

Road Safety Audit

Tripoli Way Extension

Detailed Design RSA

Final RSA Report

Prepared for:
Indesco

Date: 17th January 2026

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1. Executive Summary

This report is for a Detailed Design condition road safety audit for Tripoli Way Extension.

Positive aspects of the site have not been recorded. The purpose of this audit was to report on the defects and deficiencies of the project from a road user safety perspective only. The safety audit is not a design check, although some design issues may be raised during the audit process.

The audit is based on a review of the supporting documentation supplied to the audit team, Google Earth, Google Maps and Near Maps, along with a site inspection.

The risk ratings provided in this audit are the assessment of the auditors. Ultimately, it is the client and / or road authority's responsibility to determine the response to risk for each road safety deficiency identified.

With each corrective action finding, a client response section has been provided. The purpose of this section is to assist the client in formalising an appropriate action required and/or deemed necessary to satisfy the safety issue raised. For example, "do nothing", action or what action was taken to address the issue.

1.1. The Safe System Approach

The Safe System approach to improving road safety, takes a holistic view of the road transport system and the interactions among the key components of that system: Safe Roads, Safe Vehicles, Safe Speeds, and Safe People.

Road safety is a shared responsibility. We all need to make decisions with safety in mind, from the design of our roads and vehicles, investments, laws and education, and each road user acting safely each and every day.

The principles underpinning the Safe System acknowledge that:

- People make mistakes which can lead to crashes.
- The human body has a limited physical ability to tolerate crash forces before harm occurs.
- A shared responsibility exists amongst those who plan, design, build, manage and use roads and vehicles and provide post-crash care to prevent crashes resulting in serious injury or death.
- All parts of the system must be strengthened to multiply their effects; and if one part fails, road users are still protected

The BTE Consulting Audit team follow the Safe System Approach as part of the audit team's assessment process and documentation.

2. Introduction

2.1. Background

BTE Consulting was commissioned by Indesco in September 2024 to undertake a Detailed Design Condition Road Safety Audit for Tripoli Way Extension (80% Detailed Design).

This report presents the findings of the road safety audit.

2.2. Site Location

The subject location, comprised the following key features:

- Intersection (roundabout) of Tongarra Road (Illawarra Highway)
- Intersection of Moles Street (Left in left out)
- Intersection of Calderwood Road (TCS)
- Intersection of Hamilton Road (TCS)
- Intersection of Terry Street (Illawarra Highway) (TCS)
- One travel lane in each direction between CH 0 Tongarra Road (Illawarra Highway) and CH630, West of Moles Street
- Two travel lanes in each direction between CH630, West of Moles Street and CH1960 Terry Street (Illawarra Highway)
- New bridge between CH490 and CH530
- New median islands
- Guard rail
- Pedestrian fencing
- Retaining walls
- Shared path within the northern verge
- Adjusted driveways
-

The scope of the audit undertaken included the following:

- All road users, including heavy vehicles, motorcyclists, cyclists and pedestrians
- The full width of the road corridor on the following roads, including approaches.

The site locations are shown in Figure 1.

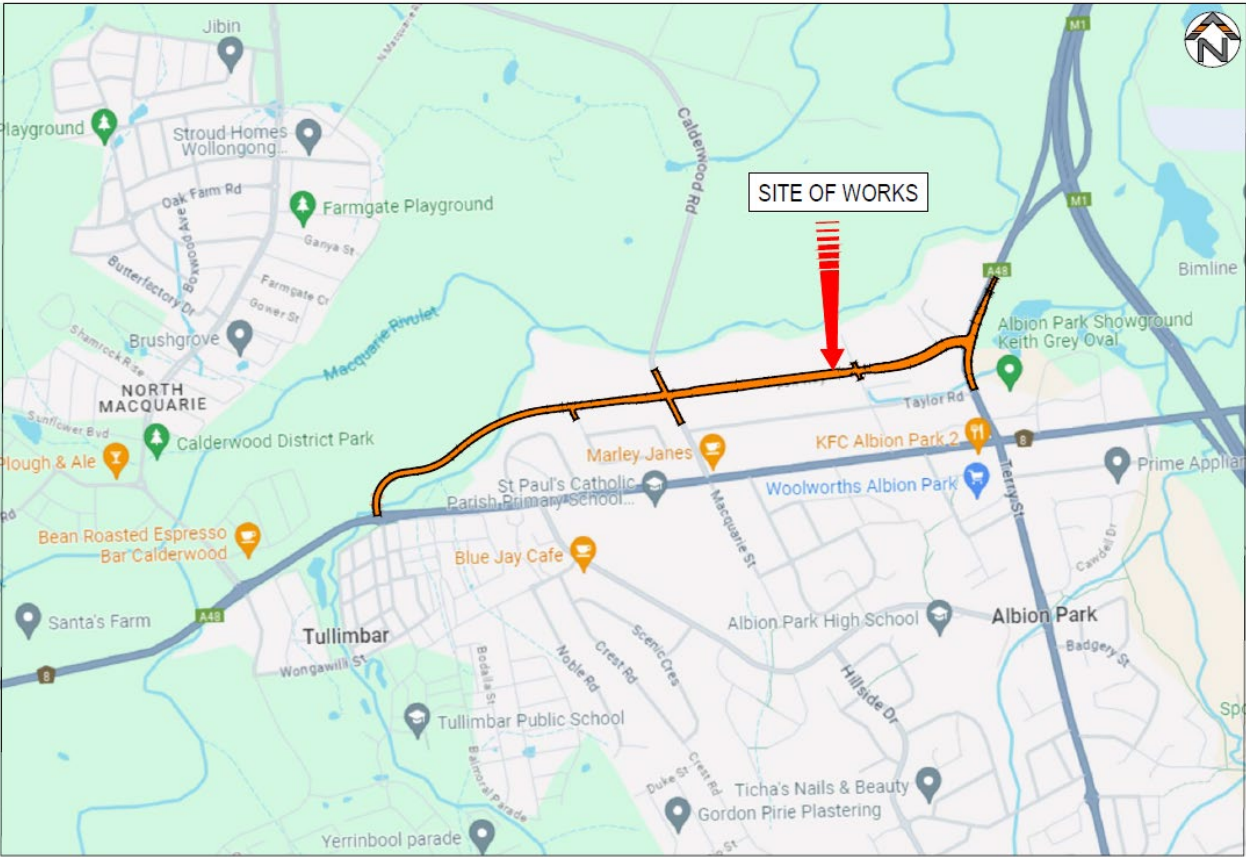


Figure 1 – Site Location (Image sourced from plan 9470-01-000)

2.3. Client
 The Project Sponsor for this Road Safety Audit is:

Name	Darren Benson
Company	Indesco
Address	Level 3/352 Hunter Street, Newcastle NSW
Telephone	(02) 6285 1022
Email	Darren.benson@indesco.com.au

3. The Audit Process

3.1. Scope of this report

This audit comprises a Detailed Design Condition Road Safety Audit. The audit was conducted to ascertain potential road safety issues for all road users. As a Detailed Design Condition Road Safety Audit, the audit is limited to consideration of elements identifiable from an appreciation of the plans provided, google maps and Near Maps, along with a site inspection.

Issues considered during the audit included:

- Road alignment and typical cross-section;
- Auxiliary lanes;
- Intersections;
- Parking;
- Local and property access;
- Pedestrians and cyclists;
- Physical objects;
- Pavement;
- Roadside safety barriers and clear zones;
- Line marking and signage;
- Landscaping;
- Provision for heavy vehicles; and
- Animals.

The objective of the audit was to review the proposed plans provided, with the intention of identifying road safety deficiencies and areas of risk that could lead to road crashes. The road safety audit team considered, for example:

- Have the permitted movements for all of the various road users been catered for in a safe way?;
- Are the appropriate operational and control mechanisms in place to promote safety?;
- Would the system operate to an acceptable level of safety in all situations, such as peak periods, poor weather and during darkness?; and
- Are there opportunities to reduce the occurrence or severity of crashes?

Although the audit reviewed and identified safety issues, the responsibility for assessing and implementing corrective action(s) lies with the Project Sponsor. It is not the role of the auditor to provide recommendations or solutions to the identified safety issues; however, identification of potential safety concerns may assist the Project Sponsor in reducing the incidence and severity of crashes.

3.2. Audit Team

Thomas Brown	Level 3 Auditor	RSA-02-1013	Accreditation Expiry: 31/12/2024
Bob Staniland	Level 2 Auditor	RSA-02-1581	Accreditation Expiry: 10/02/2026

3.3. Audit methodology

The Road safety audit has been conducted to consider the site from an appreciation of the plans provided, report provided, site inspection and Aerial image (i.e. Google / Near Maps). A site inspection was undertaken by the audit team on 2nd October 2024 between 12pm and 2pm. The weather was sunny.

3.4. Commencement Meeting

A commencement meeting was held at 2.30pm on the 26th September 2024 (via teleconference) involving Thomas Brown (Audit Team Leader) and Brandon Gathercole (Project Sponsor).

3.5. Closing Meeting

The Project sponsor provided client comments on 12/02/2026 for inclusion as part of the Final report issue. A closeout meeting was held on 17/02/2026 at 11.30am involving Thomas Brown (Audit team leader) Tim Nell (Indesco) and Darren Benson (Project sponsor). Authority was granted by the Project Sponsor, to issue the final road safety audit report.

3.6. Previous audits

There were no previous road safety audits provided to the auditors.

3.7. Exclusions

Exclusions are noted as followed;

- Subsurface drainage

This may lead to the Audit team not fully appreciating the site conditions for all road users along and on the approaches to the proposed road works at this location.

3.8. Information Sources

The road safety audit was undertaken with reference to:

- Austroads, Guide to Road Safety Part 6: Road Safety Audits (2022)

The potential risk associated with the deficiencies identified has been based on a subjective assessment of the accident likelihood and crash consequence, as outlined in Section 4.

The proposed design drawings received by the auditors, refer to Appendix B.

4. Risk classification methodology

4.1. Risk assessment system

The rating of each identified deficiency was based on the crash likelihood and consequence, in accordance with the methodology and risk matrix described in the following subsections. The crash likelihood and consequence are based on the auditor's assessment and are necessarily subjective on this basis.

Risk levels based on the criteria set out in section 10.5.1 of Austroads Guide to Road Safety, Part 6: Road Safety Audit (2022), has been assigned to each deficiency identified. The rationale behind the assignment of risk has been reproduced in Table 1, Table 2 and Table 3 from the Austroads document.

4.2. Crash likelihood

The likelihood of crash occurrence, resulting from each safety issue identified in the audit is assessed from the options presented in Table 1 .

Table 1 Likelihood

Likelihood	Description
Almost certain	Occurrence once per quarter
Likely	Occurrence once per quarter to once per year
Possible	Occurrence once per year to once every three years
Unlikely	Occurrence once every three years to once every seven years
Rare	Occurrence less than once every seven years

4.3. Severity

The potential severity of a crash resulting from the identified safety issue has been rated from the choices presented in Table 2.

Table 2

Severity	Description
Fatal	Death within 30 days of a crash
Serious	Admitted to hospital
Moderate	Major first aid and/or presents to hospital (not admitted)
Minor	Minor first aid
Insignificant	Property Damage

Reference to related severity of crash types should be read in conjunction with Figure 10.3 Severity Guidance Sheet from Austroads Guide to Road Safety Part 6:

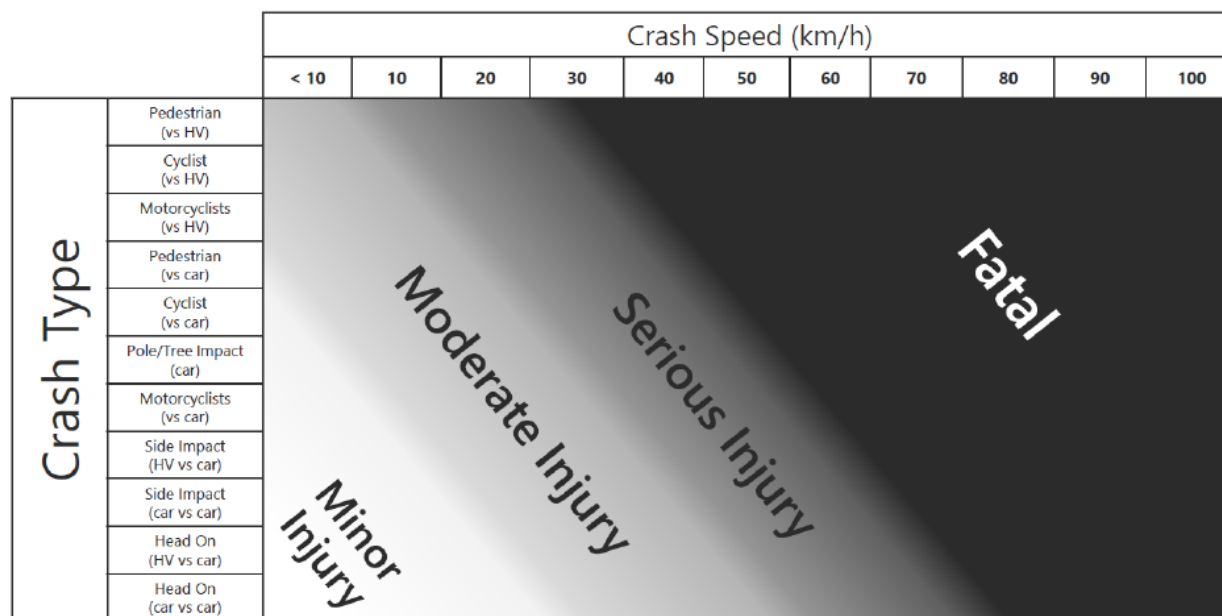


Figure 10.3 – Severity Guidance Sheet
 (Sourced from Austroads Guide to Road Safety Part 6: Road Safety Audits (2022))

It is stressed that the information contained within the severity guidance sheet (Figure 10.3) is a general indication only and that professional engineering judgement is required with its usage.

