From:	Official Information
To:	fyi-request-31217-21216caa@requests.fyi.org.nz
Cc:	Official Information
Subject:	Final response LGOIMA 485758 - [redacted] - Te Aroha/Ruakura Safety Improvements
Date:	Monday, 30 June 2025 5:18:28 pm
Attachments:	image001.png image002.png image003.jpg image004.jpg

Kia ora,

We refer to your information request below. Hamilton City Council provides the following response.

Your request:

1. *Can we have a copy of the "Te Aroha/Ruakura Safety Improvements" project plan (design schematics in map form) as displayed to the public in November 2023?*
2. *Can we have a copy of the itemised project budget (or cost estimates) for the "Te Aroha/Ruakura Safety Improvements" project as displayed to the public in November 2023?*
3. *Can we have a copy of the latest "Te Aroha/Ruakura Safety Improvements" project plan (design schematics in map form) as current in June 2025?*
4. *Can we have a copy of the itemised project budget (or cost estimates) for the "Te Aroha/Ruakura Safety Improvements" project as current in June 2025?*
5. *What is the current status of the "Te Aroha/Ruakura Safety Improvements" project?*

Our response:

1. *Can we have a copy of the "Te Aroha/Ruakura Safety Improvements" project plan (design schematics in map form) as displayed to the public in November 2023?*

   Listed below are items of documentation that were at the Community Drop-In sessions on 8th and 11th November 2023:

   i. Consultation Plan Te Aroha Ruakura Safety Improvements Consultation Plan.pdf
   ii. Long Plot Plan 60687064-TARSI-Longplot_Optimized.pdf
   iii. Community Brochure Te Aroha Ruakura Safety Improvements brochure final.pdf

2. *Can we have a copy of the itemised project budget (or cost estimates) for the "Te Aroha/Ruakura Safety Improvements" project as displayed to the public in November 2023?*

   Council did not have itemised project costs available at the Community Drop-In sessions in November 2023.

3. *Can we have a copy of the latest "Te Aroha/Ruakura Safety Improvements" project plan (design schematics in map form) as current in June 2025?*

   The latest drawings for the Te Aroha Street/Ruakura Road Safety Improvements were issued on 12 April 2024 Appendix-L-60687064 TARSI 100%_Optimized.pdf

4. *Can we have a copy of the itemised project budget (or cost estimates) for the "Te Aroha/Ruakura Safety Improvements" project as current in June 2025?*

   The latest cost estimates (P95*) for the Te Aroha Street/Ruakura Road Safety Improvements were issued on 17 April 2024 Appendix-D-Cost-Estimate.pdf *P95 figures take account of risk contingency. The figures provided below are based on a risk factor which assumes there is a 95% probability the project can be built for the amount of money shown or less.

   i. Section 1e: Te Aroha Street (between Grey Street & Peachgrove Road) = $5,784,000.000
   ii. Section 1b: Peachgrove Road/Te Aroha Street/Ruakura Road intersection = $4,318,000.00
   iii. Section 1d: Ruakura Road (between Peachgrove Road and Wairere Drive) = $3,014,000.00

6. *What is the current status of the "Te Aroha/Ruakura Safety Improvements" project?*

   Funding to construct the project has not been made available in the current 2024/27 budget period. Funding to deliver the project will be considered by both NZTA Waka Kotahi and Hamilton City Council as part of the next 2027/30 National Land Transport Programme (NZTA) and 2027/37 Long Term Plan (HCC). Therefore, no further work is being undertaken on the project at this present time.

You have the right to seek an investigation and review by the Ombudsman of this decision. Information about how to make a complaint is available at www.ombudsman.parliament.nz or freephone 0800 802 602.

Ngaa mihi
Keeley Faulkner
Official Information Advisor & Legal Support Officer
Legal services
Governance & Assurance Team | Partnerships, communication & Maaori
Email: officialinformation@hcc.govt.nz

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I support flexibility at work. While it suits me to send this email now, I don't expect a response outside of your own working hours.

From: Editor <fyi-request-31217-21216caa@requests.fyi.org.nz>
Sent: Wednesday, 4 June 2025 9:16 pm
To: Official Information <officialinformation@hcc.govt.nz>
Subject: Official Information request - Design, budget, and current status of the Te Aroha/Ruakura Safety Improvements

To whom it may concern at Hamilton City Council,

This is a request for information and documentation as covered by the Local Government Official Information and Meetings Act 1987 and/or the Official Information Act 1982.

These questions relate to the "Te Aroha/Ruakura Safety Improvements" project which Hamilton City Council held Community drop-in sessions about on the 8 November 2023 (at The Link Community Centre) and 11 November 2023 (at Your Neighbourhood Fairfield).

1. Can we have a copy of the "Te Aroha/Ruakura Safety Improvements" project plan (design schematics in map form) as displayed to the public in November 2023?

2. Can we have a copy of the itemised project budget (or cost estimates) for the "Te Aroha/Ruakura Safety Improvements" project as displayed to the public in November 2023?

3. Can we have a copy of the latest "Te Aroha/Ruakura Safety Improvements" project plan (design schematics in map form) as current in June 2025?

4. Can we have a copy of the itemised project budget (or cost estimates) for the "Te Aroha/Ruakura Safety Improvements" project as current in June 2025?

5. What is the current status of the "Te Aroha/Ruakura Safety Improvements" project?

Sincerely,

[redacted] (Editor at CityWatch NZ)
investigations@citywatchnz.org

This is an Official Information request made via the FYI website.

Please use this email address for all replies to this request:
fyi-request-31217-21216caa@requests.fyi.org.nz

Is officialinformation@hcc.govt.nz the wrong address for Official Information requests to Hamilton City Council? If so, please contact us using this form:
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ISO A1 841mm x 594mm

Hamilton City Council
Te kaunihera o Kirikiriroa

TE AROHA AND RUAKURA SAFETY IMPROVEMENTS

PROPOSED IMPROVEMENTS

PLAN (1 OF 2)

AECOM

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TE AROHA AND RUAKURA SAFETY IMPROVEMENTS

PROPOSED IMPROVEMENTS

PLAN (2 OF 2)

Hamilton City Council
Te kaunihera o Kirikiriroa

CONTINUATION - REFER TO PREVIOUS SHEET

PROPOSED TWO-WAY BIKE PATH

PROPOSED IN LANE BUS STOP WITH NEW BUS SHELTER

PROPOSED RAISED PEDESTRIAN AND BIKING CROSSING

ST OPHERTS AVE

ST WINIFREDS AVE

TE AROHA ST

PROPOSED SHARED PATH

PROPOSED IN LANE BUS STOP WITH NEW BUS SHELTER

BUS STOPS REMOVED

PROPOSED RAISED PEDESTRIAN AND BIKING CROSSING

PROPOSED RAISED INTERSECTION

PROPOSED SHARED PATH

PEACHGROVE RD

PROPOSED RAISED PEDESTRIAN AND BIKING CROSSING ON SLIP LANE

RUAKURA RD

PROPOSED SHARED PATH

PROPOSED RAISED PEDESTRIAN AND BIKING CROSSING ON SLIP LANE

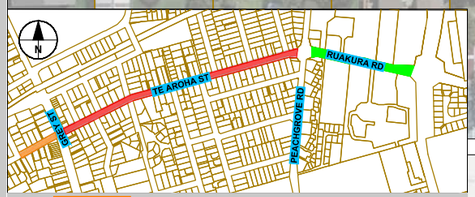
PROPOSED BIKE ON/OFF RAMP

PROPOSED RAISED PEDESTRIAN AND BIKING CROSSING ON SLIP LANE

CONTINUATION - REFER TO BELOW

LEGEND:

- EXISTING PROPERTY BOUNDARY
- NEW KERB
- EXISTING NO STOPPING LINE
- NEW NO STOPPING LINE
- EXISTING PAVEMENT
- NEW BIKE PATH
- NEW FOOTPATH
- NEW SHARED PATH
- BERM
- EXISTING BUS SHELTER
- NEW BUS SHELTER
- EXISTING TREE
- EXISTING TREE TO BE REMOVED
- NEW TREE
- PROPOSED PEDESTRIAN TACTILE PAVERS
- PROPOSED BIKING TACTILE PAVERS
- HIGH USE DRIVEWAY TREATMENT



ONE NETWORK FRAMEWORK

ROAD NAME	ROAD CLASSIFICATION	CURRENT SPEED LIMIT	PROPOSED SPEED LIMIT
TE AROHA STREET	URBAN CONNECTOR	50	40

PROPOSED BI-DIRECTIONAL CYCLE LANE

EXISTING BUS STOP IN LANE WITH EXISTING SHELTER

CONTINUATION - REFER TO ABOVE

RUAKURA RD

EXISTING BUS STOP IN LANE WITH EXISTING SHELTER

PROPOSED SIGNALISED RAISED CROSSING

PROPOSED SHARED PATH

HAMILTON CITY HOLIDAY PARK

HILDA ROSS RETIREMENT VILLAGE

PROPOSED RAISED PEDESTRIAN AND BIKING CROSSING

PROPOSED RAIN GARDEN PLANTING

PROPOSED SHARED PATH

MITRE 10

PROPOSED RAISED PEDESTRIAN AND BIKING CROSSING ON SLIP LANE

WAIRERE DR

EXISTING INTERSECTION WITH PROPOSED DUAL CROSSINGS

PROPOSED RAISED PEDESTRIAN AND BIKING CROSSING ON SLIP LANE

EXISTING TWO-WAY BIKE PATH

RUAKURA RD

PROPOSED RAISED PEDESTRIAN AND BIKING CROSSING ON SLIP LANE

WAIRERE DR

AECOM

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Hamilton City Council
Te kaunihera o Kirikiriroa

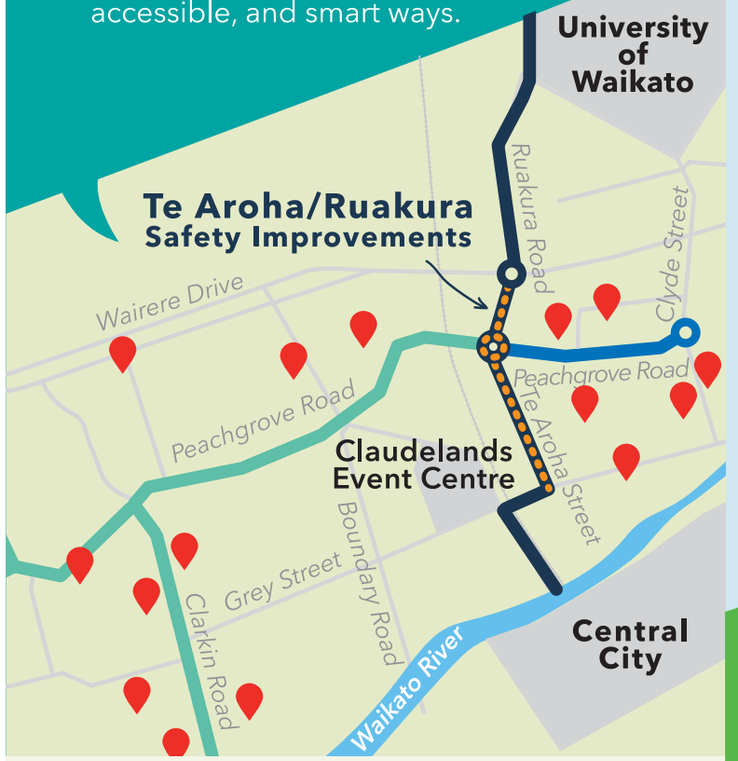
TE AROHA AND RUAKURA SAFETY IMPROVEMENTS

PROPOSED IMPROVEMENTS PLAN (LONG PLOT)

The bigger picture

The Te Aroha/Ruakura Safety Improvements is part of a wider 6km biking network on the eastern side of the river linking 16 schools, the city centre, and the university. This wider project is called School Link.

School Link aligns with Council's Access Hamilton transport strategy – Ara Kootuitui Kirikiriroa – which aims to help people connect to places in safe, accessible, and smart ways.



- Te Aroha/Ruakura Safety Improvements
- Completed sections of School Link
- Next section of School Link
- Future sections of School Link
- Schools

What's next?

You'll receive a letter shortly providing you with an opportunity to give feedback.

We'll also be hosting community drop-in sessions where you can see the plans in more detail at:

- **The Link Community Centre**
  Mary Bryant Commons room
  Wednesday 8 November 2023
  5pm-7:30pm
  4 Te Aroha Street, Claudelands

- **Your Neighbourhood Fairfield**
  Saturday 11 November 2023
  1pm-4pm
  Fairfield Park, 236 Clarkin Road

For more information, please visit:
hamilton.govt.nz/schoollink

07 838 6699

info@hcc.govt.nz

HamiltonCityCouncil

Te Aroha/Ruakura Safety Improvements

New paths, crossings, and calmer streets will help to link Hamiltonians between the university and the central city by 2024.

A dedicated walking and biking link between the university and the central city will transform accessibility and safety for people walking, biking, or on scooters on the eastern side of the city.

Hamilton City Council
Te kaunihera o Kirikiriroa

Proposed improvements

New safe crossings

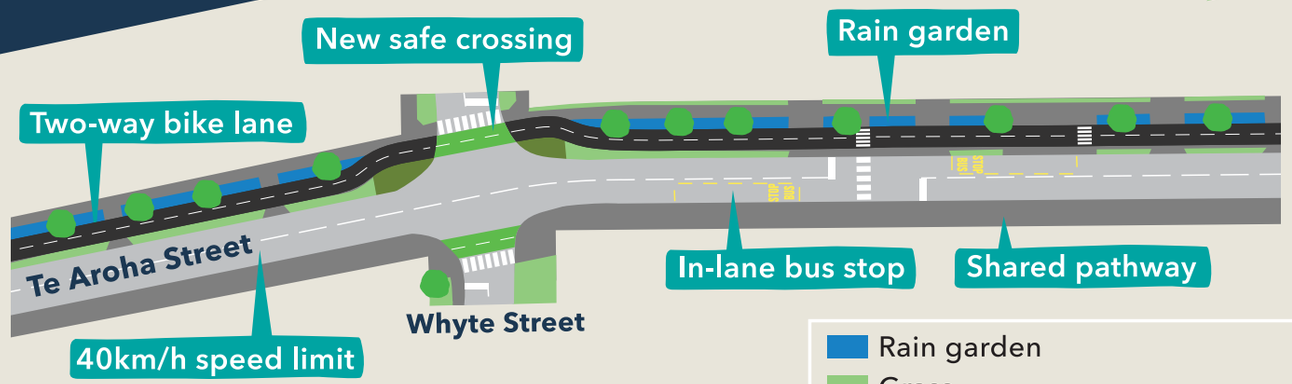
Two-way bike lane

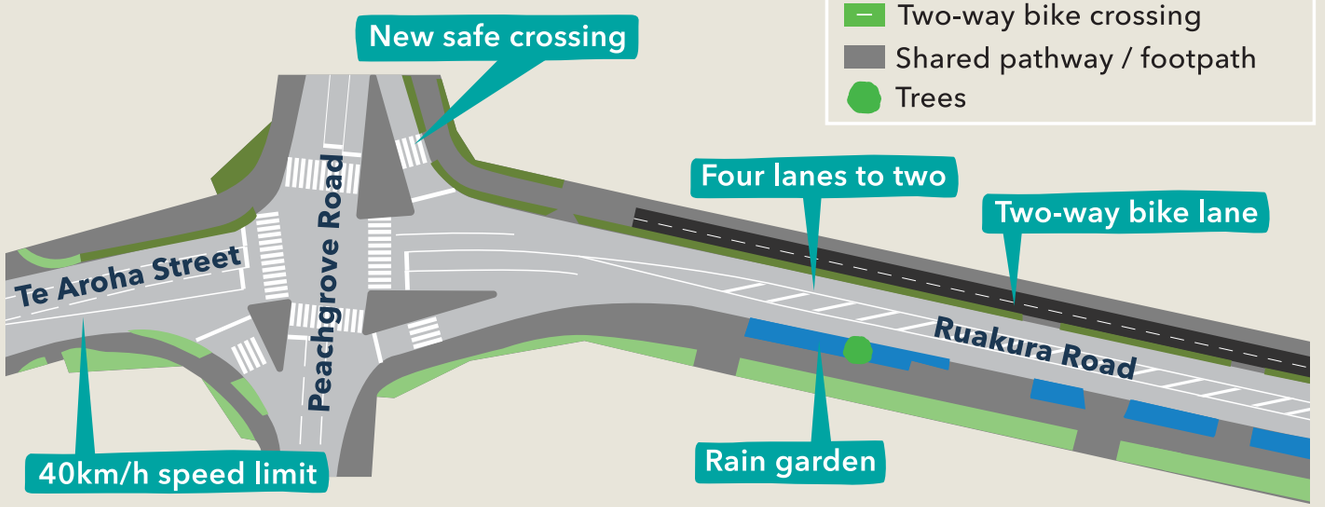
Shared pathway

New bus stops

Speed reduction

The key reason people do not bike, or let their children bike, is safety. 85% of children and parents say they would bike or walk to get to and from school if it was safer. Source: Safe Ways to School research (2018)





- Rain garden
- Grass
- Native and heritage plantings
- Two-way bike lane
- Two-way bike crossing
- Shared pathway / footpath
- Trees

Te Aroha/Ruakura Safety Improvements

Timeline

2018 Safe Ways to School research

2021 Community provides their thoughts on the School Link's business case

2022 Design cost gets funding approved from Waka Kotahi

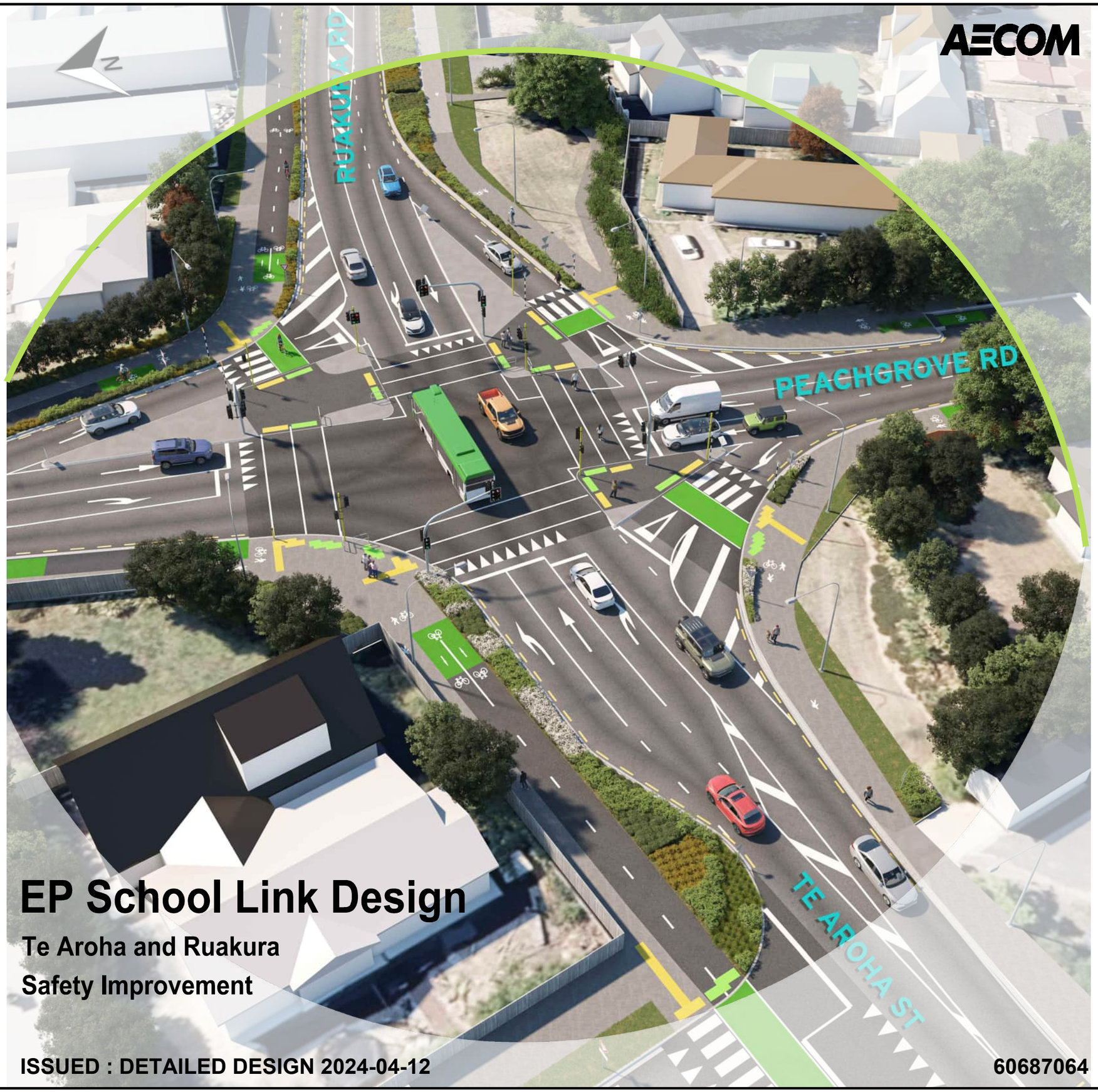
Residents, local schools, and interest groups provide input to the road safety improvement designs.

2023 Concept designs complete

2024 Construction begins

2025 Construction ends

Proposed construction of Peachgrove Road section of School Link (Te Aroha Street intersection to Clyde Street).



AECOM

EP School Link Design

Te Aroha and Ruakura Safety Improvement

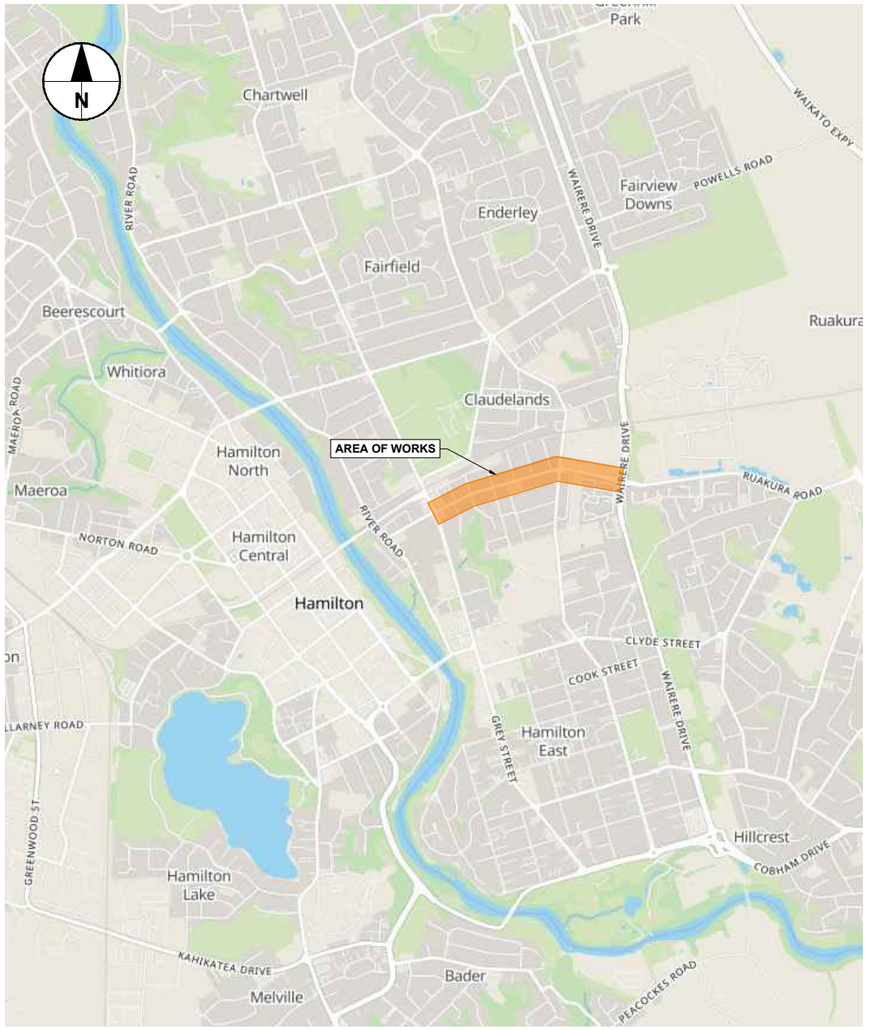
ISSUED : DETAILED DESIGN 2024-04-12

60687064

ISO A1 594mm x 841mm

HAMILTON CITY COUNCIL

EP SCHOOL LINK - TE AROHA AND RUAKURA SAFETY IMPROVEMENTS (TARSI)



DRAWING INDEX

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DRAWING INDEX

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60678064	SHT	LS	8106	TARSI	LINEMARKING & SIGNAGE PLAN	SHEET 6	C
60687064	SHT	LS	8107	TARSI	LINEMARKING & SIGNAGE PLAN	SHEET 7	C
60687064	SHT	LS	8108	TARSI	LINEMARKING & SIGNAGE PLAN	SHEET 8	C
60687064	SHT	LS	8501	TARSI	LINEMARKING DETAILS		C
60687064	SHT	LS	8601	TARSI	PAVEMENT MARKING SCHEDULE		C
60687064	SHT	WT	8101	TARSI	WATER PLAN	SHEET 1	A
60687064	SHT	WT	8106	TARSI	WATER PLAN	SHEET 2	A

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This drawing is confidential and shall only be used for the purpose of this project. The signing of this title block confirms the design and drafting of this project have been prepared and checked in accordance with the AECOM quality assurance system to ISO 9001-2000.

AECOM

CONSULTANT

AECOM New Zealand Ltd
NZ.B.N 9429032091335
www.aecom.com

PROJECT

EP School Link
Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

I/R	DATE	DESCRIPTION
F	12.04.24	100% DETAILED DESIGN
E	15.03.24	UPDATED DETAILED DESIGN
D	21.12.23	DETAILED DESIGN
C	25.07.23	FOR INFORMATION
B	12.07.23	FOR INFORMATION
A	14.06.23	FOR INFORMATION

PROJECT NUMBER

60687064

SHEET TITLE

TARSI
LOCALITY PLAN & DRAWING INDEX

SHEET NUMBER

60687064-SHT-GI-8001

ISO A1 594mm x 841mm

EP SCHOOL LINK - TE AROHA AND RUAKURA SAFETY IMPROVEMENTS NOTES

NOTES: GENERAL

1. REFER TO THE WAIKATO LOCAL AUTHORITY REGIONAL INFRASTRUCTURE TECHNICAL SPECIFICATIONS (RITS) FOR STANDARD DETAILS AND SPECIFICATIONS, UPDATED MAY 2018. ALL DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE COMPLETE PROJECT DOCUMENTATION SET, INCLUDING THE SPECIFICATIONS.
2. THE LATEST AVAILABLE COPY OF ANY STANDARD AS AT THE TIME OF TENDERING THE WORKS SHALL BE REFERENCED.
3. VERTICAL DATUM: MOTURIKI.
4. COORDINATE SYSTEM: MOUNT EDEN CIRCUIT 2000.
5. ALL DIMENSIONS ARE IN METERS UNLESS STATED OTHERWISE.
6. THE CONTRACTOR SHALL CHECK ALL DIMENSIONS ON SITE, ANY DISCREPANCIES SHALL BE REFERRED TO THE ENGINEER PRIOR TO COMMENCING WORKS.
7. ELECTRONIC 3D MODEL WILL BE PROVIDED IN CONJUNCTION WITH DRAWINGS FOR CONSTRUCTION PURPOSE.
8. ANY DISCREPANCY BETWEEN THE DRAWINGS, MODEL AND SPECIFICATIONS SHALL BE REFERRED TO THE ENGINEER.
9. IF THERE IS A CONFLICT BETWEEN THE DRAWINGS, DETAILS ON THE DRAWINGS AND THE SPECIFICATIONS, THEN THE SPECIFICATIONS WILL PREVAIL.
10. THE ORDER OF PRECEDENCE IS:
    A) SPECIFICATIONS (INCL. ANY REFERENCES TO THE RITS),
    B) CONSTRUCTION DRAWINGS,
    C) RITS,
    FOLLOWED BY OTHER INDUSTRY STANDARDS AND GUIDLINES.
11. THE SCOPE OF WORKS IS AS INDICATED ON THE DRAWINGS AND DESCRIBED IN THE CONTRACT DOCUMENTS.
12. OWNERSHIP OF THE DATA IS CLEARLY UNDERSTOOD TO BE THAT OF HAMILTON CITY COUNCIL (HCC). THE DATA IS PROVIDED ON THE UNDERSTANDING THAT IT WILL BE USED SOLELY FOR THIS PROJECT AND NOT SOLD TO ANY THIRD PARTY.

NOTES: EXISTING UTILITIES

1. EXISTING SERVICES ARE PROVIDED FROM SERVICE AUTHORITIES RECORDS, FOR INFORMATION ONLY, AND SHOULD NOT TO BE TAKEN AS A COMPLETE AND ACCURATE RECORD OF THE SERVICES WITHIN THE AREA OF WORKS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE RELEVANT SERVICE AUTHORITIES AND CONDUCT FURTHER INVESTIGATIONS TO DETERMINE THE EXACT LOCATIONS OF EXISTING SERVICES PRIOR TO COMMENCING WORKS.
2. SERVICE RELOCATIONS ARE SUBJECT TO SERVICE AUTHORITIES APPROVAL.
3. MINIMUM RADIUS SHOWN AS 900mm FOR ALL SERVICES. MINIMUM RADIUS TO BE CONFIRMED WITH SERVICE AUTHORITIES PRIOR TO COMMENCING WORKS.

NOTES: THREE WATERS

STORMWATER:

1. ALL STORMWATER CONSTRUCTION SHALL COMPLY WITH THE WAIKATO REGIONAL INFRASTRUCTURE TECHNICAL SPECIFICATIONS (RITS) SECTION 4.
2. ALL MANHOLES TO BE BUILT ACCORDING TO RITS STANDARD DETAILS (DRAWING 4-28 AND DRAWING 4-29).
3. CATCH PITS ARE TO BUILT ACCORDING TO RITS STANDARD DETAILS (DRAWING 4-18). CAST IRON GRATE TO BE CYCLE FRIENDLY (PERPENDICULAR).
4. REFER TO DRAWINGS SHT-LD-8110 AND SHT-LD-8111 FOR LANDSCAPING DETAILS.

WASTEWATER:

1. ALL WASTEWATER CONSTRUCTION SHALL COMPLY WITH THE WAIKATO REGIONAL INFRASTRUCTURE TECHNICAL SPECIFICATIONS (RITS) SECTION 5.
2. ALL SEWER DROP MANHOLES ARE TO BUILT IN ACCORDANCE WITH RITS STANDARD DETAILS (DRAWING 4-28).

WATER:

1. ALL WATER CONSTRUCTION SHALL COMPLY WITH THE WAIKATO REGIONAL INFRASTRUCTURE TECHNICAL SPECIFICATIONS (RITS) SECTION 6.

NOTES: ROADING

1. FOR ALL SERVICES COVER LEVELS IN THE CARRIAGEWAY, FOOTPATH AND BERM SHALL BE ADJUSTED TO FINISHED LEVEL. REFER TO UTILITIES DRAWING SERIES 'UT' FOR APPROXIMATE LID ADJUSTMENTS.
2. ACCESSIBLE BUS KERBS SHALL BE PROVIDED WHERE INDICATED IN ACCORDANCE WITH RITS DRAWING 3-20, ALL OTHER KERB AND CHANNEL PROFILES ARE IN ACCORDANCE WITH RITS DRAWING 3-15.
3. UNLESS INDICATED OTHERWISE ALL CENTRAL CROSSING POINT PEDESTRIAN ISLANDS SHALL BE FORMED IN ACCORDANCE WITH RITS DRAWING 3-27, INCLUDING PLACEMENT OF THE PEDESTRIAN HANDRAIL REFUGE LIGHT WARNING GLOBE AND OTHER CROSSING ELEMENTS / DIMENSIONS. UNLESS INDICATED OTHERWISE INTERSECTION ISLANDS SHALL BE DETAILED IN ACCORDANCE WITH RITS DRAWING 3-28, INCLUDING CONCRETE INFILL, BULL NOSING AND SIGNAGE PLACEMENT.
4. ALL SIGNAGE LOCATIONS SHALL BE MARKED OUT ON SITE 300mm FROM FACE OF KERB TO SIGN EDGE (PROVIDING MIN 300mm OF LATERAL DEFLECTION) FOR INSPECTION BY THE ENGINEER PRIOR TO INSTALLATION.
5. UNLESS INDICATED OTHERWISE ALL SIGNAGE INSTALLATION SHALL INCLUDE INSTALLATION OF A POLE AND FOUNDATION SUITABLE TO THE PROPOSED SIGNS TCD SPECIFIED HEIGHT.
6. ALL SIGNAGE AND ROAD MARKING TO BE IN ACCORDANCE WITH RITS, THEN AS SPECIFIED BY TCD AND MOTSAM - PART 1 & 2.
7. ALL LIGHTING COLUMN LOCATIONS SHALL BE MARKED OUT ON SITE FOR INSPECTION BY THE LIGHTING DESIGNER (OR ENGINEER) PRIOR TO INSTALLATION. NOTE UNLESS AGREED THE CONTRACTOR IS TO ALLOW MIN 2 WEEKS BETWEEN INSPECTION AND INSTALLATION TO ALLOW RESOLUTION OF ANY RISKS ENCOUNTERED ON SITE.
8. PEDESTRIAN HANDRAILS SHALL BE PROVIDED IN ACCORDANCE WITH RITS DRAWING 3-51.
9. BUS STOP SHELTER FOOTING DETAIL IN ACCORDANCE WITH RITS DRAWING 3.53, SHELTER SHALL BE IN ACCORDANCE WITH RITS DRAWING 3-54. REFER TO CONTRACT SPECIFICATION FOR FURTHER DETAILS.
10. SLIP LANE RAMPS SHALL BE FORMED IN ACCORDANCE WITH RITS DRAWING 3-65. UNLESS INDICATED OTHERWISE ALL OTHER RAMPS SHALL BE DETAILED IN ACCORDANCE WITH RITS DRAWING 3-64 (ASPHALTIC CONCRETE TAPERED RAISED PEDESTRIAN RAMPS). SUB-SURFACING / SUB-HAUNCHING PAVEMENT CONSTRUCTION (BASECOURSE AND SUBBASE) SHALL BE IN ACCORDANCE WITH THE PAVEMENT LAYOUT PLANS PV SERIES.
11. ALL PROPOSED VEHICLE CROSSING AND PEDESTRIAN CUTDOWN SETOUT IS TO BE IN ACCORDANCE WITH RITS DRAWING 3-13.
12. ALL PROPOSED PEDESTRIAN / CYCLE CUTDOWNS ARE TO RITS DRAWING 3-14.
13. PEDESTRIAN CUT-DOWN WIDTHS TO MATCH PEDESTRIAN CROSSING WIDTHS AS ANNOTATED IN LINEMARKING DRAWINGS SERIES.
14. ALL PEDESTRIAN CUT-DOWNS TO HAVE TACTILE PAVERS ARRANGED IN ACCORDANCE WITH RTS14. ALL SETOUT OF TACTILE PAVING SHALL BE INSPECTED BY THE ENGINEER PRIOR TO PLACEMENT.
15. THE CONTRACTOR SHALL ENSURE THAT ALL DRAINAGE CHANNELS HAVE POSITIVE GRAVITY GRADIENTS TO A DRAINAGE OUTLET AND AN ABSOLUTE MINIMUM LONGITUDINAL GRADE OF 1:500.
16. ALL DIGGING AROUND EXISTING TREE ROOTS IS TO BE BY HAND EXCAVATION, IN ACCORDANCE WITH HCC AND UNDER SUPERVISION OF A HCC ARBORIST.
17. ALL EXCAVATIONS TO FACILITATE THE CONSTRUCTION OF THE FOOTPATH WITHIN 10m OF A TREE TO BE SUPERVISED BY AN APPROVED ARBORIST.
18. ALL UNDERGROUND SERVICES SHALL BE LAID PRIOR TO FINAL SEALING OF PAVEMENTS.
19. ALL FIRE HYDRANTS AND SLUICE VALVES TO BE MARKED AS PER RITS.

