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11 September 2023

Attention: **Simon Waterworth, GEOLINK**

Sent via Aconex

Dear Simon,

RE: BASE HOSPITAL REDEVELOPMENT – ARTHUR STREET ACQUISITION SITE - TRAFFIC IMPACT STATEMENT

1.0 BACKGROUND

In June 2022 the NSW Government announced a $263.8M commitment to fund the redevelopment of Grafton Base Hospital (GBH), aiming to replace the ageing infrastructure with a modern facility which supports delivery of contemporary models of care. Key clinical service drivers include the need for additional inpatient and operating theatre capacity and increased volume and range of medical imaging modalities to better support the needs of the Clarence Valley population.

As part of the redevelopment, NSW Health Infrastructure (NSW-HI) have undertaken a detailed masterplan process for a staged redevelopment of the existing GBH. The redevelopment proposal also includes incorporating a portion of adjacent government owned land, previously associated with the former Grafton Correctional Centre located directly opposite GBH, into the hospital redevelopment project on Arthur Street. Specifically, the north-eastern portion of the Grafton Correctional Centre site (Blocks A to D) are proposed to be repurposed to provide relocation of the following hospital uses:

- Administration workspaces and activities relocated from the existing GBH
- Staff training rooms and facilities relocated from the existing GBH
- Future repurposing of Blocks C and D to provide temporary worker accommodation.

1.1. Assessment Purpose

Bitzios Consulting have been commissioned by NSW-HI to provide traffic engineering and transport planning service in the redevelopment of the Grafton Base Hospital. This includes the masterplan development as well as transport assessments associated with the progressive application process required through project approvals and delivery.

The purpose of this assessment is to review the traffic and transport impacts and requirements related to the proposed acquisition of the new site and its incorporation into the existing administration and training operations of GBH into the subject site as shown in Figure 2.1.

Given the interim nature of the application, this assessment focuses on the net change to traffic and transport operations associated with the proposed land use and relationship with the current GBH operations.

2.0 EXISTING TRANSPORT CONTEXT

2.1. Site Location

The subject site is located on the southern side of Arthur Street directly opposite the existing GBH as shown in Figure 2.1. Arther Street between Queen Street and Mary Street provides a two-way (one lane in each direction) urban collector road approximately 22m wide form kerb-to-kerb. Angled (45 degree reverse-in) on-street parking is provided on both sides of Arthur Street between GBH and the subject site providing approximately 6.0 lane widths.

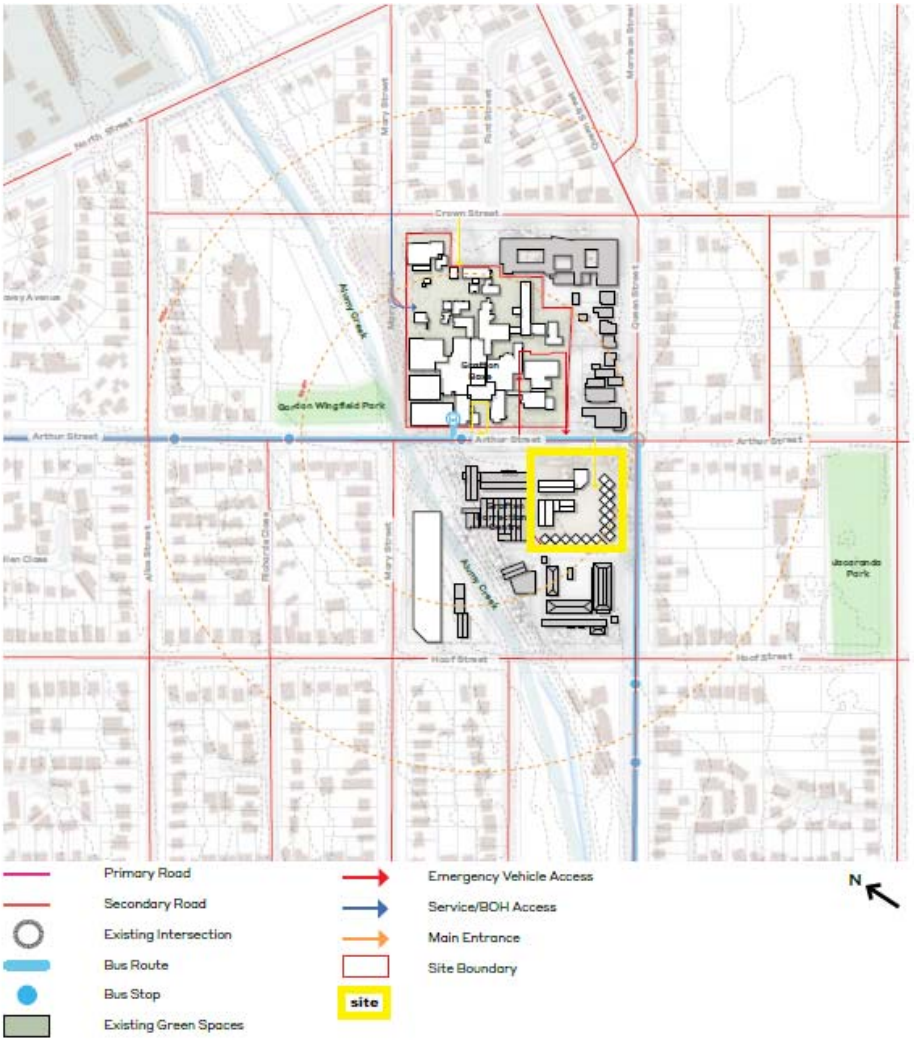


Figure 2.1: Site Location

2.2. Existing Traffic Operations

This road cross section exhibits a level of vehicle impedance due to the on-street parking operation, coupled with numerous commercial and residential driveways generating turning traffic. This includes both general hospital traffic as well as ambulance traffic approaching the hospital.

Historically with the previous operation of the former Grafton Correctional Service, Arthur Street did exhibit some parking associated with the correctional centre, however the majority of activity was oriented towards Hoof Street on the southern frontage.