4.4. Risk Level

Deficiencies are rated for their importance according to a five-tiered system, based on the following matrix, summarised in Table 3.

Table 3

	Fatal	Serious	Moderate	Minor	Insignificant
Almost certain	Extreme	Extreme	High	High	Medium
Likely	Extreme	Extreme	High	Medium	Medium
Possible	Extreme	High	High	Medium	Low
Unlikely	High	High	Medium	Low	Negligible
Rare	High	Medium	Low	Negligible	Negligible

Safe system crash
 outcome threshold

4.5. Suggested level of prioritisation based on risk rating

Possible suggested level of prioritisation for each road safety deficiency, are summarised in Table 4 below. As noted in the Executive Summary of this report, ultimately, it is the client and / or road authority's responsibility to determine the response and / or action to risk for each road safety deficiency identified.

Table 4

Risk Rating	Level of Prioritisation
Extreme	Must be corrected regardless of cost
High	Should be corrected or the risk significantly reduced, even if the treatment cost is high
Medium	Should be corrected or the risk significantly reduced, if the treatment cost is moderate, but not high
Low	Should be corrected or the risk reduced if the treatment cost is low
Negligible	No action required

The risk matrix above is aligned to Safe System principles and has been designed to be used with consideration of a severity guidance sheet (Refer Figure 10.3), based on Austroads Guide to Road Safety Part 6: Road Safety Audits (2022).

It should be noted that from Table 4 above, the ratings are based on the criteria set out in Austroads Guide to Road Safety, Part 6: Road Safety Audits (2022). The project sponsor (also known as the project manager) assigns a priority rating for each identified risk in road safety, which shows the importance of putting the treatment into action.

In terms of recommendations for suggested treatments for each identified risk to road safety, generally the audit team does not provide these, as this is not the responsibility of the auditors. Rather it is the responsibility of the client (or an appropriate representative of the client such as the project manager from the design team contracted for delivering/overseeing the project) to devise the appropriate corrective actions and implement them for the identified risks to road safety in the report.

It will be up to the discretion of the respective owning organisation/s to address their corresponding risks in the instance where local and state road authorities are responsible for an audit finding. The project manager's responsibility is to ensure all auditing findings are appropriately addressed.

For each client response addressing each audit finding, project managers must respond to close-out each finding. Where it is decided not to respond to an audit finding, justification should be given for the determination that no action will follow.

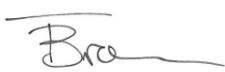
It is not the responsibility of the auditors to approve the client response actions or the project manager's responses to the findings. The auditors are however able to provide input (not recommendations) to assist the project manager, and ultimately the project, in determining appropriate responses to reach a suitable outcome for possibly addressing in future design projects.

5. Audit Statement

We, the undersigned, have undertaken a Detailed Design condition road safety audit for Tripoli Way Extension.

The audit was conducted in accordance with Austroads Guide to Road Safety Part 6: Road Safety Audits (2022), for the purpose of identifying any features, that potentially impacts on road safety.

While every care and diligence has been taken to identify potential safety concerns, as detailed in this report, we do not warrant that every safety issue has been identified.



Thomas Brown

Lead Auditor - Auditor Level 3
Registered No: RSA-02-1013

Date: 17/02/2026



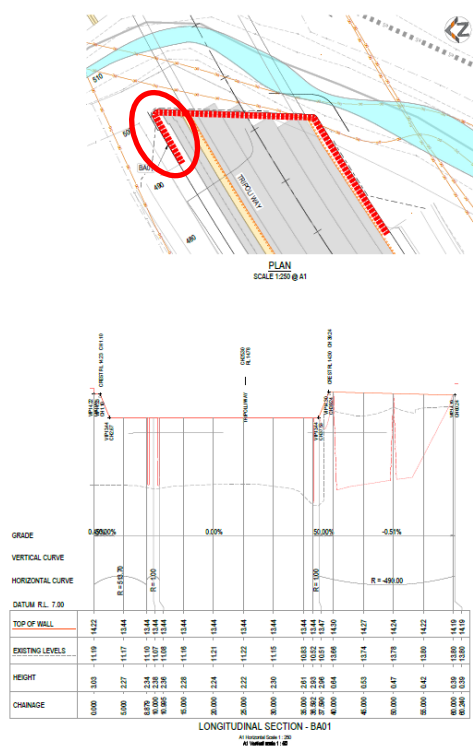
Bob Staniland

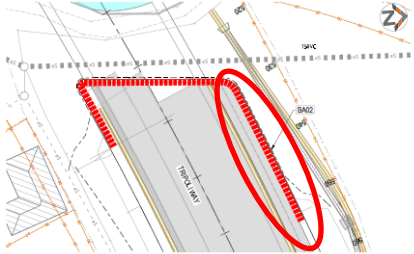
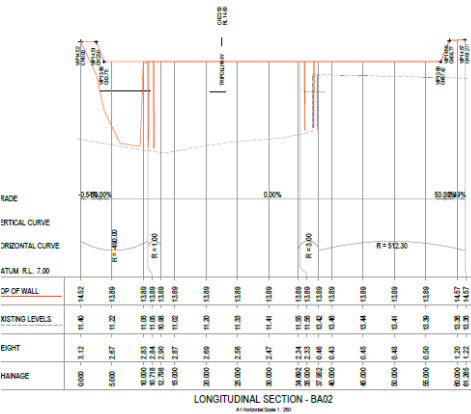
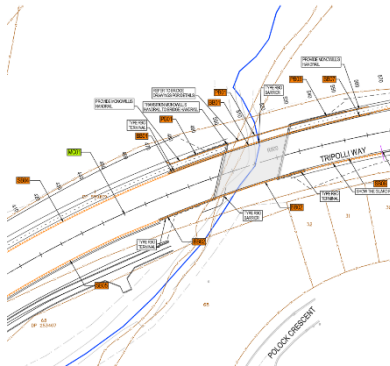
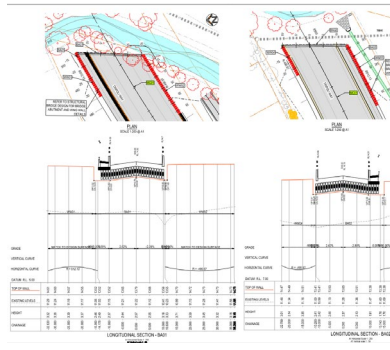
Auditor Level 2
Registered No: RSA-02-1581

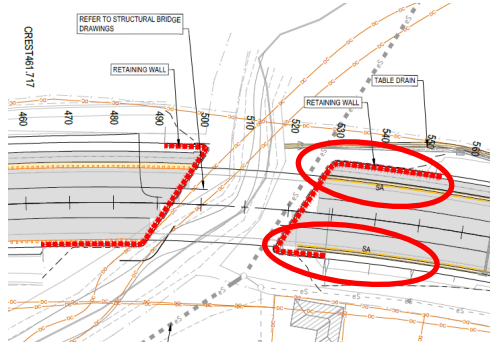
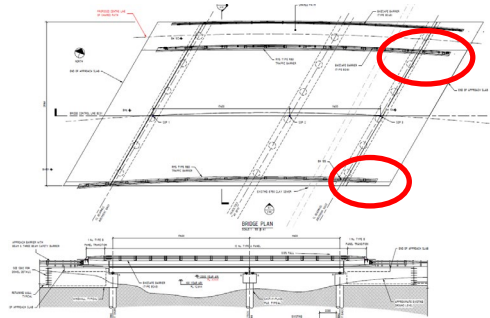
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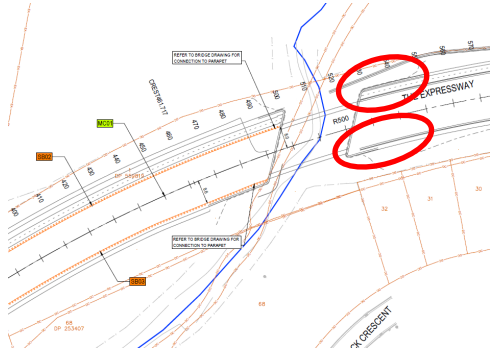
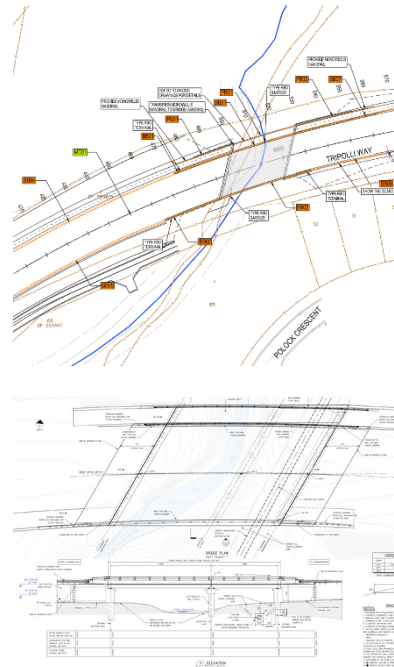
6. Audit Findings

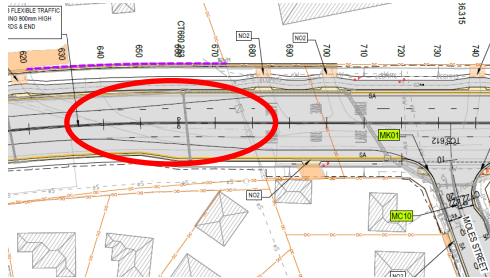
The audit findings are presented in the following table. Where applicable, the findings are presented in order of road chainage and drawing number accordingly, and is not presented in order of relative importance to road safety.

CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Risk Assessment	Client Response
1.	Tripoli Way CH490 to CH555 Pedestrian infrastructure and cyclist infrastructure	There is a lack of barriers / fencing on top of the proposed retaining walls to protect cyclists and / or pedestrians on the shared path from going over the edge of the retaining walls. This may result in errant pedestrians and / or cyclists falling over the retaining walls, resulting in injury.	Refer Sheet No. 870 	Likeli-hood	Pedestrian/cycle handrail (Monowills) has now been incorporated into the top of the retaining wall to protect errant pedestrians and / or cyclist from falling over the retaining walls. The incorporation of the handrail will result in a lower likely hood of an errant cyclist and/or pedestrian falling over the retaining wall. Please refer to 9470-11-551, 9470-11-0870 and the below screenshots.
				Likely	
				Severity	
				Moderate	
				Risk Level	
				High	

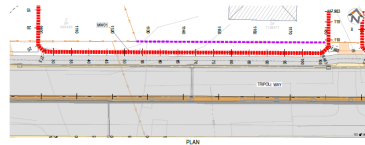
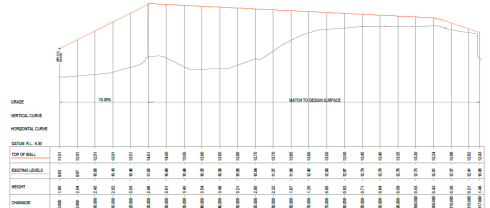
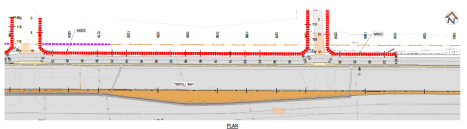
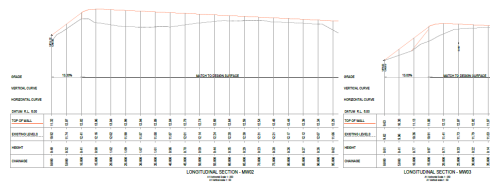
CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Risk Assessment	Client Response
			 		 

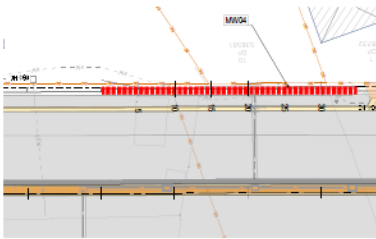
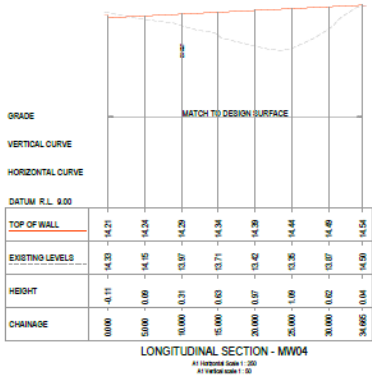
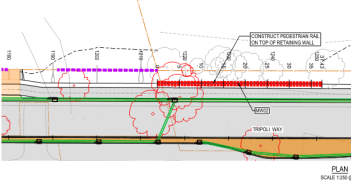
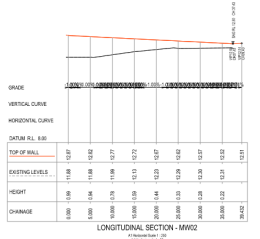
CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Risk Assessment	Client Response
2.	Tripoli Way CH530 Safety barriers	There are no barrier connections, including terminals on the eastern side of the bridge structure. If terminals are proposed to be connected directly to the bridge structure, this may not protect occupants of vehicles from hazards (i.e. drop over retaining walls). This may lead to serious injury to occupants of vehicles.	Refer sheet No. 102  Refer Sheet No. S100 	Likeli-hood	Type RBO are on the guard rail connection to the bridge and ET-SS terminal at the point of need on the eastern side of the bridge. A Crash barrier system and end terminals have now been provided on the eastern side of the bridge. The incorporation of the barrier system will result in a lower likely-hood of an errant vehicle falling over the retaining wall. Please refer to 9470-11-551, 9470-S100 and the below screenshots.
				Possible	
				Severity	
				Serious	
				Risk Level	
				High	

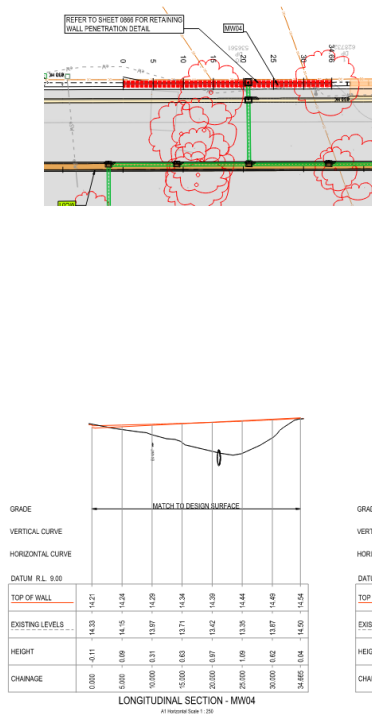
CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Risk Assessment	Client Response
			Refer sheet No. 552 		

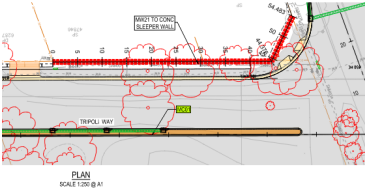
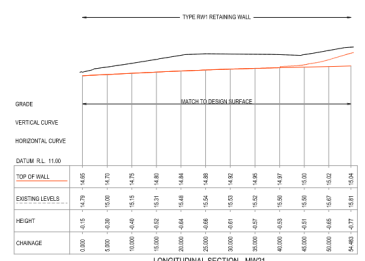
CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Risk Assessment	Client Response
3.	Tripoli Way CH635 to CH685 Auxiliary lanes	The proposed merge and diverge tapers on Tripoli Way, west of Moles Street appear short to suit a 70km/h design speed. This may lead to drivers being required to merge at a lateral rate greater than 1.0 m/sec which may increase the risk of vehicle crashes.	Refer sheet No. 103 	Likeli-hood	The merge and diverge tapers have been updated to allow for a 1.0 m/sec lateral shift. The resultant diverge taper is now 70m in length which is compliant with Austroads requirements. The resultant merge taper is now 115m in length which is compliant with Austroads requirements. With the increased length of the merge, additional signage for the merge and the available extra run off a lower likely-hood is expected. Please refer to 9470-11-103 and the below screenshot.
				Unlikely	
				Severity	
				Moderate	
				Risk Level	
				Medium	

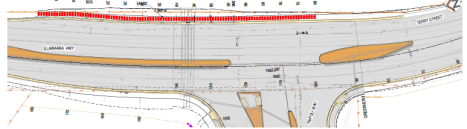
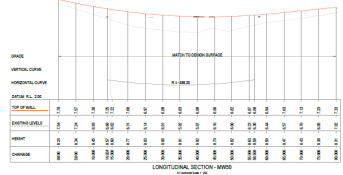
CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Risk Assessment	Client Response

CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Risk Assessment	Client Response
4.	Tripoli Way Various locations Pedestrian infrastructure and cyclist infrastructure	There is a lack of pedestrian and cyclist protection at the top of retaining walls located along the shared path (i.e. pedestrian fencing). This may result in errant pedestrians and / or cyclists falling over the retaining walls, resulting in injury.	Refer sheet No. 871   Refer sheet No. 872  	Likeli-hood	Pedestrian/cycle handrail (Monowills) has now been incorporated into the top of the retaining wall to protect errant pedestrians and / or cyclist from falling over the retaining walls. The incorporation of the handrail will result in a lower likely hood of an errant cyclist and/or pedestrian falling over the retaining wall. Please refer to 9470-11-0871, 9470-11-0872, and the below screenshots.
				Likely	
				Severity	
				Serious	
				Risk Level	
				Extreme	

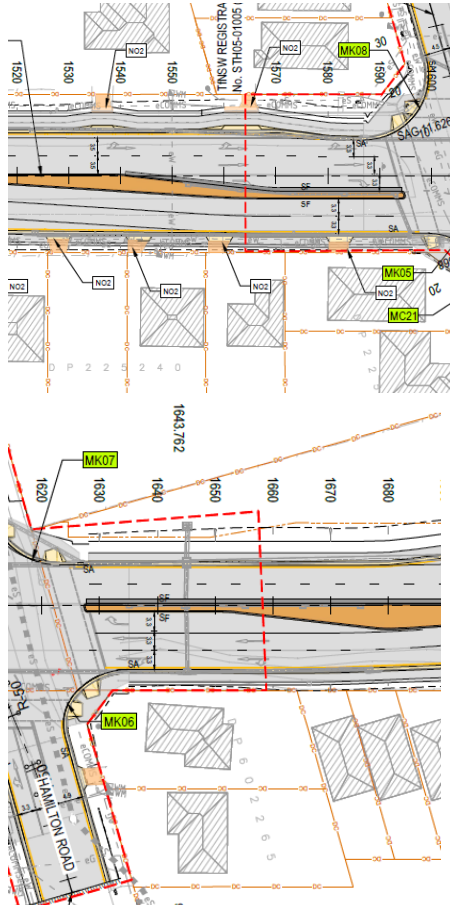
CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Risk Assessment	Client Response
			Refer sheet No. 873  		 

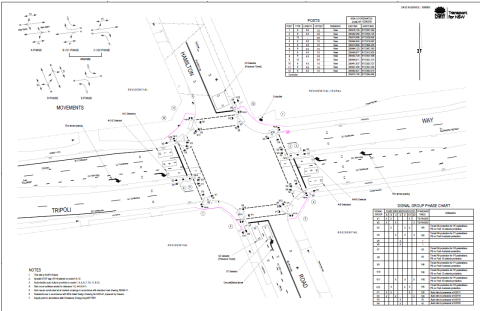
CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Risk Assessment	Client Response
					

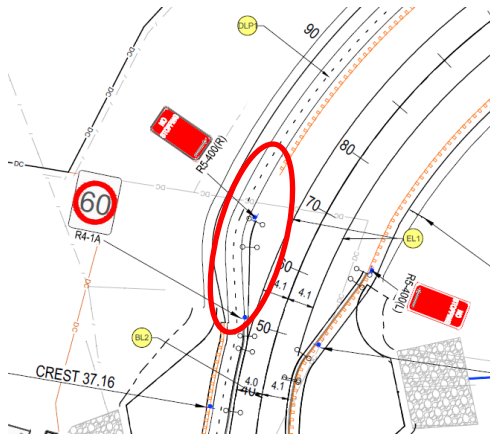
CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Risk Assessment	Client Response
					 PLAN SCALE 1:100 @ A1  LONGITUDINAL SECTION - MW21

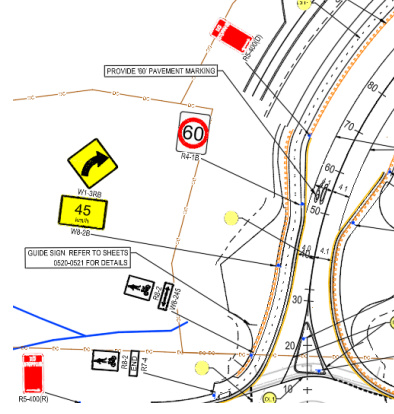
CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Risk Assessment	Client Response
5.	Terry Street CH100 to CH180 Roadside hazards	The roadside retaining wall southbound on Terry Street (Illawarra Highway) is only protected by kerb and gutter for vehicles. Errant vehicles which mount the kerb at these locations will be unable to recover before crashing over the retaining wall. This may lead to serious injury to occupants of a vehicle.	Refer sheet No. 874  	Likeli-hood	Removed from Indesco's design scope, this section is now under a Design and Construct scope which is being delivered by others.
				Unlikely	
				Severity	
				Serious	
				Risk Level	
				High	

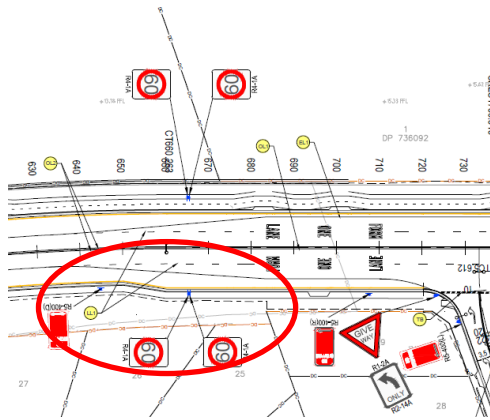
CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Risk Assessment	Client Response
6.	Tripoli Way and Calderwood Road Miscellaneous	The proposed Calderwood Road travel lane arrangement in both directions is a combination through / right turn lane and dedicated left turn lane. The proposed phasing only allows movements for the through / right turn vehicles during D phase, in both directions. Through vehicles may become frustrated being stuck behind waiting right turn vehicles and use the left turn lane to go around. This may increase the risk of a through vehicle striking an oncoming left turning vehicle or opposing right turning vehicle. This may lead to vehicle crashes and result in injury to occupants of vehicles.	Refer TCS Plan "TCS_Tripoli Way_Calderwood Rd_R1.pdf" 	Likeli-hood	Straight and right turn lane is the required configuration for the traffic modelling. Changing to a right turn lane with a straight and left will lead to more queuing and additional frustrations. Due to the traffic model requirements it is proposed to leave the intersection as is.
				Unlikely	
				Severity	
				Moderate	
				Risk Level	
				Medium	