NOTES: ROADMARKING & SIGNAGE

1. ALL PAVEMENT MARKINGS AND RAISED REFLECTIVE PAVEMENT MARKERS (RRPM) SHALL COMPLY WITH THE REQUIREMENTS OF WAIKATO LASS REGIONAL INFRASTRUCTURE TECHNICAL STANDARDS, MARKINGS (MOTSAM) AND TRAFFIC CONTROL DEVICES MANUAL.
2. DO NOT APPLY ROADMARKING TO SERVICE COVERS.
3. EXISTING MARKINGS TO BE REMOVED ARE NOT SHOWN FOR CLARITY. REDUNDANT ROAD MARKINGS SHALL BE REMOVED IN ACCORDANCE WITH APPROVED LOCAL AUTHORITY STANDARDS AND TO THE SATISFACTION OF THE OVERSEEING ENGINEER. CARE SHALL BE TAKEN SO THAT DAMAGE IS NOT CAUSED TO THE UNDERLYING ROAD SURFACE AND THAT 'GHOSTING' OF THE MARKING DOES NOT OCCUR.
4. ALL SIGNAGE DETAILS SHALL BE IN ACCORDANCE WITH WAIKATO LASS REGIONAL INFRASTRUCTURE TECHNICAL STANDARDS, MOTSAM PART 1 -SIGNS AND TRAFFIC CONTROL DEVICES MANUAL.
5. ALL SIGNS TO BE SIGHTED BY THE ENGINEER FOR VISIBILITY PRIOR INSTALLATION.
6. THE FINAL LOCATION OF ALL SIGNS TO BE AGREED WITH THE ENGINEER ON SITE DURING CONSTRUCTION.
7. ANY EXISTING SIGNS TO BE RELOCATED MAY BE RE-USED PROVIDING THE CONDITION OF THE SIGN IS ACCEPTABLE AND THE REMAINING LIFE OF THE RETRO REFLECTIVE SHEETING WILL COMPLY WITH THE DESIGN LIFE REQUIREMENTS.
8. EXISTING SIGNAGE POLE SOCKET AND POLES SHOULD BE RE-USED IF COMPLIANT AND DEEMED APPROPRIATE BY THE OVERSEEING ENGINEER.

NOTES: STREET LIGHTING

SCOPE OF WORK:

IN GENERAL THE CONTRACTOR SHALL ALLOW THE FOLLOWING UNDER THE SCOPE OF WORK:

1. ALL WORKS DETAILED AND SHOWN ON THE DRAWINGS AND ANY WORKS NEEDED TO ACHIEVE THE INTENT OF THE DESIGN SHOWN.
2. ALL RELATED CIVIL WORKS INCLUDING, BUT NOT LIMITED TO, TRENCHING, CONDUITS, BENDS, CABLE PITS AND LIDS, DRAW TAPES, SLABS AND POLE FOUNDATIONS.
3. SUPPLY, INSTALLATION AND CONNECTION OF ALL HARDWARE, EQUIPMENT AND MATERIALS INCLUDING, BUT NOT LIMITED TO, POLES, BRACKETS, LUMINAIRES, ELECTRICAL CABLES, CABLE GUARDS, FUSES, FITTINGS AND ALL MATERIALS AND EQUIPMENT NECESSARY TO COMPLETE AND COMMISSION THE ROAD LIGHTING INSTALLATION.
4. EARTHING TO ALL ELECTRICAL EQUIPMENT AND LIGHTING COLUMNS.
5. LIAISON WITH LOCAL UTILITY PROVIDERS TO ALLOW FOR NEW INCOMING MAINS FROM NEARBY TRANSFORMER, WHERE REQUIRED.
6. LIAISON WITH ANY RELEVANT AUTHORITIES OR STAKEHOLDER IMPACTED BY THE SCOPE OF THE WORKS, AND OBTAINING OF ALL NECESSARY APPROVALS AND PERMITS FROM THE SAME WHERE REQUIRED.
7. ALL NECESSARY TESTS AND DOCUMENTATION.
8. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE SPECIFIC REQUIREMENTS OF THE SITE.

GENERAL NOTES:

1. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF WAIKATO LOCAL AUTHORITY, THE REQUIREMENTS OF AS / NZS 3000:2018 AND AS / NZS 1158 SERIES AND OTHER RELEVANT STANDARDS AS REQUIRED.
2. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH OCCUPATIONAL HEALTH AND SAFETY REGULATIONS, AND CURRENT STATUTORY CODES APPLICABLE TO THE SYSTEMS NOMINATED.
3. THE CONTRACTOR SHALL LIAISE WITH ALL OTHER TRADES ON THE SITE AND COORDINATE THE ELECTRICAL INSTALLATION WHERE IT MAY AFFECT OTHER TRADES.
4. TRAFFOLYTE LABELS SHALL BE PROVIDED FOR ALL DISTRIBUTION BOARDS, OUTLETS, SWITCHES, ETC TO INDICATE PHASE REFERENCE AND/OR CIRCUIT REFERENCE.
5. PROVIDE AND MAINTAIN TEMPORARY POWER SUPPLIES AND METERING DURING THE CONSTRUCTION PHASE. REMOVE SUCH TEMPORARY INSTALLATIONS ON COMPLETION OF THE WORKS.
6. THE ELECTRICAL CONTRACTOR SHALL PROGRESSIVELY REMOVE FROM THE SITE ALL RUBBISH, DEBRIS, MATERIAL CUTTINGS AND OTHER REDUNDANT MATERIALS, WHICH RESULT FROM THE WORKS OF THE CONTRACT.
7. ALL PRODUCT FINISHES INCLUDING COLOURS SHALL BE AS SPECIFIED IN THE CONTRACT DOCUMENTS SUBJECT TO A FINAL CONFIRMATION BY THE ENGINEER PRIOR TO PLACING ANY ORDER BY THE CONTRACTOR.

REGULATIONS & STANDARDS:

THE CONTRACTOR SHALL COMPLY WITH ALL RELEVANT STATUTES, STANDARDS, CODES AND REGULATIONS, INCLUDING, BUT NOT LIMITED TO:

1. AS/NZS 1158: LIGHTING FOR ROADS AND PUBLIC SPACES
2. ELECTRICITY ACT 1992
3. ELECTRICITY (SAFETY) REGULATIONS 2010
4. AS/NZS 3000 WIRING RULES
5. LOCAL AUTHORITY BYLAWS, CONDITIONS AND STANDARDS
6. NZ RADIO INTERFERENCE REGULATIONS AND INTERFERENCE NOTICES (RADIO AND TELEVISION)
7. NZTA M26 - SPECIFICATION FOR LIGHTING COLUMNS
8. AS/NZS 2053 CONDUITS AND FITTINGS FOR ELECTRICAL INSTALLATIONS
9. NZS 5902: BUILDING AND CIVIL ENGINEERING DRAWING PRACTICE
10. ELECTRICAL CODES OF PRACTICE (ECP) SERIES
11. WAIKATO LOCAL AUTHORITY SHARED SERVICES REGIONAL INFRASTRUCTURE TECHNICAL SPECIFICATIONS

LIGHTING WORKS:

1. ALLOW FOR SUPPLY AND INSTALLATION OF ALL LIGHT FITTINGS INCLUDING ACCESSORIES, POLES, ETC AS THE PER THE LUMINAIRES SCHEDULE.
2. REFER TO TYPICAL POLE DETAILS FOR POLE MOUNTED LUMINAIRES.
3. ALL POLES SHALL BE GROUND PLANTED TYPE UNLESS NOTED OTHERWISE.
4. LIGHTS CONTROLLED VIA PHOTOCELL RELAY SWITCH SHALL HAVE A SWITCH ON LEVEL BETWEEN 10-20 LUX.
5. REDUNDANT EXISTING COLUMNS MAYBE RELOCATED/REUSED PROVIDED THE ENGINEER APPROVES.
6. CALCULATIONS INCLUDE ILLUMINATION FROM ROAD LIGHTING ONLY. SPILL LIGHT FROM NEIGHBOURING RESIDENTIAL PROPERTIES MAY BE PRESENT.
7. SPILL LIGHTING IS CALCULATED AT MAINTENANCE FACTOR OF 1 FOR NEW LUMINAIRES. WHERE SPILL LIGHTING IS AN ISSUE THE CONTRACTOR SHALL INSTALL FLAT INTEGRAL BACKLIGHT SHIELDS AS REQUIRED.
8. MAINTENANCE FACTOR FOR LED LUMINAIRES HAS BEEN CALCULATED AT 0.8.

LUMINAIRES:

1. PROVIDE LIGHTING LUMINAIRES AS SHOWN ON THE DESIGN DRAWINGS. REFER TO 'LIGHTING TYPICAL DETAILS' FOR LUMINAIRE TYPES.
2. ALL NEW LUMINAIRES MUST BE FITTED AND SUPPLIED WITH A 5 OR 7-PIN NEMA SOCKET COMPLIANT WITH ANSI C136.4:2013 AND A ZODION PHOTOCELL (SS6 VARIANT) AND THE DRIVER SHALL BE DALI DIMMABLE CONSTANT CURRENT DRIVER.
3. TEMPORARY LIGHTING SHALL BE PROVIDED WHERE PERMANENT LIGHTING IS REMOVED ON 'IN-SERVICE' ROADS.

COLUMNS:

1. UNLESS NOTED AS 'EX' EXISTING REDUNDANT LIGHTING COLUMNS WITHIN EXTENT OF WORKS SHALL BE REMOVED AND DELIVERED TO AN APPROVED STORAGE OR REMOVED FROM SITE AND KEPT IN A SAFE STORAGE FOR UP TO 1 YEAR PENDING THE ENGINEER DECISION.
2. LIGHTING COLUMNS SHALL BE IN ACCORDANCE WITH THE NZTA M26 ROAD LIGHTING COLUMN SPECIFICATION, MANUFACTURED TO NZS 4676 AND OCTAGONAL TAPERED STEEL,GALVANIZED TYPE.
3. EACH COLUMN SHALL BE EARTHED, REFER TO 'TYPICAL POLE EARTHING DETAIL.
4. LIGHTING COLUMNS SHALL BE COORDINATED ON SITE WITH ALL SERVICES AND LOCATED AT LEAST 2.0m FROM THE DRIP-LINE OF ANY TREE (BASED ON THE MATURE TREE EXPECTED GROWTH). LIGHTING COLUMNS SHALL HAVE A MINIMUM SET BACK OF 1.0m.
5. ALL LIGHTING COLUMN OUTREACH ARMS SHALL BE PERPENDICULAR TO THE CARRIAGEWAY UNLESS NOTED OTHERWISE.
6. LIGHTING COLUMNS AND OVERHEAD CLEARANCES SHALL BE AS PER NZECP 34.
7. POLE DETAILS SHOWN INCLUDING FOUNDATION DETAILS, ETC ARE INDICATIVE ONLY. THE CONTRACTOR SHALL ALLOW IN THEIR FEE FOR A COMPLETE SPECIFIC DESIGN FOR EACH MAST TAKING INTO CONSIDERATION ALL WEIGHTS AND QUANTITIES, WIND LOAD, ETC.
8. EACH COLUMN MUST BE INDIVIDUALLY NUMBERED AT TIME OF MANUFACTURE, TOGETHER WITH THE MONTH AND YEAR OF MANUFACTURE. IN ADDITION TO THE UNIQUE COLUMN NUMBER, A QR CODE MUST BE ATTACHED FOR EASY ON-SITE DATA ACCESS. THESE LABELS MUST BE POSITIONED ABOVE THE GEAR DOOR AT A HEIGHT OF 2m ABOVE GROUND.

POWER SUPPLY:

1. LIAISE WITH LOCAL UTILTY FOR NEW OR RELOCATED INSTALLATION.
2. THE ELECTRICAL CONTRACTOR SHALL BE APPROVED TO INSTALL ASSETS ON THE LOCAL ELECTRICITY NETWORK.
3. CONSECUTIVE COLUMNS SHALL BE SUPPLIED ON DIFFERENT PHASES.
4. MINIMUM STREETLIGHTING SUPPLY CABLE SIZE SHALL BE 1C 10mm2 NEUTRAL SCREEN. CABLE SHALL BE BURIED IN DUCT. THE INTERNAL POLE WIRING BETWEEN THE TERMINAL BLOCKS AND THE LUMINAIRE SHALL BE CIRCULAR 2C 2.5mm² NEUTRAL SCREEN CABLE. POWER SUPPLY SHALL COMPLY WITH TDM.
5. WHERE THE LUMINAIRE IS SUPPLIED WITH A WIELAND FLEX AND PLUG, THE INTERNAL COLUMN WIRING SHALL INSTEAD BE 3 CORE X 1.5 mm^2 COPPER WIELAND H05VV-F HEAVY DUTY CABLE - ROUND BLACK SHEATH, COMPLETE WITH A WIELAND SOCKET TO MATCH THE LUMINAIRE PLUG.
6. WHERE 3 PHASE SUB-CIRCUITS ARE USED AND EACH PHASE IS PROTECTED VIA SEPRATE CIRCUIT BREAKER, PROVIDE ADDITIONAL 3 POLE 'LINKED' ISOLATOR ON THE OUTGOING SIDE OF THE SUPPLY LABELED AS "MAINTENANCE ISOLATOR".
7. EACH DISTRIBUTION SHALL BE MINIMUM OF 12TPS (36 SINGLE POLE) IP54 AND HOUSED WITHIN A LOCKABLE AND APPROPRIATELY SIZED ROADSIDE CABINET. SEEK ENGINEER'S APPROVAL FOR ROADSIDE CONSTRUCTION MATERIAL AND COLOUR.

EARTHING:

ALLOW FOR AN EARTHING ARRANGEMENT COMPRISING OF THE FOLLOWING PARTS:

1. EARTH ELECTRODE USING 12mm DIAMETER NON-FERROUS SOLID HARD DRAW COPPER WITH HARDENED TIP DRIVEN FULLY INTO GROUND TO A MINIMUM DEPTH OF 1.8m COMPLETE WITH AN INSPECTION PIT EXPOSING THE TOP 150mm OF THE EARTH ELECTRODE. THE INSPECTION PITS SHALL BE COMPLETE WITH LID, BE CONSTRUCTED OF CELLULOSE FIBRE CEMENT OR GLASS REINFORCED PLASTIC AND INSTALLED FLUSH WITH SURROUNDING GROUND OR PAVEMENT. THE LID SHALL BE LABELED / ENGRAVED "EARTH ELECTRODE".
2. MAIN EARTHING BAR LOCATED WITHIN THE FEEDER PILLAR AND WIRED TO THE EARTH ELECTRODE USING A 6mm² (MINIMUM) COPPER CABLE WITH OUTER PROTECTIVE INSULATION SHEATH.
3. A LINKED MAIN NEUTRAL AND MAIN EARTH BAR ARRANGEMENT LOCATED INSIDE THE FEEDER PILLAR AND LIGHTING COLUMN.
4. PROTECTIVE EARTHING CONDUCTORS TO ALL SUB-CIRCUITS AS REQUIRED.
5. EARTHING OF FEEDER PILLAR METAL WORK.
6. EQUIPOTENTIAL BONDING OF ANY OTHER CONDUCTIVE METAL VIA 4mm² (MINIMUM) INSULATED CONDUCTORS AND COMPRESSION TYPE OF BOLTED FIXINGS.
7. FULL RECORDS OF EARTHING TEST MEASUREMENTS ARE TO BE MAINTAINED AND AVAILABLE FOR INSPECTION. THE TEST RESULTS SHALL BE SUBJECT TO APPROVAL BY THE ENGINEER.

DUCTS:

1. UNDERGROUND CABLE DUCTS SHALL COMPLY WITH THE REQUIREMENTS OF AS/NZS 3000.
2. THE CONTRACTOR SHALL PROVIDE ALL SLEEVES, PIPE DUCTS, CONDUITS, ETC., REQUIRED FOR UNDERGROUND ENTRY TO COLUMNS.
3. BENDS IN DUCTS SHALL HAVE INTERNAL RADIUS GREATER THAN 10 TIMES THE DIAMETER OF THE DUCT, OR AS DETAILED.
4. AFTER THE INSTALLATION OF DUCTS THEY SHALL BE CLEANED, REMOVE ALL SHARP EDGES, DRAW WIRE INSERTED, AND THE ENDS PLUGGED WITH RAGS OR NEWSPAPER TO PREVENT THE INGRESS OF SILT BEFORE THE INSTALLATION OF CABLES.
5. THE CONTRACTOR TO ALLOW FOR SWEEP BENDS AT 'T' JUNCTIONS OF DUCT WORK.
6. DUCTS SHALL NOT BE FILLED MORE THAN 60% OF IT'S FULL CAPACITY AND ALL DUCT WORK MUST BE PROVIDED WITH DRAW WIRES FOR USE WITH ANY FUTURE WORKS.

METERING:

1. THE CONTRACTOR SHALL ALLOW FOR INSTALLATION OF A REVENUE METRE (MEETING THE REQUIREMENTS OF THE ELECTRICITY SERVICE PROVIDER/RETAILER.
2. THE ENERGY METRE SHALL BE LOCATED INSIDE THE NEW MAIN SWITCHBOARD AS SHOWN ON THE SCHEMATIC DIAGRAM.

TRENCHING:

1. TRENCHES SHALL BE OF SUFFICIENT DEPTH TO COMPLY WITH MINIMUM DEPTH AS/NZS 3000 CLAUSE 3.11.4.4.
2. AFTER CABLES HAVE BEEN INSTALLED, TESTED, PROTECTED, AND APPROVAL IS GRANTED TO PROCEED, TRENCHES SHALL BE BACKFILLED WITH MATERIAL REMOVED FROM THE TRENCH, AND COMPACTED TO AT LEAST THE SAME STATE AS THE ADJACENT GROUND. ALL STONES OR OTHER NON-CLAY MATERIAL LARGER THAN 65mm PARTICLE SIZE SHALL BE REMOVED FROM THE BACKFILL MATERIAL BEFORE PLACING IN THE TRENCH FOR COMPACTION.
3. BACKFILLING SHALL BE DONE IN 100mm THICK LAYERS, HAND RAMMING THE FIRST TWO LAYERS, FOLLOWED BY POWER CONSOLIDATION. COMPLETE BACKFILLING AND CONSOLIDATION AND FINISH TO MATCH THE ADJACENT SURFACE.
4. THE CONTRACTOR SHALL:

4.1. REPORT IMMEDIATELY ANY SERVICES EXPOSED OR DAMAGED DURING TRENCHING.
4.2. ARRANGE FOR INSPECTION AND APPROVAL BY THE ENGINEER, BEFORE CABLES ARE LAID AND DURING INSTALLATION AND TESTING, GIVING AT LEAST THREE (3) DAYS' NOTICE, IN WRITING.
4.3. REINSTATE TO PREVIOUS EXISTING STANDARD ALL PREVIOUSLY FINISHED GROUND SURFACES, INCLUDING RE-GRASSING, RESEALING OR REPAIR TO CONCRETE (WHERE APPLICABLE).
4.4. RECORD THE EXACT LOCATIONS OF ALL UNDERGROUND CABLES ON THE FINAL AS-BUILT DRAWINGS, GIVING EXACT DEPTHS AND DIMENSIONS FROM READILY IDENTIFIABLE BUILDINGS OR LANDMARKS.

WIRING & CABLING:

1. ALL WIRING AND CABLING SHALL BE IN ACCORDANCE WITH AS/NZS 3000, THE DETAILS SHOWN ON THE DRAWINGS AND ANY ADDITIONAL REQUIREMENTS SET OUT BELOW.
2. CABLE SPACING FROM OTHER SERVICES OR VOLTAGES SHALL BE AS FOLLOWS:

2.1. MV OR LV 150mm MINIMUM
2.2. WATER OR GAS 200mm MINIMUM
2.3. COMMS 300mm MINIMUM (WHERE PRACTICALLY POSSIBLE)

3. METHOD OF WIRING SHALL USE THE TYPE AND CABLE SIZES SPECIFIED IN THE RELEVANT SCHEMATICS.
4. ALL CABLE IDENTIFICATION SHALL INCORPORATE PLASTIC LABEL TAGS TO ALL CABLES AT THE POINT OF ENTRY INTO THE DISTRIBUTION PILLAR TO IDENTIFY THE DESTINATION SERVED, SIZE AND TYPE OF CABLE.
5. CABLES SHALL BE ENCLOSED OR INSTALLED TO SUIT THE CATEGORIES PERMITTED BY AS/NZS 3000.
6. MECHANICAL PROTECTION SHALL BE PROVIDED TO ALL CABLES LAID DIRECT IN TRENCHES.
7. ANY CABLE NOT INSTALLED IN A WIRING ENCLOSURE SHALL BE LAID ON A BED OF NOT LESS THAN 50mm OF SAND OR FRIABLE SOIL FREE OF SHARP STONES AND COVERED BY NOT LESS THAN 50mm OF THE SAME MATERIAL.

APPROVED MANUFACTURERS:

1. PROPOSED CABLE PITS SHALL BE ACO POLYCRETE PITS RANGE OR ANY APPROVED EQUIVALENT.
2. LV SWITCHGEAR COMPONENTS SHALL BE FROM ANY OF THE FOLLOWING MAKES/BRANDS:

2.1. SCHNEIDER ELECTRIC
2.2. EATON
2.3. ABB

3. CONDUITS SHALL BE FROM THE FOLLOWING MAKES/BRANDS (METALLIC AND NON-METALLIC): CLIPSAL RANGE
4. CABLES SHALL BE FROM ANY OF THE FOLLOWING MAKES/BRANDS:

4.1. GENERAL CABLES
4.2. OLEX
4.3. TRICAB

5. THE CONTRACTOR SHALL PROVIDE A PROPOSAL FOR THE FOLLOWING ITEMS:

5.1. CABLE PITS RATED FOR VEHICULAR DRIVEOVER FEEDER PILLARS

COMPLETION & DOCUMENTATION:

1. INSPECTION, TESTING AND COMMISSIONING WORKS SHALL BE CARRIED OUT AS PER RELEVANT STANDARDS AND REGULATIONS SUCH AS AS/NZS 3000 AND MANUFACTURER'S RECOMMENDATIONS. COPIES OF SUCH TESTS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL.
2. PRIOR TO PRELIMINARY OPERATION AND TESTING THE CONTRACTOR SHALL ENSURE THAT ALL OUTSTANDING DEFECTS ARE LIMITED TO MINOR ITEMS WHICH DO NOT EFFECT OPERATIONAL REQUIREMENTS OF THE SYSTEM AS DICTATED BY AUSTRALIAN AND NEW ZEALAND STANDARDS AND THAT ALL SYSTEMS AND EQUIPMENT ARE IN WORKING ORDER. ALL DEFECTS SHALL BE REMEDIATED PRIOR TO PROJECT COMPLETION.
3. THE CONTRACTOR SHALL PROVIDE A CERTIFICATE OF ELECTRICAL SAFETY ON COMPLETION OF THE WORKS.
4. SUBMISSION OF AS-BUILT DOCUMENTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. AS-BUILT RECORDS SHALL INCLUDE THE FOLLOWING:

   PLANS SHOWING ALL SIZE, LOCATIONS, DEPTHS OF IN-GROUND CABLES AND CONDUITS. THE SAME PLAN SHALL INDICATE MAIN DISTRIBUTION POINTS AND POWER POINTS LOCATIONS (WHERE APPLICABLE).

   LOCATIONS AND ALL LIGHT FITTINGS INCLUDING TYPE AND FEEDING CIRCUIT WITH AN ACCURACY OF ±1.0M ALL DRAWINGS SHALL BE PREPARED AND SUBMITTED IN BOTH PDF & CAD FORMAT.
5. A COMPLETE SET OF THE FOLLOWING DOCUMENTS SHALL BE SUBMITTED FOR RECORD KEEPING AS PART OF FINAL COMPLETION. SUBMISSION WILL BE IN BOTH HARDCOPY AND SOFTCOPY FORMATS WHICH WOULD INCLUDE:

5.1. ALL SYSTEMS TEST RESULTS
5.2. SUPPLIERS DECLARATION OF CONFORMITY AND SUPPLIERS TEST CERTIFICATES SUBMITTED FOR REVIEW
5.3. CERTIFICATE OF COMPLIANCE
5.4. AS-INSTALLED DRAWINGS IN PDF & CAD FORMATS

CONTRACTOR RESPONSIBILITY:

1. THE CONTRACTOR SHALL ENSURE THAT ALL LIGHTING CONSTRUCTION WORKS, INCLUDING INSTALLATION, MEETS THE INTENTION OF THE DESIGN CRITERIA HIGHLIGHTED ABOVE. ANY CHANGE TO THE LOCATION OF THE POLES DUE TO ANY CIRCUMSTANCES (FOR EXAMPLE RESTRICTIONS DUE TO SITE CONDITIONS) MUST BE REPORTED TO THE ENGINEER WITH A PROPOSED SOLUTION FOR REVIEW AND APPROVAL.
2. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND EXTENT OF ALL UNDERGROUND SERVICES WITH THE APPROPRIATE UTILITY AUTHORITY PRIOR TO EXCAVATION.
3. THE CONTRACTOR SHALL ALLOW FOR COORDINATION OF ALL ELECTRICAL WIRING AND CONDUITS WITH OTHER IN-GROUND SERVICES.
4. THE CONTRACTOR SHALL ALLOW FOR ACCOMMODATING DELIVERY TIMES WITH THE OVERALL PROJECT PROGRAM TO ENSURE THAT SPECIFIED ITEMS ARE RECEIVED AT SITE ON TIME. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO BEAR ADDITIONAL FREIGHT COST FOR NOT ALLOWING FOR ANY LEAD TIME(S) FOR ANY SPECIFIED ITEM INCLUDING LIGHT FITTINGS IN ORDER TO MEET THE PROGRAM OF WORKS.
5. ANY DEVIATIONS FROM THE ENGINEER/DESIGNED SOLUTION WILL NOT BE ACCEPTED UNLESS APPROVED IN WRITING BY THE ENGINEER.
6. CONTRACTOR SHALL ALLOW IN THEIR PRICING FOR THE APPOINTMENT AND ENGAGEMENT OF A THIRD PARTY TO VERIFY THE ACHIEVED LUX LEVEL AND SPILL LIGHT RESTRICTION. CONTRACTOR MUST SUBMIT A FINAL REPORT TO THE ENGINEER CONFIRMING THAT ALL INSTALLATION ARE COMPLYING WITH THE DESIGN REQUIREMENTS IN A REPORT FORMAT SUPPORTED BY MEASUREMENTS AND ANALYZED RESULTS.

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CONSULTANT

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PROJECT

EP School Link
Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

I/R	DATE	DESCRIPTION
E	12.04.24	100% DETAILED DESIGN
D	15.03.24	UPDATED DETAILED DESIGN
C	21.12.23	DETAILED DESIGN
B	12.07.23	FOR INFORMATION
A	14.06.23	FOR INFORMATION

PROJECT NUMBER

60687064

SHEET TITLE

TARSI
GENERAL NOTES

SHEET NUMBER

60687064-SHT-GI-8002

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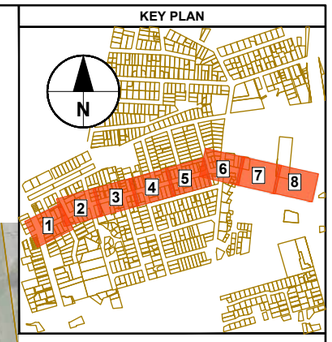

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PROJECT

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CLIENT

Hamilton City Council
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REGISTRATION

DETAILED DESIGN

SCALE

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1:2000

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

I/R	DATE	DESCRIPTION
C	12.04.24	100% DETAILED DESIGN
B	15.03.24	UPDATED DETAILED DESIGN
A	21.12.23	DETAILED DESIGN

PROJECT NUMBER

60687064

SHEET TITLE

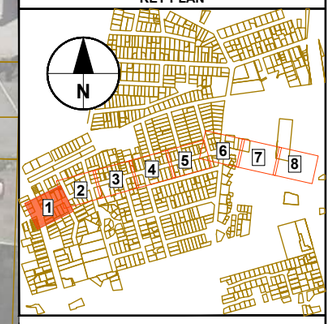
TARSI
SURVEY PLAN
OVERVIEW

SHEET NUMBER

60687064-SHT-V-8100

ISO A1 594mm x 841mm

KEY PLAN



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- EXISTING KERB
- EXISTING ROAD MARKING
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING TREE
- EXISTING TREE
- EXISTING ROAD SIGN
- EXISTING TRAFFIC LIGHT
- EXISTING STREET LIGHT
- EXISTING POWER POLE
- EXISTING WELL TRANSFORMER
- EXISTING WATER VAVLE
- EXISTING WATER METER (M)
- EXISTING WATER TOBY (T)

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REGISTRATION

DETAILED DESIGN

SCALE

0 6 12 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

I/R	DATE	DESCRIPTION
C	12.04.24	100% DETAILED DESIGN
B	15.03.24	UPDATED DETAILED DESIGN
A	21.12.23	DETAILED DESIGN

PROJECT NUMBER

60687064

SHEET TITLE

TARSI
SURVEY PLAN
SHEET 1

SHEET NUMBER

60687064-SHT-V-8101

ISO A1 594mm x 841mm

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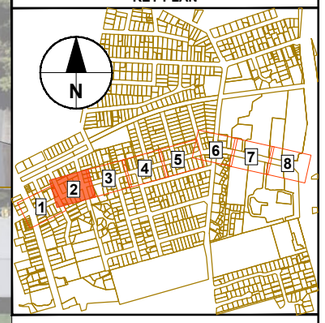

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- EXISTING TREE
- EXISTING TREE
- EXISTING ROAD SIGN
- EXISTING TRAFFIC LIGHT
- EXISTING STREET LIGHT
- EXISTING POWER POLE
- EXISTING WELL TRANSFORMER
- EXISTING WATER VAVLE
- EXISTING WATER METER (M)
- EXISTING WATER TOBY (T)

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REGISTRATION

DETAILED DESIGN

SCALE

0 6 12 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

C	12.04.24	100% DETAILED DESIGN
B	15.03.24	UPDATED DETAILED DESIGN
A	21.12.23	DETAILED DESIGN
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

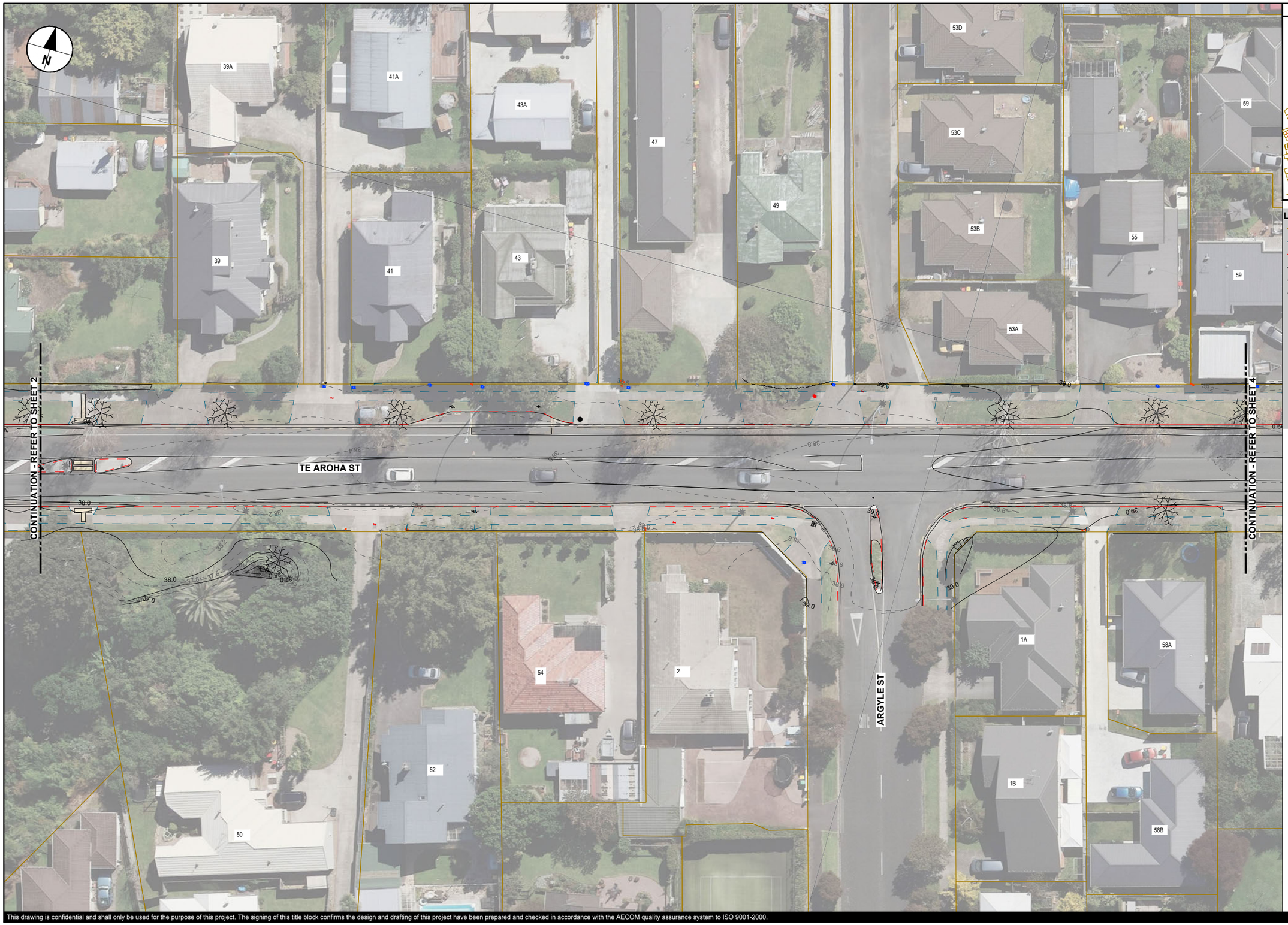
SHEET TITLE

TARSI
SURVEY PLAN
SHEET 2

SHEET NUMBER

60687064-SHT-V-8102

ISO A1 594mm x 841mm



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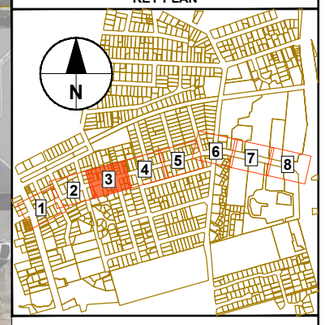

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- EXISTING TREE
- EXISTING TREE
- EXISTING ROAD SIGN
- EXISTING TRAFFIC LIGHT
- EXISTING STREET LIGHT
- EXISTING POWER POLE
- EXISTING WELL TRANSFORMER
- EXISTING WATER VAVLE
- EXISTING WATER METER
- EXISTING WATER TOBY

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DETAILED DESIGN

SCALE

0 6 12 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

C	12.04.24	100% DETAILED DESIGN
B	15.03.24	UPDATED DETAILED DESIGN
A	21.12.23	DETAILED DESIGN
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