With the closure of the correctional centre in 2020, the previous traffic and parking demands associated with the former correctional centre have been removed from the surrounding road network. This has resulted in a slight reduction in traffic and parking activity surrounding the site when compared to previous years, most notably along Hoof Street and Queen Street. In the absence of this generation and the availability of on-street parking, the use of Arthur Street for hospital-based parking has been maintained. As a result, parking activity on Arthur Street has been noted be consistent with historical trends due to its convenient proximity to the GBH primary access.

The subject site exhibits a gated (controlled) driveway crossover to Arthur Street between street trees and on-street parking as shown in Figure 1.2. Three crossovers for GBH are located on the northern side of Arthur Street between on-street parking.

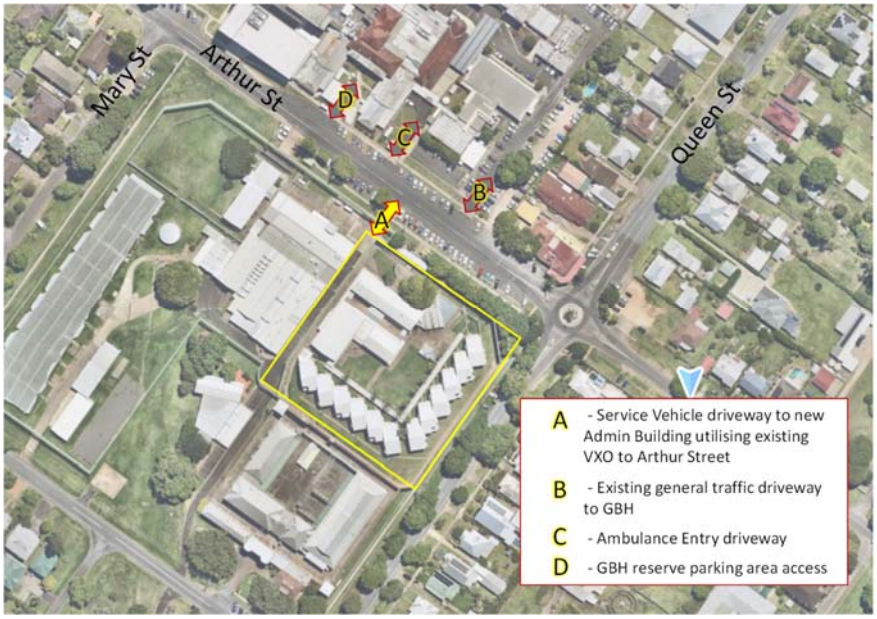


Figure 2.2: Arthur Street Driveway Locations

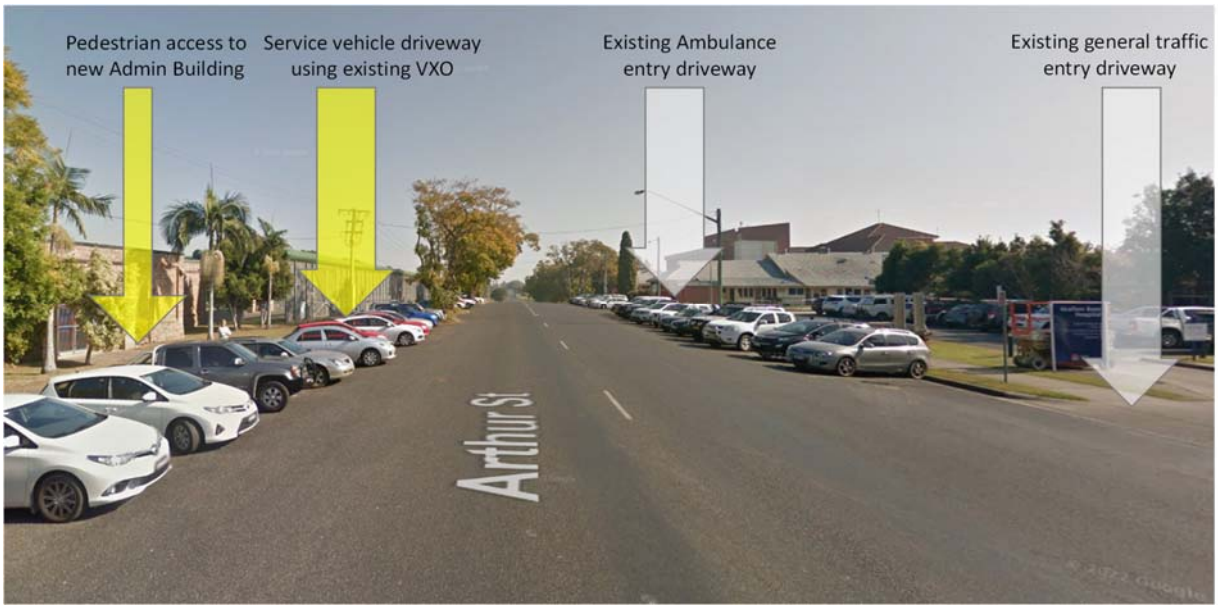


Figure 2.3: Arthur Street (2018, prior to closure of the correctional centre)

Arthur Street incorporates pedestrian pathways on both side of the road which connect to trip attractors, including GBH and the subject site. However, the presence of multiple driveways coupled with angled reverse-in parking restricts pedestrian movements crossing Arthur Street and no formal pedestrian crossing facilities currently exist along this section of road. It is noted that a pedestrian ramp is provided in front of the former correctional centre's main access as shown in Figure 2.4. However, this ramp is blocked by on-street parking and does not provide any pedestrian refuge facility or kerb ramp on the opposing side of the road.