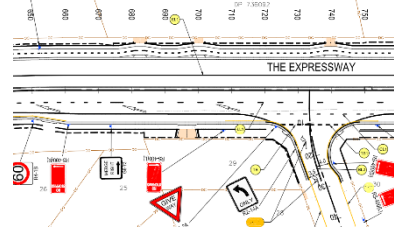
CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Risk Assessment	Client Response
7.	Tripoli Way and Hamilton Road Intersections	The proposed right turn bays eastbound and westbound on Tripoli Way approaching Hamilton Road appear short to suit a vehicle to decelerate, stop and store within the right turn bay without impacting through vehicles on Tripoli Way. This may increase the risk of vehicle crashes (i.e. rear-end type crashes). This may lead to injury to occupants of vehicles.	Refer sheet No. 106 	Likeli-hood	Increased risk noted. Aux lanes added as original concept had no channelized turns. Initial Traffic modelling showed low volumes. Right turn bays are designed as a Short Right turn lane to accommodate a single turn vehicle per the traffic modelling.
				Rare	
				Severity	
				Moderate	
				Risk Level	
				Low	

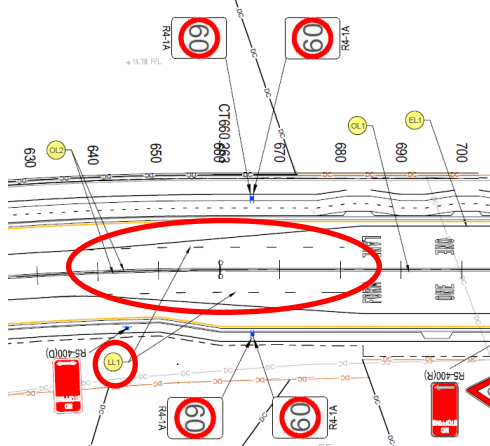
CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Risk Assessment	Client Response
			Refer TCS Plan "TCS_Tripoli Way_Hamilton Rd_R1.pdf" 		

CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Risk Assessment	Client Response
8.	Tripoli Way CH50 to CH70 Pedestrian infrastructure and cyclist infrastructure	Between CH50 and CH70 northbound on Tripoli Way, pedestrians and cyclists within the proposed shared path are not separated or protected from through vehicles. This is in particular in the future when there are two travel lanes at this location in each direction. This may increase the risk of errant vehicles to strike a pedestrian / cyclist at this location leading to serious injury to a pedestrian / cyclist.	Refer sheet No. 501 	Likeli-hood	Comment noted. Barrier between Road and shared path not a requirement under the standards. No kerb side parking allowed means buffer not required. Future connection if implemented will be signals and the path will be realigned. This is on the Northbound exit from the roundabout. It is expected that vehicles will not be diverging in this location due to the slow speed curve ahead and that traffic will be in a single lane past this location. The shared path is originally separated with the kerb.
				Rare	
				Severity	
				Serious	
				Risk Level	
				Medium	

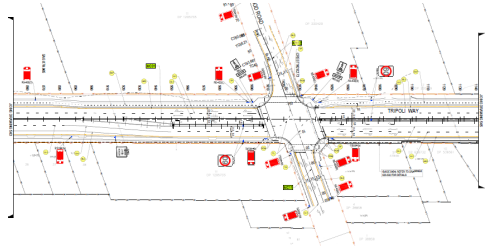
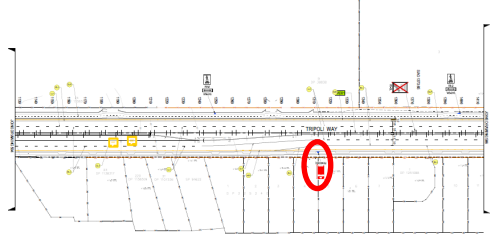
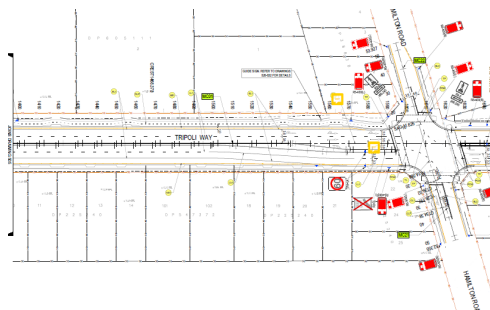
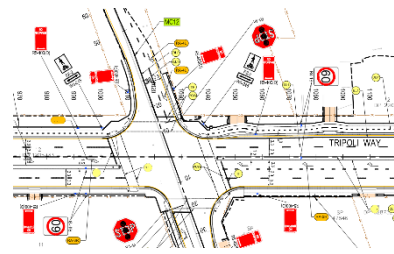
CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Risk Assessment	Client Response
					

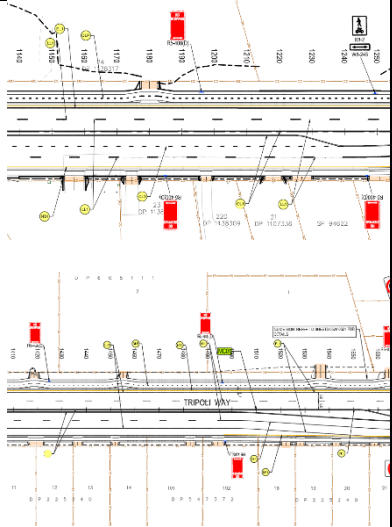
CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Risk Assessment	Client Response
9.	Tripoli Way CH680 Traffic signage	There is a lack of traffic signage to advise drivers of the proposed merge at this location. This may create readability issues for drivers approaching the merge at this location. This may lead to late lane decisions and increase the risk of vehicle crashes (i.e. side swipe type crashes).	Refer sheet No. 503 	Likeli-hood	Signage revised with increase in merge length, complies with AS1742. Additional signage has been included to warn drivers of the merge ahead. There is sufficient runoff space in the form of a 4.5m shoulder beyond the merge that will enable vehicles to avoid the run off space. With the increased length of the merge, additional signage for the merge and the available extra run off a lower likely-hood is expected. Please refer to 9470-11-503 and the below screenshot for the additional signage employed.
				Likely	
				Severity	
				Minor	
				Risk Level	
				Medium	

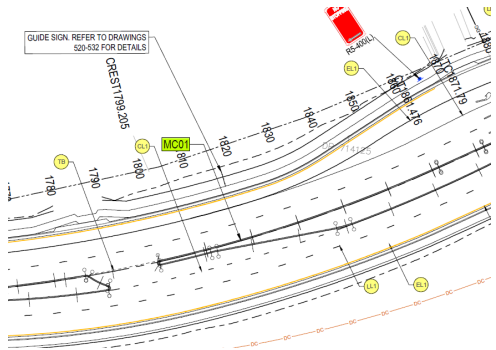
CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Risk Assessment	Client Response
					

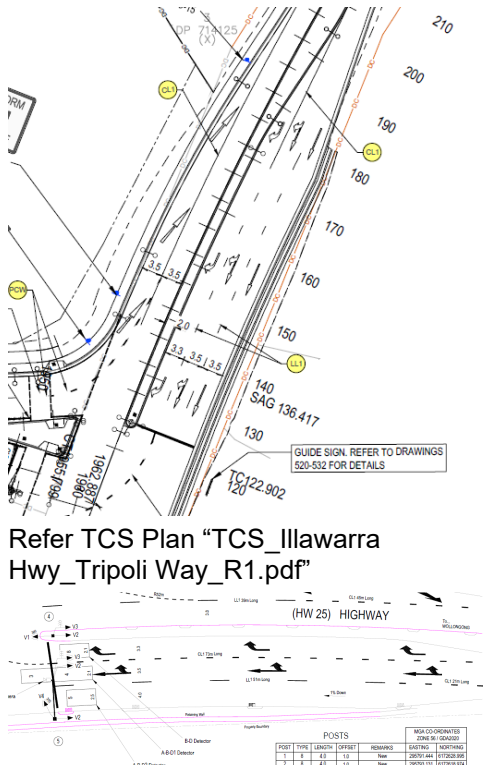
CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Risk Assessment	Client Response
10.	Tripoli Way CH640 to CH680 Delineation	The proposed linemarking and signage plan at CH640 to CH680 in both directions at the merge and diverge shows LL1 linemarking. This may cause driver confusion and readability issues that this is a merge / diverge at this location. This may lead to late lane decisions and increase the risk of vehicle crashes (i.e. side swipe type crashes).	Refer Sheet No 503 	Likeli-hood	Merge length increased. The linemarking has been updated to include a LL1 line on the lead in to the merge then a CL1 line through the merge location. With the increased length of the merge, additional signage for the merge and the available extra run off a lower likely-hood is expected. Please refer to 9470-11-503 and the below screenshot.
				Unlikely	
				Severity	
				Minor	
				Risk Level	
				Low	

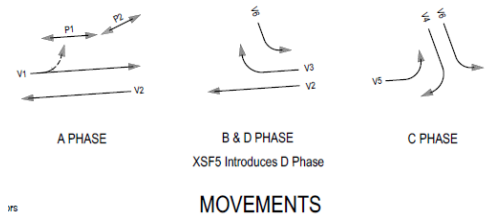
CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Risk Assessment	Client Response

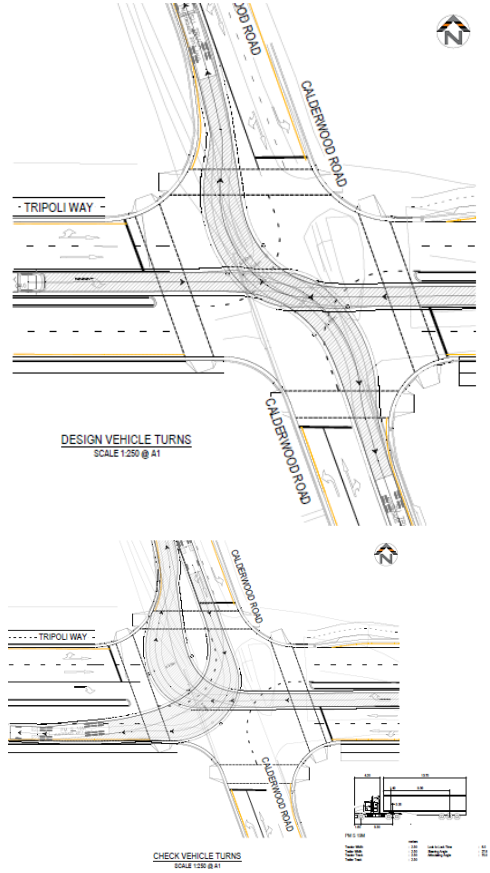
CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Risk Assessment	Client Response
11.	Tripoli Way Various locations Traffic signs	Along Tripoli Way “No stopping” signage is shown at inconsistent and large gaps to accompany NS1 (clearway) linemarking. Over time if the NS1 linemarking is removed (i.e. due to road works or worn) this may create readability issues for drivers and increase the likelihood of drivers parking in unsafe locations. This may increase the risk of vehicle crashes.	Refer sheet No. 504  Refer sheet No. 505  Refer sheet No. 506 	Likeli-hood Unlikely Severity Minor Risk Level Low	“No stopping” signage has been updated to be a smaller maximum 75m intervals as per the relevant Australian standards (AS1472.13). As a result of the reduction in gaps it shall lower the likely-hood of a vehicle stopping at an area not designated for stopping. Additionally, NS1 line marking has been used to delineate the no stopping zones. Please refer to 9470-11-504, 9470-11-505 & 9470-11-506 and the below screenshots. 