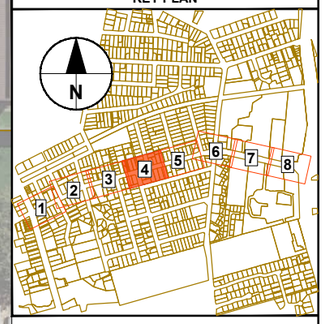
SHEET TITLE

TARSI
SURVEY PLAN
SHEET 3

SHEET NUMBER

60687064-SHT-V-8103

ISO A1 594mm x 841mm



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- EXISTING TREE
- EXISTING ROAD SIGN
- EXISTING TRAFFIC LIGHT
- EXISTING STREET LIGHT
- EXISTING POWER POLE
- EXISTING WELL TRANSFORMER
- EXISTING WATER VAVLE
- EXISTING WATER METER (M)
- EXISTING WATER TOBY (T)

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REGISTRATION

DETAILED DESIGN

SCALE

0 6 12 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

C	12.04.24	100% DETAILED DESIGN
B	15.03.24	UPDATED DETAILED DESIGN
A	21.12.23	DETAILED DESIGN
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

SHEET TITLE

TARSI
SURVEY PLAN
SHEET 4

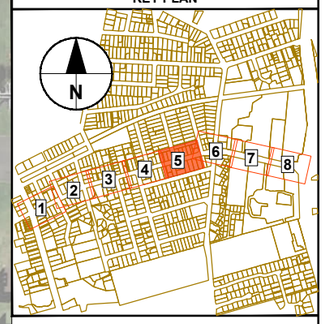
SHEET NUMBER

60687064-SHT-V-8104

Last saved by: ARAMBULOEV(2024-04-10) Last Plotted: 2024-04-10
Filename: C:\PWWORKING\AECOM_DS12_AU\ERIC.ARAMBUL0@AECOM.COM\D0330697\60687064-SHT-V-8104.DWG

ISO A1 594mm x 841mm

KEY PLAN



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- EXISTING TREE
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- EXISTING STREET LIGHT
- EXISTING POWER POLE
- EXISTING WELL TRANSFORMER
- EXISTING WATER VAVLE
- EXISTING WATER METER (M)
- EXISTING WATER TOBY (T)

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CLIENT

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REGISTRATION

DETAILED DESIGN

SCALE

0 6 12 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

I/R	DATE	DESCRIPTION
C	12.04.24	100% DETAILED DESIGN
B	15.03.24	UPDATED DETAILED DESIGN
A	21.12.23	DETAILED DESIGN

PROJECT NUMBER

60687064

SHEET TITLE

TARSI
SURVEY PLAN
SHEET 5

SHEET NUMBER

60687064-SHT-V-8105

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ISO A1 594mm x 841mm

EXTENT OF WORK

PEACHGROVE RD

RUAKURA RD

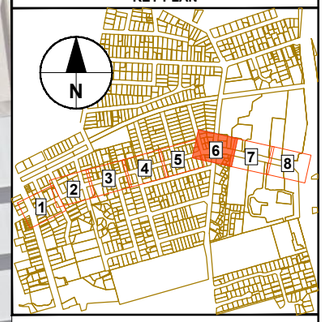
ST WINIFREDS AVE

CONTINUATION - REFER TO SHEET 6

CONTINUATION - REFER TO SHEET 6

TREE ALREADY REMOVED

KEY PLAN



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- EXISTING WATER TOBY

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REGISTRATION

DETAILED DESIGN

SCALE

0 6 12 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

C	12.04.24	100% DETAILED DESIGN
B	15.03.24	UPDATED DETAILED DESIGN
A	21.12.23	DETAILED DESIGN
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

SHEET TITLE

TARSI
SURVEY PLAN
SHEET 6

SHEET NUMBER

60687064-SHT-V-8106

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ISO A1 594mm x 841mm

KEY PLAN

LEGEND:

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- EXISTING FOOTPATH EDGE
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- EXISTING TREE
- EXISTING ROAD SIGN
- EXISTING TRAFFIC LIGHT
- EXISTING STREET LIGHT
- EXISTING POWER POLE
- 🟥 EXISTING WELL TRANSFORMER
- EXISTING WATER VAVLE
- M EXISTING WATER METER
- T EXISTING WATER TOBY

Last saved by: ARAMBULOEV(2024-04-10) Last Plotted: 2024-04-10
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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

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1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

C	12.04.24	100% DETAILED DESIGN
B	15.03.24	UPDATED DETAILED DESIGN
A	21.12.23	DETAILED DESIGN
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

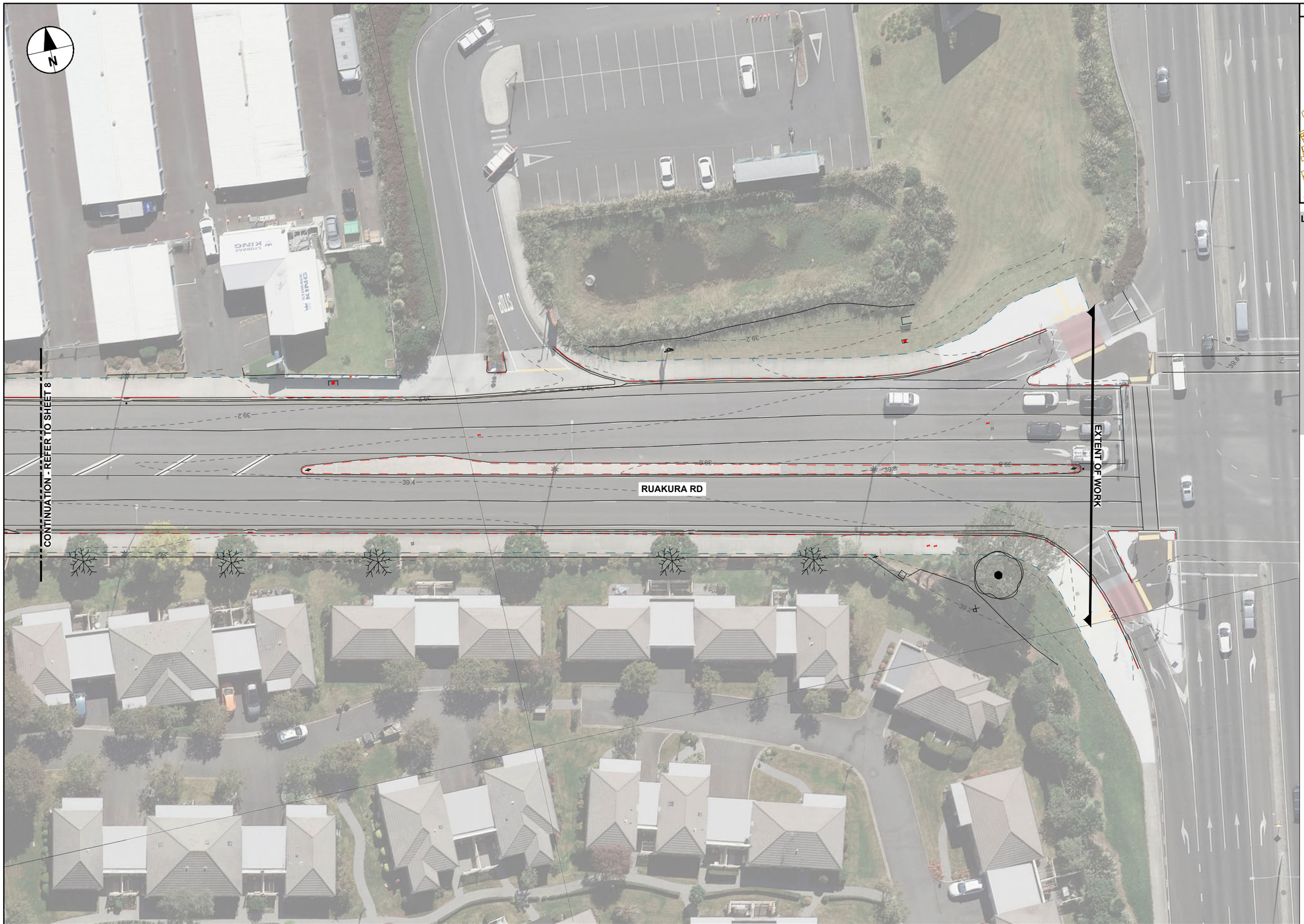
SHEET TITLE

TARSI
SURVEY PLAN
SHEET 7

SHEET NUMBER

60687064-SHT-V-8107

ISO A1 594mm x 841mm



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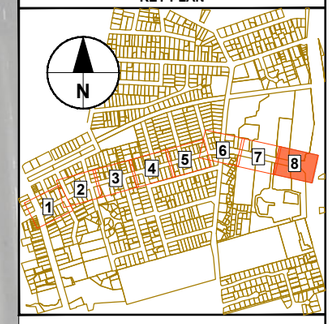

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- EXISTING WATER VAVLE
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- EXISTING WATER TOBY (T)

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REGISTRATION

DETAILED DESIGN

SCALE

0 6 12 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

C	12.04.24	100% DETAILED DESIGN
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A	21.12.23	DETAILED DESIGN
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

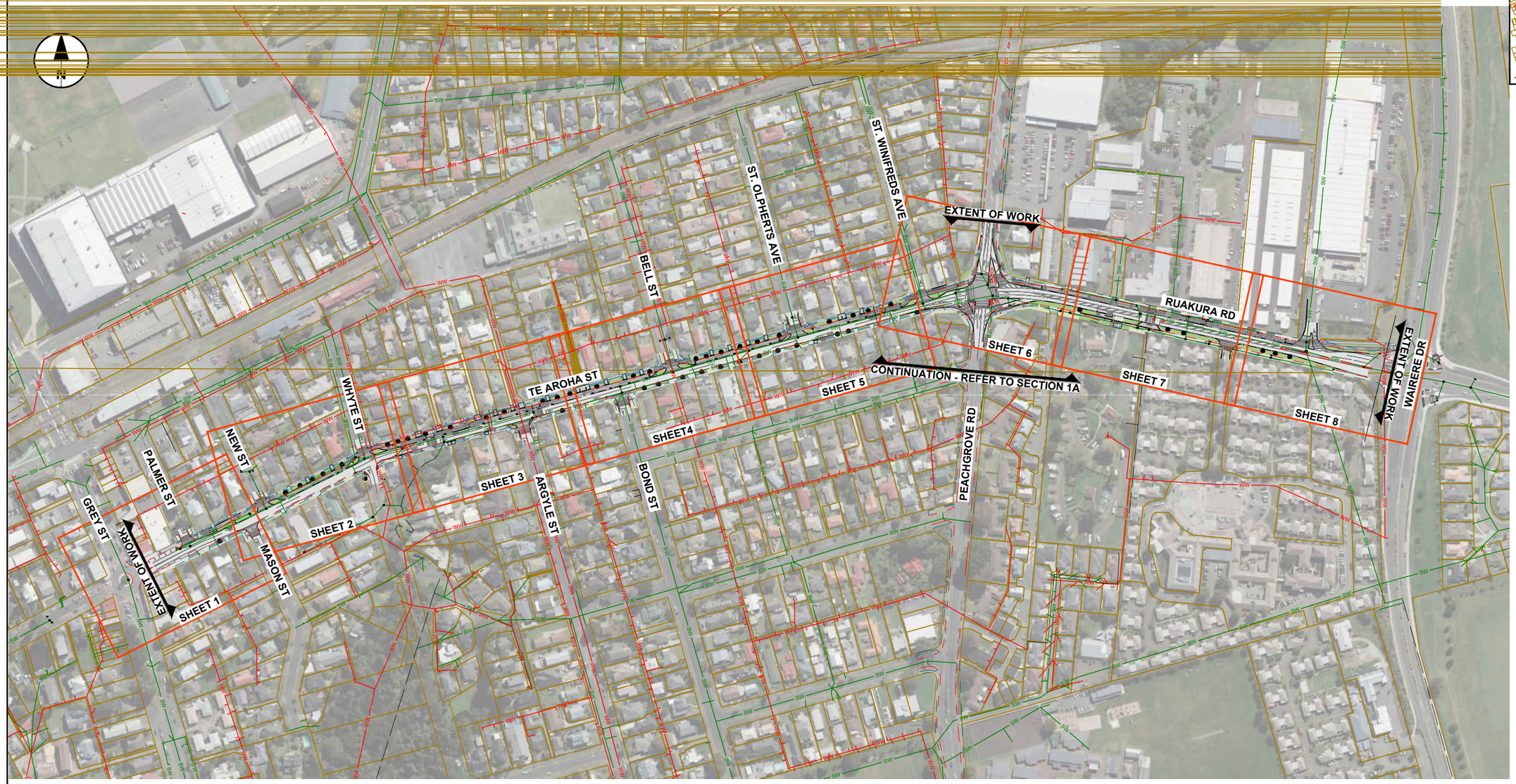
SHEET TITLE

TARSI
SURVEY PLAN
SHEET 8

SHEET NUMBER

60687064-SHT-V-8108

ISO A1 (594mm x 841mm)



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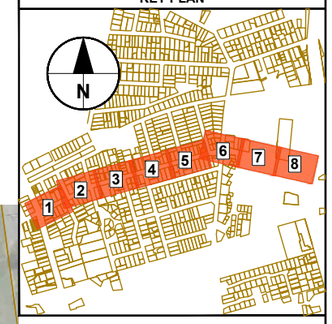

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CONSULTANT

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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 48 96 m
1:2000

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

C	14.04.24	100% DETAILED DESIGN
B	15.03.24	UPDATED DETAILED DESIGN
A	21.12.23	DETAILED DESIGN
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

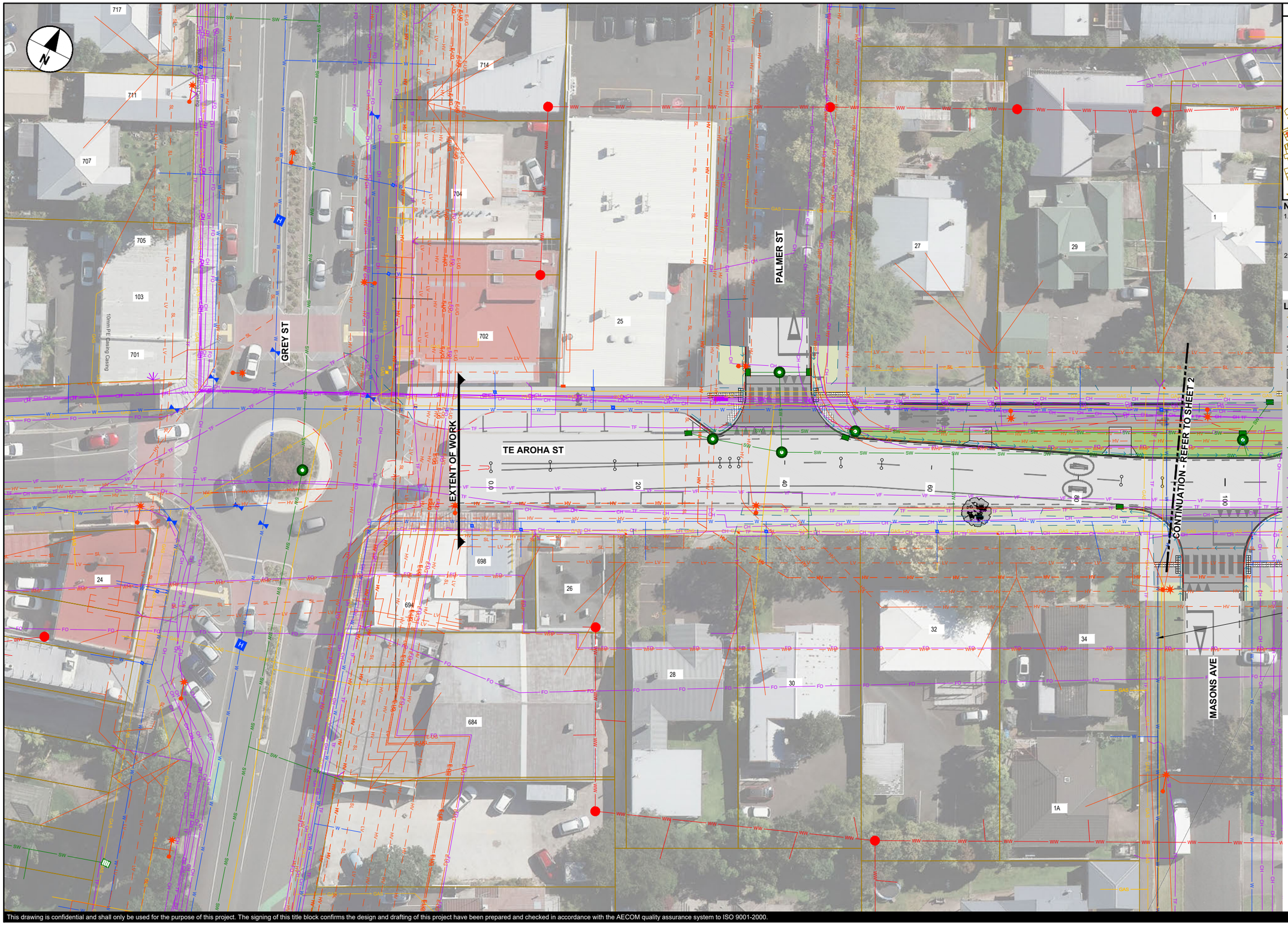
SHEET TITLE

TARSI
EXISTING SERVICES PLAN
OVERVIEW

SHEET NUMBER

60687064-SHT-UT-8100

ISO A1 594mm x 841mm



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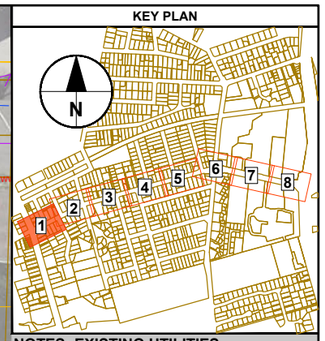

NOTES: EXISTING UTILITIES

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LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB
- NEW KERB
- EXISTING ASPHALT
- NEW ASPHALT
- NEW CONCRETE
- NEW BERM
- NEW VEHICLE CROSSING
- EXISTING TREE
- SW — EXISTING STORMWATER PIPE
- EXISTING STORMWATER CATCHPIT
- RELOCATED STORMWATER CATCHPIT
- CH — EXISTING CHORUS LINE
- VF — EXISTING VODAFONE LINE
- TF — EXISTING TUATAHI FIBRE LINE
- UFF — EXISTING ULTRAFAST FIBRE LINE
- TEL — EXISTING TELEPHONE OVERHEAD LINE
- GAS — EXISTING GAS PIPE
- WW — EXISTING WASTEWATER PIPE
- W — EXISTING WATER PIPE
- LV — EXISTING POWER LOW VOLTAGE UNDERGROUND
- HV — EXISTING POWER HIGH VOLTAGE UNDERGROUND
- SL — EXISTING STREET LIGHTING UNDERGROUND
- WHP — EXISTING WATER HEATING PILOT UNDERGROUND
- FO — EXISTING FIBRE LINE
- EXISTING POWER / COMM JUNCTION BOX
- EXISTING MANHOLE
- H — EXISTING HYDRANT
- M — EXISTING WATER METER
- EXISTING WATER VALVE
- EXISTING STREET LIGHT
- EXISTING TRAFFIC LIGHT

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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6 12 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

I/R	DATE	DESCRIPTION
F	12.04.24	100% DETAILED DESIGN
E	15.03.24	UPDATED DETAILED DESIGN
D	21.12.23	DETAILED DESIGN
C	25.07.23	FOR INFORMATION
B	12.07.23	FOR INFORMATION
A	14.06.23	FOR INFORMATION

PROJECT NUMBER

60687064

SHEET TITLE

TARSI
EXISTING SERVICES PLAN
SHEET 1

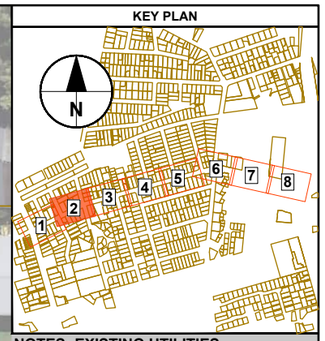
SHEET NUMBER

60687064-SHT-UT-8101

Last saved by: SCHUBELD (2024-03-11) Last Plotted: 2024-04-18
Filename: C:\PWWORKING\AECOM_DS12_AU\DANIEL.SCHUBEL@AECOM.COM\D0306976\60687064-SHT-UT-8101.DWG

ISO A1 (594mm x 841mm)

KEY PLAN



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LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB
- NEW KERB
- EXISTING ASPHALT
- NEW ASPHALT
- NEW CONCRETE
- NEW BERM
- NEW VEHICLE CROSSING
- EXISTING TREE
- SW — EXISTING STORMWATER PIPE
- EXISTING STORMWATER CATCHPIT
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- VF — EXISTING VODAFONE LINE
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- WHP — EXISTING WATER HEATING PILOT UNDERGROUND
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- EXISTING POWER / COMM JUNCTION BOX
- EXISTING MANHOLE
- H — EXISTING HYDRANT
- M — EXISTING WATER METER
- EXISTING WATER VALVE
- EXISTING STREET LIGHT
- EXISTING TRAFFIC LIGHT

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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6 12 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

I/R	DATE	DESCRIPTION
F	12.04.24	100% DETAILED DESIGN
E	15.03.24	UPDATED DETAILED DESIGN
D	21.12.23	DETAILED DESIGN
C	25.07.23	FOR INFORMATION
B	14.02.23	FOR INFORMATION
A	14.06.23	FOR INFORMATION

PROJECT NUMBER

60687064

SHEET TITLE

TARSI
EXISTING SERVICES PLAN
SHEET 2

SHEET NUMBER

60687064-SHT-UT-8102

Last saved by: SCHUBELD(2024-03-11) Last Plotted: 2024-04-10
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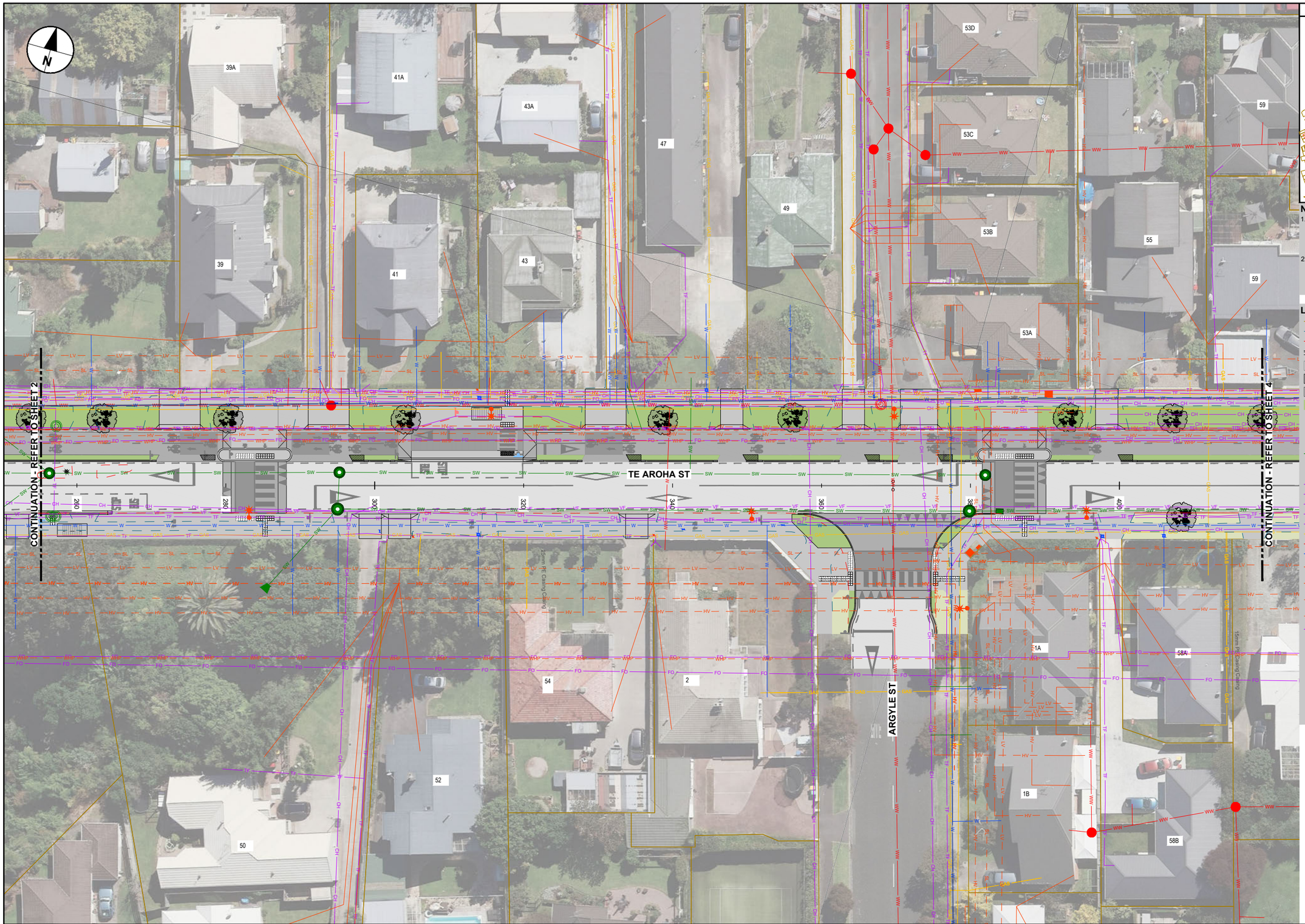
ISO A1 594mm x 841mm



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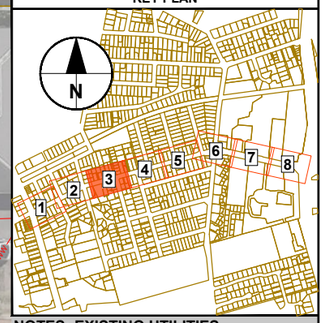

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LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB
- NEW KERB
- EXISTING ASPHALT
- NEW ASPHALT
- NEW CONCRETE
- NEW BERM
- NEW VEHICLE CROSSING
- EXISTING TREE
- SW — EXISTING STORMWATER PIPE
- EXISTING STORMWATER CATCHPIT
- RELOCATED STORMWATER CATCHPIT
- CH — EXISTING CHORUS LINE
- VF — EXISTING VODAFONE LINE
- TF — EXISTING TUATAHI FIBRE LINE
- UFF — EXISTING ULTRAFAST FIBRE LINE
- TEL — EXISTING TELEPHONE OVERHEAD LINE
- GAS — EXISTING GAS PIPE
- WW — EXISTING WASTEWATER PIPE
- W — EXISTING WATER PIPE
- LV — EXISTING POWER LOW VOLTAGE UNDERGROUND
- HV — EXISTING POWER HIGH VOLTAGE UNDERGROUND
- SL — EXISTING STREET LIGHTING UNDERGROUND
- WHP — EXISTING WATER HEATING PILOT UNDERGROUND
- FO — EXISTING FIBRE LINE
- EXISTING POWER / COMM JUNCTION BOX
- EXISTING MANHOLE
- H — EXISTING HYDRANT
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- EXISTING WATER VALVE
- EXISTING STREET LIGHT
- EXISTING TRAFFIC LIGHT

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CONSULTANT

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NZ.B.N 9429032091335
www.aecom.com

PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6 12 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

E	12.04.24	100% DETAILED DESIGN
D	15.03.24	UPDATED DETAILED DESIGN
C	21.12.23	DETAILED DESIGN
B	12.07.23	FOR INFORMATION
A	14.06.23	FOR INFORMATION
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

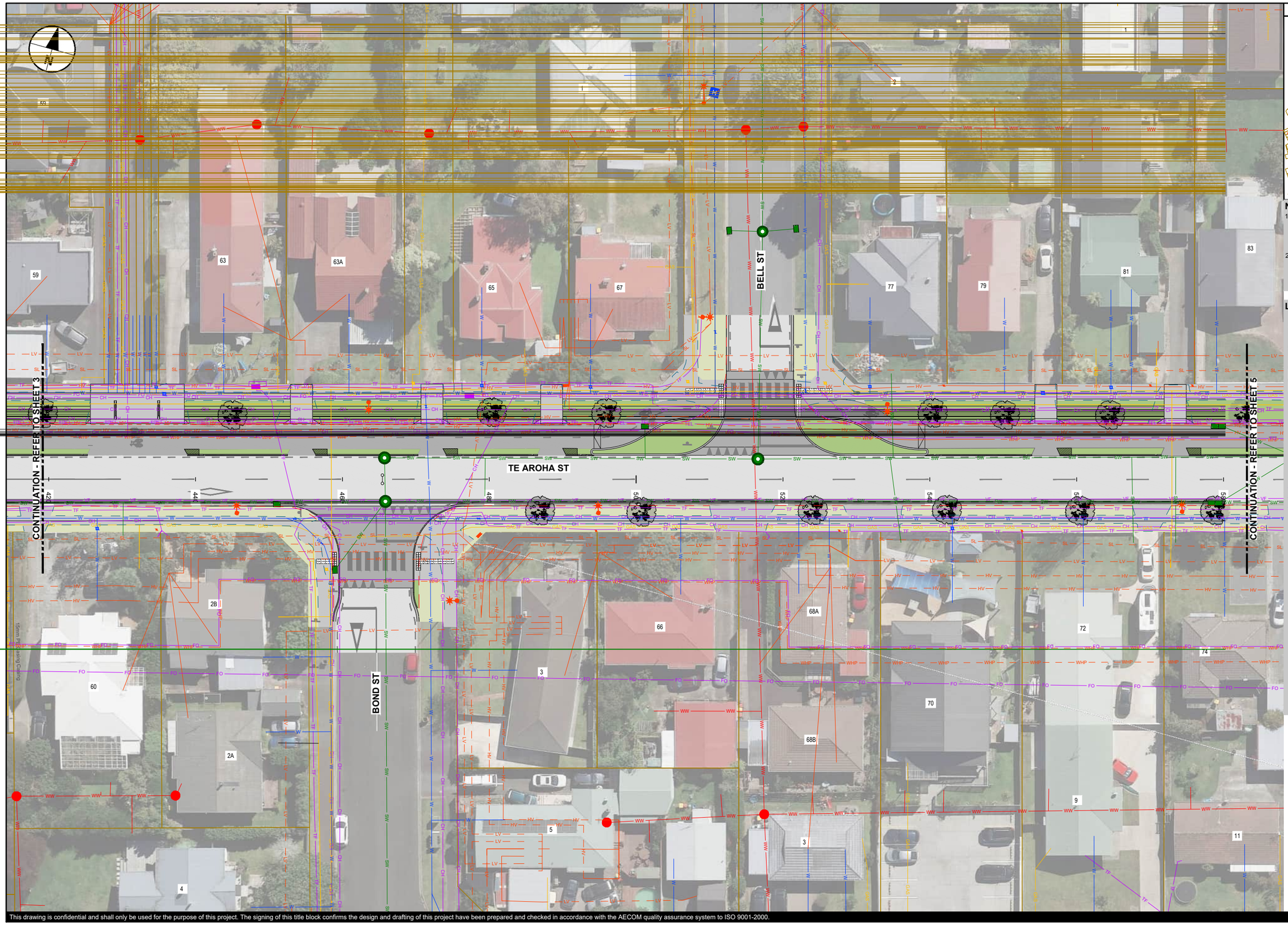
SHEET TITLE

TARSI
EXISTING SERVICES PLAN
SHEET 3

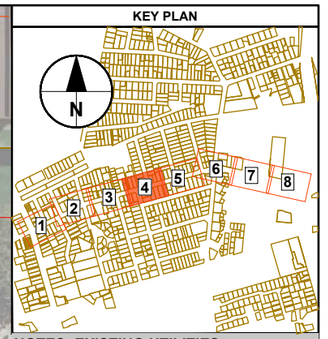
SHEET NUMBER

60687064-SHT-UT-8103

ISO A1 (594mm x 841mm)



KEY PLAN



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LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB
- NEW KERB
- EXISTING ASPHALT
- NEW ASPHALT
- NEW CONCRETE
- NEW BERM
- NEW VEHICLE CROSSING
- EXISTING TREE
- SW — EXISTING STORMWATER PIPE
- EXISTING STORMWATER CATCHPIT
- RELOCATED STORMWATER CATCHPIT
- CH — EXISTING CHORUS LINE
- VF — EXISTING VODAFONE LINE
- TF — EXISTING TUATAHI FIBRE LINE
- UFF — EXISTING ULTRAFAST FIBRE LINE
- TEL — EXISTING TELEPHONE OVERHEAD LINE
- GAS — EXISTING GAS PIPE
- WW — EXISTING WASTEWATER PIPE
- W — EXISTING WATER PIPE
- LV — EXISTING POWER LOW VOLTAGE UNDERGROUND
- HV — EXISTING POWER HIGH VOLTAGE UNDERGROUND
- SL — EXISTING STREET LIGHTING UNDERGROUND
- WHP — EXISTING WATER HEATING PILOT UNDERGROUND
- FO — EXISTING FIBRE LINE
- EXISTING POWER / COMM JUNCTION BOX
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- H — EXISTING HYDRANT
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- EXISTING WATER VALVE
- EXISTING STREET LIGHT
- EXISTING TRAFFIC LIGHT

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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6 12 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

E	12.04.24	100% DETAILED DESIGN
D	15.03.24	UPDATED DETAILED DESIGN
C	21.12.23	DETAILED DESIGN
B	12.07.23	FOR INFORMATION
A	14.06.23	FOR INFORMATION
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