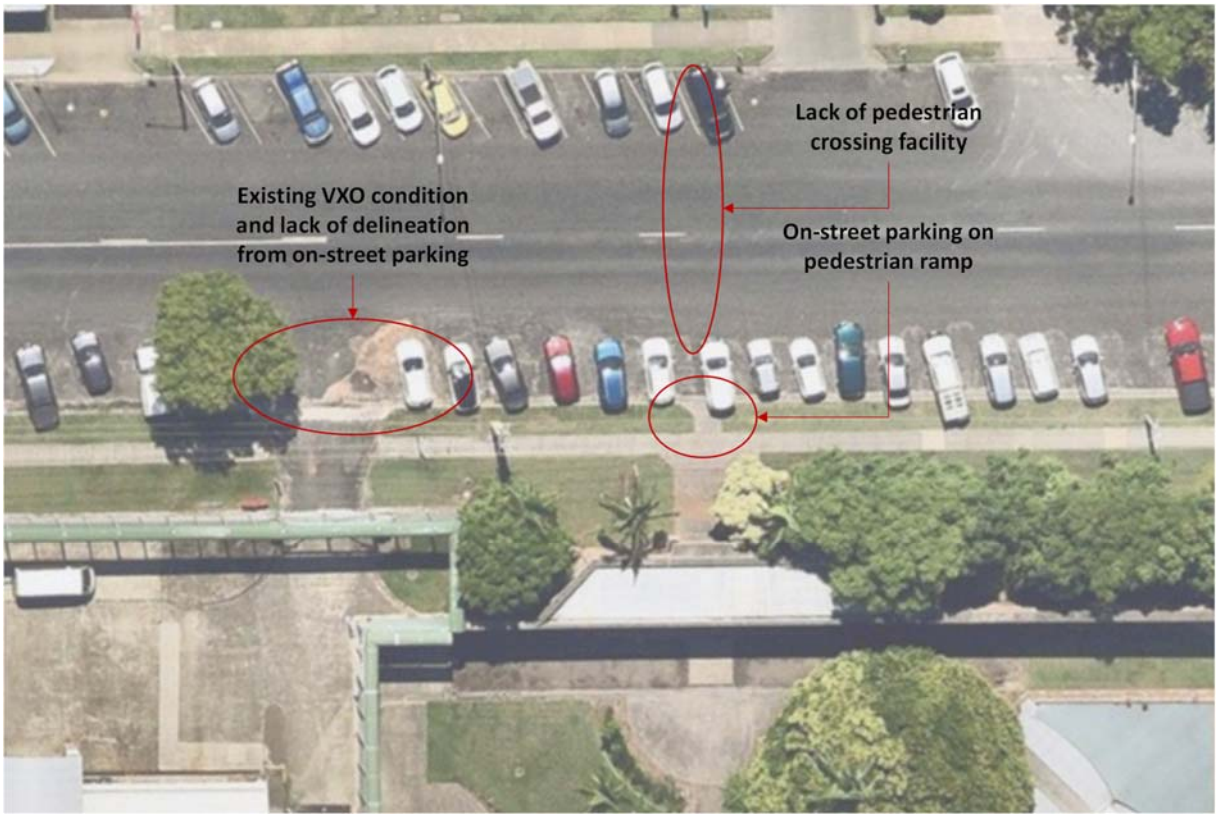


Figure 2.4: Existing On-street Deficiencies

2.3. Existing Parking Supply

GBH currently has access to a total of 299 car parking spaces consisting of 174 on-street parking spaces and 125 off-street spaces. Existing parking areas are illustrated below in Figure 2.5.It is noted that the parking supply does incorporate parking areas not within the bounds of GBH controlled land. These parking areas are however well established for use as part of the Grafton health precinct.

The parking capacity of each location has been sourced from GeoLINK Parking Study report (2022). For ease of reference, it has been re-produced in Table 2.1.

Source: GeoLINK Parking Study Report (2022)

Figure 2.5: Existing Parking Supply

Table 2.1: Parking Supply within Study Area

ID	Description	Restrictions	Capacity
1	Grassed, informal	Nil	26
2	Mary St, on-street 90 deg. and off-street 90 deg. marked	Nil Fleet vehicles only No parking	15 12 2
3	Concrete, 90 deg. marked bays plus unmarked space and adjacent grassed area	Marked general Undercover general Unmarked general	4 4 4
4	Crown St, on-street 45 deg. marked, unmarked and adjacent grassed area	Marked general Unmarked general Grass	27 4 5
5	Informal, dirt, vacant lot	Nil	18
6	Informal, dirt, vacant lot	Nil	42

ID	Description	Restrictions	Capacity
7	Formal, 90 deg. marked	Nil	17
8	Formal 90 deg. marked and parallel marked	2 hour patient parking only Police and Serco Accessible parking Drop-off only	6 3 2 4
9	Formal 90 deg. and unmarked 90 deg. plus parallel	'No public access' Unmarked general Doctors only Marked general NACHS only Staff or resident only Executive only Accessible parking	All 17 4 3 4 1 4 1
10	Formal 90 deg. marked bays	Patient transport only	3
11	Formal 90 deg. marked bays	'Oncology patients and disabled parking only' General Accessible parking bays	All 9 3
12	Arthur St north side, on-street, 45 deg. marked, from Emergency Entry to Main Entry	2 hour, 8:30 am-5:30 pm Monday to Friday, 8:30 am-12:30 pm Saturday General Accessible	All 19 3
13	Arthur St south side, on-street, 45 deg.	Nil	36
14	Arthur St north-west, on-street, 45 deg.	Nil	25
15	Informal 90 deg. undercover	'Occupational Therapy Only'	2
16	Main entry drop-off, formal 90 deg., marked	15-minute drop-off Accessible 15-minute drop-off	1 2
17	Formal 90 deg. marked	'No staff parking' General Reserved, HITH, biomedical Accessible parking No parking	All 20 2 3 2
18	Formal, gravel, 90 deg. marked	'Annex patient parking only'	11

3.0 TRANSPORT ASSESSMENT OF PROPOSAL

3.1. Traffic Assessment

Given the historical nature of the former correctional centre, the subject site previously generated traffic to and from the site, with staff and visitor trips concentrated on the southern side of the site at Hoof Street.

The proposal will relocate administration and training aspects of the existing GBH from north of Arthur Street to the subject site and is not expected to generate a net increase in traffic generation to the surrounding network.

Staff parking arrangements for the administration and training aspects of the GBH will remain unchanged, with no staff parking locations being designated on the new site south of Arthur Street. Staff will continue to park within staff parking areas associated with the GBH. Other works associated with the GBH site redevelopment will be subject to a separate planning approval pathway.

We are therefore of the view that the proposal will not result in substantial increase in traffic movements or exacerbate traffic congestion in a way that would warrant the need for intersections to be upgraded from their existing forms.

Traffic volumes associated with the service vehicle movements will be generated by the proposal. These movements would be estimated at a maximum of five vehicle per day and involve small and medium sized vehicles only. Based on information provided by LHD, it is understood that the largest vehicle to access the site would be a refuse collection vehicles. In this regard, waste collection for this proposed land uses would only generate the need for kerbside ‘wheelie’ bins and as such would occur via on-street collection at the driveway crossover on a weekly basis.

