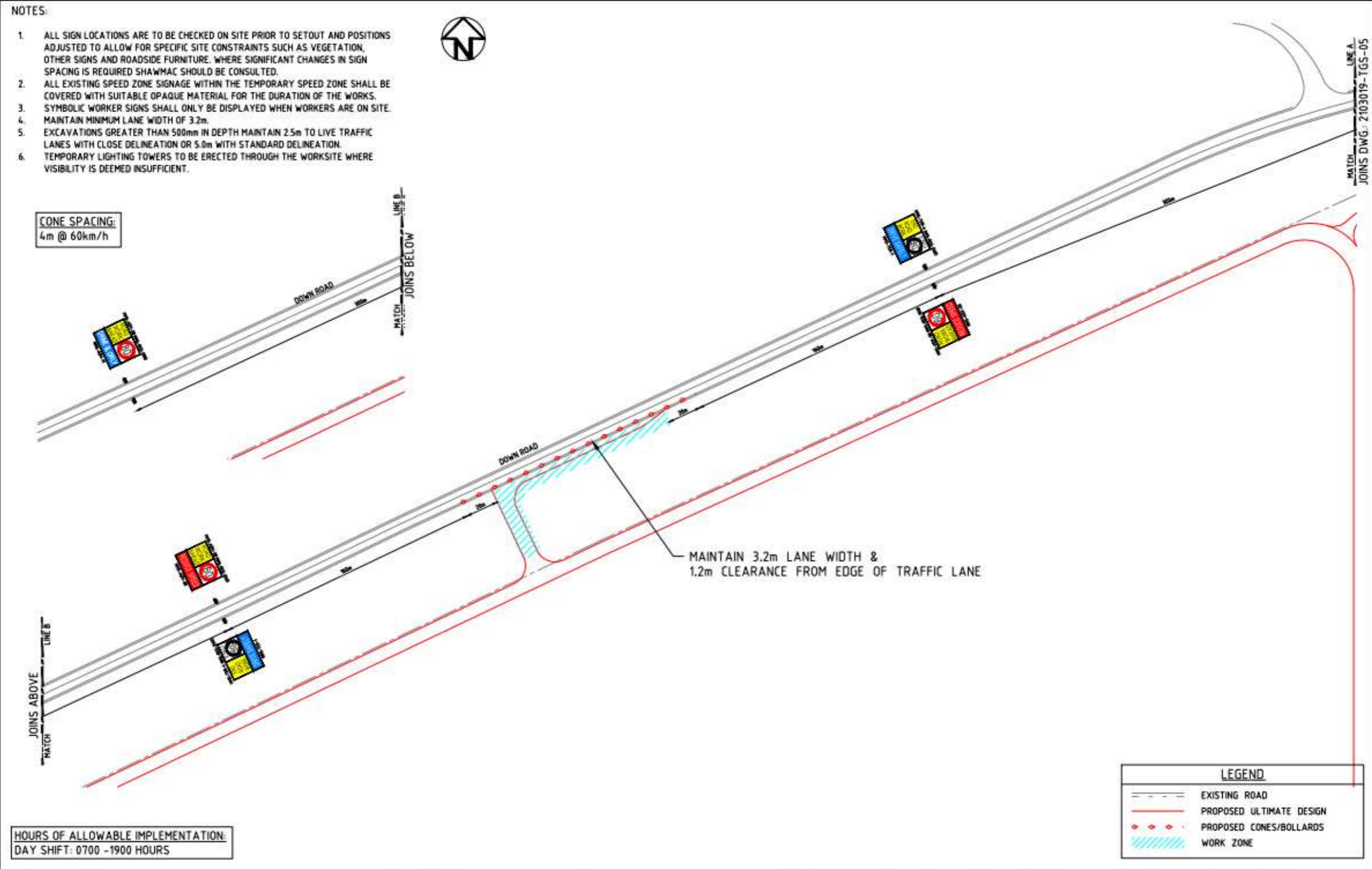
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CONE SPACING:
4m @ 60km/h



HOURS OF ALLOWABLE IMPLEMENTATION:
DAY SHIFT: 0700 - 1900 HOURS

No.	DATE	DESCRIPTION	APPR.
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SCALE: 1:1000

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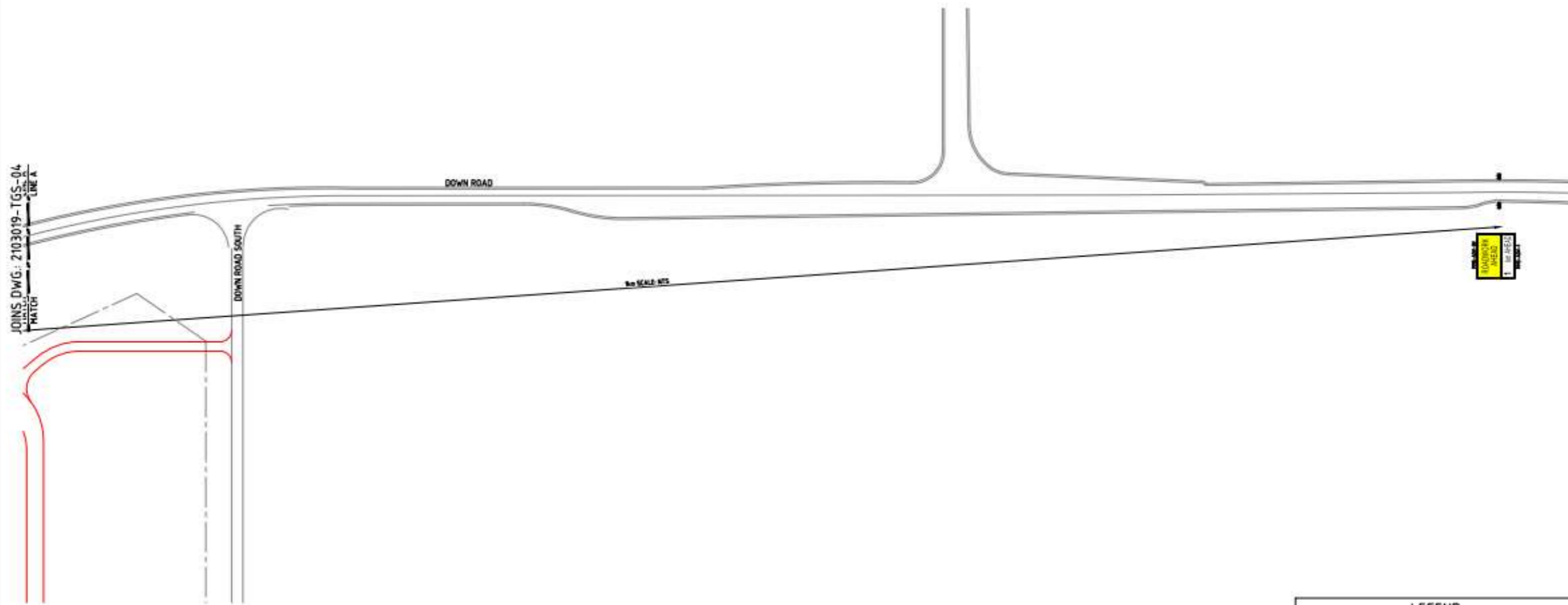
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REV:	A

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CONE SPACING:
8m @ 80km/h



HOURS OF ALLOWABLE IMPLEMENTATION:
DAY SHIFT: 0700 - 1900 HOURS

LEGEND	
	EXISTING ROAD
	PROPOSED ULTIMATE DESIGN
	PROPOSED CONES/BOLLARDS
	WORK ZONE

No.	DATE	DESCRIPTION	APPR.
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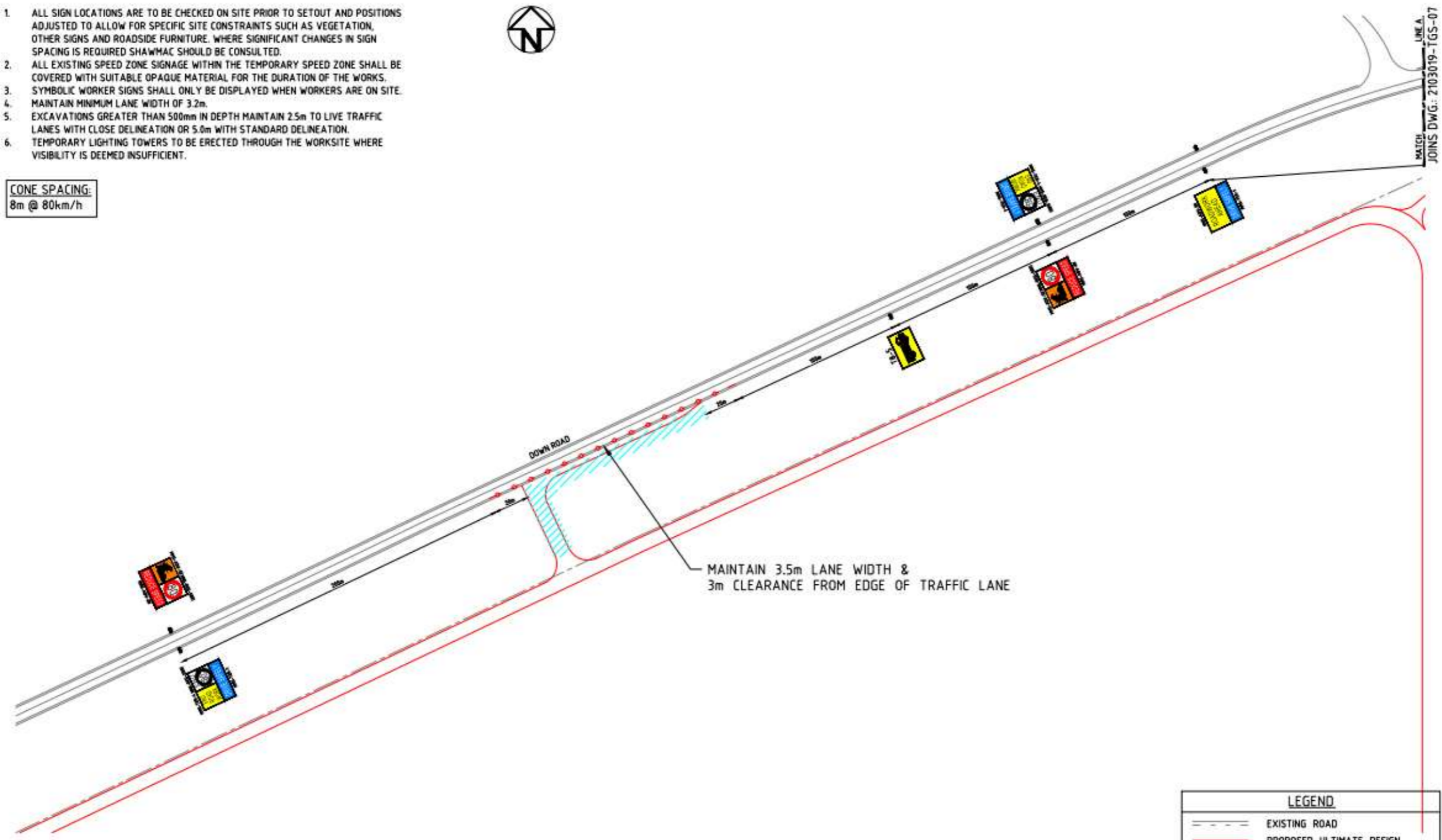
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TITLE:	ALBANY MOTORSPORT PARK ACCESS CONSTRUCTION WORKS VERGE WORKS - 80km/h SCENARIO TRAFFIC GUIDANCE SCHEME
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CONE SPACING:
8m @ 80km/h



HOURS OF ALLOWABLE IMPLEMENTATION:
DAY SHIFT: 0700 - 1900 HOURS

LEGEND	
	EXISTING ROAD
	PROPOSED ULTIMATE DESIGN
	PROPOSED CONES/BOLLARDS
	WORK ZONE

No.	DATE	DESCRIPTION	APPR.
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DRAWING NUMBER:	2103019-TGS-08
REV:	A

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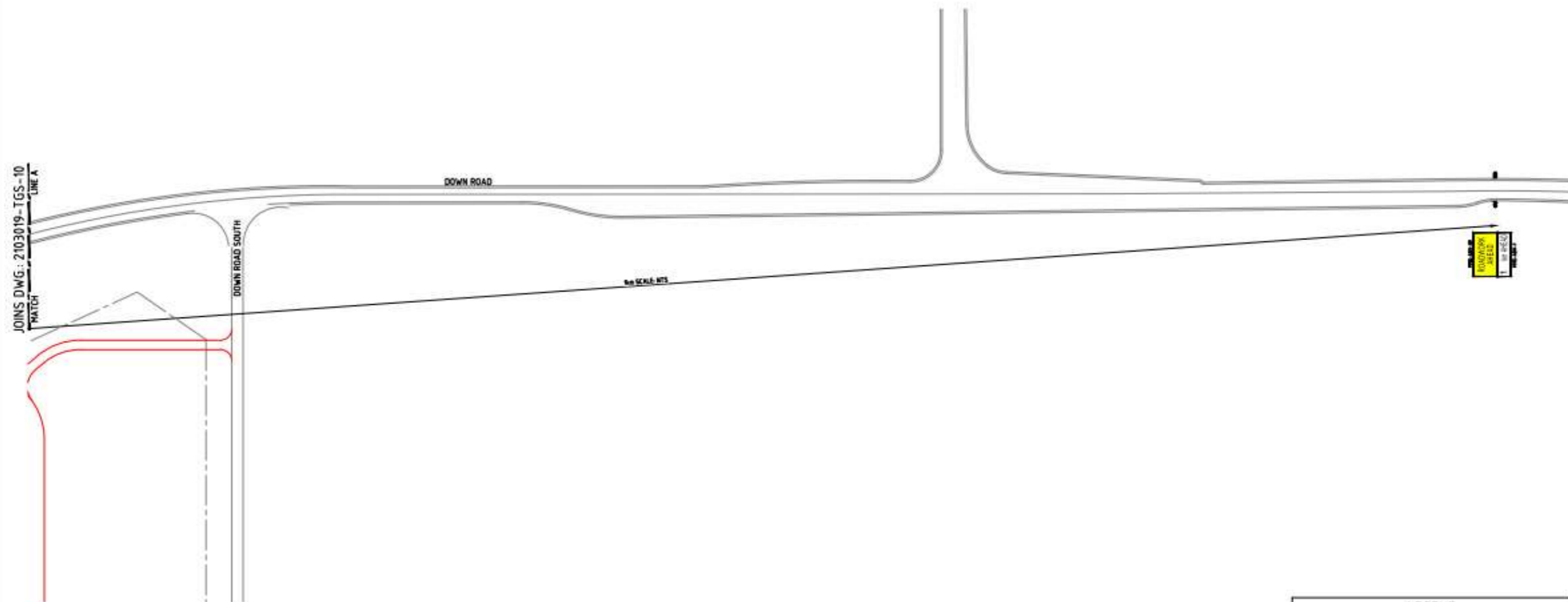
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CONE SPACING:
8m @ 80km/h



HOURS OF ALLOWABLE IMPLEMENTATION:
DAY SHIFT: 0700 - 1900 HOURS

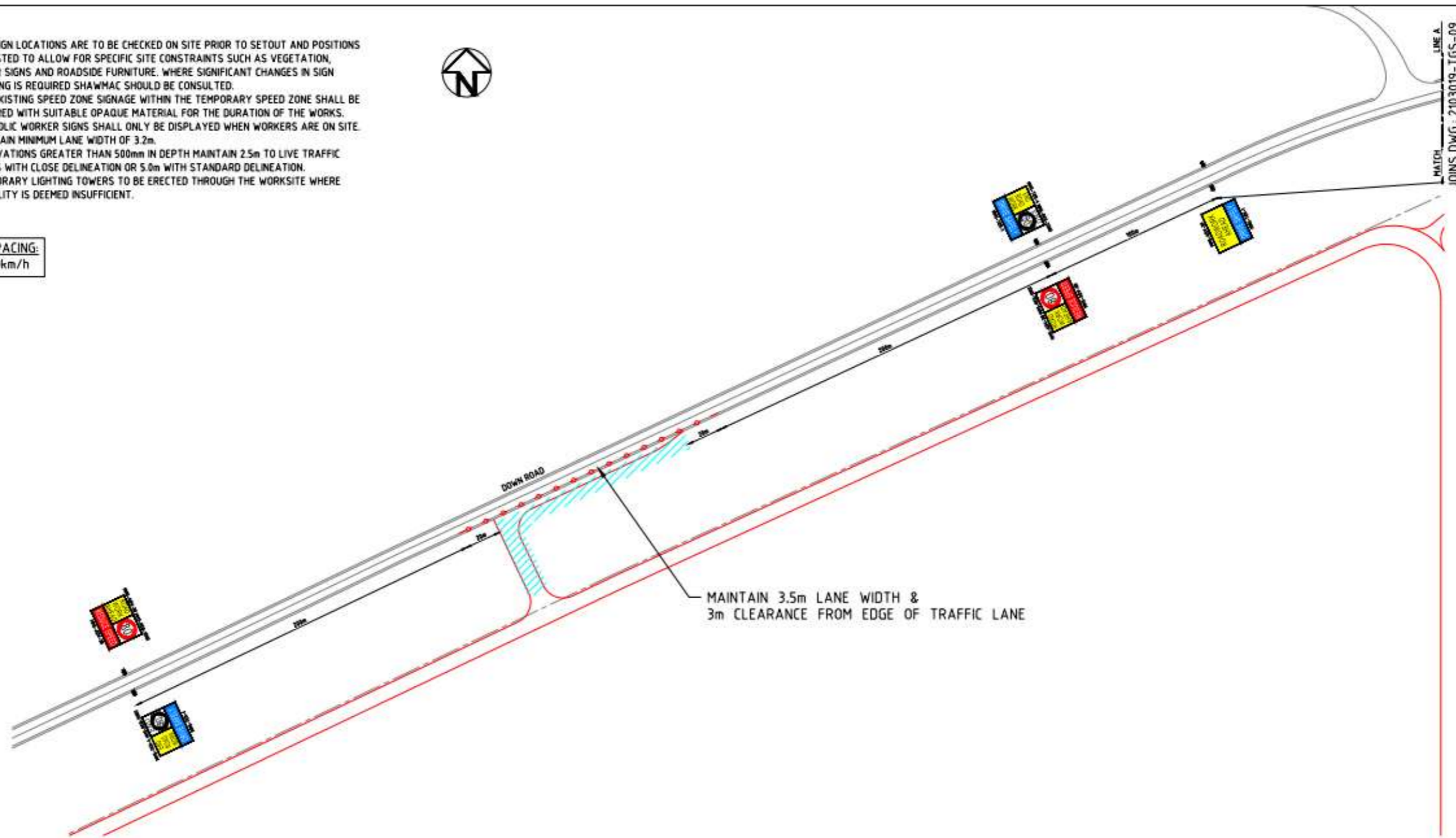
LEGEND	
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			CLIENT:					AWTM NAME: A. ANASTAS AWTM NO.: 19-6370-02 AWTM DATE: 06.04.21		TITLE: ALBANY MOTORSPORT PARK ACCESS CONSTRUCTION WORKS VERGE WORKS AFTER CARE - 80km/h SCENARIO TRAFFIC GUIDANCE SCHEME	
						1ST FLOOR 938 ALBANY HIGHWAY EAST VICTORIA PARK WA 6101 P 9395 1900 E admin@shawmac.com.au		REVIEWED BY: Y.KE AWTM NO.: 17-4573-02 REVIEWED DATE: 06.04.21		DRAWING NUMBER: 2103019-TGS-09 REV: A	
No. DATE DESCRIPTION APPR.			SCALE: 1:1000		CONSULTING CIVIL AND TRAFFIC ENGINEERS		LAST SAVED BY: Yyke DATE: 6 April 2021 12:55 AM				

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6. TEMPORARY LIGHTING TOWERS TO BE ERECTED THROUGH THE WORKSITE WHERE VISIBILITY IS DEEMED INSUFFICIENT.