SHEET TITLE

TARSI
EXISTING SERVICES PLAN
SHEET 4

SHEET NUMBER

60687064-SHT-UT-8104

Last saved by: SCHUBELD (2024-03-11) Last Plotted: 2024-04-10
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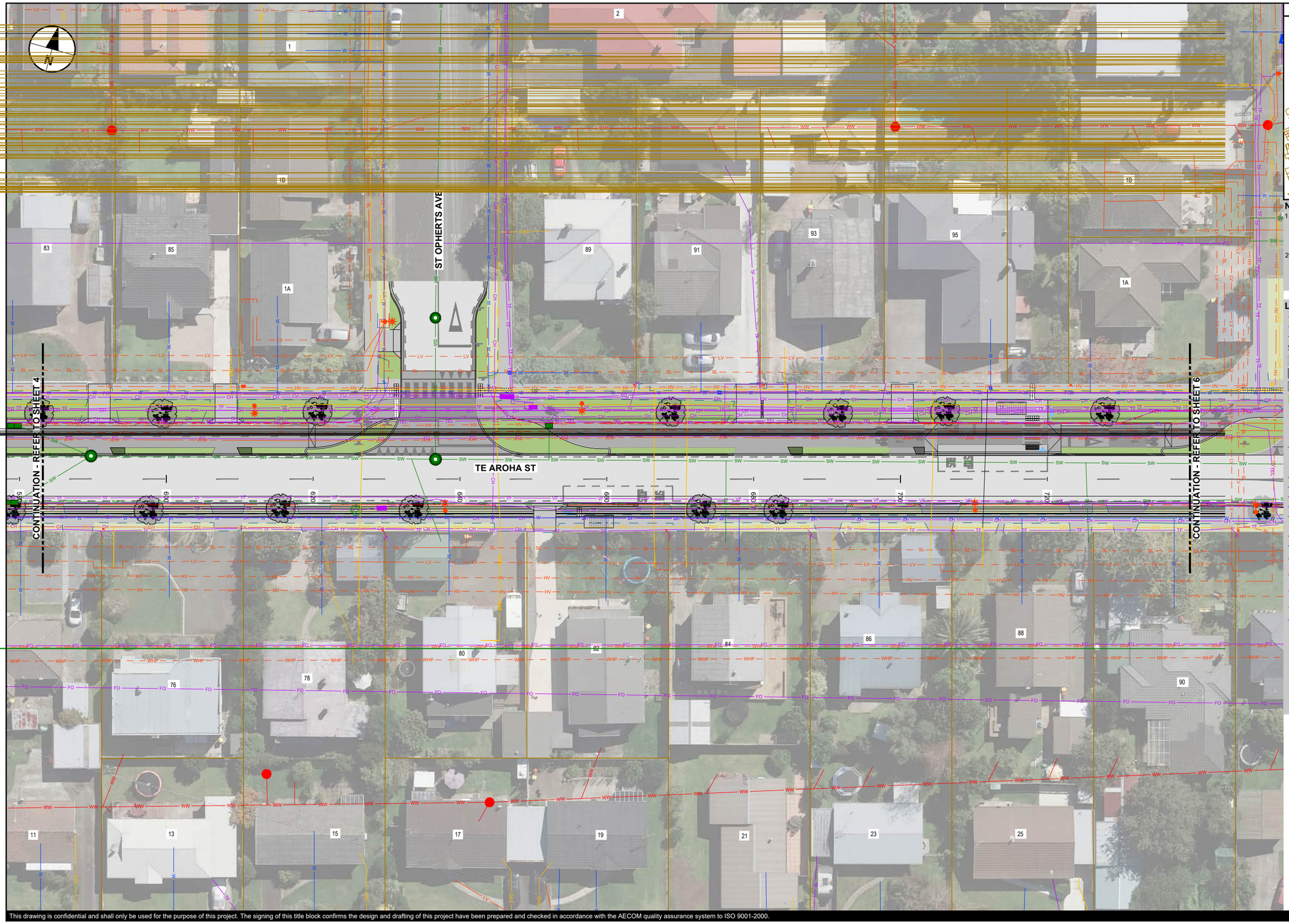
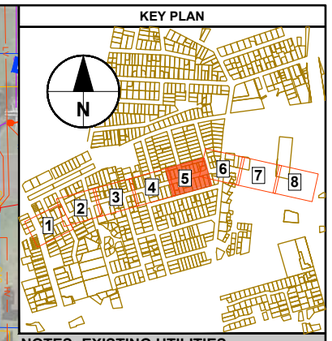
ISO A1 (594mm x 841mm)





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LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB
- NEW KERB
- EXISTING ASPHALT
- NEW ASPHALT
- NEW CONCRETE
- NEW BERM
- NEW VEHICLE CROSSING
- EXISTING TREE
- SW — EXISTING STORMWATER PIPE
- EXISTING STORMWATER CATCHPIT
- RELOCATED STORMWATER CATCHPIT
- CH — EXISTING CHORUS LINE
- VF — EXISTING VODAFONE LINE
- TF — EXISTING TUATAHI FIBRE LINE
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- GAS — EXISTING GAS PIPE
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- W — EXISTING WATER PIPE
- LV — EXISTING POWER LOW VOLTAGE UNDERGROUND
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- EXISTING STREET LIGHT
- EXISTING TRAFFIC LIGHT

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AECOM

CONSULTANT

AECOM New Zealand Ltd
NZ.B.N 9429032091335
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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6 12 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

E	12.04.24	100% DETAILED DESIGN
D	15.03.24	UPDATED DETAILED DESIGN
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A	14.06.23	FOR INFORMATION
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

SHEET TITLE

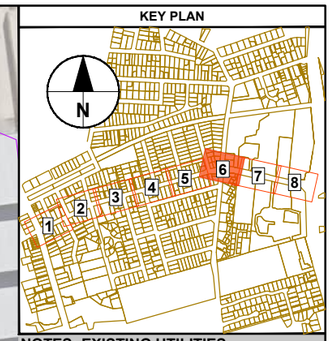
TARSI
EXISTING SERVICES PLAN
SHEET 5

SHEET NUMBER

60687064-SHT-UT-8105

ISO A1 594mm x 841mm

KEY PLAN



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LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB
- NEW KERB
- EXISTING ASPHALT
- NEW ASPHALT
- NEW CONCRETE
- NEW BERM
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- EXISTING STORMWATER CATCHPIT
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- EXISTING WATER VALVE
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PROJECT
EP School Link Design

CLIENT
Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION
DETAILED DESIGN

SCALE
0 6 12 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

E	12.04.24	100% DETAILED DESIGN
D	15.03.24	UPDATED DETAILED DESIGN
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I/R	DATE	DESCRIPTION

PROJECT NUMBER
60687064

SHEET TITLE
TARSI
EXISTING SERVICES PLAN
SHEET 6

SHEET NUMBER
60687064-SHT-UT-8106

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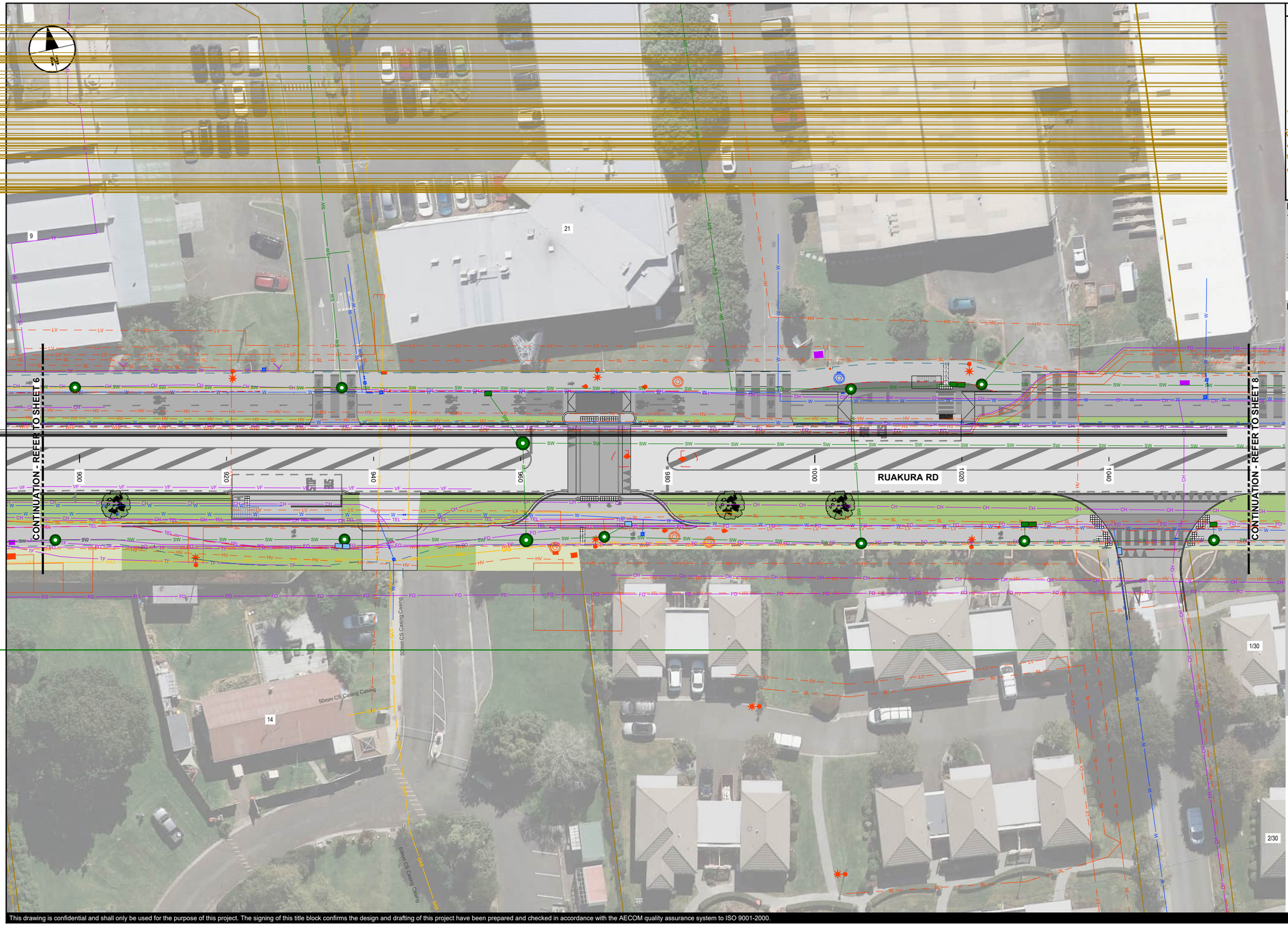
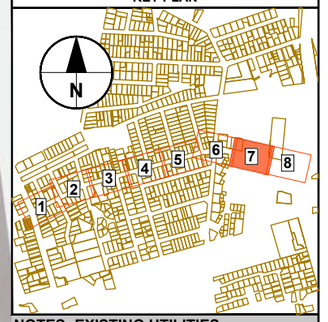
ISO A1 594mm x 841mm



KEY PLAN



NOTES: EXISTING UTILITIES

1. EXISTING SERVICES ALIGNMENTS ARE PROVIDED FROM SERVICE AUTHORITIES RECORDS, FOR INFORMATION ONLY, AND SHOULD NOT TO BE TAKEN AS A COMPLETE AND ACCURATE RECORD OF THE SERVICES WITHIN THE AREA OF WORKS.
2. MANHOLE/CHAMBER, HYDRANTS, WATER METER, POWER TRANSFORMER/CABINETS, TRAFFIC LIGHT POLE/CABINETS, POWER AND STREET LIGHTING POLES LOCATIONS WERE TAKEN FROM TOPOGRAPHICAL SURVEY.

LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB
- NEW KERB
- EXISTING ASPHALT
- NEW ASPHALT
- NEW CONCRETE
- NEW BERM
- NEW VEHICLE CROSSING
- EXISTING TREE
- SW EXISTING STORMWATER PIPE
- EXISTING STORMWATER CATCHPIT
- RELOCATED STORMWATER CATCHPIT
- CH EXISTING CHORUS LINE
- VF EXISTING VODAFONE LINE
- TF EXISTING TUATAHI FIBRE LINE
- UFF EXISTING ULTRAFAST FIBRE LINE
- TEL EXISTING TELEPHONE OVERHEAD LINE
- GAS EXISTING GAS PIPE
- WW EXISTING WASTEWATER PIPE
- W EXISTING WATER PIPE
- LV EXISTING POWER LOW VOLTAGE UNDERGROUND
- HV EXISTING POWER HIGH VOLTAGE UNDERGROUND
- SL EXISTING STREET LIGHTING UNDERGROUND
- WHP EXISTING WATER HEATING PILOT UNDERGROUND
- FO EXISTING FIBRE LINE
- EXISTING POWER / COMM JUNCTION BOX
- EXISTING MANHOLE
- H EXISTING HYDRANT
- M EXISTING WATER METER
- EXISTING WATER VALVE
- EXISTING STREET LIGHT
- EXISTING TRAFFIC LIGHT

This drawing is confidential and shall only be used for the purpose of this project. The signing of this title block confirms the design and drafting of this project have been prepared and checked in accordance with the AECOM quality assurance system to ISO 9001-2000.

CONSULTANT
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NZ.B.N 9429032091335
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PROJECT
EP School Link Design

CLIENT
Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION
DETAILED DESIGN

SCALE
0 6 12 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

E	12.04.24	100% DETAILED DESIGN
D	15.03.24	UPDATED DETAILED DESIGN
C	21.12.23	DETAILED DESIGN
B	12.07.23	FOR INFORMATION
A	14.06.23	FOR INFORMATION
I/R	DATE	DESCRIPTION

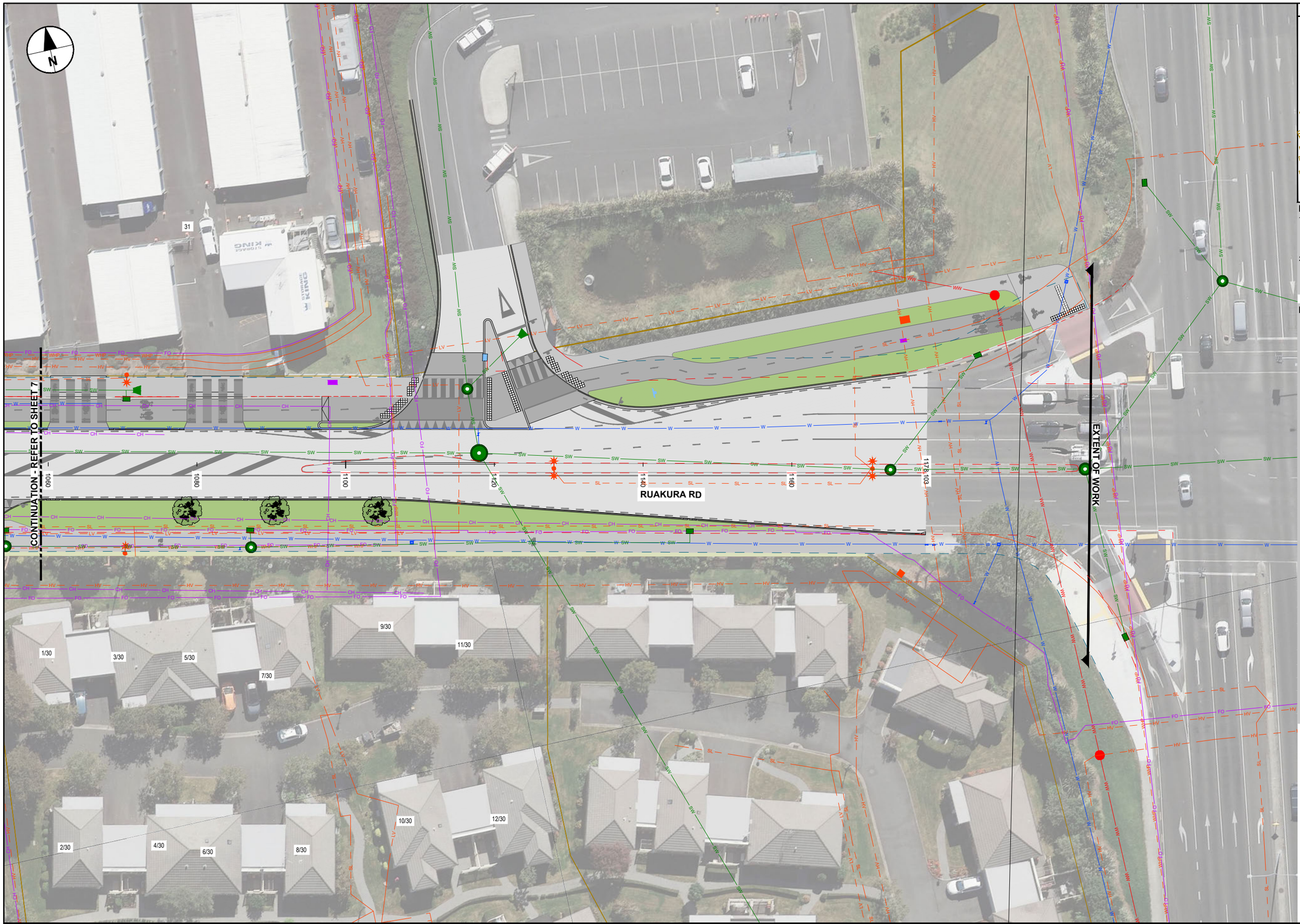
PROJECT NUMBER
60687064

SHEET TITLE
TARSI
EXISTING SERVICES PLAN
SHEET 7

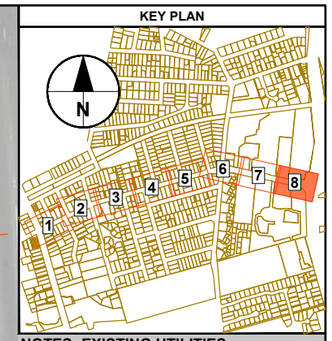
SHEET NUMBER
60687064-SHT-UT-8107

Last saved by: SCHUBELD(2024-03-11) Last Plotted: 2024-04-10
Filename: C:\PWWORKING\AECOM_DS12_AU\ERIC.ARAMBULO@AECOM.COM\D0330697\60687064-SHT-UT-8107.DWG

ISO A1 594mm x 841mm



KEY PLAN



NOTES: EXISTING UTILITIES

1. EXISTING SERVICES ALIGNMENTS ARE PROVIDED FROM SERVICE AUTHORITIES RECORDS, FOR INFORMATION ONLY, AND SHOULD NOT TO BE TAKEN AS A COMPLETE AND ACCURATE RECORD OF THE SERVICES WITHIN THE AREA OF WORKS.
2. MANHOLE/CHAMBER, HYDRANTS, WATER METER, POWER TRANSFORMER/CABINETS, TRAFFIC LIGHT POLE/CABINETS, POWER AND STREET LIGHTING POLES LOCATIONS WERE TAKEN FROM TOPOGRAPHICAL SURVEY.

LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB
- NEW KERB
- EXISTING ASPHALT
- NEW ASPHALT
- NEW CONCRETE
- NEW BERM
- NEW VEHICLE CROSSING
- EXISTING TREE
- SW EXISTING STORMWATER PIPE
- EXISTING STORMWATER CATCHPIT
- RELOCATED STORMWATER CATCHPIT
- CH EXISTING CHORUS LINE
- VF EXISTING VODAFONE LINE
- TF EXISTING TUATAHI FIBRE LINE
- UFF EXISTING ULTRAFAST FIBRE LINE
- TEL EXISTING TELEPHONE OVERHEAD LINE
- GAS EXISTING GAS PIPE
- WW EXISTING WASTEWATER PIPE
- W EXISTING WATER PIPE
- LV EXISTING POWER LOW VOLTAGE UNDERGROUND
- HV EXISTING POWER HIGH VOLTAGE UNDERGROUND
- SL EXISTING STREET LIGHTING UNDERGROUND
- WHP EXISTING WATER HEATING PILOT UNDERGROUND
- FO EXISTING FIBRE LINE
- EXISTING POWER / COMM JUNCTION BOX
- EXISTING MANHOLE
- H EXISTING HYDRANT
- M EXISTING WATER METER
- EXISTING WATER VALVE
- EXISTING STREET LIGHT
- EXISTING TRAFFIC LIGHT

This drawing is confidential and shall only be used for the purpose of this project. The signing of this title block confirms the design and drafting of this project have been prepared and checked in accordance with the AECOM quality assurance system to ISO 9001-2000.

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AECOM

CONSULTANT

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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6 12 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

I/R	DATE	DESCRIPTION
E	12.04.24	100% DETAILED DESIGN
D	15.03.24	UPDATED DETAILED DESIGN
C	21.12.23	DETAILED DESIGN
B	12.07.23	FOR INFORMATION
A	14.06.23	FOR INFORMATION

PROJECT NUMBER

60687064

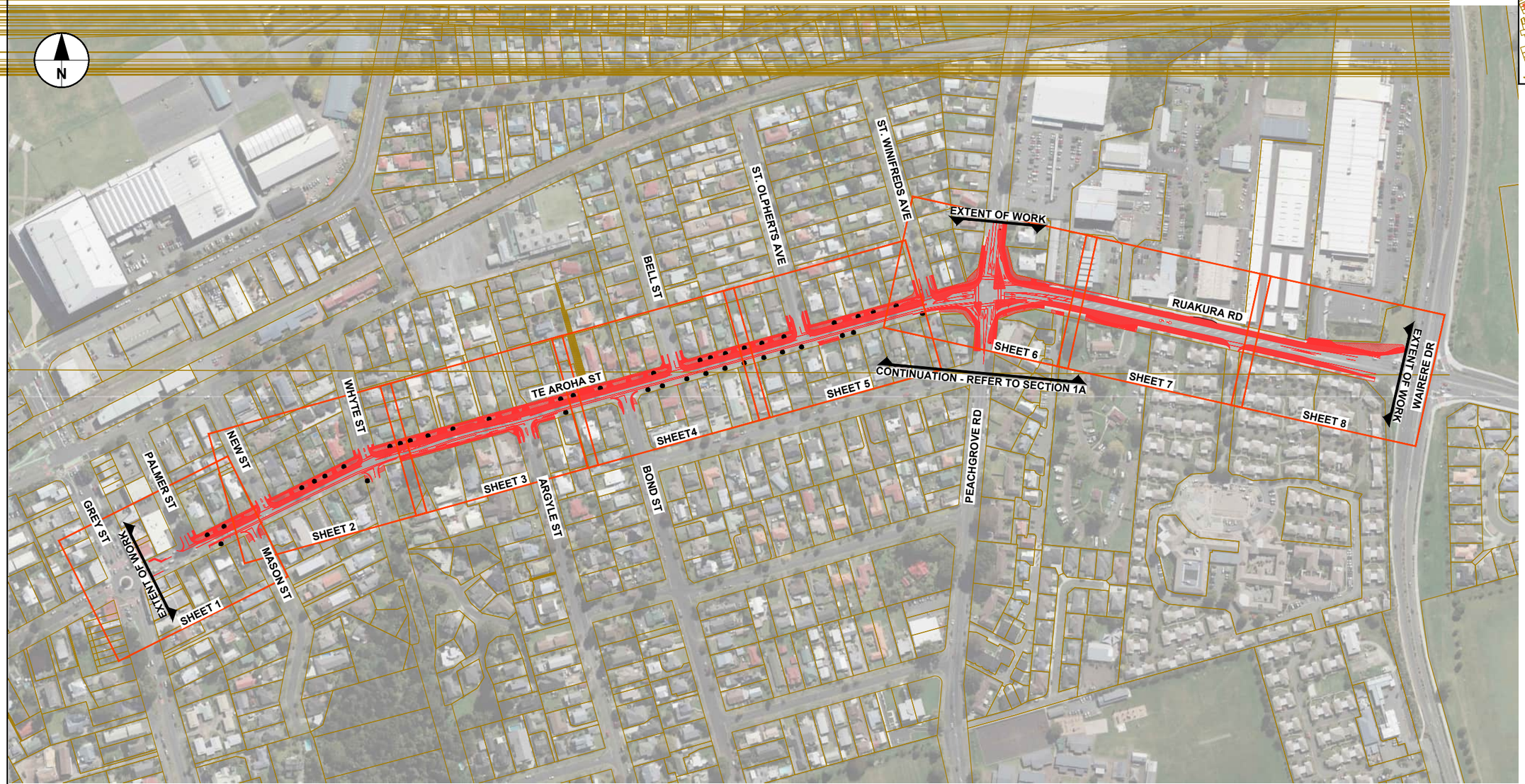
SHEET TITLE

TARSI
EXISTING SERVICES PLAN
SHEET 8

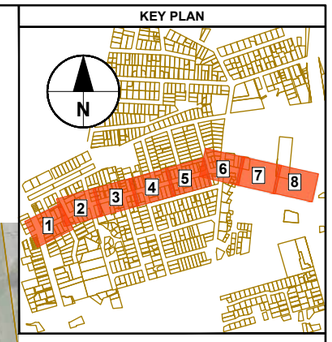
SHEET NUMBER

60687064-SHT-UT-8108

ISO A1 594mm x 841mm



KEY PLAN



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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 50 100 m
1:2000

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

I/R	DATE	DESCRIPTION
C	12.04.24	100% DETAILED DESIGN
B	15.03.24	UPDATED DETAILED DESIGN
A	21.12.23	DETAILED DESIGN

PROJECT NUMBER

60687064

SHEET TITLE

TARSI
SITE CLEARANCE PLAN
OVERVIEW

SHEET NUMBER

60687064-SHT-CD-8100

ISO A1 594mm x 841mm

LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING KERB TO BE REMOVED
- EXISTING ROAD MARKING TO BE REMOVED
- EXISTING PAVEMENT TO BE REMOVED
- EXISTING VEHICLE CROSSING TO BE REMOVED
- EXISTING FOOTPATH TO BE REMOVED
- EXISTING BERM TO BE REMOVED
- EXISTING VEGETATION TO BE REMOVED
- EXISTING POWER POLE TO BE RETAINED
- EXISTING LIGHTING POLE TO BE RETAINED
- EXISTING LIGHTING POLE TO BE RELOCATED
- EXISTING STREET LIGHT TO BE REMOVED
- EXISTING SIGN TO BE RELOCATED
- EXISTING SIGN TO BE REMOVED
- EXISTING WEL TRANSFORMER
- EXISTING WEL TRANSFORMER TO BE RELOCATED
- EXISTING STORMWATER CATCHPIT TO BE RETAINED
- EXISTING STORMWATER CATCHPIT TO BE RELOCATED
- EXISTING TRAFFIC LIGHT TO BE RETAINED
- EXISTING TRAFFIC LIGHT TO BE REMOVED
- EXISTING TRAFFIC LIGHT TO BE RELOCATED
- EXISTING TREE
- EXISTING TREE TO BE REMOVED
- NOTABLE TREE WITH ROOT PROTECTION AREA (PC9)

This drawing is confidential and shall only be used for the purpose of this project. The signing of this title block confirms the design and drafting of this project have been prepared and checked in accordance with the AECOM quality assurance system to ISO 9001-2000.

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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6 12 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

I/R	DATE	DESCRIPTION
C	12.04.24	100% DETAILED DESIGN
B	15.03.24	UPDATED DETAILED DESIGN
A	21.12.23	DETAILED DESIGN

PROJECT NUMBER

60687064

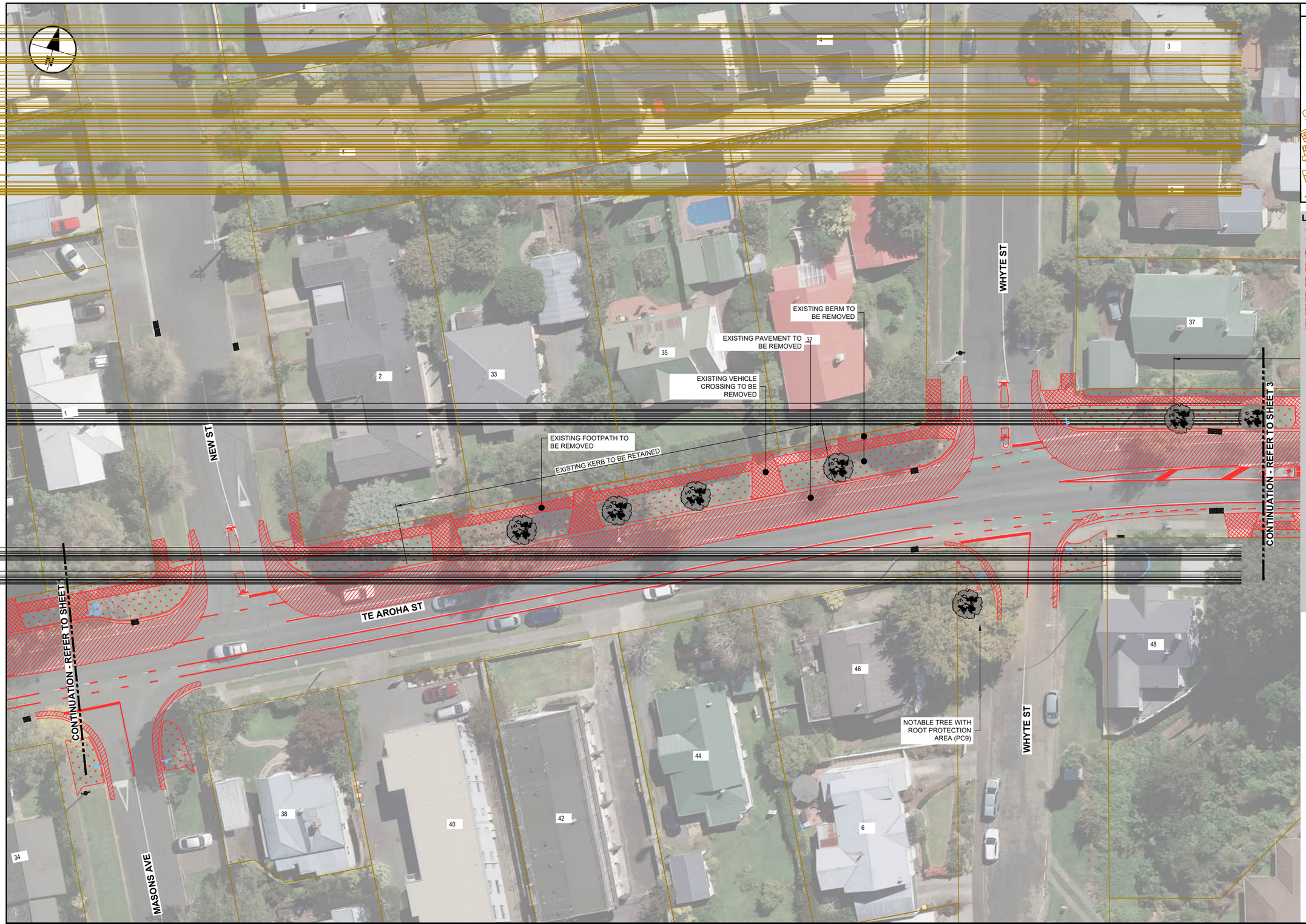
SHEET TITLE

TARSI
SITE CLEARANCE PLAN
SHEET 1

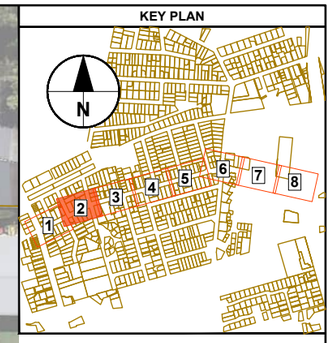
SHEET NUMBER

60687064-SHT-CD-8101

ISO A1 594mm x 841mm



KEY PLAN



LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING KERB TO BE REMOVED
- EXISTING ROAD MARKING TO BE REMOVED
- EXISTING PAVEMENT TO BE REMOVED
- EXISTING VEHICLE CROSSING TO BE REMOVED
- EXISTING FOOTPATH TO BE REMOVED
- EXISTING BERM TO BE REMOVED
- EXISTING VEGETATION TO BE REMOVED
- EXISTING POWER POLE TO BE RETAINED
- EXISTING LIGHTING POLE TO BE RETAINED
- EXISTING LIGHTING POLE TO BE RELOCATED
- EXISTING STREET LIGHT TO BE REMOVED
- EXISTING SIGN TO BE RELOCATED
- EXISTING SIGN TO BE REMOVED
- EXISTING WEL TRANSFORMER
- EXISTING WEL TRANSFORMER TO BE RELOCATED
- EXISTING STORMWATER CATCHPIT TO BE RETAINED
- EXISTING STORMWATER CATCHPIT TO BE RELOCATED
- EXISTING TRAFFIC LIGHT TO BE RETAINED
- EXISTING TRAFFIC LIGHT TO BE REMOVED
- EXISTING TRAFFIC LIGHT TO BE RELOCATED
- EXISTING TREE
- EXISTING TREE TO BE REMOVED
- NOTABLE TREE WITH ROOT PROTECTION AREA (PC9)

This drawing is confidential and shall only be used for the purpose of this project. The signing of this title block confirms the design and drafting of this project have been prepared and checked in accordance with the AECOM quality assurance system to ISO 9001-2000.

