

AGENDA



EXTRAORDINARY LOCAL TRAFFIC COMMITTEE MEETING

MONDAY 3 JUNE 2024

11:00 AM

Function of the Local Traffic Committee

Background

Roads and Maritime Services (RMS) is legislated as the Authority responsible for the control of traffic on all NSW Roads. The RMS has delegated certain aspects of the control of traffic on local roads to councils. To exercise this delegation, councils must establish a local traffic committee and obtain the advice of the RMS and Police. The Inner West Council Local Traffic Committee has been constituted by Council as a result of the delegation granted by the RMS pursuant to Section 50 of the Transport Administration Act 1988.

Role of the Committee

The Local Traffic Committee is primarily a technical review and advisory committee which considers the technical merits of proposals and ensures that current technical guidelines are considered. It provides recommendations to Council on traffic and parking control matters and on the provision of traffic control facilities and prescribed traffic control devices for which Council has delegated authority. These matters are dealt with under **Part A** of the agenda and require Council to consider exercising its delegation.

In addition to its formal role as the Local Traffic Committee, the Committee may also be requested to provide informal traffic engineering advice on traffic matters not requiring Council to exercise its delegated function at that point in time, for example, advice to Council's Development Assessment Section on traffic generating developments. These matters are dealt with under **Part C** of the agenda and are for information or advice only and do not require Council to exercise its delegation.

Committee Delegations

The Local Traffic Committee has no decision-making powers. The Council must refer all traffic related matters to the Local Traffic Committee prior to exercising its delegated functions. Matters related to State Roads or functions that have not been delegated to Council must be referred directly to the RMS or relevant organisation.

The Committee provides recommendations to Council. Should Council wish to act contrary to the advice of the Committee or if that advice is not supported unanimously by the Committee members, then the Police or RMS have an opportunity to appeal to the Regional Traffic Committee.

Committee Membership & Voting

Formal voting membership comprises the following:

- one representative of Council as nominated by Council;
- one representative of the NSW Police from each Local Area Command (LAC) within the LGA, being Newtown, Marrickville, Leichhardt and Ashfield LAC's.
- one representative from the RMS; and
- State Members of Parliament (MP) for the electorates of Summer Hill, Newtown, Heffron, Canterbury, Strathfield and Balmain or their nominees.

Where the Council area is represented by more than one MP or covered by more than one Police LAC, representatives are only permitted to vote on matters which effect their electorate or LAC.

Informal (non-voting) advisors from within Council or external authorities may also attend Committee meetings to provide expert advice.

Committee Chair

Council's representative will chair the meetings.

Public Participation

Members of the public or other stakeholders may address the Committee on agenda items to be considered by the Committee. The format and number of presentations is at the discretion of the Chairperson and is generally limited to 3 minutes per speaker. Committee debate on agenda items is not open to the public.

AGENDA

- 1 Apologies
- 2 Disclosures of Interest
- 3 Matters Arising from Council's Resolution of Minutes
- 4 Part A – Items Where Council May Exercise Its Delegated Functions

Traffic Matters

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LTC0624(2) Item 1 Interim East-West Pedestrian and Cycle Link (EWPCL) Proposal from Sydenham Station to Marrickville Station (Midjuburi - Marrickville Ward/Summer Hill Electorate/ Inner West PAC)	4
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LTC0624(2) Item 4 Proposed new kerb extension facilities at intersection of Victoria Street and Clissold Street, Ashfield (Djarrawawunang- Ashfield Ward/Summer Hill Electorate/Burwood PAC)	145

Parking Matters

Nil at the time of printing.

Late Items

Nil at time of printing.

5 Part B - Items for Information Only

Nil at the time of printing.

6 Part C - Items for General Advice

Nil at the time of printing.

7 General Business

8 Close of Meeting

Item No: LTC0624(2) Item 1
Subject: INTERIM EAST-WEST PEDESTRIAN AND CYCLE LINK (EWPCCL) PROPOSAL FROM SYDENHAM STATION TO MARRICKVILLE SATION (MIDJUBURI - MARRICKVILLE WARD/SUMMER HILL ELECTORATE/ INNER WEST PAC)
Prepared By: George Tsaprounis - Coordinator Traffic Engineering Services (south)
Authorised By: Manod Wickramasinghe - Traffic and Transport Planning Manager

RECOMMENDATION

That the following design plans for the proposed interim EWPCCL (East West Pedestrian and Cycleway Link) between Sydenham and Marrickville stations submitted by Sydney Metro (Group GSA, EWPCCL INTERIM CYCLEWAY DESIGN, drawings A241703 L-2101 to 2104 issue H, A241703 L-2105 to 2110 Issue I and ACOR Consultants, EWPCCL INTERIM CYCLEWAY DESIGN SYDENHAM STATION TO MARRICKVILLE STATION, drawings C05-0001 to C05-0004 Issue F and C05-1000 Issue F) be approved, subject to the following conditions:

- Sydney Metro undertaking all maintenance and management activities (including community liaison) for the duration of the interim EWPCCL;
- any amendments and or changes to the interim EWPCCL be undertaken by Sydney Metro;
- all proposed treatments are to be constructed, installed or marked as per Council standards and/or specifications and to the satisfaction of Council; and
- Sydney Metro undertake all necessary work to implement a 40 km/h zone for the following streets/lanes (Meeks Road, Gerald Street, Sydney Lane, Maude Lane and Meeks Lane) prior to completion of the works, subject TfNSW approval.

STRATEGIC OBJECTIVE

This report supports the following strategic directions contained within Council's Community Strategic Plan:

2: Liveable, connected neighbourhoods and transport

EXECUTIVE SUMMARY

This report outlines proposed interim EWPCCL (East West Pedestrian and Cycleway Link) between Sydenham and Marrickville and seeking approval for its implementation. This cycleway link will play an important role during the upcoming track possession of Southwest Rail Line between Sydenham and Bankstown by providing alternate options for the commuters and local community. Part of this interim EWPCCL is consistent with Council's future bike strategy.

It is recommended that the proposed attached design submitted by Sydney Metro be approved subject to conditions.

BACKGROUND

Sydney Metro proposes to deliver an interim cycle link between Marrickville Station and Sydenham Station for the community to use during the final Metro conversion shutdown of the T3 Bankstown Line. It is planned for the interim cycle link to be opened before the final conversion shutdown of up to 12 months. Works along the route are proposed at Lower

Railway Parade, Marrickville Road, Meeks Road, Victoria Road up to Station Street. (refer to figure 1 below).

These works form part of Southwest Link– a fully integrated transport plan for Southwest Sydney giving passengers choices between dedicated and existing local bus services, rail services, light rail, active transport and turn up and go Metro services to and from Sydenham station.



Figure 1 – Proposed route

DISCUSSION

The EWPCCL is a Sydney Metro project which seeks to improve east- west pedestrian and cyclist facilities between Sydenham and Bankstown along the T3 line. Components of the end-state EWPCCL design are being led by Council and procurement for undertaking the detailed design is currently in progress. Sydney Metro will then undertake the delivery component. Sydney Metro will also be undertaking community engagement for the end-state EWPCCL later this year.

Sydney Metro has engaged with both Council and TfNSW staff to ensure that comments and requirements have been considered and incorporated into the design as agreed upon by the stakeholders. The attached design plans are the final product of these stakeholder meetings.

It should be noted that there is potential alignment with some of the interim EWPCCL and Marrickville Road East routes that form part of Council's capital works program. Marrickville Road East provides a separated cycleway along Marrickville Road from Meeks Road to Railway Parade/Gleeson Avenue and is currently undergoing detailed design. The final treatments for Marrickville Road will differ from those included as part of the TTP which is expected to provide shared paths rather than a separated cycleway. In this respect, Council may be able to retain constructed infrastructure where it provides synergies with the proposed Marrickville Road East route and where it provides a benefit to the public.

Design components of the proposed works include:

- Shared path along Lower Railway Parade – This will involve the installation of relevant signage, line marking and symbols, various repair works along the footpath, tree trimming and tree planting (refer to attached drawings A241703 L-2101 and 2102 issue H)

- Shared path along Marrickville Road (northern side from Lower Railway Parade to Sydney Street and southern side from Sydney Street to Meeks Road) – This will involve hazard driveway markings, installation of relevant signage, line marking and symbols, painted road treatment on Marrickville Road, new kerb blisters (either side of Buckley Street), various works along the footpath, stamped on-road threshold treatment at Barclay Street, Sydney Street and Gerald Street and hold rails to existing refuge island on Marrickville Road at Sydney Street (refer to attached drawings A241703 L-2103 and 2104 issue H and 2105 Issue I, C05-0003 Issue F and C05-0002 Issue F)
- Bi-directional on-road bicycle lane along Meeks Road between Sydney Lane and Maude Lane (eastern side) and on-road mixed traffic treatment for the remainder of Meeks Road to Victoria Road – This will involve on road stamped threshold treatment on Meeks Road, either side of Marrickville Road, Sydney Lane, Marrickville Lane and Maude Lane, painted road treatment across driveways, separation treatment between bicycle lane and parking lanes, , installation of relevant signage, line marking and symbols, painted bicycle refuge and transition zone and on-road threshold treatment at the bend in Meeks Road (refer to attached drawings A241703 L-2106, 2107 and 2108 Issue I and C05-0004 Issue F)
- Use of existing council bi-directional lane along Victoria Road from Meeks Road to Myrtle Street and connection to off road shared path connecting Marrickville Station to Victoria Road – This will involve installation of relevant signage, line marking and symbols, installation of speed cushions and refuge island (refer to attached drawings A241703 L-2109 and 2110 Issue I, C05-0001 and C05-1000 Issue F)

It should be noted that a Pre-Construction Concept Design Road Safety Audit was undertaken to support the proposal.

Council Officers did raise concerns in relation to cyclists crossing at the intersection of Buckley Street and Marrickville Road as the intersection does carry large volume of traffic and the geometric features of the intersection are not ideal for a pedestrian crossing. Although the cyclist will be asked to dismount at this location, this will provide motorists with additional stopping time to give way to crossing cyclists.

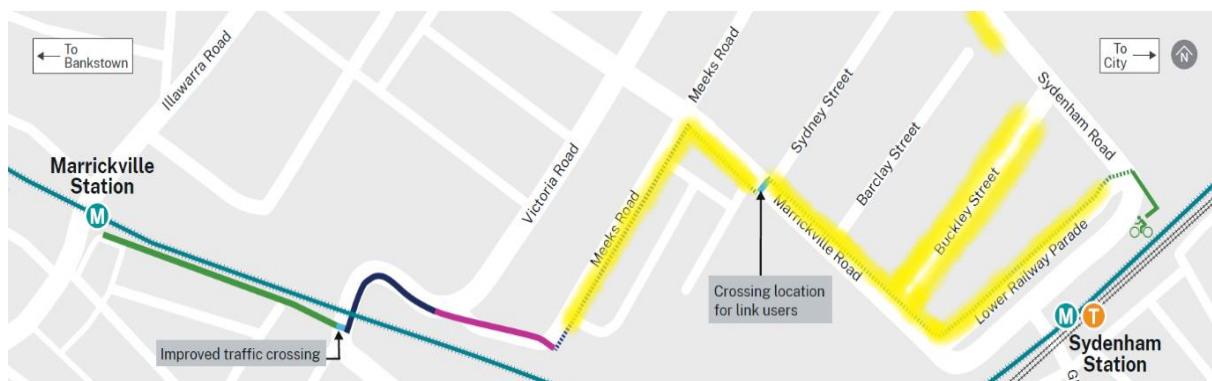
The 'pros and cons' of installing a mixed traffic treatment versus a bi-directional cycle lane in Meeks Road was discussed prior to the final proposal for a bi-directional cycle lane to be provided on the eastern side of the roadway. This is envisaged to provide a safe and separated cycleway facility and aligns with the end state EWPC design.

Following a discussion on lowering the speed limit on Meeks Road, Council Officers asked that Sydney Metro pursue lowering the speed limit along Meek Roads (and adjacent Street(s)/laneways to 40km/h.

Sydney Metro will be requested to construct, install and line mark all proposed treatments as per Council standards or specifications and to the satisfaction of Council.

COMMUNITY ENGAGEMENT

Sydney Metro undertook doorknocks with adjacent businesses to the proposed cycle link alignment (as well as on Buckley Street) on Wednesday 15 May and Thursday 16 May. 27 businesses were spoken to directly about the interim path (and provided with a copy of the factsheet), while the cycle link fact sheet was letterbox dropped at other businesses (where possible) and adjacent residential properties. Areas where doorknocks were undertaken are marked in yellow in the below map.



Business feedback was generally positive. A summary of issues/concerns is detailed below (further consultation will be conducted with these businesses prior to the start of construction).

Sydney Metro have indicated that they will conduct further engagement following approval of this proposal by the Traffic Committee, including:

- Distributing the fact sheet to a wider footprint of properties in Marrickville
- Emailing the fact sheet to Sydney Metro's Marrickville Station distribution list
- Distributing the fact sheet as a handout to train users at Marrickville and Sydenham Stations ahead of construction of the interim link commencing.

Issue raised	Sydney Metro response
Safety issues re heavy vehicle/car driveway access in and out and potential conflict with cyclists using path	<ul style="list-style-type: none"> • Several measures, including the marking of chevrons on business driveways along the link, are within the design to increase awareness of potential for heavy vehicles in the area • Sydney Metro will continue to consult with businesses with these concerns around potential for additional signage (non-regulatory signage)
Loss of parking on Lower Railway Parade throughout shutdowns Driver behaviour issues during previous shutdowns	<ul style="list-style-type: none"> • These are unrelated to the interim cycle path • Parking changes relate to previous shutdowns where Lower Railway Parade was used as a laydown area for replacement buses • It is likely that there will be less parking loss during final shutdown, alternative layover spaces are currently being progressed (TBC) • Drivers will be briefed and reminded about appropriate behaviours.
Potential parking loss on Meeks Road	<ul style="list-style-type: none"> • The design minimises impacts to local parking, resulting in the loss of only two spots on Meeks Road

CONCLUSION

It is recommended that Council conditionally approve the following attached design drawings for the interim EWPCL (East West Pedestrian and Cycleway Link) between Sydenham and Marrickville. These conditions to pertain to responsibilities for management and maintenance as well as responsibilities pre, post and during construction of the route.

FINANCIAL IMPLICATIONS

There are no financial implications associated with the implementation of the proposed recommendations outlined in the report.

ATTACHMENTS

1. [↓](#) EWPCCL INTERIM CYCLEWAY DESIGN
SYDENHAM STATION TO MARRICKVILLE STATION - CIVIL WORKS
2. [↓](#) EWPCCL INTERIM CYCLEWAY DESIGN
SYDENHAM STATION TO MARRICKVILLE STATION - LAYOUT, LINEMARKING AND SIGNAGE

EWPCIL INTERIM CYCLEWAY DESIGN SYDENHAM STATION TO MARRICKVILLE STATION CIVIL WORKS



LOCALITY PLAN
NOT TO SCALE

DRAWING NUMBER	DRAWING TITLE
C01-0001	COVER SHEET, LOCALITY PLAN AND DRAWING SCHEDULE
C01-0101	CONSTRUCTION NOTES
C05-0001	GENERAL ARRANGEMENT PLAN - SHEET 1
C05-0002	GENERAL ARRANGEMENT PLAN - SHEET 2
C05-0003	GENERAL ARRANGEMENT PLAN - SHEET 3
C05-0004	GENERAL ARRANGEMENT PLAN - SHEET 4
C05-1000	TURNING PATH PLAN
C07-0001	NOTES AND DETAILS

Attachment 1

[illegible]

GENERAL NOTES

1. THE DRAWING DIMENSIONS SHALL NOT BE OBTAINED BY SCALING.
 2. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATION AND WRITTEN INSTRUCTIONS. ANY DISCREPANCY OR VARIATION SHALL BE REFERRED TO THE SUPERINTENDENT BEFORE PROCEEDING WITH THE WORK.
 3. ALL WORK TO BE IN ACCORDANCE WITH INNER WEST COUNCIL ENGINEERING REQUIREMENTS FOR DEVELOPMENT AND INNER WEST COUNCIL STANDARD DRAWINGS AND SPECIFICATIONS.
 4. NO ADDITIONAL OR P.C. WORKS SHALL BE UNDERTAKEN WITHOUT THE SUPERINTENDENTS APPROVAL. CONFIRM COUNCIL INSTRUCTIONS WITH SUPERINTENDENT.
 5. THE CONTRACTOR MUST ENSURE SUPERINTENDENT AND/OR COUNCIL APPROVAL OF MATERIALS, PRIOR TO DELIVERY TO SITE.
 6. DIVERSION OF WATER AND THE PROTECTION OF WORKS IS THE CONTRACTORS RESPONSIBILITY.
 7. THE CONTRACTOR HAS SOLE RESPONSIBILITY TO EXERCISE CARE AND TAKE PRECAUTIONS TO ENSURE CONSTRUCTION ACTIVITIES DO NOT AFFECT ADJACENT PROPERTIES, ACCESS OR STRUCTURES. MAINTAIN EMBANKMENTS AND STRUCTURES IN STABLE CONDITION DURING CONSTRUCTION ENSURING NO PART IS OVERSTRESSED. TEMPORARY STRUCTURES, FORMWORK, TEMPORARY BRACING, SHORING AND THE LIKE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
 8. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE FULL QA DOCUMENTATION OF THE PROJECT TO ENSURE WORKS MEET THE RELEVANT SECTIONS OF AUSPEC FOR ROADS, DRAINAGE, WATER AND SEWER. A COMPLETE ITP PLAN SHALL BE SUBMITTED TO THE SUPERINTENDENT FOR APPROVAL PRIOR TO WORKS COMMENCING ON SITE.
 9. CONTRACTOR IS TO VERIFY THE LOCATION OF ALL SERVICES WITH EACH RELEVANT AUTHORITY. ANY DAMAGE TO SERVICES SHALL BE REPAIRED BY THE CONTRACTOR OR THE RELEVANT AUTHORITY AT THE CONTRACTORS EXPENSE. SERVICES SHOWN ON THESE PLANS ARE ONLY THOSE EVIDENT AT THE TIME OF SURVEY.
 10. UNDERTAKE WORKS TO PRINCIPLES OF AS 9001. SUBMIT WORK METHOD STATEMENT TO SUPERINTENDENT.
- HOLD POINTS SHALL APPLY TO:
- APPROVAL OF WORK METHOD STATEMENT
 - APPROVAL OF TRAFFIC CONTROL PLAN
 - LOCATION OF IN-GROUND SERVICES
 - SETOUT OF EACH AREA OF WORKS
 - CERTIFICATION OF SUBGRADE
 - STORMWATER PIPEWORK PRIOR TO BACKFILL
 - CONDUITS PRIOR TO BACKFILL
 - WORK AS EXECUTED SURVEY
 - GEOTECHNICAL CERTIFICATION
11. ALL WORKS ARE TO BE SETOUT BY A REGISTERED SURVEYOR.
 12. ALL LEVELS SHALL BE OBTAINED FROM ESTABLISHED BENCH MARKS ONLY. STANDARD DATUM FOR ALL DRAWINGS IS AUSTRALIAN HEIGHT DATUM (A.H.D.).
 13. A TRAFFIC CONTROL PLAN TO AS 1742.3 IS TO BE SUBMITTED TO COUNCIL FOR APPROVAL PRIOR TO WORKS COMMENCING.
 14. SERVICE CONDUITS SHALL BE PLACED AS DIRECTED BY AUSGRD, NBN, JEMENA AND AS REQUIRED BY COUNCIL.
 15. PROPOSED SERVICES CROSSING EXISTING ROADS SHALL BE THRUST BORED UNDER THE ROAD SO AS NOT TO DAMAGE EXISTING SURFACES.
 16. ALL NEW WORKS ARE TO MAKE SMOOTH JUNCTIONS WITH ALL EXISTING CONDITIONS. AC JOINTS TO BE SAW CUT AT CONNECTION TO EXISTING PAVEMENT. THE CONTRACTOR IS TO MAKE ALL DUE ALLOWANCES FOR WORKS DURING CONSTRUCTION.

PAVEMENT MARKING AND SIGNAGE NOTES

1. THE WORK SHALL INCLUDE ALL PAVEMENT MARKING TO ROADS, HARDSTANDS, PATHS, CARPARKS AND THE TRAFFICABLE AREAS.
2. PAVEMENT MARKING AND PAINT SHALL BE IN ACCORDANCE WITH AS 1742.2 AND THE RELEVANT LOCAL AND STATE AUTHORITY GUIDELINES AND SPECIFICATIONS.
3. PAVEMENT MARKING SHALL BE SPOTTED OUT AND APPROVED PRIOR TO SPRAYING.
4. PAINT SHALL BE APPLIED AT A WET THICKNESS OF BETWEEN 0.35mm TO 0.40mm.
5. EXISTING PAVEMENT MARKING IN CONFLICT WITH NEW WORKS SHALL BE REMOVED IN ACCORDANCE WITH AS 1742.2. REDUNDANT PAVEMENT MARKING MUST BE REMOVED BY GRINDING, BLASTING OR RESURFACING. PAINTING OVER WITH BLACK BITUMINOUS PAINT IS NOT ACCEPTABLE.
6. RAISED PAVEMENT MARKERS ARE TO BE INSTALLED IN ACCORDANCE WITH AS 1742.2 AND AS DIRECTED BY SUPERINTENDENT.
7. SIGNAGE SHALL BE IN ACCORDANCE WITH AS 1742.1, AS 1742.2, AS 2890.1 AND THE RELEVANT LOCAL AND STATE AUTHORITY GUIDELINES AND SPECIFICATIONS.
8. EXISTING SIGNAGE IN CONFLICT WITH NEW WORKS SHALL BE REMOVED OR RELOCATED AS DIRECTED BY THE SUPERINTENDENT.
9. PAVEMENT MARKING NOTATION IS AS FOLLOWS:

DOUBLE TWO-WAY	BL2
EDGE LINE	EL1
NO STOPPING LINE	NS1
STOP LINE	TF
PEDESTRIAN CROSSING (ZEBRA)	PX
BICYCLE CROSSING LINE	TBC

SAFETY IN DESIGN

1. THE DESIGN SAFETY ASSESSMENT HAS BEEN CARRIED OUT WITH REFERENCE TO CURRENT STANDARDS AND REGULATIONS FOR DESIGN TO BE SAFE SO FAR AS REASONABLY PRACTICABLE. HAZARD AND RISK IDENTIFICATION IS BASED ON INFORMATION AVAILABLE TO THE DESIGNER AT THE TIME OF THE DESIGN.
2. IDENTIFIED HAZARDS ARE THOSE WHICH ARE AFFECTED BY THE DESIGN, AND ARE WITHIN THE CONTROL OF THE DESIGNER.
3. HAZARDS AND RISK RELATING TO CONSTRUCTION, OPERATION, MAINTENANCE AND DEMOLITION MUST BE CONSIDERED BY THE OWNER, MANAGER, BUILDER, USER, MAINTAINER AND DEMOLISHER. ALL SUCH ENTITIES ARE ASSUMED TO BE QUALIFIED, COMPETENT AND EXPERIENCED.
4. SEEK ADVICE WHERE ACTIVITIES ARE OUTSIDE THE FIELD OF EXPERIENCE OF THE CONSULTANT/BUILDER/MAINTAINER, INCLUDING BUT NOT LIMITED TO QUALIFIED STRUCTURAL AND GEOTECHNICAL ENGINEERS.
5. ATYPICAL HAZARDS HAVE BEEN IDENTIFIED IN THE DESIGN PROCESS.

ATYPICAL HAZARDS IDENTIFIED ARE:
 - CLOSE PROXIMITY TO MOVING VEHICLES
6. WHERE STATE OR TERRITORY LEGISLATION EXISTS, OR OTHERWISE AS MAY BE REQUIRED, A DESIGN VERIFICATION STATEMENT WILL BE PROVIDED BY THE CONSULTING ENGINEER.

EXISTING SERVICES AND FEATURES

1. THE CONTRACTOR SHALL ALLOW FOR THE CAPPING OFF, EXCAVATION, REMOVAL AND DISPOSAL, IF REQUIRED, OF ALL EXISTING SERVICES IN AREAS AFFECTED BY WORKS WITHIN THE CONTRACT AREA AS DIRECTED OTHERWISE BY THE SUPERINTENDENT.
2. THE CONTRACTOR SHALL ENSURE THAT AT ALL TIMES SERVICES TO ALL BUILDINGS NOT AFFECTED BY THE WORKS ARE NOT DISRUPTED.
3. EXISTING BUILDINGS, EXTERNAL STRUCTURES, AND TREES SHOWN ON THESE DRAWINGS ARE FEATURES EXISTING PRIOR TO ANY DEMOLITION WORKS.
4. CONTRACTOR SHALL CONSTRUCT TEMPORARY SERVICES TO MAINTAIN EXISTING SUPPLY TO BUILDINGS REMAINING IN OPERATION DURING WORKS TO THE SATISFACTION AND APPROVAL OF THE SUPERINTENDENT. ONCE DIVERSION IS COMPLETE AND COMMISSIONED THE CONTRACTOR SHALL REMOVE ALL SUCH TEMPORARY SERVICES AND MAKE GOOD TO THE SATISFACTION OF THE SUPERINTENDENT.
5. INTERRUPTION TO SUPPLY OF EXISTING SERVICES SHALL BE DONE SO AS NOT TO CAUSE ANY INCONVENIENCE TO THE PRINCIPAL. CONTRACTOR TO GAIN APPROVAL OF SUPERINTENDENT FOR TIME OF INTERRUPTION.

INNER WEST COUNCIL STANDARD DRAWINGS

THE FOLLOWING STANDARD DRAWINGS ARE TO BE ADOPTED UNLESS NOTED OTHERWISE

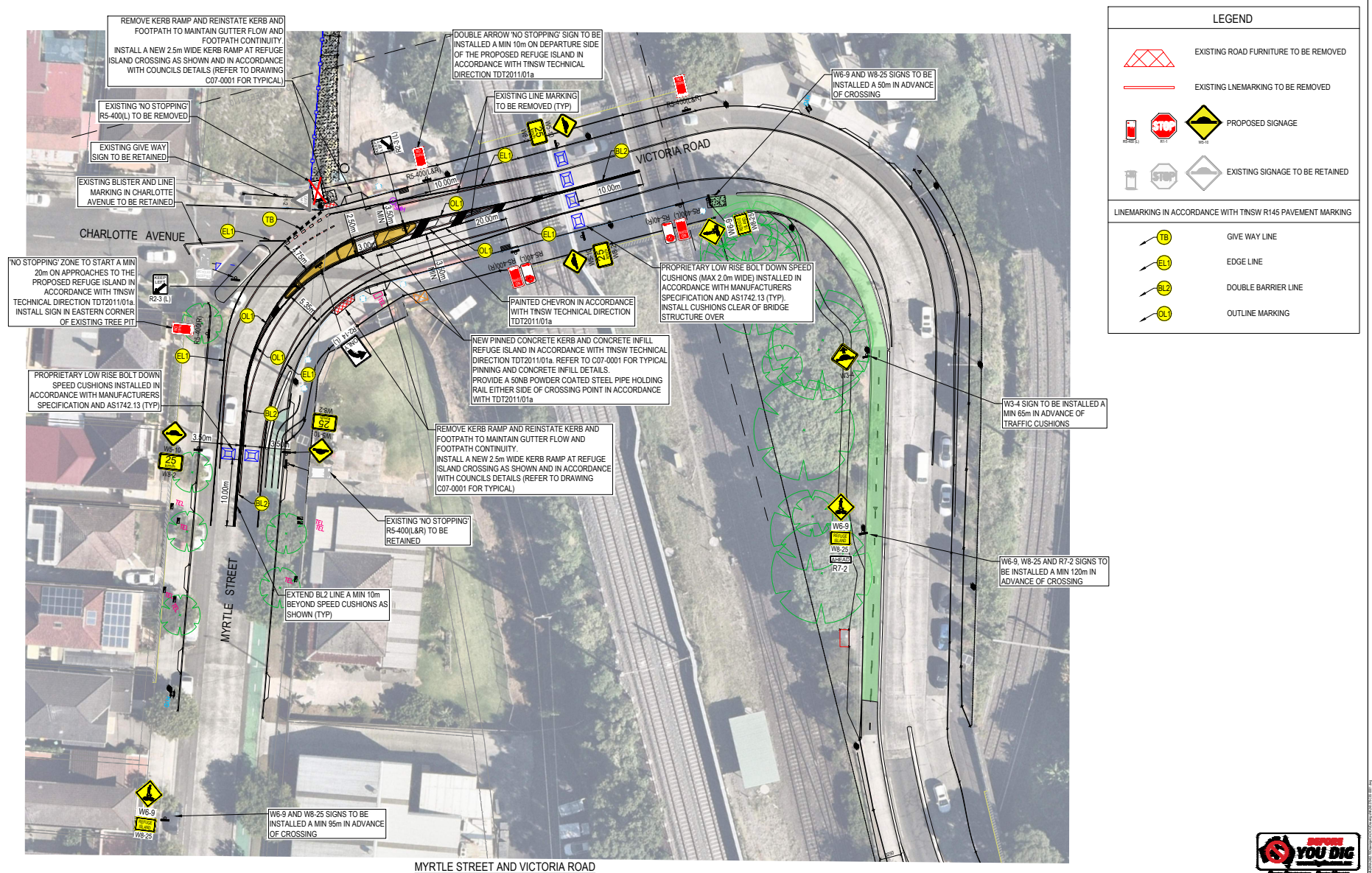
- C1 - STANDARD CYCLEWAY DETAILS
- E1 - SEDIMENT & EROSION CONTROL PLAN
- F2 - 100mm THICK REINFORCED CONCRETE FOOTPATH
- F3 - 150mm THICK REINFORCED CONCRETE FOOTPATH
- F4 - KERB RAMPS
- F9 - ASPHALTIC CONCRETE PAVED FOOTPATH
- R1 - STANDARD KERB PROFILES
- R2 - CONCRETE ROAD SLAB REPLACEMENT WORK
- R5 - STANDARD FLEXIBLE ROAD PAVEMENTS - RECONSTRUCTION WITH ASPHALTIC CONCRETE OVER DGB
- R6 - STANDARD FLEXIBLE ROAD PAVEMENTS - FULL DEPTH ASPHALTIC CONCRETE ROAD PAVEMENTS
- R7 - ASPHALTIC CONCRETE ROAD HEAVY PATCHING
- T2 WATTS PROFILE SPEED HUMPS & ASPHALTIC SPEED CUSHIONS (WHERE PERMANENT FIXTURES ARE NOT REQUIRED)
- DRAWING 1 INF. MARKING DRAWING.

ALL STANDARD DETAILS AND PAVEMENT WORKS ARE TO BE CONFIRMED ON SITE WITH COUNCILS WORKS SUPERVISOR AND MATCH TO ADJACENT SURROUNDING CONDITIONS

EROSION AND SEDIMENT CONTROL NOTES

1. PROVIDE EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION TO COUNCIL STANDARDS AND CONFORMING TO LANDCOM SOILS & CONSTRUCTION Vol 1, 4th EDITION, MARCH 2004.
2. PREPARE EROSION AND SEDIMENT CONTROL PLAN AND OBTAIN COUNCIL APPROVAL PRIOR TO WORKS.
3. ALL PERIMETER CONTROL DEVICES ARE TO BE INSTALLED PRIOR TO WORK COMMENCING AND BE MAINTAINED DURING CONSTRUCTION. LOCATE SEDIMENT FENCE WITHIN WORKS BOUNDARY.
4. CONTRACTOR TO DEFINE ACCESS, STOCKPILE AND OTHER AREAS PRIOR TO WORK COMMENCING.
5. PROVIDE A SINGLE POINT OF ACCESS TO THE SITE.
6. MINIMISE SITE DISTURBANCE AND REDUCE STOCKPILING TO A LEVEL NECESSARY TO CONSTRUCT THE WORKS. STOCKPILE AREAS, CONSTRUCTION ACCESSES AND NO GO AREAS TO BE DEFINED AND CONFIRMED PRIOR TO COMMENCEMENT OF WORK. FENCE NO GO AREAS.
7. PROVIDE MEASURES AT STOCKPILES TO DIVERT CLEAN WATER AND COLLECT SEDIMENT DOWNSTREAM. LOCATE STOCKPILES AWAY FROM STORMWATER FLOWS.
8. PROVIDE AND MAINTAIN PERMANENT GRASSING AS SOON AS POSSIBLE AFTER CONSTRUCTION. STAGE WORKS AS NECESSARY. GRASS SPECIES SHALL BE TO COUNCIL REQUIREMENTS. GRASS TURF TABLEDRAINS AND SWALES. MULCH (IF AVAILABLE FROM SITE CLEARING) AND SEED ALL OTHER DISTURBED AREAS INCLUDING TRENCHES, WHICH HAVE NOT BEEN TURFED. ON COMPLETION OF WORKS PROVIDE STRIP TURFING. SEE GENERAL NOTES.
9. CONTROL DUST BY WINDBREAKS, WATERING ETC.
10. EROSION AND SILT PROTECTION MEASURES ARE TO BE MAINTAINED AT ALL TIMES. ADJUST TO SUIT STAGING AND PROGRESS.
11. HIGH EROSION AREAS, INCLUDING BATTERS TO BE STABILISED WITHIN 7 DAYS OF COMPLETING OF WORKS AND EARLIER IF DIRECTED BY SUPERINTENDENT.
12. ALL STABILISED WORKS ARE TO BE MAINTAINED UNTIL COMPLETION OF WORKS.
13. REMOVE TEMPORARY MEASURES AFTER COMPLETION OF CONSTRUCTION AND STABILISATION OF WORKS.

[illegible]



MYRTLE STREET AND VICTORIA ROAD

SCALE 1:250

Rev	Description	Date	Drawn	Checked
F	ISSUED FOR APPROVAL	20.05.24	MDM	JK
E	ISSUED FOR APPROVAL	17.05.24	MDM	JK
D	ISSUED FOR APPROVAL	15.05.24	MDM	JK
C	ISSUED FOR APPROVAL	03.05.24	MDM	JK
B	ISSUED FOR INFORMATION	03.05.24	MDM	JK
A	ISSUED FOR INFORMATION	28.04.24	MDM	JK



PRINT IN COLOUR

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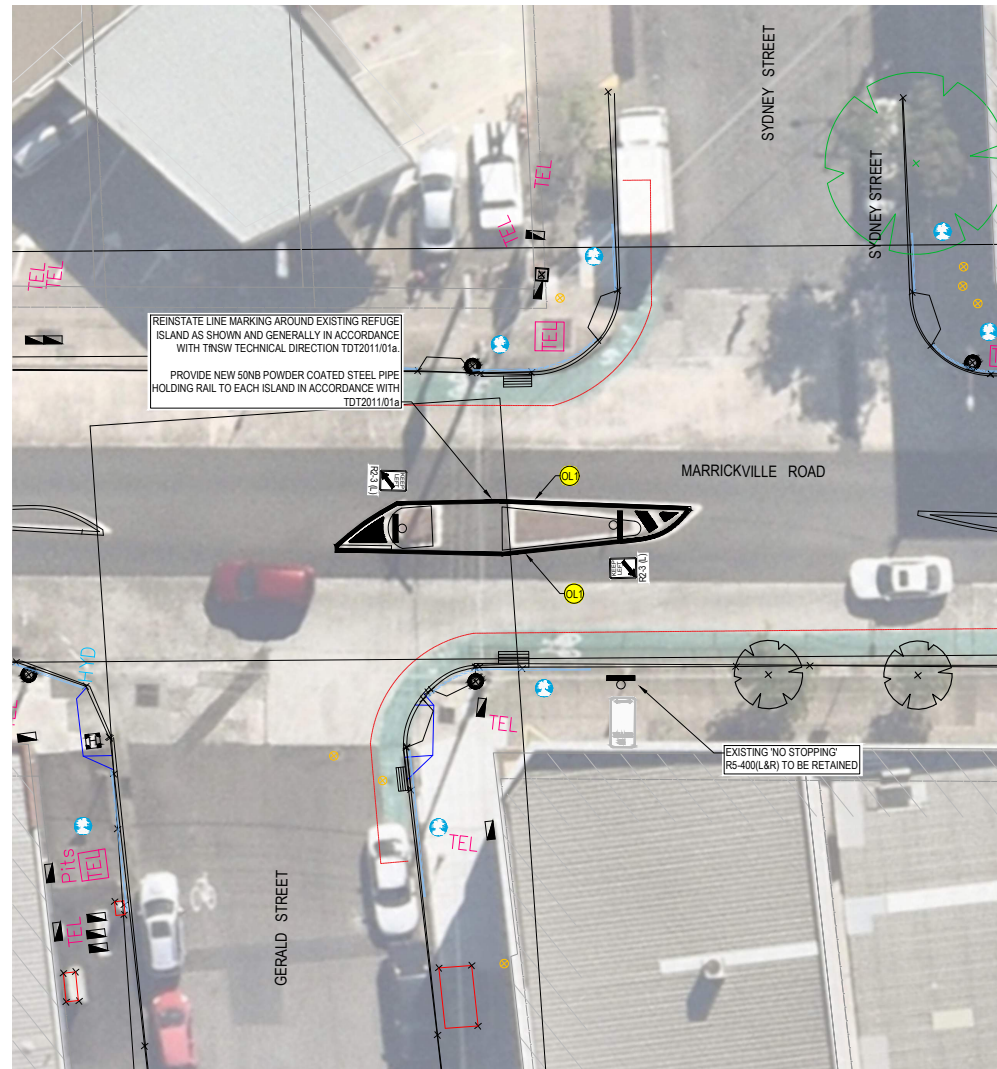
Project
EWPCL INTERIM CYCLEWAY DESIGN
SYDENHAM STATION TO MARRICKVILLE STATION











Rev	Description	Date	Drawn	Checked	Scale
F	ISSUED FOR APPROVAL	20.05.24	MDM	JK	1:250
E	ISSUED FOR APPROVAL	17.05.24	MDM	JK	1:250
D	ISSUED FOR APPROVAL	15.05.24	MDM	JK	1:250
C	ISSUED FOR APPROVAL	03.05.24	MDM	JK	1:250
B	ISSUED FOR INFORMATION	03.05.24	MDM	JK	1:250
A	ISSUED FOR INFORMATION	28.04.24	MDM	JK	1:250

NOT FOR CONSTRUCTION

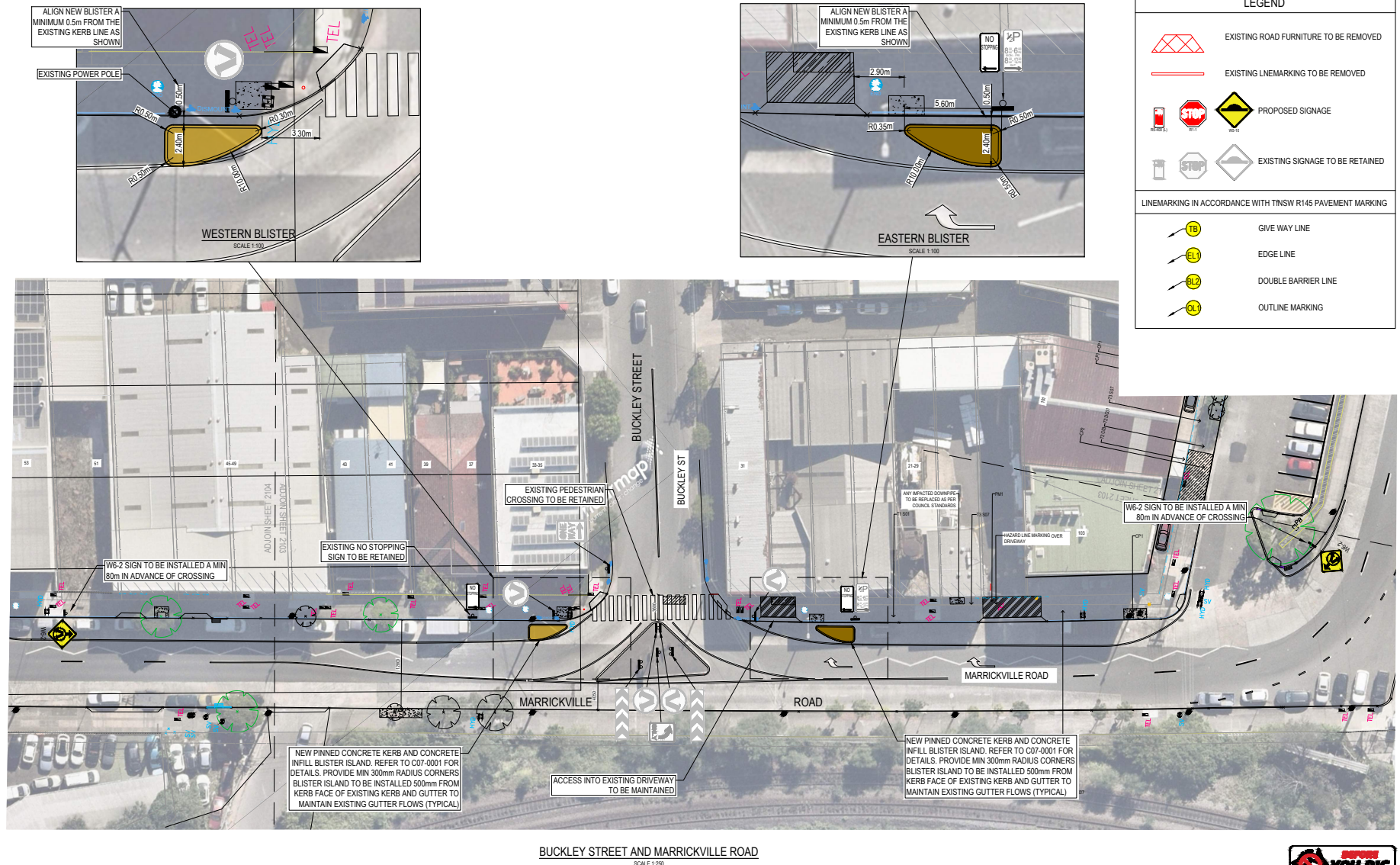


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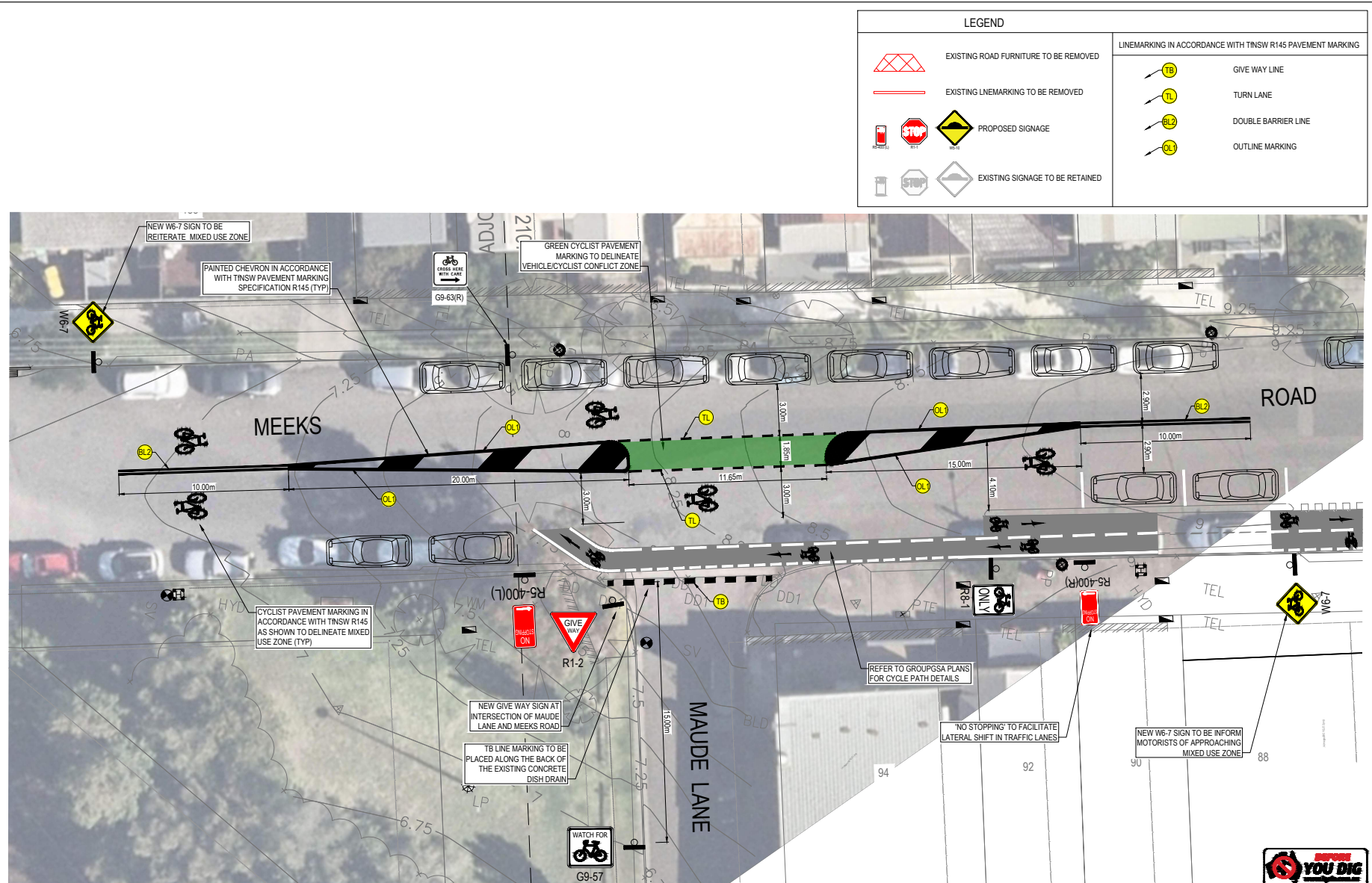


LEGEND	
	EXISTING ROAD FURNITURE TO BE REMOVED
	EXISTING LNE MARKING TO BE REMOVED
 	PROPOSED SIGNAGE
 	EXISTING SIGNAGE TO BE RETAINED
LINE MARKING IN ACCORDANCE WITH TINSW R145 PAVEMENT MARKING	
	GIVE WAY LINE
	EDGE LINE
	DOUBLE BARRIER LINE
	OUTLINE MARKING

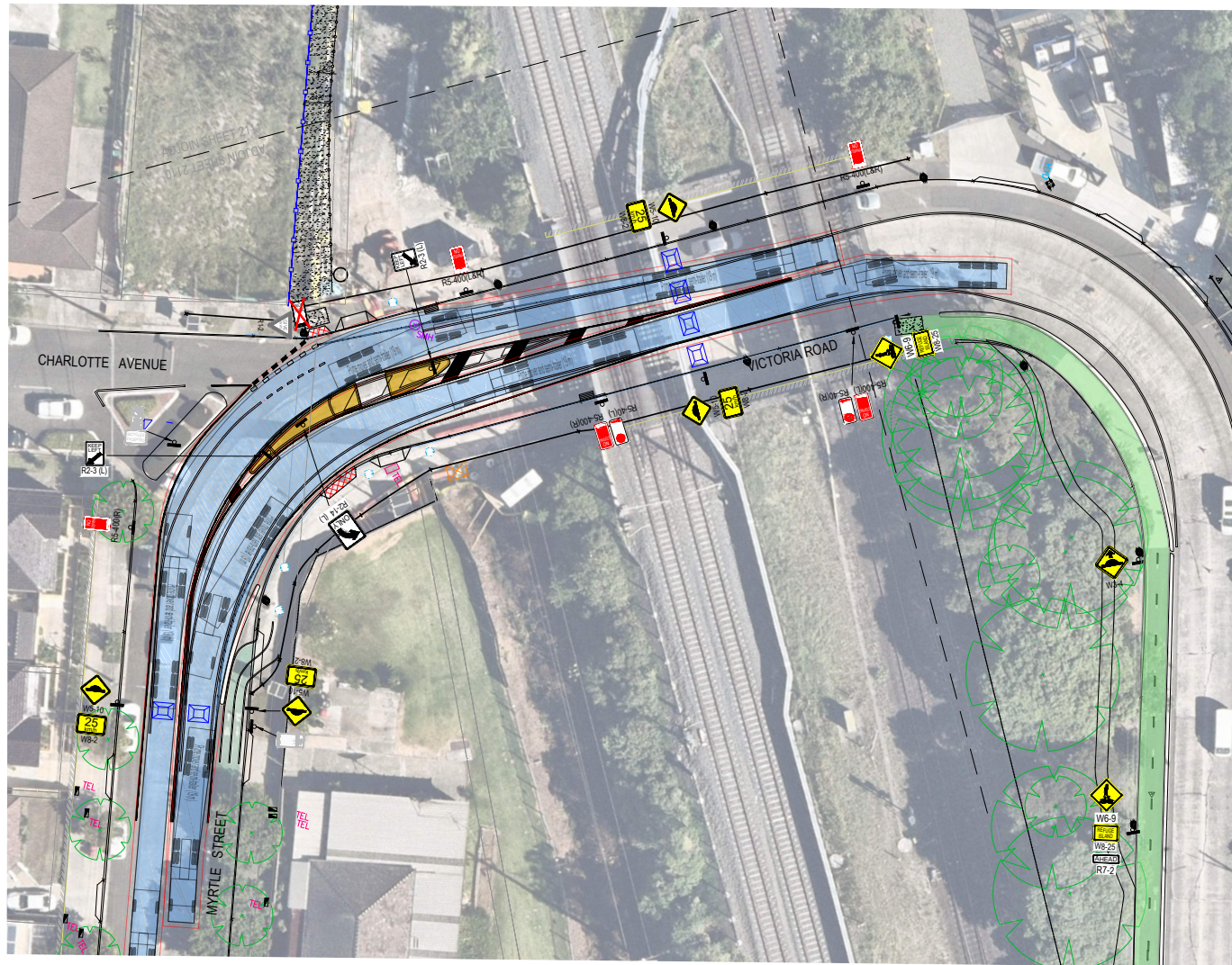
[illegible]



SYDNEY METRO Level 43, 680 GEORGE ST SYDNEY, NSW, 2000				GROUP GSA PTY LTD Level 7, 80 WILLIAM ST SYDNEY, NSW, 2011 T: +612 9361 4144				ACOR Consultants Pty Ltd The Forum, Level 1 Suite 1 240-244 Pacific Highway Charlestown NSW 2290 T +61 2 4926 4811				EWPL INTERIM CYCLEWAY DESIGN SYDENHAM STATION TO MARRICKVILLE STATION				CIVIL GENERAL ARRANGEMENT PLAN SHEET 3				NOT FOR CONSTRUCTION			
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Design JK				Design JK				Design JK				Design JK				Design JK				Design JK			
G.A. Check JPR				G.A. Check JPR				G.A. Check JPR				G.A. Check JPR				G.A. Check JPR				G.A. Check JPR			
Date 03.05.24				Date 03.05.24				Date 03.05.24				Date 03.05.24				Date 03.05.24				Date 03.05.24			
Scale AS SHOWN				Scale AS SHOWN				Scale AS SHOWN				Scale AS SHOWN				Scale AS SHOWN				Scale AS SHOWN			
Project No. NA240270				Project No. NA240270				Project No. NA240270				Project No. NA240270				Project No. NA240270				Project No. NA240270			
Drawing Title CIVIL GENERAL ARRANGEMENT PLAN				Drawing Title CIVIL GENERAL ARRANGEMENT PLAN				Drawing Title CIVIL GENERAL ARRANGEMENT PLAN				Drawing Title CIVIL GENERAL ARRANGEMENT PLAN				Drawing Title CIVIL GENERAL ARRANGEMENT PLAN				Drawing Title CIVIL GENERAL ARRANGEMENT PLAN			
Sheet No. 3				Sheet No. 3				Sheet No. 3				Sheet No. 3				Sheet No. 3				Sheet No. 3			
Author JK				Author JK				Author JK				Author JK				Author JK				Author JK			
Date 24/05/24				Date 24/05/24				Date 24/05/24				Date 24/05/24				Date 24/05/24				Date 24/05/24			



										North		Scale PRINT IN COLOUR	Client SYDNEY METRO LEVEL 43, 680 GEORGE ST SYDNEY, NSW, 2000	Architect GROUP GSA PTY LTD LEVEL 7, 80 WILLIAM ST SYDNEY NSW, 2011 T +612 9361 4144		ACOR Consultants Pty Ltd The Forum, Level 1 Suite 1 240-244 Pacific Highway Charlestown NSW 2290 T +61 2 4920 4811 	Project EWPL INTERIM CYCLEWAY DESIGN SYDENHAM STATION TO MARRICKVILLE STATION	Drawing Title CIVIL GENERAL ARRANGEMENT PLAN SHEET 4	Drawing No. NA240270	Client MEMU	Designed JK	G.A. Check JPR	Date 03.05.24	Scale @ A1 1:200	Folio F
F	ISSUED FOR APPROVAL		22.05.24	MDM	JK																				
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	NOT ISSUED																								
	NOT ISSUED																								



MYRTLE STREET AND VICTORIA ROAD

SCALE 1:200

										North	Scale	Client	Architect	ACOR Consultants Pty Ltd	Project	Drawing Title
												SYDNEY METRO	GROUP GSA PTY LTD	The Forum, Level 1 Suite 1 240-244 Pacific Highway Charlestown NSW 2290 T +61 2 4926 4811	EWPCL INTERIM CYCLEWAY DESIGN SYDENHAM STATION TO MARRICKVILLE STATION	CIVIL TURNING PATH PLAN
										PRINT IN COLOUR	LEVEL 43, 680 GEORGE ST SYDNEY, NSW, 2000	LEVEL 7, 80 WILLIAM ST SYDNEY, NSW, 2011 T: +612 9361 4144			NOT FOR CONSTRUCTION	

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NOT FOR CONSTRUCTION

EWPCl INTERIM CYCLEWAY DESIGN
SYDENHAM STATION TO MARRICKVILLE STATION



Extent of Works

Document Title	Number	Scale
Cover Sheet	L-0000	--
Materials & Furniture Schedule	L-2000	--
General Arrangement Plan	L-2101	1:200
General Arrangement Plan	L-2102	1:200
General Arrangement Plan	L-2103	1:200
General Arrangement Plan	L-2104	1:200
General Arrangement Plan	L-2105 (2)	1:200
General Arrangement Plan	L-2105	1:200
General Arrangement Plan	L-2106	1:200
General Arrangement Plan	L-2107	1:200
General Arrangement Plan	L-2108	1:200
General Arrangement Plan	L-2109	1:200
General Arrangement Plan	L-2110	1:200
General Arrangement Plan	L-2111	1:200
General Arrangement Plan	L-2112	1:200
General Arrangement Plan	L-2113	1:200
Details	L-7001	--
Details	L-7002	--
Details	L-7003	--
Details	L-7004	--

Amendment	Date
A PRELIMINARY ISSUE	12/04/2024
B PRELIMINARY ISSUE	01/05/2024
C CLIENT ISSUE	03/05/2024
D CLIENT ISSUE	10/05/2024
E CLIENT ISSUE	14/05/2024
F FINAL DOCUMENTATION	17/05/2024
G REVISED FINAL DOCUMENTATION	20/05/2024
H REVISED FINAL DOCUMENTATION	20/05/2024
I FINAL ISSUE	22/05/2024

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new architectural ideas more thoughtful

Project Title
EWPCl Interim Cycleway Design
Drawing Title
Cover Sheet

Drawing Created (date)	22/05/2024	
Drawing Created (by)	MC	
Verified	MS	
Approved	SH	
Scale		
Project No.	Drawing No.	Issue
A241703	L-0000	I


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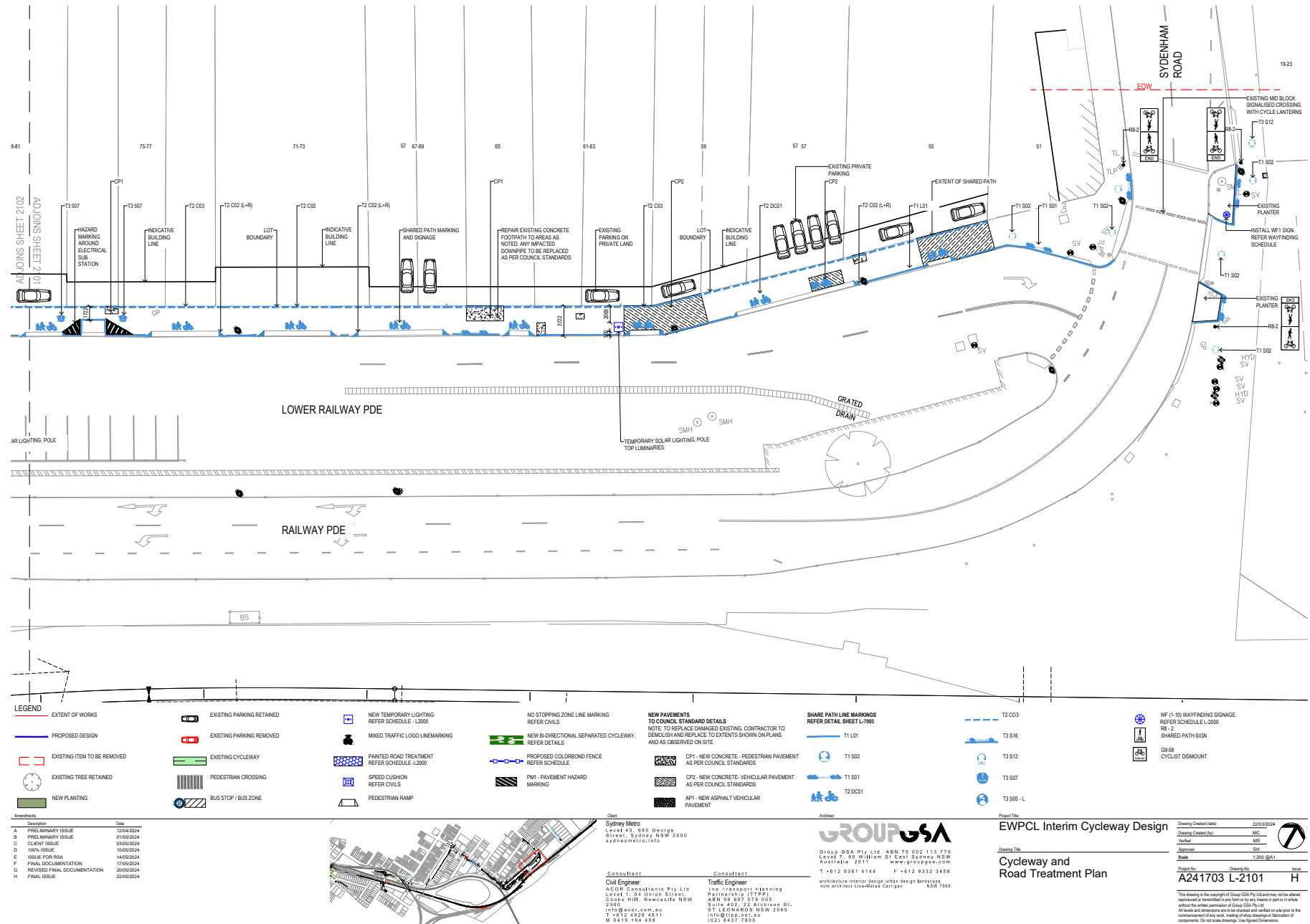
FURNITURE SCHEDULE					
QTY	PRODUCT NAME	SUPPLIER	SUPPLY & INSTALLATION	LOCATION	NOTES
	Temporary Solar Lighting, pole top, Luminaire with Concrete Base for Sharepath with Glare shield against residence fence AE3S90R2-F2 Smart solar lighting panel 30W 615Wh 90W L3SS10-1052X Luminaire 10W 3K T2L 2w 6M Pole (ET-LDSP-6.2M) and a 1.1x1.1x0.8m concrete pad. Lighting to be installed as per manufacturer recommendations. PP3 Lighting compliance	Leadsun or approved equivalent	Contractor	Sharepath	
	Colourbond Fence 1800mm HIGH MIN to 2100mm HIGH MAX Fence on natural ground.	Contractor	Contractor	Refer Drawings	
	Speed Cushion 2000 x 1600mm Speed cushion to be installed as per manufacturer specifications	Saferoads or approved equal	Contractor	Refer Drawings	
	Bike Holding Rail 1200 x 1000mm High hot dipped galvanised holding rail with a yellow powder coated finish. Holding rail to have class 2 Red/White reflective bands	Seton Australia or approved equal	Contractor	Refer Drawings	