CONE SPACING:
8m @ 80km/h



HOURS OF ALLOWABLE IMPLEMENTATION:
DAY SHIFT: 0700 -1900 HOURS

LEGEND	
	EXISTING ROAD
	PROPOSED ULTIMATE DESIGN
	PROPOSED CONES/BOLLARDS
	WORK ZONE

No.	DATE	DESCRIPTION	APPR.
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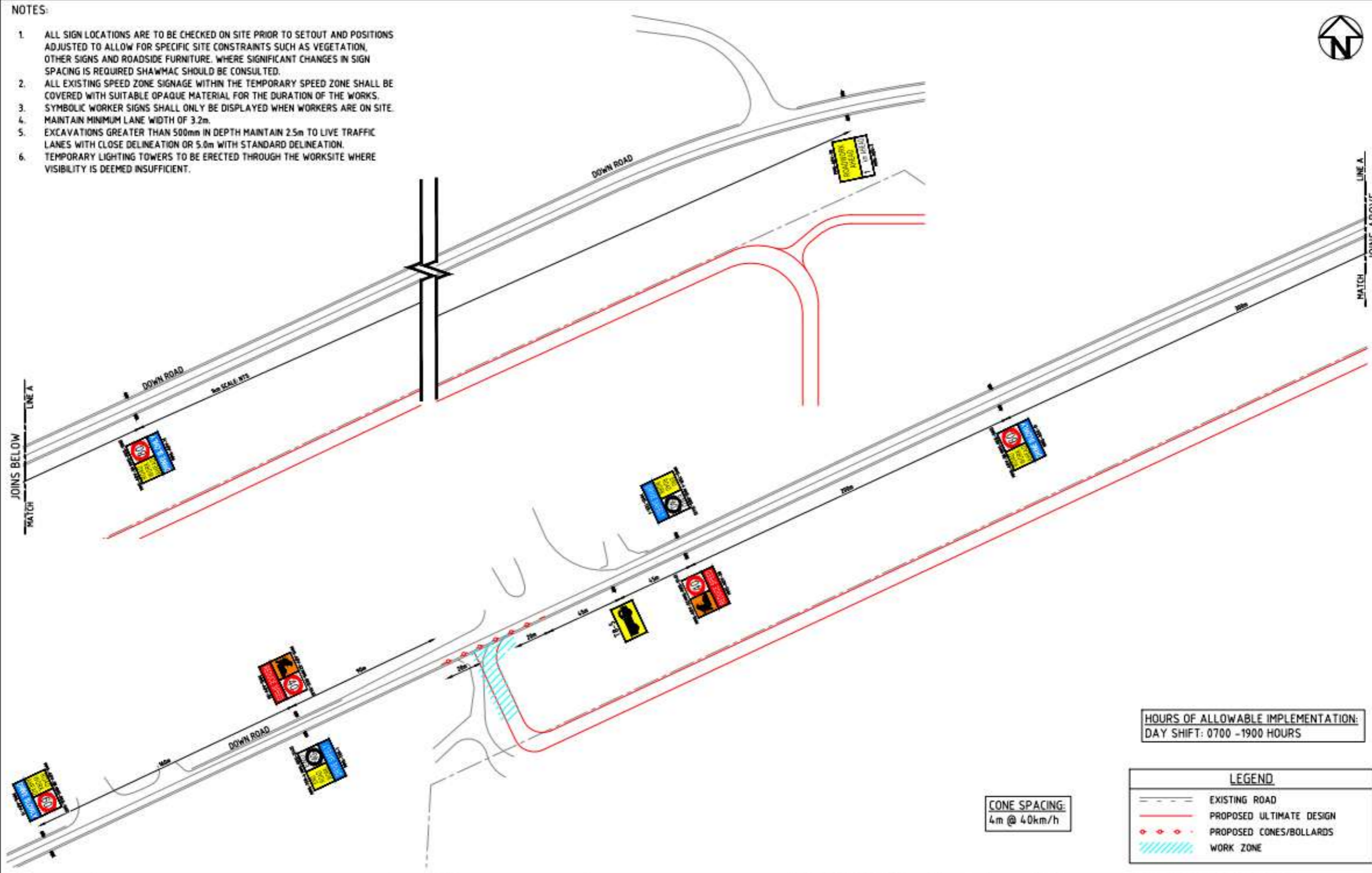
AWTM NAME: A.ANASTAS
AWTM NO.: 19-6370-02
AWTM DATE: 06.04.21
REVIEWED BY: Y.KE
AWTM NO.: 17-4573-02
REVIEWED DATE: 06.04.21

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TITLE:	ALBANY MOTORSPORT PARK ACCESS CONSTRUCTION WORKS VERGE WORKS AFTER CARE - 80km/h SCENARIO TRAFFIC GUIDANCE SCHEME
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REVIEWED DATE: 06.04.21

TITLE: ALBANY MOTORSPORT PARK
ACCESS CONSTRUCTION WORKS
VERGE WORKS - 40km/h SCENARIO
TRAFFIC GUIDANCE SCHEME

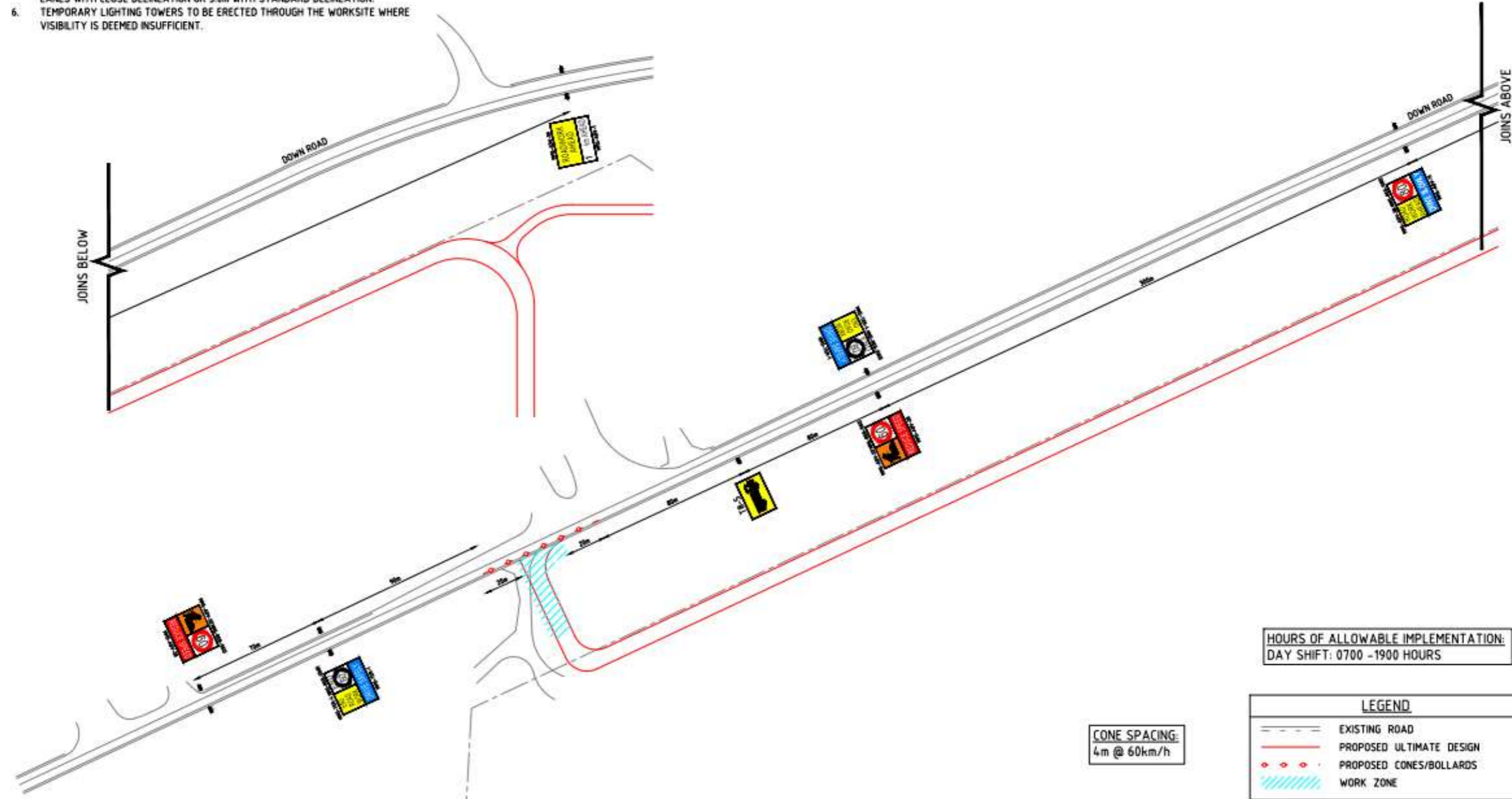
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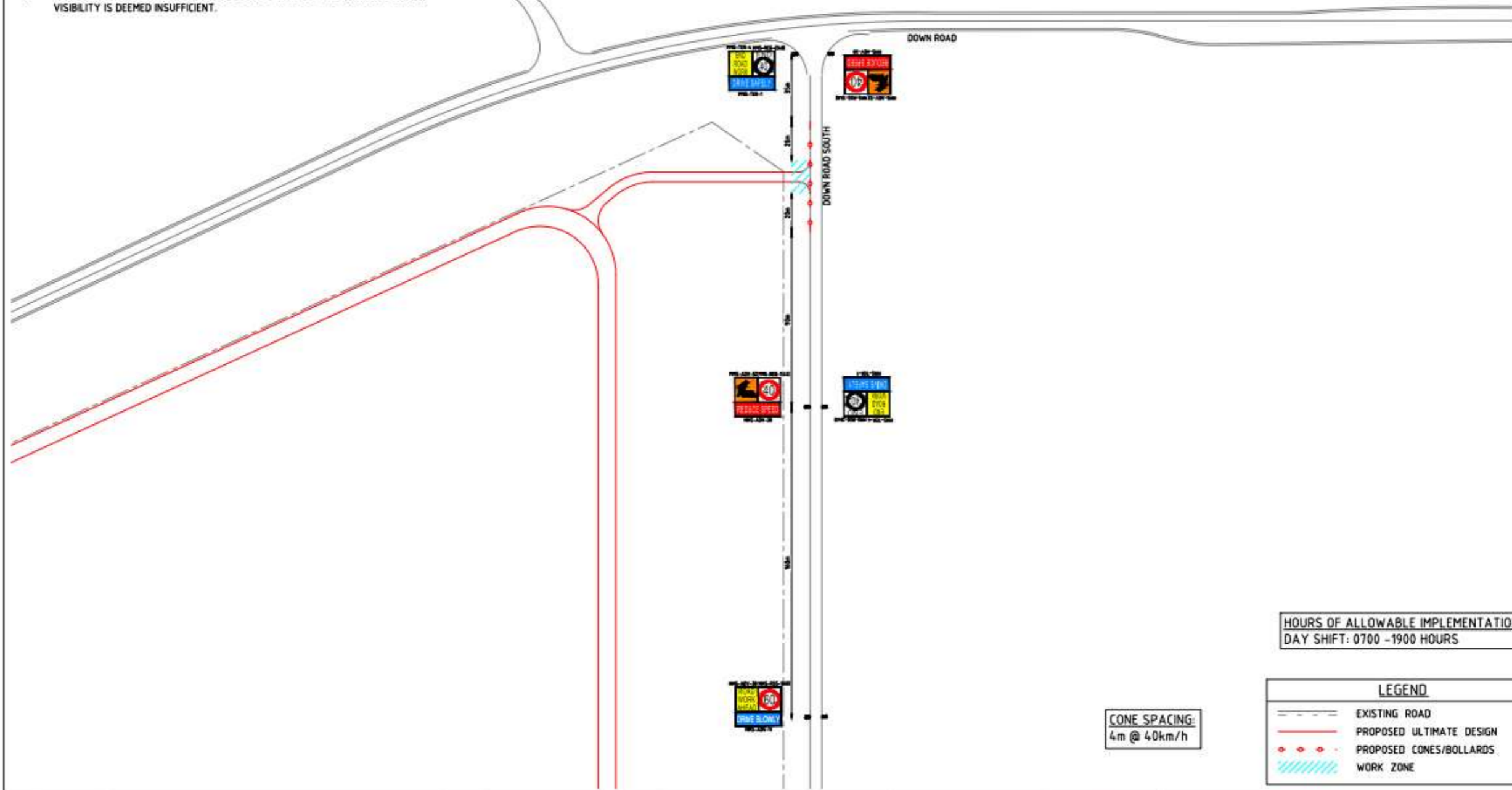
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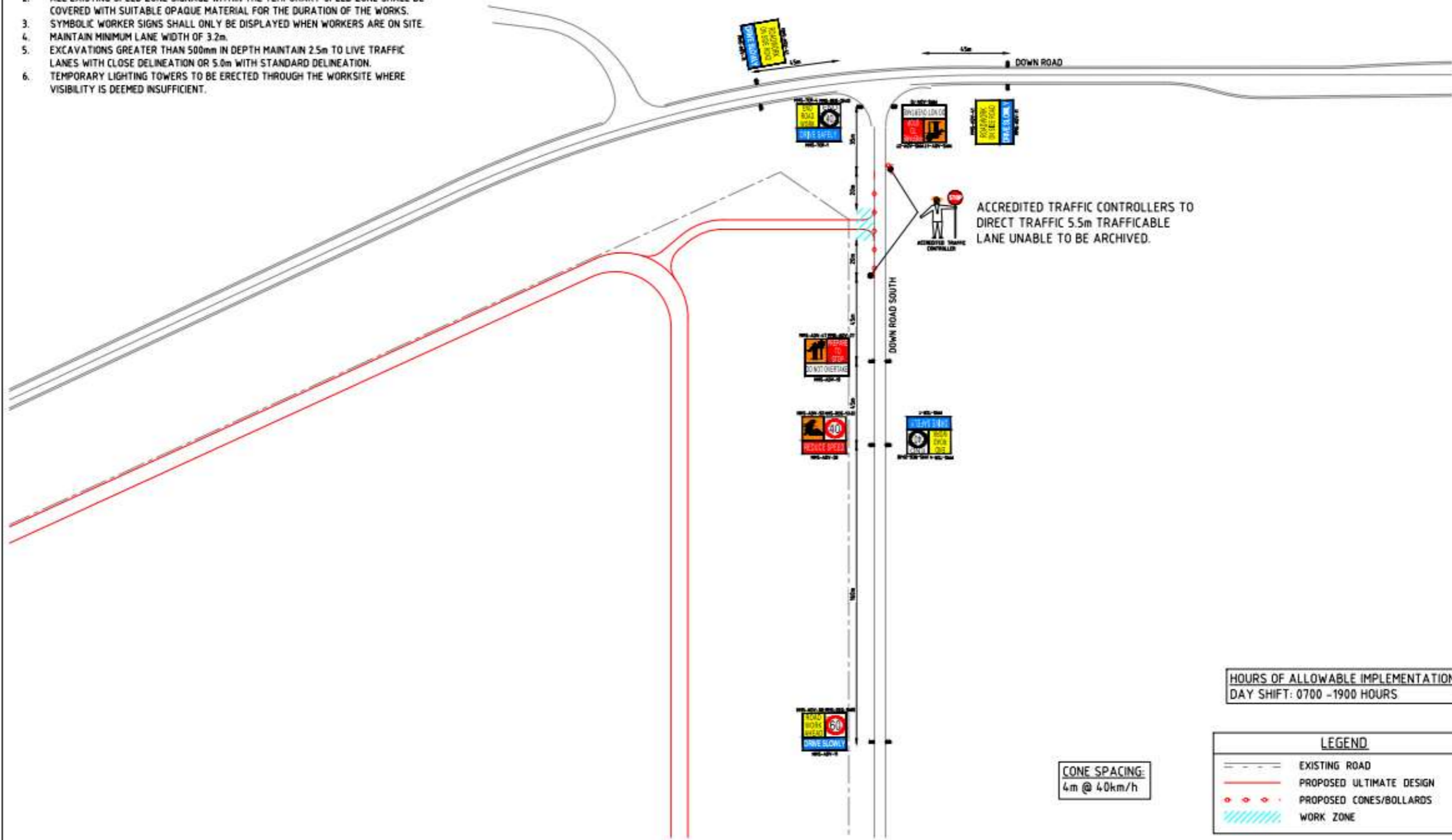
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AWTM NO.: 17-4573-02
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TITLE:	ALBANY MOTORSPORT PARK ACCESS CONSTRUCTION WORKS VERGE WORKS - 40km/h SCENARIO TRAFFIC GUIDANCE SCHEME
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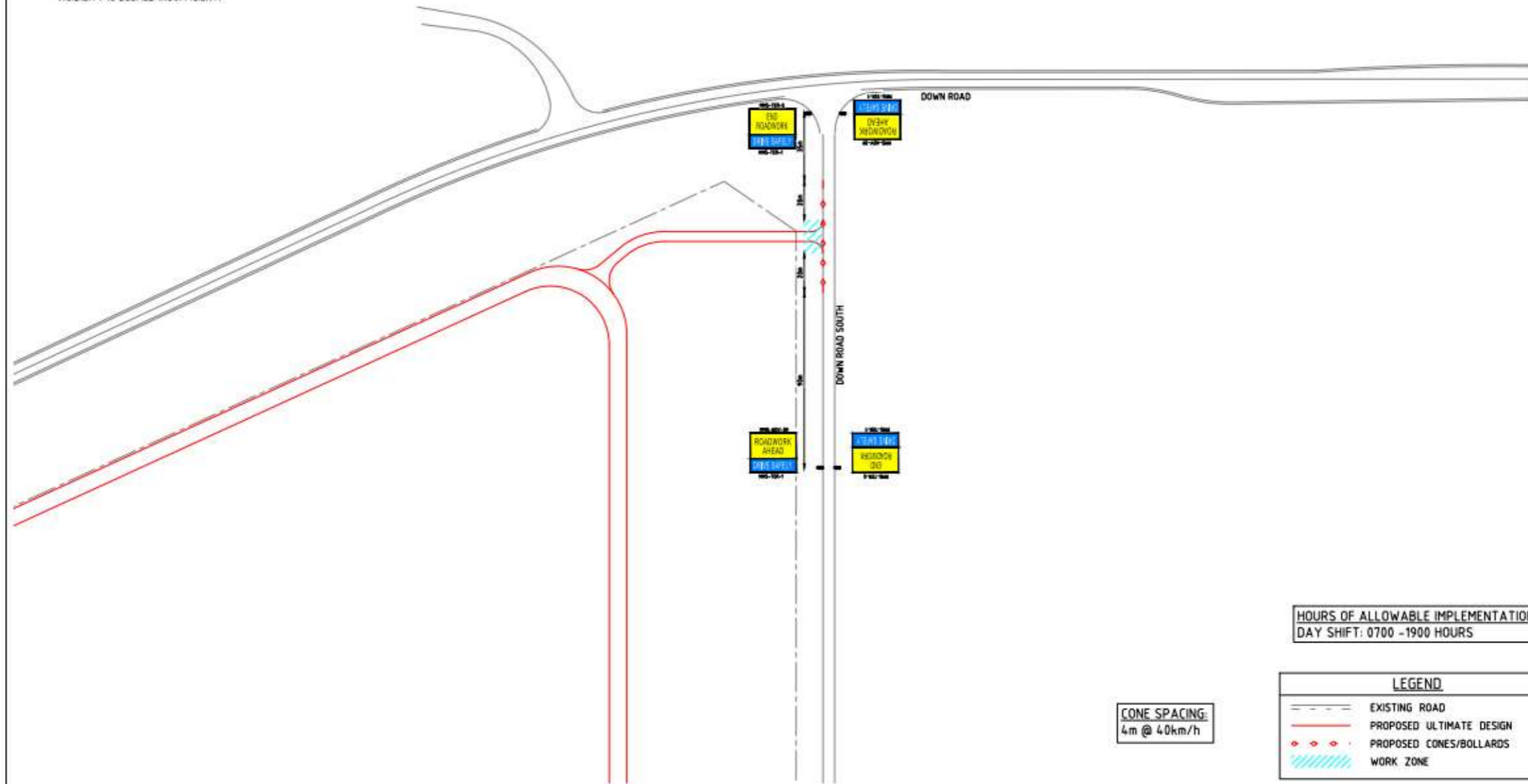
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AWTM NO.: 19-6370-02
AWTM DATE: 06.04.21
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AWTM NO.: 17-4573-02
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TITLE: ALBANY MOTORSPORT PARK
ACCESS CONSTRUCTION WORKS
TEMPORARY HOLDING TRAFFIC - 40km/h SCENARIO
TRAFFIC GUIDANCE SCHEME
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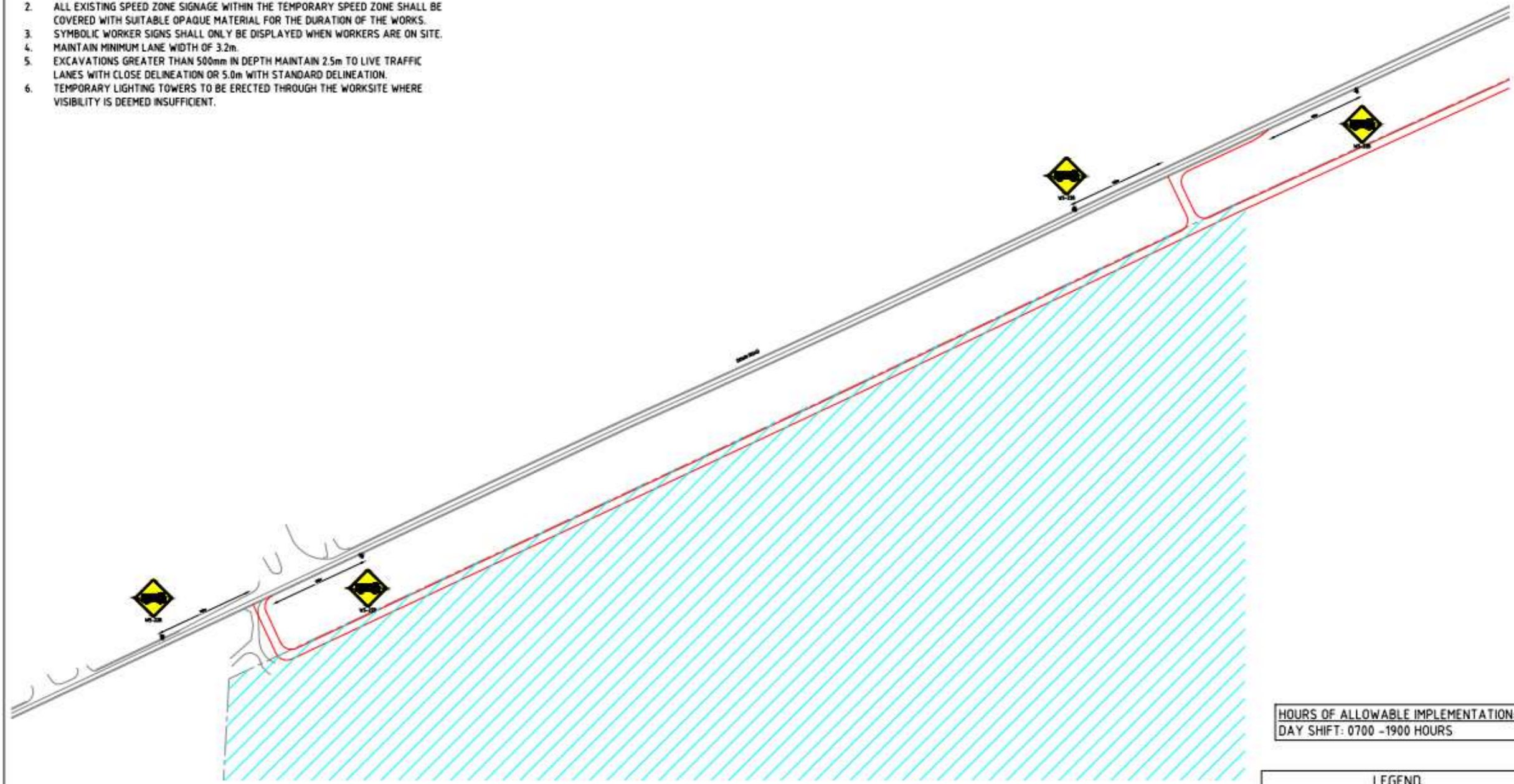
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DAY SHIFT: 0700 -1900 HOURS