3.2. Pedestrian Assessment

The proposal is expected to be create a pedestrian movement relationship between the existing GHB site on the northern side of Arthur Street and the new administration and training facility on the southern side of Arthur Street. Given this new pedestrian desire line, as well as the existing deficiencies associated with pedestrians crossing Arthur Street currently, it is recommended that improvements to the pedestrian crossing facilities on Arthur Street to be undertaken as part of the proposal. This would coincide with some minor improvements to on-street parking configurations. To do this, several local traffic improvements are recommended including the following components:

- Install a pedestrian refuge crossing on Arthur Street generally in between the general access driveway and ambulance driveway to the GBH
- Relocate and install pedestrian ramps on Arthur Street at the new crossing point and connect to the pathway network on both side of the road
- Install pedestrian build-outs on either side of the pedestrian crossing to separate from on-street parking movements and increase protection for pedestrians
- Update on-street parking line marking to formalise parking spaces in proximity to the crossing and adjacent driveways
- Install central lane line marking and chevrons to delineate through traffic movements as well as turning movements to adjacent GBH driveways
- Removal of ten (10) on-street parking on Arthur Street to accommodate the proposed pedestrian crossing.

A conceptual layout plan has been prepared and is located in **Attachment A**. This concept layout plan provides an example representation of the recommended treatments to install a pedestrian crossing facility and improve adjacent on-street parking fronting the subject site on Arthur Street. The proposed treatment will see a minor reduction to the on-street parking immediately adjacent to the GBH. Given the safety benefits associated with the proposed facility, as well as that on-street parking utilisation does not extend significantly beyond Arthur Street, the net loss of parking associated with the proposed pedestrian treatment is considered acceptable. Further to this, the planned future redevelopment of the GBH is expected to see further improvements in parking and pedestrian facilities across the wider precinct.

It is acknowledged that any proposed local road treatments must be approved by Council and the Local Traffic Committee. On this basis, it is considered appropriate that the proposed development be conditioned to:

Construct a pedestrian crossing facility on Arthur Street fronting the site to the satisfaction of Council. The pedestrian facility must be designed with consideration to:

- *Council's specifications*
- *Austroads Guide to Traffic Management Part 8: Local Street Management (2020)*
- *Austroads Guide to Road Design Part 4: Intersections and Crossings General (2023)*
- *Australian Standards Manual of Uniform Traffic Control Devices Part 10: Pedestrian Control and Protection (AS1742.10) (2009)*
- *Australian Standards Design for Access and Mobility Part 1: General Requirements for Access – New Building Work (AS1428.1) (2009)*
- *Australian Standards (AS2890.5 – On-street Parking Facilities).*

4.0 Parking Assessment

Similar to the traffic impacts, the potential demand from the new administrative building shall be generated by the existing staff members currently accommodated for within the existing GBH parking supply. While it is acknowledged that the historically GBH does rely on the supply of on-street parking to service its users, including staff and visitors, the proposal to incorporate the new site on the southern side of Arthur Street into the GBH operations will not constitute a net increase in parking demands. The reason for this is that the additional floor space and 'potential demands' will be off-set by the staged decanting of the existing site to accommodate the greater masterplan redevelopment of the precinct.

Parking will play a major role in the staged construction and ultimately ongoing operation of the new facility. This will include the continued reliance and therefore improvements to on-street parking facilities on and around the site.

5.0 Summary

The proposed development does not significantly increase traffic movements on the surrounding road network to warrant the need for intersection or road network improvements to be imposed.

While the site's frontage road (Arthur Street) exhibits some existing deficiencies related to pedestrian crossing facilities and conflicts with on-street parking and driveway movements that will be further exacerbated by the proposed land use, the inclusion of a new pedestrian crossing facility on Arthur Steet, together with updates to on-street parking line marking and lane delineation, will significantly improve the existing operations for all road users.

We therefore recommend that with the inclusion of the nominated works as outlined in Section 3.2 of this letter, that the proposed development be approved on transport grounds.

Yours faithfully

Andrew Eke

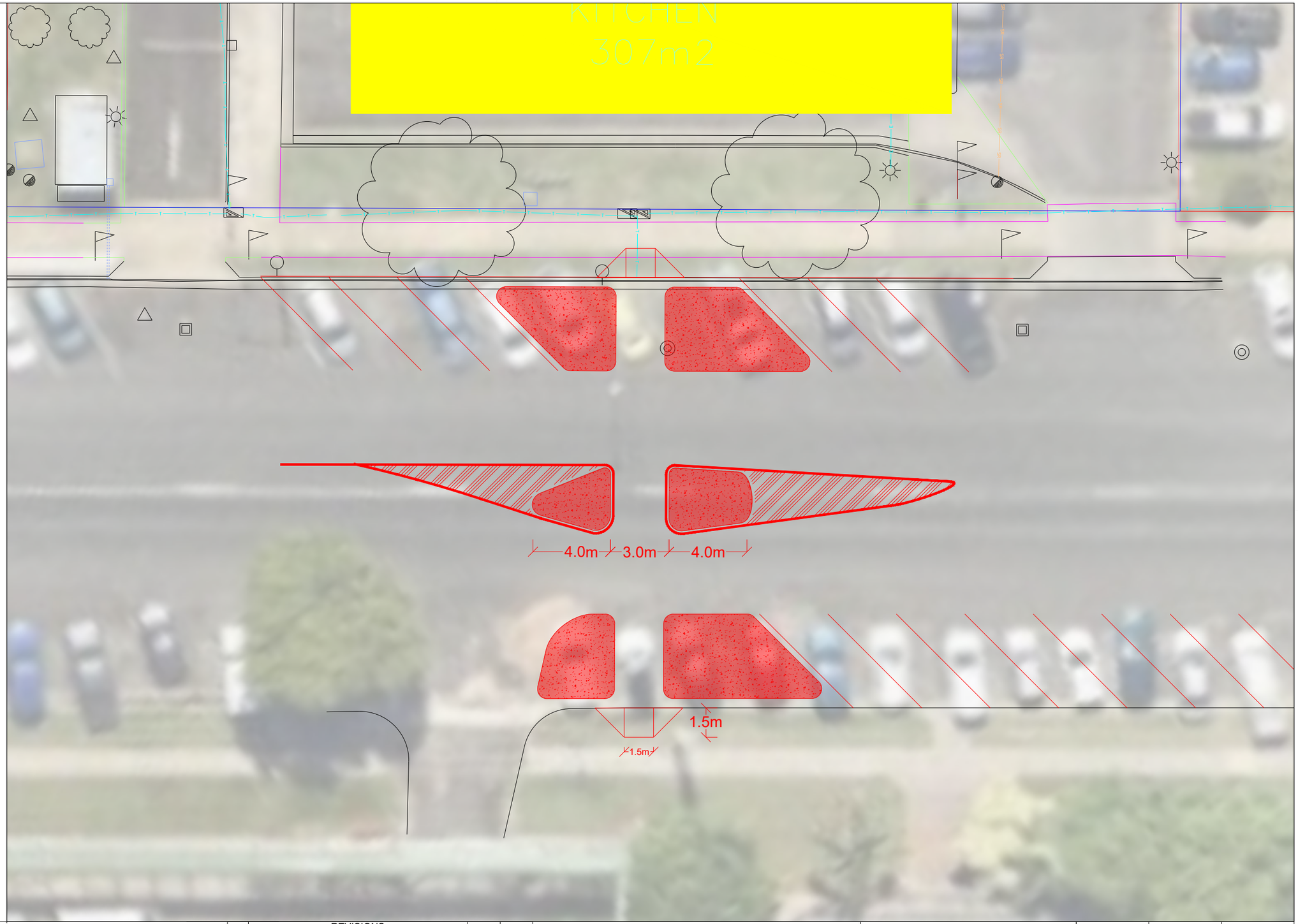
Principal Traffic Engineer / Transport Planner