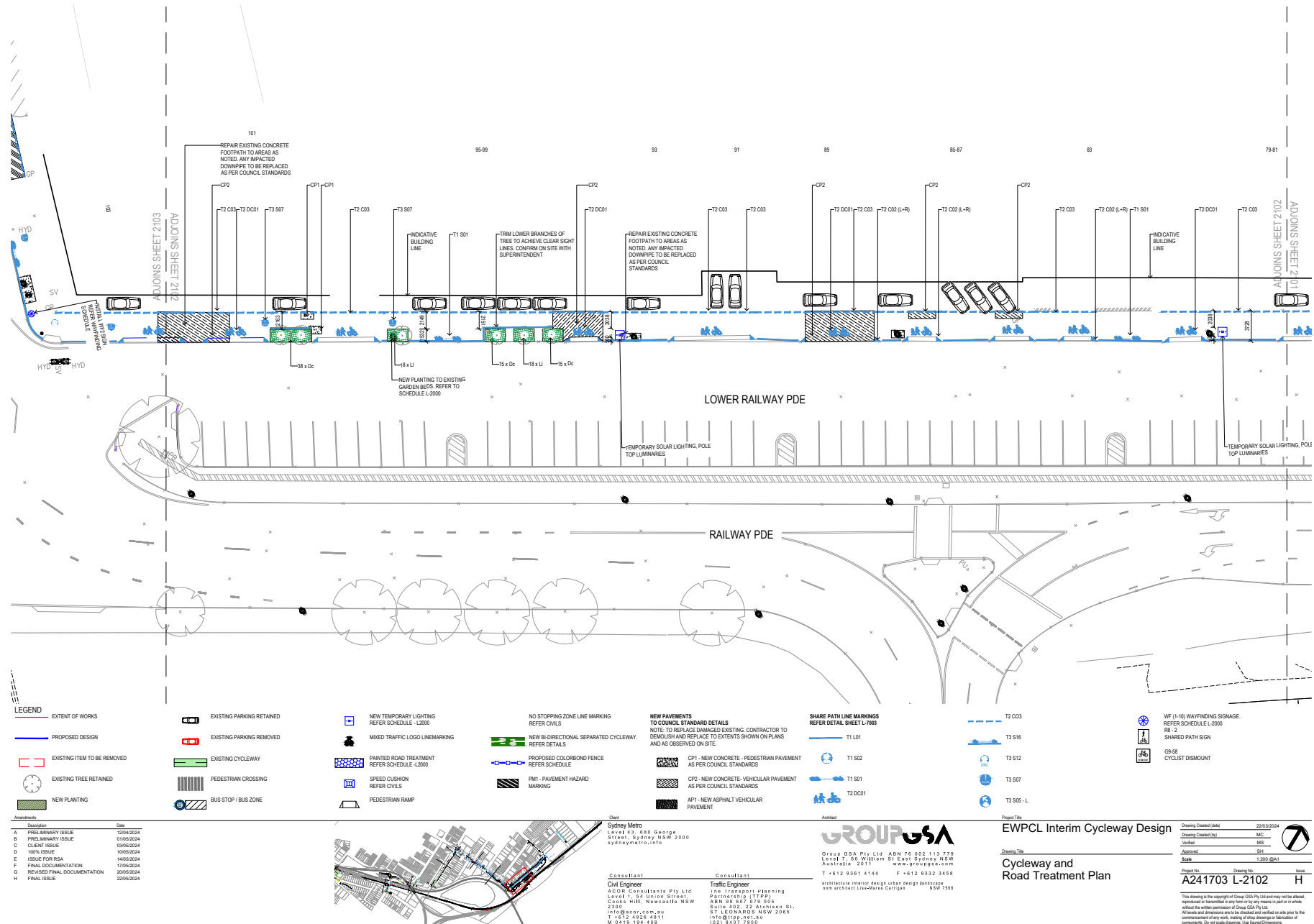
MATERIALS + FINISHES SCHEDULE					
CODE	PRODUCT NAME	SUPPLIER	INSTALLATION	Detail	IMAGE
	Duratherm inlaid thermoplastic safety hex pattern where specified. (Colour and pattern as per council recommendations)	MPS paving systems Australia or streetstrong.com.au	MPS paving systems Australia or streetstrong.com.au	as per manufacturers recommendation	
	Green cycleway warning paint to driveways and crossing locations. Refer General Arrangement Plans L2000. Refer specification for product detail and application	Colourcoat or approved equal	Contractor	n/a	
	Bike Lane Safety Separators. Orca 300 Island series. Combination of Island Straight section and Island with end as per the detail. (500600 Straight Section & 500601 End Section)	Orca Green Civil products or approved equal	Contractor	as per manufacturers recommendation	

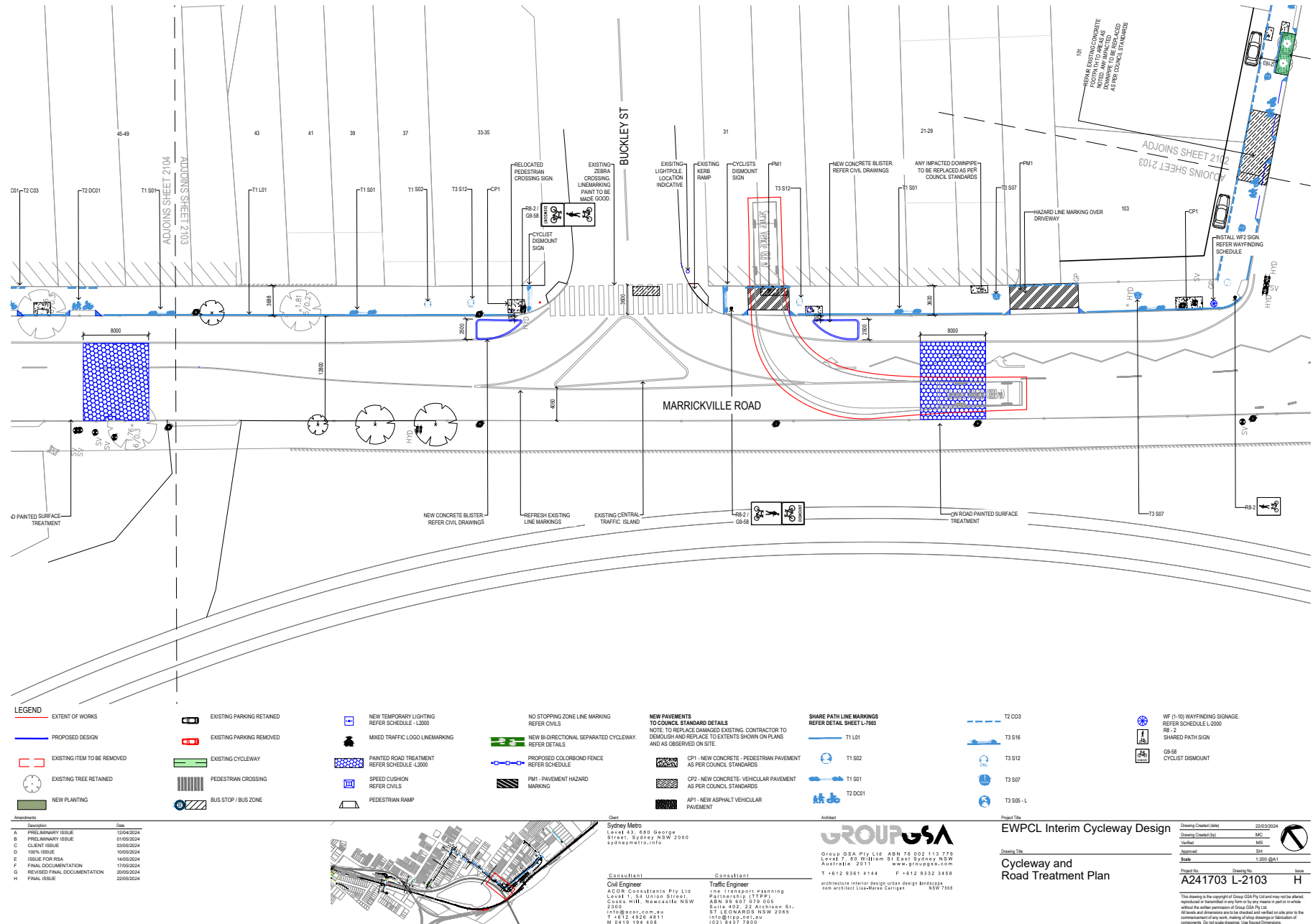
PLANTING SCHEDULE						
CODE	BOTANIC NAME	COMMON NAME	MATURE SIZE (h x w in m)	INSTALLATION SIZE	SPACING	QUANTITY
GROUNDCOVERS & GRASSES						
Dc	<i>Dianella caerulea</i> 'Little Jess'	Native Flax	0.4 x 0.4	140mm	5/m ²	68
LI	<i>Lomandra longifolia</i> 'Tanika'	Tanika Lomandra	0.6 x 0.6	140mm	6/m ²	36

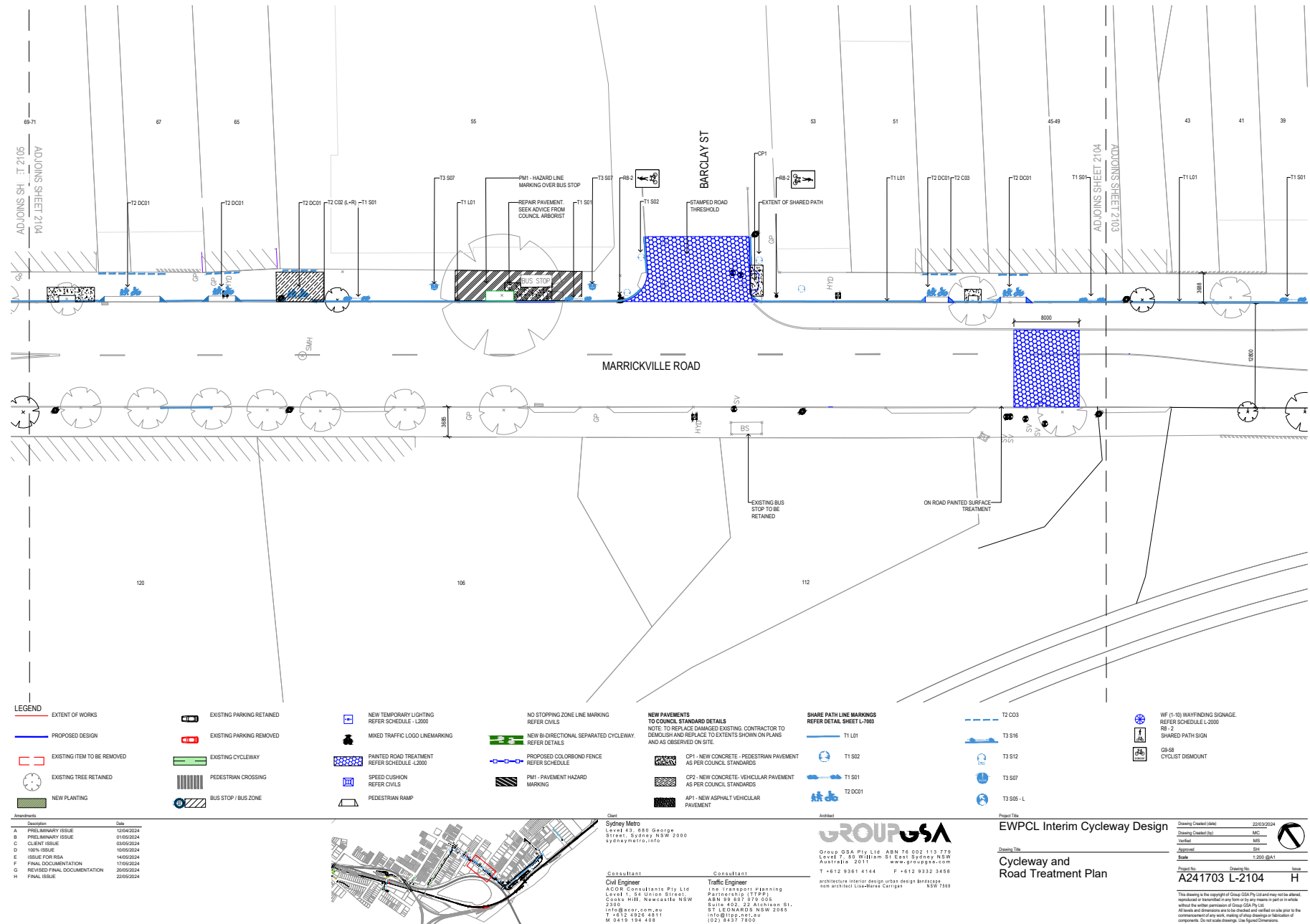
SIGNAGE AND GRAPHICS SCHEDULE						
CODE	LOCATION	SIGN TYPE	DETAIL CROSS REFERENCE	TEXT ON SIGNAGE	DISTANCE	POST
WF1A	19-23 - SYDENHAM ROAD	CYCLE WAYFINDING SIGN	SHEET L-2101	NEWTOWN	SHOW x M OR x KM	NEW
WF1B		CYCLE WAYFINDING SIGN		SYDENHAM STATION	SHOW x M OR x KM	
WF2A	103 - LOWER RAILWAY PARADE / MARRICKVILLE ROAD	CYCLE WAYFINDING SIGN	SHEET L-2102	MARRICKVILLE STATION	SHOW x M OR x KM	NEW
WF2B		CYCLE WAYFINDING SIGN		SYDENHAM STATION	SHOW x M OR x KM	
WF3A	53 - MARRICKVILLE ROAD	CYCLE WAYFINDING SIGN	SHEET L-2104	MARRICKVILLE STATION -	SHOW x M OR x KM	NEW
WF3B		CYCLE WAYFINDING SIGN		SYDENHAM STATION	SHOW x M OR x KM	
WF4A	112 - MARRICKVILLE ROAD	CYCLE WAYFINDING SIGN	SHEET L-2104	MARRICKVILLE STATION	SHOW x M OR x KM	NEW
WF4B		CYCLE WAYFINDING SIGN		SYDENHAM STATION	SHOW x M OR x KM	
WF5A	162 - MARRICKVILLE ROAD/ 54 WEEKS ROAD	CYCLE WAYFINDING SIGN	SHEET L-2105	MARRICKVILLE STATION	SHOW x M OR x KM	NEW
WF5B		CYCLE WAYFINDING SIGN		SYDENHAM STATION	SHOW x M OR x KM	
WF6A	143 WEEKS ROAD / 353 VICTORIA ROAD	CYCLE WAYFINDING SIGN	SHEET L-2110	MARRICKVILLE STATION	SHOW x M OR x KM	NEW
WF6B		CYCLE WAYFINDING SIGN		SYDENHAM STATION	SHOW x M OR x KM	
WF7A	VICTORIA ROAD / 2 - MYRTLE STREET	CYCLE WAYFINDING SIGN	SHEET L-2110	MARRICKVILLE STATION	SHOW x M OR x KM	NEW
WF7B		CYCLE WAYFINDING SIGN		SYDENHAM STATION	SHOW x M OR x KM	
WF8A	location	CYCLE WAYFINDING SIGN	SHEET xxx	SYDENHAM STATION	SHOW x M OR x KM	NEW
WF8B		CYCLE WAYFINDING SIGN		MARRICKVILLE STATION	SHOW x M OR x KM	
WF9A	location	CYCLE WAYFINDING SIGN	SHEET xxx	SYDENHAM STATION MARRICKVILLE STATION	SHOW x M OR x KM	NEW
WF9B		SYDNEY METRO DIRECTIONAL SIGN		BUSES	BUS SYMBOL AND ARROW	
WF9C		SYDNEY METRO DIRECTIONAL SIGN		BUSES	BUS SYMBOL AND ARROW	
WF9D		SYDNEY METRO DIRECTIONAL SIGN		SYDENHAM via Marrickville Road	PEDESTRIAN SYMBOL AND ARROW	
WF10A	location	SYDNEY METRO DIRECTIONAL SIGN	SHEET xxx	BUSES	BUS SYMBOL AND ARROW	NEW
WF10B		SYDNEY METRO DIRECTIONAL SIGN		SYDENHAM via Marrickville Road	PEDESTRIAN SYMBOL AND ARROW	
WF11A	location	SYDNEY METRO DIRECTIONAL SIGN	SHEET xxx	BUSES	SHOW x M OR x KM	NEW
WF11B		SYDNEY METRO DIRECTIONAL SIGN		SYDENHAM via Marrickville Road	SHOW x M OR x KM	

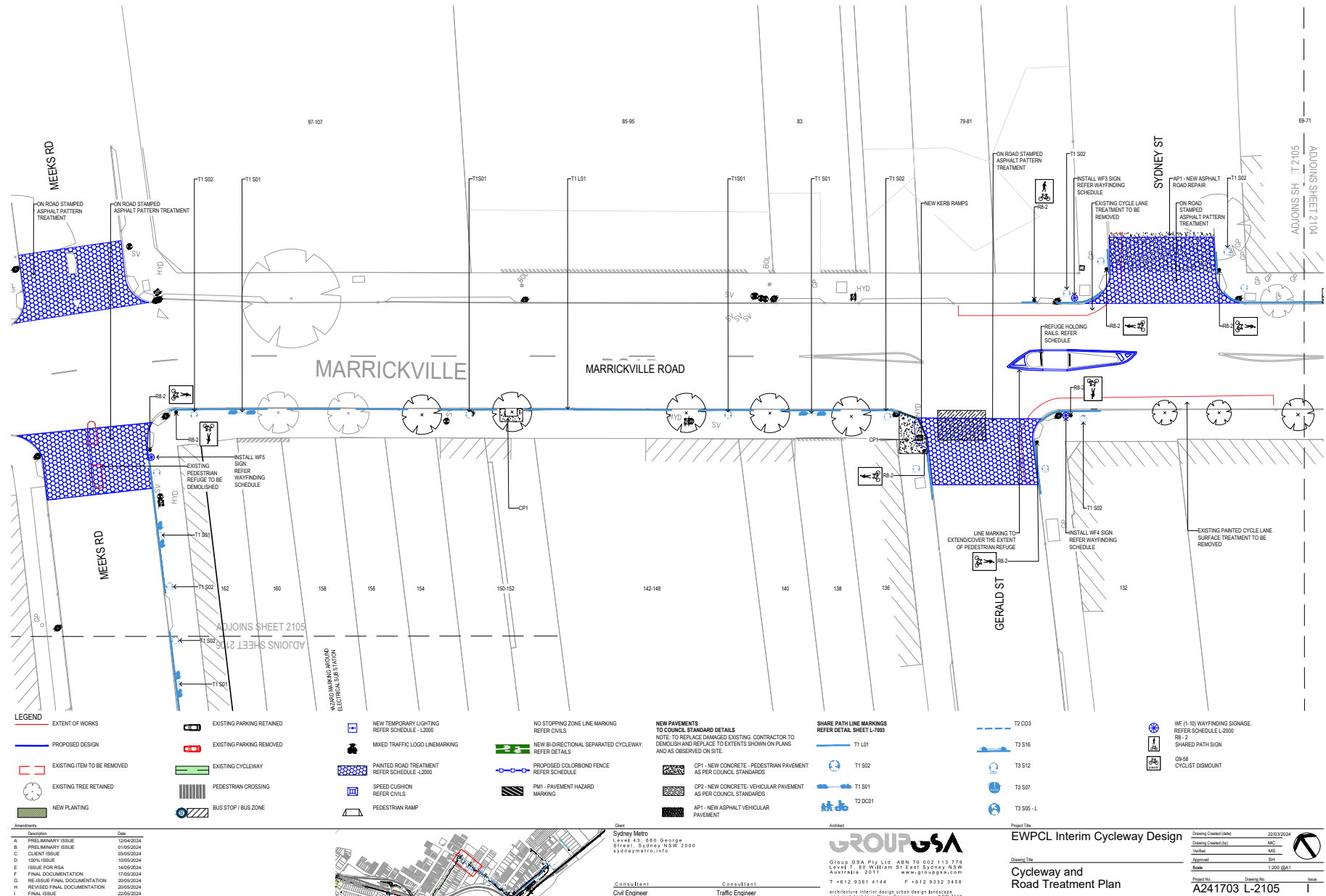
Amendments			Client		Architect		Project Title	
Description	Date		Sydney Metro Level 43, 980 George Street, Sydney NSW 2000 sydenphoto.info		 Group GSA Pty Ltd ABN 76 002 113 779 Level 2, 80 William St Bays Sydney NSW Australia 2011 www.groupgsa.com T +612 9361 4144 F +612 9332 3408		EWPCIL Interim Cycleway Design	
A CLIENT ISSUE	17/05/2024							
B 100% ISSUE	10/05/2024							
C CLIENT ISSUE	14/05/2024							
D FINAL DOCUMENTATION ISSUE	17/05/2024							
E FINAL ISSUE	22/05/2024							
			Consultant		Consultant		Drawing Title	
			Civil Engineer ACOR Consultants Pty Ltd Level 1, 24 Union Street, Cockle Hill, Newcastle NSW 2300 info@acor.com.au T +612 4924 4811 M 0419 194 406	Traffic Engineer The Transport Planning Partnership (TTP) ABN 99 607 078 005 Suite 402, 22 Alison St., ST LEONARDS NSW 2088 info@tpp.net.au (02) 8437 7808	architecture interior design urban design landscape room architect landscape courtyard NSW 7588		MATERIALS & FURNITURE SCHEDULE	
							Drawing Created (date)	05/04/2024
							Drawing Created (by)	MAC
							Verified	MAC
							Approved	SH
							Scale	A1:15
							Project No.	A241703 L-2000
							Drawing No.	E
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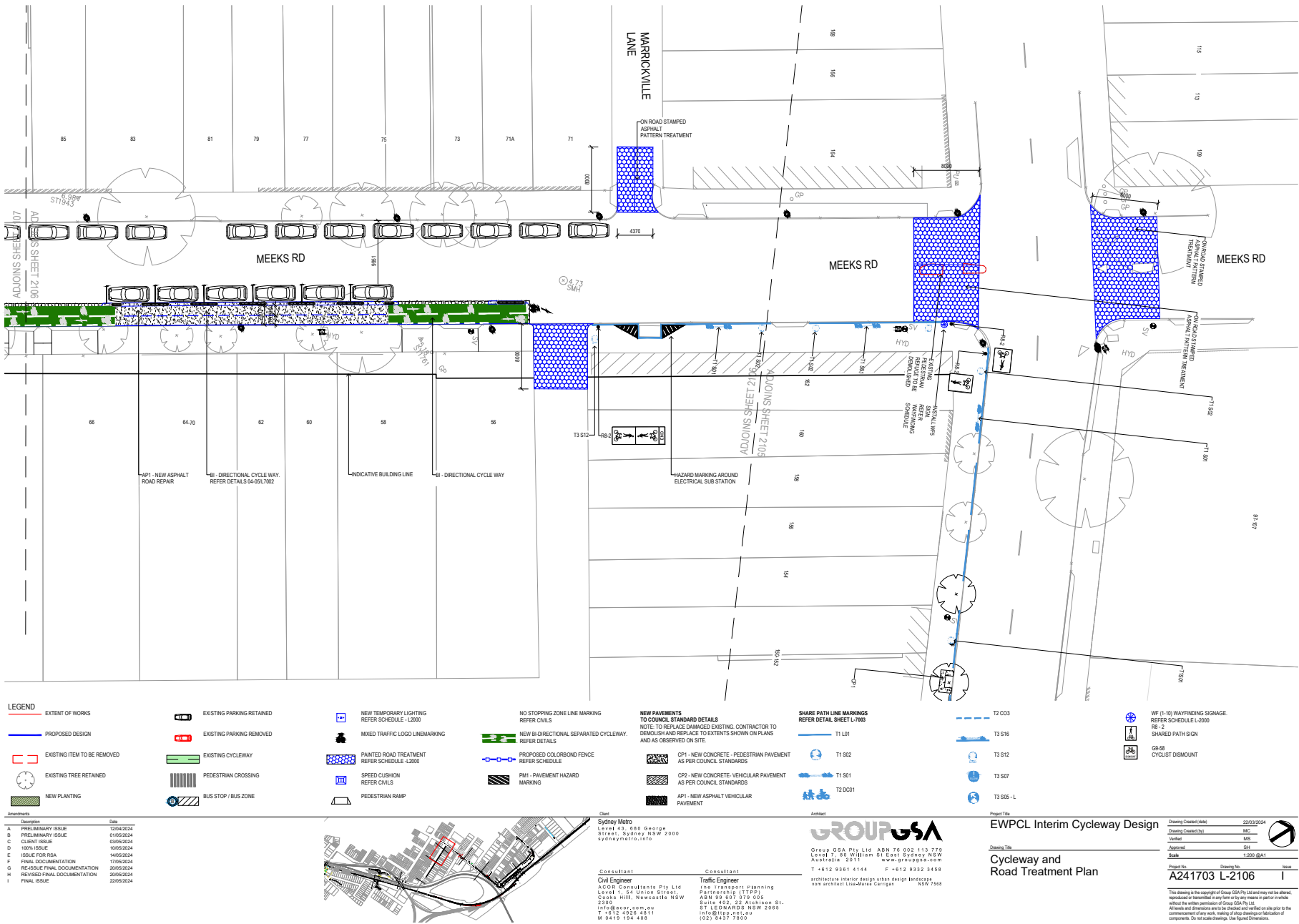


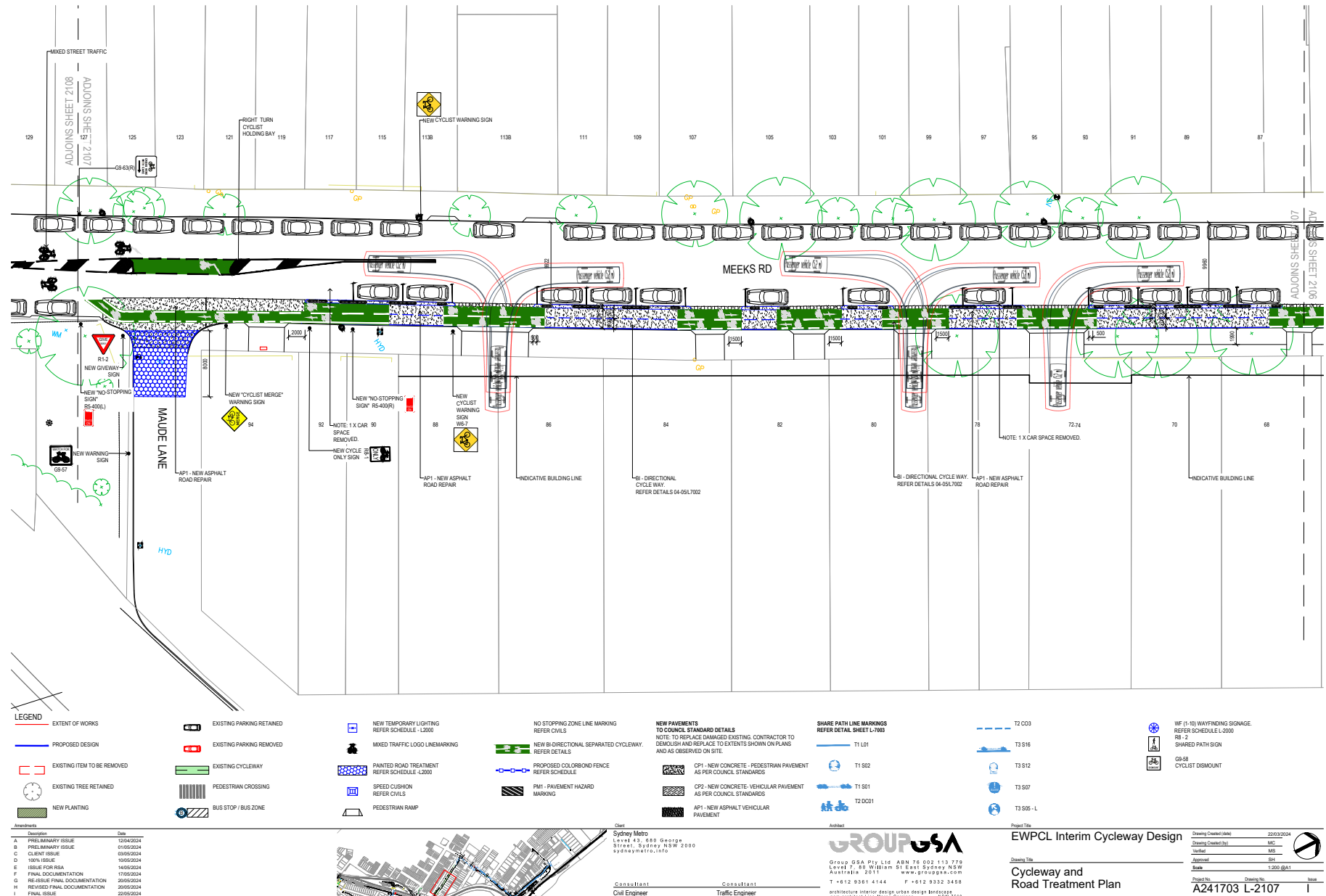


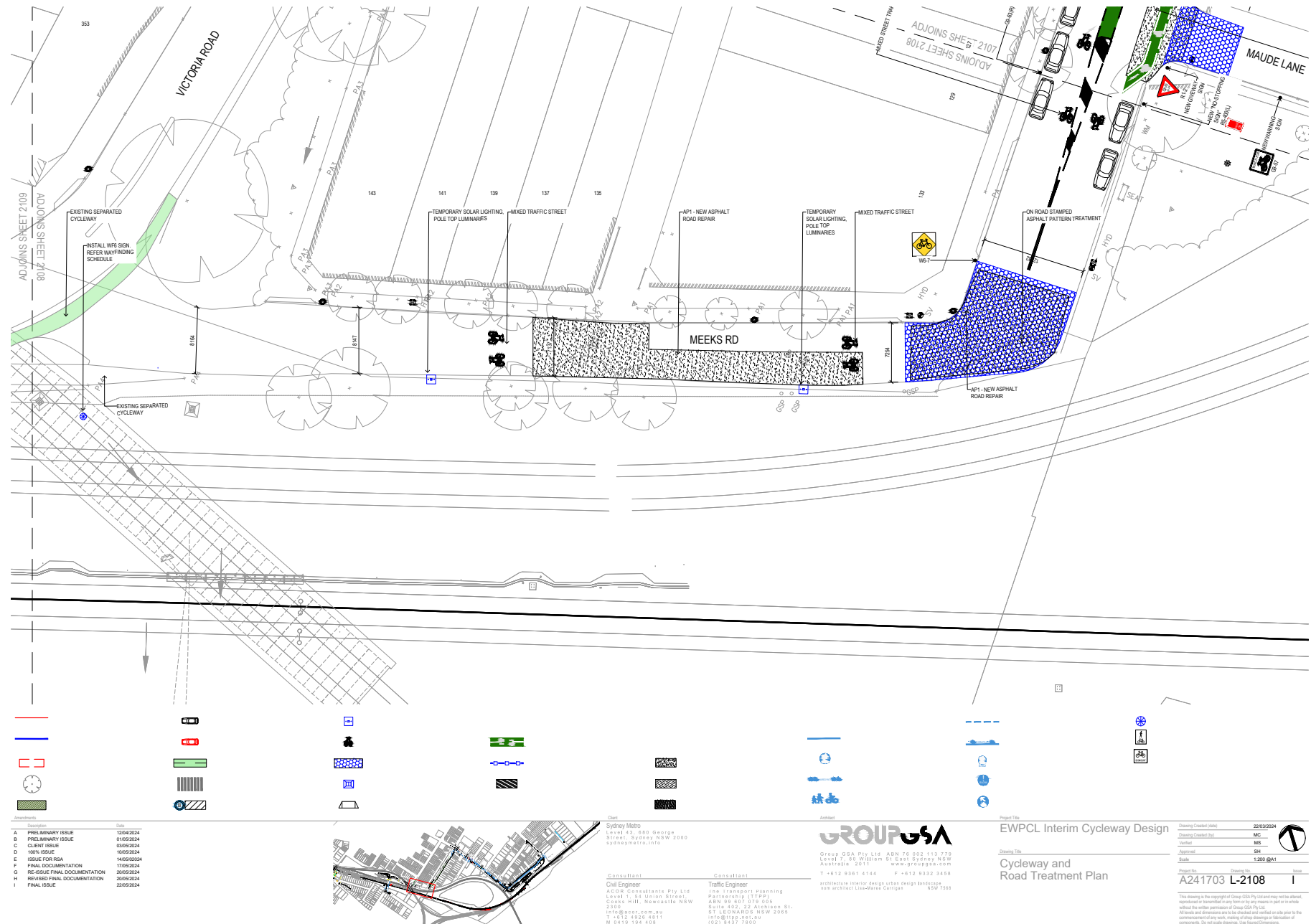


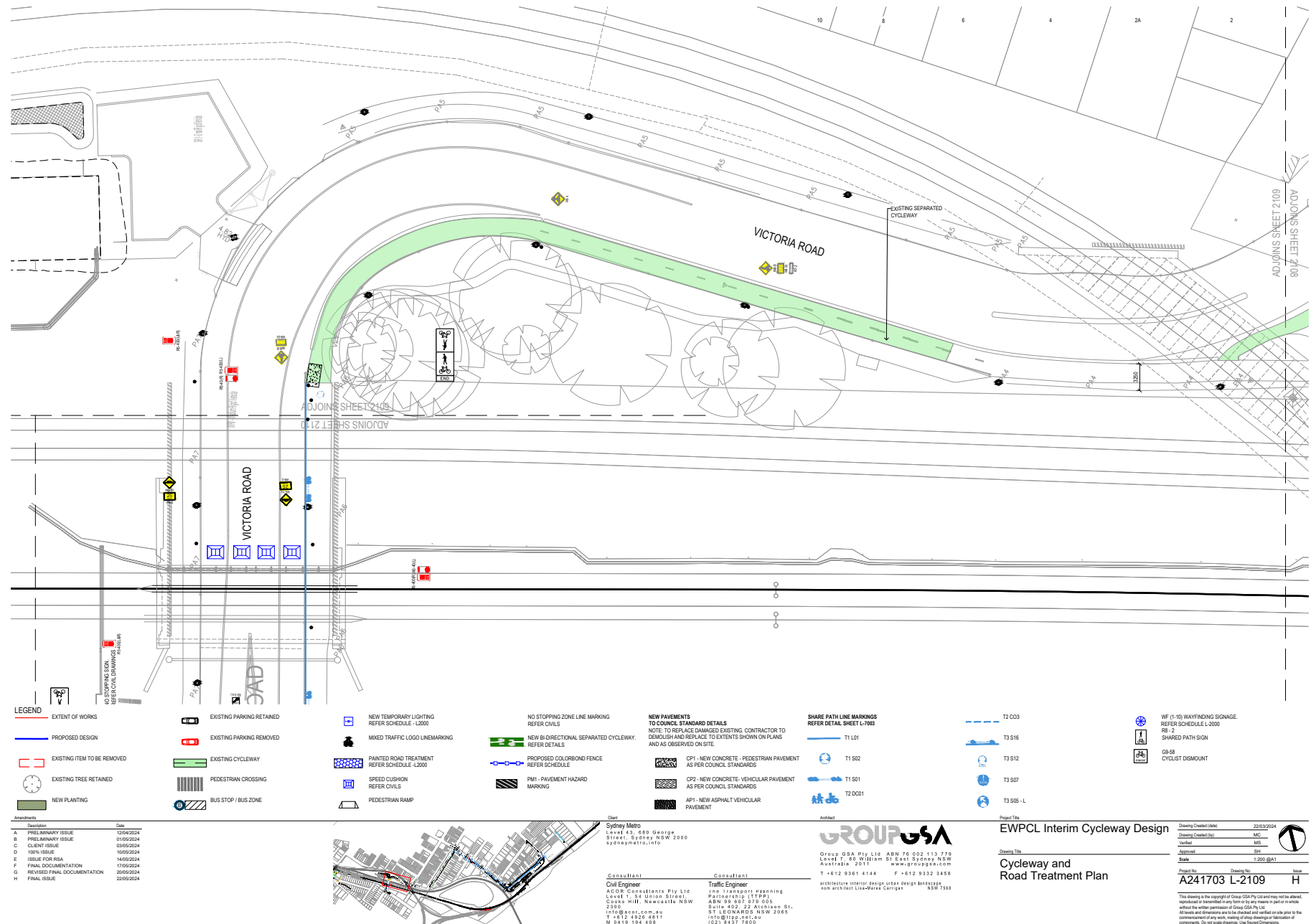


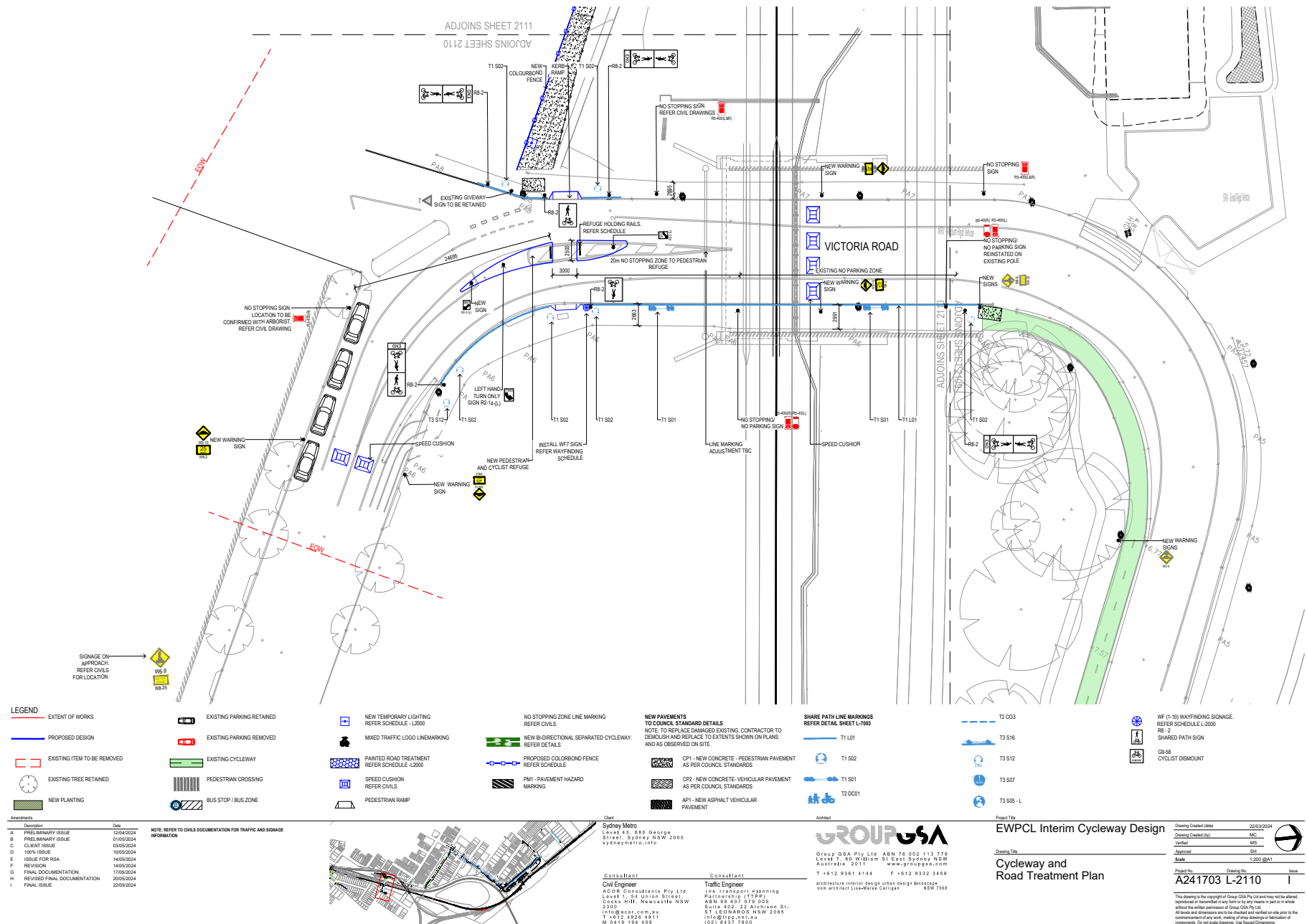


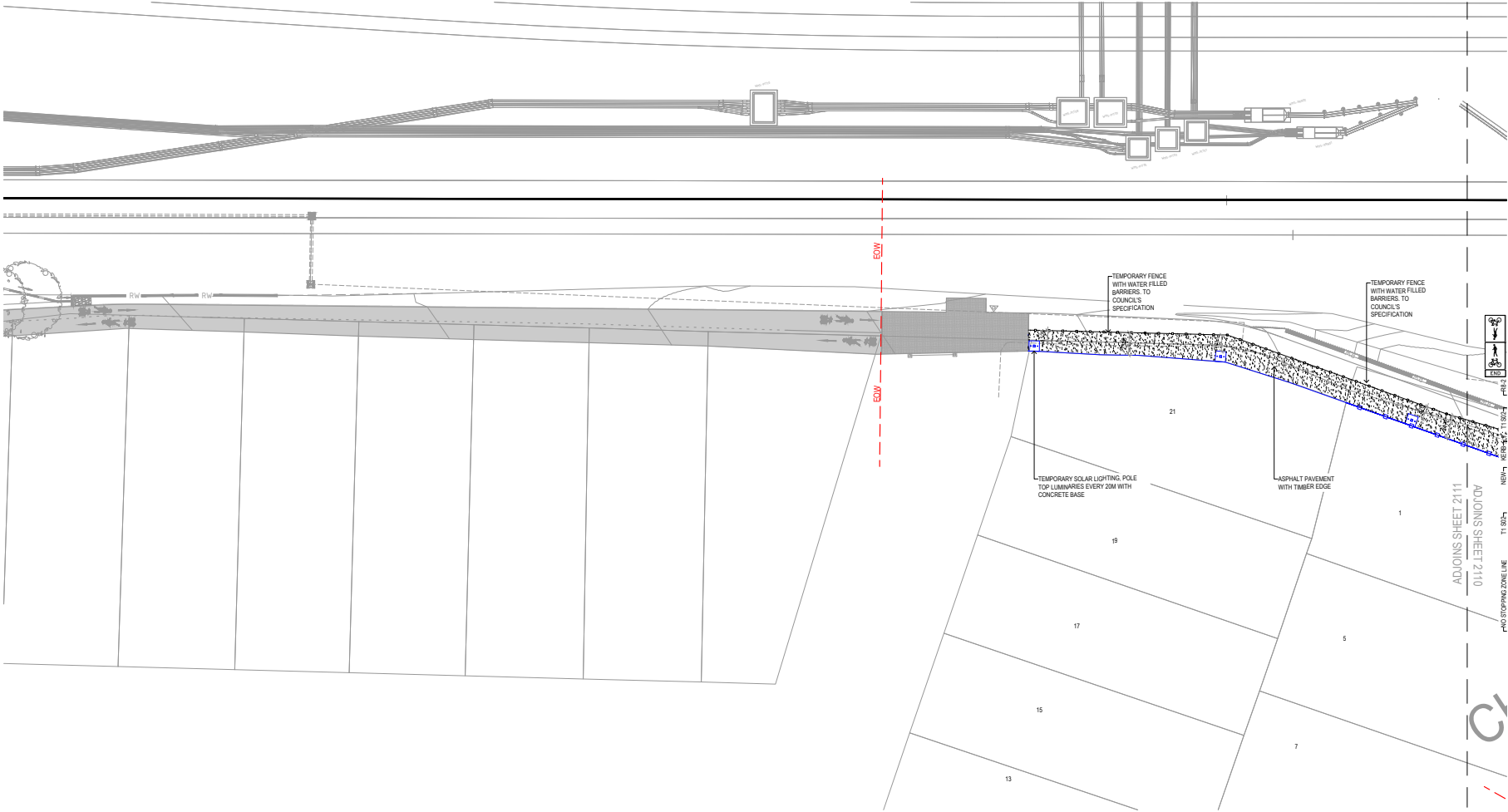












LEGEND

EXTENT OF WORKS

- PROPOSED DESIGN
- EXISTING ITEM TO BE REMOVED
- EXISTING TREE RETAINED
- NEW PLANTING

EXISTING PARKING RETAINED

EXISTING PARKING REMOVED

EXISTING CYCLEWAY

PEDESTRIAN CROSSING

BUS STOP / BUS ZONE

NEW TEMPORARY LIGHTING
REFER SCHEDULE - L2000

MIXED TRAFFIC LOGO LINEMARKING

PAINTED ROAD TREATMENT
REFER SCHEDULE - L2000

SPEED CUSHION
REFER CIVILS

PEDESTRIAN RAMP

NO STOPPING ZONE LINE MARKING
REFER CIVILS

NEW BI-DIRECTIONAL SEPARATED CYCLEWAY
REFER DETAILS

PROPOSED COLORBOND FENCE
REFER SCHEDULE

PMI - PAVEMENT HAZARD
MARKING

NEW PAVEMENTS
TO COUNCIL STANDARD DETAILS
NOTE: TO REPLACE DAMAGED EXISTING, CONTRACTOR TO
DEMOLISH AND REPLACE TO EXTENTS SHOWN ON PLANS
AND AS OBSERVED ON SITE.

CPI - NEW CONCRETE - PEDESTRIAN PAVEMENT
AS PER COUNCIL STANDARDS

CP2 - NEW CONCRETE - VEHICULAR PAVEMENT
AS PER COUNCIL STANDARDS

AP1 - NEW ASPHALT VEHICULAR
PAVEMENT

SHARE PATH LINE MARKINGS
REFER DETAIL SHEET L-1003

T1 L01

T1 S02

T1 S01

T2 D001

T2 C03

T3 S16

T3 S12

T3 S07

T3 S05 - L

WF (1-10) WAYFINDING SIGNAGE
REFER SCHEDULE L-2000

RS - 2
SHARED PATH SIGN

G9-68
CYCLIST DISMOUNT

Amendments

Amendment	Date
A - PRELIMINARY ISSUE	12/04/2024
B - PRELIMINARY ISSUE	01/05/2024
C - CLIENT ISSUE	03/05/2024
D - 100% ISSUE	10/05/2024
E - ISSUE FOR RIA	14/05/2024
F - FINAL DOCUMENTATION	17/05/2024
G - REVISED FINAL DOCUMENTATION	20/05/2024
H - FINAL ISSUE	20/05/2024

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architectural interior design urban design landscape
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Project Title

EWPCL Interim Cycleway Design

Drawing Title

Cycleway and Road Treatment Plan

Drawing Details

Drawn	Checked	Date
2023/02/01	2023/02/01	2023/02/01

Drawn: MC
Checked: MS
Approved: SM
Date: 13/05/2024

Sheet

A241703 L-2111

Scale

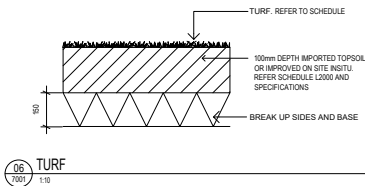
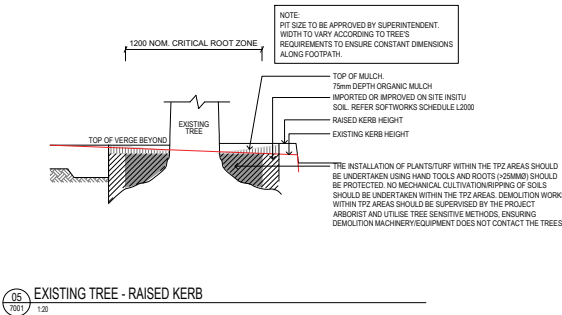
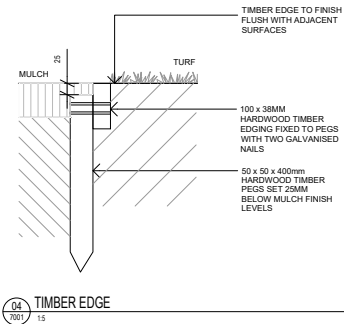
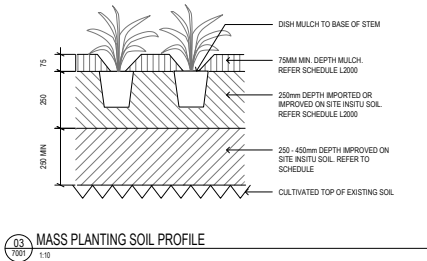
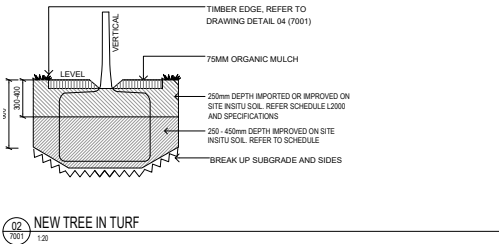
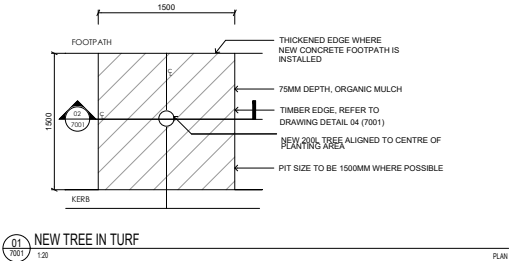
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Issue

H

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Amendments	Description	Date
A	CHECK ISSUE	19/05/2024
B	ISSUE FOR RSA	14/05/2024
C	FINAL DOCUMENTATION	17/05/2024
D	FINAL ISSUE	22/05/2024

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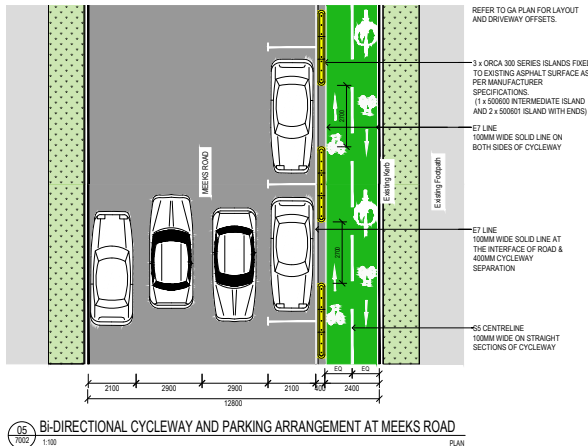
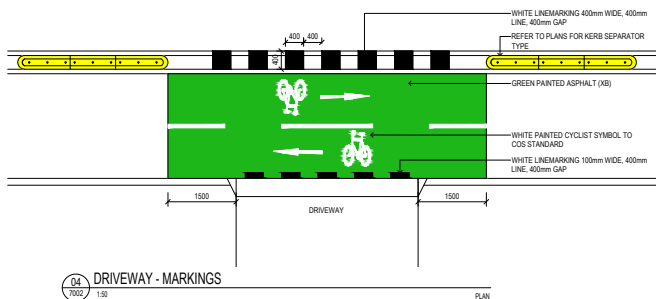
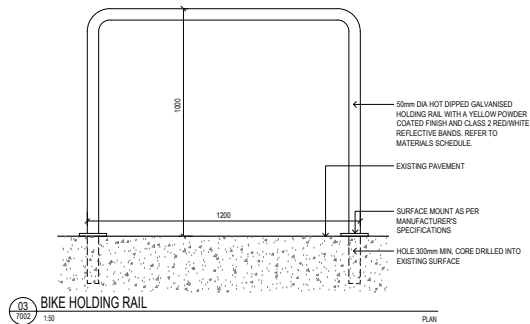
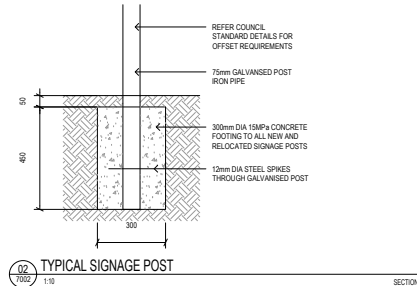
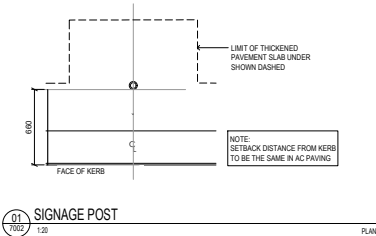
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Project Title
EWPCCL Interim Cycleway Design
DRAWING DETAILS

Drawing Created (Date)	05/04/2024
Drawing Created By	MAC
Verified	MAC
Approved	SH
Scale	A1
Project No.	A241703 L-7001
Drawing No.	
Issue	D

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Amendments	Description	Date
A	CLIENT ISSUE	09/05/2024
B	ISSUE FOR RIA	14/05/2024
C	FINAL DOCUMENTATION	17/04/2024
D	FINAL ISSUE	22/05/2024

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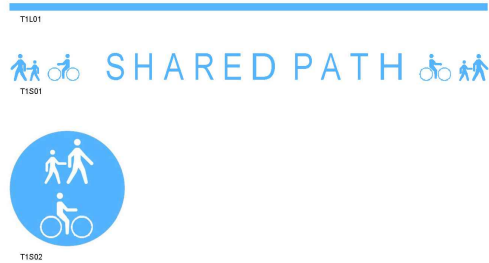
Consultant
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Project Title
EWPCIL Interim Cycleway Design
Drawing Title
DETAILS

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Drawing Created By	MAC
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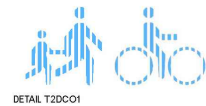


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Date	16.09.09		SHM Standard Date	

Shared Pathways - Pavement Markings Guide - Draft

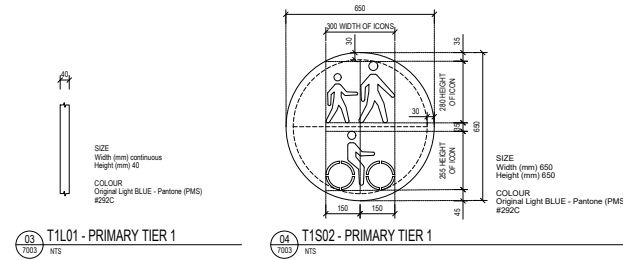
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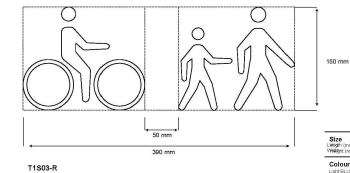
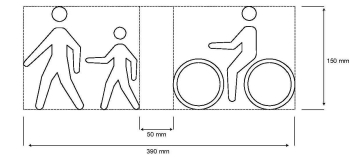
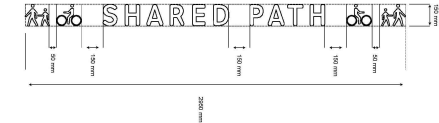


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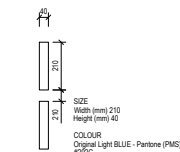
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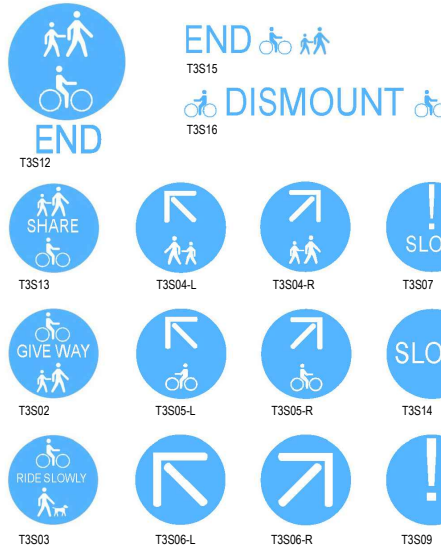
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NTS



05 TERTIARY TIER 3
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NOTE:
DETAILS FROM CITY OF SYDNEY SHARED PATHWAYS PAVEMENT MARKING
GUIDELINES ATTACHMENT D, SEPTEMBER 2009, CITY OF SYDNEY

Amendments	Description	Date
A	CLIENT ISSUE	03/05/2024
B	ISSUE FOR RBA	14/05/2024
C	FINAL DOCUMENTATION	17/05/2024
D	FINAL ISSUE	22/05/2022

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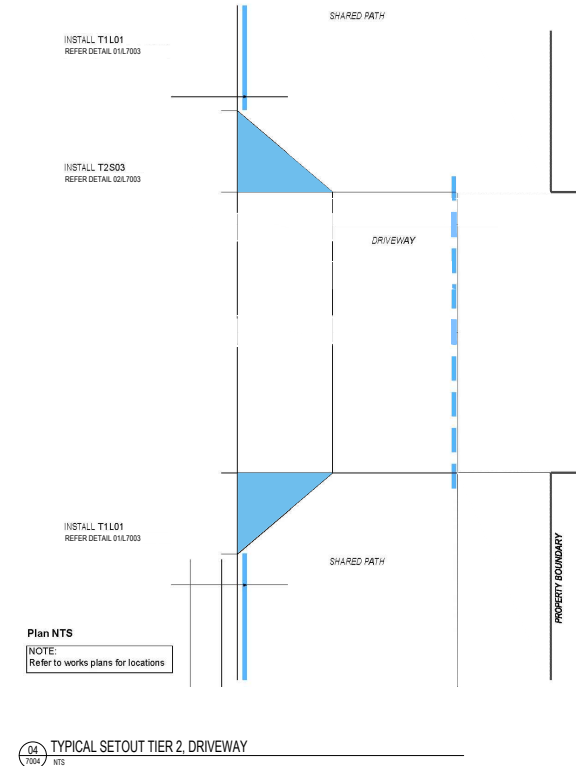
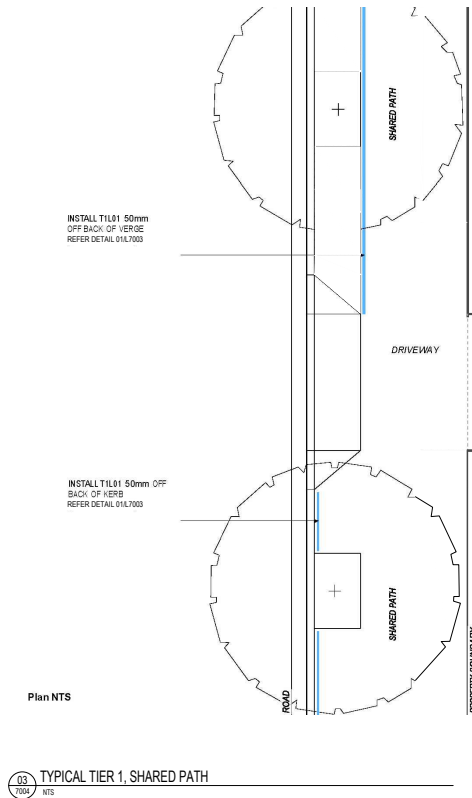
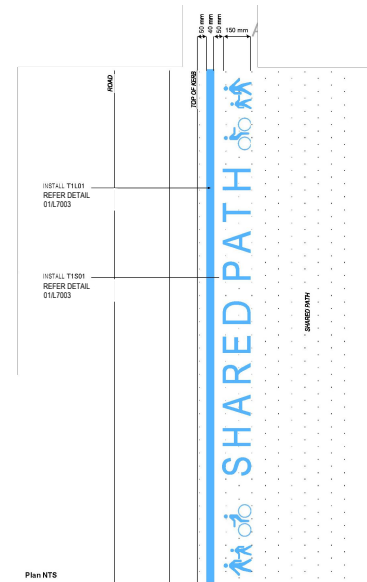
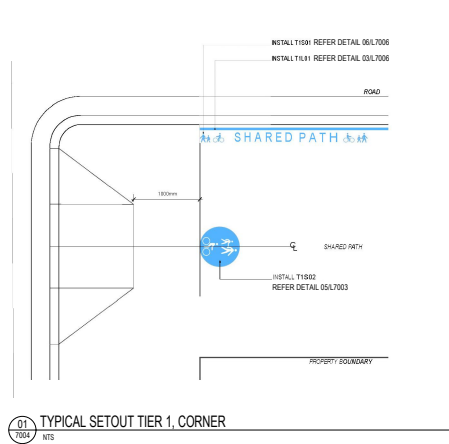
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Scale	A1

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Item No: LTC0624(2) Item 2
Subject: BURROWS AVENUE AND RAILWAY ROAD, SYDENHAM - PROPOSED BUS LAYOVER AND PARKING CHANGES (MIDJUBURI - MARRICKVILLE WARD / HEFRON ELECTORATE / INNER WEST PAC)
Prepared By: George Tsaprounis - Coordinator Traffic Engineering Services (south)
Authorised By: Manod Wickramasinghe - Traffic and Transport Planning Manager

RECOMMENDATION

That the detail design drawing for the on-road changes associated with the proposed construction of a bus layover area in Burrows Avenue, west of Gleeson Avenue, Sydenham (as per attached drawing "Sydenham Station Bus Layover Burrows Avenue and Railway Road Signs and line marking plan" by Aurecon, dated 13/2/24, drawing no. 520212-AURC-038-RW-DRG-002001, sheet 10 of 41) be approved, subject to the following conditions:

- a) TfNSW provide assurances to Council with regards to buses servicing Sydenham Station will be a quieter bus fleet with a reduced footprint in relation to exhaust fumes; and
- b) TfNSW monitor the interaction between buses and vehicles along Railway Road (one way) and Burrows Road over the next 12 months and implement further traffic control measures should they be required.