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	PROPOSED CONES/BOLLARDS
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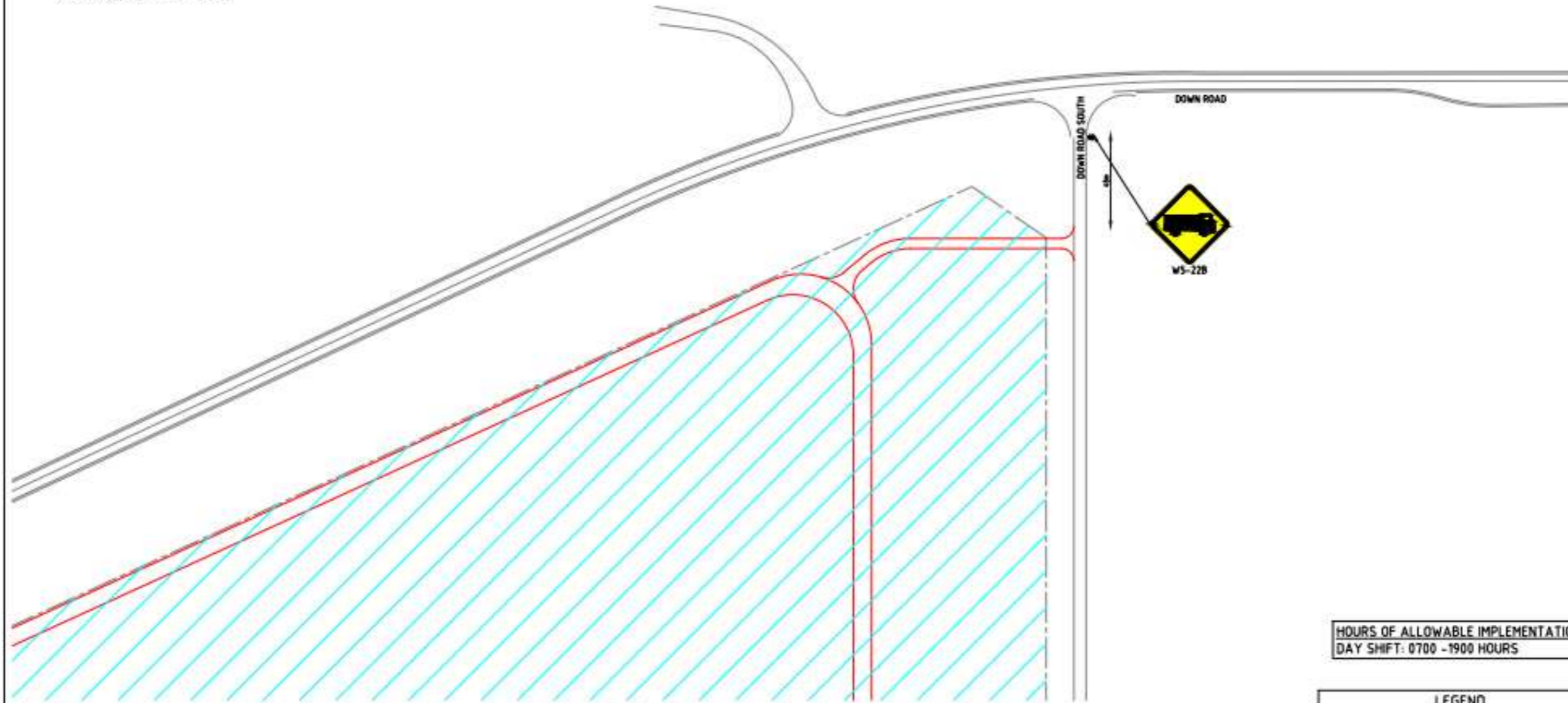
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TITLE: ALBANY MOTORSPORT PARK INTERNAL WORKS ACCESS CONTROL LAYOUT TRAFFIC GUIDANCE SCHEME	DRAWING NUMBER: 2103019-TGS-16	REV: A
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HOURS OF ALLOWABLE IMPLEMENTATION:
DAY SHIFT: 0700 - 1900 HOURS

LEGEND	
	EXISTING ROAD
	PROPOSED ULTIMATE DESIGN
	PROPOSED CONES/BOLLARDS
	WORK ZONE

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REVIEWED DATE: 06.04.21

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TITLE:	ALBANY MOTORSPORT PARK INTERNAL WORKS ACCESS CONTROL LAYOUT TRAFFIC GUIDANCE SCHEME
DRAWING NUMBER:	2103019-TGS-17
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Appendix G – Barrier Design Sheets

N/A



Appendix H- Stakeholder Approval



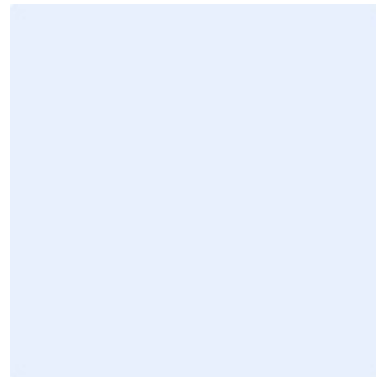
Appendix B – Event Traffic Management Plan



EVENT TRAFFIC MANAGEMENT PLAN

ALBANY MOTORSPORT PARK
MOTOR EVENTS
PREPARED FOR

EVENT ORGANISER



I, YUYANG KE (AUS AWTM-19-6370-02), declare that I have designed this Traffic Management Plan following a site inspection on 11/03/2021 The Traffic Management Plan prepared, is in accordance with the Main Roads Code of Practice (Works and/or Events), AGTTM and AS 1742.3

	Name/Company	Accreditation Details	Date	Signature
TMP designed by:	ANTHONY ANASTAS Shawmac Consulting Civil and Traffic Engineers	AUS AWTM-20-4573-02	15/04/2021	
TMP Reviewed by:	YUYANG KE Shawmac Consulting Civil and Traffic Engineers	AUS AWTM-19-6370-02	15/04/2021	
RTM Reviewed and Endorsed by:				
Road Authority Review by:				
Road Authority Authorisation:	Road authority authorisation of the implementation of traffic signs and devices is given for Traffic Management Plan No. 2103019 Signed By: Date: Signature: Position:			

TMP No.	2103019	Revision No.	1	Date	15/04/2021
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DOCUMENT STATUS

Revision	Date	Prepared	Approved	Comments
1	14/04/21	A. Anastas	Yuyang Ke	Issued for client's review

Revision <1> Changes:		
Page Number	Header Reference	Description





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Figures

Figure 1: Location of Works 3

TABLES

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Glossary

Acronym	Definition
AGTTM	Austrorads Guide to Temporary Traffic Management
AS	Australian Standard
AS/NZS	Australian and New Zealand Standard
AWTM	Advanced Worksite Traffic Management / Manager
CoP	Traffic Management for Works on Roads Code of Practice (MRWA)
MRWA	Main Roads Western Australia
OS&H	Occupational Safety and Health
RTM	Roadworks Traffic Manager (accredited by MRWA)
SRSA	Senior Road Safety Auditor
TGS	Traffic Guidance Schemes
TMP	Traffic Management Plan
TCP	Traffic Control Plan



1. Introduction

1.1. Purpose and Scope

This Event Traffic Management Plan (TMP) outlines the traffic control and traffic management procedures to be implemented by Event Organiser and Traffic Management Personnel to manage potential hazards associated with the traffic environment during the event.

Scope is to management motor sport event by event organiser in Albany Motorsport Park between Motocross Precinct and Race Track Precinct.

1.2. Objectives and Strategies

The objectives of the Traffic Management Plan is to ensure:

- The safety of the event participants.
- All road users, including vulnerable road users, are safely guided around, through or past the event activity.
- The performance of the road network is not unduly impacted and the disruption and inconvenience to all road users are minimised for the duration of the event.
- Impacts on users of the road reserve and adjacent properties and facilities are minimised.

In an effort to meet these objectives the Traffic Management Plan will incorporate the following strategies:

- Providing a sufficient number of traffic lanes to accommodate vehicle volumes.
- Ensuring delays are minimised.
- Ensuring all road users are managed including motorists, pedestrians, cyclists, people with disabilities and people using public transport.

2. Event Overview

2.1. Event Location

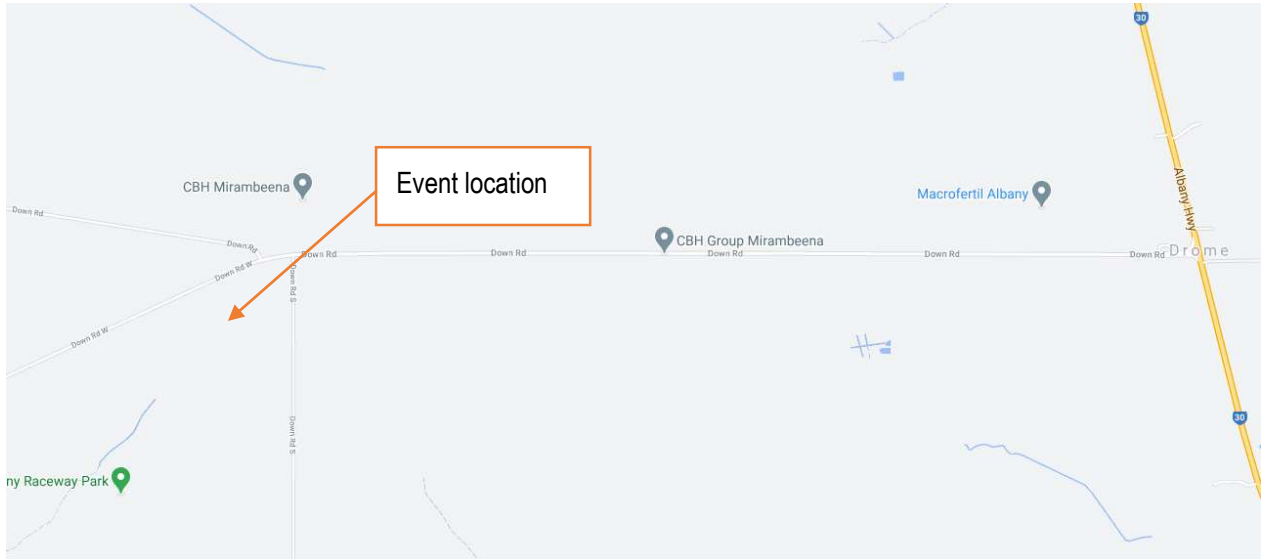


Figure 1: Location of Works

2.2. Event Details, Site Assessment and Site Constraint /Impacts

Item	Description
Event Scope:	Albany Motorsport Park event management
Event Category:	Motor sport
Location:	Lot 5780 Down Road, Drome, WA 6330
Road Classification, Existing Speed:	Down Road – Access Road: 110km/h Down Road South - local access road (Gravel)
Road Authority:	City of Albany
Local Government:	City of Albany
Event Organiser:	TBC
Details of Activity:	Traffic management for: <ul style="list-style-type: none"> • Motocross Precinct • Race Track Precinct
Staging of Event:	N/A
Date of Event:	TBC
Event Start and Finish Time:	TBC
Duration of Event:	<ul style="list-style-type: none"> • 8am to 6pm • 6pm to 10pm
Other Constraints:	N/A



Concurrent/Adjacent Works or Projects	TBC
--	-----

2.3. Existing Traffic and Road Environment

Item	Description
Traffic Volume and Composition	Down Road: 844 vpd(2017) Down Road South: no data
Existing Road Configuration	Down Road: single carriageway with one lane in each direction approximately 9m wide. Down Road South: Gravel approximately 5m wide.
Existing Pedestrian / Cyclists Facilities	N/A

2.4. Overview of Proposed Temporary Traffic Management

Item	Description
Temporary Traffic Management Descriptions:	<i>Speed reduction to 60km/h and traffic wardens to direct traffic for the duration of the event.</i>
Speed Zone Dates and Times	N/A
Lane Closures Dates and Times	N/A
Road Closures Dates and Times	N/A
Signal Modifications Description	N/A
Proposed Lane Widths	Existing lane widths to be maintained
Road Safety Barrier	N/A

2.5. Event Representatives

The event organiser has the ultimate responsibility and authority to ensure the TMP is implemented as designed. GHD has appointed Shawmac to prepare this Traffic Management Plan and associated controls for the event.

The TMP will be implemented by TBC

Position	Name	Contact Details
Event Organiser	TBC	
Road Authority	City of Albany	Phone: (08) 6820 3000 Email: staff@albany.wa.gov.au Post: PO Box 484, ALBANY, WA 6331
Local Government	City of Albany	Phone: (08) 6820 3000 Email: staff@albany.wa.gov.au



		Post: PO Box 484, ALBANY, WA 6331
Event Marshal	TBC	
Traffic Management Supervisor	TBC	
TMP Design	Yuyang Ke Shawmac Pty Ltd	Email: yyke@shawmac.com.au mob: 0421591428
TMP Implementation	TBC	



3. Risk Management

The following details the preliminary assessment of site hazards likely to be encountered, the level of risk associated with each and the control proposed. Note that the risk level is the level of assessed risk without the controls in place. The controls listed have been determined as being appropriate in reducing the risk to a level that is acceptable. The hierarchy of control has been utilised to ensure that the highest practicable level of protection and safety is selected:

- Elimination
- Substitution
- Isolation
- Engineering
- Administration
- Personal Protection Equipment

In evaluating the options, a key consideration is whether the option takes traffic around, through or past the worksite.

3.1. Risk Classification Tables

3.1.1. QUALITATIVE MEASURES OF CONSEQUENCE OR IMPACT

Level	Consequence	Description
1	Insignificant	<ul style="list-style-type: none"> • Mid-block hourly traffic flow per lane is equal to or less than the allowable lane capacity detailed in AGTTM. No impact to the performance of the network. • Affected intersection leg operates at a Level of Service (LoS) of A or B. • No property damage.
2	Minor	<ul style="list-style-type: none"> • Mid-block hourly traffic flow per lane is greater than the allowable road capacity and less than 110% of the allowable road capacity as detailed in AGTTM. Minor impact to the performance of the network. • Intersection performance operates at a Level of Service (LoS) of C. • Minor property damage.
3	Moderate	<ul style="list-style-type: none"> • Midblock hourly traffic flow per lane is equal to and greater than 110% and less than 135% of allowable road capacity as detailed in AGTTM. Moderate impact to the performance of the network. • Intersection performance operates at a Level of Service (LoS) of D. • Moderate property damage.
4	Major	<ul style="list-style-type: none"> • Midblock hourly traffic flow per lane is equal to and greater than 135% and less than 170% of allowable road capacity as detailed in AGTTM. Major impact to the performance of the network. • Intersection performance operates at a Level of Service (LoS) of E. • Major property damage.
5	Catastrophic	<ul style="list-style-type: none"> • Midblock hourly traffic flow per lane is equal to and greater than 170% of allowable road capacity as detailed in AGTTM. Unacceptable impact to the performance of the network. • Intersection performance operates at a Level of Service (LoS) of F. • Total property damage



3.1.2. OSH QUALITATIVE MEASURES OF CONSEQUENCE OR IMPACT

Level	Consequence	Description
1	Insignificant	No treatment required.
2	Minor	First aid treatment required.
3	Moderate	Medical treatment required or Lost Time Injury.
4	Major	Single fatality or major injuries or severe permanent disablement.
5	Catastrophic	Multiple fatalities.

3.1.3. QUALITATIVE MEASURES OF LIKELIHOOD

Level	Likelihood	Description
A	Almost certain	The event or hazard: <ul style="list-style-type: none"> is expected to occur in most circumstances, will probably occur with a frequency more than 10 times per year.
B	Likely	The event or hazard: <ul style="list-style-type: none"> will probably occur in most circumstances, will probably occur with a frequency of between 1 and 10 times per year.
C	Possible	The event or hazard: <ul style="list-style-type: none"> might occur at some time, will probably occur with a frequency of 0.1 to 1 times per year (i.e. once in 1 to 10 years).
D	Unlikely	The event or hazard: <ul style="list-style-type: none"> could occur at some time, will probably occur with a frequency of 0.02 to 0.1 times per year (i.e. once in 10 to 50 years).
E	Rare	The event or hazard: <ul style="list-style-type: none"> may occur only in exceptional circumstances, will probably occur with a frequency of less than 0.02 times per year (i.e. less than once in 50 years).

IMPORTANT NOTE: The likelihood of an event or hazard occurring shall first be assessed over the duration of the activity (i.e. “period of exposure”). For risk assessment purposes the assessed likelihood shall then be proportioned for a “period of exposure” of one year.

Example: An activity has a duration of 6 weeks (i.e. “period of exposure” = 6 weeks). The event or hazard being considered is assessed as likely to occur once every 20 times the activity occurs (i.e. likelihood or frequency = 1 event/20 times activity occurs = 0.05 times per activity). Assessed annual likelihood or frequency = 0.05 times per activity x 52 weeks/6 weeks = 0.4 times per year. Assessed likelihood = Possible.



3.1.4. QUALITATIVE RISK ANALYSIS MATRIX – RISK RATING

Likelihood	Consequences				
	Insignificant 1	Minor 2	Moderate 3	Major 4	Catastrophic 5
A (almost certain.)	Low 5	High 10	High 15	Very High 20	Very High 25
B (Likely)	Low 4	Medium 8	High 12	Very High 16	Very High 20
C (Possible)	Low 3	Low 6	Medium 9	High 12	High 15
D (Unlikely)	Low 2	Low 4	Low 6	Medium 8	High 10
E (Rare)	Low 1	Low 2	Low 3	Low 4	Medium 7

3.1.5. MANAGEMENT APPROACH FOR RESIDUAL RISK RATING

Residual Risk Rating	Required Treatment
Very High	Unacceptable risk. HOLD POINT. Work cannot proceed until risk has been reduced.
High	High priority, OSH MR and Roadworks Traffic Manager (RTM) must review the risk assessment and approve the treatment and endorse the TGS prior to its implementation.
Medium	Medium Risk, standard traffic control and work practices subject to review by accredited AWTM personnel prior to implementation.
Low	Managed in accordance with the approved management procedures and traffic control practices.