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CONSULTANT
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NZ.B.N 9429032091335
www.aecom.com

PROJECT
EP School Link Design

CLIENT
Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION
DETAILED DESIGN

SCALE
0 6 12 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

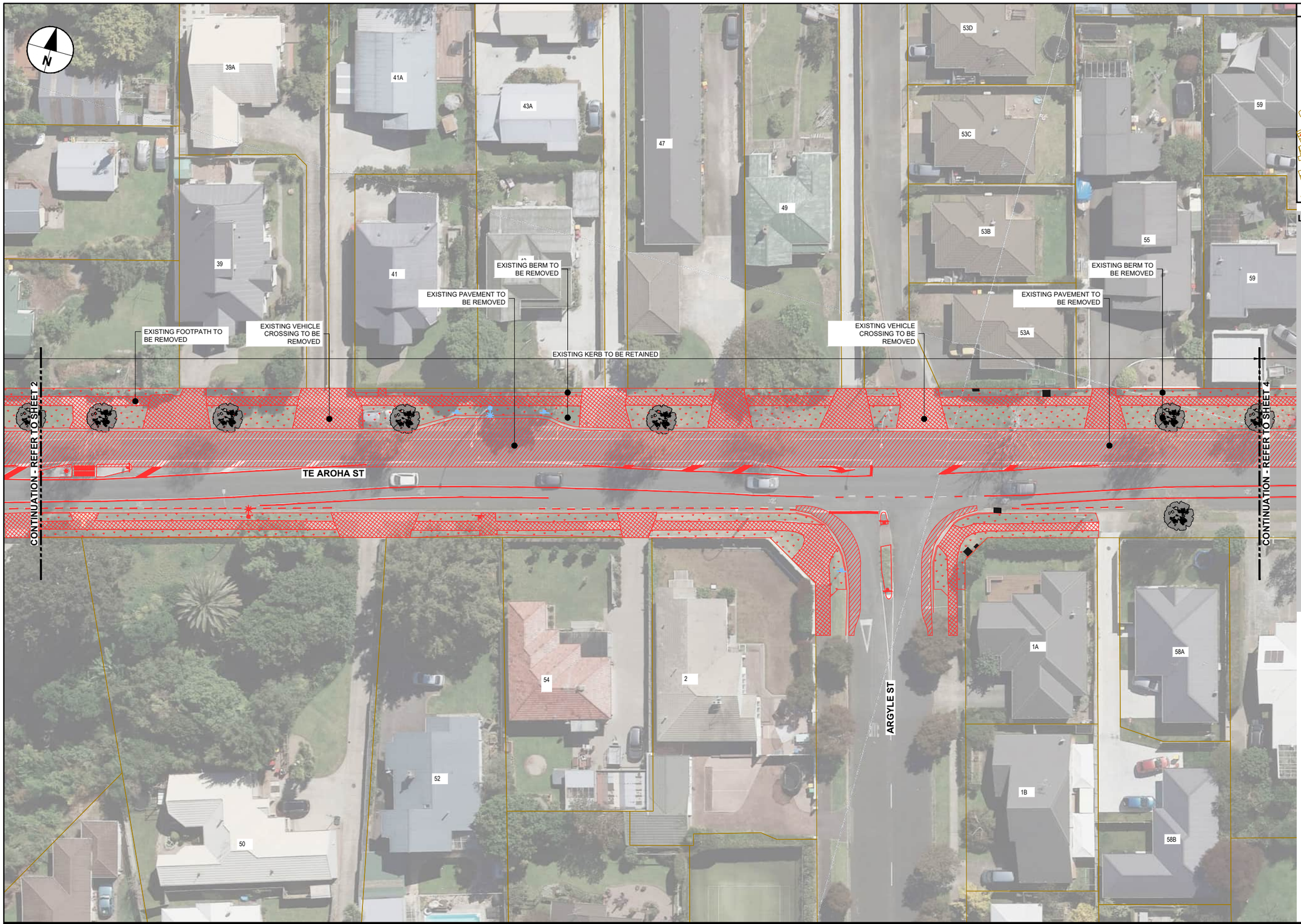
I/R	DATE	DESCRIPTION
C	12.04.24	100% DETAILED DESIGN
B	15.03.24	UPDATED DETAILED DESIGN
A	21.12.23	DETAILED DESIGN

PROJECT NUMBER
60687064

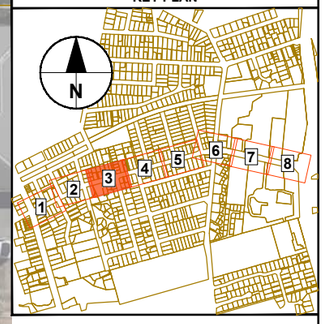
SHEET TITLE
TARSI
SITE CLEARANCE PLAN
SHEET 2

SHEET NUMBER
60687064-SHT-CD-8102

ISO A1 594mm x 841mm



KEY PLAN



LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING KERB TO BE REMOVED
- EXISTING ROAD MARKING TO BE REMOVED
- EXISTING PAVEMENT TO BE REMOVED
- EXISTING VEHICLE CROSSING TO BE REMOVED
- EXISTING FOOTPATH TO BE REMOVED
- EXISTING BERM TO BE REMOVED
- EXISTING VEGETATION TO BE REMOVED
- EXISTING POWER POLE TO BE RETAINED
- EXISTING LIGHTING POLE TO BE RETAINED
- EXISTING LIGHTING POLE TO BE RELOCATED
- EXISTING STREET LIGHT TO BE REMOVED
- EXISTING SIGN TO BE RELOCATED
- EXISTING SIGN TO BE REMOVED
- EXISTING WEL TRANSFORMER
- EXISTING WEL TRANSFORMER TO BE RELOCATED
- EXISTING STORMWATER CATCHPIT TO BE RETAINED
- EXISTING STORMWATER CATCHPIT TO BE RELOCATED
- EXISTING TRAFFIC LIGHT TO BE RETAINED
- EXISTING TRAFFIC LIGHT TO BE REMOVED
- EXISTING TRAFFIC LIGHT TO BE RELOCATED
- EXISTING TREE
- EXISTING TREE TO BE REMOVED
- NOTABLE TREE WITH ROOT PROTECTION AREA (PC9)

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AECOM

CONSULTANT

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NZ.B.N 9429032091335
www.aecom.com

PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6 12 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

I/R	DATE	DESCRIPTION
C	12.04.24	100% DETAILED DESIGN
B	15.03.24	UPDATED DETAILED DESIGN
A	21.12.23	DETAILED DESIGN

PROJECT NUMBER

60687064

SHEET TITLE

TARSI
SITE CLEARANCE PLAN
SHEET 3

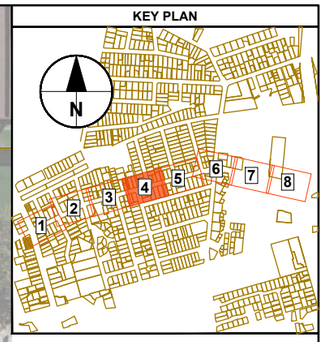
SHEET NUMBER

60687064-SHT-CD-8103

Last saved by: ARAMBULOEY(2024-02-22) Last Plotted: 2024-04-10
Filename: C:\PW\WORKING\AECOM_DS12_AU1ERIC.ARAMBULO@AECOM.COM\D0330697\60687064-SHT-CD-8103.DWG

ISO A1 594mm x 841mm

Last saved by: ARAMBULOE\(2024-02-22) Last Plotted: 2024-04-10
Filename: C:\PWWORKING\AECOM_DS12_AU\ERIC.ARAMBULO@AECOM.COM\D0330697\60687064-SHT-CD-8104.DWG



LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING KERB TO BE REMOVED
- EXISTING ROAD MARKING TO BE REMOVED
- EXISTING PAVEMENT TO BE REMOVED
- EXISTING VEHICLE CROSSING TO BE REMOVED
- EXISTING FOOTPATH TO BE REMOVED
- EXISTING BERM TO BE REMOVED
- EXISTING VEGETATION TO BE REMOVED
- EXISTING POWER POLE TO BE RETAINED
- EXISTING LIGHTING POLE TO BE RETAINED
- EXISTING LIGHTING POLE TO BE RELOCATED
- EXISTING STREET LIGHT TO BE REMOVED
- EXISTING SIGN TO BE RELOCATED
- EXISTING SIGN TO BE REMOVED
- EXISTING WEL TRANSFORMER
- EXISTING WEL TRANSFORMER TO BE RELOCATED
- EXISTING STORMWATER CATCHPIT TO BE RETAINED
- EXISTING STORMWATER CATCHPIT TO BE RELOCATED
- EXISTING TRAFFIC LIGHT TO BE RETAINED
- EXISTING TRAFFIC LIGHT TO BE REMOVED
- EXISTING TRAFFIC LIGHT TO BE RELOCATED
- EXISTING TREE
- EXISTING TREE TO BE REMOVED
- NOTABLE TREE WITH ROOT PROTECTION AREA (PC9)

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AECOM

CONSULTANT

AECOM New Zealand Ltd
NZ.B.N 9429032091335
www.aecom.com

PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6 12 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

I/R	DATE	DESCRIPTION
C	12.04.24	100% DETAILED DESIGN
B	15.03.24	UPDATED DETAILED DESIGN
A	21.12.23	DETAILED DESIGN

PROJECT NUMBER

60687064

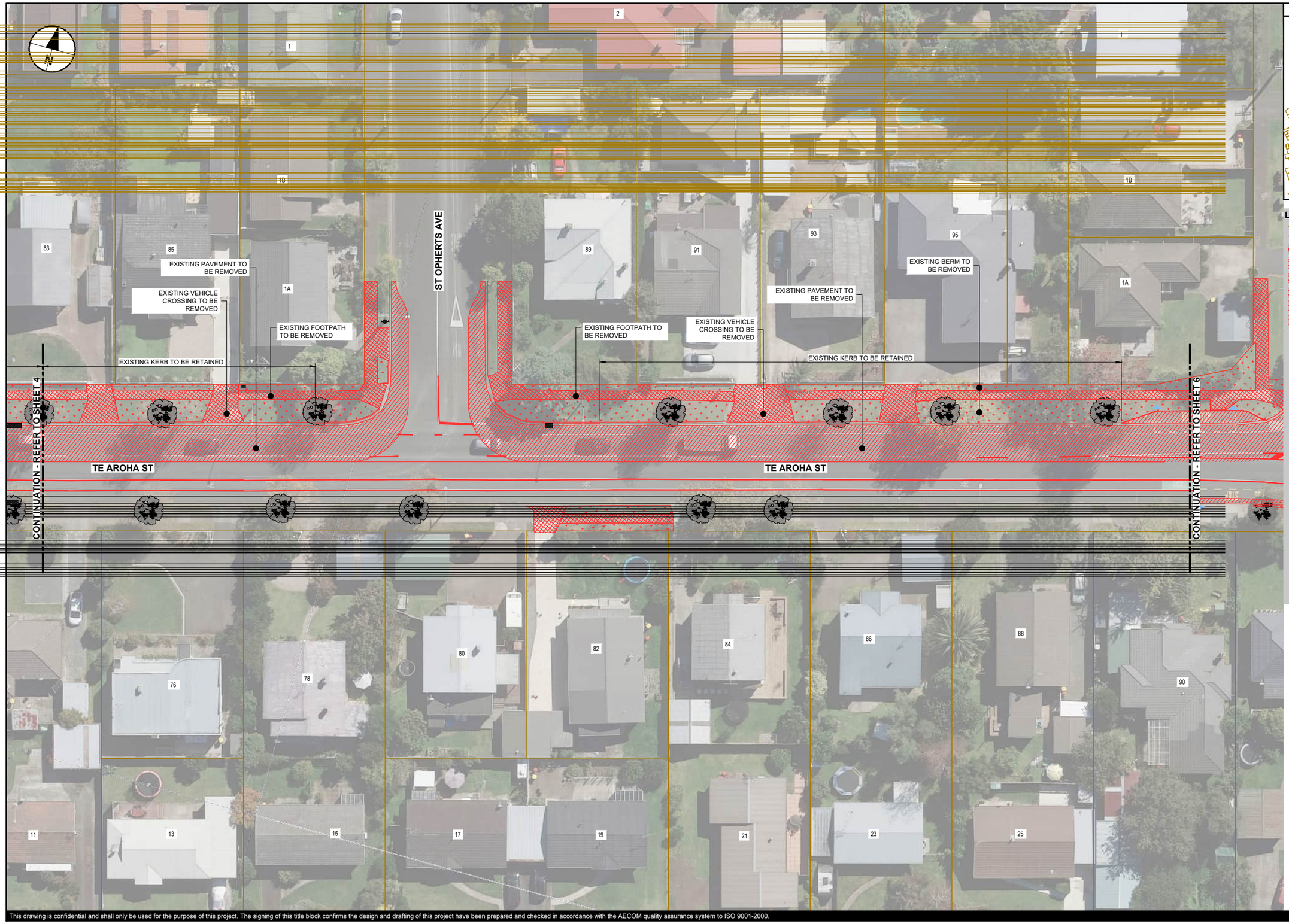
SHEET TITLE

TARSI
SITE CLEARANCE PLAN
SHEET 4

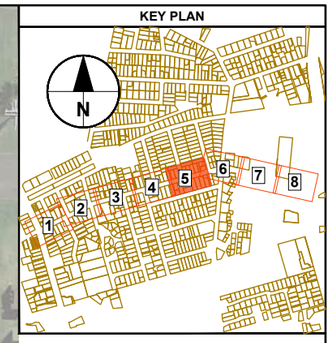
SHEET NUMBER

60687064-SHT-CD-8104

ISO A1 (594mm x 841mm)



KEY PLAN



LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING KERB TO BE REMOVED
- EXISTING ROAD MARKING TO BE REMOVED
- EXISTING PAVEMENT TO BE REMOVED
- EXISTING VEHICLE CROSSING TO BE REMOVED
- EXISTING FOOTPATH TO BE REMOVED
- EXISTING BERM TO BE REMOVED
- EXISTING VEGETATION TO BE REMOVED
- EXISTING POWER POLE TO BE RETAINED
- EXISTING LIGHTING POLE TO BE RETAINED
- EXISTING LIGHTING POLE TO BE RELOCATED
- EXISTING STREET LIGHT TO BE REMOVED
- EXISTING SIGN TO BE RELOCATED
- EXISTING SIGN TO BE REMOVED
- EXISTING WEL TRANSFORMER
- EXISTING WEL TRANSFORMER TO BE RELOCATED
- EXISTING STORMWATER CATCHPIT TO BE RETAINED
- EXISTING STORMWATER CATCHPIT TO BE RELOCATED
- EXISTING TRAFFIC LIGHT TO BE RETAINED
- EXISTING TRAFFIC LIGHT TO BE REMOVED
- EXISTING TRAFFIC LIGHT TO BE RELOCATED
- EXISTING TREE
- EXISTING TREE TO BE REMOVED
- NOTABLE TREE WITH ROOT PROTECTION AREA (PC9)

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CONSULTANT

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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6 12 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

I/R	DATE	DESCRIPTION
C	12.04.24	100% DETAILED DESIGN
B	15.03.24	UPDATED DETAILED DESIGN
A	21.12.23	DETAILED DESIGN

PROJECT NUMBER

60687064

SHEET TITLE

TARSI
SITE CLEARANCE PLAN
SHEET 5

SHEET NUMBER

60687064-SHT-CD-8105

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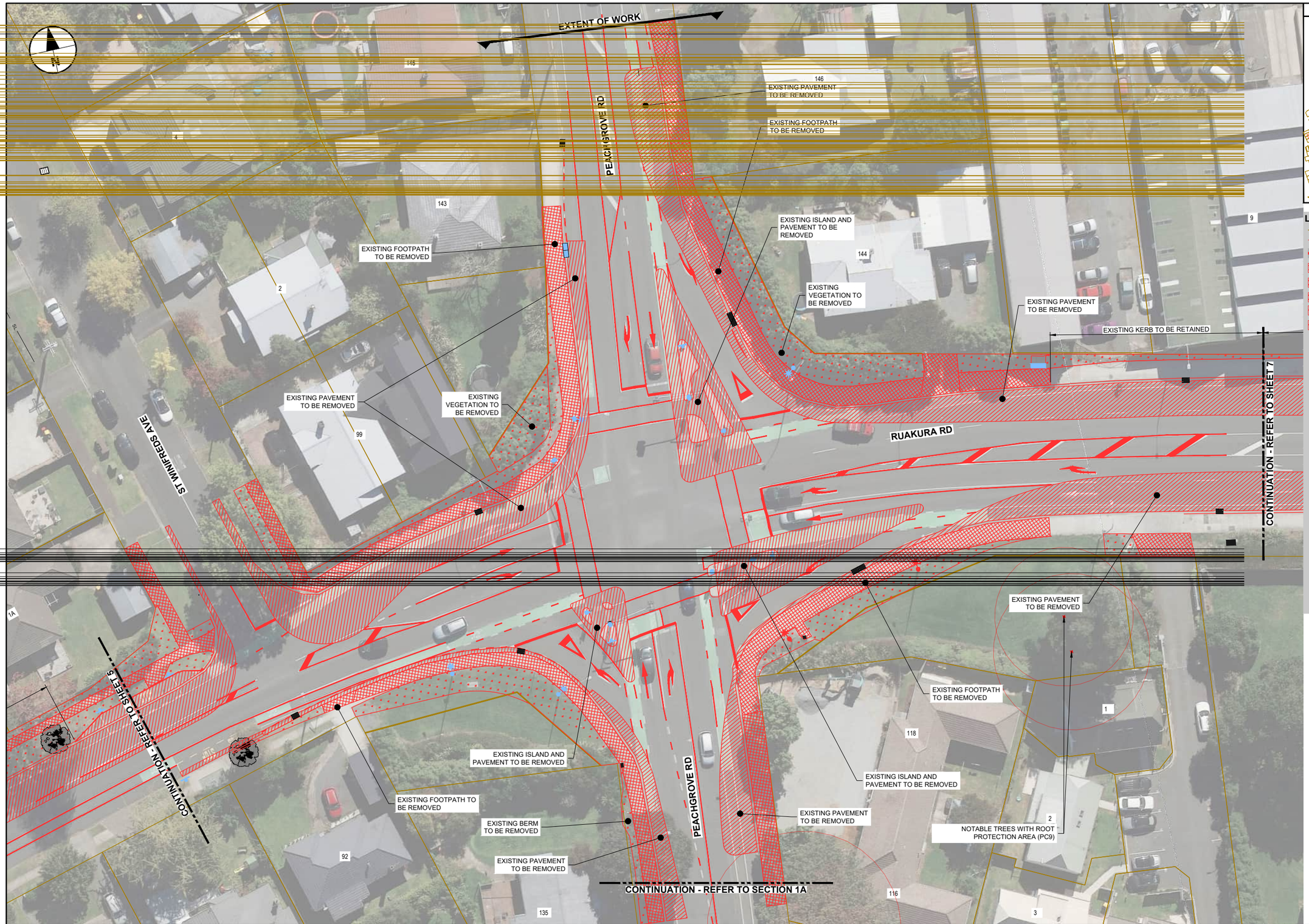
Filename: C:\PWWORKING\AECOM_DS12_AU\ERIC.ARAMBUL\O@AECOM.COM\D0330697\60687064-SHT-CD-8105.DWG

ISO A1 594mm x 841mm



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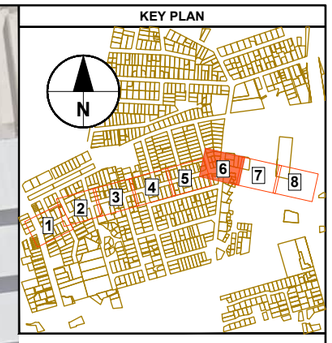

LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING KERB TO BE REMOVED
- EXISTING ROAD MARKING TO BE REMOVED
- EXISTING PAVEMENT TO BE REMOVED
- EXISTING VEHICLE CROSSING TO BE REMOVED
- EXISTING FOOTPATH TO BE REMOVED
- EXISTING BERM TO BE REMOVED
- EXISTING VEGETATION TO BE REMOVED
- EXISTING POWER POLE TO BE RETAINED
- EXISTING LIGHTING POLE TO BE RETAINED
- EXISTING LIGHTING POLE TO BE RELOCATED
- EXISTING STREET LIGHT TO BE REMOVED
- EXISTING SIGN TO BE RELOCATED
- EXISTING SIGN TO BE REMOVED
- EXISTING WEL TRANSFORMER
- EXISTING WEL TRANSFORMER TO BE RELOCATED
- EXISTING STORMWATER CATCHPIT TO BE RETAINED
- EXISTING STORMWATER CATCHPIT TO BE RELOCATED
- EXISTING TRAFFIC LIGHT TO BE RETAINED
- EXISTING TRAFFIC LIGHT TO BE REMOVED
- EXISTING TRAFFIC LIGHT TO BE RELOCATED
- EXISTING TREE
- EXISTING TREE TO BE REMOVED
- NOTABLE TREE WITH ROOT PROTECTION AREA (PC9)

Last saved by: ARAMBULO(V(2024-02-22) Last Plotted: 2024-04-10
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AECOM

CONSULTANT

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NZ.B.N 9429032091335
www.aecom.com

PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6 12 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

I/R	DATE	DESCRIPTION
C	12.04.24	100% DETAILED DESIGN
B	15.03.24	UPDATED DETAILED DESIGN
A	21.12.23	DETAILED DESIGN

PROJECT NUMBER

60687064

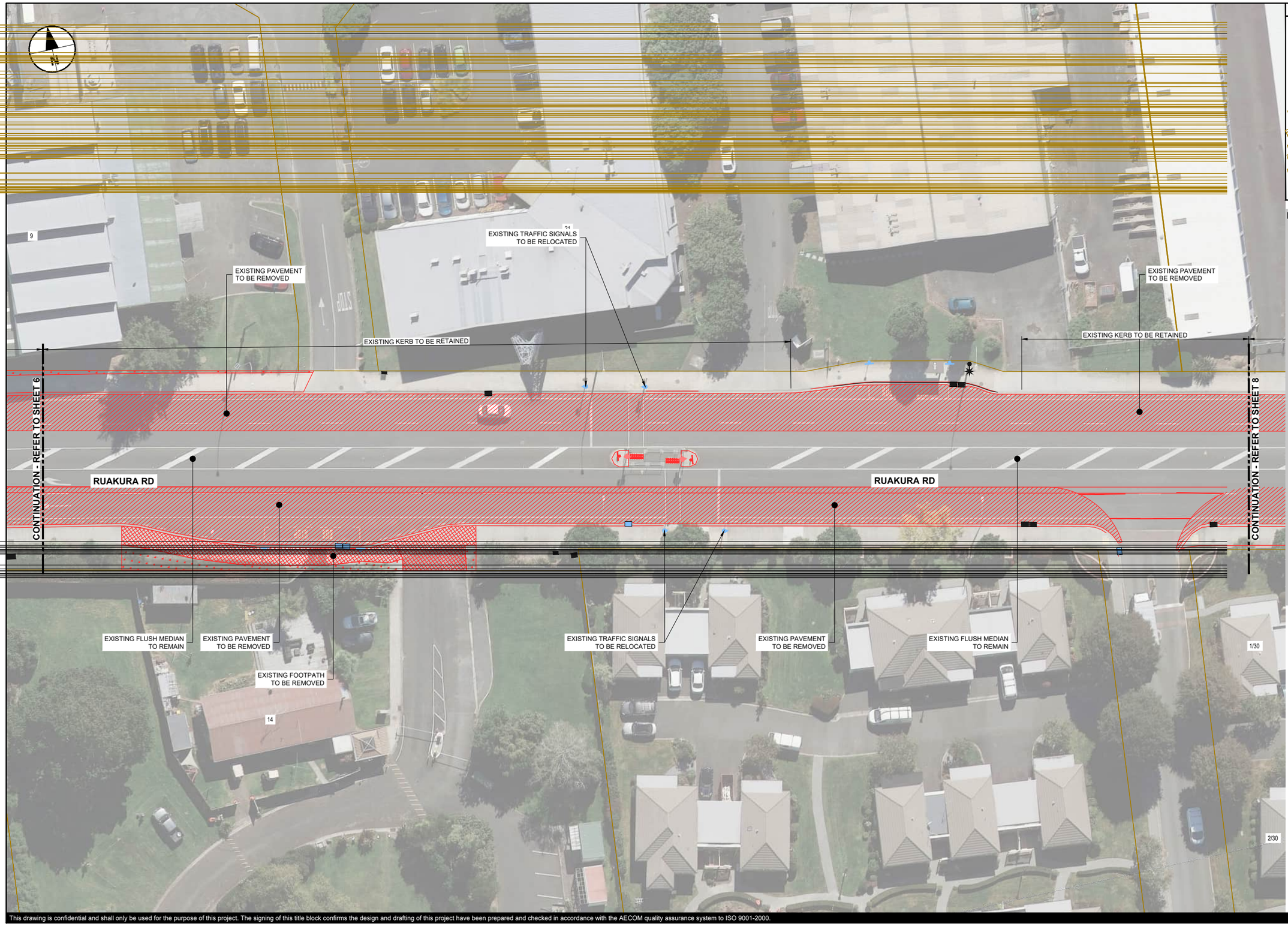
SHEET TITLE

TARSI
SITE CLEARANCE PLAN
SHEET 6

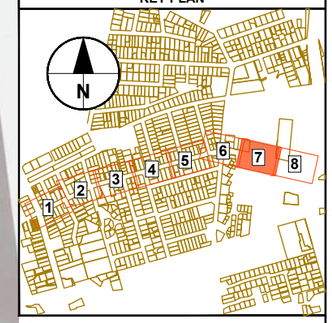
SHEET NUMBER

60687064-SHT-CD-8106

ISO A1 (594mm x 841mm)



KEY PLAN



LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING KERB TO BE REMOVED
- EXISTING ROAD MARKING TO BE REMOVED
- EXISTING PAVEMENT TO BE REMOVED
- EXISTING VEHICLE CROSSING TO BE REMOVED
- EXISTING FOOTPATH TO BE REMOVED
- EXISTING BERM TO BE REMOVED
- EXISTING VEGETATION TO BE REMOVED
- EXISTING POWER POLE TO BE RETAINED
- EXISTING LIGHTING POLE TO BE RETAINED
- EXISTING LIGHTING POLE TO BE RELOCATED
- EXISTING STREET LIGHT TO BE REMOVED
- EXISTING SIGN TO BE RELOCATED
- EXISTING SIGN TO BE REMOVED
- EXISTING WEL TRANSFORMER
- EXISTING WEL TRANSFORMER TO BE RELOCATED
- EXISTING STORMWATER CATCHPIT TO BE RETAINED
- EXISTING STORMWATER CATCHPIT TO BE RELOCATED
- EXISTING TRAFFIC LIGHT TO BE RETAINED
- EXISTING TRAFFIC LIGHT TO BE REMOVED
- EXISTING TRAFFIC LIGHT TO BE RELOCATED
- EXISTING TREE
- EXISTING TREE TO BE REMOVED
- NOTABLE TREE WITH ROOT PROTECTION AREA (PC9)

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AECOM

CONSULTANT

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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6 12 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

I/R	DATE	DESCRIPTION
C	12.04.24	100% DETAILED DESIGN
B	15.03.24	UPDATED DETAILED DESIGN
A	21.12.23	DETAILED DESIGN

PROJECT NUMBER

60687064

SHEET TITLE

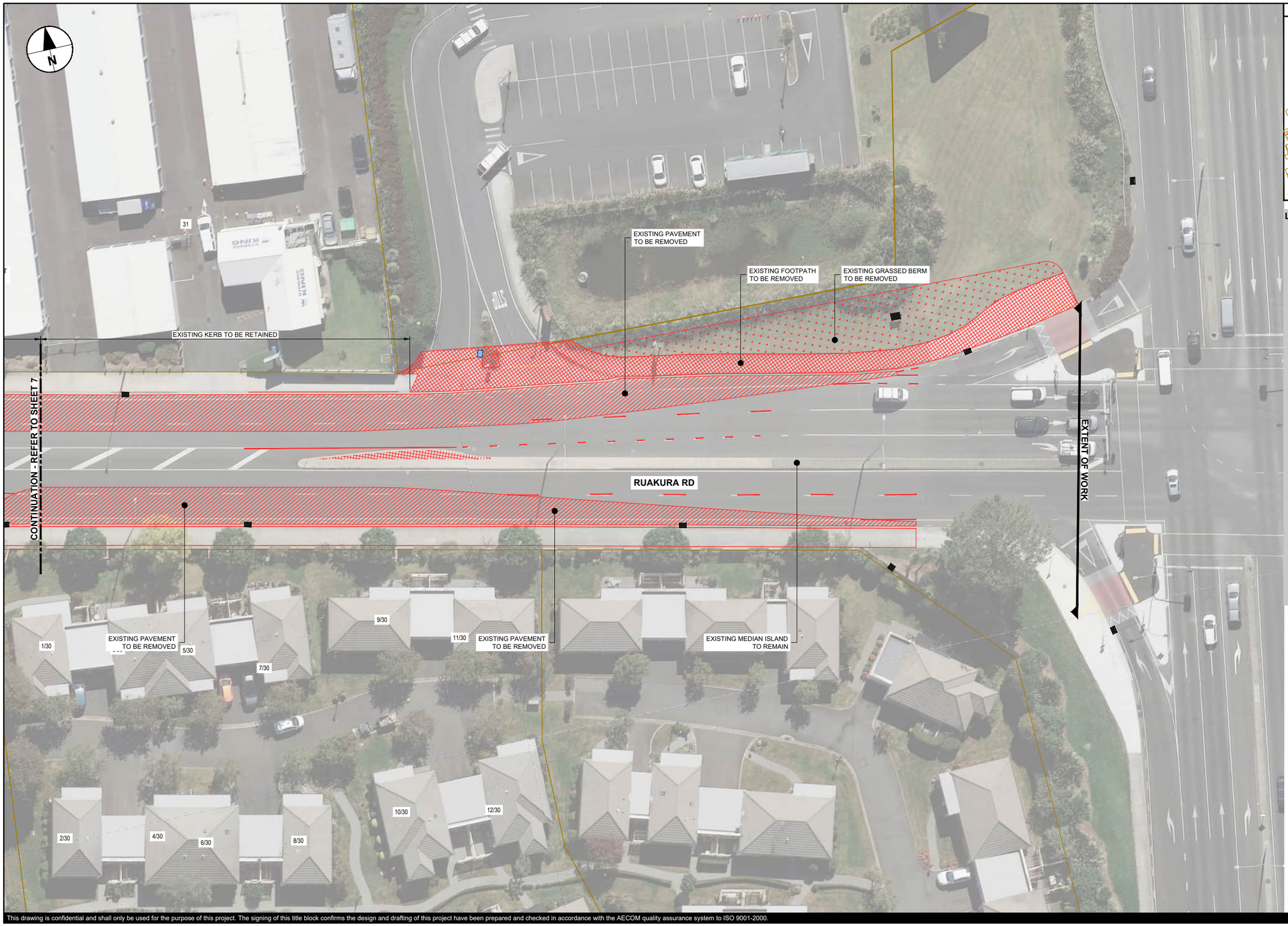
TARSI
SITE CLEARANCE PLAN
SHEET 7

SHEET NUMBER

60687064-SHT-CD-8107

Last saved by: ARAMBULOEV(2024-02-22) Last Plotted: 2024-04-10
Filename: C:\PWWORKING\AECOM_DS12_AU\ERIC.ARAMBULO@AECOM.COM\D3306897\60687064-SHT-CD-8107.DWG

ISO A1 594mm x 841mm



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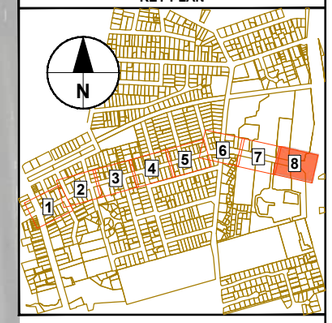

LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING KERB TO BE REMOVED
- EXISTING ROAD MARKING TO BE REMOVED
- EXISTING PAVEMENT TO BE REMOVED
- EXISTING VEHICLE CROSSING TO BE REMOVED
- EXISTING FOOTPATH TO BE REMOVED
- EXISTING BERM TO BE REMOVED
- EXISTING VEGETATION TO BE REMOVED
- EXISTING POWER POLE TO BE RETAINED
- EXISTING LIGHTING POLE TO BE RETAINED
- EXISTING LIGHTING POLE TO BE RELOCATED
- EXISTING STREET LIGHT TO BE REMOVED
- EXISTING SIGN TO BE RELOCATED
- EXISTING SIGN TO BE REMOVED
- EXISTING WEL TRANSFORMER
- EXISTING WEL TRANSFORMER TO BE RELOCATED
- EXISTING STORMWATER CATCHPIT TO BE RETAINED
- EXISTING STORMWATER CATCHPIT TO BE RELOCATED
- EXISTING TRAFFIC LIGHT TO BE RETAINED
- EXISTING TRAFFIC LIGHT TO BE REMOVED
- EXISTING TRAFFIC LIGHT TO BE RELOCATED
- EXISTING TREE
- EXISTING TREE TO BE REMOVED
- NOTABLE TREE WITH ROOT PROTECTION AREA (PC9)

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AECOM

CONSULTANT

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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6 12 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

I/R	DATE	DESCRIPTION
C	12.04.24	100% DETAILED DESIGN
B	15.03.24	UPDATED DETAILED DESIGN
A	21.12.23	DETAILED DESIGN

PROJECT NUMBER

60687064

SHEET TITLE

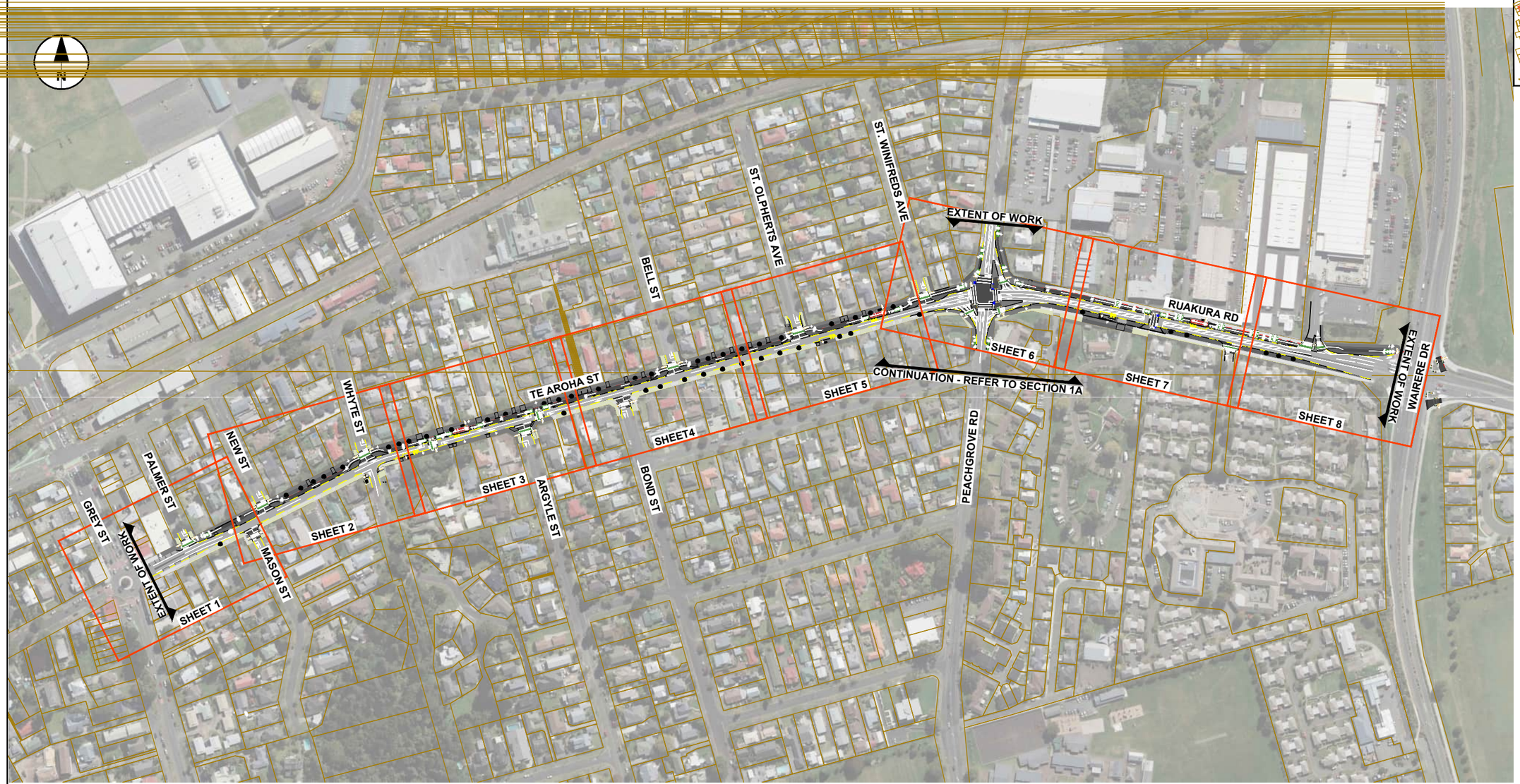
TARSI
SITE CLEARANCE PLAN
SHEET 8

SHEET NUMBER

60687064-SHT-CD-8108

Last saved by: ARAMBULOEV(2024-02-22) Last Plotted: 2024-04-10
Filename: C:\PWWORKING\AECOM_DS12_AU\ERIC.ARAMBULO@AECOM.COM\D0330697\60687064-SHT-CD-8108.DWG

ISO A1 (594mm x 841mm)



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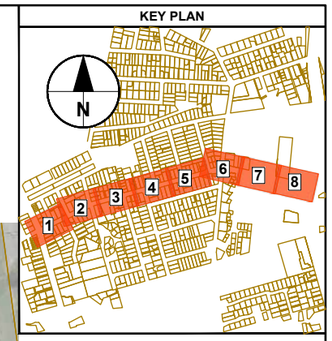

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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 48 96 m
1:2000

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

C	12.04.24	100% DETAILED DESIGN
B	15.03.24	UPDATED DETAILED DESIGN
A	21.12.23	DETAILED DESIGN
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

SHEET TITLE

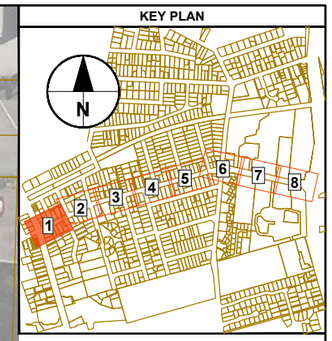
TARSI
CIVIL PLAN
OVERVIEW

SHEET NUMBER

60687064-SHT-CI-8100

ISO A1 594mm x 841mm

KEY PLAN



LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB FACE
- NEW KERB
- EXISTING ASPHALT
- NEW ASPHALT
- EXISTING CONCRETE
- NEW CONCRETE
- EXISTING LANDSCAPE AREA
- NEW LANDSCAPE AREA
- NEW BUS SHELTER
- NEW VEHICLE CROSSING
- EXISTING TREE
- EXISTING TREE TO BE REMOVED
- NEW TREE
- NOTABLE TREE WITH ROOT PROTECTION AREA (PC9)
- EXISTING TRAFFIC LIGHT
- EXISTING TRAFFIC LIGHT TO BE RELOCATED
- EXISTING TRAFFIC LIGHT TO BE REMOVED
- NEW TRAFFIC LIGHT
- NEW CYCLIST HANDRAIL
- EXISTING SIGN TO BE RELOCATED
- EXISTING SIGN TO BE REMOVED
- NEW SIGN
- EXISTING STREET LIGHT
- EXISTING STREET LIGHT TO BE RELOCATED
- EXISTING STREET LIGHT TO BE REMOVED
- EXISTING STREET LIGHT TO BE REMOVED
- NEW STREET LIGHT
- NEW STREET LIGHT AND POLE
- EXISTING POWER POLE
- EXISTING WELL TRANSFORMER
- EXISTING WELL TRANSFORMER TO BE RELOCATED
- EXISTING STORMWATER CATCHPIT
- EXISTING STORMWATER CATCHPIT TO BE RELOCATED
- RELOCATED STORMWATER CATCHPIT
- NEW STORMWATER CYCLE FRIENDLY CATCHPIT