BITZIOS CONSULTING

Attachments: A: Arthur Street Concept Layout Plan

Attachment A

Arthur Street Pedestrian Facility Concept Layout Plan



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Issue	REVISIONS Revisions/Descriptions	Drawn	Date
001	Aruthr Street Crossing Concept	J.I	05.09.2023

Scale @ A3 0 2 4 6 8 10 1:200

Project: Grafton Base Hospital
SSDA Traffic Services

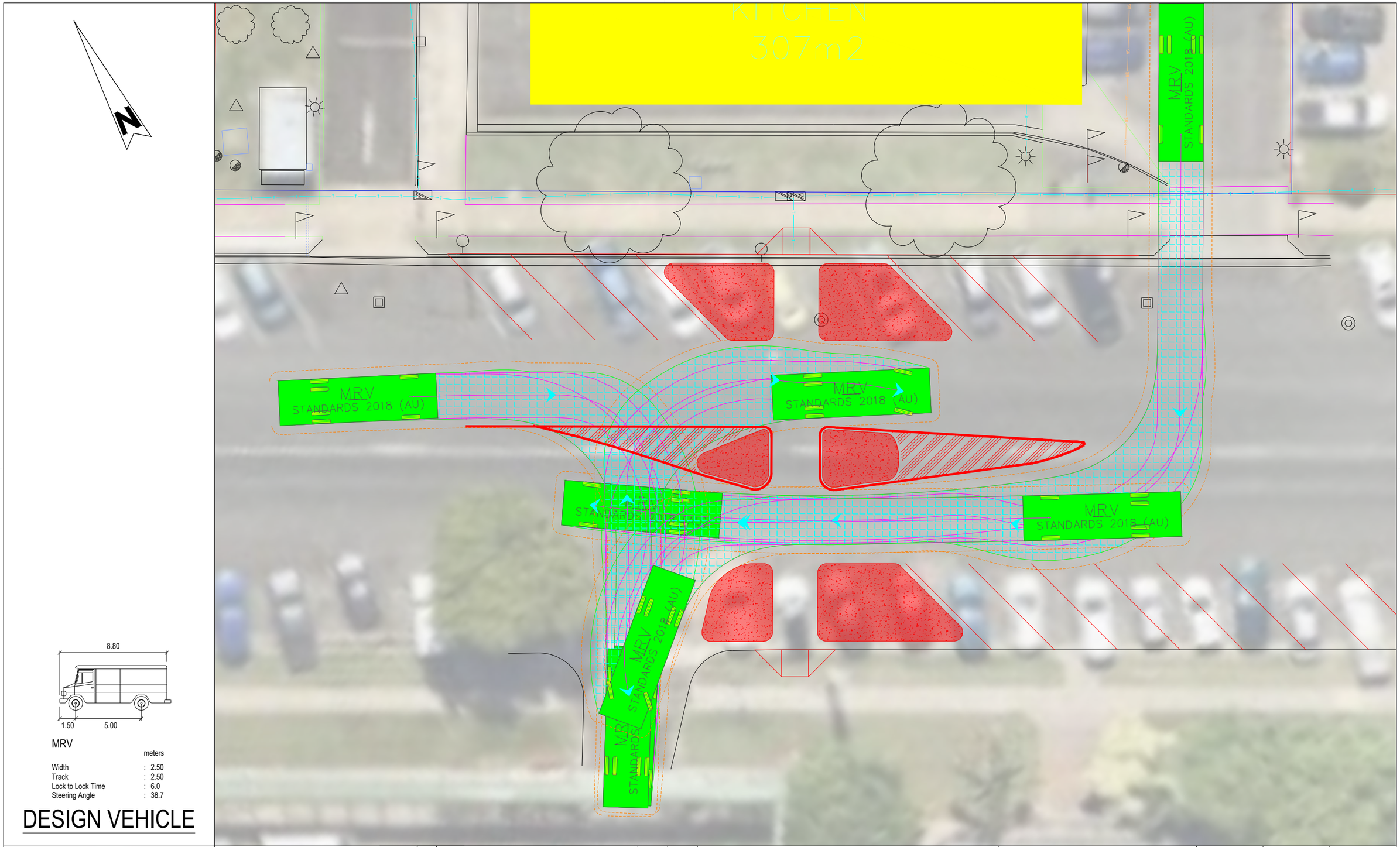
Title: Arthur Street Crossing Concept

Design	Drawn	Checked
J.I	J.I	A.E