3.2. Risk Register

Item	Risk Event	Consequence	Pre - treatment Risk			Treatment	Residual Risk		
			L	C	RR		L	C	RR
3.2.1 Environmental									
3.2.1.1	Sun glare causing decreased visibility of traffic control delineation and signage for motorists resulting in serious injury or fatality.	Serious injury or fatality.	C	4	H12	Where sun glare is identified as adversely affecting a driver's ability to sight signage and / or traffic control devices, sign locations may need to be adjusted and additional delineation and/or traffic control devices provided to address the risk from glare. Where traffic control is adversely affected by glare at sunset and sunrise, traffic controllers may need to assist in maintaining low traffic speeds. All changes are to be noted in the daily diary.	D	4	M8
3.2.1.2	Headlight glare from night works causing decreased visibility of traffic control delineation and signage for motorists resulting in serious injury or fatality.	Serious injury or fatality.	C	3	M9	Traffic control personnel and site supervisor to conduct site drive assessments of temporarily installed signage and delineation to ensure devices are visible for all motorists. Where traffic control is adversely affected by head light glare from night works, traffic controllers may move or angle devices. All changes are to be noted in the daily diary.	D	3	L6
3.2.1.3	Reduced motorist's visibility of worksite due to night works causing an increase of interactions between workers and live traffic resulting in serious injury or fatality.	Serious injury or fatality.	C	4	H12	Traffic control and workers to wear High Visibility Retroreflective Vests at all time and to use night work batons. All traffic controller signs to be Class 1 Retro-reflective material. Temporary speed zones to be implemented where required for advanced warning of the worksite.	D	4	M8
3.2.1.4	Inclement weather causing hazardous environments through the worksite or reduced visibility of implemented traffic control resulting in serious injury or fatality.	Serious injury or fatality.	C	4	H12	Where adverse weather conditions are encountered during the works, the following may be implemented: 1. Signage and tapers extended by 25%. 2. 'Slippery When Wet' signs may be implemented.	D	4	M8



Item	Risk Event	Consequence	Pre - treatment Risk			Treatment	Residual Risk		
			L	C	RR		L	C	RR
						3. Where the road becomes impassable work may cease and traffic control implemented. Any adjustments to the plan shall be risk assessed and approved by someone holding a WTM or AWTM accreditation.			
3.2.1.5	Crests and curves causing reduced visibility of the worksite and implemented traffic control resulting in serious injury or fatality.	Serious injury or fatality.	C	4	H12	Sign locations can be staggered to assist driver's visibility, in accordance with Australian Standards and under the supervision of an accredited AWTM. All signs shall be regularly inspected and re-positioned as required to reduce the effects of shadows. All changes shall be recorded in the daily diary.	D	4	M8
3.2.1.6	Vegetation causing reduced visibility of the worksite and implemented traffic control resulting in serious injury or fatality.	Serious injury or fatality.	C	4	H12	Where vegetation impacts on the effectiveness of the traffic management, signage may be extended by 25% or reduced by 10% in order to increase visibility. Vegetation may be pruned to increase visibility as required and approved by LGA. All signage adjustments will be recorded within the daily diary.	D	4	M8
3.2.1.7	Temporary lighting installed adjacent to residential properties causing adverse environmental impacts for locals resulting in adverse public reaction.	Adverse public reaction.	C	3	M9	Lights to be positioned where illumination doesn't adversely affect residents. Temporary lights to be used only as required to light the worksite and temporary delineation.	D	3	L6
3.2.2 Temporary Speed Zones									
3.2.2.1	Traffic speed on affected routes in traffic lanes adjacent to the worksite creating hazardous worksites and unsafe worksite access.	Potential injury or fatality to road users, project personnel or sub-contractors.	C	4	H12	Introduction of temporary speed zones will be implemented where required to reduce risk to motorists, workers and plant. Temporary speed zones and adequate delineation will be implemented as per the Traffic Guidance Schemes and in accordance with AS 1742.3 and MRWA CoP.	D	4	M8
3.2.2.2	Traffic not adhering to proposed temporary speed zones causing an increase potential for conflicts between workers and motorists	Serious injury or fatality.	C	4	H12	Repeater signage and VMS boards to be implemented through the worksite as required. Speed zones should follow the minimum and	D	4	M8



Item	Risk Event	Consequence	Pre - treatment Risk			Treatment	Residual Risk		
			L	C	RR		L	C	RR
	resulting in serious injury or fatality.					maximum lengths provided in AS1742.3 and MRWA CoP.			
3.2.3 Excavations									
3.2.4 Traffic Control/Construction Plant & Workers/Traffic Management Design									
3.2.4.1	Incorrect implementation of temporary signage and linemarkings causing an increase of interactions between traffic control and live traffic resulting in serious injury or fatality.	Serious injury or fatality.	C	4	H12	<p>Before work commences, signs and devices at approaches to the work area shall be erected in accordance with the adopted TGS, in the following order:</p> <ol style="list-style-type: none"> 1. Advanced warning signs. 2. All intermediate advanced warning and regulatory signs and devices required in advance of the taper or start of the work area. 3. All delineating devices required to form a taper including flashing arrow signs or temporary hazard markers where required. 4. Delineation past the work area or into a side track. 5. Other warning signs or regulatory signs. <p>Delineation devices such as cones and bollards should be placed in the same sequence, i.e. those furthest in advance of the work placed first.</p>	D	4	M8
3.2.4.2	Incorrect design of temporary signage and linemarkings causing an increase of speed and errant vehicles through the worksite resulting in serious injury or fatality.	Serious injury and fatality.	C	4	H12	Traffic Management Plan and associated Traffic Guidance Schemes to be designed and endorsed by suitably accredited AWTM and RTM as required for the proposed works. Plans to be reviewed and approved by relevant LGA and road authorities prior to the implementation of the works.	D	4	M8
3.2.4.3	The interaction of work personnel with through traffic may causing an increase of	Serious injury or fatality	C	4	H12	Traffic control and delineation to be installed as per the Traffic Guidance Schemes in accordance with AS 1742.3 and MRWA CoP.	D	4	M8



Item	Risk Event	Consequence	Pre - treatment Risk			Treatment	Residual Risk		
			L	C	RR		L	C	RR
	conflicts resulting in serious injury or fatality.					Edge clearance spacing to be provided between live traffic and workers per the posted or implemented speed zones. Temporary speed zones, lane closures, road closures or reversible flow may be provided to maintain edge clearances. A TMA may be provided for where workers are within 1.2m of live traffic to protect them from oncoming vehicles. TMA's to be installed 20m prior to the work area and 40m where site entrances are required. Workers to be within 100m of TMA for protection to be effective. Daily toolbox meetings to ensure that workers are educated on the dangers of working around live traffic.			
3.2.4.4	Construction traffic entering and leaving the construction site causing an increase of rear end crashes through the worksite resulting in serious injury.	Serious injury.	B	3	H12	<p>Site entry and exit points will be provided for construction traffic at strategic locations.</p> <p>Vehicles shall:</p> <ol style="list-style-type: none"> 1. Decelerate slowly and signal their intention by indicator to leave the traffic stream; 2. Activate the vehicle's rotating yellow lamp, where fitted, once a speed of 20 km/h. has been reached and at least 50m prior to the exit location. 3. Switch on the vehicle hazard lights once the vehicle is stationary. 4. Where risks associated with unassisted exit or entry to or from the traffic stream are high, Traffic Controllers should be used to assist entry and exit movements. <p>Spotters may be used to assist drivers enter the traffic stream. Restrictions may be put in place to restrict truck movements entering traffic flows during periods of high traffic flows from site</p>	C	3	M9
3.2.4.5	Parking of construction plant causing an increase of crashes through the worksite	Serious injury or fatality.	C	4	H12	Work practices will be developed to outline provisions for:	D	4	M8



Item	Risk Event	Consequence	Pre - treatment Risk			Treatment	Residual Risk		
			L	C	RR		L	C	RR
	resulting in serious injury or fatality.					1. Short term parking of work plant. 2. Long term parking of work plant. 3. Short term parking for workers and LV's. Construction access have been shown on the Traffic Guidance Schemes.			
3.2.4.6	Workmen may be hit by vehicles during the setting out of traffic management control devices resulting in serious injury or fatality.	Serious injury or fatality.	C	4	H12	No work shall commence until the approved traffic management has been implemented. Traffic management to be setup prior to arrival of workers to site and taken down after they leave to avoid excessive congestion.	D	4	M8
3.2.5 Lane Closures (NA)									
3.2.6 Reversible Flow/Stop Control/Contra-flow (NA)									
3.2.7 Temporary/Existing Barrier (NA)									
3.2.8 Temporary Linemarking/Ultimate Design/Existing Road Environment (NA)									
3.2.9 Temporary/Existing Signage and Structures (NA)									
3.2.10 Road Closures (NA)									
3.2.11 Heavy Vehicles Network									
3.2.11.1	Restrictions placed on traffic lane widths and corner geometries by temporary traffic management impacting heavy haulage traffic routes resulting in adverse public reaction and property damage.	Property damage and adverse public reaction.	C	3	M9	Details and impacts to the heavy haulage route to be communicated to MRWA HVO prior to the implementation of any works. Where corner geometry or lane widths cannot accommodate heavy vehicles, detours or provisions to escort trucks through site may be provided. Where large or oversized vehicles are moving through the worksite, traffic controllers shall be used to ensure sufficient carriageway width is provided and any workers adjacent to the traffic lanes or within a hazardous area are instructed to move clear of the traffic. Temporary alignment swept paths to be checks. Existing RAV network to be	D	3	L6



Item	Risk Event	Consequence	Pre - treatment Risk			Treatment	Residual Risk		
			L	C	RR		L	C	RR
						accommodated where possible.			
3.2.11.2	Heavy vehicles in conflict with the event traffic on Down Road, increase chance of rear end.	Property damage and adverse public reaction	C	3	M9	The events are only allow within the weekend and public holidays, where the heavy vehicles will not be operating.	D	3	L6
3.2.12 Public Transport Authority (NA)									
3.2.13 Emergency Services/Emergency Arrangements and Contingencies									
3.2.13.1	Restrictions and delays associated with the traffic control causing a failure to respond for emergency services resulting in an increase severity in emergency situations.	Failure to respond to emergency situations.	C	4	H12	Pre-communication to be given to all emergency services prior to the implementation of any works in the form of the Notification of Roadworks. Details to be provided for any proposed detours, predicted increases in congestion and any works that may increase delays to the emergency network. Where safe, workers and Traffic Control to respond to emergency services to facilitate an unhindered passage through or around the worksite.	D	4	M8
3.2.13.2	Dangerous goods, damage to services or failure of services causing restricted access through the worksite resulting in adverse public reaction.	Adverse public reaction.	B	3	H12	Should any incident arise involving vehicles transporting dangerous goods, damage or failure of services; all work shall cease immediately, machinery and vehicles turned off and the area cleared of personnel as soon as possible. Traffic Controllers (and other personnel if necessary) shall be deployed immediately to ensure no traffic or other road users approach the area. All site personnel shall be briefed on evacuation and control procedures.	C	3	M9
3.2.14 Public Interactions and Impacts									
3.2.14.1	Temporary traffic management devices restricting access to local properties and commercial premises resulting in an adverse public reaction.	Adverse public reaction	C	3	M9	Local and commercial access to be maintained where possible. Pre-communication to be provided where adverse impacts may restrict access with the associated works. Provisions including; temporary tracks, temporary closures	D	3	L6



Item	Risk Event	Consequence	Pre - treatment Risk			Treatment	Residual Risk		
			L	C	RR		L	C	RR
						and local access may be provided to maintain access.			
3.2.15 Pedestrians and Cyclists (NA)									
3.2.16 Variations to the Standards (NA)									





4. Traffic Management Planning and Assessment

4.1. Traffic Assessment and Analysis

4.1.1. Traffic and Speed data

A summary of recent traffic data is provided below:

Location	Average weekday (vpd)	Trucks	Average weekend (vpd)	Trucks
Down Road	844 vpd (2017)	34%	419 vpd (2017)	40%
Albany Highway	4,950 vpd (2017)	20%	3,520 vpd (2017)	16%

4.1.2. Site generated traffic

The assessment assumes 500 spectators/competitors in total. Events with larger numbers will be subject to specific traffic management measures. The indicative use of the venue based on the business plan for GSMSP is shown in Table 2.

Table 2 Indicative event profile

Use	Level	Frequency	Duration	Entrants	Spectators
Driver training (2WD & 4WD), schools, manufacturer testing		Weekdays	Day	50	0
Car test & tune day	Club	4 week days / month	Day	30	30
Car speed events	Club	1 weekend / month	Day	100	200 – 500
Car speed events	State	1 weekend / month	Day	100 – 200	200 – 1,000
Car speed events	National	1 weekend / year	Day	200 – 300	2,000 – 5,000
Super cars events	National	1 x 3 day weekend / year	Day	200 – 300	10,000 – 20,000
Bike test & tune day	Club	4 week days / month	Day	50	50
Bike speed events (MRCWA)	Club	1 weekend / month	Day	100	200 – 500
Bike speed events – Champions Ride Day	State	1 weekend / month	Day	100	200 – 1,000
Bike speed events	National	1 weekend / year	Day	200	1,000 – 5,000
Motocross events	Club	3 days / week training 4 single days / month	Day	100 – 200	200 – 400
Motocross events	State	1 weekend / month	Day	200 – 300	500 – 1,000
Cycling events	Club		Day		
Cycling events	State		Day		
Drifting day	Club	2 days / month	Day and Evening	30	30
Drifting day	State	1 weekend / month	Day and Evening	50	200 – 500

Use	Level	Frequency	Duration	Entrants	Spectators
Burnout day	Club	1 weekend / month	Day or Evening	30	30
Burnout day	State	1 x 3 day weekend / year	Day or Evening	50	1,000 – 2,000
Drag racing practice day	Club	4 week days/ month	Day	30	100
Drag racing competition	Club	1 day / month	Day and Evening	30	200 – 500
Drag racing competition	State	4 weekends / year	Day and Evening	50	500 – 1,000
Drag racing competition	National	1 weekend / year	Day or evening	50	1,000 – 5,000
Motorkhana	Club	1 day / month	Day	50	200
Tractor Pull	State	2 weekends / year	Day	50	1,000 – 2,000

Assumption of traffic generation and vehicle type

Vehicle type	In (vph)	Out (vph)
Light vehicle	237	237
Heavy vehicle	13	13
Total	250	250

4.1.3. Traffic Flow Analysis

General Comments

Volumes used in this report are based on average traffic figures derived from historical counts. AGTTM - Part 2, Section 3.2.3 (refer to Table 3.1) indicates that the mid-block capacity of multi-lane roadways is 1,000 vehicles per lane per hour (vpl/ph) and 500 vehicles per hour within 200m of an intersection for each lane. These design lane capacities have been used when analysing the effects of associated with the works. Where a departure from the AGTTM regarding lane capacities is required for the works to proceed a variation form will be filled out and attached to the close of this document.

Due to expected traffic volumes (see above) it is anticipated there will only be minor delays provided the Traffic Management setup follows the instructions set out in this document.

Traffic flow should be maintained wherever possible. Traffic volumes and movements will be analysed against the requirements detailed in AGTTM - Part 2, Section 3.2.3 (refer to Table 3.1) and Section 3.3.4 (refer to table 3.4).and MRWA CoP risk tables (see section 6) to ensure levels of service are acceptable to the Road Authority. The works are expected to have very minor impacts on the impacted roads.

4.1.3.1 Traffic Impact and Assessment:

The impact will be minor as the total is below the allowable capacity with various speed reduction and reduced



lane width on Down Road.

4.1.4. Temporary Speed Zones

An event speed limit of 60 km/h at Down Road on the approaching and past the even site.

After work hours the posted speed will be reinstated and the road will be left clean and free of debris.

4.1.5. Existing Traffic Signals

N/A

4.1.6. Impact to Adjoining Network

There is no impact to adjoining network during the construction

4.1.7. End of Queue Treatment

N/A

4.1.8. Temporary Traffic Signals

N/A

4.2. Road Users

4.2.1. Pedestrians

There are no pedestrian facilities.

4.2.2. Cyclists

There are no cyclists' facilities.

4.2.3. Public Transport

There are no public transport facilities.

4.2.4. Heavy and Oversized Vehicles

There are no impacts to the heavy and oversized vehicles.

4.2.5. Existing Parking Facilities

There are no impacts to existing parking facilities.

4.2.6. Access to Adjoining Properties/Business

There are no impacts to adjoining properties.

4.2.7. Rail Crossings

There are no impacts to railway crossings.

4.2.8. School Crossings



There are no school crossings.

4.2.9. Special Events and Other Works

TBC.

4.2.10. Emergency Vehicle Access

Emergency vehicle access will be maintained for the duration of the events.

4.3. Night Work Provisions

N/A

4.4. Road Safety Barriers

N/A

4.5. Consultation and Communication / Notification

4.5.1. Other Agencies

All relevant authorities to be notified prior to the commencement of any works via; email, phone or Notification of Roadworks. This includes: City of Albany, there are no impacts to railway crossings Main Roads Western Australia (MRWA), MRWA Traffic Operations Centre, MRWA Heavy Vehicle Services, Public Transport Authority.

Emergency services to be notified prior to the commencement of any works via the Notification of Roadworks.

4.5.2. Public

The public shall be notified of the event and traffic management arrangements which will effect journey times via:

- Notice to Motorists in the weekend West Australian placed two weeks in advance, one week in advance and at the event activity;
- Letter drop to all residents and businesses within the traffic control zone one week ahead of the scheduled event; and,
- VMS boards during the event.
- Significant events may require radio advertising.



5. Site Assessment

5.1. Provision to Address Environmental Conditions

5.1.1. Adverse Weather

Weather is not expected to adversely impact on the effectiveness of the traffic control detailed on the attached TGS's. Notwithstanding this, should adverse weather conditions be encountered during the event, the following contingency plans should be activated. Note: any adjustments to the plan shall be risk assessed and approved by someone holding a WTM or AWTM accreditation. Major changes will require road authority approval.

5.1.1.1 Rain

In the event of rain, an on-site assessment shall be made and sign spacing and tapers may be extended by 25% to account for increased stopping distances. Slippery (T3-3) signs may be placed as required and all changes shall be recorded in the daily diary.

If rain occurs, Traffic Management Personnel shall inspect the site and where signage and / or devices are not clearly visible, signage may need to be adjusted to improve visibility or if necessary provide additional signage and delineation. Where stopping distances are adversely affected by wet surfaces, spacing between signs may need to be adjusted to provide increased reaction time for drivers. In cases where it is determined that the rain is so heavy that the risk is considered unacceptable, the event shall cease until rain has cleared. All changes shall be noted in the daily diary.

5.1.1.2 Floods

Should flooding occur to the extent that the event becomes impassable or risk is considered unacceptable, the event shall cease immediately and Traffic Controllers (and other personnel if necessary) shall be deployed immediately to close the site and direct traffic around the flooded area. Emergency services and the Road Authority shall be notified immediately and Traffic Controllers shall remain onsite until emergency services and the Road Authority personnel arrive and take control of the site.

5.1.1.3 Other Adverse Weather (strong winds, thunder storms etc.)

Should strong winds or thunder storms occur, all signs are to be weighted down to prevent blowing over or debris entering the roadway causing hazards for motorists. Periodically site inspections to be conducted during storms to ensure integrity of all Traffic Management devices.

5.1.2. Sun Glare

Where sun glare is identified as adversely affecting a driver's ability to sight signage and / or traffic control devices, sign locations may need to be adjusted and additional delineation and/or traffic control devices provided to address the risk from glare. Additionally, in the event that traffic control is adversely affected by glare at sunset and sunrise, traffic controllers may need to assist in maintaining low traffic speeds.



All changes are to be noted in the daily diary.

5.1.3. Fog/Dust/Smoke

Where fog, dust or smoke is identified as adversely affecting a driver's ability to sight signage and / or traffic control devices, sign locations may need to be adjusted and additional delineation and/or traffic control devices provided to address the risk. All changes are to be noted in the daily diary.

Should the event be affected by fog, dust or smoke to the extent that risk is considered unacceptable, all event shall cease immediately and Traffic Controllers (and other personnel if necessary) shall be deployed immediately to close the site.

5.1.4. Road Geometry, Terrain, Vegetation and Structures

There is a curve on the approaching to the project site on Down Road towards Down Road south and straight after Down Road south.

The vertical geometry through the site is flat.

5.2. Existing Traffic and Adverting Signs

All existing signage that is contradictory to the temporary signage implemented in the TGS's are to be covered with opaque material for the duration of the works. Regular drive throughs should ensure the integrity of the worksite and all traffic management. Where signs cannot be covered and conflict with the temporary signage, it is to be removed.



6. Statutory Requirements

6.1. Road Traffic Act and Regulations

The motor sport event will not affect any road traffic act and regulations, event organiser shall organise Traffic implementation company to implement traffic management devices as per the Traffic Guidance Scheme shown in Appendix F.

6.2. Occupational Safety and Health

The Event Organiser has a duty of care under statute and common law to themselves, their employees and all event participants, to take all reasonable measures to prevent accident or injury.

This TMP forms part of the overall Event Management Plan and provides details on how all road users considered likely to pass through, past, or around the event site will be safely and efficiently managed for the full duration of the event.

6.3. Roles and Responsibilities

6.3.1. Responsibilities

The Event Organisers has the ultimate responsibility to ensure the TMP is implemented for the prevention of injury and property damage to event participants, road users and all members of the public.

The Event Organiser will ensure all site personnel are fully aware of their responsibilities, and that Traffic Controllers are appropriately trained and accredited and that sufficient controllers are available to ensure appropriate breaks are taken.