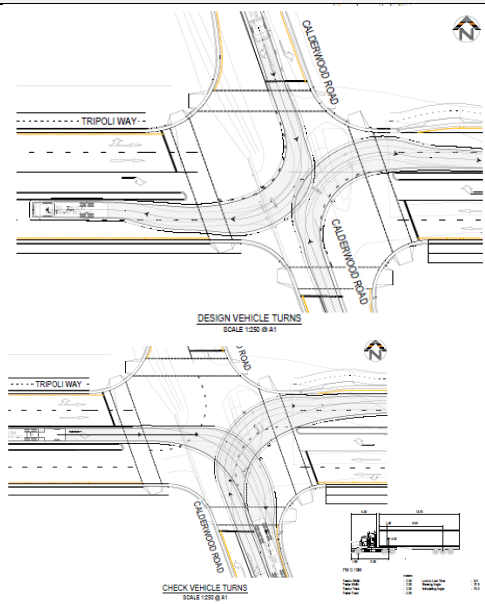
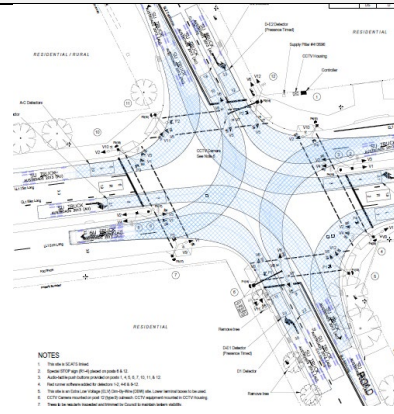
CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Risk Assessment	Client Response
					

CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Risk Assessment	Client Response
12.	Tripoli Way Ch1800 Traffic signs	The proposed right turn bay into the Albion Park Landscaping Supplies is not clearly denoted to approaching vehicles. This may lead to driver confusion of the intended use of the right turn bay. This may increase the risk of drivers using the access right turn bay as a U-turn bay on Tripoli way. This may also lead to late lane decisions for vehicles intending on accessing the Albion Park Landscaping Supplies. This may increase the risk of vehicle crashes and lead to injury to occupants of vehicles.	Refer Sheet No. 507 	Likeli-hood	Removed from Indesco's design scope, this section is now under a Design and Construct scope which is being delivered by others.
				Unlikely	
				Severity	
				Moderate	
				Risk Level	
				Medium	

CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Risk Assessment	Client Response
13.	Terry Street (Illawarra Highway) CH125 to CH210 Traffic signals	The proposed through / right combination lane (Lane 2) allows through movements on A, B and D phases (TCS plan) while the right turn is only allowed on B and D phases. Lane 2 through vehicles in phase A (through vehicles only) may get stuck behind right turning vehicles. This may lead to through vehicles changing lanes into Lane 1 (through only lane). This may increase the risk of vehicle crashes with oncoming vehicles in Lane 1. This may result in serious injury to occupants of a vehicle. Note – additionally, the delineation between all three lanes (LL1 linemarking) may increase the risk of confusion to drivers of the lanes purpose as a through lane or right turn lane.	Refer Sheet No. 508  Refer TCS Plan "TCS_Illawarra Hwy_Tripoli Way_R1.pdf"	Likeli-hood	Removed from Indesco's design scope, this section is now under a Design and Construct scope which is being delivered by others.
				Almost certain	
				Severity	
				Serious	
				Risk Level	
				Extreme	

CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Risk Assessment	Client Response
			 A PHASE B & D PHASE XSF5 Introduces D Phase C PHASE MOVEMENTS		

CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Risk Assessment	Client Response
14.	Tripoli Way and Calderwood Road Miscellaneous	The proposed right turn movements from Tripoli Way into Calderwood Road overlap and don't allow for Diamond phasing shown in movements A and E. The proposed right turn movements from Calderwood Road into Tripoli Way overlap and don't allow for Diamond phasing shown in movement D. Vehicles which attempt diamond phasing turns at this location are at extreme risk of a head on crash with an oncoming vehicle in the opposing direction. This may lead to serious injuries to occupants of vehicles. Note – T1 linemarking is shown on the Civil Plans but not shown on the TCS plans.	Refer sheet No. 853 	Likeli-hood	The proposed right turn movements allow for a right turn of simultaneous SU Trucks (HRV) as well as the relevant design vehicle completing the left turn maneuver. A check vehicle of a Semi-Trailer was shown in the early design phase to maneuver the intersection when it is clear in the opposing direction. It is expected this will turn at the end of the phase and is a rare maneuver. The design progressed based on the design for a SU truck, as a result of this only the SU Truck movement has been shown, as per the TCS design which has now been approved by TfNSW. Please refer to 9470-11-852, DS2024/001077_5255 and the below screenshot.
				Almost certain	
				Severity	
				Serious	
				Risk Level	
				Extreme	

CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Risk Assessment	Client Response
					 NOTES 1. The site is a 1:500 scale. 2. The site is a 1:500 scale. 3. The site is a 1:500 scale. 4. The site is a 1:500 scale. 5. The site is a 1:500 scale. 6. The site is a 1:500 scale. 7. The site is a 1:500 scale.

CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Risk Assessment	Client Response
			Refer TCS Plan "TCS_Tripoli Way_Calderwood Rd_R1.pdf" MOVEMENTS		

Appendix A - Road Safety Audit Categories

Road safety audit practices



Transport
for NSW

INFORMATION SHEET:

NO: L5

Road safety audit categories

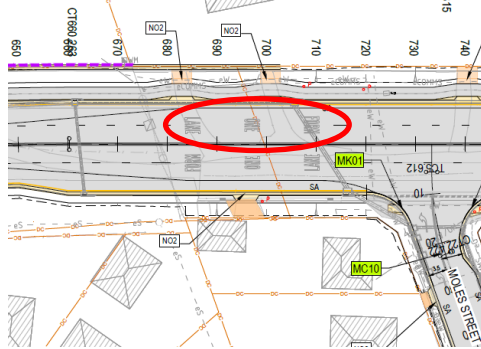
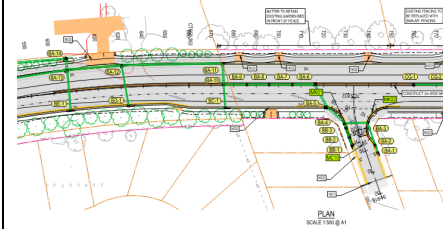
Categories have been set up to assist in the management of corrective actions, and monitoring of trends in identified risks in road safety.

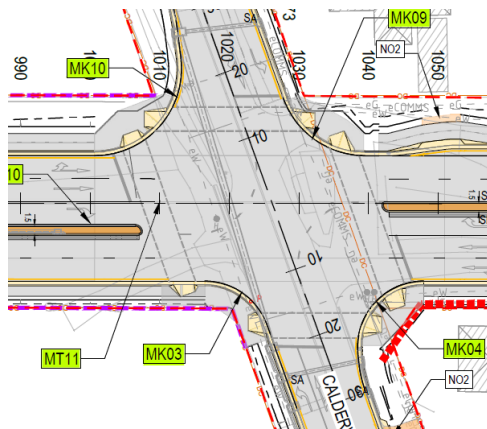
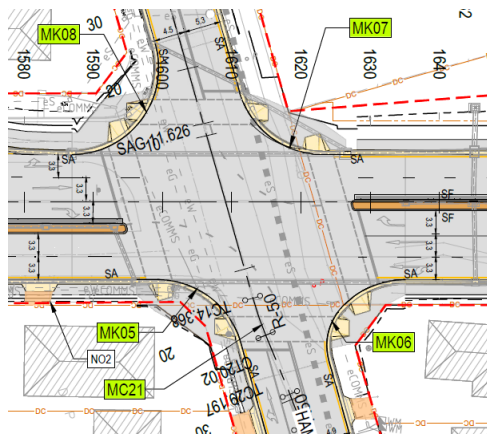
Category	Examples
Access impacts	Property, developments, traffic generators, rest areas, emergency vehicles, service vehicles, maintenance, vehicle breakdowns, etc.
Auxiliary lanes	Overtaking lanes, passing lanes, tapers, merges, etc.
Bridge structures	Road bridge, pedestrian bridge, rail bridge, etc.
Bus infrastructure	Bus lanes, bus facilities, bus stops, etc.
Cyclist infrastructure	Cycleways, on-road facilities, off-road cycle facilities, cycle routes, etc.
Delineation	Guide posts, pavement markings, reflectors, warning signs, etc.
Drainage	Ponding, aquaplaning, etc.
Heavy vehicle infrastructure	Inspection bays, facilities, provisions, routes, etc.
Intersections	Roundabouts, cross intersections, T-junctions, etc.
Landscaping	Shrubs, trees, etc.
Lighting	Street lighting, tunnel lighting, etc.
Miscellaneous	Matters not covered by categories listed.
Network effects	Road function, traffic composition, traffic volume, traffic characteristics, route choice, impact of continuity with the existing network, etc.
Special road users infrastructure	Trains, ferries, trams, equestrian, stock, etc.

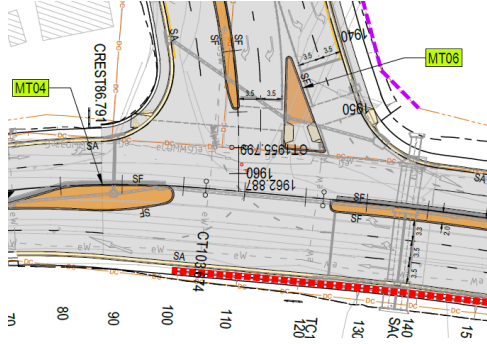
Category	Examples
Pedestrian infrastructure	Pathways, pedestrian crossings, pedestrian fencing, etc.
Road alignment and cross section	Sight distance, visibility, readability by drivers, glare, widths, shoulders, crossfalls, batter slopes, drains, etc.
Road pavement	Pavement defects, skid resistance, ponding, loose stones/material, etc.
Road users	Behaviour, practices, travel patterns, interaction between different road users, etc.
Roadside activities	Roadside advertising, roadside designs, vending, etc.
Roadside hazards	Clear zones, utility poles, culverts, bridge structures, trees, etc.
Safety barriers	Concrete, guardrail, wire rope safety barriers, crash cushions, etc.
Speed zoning	Speed limits, speed zones, design speed, school zones, etc.
Traffic management and operations	Staging of works, temporary traffic control, detours, peak tidal flows, clearways, parking, etc.
Traffic management devices	Threshold treatments, road humps, kerb extensions, slow points, etc.
Traffic signals	Signal phasing, bus signals, bicycle signals, pedestrian signals, etc.
Traffic signs	Regulatory signs, warning signs, guide signs, etc.
Tunnel structures	Road tunnels, pedestrian tunnels, cycle tunnels, etc.

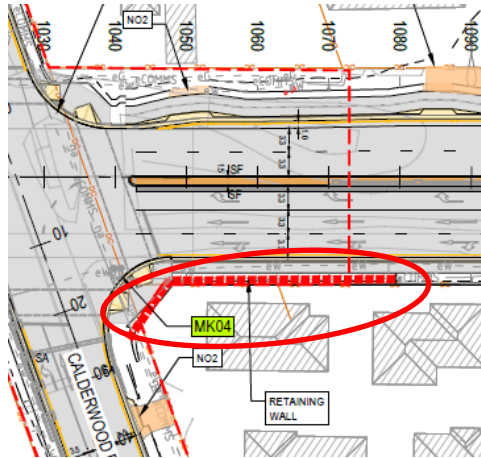
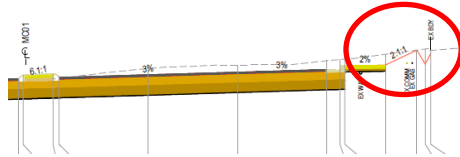
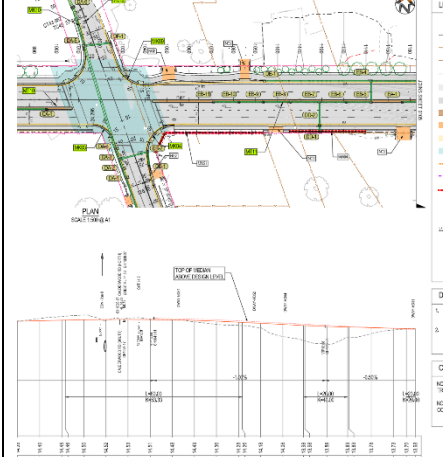
Appendix B - Other Observations

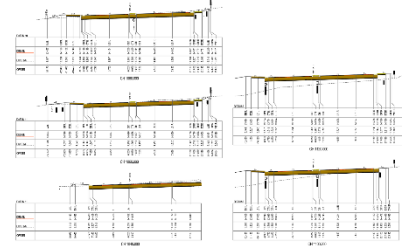
Below are general auditor team observations of potential road safety audit items that may be outside the scope of works, excluded from the audit findings (refer Section 3.7 Exclusions) or may require additional information linked to the observations below to determine if a road safety issue should be raised by the audit team. These observations are not linked to the audit findings within the RSA report.

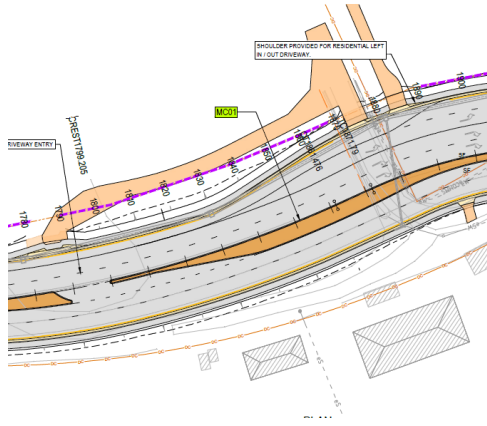
CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Client Response
1.	Tripoli Way CH700 Delineation	There is a proposed "Form one lane" pavement message located on the diverge between two lanes. This may cause driver confusion and lead to drivers changing lanes back to Lane 2 in the middle of a change to Lane 1. This may increase the risk of vehicle crashes (i.e. side swipe type crashes).	Refer sheet No. 103 	The proposed line marking has been updated to include a LL1 line on the lead in to the merge then a CL1 line through the merge location. With the increased length of the merge, additional signage for the merge and the available extra run off a lower likely-hood is expected. Please refer to 9470-11-103 and the below screenshot. 