STRATEGIC OBJECTIVE

This report supports the following strategic directions contained within Council's Community Strategic Plan:

2: Liveable, connected neighbourhoods and transport

EXECUTIVE SUMMARY

Transport for New South Wales (TfNSW) has approached Council with regards to a proposal for the construction of a bus layover area in Burrows Avenue, west of Gleeson Avenue, Sydenham. The designated bus layover area is required at Sydenham Station to cater for the growing number of bus services in this area. Prior to picking up passengers, buses currently park along Burrows Avenue which creates congestion and safety issues for pedestrians and drivers. The bus layover area will store up to 6 buses. The existing unrestricted parking spaces (approximately 11 spaces) on the south side of Burrows Avenue (adjacent to the vacant property) and six (6) 90-degree angle parking spaces on the north side of Burrows Avenue will be lost as a result of the proposal. In response to this loss of parking it is proposed to convert the parallel parking on the east side of Railway Road to 45-degree rear to kerb parking to lessen the impact from the loss of parking because of this proposal.

Community engagement was undertaken and it began on Friday 24 November and ended on Friday 8 December 2023. Community notifications, letterbox dropped and nearby properties door knocked on Railway Road, Burrows Avenue and Wright Street were part of the consultation process.

It is recommended that Council approve the signs and line marking plan (drawing no. 520212-AURC-038-RW-DRG-002001 sheet 10 of 41).

BACKGROUND

Sydenham Station is an important junction with the Bankstown Railway Line (T3), Illawarra and Eastern Suburbs line (T4) and Airport and South line (T8) and interchange with east-west bus routes. It continues to be a logical bus terminus for passengers interchanging with rail services from Sydney's Inner East and Inner West. This interchange function is expected to intensify in coming years with:

- The opening of the City & Southwest Metro between Chatswood and Bankstown. Increased Illawarra Line services
- Increased bus service levels and patronage to and from Sydenham Station. Population growth in surrounding precincts
- Sydenham being identified as the terminus for future new bus routes under the *Greater Sydney Bus Network Strategy*.

Given the importance of Sydenham Station as a multimodal transport interchange, buses servicing this major hub don't have enough room to terminate and layover between services. This creates congestion on Railway Road, Burrows Avenue and Gleeson Avenue (a freight corridor to the Airport and Port Botany). The limited bus layover options in the area results in buses idling in these streets, causing obstruction to pedestrians and cars, in active bus zones and surrounding streets. Transport for NSW representatives have advised of safety issues, delays to passengers and bus services which are currently being experienced as a result. To resolve this issue, Transport for NSW is proposing to construct a bus layover facility at the corner of Railway Road and Burrows Avenue in Sydenham (refer to figure 1 below)



Figure 1 – Locality Plan

DISCUSSION

Transport for New South Wales (TfNSW) is proposing a new bus layover facility at the corner of Railway Road and Burrows Avenue as part of the Bus Priority Infrastructure Program (BPIP) to improve the reliability and efficiency of bus services. Prior to picking up passengers, buses currently park along Burrows Avenue which creates congestion and safety issues for pedestrians and drivers.

The proposed bus layover would give bus drivers a place to park safely between services and improve bus travel times and service frequencies, increasing reliability for passengers. Sydenham requires a bus layover area to cater to the growing number of bus services in this area. At present, prior to picking up passengers, buses park along Burrows Avenue and Railway Road creating congestion and impacting bus operations.

The proposed bus layover facility at the corner of Railway Road and Burrows Avenue in Sydenham will include the following changes (refer to figure 2):

- Six 16m-long angle bus parking spaces on the southern side of Burrows Avenue with manoeuvring space at the northern end of Railway Parade for egress, replacing a total of 11 parallel parking spaces.
- A dedicated drivers amenity block with a lunchroom and toilets.
- The 8 parallel parking spaces along the eastern side of Railway Road converted into 13 45-degree angle car parking spaces.
- A reduction in 90 degree angle car parking spaces along the northern side of Burrows Avenue from 12 to 6.
- Create a path for pedestrians, passengers and the community to safely walk to and from Railway Road to Gleeson Avenue.
- Build a noise wall to separate the nearby homes from the new bus layover facility and minimise noise impacts from the bus layover facility.
- Install driveways for buses to enter from Railway Road and leave through Burrows Avenue.

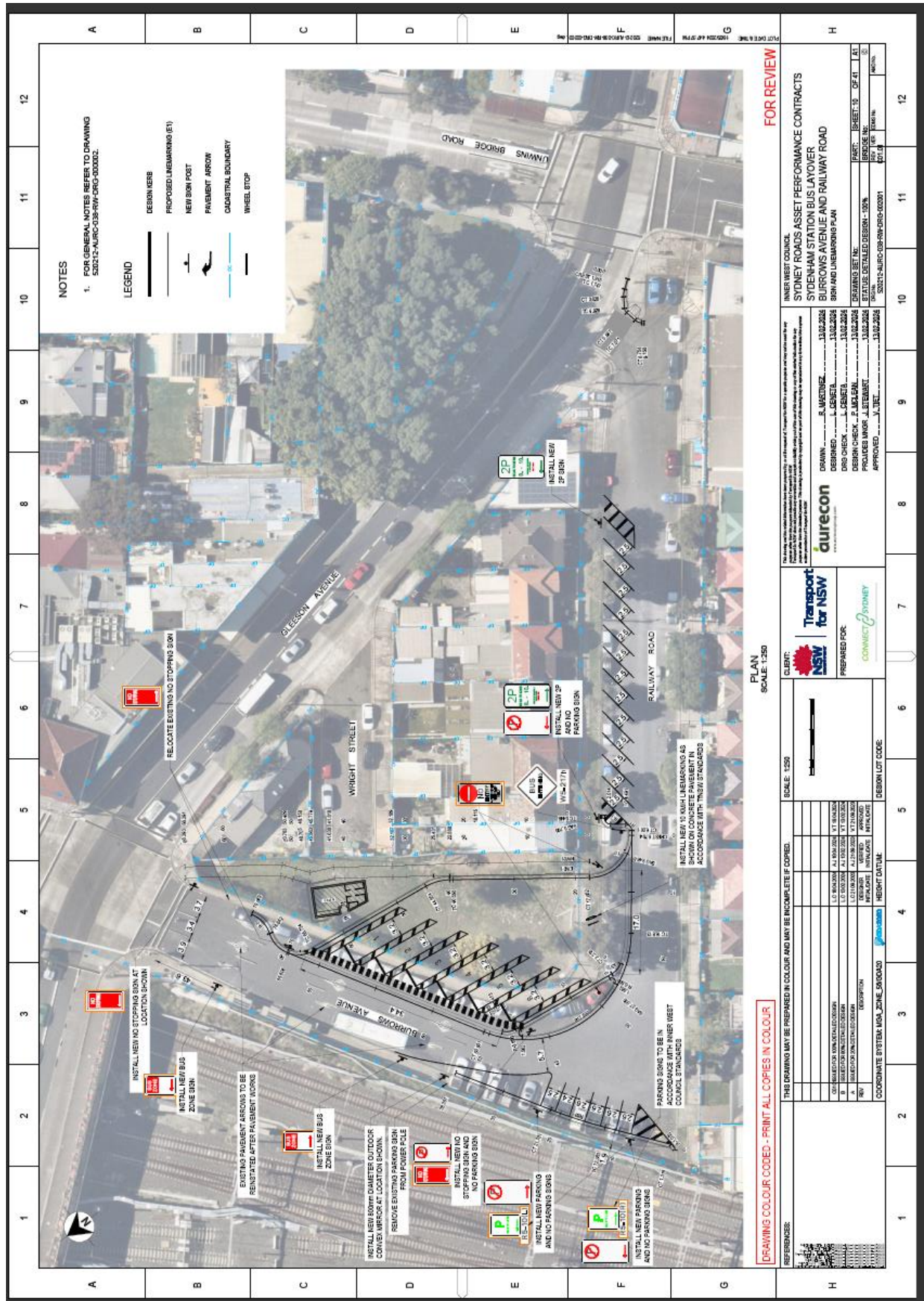


Figure 2 – Bus layover proposal

The above changes result in a net loss of 17 unrestricted parking spaces across the two streets. The impacts of the proposed changes to the current parking arrangements along Burrows Avenue and Railway Road are provided in table 1 below.

Road Name	Parking Restrictions	Parking supply	Impact	Justification
Burrows Avenue – East *	Unrestricted	11	- 11	Required for the buses to exit from the new layover into Burrows Avenue
Burrows Avenue – West	Unrestricted	12	- 6	Required for buses to safe turning movements
Railway Rd -East	2 P	10	+5	Changing to angle parking
Railway Rd -West	1P, 2P	23	zero	No change

Table 1 – Proposed changes to parking

Given the loss of parking Council requested that parking data be collected by TfNSW to determine the impact of the proposed loss. The objective of the parking investigation was to provide TfNSW and Council with data, its analysis including assessment and recommendations on parking restriction changes and identify the parking impacts of the proposed layover area at the corner of Railway Road and Burrows Avenue ('Proposal Footprint') and on alternative parking areas within a 400m radius of the proposal area ('Side Streets'). Refer to attached Parking Data Report for further details.

A site inspection was undertaken on Tuesday, 5 September 2023 between 12:30pm and 1:30pm to gain an understanding of the current parking conditions and constraints. Some of the key conclusions are listed below.

- Surplus parking in addition to the parking supply was observed in Buckley Street, Railway Parade, Railway Road (one-way), Hogan Avenue and George Street.
- The occupancy results show that there was some surplus parking in Burrows Avenue, Buckley Street and Hogan Avenue.
- The duration of stay results showed that on the peak weekdays and weekend days:
 - Most vehicles stayed for one hour and only four to six vehicles parked during the whole 13-hour surveys.
 - The average vehicle stays were six hours in Burrows Avenue and 3 to 3.5 hours in Railway Road (one-way).
- A total of 131 properties in Railway Road, George Street, Swain Street, Gleeson Avenue, Park Road and Yelverton Street were identified as not having onsite parking capacity. Of the 21 properties within the proposal footprint (all in Railway Road and none in Burrows Avenue), only seven had onsite parking.
- Under TfNSW's proposal, there is mostly insufficient parking across Burrows Avenue and Railway Road between Monday and Friday. The occupancy across all streets ranges between 55% and 80% and therefore there is still sufficient parking in surrounding streets.

In order to address the shortfall in parking, TfNSW have proposed that the current parking spaces along the eastern side of Railway Road be converted from 2P parallel parking spaces to 2P 45-degree, (rear to kerb) parking spaces. It has been calculated that this will result in a net gain of 5 timed parking spaces. It should be noted that the majority of the spaces lost as a result of the proposed works will be unrestricted spaces and adjacent to railway land. From the data analysis, it does seem that spare capacity does exist within a 400m radius to cope with the transfer of these spaces. It should also be noted that the majority of residential streets within close proximity to Sydenham Station have been treated with 2P resident parking restrictions.

COMMUNITY ENGAGEMENT

Community engagement began on Friday 24 November and ended on Friday 8 December 2023, with community notifications letterbox dropped and nearby properties doorknocked on Railway Road, Burrows Avenue and Wright Street. Feedback was invited in person, on the phone, via email and through the Sydenham bus layover project web page, the Transport Your Say website, and the NSW Government Have Your Say portal. (Refer to the attached Community Engagement Report). A summary of the channels of engagement and description is provided in table 2 below.

At the end of the engagement period, feedback was received from 18 individuals. The local community supported the proposed bus layover in principle but had concerns around parking and the proposed location.

Transport used an 'inform' and 'consult' engagement approach for this project:

- 'Inform' the community, businesses and other stakeholders on the proposal.
- 'Consult' on changes to parking on Railway Road and Burrows Avenue.

Table 2 – Summary of channels of engagement

Channel	Description
Have your say community notification	<ul style="list-style-type: none"> • 170 print notifications were letterbox dropped to residents and businesses across the proposal area • Email notifications to emergency services and local schools • Notifications and engagement with disability peak bodies through the Accessible Transport Advisory Committee
Transport project web page	<ul style="list-style-type: none"> • www.transport.nsw.gov.au/projects/current-projects/sydenham-bus-layover • 122 unique visitors accessed the project page
Your say Transport website	<ul style="list-style-type: none"> • yoursay.transport.nsw.gov.au/sydenham-bus-layover • 132 unique visitors accessed the Your say page
NSW Government Have Your Say portal	<ul style="list-style-type: none"> • www.nsw.gov.au/have-your-say/sydenham-bus-layover
Inner West Community Forum	<ul style="list-style-type: none"> • The Sydenham Bus Layover proposal was featured in the Inner West December livestream on Wednesday 6 December, reminding community members to have their say
Doorknocks	<ul style="list-style-type: none"> • On Thursday 23 and Friday 24 November, 24 properties were doorknocked along Railway Road and Wright Street. Direct face to face engagement was carried out with 15 residents at their residential properties. Two businesses were informed and engaged along Railway Road.
Key stakeholder briefings	<ul style="list-style-type: none"> • Inner West Council briefed 7 June and 24 November 2023 • Rail, Tram and Bus Union, and Transport Workers' Union of NSW briefed 19 October 2023

The main issues raised in relation to traffic and parking from the engagement that was undertaken by TfNSW are summarised below as follows.

	Issue Raised	Response from TfNSW
Traffic	The layover will create more traffic on Railway Road and Burrows Avenue, creating congestion and noise	Transport expects the project to benefit the community and wider bus network. The proposed bus layover facility is expected to improve local traffic flows, road safety, and bus timetable reliability by reducing congestion, delays, and reducing instances of buses 'double parking' on Railway Road and Burrows Avenue. To manage noise to adjacent properties, the proposal includes the construction of a noise wall. The noise wall will run along the eastern boundary of the bus layover and will provide significant noise shielding.
	Will the configuration of lanes at the Intersection of Gleeson Avenue and Burrows Avenue change as part of this proposal?	The configuration of lanes at the Gleeson Avenue and Burrows Avenue intersection will not change as part of this project.
Parking	Railway Road is used for parking buses for rail replacement services, would a permanent layover replace this practice?	The proposed bus layover is a permanent facility and will be used by regular bus services as well as by rail replacement services. The layover is expected to improve local traffic flows, road safety, and on-time running by reducing congestion, delays, and instances of buses 'double parking' on Railway Road and Burrows Avenue. We do not expect to exceed six buses at the layover at any given time.
	There is not enough parking in the street and angled parking does not provide enough spaces to offset the loss of spaces, negatively impacting residents and businesses.	Transport has undertaken a parking assessment and has worked to optimise the parking spaces in Railway Road and Burrows Avenue. The introduction of angled parking provides an additional five spaces to the existing eight spaces in the section along Railway Road between Nos.105 and 117 Railway Road. Transport has also carried out a review of the Sydenham residential parking permit scheme and available parking spaces post- project delivery. There are sufficient available parking spaces within the project scope area (including Wright Street) to accommodate the permit allocation available for properties along Railway Road.
	Angled parking looks the wrong way	The proposed angled parking is in accordance with Australian Standard 2890 Parking Facilities.
	Angled parking would narrow the road and increase the risk of crashes	The introduction of angled parking has historically been shown to reduce vehicle speeds which creates a safer road environment. Angled parking will also not adversely affect traffic flows along Railway Road.
	Will parking on the southern side of Railway Road be modified or removed?	Parking spaces on the southern side of Railway Road will not be modified or removed as part of this project scope. The parking changes are on the northern side of Railway Road and on Burrows Avenue.
	Why is angled parking on the right side of Railway	The angled parking is proposed for the northern side of Railway Road to accommodate bus turning

	Road and not the left?	maneuvers into the layover.
	What is the net change in parking spaces?	<p>The parking changes to accommodate the bus layover will result in a net reduction of 12 parking spaces.</p> <p>For Railway Road on the southern side, there is no change to the existing 23 parking spaces. On the northern side there are currently eight parking spaces which will increase to 13 parking spaces with the introduction of angled parking.</p> <p>On the western side of Burrows Avenue, 12 parking spaces will be reduced to six. The 11 informal parking opportunities in the right turn pocket on the eastern side of Burrows Avenue will be removed as that area forms the layover exit for the buses.</p> <p>Transport has undertaken a parking assessment to optimise parking spaces. Transport has also carried out an assessment of the Sydenham residential parking permit scheme and available parking spaces post project delivery. The results of the assessments indicate that there are sufficient available parking spaces within the project scope area (including Wright Street) to accommodate the permit allocation available for properties along Railway Road.</p>

CONCLUSION

The new bus layover facility project will benefit Sydenham Station as a multimodal transport interchange and support public transport infrastructure within the Inner West area. However, this will come at a cost to the adjoining residents with possible noise and exhaust impacts from the additional buses laying over and loss of overall parking. The creation of 45 degree angle parking will help ease the burden for resident as the additional spaces will be posted as 2P RPS area. It would also seem like the loss in unrestricted parking spaces can be accommodated in the adjacent street network. Issues of additional buses along Railway Road and their impacts are not properly addressed. Council should seek assurances from TfNSW as to servicing this node point with a quieter bus fleet with a reduced footprint in relation to exhaust fumes. Furthermore, given the increase in buses, the interaction of buses and vehicles should be monitored over a period of time and that TfNSW be responsible implementing further traffic control measures should they be required in future.

FINANCIAL IMPLICATIONS

There are no financial implications associated with the implementation of the proposed recommendations outlined in the report.

ATTACHMENTS

1. [Sydenham Bus Layover - Parking Data report](#)
2. [Sydenham Bus Layover - Community Engagement Report](#)
3. [Sydenham Bus Layover - Detailed Design](#)



Sydenham Bus Layover Parking Data Report

Transport for NSW

12 March 2024

Item 2



Attachment 1

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P6209.002R Sydenham Bus Layover Parking Data Report	S. Daizli	A. Grey	A. Grey	2/02/2024	Vishnu Anne vishnu@matrix888.com
P6209.003R Sydenham Bus Layover Parking Data Report	S. Daizli	A. Grey	A. Grey	1/03/2024	Vishnu Anne vishnu@matrix888.com
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Sydenham Bus Layover Parking Data Report

Project: P6209

Version: 004



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Figure 6.4:	Cumulative Parking Occupancy Percentages in All Streets – With Proposal
Figure 6.5:	Proposed VMS Locations

Appendices

Appendix A:	Parking Inventory
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Sydenham Bus Layover Parking Data Report

Project: P6209

Version: 004



1. INTRODUCTION

1.1 Overview

Sydenham Station on the north-south Illawarra Railway Line is an important junction with the Bankstown Railway Line and interchange with east-west bus routes. It continues to be a logical bus terminus for passengers interchanging with rail services from Sydney's Inner East and Inner West. This interchange function is expected to intensify in coming years with:

- The opening of the City & South West Metro between Chatswood and Bankstown
- Increased Illawarra Line services
- Increased bus service levels and patronage to and from Sydenham Station
- Population growth in surrounding precincts
- Sydenham being identified as the terminus for future new bus routes under the *Greater Sydney Bus Network Strategy*.

1.2 Background

A designated bus layover area is required at Sydenham Station to cater to the growing number of bus services in this area. Prior to picking up passengers, buses currently park along Burrows Avenue which creates congestion and safety issues for pedestrians and drivers.

Transport for NSW (TfNSW) is proposing a bus layover area at the corner of Railway Road and Burrows Avenue. This will provide drivers a safe place to park between services, improve bus travel times and service frequencies, and increase reliability for passengers.

The proposal includes:

- Six 16m-long angle bus parking spaces on the southern side of Burrows Avenue with manoeuvring space at the northern end of Railway Parade for egress, replacing a total of 11 parallel parking spaces
- A dedicated drivers amenity block with a lunchroom and toilets
- The 14 parallel parking spaces along the northern side of Railway Parade converted into 13 45° angle car parking spaces
- A reduction in 90° angle car parking spaces along the northern side of Burrows Avenue from 11 to six.

The above changes result in a net loss of 17 parking spaces across the two streets. TfNSW's proposal is shown in Figure 1.1. It is assumed that current parking and time restrictions will remain.



Source: Transport for NSW Sydenham Bus Layover project webpage

Figure 1.1: Proposed Bus Layover

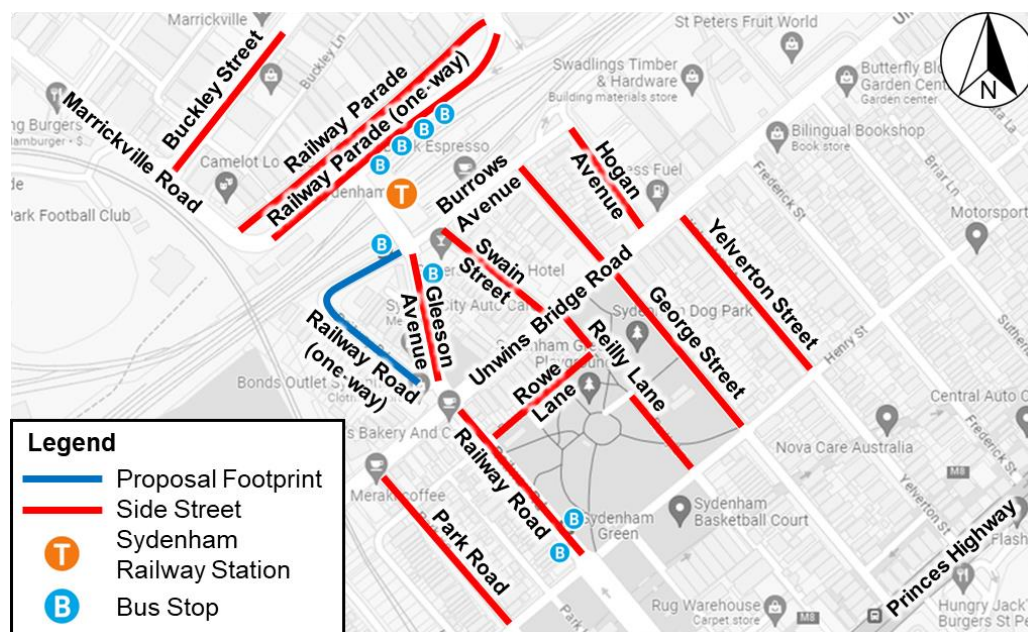
1.3 Project Objective and Study Area

The objective of the parking investigation is to provide TfNSW with data, its analysis including assessment and recommendations on parking restriction changes, and identify the parking impacts of the proposed additional layover area at the corner of Railway Road and Burrows Avenue ('Proposal Footprint') on alternative parking areas within a 400m radius of the proposal area ('Side Streets').

The study area is summarised in Table 1.1 and shown in Figure 1.2.

Table 1.1: Study Area

ID	Road Name	Section	Side/s Included
Proposal Footprint			
D1	Burrows Avenue	Railway Road to Gleeson Avenue	Both
D2	Railway Road (one-way)	Gleeson Avenue to Burrows Avenue	Both
Side Streets			
O1	Buckley Street	Marrickville Road to No. 21-25 and 26-28	Both
O2-1	Railway Parade	All	Both
O2-2	Railway Parade (one-way)	All	South
O3	Hogan Avenue	All	Both
O4	George Street	Burrows Avenue to Henry Street	Both
O5	Swain Street	All	Both
O6	Gleeson Avenue	All	East
O7	Park Road	Unwins Bridge Road to Henry Street	Both
O8	Railway Road	Unwins Bridge Road to Henry Street	Both
O9	Rowe Lane	Railway Road to Reilly Lane	South
O10	Reilly Lane	Unwins Bridge Road to Henry Street	West
O11	Yelverton Street	Unwins Bridge Road to Henry Street	Both



Adapted from Google Maps

Figure 1.2: Study Area

1.4 Scope of Works

TfNSW engaged Matrix Traffic and Transport Data (Matrix) to undertake the parking investigation, surveys and reporting for this project. Matrix has since engaged Bitzios Consulting (Bitzios) to prepare the parking data report (this report) in accordance with TfNSW's *Requirements for a Parking Study for an REF (REF Requirements, 2016)*, which included the following tasks:

- Summarise the parking surveys undertaken in terms of days, time and type
- Summarise the occupancy and duration of stay for each section on weekdays and weekends
- Prepare maps displaying the parking inventory, restrictions and type (retail, commuter, staff or residential)
- Review the study area, including extents, corridor length, existing lane restrictions, lane configuration, speed limits, business centre locations, and key locations of legal and illegal parking
- Undertake a parking assessment on the parking impacts from the proposed bus junction infrastructure in terms of parking supply and demand, including parking impacts along Burrows Avenue and Railway Road (between Gleeson Avenue and Burrows Avenue) and the suitability of nearby side streets by measuring the former's parking demand against alternative parking demand by:
 - Mapping how the areas have been divided and nearby side streets included in the analysis
 - Dividing the results into sections, days (weekday and weekend) and by direction
 - Provide comments on any events or unusual events
 - Describing the adjacent land use where the parking is permitted
 - Plotting graphs of road demand against nearby parking vacancies for each area on each day
 - Summarising the parking in terms of deficit or surplus for each area and the time of any parking deficits at the area occurred
 - Identifying the length of parking to be removed and the number of parking spaces impacted to be in accordance with *AS2890.5:On-street parking*
 - The need for parking directional signage for directing residents and other road users to side street parking and the potential locations for these signs.
- Prepare one map for locations and information of any parking, legal or illegal, not displayed in Figure 1.2
- Identify any business or residents that do not have onsite parking capacity
- Identify any business loading areas occurring on the section of road.

2. OVERVIEW OF PARKING AREAS

2.1 Parking Inventory

The existing parking inventory in each road section as at Tuesday, 5 September 2023 is summarised in Table 2.1. There are no lane restrictions (i.e. clearways, transit lanes or bus lanes) or loading, taxi or mail zones in these areas.

Table 2.1: Existing Parking Inventory

ID	Road Name	Parking Type/s	Parking Restrictions	Parking Supply
Proposal Footprint				
D1	Burrows Avenue	Commuter / residential	Bus Zone, No Stopping, Unrestricted	22
D2	Railway Road (one-way)	Residential	1P, 2P, No Parking, No Stopping, Unrestricted	33
Side Streets				
O1	Buckley Street	Residential	No Stopping, Unrestricted	12
O2-1	Railway Parade	Commuter / residential	2P, 4P, Bicycle Parking, No Parking, Car Share, No Stopping, Unrestricted	95
O2-2	Railway Parade (one-way)	Commuter	Bus Zone, No Stopping, Unrestricted	3
O3	Hogan Avenue	Residential	2P, No Parking, No Stopping, Unrestricted	14
O4	George Street	Residential	2P, Disabled Only, No Stopping, Unrestricted	59
O5	Swain Street	Residential	2P, Disabled Only, No Stopping	28
O6	Gleeson Avenue	Retail	Bus Zone, No Parking, No Stopping, 1P	7
O7	Park Road	Retail / residential	2P, No Stopping, Unrestricted	47
O8	Railway Road	Retail / residential	Bus Zone, No Parking, No Stopping, 1P	29
O9	Rowe Lane	Residential	4P, No Parking, No Stopping	25
O10	Reilly Lane	Residential	No Parking, No Stopping, Unrestricted	3
O11	Yelverton Street	Residential	2P, No Stopping	52
Total				429

The locations of each parking restriction and their supply are shown in Figure 2.1. The parking and time restrictions of each segment are provided in **Appendix A**.



*Matrix: No Board = no space to park. / Basemap: Community Map

Figure 2.1: Existing Parking Restrictions and Supply

2.2 Road Network

Key characteristics of each road section and adjoining land uses are summarised in Table 2.2.

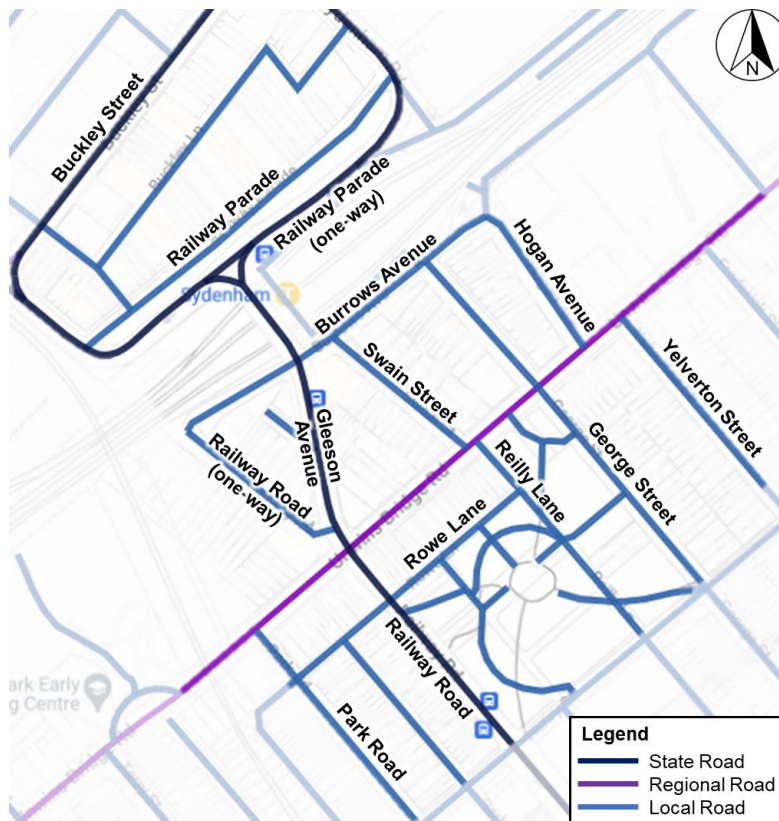
Table 2.2: Existing Road Characteristics

Road Name	Road Classification	No. of Travel Lanes	Speed Limit	Corridor Length	Adjoining Land Uses*
Proposal Footprint					
Burrows Avenue	Local Road	1 (one-way)	50km/h	85m	▪ R2 Low Density Residential
Railway Road (one-way)	Local Road	1 (one-way)	50km/h	114m	▪ E1 Local Centre ▪ R2 Low Density Residential
Side Streets					
Buckley Street	State Road	2 (one-way)	60km/h	153m	▪ E4 General Industrial
Railway Parade	Local Road	2 (two-way)	50km/h	278m	▪ E4 General Industrial
Railway Parade (one-way)	State Road	2 (one-way)	60km/h	275m	▪ Sydenham Station
Hogan Avenue	Local Road	2 (two-way)	50km/h	106m	▪ E4 General Industrial ▪ R2 Low Density Residential
George Street	Local Road	2 (two-way)	50km/h	301m	▪ R2 Low Density Residential ▪ Sydenham Green Park
Swain Street	Local Road	1 (one-way)	50km/h	108m	▪ E1 Local Centre ▪ R2 Low Density Residential

Road Name	Road Classification	No. of Travel Lanes	Speed Limit	Corridor Length	Adjoining Land Uses*
Gleeson Avenue	State Road	4 (two-way)	60km/h	119m	<ul style="list-style-type: none"> E1 Local Centre / Sydenham Town Centre Memory Reserve
Park Road	Local Road	2 (two-way)	50km/h	172m	<ul style="list-style-type: none"> E1 Local Centre / Sydenham Town Centre R2 Low Density Residential
Railway Road	State Road	4 (two-way)	60km/h	164m	<ul style="list-style-type: none"> E1 Local Centre / Sydenham Town Centre R2 Low Density Residential Sydenham Green Park
Rowe Lane	Local Road	1 (two-way)	50km/h	116m	<ul style="list-style-type: none"> E1 Local Centre R2 Low Density Residential Sydenham Green Park
Reilly Lane	Local Road	1 (two-way)	50km/h	119m	<ul style="list-style-type: none"> R2 Low Density Residential Sydenham Green Park
Yelverton Street	Local Road	2 (two-way)	50km/h	175m	<ul style="list-style-type: none"> R2 Low Density Residential

*Source: Inner West Local Environmental Plan 2022

The classification of each road section is shown in Figure 2.2.



Source: Transport for NSW Road Network Classifications Map

Figure 2.2: Road Classifications

2.3 Land Uses

The land use definitions under the Inner West Local Environmental Plan 2022 are shown in Figure 2.3.



Source: NSW Planning Portal Spatial Viewer

Figure 2.3: Land Zoning Map

3. SITE INSPECTION

3.1 Overview

A site inspection was undertaken on Tuesday, 5 September 2023 between 12:30pm and 1:30pm to gain an understanding of the current parking conditions and constraints, as well as verify the inventory survey undertaken by Matrix.

Buses taking up vehicle parking spaces along Burrows Avenue and Railway Road (one-way) was not observed during the parking surveys or site inspection.

3.2 Bitzios vs. Matrix Parking Supply

The parking supply in each area verified Bitzios and surveyed by Matrix are compared in Table 3.1. The greatest difference was only five vehicles. A permanent No Stopping zone was recently implemented on the western corner of Burrows Avenue. The remaining differences are based on AS2890.5 (where practical), as well as first-principles (i.e. locations of driveways and road infrastructure, road geometry, types of vehicles and land uses). The parking supply in the occupancy survey results throughout this report is based on Bitzios' survey.





Table 3.1: Bitzios vs. Matrix Parking Supply

Road Name	Bitzios Parking Supply	Matrix Parking Supply	Difference
Burrows Avenue	22	26	-4
Railway Road (one-way)	33	36	-3
Buckley Street	12	9	+3
Railway Parade	95	95	0
Railway Parade (one-way)	3	3	0
Hogan Avenue	14	13	0
George Street	59	59	0
Swain Street	28	28	0
Gleeson Avenue	7	7	0
Park Road	47	49	-2
Railway Road	29	29	0
Rowe Lane	25	25	0
Reilly Lane	3	3	0
Yelverton Street	52	47	+5
Total	429	429	0

3.3 Surplus Parking

Surplus parking in addition to the above supply not identified by Bitzios or Matrix, including both legal/practical and illegal/unsafe parking, was observed in some areas as summarised in Table 3.2. Their locations are shown in Figure 3.1.

Table 3.2: Surplus Parking Areas

ID	Location	Description / Comments	Illustration*
1	Buckley Street	4 illegally parked vehicles observed across driveways (maybe associated with nearby businesses).	
2	Railway Parade	2 parked vehicles observed at the north-eastern end (appears safe, practical and common according to Nearmap).	
3	Railway Parade (one-way)	6 additional parked vehicles observed at the south-western end (the first 5 from left deemed safe enough; common according to Nearmap).	
4	George Street	1 additional parked vehicle observed.	

*Yellow circle = legal/practical parking and red circle = illegal/unsafe parking.



*Matrix: No Board = no space to park. / Basemap: Community Map



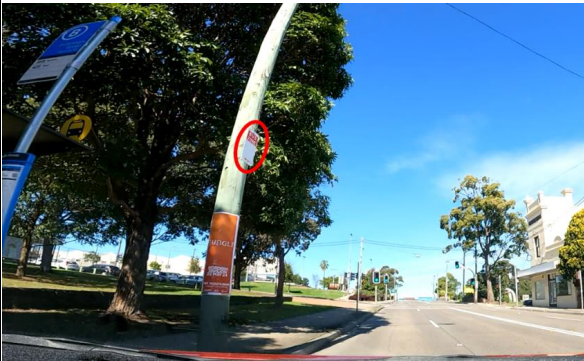
Figure 3.1: Surplus Parking Locations

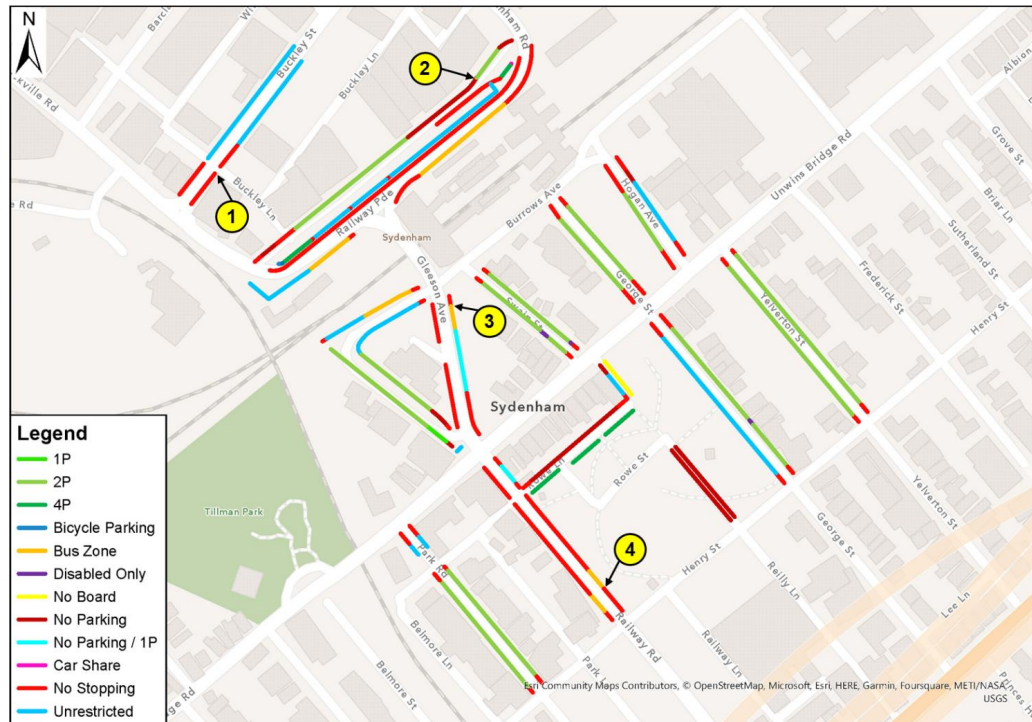
3.4 Conflicting Signage

Table 3.3 summarises conflicting parking signage observed during the site inspection. Their locations are shown in Figure 3.2.

Table 3.3: Conflicting Parking Signage

ID	Location	Issue	Illustration
1	Buckley Street	Missing double arrow No Stopping sign. There is currently an end No Stopping sign.	

ID	Location	Issue	Illustration
2	Railway Parade	Missing end No Parking and start 2P signs.	
3	Gleeson Avenue	Missing start Bus Zone sign. There is currently a double arrow No Stopping sign.	
4	Railway Road	Missing start No Stopping sign.	



*Matrix: No Board = no space to park. / Basemap: Community Map

Figure 3.2: Conflicting Parking Signage Locations

3.5 Temporary Parking Changes

Posters hung along Burrows Avenue, Railway Road (one-way), Gleeson Avenue and Railway Parade show that some parking spaces in these areas are used by rail replacement buses, particularly during major weekday rail shutdowns. A poster outlining upcoming changes during the Term 3 school holidays is shown in Figure 3.3.



Figure 3.3: Temporary parking changes for rail replacement bus use

4. PARKING SURVEYS

4.1 Overview

Matrix undertook parking inventory and occupancy surveys along each road section between Wednesday, 26 July and Tuesday, 1 August 2023 between 6:00am and 7:00pm daily. A duration of stay survey was also undertaken along Burrows Avenue and Railway Road (one-way) over the same period. The occupancy and duration of stay were recorded every hour.

4.2 Limitations

It was observed in the survey data that:

- Occupancy (if any) was not recorded in the following zones where it is illegal to park:
 - No Stopping (including part-time)
 - No Parking (including part-time)
 - Bus Zone.
- Areas used by trucks for business loading were not identified, particularly given the lack of loading or mail zones.

It is therefore difficult to identify and/or verify any common areas or times of surplus parking, illegal parking or business loading.

4.3 Occupancy Survey Results

4.3.1 D1. Burrows Avenue (within proposal footprint)

The parking occupancy results for Burrows Avenue are presented in Figure 4.1. Key observations include that:

- Surplus parking (up to three vehicles) occurred on Thursday, Saturday, Monday and Tuesday between 10:00am and 1:00pm, most likely used by commuters. It is noted that a supply of 26 spaces was allowed at the time of the survey, now 22 due to the permanent No Stopping zone (see Section 3.2)
- Friday and Sunday only had up to 17 parked vehicles per hour.

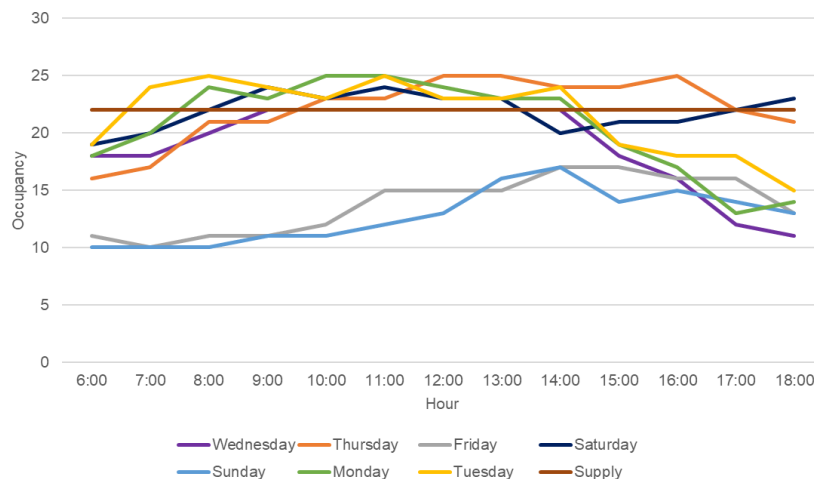


Figure 4.1: Parking Occupancy – D1. Burrows Avenue

4.3.2 D2. Railway Road (one-way) (within proposal footprint)

The parking occupancy results for Railway Road (one-way) are presented in Figure 4.2. Parking was highest on Wednesday, Thursday and Sunday after 1:00pm. Parking was lowest on Friday and Sunday before 1:00pm.

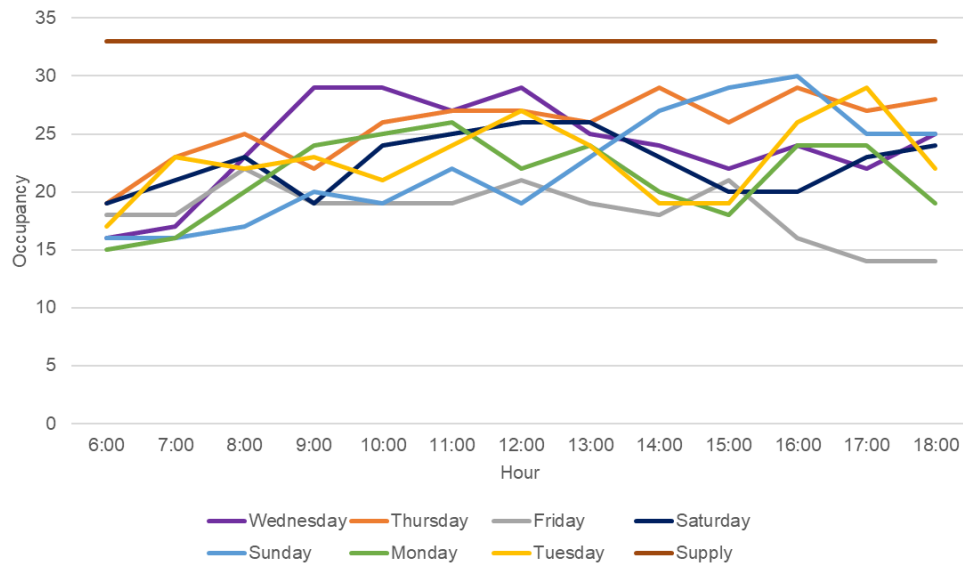


Figure 4.2: Parking Occupancy – D2. Railway Road (one-way)

4.3.3 O1. Buckley Street

The parking occupancy results for Buckley Street are presented in Figure 4.3. Surplus parking (up to six vehicles) occurred on Wednesday after 9:00am, as well as on Friday, Monday and Tuesday between 9:00am and 2:00pm. This is most likely associated with nearby businesses.

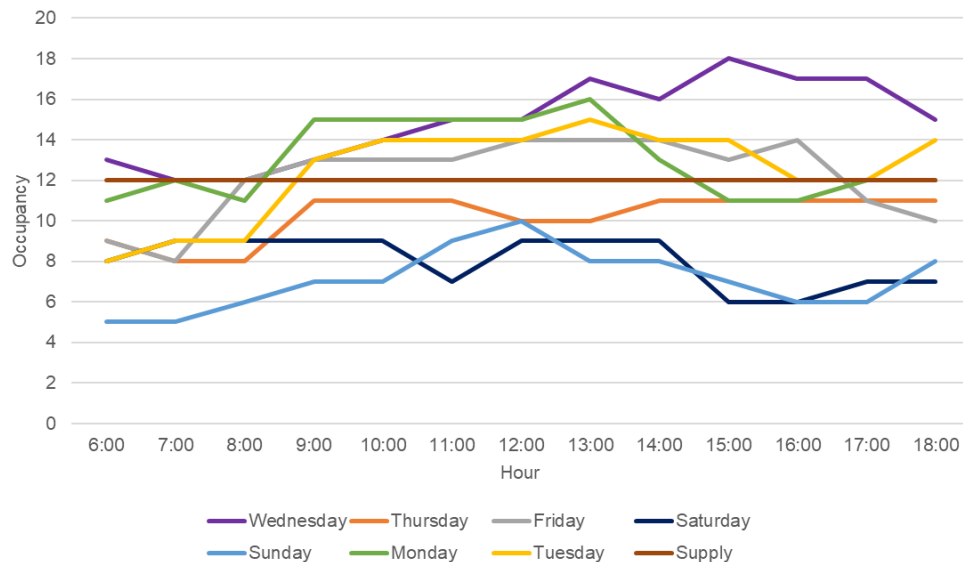


Figure 4.3: Parking Occupancy – O1. Buckley Street

4.3.4 O2-1. Railway Parade

The parking occupancy results for Railway Parade are presented in Figure 4.4. Weekday and weekend parking patterns were generally consistent. Weekday parking peaked at 92 vehicles on Wednesday at 1:00pm, compared with just 29 vehicles on Saturday at 11:00am. It is likely that most parking is used by commuters.

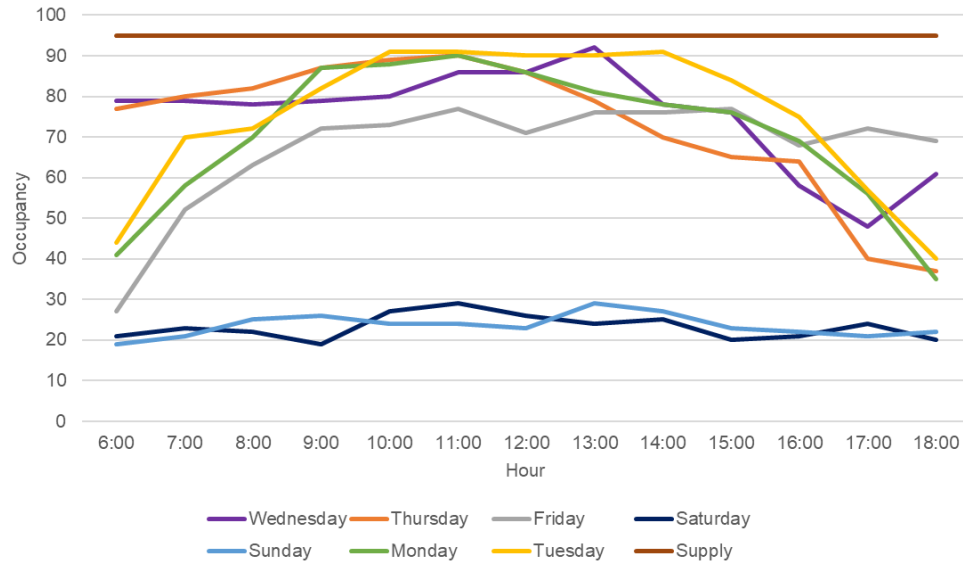


Figure 4.4: Parking Occupancy – O2-1. Railway Parade

4.3.5 O2-2. Railway Parade (one-way)

The parking occupancy results for Railway Parade (one-way) are presented in Figure 4.5. Parking was mostly at capacity, however, it is likely that more vehicles were parked at the south-western end.

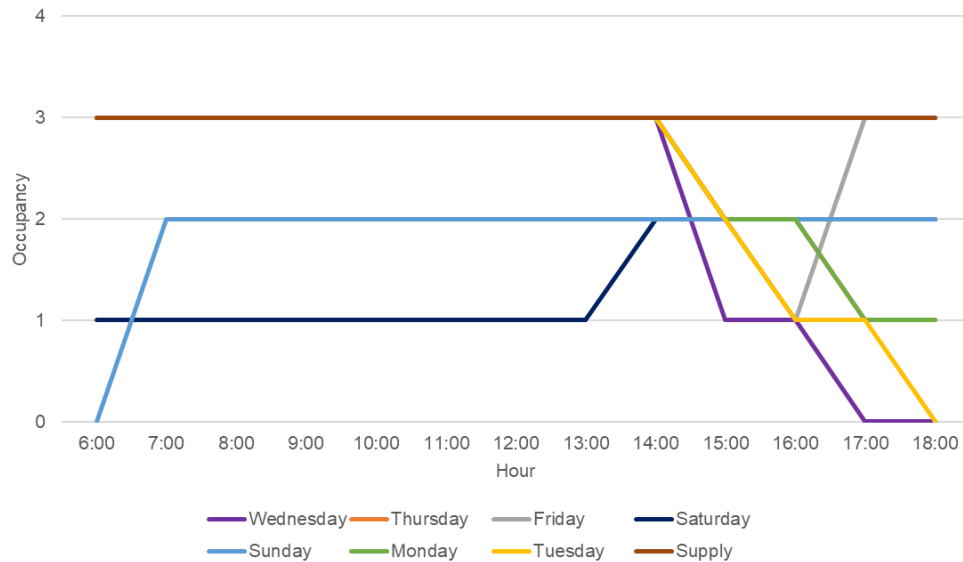


Figure 4.5: Parking Occupancy – O2-2. Railway Parade (one-way)

4.3.6 O3. Hogan Avenue

The parking occupancy results for Hogan Avenue are presented in Figure 4.6. Surplus parking (up to three vehicles) occurred during five hours on Thursday, and two hours each on Wednesday and Friday afternoon and Tuesday morning. This may be due to the nearby smash repairers.

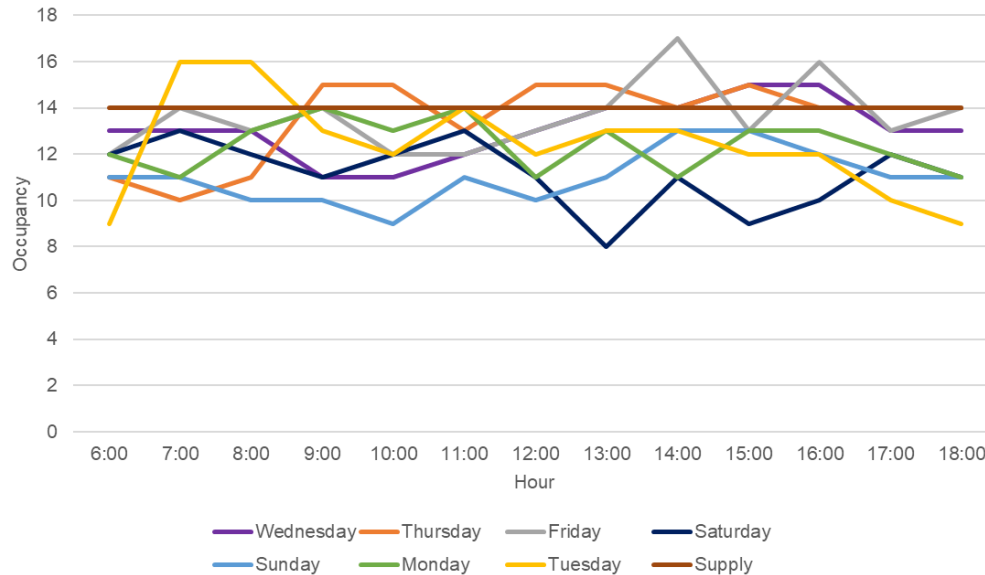


Figure 4.6: Parking Occupancy – O3. Hogan Avenue

4.3.7 O4. George Street

The parking occupancy results for George Street are presented in Figure 4.7. Spaces were mostly at least 90% occupied, except on Thursday which had just 49%. It is not clear why.

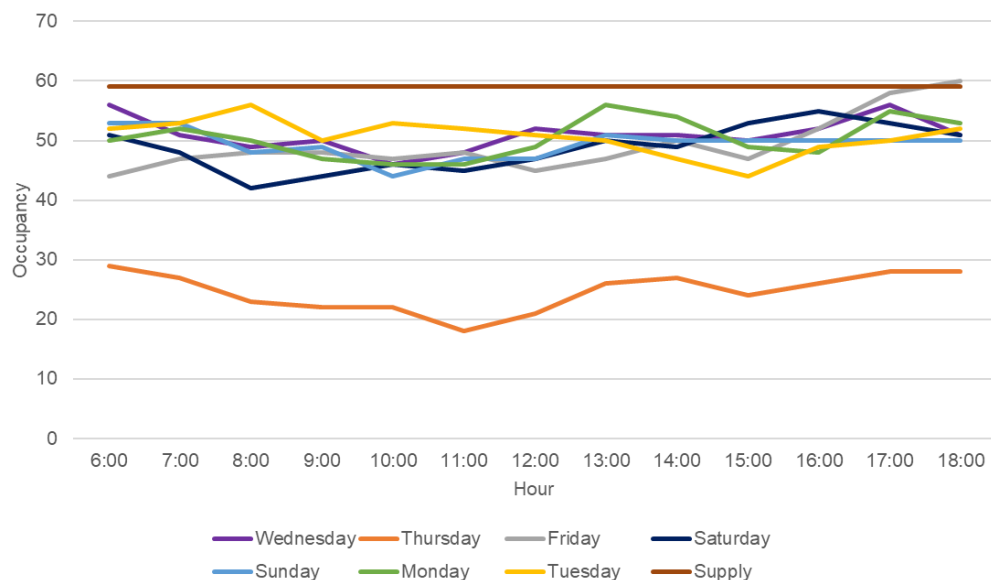


Figure 4.7: Parking Occupancy – O4. George Street

4.3.8 O5. Swain Street

The parking occupancy results for Swain Street are presented in Figure 4.8. Parking generally increased throughout the day on all days and was higher on weekdays.

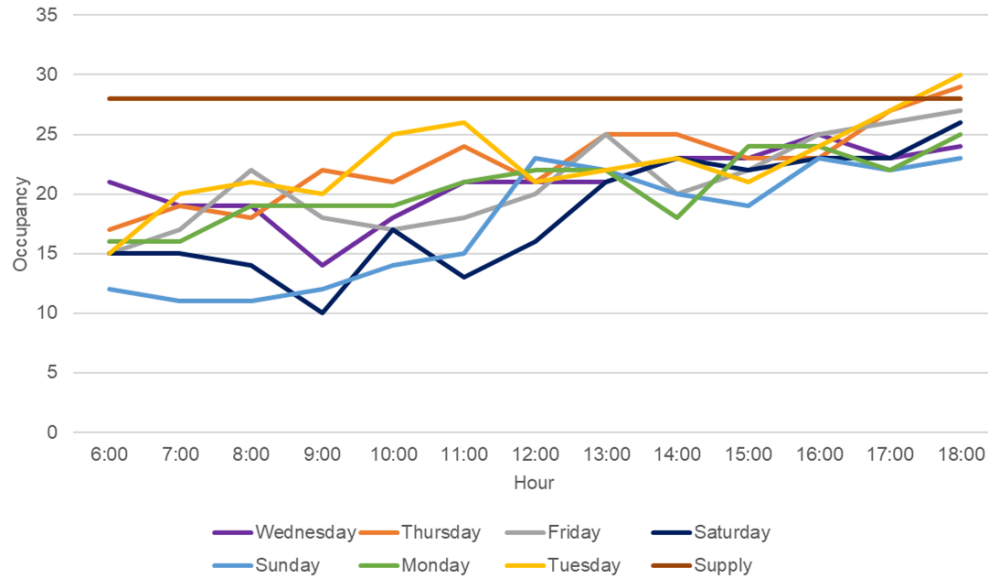


Figure 4.8: Parking Occupancy – O5. Swain Street

4.3.9 O6. Gleeson Avenue

The parking occupancy results for Gleeson Avenue are presented in Figure 4.9. Parking is only allowed on the eastern (southbound) side. Weekend parking was higher as it is unrestricted and six spaces were occupied most of the week.