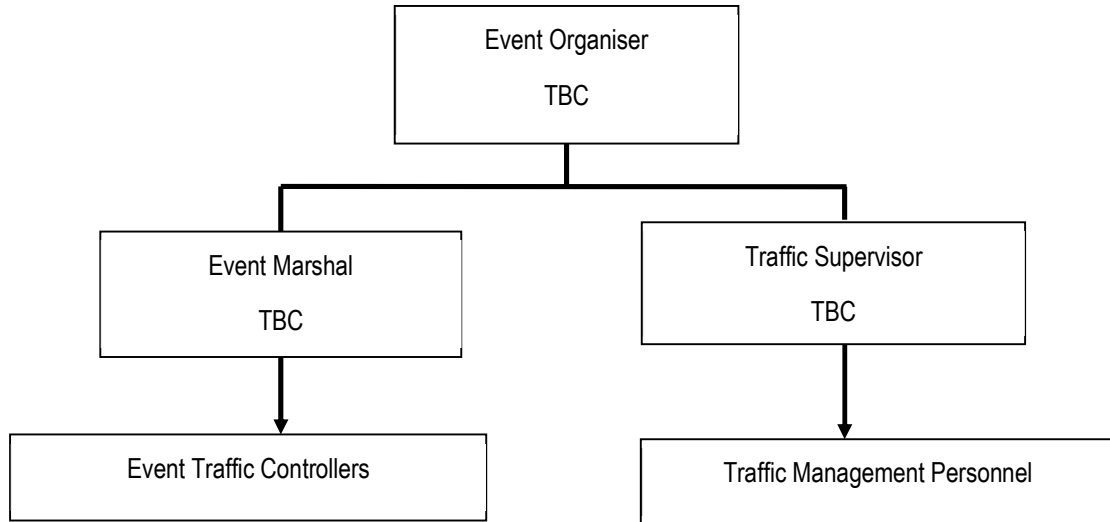
All personnel engaged in the traffic management activities will follow the correct work practices as required by the CoP, AGTTM and AS1742.3.

The event activities will not commence until all signs, devices and barricades are in place and operational in accordance with the requirements of the TMP.

All personnel responsible for temporary traffic management shall ensure that the number, type and location of signs, devices and barricades are to a standard not less than Appendix F of this plan, CoP, AGTTM and AS1742.3. Should a situation arise that is not covered by this TMP, CoP, AGTTM or AS1742.3, the Road Authority Representative shall be notified.

6.3.2. Roles

The following diagram outlines the responsibility hierarchy of this contact.



6.3.2.1 Event Organiser

The event organiser has appointed TBC as the traffic management representatives for the event activities and to assume the following responsibilities. The Traffic Management Supervisor shall:

- Ensure all traffic control measures for this TMP are placed and maintained in accordance with this plan and the relevant Acts, Codes, Standards and Guidelines.
- Ensure suitable communication and consultation with the affected residents is maintained at all times.
- Ensure inspections of the traffic control devices are undertaken in accordance with the TMP, and results recorded. Any variations shall be detailed together with reasons.
- Arrange and/or undertake any necessary audits and incident investigations.
- Instruct event personnel on the relevant safety standards, including the correct wearing of high visibility safety vests, and other equipment as required.
- Render assistance to road users and stakeholders (residents) when incidents arising out of the event activities affect the network performance or the safety of road users and event participants.
- Take appropriate action to correct unsafe conditions, including any necessary modifications to the TMP.

6.3.2.2 Traffic Management Personnel

- At least one person on site shall be accredited in Basic Worksite Traffic Management, and shall have the responsibility of ensuring the traffic management devices are set out in accordance with the TMP
- At least one person accredited in Advanced Worksite Traffic Management shall be available to attend the site at short notice at all times to manage variations, contingencies and emergencies, and to take overall responsibility for traffic management.

6.3.2.3 Traffic Controllers

Traffic Controllers shall be used to control road users to avoid conflict with event participants, traffic and pedestrians, and to stop and direct traffic in emergency situations.

Traffic Controllers shall:

- Operate in accordance with AGTTM Part 7: Traffic Controllers
- Be accredited in Basic Worksite Traffic Management
- Hold a current Traffic Controller's accreditation



- Be relieved from their duty after not more than 2 hours for a period of rest or “other duties” of at least 15 minutes as required by AGTTM and/or OS&H Regulations.

6.3.2.4 Event Marshals

The event organiser shall ensure that event personnel engaged as marshals are provided with training to ensure such personnel are aware of the limits of their responsibilities and can undertake their activities safely.

6.3.2.1 Event Traffic Controllers and Marshalls

Event Traffic Controllers and Marshalls shall:

- Correctly wear high visibility vests, in addition to other protective equipment required (e.g. footwear, sun protection etc.), at all times whilst at the event site.
- Comply with the requirements of the TMP and ensure no activity is undertaken that will endanger the safety of other event personnel, event participants or the general public.
- Enter and leave the event site by approved routes and in accordance with safe practices.

Event Traffic Controllers shall be accredited and shall only undertake tasks in accordance with the Event CoP.

6.4. Personal Protective Equipment (PPE)

All personnel entering the event site shall correctly wear high visibility vests to AS/NZS 4602, in addition to other protective equipment required on a site-by-site basis (e.g. protective footwear, eye protection, helmet, sun protection, respiratory devices etc.) at all times whilst on at the event.



7. Implementation

7.1. Traffic Guidance Schemes

The Traffic Guidance Scheme (TGS) outlined in Appendix F and listed below have been provided for the following stages to demonstrate the type of controls that will be implemented throughout the term of the event. All sign and device requirements are shown on each TGS. Should the use of additional (not shown on the TGS or listing of devices) or reduced number of devices be required due to unforeseen needs, they shall be recorded within the Daily Diary as a variation to the TMP, following prior approval.

Staging	TGS Number & Revision	Details
Stage 1	AMP-EVE-01	Motocross Precinct Event Traffic Management
	AMP-EVE-02	
	AMP-EVE-03	
Stage 2	AMP-EVE-04	Race Track Precinct Event Traffic Management
	AMP-EVE-05	

7.2. Sequence and Staging

The sequence of temporary traffic management installation, event activities and temporary traffic management removal are detailed below:

Step	Details
Pre-start	Contact City of Albany and advise of works.
Stage 1	Implement advanced warning signage.
Stage 2	Manage event
Stage 3	Pack up of TTM

7.3. Traffic Control Devices

7.3.1. Sign Requirements

All signs used shall conform to the designs and dimensions as shown in Australian Standard AS 1742.3, the CoP and/or Main Roads specifications

Prior to installation, all signs and devices shall be checked by the Site Supervisor or a suitably qualified person to ensure that they are in good condition and meet the following requirements:-

- Mechanical condition - Items that are bent, broken or have surface damage shall not be used.
- Cleanliness - Items should be free from accumulated dirt, road grime or other contamination.
- Colour of fluorescent signs - Fluorescent signs whose colour has faded to a point where they have lost their daylight impact shall be replaced.



- Retroreflectivity. - Signs used for night-time or low light conditions whose retroreflectivity is degraded either from long use or surface damage and does not meet the requirements of AS 1906 shall be replaced.
- Battery operated devices - shall be checked for lamp operation and battery condition.

Where signs do not conform either to the requirements of AS 1742.3 or would fail to pass any of the above checks, they shall be replaced on notice.

Signs and devices shall be positioned and erected in accordance with the locations and spacing's shown on the drawings. All signs shall be positioned and erected such that:

- They are properly displayed and securely mounted;
- They are within the driver's line of sight;
- They cannot be obscured from view;
- They do not obscure other devices from the driver's line of sight;
- They do not become a possible hazard to event participants or vehicles; and
- They do not deflect traffic into an undesirable path.

Signs and devices that are erected before they are required shall be covered by a suitable opaque material. The cover shall be removed immediately prior to the commencement of the event.

Where there is a potential for conflict of information between existing signage and temporary signage erected for the purpose of traffic control, the existing signs shall be covered. The material covering the sign shall ensure that the sign cannot be seen under all conditions i.e. day, night and wet weather. Care will be taken to ensure existing signs are not damaged by the covering material or by adhesive tape.

7.3.2. Tolerances on Positioning of Signs and Devices

Where a specific distance for the longitudinal positioning of signs or devices with respect to other items or features is stated, for the spacing of delineating devices or for the length of tapers or markings, the following tolerances may be applied: -

(a) Positioning of signs, length of tapers or markings:

- (i) Minimum, 10% less than the distances or lengths given.
- (ii) Maximum, 25% more than the distances or lengths given.

(b) Spacing of delineating devices:

- (i) Maximum, 10% more than the spacing shown.
- (ii) No minimum.

These tolerances shall not apply where a distance, length or spacing is already stated as a maximum, a minimum



or a range.

7.3.3. Flashing Arrow Signs

Where flashing arrow signs are required to better delineate lane tapers, these signs will comprise a matrix of lamps or light emitting elements in the form of an arrow that is flashed in a cyclical manner to provide advance warning. The sign shall have a minimum dimension of 2400 mm. x 1200 mm. and conform to the requirements of AS/NZS 4192. The Project Site Supervisor shall ensure that all equipment used meets the Australian Standard.

7.3.4. Delineation

Cones shall be used for delineation unless other treatment is specified in the Traffic Management Plan or on the Traffic Guidance Schemes. All cones shall be at least 700 millimetres in height and constructed from fluorescent orange or red material that is resilient to impact and will not damage vehicles when hit at low speed. Cones will be fitted with suitable white retro-reflective tape placed in accordance with AS 1742.3, AGTTM and the CoP.

Cones shall be designed to be stable under reasonably expected wind conditions and air turbulence from passing traffic. The base of the cones will be secured so that they are not dislodged by traffic. Cones will be inspected at intervals necessary to ensure any mis-alignment or displacement is identified and corrected prior to this causing disruption to traffic.

Where specified, temporary frangible or otherwise non-hazardous delineator posts or bollards may be used for edge protection and taper delineation. Posts or bollards shall have a maximum dimension of 60 millimetres when measured along the longest side of a square or rectangular section or across the diameter of a circular section. Base design shall permit easy fixing to either sealed or unsealed surfaces and not intrude into traffic lanes greater than 50 millimetres from the face of the post or bollard.

All posts or bollards shall be erected in accordance with the Traffic Guidance Schemes. Posts and bollards shall be a minimum of 1000 mm. high, capable of being fixed to the road pavement by a suitable road adhesive or by fastening bolts or spikes. Fixing shall be in accordance with manufacturer's recommendations.

Posts and bollards shall be fitted with suitable white retro-reflective tape placed in accordance with AS 1742.3, AGTTM and the CoP. All posts or bollards will be inspected daily and where displaced or missing made good immediately. All delineator posts are to be completely removed at the completion of all stages of construction and prior to the placement of asphalt surfacing. If adhesive is used to affix the posts this shall be completely removed from the road surface so that a flush surface is obtained.

All cones and post type delineators shall be spaced according to Table 4.7 of AS 1742.3-2019 and the Traffic Guidance Schemes.

Purpose and Usage	Traffic Speed, km/h (see Clause 1.3.16)	Recommended Maximum Spacing, m
At divide road crossovers to transfer traffic to the opposing roadway.	All speeds	2
Protecting freshly painted lines	≤ 75	24
	≥ 76	60 ^a
All purposes	≤ 55	4
	56 to 75	12



Purpose and Usage	Traffic Speed, km/h (see Clause 1.3.16)	Recommended Maximum Spacing, m
	≥ 76	18
All purposes	≤ 50	4
^a This spacing may need to be reduced on curves or crests, or if the row of cones is not clearly defined at night.		

7.4. Communication TMP Requirements

The Traffic Management Plan will be discussed at the prestart meeting between the event organiser as well as the TM crew on site. Any variations to the planned works will be consulted with via a current AWTM holder.

7.5. Temporary Traffic Signal Modification

N/A





8. Emergency Arrangements and Contingencies

8.1. Traffic Incident Procedures

In the event of an incident or accident, whether or not involving traffic or road users, First Aid shall be administered as necessary, and medical assistance shall be called for if required.

8.1.1. Serious Injury or Fatality

In the case of serious injury or fatality occurring an Ambulance and Police shall be called on telephone number 000 where life threatening injuries are apparent.

Traffic Controllers (and other personnel if necessary) shall be deployed immediately to ensure no traffic or other road users approach the area as well as assist emergency vehicles required to access and/or travel through the event site.

The scene shall be preserved leaving everything in situ, until direction is given by Police or WorkSafe.

Traffic management shall find the nearest plausible detour and implement as soon as possible to move traffic around the incident.

Once on site traffic management crew are to follow the directions of Police and/or Worksafe.

8.1.2. Minor Incident or Vehicle Break Down within Site

Broken down vehicles and vehicles involved in minor non-injury crashes shall be temporarily moved to the verge as soon as possible after details of the crash locations have been gathered and noted.

Any traffic crash resulting in non-life threatening injury shall be reported to the WA Police Service on 131 444.

Details of all incidents and accidents shall be reported to the Site Supervisor and Event Organiser using the incident report form at Appendix "C" (or similar).

8.2. Emergency Services

Emergency services shall be notified of the proposed works nature, location, date and times as well as contact details for the site supervisor.

On-site traffic controllers will be equipped with mobile communications to advise and/or liaise with emergency services to ensure a prompt response should the need arise.

8.3. Dangerous Goods

Should any incident arise involving vehicles transporting dangerous goods, all work shall cease immediately, machinery and vehicles turned off and the area cleared of personnel as soon as possible. Traffic Controllers (and other personnel if necessary) shall be deployed immediately to ensure no traffic or other road users approach the area.

Emergency services shall be notified of the proposed works nature, location, date and times as well as contact details for the site supervisor. All site personnel shall be briefed on evacuation and control procedures.



8.4. Emergency Contacts

In the event of an emergency the following relevant authorities must be contacted and advised of the nature of works, location, type of emergency and contact details for the site supervisor.

Emergency Service	E-mail/Website	Phone (Emergency)
WA Police Service	State.Traffic.Intelligence.Planning.&.Co-ordination.Unit@police.wa.gov.au	000
St John Ambulance	ambulanceoperations@stjohnambulance.com.au	000
DFES	dfes@dfes.wa.gov.au	000
Power	http://www.westernpower.com.au/customerservice/contactus/	13 13 51
Gas	enquiries@atcogas.com.au	13 13 52

8.5. Hostile Vehicle Mitigation

Hostile Vehicle Mitigation (HVM) is to be developed in consultation with key stakeholders, including WA Police, relevant road authorities and the event organisers, and documented in a separate HVM Plan. This plan is to be to the satisfaction of all key stakeholders and under the management of strict document control and distribution measures. HVM locations are to be referenced on the Event TMP TGS's.



9. Monitoring and Measurement

9.1. Daily Inspections

Prior to the event commencing the Traffic Management Plan shall be communicated to all key stakeholders and affected parties.

On completion of setting out the traffic control measures, the site is to be monitored for a suitable period of time.

The Event Organiser will ensure that the Traffic Management Plan is implemented and evaluated for effectiveness. Inspections shall be undertaken as required and at a minimum on the following occasions:

- Before the start of event activities on site,
- During the hours of the event,
- Closing down at the end of the event period, and

A daily record of the inspections shall be kept indicating

- When traffic controls were erected,
- When changes to controls occurred and why the changes were undertaken,
- Any significant incidents or observations associated with the traffic controls and their impacts on road users or adjacent properties.

The Traffic Management Company shall ensure that personnel are assigned to monitor the traffic control scheme. Inspections shall at least satisfy the following requirements.

9.1.1. Before Works Start

- Confirm TMP and TGS are suitable for the event activities;
- Inspect all signs and devices to ensure they are undamaged, clean and comply with the requirements depicted on the TGS;
- After any adjustments have been made to the signs and devices, conduct a drive through inspection to confirm effectiveness.

9.1.2. During Work Hours

- Designate and ensure that appropriate personnel drive through the site periodically to inspect all signs and devices and ensure they are undamaged and comply with the requirements depicted on the Traffic Guidance Schemes;
- Attend to minor problems as they occur;
- Conduct on the spot maintenance/repairs as required;
- When traffic controllers are on the job, ensure they remain in place at all times. Relieve controllers as necessary to ensure attentiveness is retained;
- Re-position signs and devices as required throughout the day and keep records of any changes.

9.1.3. Closing Down Each Day

- Conduct a pre-close down inspection,
- Remove all unnecessary signage;
- Drive through site and confirm all signs and devices have been safely removed;
- Record details of inspection and any changes made to layout.

9.1.4. After Hours



-
- Appoint personnel to conduct after dark checks. Replace any signs / devices not working, missing or damaged and record in diary.
 - Appoint personnel to conduct checks on non-work days (e.g. weekends). Replace any signs / devices not working, missing or damaged and record in diary.
 - The frequency of inspections needs to align with the amount of traffic management on site, weather conditions, vehicle types and volumes, road user behaviour and site specific risks.

9.2. TMP Audits and Inspections

One compliance audit (using the 'Compliance Audit Checklist for Traffic Management for Works on Roads' – found on the MRWA website) shall be conducted following setting up of the traffic management and prior to commencement of the event.

Audit findings, recommendations and actions taken shall be documented and copies forwarded to the Event Organiser and the Road Authority's Representative.

9.3. Records

A daily diary recording all inspections including variations to the approved TMP shall be kept using the Daily Diary.

A record of all inspections shall be made at those times prescribed by the Traffic Management Implementation Standards.

All variations made to the approved Traffic Management Plan shall be recorded and the nature of the variations and the reason for the variations clearly stated. Upon completion of each day the Traffic Supervisor shall provide copies of the variation record to the Event Organiser.

9.4. Public Feedback

Any public feedback is to be reported to EVENT ORGANISER who will in turn forward them through to City of Albany for consultation and /or to action accordingly.



10. Management Review and Approvals

10.1. TMP Review and Improvement

The Project Manager will ensure that the Traffic Management Plan is implemented and evaluated for effectiveness. The Supervisor shall inspect and monitor traffic movements around the site in conjunction with the personnel who have erected the control measures.

The Project Manager will implement a procedure that ensures comments and complaints received from the public are registered. The Supervisor shall be responsible for the monitoring of the Register on a daily basis.

TCP to be reviewed and updated every 3-6 months to ensure proposed long term Traffic Management complies with changing site environment.

10.2. Variations

Any proposed changes to the Plan shall be communicated to and approved by the RTM. In emergency situations requiring urgent changes, the RTM shall be consulted as soon as practicable.

10.3. Approvals

Before the event commences it is necessary to seek approval from the following:

- Local Government Authority
- WA Police



Appendix A - Notification of Event

To be completed by Event Organiser



NOTIFICATION OF EVENT

Notifications are to be distributed at least one (1) week in advance of the event
Where Police attendance is required at least three (3) week's notice shall be given (except in an emergency)

TMP reference		Communication plan sent to Main Roads	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>		
Anticipated Start Date:		Anticipated Finish Date:					
Anticipated Start Time:		Anticipated Finish Time:					
Location of works (Road/Street, Suburb):							
Description of Event:							
Description of traffic management arrangements:	To accommodate the proposed event, traffic control are to install the following:						
Posted Speed Limit:		Worksite speed limit:		After hours speed limit:			
What is the anticipated effect on traffic flows?:				Will there be restricted width for oversize escorted vehicles?:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Are lanes closed at signals?:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	Are signal loops or hardware affected?:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Will signal phases need time changes?:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	Will signals need to revert automatically?:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Date of signal 'black out':				Times of signal 'black out':			
Will Police attendance be required?:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Dates for Police attendance :				
Road Authority:							
Postal Address:							
Telephone:		Email:		Facsimile:			
Contact:							
Telephone:		Email:		Mobile:			
Event Organiser:							
Postal Address:							
Telephone:		Email:		Facsimile:			
Contact:							
Telephone:		Email:		Mobile:			
After hours contact:		Telephone:		Mobile:			
Traffic Management Contractor:							
Postal Address:							
Telephone:		Email:		Facsimile:			
Contact:							
Telephone:		Email:		Mobile:			
After hours contact:		Telephone:		Mobile:			



Distribution List	Email/Website
WA Police State Traffic Coordination	State.Traffic.Intelligence.Planning.&.Co-ordination.Unit.SMIL@police.wa.gov.au
Main Roads Customer Information Centre	enquiries@mainroads.wa.gov.au
Main Roads WA Event Coordinator	event.coordinator@mainroads.wa.gov.au
Main Roads Road Network Operations Centre	RNOC.Control.Room.Information.Desk@mainroads.wa.gov.au
Main Roads WA Real Time Media	dltocpacs@mainroads.wa.gov.au
Main Roads Heavy Vehicle Services	hvs@mainroads.wa.gov.au
St John Ambulance	BusinessSupportServices@stjohnwa.com.au
Fire & Emergency Services	Dfes@dfes.wa.gov.au
Public Transport Authority	transperth.servicedisruptions@pta.wa.gov.au
Main Roads Digital Communications	communications@mainroads.wa.gov.au
Local Government	





Appendix B - Variation to Standards

NOT APPLICABLE



**APPLICATION FOR APPROVAL TO VARY REQUIREMENTS OF
AS1742.3, AGTTM OR MRWA TRAFFIC MANAGEMENT CODES OF PRACTICE**

Form Instruction

1. **Section A** – Identify the Principal Agency / person commissioning the activity. (Does not include contractors, subcontractors or **traffic** management company/traffic planners etc).
2. **Section B** – Identify activity location, start / finish date and time, type of traffic management, description location of activity.
3. **Section C** – Identify the person that has prepared the Traffic Management Plan, this person shall have AWTM accreditation.
4. **Section D** – For Works undertaken on a State road or on behalf of Main Roads Western Australia the details of the risk assessment process identified in this application form must be documented and endorsed by an accredited Roadworks Traffic Manager¹.
All applications to be addressed to the applicable Main Roads Regional office. For contact information please refer to the online Application kits and guidelines to undertake works. (www.mainroads.wa.gov.au >Technical & Commercial > Working on roads > Third Party Works).
For all other applications the details of the risk assessment process identified in this application form must be documented and endorsed¹ by the person responsible for approving the traffic management plan.
Contact with the appropriate road authority should be made prior to lodgement of this application to determine its suitability and for any additional requirements.
5. **Section E** - Risk implication, identification and assessment process must be undertaken in accordance with Risk Management – Principles and Guidelines AS/NZS ISO 31000. The likelihood and consequences should be rated after the application of any additional counter measures taken utilising Tables from Annexure's 202B and 203B, Main Roads WA - Specification 202 and 203 respectively.
6. **Incomplete or applications not signed** by the RTM¹ will not be processed.