NOT FOR CONSTRUCTION

Date: 05.09.2023

Project Number	Sheet Number	Issue
P6181	1	001



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SSDA Traffic Services

Title: MRV Manoeuvring

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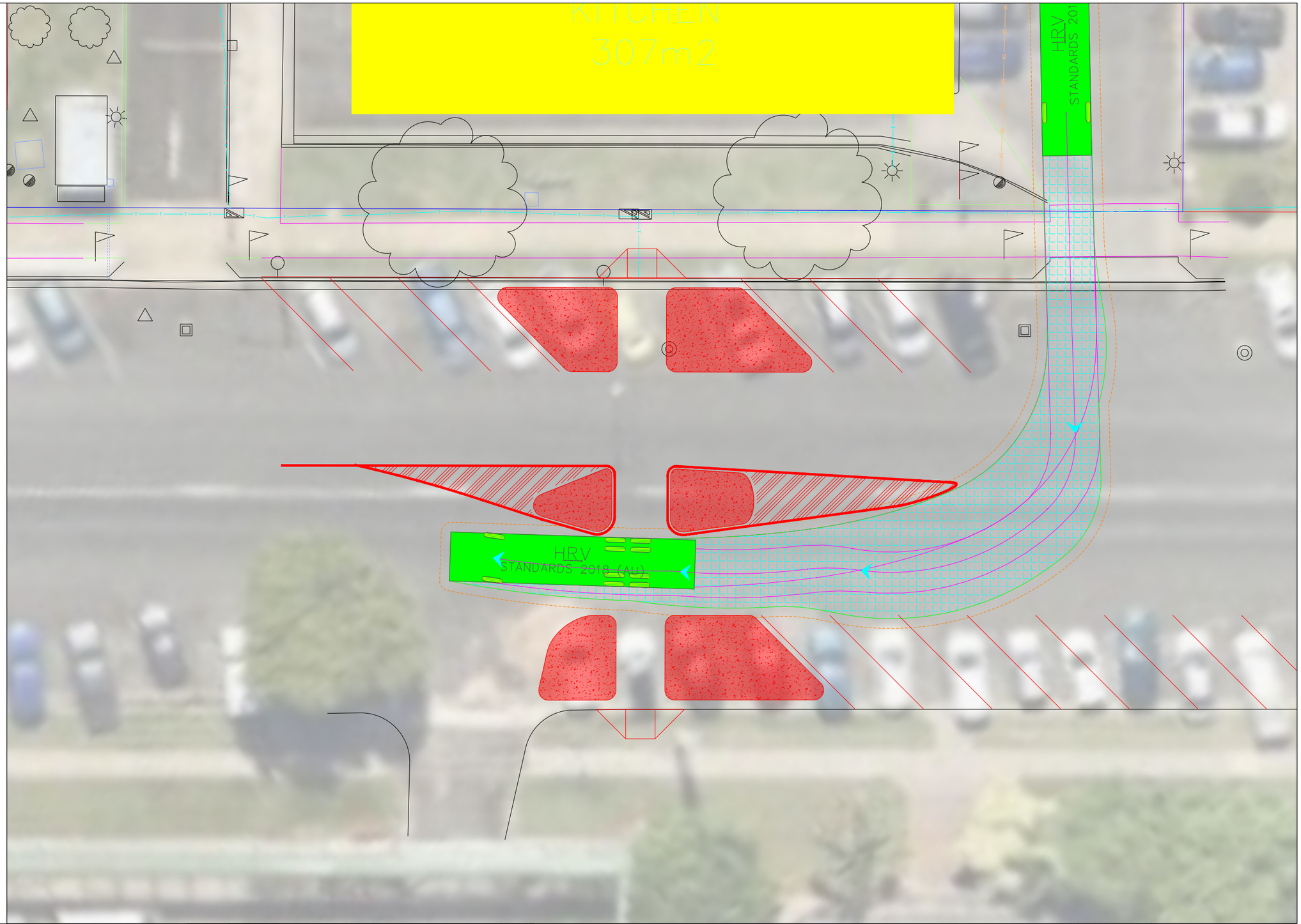

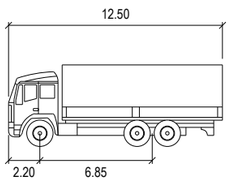

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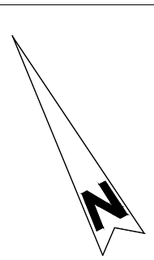

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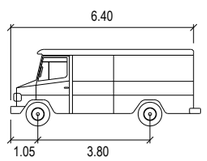