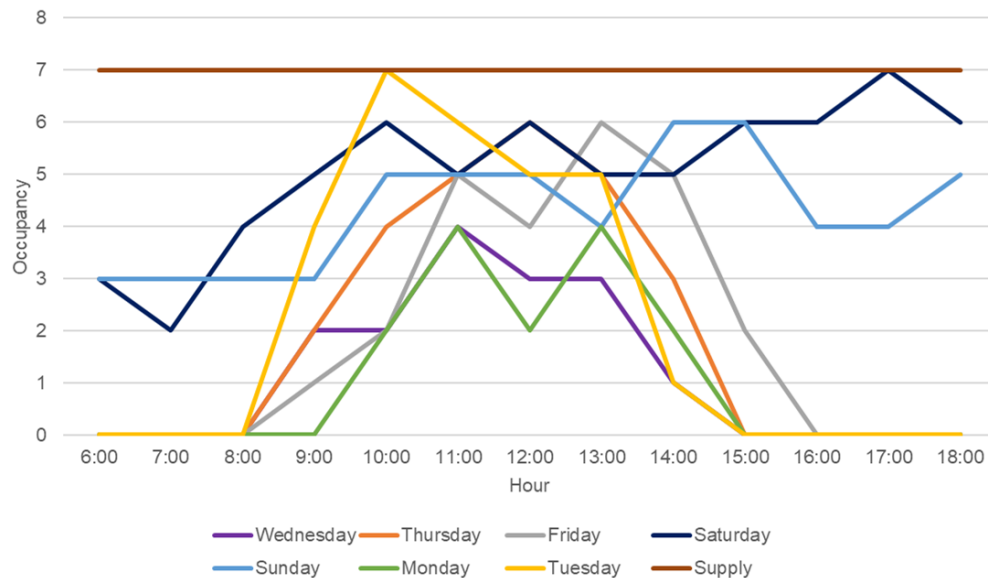


Figure 4.9: Parking Occupancy – O6. Gleeson Avenue

4.3.10 07. Park Road

The parking occupancy results for Park Road are presented in Figure 4.10. Spaces were mostly 80-90% occupied and usage was higher between Friday and Sunday.

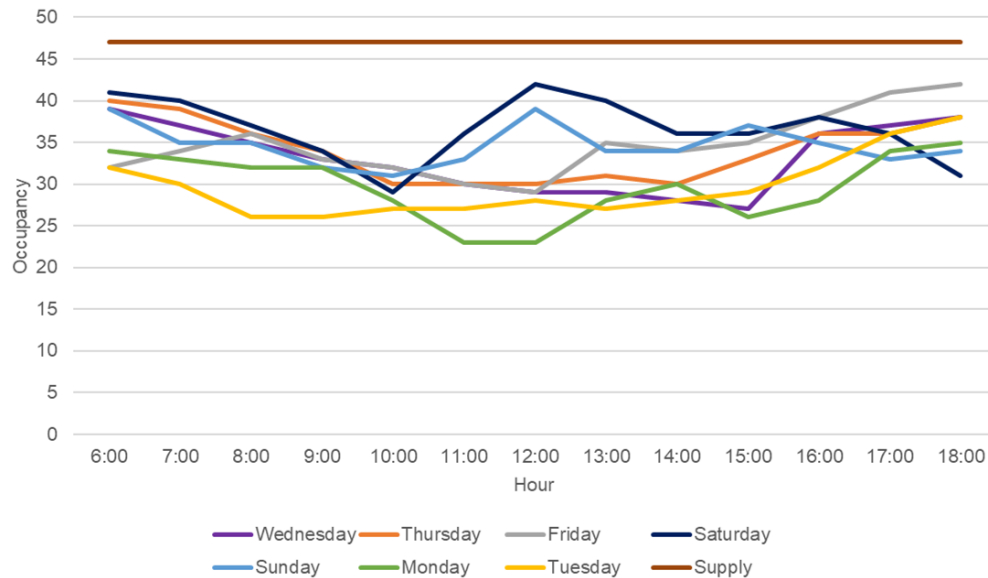


Figure 4.10: Parking Occupancy – 07. Park Road

4.3.11 08. Railway Road

The parking occupancy results for Railway Road are presented in Figure 4.11. Spaces on weekends were up to 45% occupied, compared with just 28% on weekdays. Eastern (southbound) spaces (12) between Rowe Lane and Henry Street were predominantly unoccupied.

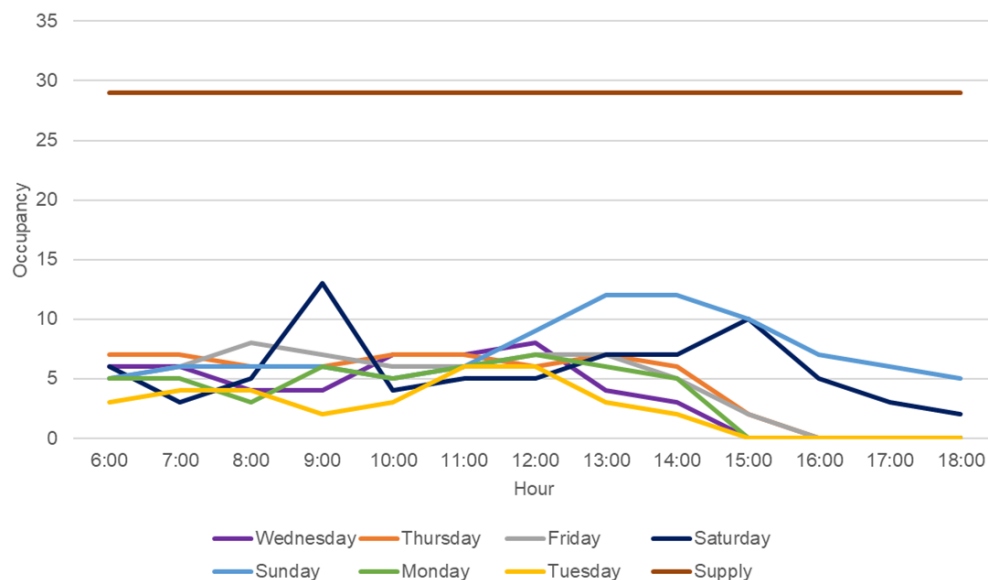


Figure 4.11: Parking Occupancy – 08. Railway Road

4.3.12 O9. Rowe Lane

The parking occupancy results for Rowe Lane are presented in Figure 4.12. Parking patterns were generally consistent each day: increasing till 12:00pm, then decreasing till 3:00pm and increasing again. Non-permit holders can only park for four hours between 8:30am-6:00pm Monday to Friday.

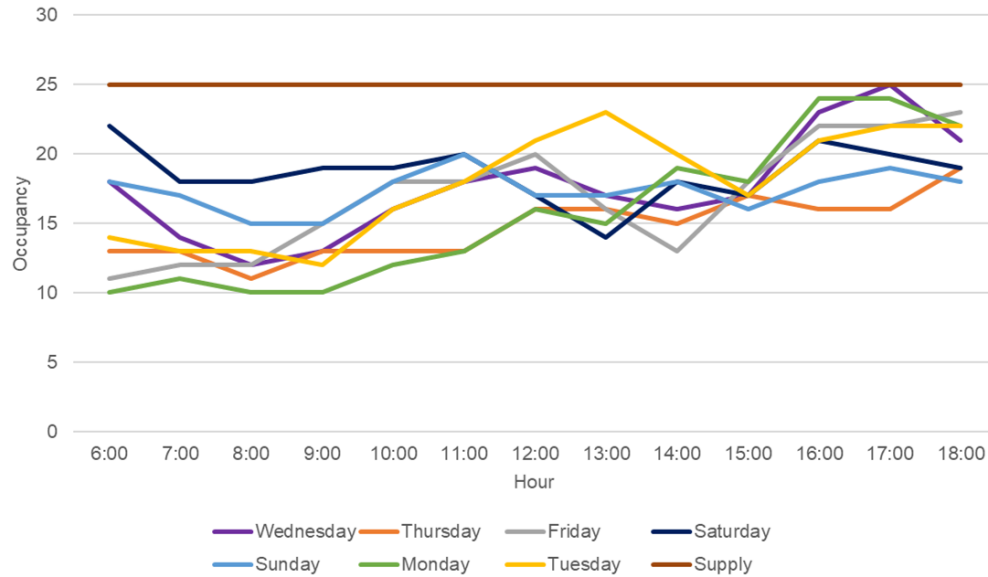


Figure 4.12: Parking Occupancy – O9. Rowe Lane

4.3.13 O10. Reilly Lane

The parking occupancy results for Reilly Lane are presented in Figure 4.13. Parking was mostly at capacity.

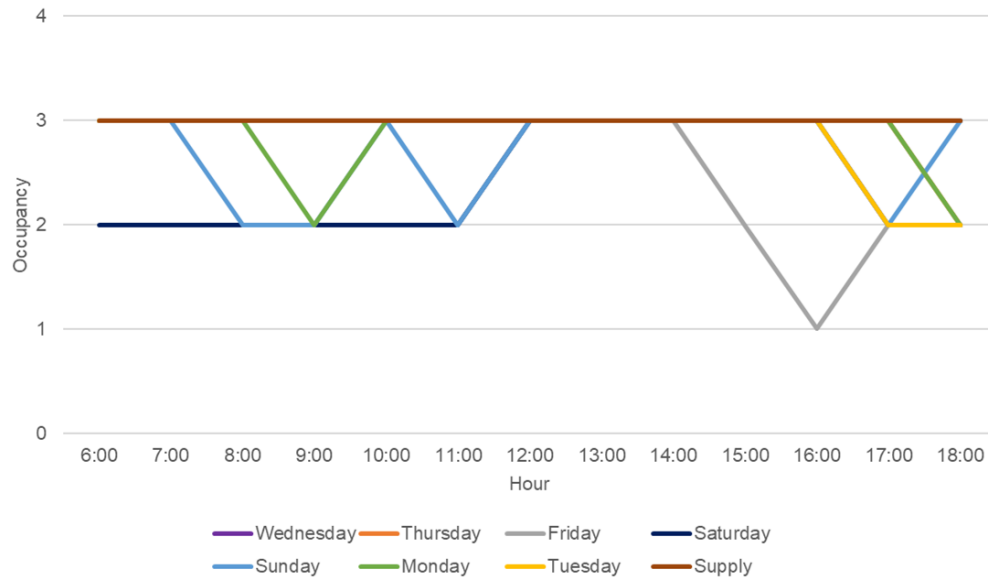


Figure 4.13: Parking Occupancy – O10. Reilly Lane

4.3.14 O11. Yelverton Street

The parking occupancy results for Yelverton Street are presented in Figure 4.14. Key observations include that:

- Parking patterns were generally consistent each day, decreasing till 12:00pm, then increasing
- Weekend parking was higher as it is unrestricted
- Weekday parking was lower possibly due to residents commuting.

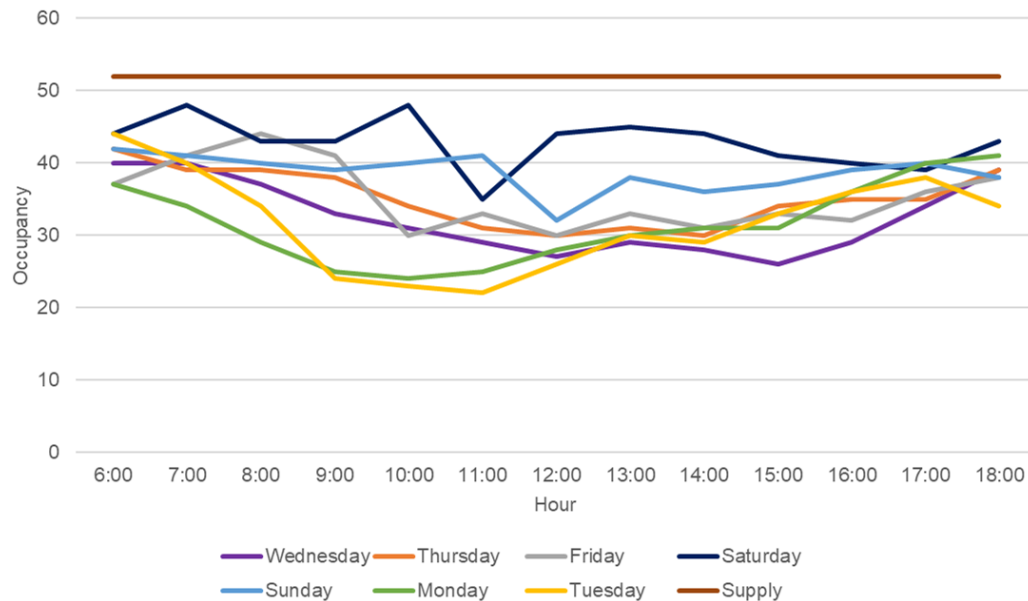


Figure 4.14: Parking Occupancy – O11. Yelverton Street

4.4 Duration of Stay Survey Results

4.4.1 Burrows Avenue (within proposal footprint)

The duration of stay during the peak weekday (Thursday) and weekend day (Saturday) for Burrows Avenue are summarised in Table 4.1. Key observations include that:

- Most vehicles stayed for one hour on both days: Thursday 12 (26%) and Saturday nine (19%)
- Four vehicles were parked during the whole Thursday survey (9%) and six vehicles were parked during the Saturday (13%) survey
- The average vehicle stays were 6 hrs 6 mins on Thursday and 5 hrs 56 mins on Saturday.

4.4.2 Railway Road (one-way) (within proposal footprint)

The duration of stay during the peak weekday (Tuesday) and weekend day (Saturday) for Railway Road (one-way) are summarised in Table 4.2. Key observations include that:

- Most vehicles stayed for one hour on both days: Tuesday 44 (44%) and Saturday 28 (33%)
- Four vehicles were parked during the whole Tuesday survey (4%) and five vehicles were parked during the Saturday survey (6%)
- The average vehicle stays were 2 hrs 57 mins on Tuesday and 3 hrs 24 mins on Saturday.

Table 4.1: Peak Duration of Stay – D1. Burrows Avenue

Hour	Duration of Stay (hours)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Thursday													
6:00	-	1	1	1	-	-	1	1	2	1	3	1	4
7:00	-	-	-	-	-	-	-	1	-	-	-	-	-
8:00	-	1	-	-	-	-	-	-	1	-	3	-	-
9:00	-	-	-	-	-	-	-	-	-	1	-	-	-
10:00	-	-	-	-	-	-	1	2	1	-	-	-	-
11:00	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00	-	-	-	-	1	1	-	-	-	-	-	-	-
13:00	-	-	-	-	-	1	-	-	-	-	-	-	-
14:00	-	-	-	-	-	-	-	-	-	-	-	-	-
15:00	1	-	-	2	-	-	-	-	-	-	-	-	-
16:00	2	-	1	-	-	-	-	-	-	-	-	-	-
17:00	3	2	-	-	-	-	-	-	-	-	-	-	-
18:00	6	-	-	-	-	-	-	-	-	-	-	-	-
Total	12	4	2	3	1	2	2	4	4	2	6	1	4
Saturday													
6:00	1	-	-	1	-	-	-	3	3	2	1	2	6
7:00	-	-	-	-	1	-	1	-	-	-	-	-	-
8:00	-	-	-	1	-	-	-	-	-	-	1	-	-
9:00	1	-	-	-	1	-	-	-	-	-	-	-	-
10:00	-	-	-	-	-	-	-	-	1	-	-	-	-
11:00	-	-	-	1	-	-	-	-	-	-	-	-	-
12:00	-	-	-	1	-	-	-	-	-	-	-	-	-
13:00	-	-	-	-	-	-	-	-	-	-	-	-	-
14:00	-	2	-	-	-	-	-	-	-	-	-	-	-
15:00	-	-	1	4	-	-	-	-	-	-	-	-	-
16:00	-	1	4	-	-	-	-	-	-	-	-	-	-
17:00	1	1	-	-	-	-	-	-	-	-	-	-	-
18:00	6	-	-	-	-	-	-	-	-	-	-	-	-
Total	9	4	5	8	2	-	1	3	4	2	2	2	6

Table 4.2: Peak Duration of Stay – D2. Railway Road (one-way)

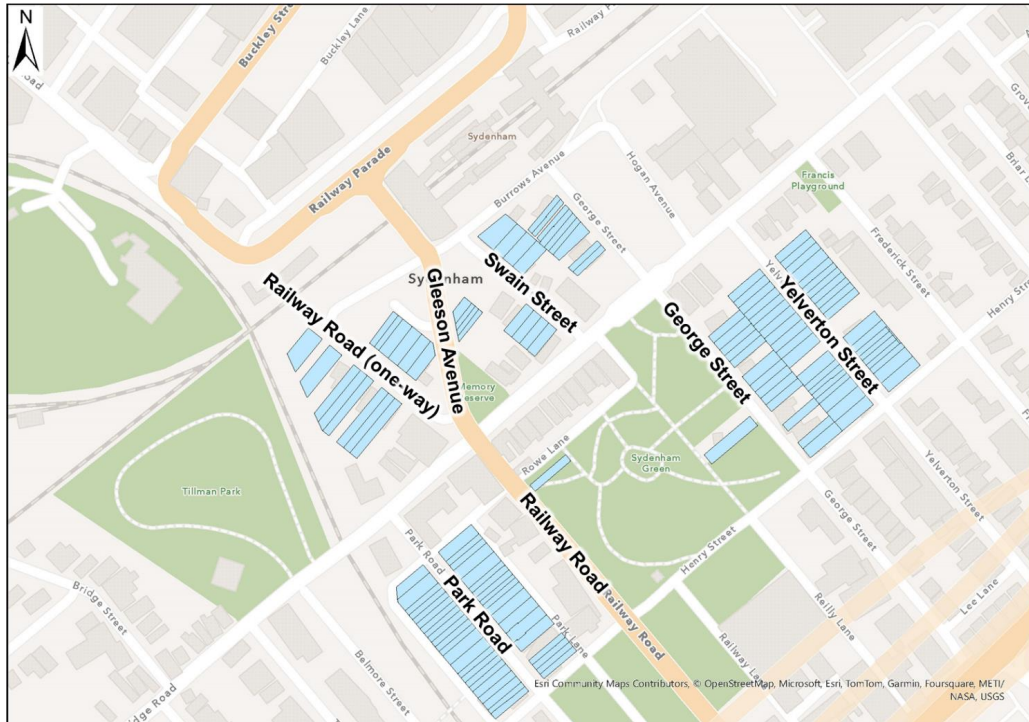
Hour	Duration of Stay (hours)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Tuesday													
6:00	-	5	4	1	-	1	2	-	-	-	-	-	4
7:00	1	2	-	-	2	-	-	1	-	-	-	-	-
8:00	2	-	1	-	-	-	-	-	2	-	-	-	-
9:00	2	1	3	-	-	-	1	-	-	2	-	-	-
10:00	1	-	-	-	-	-	-	-	-	-	-	-	-
11:00	3	1	-	1	-	-	-	1	-	-	-	-	-
12:00	4	6	1	-	-	-	1	-	-	-	-	-	-
13:00	4	-	-	-	-	-	-	-	-	-	-	-	-
14:00	2	1	-	-	2	-	-	-	-	-	-	-	-
15:00	4	-	-	1	-	-	-	-	-	-	-	-	-
16:00	7	3	3	-	-	-	-	-	-	-	-	-	-
17:00	9	3	-	-	-	-	-	-	-	-	-	-	-
18:00	5	-	-	-	-	-	-	-	-	-	-	-	-
Total	44	22	12	3	4	1	4	2	2	2	-	-	4
Saturday													
6:00	1	2	4	1	-	-	-	2	2	1	-	1	5
7:00	-	1	1	-	-	-	-	1	-	-	-	-	-
8:00	2	1	1	-	-	-	-	-	-	-	-	-	-
9:00	2	-	-	-	-	-	-	-	-	1	-	-	-
10:00	4	1	2	2	-	-	-	-	1	-	-	-	-
11:00	-	4	-	2	-	-	-	-	-	-	-	-	-
12:00	1	1	-	-	-	-	-	-	-	-	-	-	-
13:00	7	-	-	-	-	-	-	-	-	-	-	-	-
14:00	1	6	-	1	1	-	-	-	-	-	-	-	-
15:00	-	-	2	1	-	-	-	-	-	-	-	-	-
16:00	1	4	2	-	-	-	-	-	-	-	-	-	-
17:00	-	4	-	-	-	-	-	-	-	-	-	-	-
18:00	9	-	-	-	-	-	-	-	-	-	-	-	-
Total	28	24	12	7	1	-	-	3	3	2	-	1	5

5. PROPERTIES WITHOUT ONSITE PARKING

A total of 131 properties (all in Sydenham) have been identified as not having onsite parking capacity. These are listed in Table 5.1 and shown in Figure 5.1.

Table 5.1: Properties Without Onsite Parking

Within Proposal Footprint	Outside Proposal Footprint		
<ul style="list-style-type: none"> 84 Railway Road 86 Railway Road 88 Railway Road 92 Railway Road 94 Railway Road 96 Railway Road 100 Railway Road 105 Railway Road 106 Railway Road 107 Railway Road 109 Railway Road 111 Railway Road 113 Railway Road 115 Railway Road 	<ul style="list-style-type: none"> 93 Railway Road 47 George Street 49 George Street 53 George Street 57 George Street 59 George Street 61 George Street 63 George Street 65 George Street 69 George Street 71 George Street 73 George Street 75 George Street 77 George Street 86 George Street 116A George Street 116B George Street 120 George Street 122 George Street 124 George Street 126 George Street 128 George Street 130 George Street 132 George Street 4 Swain Street 5 Swain Street 6 Swain Street 7 Swain Street 8 Swain Street 9 Swain Street 10 Swain Street 11 Swain Street 5 Gleeson Avenue 7 Gleeson Avenue 9-9A Gleeson Avenue 11-13 Gleeson Avenue 56 Park Road 57 Park Road 58 Park Road 	<ul style="list-style-type: none"> 58A Park Road 59 Park Road 60 Park Road 61A Park Road 61B Park Road 62 Park Road 64 Park Road 66 Park Road 67 Park Road 68 Park Road 69 Park Road 70 Park Road 71 Park Road 72 Park Road 73 Park Road 75 Park Road 76 Park Road 77 Park Road 78 Park Road 79 Park Road 80 Park Road 81 Park Road 82 Park Road 83 Park Road 84 Park Road 85 Park Road 86 Park Road 87 Park Road 88 Park Road 90 Park Road 92 Park Road 93 Park Road 94 Park Road 95 Park Road 96 Park Road 97 Park Road 98 Park Road 99 Park Road 100 Park Road 	<ul style="list-style-type: none"> 54 Yelverton Street 55 Yelverton Street 56 Yelverton Street 57 Yelverton Street 58 Yelverton Street 59 Yelverton Street 61 Yelverton Street 63 Yelverton Street 64 Yelverton Street 65 Yelverton Street 66 Yelverton Street 67 Yelverton Street 68 Yelverton Street 69 Yelverton Street 70 Yelverton Street 71 Yelverton Street 72 Yelverton Street 78 Yelverton Street 79 Yelverton Street 80 Yelverton Street 81 Yelverton Street 82 Yelverton Street 83 Yelverton Street 84 Yelverton Street 85 Yelverton Street 86 Yelverton Street 87 Yelverton Street 88 Yelverton Street 89 Yelverton Street 90 Yelverton Street 91 Yelverton Street 92 Yelverton Street 93 Yelverton Street 94 Yelverton Street 95 Yelverton Street 96 Yelverton Street 97 Yelverton Street 98 Yelverton Street 99 Yelverton Street



*Matrix: No Board = no space to park.
Properties source: NSW Land Parcel and Property Theme cadastre
Basemap: Community Map

Figure 5.1: Properties Without Onsite Parking

6. ALTERNATIVE PARKING ASSESSMENT

6.1 Burrows Avenue / Railway Road Only

The cumulative parking occupancy vs. parking supply across Burrows Avenue and Railway Road was analysed to determine whether there is sufficient parking under the proposal. The results are presented in Figure 6.1 and Figure 6.2. There is mostly insufficient parking in Burrows Avenue and Railway Road between Monday and Friday.

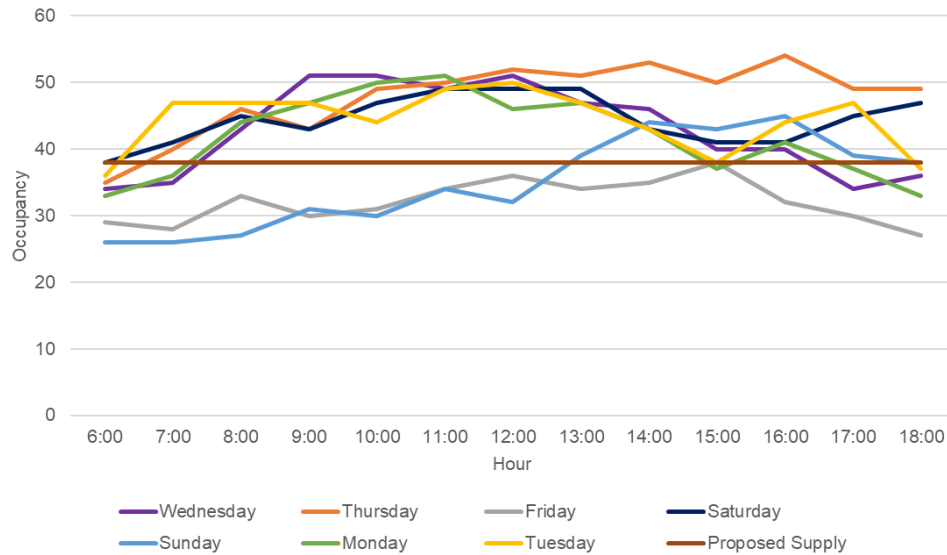


Figure 6.1: Cumulative Parking Occupancy in Burrows Avenue / Railway Road – With Proposal

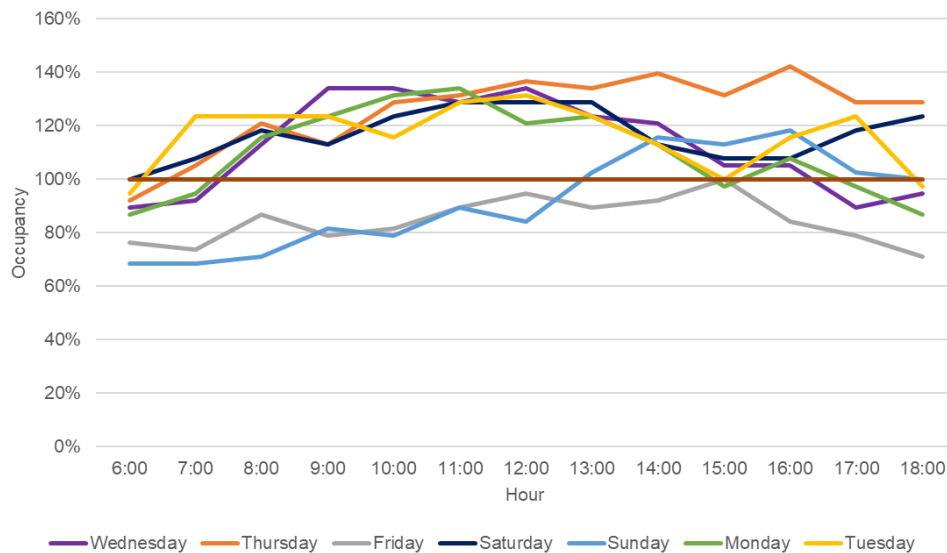


Figure 6.2: Cumulative Parking Occupancy Percentages in Burrows Avenue / Railway Road – With Proposal

6.2 All Streets

The cumulative parking occupancy vs. parking supply across all streets was analysed to determine whether there is sufficient parking under the proposal. The results are presented in Figure 6.3 and Figure 6.4. The highest occupancy is 80% and the lowest occupancy is 55%.

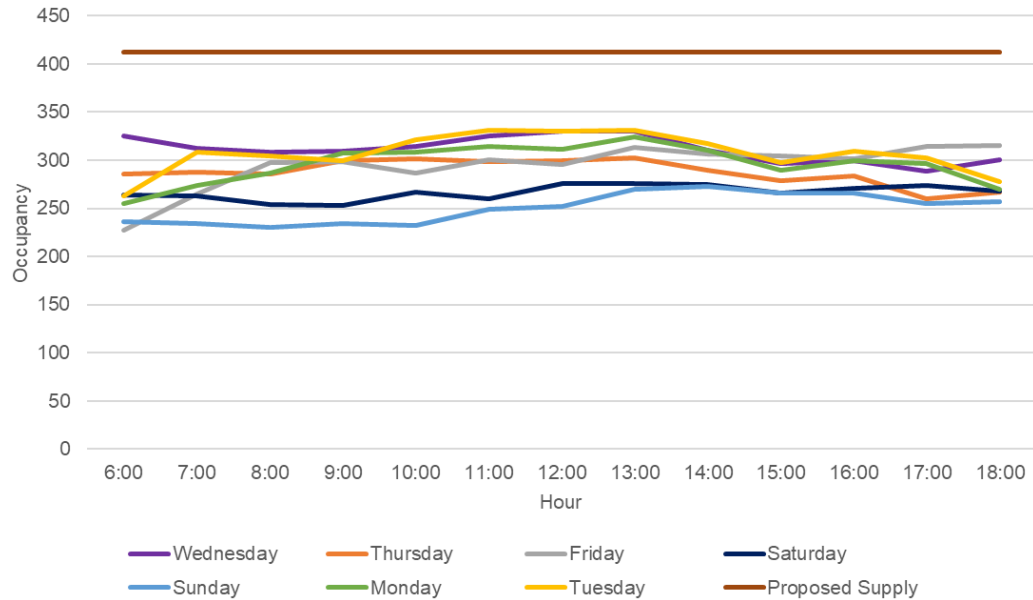


Figure 6.3: Cumulative Parking Occupancy in All Streets – With Proposal

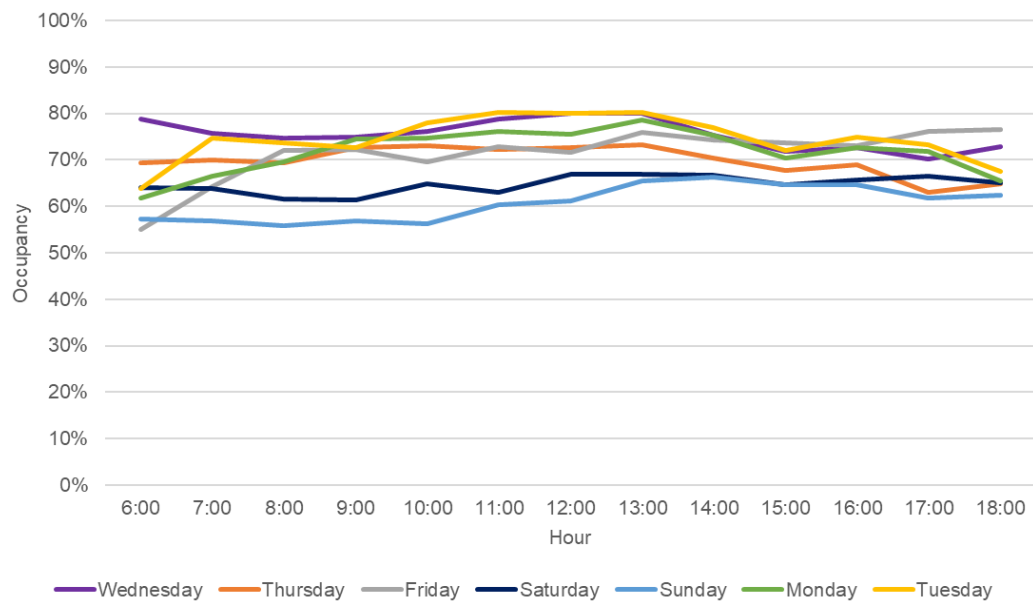
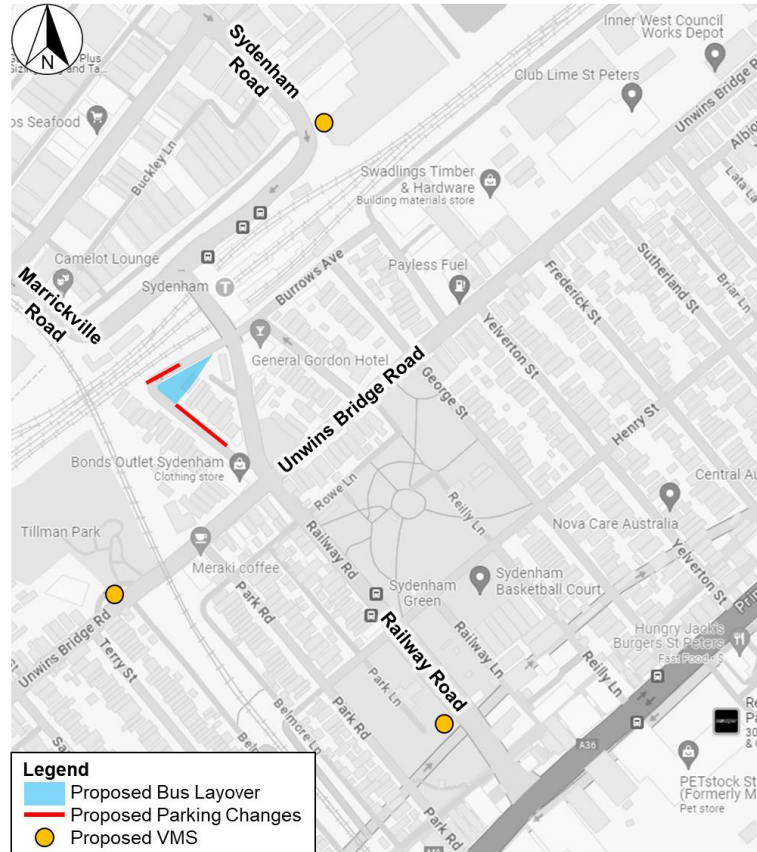


Figure 6.4: Cumulative Parking Occupancy Percentages in All Streets – With Proposal

6.3 Parking Directional Signage

The *REF Requirements (2016)* require parking directional signage for side street parking, however, providing such signage is not commonplace for on-street parking. Also, given the extent of the study area, this is considered complex for drivers who can otherwise drive around to look for nearby parking as they would normally do. As such, it is suggested that variable message signs (VMS) be installed on major entry points to the study area as shown in Figure 6.5 to warn drivers of the parking changes and to seek alternative parking.



Adapted from Google Maps

Figure 6.5: Proposed VMS Locations

It is noted that there are limited opportunities for installing VMS within the study area due to narrow roadside space, particularly along Unwins Bridge Road (from St Peters) and Marrickville Road. Alternative signs may be required at these locations. The use of traffic signs should be used in conjunction with Live Traffic and other communication channels.

7. CONCLUSIONS

The key findings from the Sydenham Station bus layover parking investigation to assess the parking impacts of the proposed bus layover area at the corner of Railway Road and Burrows Avenue are summarised as follows:

- TfNSW's proposal includes:
 - Six 16m-long angle bus parking spaces on the southern side of Burrows Avenue with manoeuvring space at the northern end of Railway Parade for egress, replacing a total of 11 parallel parking spaces
 - A dedicated drivers amenity block with a lunchroom and toilets
 - The 14 parallel parking spaces along the northern side of Railway Parade converted into 13 45° angle car parking spaces
 - A reduction in 90° angle car parking spaces along the northern side of Burrows Avenue from 11 to six.
- Bitzios' parking inventory identified minor differences in supply from Matrix in Burrows Avenue, Railway Road, Buckley Street, Park Road and Yelverton Street
- There are no lane restrictions or loading, taxi or mail zones in the study area
- Surplus parking in addition to the parking supply was observed in Buckley Street, Railway Parade, Railway Parade (one-way), Hogan Avenue and George Street
- Conflicting parking signage was observed in Buckley Street, Railway Parade, Gleeson Avenue and Railway Road
- Some parking spaces along Burrows Avenue, Railway Road (one-way), Gleeson Avenue and Railway Parade are already used by rail replacement buses during major weekday rail shutdowns
- The occupancy results show that there was some surplus parking in Burrows Avenue, Buckley Street and Hogan Avenue
- The duration of stay results show that on the peak weekdays and weekend days:
 - Most vehicles stayed for one hour and only four to six vehicles parked during the whole 13-hour surveys
 - The average vehicle stays were six hours in Burrows Avenue and 3 to 3.5 hours in Railway Road (one-way).
- A total of 131 properties in Railway Road, George Street, Swain Street, Gleeson Avenue, Park Road and Yelverton Street have been identified as not having onsite parking capacity. Of the 21 properties within the proposal footprint (all in Railway Road and none in Burrows Avenue), only seven have onsite parking
- Under TfNSW's proposal, there is mostly insufficient parking across Burrows Avenue and Railway Road between Monday and Friday. The occupancy across all streets ranges between 55% and 80% and therefore there is still sufficient parking in surrounding streets
- It is suggested that VMS be installed on major entry points to the study area along Railway Road, Unwins Bridge Road (from Tempe) and Sydenham Road instead of parking directional signage due to not being commonplace for on-street parking and complexity for drivers. Unwins Bridge Road (from St Peters) and Marrickville Road may require alternative signs due to narrow roadside space. The use of traffic signs should be used in conjunction with Live Traffic and other communication channels.



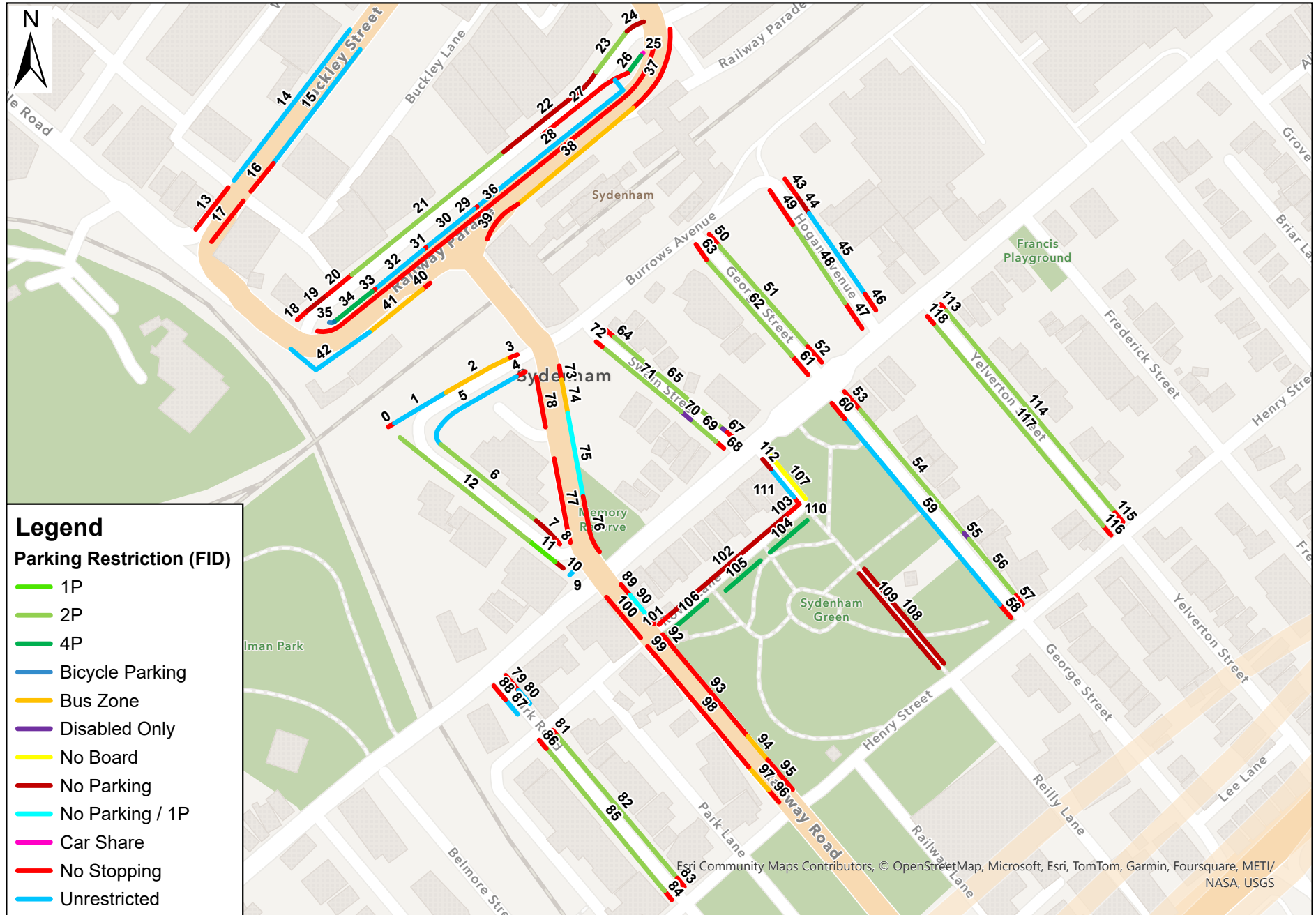
Appendix A: Parking Inventory

Item 2



Attachment 1







Segment	Segment Length, in ft	Segment Length, in mi	Parking Restrictions	Time/Other Restrictions	Maxim. Supply	Minim. Supply	Notes	
1 01 1	Burruss Avenue	North	Southbound	No Stopping	0	0		
1 01 2	Burruss Avenue	North	Southbound	Unrestricted	90 Angle Parking Rear to North Vehicles under 6m only	15	11	Used by rail replacement buses
1 01 3	Burruss Avenue	North	Southbound	Bus Zone	0	0		
1 01 4	Burruss Avenue	North	Southbound	No Stopping	0	0		
1 01 5	Burruss Avenue	North	Southbound	No Stopping	0	0		
1 01 6	Burruss Avenue	North	Southbound	Unrestricted	0	0		
1 02 1	Railway Road (one-way)	North	Southbound	05:00-12:00	8m 30pm Permit holders excluded Area MM	14	14	Used by rail replacement buses
1 02 2	Railway Road (one-way)	North	Southbound	No Parking	0	0		
1 02 3	Railway Road (one-way)	North	Southbound	05:00-12:00	90 Angle Parking Rear to North Vehicles under 6m only	0	0	
1 02 4	Railway Road (one-way)	North	Southbound	05:00-12:00	0	0		
1 02 5	Railway Road (one-way)	South	Southbound	05:00-12:00	0	0		
1 02 6	Railway Road (one-way)	South	Southbound	05:00-12:00	0	0		
1 02 7	Railway Road (one-way)	South	Southbound	05:00-12:00	0	0		
1 02 8	Railway Road (one-way)	South	Southbound	05:00-12:00	0	0		
1 02 9	Railway Road (one-way)	South	Southbound	05:00-12:00	0	0		
1 02 10	Railway Road (one-way)	South	Southbound	05:00-12:00	0	0		
1 02 11	Railway Road (one-way)	South	Southbound	05:00-12:00	0	0		
1 02 12	Railway Road (one-way)	South	Southbound	05:00-12:00	0	0		
1 02 13	Buckley Street	West	Westbound	No Stopping	0	0		
1 02 14	Buckley Street	West	Westbound	Unrestricted	0	0	Missing double arrow No Stopping sign. There is currently an No Stopping sign	
1 02 15	Buckley Street	East	Eastbound	Unrestricted	0	0	additional parked vehicles (observed across driveway) (single associated with rear by businesses)	
1 02 16	Buckley Street	East	Eastbound	Unrestricted	0	0		
1 02 17	Buckley Street	East	Eastbound	No Stopping	0	0		
1 02 18	Buckley Street	East	Eastbound	No Stopping	0	0		
1 02 19	Buckley Street	East	Eastbound	No Stopping	0	0		
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1 02 25	Buckley Street	East	Eastbound	No Stopping	0	0		
1 02 26	Buckley Street	East	Eastbound	No Stopping	0	0		
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1 02 28	Buckley Street	East	Eastbound	No Stopping	0	0		
1 02 29	Buckley Street	East	Eastbound	No Stopping	0	0		
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1 02 39	Buckley Street	East	Eastbound	No Stopping	0	0		
1 02 40	Buckley Street	East	Eastbound	No Stopping	0	0		
1 02 41	Buckley Street	East	Eastbound	No Stopping	0	0		
1 02 42	Buckley Street	East	Eastbound	No Stopping	0	0		
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1 03 4	Hogan Avenue	East	Eastbound	No Stopping	0	0		
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1 03 11	Hogan Avenue	East	Eastbound	No Stopping	0	0		
1 03 12	Hogan Avenue	East	Eastbound	No Stopping	0	0		
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1 03 96	Hogan Avenue	East	Eastbound	No Stopping	0	0		
1 03 97	Hogan Avenue	East	Eastbound	No Stopping	0	0		
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Item 2

Sydenham Bus Layover

Community
Engagement Report

February 2024



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Attachment 2

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Item 2

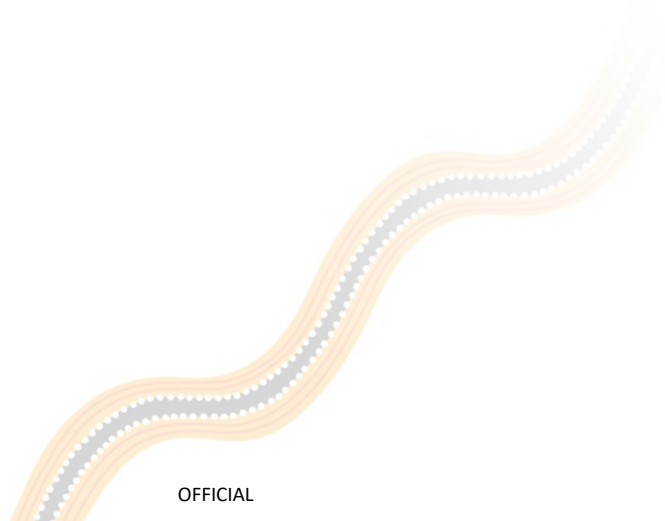
Acknowledgement of Country

Transport for NSW (Transport or TfNSW) acknowledges the Gadigal people of the Eora Nation, the traditional custodians of the land in which this project is located, and all peoples and nations.

We pay our respects to Elders past and present and celebrate the diversity of Aboriginal people and their ongoing cultures and connections to the lands and waters of NSW.

Many of the transport routes we use today – from rail lines, to roads, to water crossings – follow the traditional song lines, trade routes and ceremonial paths in Country that our nation's First Peoples followed for tens of thousands of years.

Transport for NSW is committed to honouring Aboriginal peoples' cultural and spiritual connections to the land, waters and seas and their rich contribution to society.



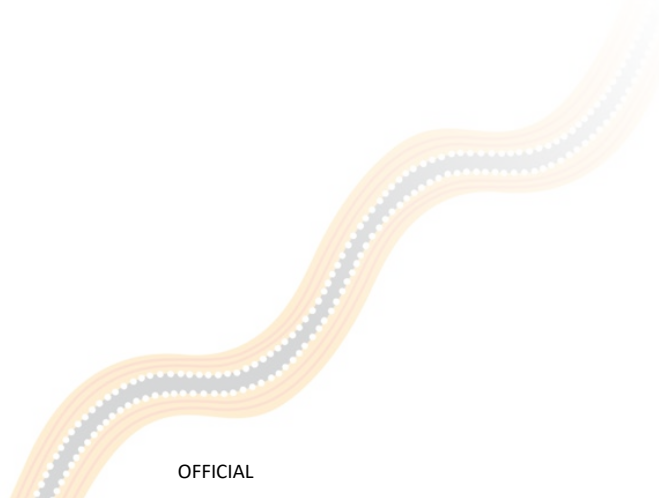
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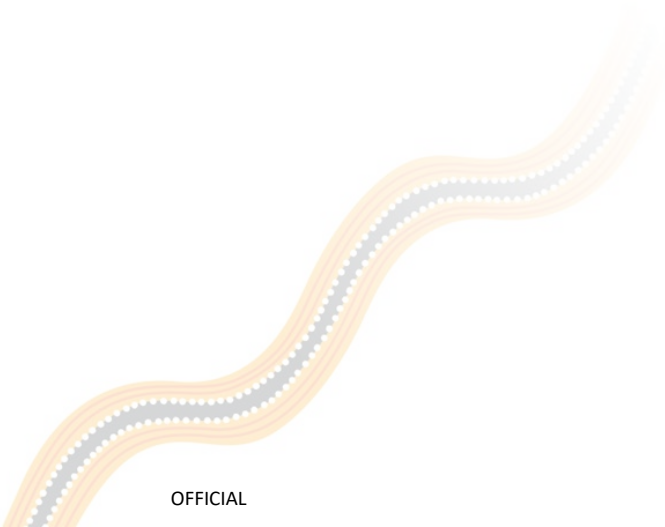


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1. Executive Summary

This report outlines the engagement that Transport for NSW (Transport) conducted with residents, businesses and key stakeholders on the proposed construction of Sydenham Bus Layover (bus layover, or the layover) at the corner of Railway Road and Burrows Avenue in Sydenham.

Transport is proposing a new bus layover facility as part of the Bus Priority Infrastructure Program (BPIP) to improve the reliability and efficiency of bus services while easing congestion for all road users.

The proposed bus layover would give bus drivers a place to park safely between services and improve bus travel times and service frequencies, increasing reliability for passengers. Sydenham requires a bus layover area to cater to the growing number of bus services in this area. At present, prior to picking up passengers, buses park along Burrows Avenue and Railway Road creating congestion and impacting bus operations.

The proposed bus layover facility at the corner of Railway Road and Burrows Avenue in Sydenham would:

- provide six bus parking spaces, a meal room and toilets for bus drivers
- create a path for pedestrians, passengers and the community to safely walk to and from Railway Road to Gleeson Avenue
- build a noise wall to separate the nearby homes from the new bus layover facility and minimise noise impacts from the bus layover facility
- install driveways for buses to enter from Railway Road and leave through Burrows Avenue
- remove parking spaces from Burrows Avenue to create enough space for buses to safely exit the layover area
- convert parallel car parking spaces on the northern side of Railway Road to angled parking, subject to approval from Inner West Council.

Community engagement began on Friday 24 November and ended on Friday 8 December 2023, with community notifications letterbox dropped and nearby properties doorknocked on Railway Road, Burrows Avenue and Wright Street. Feedback was invited in person, on the phone, via email and through the Sydenham bus layover project web page, the Transport Your Say website, and the NSW Government Have Your Say portal.

At the end of the engagement period, feedback was received from 18 individuals. The local community supported the proposed bus layover in principle but had concerns around parking and the proposed location.

Transport has considered all feedback received from the local community and has decided to progress development of the proposal with the following amendment:

- relocation of the pedestrian walkway between the noise wall and the bus layover, providing residential properties with more privacy. The noise wall will be set back half a metre from residential property boundaries to allow access for maintenance purposes.

Pending approval, construction is planned to start in early 2024. We will continue to inform the community and stakeholders as the project progresses.

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2. Purpose of this report

2.1 Background

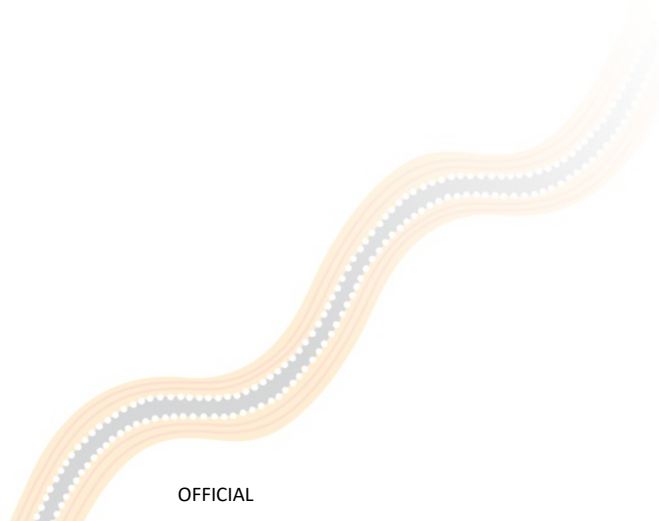
This report is regarding Transport's proposal for the Sydenham Bus Layover, community engagement and feedback to the proposal, as well as the next steps following the release of this report.

Sydenham Station is an important multimodal transport interchange. Buses servicing this major hub currently have insufficient space to terminate and layover between services. Delivery of the Sydney Metro project resulted in adjustments to the Bus Zone around Sydenham Station. Consequently, this has created increased bus congestion and is impacting bus operation, passengers and the safe movement of pedestrians and other road users.

Analyses of bus timetables show there are 306 bus arrivals at Sydenham Station per week that require some waiting time prior to scheduled departure times. The proposed bus layover facility will alleviate congestion, delays and reduce instances of buses 'double parking' on Railway Road and Burrows Avenue. This will assist in improving the on-time running of buses and local traffic flows on Railway Road and Burrows Avenue. Availability of this proposed bus layover will allow bus operators the opportunity to schedule more efficient bus movements and reduce dead (empty) running between Sydenham and Tempe on the Princes Highway, or other depots through inner-city streets.

The proposed bus layover facility will also provide a valuable operational asset to support assured delivery and increase efficiency of future bus services at this intermodal node between the Sydney Trains, Metro, Inner-West and Inner-East bus networks in alignment with Future Transport, the Greater Sydney Integrated Network Plan and the Greater Sydney Bus Network Strategy.

This report highlights the features of the proposed bus layover facility and details the community engagement conducted, and the project team's responses to feedback from local residents, businesses and other stakeholders.



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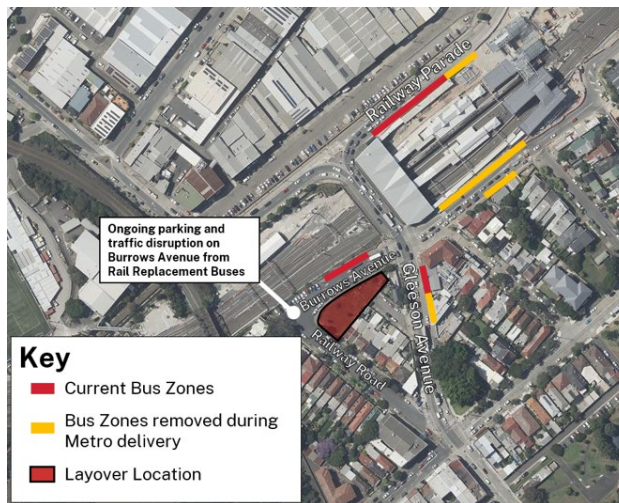
3. Project overview

Sydenham Station is an important multimodal transport interchange. Buses servicing this major hub don't have enough room to terminate and layover between services. This creates congestion on Railway Road, Burrows Avenue and Gleeson Avenue (a freight corridor to the Airport and Port Botany).

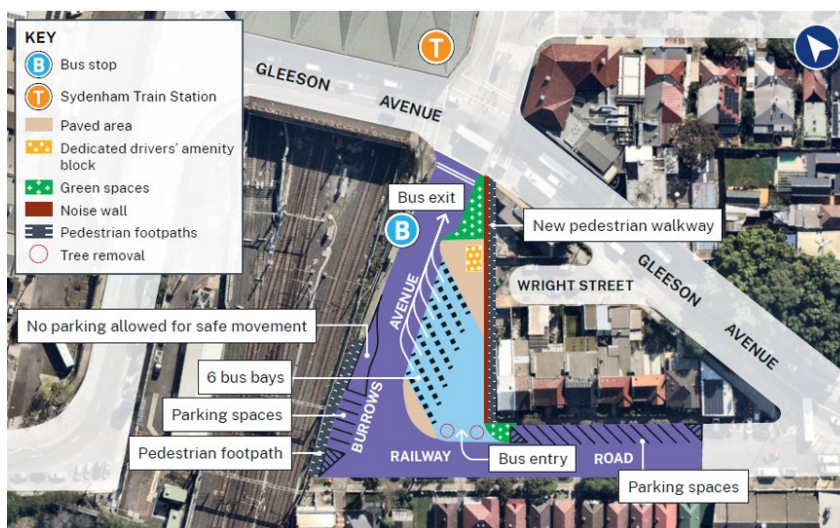
The limited bus layover options in the area result in buses idling in these streets, causing obstruction to pedestrians and cars, in active bus zones and surrounding streets. Safety issues, delays to passengers and bus services are currently being experienced as a result.

To resolve this issue, Transport for NSW proposes a bus layover facility at the corner of Railway Road and Burrows Avenue in Sydenham.

3.1 Proposed bus layover location



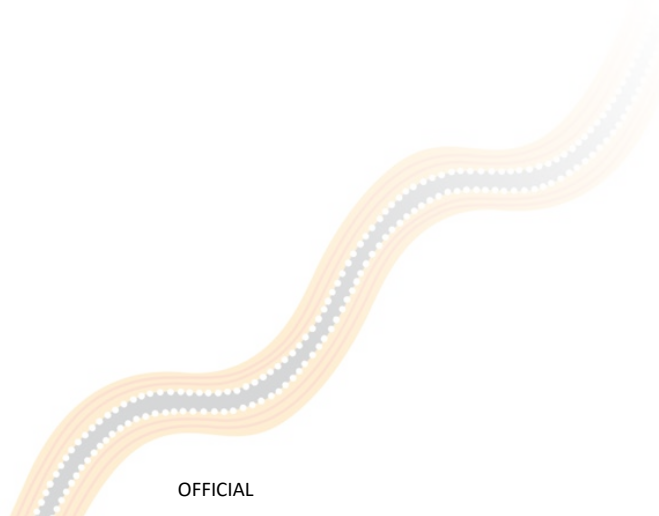
3.2 Original design proposal



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3.2 Amended design proposal



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4. Engagement approach

4.1 Engagement objectives

- To raise awareness of the Sydenham Bus Layover proposal
- Build preparedness and strategic readiness for changes in traffic and parking arrangements to the local area and seek comment, feedback, ideas, and suggestions on the proposal.
- Build a database of interested community members with whom we can continue to engage during the proposal's development and delivery.
- Engage with relevant councils, businesses and other community groups.
- Inform the community, businesses and other stakeholders on the proposal.

4.2 How engagement was done

Transport used an 'inform' and 'consult' engagement approach for this project:

- 'Inform' the community, businesses and other stakeholders on the proposal
- 'Consult' on changes to parking on Railway Road and Burrows Avenue.

Community engagement occurred from Friday 24 November to Friday 8 December 2023.

Community members were invited to provide their feedback through the Transport project website, Your Say Transport website, the NSW Government Have Your Say portal, as well as via face-to-face conversations, email correspondence, doorknocks, and phone conversations via the project info line.

Community engagement activities

Channel	Description
Have your say community notification	<ul style="list-style-type: none"> • 170 print notifications were letterbox dropped to residents and businesses across the proposal area • Email notifications to emergency services and local schools • Notifications and engagement with disability peak bodies through the Accessible Transport Advisory Committee
Transport project web page	<ul style="list-style-type: none"> • www.transport.nsw.gov.au/projects/current-projects/sydenham-bus-layover • 122 unique visitors accessed the project page
Your say Transport website	<ul style="list-style-type: none"> • yoursay.transport.nsw.gov.au/sydenham-bus-layover • 132 unique visitors accessed the Your say page
NSW Government Have Your Say portal	<ul style="list-style-type: none"> • www.nsw.gov.au/have-your-say/sydenham-bus-layover
Inner West Community Forum	<ul style="list-style-type: none"> • The Sydenham Bus Layover proposal was featured in the Inner West December livestream on Wednesday 6 December, reminding community members to have their say
Doorknocks	<ul style="list-style-type: none"> • On Thursday 23 and Friday 24 November, 24 properties were doorknocked along Railway Road and Wright Street. Direct face to face engagement was carried out with 15 residents at their residential properties. Two businesses were informed and engaged along Railway Road.
Key stakeholder briefings	<ul style="list-style-type: none"> • Inner West Council briefed 7 June and 24 November 2023 • Rail, Tram and Bus Union, and Transport Workers' Union of NSW briefed 19 October 2023

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5. Consultation summary/what we heard

5.1 Overview

Transport received feedback from 18 residents and local businesses regarding our proposed bus layover facility at the corner of Railway Road and Burrows Avenue.