A	Applicant (Principal for the Works)					
	Postal address					
	Suburb		State		Postcode	
	Project Manager				Telephone	
	Email					

B	Anticipated start date				Anticipated finish date					
	Daily work hours; From				Weekend work applicable		Yes <input type="checkbox"/>	Sat <input type="checkbox"/>	Sun <input type="checkbox"/>	No <input type="checkbox"/>
	Location of works (Road/Street Suburb),									
	Road type (eg undivided, two lane)									
	Description of works									
	Are alterations to permanent traffic signals required?				Yes <input type="checkbox"/>		No <input type="checkbox"/>		N/A <input type="checkbox"/>	
	Posted Speed Limit				Worksite speed limit				After hours speed limit	

C	TMP Designer									
	Accreditation Number									
	Postal address		Level 1 / 908 Albany Highway							
	Suburb		East Victoria Park		State	WA	Postcode	6101		
	Email				Telephone	(08) 9355 1300		Facsimile	N/A	

¹A person with AWTM accreditation is permitted to endorse a variation of less than 135 % of the allowable lane capacity as outlined in table 4.10 of AS 1742.3. See section 4.5 of the Code of Practice.



	Endorsement Signature		Date Click here to enter a date.
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**APPLICATION FOR APPROVAL TO VARY REQUIREMENTS OF
AS1742.3, AGTTM OR MRWA TRAFFIC MANAGEMENT CODES OF PRACTICE**

D	RTM Endorsing Variation					
	Accreditation Number					
	Postal address					
	Suburb		State		Postcode	
	Email		Telephone		Facsimile	
	Endorsement signature				Date	

For Internal Use Only							
Approving Road Authority							
Approving Officer Position							
Application Approved	Yes <input type="checkbox"/>	No <input type="checkbox"/>	If Not Why Not				
Additional Conditions							
Approved By: Signature		Title		Date		File Num	



E	Description of Variation Requested	Specify Point of Departure from Standard / Code of Practice (List section and page number)	Justification (Why is this necessary)	Additional Counter Measures to be Taken (Identify additional counter measures to be used to negate the lesser treatment)	Residual Risk*		
					L	C	RR





Appendix C - Record Forms

Daily Diary

Location: _____		Client: _____		Date: _____	
TMP No: _____		TGS No: _____		Weather Conditions: _____	
Start Time at Depot: _____		Time Arrive Onsite: _____		Commencement of Site Setup: _____	
Site Pulled Down at: _____		Time Aftercare signs setup: _____		TGS No: _____	
<input type="checkbox"/> Day Works		<input type="checkbox"/> Night Works		<input type="checkbox"/> Emergency Response	
<input type="checkbox"/> Attendance at Pre-Start Meeting		Did an incident occur (if yes complete incident report form)		<input type="checkbox"/> Yes <input type="checkbox"/> No	
Name (Site Supervisor): _____		Signed: _____		Time left site: _____	
Drive Through Checks (Checks must be conducted at least every 2 hours)		Finish time at Depot: _____		Site Setup as per TGS <input type="checkbox"/> Yes <input type="checkbox"/> No (if not comment on next page)	
I confirm that the above times of 'setup' and 'pulldown' of traffic management signs and devices are a true and correct					
Time of check entered. Rule off and leave blank if the check does not apply to the site. Make a note of any issues on the next page.					

Traffic Management Site Checks	1	2	3	4	5	6	7	8	9	10
Time										
Are signs upright, clean, visible, level & stable										
Are taper lengths correct										
Are speed limit signs correct and doubled up										
Are sign spacings correct										
Are cone/bollard alignments straight & spaced correctly										
Are devices operating correctly										
Are pedestrians, cyclists and other vulnerable road users catered for										
Are lane widths adequate										



Are vehicle queue lengths acceptable										
Is road surface condition adequate										
Is the work area clearly defined?										
Are the travel paths for both directions of traffic clearly defined? Is the work area appropriately separated from passing traffic? Check the transition at the interface of the modified alignment.										
Are centre lines/lane lines/edge lines clear and unambiguous?										
Are sight and stopping distances adequate at works, at intersections and driveways?										
Are traffic lanes clearly delineated?										
Are lighting for night-time controls operating correctly?										
Have other risks associated with traffic management at night been catered for, e.g. placement of lighting towers										





No. of TTM Vehicles Onsite: _____

No. of TTM Personnel Onsite: _____

TTM Personnel Names & Accreditations:

Name	Accreditation Details (tick)					Time of Break from Stop/Slow (Traffic controllers must have a 15 minute break every two hours of constant stop/slow operation)							
	TC	BWTM	WTM	AWTM	OTMA	On	Off	On	Off	On	Off	On	Off
						:	:	:	:	:	:	:	:
						:	:	:	:	:	:	:	:
						:	:	:	:	:	:	:	:
						:	:	:	:	:	:	:	:
						:	:	:	:	:	:	:	:
						:	:	:	:	:	:	:	:

Additional Comments

I confirm that the details contained herein are true and correct

Name: (TTM Leader): _____ Signed: _____





Incident Report Form.

Region:
Contract No.:

Incident Report No.:
Contractor:

Safety Incident Report No:

Major Incident Reports must be forwarded to the Superintendent within 48 hours of the incident occurring or becoming apparent.

Contractors shall use this Form for reporting of traffic Incidents on works under Contract and this form supplements the Safety Incident Report Form.

1.0 Details of Incident		Reported to:	<input type="checkbox"/> Supervisor	<input type="checkbox"/> TMR	<input type="checkbox"/> Other
Date of incident		Time of Incident			
Work Being Undertaken					
Location (include direction and lane if applicable)					
Crash Type					
Incident type	Near Miss	Property Damage	Injury	Fatality	
Atmospheric Conditions	Clear	Overcast	Raining	Fog/Smoke/Dust	
Light Conditions	Day Light		Night Time		Dawn/Dusk
Road Surface	Unsealed		Sealed		





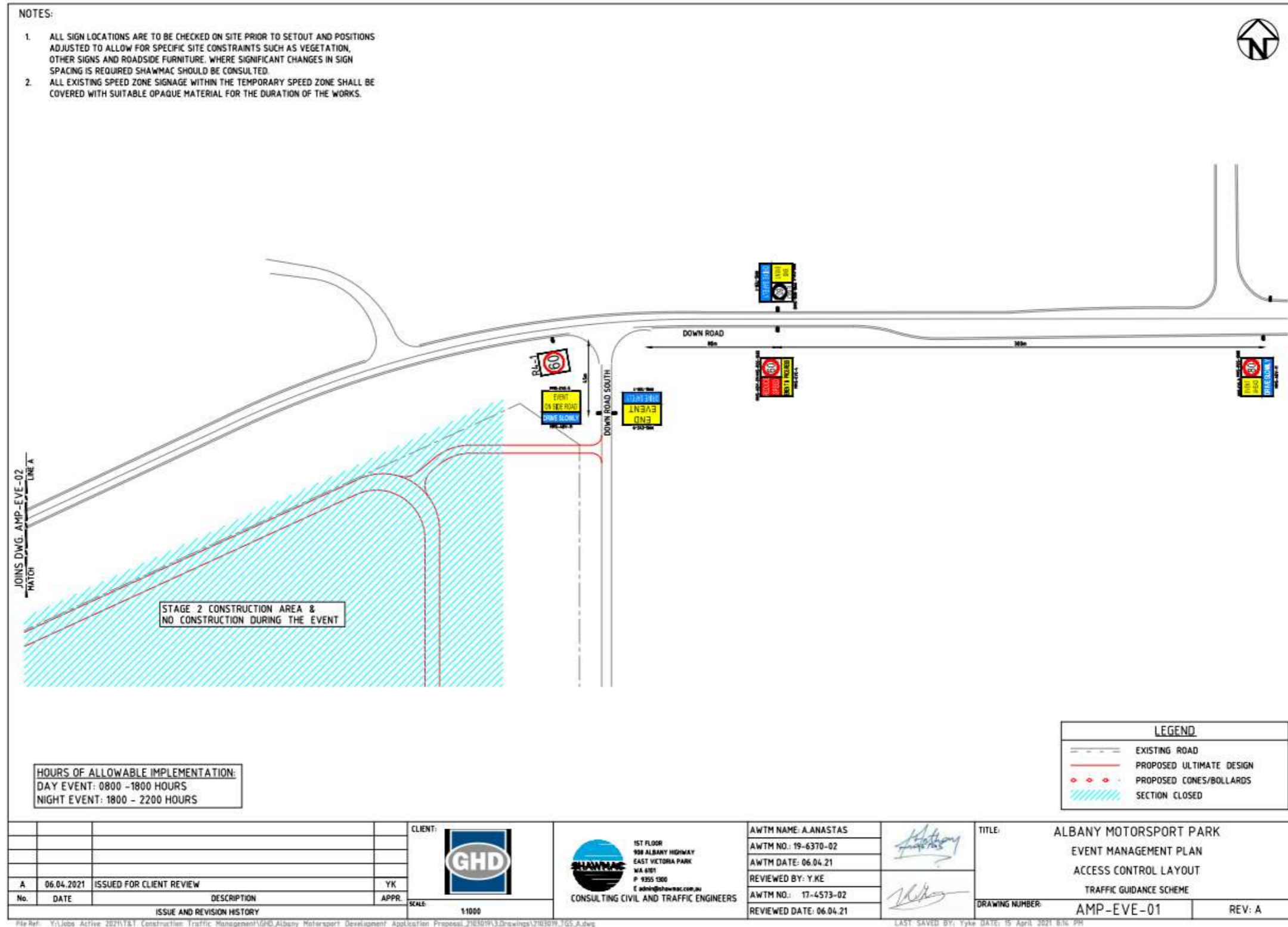
Appendix D - Traffic Analysis and Volume Counts

Volumes

Location	Average weekday (vpd)	Trucks	Average weekend (vpd)	Trucks
Down Road	844 vpd (2017)	34%	419 vpd (2017)	40%
Albany Highway	4,950 vpd (2017)	20%	3,520 vpd (2017)	16%



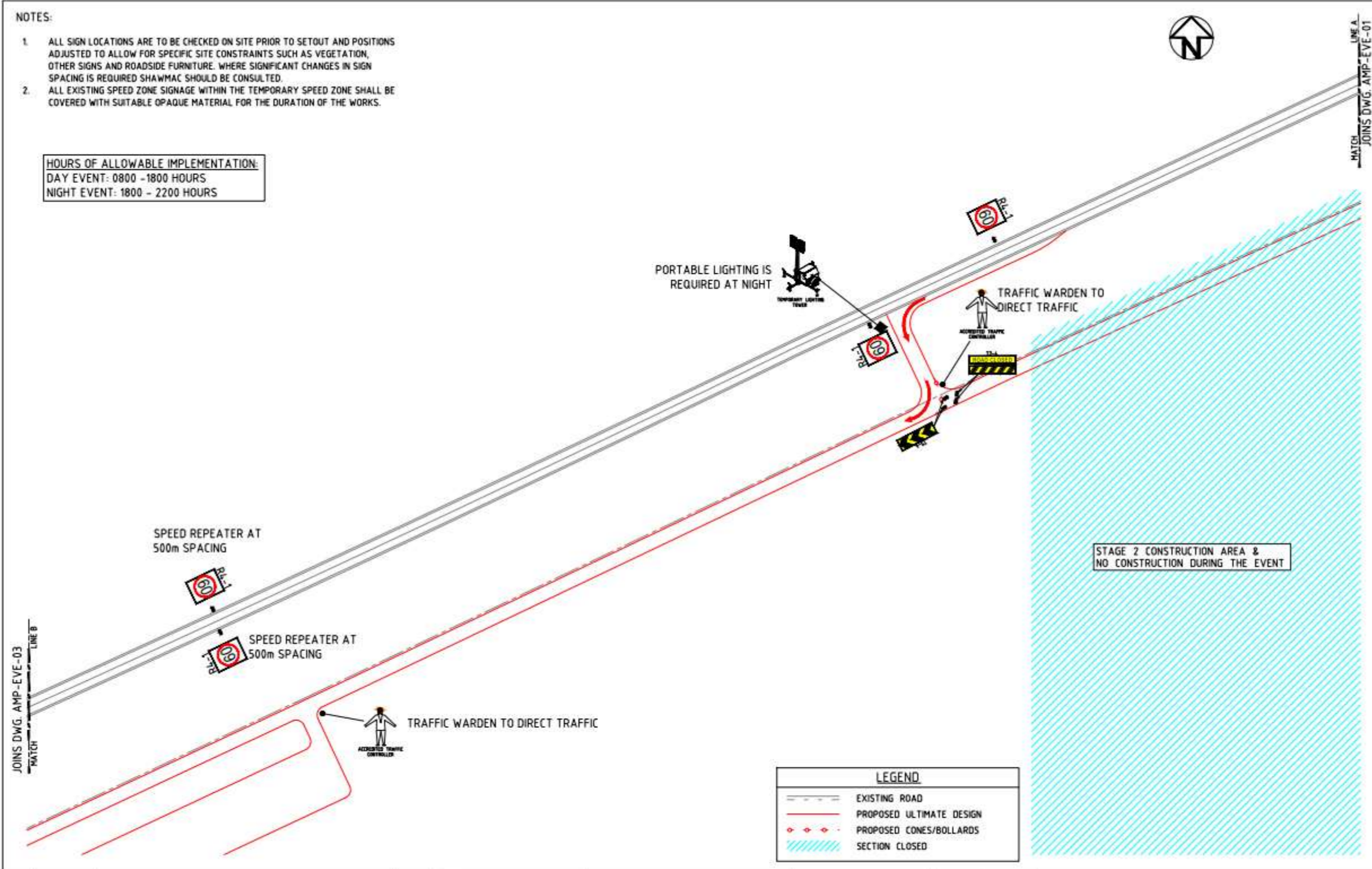
Appendix E - Roadway Access Authorisation Permit



NOTES:

1. ALL SIGN LOCATIONS ARE TO BE CHECKED ON SITE PRIOR TO SETOUT AND POSITIONS ADJUSTED TO ALLOW FOR SPECIFIC SITE CONSTRAINTS SUCH AS VEGETATION, OTHER SIGNS AND ROADSIDE FURNITURE. WHERE SIGNIFICANT CHANGES IN SIGN SPACING IS REQUIRED SHAWMAC SHOULD BE CONSULTED.
2. ALL EXISTING SPEED ZONE SIGNAGE WITHIN THE TEMPORARY SPEED ZONE SHALL BE COVERED WITH SUITABLE OPAQUE MATERIAL FOR THE DURATION OF THE WORKS.

HOURS OF ALLOWABLE IMPLEMENTATION:
 DAY EVENT: 0800 - 1800 HOURS
 NIGHT EVENT: 1800 - 2200 HOURS



No.	DATE	DESCRIPTION	YK	APPR
A	06.04.2021	ISSUED FOR CLIENT REVIEW		

ISSUE AND REVISION HISTORY

CLIENT:

SCALE: 1:1000

1ST FLOOR
 908 ALBANY HIGHWAY
 EAST VICTORIA PARK
 WA 6101
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CONSULTING CIVIL AND TRAFFIC ENGINEERS

AWTM NAME: A.ANASTAS
AWTM NO.: 19-6370-02
AWTM DATE: 06.04.21
REVIEWED BY: Y.KE
AWTM NO.: 17-4573-02
REVIEWED DATE: 06.04.21

Anthony Anastas
Y.Ke

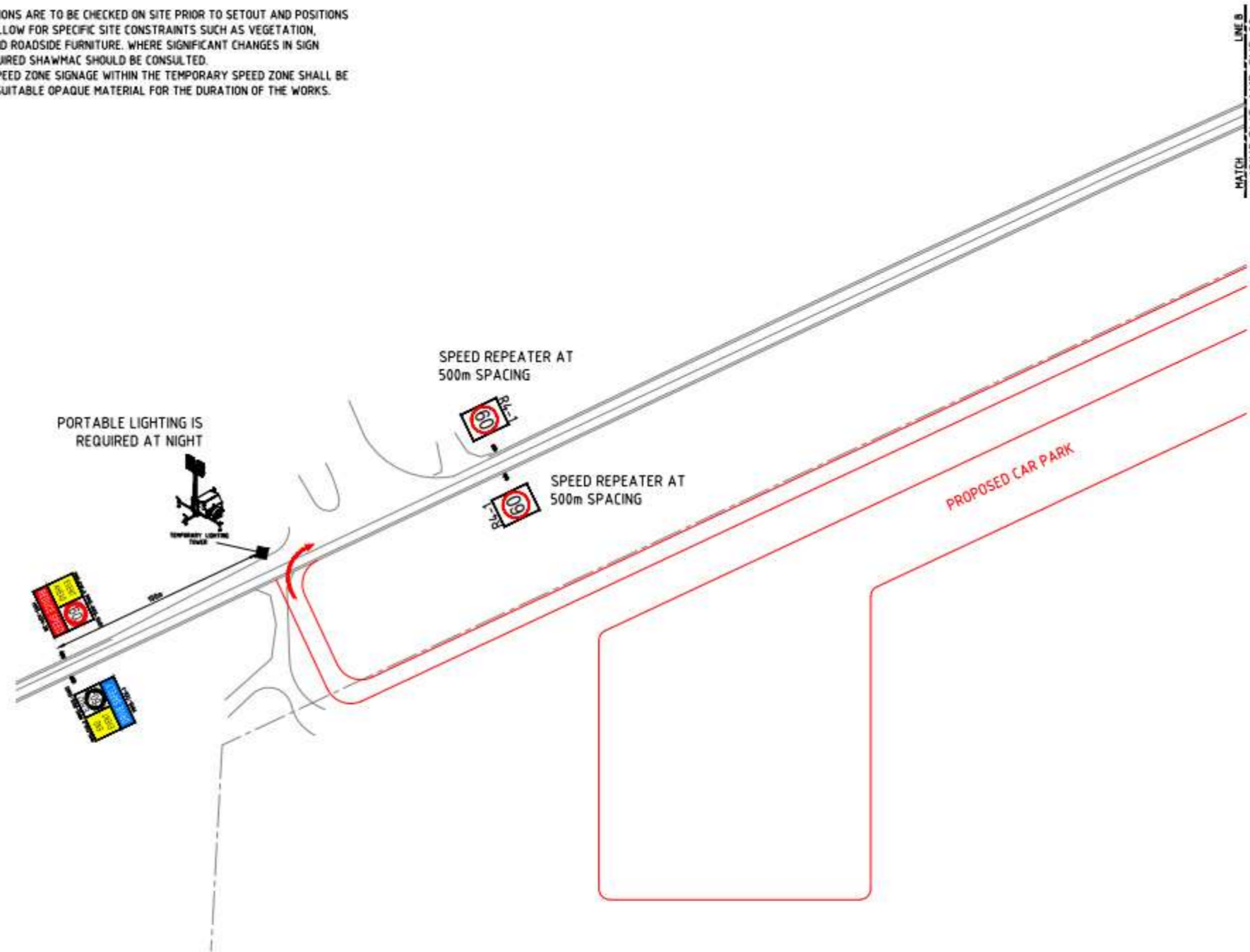
TITLE:	ALBANY MOTORSPORT PARK EVENT MANAGEMENT PLAN ACCESS CONTROL LAYOUT TRAFFIC GUIDANCE SCHEME
DRAWING NUMBER:	AMP-EVE-02
REV:	REV: A

File Ref: Y:\Jobs Active 2021\T&T Construction Traffic Management\GHD\Albany Motorsport Development Application Proposal_2103079\3\Drawings\2103079_3\GS_A.dwg

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HOURS OF ALLOWABLE IMPLEMENTATION:
 DAY EVENT: 0800 - 1800 HOURS
 NIGHT EVENT: 1800 - 2200 HOURS