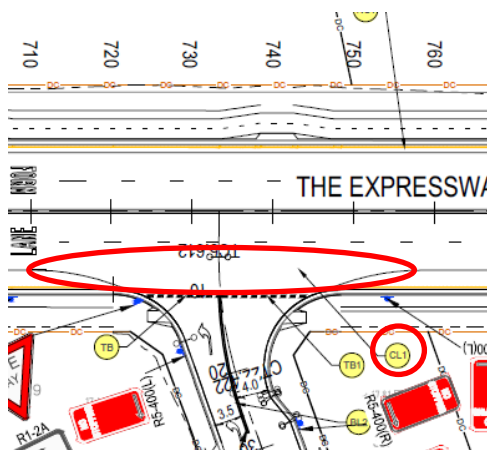
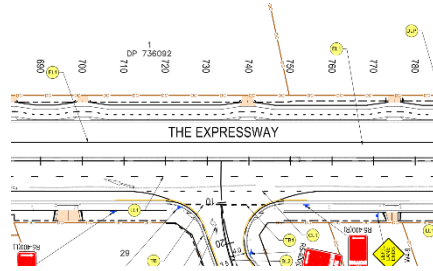
CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Client Response
2.	Tripoli Way and Calderwood Road, Tripoli Way and Hamilton Road, And Tripoli Way and Terry Street (Illawarra Highway) Pedestrian infrastructure and cyclist infrastructure	The audit team observed within the Civil plans and TCS plans that the proposed kerb ramps are not full width kerb ramps at the proposed TCS intersections as per TfNSW specifications.	Refer sheet No. 104  Refer sheet No. 106 	Kerb ramps all 2.5m wide, as agreed with Client. Terry Street intersection is now removed from Indesco's design scope, this section is now under a Design and Construct scope which is being delivered by others..

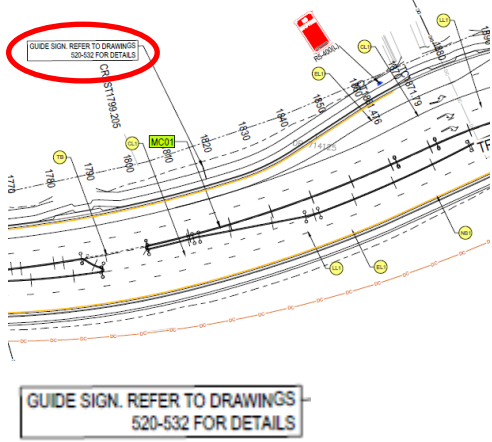
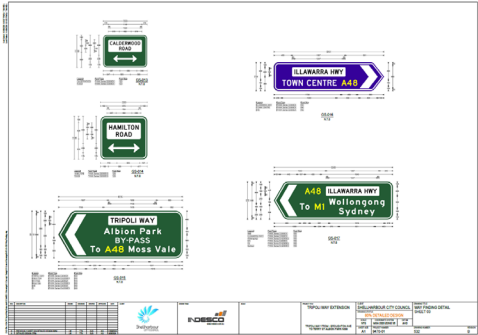
CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Client Response
			Refer sheet No. 108 	

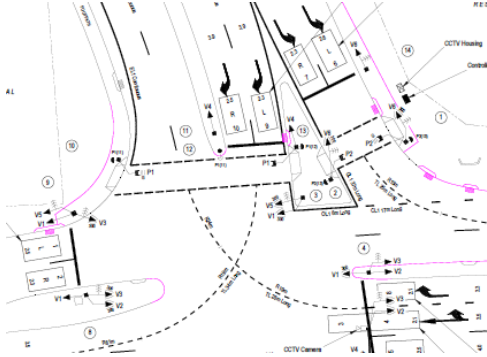
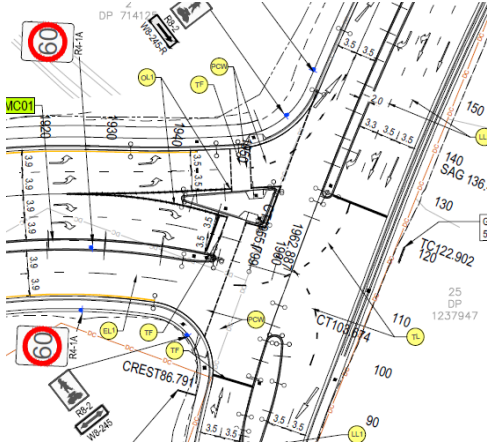
CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Client Response
3.	Tripoli Way and Calderwood Road Road alignment and cross section	Proposed retaining wall details and verge details at the south-eastern corner of the intersection of Tripoli Way and Calderwood Road are not clear on the cross sections.	Refer Sheet No. 104  Refer Sheet No. 215 	The Cross sections through this section have been amended to show the retaining wall correctly. There was a slight issue within the modelling causing a redundant 'string' to be picked up during the creating of cross sections. Please refer to 9470-11-104 & 9470-11-215 and the below screenshots. 

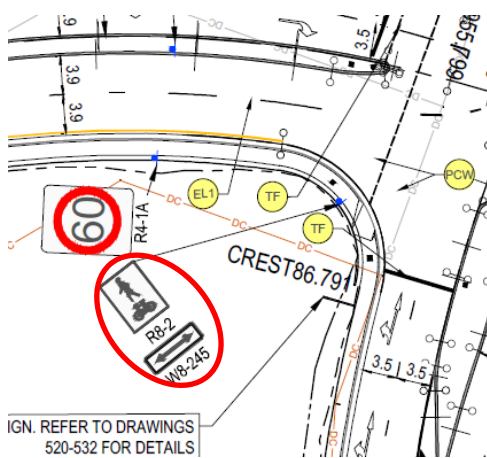
CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Client Response
				

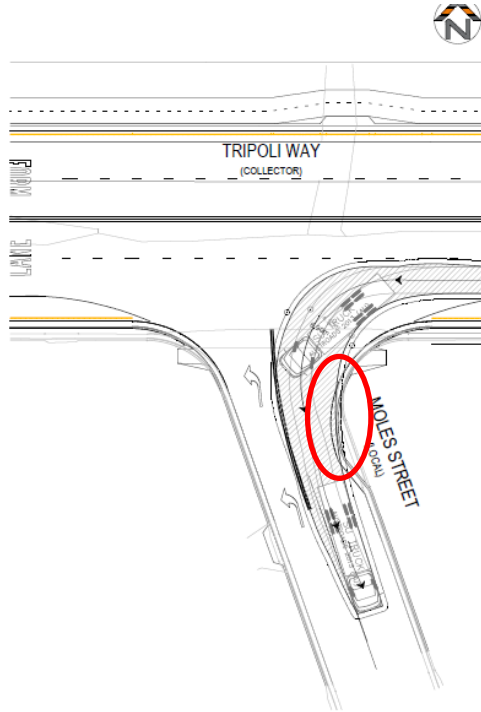
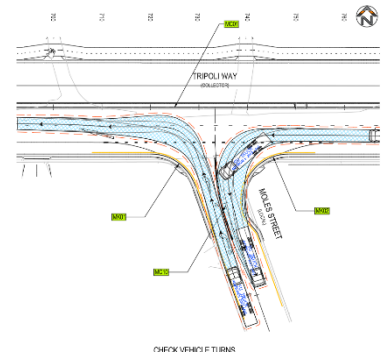
CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Client Response
4.	Tripoli Way CH1790 Access impacts	It is unclear to the audit team whether heavy vehicles have been considered to the proposed access to Albion Park Landscaping Supplies. This includes storage within the right turn lane and the internal driveway geometry. This may lead to the Audit team not fully appreciating the site conditions for all road users along and on the approaches to the proposed road works at this location.	Refer Sheet No.107 	Removed from Indesco's design scope, this section is now under a Design and Construct scope which is being delivered by others.

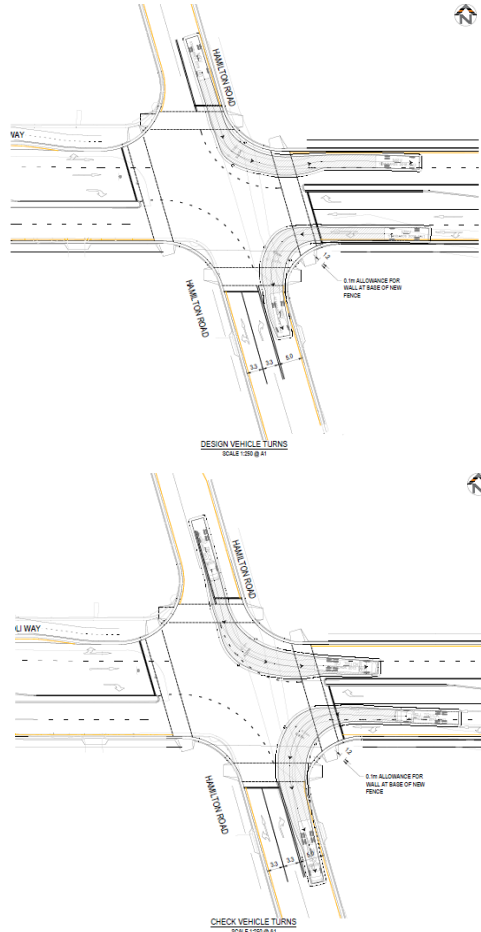
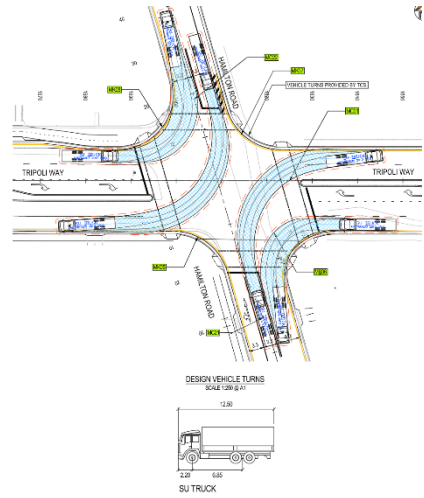
CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Client Response
5.	Tripoli Way and Moles Street CH710 to CH760 Delineation	The linemarking and signage plans note a CL1 line which is missing from all plans.	Refer Sheet No. 503 	The CL1 line marking has been placed back into the plans. The intention is the CL1 line will go through the intersection. Please refer to 9470-11-503 and the screenshot below. 

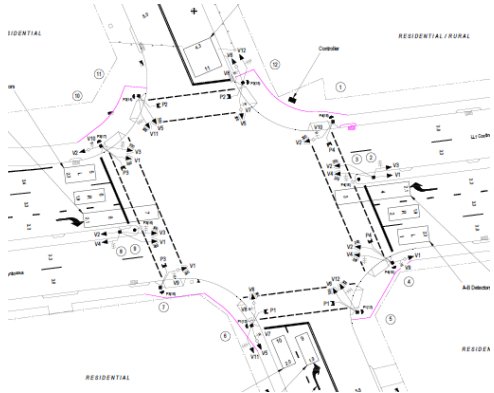
CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Client Response
6.	Tripoli Way CH1820 Traffic signs	It is unclear to the audit team what the proposed guide sign at this location is.	Refer Sheet No.507  Refer sheet No. 532 	Removed from Indesco's design scope, this section is now under a Design and Construct scope which is being delivered by others.

CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Client Response
7.	Tripoli Way and Terry Street (Illawarra Highway) CH1950 Miscellaneous	The Civil plans PCW linemarking and kerb ramps do not match the TCS plans. Additionally there is missing PCW linemarking and PCW linemarking striking the median nose.	Refer TCS Plan "TCS_Illawarra Hwy_Tripoli Way_R1.pdf"  Refer sheet No. 508 	Removed from Indesco's design scope, this section is now under a Design and Construct scope which is being delivered by others.

CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Client Response
8.	Terry Street (Illawarra Highway) CH100 Traffic signs	The audit team observed a shared path sign located on a narrow path. This location appears narrow to suit a shared path and to cater for cyclists.	Refer sheet No. 508 	Removed from Indesco's design scope, this section is now under a Design and Construct scope which is being delivered by others.

CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Client Response
9.	Moles Street Road alignment and cross section	The 12.5m single unit truck turning left from Tripoli Way into Moles Street is shown striking the kerb. This may lead to vehicle damage.	Refer sheet No. 851 	This intersection has been updated and this element has been updated to avoid striking the kerb. Please refer to 9470-11-1031 and the below screenshot. 

CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Client Response
10.	Tripoli Way and Hamilton Road Delineation	The audit team observed T1 linemarking provided on the Civil plans but not shown on the TCS plans. Additionally, turnpaths for a 12.5m single unit truck have been provided, but movements for a 19m semi-trailer have not. This may lead to the Audit team not fully appreciating the site conditions for all road users along and on the approaches to the proposed road works at this location.	Refer Sheet No. 855 	T1 Line marking has been removed from the Civil Engineering Plans. Turn paths for Design vehicles have been updated, typically the design vehicle is a 12.5m Single Unit Truck (HRV) Please refer to 9470-11-1033 and the screenshot below. 

CAR No	Location Category	Description of Risk to Road Safety	Photographs/ Plans / Drawing No	Client Response
			Refer TCS Plan "TCS_Tripoli Way_Hamilton Rd_R1.pdf" 	

Appendix B – Document List

Document No.	Description			Rev
9470_Tripoli Way Extension_80% Detailed Design Report.v1.pdf	Number	Title	AMDT	
	9470-01-000	COVER SHEET	G	
	9470-01-001	DRAWING SCHEDULE	G	
	9470-01-002	TYPICAL NOTES SHEET 1	G	
	9470-01-003	TYPICAL NOTES SHEET 2	G	
	9470-01-004	TYPICAL NOTES SHEET 3	G	
	9470-01-005	TYPICAL LEGEND AND NOTES	A	
	9470-01-006	OVERVIEW PLAN	G	
	9470-01-007	SPECIFICATION AREAS	B	
	9470-01-008	PRESERVATION OF SURVEY INFRASTRUCTURE PLAN	B	
	9470-01-009	CONSTRAINTS AREAS	A	
	9470-01-010	DEMOLITION OVERVIEW PLAN	A	
	9470-01-011	DEMOLITION PLAN SHEET 1	D	
	9470-01-012	DEMOLITION PLAN SHEET 2	D	
	9470-01-013	DEMOLITION PLAN SHEET 3	D	
	9470-01-014	DEMOLITION PLAN SHEET 4	D	
	9470-01-015	DEMOLITION PLAN SHEET 5	D	

Number	Title	AMDT
9470-01-016	DEMOLITION PLAN SHEET 6	D
9470-01-017	DEMOLITION PLAN SHEET 7	D
9470-01-020	EROSION AND SEDIMENT CONTROL DETAILS SHEET 1	B
9470-01-021	EROSION AND SEDIMENT CONTROL DETAILS SHEET 2	B
9470-01-022	EROSION AND SEDIMENT CONTROL DETAILS SHEET 3	B
9470-01-031	EROSION AND SEDIMENT CONTROL OVERVIEW PLAN	A
9470-01-032	EROSION AND SEDIMENT CONTROL PLAN SHEET 1	B
9470-01-033	EROSION AND SEDIMENT CONTROL PLAN SHEET 2	B
9470-01-034	EROSION AND SEDIMENT CONTROL PLAN SHEET 3	B
9470-01-035	EROSION AND SEDIMENT CONTROL PLAN SHEET 4	B
9470-01-036	EROSION AND SEDIMENT CONTROL PLAN SHEET 5	B
9470-01-051	TYPICAL SECTIONS MC01 (TRIPOLI WAY) SHEET 01	G
9470-01-052	TYPICAL SECTIONS MC01 (TRIPOLI WAY) SHEET 02	G
9470-01-053	TYPICAL SECTIONS MC01 (TRIPOLI WAY) SHEET 03	G
9470-01-054	TYPICAL SECTIONS MC01 (TRIPOLI WAY) SHEET 04	G
9470-01-055	TYPICAL SECTIONS MC01 (TRIPOLI WAY) SHEET 05	G
9470-01-056	TYPICAL SECTIONS MC02 (TERRY ST)	F
9470-01-057	TYPICAL SECTIONS MC010 (MOLES ST) & MC11 (CALDERWOOD RD)	F
9470-01-058	TYPICAL SECTIONS MC21 (HAMILTON RD)	F
9470-01-060	TYPICAL KERB DETAILS	G
9470-01-070	ALIGNMENT PLAN	G
9470-01-071	INTERSECTION SETOUT TONGARRA ROAD	F
9470-01-072	INTERSECTION SETOUT MOLES STREET CALDERWOOD ROAD	F
9470-01-073	INTERSECTION SETOUT HAMILTON ROAD	F
9470-01-074	INTERSECTION SETOUT TERRY STREET	F
9470-01-075	TRIPOLI WAY MEDIAN SHEET 1	F
9470-01-076	TRIPOLI WAY MEDIAN SHEET 2	B
9470-01-077	TRIPOLI WAY MEDIAN SHEET 3	B
9470-01-078	TRIPOLI WAY MEDIAN SHEET 4	A
9470-01-079	INTERSECTION SETOUT NOTES SHEET 01	A
9470-01-080	INTERSECTION SETOUT NOTES SHEET 02	A
9470-01-101	PLAN AND LONG SECTION MC01 - SHEET 1	G
9470-01-102	PLAN AND LONG SECTION MC01 - SHEET 2	G
9470-01-103	PLAN AND LONG SECTION MC01 - SHEET 3	G
9470-01-104	PLAN AND LONG SECTION MC01 - SHEET 4	G
9470-01-105	PLAN AND LONG SECTION MC01 - SHEET 5	G
9470-01-106	PLAN AND LONG SECTION MC01 - SHEET 6	G
9470-01-107	PLAN AND LONG SECTION MC01 - SHEET 7	G
9470-01-108	PLAN AND LONG SECTION MC02 - SHEET 1	G
9470-01-109	PLAN AND LONG SECTION MC02 - SHEET 2	G
9470-01-120	PLAN AND LONG SECTION MC10	G
9470-01-121	PLAN AND LONG SECTION MC11 AND MC12	G

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9470-01-122	PLAN AND LONG SECTION MC21 AND MC22	G
9470-01-130	INTERSECTION LAYOUT TONGARRA ROAD	A
9470-01-131	INTERSECTION LAYOUT MOLES STREET AND TAYLOR ROAD	A
9470-01-132	INTERSECTION LAYOUT CALDERWOOD ROAD	A
9470-01-133	INTERSECTION LAYOUT HAMILTON ROAD	A
9470-01-134	INTERSECTION LAYOUT TERRY STREET	A
9470-01-151	INTERSECTION DETAILS TONGARRA ROAD	A
9470-01-152	INTERSECTION DETAILS MOLES STREET AND TAYLOR ROAD	A
9470-01-153	INTERSECTION DETAILS CALDERWOOD ROAD	A
9470-01-154	INTERSECTION DETAILS HAMILTON ROAD	A
9470-01-155	INTERSECTION DETAILS TERRY STREET	A
9470-01-201	CROSS SECTION MC01 SHEET 01	G
9470-01-202	CROSS SECTION MC01 SHEET 02	G
9470-01-203	CROSS SECTION MC01 SHEET 03	G
9470-01-204	CROSS SECTION MC01 SHEET 04	G
9470-01-205	CROSS SECTION MC01 SHEET 05	G
9470-01-206	CROSS SECTION MC01 SHEET 06	G
9470-01-207	CROSS SECTION MC01 SHEET 07	G
9470-01-208	CROSS SECTION MC01 SHEET 08	G
9470-01-209	CROSS SECTION MC01 SHEET 09	G
9470-01-210	CROSS SECTION MC01 SHEET 10	G
9470-01-211	CROSS SECTION MC01 SHEET 11	G
9470-01-212	CROSS SECTION MC01 SHEET 12	G
9470-01-213	CROSS SECTION MC01 SHEET 13	G
9470-01-214	CROSS SECTION MC01 SHEET 14	G
9470-01-215	CROSS SECTION MC01 SHEET 15	G
9470-01-216	CROSS SECTION MC01 SHEET 16	G
9470-01-217	CROSS SECTION MC01 SHEET 17	G
9470-01-218	CROSS SECTION MC01 SHEET 18	G
9470-01-219	CROSS SECTION MC01 SHEET 19	G
9470-01-220	CROSS SECTION MC01 SHEET 20	G
9470-01-221	CROSS SECTION MC01 SHEET 21	G
9470-01-222	CROSS SECTION MC01 SHEET 22	G
9470-01-223	CROSS SECTION MC01 SHEET 23	G
9470-01-224	CROSS SECTION MC01 SHEET 24	G
9470-01-225	CROSS SECTION MC01 SHEET 25	G
9470-01-226	CROSS SECTION MC01 SHEET 26	G
9470-01-231	CROSS SECTION MC02 SHEET 01	G
9470-01-232	CROSS SECTION MC02 SHEET 02	G
9470-01-233	CROSS SECTION MC02 SHEET 03	G
9470-01-234	CROSS SECTION MC02 SHEET 04	G
9470-01-240	CROSS SECTION MC10	G

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9470-01-245	CROSS SECTION MC11	G
9470-01-250	CROSS SECTION MC12	G
9470-01-255	CROSS SECTION MC21	G
9470-01-260	CROSS SECTION MC22	G
9470-01-300	STORMWATER NOTES	A
9470-01-301	STORMWATER OVERVIEW	B
9470-01-302	STORMWATER LAYOUT PLAN SHEET 01	G
9470-01-302	STORMWATER LAYOUT PLAN SHEET 02	G
9470-01-304	STORMWATER LAYOUT PLAN SHEET 03	G
9470-01-305	STORMWATER LAYOUT PLAN SHEET 04	G
9470-01-306	STORMWATER LAYOUT PLAN SHEET 05	G
9470-01-307	STORMWATER LAYOUT PLAN SHEET 06	G
9470-01-308	STORMWATER LAYOUT PLAN SHEET 07	G
9470-01-309	STORMWATER LAYOUT PLAN SHEET 08	G
9470-01-310	STORMWATER PIT SCHEDULE SHEET 01	D
9470-01-311	STORMWATER PIT SCHEDULE SHEET 02	A
9470-01-312	STORMWATER PIT SCHEDULE SHEET 03	A
9470-01-313	STORMWATER PIT SCHEDULE SHEET 04	A
9470-01-320	STORMWATER PROFILES SHEET 01	G
9470-01-321	STORMWATER PROFILES SHEET 02	G
9470-01-322	STORMWATER PROFILES SHEET 03	G
9470-01-323	STORMWATER PROFILES SHEET 04	G
9470-01-324	STORMWATER PROFILES SHEET 05	G
9470-01-325	STORMWATER PROFILES SHEET 06	G
9470-01-326	STORMWATER PROFILES SHEET 07	G
9470-01-327	STORMWATER PROFILES SHEET 08	G
9470-01-328	STORMWATER PROFILES SHEET 09	G
9470-01-329	STORMWATER PROFILES SHEET 10	G
9470-01-330	STORMWATER PROFILES SHEET 11	G
9470-01-331	STORMWATER PROFILES SHEET 12	G
9470-01-332	STORMWATER PROFILES SHEET 13	G
9470-01-333	STORMWATER PROFILES SHEET 14	G
9470-01-334	STORMWATER PROFILES SHEET 15	G
9470-01-351	STORMWATER DETAILS SHEET 01	D
9470-01-352	STORMWATER DETAILS SHEET 02	B
9470-01-370	CATCHMENT PLAN SHEET 01	D
9470-01-371	CATCHMENT PLAN SHEET 02	D
9470-01-372	CATCHMENT PLAN SHEET 03	D
9470-01-373	CATCHMENT PLAN SHEET 04	D
9470-01-374	CATCHMENT PLAN SHEET 05	D
9470-01-375	CATCHMENT PLAN SHEET 06	D
9470-01-376	CATCHMENT PLAN SHEET 07	B