Feedback provided that is not related to this proposal has been passed on to the relevant agency for their consideration. Comments in relation to public transport improvements and bus services have been passed on to the relevant team within Transport.

Issue Category	Issue Raised	Response
Access	Access to the rail corridor from Burrows Avenue must be maintained	Sydney Trains requires access to their assets at all times for maintenance. Transport has reviewed the design to maintain access to the rail corridor from Burrows Avenue. A 'No Parking' sign will be installed in front of the railway gate on Burrows Avenue/Railway Road and a chevroned area will be marked at the access gate.
Alternative layover location	Transport should consider alternative layover locations, including Railway Parade, as well as the lower part of Railway Parade between Marrickville Road and Sydenham Road, which was the preferred option in 2018 as part of the Metro upgrade for Sydenham	<p>Transport appreciates the community's feedback on alternative locations for a bus layover facility. We have evaluated suggestions for other bus layover locations raised by the community. The alternative location on the lower part of Railway Parade between Marrickville Road and Sydenham Road, noted in the 2018 Planning Approval Consistency Assessment Form, relates to traffic changes as part of Sydney Metro's proposed projects. As this project is being delivered under the Bus Priority Infrastructure Program, the project objectives are separate to Sydney Metro. Consequently, the 2018 Planning Approval Consistency Assessment Form does not apply to this project.</p> <p>A bus layover requires adequate space to accommodate bus parking as well as entry and exit manoeuvres. There is insufficient space to locate a bus layover on upper Railway Parade.</p> <p>The proposed bus layover will provide a valuable operational asset to support assured delivery and increase efficiency of existing and future bus services at this intermodal node between the Sydney Trains, Metro, Inner-West and Inner-East bus networks. This project along with other layover projects align with the Future Transport, the Greater Sydney Integrated Network Plan and the Greater Sydney Bus Network Strategy.</p>

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		Overall, Transport expects the project to benefit the community and wider bus network. The proposed bus layover is expected to improve local traffic flows, road safety, and on-time running by reducing congestion, delays, and reduce instances of buses double parking on Railway Road and Burrows Avenue.
Amenity	The proposed layover and noise wall will be an eyesore that will attract graffiti and reduce property value	Transport will carry out a visual impact assessment to evaluate the landscape character and visual impact of the bus layover facility, including the building and noise wall and assess how it fits into the surrounding environment. The visual impact assessment will be included in the Review of Environmental Factors and mitigations will be provided where required. Transport will publish the Review of Environmental Factors report on the project website once completed. The final design will look at solutions for the surface of the noise wall as part of graffiti prevention. The project team will work with Transport's maintenance teams to ensure appropriate maintenance for the bus layover, including the noise wall.
	Will there be street lighting for the new footpath	Yes, lighting will be provided within the bus layover which will light the footpath. The lighting assessment for the bus layover has been performed in accordance with the Australian Standards, Lighting for Roads and Public Spaces (AS/NZS 1158.3.1.)
	Lighting for the new footpath needs to be directed away from residential properties	Transport understands residents' concerns regarding potential light spillage from the construction of the proposed bus layover. This consideration has been included in the lighting assessment of the bus layover. Properties on the eastern boundary of the bus layover will be shielded from light spillage by the noise wall.
Bus Services	What hours will the buses use the layover?	Hours that buses will use the bus layover facility will be according to bus timetabling, dependent on public transport needs and bus services Transport needs to provide the community.
	Bus drivers need to turn off their engines when at the layover	Transit Systems will be the entity managing the buses and layover operation. Transport does not expect bus drivers to continue running their engines when parked and stationary.
	Noise from the layover	To manage operational noise from the bus layover, Transport has taken a proactive approach and incorporated a noise wall in the design. The noise wall will be located between the layover and the adjacent properties to provide noise shielding from the layover. As part of the Review of Environmental Factors assessment for the project, a noise assessment of the operation of the layover will be undertaken. The results of the noise assessment will inform the height of the noise wall panels. Transport seeks to minimise noise impacts from the layover operation and along with the noise wall, will consider other safeguards and management measures identified in the assessment. Results of the noise

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		assessment and associated measures will be included in the Review of Environmental Factors report which will be published on the project website.
Construction	Noise impact on local residents during construction	Transport understands residents' concerns regarding any noise produced during the construction of the proposed bus layover construction. As part of the Review of Environmental Factors assessment for the project, a noise assessment of the construction of the layover will be undertaken. This will include an assessment of construction hours, construction activities and predicted noise impacts. Safeguards and management measures will be identified to minimise noise impacts. Transport will update the community on the measures to be implemented in the Review of Environmental Factors report which will be published on the project website.
Consultation	Two weeks of consultation is not sufficient	A two-week period is the standard timeframe to get feedback on projects of this scale. To ensure that residents and other stakeholders on Railway Road were reached, doorknocks were carried out on 23 and 24 November, resulting in direct face to face engagement with 15 residents and two businesses. Additionally, the project team accepted all feedback received after the closing date for submissions. We received feedback from 18 individuals in total.
	Why doesn't Transport post directly to local groups, such as Tempe 2020, on social media?	Transport is unable to post directly to community groups on social media as most group pages (like Tempe 2020) are set to private and not accessible by non-members.
Environment	Alternatives to tree removal should be considered	During the concept development phase, Transport sought to avoid or minimise tree removal by investigating alternative designs. Unfortunately, as the project site is constrained due to the limited available space, two mature trees located at the proposed layover entry point need to be removed. The two trees proposed to be removed as part of the project will be replaced with four trees, to be planted within the Inner West local government area (subject to Council approval). Additionally, the project has allocated space within the northern section of the site for a turfed area.
	Why was the DA for removal of two Melaleucas (paper barks) not advertised?	The approval process for removal of the paperbark trees did not involve a development application (DA). Transport has consulted with Inner West Council and our environmental team, and the trees will be removed in accordance with Transport guidelines, which include offsetting the removal on a two for one basis.
	Native Vegetation should be used for this project	Transport prefers to use native vegetation for landscaping on projects, particularly when it is endemic to the area. More details on the species of trees to be planted as part of the proposed bus layover will be released in the Review of Environmental Factors report.

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	More trees should be planted as part of the proposal	Transport will be offsetting the removal of trees on a two for one basis. The two trees proposed to be removed as part of the project will be replaced with four trees, to be planted within the Inner West Council local government area (subject to Council approval.) The Inner West Council will manage the tree planting locations.
Noise wall	How high would the proposed noise wall be?	The results of the noise assessment for the proposed bus layover facility will inform the height of the noise wall along with the visual impact assessment. The results will be included in the Review of Environmental Factors report which will be published on the project website.
	What would be the impact on light to adjoining properties from the noise wall?	To address residents' concerns regarding the impact on natural lighting, Transport will perform a lighting assessment of the bus layover. This will be completed once the proposed design for the noise wall has been developed and will form part of Inner West Council's lighting review to assess the impact to natural lighting from the bus layover project. The results will be included in the Review of Environmental Factors report which will be published on the project website.
	The noise wall will not do enough to mitigate noise from the layover	As part of the Review of Environmental Factors assessment for the project, a noise assessment of the operation of the bus layover will be undertaken. The results of the noise assessment will inform the noise wall panel height. Transport seeks to minimise noise impacts from the layover operation and along with the noise wall, will consider other safeguards and management measures identified in the assessment. Results of the noise assessment and associated measures will be included in the Review of Environmental Factors report which will be published on the project website.
Parking	Railway Road is used for parking buses for rail replacement services, would a permanent layover replace this practice?	The proposed bus layover is a permanent facility and will be used by regular bus services as well as by rail replacement services. The layover is expected to improve local traffic flows, road safety, and on-time running by reducing congestion, delays, and instances of buses 'double parking' on Railway Road and Burrows Avenue. We do not expect to exceed six buses at the layover at any given time.
	There is not enough parking in the street and angled parking does not provide enough spaces to offset the loss of spaces, negatively impacting residents and businesses	Transport has undertaken a parking assessment and has worked to optimise the parking spaces in Railway Road and Burrows Avenue. The introduction of angled parking provides an additional five spaces to the existing eight spaces in the section along Railway Road between 105 and 117 Railway Road. Transport has also carried out a review of the Sydenham residential parking permit scheme and available parking spaces post-project delivery. There are sufficient available parking spaces within the project scope area (including Wright Street) to accommodate the permit allocation available for properties along Railway Road.

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	Angled parking looks the wrong way	The proposed angled parking is in accordance with Australian Standard 2890 Parking Facilities.
	Angled parking would narrow the road and increase the risk of crashes	The introduction of angled parking has historically been shown to reduce vehicle speeds which creates a safer road environment. Angled parking will also not adversely affect traffic flows along Railway Road.
	Will parking on the southern side of Railway Road be modified or removed?	Parking spaces on the southern side of Railway Road will not be modified or removed as part of this project scope. The parking changes are on the northern side of Railway Road and on Burrows Avenue.
	Why is angled parking on the right side of Railway Road and not the left?	The angled parking is proposed for the northern side of Railway Road to accommodate bus turning manoeuvres into the layover.
	What is the net change in parking spaces?	<p>The parking changes to accommodate the bus layover will result in a net reduction of 12 parking spaces.</p> <p>For Railway Road on the southern side, there is no change to the existing 23 parking spaces. On the northern side there are currently eight parking spaces which will increase to 13 parking spaces with the introduction of angled parking.</p> <p>On the western side of Burrows Avenue, 12 parking spaces will be reduced to six. The 11 informal parking opportunities in the right turn pocket on the eastern side of Burrows Avenue will be removed as that area forms the layover exit for the buses.</p> <p>Transport has undertaken a parking assessment to optimise parking spaces. Transport has also carried out an assessment of the Sydenham residential parking permit scheme and available parking spaces post-project delivery. The results of the assessments indicate that there are sufficient available parking spaces within the project scope area (including Wright Street) to accommodate the permit allocation available for properties along Railway Road.</p>
Pedestrian access	Will the pedestrian walkway next to the layover integrate with small Wright Street?	The proposed footpath will be located between the noise wall and the proposed bus layover facility, noting the walkway will be separated from the layover with a pedestrian fence. This means that Wright Street will not be accessible from the footpath due to the proposed noise wall. This is to ensure privacy and effective noise mitigation for adjacent properties on the eastern boundary.
	The intersection of Gleeson and Burrows	The current traffic signal phasing of Gleeson Avenue and Burrows Avenue has been reviewed as part of project development and Transport has determined that no changes are required.

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	Avenue should have pedestrian priority	
	Footpath on Burrows Avenue should be widened	<p>Transport has assessed the existing pedestrian infrastructure and determined there is sufficient existing pedestrian infrastructure on the western side of Burrows Avenue (including footpath width) to enable safe pedestrian movements to the Burrows Avenue bus stop (Stop ID: 204421) and Sydenham Station.</p> <p>The footpath on the eastern side of Burrows Avenue on the boundary of the bus layover will be permanently removed to enable safe and efficient bus exit from the layover. The new walkway will provide pedestrian a safe route between Gleeson Avenue and Railway Road.</p>
	The proposed walkway will create noise next to properties	Transport has updated the design, the proposed walkway will now be located between the noise wall and the proposed bus layover, noting the walkway will be separated from the layover with a pedestrian fence. The noise wall will provide noise shielding to adjacent properties from pedestrian traffic.
	Commuters should not need to cross Gleeson Avenue to get to the Burrows Avenue bus stop	There is sufficient existing pedestrian infrastructure to facilitate safe pedestrian movements between Sydenham Station and Burrows Avenue bus stop (Stop ID: 204421). There are existing signalised pedestrian crossings across Burrows Avenue and Gleeson Avenue. Transport does not have any plan to move bus stops within and outside the proposal area.
	The proposed walkway will make travel to the bus stop on Burrows Avenue from Railway Road longer	The footpath on the eastern side of Burrows Avenue on the boundary of the bus layover will be permanently removed to enable safe and efficient bus exit from the layover. Pedestrians would be able to use a new walkway between Gleeson Avenue and Railway Road. Along with the existing footpath to Burrows Avenue along Railway Road, the new walkway will provide an alternative safe option for pedestrians.
Proposed layover	This area was previously proposed as part of the Metro but did not go ahead, what changed?	The 2018 Planning Approval Consistency Assessment Form relates to traffic changes as part of Sydney Metro's proposed projects. The proposed bus layover facility is associated with the Transport's Bus Priority Infrastructure Program which supports the overall Future Transport Strategy.
	Why build the layover now when the area is expected to be rezoned and redeveloped after the Bankstown Line Closure?	The proposed bus layover will provide a valuable operational asset to increase efficiency of existing and future bus services at this intermodal node between the Sydney Trains, Metro, Inner-West and Inner-East bus networks in alignment with Future Transport, the Greater Sydney Integrated Network Plan and the Greater Sydney Bus Network Strategy.
	The cost outweighs the benefits	Transport has performed a benefits assessment as part of the proposal. The bus layover will provide bus drivers a place to park safely between services, improve operating efficiencies and increase reliability for

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		passengers, leading to reduced operating costs. The assessment concluded over the lifetime of the project, the benefits provided by the layover are expected to exceed the project capital cost.
	Existing stormwater pipe at the location of the proposed layover has caused flooding to adjacent properties	Transport will liaise with Sydney Water and Inner West Council to manage storm water drainage at the proposed site.
	Why not build a toilet inside the station instead of at the layover	Sydenham Station already has toilet facilities with wheelchair accessibility and baby change tables. The purpose of the amenity block at the layover is to enable bus drivers to access amenities between shifts as efficiently as possible without the need to walk to Sydenham Station.
Safety	Will drivers reverse into and out of the facility?	The bus layover has been designed to allow buses to enter and exit the facility in forward motion. Buses will enter the layover from Railway Road and exit onto Burrows Avenue.
	Bus drivers would need to cross the road from the bus stop to use the amenity block	Bus operators laying over in Burrows Avenue will need to cross Burrows Avenue to access toilet and meal room facilities at the bus layover.
	How will buses enter and exit the layover facility safely?	The bus layover has been designed with the safety of pedestrians, road users and passengers as the priority. All buses will enter and exit the layover in a forward motion. A new pedestrian walkway between Gleeson Avenue and Railway Road and the existing walkway on the north side of Burrows Avenue will separate pedestrians from bus movements.
Traffic	The layover will create more traffic on Railway Road and Burrows Avenue, creating congestion and noise	Transport expects the project to benefit the community and wider bus network. The proposed bus layover facility is expected to improve local traffic flows, road safety, and bus timetable reliability by reducing congestion, delays, and reducing instances of buses 'double parking' on Railway Road and Burrows Avenue. To manage noise to adjacent properties, the proposal includes the construction of a noise wall. The noise wall will run along the eastern boundary of the bus layover and will provide significant noise shielding.
	Will the configuration of lanes at the Intersection of Gleeson Avenue and Burrows Avenue change as part of this proposal?	The configuration of lanes at the Gleeson Avenue and Burrows Avenue intersection will not change as part of this project.

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Not included as part of this project	Introduce a right hand turn signal phase from Gleeson Avenue into Unwins Bridge Road	The Gleeson Avenue and Unwins Bridge Road intersection is outside the scope of the proposed bus layover facility. Transport has shared this feedback with the relevant team for investigation.
	The pedestrian zebra crossing on Burrows Avenue, adjacent to the train station, needs to be raised into a wombat crossing	The Burrows Avenue zebra crossing to Sydenham Station is outside the scope of this proposal. Transport has shared feedback with the relevant team for investigation.
	Transport should build a commuter carpark next to Sydenham Station	Commuter car parks are delivered under Transport's Commuter Car Park Program. At present there are no plans to build parking facilities near Sydenham Station. Due to the location of the station, particularly its proximity to the Sydney CBD, commuters are not expected to drive to the station by car.

5.2 Engagement outcomes

Transport would like to thank everyone who took the time to consider the proposal and provide feedback. Transport received feedback from 18 residents and local businesses as well as other stakeholders regarding the proposed bus layover facility at the corner of Railway Road and Burrows Avenue.

Key areas of concern were parking and the proposed location.

Transport has considered all feedback received from the local community and has decided to progress development of the proposal with the following amendment:

- Relocating the pedestrian walkway between the noise wall and the bus layover, providing residential properties with more privacy. The noise wall will be set back half a metre from residential property boundaries to access for maintenance purposes.

Transport notes the impact on parking in the area. We encourage parking on properties where possible, parking on Unwins Bridge Road, Wright Street and surrounding local streets.

Feedback received on the noise wall and bus driver amenities will be considered as the design process progresses.

5.3 Next steps

- Inform the community of progress on the proposed bus layover facility
- Publish the Review of Environmental Factors report on the project web page
- Endorsement of the proposed bus layover and parking changes by Inner West Council
- Notify community members and start construction work on the bus layover.

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6. Appendix

6.1 Community Update

Transport for NSW

Sydenham Bus Layover Have Your Say

November 2023



The NSW Government is proposing a new bus layover facility as part of the Bus Priority Infrastructure Program to improve the reliability and efficiency of bus services, while easing congestion for all road users.

Sydenham requires a bus layover area to cater to the growing number of buses services in this area. Prior to picking up passengers, buses currently park along Burrows Avenue creating congestion and safety issues for pedestrians and drivers.

Transport is proposing a bus layover area at the corner of Railway Road and Burrows Avenue. This would give drivers a place to park safely between services and improve bus travel times and service frequencies, increasing reliability for passengers.

Key features

The buses would enter from Railway Road and exit into Burrows Avenue at the proposed bus layover which would have:

- six bus parking spaces
- a dedicated drivers' amenity block with a lunch room and toilets
- a noise wall between residential properties and the layover facility
- landscaping.

Pedestrian walkway

Transport would also create a separate pedestrian walkway to provide the public with a direct pathway to Sydenham Station.

Benefits

- Bus layover with space for six buses and an amenities block for drivers, freeing up the streets and improving traffic flow
- Improved bus on time running and reliability

- New, separated and safer walkway for pedestrians and residents to get to Sydenham Station
- Improved safety and connectivity for pedestrians, commuters and drivers
- Reduced emissions from buses idling and circling between services.

Expected impacts

- Some loss of parking will occur as part of this project; existing street parking on Railway Road will be converted to angled parking to provide additional parking spaces
- Two trees in the nature strip on Railway Road would need to be removed to create the entry into the layover.

If approved construction is expected to take up to five months to complete, weather permitting.

We have included a map on the reverse side of this notification.

FAQs

Will any car spaces be lost?

Parking loss would be limited with the creation of angled parking on Railway Road, replacing some of the spaces required for the layover space.

Will access change for residents?

Yes – during pavement and footpath work on Burrows Avenue and when the proposed entry and exit points are being established, but these changes would be temporary.



Transport for NSW acknowledges the Gadigal people of the Eora Nation as the Traditional Custodians of the lands on which we work and pays respect to Elders past and present.

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Proposed bus layover facility



Image Credit: Aerial Photography Nearmap

Have your say

Transport invites your feedback on the proposed bus layover at the corner of Railway Road and Burrows Avenue in Sydenham.

Have your say by **Friday 8 December 2023** at
yoursay.transport.nsw.gov.au/sydenham-bus-layover

You can also email projects@transport.nsw.gov.au or
call us on **1800 684 490**.

Contact us



Project Infoline **1800 684 490**



projects@transport.nsw.gov.au



Have your say at
yoursay.transport.nsw.gov.au/sydenham-bus-layover



For the latest traffic updates:
Call 132 701, visit [livetraffic.com](https://www.livetraffic.com) or
download the app Live Traffic NSW



Interpreter service

For languages other than English call **131 450**
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131 450 पर कॉल करें

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tiếng Anh, gọi số **131 450**

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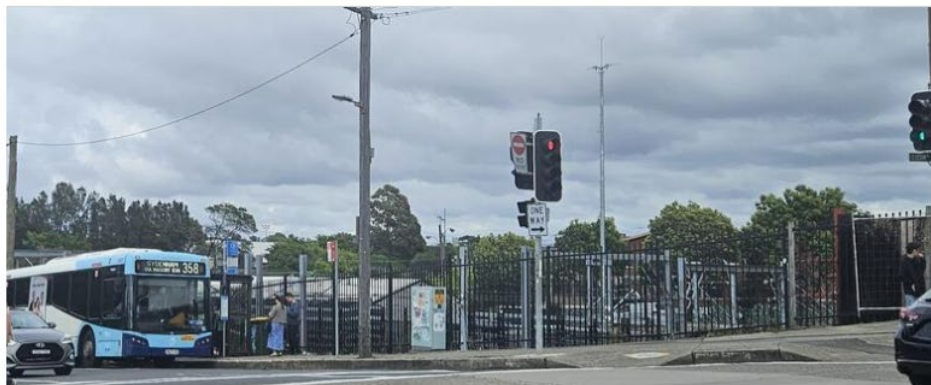
6.2 Transport website

Home / Projects / Current Projects / Sydenham Bus Layover

Sydenham Bus Layover

Reviewed 28 Nov 2023

The NSW Government is funding a new bus layover facility as part of the Bus Priority Infrastructure Program to improve the reliability and efficiency of bus services, while easing congestion for all road users.



Sydenham bus layover

Latest news

November 2023 – Have Your Say

Transport invites your feedback on the proposed bus layover at the corner of Railway Road and Burrows Avenue in Sydenham.

Have your say by Friday 8 December 2023 at [the consultation website](#).

Please view or download the [November 2023 Have Your Say \(PDF, 1.19 MB\)](#) for more information.

<https://www.transport.nsw.gov.au/projects/current-projects/sydenham-bus-layover>

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6.3 Your Say website

Sydenham Bus Layover

The NSW Government is funding a new bus layover facility as part of the Bus Priority Infrastructure Program to improve the reliability and efficiency of bus services, while easing congestion for all road users.

Sydenham requires a bus layover area to cater to the growing number of buses services in this area. Prior to picking up passengers, buses currently park along Burrows Avenue which creates congestion and safety issues for pedestrians and drivers.

Transport is proposing a bus layover area at the corner of Railway Road and Burrows Avenue. This would give drivers a place to park safely between services. [Continue reading](#)

Documents

[sydenham-bus-layover-hys-nov-23.pdf](#)
(1.19 MB) (pdf)

REGISTER

for project updates

SURVEY

Sydenham Bus Layover - Have Your Say

We are seeking feedback on the proposal and you can have your say by Friday 8 December



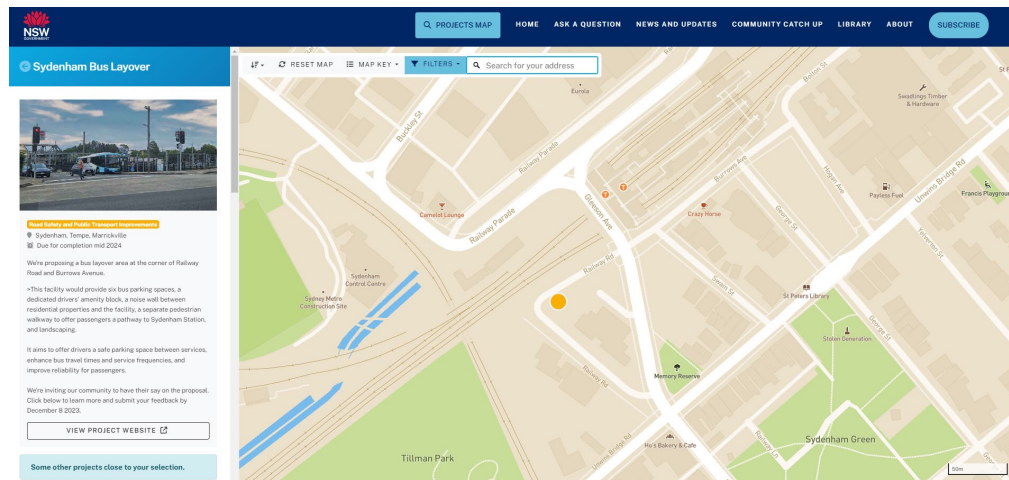
Take Survey

<https://yoursay.transport.nsw.gov.au/sydenham-bus-layover>

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6.4 Inner West portal



<https://caportal.com.au/tfns/inner-west>












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GENERAL				SAFETY				5. SUBSURFACE DRAINAGE				
1. THE INFORMATION CONTAINED IN THESE DRAWINGS PRODUCED BY AURECON IS SOLELY FOR THE USE OF TRANSPORT FOR NSW FOR THE PURPOSE FOR WHICH IT HAS BEEN PREPARED, AURECON AUSTRALIA PTY LTD UNDERTAKES NO DUTY TO OR ACCEPTS NO RESPONSIBILITY TO ANY THIRD PARTY WHO MAY RELY UPON THIS DOCUMENT.				1. THE CONTRACTOR IS RESPONSIBLE FOR SAFETY ONSITE. 2. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL EXCAVATION WORKS IN A STABLE CONDITION, AND ENSURING NO PART SHALL BE OVERSTRESSED DURING CONSTRUCTION ACTIVITIES, PROVISION OF TEMPORARY BRACING, SHORING AND BATTERING IS BY THE CONTRACTOR AS REQUIRED TO PROVIDE A SAFE WORKING ENVIRONMENT. 3. THE CONTRACTOR MUST MAKE PROVISION FOR THE SAFETY OF NORMAL VEHICULAR TRAFFIC AND PEDESTRIANS, AND OTHERS INCLUDING UNAUTHORISED INTRUDERS. 4. ALL PITS, MANHOLES, PUMP STATIONS AND OTHER CONFINED SPACES SHOULD BE FITTED WITH A CONFINED SPACE WARNING SIGN.				5.1. SUBSURFACE DRAINAGE CONNECTIONS TO THE DRAINAGE PITS SHALL BE IN ACCORDANCE WITH TNSW STANDARD PAVEMENT SUBSURFACE DRAINAGE DETAILS VOLUME 6 - SUPPLEMENTARY MODEL DRAWINGS. 5.2. GEOTEXTILE TYPE FOR SUBSURFACE TRENCH AND EDGE DRAINS SHALL BE IN ACCORDANCE WITH PROJECT TNSW SPECIFICATION R83, APPLICATION G3 STRENGTH CLASS A. GEOTEXTILE LAPS SHALL BE IN ACCORDANCE WITH TNSW MODEL DRAWING MD.R33.A06. 5.3. ALL SUBSURFACE DRAINAGE TRENCH DRAINS SHALL BE INSTALLED WITH A LONGITUDINAL GRADIENT OF NOT LESS THAN 0.5%, TRENCH DRAIN TO BE CONSTRUCTED IN ACCORDANCE WITH R33 AND STANDARD DRAWING MD.R33.A06. CORRUGATED PERFORATED AND NON-PERFORATED PLASTIC PIPE TO CONFORM TO TNSW 3552. 5.5. BITUMINOUS SPRAYED SEALS ARE NOT TO BE PLACED OVER THE TOP OF SUBSURFACE DRAINAGE.				
2. ALL WORKS SHALL BE PERFORMED IN ACCORDANCE WITH TNSW STANDARD DRAWINGS AND SPECIFICATIONS UNLESS OTHERWISE SHOWN.				OTHER ENVIRONMENTAL NOTES				UTILITY SERVICES				
3. ANY DISCREPANCIES OR OMISSIONS FROM THESE DOCUMENTS SHALL BE REFERRED TO AURECON FOR CLARIFICATION AND APPROVED BY TNSW.				1. ACCEPTABLE RECEPTORS WILL BE PROVIDED FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHING, LIGHT WEIGHT MATERIALS AND LITTER.				1. THESE DRAWINGS SHALL TO BE READ IN CONJUNCTION WITH ALL PUBLIC OR PRIVATE SERVICE PROVIDER DRAWINGS, INCLUDING BUT NOT LIMITED TO: - JEMENA DRAWINGS - AUSGRID DRAWINGS - TRANSGRID - NBN DRAWINGS - SYDNEY WATER DRAWINGS - TNSW SIGNAL PLAN DRAWINGS - TELSTRA, OPTUS, AND TPG DRAWINGS - SYDNEY TRAINS DRAWINGS - INNER WEST COUNCIL				
4. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE, ALL CHANGES AND LEVELS ARE IN METERS UNLESS NOTED OTHERWISE.				SURVEY NOTES				2. EXISTING UTILITIES SHOWN ON DRAWINGS ARE INDICATIVE ONLY AND MAY NOT INCLUDE ALL SERVICES PRESENT, AURECON TAKES NO RESPONSIBILITY FOR THE UTILITY INFORMATION AS SHOWN ON THESE DRAWINGS.				
5. ALL DIMENSIONS RELEVANT TO SETTING OUT OR OFF-SITE WORK SHALL BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION AND FABRICATION HAS COMMENCED.				3. THE AERIAL MAP PROVIDED IS USED AS THE BASIS FOR DESIGN, AURECON DOES NOT GUARANTEE ITS SUITABILITY AS A BASIS FOR CONSTRUCTION DRAWINGS, SHOULD DISCREPANCIES BE ENCOUNTERED DURING CONSTRUCTION BETWEEN THE AERIAL IMAGE AND ACTUAL SURVEY DATA, CONTACT THE PRINCIPAL'S REPRESENTATIVE.				3. IT IS THE CONTRACTORS RESPONSIBILITY TO LIAISE WITH EACH UTILITY SERVICE PROVIDER ON SITE, TO LOCATE AND IDENTIFY THE SIZE, POSITION, LINE AND LEVEL OF ALL UTILITY SERVICES IN BOTH PUBLIC AND PRIVATE LAND, PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES.				
6. DO NOT SCALE FROM DRAWINGS.				4. CONTRACTOR IS TO VERIFY SURVEY AND SETOUT INFORMATION PRIOR TO CONSTRUCTION.				4. THE CONTRACTOR MUST TAKE EVERY PRECAUTION TO PROTECT EXISTING AND NEW UTILITY SERVICES THROUGH THE COURSE OF THE CONTRACT.				
7. ORIGIN OF LEVELS - AHD COORDINATES TO MGA20 - MAP GRID AUSTRALIA 2020.				LINE MARKING AND SIGNAGE NOTES				5. ALL WORKS INVOLVING UTILITY SERVICES TO BE UNDERTAKEN TO THE SATISFACTION OF THE UTILITY SERVICE PROVIDER, THE CONTRACTOR WILL BE RESPONSIBLE FOR ENGAGING WITH THE UTILITY SERVICE PROVIDER, THE EXECUTION OF THE WORK TO THEIR REQUIREMENTS AND PROCUREMENT OF APPROVALS FOR WORKS UNDERTAKEN.				
8. WHERE A PROPRIETARY ITEM (OR EQUIVALENT) IS SPECIFIED, AND AN EQUIVALENT ITEM IS PROPOSED, THE CONTRACTOR SHALL PROVIDE MANUFACTURERS SPECIFICATIONS FOR BOTH PRODUCTS TO TNSW FOR APPROVAL AND DEMONSTRATE THAT THE PRODUCT PERFORMANCE IS EQUIVALENT OR BETTER, PRIOR TO USE.				1. THE FOLLOWING REFERENCES HAVE BEEN USED AS A BASIS FOR DESIGN: 1.1. AS 1742.1 MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES PART 1: GENERAL INTRODUCTION AND INDEX OF SIGNS 1.2. AS 1742.2 MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES PART 2: TRAFFIC CONTROL DEVICES FOR GENERAL USE. 1.2. AS 1742.15 MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES PART 15: DIRECTION SIGNS, INFORMATION SIGNS AND ROUTE NUMBERING. 1.3. AUSTRROADS GUIDE TO ROAD DESIGN PART 3: GEOMETRIC DESIGN. 1.4. TS 06307 INSTALLATION AND MAINTENANCE OF SIGNS. 1.5. TS 05462.8 DELINEATION PART 8 DIAGONAL AND CHEVRON MARKINGS,				6. ALL WORKS INVOLVING UTILITY SERVICES MUST ONLY BE UNDERTAKEN USING PLANS APPROVED BY THE UTILITY SERVICE PROVIDER.				
9. ALL PROPRIETARY PRODUCTS ARE TO BE INSTALLED FIXED AND TESTED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.				PAVEMENTS				7. ALL SERVICE PIT COVERS AND MARKERS ARE TO BE PLACED IN ACCORDANCE WITH THE LOCATIONS AS SHOWN ON THE PUBLIC DOMAIN DRAWINGS, AND IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATION.				
10. DURING CONSTRUCTION, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT THE STRUCTURES AND EXCAVATIONS ARE MAINTAINED IN A SAFE AND STABLE CONDITION AT ALL TIME AND NO PART IS TO BE OVERSTRESSED, THE CONTRACTOR SHALL DEVELOP WORK METHOD STATEMENTS FOR ALL ERECTION OF STRUCTURAL STEEL/FORMWORK/ DEMOLITION/EXCAVATION/TILT PANELS ETC, AND PROVIDE TEMPORARY WORKS SUCH AS BRACING, PROPPING AND SHORING ETC, TO KEEP THE WORKS AND EXCAVATIONS STABLE AND FREE FROM WATER AT ALL TIMES. THE CONTRACTOR IS TO ENGAGE A STRUCTURAL ENGINEER TO DESIGN AND CERTIFY THE TEMPORARY WORKS.				1. APPLICATION OF TACKCOAT IS AS FOLLOWS • APPLICATION RATE OF BETWEEN 0.15L/M ² AND 0.30L/M ² OF RESIDUAL BITUMEN. • AT VERTICAL FACES AT JOINTS, THE APPLICATION RATES MUST BE DOUBLED THE ABOVE POINT. 2. HIGH FRICTION ASPHALT TO HAVE A MINIMUM POLISHED AGGREGATE FRICTION VALUE (PAFV) OF 56. 3. CONCRETE BASE 3.1. ALL WORKS MUST BE IN ACCORDANCE WITH TNSW QA R83. 3.2. THE CONCRETE BASE TO BE REINFORCED WITH SYNTHETIC MACRO FIBRE STRUX 9040 AT A MINIMUM RATE OF 4.8 Kg/m3 /OR SKAFIBRE FORCE 48 PP AT A MINIMUM RATE OF 5.7 Kg/m3/ 3.3. THE CONCRETE BASES SHALL BE CONSTRUCTED AND TESTED IN ACCORDANCE WITH TNSW QA R83 SPECIFICATION. IT IS NOTED THAT A MINIMUM COMPRESSIVE STRENGTH OF 48 MPa IS REQUIRED FOR THE CONCRETE BASE REINFORCED WITH SYNTHETIC MACRO FIBRES. 4. LEAN MIX CONCRETE 4.1. ALL WORKS MUST BE IN ACCORDANCE WITH TNSW QA R82. 4.2. THE LMC SUBBASE SHALL BE CONSTRUCTED AND TESTED IN ACCORDANCE WITH TNSW QA R82 SPECIFICATION. IT IS NOTED THAT A MINIMUM 15 MPa COMPRESSIVE STRENGTH AT 28 DAYS IS REQUIRED. 4.3. WAX EMULSION TO BE ADOPTED FOR THE CURING AND DEBONDING TREATMENT OF THE LMC SUBBASE SURFACE.				8. ALL SERVICE PIT COVERS TO BE PLACED AT FINISHED SURFACE LEVELS TO MATCH THE PROPOSED LONGITUDINAL AND CROSS FALL GRADES OF THE FOOTPATH OR ROADWAY IT IS CONTAINED WITHIN. 9. NO PIPE OR TRENCH SHALL BE LOCATED WITHIN THE ZONE OF INFLUENCE (1V/2H) OF A FOOTING. 10. WORKS AS CONSTRUCTED SURVEY ON ALL UTILITY WORK SHALL BE RECORDED PRIOR TO ANY BACKFILLING.				
SITEWORKS								11. AUSGRID TRANSMISSION CABLES - AUSGRID SUPERVISOR SHALL BE ON SITE WHEN EXCAVATION IS WITHIN 2m OF TRANSMISSION CABLES.				
1. THE CONTRACTOR TO MAKE SMOOTH CONNECTION TO ANY EXISTING WORKS.								12. TRANSGRID TRANSMISSION CABLES - TRANSGRID REPRESENTATIVE SHALL BE ON SITE WHEN EXCAVATION IS WITHIN 2m OF TRANSMISSION CABLES.				
2. ON COMPLETION OF THE WORKS, THE CONTRACTOR MUST RESTORE OR REINSTATE ANY AREAS, STRUCTURES, PAVEMENTS OR UTILITY SERVICES DAMAGED OR DIRTIED DURING THE CONSTRUCTION, TO THE SATISFACTION OF CoS AND TNSW. ALL TRENCH BACKFILL MATERIAL SHALL BE COMPACTED TO THE SAME DENSITY AS THE ADJACENT MATERIAL.								13. JEMENA GAS - JEMENA SUPERVISOR SHALL BE ON SITE WHEN EXCAVATION IS UNDERTAKEN AS REQUIRED BY JEMENA SPECIFICATIONS.				
3. ALL SERVICE TRENCHES UNDER VEHICULAR PAVEMENTS SHALL BE BACKFILLED IN ACCORDANCE WITH CoS STANDARD DRAWINGS.												
4. ASPHALTIC CONCRETE SHALL CONFORM TO TNSW QA SPECIFICATION R116.												
5. ALL BASECOURSE MATERIAL SHALL BE IGNEOUS ROCK QUARRIED MATERIAL TO COMPLY WITH TNSW QA SPECIFICATION 3051 - GRANULAR BASE AND SUBBASE MATERIALS FOR SURFACED ROAD PAVEMENTS, COMPACTED TO 98% MODIFIED DENSITY IN ACCORDANCE WITH AS1289 5.2.1, FREQUENCY OF COMPACTION TESTING TO BE NO LESS THAN 1 TEST PER 50m2 OF BASECOURSE MATERIAL PLACED.												
6. ALL SUBBASE COURSE MATERIAL SHALL BE IGNEOUS ROCK QUARRIED MATERIAL TO COMPLY WITH TNSW QA SPECIFICATION 3051 - GRANULAR BASE AND SUBBASE MATERIALS FOR SURFACED ROAD PAVEMENTS, COMPACTED TO 95% MODIFIED DENSITY IN ACCORDANCE WITH AS1289 5.2.1, FREQUENCY OF COMPACTION TESTING TO BE NO LESS THAN 1 TEST PER 50m2 OF BASECOURSE MATERIAL PLACED.												
7. THE USE OF RECYCLED MATERIALS IS ENCOURAGED BY CoS AND TNSW. IF THE CONTRACTOR INTENDS TO USE RECYCLED MATERIALS, A RECYCLED MATERIAL COMPLYING WITH TNSW QA SPECIFICATION 3051 - GRANULAR BASE AND SUBBASE MATERIALS FOR SURFACED ROAD PAVEMENTS WILL BE CONSIDERED, SUBJECT TO MATERIAL SAMPLES AND APPROPRIATE CERTIFICATIONS BEING PROVIDED TO THE SATISFACTION OF CoS.												
8. THE CONTRACTOR IS TO CONTINUE TO PROVIDE CERTIFICATION FOR ALL RECYCLED MATERIALS DURING THE COURSE OF CONSTRUCTION, AND WHERE MATERIAL THAT DOES NOT COMPLY, THE CONTRACTOR WILL BE RESPONSIBLE FOR REMOVAL AND REPLACEMENT WITH A SUITABLY COMPLIANT MATERIAL AT THEIR OWN COST.												
9. SHOULD THE CONTRACTOR WISH TO USE A RECYCLED PRODUCT, THE INTENT SHALL BE CLEARLY INDICATED IN THEIR TENDER AND THE PRICE DIFFERENCE BETWEEN AN IGNEOUS PRODUCT AND A RECYCLED PRODUCT SHALL BE CLEARLY NOTED.												
10. ANY EXCAVATION OR SAW CUTTING OF THE ROAD SURFACE SHALL BE REINSTATED WITH APPROPRIATE WATERPROOFING BY THE CONTRACTOR.												
DRAWING COLOUR CODED - PRINT ALL COPIES IN COLOUR												FOR REVIEW
REFERENCES:												
THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED,												
SCALE: NOT TO SCALE												
CLIENT:												
PREPARED FOR:												
DRAWN _____ R. MARTINEZ _____ 13.02.2024												
DESIGNED _____ L. CENETA _____ 13.02.2024												
DRG CHECK _____ L. CENETA _____ 13.02.2024												
DESIGN CHECK _____ P. MCLEAN _____ 13.02.2024												
PROVIDES MNGR. J. STEWART _____ 13.02.2024												
APPROVED _____ J. TIE _____ 13.02.2024												
INNER WEST COUNCIL SYDNEY ROADS ASSET PERFORMANCE CONTRACTS SYDENHAM STATION BUS LAYOVER BURROWS AVENUE AND RAILWAY ROAD GENERAL NOTES												
DRAWING SET No: _____												
STATUS: DETAILED DESIGN - 100%												
520212-AURC-038-RW-DRG-000002												
PART: _____ SHEET: 2 OF 41												
BRIDGE No: _____												
DRG No: _____ REV: _____												
EOMS No: _____												
AMD No: _____												
1	2	3	4	5	6	7	8	9	10	11	12	







1	2	3	4	5	6	7	8	9	10	11	12
STRUCTURAL GENERAL NOTES <div style="display: flex;"> <div style="width: 30%;"> <p>A</p> <p>1. READ THESE NOTES IN CONJUNCTION WITH ARCHITECTURAL AND OTHER ENGINEERING DRAWINGS AND SPECIFICATIONS, AND WITH SUCH OTHER WRITTEN INSTRUCTIONS ISSUED, REFER TO ARCHITECTURAL DRAWINGS FOR SETTING OUT AND DETAIL DIMENSIONS, IN CASE OF DISCREPANCY, PRECEDENCE IS GIVEN TO DRAWINGS, THEN NOTES, THEN SPECIFICATION.</p> <p>2. CARRY OUT WORK IN A SAFE MANNER IN ACCORDANCE WITH APPLICABLE LEGISLATION, STATUTORY REGULATIONS, BY-LAWS OR RULES. CONTRACTOR IS RESPONSIBLE FOR OCCUPATIONAL HEALTH AND SAFETY OF SITE PERSONNEL AND GENERAL PUBLIC IN ACCORDANCE WITH ALL CURRENT WORK HEALTH AND SAFETY ACTS, LEGISLATIVE REQUIREMENTS, ASSOCIATED REGULATIONS AND CODES OF PRACTICE, INDUSTRIAL AGREEMENTS AND ACCEPTED INDUSTRY PRACTICE.</p> <p>3. REFER DISCREPANCIES TO SUPERINTENDENT BEFORE PROCEEDING WITH WORK.</p> <p>4. SUBMIT DETAILS OF PROPOSED CHANGES TO SCOPE, WORK METHODS OR MATERIALS etc FOR APPROVAL BEFORE PROCEEDING, APPROVAL DOES NOT AUTHORISE A VARIATION TO THE CONTRACT.</p> <p>5. CHECK STRUCTURAL DRAWINGS AGAINST ARCHITECTURAL, MECHANICAL, ELECTRICAL SERVICES AND OTHER DRAWINGS FOR REQUIREMENTS FOR PENETRATIONS, CONDUITS, DUCTS, PIPES, etc.</p> <p>6. NOMINATION OF PROPRIETARY ITEMS DOES NOT INDICATE EXCLUSIVE PREFERENCE BUT INDICATES REQUIRED PROPERTIES OF ITEM. SIMILAR ALTERNATIVES HAVING REQUIRED PROPERTIES MAY BE OFFERED FOR APPROVAL, APPROVAL DOES NOT AUTHORISE A VARIATION TO THE CONTRACT. INSTALL PROPRIETARY ITEMS IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS AND RECOMMENDATIONS.</p> <p>7. OBTAIN NECESSARY PERMITS AND APPROVALS FROM RELEVANT AUTHORITIES BEFORE COMMENCING WORK ON SITE. NOTIFY RELEVANT SERVICE AUTHORITIES BEFORE COMMENCING WORK ON SITE.</p> <p>8. GIVE TWO WORKING DAYS' (48 HOURS) NOTICE SO THAT INSPECTION MAY BE MADE OF CRITICAL STAGES OF WORK.</p> <p>9. INSPECTIONS AND REVIEWS UNDERTAKEN BY SUPERINTENDENT OR OTHERS DO NOT RELIEVE CONTRACTOR OF RESPONSIBILITY FOR COMPLIANCE WITH DRAWINGS AND SPECIFICATIONS.</p> <p>10. DO NOT OBTAIN DIMENSIONS BY SCALING FROM DRAWINGS.</p> <p>11. DIMENSIONS ARE IN MILLIMETRES. LEVELS ARE IN METRES UNO, CHAINAGES ARE IN METRES UNO.</p> <p>12. HAVE SURVEY AND SETTING OUT UNDERTAKEN BY A REGISTERED SURVEYOR.</p> <p>13. VERIFY ON SITE SETTING OUT DIMENSIONS AGAINST EXISTING MEMBER SIZES SHOWN ON DRAWINGS BEFORE SHOP DRAWINGS, CONSTRUCTION AND FABRICATION IS COMMENCED, EXISTING STRUCTURES SHOWN ON DRAWINGS ARE IN APPROXIMATE LOCATIONS ONLY.</p> <p>14. USE STANDARD BOLT PATTERNS etc, THROUGHOUT THE WORKS TO AVOID CONFUSION OR AMBIGUITY.</p> <p>15. TAKE CARE OF HAZARDS ASSOCIATED WITH BURIED, CONCEALED OR OVERHEAD SERVICES, TAKE PRECAUTIONS AND WORKMANSHIP UNDERTAKE EXPLORATION TO ESTABLISH LOCATION OF AND PROTECT EXISTING SERVICES AT SITE. SERVICES SHOWN ON DRAWINGS ARE IN APPROXIMATE LOCATIONS ONLY. SERVICES OTHER THAN THOSE SHOWN MAY EXIST ON SITE. MARK LOCATIONS OF SERVICES CLEARLY ON SITE, AND ON AS-BUILT DRAWINGS, HAND EXCAVATE WITHIN ONE METRE OF IN-GROUND SERVICES.</p> <p>16. DISPOSE OF SURPLUS MATERIAL OFF SITE IN ACCORDANCE WITH LOCAL AUTHORITY WASTE REGULATIONS.</p> <p>17. IMPLEMENT SOIL AND WATER MANAGEMENT PROCEDURES TO AVOID EROSION, CONTAMINATION AND SEDIMENTATION OF SITE, SURROUNDING AREAS, AND DRAINAGE SYSTEMS.</p> <p>18. WORKMANSHIP AND MATERIALS TO COMPLY WITH REQUIREMENTS OF AUSTRALIAN STANDARDS, NATIONAL CONSTRUCTION CODE (NCC) AND BY-LAWS AND ORDINANCES OF RELEVANT BUILDING AUTHORITIES. ALL STANDARDS REFERRED TO ARE THOSE CURRENT (AS AMENDED) AT COMMENCEMENT OF CONTRACT.</p> <p>19. OBTAIN REQUIREMENTS FOR SERVICES, ADJOINING ELEMENTS etc TO BE EMBEDDED IN, FIXED TO OR SUPPORTED ON WORK AND PROVIDE FOR REQUIRED FIXINGS, PROVIDE FOR TEMPORARY SUPPORT OF ADJOINING ELEMENTS DURING CONSTRUCTION, DRAWINGS DO NOT SHOW DETAILS OF ALL FIXTURES, INSERTS, SLEEVES, RECESSES OR OPENINGS etc REQUIRED.</p> <p>20. HAVE TESTING PERFORMED BY AN INDEPENDENT NATA (NATIONAL ASSOCIATION OF TESTING AUTHORITIES) ACCREDITED AUTHORITY AND PROVIDE TEST REPORTS TO SUPERINTENDENT.</p> <p>21. SEPARATE METALS FROM INCOMPATIBLE MATERIALS (eg STAINLESS STEEL, GALVANIZED STEEL, UNGALVANIZED STEEL AND TREATED TIMBER etc) BY CONCEALED LAYERS OF SUITABLE INERT MATERIALS OF SUITABLE THICKNESSES. USE PLASTIC SLEEVES AND WASHERS FOR BOLTS, etc.</p> <p>22. EXTERNAL ELEMENTS ARE THOSE EXPOSED TO WEATHER, RAIN AND WATER PENETRATION IN FINAL WORKS.</p> <p>23. SUPPLY RELEVANT NOTES, DRAWINGS AND SPECIFICATIONS etc TO SUB-CONTRACTORS.</p> <p>24. UNO=UNLESS NOTED OTHERWISE, SLS=SERVICEABILITY LIMIT STATE, SLS-U=ULTIMATE LIMIT STATE, NSL=NATURAL SURFACE LEVEL, FSL=FINISHED SURFACE LEVEL.</p> <p>25. SUPERINTENDENT=SUPERINTENDENT NOMINATED IN CONTRACT.</p> <p>26. BUILD, FABRICATE AND PROCURE ONLY FROM DRAWINGS ISSUED FOR CONSTRUCTION.</p> <p>27. KEEP ON SITE A COMPLETE SET OF CONTRACT DOCUMENTS (INCLUDING DRAWINGS AND SPECIFICATIONS) AND SITE INSTRUCTIONS.</p> <p>28. REFER TO CIVIL AND UTILITIES DRAWINGS FOR INGROUND SERVICES.</p> </div> <div style="width: 70%;"> <p>TEMPORARY WORKS</p> <p>29. THESE DRAWINGS DO NOT DETAIL TEMPORARY WORKS, CONSTRUCTION METHODS AND TEMPORARY WORKS ARE RESPONSIBILITY OF THE CONTRACTOR.</p> <p>30. PROVIDE SCAFFOLDING, BARRIERS, FALL RESTRAINT, HAND-MID RAILS AND TOE BOARDS FOR WORK AT HEIGHT, ERECT ACCESS STAIRS AT EARLIEST OPPORTUNITY TO REDUCE OPEN SHAFTHAZARDS AND FACILITATE ACCESS, MAINTAIN SAFETY MESH AND BARRIERS TO ALL OPENINGS AND ELEVATED EDGES.</p> <p>31. MAINTAIN STRUCTURE IN A STABLE CONDITION DURING CONSTRUCTION AND PROVIDE TEMPORARY BRACING AND/OR SUPPORT AS REQUIRED, SHOW TEMPORARY MEMBERS ON SHOP DRAWINGS, PROVIDE SPREADERS AT LOADS AND/OR LIFTING POINTS WHERE REQUIRED, ENSURE NO PART IS OVERSTRESSED, DO NOT PLACE OR STORE BUILDING MATERIALS ON SUPPORT FORMWORK OR PROP FROM STRUCTURAL MEMBERS WITHOUT SUPERINTENDENT'S APPROVAL, PROVIDE CALCULATIONS BY SUITABLY QUALIFIED STRUCTURAL ENGINEER TO PROVE ADEQUACY OF STRUCTURE FOR PROPOSED CONSTRUCTION SEQUENCE, METHODS AND LOADS INCLUDING PROPPING, CRANE LIFTS etc.</p> <p>32. PROVIDE TEMPORARY BRACING WHERE REQUIRED FOR STRUCTURAL ELEMENTS OR FRAMES STABILIZED BY MASONRY, PRECAST CONCRETE OR OTHER ELEMENTS CONSTRUCTED AFTER ERECTION OF THE STRUCTURAL ELEMENT OR FRAME, AND SHOW ON SHOP DRAWINGS.</p> <p>DESIGN ASSUMPTIONS</p> <p>33. ALL STRUCTURES TO HAVE A DESIGN WORKING LIFE OF 50 YEARS, BORED PILES ARE DESIGNED TO HAVE A DESIGN WORKING LIFE OF 100 YEARS.</p> <p>34. STRUCTURAL WORK HAS BEEN DESIGNED FOR FOLLOWING LOADS:</p> <ul style="list-style-type: none"> PERMANENT DEAD LOAD OF STRUCTURE AS SHOWN ON DRAWINGS LIVE LOADS AS SNZS1170.1 NON-TRAFFICABLE ROAD CEILING AND SERVICES LOAD IMPOSED 'SURCHARGE' LOAD ON GROUND COMPACTION LOADS SOIL DENSITY ANGLE OF INTERNAL FRICTION ACTIVE LATERAL EARTH PRESSURE COEFFICIENT ka AT REST LATERAL EARTH PRESSURE COEFFICIENT ko BUILDING DESIGN WORKING LIFE BUILDING IMPORTANCE LEVEL WIND LOADS TO AS/NZS1170.2: <ul style="list-style-type: none"> REGION AVERAGE RECURRENT INTERVAL, R ULTIMATE REGIONAL WIND SPEED VR (3 sec GUST) SERVICEABILITY REGIONAL WIND SPEED V25 (3 sec) DIRECTIONAL MULTIPLIER TERRAIN CATEGORY DESIGN BUILDING HEIGHT AS PER BUILDING ELEVATION TERRAIN/HEIGHT MULTIPLIER (Mz/gz) SHIELDING MULTIPLIER (Ms) TOPOGRAPHIC MULTIPLIER (Mm) EARTHQUAKE LOADS TO AS1170.4: <ul style="list-style-type: none"> ANNUAL PROBABILITY OF EXCEEDANCE PROBABILITY FACTOR, (kp) HAZARD DESIGN FACTOR (Z) SITE SUB-SOIL CLASS EARTHQUAKE DESIGN CATEGORY (EDC) STRUCTURE HEIGHT, (m) NUMBER OF STOREYS STRUCTURE DUCTILITY FACTOR (u) <p>35. LATERAL DEFLECTION OF POST UNDER SLS WIND LOAD SHALL BE LIMITED TO 1:125 OF HEIGHT OF POST.</p> <p>36. THE TOTAL CORROSION ALLOWANCE FOR BURIED POST FOR THE NOISE WALL IS 1.0 mm. THIS IS TO BE CONFIRMED ONCE THE SOIL PROPERTIES OF THE BACKFILL IS CONFIRMED.</p> <p>PILES</p> <p>1. BORED PILES TO BE IN ACCORDANCE WITH TNSW QA SPECIFICATION B59.</p> <p>2. PILES HAVE BEEN DESIGNED ASSUMING 700 kPa ALLOWABLE END BEARING AND 70 kPa SKIN FRICTION AND 8.4x10⁴ kPa/m MODULUS OF SUBGRADE REACTION OF ROCK LAYERS.</p> <p>PILING DELIVERABLE</p> <p>3. SURVEY AS CONSTRUCTED PILE POSITIONS, GROUND LEVEL AT TIME OF INSTALLATION AND CUT-TO-LEVELS, AND SUBMIT RECORDS TO CONTRACTOR WITHIN ONE WEEK OF COMPLETION OF PILING.</p> </div> </div>						EARTHWORKS, FOUNDATIONS AND FOOTINGS <p>EARTHWORKS</p> <p>1. EARTHWORKS TO BE IN ACCORDANCE WITH TNSW R44, AS3798 AND AS 2870.</p> <p>FOUNDATIONS</p> <p>2. FOUNDATION LEVELS SHOWN ARE CONTRACT LEVELS, FINAL LEVELS TO BE AS DIRECTED BY SUPERINTENDENT.</p> <p>3. HARDCORE (BASE) SHALL BE APPROVED WELL GRADED NATURAL GRAVEL OR CRUSHED ROCK (MAX. SIZE 40mm) SPREAD AND COMPACTED TO 85% MAXIMUM DRY DENSITY DETERMINED BY TEST AS-1288-01 OR 85% MINIMUM DENSITY INDEX FOR COHESIONLESS SOILS.</p> <p>4. 'CONTROLLED FILL' IS: SAND FILL UP TO 800 mm DEEP, WELL COMPACTED IN LAYERS < 300 mm THICK BY VIBRATING PLATE OR VIBRATING ROLLER, OR NON-SAND FILL UP TO 400 mm DEEP, WELL COMPACTED IN LAYERS <150 mm THICK BY MECHANICAL ROLLER (CLAY FILL TO BE MOIST DURING COMPACTION), OR OTHER MATERIAL PLACED AND COMPACTED IN ACCORDANCE WITH SPECIFICATION.</p> <p>5. 'ROLLED FILL' IS: SAND FILL UP TO 600 mm DEEP COMPACTED IN LAYERS < 300 mm THICK, OR NON-SAND FILL UP TO 300 mm DEEP COMPACTED IN LAYERS < 150 mm THICK (CLAY FILL TO BE MOIST DURING COMPACTION).</p> <p>6. AVOID OVER EXCAVATION, BACKFILL OVER EXCAVATION WITH GRADE N° BLINDING CONCRETE.</p> <p>7. KEEP EXCAVATIONS FREE OF WATER, PROVIDE ADEQUATE DRAINAGE TO ENSURE FORMATION IS NOT AFFECTED BY MOISTURE. PREVENT FOUNDATION DRYING OUT DUE TO EXPOSURE. PLACE BLINDING, FOOTINGS, PILES AND BACKFILL AS SOON AS PRACTICABLE AFTER EXCAVATION.</p> <p>8. ENSURE EXCAVATIONS ARE STABLE AND PROTECT SURROUNDING PROPERTY AND SERVICES FROM ADVERSE EFFECTS OF GROUND WORKS, PROVIDE TEMPORARY WORKS AS REQUIRED, PROVIDE SHORING CERTIFIED BY SUITABLY QUALIFIED STRUCTURAL ENGINEER TO ALL DEEP EXCAVATIONS WHERE REQUIRED.</p> <p>9. DO NOT UNDERMINE EXISTING FOOTINGS.</p> <p>10. DEEPEN FOOTINGS BY THICKENING BLINDING CONCRETE AS REQUIRED NEAR EXISTING SERVICE TRENCHES (EVEN IF BACKFILLED), EXCAVATIONS, BATTERS etc. SO INFLUENCE LINE (AT 30° TO HORIZONTAL) FROM FOOTING IS BELOW ADJACENT EXCAVATION.</p> <p>11. PROVIDE SAFETY MESH AND OTHER PROTECTION TO PREVENT EXPOSURE OF PERSONNEL TO EXCAVATIONS DURING FOUNDATION CONSTRUCTION.</p> <p>12. USE SUITABLE CONSTRUCTION TECHNIQUES AND EQUIPMENT FOR BACKFILLING ADJACENT TO STRUCTURES TO PREVENT OVERSTRESS AND DAMAGE, PROVIDE SUPPORT TO RETAINING WALLS IF CONSTRUCTION METHODS IMPOSE COMPACTION LOADS GREATER THAN ALLOWED (SEE DESIGN LOADS IN GENERAL NOTES), BACKFILL EVENLY TO AVOID DIFFERENTIAL SOIL PRESSURES ON STRUCTURES, BACKFILL AGAINST RETAINING WALLS ONLY AFTER SPECIFIED CONCRETE STRENGTH IS ACHIEVED, AND PERMANENT SUPPORT INSTALLED WHERE APPLICABLE.</p> <p>13. BACKFILL FOR RETAINING WALLS TO BE FREE DRAINING GRANULAR MATERIAL, PROVIDE DRAINAGE BEHIND RETAINING WALLS COMPRISING CONTINUOUS SLOTTED DRAIN WITH GRANULAR SURROUND, OR NYLEX 'COREDRAIN' CONNECTED TO REGULATED STORMWATER DRAINAGE SYSTEM, PROVIDE 50 mm DIAMETER WEEPHOLES AT 1500 MAXIMUM CENTRES AT BASE OF WALL.</p> <p>14. SLOPE SERVICES TRENCHES AWAY FROM BUILDING, BED SERVICES ON COMPACTED MATERIAL COMPATIBLE WITH NATURAL MATERIAL ON SITE. BACKFILL TOP 300 mm OF TRENCHES WITH HAND COMPACTED CLAY WITHIN 1500 mm OF BUILDING, WHERE SERVICES PASS THROUGH MIDDLE THIRD OF FOOTING, SLEEVE SERVICES OR PROVIDE 40 mm THICK CLOSED-CELL POLYETHYLENE LAGGING.</p>					