ONE NETWORK FRAMEWORK

ROAD NAME	ROAD CLASSIFICATION	CURRENT SPEED LIMIT	PROPOSED SPEED LIMIT
TE AROHA STREET	URBAN CONNECTOR	50	40

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www.aecom.com

PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6.25 12.5 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

I/R	DATE	DESCRIPTION
F	12.04.24	100% DETAILED DESIGN
E	15.03.24	UPDATED DETAILED DESIGN
D	21.12.23	DETAILED DESIGN
C	25.07.23	FOR INFORMATION
B	12.07.23	FOR INFORMATION
A	14.06.23	FOR INFORMATION

PROJECT NUMBER

60687064

SHEET TITLE

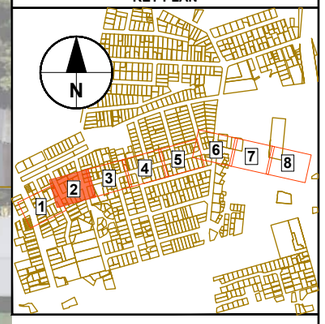
TARSI
CIVIL PLAN
SHEET 1

SHEET NUMBER

60687064-SHT-CI-8101

ISO A1 (594mm x 841mm)

KEY PLAN



LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB FACE
- NEW KERB
- EXISTING ASPHALT
- NEW ASPHALT
- EXISTING CONCRETE
- NEW CONCRETE
- EXISTING LANDSCAPE AREA
- NEW LANDSCAPE AREA
- NEW BUS SHELTER
- NEW VEHICLE CROSSING
- EXISTING TREE
- EXISTING TREE TO BE REMOVED
- NEW TREE
- NOTABLE TREE WITH ROOT PROTECTION AREA (PC9)
- EXISTING TRAFFIC LIGHT
- EXISTING TRAFFIC LIGHT TO BE RELOCATED
- EXISTING TRAFFIC LIGHT TO BE REMOVED
- NEW TRAFFIC LIGHT
- NEW CYCLIST HANDRAIL
- EXISTING SIGN TO BE RELOCATED
- EXISTING SIGN TO BE REMOVED
- NEW SIGN
- EXISTING STREET LIGHT
- EXISTING STREET LIGHT TO BE RELOCATED
- EXISTING STREET LIGHT TO BE REMOVED
- EXISTING STREET LIGHT TO BE REMOVED
- NEW STREET LIGHT
- NEW STREET LIGHT AND POLE
- EXISTING POWER POLE
- EXISTING WELL TRANSFORMER
- EXISTING WELL TRANSFORMER TO BE RELOCATED
- EXISTING STORMWATER CATCHPIT
- EXISTING STORMWATER CATCHPIT TO BE RELOCATED
- RELOCATED STORMWATER CATCHPIT
- NEW STORMWATER CYCLE FRIENDLY CATCHPIT

ONE NETWORK FRAMEWORK

ROAD NAME	ROAD CLASSIFICATION	CURRENT SPEED LIMIT	PROPOSED SPEED LIMIT
TE AROHA STREET	URBAN CONNECTOR	50	40

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CONSULTANT

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NZ.B.N 9429032091335
www.aecom.com

PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6.25 12.5 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

I/R	DATE	DESCRIPTION
F	12.04.24	100% DETAILED DESIGN
E	15.03.24	UPDATED DETAILED DESIGN
D	21.12.23	DETAILED DESIGN
C	25.07.23	FOR INFORMATION
B	12.07.23	FOR INFORMATION
A	14.06.23	FOR INFORMATION

PROJECT NUMBER

60687064

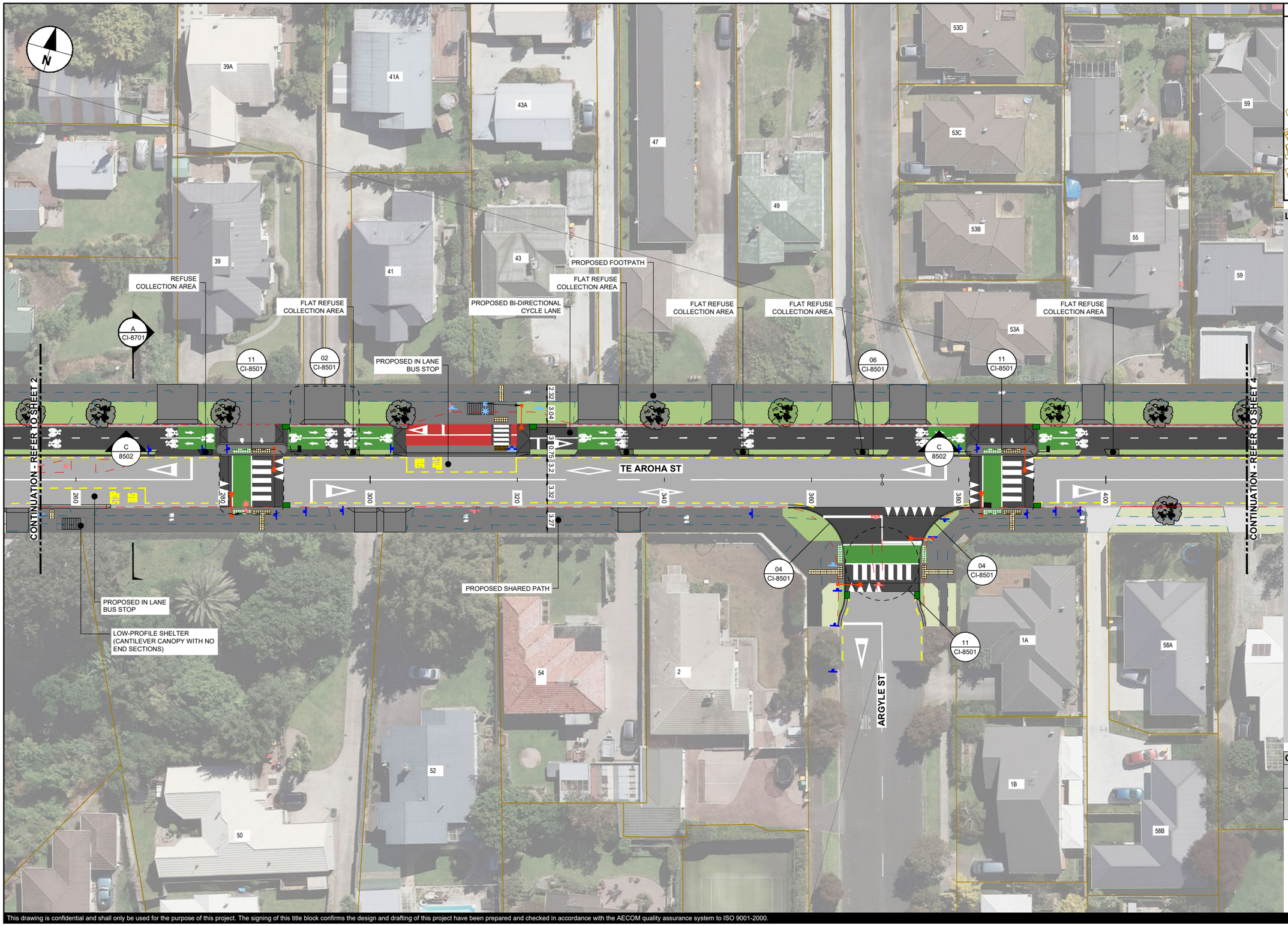
SHEET TITLE

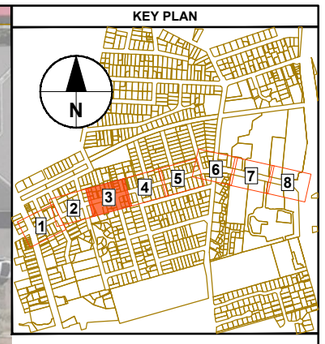
TARSI
CIVIL PLAN
SHEET 2

SHEET NUMBER

60687064-SHT-CI-8102

ISO A1 594mm x 841mm





LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB FACE
- NEW KERB
- EXISTING ASPHALT
- NEW ASPHALT
- EXISTING CONCRETE
- NEW CONCRETE
- EXISTING LANDSCAPE AREA
- NEW LANDSCAPE AREA
- NEW BUS SHELTER
- NEW VEHICLE CROSSING
- EXISTING TREE
- EXISTING TREE TO BE REMOVED
- NEW TREE
- NOTABLE TREE WITH ROOT PROTECTION AREA (PC9)
- EXISTING TRAFFIC LIGHT
- EXISTING TRAFFIC LIGHT TO BE RELOCATED
- EXISTING TRAFFIC LIGHT TO BE REMOVED
- NEW TRAFFIC LIGHT
- NEW CYCLIST HANDRAIL
- EXISTING SIGN TO BE RELOCATED
- EXISTING SIGN TO BE REMOVED
- NEW SIGN
- EXISTING STREET LIGHT
- EXISTING STREET LIGHT TO BE RELOCATED
- EXISTING STREET LIGHT TO BE REMOVED
- EXISTING STREET LIGHT TO BE REMOVED
- NEW STREET LIGHT
- NEW STREET LIGHT AND POLE
- EXISTING POWER POLE
- EXISTING WELL TRANSFORMER
- EXISTING WELL TRANSFORMER TO BE RELOCATED
- EXISTING STORMWATER CATCHPIT
- EXISTING STORMWATER CATCHPIT TO BE RELOCATED
- RELOCATED STORMWATER CATCHPIT
- NEW STORMWATER CYCLE FRIENDLY CATCHPIT

ONE NETWORK FRAMEWORK

ROAD NAME	ROAD CLASSIFICATION	CURRENT SPEED LIMIT	PROPOSED SPEED LIMIT
TE AROHA STREET	URBAN CONNECTOR	50	40

Last saved by: ARAMBULOEV(2024-04-10) Last Plotted: 2024-04-18
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www.aecom.com

PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6.25 12.5 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

E	12.04.24	100% DETAILED DESIGN
D	15.03.24	UPDATED DETAILED DESIGN
C	21.12.23	DETAILED DESIGN
B	12.07.23	FOR INFORMATION
A	14.06.23	FOR INFORMATION
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

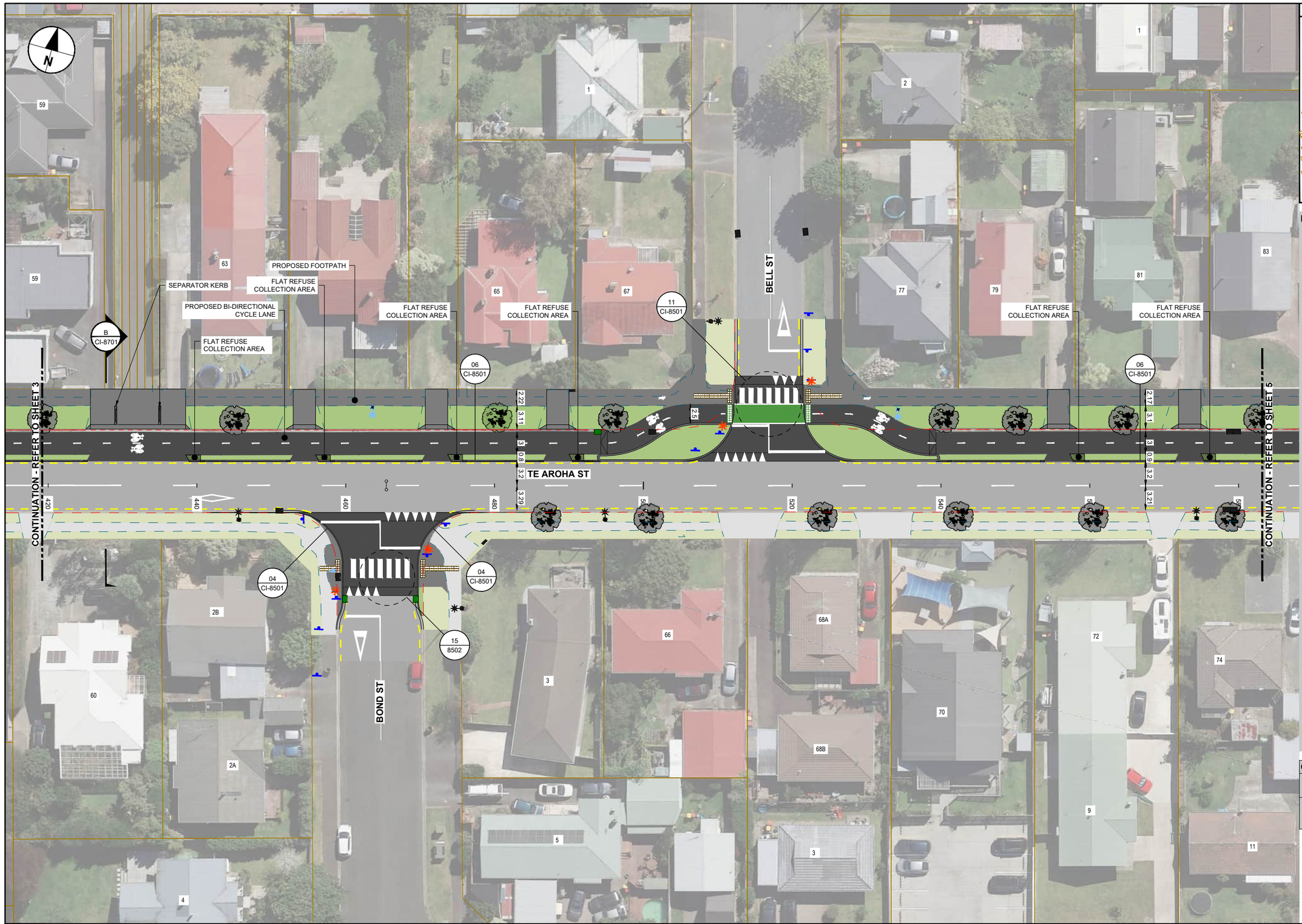
SHEET TITLE

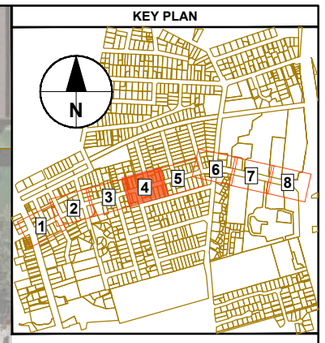
TARSI
CIVIL PLAN
SHEET 3

SHEET NUMBER

60687064-SHT-CI-8103

ISO A1 594mm x 841mm





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- EXISTING FOOTPATH EDGE
- EXISTING KERB FACE
- NEW KERB
- EXISTING ASPHALT
- NEW ASPHALT
- EXISTING CONCRETE
- NEW CONCRETE
- EXISTING LANDSCAPE AREA
- NEW LANDSCAPE AREA
- NEW BUS SHELTER
- NEW VEHICLE CROSSING
- EXISTING TREE
- EXISTING TREE TO BE REMOVED
- NEW TREE
- NOTABLE TREE WITH ROOT PROTECTION AREA (PC9)
- EXISTING TRAFFIC LIGHT
- EXISTING TRAFFIC LIGHT TO BE RELOCATED
- EXISTING TRAFFIC LIGHT TO BE REMOVED
- NEW TRAFFIC LIGHT
- NEW CYCLIST HANDRAIL
- EXISTING SIGN TO BE RELOCATED
- EXISTING SIGN TO BE REMOVED
- NEW SIGN
- EXISTING STREET LIGHT
- EXISTING STREET LIGHT TO BE RELOCATED
- EXISTING STREET LIGHT TO BE REMOVED
- EXISTING STREET LIGHT TO BE REMOVED
- NEW STREET LIGHT
- NEW STREET LIGHT AND POLE
- EXISTING POWER POLE
- EXISTING WELL TRANSFORMER
- EXISTING WELL TRANSFORMER TO BE RELOCATED
- EXISTING STORMWATER CATCHPIT
- EXISTING STORMWATER CATCHPIT TO BE RELOCATED
- RELOCATED STORMWATER CATCHPIT
- NEW STORMWATER CYCLE FRIENDLY CATCHPIT

ONE NETWORK FRAMEWORK

ROAD NAME	ROAD CLASSIFICATION	CURRENT SPEED LIMIT	PROPOSED SPEED LIMIT
TE AROHA STREET	URBAN CONNECTOR	50	40

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CONSULTANT

AECOM New Zealand Ltd
NZ.B.N 9429032091335
www.aecom.com

PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6.25 12.5 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

E	12.04.24	100% DETAILED DESIGN
D	15.03.24	UPDATED DETAILED DESIGN
C	21.12.23	DETAILED DESIGN
B	12.07.23	FOR INFORMATION
A	14.06.23	FOR INFORMATION
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

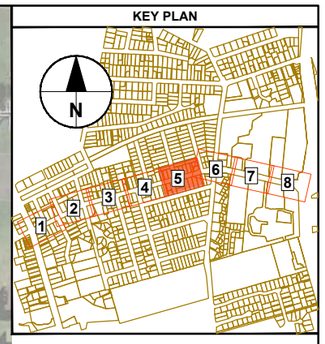
SHEET TITLE

TARSI
CIVIL PLAN
SHEET 4

SHEET NUMBER

60687064-SHT-CI-8104

ISO A1 594mm x 841mm



LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB FACE
- NEW KERB
- EXISTING ASPHALT
- NEW ASPHALT
- EXISTING CONCRETE
- NEW CONCRETE
- EXISTING LANDSCAPE AREA
- NEW LANDSCAPE AREA
- NEW BUS SHELTER
- NEW VEHICLE CROSSING
- EXISTING TREE
- EXISTING TREE TO BE REMOVED
- NEW TREE
- NOTABLE TREE WITH ROOT PROTECTION AREA (PC9)
- EXISTING TRAFFIC LIGHT
- EXISTING TRAFFIC LIGHT TO BE RELOCATED
- EXISTING TRAFFIC LIGHT TO BE REMOVED
- NEW TRAFFIC LIGHT
- NEW CYCLIST HANDRAIL
- EXISTING SIGN TO BE RELOCATED
- EXISTING SIGN TO BE REMOVED
- NEW SIGN
- EXISTING STREET LIGHT
- EXISTING STREET LIGHT TO BE RELOCATED
- EXISTING STREET LIGHT TO BE REMOVED
- EXISTING STREET LIGHT TO BE REMOVED
- NEW STREET LIGHT
- NEW STREET LIGHT AND POLE
- EXISTING POWER POLE
- EXISTING WELL TRANSFORMER
- EXISTING WELL TRANSFORMER TO BE RELOCATED
- EXISTING STORMWATER CATCHPIT
- EXISTING STORMWATER CATCHPIT TO BE RELOCATED
- RELOCATED STORMWATER CATCHPIT
- NEW STORMWATER CYCLE FRIENDLY CATCHPIT

ONE NETWORK FRAMEWORK

ROAD NAME	ROAD CLASSIFICATION	CURRENT SPEED LIMIT	PROPOSED SPEED LIMIT
TE AROHA STREET	URBAN CONNECTOR	50	40

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CONSULTANT
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NZ.B.N 9429032091335
www.aecom.com

PROJECT
EP School Link Design

CLIENT
Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION
DETAILED DESIGN

SCALE
0 6.25 12.5 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

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C	21.12.23	DETAILED DESIGN
B	12.07.23	FOR INFORMATION
A	14.06.23	FOR INFORMATION

PROJECT NUMBER
60687064

SHEET TITLE
TARSI
CIVIL PLAN
SHEET 5

SHEET NUMBER
60687064-SHT-CI-8105

ISO A1 594mm x 841mm

Last saved by: ARAMBULOEV(2024-04-03) Last Plotted: 2024-04-22
Filename: C:\PW\WORKING\AECOM_DS12_AU\DANIEL.SCHUBEL@AECOM.COM\D0330697\60687064-SHT-CI-8106.DWG

EXTENT OF WORK

400mm WIDE PRECAST CONCRETE SEPARATOR IN ACCORDANCE WITH TDM TECHNICAL STANDARDS CY0004 OR SIMILAR APPROVED

PROPOSED CYCLE ON/OFF RAMP

PEACHGROVE RD

PROPOSED RAISED EXTENDED RSP ON SLIP LANES

SHARED PATH ENDS, BI-DIRECTIONAL CYCLE PATH BEGINS

PROPOSED RAISED INTERSECTION

BI-DIRECTIONAL CYCLE PATH ENDS, SHARED PATH BEGINS

ST WINFREDS AVE

RUAKURA RD

CONTINUATION - REFER TO SHEET 7

CONTINUATION - REFER TO SHEET 5

TE AROHA ST

PROPOSED SHARED PATH

NEW WIDENED PAVEMENT CONTRACTOR TO MATCH EXISTING PAVEMENT LAYERS AND SURFACING

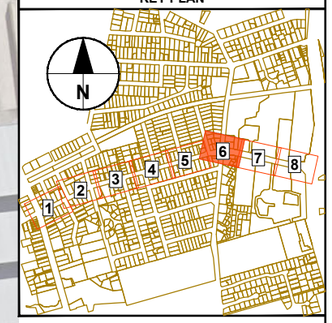
PROPOSED EXPANDED RAISED ISLANDS

NOTABLE TREES WITH ROOT PROTECTION AREA (PC9)

PROPOSED CYCLE ON/OFF RAMP

CONTINUATION - REFER TO SECTION 1A

KEY PLAN



LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB FACE
- NEW KERB
- EXISTING ASPHALT
- NEW ASPHALT
- EXISTING CONCRETE
- NEW CONCRETE
- EXISTING LANDSCAPE AREA
- NEW LANDSCAPE AREA
- NEW BUS SHELTER
- NEW VEHICLE CROSSING
- EXISTING TREE
- EXISTING TREE TO BE REMOVED
- NEW TREE
- NOTABLE TREE WITH ROOT PROTECTION AREA (PC9)
- EXISTING TRAFFIC LIGHT
- EXISTING TRAFFIC LIGHT TO BE RELOCATED
- EXISTING TRAFFIC LIGHT TO BE REMOVED
- NEW TRAFFIC LIGHT
- NEW CYCLIST HANDRAIL
- EXISTING SIGN TO BE RELOCATED
- EXISTING SIGN TO BE REMOVED
- NEW SIGN
- EXISTING STREET LIGHT
- EXISTING STREET LIGHT TO BE RELOCATED
- EXISTING STREET LIGHT TO BE REMOVED
- EXISTING STREET LIGHT TO BE REMOVED
- NEW STREET LIGHT
- NEW STREET LIGHT AND POLE
- EXISTING POWER POLE
- EXISTING WELL TRANSFORMER
- EXISTING WELL TRANSFORMER TO BE RELOCATED
- EXISTING STORMWATER CATCHPIT
- EXISTING STORMWATER CATCHPIT TO BE RELOCATED
- RELOCATED STORMWATER CATCHPIT
- NEW STORMWATER CYCLE FRIENDLY CATCHPIT

ONE NETWORK FRAMEWORK

ROAD NAME	ROAD CLASSIFICATION	CURRENT SPEED LIMIT	PROPOSED SPEED LIMIT
TE AROHA STREET	URBAN CONNECTOR	50	40
RUAKURA ROAD	URBAN CONNECTOR	50	50

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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6.25 12.5 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

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A	14.06.23	FOR INFORMATION
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

SHEET TITLE

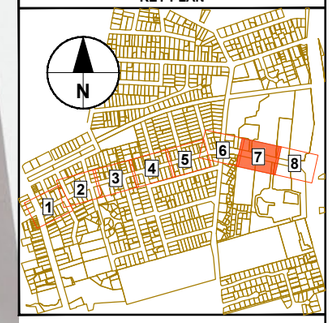
TARSI
CIVIL PLAN
SHEET 6

SHEET NUMBER

60687064-SHT-CI-8106

ISO A1 594mm x 841mm

KEY PLAN



LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB FACE
- NEW KERB
- EXISTING ASPHALT
- NEW ASPHALT
- EXISTING CONCRETE
- NEW CONCRETE
- EXISTING LANDSCAPE AREA
- NEW LANDSCAPE AREA
- NEW BUS SHELTER
- NEW VEHICLE CROSSING
- EXISTING TREE
- EXISTING TREE TO BE REMOVED
- NEW TREE
- NOTABLE TREE WITH ROOT PROTECTION AREA (PC9)
- EXISTING TRAFFIC LIGHT
- EXISTING TRAFFIC LIGHT TO BE RELOCATED
- EXISTING TRAFFIC LIGHT TO BE REMOVED
- NEW TRAFFIC LIGHT
- NEW CYCLIST HANDRAIL
- EXISTING SIGN TO BE RELOCATED
- EXISTING SIGN TO BE REMOVED
- NEW SIGN
- EXISTING STREET LIGHT
- EXISTING STREET LIGHT TO BE RELOCATED
- EXISTING STREET LIGHT TO BE REMOVED
- EXISTING STREET LIGHT TO BE REMOVED
- NEW STREET LIGHT
- NEW STREET LIGHT AND POLE
- EXISTING POWER POLE
- EXISTING WELL TRANSFORMER
- EXISTING WELL TRANSFORMER TO BE RELOCATED
- EXISTING STORMWATER CATCHPIT
- EXISTING STORMWATER CATCHPIT TO BE RELOCATED
- RELOCATED STORMWATER CATCHPIT
- NEW STORMWATER CYCLE FRIENDLY CATCHPIT

ONE NETWORK FRAMEWORK

ROAD NAME	ROAD CLASSIFICATION	CURRENT SPEED LIMIT	PROPOSED SPEED LIMIT
RUAKURA ROAD	URBAN CONNECTOR	50	50

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CONSULTANT

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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6.25 12.5 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

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PROJECT NUMBER

60687064

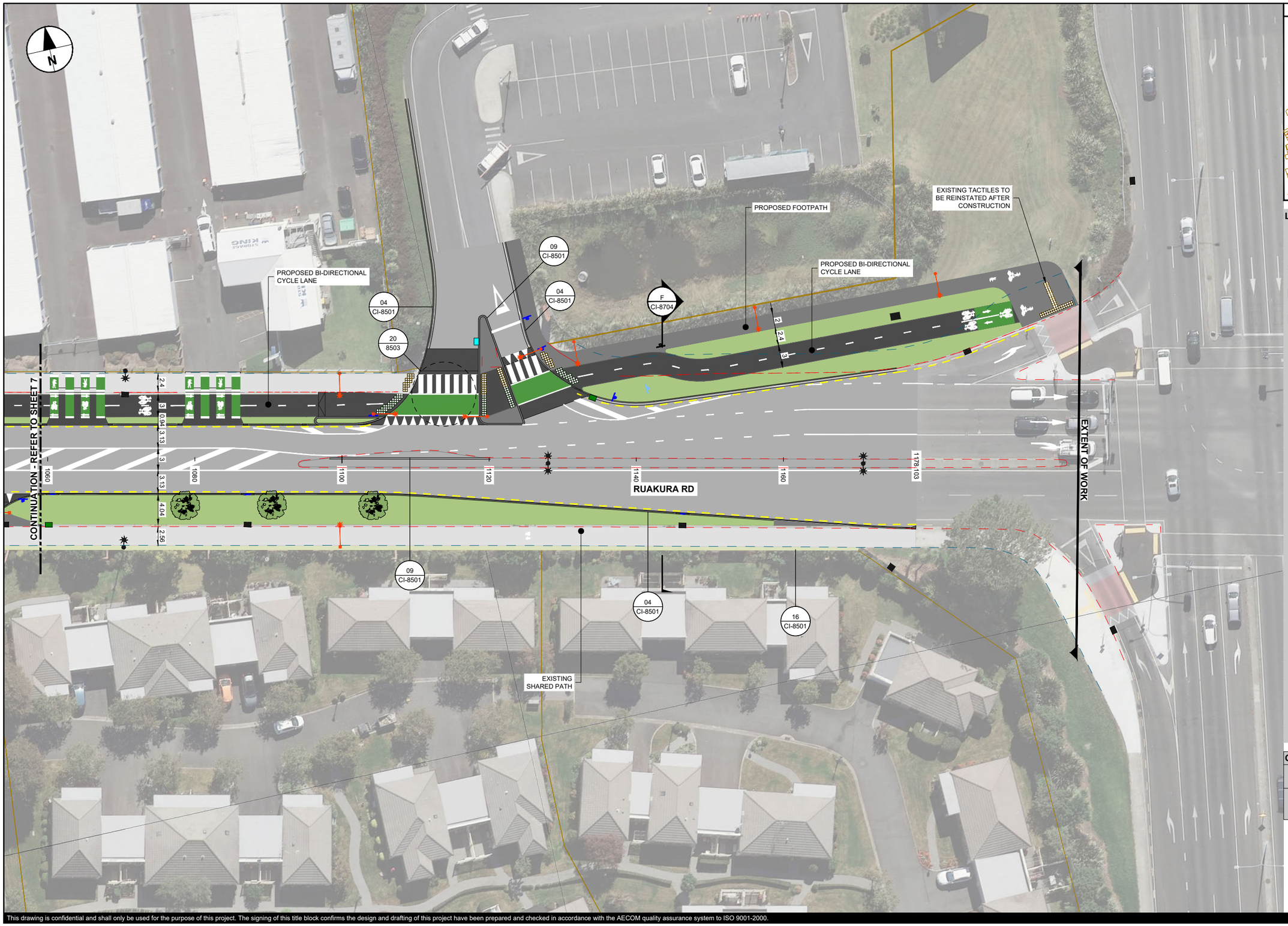
SHEET TITLE

TARSI
CIVIL PLAN
SHEET 7

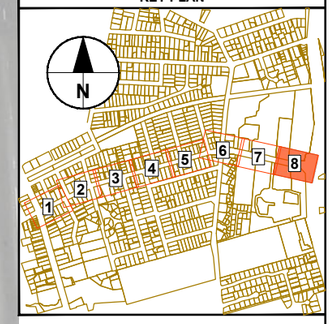
SHEET NUMBER

60687064-SHT-CI-8107

ISO A1 594mm x 841mm



KEY PLAN



LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB FACE
- NEW KERB
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- NEW ASPHALT
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- EXISTING SIGN TO BE RELOCATED
- EXISTING SIGN TO BE REMOVED
- NEW SIGN
- EXISTING STREET LIGHT
- EXISTING STREET LIGHT TO BE RELOCATED
- EXISTING STREET LIGHT TO BE REMOVED
- EXISTING STREET LIGHT TO BE REMOVED
- NEW STREET LIGHT
- NEW STREET LIGHT AND POLE
- EXISTING POWER POLE
- EXISTING WELL TRANSFORMER
- EXISTING WELL TRANSFORMER TO BE RELOCATED
- EXISTING STORMWATER CATCHPIT
- EXISTING STORMWATER CATCHPIT TO BE RELOCATED
- RELOCATED STORMWATER CATCHPIT
- NEW STORMWATER CYCLE FRIENDLY CATCHPIT

ONE NETWORK FRAMEWORK

ROAD NAME	ROAD CLASSIFICATION	CURRENT SPEED LIMIT	PROPOSED SPEED LIMIT
RUAKURA ROAD	URBAN CONNECTOR	50	50

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PROJECT

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CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6.25 12.5 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

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A	14.06.23	FOR INFORMATION
I/R	DATE	DESCRIPTION

PROJECT NUMBER

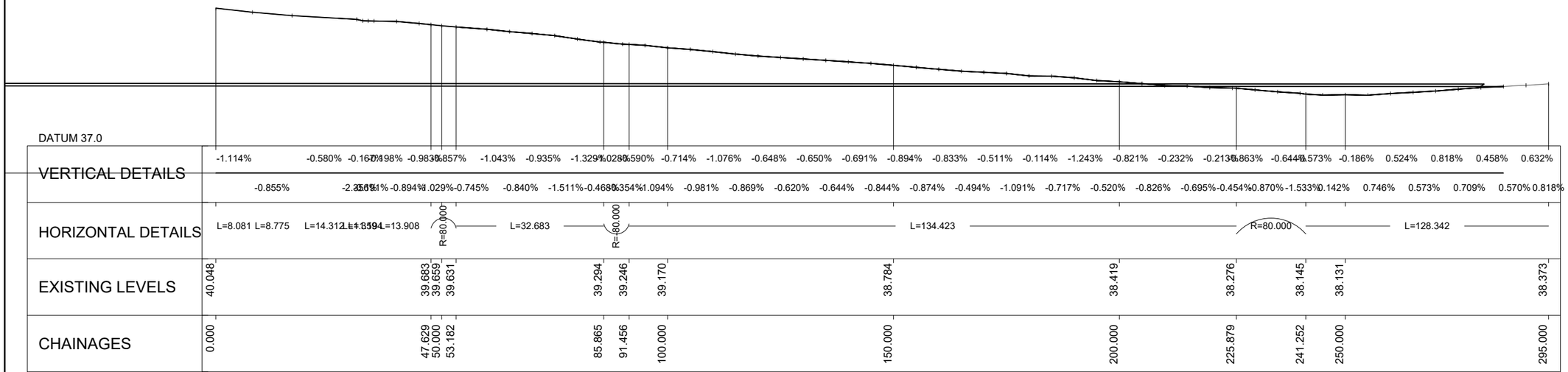
60687064

SHEET TITLE

TARSI
CIVIL PLAN
SHEET 8

SHEET NUMBER

60687064-SHT-CI-8108



CONTROL LINE MC01

HORIZONTAL - 1 : 500

VERTICAL - 1 : 50

ISO A1 594mm x 841mm

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CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 24 48 m
1:1000

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

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I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

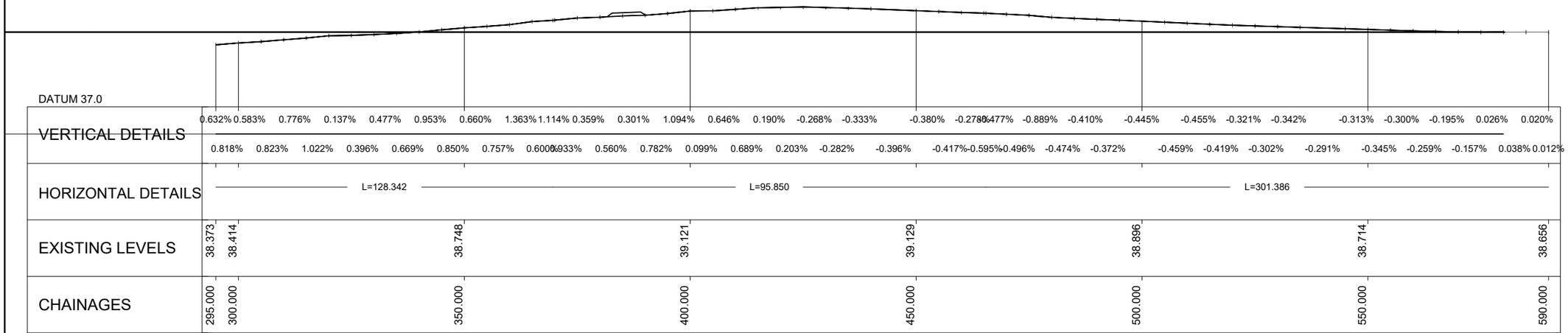
SHEET TITLE

TARSI
LONG SECTION
SHEET 1

SHEET NUMBER

60687064-SHT-CI-8201

ISO A1 594mm x 841mm



CONTROL LINE MC01

HORIZONTAL - 1 : 500

VERTICAL - 1 : 50

Last saved by: SCHUBELD(2023-12-20) Last Plotted: 2024-04-10
Filename: C:\PWWORKING\AECOM_DS12_AU\ERIC.ARAMBULO@AECOM.COM\D0330697\60687064-SHT-CI-8202.DWG