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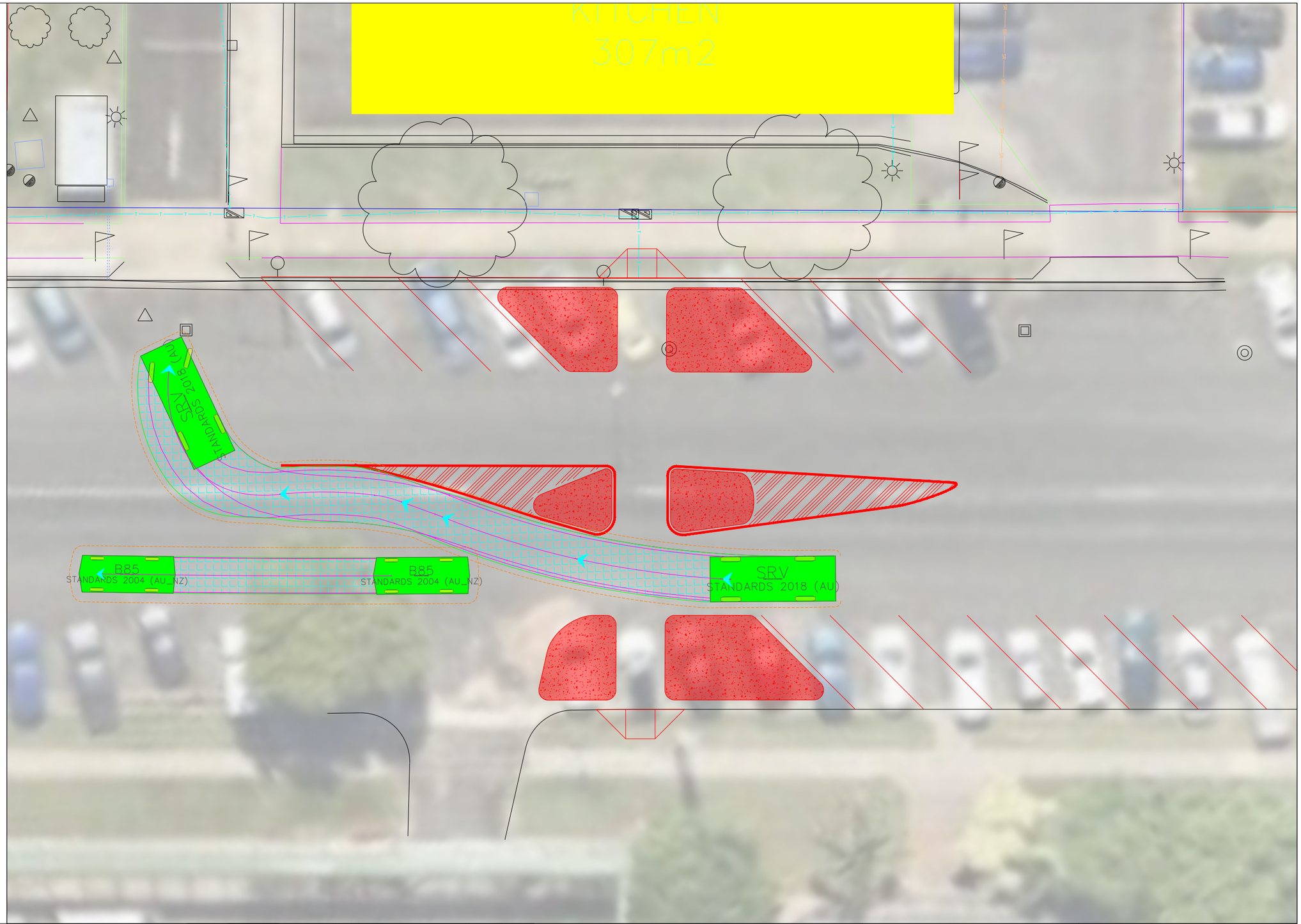

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SSDA Traffic Services

Title: Arthur Street Ambulance Storage

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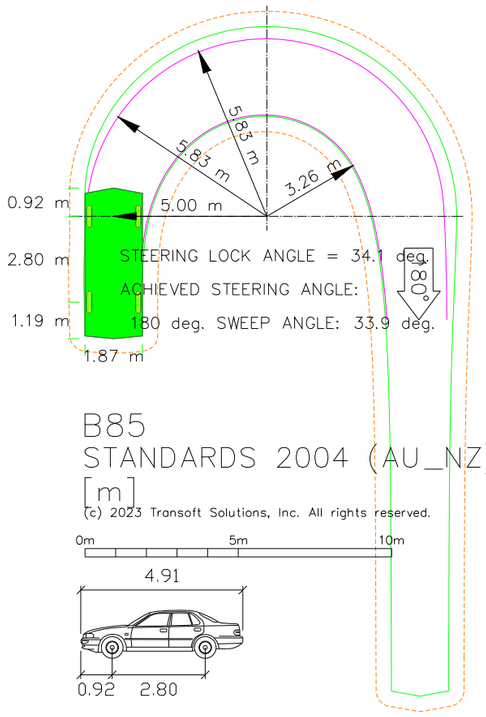

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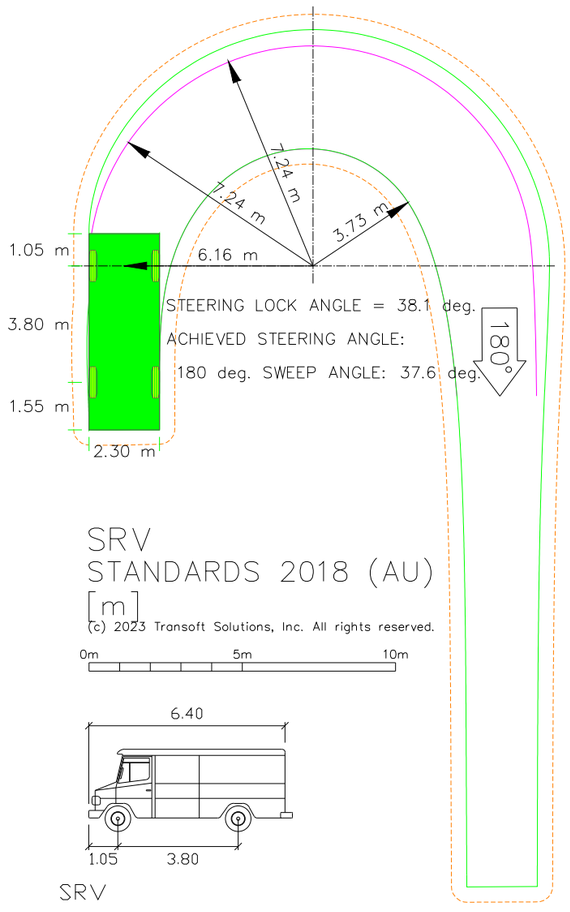