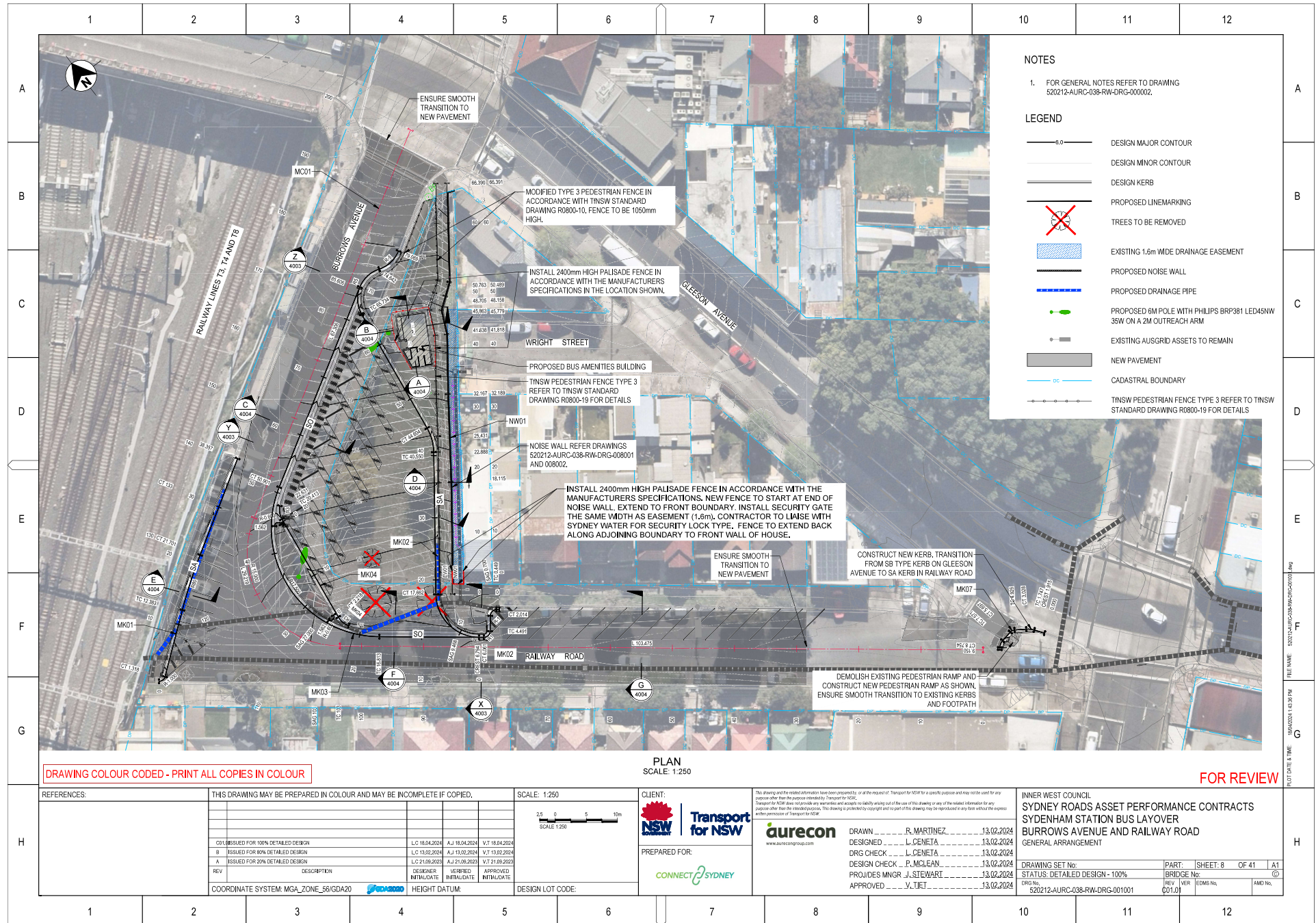
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	<p>STEEL</p> <p>1. WORKMANSHIP AND MATERIAL TO COMPLY WITH AS4100, AS/NZS4600, AND AS/NZS1554.</p> <p>2. CONSTRUCTION CATEGORY FOR FABRICATION IN ACCORDANCE WITH AS/NZS5131 AS FOLLOWS:</p> <ul style="list-style-type: none"> SERVICE CATEGORY: SC1 FABRICATION CATEGORY: FC1 CONSTRUCTION CATEGORY: CC3 <p>3. PROVIDE STEEL IN ACCORDANCE WITH:</p> <ul style="list-style-type: none"> AS1397 GRADE Q450 FOR PURLINS AND GIRTS, AS1443 COLD-FINISHED BARS, AS/NZS1594 GRADE 250 HOT-ROLLED STEEL FLAT PRODUCTS, AS/NZS3678 FOR PLATES AND FLOOR PLATE, AS/NZS3679 PART 2, GRADE 300 FOR WELDED BEAMS AND WELDED COLUMNS, AS/NZS3679 PART 1 GRADE 300 OR BHP GRADE 300 PLUS FOR UNIVERSAL BEAMS, UNIVERSAL COLUMNS, PARALLEL FLANGE CHANNELS, ANGLES, FLATS, BARS AND RODS, OTHERWISE TO COMPLY WITH AS/NZS3678 OR AS/NZS3679 GRADE 250 UNO. <p>4. MANUFACTURERS AND PROCESSORS OF STRUCTURAL STEEL MUST HOLD A VALID CERTIFICATE OF APPROVAL ISSUED BY ACRS (AUSTRALASIAN CERTIFICATION AUTHORITY FOR REINFORCING AND STRUCTURAL STEELS), COMPLIANCE ACRS CERTIFICATION OF COMPLIANCE WITH RELEVANT STANDARDS, PRODUCT TAGS AND SUPPORTING DOCUMENTATION FOR ALL STRUCTURAL STEELWORK.</p> <p>5. MARK STEEL GRADES ON STRUCTURAL MEMBERS IN NON-CRITICAL AREAS. USE IDENTIFICATION MARKS COMPATIBLE WITH AND VISIBLE THROUGH PAINT SYSTEM.</p> <p>6. PROVIDE 3 mm CAP PLATES SEAL WELDED TO HOLLOW SECTIONS UNO.</p> <p>7. CARRY OUT ERECTION OF STEELWORK IN ACCORDANCE WITH AS3828 GUIDELINES FOR THE ERECTION OF BUILDING STEELWORK.</p> <p>8. PROTECT STEELWORK FROM DAMAGE DURING HANDLING, TRANSPORT, STORAGE AND ERECTION. SUBMIT PROPOSED METHOD TO REPAIR DAMAGE FOR APPROVAL. PROTECT STEELWORK STORED ON SITE FROM CORROSION OR DETERIORATION OF COATINGS.</p> <p>9. PLUMB COLUMNS WITH METAL PACKERS OR SHIMS.</p> <p>10. SEQUENCE ERECTION WORKS TO AVOID PINCH POINTS AND SITE CONGESTION.</p> <p>11. PROVIDE STEEL MEMBERS MADE FROM WHOLE LENGTHS WHEREVER POSSIBLE. SEEK APPROVAL TO MAKE LENGTHS UP OF SECTIONS JOINED BY COMPLETE PENETRATION FULL STRENGTH BUTT WELDS GROUND FLUSH WHERE REQUIRED. WHERE PROPOSED, SHOW JOINTS ON SHOP DRAWINGS. ENSURE MEMBERS ARE CONCENTRIC AT CONNECTIONS (GRAVITY- OR GAUGE-LINES TO INTERSECT) UNO. ACCURATELY PRE-FORM PARTS TO AVOID FORCE AND/OR RESTRAINT DURING JOINING.</p> <p>12. DRILL HOLES FULL SIZE OR REAM TO FULL SIZE AFTER SUB-DRILLING OR SUB-PUNCHING. SUB-DRILLED OR SUB-PUNCHED HOLES TO BE AT LEAST 3 mm UNDERSIZE. "OXY" OR FLAME CUTTING OF HOLES IS NOT PERMITTED. BOLT HOLE SIZE TO BE:</p> <ul style="list-style-type: none"> BOLT DIAMETER PLUS 2 mm FOR STEEL TO STEEL CONNECTIONS, BOLT DIAMETER PLUS 4 mm FOR STEEL TO CONCRETE CONNECTIONS, BOLT DIAMETER PLUS 4 mm FOR HOLDING DOWN BOLTS UP TO M20, BOLT DIAMETER PLUS 5 mm FOR HOLDING DOWN BOLTS M24 OR LARGER. <p>WELDING</p> <p>13. DEVELOP WELD PROCEDURES TO SUIT JOINT DETAILS AND SHOW ON SHOP DRAWINGS. USE PREQUALIFIED WELD PROCEDURES AND CONSUMABLES TO AS/NZS1554.1 CLAUSE 4.3 OR DEVELOP QUALIFICATION OF WELD PROCEDURE AND CONSUMABLES BY TESTING TO AS/NZS1554.1 CLAUSE 4.2. LIST APPLICABLE PARAMETERS ON WELDING PROCEDURE QUALIFICATION RECORD AND MAKE RECORD AVAILABLE FOR INSPECTION.</p> <p>14. WELDING TO BE UNDERTAKEN BY SUITABLY QUALIFIED EXPERIENCED WELDER UNDER SUPERVISION OF QUALIFIED WELDING SUPERVISOR.</p> <p>15. CARRY OUT WELDING TO AS/NZS1554: ALL INTERFACES BETWEEN STEEL SECTIONS TO BE CONNECTED WITH 6 mm CONTINUOUS FILLET WELDS ALL ROUND, BOTH SIDES UNO.</p> <ul style="list-style-type: none"> WELDS TO BE CATEGORY SP, BUTT WELDS TO BE FULL (COMPLETE) PENETRATION WITH MIN 6mm THICK WELD LEG UNO, ELECTRODES TO BE LOW CARBON WITH TENSILE STRENGTH OF $f_{tws}=490$ MPa, PRE-APPROVED TO AS/NZS1554, eg CLASSIFICATION B-649XX, <p>16. EXTENT OF WELD INSPECTION/TESTING TO BE:</p> <ul style="list-style-type: none"> VISUAL SCANNING: 100% OF WELDS, VISUAL EXAMINATION: 100% OF BUTT WELDS IN TENSION MEMBERS AND 50% OF OTHER WELDS, RADIOGRAPHIC OR ULTRASONIC: 10% OF BUTT WELDS IN TENSION MEMBERS AND 5% OF OTHER WELDS, <p>17. GRIND WELDS SMOOTH AND FLUSH WITH PARENT METAL WHERE NOMINATED ON DRAWINGS. GRIND ONLY IN LONGITUDINAL DIRECTION OF MEMBER.</p> <p>18. REPAIR FAULTY WELDS AND DEFECTS REVEALED BY WELD INSPECTION/TESTING AND REPEAT THE EXAMINATION.</p> <p>19. WELDS TO BE INSPECTED BY INDEPENDENT NATA ACCREDITED QUALIFIED WELDING INSPECTOR TO AS2214. PROVIDE WELDING INSPECTOR'S REPORT TO SUPERINTENDENT.</p> <p>20. WELDING SYMBOLS ARE TO AS1101.3. "CPW" INDICATES CONTINUOUS FILLET WELD. "FSBW" INDICATES FULL STRENGTH BUTT WELD WHICH IS EQUIVALENT TO CPBW. "CPBW" INDICATES COMPLETE PENETRATION BUTT WELD.</p> <p>BOLTS</p> <p>21. M16 AND LARGER BOLTS TO BE HIGH STRENGTH STRUCTURAL BOLTS, 8.8/S PROCEDURE AND M12 SIZE BOLTS SHALL BE COMMERCIAL BOLTS, 4.6/S PROCEDURE UNO.</p> <p>22. FOR BOLTS MANUFACTURED OUTSIDE AUSTRALIA, PROVIDE LOCAL INDEPENDENT NATA ACCREDITED LABORATORY COMPLIANCE CERTIFICATE BASED ON APPROPRIATE TESTING AND VERIFICATION.</p> <p>23. USE BOLTS WITH THREADS IN COMPLIANCE WITH AS1275. BOLTS OF STRENGTH GRADE 4.6 TO BE COMMERCIAL GRADE BOLTS TO AS1111 AND 1112. BOLTS OF STRENGTH GRADE 8.8 TO BE HIGH STRENGTH STRUCTURAL BOLTS. NUTS AND WASHERS TO AS/NZS1252. MECHANICAL PROPERTIES OF BOLTS, NUTS, SCREWS AND STUDS TO COMPLY WITH AS/NZS4291. WASHERS TO COMPLY WITH AS1237. TIGHTENING PROCEDURES TO COMPLY WITH AS4100:</p> <ul style="list-style-type: none"> S SNUG TIGHT, TB BEARING MODE JOINT. BOLTS FULLY TENSIONED, TF FRICTION MODE JOINT. BOLTS FULLY TENSIONED, (CONTACT SURFACES OF FRICTION CONNECTIONS TO BE UNCOATED AND FREE OF MILL SCALE.) <p>24. BOLT TYPE AND TIGHTENING PROCEDURE ARE DESIGNATED: NUMBER, SIZE STRENGTH GRADE/TIGHTENING PROCEDURES. eg. 4-M24 8.8/TF = 4 OFF 24 DIAMETER METRIC HIGH STRENGTH STRUCTURAL BOLTS FULLY TENSIONED IN BEARING MODE.</p> <p>25. USE BOLT LENGTHS SO THAT PROJECTION BEYOND NUT IS AT LEAST TWO THREADS. AND NOT MORE THAN 10 mm.</p> <p>26. PROVIDE A COLOUR FLASH AT LOCATIONS OF TF AND TB BOLTS. DEGREASE AND LIGHTLY OIL TF AND TB BOLTS PRIOR TO INSTALLATION. TENSION TF AND TB BOLTS USING PART-TURN METHOD (OR TAMPER PROOF LOAD INDICATING WASHERS FOR TF BOLTS) TO AS4100. DO NOT USE CALIBRATED TORQUE WRENCHES. PROVIDE WITNESS MARKS ON BOLT AND NUT. PROVIDE A HARDENED WASHER UNDER BOLT HEAD OR NUT, WHICHEVER IS ROTATED. DO NOT REUSE TB OR TF BOLTS ONCE TENSIONED.</p> <p>27. SLIP FACTOR ASSUMED FOR FRICTION TYPE BOLTS = 0.35. TREAT CONTACT SURFACES BY WIRE BRUSHING OR LIGHT BLASTING TO CLASS 3 (SURFACE PROFILE 35 TO 65 MICRONS) AS REQUIRED TO ACHIEVE ASSUMED SLIP FACTOR.</p> <p>28. USE BOLTS, SCREWS, NUTS AND WASHERS HOT DIP GALVANIZED BY MANUFACTURER TO AS1214. TAP GALVANIZED NUTS 0.4 mm OVERSIZE TO SUIT GALVANIZED THREADS TO AS1214 AND OIL FOR PROTECTION. INSTALL WASHERS UNDER BOLT HEAD OR NUT, WHICHEVER PART IS ROTATED. USE HARDENED OR PLATE WASHERS UNDER BOTH HEAD AND NUT FOR OVERSIZED AND SLOTTED HOLES TO AS4100. USE TAPERED WASHERS AS REQUIRED UNDER NON-ROTATING PART.</p> <p>29. SLOTTED HOLES TO BE 2.5 x BOLT DIAMETER LONG UNO. BOLTS TO BE SET CENTRAL IN SLOT UNO. USE 8 mm PLATE WASHERS UNDER BOLT HEAD AND NUT TO COMPLETELY COVER HOLE.</p> <p>CONNECTIONS</p> <p>30. STEEL CONNECTION DETAILS TO BE IN ACCORDANCE WITH AS4100 AND AUSTRALIAN STEEL INSTITUTE (ASI) STRUCTURAL STEEL CONNECTION SERIES OF MANUALS AND GUIDES UNO.</p> <p>31. MAKE BOLTED STRUCTURAL CONNECTIONS WITH 10 mm THICK CLEAT PLATES AND 2 M16 8.8/S BOLTS UNO. USE M12 4.6/S BOLTS FOR PURLINS UP TO 250 DEEP UNO. STIFFENERS, PURLIN AND GIRT CLEATS AND FLY BRACE CLEATS TO BE 8 mm THICK UNO. ROD BRACING TO HAVE TURNBUCKLES WITH FULL CAPACITY OF ROD UNO.</p> <p>32. PROVIDE CLEATS AND DRILL HOLES NECESSARY FOR FIXING OTHER ELEMENTS TO STEELWORK. SHOW ON SHOP DRAWINGS.</p> <p>33. PROVIDE RADIUS CORNERS ON EXPOSED CLEATS TO REDUCE RISK OF IMPALEMENT AND LACERATIONS.</p> <p>34. PROVIDE BOLTED CLEAT CONNECTIONS TO SITE WELDED CONNECTIONS CAPABLE OF BEING LOADED BEFORE OR WHILE CONNECTIONS ARE WELDED TOGETHER.</p> <p>35. CROP INTERNAL CORNERS OF CLEATS AND STIFFENERS, etc TO FACILITATE DRAINAGE. PROVIDE DRAINAGE HOLES TO PREVENT WATER PONDING ON STRUCTURAL ELEMENTS DURING CONSTRUCTION. SHOW PROPOSED HOLES ON SHOP DRAWINGS.</p> <p>36. CLEARLY MARK CONNECTIONS SUBJECT TO VIBRATION. USE LOCK NUTS FOR BOLTS SUBJECT TO VIBRATION.</p> <p>DURABILITY AND PROTECTIVE COATINGS</p> <p>1. ALL EXPOSED STEELWORK TO BE HOT DIP GALVANISED.</p> <p>2. FOR STEEL PROTECTIVE TREATMENT REFER TO TNSW SPECIFICATION B220.</p> <p>DELIVERABLES</p> <p>3. SUBMIT NAMES AND CONTACT DETAILS OF PROPOSED FABRICATION AND INSTALLATION SUBCONTRACTORS.</p> <p>4. SUBMIT SHOP DRAWINGS AND DESIGN CALCULATIONS. REFER GENERAL-DELIVERABLES NOTES.</p> <p>5. PROVIDE DOCUMENTARY EVIDENCE (INCLUDING TEST RESULTS) OF COMPLIANCE WITH RELEVANT AUSTRALIAN STANDARDS ISSUED BY MANUFACTURER FOR ALL STEELWORK AND EACH BATCH OF FASTENERS USED. EVIDENCE MUST PROVIDE CLEAR VERIFICATION THAT PRODUCT MEETS RELEVANT AUSTRALIAN STANDARDS AND BE WRITTEN IN ENGLISH ALPHANUMERIC CHARACTERS. EVIDENCE TO INCLUDE: NAMES AND ADDRESSES OF MANUFACTURER, SUPPLIER AND TESTING AUTHORITY; TEST CERTIFICATE NUMBER AND DATE WITH PAGE NUMBER ON EACH PAGE; PRODUCT TESTING SPECIFICATION AND GRADE OF STEEL; PRODUCT DESIGNATION AND RELEVANT DIMENSIONS; PRODUCT STEEL MAKING PROCESS, LENGTH, BUNDLE, PACK OR UNIQUE IDENTIFIER TO WHICH CERTIFICATE APPLIES; HEAT NUMBER (FROM CASTING); MECHANICAL PROPERTIES FROM TENSILE TEST (ALL VALUES CITED IN AS/NZS STANDARD); WHETHER EACH MEASURED MECHANICAL PROPERTY COMPLIES WITH AS/NZS STANDARD; CHEMICAL ANALYSIS RESULTS AND TYPE OF ANALYSIS UNDERTAKEN; CUSTOMER PURCHASE ORDER TO MATCH BATCH NUMBER; ANY OTHER SYSTEM REFERENCE NUMBERS AND SIGNATURE OF AUTHENTICITY.</p>												A																																																																																
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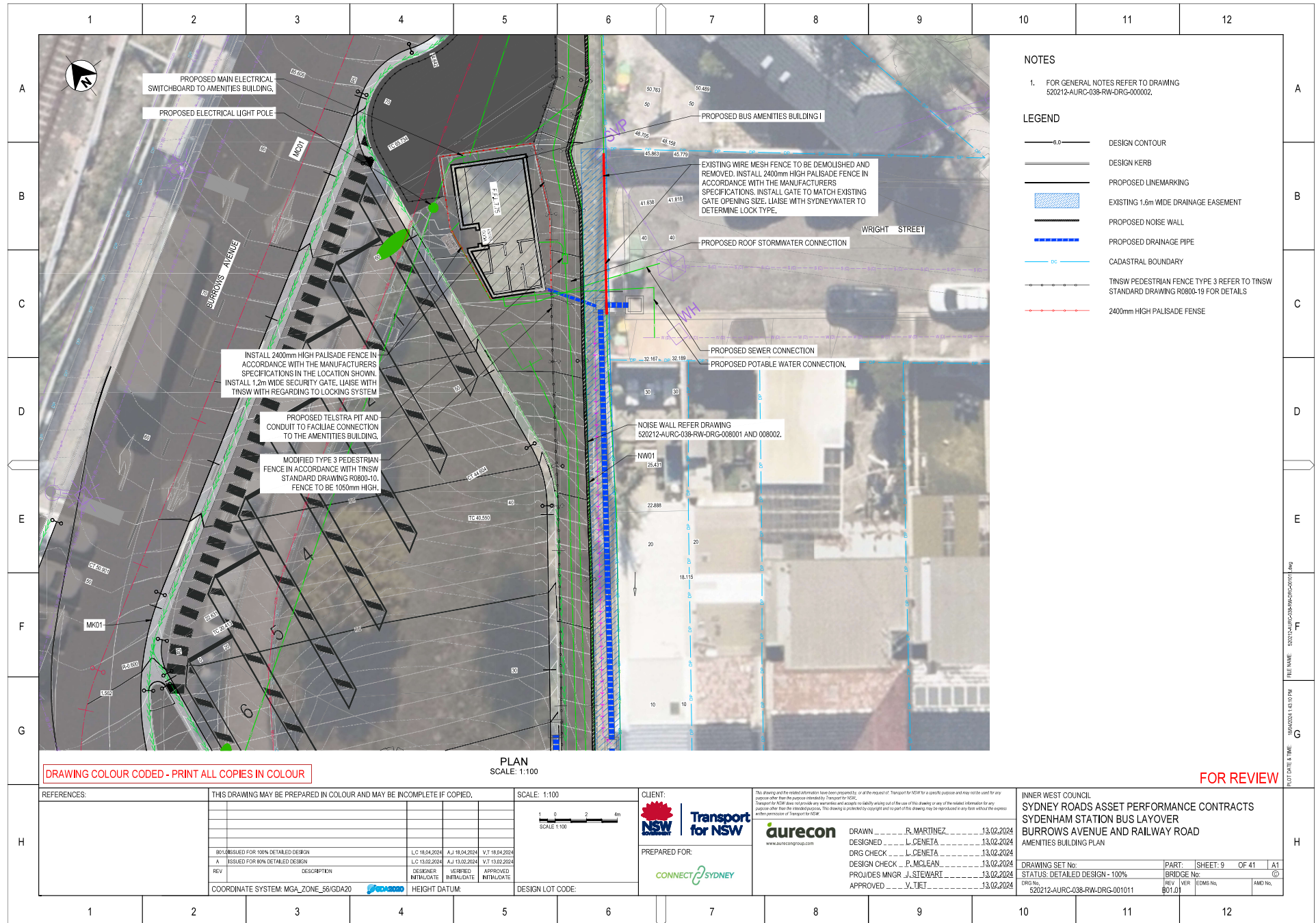
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A	<p>CONTINUATION FOR REINFORCEMENT</p> <p>25. FOR EXTERNAL OR CORROSIVE APPLICATIONS USE HOT DIP GALVANIZED TIE WIRES</p> <p>26. SUPPORT REINFORCEMENT ON PROPRIETARY CONCRETE. METAL OR PLASTIC SUPPORTS ADEQUATE TO WITHSTAND CONSTRUCTION AND TRAFFIC LOADS AND MAINTAIN DURABILITY OF FINISHED CONCRETE STRUCTURE. FOR CONCRETE SURFACES WITH B2 EXPOSURE CLASSIFICATION OR GREATER, ONLY USE PROPRIETARY HIGH STRENGTH FIBRE REINFORCED CEMENT SPACER BLOCKS OR SUPPORTS.</p> <p>27. DO NOT PLACE OR MOVE REINFORCEMENT DURING OR AFTER CONCRETE PLACEMENT.</p> <p>28. ENSURE EMBEDDED ITEMS (INSERTS, THREADED SOCKETS, FERRULES, BOLTS, DISSIMILAR METAL ITEMS, etc) IN COVER CONCRETE OR EXPOSED TO AIR ARE NOT IN CONTACT WITH REINFORCEMENT. PROVIDE ISOLATION BETWEEN DISSIMILAR METALS, AND BETWEEN REINFORCEMENT AND EXPOSED ITEMS.</p> <p>29. OBTAIN SUPERINTENDENT'S APPROVAL OF INSERTS, FIXINGS AND OTHER ITEMS EMBEDDED IN COVER CONCRETE.</p> <p>30. DO NOT WELD REINFORCEMENT, CAST-IN ITEMS etc UNLESS APPROVED UNO.</p> <p>31. SPLICE REINFORCEMENT ONLY AT LOCATIONS SHOWN ON DRAWINGS OR AS APPROVED BY SUPERINTENDENT. STAGGER LAPS WHERE POSSIBLE. LAPPED SPLICE LENGTHS TO COMPLY WITH AS3600, CLEAR SPACING BETWEEN LAPPED BARS TO BE LESS THAN THREE TIMES BAR DIAMETER. WHERE BAR SIZES VARY USE LAPPED SPLICE LENGTH FOR SMALLER BAR DIAMETER.</p> <p>32. LAPPED SPLICE LENGTHS FOR HORIZONTAL BARS WITH MORE THAN 300 mm CONCRETE CAST BELOW THE BAR AND SPACED AT ≥150 mm CENTRES TO COMPLY WITH THE FOLLOWING UNO:</p> <table border="1"> <thead> <tr> <th>COVER</th><th>f_c</th><th>N12</th><th>N16</th><th>N20</th><th>N24</th><th>N28</th><th>N32</th></tr> </thead> <tbody> <tr> <td>≥25</td><td>≥20</td><td>770</td><td>1150</td><td>1570</td><td>-</td><td>-</td><td>-</td></tr> <tr> <td>≥40</td><td>≥25</td><td>630</td><td>980</td><td>1350</td><td>1740</td><td>-</td><td>-</td></tr> <tr> <td>≥40</td><td>≥32</td><td>510</td><td>770</td><td>1100</td><td>1440</td><td>1810</td><td>2220</td></tr> <tr> <td>≥50</td><td>≥40</td><td>460</td><td>630</td><td>890</td><td>1200</td><td>1530</td><td>1890</td></tr> </tbody> </table> <p>DO NOT INTERPOLATE INTERMEDIATE VALUES OF SPLICE LENGTHS. LAPPED SPLICE LENGTHS FOR BARS IN COLUMNS REFER TO DETAILS OR SUPERINTENDENT. 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THUS:</p> <table border="1"> <thead> <tr> <th></th><th>RECTANGULAR MESHES</th><th>225 END LAP</th><th>125 SIDE LAP</th></tr> </thead> <tbody> <tr> <td>SQUARE MESHES SL102 TO SL42</td><td>225 END LAP</td><td>225 SIDE LAP</td><td></td></tr> <tr> <td>SL81</td><td>125 END LAP</td><td>125 SIDE LAP</td><td></td></tr> <tr> <td>TRENCH MESH</td><td>500 END LAP</td><td>N/A</td><td></td></tr> </tbody> </table> <p>USE LAP LENGTHS BASED ON LARGEST WIRE SPACING. DO NOT LAP MORE THAN THREE SHEETS AT ANY ONE POINT.</p> <p>38. ALTERNATIVELY USE N12 SPLICE BARS TO LAP ADJACENT SHEETS OF MESH. SPACING OF SPLICE BARS TO MATCH SPACING OF BARS IN MESH. SPLICE BARS TO OVERLAP MESH BY 750 mm MINIMUM UNO.</p> <p>39. SPLICE TRENCH MESH BY A LAP OF 750 mm MINIMUM UNO. AT T- AND L-INTERSECTIONS, CONTINUE TRENCH MESH FULL WIDTH OF INTERSECTION. AT L-INTERSECTIONS PROVIDE AN N12 L BAR TO LAP 750 mm WITH OUTSIDE BARS UNO.</p> <p>40. DO NOT WELD REINFORCEMENT UNLESS SHOWN ON DRAWINGS OR OTHERWISE APPROVED BY SUPERINTENDENT. WHERE ALLOWED, WELDING OF REINFORCEMENT (BACK-WELDING FOR FIXING PURPOSES) TO COMPLY WITH AS3600 AND AS/NZS1554.3. DO NOT WELD REINFORCEMENT WITHIN 75 mm OF A SECTION THAT HAS BEEN BENT (100 mm FOR N28 AND N32 BARS, 125 mm FOR N36 BARS).</p> <p>EXTENT OF WELD INSPECTION/TESTING TO BE:</p> <ul style="list-style-type: none"> VISUAL SCANNING 100% OF WELDS VISUAL EXAMINATION 50% OF WELDS RADIOGRAPHIC OR ULTRASONIC 5% OF FILLET WELDS AND 100% OF BUTT WELDS. <p>41. DO NOT BEND OR STRAIN REINFORCEMENT IN A WAY THAT MAY CAUSE DAMAGE. BEND DIAMETERS TO BE TO AS3600. BARS TO BE BENT COLD UNO. GRADE 250 BARS MAY BE BENT AT TEMPERATURES UP TO 850°C. DO NOT COOL HEATED BARS BY QUENCHING.</p> <p>42. USE ONLY N12 QUENCHED AND SELF-TEMPERED REINFORCEMENT FOR PULLOUT BARS OR BARS TO BE BENT ON SITE (eg TEMP CORE BY ONSTEEL). DO NOT USE MICROALLOY REINFORCEMENT FOR PULLOUT BARS AND BARS TO BE BENT ON SITE. CAST IN PULLOUT BARS WITH BEND CLEAR OF CONCRETE. USE PROPRIETARY POWERED BENDING TOOLS WITH PIN DIAMETERS TO AS3600 AT AMBIENT TEMPERATURE FOR SITE BENDING OF PULLOUT BARS. USING A SINGLE SMOOTH BENDING ACTION. DO NOT USE IMPACT BLOWS OR HAMMER BARS. OR BEND BARS USING A PIPE. TAKE CARE TO MINIMISE SURFACE DAMAGE, AND INSPECT REBENT BARS FOR CRACKS. REPORT CRACKS TO SUPERINTENDENT.</p> <p>43. DO NOT CUT, BEND NOR HEAT REINFORCEMENT ON SITE WITHOUT SUPERINTENDENT'S PRIOR WRITTEN APPROVAL.</p> <p>44. ENSURE HOT BENDING OF REINFORCEMENT COMPLIES WITH AS3600 CLAUSE 17.2.3.1. DO NOT HEAT D500N REINFORCEMENT. USE TEMPERATURE INDICATOR PAINTS AND/OR CRAYONS TO ENSURE REINFORCEMENT TEMPERATURE DOES NOT EXCEED MANUFACTURERS RECOMMENDED LIMITS. 450 DEGREES MAXIMUM. REINFORCEMENT THAT CHANGED COLOUR DURING HEATING MUST BE DISCARDED.</p> <p>45. DO NOT BEND REINFORCEMENT AFTER GALVANISING OR APPLICATION OF OTHER COATINGS.</p> <p>46. USE 10 mm HOT DIPPED GALVANIZED DANLEY DIAMOND DOWELS (TEL: 07 3899 3466). INSTALL DOWELS PARALLEL TO SURFACE OF SLAB. MAINTAIN DOWEL ALIGNMENT BY USE OF A SUITABLE SUPPORT ASSEMBLY TO ENSURE HORIZONTAL AND VERTICAL ALIGNMENT TOLERANCE OF 2 IN 300. DO NOT INSERT DOWELS DURING PLACEMENT OF CONCRETE.</p> <p>47. PERCUSSION ROTARY DRILL HOLES FOR GROUTED BARS AND THREADED RODS (NOTE: CORED HOLES MUST BE ROUGHENED), HOLE DIAMETER AND INSTALLATION TO BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. EMBEDMENT LENGTHS AS PER DRAWINGS.</p> <p>48. ENSURE HOLES FOR GROUTED BARS AND THREADED RODS ARE DRY AND CLEANED THOROUGHLY BEFORE INSTALLING ANCHORS. WIRE BRUSH HOLES AND BLOW OUT WITH COMPRESSED AIR TO REMOVE DUST. FILL HOLE WITH ADHESIVE USING A CAULKING GUN FROM BOTTOM OF HOLE OUTWARDS. DISCARD ADHESIVE FROM FIRST TRIGGER PULL. PROVIDE BARS/THREADED RODS WITH CHAMFERED (CHISELLED) ENDS. BARS TO BE DEGREASED, AND FLAKY RUST REMOVED. ROTATE WHILE INSERTING TO ENSURE FULLY COATED AND PUSH FULLY INTO HOLE. PROTECT FROM DISTURBANCE DURING CURING. FOLLOW MANUFACTURER'S RECOMMENDATIONS.</p> <p>49. USE HILTI HIT-HY200R OR HILTI HIT-RE500v3 ADHESIVE IN ACCORDANCE MANUFACTURER'S RECOMMENDATIONS UNO.</p>												COVER	f _c	N12	N16	N20	N24	N28	N32	≥25	≥20	770	1150	1570	-	-	-	≥40	≥25	630	980	1350	1740	-	-	≥40	≥32	510	770	1100	1440	1810	2220	≥50	≥40	460	630	890	1200	1530	1890	COVER	f _c	N12	N16	N20	N24	N28	N32	≥25	≥20	590	890	1210	-	-	-	≥40	≥25	490	750	1040	1340	-	-	≥40	≥32	390	600	840	1110	1400	1710	≥50	≥40	350	480	690	920	1180	1450		RECTANGULAR MESHES	225 END LAP	125 SIDE LAP	SQUARE MESHES SL102 TO SL42	225 END LAP	225 SIDE LAP		SL81	125 END LAP	125 SIDE LAP		TRENCH MESH	500 END LAP	N/A		A						
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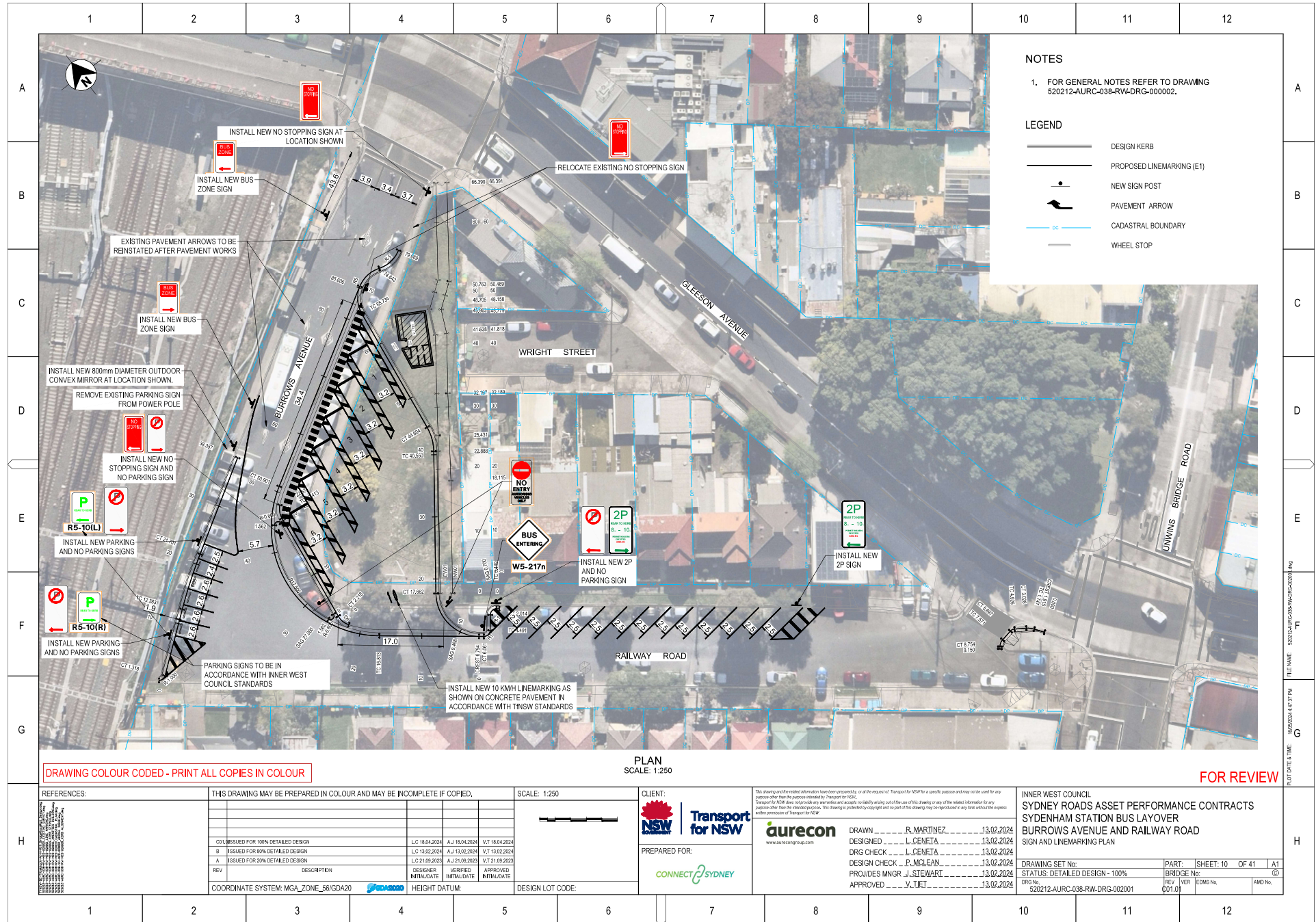
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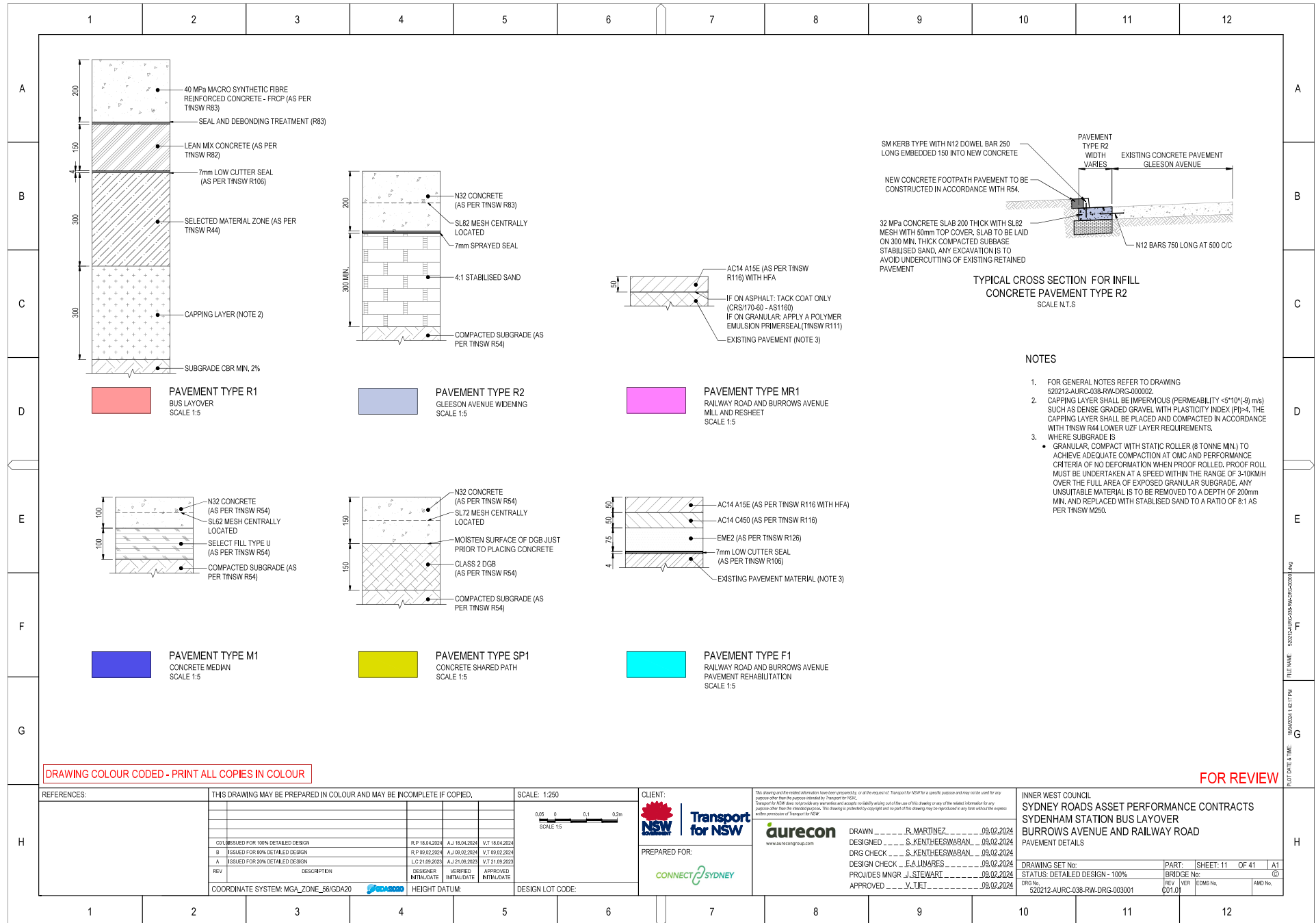
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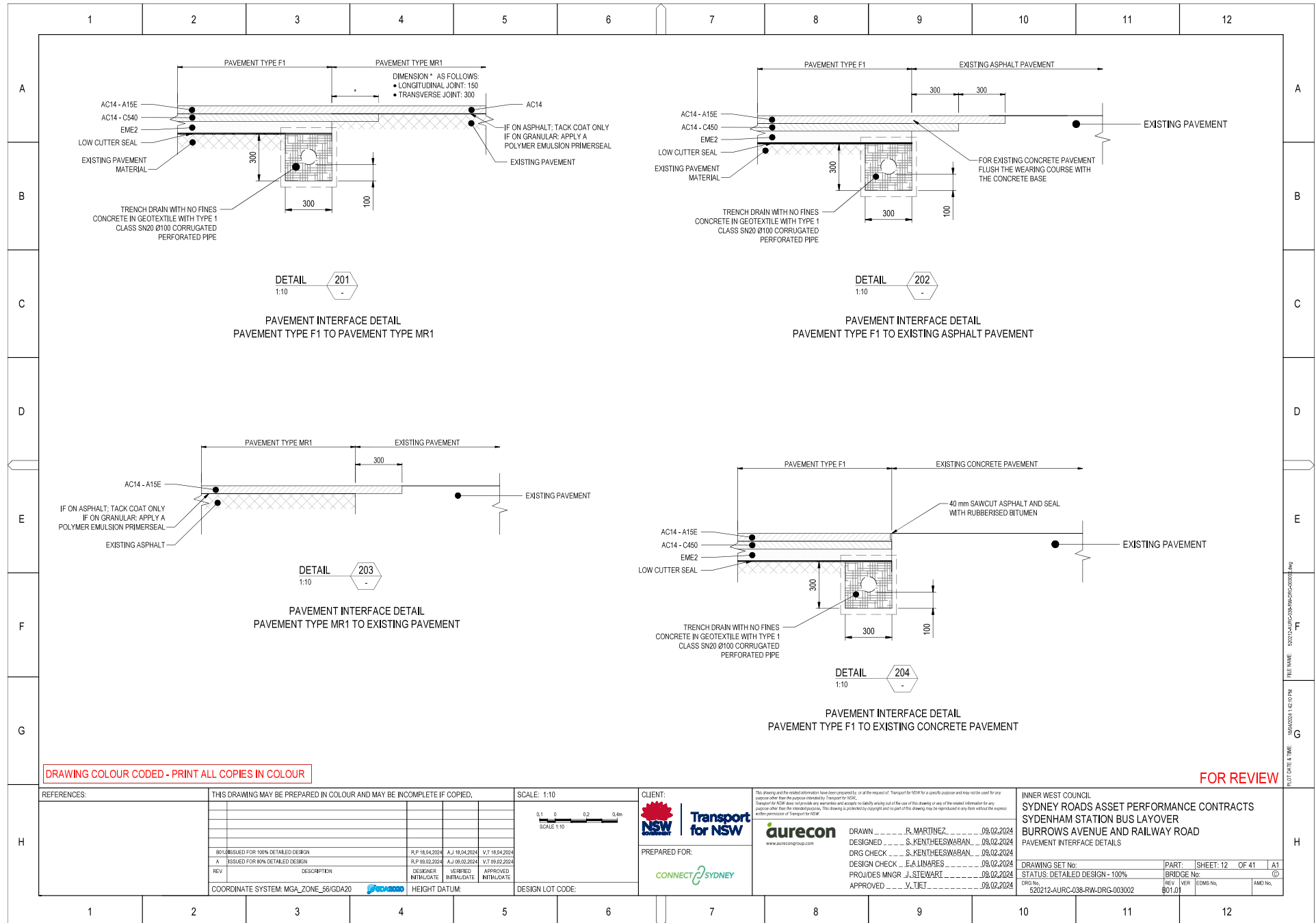
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A	<p>DRAINAGE - GENERAL</p> <ol style="list-style-type: none"> ALL COORDINATES ARE REFERENCED TO GEODETIC DATUM OF AUSTRALIA (GDA94) ZONE 56 AND ALL LEVELS ARE TO AUSTRALIAN HEIGHT DATUM. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE, ALL LEVELS, STATIONS AND COORDINATES ARE EXPRESSED IN METRES. REFER TO TNSW STANDARD DRAWING INDEX TABLE 3 FOR DRAWINGS TO BE USED FOR THIS PROJECT. ALL GRADING POINTS ARE RELATED TO FINISHED ROAD LEVEL. ALL LOCATIONS, ORIENTATION AND LEVELS MUST BE VERIFIED ON SITE BEFORE COMMENCING ANY WORK, REFER DISCREPANCIES TO THE PRINCIPAL. DO NOT OBTAIN DIMENSIONS FROM SCALING, EXISTING SURFACE LEVELS ON THE DRAWINGS ARE INDICATIVE ONLY. THE DOCUMENTED DRAINAGE SYSTEM IS DETAILED ONLY FOR THE PERMANENT ROAD CONFIGURATION UNLESS NOTED OTHERWISE. EXISTING STORMWATER DRAINAGE PIPES AND MANHOLES WITHIN THE LIMITS OF WORK MUST BE RETAINED, DECOMMISSIONED OR MODIFIED AS SPECIFIED. CONTRACTOR TO UNDERTAKE PRE AND POST CONSTRUCTION CCTV INSPECTIONS FOR ALL PIPE LINES IMPACTED BY THE WORKS AND TO BE PROVIDED TO TNSW FOR ACCEPTANCE PRIOR TO HAND-OVER. CONTRACTOR TO MANAGE AND STAGE CONSTRUCTION WORKS, INCLUDING PROVIDING TEMPORARY DIVERSION WORKS, IF NECESSARY, TO ENABLE EXISTING DRAINAGE SYSTEM TO PERFORM TO ITS CURRENT STANDARD. 																																																															
B	<p>SAFETY - IN - DESIGN INFORMATION</p> <ol style="list-style-type: none"> THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH TNSW QA SPECIFICATION G22 AND THE PROJECT SAFETY IN DESIGN REGISTER, OTHER HAZARDS AND RISKS IDENTIFIED IN THESE DOCUMENTS TO BE ADDRESSED BY CONTRACTOR N AND SUB-CONTRACTORS ON SITE DURING MEETINGS. AT ALL TIMES DURING CONSTRUCTION, ADEQUATE SAFETY PROCEDURE SHALL BE TAKEN TO PREVENT PERSONNEL FROM FALLING INTO PITS AND OPEN TRENCHES. <p>EXISTING STORMWATER</p> <ol style="list-style-type: none"> LAYOUT OF EXISTING STORMWATER DRAINAGE HAVE BEEN PREPARED BASED ON A COMBINATION OF DRAINAGE UTILITIES SURVEY, DETAILED GROUND FEATURE SURVEY PROVIDED BY TNSW OBTAINED DURING CURRENT DESIGN AND BYDA INFORMATION. WHERE AN EXISTING PIT HAS ONLY ONE PIPE OUTLET, THE SETOUT / REFERENCE POINT OF THE EXISTING PIT IS BASED ON THE SURVEYED PIPE INVERT LEVEL. WHERE AN EXISTING PIT HAS TWO OR MORE CONNECTION PIPES, THE SETOUT / REFERENCE OF THE EXISTING PIT IS BASED ON THE INTERSECTION POINT OF THE CENTERLINE OF EACH PIPE. ANY EXISTING RETAINED PIPES ARE TO BE TREATED IN ACCORDANCE WITH TNSW QA SPECIFICATION R11. EXISTING STORMWATER PIPES OR CULVERTS THAT ARE IDENTIFIED TO BE DECOMMISSIONED OR ABANDONED SHALL BE ASSESSED FOR THE APPROPRIATE TREATMENT WHICH INCLUDES: <ul style="list-style-type: none"> REMOVE AND BACKFILL - EXISTING PIPES / PITS TO BE REMOVED WITH TRENCH BACKFILLED AND COMPACTED. SEAL AND GROUT - PIPE ENDS TO BE CAPPED AND PIPES INFILLED WITH GROUT. ALL EXISTING STORMWATER DRAINAGE LINES AND PITS THAT ARE TO REMAIN, AND ANY PART OF THE SYSTEM IDENTIFIED AS WARRANTING REPAIR SHALL BE REPORTED TO PRINCIPAL FOR FURTHER DIRECTION. 																																																															
C	<p>LONGITUDINAL PAVEMENT DRAINAGE</p> <ol style="list-style-type: none"> ALL PIPES ARE TO BE CLASS 4 STEEL REINFORCED CONCRETE PIPE AS PER AS/NZS 4058:2007 UNLESS NOTED OTHERWISE, CONCRETE PIPES ARE TO BE RUBBER RING JOINTED SPIGOT AND SOCKET TYPE. ALL PIPEWORK IS TO LAID WITH SOCKET FACING UPSTREAM. CONCRETE PIPE INSTALLATION SUPPORT TYPE TO BE MINIMUM 'HS2' IN ACCORDANCE WITH AS/NZS 3725:2007. CONCRETE PIPE CLASSES HAVE BEEN DETERMINED, BASED ON TYPE HS3 SUPPORT AND TRENCH OR EMBANKMENT CONDITION INSTALLATION TO AS3725 AND TNSW QA SPECIFICATION R11 UNLESS OTHERWISE NOTED. ALL PITS AND PIPES ARE TO BE IN ACCORDANCE WITH TNSW STANDARD DRAWINGS. CONNECTION BETWEEN PIPES AND STRUCTURES TO BE UNDERTAKEN IN ACCORDANCE WITH TNSW QA SPECIFICATION R11 AND TNSW STANDARD DRAWINGS. PIPE CLASSES HAVE BEEN CHECKED FOR OPERATIONAL TRAFFIC LOADING AND THE FOLLOWING CONSTRUCTION MINIMUM COVER REQUIRED ABOVE EXISTING AND NEW PIPES BEFORE USING THE PLAN SHOWN IN TABLE 1, PIPES ARE TO BE PROTECTED IN ACCORDANCE WITH TNSW QA SPECIFICATION R11. 																																																															
D	<p>TABLE 1 - MINIMUM COVER FOR CONSTRUCTION LOADS</p> <table border="1"> <thead> <tr> <th>PLANT</th> <th>MINIMUM COVER FOR CONSTRUCTION LOADS EXISTING PIPE (mm)</th> <th>RCP (CLASS 1) (mm)</th> </tr> </thead> <tbody> <tr> <td>EXCAVATOR (CAT 320B - 25.9 T)</td> <td>400</td> <td>300</td> </tr> <tr> <td>ROLLER (PAAVR - 10 T)</td> <td>700</td> <td>400</td> </tr> <tr> <td>GRADER (CAT10H - 17 T)</td> <td>400</td> <td>300</td> </tr> <tr> <td>TRUCK (CAT300E - 49 T)</td> <td>400</td> <td>400</td> </tr> <tr> <td>COMPACTOR (CAT10P - 10.9 T)</td> <td>400</td> <td>300</td> </tr> <tr> <td>DOZER (CAT90 - 48.3 T)</td> <td>400</td> <td>300</td> </tr> <tr> <td>SCRAPER (CAT62B - 49.2 T)</td> <td>900</td> <td>400</td> </tr> <tr> <td>EXCAVATOR - COMPACTION WHEEL (APAC6WH1 - 20 T)</td> <td>900</td> <td>400</td> </tr> <tr> <td>EXCAVATOR - COMPACTION WHEEL (APAC6WH2 - 25 T)</td> <td>950</td> <td>500</td> </tr> </tbody> </table> <p>DRAINAGE DURABILITY</p> <ol style="list-style-type: none"> THE EXPOSURE CLASSIFICATION FOR BOX CULVERTS SHALL BE 'B1' IN ACCORDANCE WITH AS 1597.2:2013 AND DRAINAGE PITS SHALL BE 'B1' IN ACCORDANCE WITH AS1100.5:2017 UNLESS NOTED OTHERWISE IN THE PIT AND PIPE SCHEDULE. PRECAST PIPES SHALL BE IN ACCORDANCE WITH AS/NZS 4058:2007. ALL PIPES SHALL BE BACKFILLED WITH NON-AGGRESSIVE SOIL (pH >5.5, S04 < 1000 mg/Kg (ppm) AND CHLORIDE < 1000 mg/Kg (ppm)). THE EXPOSURE CLASSIFICATION FOR PRECAST PIPES HAS BEEN CLASSIFIED AS 'NORMAL' UNLESS NOTED OTHERWISE IN THE PIT AND PIPE SCHEDULE. 												PLANT	MINIMUM COVER FOR CONSTRUCTION LOADS EXISTING PIPE (mm)	RCP (CLASS 1) (mm)	EXCAVATOR (CAT 320B - 25.9 T)	400	300	ROLLER (PAAVR - 10 T)	700	400	GRADER (CAT10H - 17 T)	400	300	TRUCK (CAT300E - 49 T)	400	400	COMPACTOR (CAT10P - 10.9 T)	400	300	DOZER (CAT90 - 48.3 T)	400	300	SCRAPER (CAT62B - 49.2 T)	900	400	EXCAVATOR - COMPACTION WHEEL (APAC6WH1 - 20 T)	900	400	EXCAVATOR - COMPACTION WHEEL (APAC6WH2 - 25 T)	950	500																						
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G	<p>DRAINAGE STRUCTURES</p> <ol style="list-style-type: none"> STRUCTURES HAVE BEEN DESIGNED FOR FINAL LOADS (UNLESS STATED OTHERWISE) ACTING ON COMPLETED STRUCTURES, THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND PROVISION OF ANY TEMPORARY BRACING, PROPPING, ETC, REQUIRED DURING CONSTRUCTION, STRUCTURES MUST BE MAINTAINED IN A STABLE CONDITION AND NO PART MUST BE OVERSTRESSED. FOUNDATION SUPPORT FOR DRAINAGE STRUCTURES TO BE PROVIDED IN ACCORDANCE TO TNSW QA SPECIFICATION R11. INADEQUATE FOUNIDING MATERIAL, FOR PIPES AND STRUCTURES MUST BE REMOVED OR IMPROVED IN ACCORDANCE WITH TNSW QA SPECIFICATION R11. TNSW STANDARD DETAILS TO BE ADOPTED UNLESS NOTED OTHERWISE. STEEL GRATES AND FRAMES ARE TO BE FABRICATED FROM MILD STEEL AND HOT DIP GALVANISED, ALL GRATES ARE TO BE CLASS D (UNLESS NOTED OTHERWISE), GRATES AND FRAMES WITHIN THE PAVEMENT SURFACE ARE TO BE BICYCLE SAFE IN ACCORDANCE WITH AS 3996 UNLESS NOTED OTHERWISE. ALL WELDS TO COMPLY WITH AUSTRALIAN STANDARD AS 1554, FILLET WELDS TO BE NOT LESS THAN 6mm UNLESS NOTED OTHERWISE. ALL GALVANISING TO BE IN ACCORDANCE WITH AS/NZS 2312 AND AS/NZS 4680, GALVANISING TO THREADED FASTENERS TO BE IN ACCORDANCE WITH AS 1214, MINIMUM GALVANISING 600gsm OTHER THAN ON FASTENERS. GRATE SUPPORT TO BE CONSTRUCTED LEVEL TO ENSURE THAT THE GRATE DOES NOT ROCK AFTER INSTALLATION. FOR LOCATION AND LEVEL OF PITS, REFER TO PIT SCHEDULE ON DRAWING 520212-AURC-038-DR-DRG-006001. 																																																															
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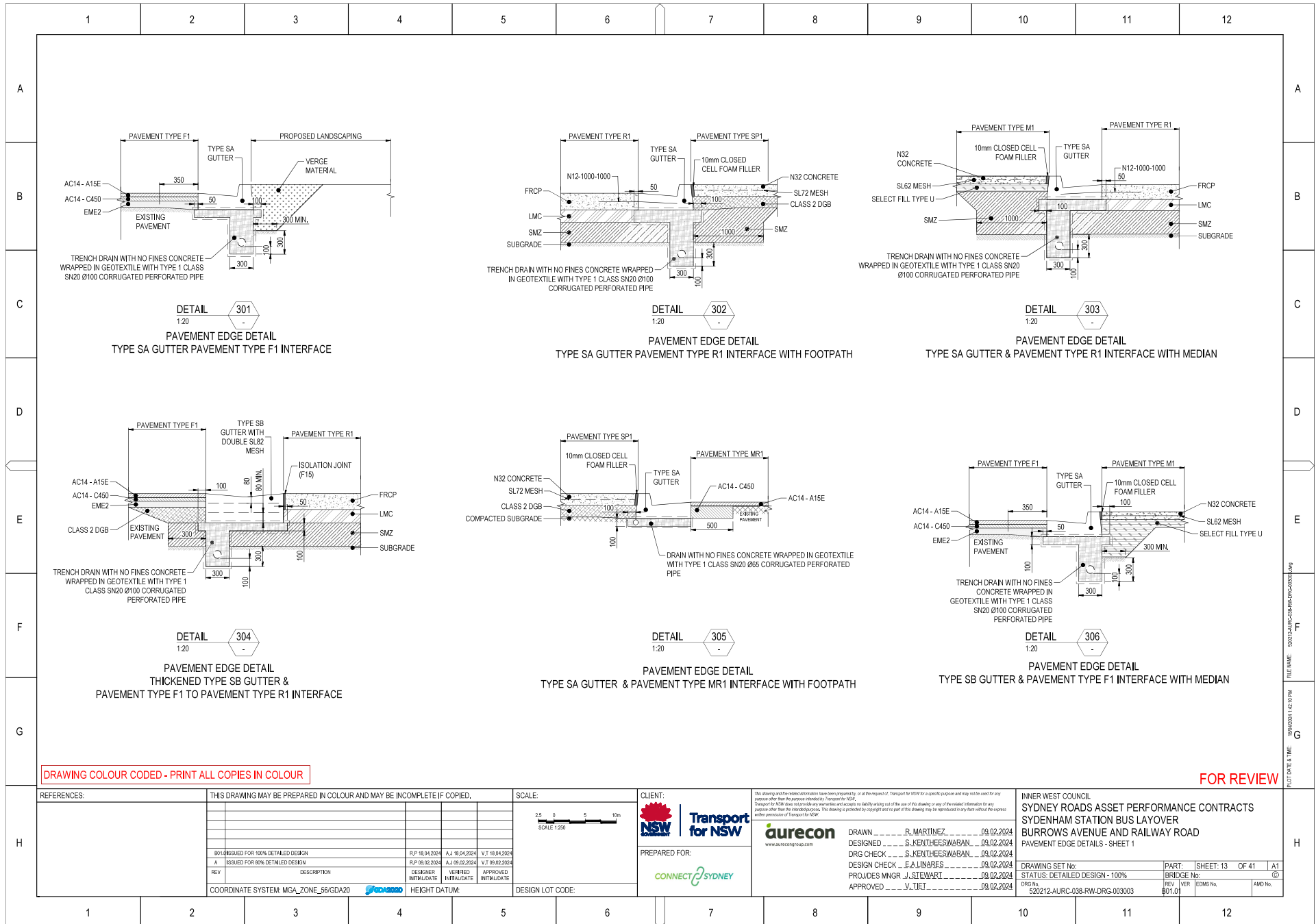