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PROJECT

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CLIENT

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REGISTRATION

DETAILED DESIGN

SCALE

0 24 48 m
1:1000

PROJECT MANAGEMENT INITIALS

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PROJECT DATA

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I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

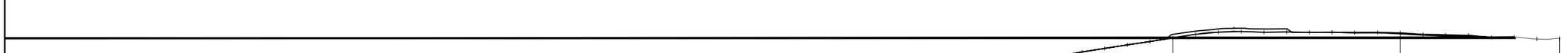
SHEET TITLE

TARSI
LONG SECTION
SHEET 2

SHEET NUMBER

60687064-SHT-CI-8202

ISO A1 594mm x 841mm



CONTROL LINE MC01

HORIZONTAL - 1 : 500

VERTICAL - 1 : 50

Last saved by: SCHUBELD(2023-12-20) Last Plotted: 2024-04-10
Filename: C:\PWWORKING\AECOM_DS12_AU\ERIC.ARAMBULO@AECOM.COM\D0330897\60687064-SHT-CI-8203.DWG

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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 24 48 m
1:1000

PROJECT MANAGEMENT INITIALS

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PROJECT DATA

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A	21.12.23	DETAILED DESIGN

PROJECT NUMBER

60687064

SHEET TITLE

TARSI
LONG SECTION
SHEET 3

SHEET NUMBER

60687064-SHT-CI-8203

ISO A1 594mm x 841mm

DATUM 38.0

VERTICAL DETAILS	-0.474%	0.362%	0.828%	0.097%	0.054%	0.710%	-0.415%	-0.278%	-0.058%	0.022%	0.484%	0.138%	0.037%	-0.406%	-0.325%	-0.021%	0.956%	0.375%	0.250%	0.367%	-0.396%	0.445%	0.068%	0.166%	0.269%	0.144%	0.769%	0.736%	0.407%	0.374%	
	0.230%	0.268%	-0.809%	-0.896%	-0.834%	-0.383%	-0.853%	-0.174%	-0.822%	-0.396%	-0.330%	-1.047%	-0.732%	-0.143%	0.122%	-0.117%	-0.056%	0.205%	0.302%	0.056%	0.302%	0.761%	1.313%	-0.002%	0.190%	0.013%	0.420%	0.616%	0.562%	0.367%	0.298%
HORIZONTAL DETAILS	R=250.000												L=288.675																		
EXISTING LEVELS	39.659	39.638	39.578				39.484						39.333					39.346					39.535						39.667		39.799
CHAINAGES	885.000	889.427	900.000				950.000						1000.000					1050.000					1100.000						1150.000		1178.103

CONTROL LINE MC01

HORIZONTAL - 1 : 500

VERTICAL - 1 : 50

Last saved by: SCHUBELD(2023-12-20) Last Plotted: 2024-04-10
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CLIENT

Hamilton City Council
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REGISTRATION

DETAILED DESIGN

SCALE

0 24 48 m
1:1000

PROJECT MANAGEMENT INITIALS

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PROJECT DATA

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I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

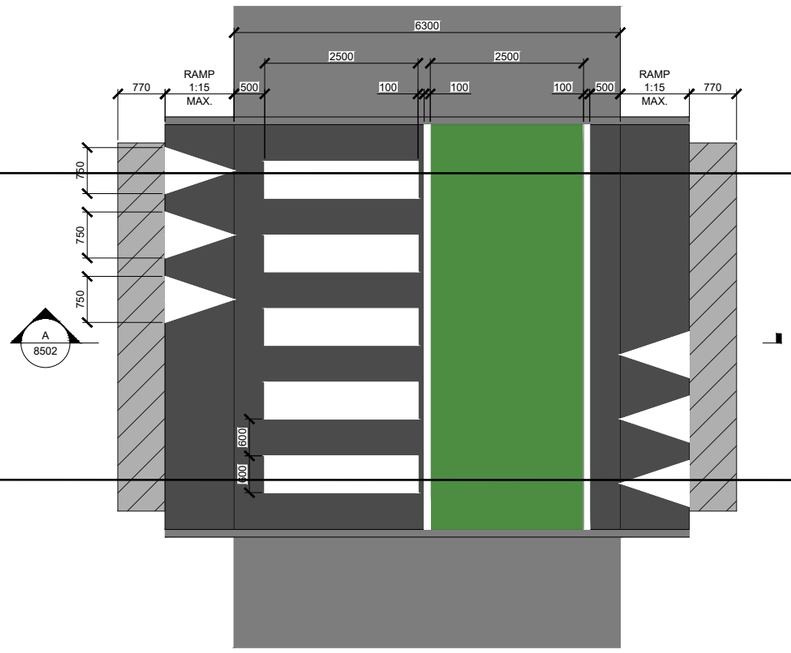
SHEET TITLE

TARSI
LONG SECTION
SHEET 4

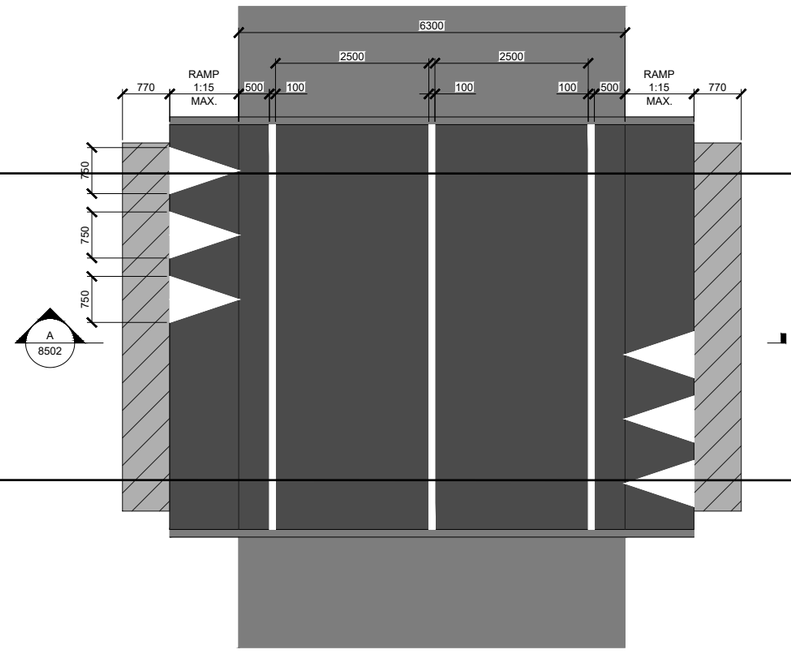
SHEET NUMBER

60687064-SHT-CI-8204

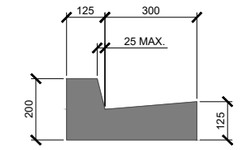
ISO A1 594mm x 841mm



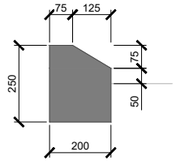
11 8501 DETAIL RAISED PEDESTRIAN & CYCLE CROSSING
1:50 m



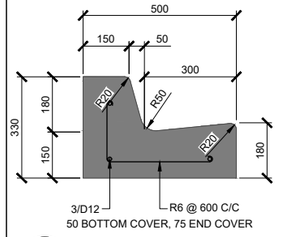
12 8501 DETAIL RAISED SIGNALISED PEDESTRIAN & CYCLE CROSSING
1:50 m



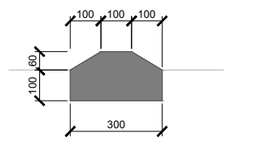
04 8501 DETAIL KERB & CHANNEL
1:10 m



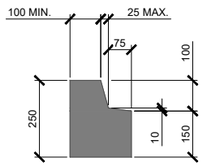
09 8501 DETAIL MEDIAN KERB CAST INSITU
1:10 m



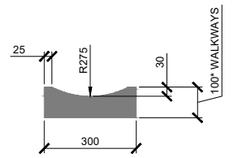
05 8501 DETAIL BUS KERB
1:10 m



10 8501 DETAIL CYCLE SEPARATOR KERB
1:10 m

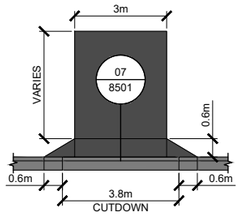


06 8501 DETAIL VERTICAL NIB KERB
1:10 m

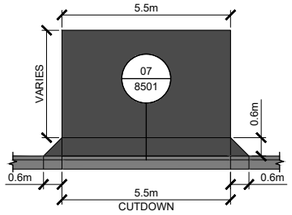


*125 RESIDENTIAL
*150 INDUSTRIAL / COMMERCIAL

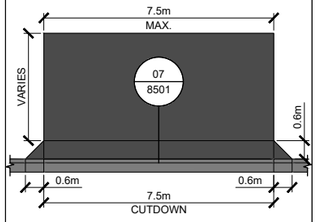
16 8501 DETAIL DISH CHANNEL
1:10 m



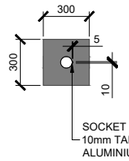
01 8501 DETAIL VEHICLE CROSSING RESIDENTIAL SINGLE
1:100 m



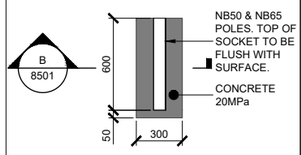
02 8501 DETAIL VEHICLE CROSSING RESIDENTIAL DOUBLE
1:100 m



03 8501 DETAIL VEHICLE CROSSING INDUSTRIAL
1:100 m



B 8501 SECTION GROUND SOCKETS FOR REMOVABLE POLES
1:20 m



19 8501 DETAIL GROUND SOCKETS FOR REMOVABLE POLES
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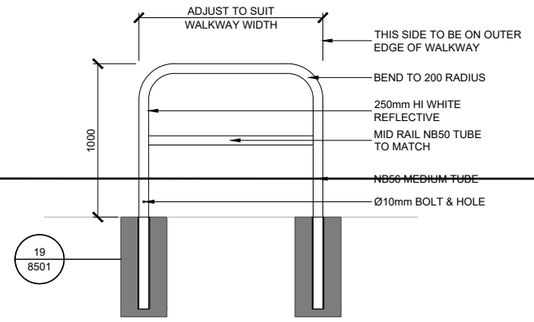
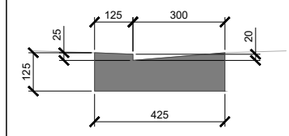
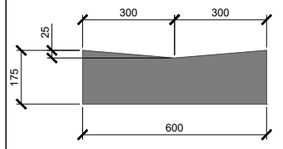


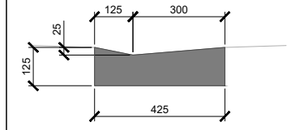
18 8501 DETAIL CYCLE HANDRAIL
1:20 m



07 8501 DETAIL VEHICLE CUTDOWN KERB
1:10 m



17 8501 DETAIL VEE CHANNEL
1:10 m



08 8501 DETAIL PEDESTRIAN CUTDOWN KERB
1:10 m

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REGISTRATION
DETAILED DESIGN

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

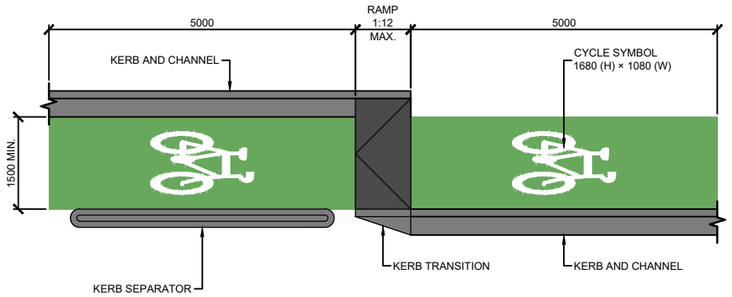
I/R	DATE	DESCRIPTION
C	12.04.24	100% DETAILED DESIGN
B	15.03.24	UPDATED DETAILED DESIGN
A	21.12.23	DETAILED DESIGN

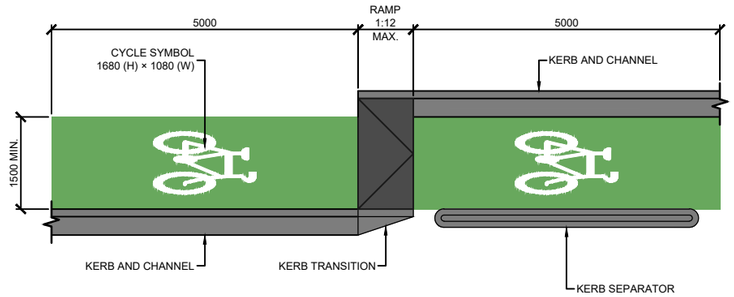
PROJECT NUMBER
60687064

SHEET TITLE
TARSI DETAILS SHEET 1

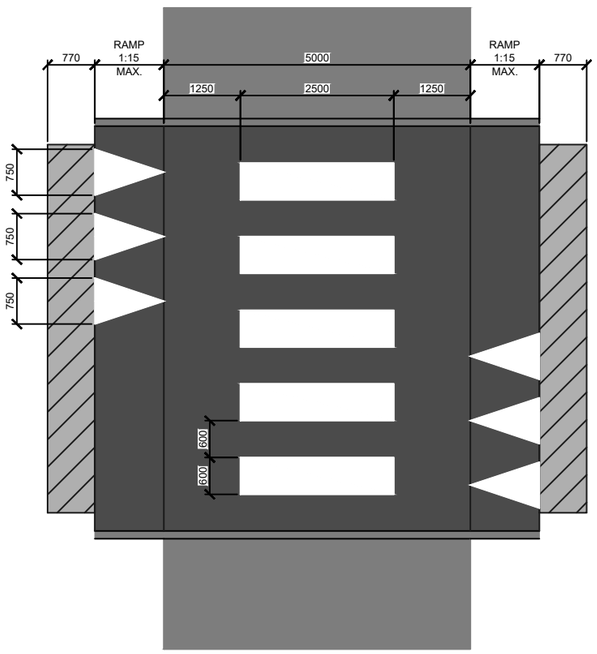
SHEET NUMBER
60687064-SHT-CI-8501

ISO A1 594mm x 841mm

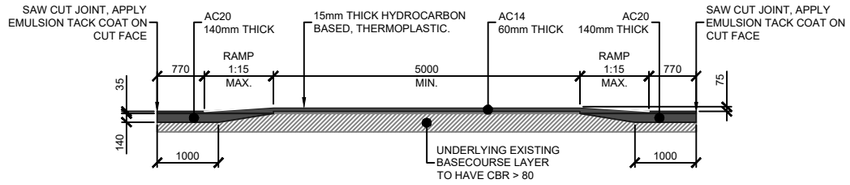




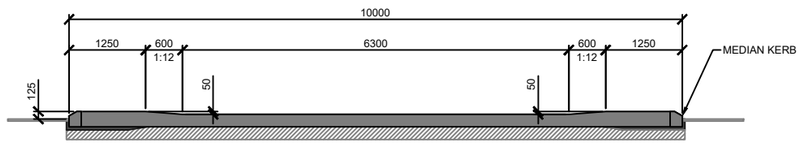
13 / 8502 DETAIL CYCLE OFF RAMP
1:50 m



14 / 8502 DETAIL CYCLE ON RAMP
1:50 m



A / 8502 SECTION ASPHALT RAISED PEDESTRIAN CROSSING
1:50 m



C / 8502 SECTION REFUGE ISLAND
1:50 m

15 / 8502 DETAIL RAISED PEDESTRIANCROSSING
1:50 m

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DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

I/R	DATE	DESCRIPTION
C	12.04.24	100% DETAILED DESIGN
B	15.03.24	UPDATED DETAILED DESIGN
A	21.12.23	DETAILED DESIGN

PROJECT NUMBER
60687064

SHEET TITLE
TARSI
DETAILS
SHEET 2

SHEET NUMBER
60687064-SHT-CI-8502

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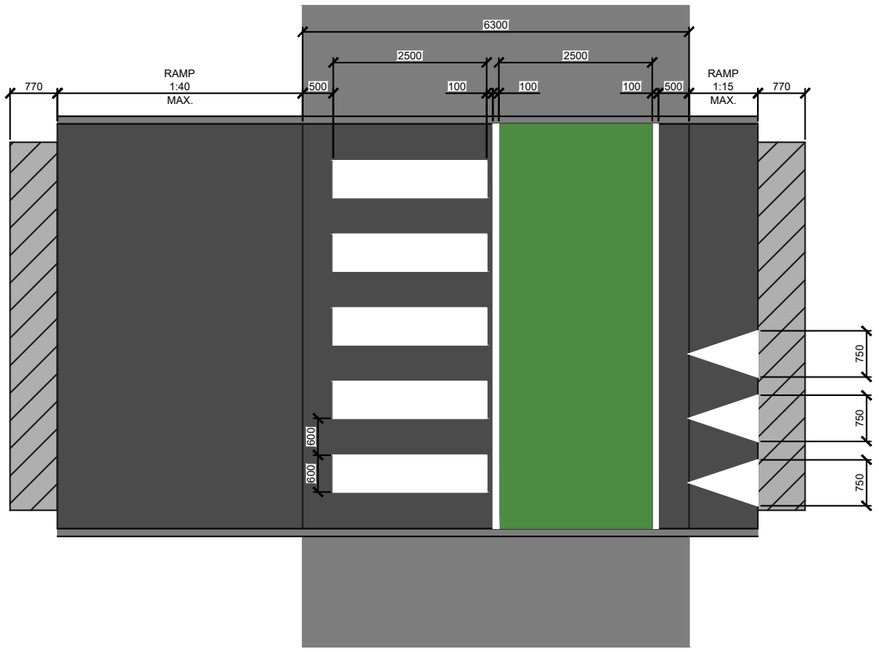
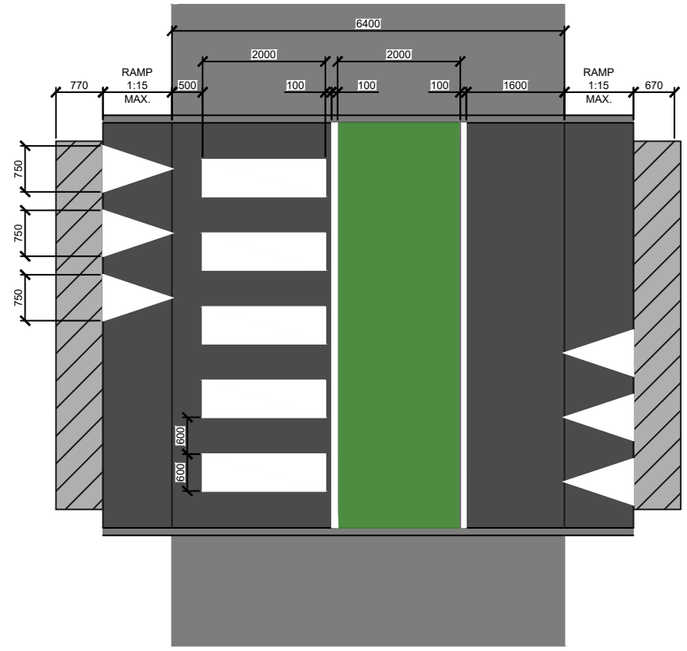
ISO A1 594mm x 841mm



20 8503 DETAIL - CROSSING - MITRE10
1:50_XREF



21 8503 DETAIL - CROSSING - HILDAROSS
1:50_XREF

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DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

I/R	DATE	DESCRIPTION
A	12.04.2024	100% DETAILED DESIGN

PROJECT NUMBER

60687064

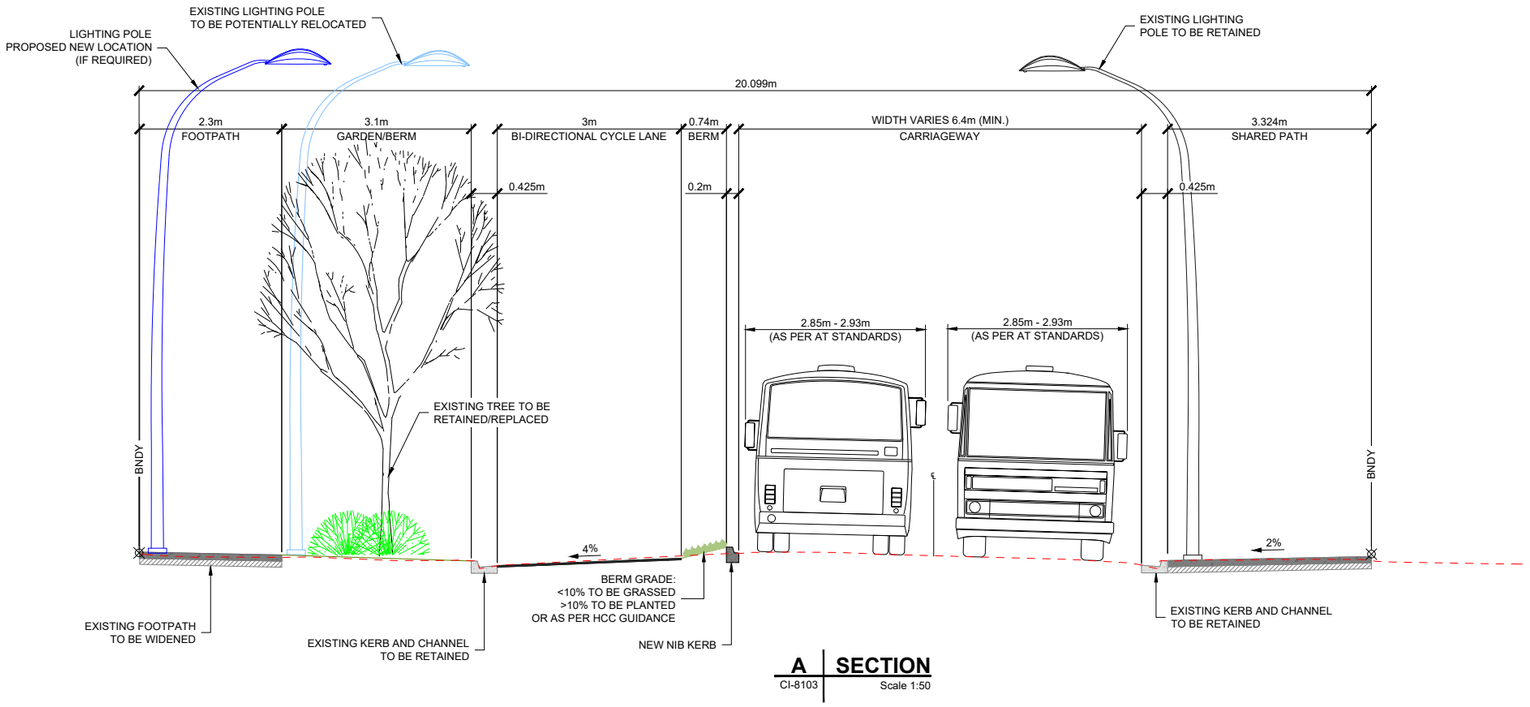
SHEET TITLE

TARSI
DETAILS
SHEET 3

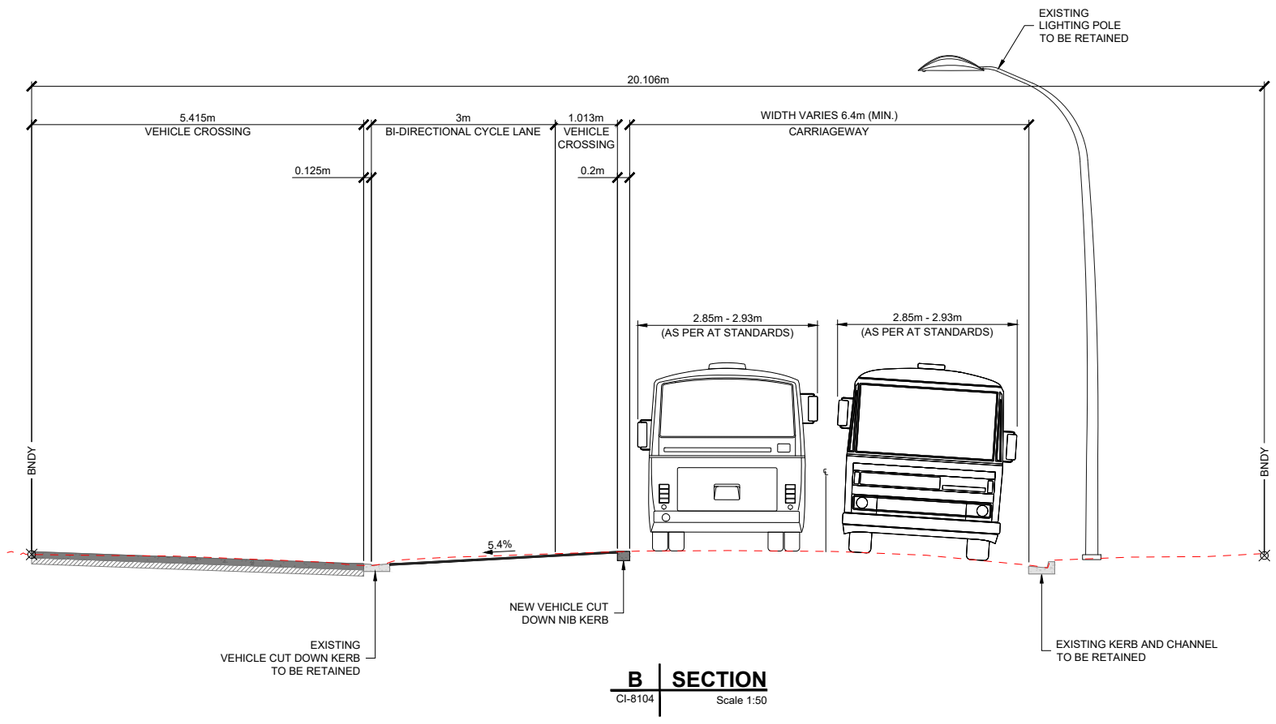
SHEET NUMBER

60687064-SHT-CI-8503

ISO A1 594mm x 841mm



A SECTION
CI-8103 Scale 1:50



B SECTION
CI-8104 Scale 1:50

Last saved by: MANNINGB(2024-02-21) Last Plotted: 2024-04-10
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SCALE
0 6.25 12.5 m
1:250

PROJECT MANAGEMENT INITIALS

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PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

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E	12.04.24	100% DETAILED DESIGN
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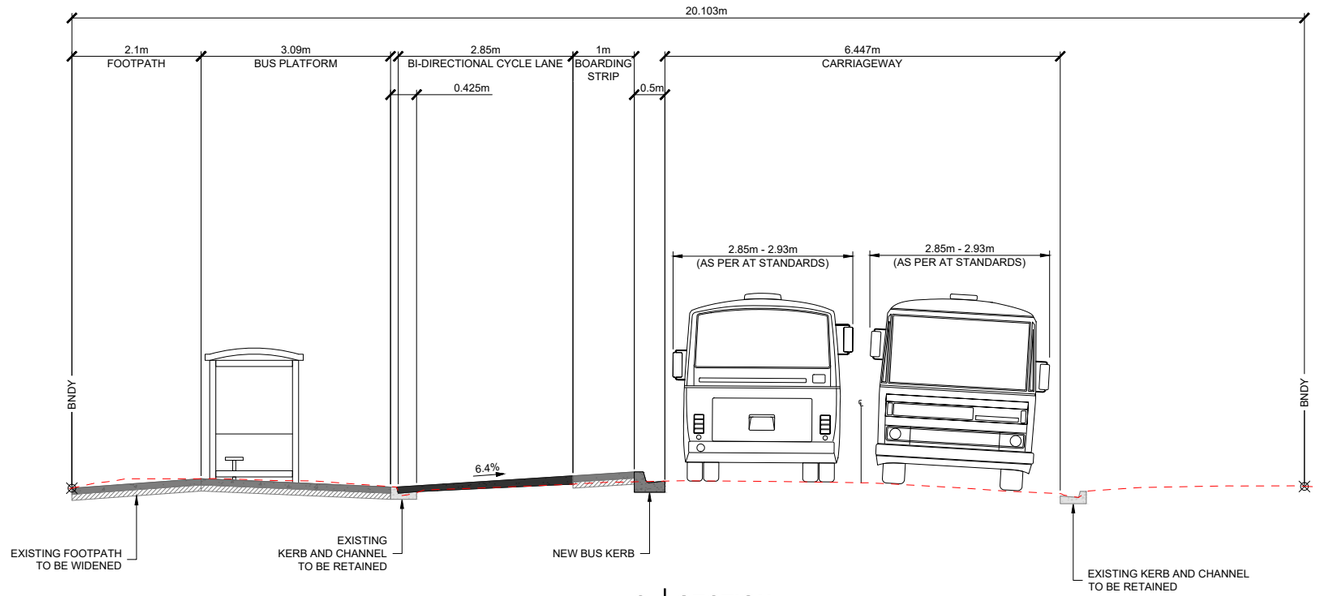
B	12.07.23	FOR INFORMATION
A	14.06.23	FOR INFORMATION
I/R	DATE	DESCRIPTION

PROJECT NUMBER
60687064

SHEET TITLE
TARSI
TYPICAL SECTION
SHEET1

SHEET NUMBER
60687064-SHT-CI-8701

ISO A1 594mm x 841mm



C | SECTION

CI-8105 | Scale 1:50

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REGISTRATION

DETAILED DESIGN

SCALE

0 6.25 12.5 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

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A	14.06.23	FOR INFORMATION
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

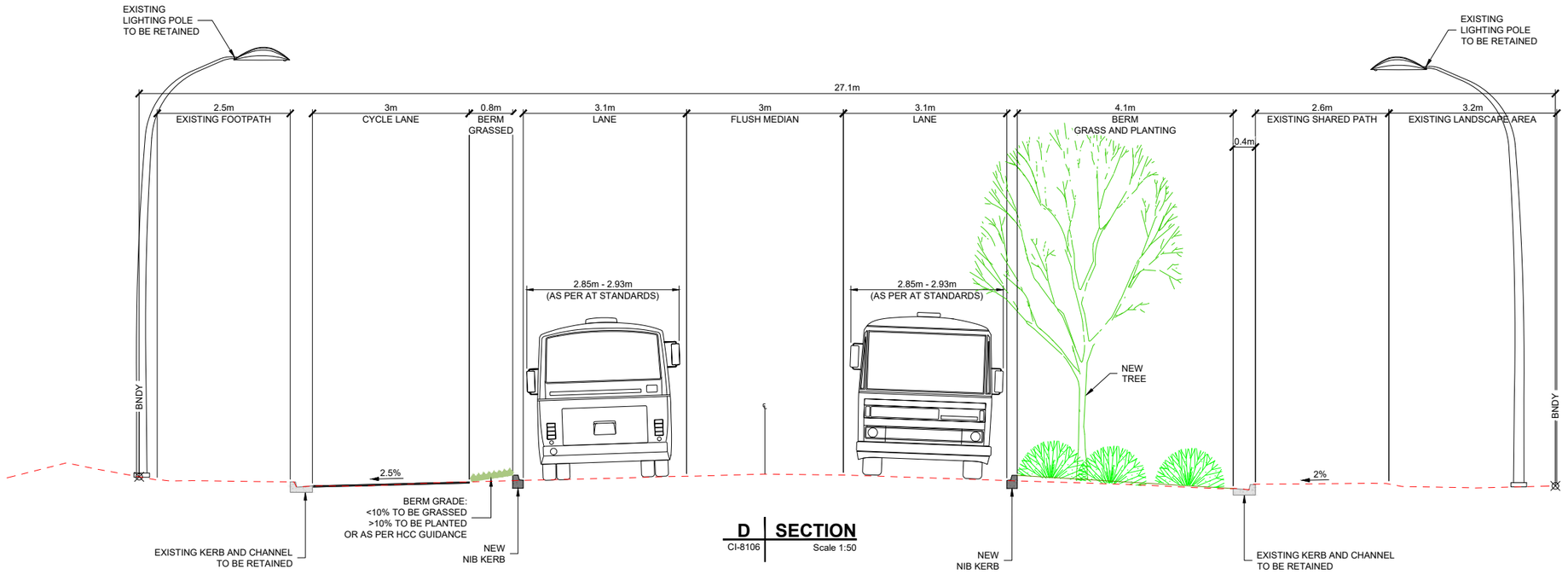
SHEET TITLE

TARSI
TYPICAL SECTION
SHEET 2

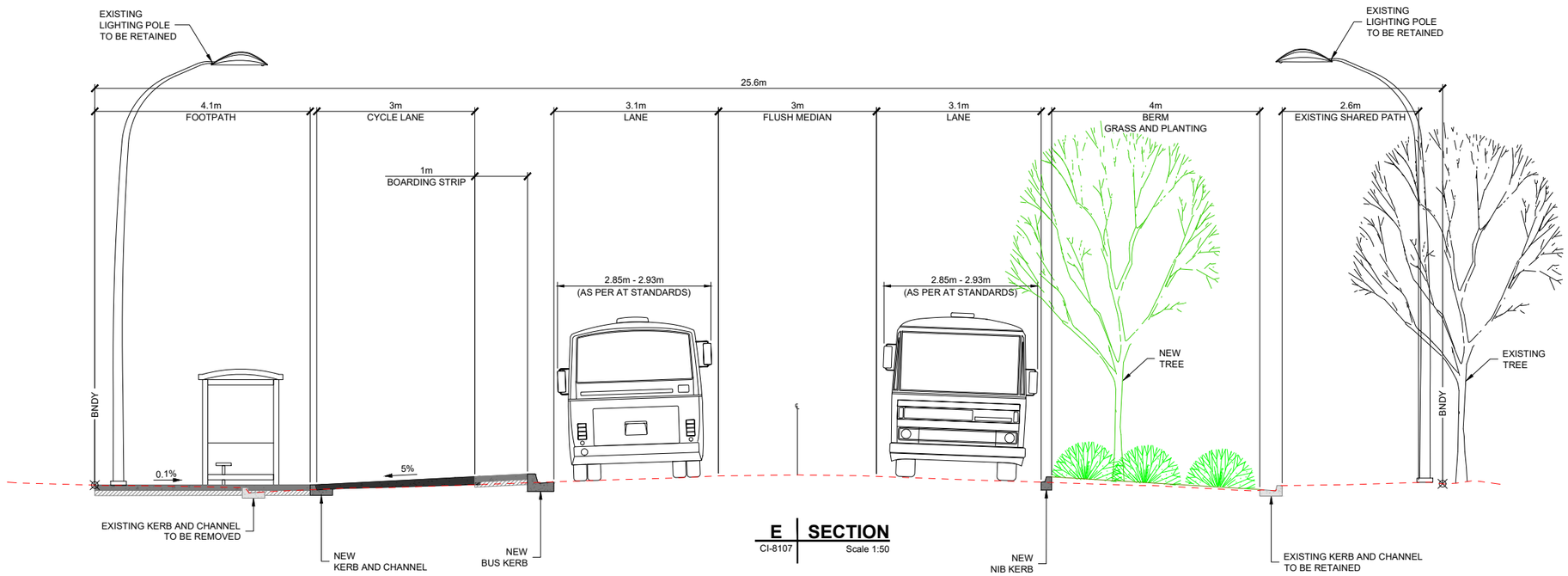
SHEET NUMBER

60687064-SHT-CI-8702

ISO A1 594mm x 841mm



D SECTION
CI-8106 Scale 1:50



E SECTION
CI-8107 Scale 1:50

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SCALE

0 6.25 12.5 m
1:250

PROJECT MANAGEMENT INITIALS

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DESIGNER	CHECKED	APPROVED

PROJECT DATA

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I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