LEGEND	
	EXISTING ROAD
	PROPOSED ULTIMATE DESIGN
	PROPOSED CONES/BOLLARDS
	SECTION CLOSED

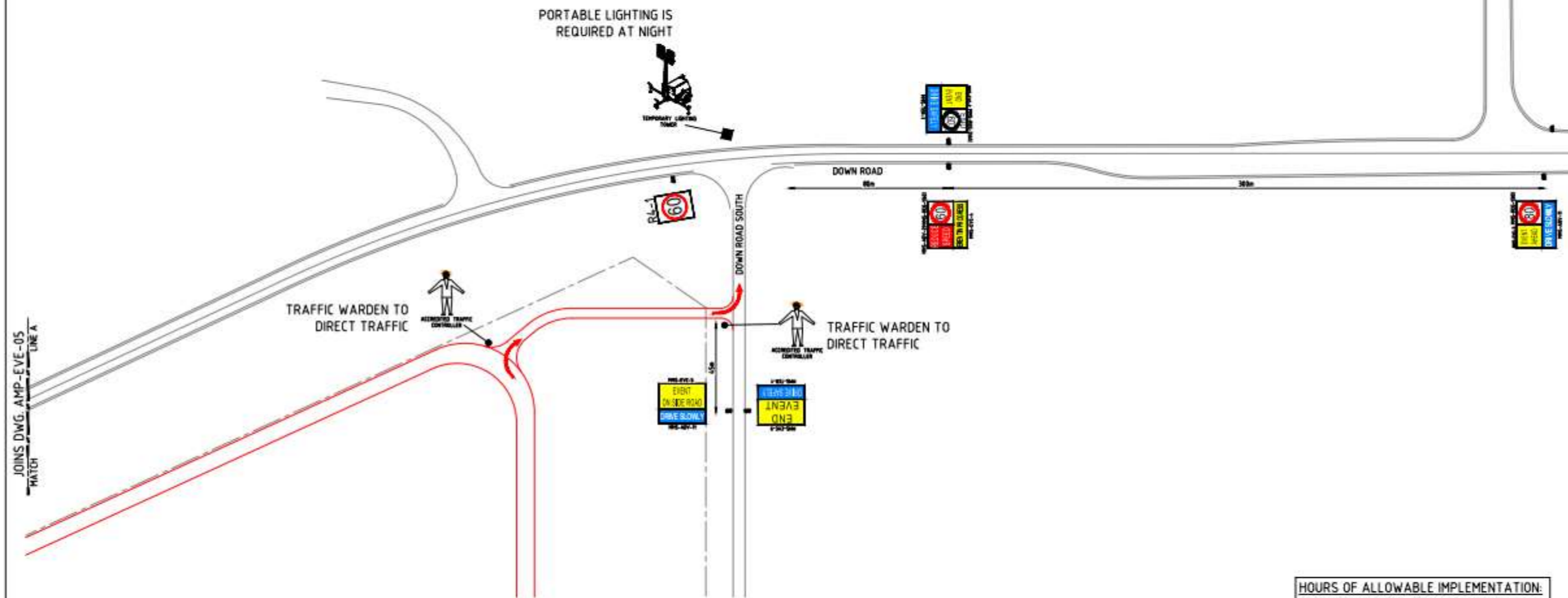
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				AWTM NO.: 19-6370-02		
			151 FLOOR 908 ALBANY HIGHWAY EAST VICTORIA PARK WA 6101 P 9355 1300 E admin@shawmac.com.au	AWTM DATE: 06.04.21		DRAWING NUMBER: AMP-EVE-03
			CONSULTING CIVIL AND TRAFFIC ENGINEERS	REVIEWED BY: Y.KE		
ISSUE AND REVISION HISTORY		SCALE: 1:1000		AWTM NO.: 17-4573-02		REV: A
No.	DATE	DESCRIPTION	APPR.	REVIEWED DATE: 06.04.21		
A	06.04.2021	ISSUED FOR CLIENT REVIEW	YK			

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HOURS OF ALLOWABLE IMPLEMENTATION:
 DAY EVENT: 0800 - 1800 HOURS
 NIGHT EVENT: 1800 - 2200 HOURS

LEGEND	
	EXISTING ROAD
	PROPOSED ULTIMATE DESIGN
	PROPOSED CONES/BOLLARDS
	SECTION CLOSED

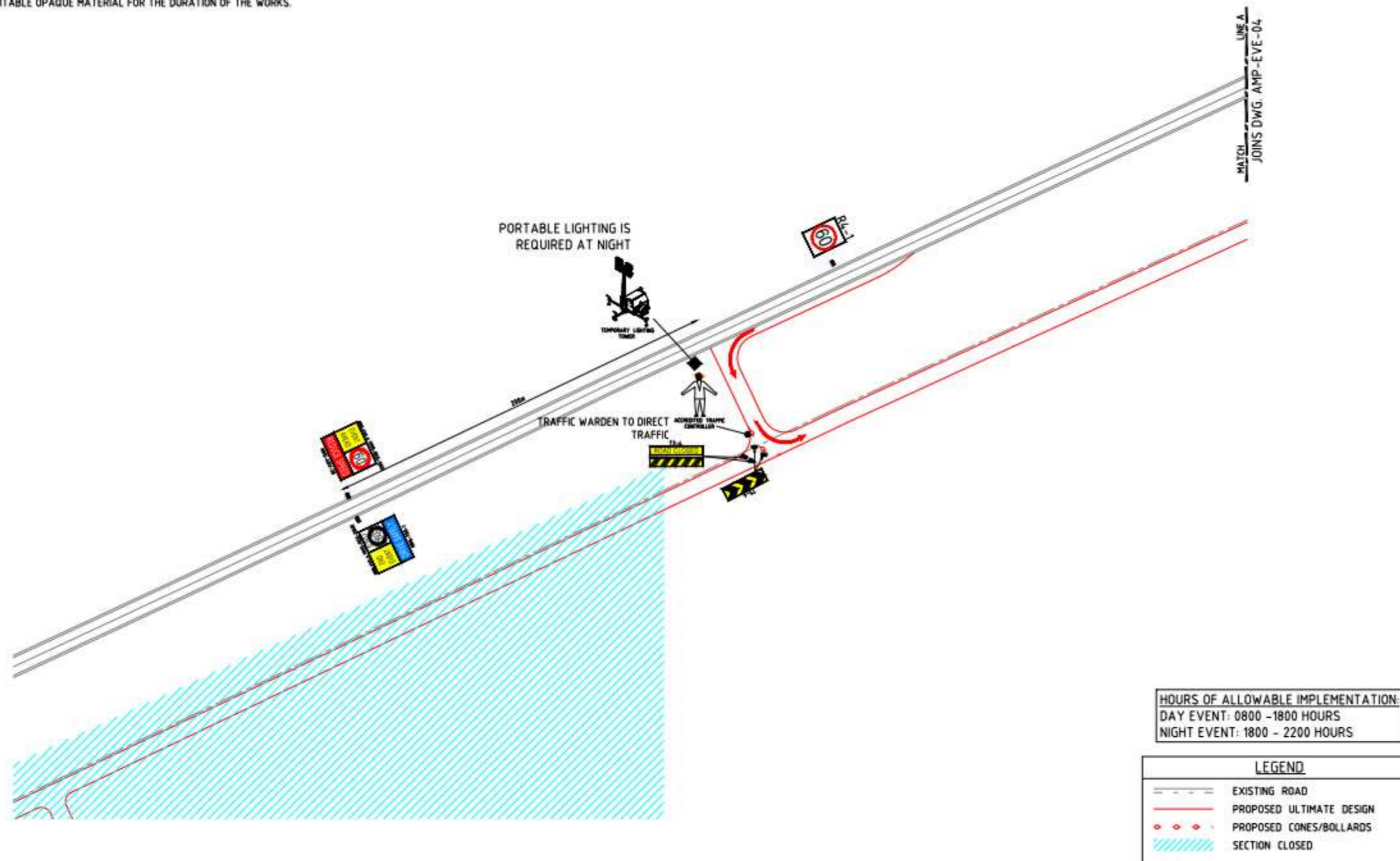
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				AWTM NO.: 19-6370-02		
			1ST FLOOR 998 ALBANY HIGHWAY EAST VICTORIA PARK WA 6101 P. 9355 1300 E. admin@shawmac.com.au	AWTM DATE: 06.04.21		DRAWING NUMBER: AMP-EVE-04
			CONSULTING CIVIL AND TRAFFIC ENGINEERS	REVIEWED BY: Y.KE		
			SCALE: 1:1000	AWTM NO.: 17-4573-02		REV: A
				REVIEWED DATE: 06.04.21		

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			CLIENT:		AWTM NAME: A.ANASTAS		TITLE: ALBANY MOTORSPORT PARK EVENT MANAGEMENT PLAN ACCESS CONTROL LAYOUT TRAFFIC GUIDANCE SCHEME
				 1ST FLOOR 908 ALBANY HIGHWAY EAST VICTORIA PARK WA 6101 P 9355 1300 E admin@shawmac.com.au	AWTM NO.: 19-6370-02		
A	06.04.2021	ISSUED FOR CLIENT REVIEW	YK		AWTM DATE: 06.04.21		DRAWING NUMBER: AMP-EVE-05
No.	DATE	DESCRIPTION	APPR	SCALE: 1:1000	AWTM NO.: 17-4573-02		
ISSUE AND REVISION HISTORY					REVIEWED BY: Y.KE		

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Appendix C – Traffic Assessment (GHD)



Albany Motorsport Park – Development Application

Transport Impact Assessment

City of Albany

27 July 2021

→ **The Power of Commitment**



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Author	Stephen McDermott
Project manager	Vicki Davies
Client name	City of Albany
Project name	Albany Motorsport Park - Development Application
Document title	Albany Motorsport Park – Development Application Transport Impact Assessment
Revision version	Rev 0
Project number	12546218

Document status

Status Code	Revision	Author	Reviewer		Approved for issue		
			Name	Signature	Name	Signature	Date
S3	A	S McDermott	S Barlow		Jeff Foley		14.05.21
S4	0	S McDermott	S Barlow		Jeff Foley		

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Appendices

Appendix A	Masterplan
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1. Introduction

The City of Albany (CoA) has engaged GHD to prepare an Application for Planning Approval for the staged construction of the Albany Motorsport Park (AMP) at Lot 5780 (No. 54) Down Road South, Drome (the Site) (Appendix A). The project Proponent is the Great Southern Motorplex Group Inc. (GSMG).

At full development, the proposed AMP will consist of:

- Sealed, configurable multi-use track (3.5 km long × 12 m wide) for motor car racing, motorcycle racing, drifting, driver training and cycling:
 - Designed to comply with Motorsport Australia *Track Operator's Safety Guide*^[1] and Motorcycling Australia (MA) *Track Guidelines*^[2].
 - To be licensed by Motorsport Australia for Fédération Internationalé de l'Automobile (FIA) Grade 2 and Fédération Internationalé Motocyclisme (FIM) Grade B (i.e. up to second-tier international motor racing).
- A motocross circuit designed and constructed in association with MA guidelines.
- An off-road four-wheel drive (4WD) and all-terrain vehicle (ATV) training area.
- Associated buildings and infrastructure.

Due to the scale and nature of the proposed development, the construction works have been broken down into two key stages which comprise of the following:

- Stage 1 (this Development Application):
 - Stage 1A: Construction of motocross track, 4WD driver training area, all-terrain vehicle (ATV) area and associated infrastructure.
 - Stage 1B: Construction of racetrack and associated infrastructure (subject to funding).
- Future Development: Construction and replacement of final permanent structures to support the function of the motorsports complex (subject to funding). Stage 2 will be addressed as a separate Development Application.

1.1 Site location

Lot 5780 Down Road South, Drome is located approximately 20 km to the north of the Albany CBD and is 192.34 ha in size. The AMP comprises 141.7 ha (including 0.2 ha for crossovers) in the eastern portion of the Site. Two areas within Lot 5780 are excluded from the AMP development and include 49.47 ha at the western end of the Site which is covered with native vegetation and a dam area (1.37 ha) on the northern boundary which is subleased to Plantation Energy.

The Site is bounded by Down Road West to the north, Down Road South to the east, Lot 5781 Down Road South to the south (privately owned) and a local road reserve and the Avon-Albany rail reserve to the west. The Site is located adjacent to the Mirambeena Timber Processing Precinct and sits within the industrial buffer area.

A Master Plan, which illustrates the various aspects of the Site and staging areas, has been developed by the GSMG and CoA to support the Development Application for the AMP (Appendix A).

1.2 Purpose of this report

A transport impact assessment for the proposed AMP at Lot 5780, Down Road South, Drome (north of Albany, WA) is required. This report provides the transport assessment input.

¹ CAMS. (2012). *Track Operator's Safety Guide*. Malvern East: Confederation of Australian Motor Sports.

² MA. (2011). *Track Guidelines*. South Melbourne: Motorcycling Australia.

1.3 Scope of work

The transport impact assessment scope is as follows:

- Liaise with the CoA regarding any transport issues or concerns and obtain available traffic count data.
- Liaise with Main Roads WA regarding the intersection of Down Road / Albany Highway and adequacy to accommodate the proposed use.
- Undertake a crash analysis of the above intersection and along Down Road.
- Confirm speed limit and road hierarchy of Down Road.
- Assess peak hour traffic at the Down Road / Albany Highway intersection for the peak operational time of the AMP.
- Review concept plan in relation to site access.
- Review likely traffic generation for the AMP, based on information from the CoA and the Great Southern Motorplex Group (GSMG). Assess the potential impact to the road network.

1.4 Disclaimer

This report has been prepared by GHD for City of Albany and may only be used and relied on by City of Albany for the purpose agreed between GHD and the City of Albany as set out in this report.

GHD otherwise disclaims responsibility to any person other than City of Albany arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report. GHD disclaims liability arising from any of the assumptions being incorrect.

GHD has prepared this report on the basis of information provided by City of Albany and others who provided information to GHD (including Government authorities)], which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.

2. Assessment of surrounding road network

2.1 Adjacent roads

The site is bounded by Down Road to the north and Down Road South to the east.

2.1.1 Down Road

Down Road connects with Albany Highway to the east. It is a single carriageway road, approximately nine metres (m) wide with one lane in each direction. It is designated as an Access Road under the Main Roads WA Road Information Mapping system and is under the control of the CoA. A speed limit of 110 kilometres per hour (km/h) applies.

The western end of the AMP site is located opposite the exit from a woodchip facility.

2.1.2 Albany Highway

Albany Highway is under the control of Main Roads WA and is designated a Primary Distributor. A speed limit of 110 km/h applies.

The intersection of Down Road/Albany Highway has been upgraded to accommodate traffic associated with CBH's Mirambeena Storage Facility and includes a right and left turn lane in Albany Highway; a continuous left turn lane from Down Road into Albany Highway; and an acceleration lane for right-turning vehicles from Down Road onto Albany Highway.

2.2 Restricted Access Vehicle network

Down Road forms part of the Restricted Access Vehicle (RAV) network 7 and accommodates multi-combination vehicles up to 36.5 m in length. Down Road accommodates RAVs serving the CBH grain storage facility, Plantation Energy and the APEC wood chipping facility.

Albany Highway forms part of the RAV network 7 and accommodates multi combination vehicles up to 36.5 m in length.

2.3 Traffic data

Traffic data has been sourced from the Main Roads WA web site and the CoA and the data in Table 2.1 is the latest as at March 2021.

Table 2.1 Average weekday and weekend traffic volumes – existing vehicles per day (vpd)

Location	Average weekday (vpd)	Trucks	Average weekend (vpd)	Trucks
Down Road	844 (2017)	34%	419 (2017)	40%
Albany Highway	4,950 (2017)	20%	3,520 (2017)	16%

Source: Main Roads WA Traffic Map

The existing high percentage of trucks in Down Road reflects the activity associated with the timber processing precinct and CBH facility.

2.4 Crash data

Crash data has been reviewed for the period 1 January 2015 to 31 December 2019.

2.4.1 Albany Highway/Down Road

A review of the Main Roads WA crash analysis reporting system (CARS) indicates one reported crash in 2018. The intersection has been upgraded recently.

2.4.2 Down Road (Albany Highway to end SLK 5.05)

There have been no reported crashes along Down Road in the five-year period. The crash assessment indicates there are no current reported safety issues at the Albany Highway/Down Road intersection or along Down Road.

3. Proposed development

3.1 Site generated traffic

The assessment assumes 500 spectators/competitors in total. Events with larger numbers will be subject to specific traffic management measures. The indicative use of the venue based on the business plan for Albany Motorsport Park is shown in Table 3.1.

Table 3.1 Indicative event profile

Use	Level	Frequency	Duration	Entrants	Spectators
Driver training (2WD & 4WD), schools, manufacturer testing	-	Weekdays	Day	50	0
Car test & tune day	Club	4 weekdays / month	Day	30	30
Car speed events	Club	1 weekend / month	Day	100	200 – 500
Car speed events	State	1 weekend / month	Day	100 – 200	200 – 1,000
Car speed events	National	1 weekend / year	Day	200 – 300	2,000 – 5,000
Super cars events	National	1 x 3-day weekend / year	Day	200 – 300	10,000 – 20,000
Bike test & tune day	Club	4 weekdays / month	Day	50	50
Bike speed events (MCRCA)	Club	1 weekend / month	Day	100	200 – 500
Bike speed events – Champions Ride Day	State	1 weekend / month	Day	100	200 – 1,000
Bike speed events	National	1 weekend / year	Day	200	1,000 – 5,000
Motocross events	Club	3 days / week training 4 single days / month	Day	100 – 200	200 – 400
Motocross events	State	1 weekend / month	Day	200 – 300	500 – 1,000
Drifting day	Club	2 days / month	Day and Evening	30	30
Drifting day	State	1 weekend / month	Day and Evening	50	200 – 500

3.1.1 Duration of events

– Typical day is 8:00 am – 6:00 pm.

Based on an overall attendance of 500 people, it is assumed an average of two people per vehicle so 250 vehicles in and 250 vehicles out, of which, 5% (13) are heavy vehicles transporting competition vehicles.

A capacity assessment of Down Road using Highway Capacity Software (HCS7) indicates a level of service B, assuming AMP and peak hour traffic movement occur at the same time. No capacity issues are therefore anticipated.

The intersection of Albany Highway/Down Road has been upgraded to accommodate CBH traffic and no further upgrade is anticipated to be required for general use of the AMP. Analysis has been undertaken assuming the AMP exit traffic occurs at the same time as the pm peak hour of the intersection and confirms no forecast delay or congestion.

Table 3.2 Down Road Albany Highway Existing + Site Traffic AM – Give way/Yield (Two way)

Down Road Albany Hwy Existing + Site Traffic AM Give way / Yield (Two-Way)											
Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
		Total	HV				Vehicles	Distance			
		veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Albany Hwy											
1	L2	160	10.0	0.119	9.6	LOS A	0.5	3.8	0.28	0.62	63.9
2	T1	161	20.0	0.093	0.0	LOS A	0.0	0.0	0.00	0.00	109.9
Approach		321	15.0	0.119	4.8	LOS A	0.5	3.8	0.14	0.31	80.8
North: Albany Hwy											
8	T1	156	16.0	0.088	0.0	LOS A	0.0	0.0	0.00	0.00	109.9
9	R2	160	10.0	0.110	9.1	LOS A	0.5	3.9	0.31	0.63	67.6
Approach		316	13.0	0.110	4.6	NA	0.5	3.9	0.15	0.32	82.1
West: Down Road											
10	L2	5	10.0	0.003	9.4	LOS A	0.0	0.0	0.00	0.64	69.1
12	R2	4	10.0	0.009	13.7	LOS B	0.0	0.2	0.57	0.73	59.4
Approach		9	10.0	0.009	11.3	LOS B	0.0	0.2	0.25	0.68	64.8
All Vehicles		646	13.9	0.119	4.8	NA	0.5	3.9	0.15	0.32	81.1

Table 3.3 Down Road Albany Highway Existing + Site Traffic PM – Give way/Yield (Two way)

Down Road Albany Hwy Existing + Site Traffic PM Give Way / Yield (Two-Way)											
Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
		Total	HV				Vehicles	Distance			
		veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Albany Hwy											
1	L2	20	10.0	0.013	9.1	LOS A	0.1	0.4	0.08	0.62	65.1
2	T1	187	20.0	0.109	0.0	LOS A	0.0	0.0	0.00	0.00	109.9
Approach		207	19.0	0.109	0.9	LOS A	0.1	0.4	0.01	0.06	103.0
North: Albany Hwy											
8	T1	294	16.0	0.166	0.0	LOS A	0.0	0.0	0.00	0.00	109.9
9	R2	20	10.0	0.014	9.1	LOS A	0.1	0.5	0.31	0.61	67.6
Approach		314	15.6	0.166	0.6	NA	0.1	0.5	0.02	0.04	105.1
West: Down Road											
10	L2	145	10.0	0.084	9.4	LOS A	0.0	0.0	0.00	0.64	69.2
12	R2	145	10.0	0.306	15.4	LOS C	1.4	10.5	0.64	0.90	57.6
Approach		291	10.0	0.306	12.4	LOS B	1.4	10.5	0.32	0.77	63.3
All Vehicles		812	14.5	0.306	4.9	NA	1.4	10.5	0.12	0.31	83.9

Further analysis has been undertaken assuming a 1% growth rate on Albany Highway for ten years and the results indicate all levels of service remain the same for both the am and pm peak periods.

3.2 Site access

One access point is proposed to serve the Site from Down Road. Entry to the AMP would be via the eastern entry point only. The western entry point is for separate access (by another leaseholder) to the small dam in the north-west corner of the site. Gated emergency access will be available to Down Road at the west end of the Site, east end of the Site and at the south east corner of the Site as indicated on the Master Plan in Appendix A.

Traffic volumes on Down Road are approximately 840 vpd, of which approximately 34% are trucks (large multi combination vehicles). To minimise the impacts on large trucks using Down Road during weekdays, a left turn lane in Down Road should be provided at the access location. *Austrroads Guide to Road Design* indicates the length of the turn lane should be 180 m at 110 km/h or 120 m if a posted speed of 80 km/h is adopted (Table 3.4).

The speed limit on Down Road is 110 km/h. It is considered that this is too high in view of the likely activity associated with the proposed AMP and it should be considered to be reduced to a maximum of 80 km/h. Main Roads WA will need to be consulted regarding this matter, noting that at the time of writing, Main Roads WA is not supportive of reducing the speed limit.

Site access should be constructed to accommodate construction traffic prior to the site construction phase.