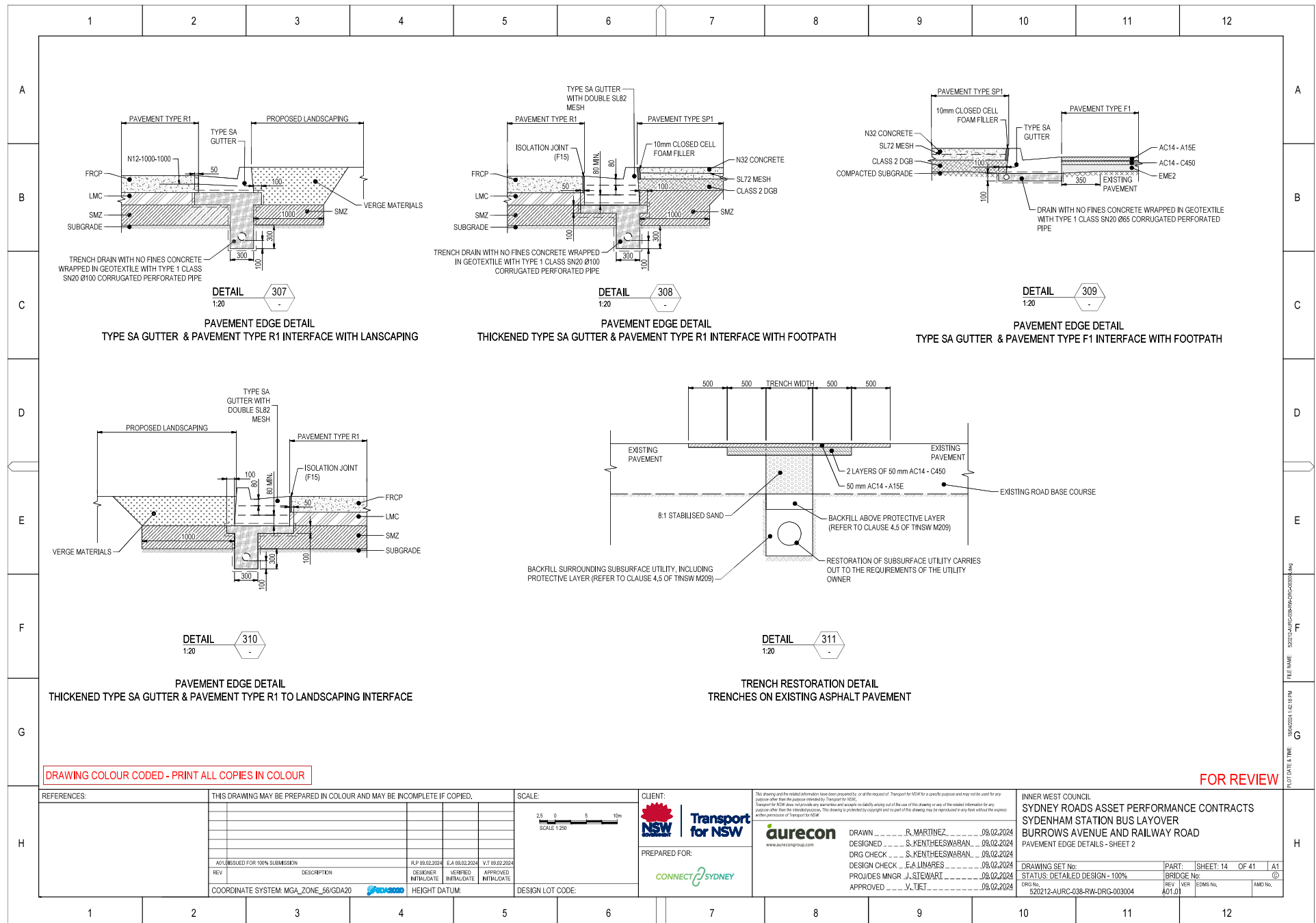


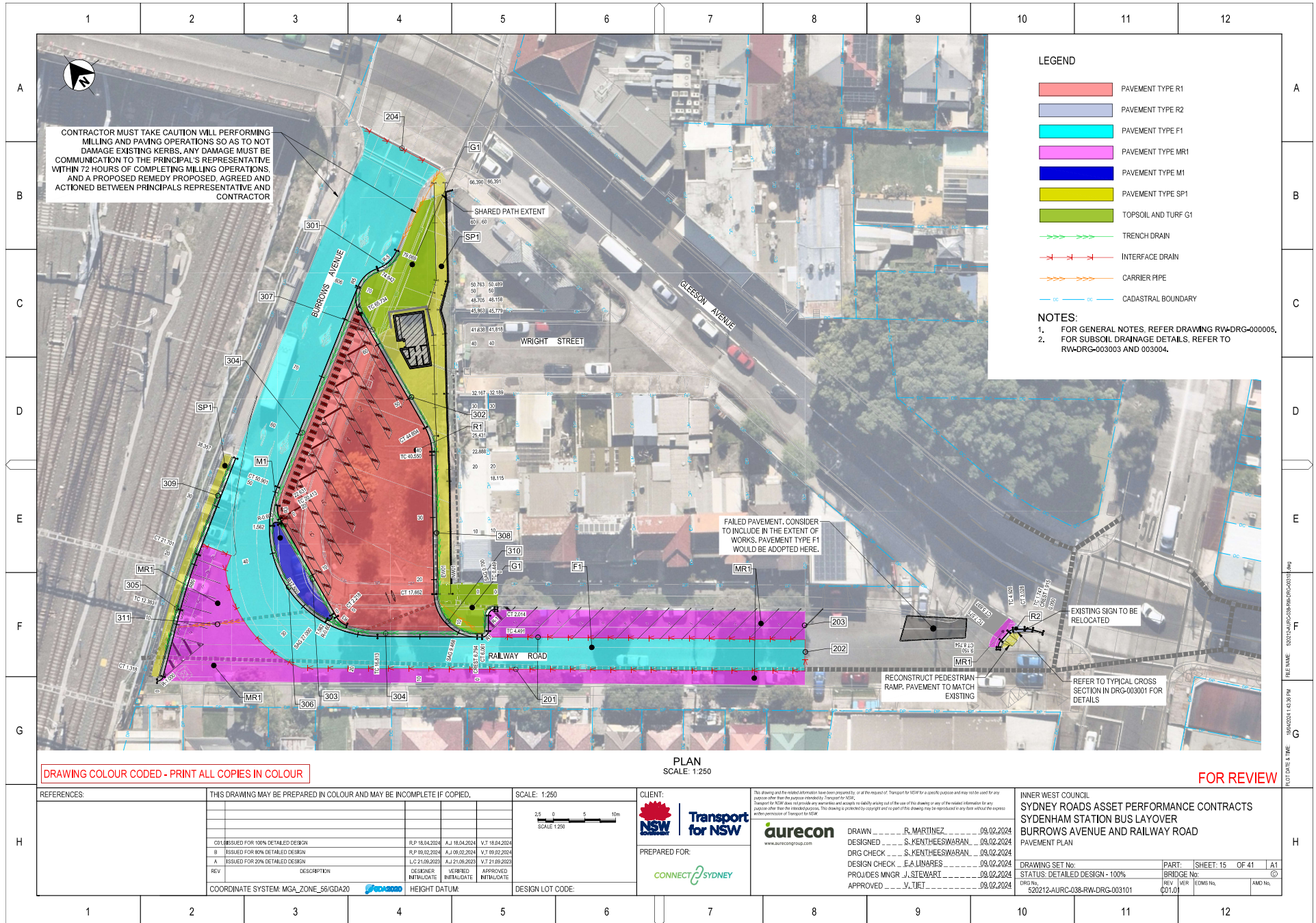


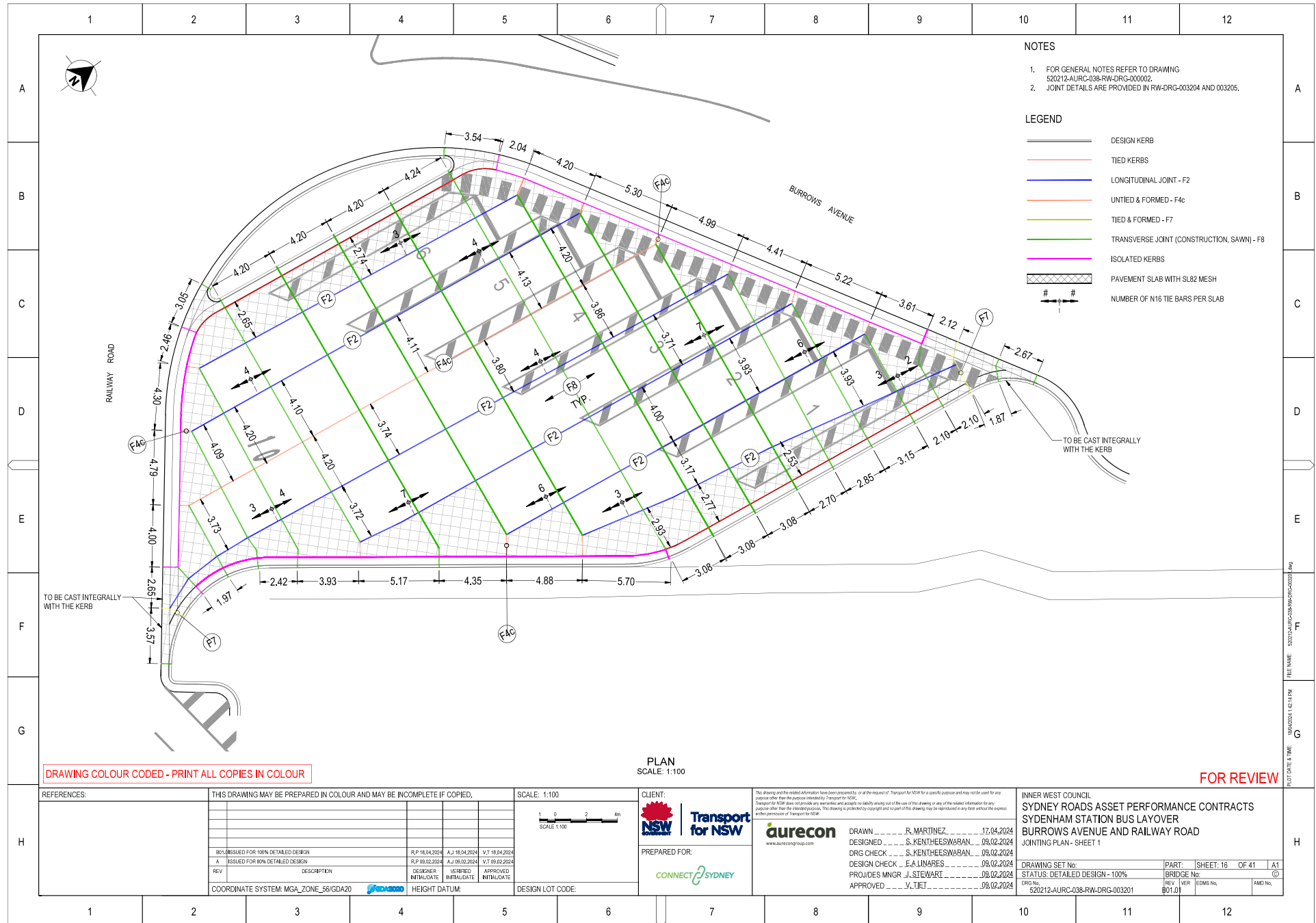
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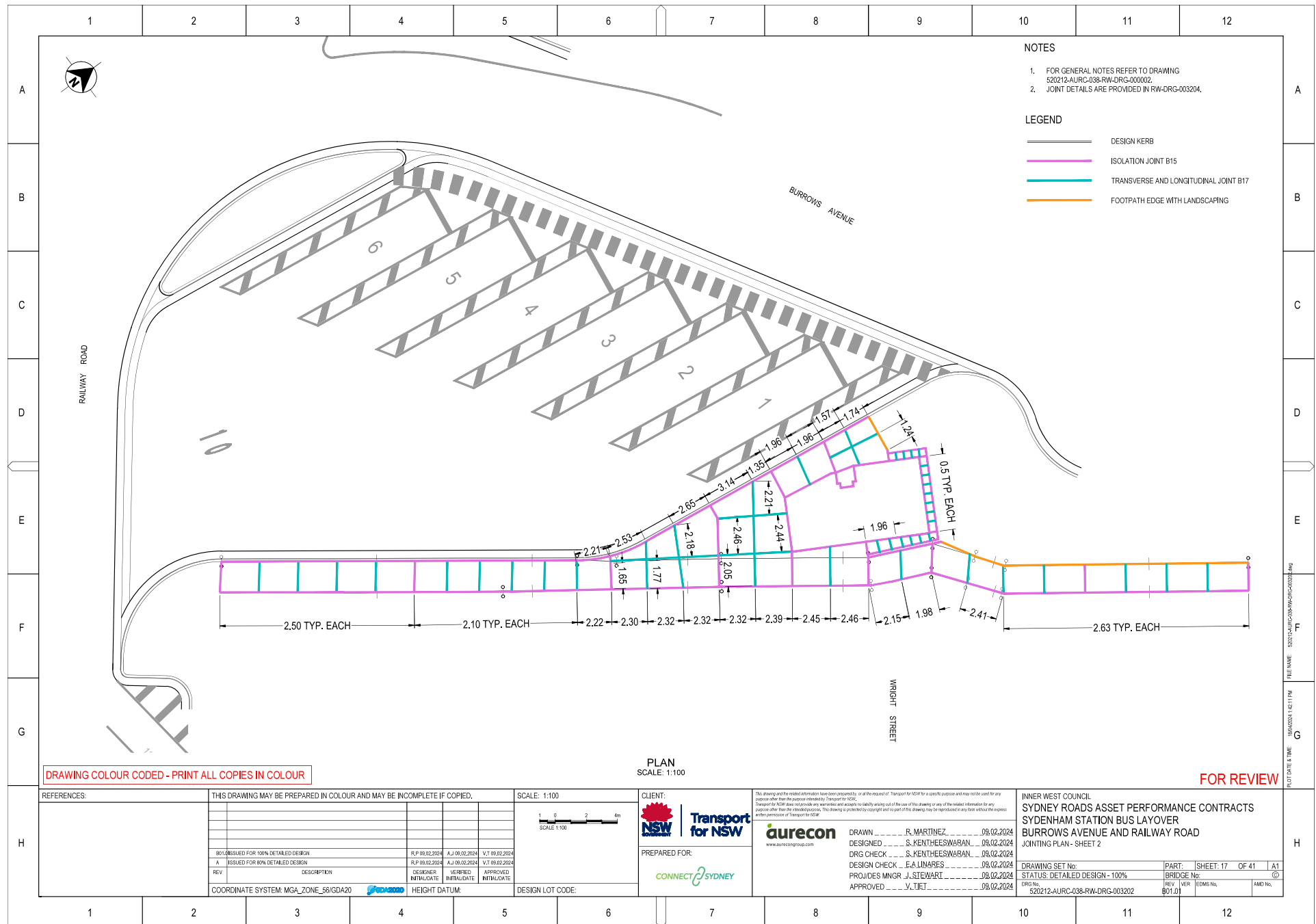


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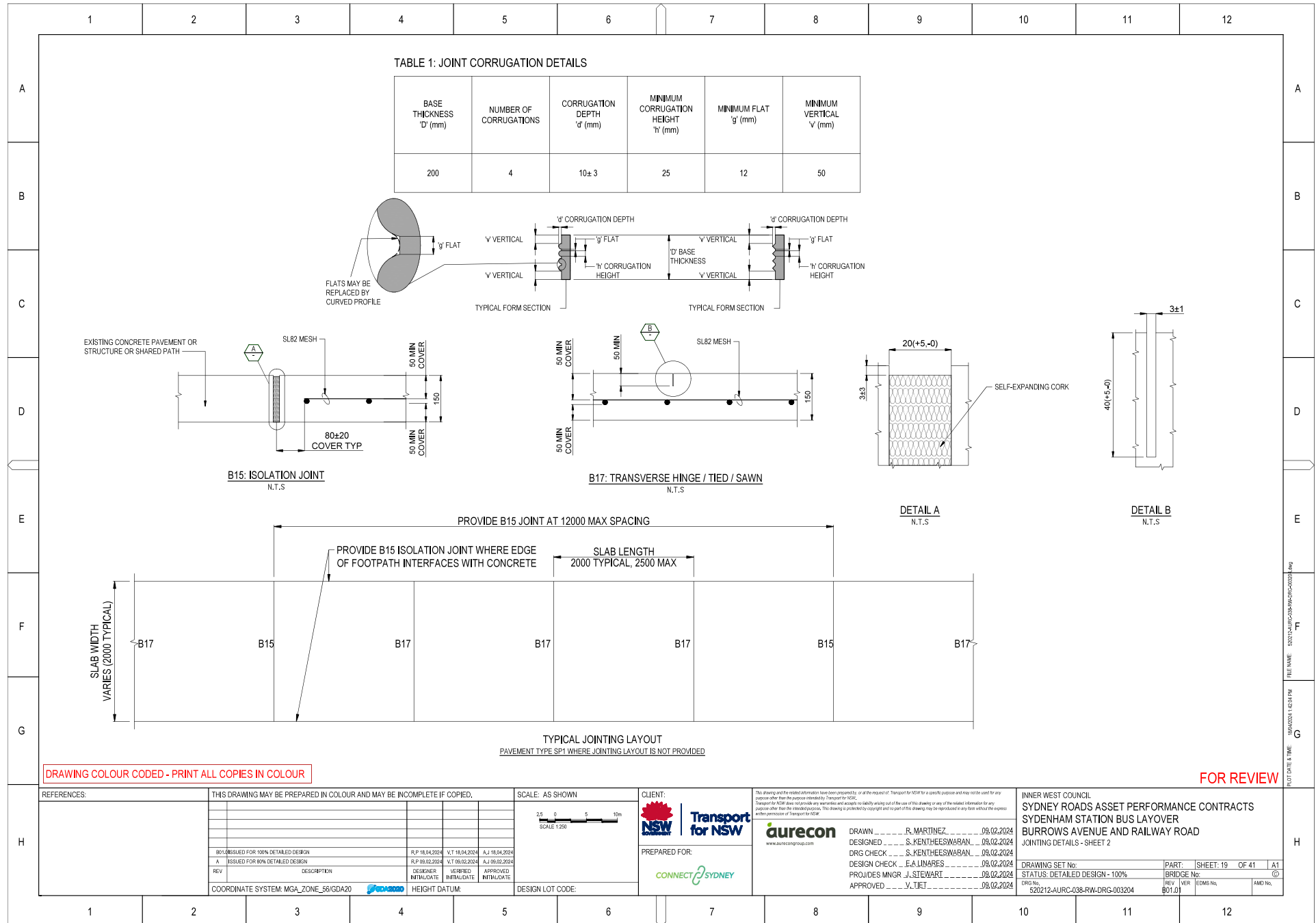


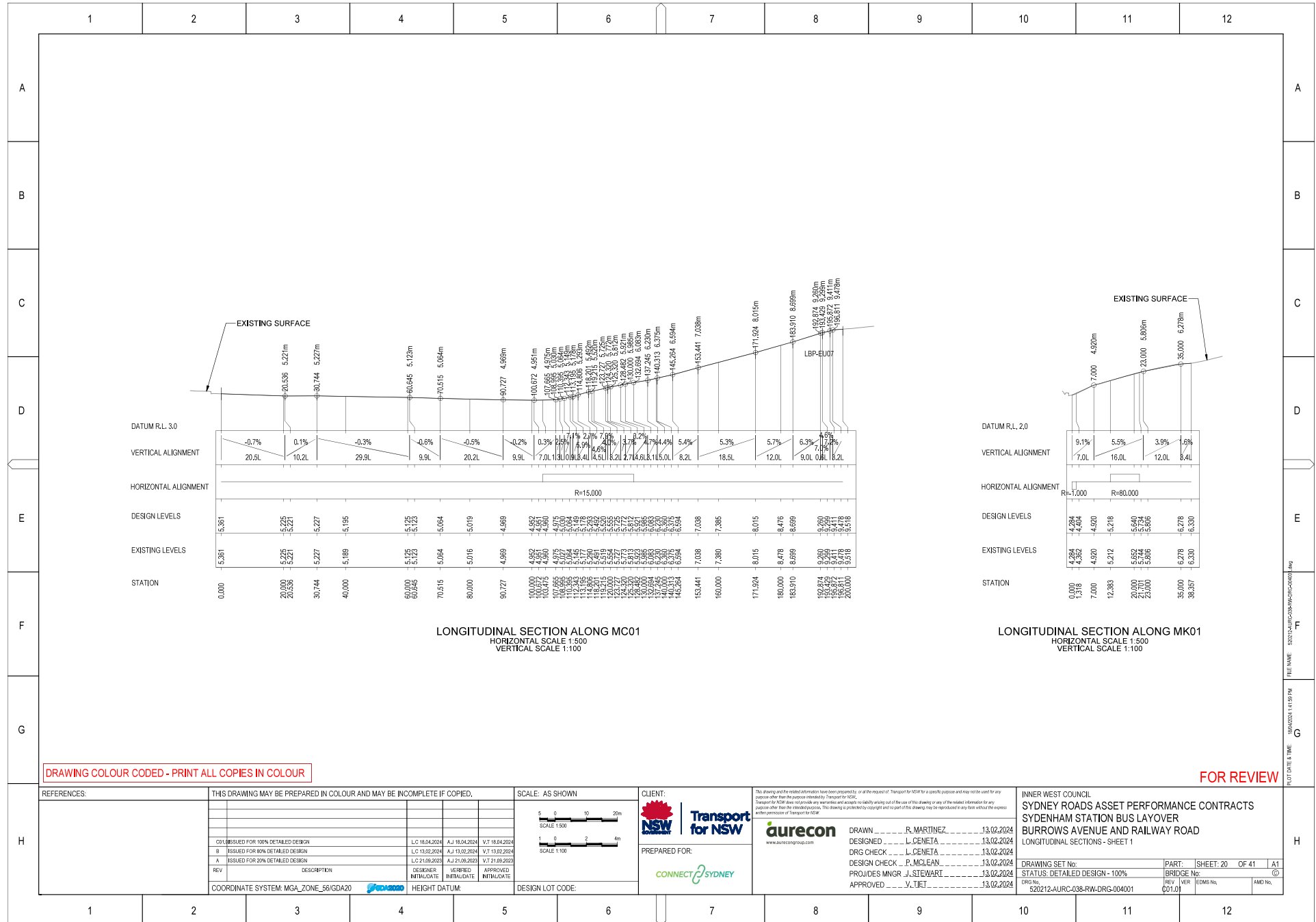


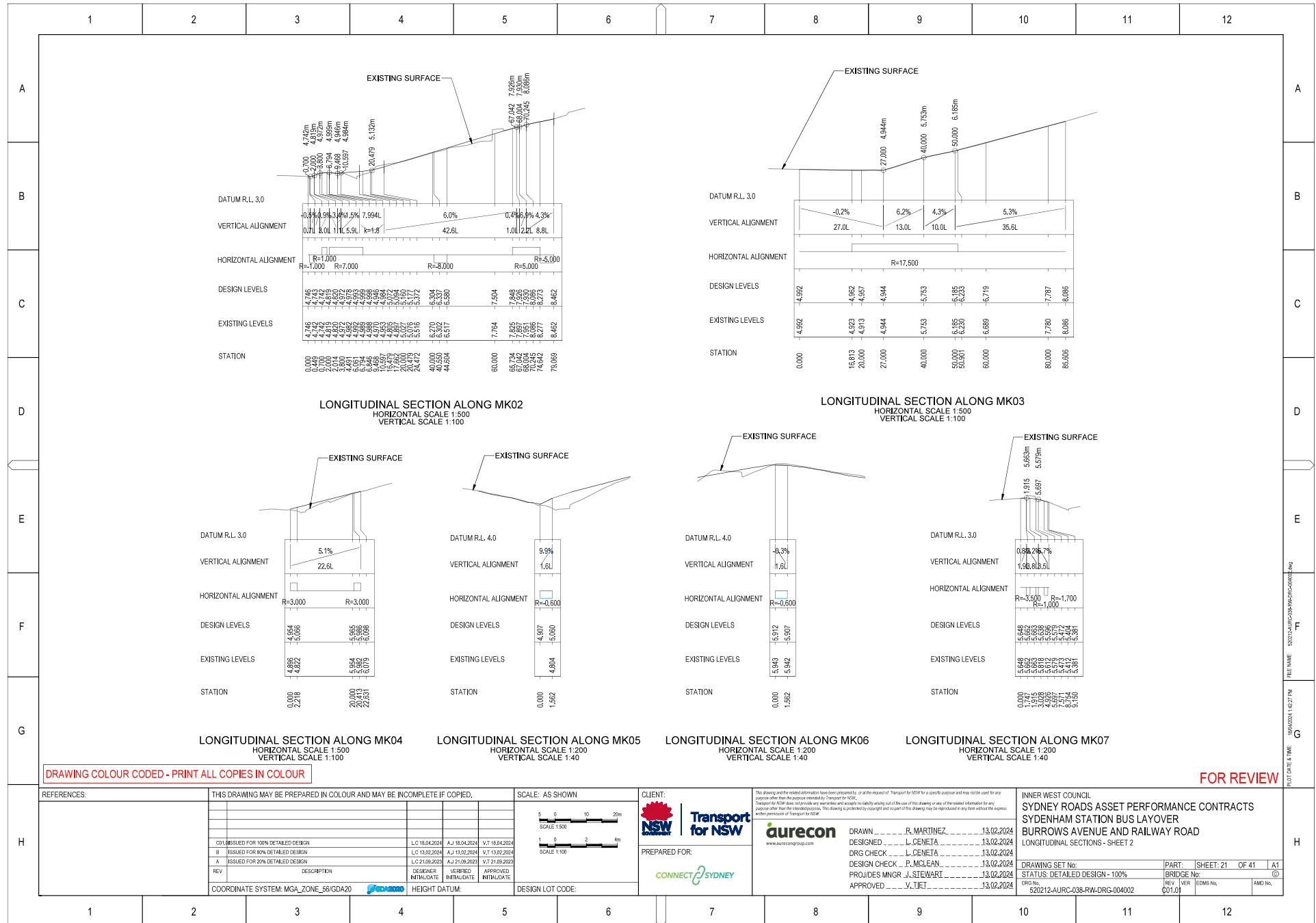




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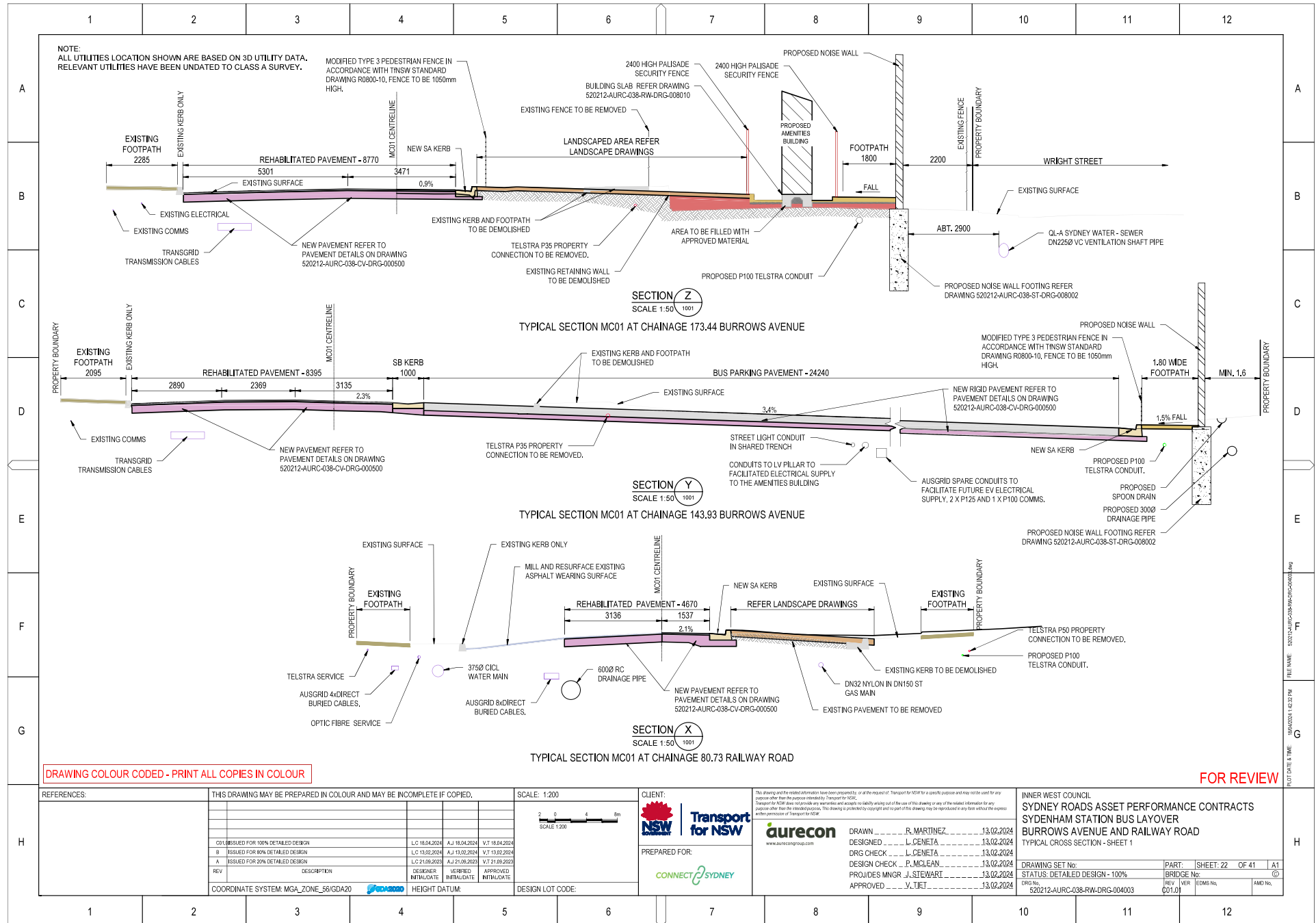


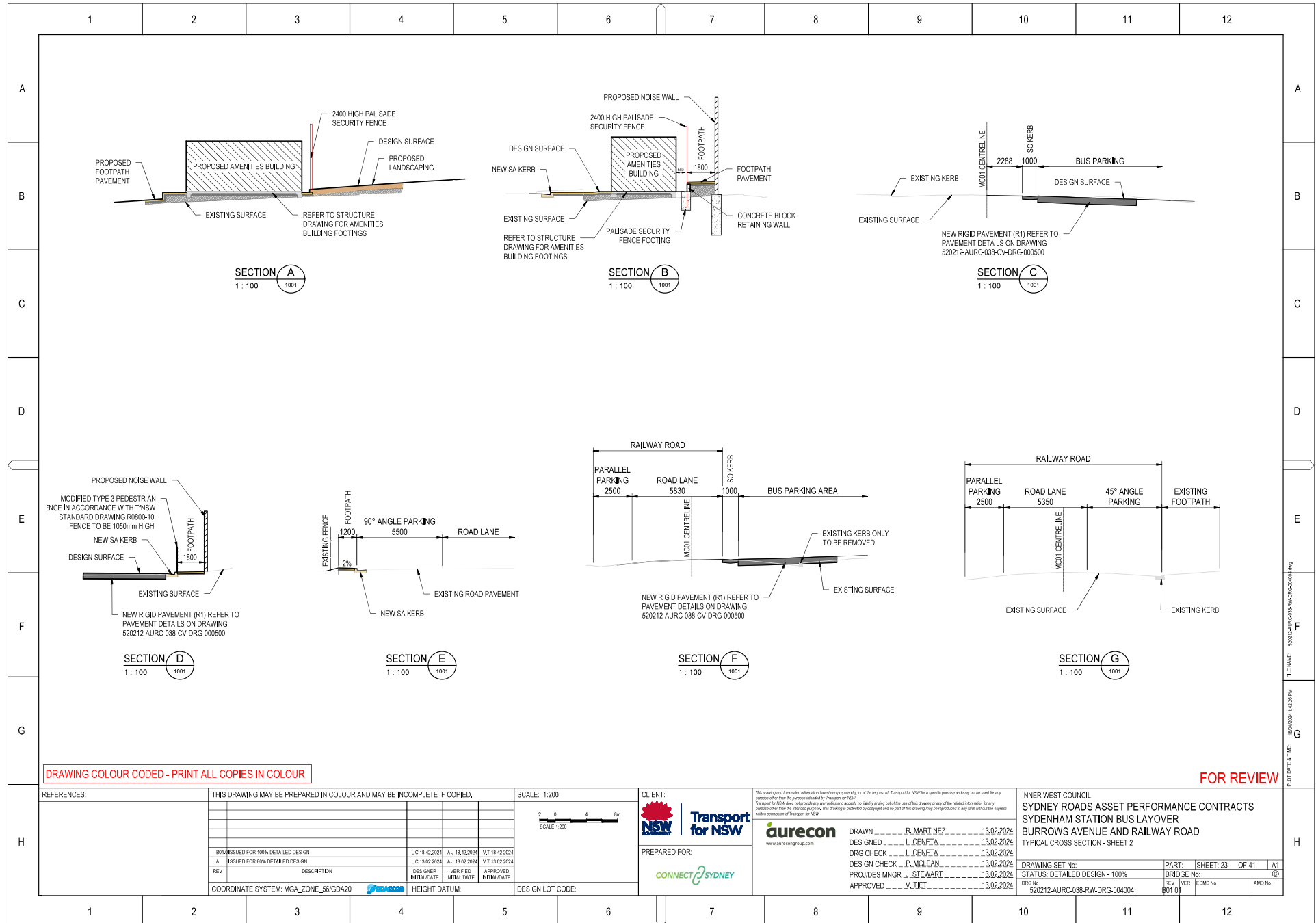


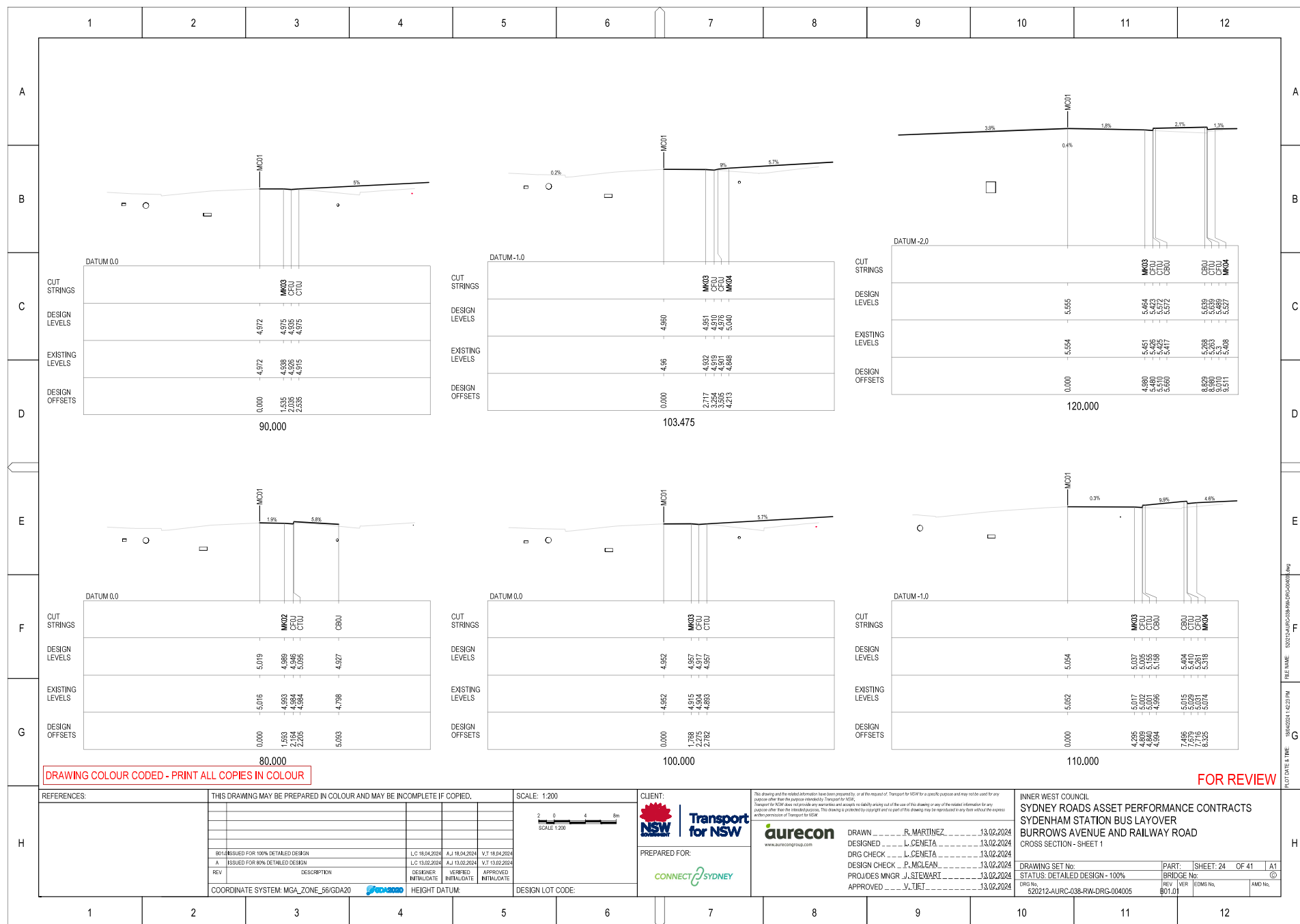


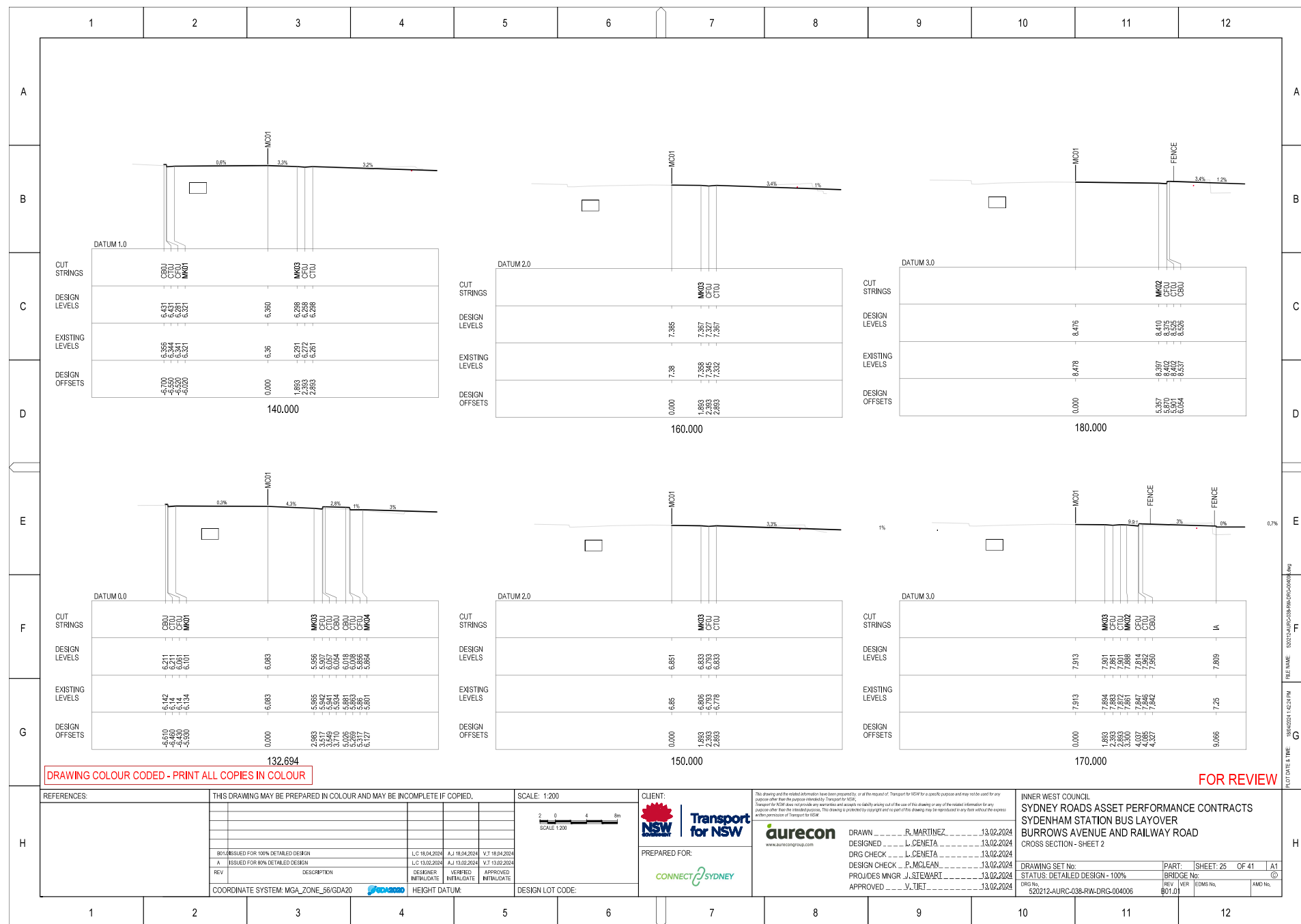
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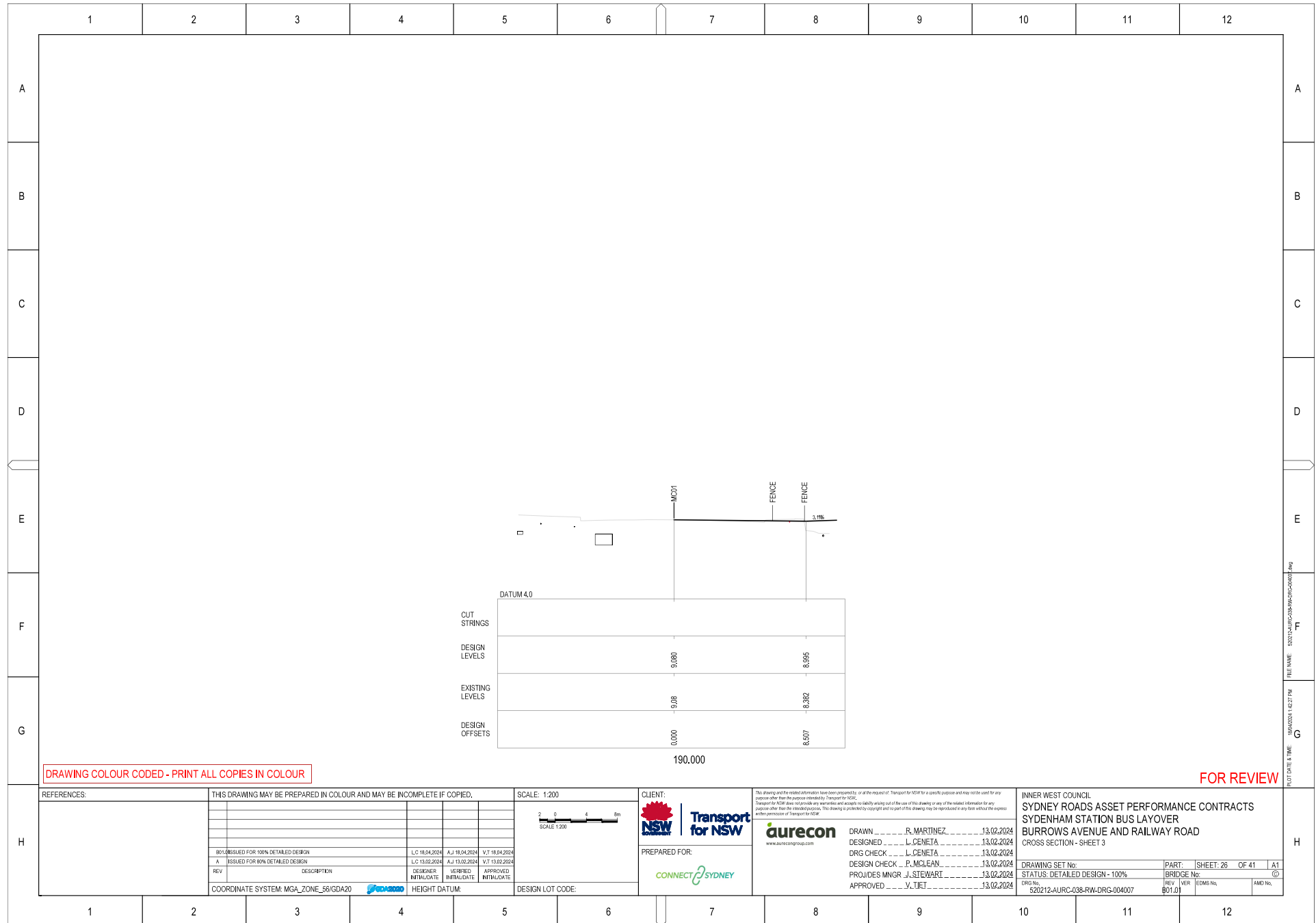
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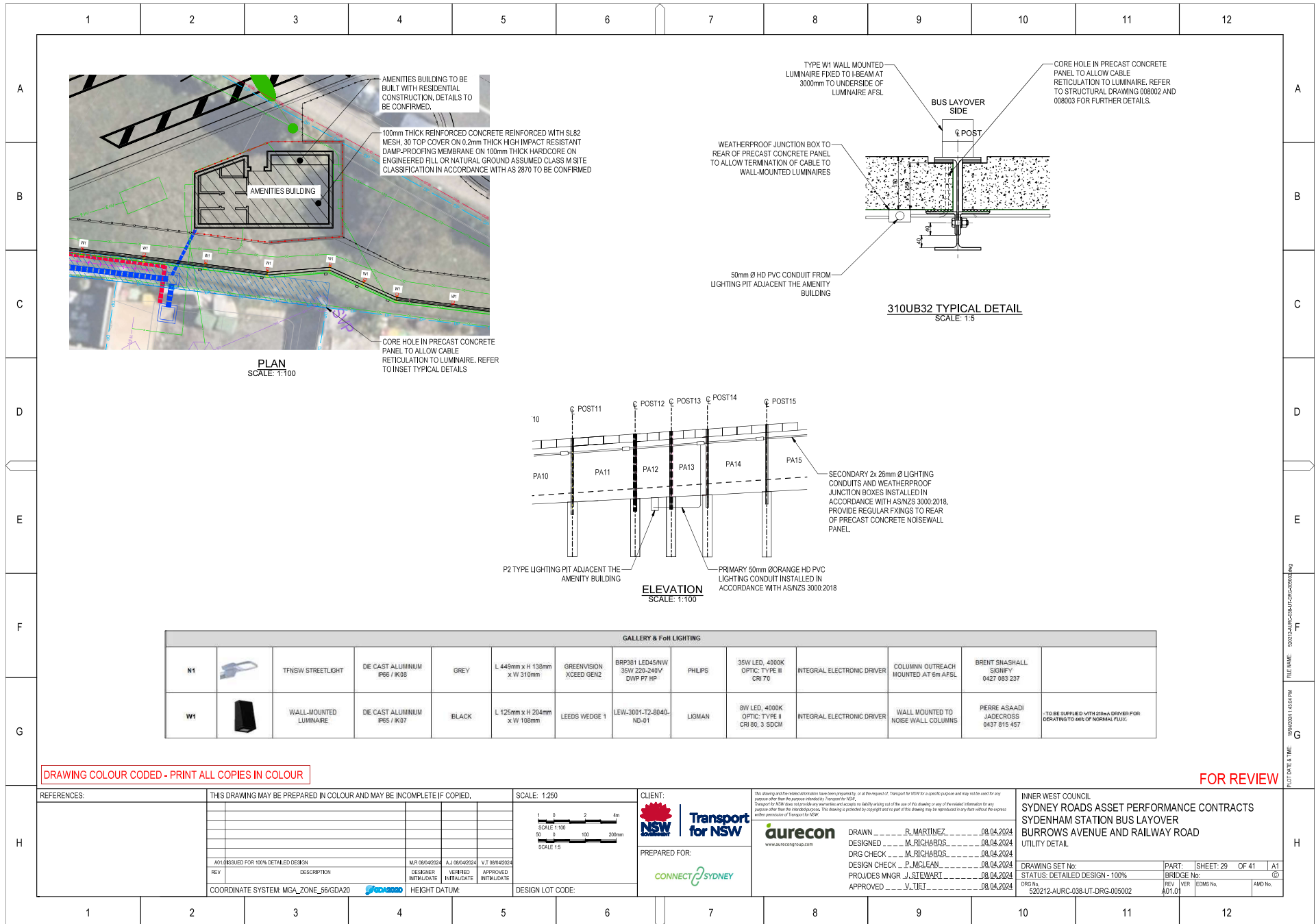


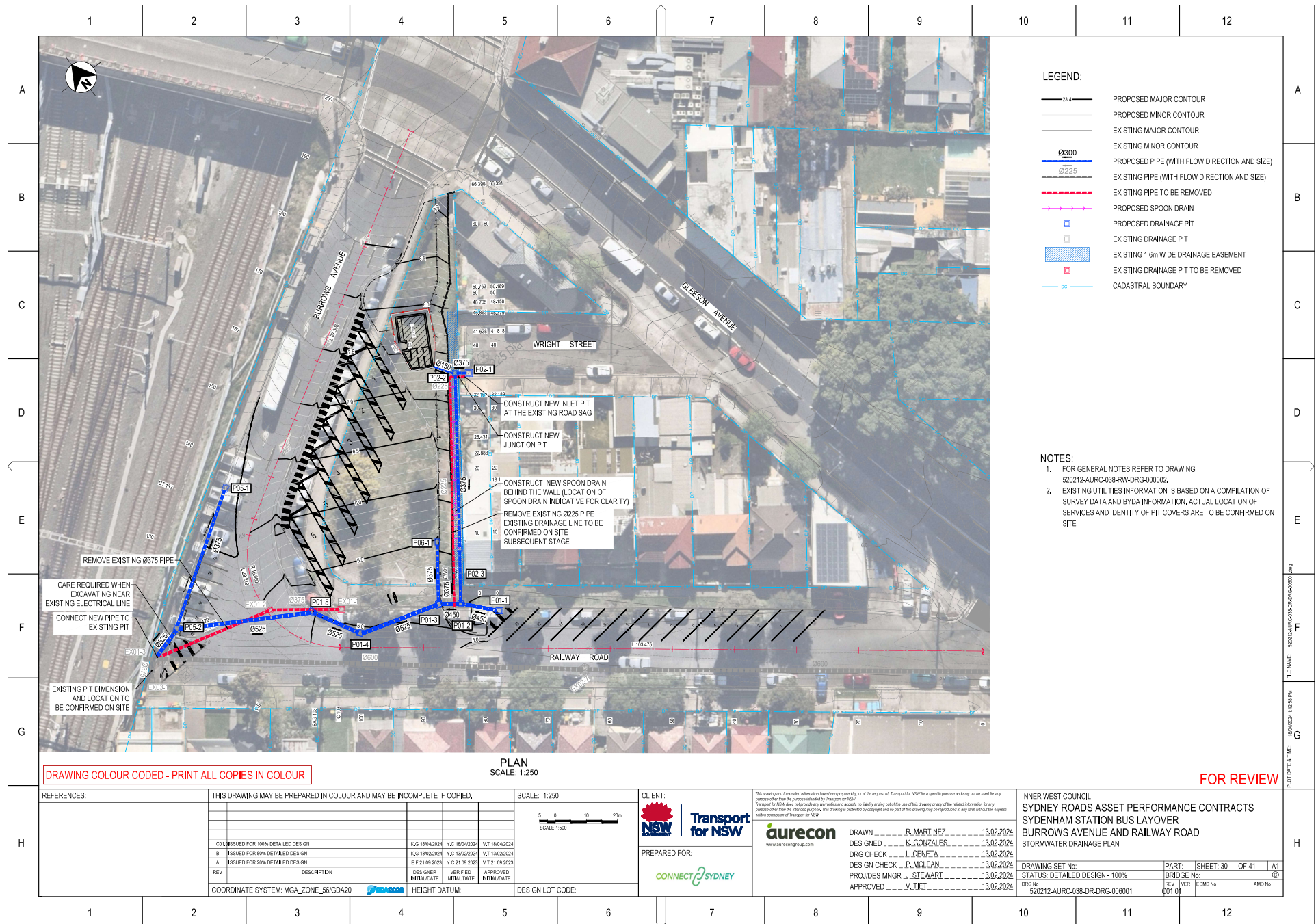


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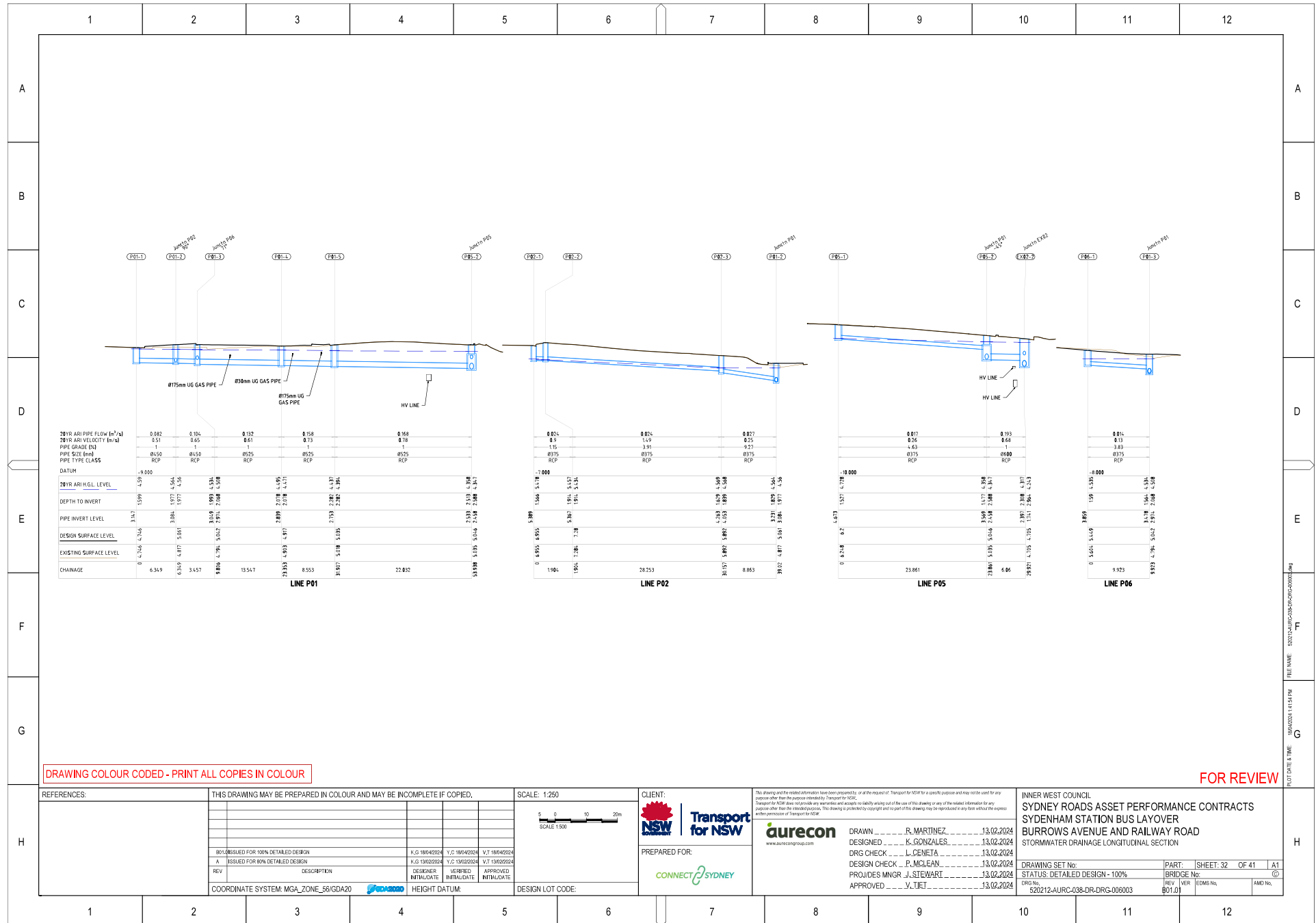
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P01-2	JUNCTION PIT	0.6	0.6	5.061	1.90	330420.59	6245663.89	R0220-35
P01-3	SA1	0.85	0.67	5.042	1.92	330417.81	6245665.94	R0220-01
P01-4	SO1	0.7	0.7	4.917	1.93	330404.92	6245669.96	R0220-21
P01-5	SAS	0.85	0.67	5.035	2.13	330400.53	6245677.39	R0220-01
P02-1	SA1	0.85	0.67	6.955	1.57	330443.94	6245692.75	R0220-01
P02-2	JUNCTION PIT	0.6	0.6	7.280	1.91	330442.43	6245693.90	R0220-35
P02-3	JUNCTION PIT	0.6	0.6	5.892	1.84	330425.86	6245671.01	R0220-35
P05-1	SA2	0.85	0.67	6.200	1.53	330401.83	6245701.65	R0220-01
P05-2	SA1	0.85	0.67	5.046	2.36	330382.04	6245688.35	R0220-01
P06-1	SA2	0.85	0.67	5.449	1.59	330423.59	6245674.00	R0220-01