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9470-01-380	STORMWATER CALCULATIONS MINOR STORM 5% AEP SHEET 01	A
9470-01-381	STORMWATER CALCULATIONS MINOR STORM 5% AEP SHEET 02	A
9470-01-382	STORMWATER CALCULATIONS MINOR STORM 5% AEP SHEET 03	A
9470-01-383	STORMWATER CALCULATIONS MINOR STORM 5% AEP SHEET 04	A
9470-01-384	STORMWATER CALCULATIONS MINOR STORM 5% AEP SHEET 05	A
9470-01-385	STORMWATER CALCULATIONS MINOR STORM 5% AEP SHEET 06	A
9470-01-390	STORMWATER CALCULATIONS MINOR STORM 1% AEP SHEET 01	A
9470-01-391	STORMWATER CALCULATIONS MINOR STORM 1% AEP SHEET 02	A
9470-01-392	STORMWATER CALCULATIONS MINOR STORM 1% AEP SHEET 03	A
9470-01-393	STORMWATER CALCULATIONS MINOR STORM 1% AEP SHEET 04	A
9470-01-394	STORMWATER CALCULATIONS MINOR STORM 1% AEP SHEET 05	A
9470-01-395	STORMWATER CALCULATIONS MINOR STORM 1% AEP SHEET 06	A
9470-01-401	PAVEMENT DETAILS SHEET 01	G
9470-01-402	PAVEMENT DETAILS SHEET 02	G
9470-01-411	PAVEMENT PLANS SHEET 01	G
9470-01-412	PAVEMENT PLANS SHEET 02	G
9470-01-413	PAVEMENT PLANS SHEET 03	G
9470-01-414	PAVEMENT PLANS SHEET 04	G
9470-01-415	PAVEMENT PLANS SHEET 05	G
9470-01-416	PAVEMENT PLANS SHEET 06	G
9470-01-417	PAVEMENT PLANS SHEET 07	G
9470-01-420	PAVEMENT SUBSURFACE DRAINS	A
9470-01-501	ROAD FURNITURE PLAN SHEET 01	G
9470-01-502	ROAD FURNITURE PLAN SHEET 02	G
9470-01-503	ROAD FURNITURE PLAN SHEET 03	G
9470-01-504	ROAD FURNITURE PLAN SHEET 04	G
9470-01-505	ROAD FURNITURE PLAN SHEET 05	G
9470-01-506	ROAD FURNITURE PLAN SHEET 06	G
9470-01-507	ROAD FURNITURE PLAN SHEET 07	G
9470-01-508	ROAD FURNITURE PLAN SHEET 08	G
9470-01-509	ROAD FURNITURE PLAN SHEET 09	G
9470-01-520	WAY FINDING PLAN SHEET 01	B
9470-01-521	WAY FINDING PLAN SHEET 02	B
9470-01-520	WAY FINDING DETAIL SHEET 01	A
9470-01-521	WAY FINDING DETAIL SHEET 02	B
9470-01-530	WAY FINDING DETAIL SHEET 03	B
9470-01-550	SAFETY BARRIER PLANS	A
9470-01-601	CONSTRUCTION STAGING STAGE 01 SHEET 01	F
9470-01-602	CONSTRUCTION STAGING STAGE 01 SHEET 02	F
9470-01-605	CONSTRUCTION STAGING STAGE 02 SHEET 01	F
9470-01-606	CONSTRUCTION STAGING STAGE 02 SHEET 02	F
9470-01-701	PROPERTY WORKS PLAN SHEET 01	G

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	9470-01-702	PROPERTY WORKS PLAN SHEET 02	G	
	9470-01-720	DRIVEWAY DETAILS	B	
	9470-01-721	PROPERTY DRIVEWAY PLAN SHEET 01	F	
	9470-01-722	PROPERTY DRIVEWAY PLAN SHEET 02	F	
	9470-01-723	PROPERTY DRIVEWAY PLAN SHEET 03	F	
	9470-01-724	PROPERTY DRIVEWAY PLAN SHEET 04	F	
	9470-01-725	PROPERTY DRIVEWAY PLAN SHEET 05	F	
	9470-01-801	ISOPACH PLAN SHEET 01	F	
	9470-01-802	ISOPACH PLAN SHEET 02	F	
	9470-01-810	STOPPING SIGHT DIAGRAM	A	
	9470-01-820	AQUAPLANING CHECK SHEET 01	F	
	9470-01-821	AQUAPLANING CHECK SHEET 02	F	
	9470-01-822	AQUAPLANING CHECK SHEET 03	F	
	9470-01-850	VEHICLE TURNING PATHS TONGARRA ROAD	E	
	9470-01-851	VEHICLE TURNING PATHS MOLES STREET	E	
	9470-01-852	VEHICLE TURNING PATHS CALDERWOOD ROAD SHEET 01	E	
	9470-01-853	VEHICLE TURNING PATHS CALDERWOOD ROAD SHEET 02	E	
	9470-01-854	VEHICLE TURNING PATHS HAMILTON ROAD SHEET 01	E	
	9470-01-855	VEHICLE TURNING PATHS HAMILTON ROAD SHEET 02	F	
	9470-01-856	VEHICLE TURNING PATHS TERRY STREET SHEET 01	F	
	9470-01-857	VEHICLE TURNING PATHS TERRY STREET SHEET 02	F	
	9470-01-860	RETAINING WALLS PLAN SHEET 01	D	
	9470-01-861	RETAINING WALLS PLAN SHEET 02	D	
	9470-01-862	RETAINING WALL DETAILS RW01	D	
	9470-01-863	RETAINING WALL DETAILS RW02	D	
	9470-01-864	RETAINING WALL DETAILS RW04	D	
	9470-01-870	RETAINING WALLS DETAILS PLAN AND PROFILES SHEET 01	A	
	9470-01-871	RETAINING WALLS DETAILS PLAN AND PROFILES SHEET 02	A	
	9470-01-872	RETAINING WALLS DETAILS PLAN AND PROFILES SHEET 03	A	
	9470-01-873	RETAINING WALLS DETAILS PLAN AND PROFILES SHEET 04	A	
	9470-01-874	RETAINING WALLS DETAILS PLAN AND PROFILES SHEET 05	A	
	9470-01-900	COMBINED UTILITIES OVERVIEW PLAN	D	
	9470-01-901	COMBINED UTILITIES SHEET 01	D	
	9470-01-902	COMBINED UTILITIES SHEET 02	D	
	9470-01-903	COMBINED UTILITIES SHEET 03	D	
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	9470-01-911	SEWER CROSSING PROFILES SHEET 01	D	
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	9470-01-913	SEWER CROSSING PROFILES SHEET 03	B	
	9470-01-914	SEWER CROSSING DETAILS	D	
	9470-01-920	GAS OVERVIEW PLAN	D	
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	9470-01-921	GAS PLAN SHEET 01	D	
	9470-01-922	GAS PLAN SHEET 02	D	
	9470-01-923	GAS PLAN SHEET 03	D	
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9470 - 20240906 - Bridge issue for 80%.pdf	<table><thead><tr><th colspan="4">INDESCO DRAWING LIST</th></tr><tr><th>SHEET NUMBER</th><th>SHEET NAME</th><th>CURRENT REVISION</th><th>CURRENT REVISION DATE</th></tr></thead><tbody><tr><td>S000</td><td>TITLE PAGE</td><td>3</td><td>06.09.2024</td></tr><tr><td>S001</td><td>DRAWING SCHEDULE</td><td>3</td><td>06.09.2024</td></tr><tr><td>S002</td><td>GENERAL NOTES</td><td>3</td><td>06.09.2024</td></tr><tr><td>S100</td><td>GENERAL ARRANGEMENT - SHEET 1</td><td>3</td><td>06.09.2024</td></tr><tr><td>S101</td><td>GENERAL ARRANGEMENT - SHEET 2</td><td>3</td><td>06.09.2024</td></tr><tr><td>S105</td><td>BRIDGE CONSTRUCTION SEQUENCE - SHEET 1</td><td>3</td><td>06.09.2024</td></tr><tr><td>S106</td><td>BRIDGE CONSTRUCTION SEQUENCE - SHEET 2</td><td>3</td><td>06.09.2024</td></tr><tr><td>S200</td><td>PILE LAYOUT</td><td>3</td><td>06.09.2024</td></tr><tr><td>S210</td><td>PILE DETAILS</td><td>3</td><td>06.09.2024</td></tr><tr><td>S300</td><td>ABUTMENT BA01 CONCRETE - 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S302	ABUTMENT BA01 CONCRETE - SHEET 3	3	06.09.2024																																																																																																																																																							
S305	ABUTMENT BA01 REINFORCEMENT - SHEET 1	3	06.09.2024																																																																																																																																																							
S306	ABUTMENT BA01 REINFORCEMENT - SHEET 2	3	06.09.2024																																																																																																																																																							
S307	ABUTMENT BA01 REINFORCEMENT - SHEET 3	3	06.09.2024																																																																																																																																																							
S310	ABUTMENT BA02 CONCRETE - SHEET 1	3	06.09.2024																																																																																																																																																							
S311	ABUTMENT BA02 CONCRETE - SHEET 2	3	06.09.2024																																																																																																																																																							
S315	ABUTMENT BA02 REINFORCEMENT - SHEET 1	3	06.09.2024																																																																																																																																																							
S316	ABUTMENT BA02 REINFORCEMENT - SHEET 2	3	06.09.2024																																																																																																																																																							
S320	BRIDGE PIER BP01 CONCRETE - SHEET 1	3	06.09.2024																																																																																																																																																							
S325	BRIDGE PIER BP01 REINFORCEMENT - SHEET 1	3	06.09.2024																																																																																																																																																							
S330	BRIDGE BEARING DETAILS - SHEET 1	3	06.09.2024																																																																																																																																																							
S331	BRIDGE BEARING DETAILS - SHEET 2	3	06.09.2024																																																																																																																																																							
S410	PSC PLANK GIRDER TYPE A CONCRETE	3	06.09.2024																																																																																																																																																							
S411	PSC PLANK GIRDER TYPE B CONCRETE	3	06.09.2024																																																																																																																																																							
S420	GIRDER LAYOUT	3	06.09.2024																																																																																																																																																							
S500	DECK CONCRETE SHEET 1	3	06.09.2024																																																																																																																																																							
S501	DECK CONCRETE SHEET 2	3	06.09.2024																																																																																																																																																							
S510	DECK REINFORCEMENT SHEET 1	3	06.09.2024																																																																																																																																																							
S511	DECK REINFORCEMENT SHEET 2	3	06.09.2024																																																																																																																																																							
S515	APPROACH SLAB CONCRETE - SHEET 1	3	06.09.2024																																																																																																																																																							
S517	APPROACH SLAB REINFORCEMENT - SHEET 1	3	06.09.2024																																																																																																																																																							
S520	EXPANSION JOINTS DETAILS	3	06.09.2024																																																																																																																																																							
S550	TRAFFIC BARRIER DETAILS - SHEET 1	3	06.09.2024																																																																																																																																																							
S551	TRAFFIC BARRIER DETAILS - SHEET 2	3	06.09.2024																																																																																																																																																							
S552	TRAFFIC BARRIER DETAILS - SHEET 3	3	06.09.2024																																																																																																																																																							
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CASE213394PW-D_1- EARLY WORKS- SHEET02.pdf		A
CASE213394PW-D_1- EARLY WORKS- SHEET03.pdf		A
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CASE213394WW- D_v1 - EARLY WORKS-SHEET03.pdf		A

TRIPOLI 80% DD LANDSCAPE DOCUMENTATION.pdf	DRAWING SCHEDULE		
	COVER SHEET & LOCATION PLAN	L-0000	D
	LANDSCAPE SPECIFICATION	L-1000	A
	TREE MANAGEMENT PLAN_01	L-1001	D
	TREE MANAGEMENT PLAN_02	L-1002	D
	TREE MANAGEMENT PLAN_03	L-1003	D
	TREE MANAGEMENT PLAN_04	L-1004	D
	TREE MANAGEMENT PLAN_05	L-1005	D
	TREE MANAGEMENT PLAN_06	L-1006	D
	TREE MANAGEMENT PLAN_07	L-1007	D
	TREE MANAGEMENT PLAN_08	L-1008	C
	SCHEDULES	L-2000	D
	LANDSCAPE PLAN_01	L-2001	D
	LANDSCAPE PLAN_02	L-2002	D
	LANDSCAPE PLAN_03	L-2003	D
	LANDSCAPE PLAN_04	L-2004	D
	LANDSCAPE PLAN_05	L-2005	D
	LANDSCAPE PLAN_06	L-2006	D
	LANDSCAPE PLAN_07	L-2007	D
	LANDSCAPE PLAN_08	L-2008	D
	LANDSCAPE DETAILED PLAN	L-2009	D
	TYPICAL LANDSCAPE DETAILS_01	L-7001	D
	TYPICAL LANDSCAPE DETAILS_02	L-7002	D
	TYPICAL LANDSCAPE DETAILS_03	L-7003	D
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