Table 3.4 Deceleration lane lengths (Austrroads)

Design speed of approach	Length of deceleration D – including diverge taper T									
	Stop condition1		Design speed of exit curve (km/h)2							
Road (km/h)	0	0	20	30	40	50	60	70	80	90
	Comf. 2.5 m/s ²	Max. 3.5 m/s ²	Comfortable average rate of deceleration 2.5m/s ²							
50	40	30	30	25	15					
60	55	40	50	40	30	15				
70	75	55	70	60	50	40	20			
80	100	70	95	85	75	60	45	25		
90	125	90	120	110	100	85	70	50	25	
100	155	110	150	140	130	115	100	80	55	30
110	185	135	180	175	160	150	130	110	90	60

Assuming a posted speed of 80 km/h on Down Road, the sight distance at the access location will require 5 m x 214 m. If 110 km/h is maintained, then 5 m x 285 m is required. Adequate clearing will need to be undertaken if required (Figure 3.1 and Table 3.5).

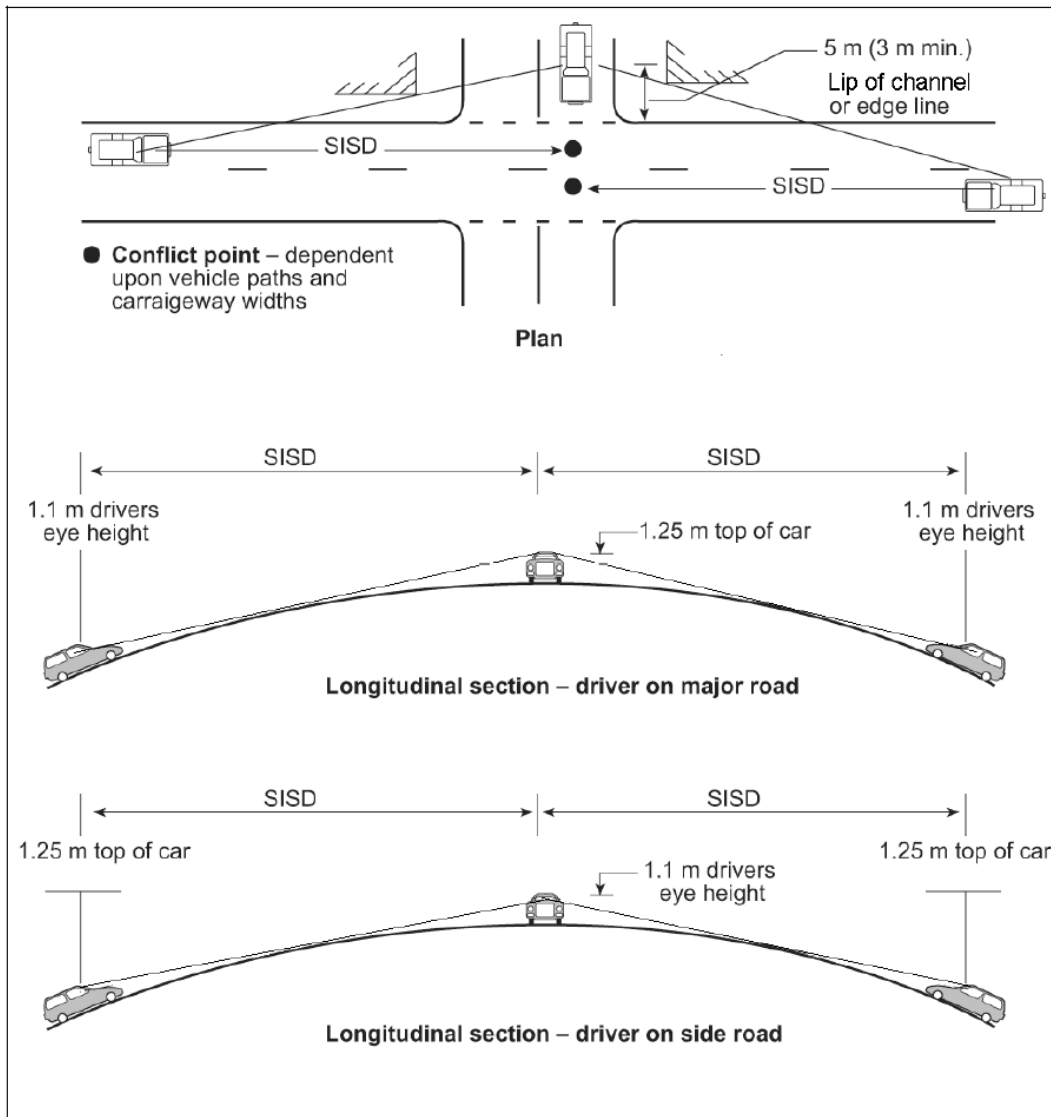


Figure 3.1 Safe intersection sight distance

Table 3.5 Safe intersection sight distance based on design speed

Design speed (km/h)	Based on safe intersection sight distance for cars ¹ h1 = 1.1; h2 = 1.25, d = 0.362; Observation time = 3 s					
	R _T = 1.5s ³		R _T = 2.0s		R _T = 2.5s	
	SISD (m)	K	SISD (m)	K	SISD (m)	K
40	67	4.9	73	6	-	-
50	90	8.6	97	10	-	-
60	114	14	123	16	-	-
70	141	22	151	25	-	-
80	170	31	181	35	-	-
90	201	43	214	49	226	55
100	234	59	248	66	262	74
110	-	-	285	87	300	97
120	-	-	324	112	341	124
130	-	-	365	143	383	157

If a speed limit of 110 km/h is maintained, a review of aerial photography would indicate a suitable location for the eastern access is approximately 240 m west of Down Road north or ~200 m if the speed limit is reduced to 80 km/h.

3.3 Parking

The Masterplan shows approx. 250-bay parking areas at the multi-use racetrack and motocross track. Competitors will have separate competitor parking and marshalling areas, as shown on the Masterplan. Parking for approximately 200 cars will be detailed at the motocross club house area.

Based on 500 spectators/competitors, an overall provision of 250-300 bays is forecast to be required. All parking demand will be contained within the site. A separate Traffic and Parking Management Plan for large events has also been developed.

3.4 Construction

Site construction activities should include the construction of suitable site access prior to the works. The access should be designed for the designated construction vehicle.

The number of trucks associated with the construction process should be determined and checked against any capacity constraints or time limit constraints. Activities may need to be planned to avoid peak activity from surrounding businesses and peak movement on the road network. Truck routes to and from the site during construction should be agreed with City of Albany and Main Roads WA.

If any oversize over mass (OSOM) vehicles are planned, appropriate approval will be required from Main Roads WA together with any necessary traffic management.

3.5 Traffic management for larger events

For larger events, careful planning will be required to accommodate the safe and orderly entry, exit and parking for competitors and spectators. This is subject to a separate report and hence, this report does not cover detailed traffic management planning however, the planning will need to include:

- Consultation with Main Roads WA regarding requirements for the Albany Highway/Down Road intersection
- Consultation with the CoA
- Consultation with the Department of Fire and Emergency Services and WA Police
- Consultation with adjacent businesses in Down Road
- Variable message sign (VMS) requirements on Albany Highway
- Directional signage to parking areas
- Illumination of access and parking areas
- Community notices, radio, newspaper, social media, etc.
- Speed limits and traffic control in Down Road
- Emergency access requirements
- Requirements for satellite parking and bus transfers

Note: There are likely to be other considerations in addition to the above list.

3.6 Main Roads WA input

Several queries were raised with Main Roads WA and their response is highlighted as follows.

Query - In view of the access points to the AMP, woodchip facility and CBH facility being in close proximity, would Main Roads WA consider reducing the speed limit on Down Road from 110 km/h to 80 km/h?

Response – The CoA to follow up with Main Roads WA, however at the time of writing their response is as follows:

It is very unlikely that Main Roads would reduce the speed limit on this section of road due to events occasionally generating increased traffic volumes. The environment is rural with good road geometry.

Main Roads WA suggests the following alternatives:

- **Traffic management for events process.**
- **Ensure all accesses to the AMP has safe intersection sight distances and appropriate turn treatments.**

Query - Does Main Roads have any issue or concern with the existing Down Road/Albany Highway intersection noting it has recently been upgraded? Analysis indicates it will operate to a good level of service if AMP is developed.

Response – No, the existing Down Road/Albany Highway intersection does not require additional treatments.

Query - Are there any other land use or infrastructure proposals that MRWA is aware of that could significantly affect the AMP?

Response - No.

Query - Specific traffic management will be required for large events. Does Main Roads WA have any concerns?

Response - MRWA has no concerns about specific traffic management for large events at the Down Road/Albany Highway intersection. (Great Southern Motorsports Group advice: The venue operations manual to include traffic management procedures during events including signage and traffic wardens).

3.7 City of Albany input

Query - Is the City supportive of reducing the speed limit on Down Road from 110 km/h?

Response - Yes, from a point west of the CBH site entry. However, note that Main Roads WA is not supportive. City to follow up with Main Roads WA.

Query - Does the City have preferred locations for the access points to the site?

Response - Entry to the AMP should be via the eastern entry point only. The western entry point is for separate access (by another leaseholder) to the small dam in the north-west corner.

Query - Are there restrictions to clearing trees for access/sight distance?

Response - Just normal DWER clearing permit applies. CoA will handle this separately as part of the environmental impact assessment. Clearing permits not required as covered during the DA process and listed under the clearing exemptions of the EP Act.

Query - How many constructed parking bays are required by the City, assuming 500 spectators/competitors. Is 250-300 considered to be sufficient?

Response – The Masterplan shows a 250-bay parking area at the multi-use racetrack. Competitors will have a competitor parking and marshalling area adjacent to the pits area as shown on the Masterplan. Parking for approximately 200 cars will be provided at the motocross club house area.

Query - Are there any other land use or infrastructure proposals that the City is aware of that could significantly impact the AMP or traffic in Down Road?

Response - No.

Query - Left turn lanes are likely to be required in Down Road at the access points, is the City supportive?

Response - Yes.

3.8 Traffic safety assessment – Albany Highway emergency access way

An emergency access road is proposed from the site to Albany Highway. The access road will be located along the full length and adjacent to the northern boundaries of Lot 1 (excised road reserve) and Lot 10 (easement).

The location is shown on Figure 3.2.

Access to Albany Highway is located approximately 1,540 m south of the Down Road/Albany Highway intersection, via a 10 m wide easement through Water Corporation land (Lot 10 Down Road) and 20 m wide excision through private property (Lot 1 Down Road). The easement will be restricted to 10 m wide and the purpose of the proposed access easement is strictly limited to 'emergency use' only (i.e. only to be used for access / egress in the case of a bushfire event / fire emergencies).

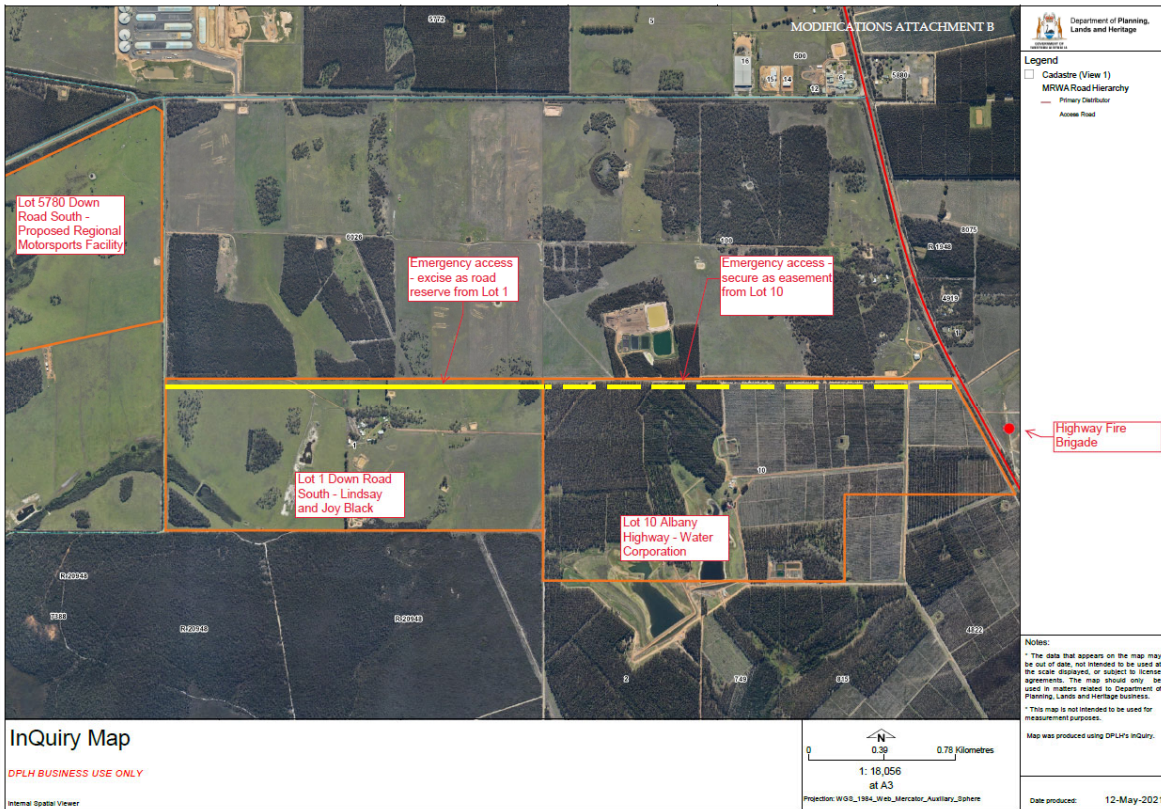


Figure 3.2 Emergency access way

3.8.1 Emergency access and safety issues

Certain operation and maintenance issues associated with the emergency access will need to be addressed by GSMG and/or CoA. These include the following:

- The access road shall need to be well maintained and kept clear for vehicular access at all times, to include vegetation clearing, overhanging tree canopy clearing and access road surface maintenance.
- Parking of vehicles within the emergency access shall be prohibited at all times.
- Suitable signage shall need to be installed at each end to confirm its status as an emergency access only.
- A sealed section should be constructed at the eastern end of the emergency access road to ensure loose material is not transferred onto Albany Highway.
- Sight distances at its intersection with Albany Highway should be maintained at all times commensurate with the design speed of Albany Highway (110 km/h) (i.e. 5 m x 285 m). Clearing should be suitable to achieve the necessary sight distances. Figure 3.1 refers.
- The intersection with Albany Highway shall be designed to accommodate the design vehicle.
- Protocols for use of the emergency access shall be adopted to include traffic management and chain of responsibility commensurate with Bushfire Management Plan (BMP) requirements.
- The City of Albany acknowledges there are existing interests registered across the subject land and agrees to be a shared user of the subject access track.

It is considered that subject to suitable management and control the emergency access as proposed could be supported from a traffic and safety perspective.

4. Summary and recommendations

4.1 Summary

The reported crash history does not indicate a safety issue on Down Road or its intersection with Albany Highway. Assuming competitor/spectator numbers of 500, the site is anticipated to generate 250 vph in and 250 vph out at the start and finish of events. No adverse impacts are anticipated for Down Road or its intersection with Albany Highway.

It is considered that the speed limit on Down Road near the site should be reduced from 110 km/h to a maximum of 80 km/h (west of the CBH entry) and should be considered by Main Roads WA and the City of Albany. At the time of writing, it is noted that Main Roads is not supportive of reducing the speed limit, complimentary directional signage on Down Road should be installed for the AMP to assist in causing drivers to slow down.

If a speed limit of 110 km/h is maintained, a review of aerial photography would indicate a suitable location for the eastern access is approximately 240 m west of Down Road north or ~200 m if an 80 km/h speed limit is adopted.

Site access should include a deceleration lane (200 m) suitable for the posted speed limit.

Traffic management as required will need to be planned and undertaken for events with competitor/spectator numbers in excess of 500 in consultation with the CoA and Main Roads WA.

All parking should be contained on site and should be clearly signed for users.

Emergency access to Albany Highway shall be designed suitable for the design vehicle and maintained for use at all times.

4.2 Recommendations

It is recommended that:

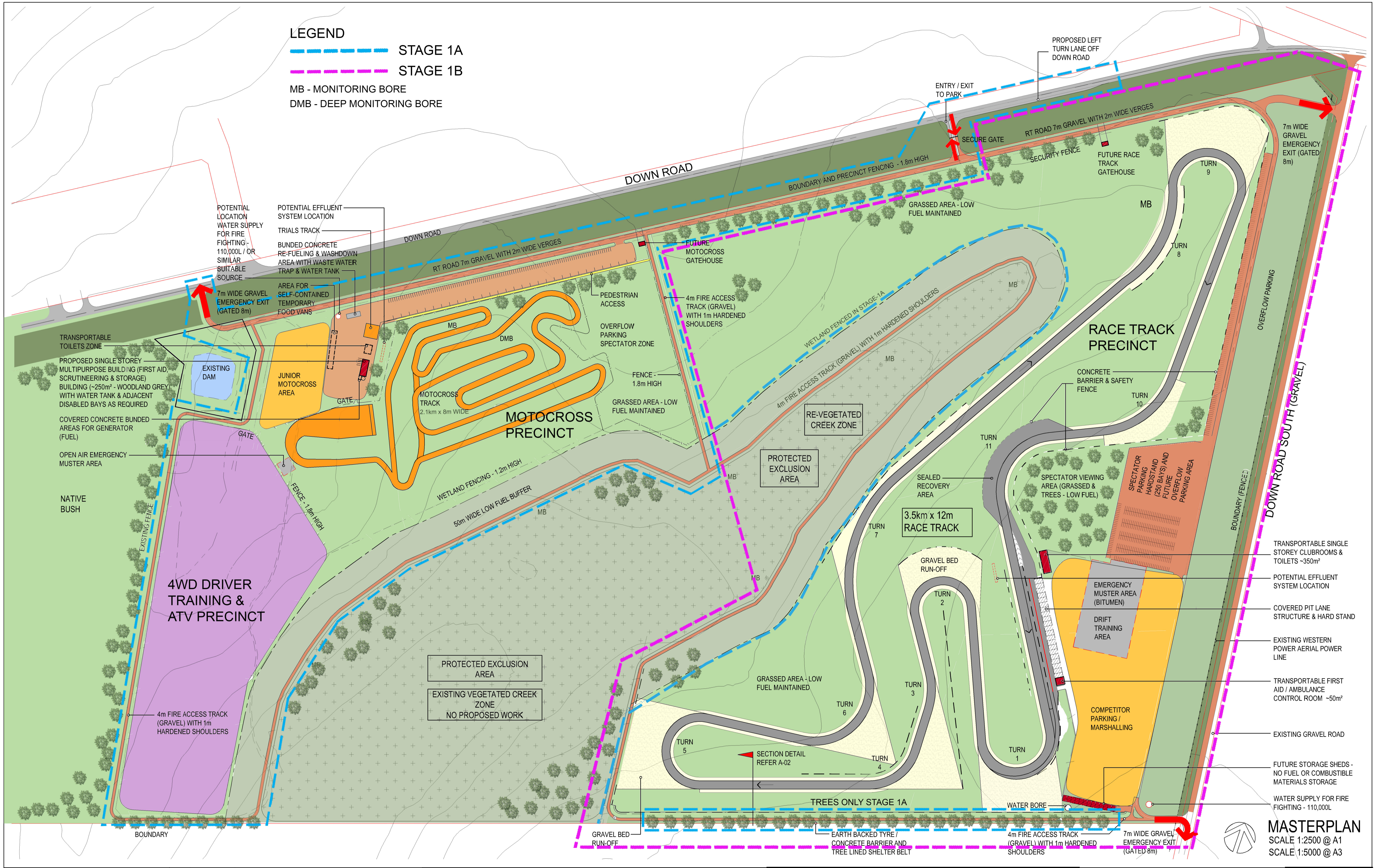
- The speed limit in Down Road near the site (west of CBH entry) is considered for reduction from 110 km/h to a maximum of 80 km/h and this should be followed up with Main Roads WA and the CoA.
- Complementary directional signage on Down Road should be installed for the AMP to assist in causing drivers to slow down.
- A left turn lane should be constructed at the access location in Down Road, commensurate with the posted speed limit (a 200 m length is recommended).
- Site accesses are located based on sight distance requirements for the adopted speed limit (either 80 km/h or 110 km/h).
- Traffic management planning for large events should be developed with the CoA and Main Roads WA.
- Regular consultation should be undertaken with CBH, the woodchip facility and other businesses in Down Road to advise when large events are planned.
- Emergency access to Albany Highway should be designed suitable for the design vehicle and maintained for use at all times.

Appendix A

Masterplan

LEGEND

- STAGE 1A
- STAGE 1B
- MB - MONITORING BORE
- DMB - DEEP MONITORING BORE



MASTERPLAN
 SCALE 1:2500 @ A1
 SCALE 1:5000 @ A3

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rev	date	description
A	15-04-2021	ISSUED FOR CLIENT REVIEW
B	27-04-2021	ISSUED FOR CLIENT REVIEW
C	12-05-2021	ISSUED FOR CLIENT REVIEW
D	26-05-2021	ISSUED FOR CLIENT REVIEW
E	05-07-2021	ISSUED FOR DA

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Masterplan - Stage 1

cad file

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