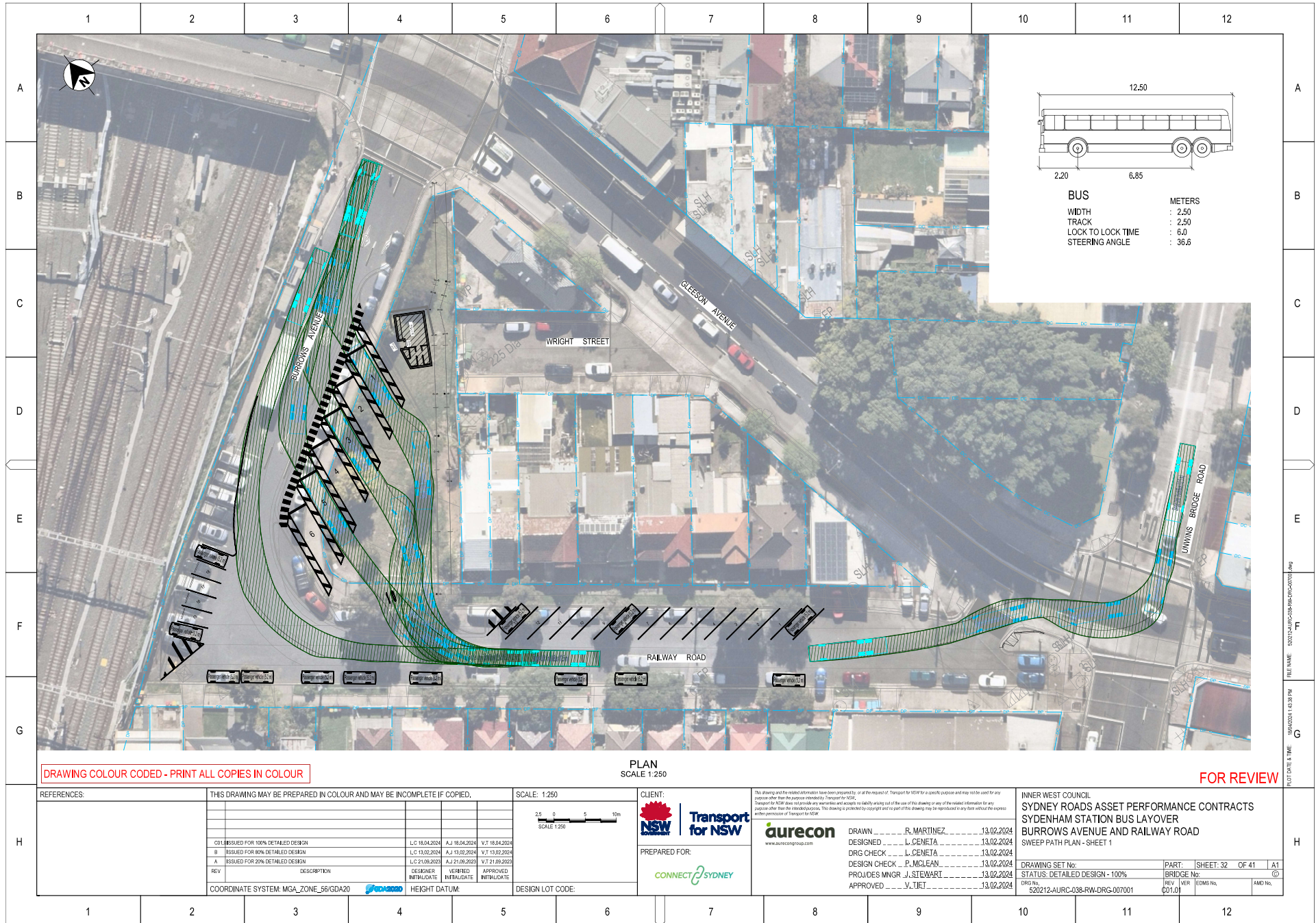
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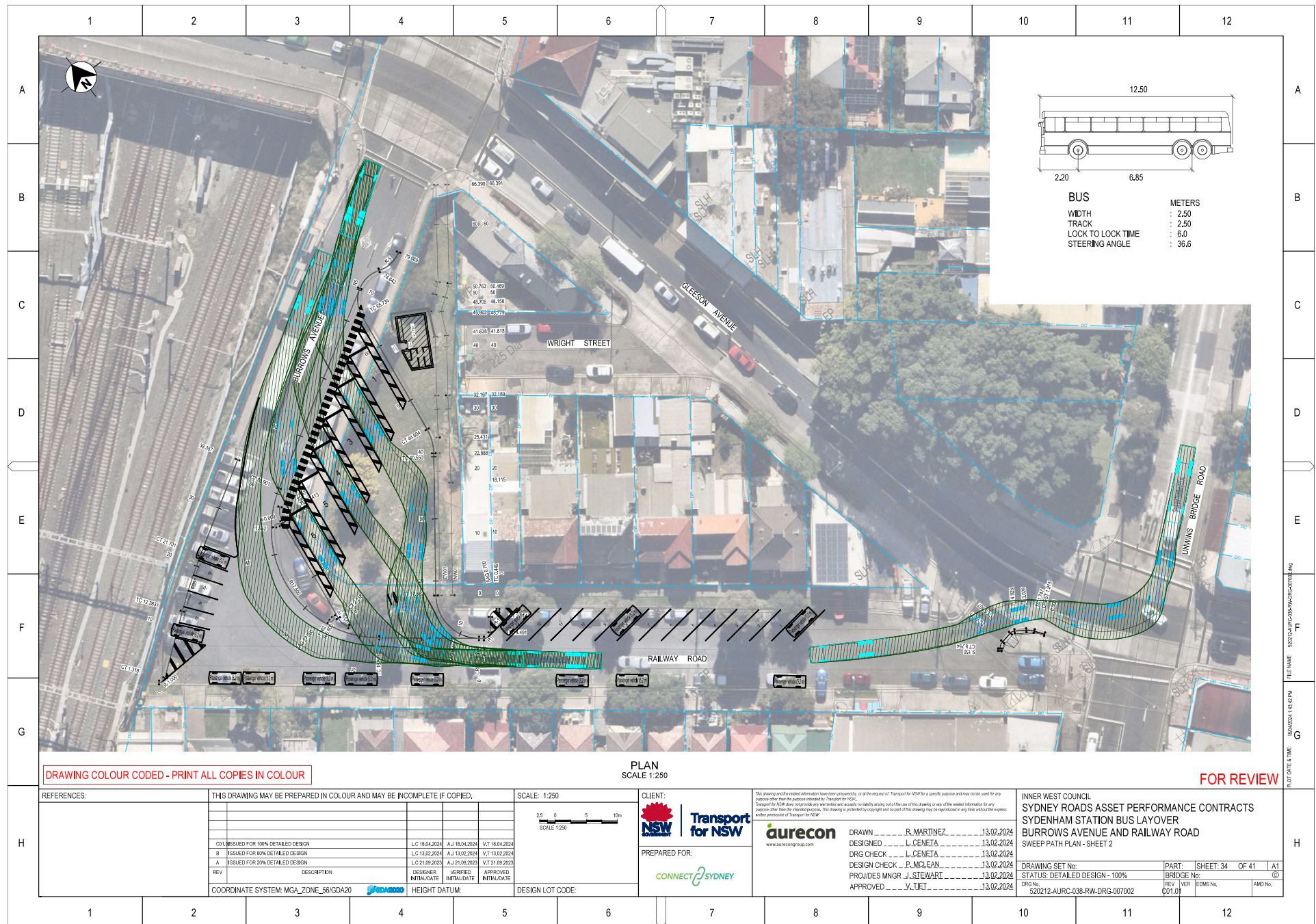
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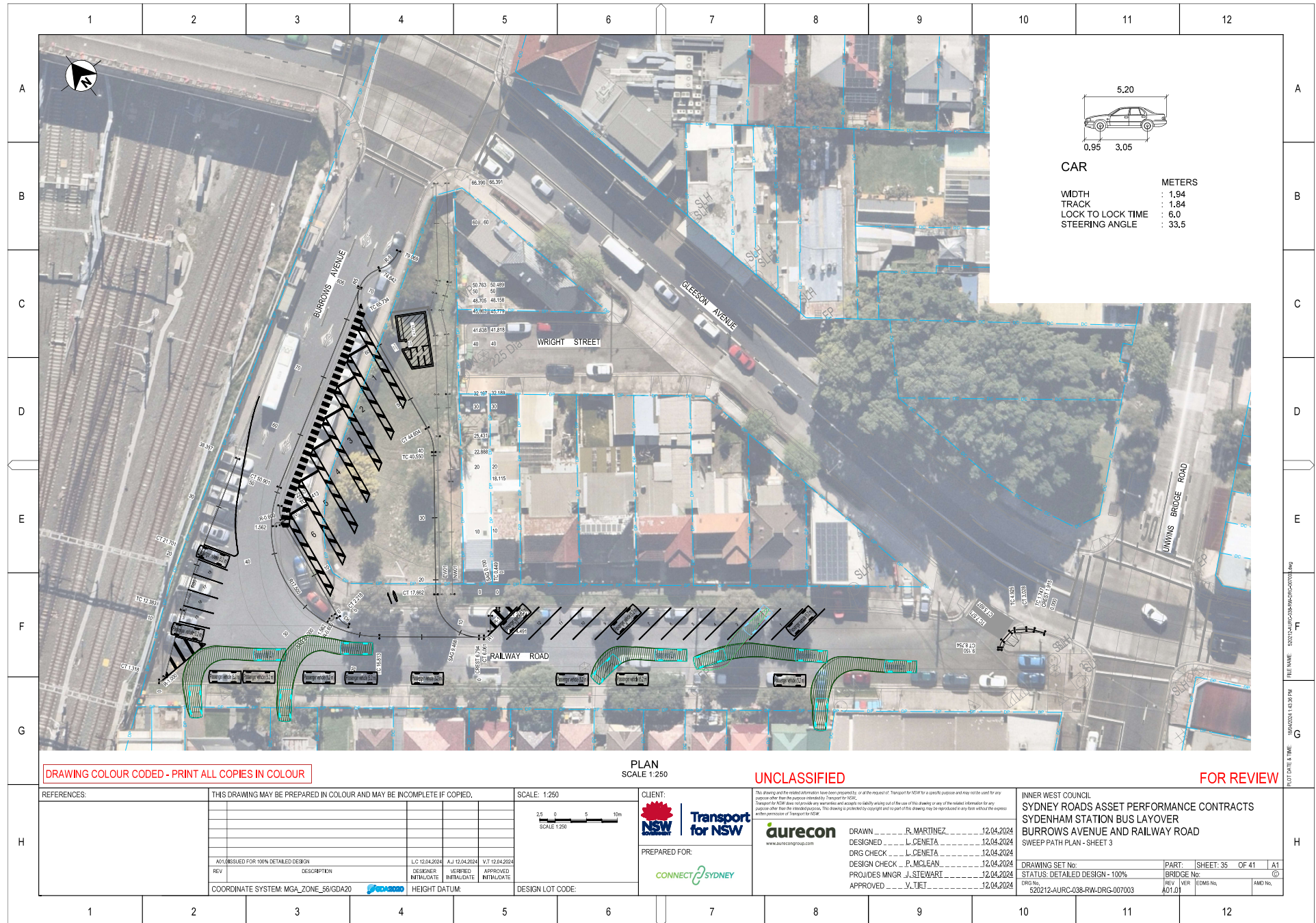
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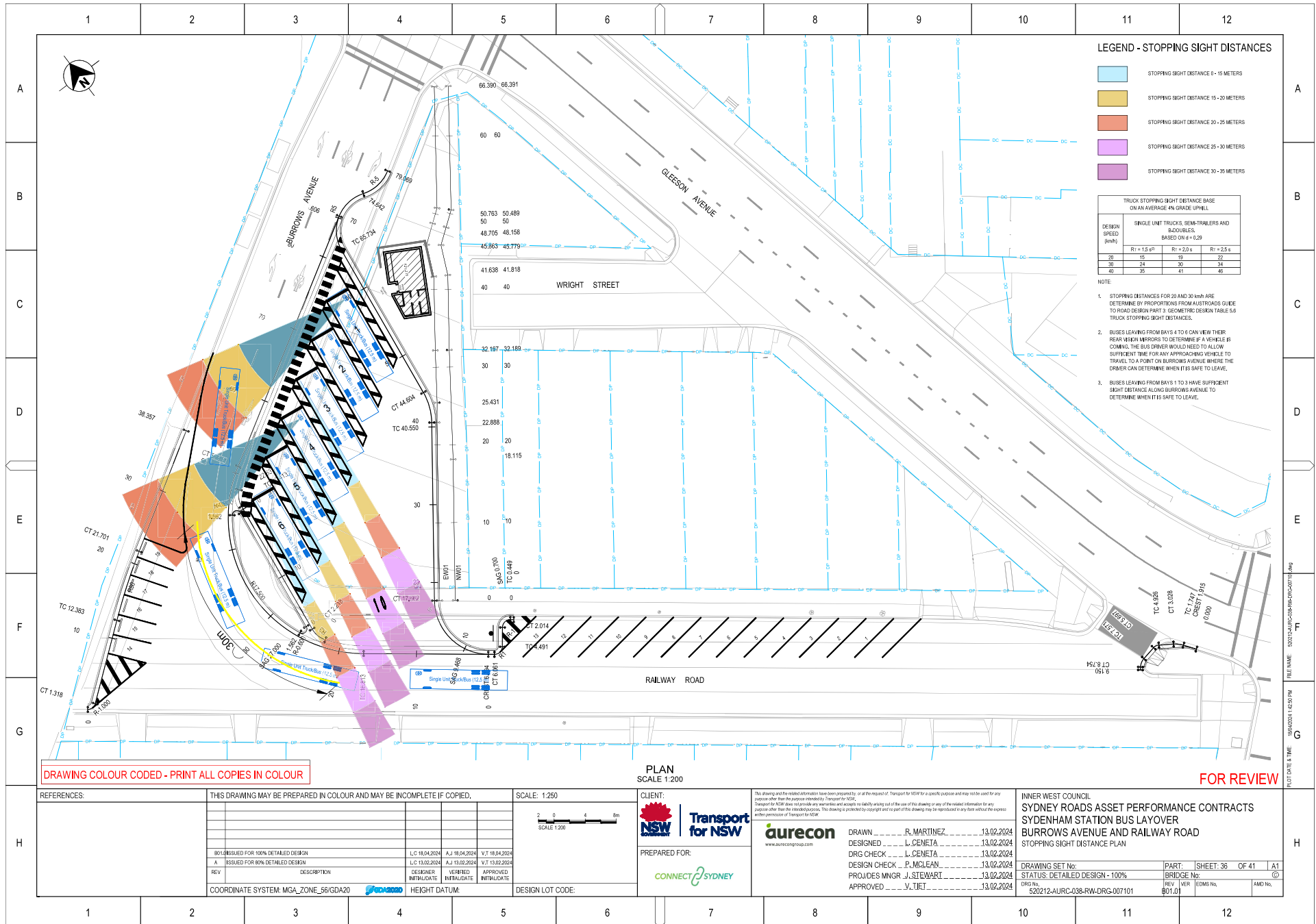
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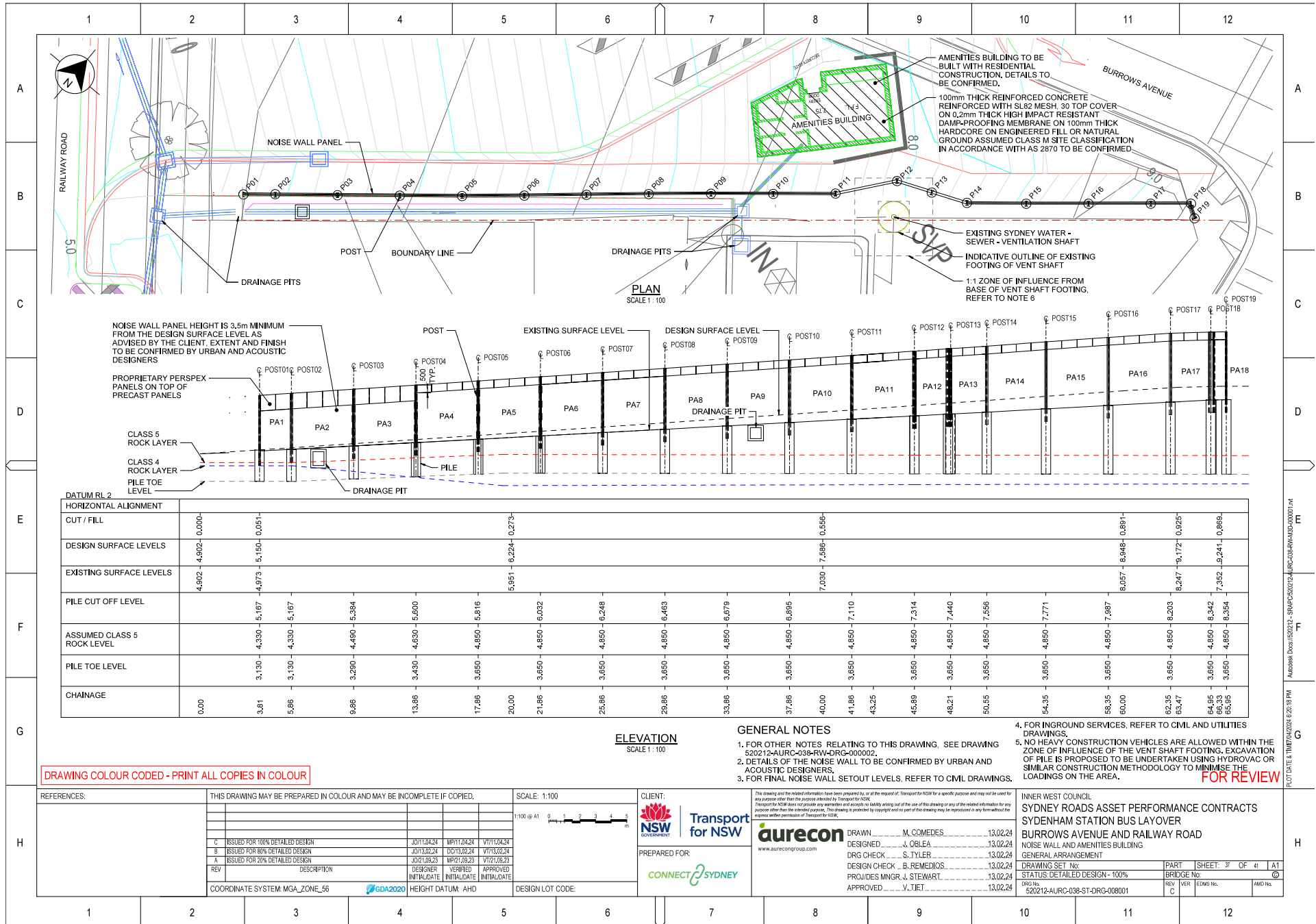


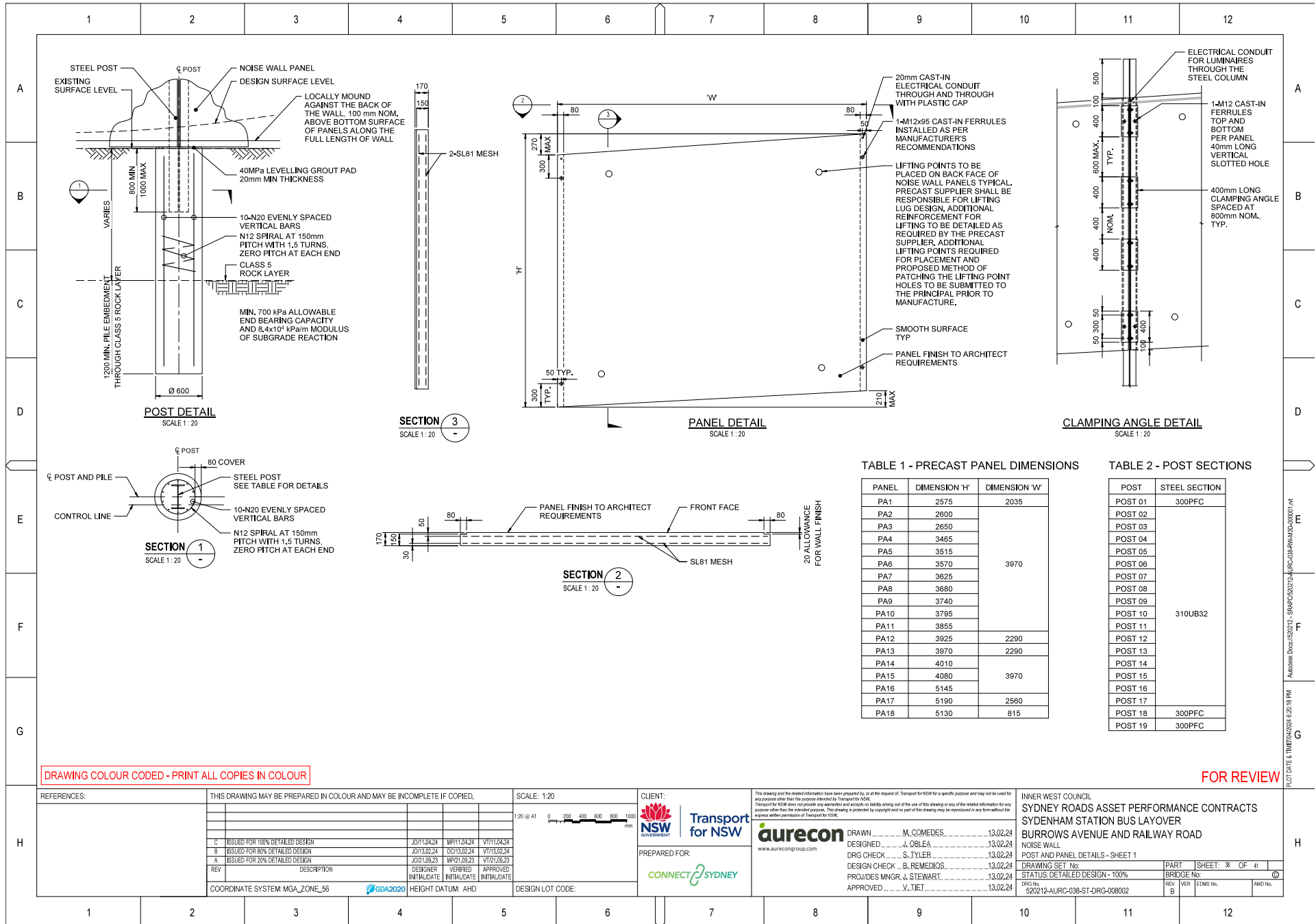


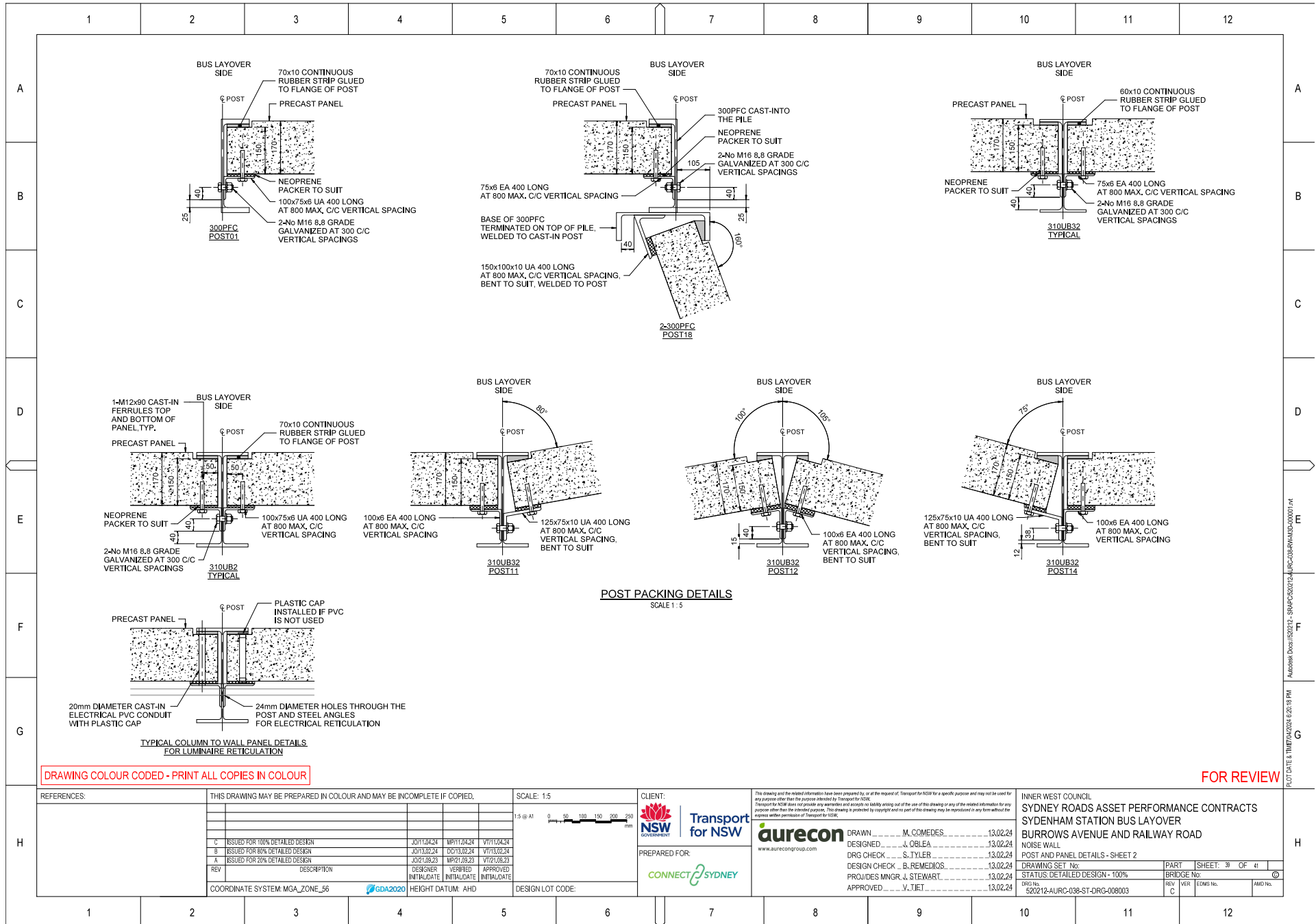


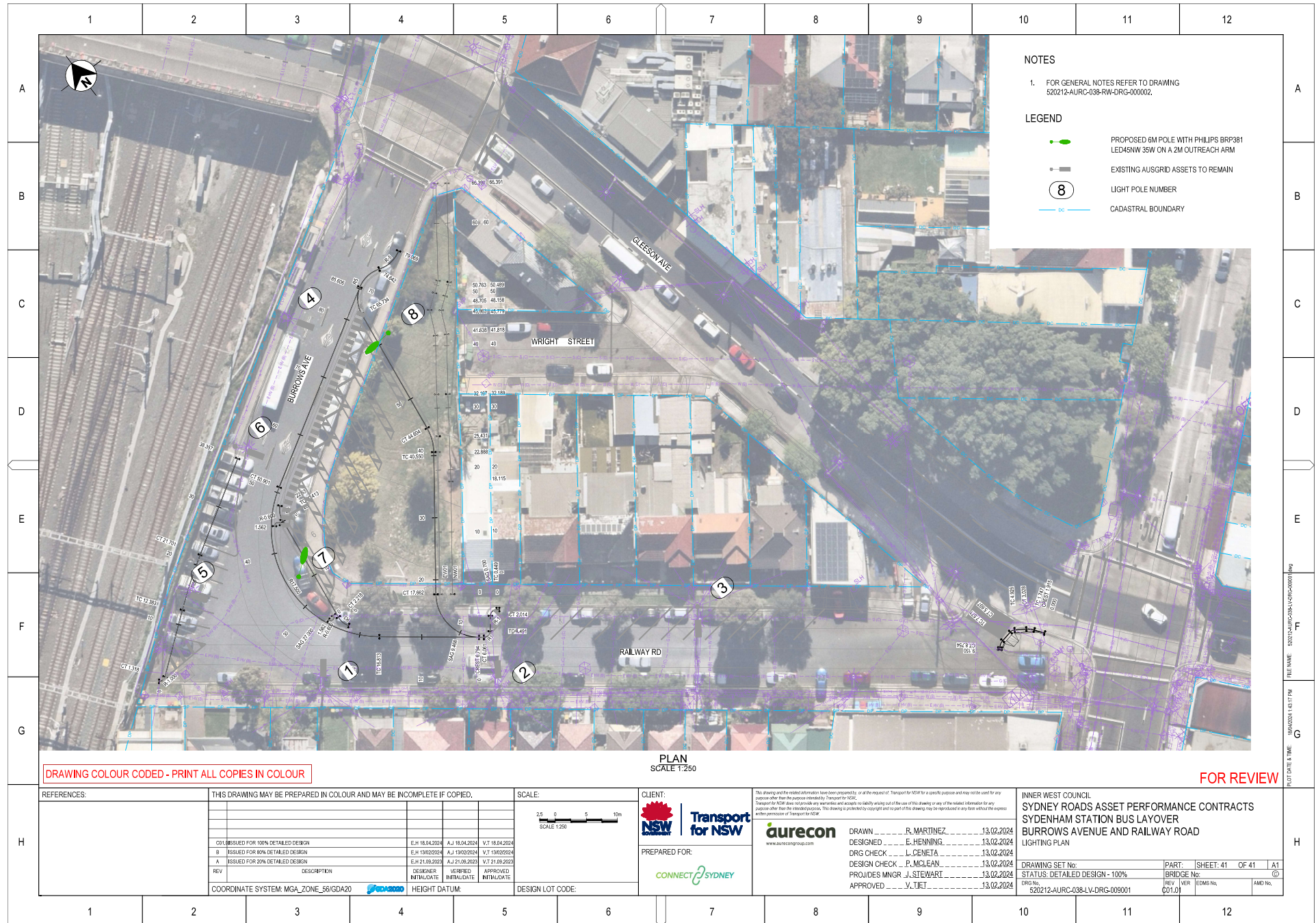












Item No: LTC0624(2) Item 3

Subject: RAILWAY ROAD, SYDENHAM - PROPOSED CHANGES TO PARKING AND TRAFFIC ARRANGEMENTS AS A RESULT OF CONSTRUCTION WORKS (MIDJUBURI- MARRICKVILLE WARD / HEFRON ELECTORATE / INNER WEST PAC)

Prepared By: George Tsaprounis - Coordinator Traffic Engineering Services (south)

Authorised By: Manod Wickramasinghe - Traffic and Transport Planning Manager

RECOMMENDATION

That 45-degree rear to kerb angle parking signposted as '2P 8am-10pm Permit Holders Excepted Area M4' be approved for the eastern side of Railway Road from no. 101/103 to 111/113 Railway Road in order to lessen parking impacts from construction activities.

STRATEGIC OBJECTIVE

This report supports the following strategic directions contained within Council's Community Strategic Plan:

2: Liveable, connected neighbourhoods and transport

EXECUTIVE SUMMARY

Transport for New South Wales (TfNSW) has approached Council with regards to a proposal for the construction of a bus layover area in Burrows Avenue, west of Gleeson Avenue, Sydenham. The designated bus layover area is required at Sydenham Station to cater for the growing number of bus services in this area.

It is proposed to increase parking capacity in Railway Road during construction activities to reduce the impact on residents.

BACKGROUND

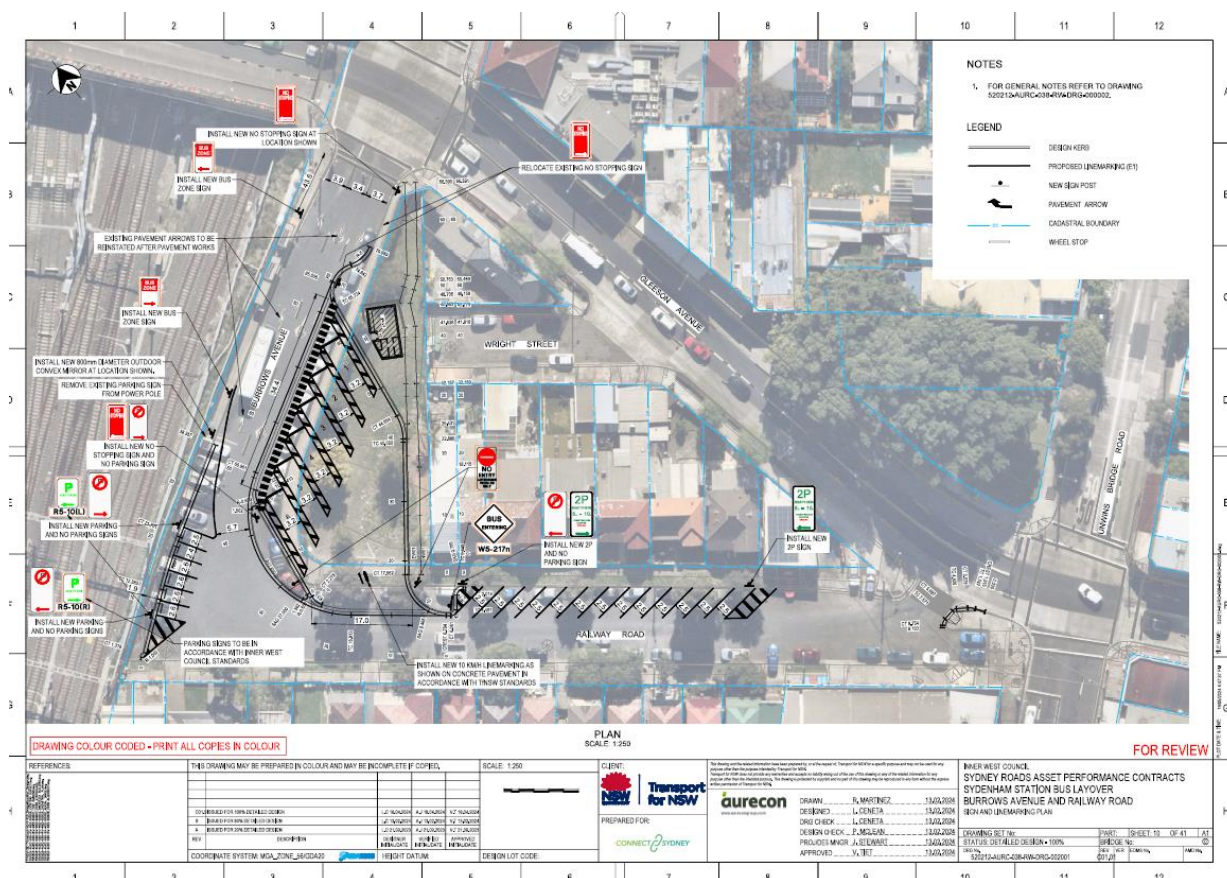
The proposed bus layover facility at the corner of Railway Road and Burrows Avenue in Sydenham will include the following changes (refer to figure 2):

- Six 16m-long angle bus parking spaces on the southern side of Burrows Avenue with manoeuvring space at the northern end of Railway Parade for egress, replacing a total of 11 parallel parking spaces.
- A dedicated drivers amenity block with a lunchroom and toilets.
- The 8 parallel parking spaces along the eastern side of Railway Road converted into 13x 45 degree angle car parking spaces.
- A reduction in 90 degree angle car parking spaces along the northern side of Burrows Avenue from 12 to 6 spaces.
- Create a path for pedestrians, passengers and the community to safely walk to and from Railway Road to Gleeson Avenue.
- Build a noise wall to separate the nearby homes from the new bus layover facility and minimise noise impacts from the bus layover facility.
- Install driveways for buses to enter from Railway Road and leave through Burrows Avenue.

DISCUSSION

TfNSW are planning to commence construction activities for the new bus layover area on 10 June 2024. This will involve installing a temporary site compound on Burrows Avenue at Railway Road (in the existing 90-degree parking area against the railway fence on Burrows Avenue). This will temporarily remove all 12 spaces in this area (6 spaces will be returned in the final layout).

Upon completion of stormwater drainage and roadworks in bus layover area (on 22 July 2024) the site compound will then be relocated into the bus layover area. The project is expected to be finished by mid September 2024. In order to lessen the burden of loss in parking for residents of Railway Road, it is proposed to install the 45 degree 2P Residential Parking spaces during this phase of the works. This will assist the residents by creating some parking. These spaces will remain in place at the end of the works.



FINANCIAL IMPLICATIONS

There are no financial implications associated with the implementation of the proposed recommendations outlined in the report.

ATTACHMENTS

Nil.

Item No: LTC0624(2) Item 4

Subject: PROPOSED NEW KERB EXTENSION FACILITES AT INTERSECTION OF VICTORIA STREET AND CLISSOLD STREET, ASHFIELD. (DJARRAWAWUNANG- ASHFIELD WARD/SUMMER HILL ELECTRATE/BURWOOD PAC)

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Authorised By: Manod Wickramasinghe - Traffic and Transport Planning Manager

RECOMMENDATION

That the detailed amended design plan (10281-A) to install new landscaped blister islands (kerb extension build-outs) and painted island/line marking to all corners of Victoria Street at Clissold Street, plus realign the 'STOP' lines on both approaches on Clissold Street and remove the raised central median islands to be replaced with road at- grade stenciled marked islands in Clissold Street as shown in *Attachment 1*, be approved.

STRATEGIC OBJECTIVE

This report supports the following strategic directions contained within Council's Community Strategic Plan:

2: Liveable, connected neighbourhoods and transport

EXECUTIVE SUMMARY

Council at its meetings on 18 March 2024 (through its Traffic Committee 11 December 2023) approved in principle, subject to detailed design, a series of proposed pedestrian (zebra) crossings and kerb extension treatments (under concept) for improved pedestrian and road safety around and near to the Cardinal Freeman (Retirement) Village, Ashfield.

This report discusses the prepared design of the proposed treatment, i.e., provide new landscaped blister islands (kerb extension build-outs) and painted island/line marking to all corners of Victoria Street at Clissold Street. In addition, the 'STOP' lines are realigned on both approaches of Clissold Street and the raised central median islands are replaced with at-grade stenciled islands in Clissold Street. This work is programmed to be constructed in the 2024/2025 financial year.

BACKGROUND

The Cardinal Freeman Village (currently known as Levande Cardinal Freeman) is bounded by Clissold Street to the north, Victoria Street to the east, Seaview Street to the south and Queen Street to the west.

The village caters to an independent living lifestyle however as the average age is over 82 years there are a significant number of residents with mobility issues that hinder their ability to move around freely.

Many of the elderly residents are capable, and desire to walk to and from various destinations outside of the village, and/or take other forms of public transportation (e.g., bus and train) to travel to other parts of Sydney.

This has prompted a general request from the elderly residents to improve pedestrian safety around the village to enable them to walk to various desired destinations and take public transport within the area.

Other Aged care facilities such as the Ashfield Baptist Homes, Bethal Nursing Homes, Ashfield Terrace Care Community, and other community facilities are also located adjacent or near to the Cardinal Freeman Village.

The proposed treatment in this report received a high support rate (80%) under a general community engagement consultation conducted through Council's 'Have Your Say' back in October 2023. The facility is viewed in benefit and supported by the community at large, and not only for the elderly of the Cardinal Freeman Village.

DISCUSSION

The following information is provided in discussion.

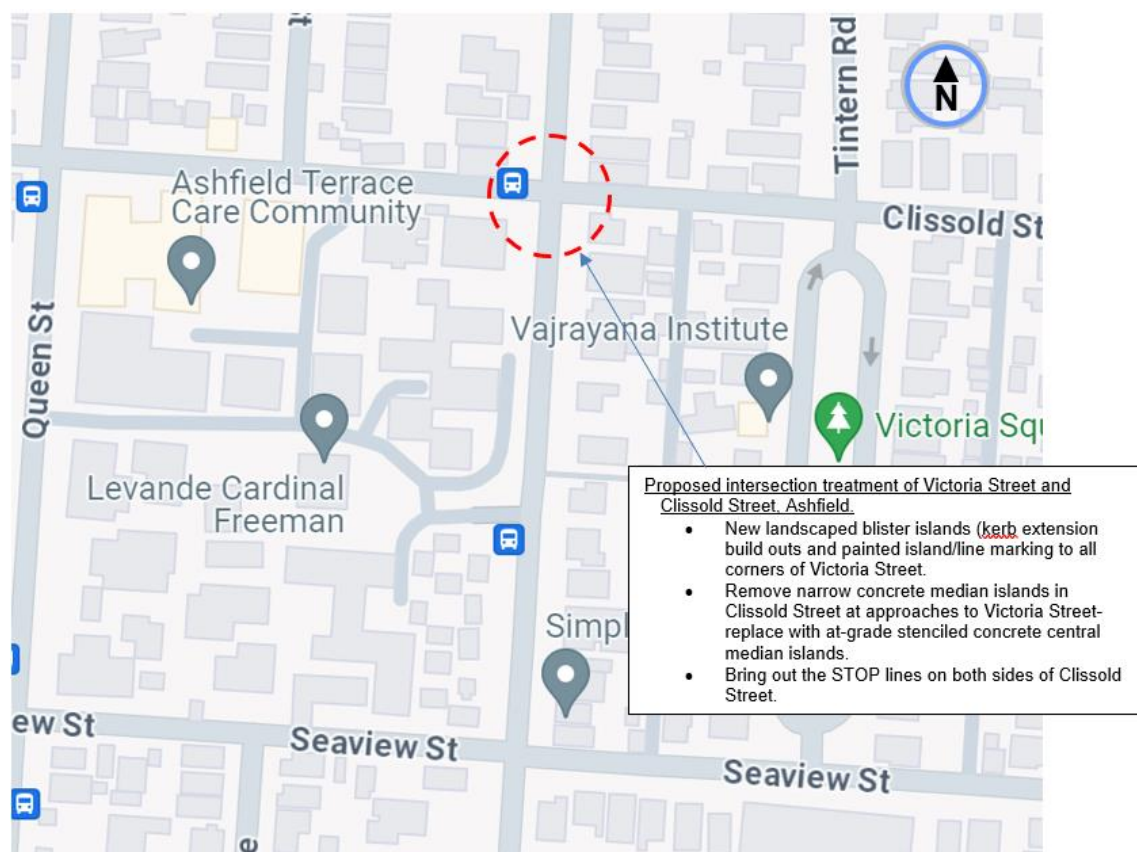


Figure 1. Locality Plan

Proposed intersection treatment of Victoria Street and Clissold Street, Ashfield.

- New landscaped blister islands (kerb extension build outs and painted island/line marking to all corners of Victoria Street.
- Remove narrow concrete median islands in Clissold Street at approaches to Victoria Street-replace with at-grade stenciled concrete central median islands.
- Bring out the STOP lines on both sides of Clissold Street.

Street Name	Victoria Street (at intersection to Clissold Street)
Carriageway width (m) kerb to kerb	Approx. 12.8m
Carriageway type	Two-way, one travel lane each direction.
Classification	Local
Speed Limit km/h	50
85 th percentile speed km/h	--
Vehicles per day (vpd)	Approx. 2500
Available TfNSW recorded crash history Last 5 years (2018- 2023)	2 X RUM 10 at intersection 2021 and 2023, cross-traffic, both non-casualty tow-away Prior to 2018, 5 incident occasions recorded as far back to 2009 , mainly RUM 10, cross traffic, non injury to moderate injury.
Parking arrangements	Unrestricted parking both sides, 'No Stopping' to corners of intersection
Side street (nearest)	-

Table 1. Road Network detail. Change

The Plan

The following works are proposed and are illustrated on the attached plans:

Clissold Street (at Victoria Street), Ashfield (Amended Plan No. 10281-A):

- Construct three (3) new landscaped kerb blister islands with integrated footpaths and kerb ramps to improve pedestrian points & safety whilst slowing traffic approaching the intersection;
- Provide painted island/line marking treatment to the north-eastern corner of the intersection to maintain the existing Bus Stop at the corner;
- Construct four (4) new kerb ramps to improve pedestrian accessibility;
- Reconstruct sections of damaged concrete footpath with new concrete footpath
- Reconstruct some damaged concrete kerb & gutter with new kerb & gutter;
- Remove the 2 raised concrete median islands in Clissold Street and construct new 'at-grade' (flat) central median islands in their place (with stencilled & coloured finish);
- Provide new line marking at the Clissold Street intersection (extending into Victoria Street) to improve sight lines for motorists (refer to Plans);
- Adjust 1 existing 'No Stopping' sign and zone in Victoria Street to cater for one of the new kerb blister islands (refer to plans);
- Install associated signage associated with the works as required and where shown on Plan;

Parking Changes

The proposal will require an adjustment to some of the existing on-street parking arrangements. It is proposed to adjust the existing 'No Stopping' signage and zone in Victoria Street to accommodate one of the new landscaped kerb blister islands needed to improve pedestrian safety.

This adjustment will not result any loss of existing on-street parking spaces in Victoria Street or Clissold Street.

Streetlighting

The existing lighting is deemed adequate and therefore there will be no changes to the existing street lighting due to the proposed works.

Further information

- The kerb blister islands, or kerb extension build outs with compliant pram ramps assist pedestrians to cross-over Victoria Street over a shorter distance, whilst being refuted by the islands.
- The north-eastern corner of the intersection is treated in painted island/line marking to maintain the function and operation of the existing Bus Stop on the eastern side of Victoria Street, north of Clissold Street. A compliant pram ramp is constructed away of the required front door boarding area of the bus.
- The alignment of the kerb blister islands and painted line marked island assists to bring out the STOP lines in Seaview Street to improve the sight view of traffic.
- The kerb blister islands and line marked island are widened out as far possible to provide a narrowing channel for 2-way traffic in Victoria Street in attempt to control speed through the intersection. Associated and extended edge line marking in Victoria Street assists to guide and control traffic movement through and around the intersection.
- The existing narrow (raised) concrete median islands in Clissold Street, in approach to the Victoria Street are removed and replaced with road at-grade stencil marked islands with associated line marking to maintain the separation in traffic. The physical islands are narrow and are known to be hit with signage on top being continuously damaged, particularly with vehicles turning at the intersection. They are therefore viewed to be hazardous.
- Transit Systems Australia, being the public bus operator for Transport for NSW raises no objection to the proposal.
- Design garbage turn path movements are provided in *Attachment 2*.
- An original plan (10281) was issued out to consultation as shown in Figure 2 below. Based on certain concerns as raised by residents regarding illegal parking and the need for improved sight view at the corners of the intersection, the kerb blister islands are amended and extended and tailed off in towards Clissold Street. -see amended plan 10281-A *Attachment 1*. This further signifies the presence and effectiveness of the kerb extensions to assist and guide traffic through and around the intersection and ensures that vehicles do not park at the corners. The extension of the kerb blister islands further improves to assist and bring out the 'STOP' lines in Clissold Street, particularly on the western side of Victoria Street, nearest the Cardinal Freeman Village.

The north-western kerb return corner of the intersection (under amended plan) is extended out to widen the pram ramp at the corner of Clissold Street.

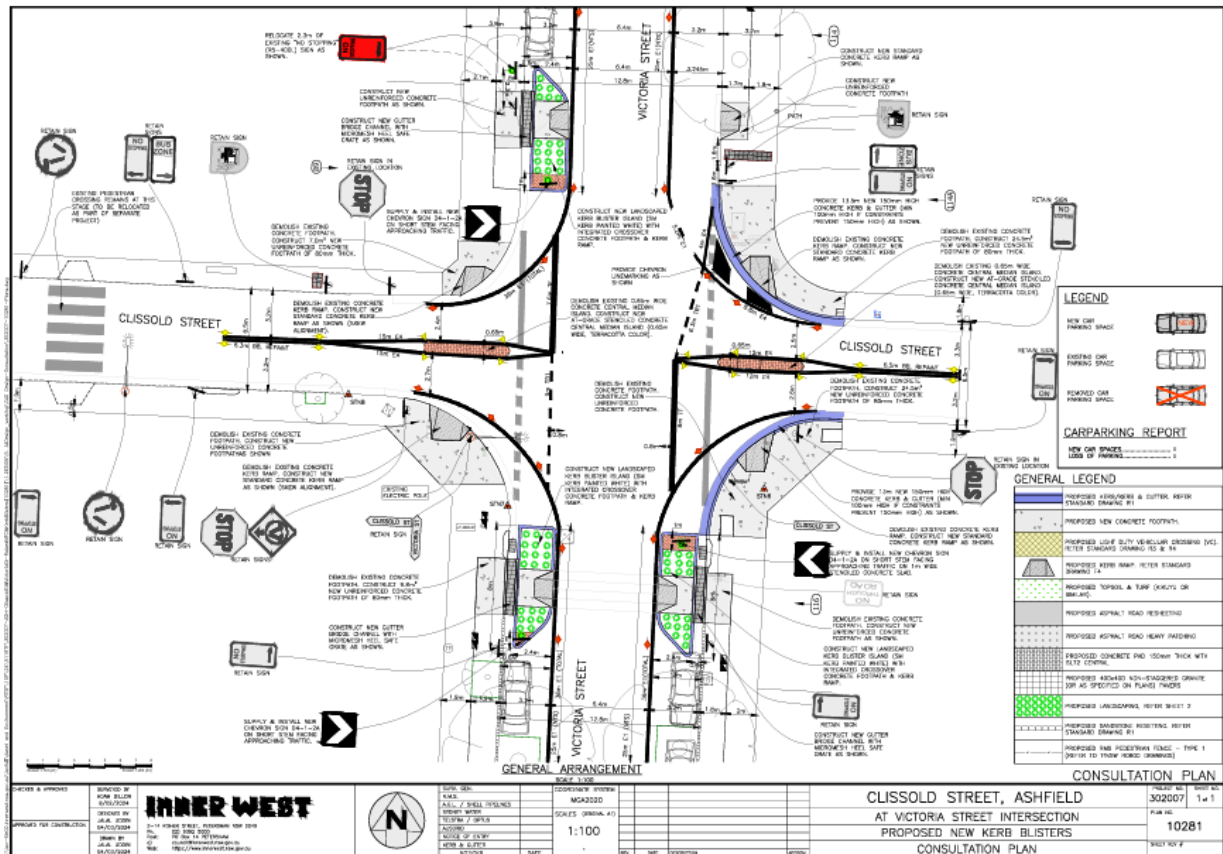


Figure 2. Original plan (10281) issued out to consultation

FINANCIAL IMPLICATIONS

The project is listed on Council's Traffic Facilities Capital Works budget for works to be carried out in 2024/2025, subject to funding. The work is estimated to be around \$95,000. Council has applied for external funding for this project under the Get Active NSW/Road Safety Program.

CONSULTATION

A letter outlining the proposal was mailed out to 18 properties (55 letters) around the intersection of Victoria Street and Clissold Street, Ashfield requesting residents' views regarding the proposal.



Figure 2. Map on Consultation Area

Council officers also convened a presentation session on the 2 May 2024 at the Cardinal Freeman Village outlining the proposal to the elderly residents of the Village.

One (1) street resident raised concerns as to why a kerb-blister island was not going in one of the corner locations in Victoria Street. 11-12 residents of the village who attended the presentation session and who provided comments on the proposal on the day were wholly in support of the proposal with or without certain concerns. One (1) resident was unsure.

One (1) response was submitted under email by a visually impaired resident of the village raising various concerns to the proposal.

Transit Systems Australia being the public bus operator for TfNSW raised no objection to the proposal.

The main traffic related concerns raised (to date) by the residents are outlined below in the table.

Residents Comments	Officers Response
<p><u>Street resident concern/comments.</u></p> <p>Request for an additional kerb blister island(s) (Our only query pertains to the south-west junction at Victoria Street on the Clissold St corner).</p>	<p>The concern may well be related to the north-eastern corner and not the south-western corner (side of the Village) where a kerb blister is proposed. It is not possible to provide an additional kerb blister island to the north-eastern corner of Victoria Street due to the existing Bus Zone and the road space needed for buses to access the area. Additional kerb blister islands in Clissold Street are not feasible due to the narrowness of the road and the clearances needed for vehicles to enter & exit Clissold Street safely.</p>
<p><u>Cardinal Freeman Village- Elderly resident concerns/ comments (inclusive with those of the visual impaired resident).</u></p> <ul style="list-style-type: none"> Concerns with deep grooves around corner of Clissold St- request resurfacing as part of 	<ul style="list-style-type: none"> The request for resurfacing of the road under the proposal will be referred to the design team of Council to investigate the matter under detailed

<p>proposal.</p> <ul style="list-style-type: none"> • Bus stop relocation concerns. • Will sight lines improve at this location? Concerns about existing sight lines at Clissold Street. • Why is Council proposing another pedestrian crossing at close location to existing pedestrian crossing? • Are pram ramps compliant and will they improve crossover? • Victoria Street is referred to as a 'race track' due to speed and dangerous driving. • Residents hope that changes to grade can be made to assist Giselle. • Drop kerbs on the north side of Clissold Street may be a potential trip hazard? • Proposed turning radius is too wide allowing vehicles to turn corners at speed. This is exacerbated by removal of the existing raised median islands and replacement road line markings. • Relocation of the crossing on Victoria Street will encourage pedestrians to deviate from their walking route to the new crossing point. This is unsafe as pedestrians may decide to cross directly along the alignment of Clissold Street footpath at the intersection of Victoria Street. <p>Suggested Recommendations:</p> <ul style="list-style-type: none"> • An alternative design as advised by 'Better Streets' 	<p>planning for construction.</p> <ul style="list-style-type: none"> • No bus stop will be relocated under this proposal. • Sight lines between pedestrians and traffic will be improved at the corners with the kerb blister islands built out into Victoria Street. The islands will be placed within the existing 'No Stopping' zones at the corners. An amendment to plan is made to extend the physical kerb islands towards Clissold Street, by tailing them off into the corners. This would ensure that vehicles do not park at the corners and that the necessary sight view is acquired. • The existing at -grade pedestrian (zebra) crossing in Clissold Street (under a separate proposal) will be removed, and a new raised pedestrian (zebra) will be constructed further west near towards the Village's Gate 11. • Yes, new pram ramps will be made complaint. Any old ramps will be rectified to comply within this proposal. • There will be sufficient grade variation to all pram ramps irrespective if constructed alone to the corners or incorporated within the kerb -blister islands. • The intention of building the kerb blister islands out as far possible and/or use associated line marking is to narrow the traffic passageway at the intersection to lend and assist in traffic control through the area. • The corners will be rebuilt to provide compliant pram ramps and kerbing. The matter of drop kerbs (within the scope of works) will be referred to the design team to investigate under construction detail. • The proposed build outs/painted island markings to the corners with associated edge line marking, narrows and channelises the intersection to control and guide traffic movement in the area. The existing narrow (raised) concrete median islands in Clissold Street, in both approaches to Victoria Street are removed and replaced with at-grade stencil marked islands with associated line marking for appropriate separation in traffic. • The relocation of the crossing points across Victoria Street away from the corners provide an improved pedestrian facility with kerb blister islands and new pram ramps established to cross at a shorter distance. Pram ramps are not built right at the
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<p>to construct kerb build outs at intersection and include minor narrowing of Clissold Street. Creating slower, tighter turns for cars and heavy vehicles.</p> <ul style="list-style-type: none"> Identify trip hazards and remove or repair. This is important for aged individuals and individuals with a disability or mobility issues. 'Better Streets' suggest that the nearby 'Bus Stop' be situated in-lane with the footpath extending into the parking lane so the bus stops traffic only within that lane. The plan shows the 'Bus Stop' being retained with no change to the kerb location for buses travelling south along Victoria Street. The bus would need to move from the travel lane to the parking lane to drop-off/pick-up passengers. A build out on the northeast corner of the intersection would allow for safer crossing for pedestrians. Request for an additional pedestrian (zebra) crossing along with kerb ramps at this intersection of Victoria Street at Clissold Street to improve safety for pedestrians and visually impaired individuals crossing with the assistance of their guide dog. The existing lighting at the intersection is deemed inadequate. Concerns raised with the safety at the pedestrian (zebra) crossing at Yeo Park and Harland Street. 	<p>Victoria Street corners. Pedestrians are discouraged from crossing right at the corners.</p> <p><u>Response to suggested recommendation by resident(s).</u></p> <ul style="list-style-type: none"> Clissold Street cannot be further narrowed owing to 2-way traffic movement. The kerb blisters islands (in amendment to plan) will be extended in Victoria Street towards Clissold Street and tailed off in towards the corners. The kerb blister islands are widened out into Victoria Street as far possible, with edge line marking going around the corners. This will sufficiently tighten, control and guide traffic movement around the intersection. Any trip hazards revolving around the proposed scope of works will be further examined under construction detail. The Bus stop on the eastern side of Victoria Street, north of Clissold Street is maintained as existing. Bus platforms are only limited to locations where current designed buses cannot pull up safely close to the kerb, e.g., Bus Stops located in a short span distance between trees. An out reached bus platform at the corner would pose danger and hazard with buses pulling up 'in lane' and obstructing the view of cross-traffic. A kerb blister island to the western side but no kerb blister island to the eastern side, north of Clissold Street, with complaint aligned pram ramps to both sides of the road, is still considered as an improved cross-over path for pedestrians at a shorter distance. A pedestrian (zebra) crossing is not proposed in Victoria Street, to the north side of Clissold. Sufficient pedestrian numbers could not be substantiated to consider a crossing over Victoria Street under appropriate Transport for NSW/Council guidelines/policies. <p>It was viewed and approved by Council (in principle) that a crossing further up at Robert Street next to the Sydney Private Hospital, would accommodate path movements across Victoria Street, allowing visitors/outpatients of the Sydney Private Hospital to reach out to bus stops on the eastern side and destined movements towards Summer Hill. A pedestrian (zebra) crossing in Victoria Street, south of Robert Street, is yet to be proposed in detail and will be reported separately. It is viewed that this crossing will cater for improved pedestrian access for other community needs in the area.</p> <p>Notwithstanding this, kerb blister island(s) with complaint aligned pram ramps are proposed as an alternative facility for improved pedestrian access</p>
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	<p>across Victoria Street at Clissold Street.</p> <ul style="list-style-type: none"> • Lighting in the area is considered appropriate, however Council's Design Section will be asked to re-look at this. • Concerns raised with the safety at the pedestrian (zebra) crossing at Yeo Park and Harland Street will be investigated separately.
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CONCLUSION

It is recommended that the detailed amended design plan (10281-A) to install new landscaped blister islands (kerb extension build-outs) and painted island/line marking to all corners of Victoria Street at Clissold Street, realign the 'STOP' lines on both approaches of Clissold Street and remove the central median islands to be replaced with road at-grade stenciled marked islands in Clissold Street as shown in *Attachment 1*, be approved.

ATTACHMENTS

1. [Download](#) Proposed (amended) kerb extensions at the intersection of Victoria Street and Clissold Street, Ashfield.
2. [Download](#) Design Garbage Truck turning paths.