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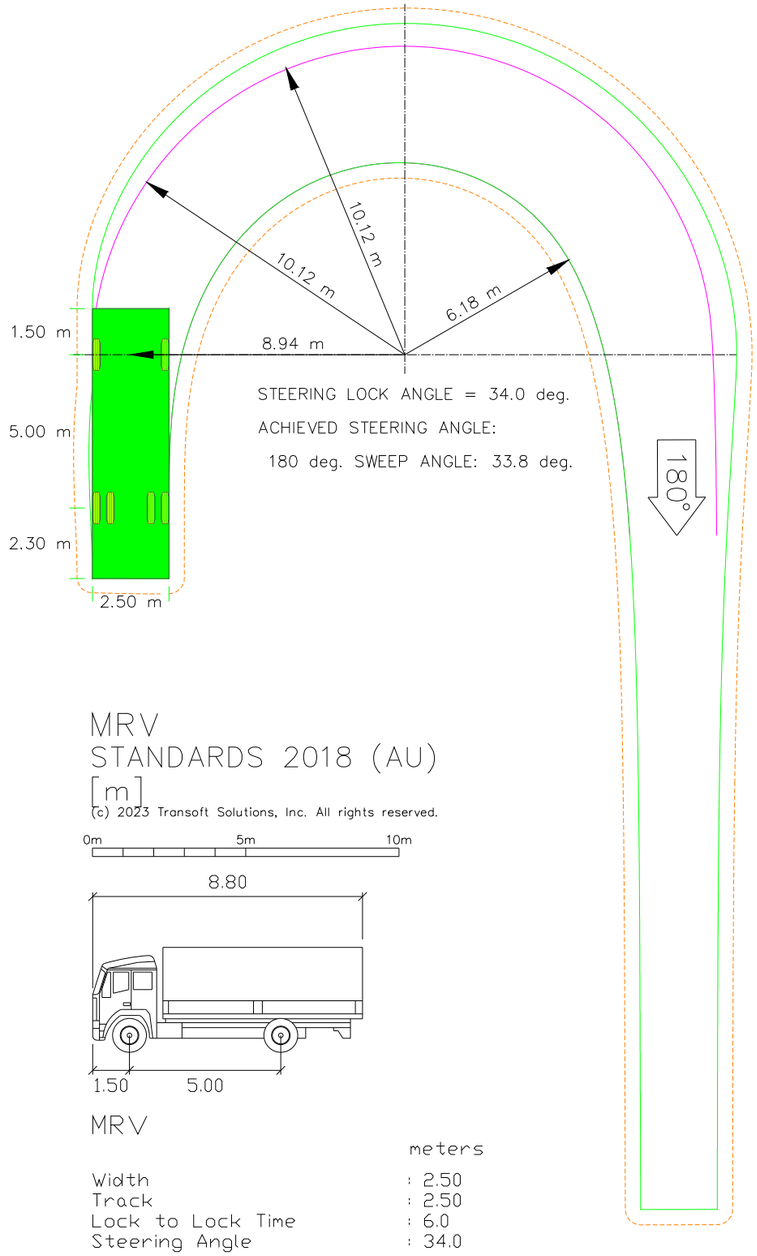

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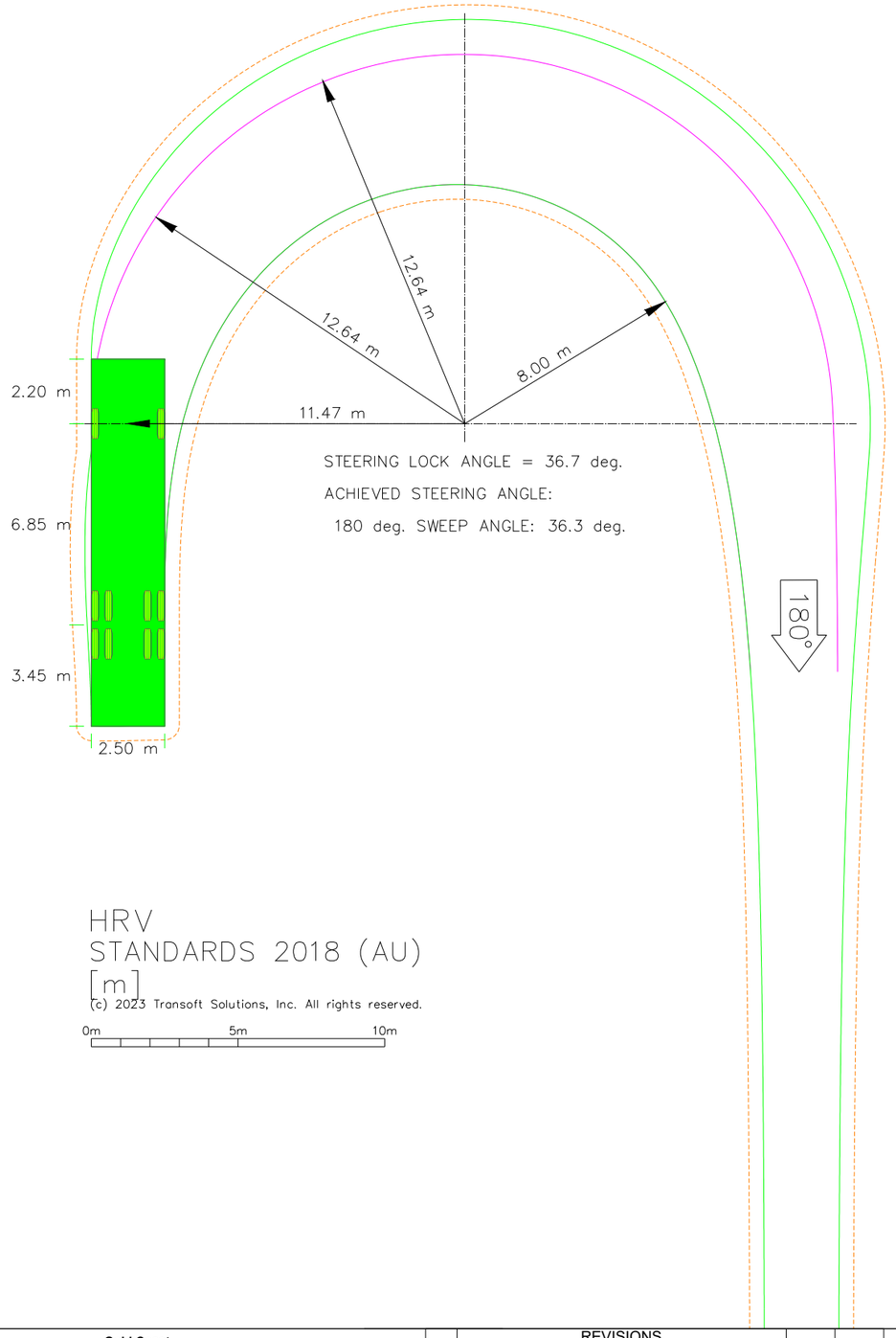

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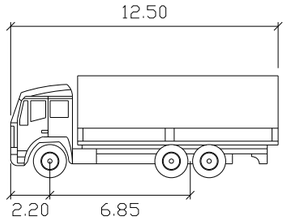

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