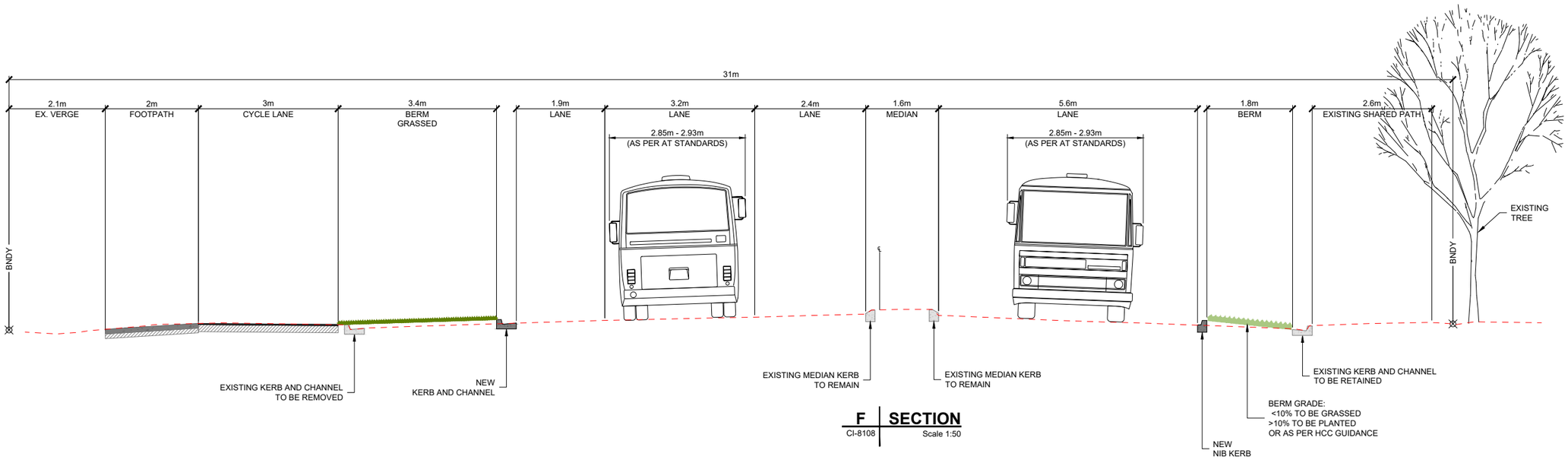
SHEET TITLE

TARSI
TYPICAL SECTION
SHEET 3

SHEET NUMBER

60687064-SHT-CI-8703

ISO A1 594mm x 841mm



F SECTION
CI-8108 Scale 1:50

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DETAILED DESIGN

SCALE
0 6.25 12.5 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

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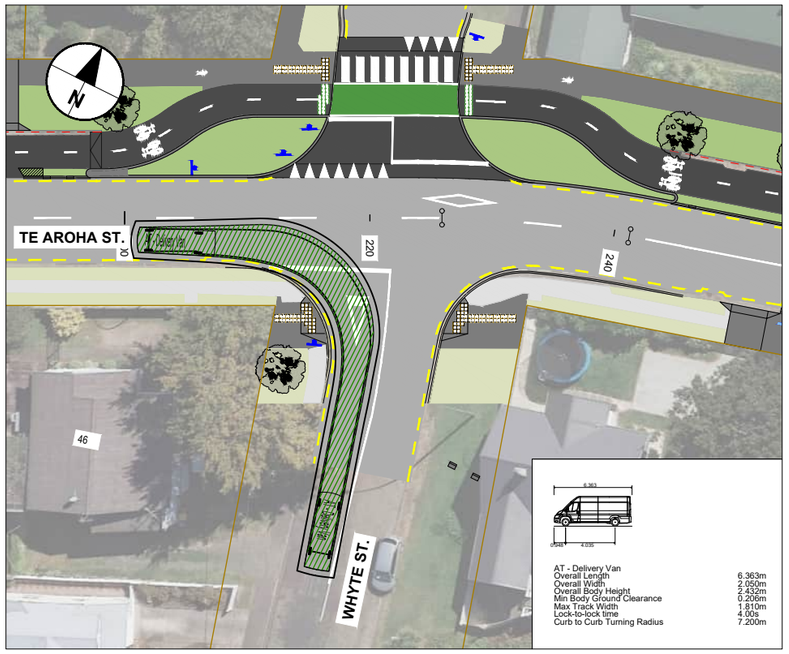
C	21.12.23	DETAILED DESIGN
B	12.07.23	FOR INFORMATION
A	14.06.23	FOR INFORMATION
I/R	DATE	DESCRIPTION

PROJECT NUMBER
60687064

SHEET TITLE
TARSI
TYPICAL SECTION
SHEET 4

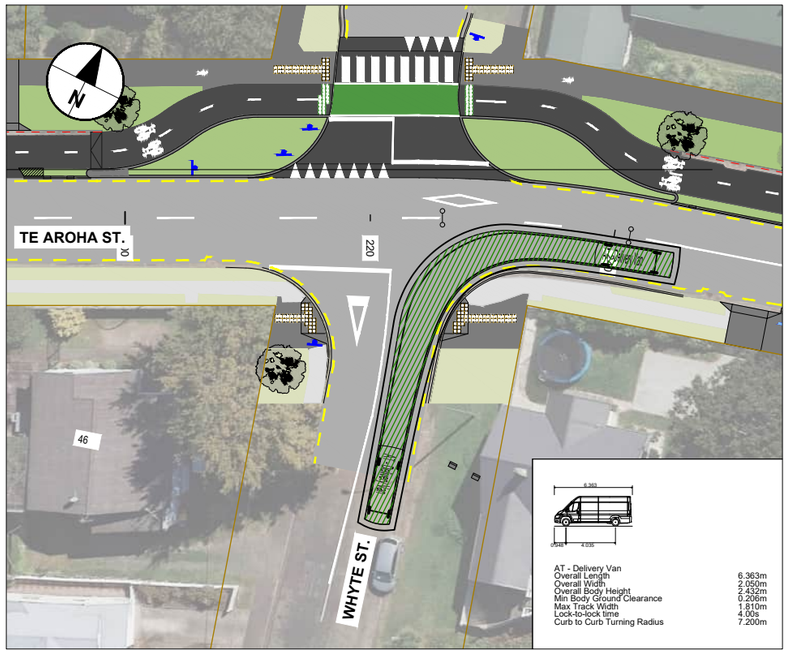
SHEET NUMBER
60687064-SHT-CI-8704

ISO A1 594mm x 841mm



A.T. DELIVERY VAN - WHYTE ST / TE AROHA ST #1

Scale 1:250m



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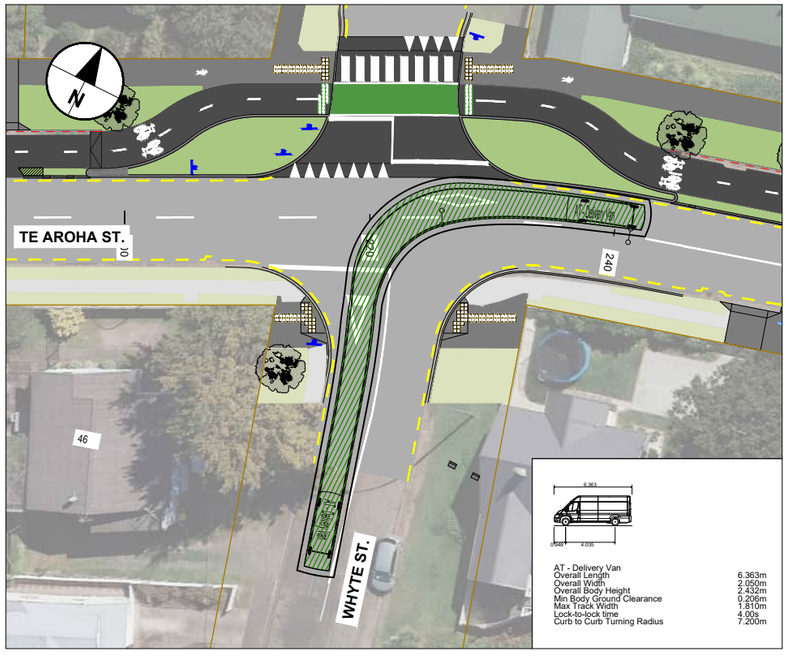
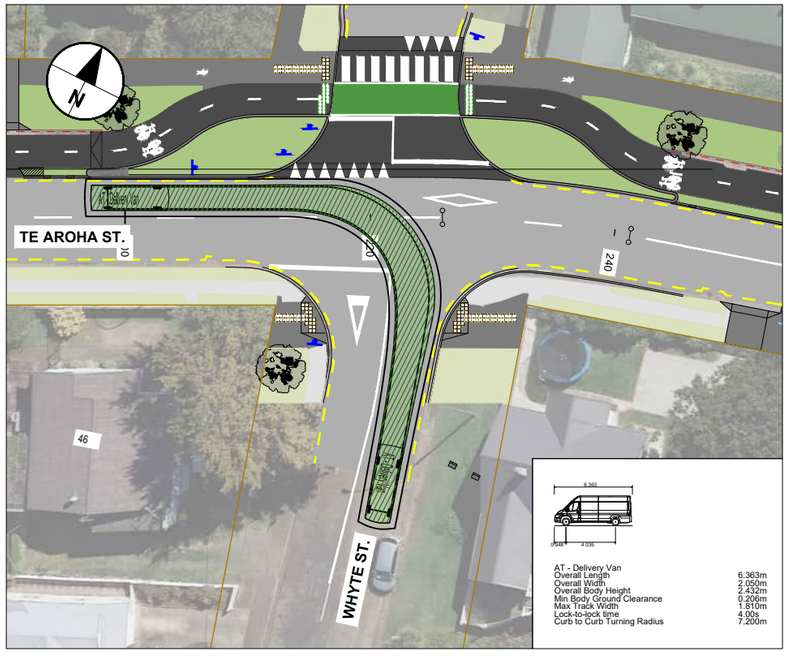
Scale 1:250m



A.T. DELIVERY VAN - WHYTE ST / TE AROHA ST #2

Scale 1:250m



A.T. DELIVERY VAN - TE AROHA ST / WHYTE ST #2

Scale 1:250m

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Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6.25 12.5 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

I/R	DATE	DESCRIPTION
F	12.04.24	100% DETAILED DESIGN
E	15.03.24	UPDATED DETAILED DESIGN
D	21.12.23	DETAILED DESIGN
C	25.07.23	FOR INFORMATION
B	12.07.23	FOR INFORMATION
A	14.06.23	FOR INFORMATION

PROJECT NUMBER

60687064

SHEET TITLE

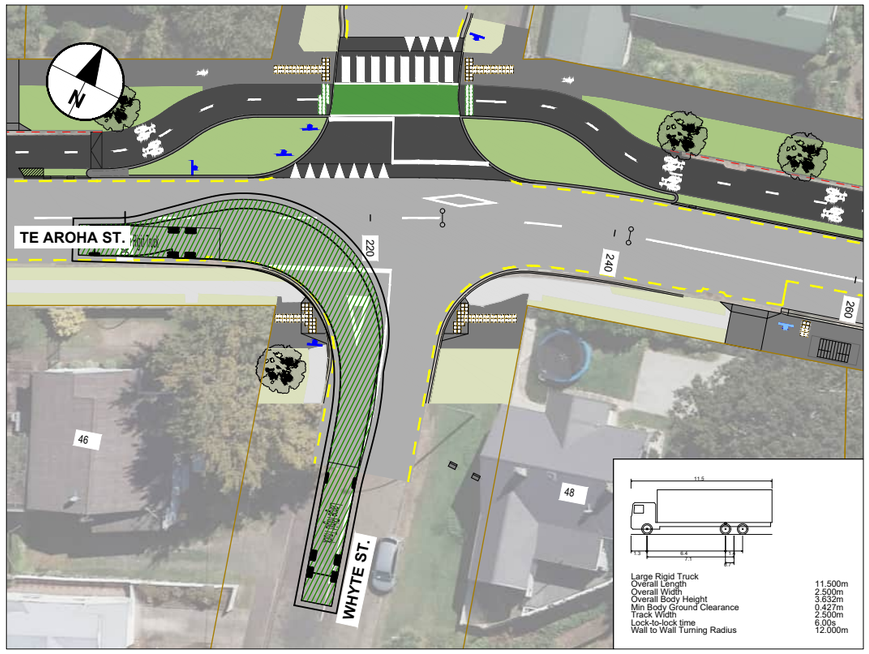
TARSI
VEHICLE TRACKING PLAN
SHEET 1

SHEET NUMBER

60687064-SHT-VT-8101

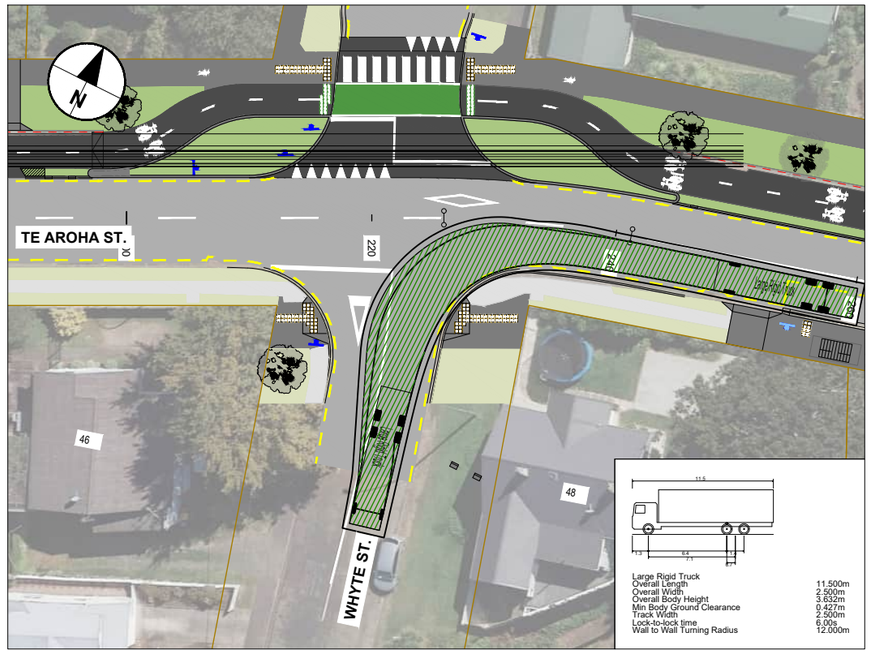
Last saved by: ARAMBULOEV (2024-03-05) Last Plotted: 2024-04-10
Filename: C:\PWWORKING\AECOM_DS12_AUJERIC.ARAMBULO@AECOM.COM\D0330697\60687064-SHT-VT-8101.DWG

ISO A1 594mm x 841mm



A.T. LARGE RIGID TRUCK - WHYTE ST / TE AROHA ST #1

Scale 1:250m



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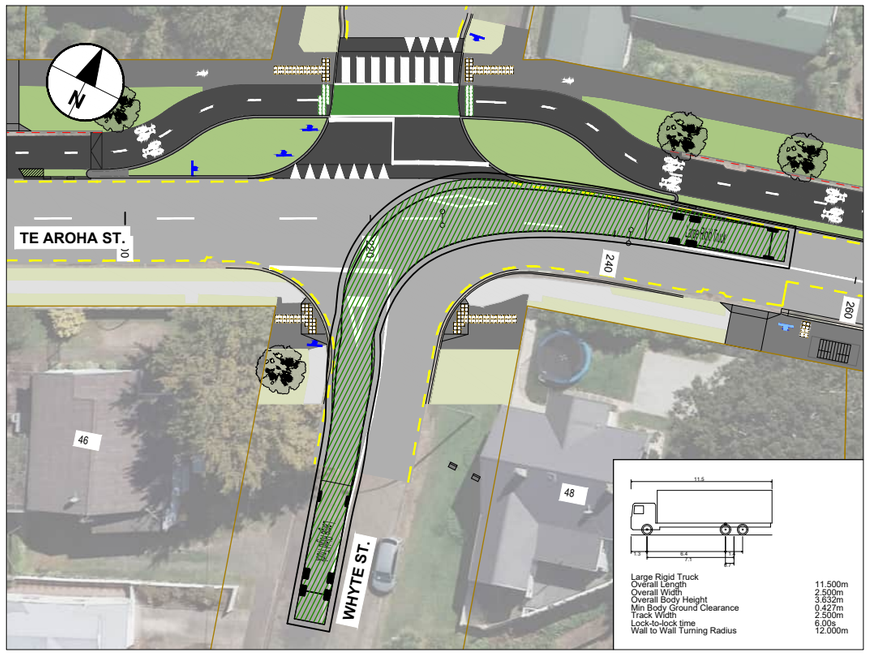
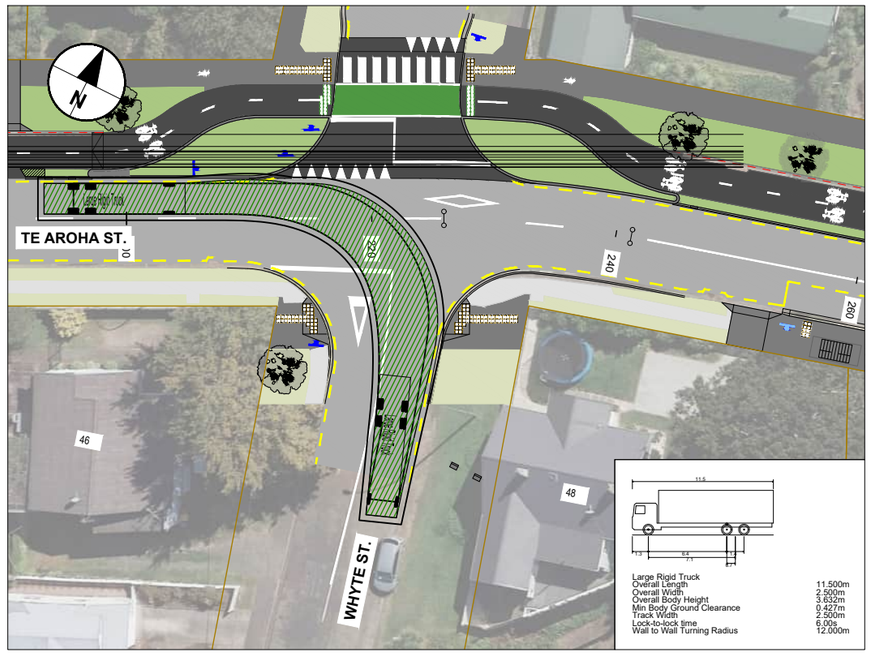
Scale 1:250m



A.T. LARGE RIGID TRUCK - WHYTE ST / TE AROHA ST #2

Scale 1:250m



A.T. LARGE RIGID TRUCK - TE AROHA ST / WHYTE ST #2

Scale 1:250m

Last saved by: SCHUBEL (2024-03-07) Last Plotted: 2024-04-10
Filename: C:\PWWORKING\AECOM_DS12_AU\ERIC.ARAMBULO@AECOM.COM\D0330897\60687064-SHT-VT-8102.DWG

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AECOM

CONSULTANT

AECOM New Zealand Ltd
NZ.B.N 9429032091335
www.aecom.com

PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6.25 12.5 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 200

ISSUE/REVISION

I/R	DATE	DESCRIPTION
F	12.04.24	100% DETAILED DESIGN
E	15.03.24	UPDATED DETAILED DESIGN
D	21.12.23	DETAILED DESIGN
C	25.07.23	FOR INFORMATION
B	12.07.23	FOR INFORMATION
A	14.06.23	FOR INFORMATION

PROJECT NUMBER

60678064

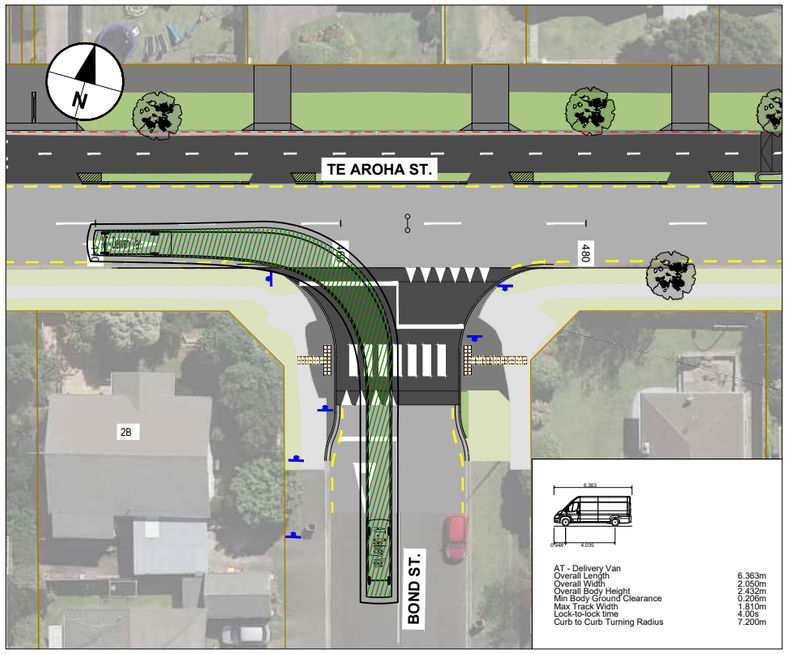
SHEET TITLE

TARSI
VEHICLE TRACKING PLAN
SHEET 2

SHEET NUMBER

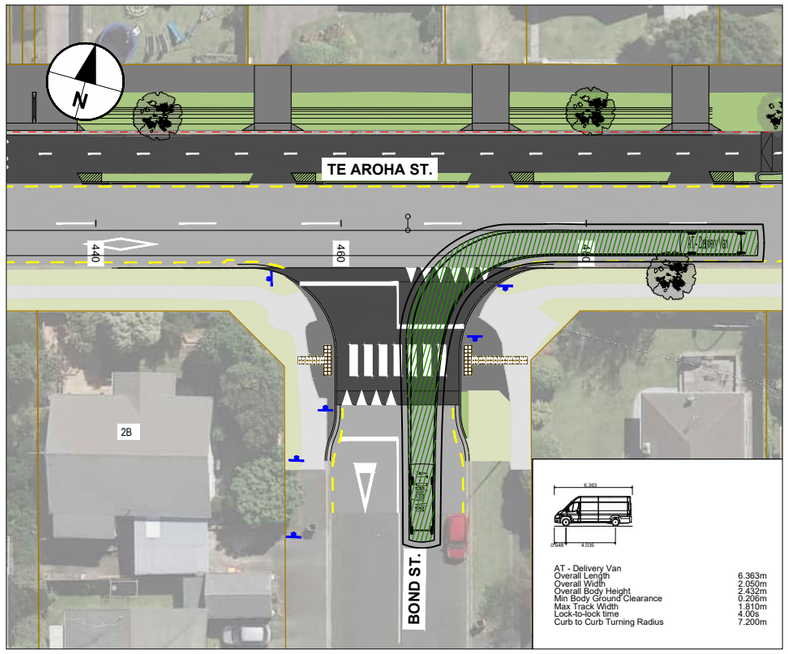
60678064-SHT-VT-8102

ISO A1 594mm x 841mm



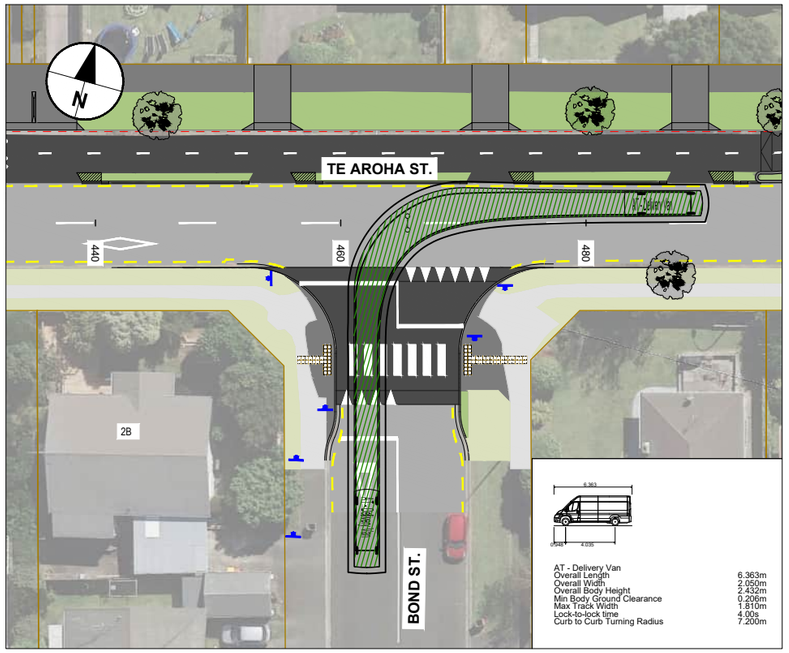
A.T. DELIVERY VAN - BOND ST / TE AROHA ST #1

Scale 1:250m



A.T. DELIVERY VAN - TE AROHA ST / BOND ST #1

Scale 1:250m



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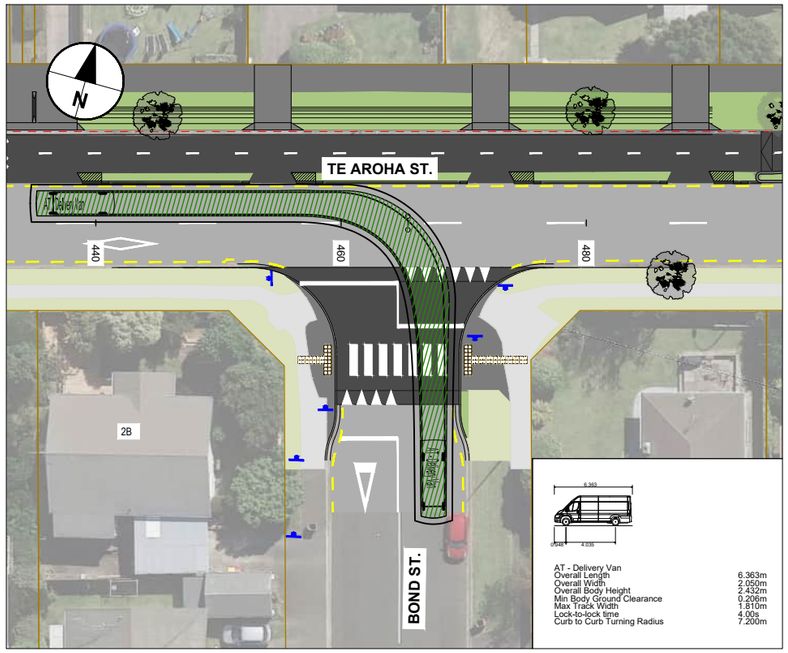
Scale 1:250m



A.T. DELIVERY VAN - TE AROHA ST / BOND ST #2

Scale 1:250m

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AECOM

CONSULTANT

AECOM New Zealand Ltd
NZ.B.N 9429032091335
www.aecom.com

PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6.25 12.5 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

E	12.04.24	100% DETAILED DESIGN
D	15.03.24	UPDATED DETAILED DESIGN
C	21.12.23	DETAILED DESIGN
B	12.07.23	FOR INFORMATION
A	14.06.23	FOR INFORMATION
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

SHEET TITLE

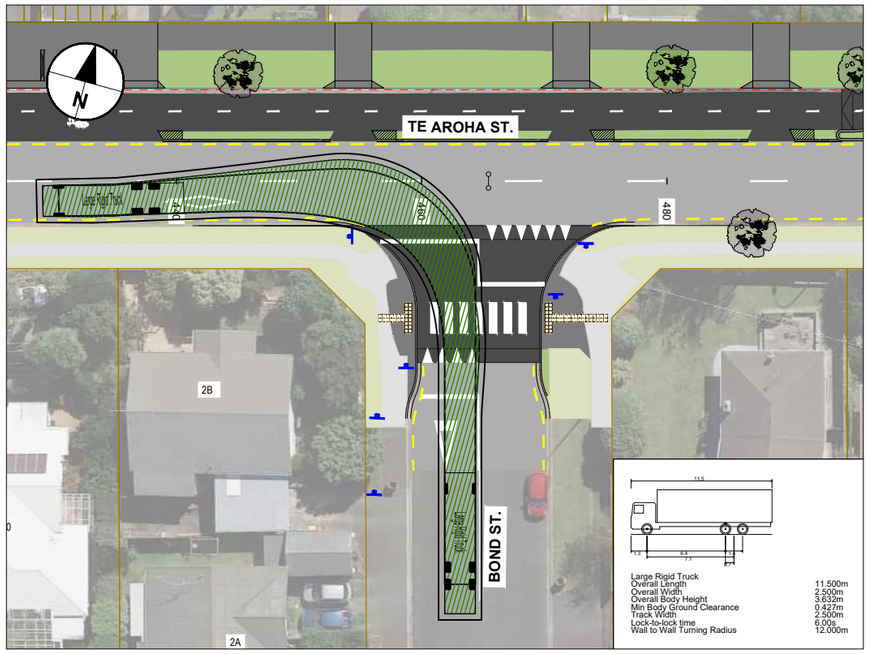
TARSI
VEHICLE TRACKING PLAN
SHEET 3

SHEET NUMBER

60687064-SHT-VT-8103

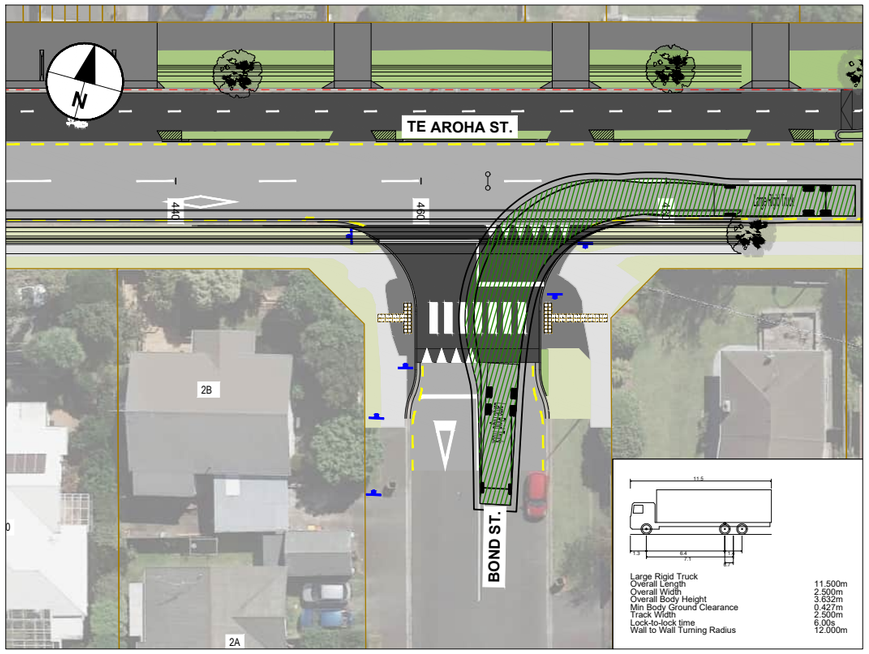
Last saved by: MANNINGB(2024-03-07) Last Plotted: 2024-04-10
Filename: C:\PWWORKING\AECOM_DS12_AU\ERIC.ARAMBULO@AECOM.COM\D0330697\60687064-SHT-VT-8103.DWG

ISO A1 594mm x 841mm



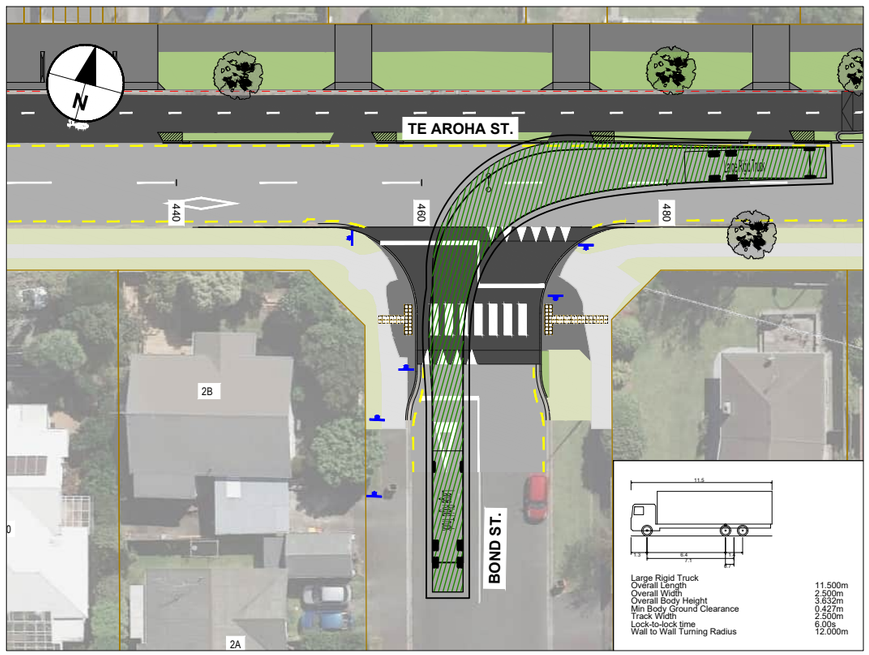
A.T. LARGE RIGID TRUCK - BOND ST / TE AROHA ST #1

Scale 1:250m



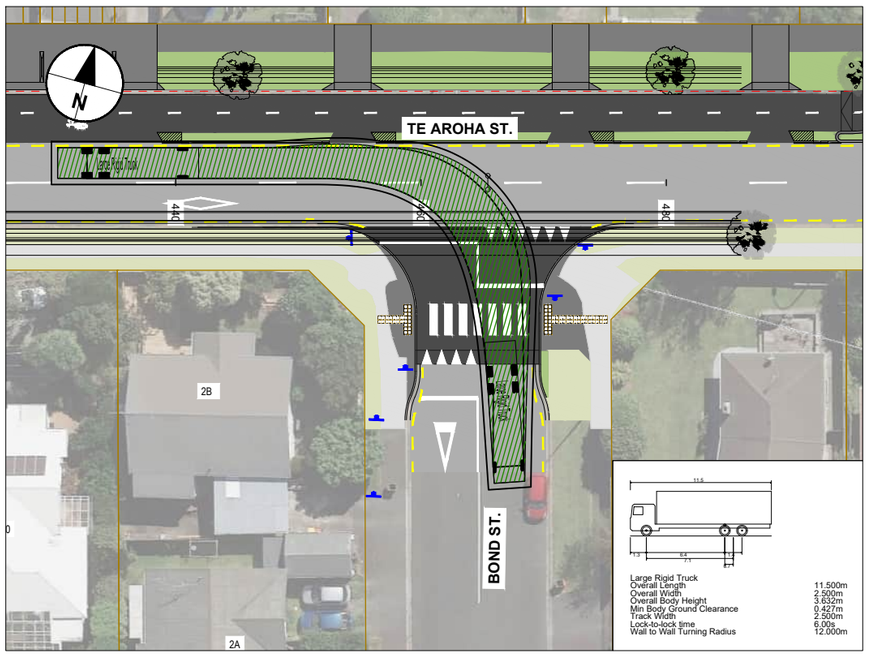
A.T. LARGE RIGID TRUCK - TE AROHA ST / BOND ST #1

Scale 1:250m



A.T. LARGE RIGID TRUCK - BOND ST / TE AROHA ST #2

Scale 1:250m



A.T. LARGE RIGID TRUCK - TE AROHA ST / BOND ST #2

Scale 1:250m

Last saved by: MANNINGR(2024-03-07) Last Plotted: 2024-04-10
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AECOM

CONSULTANT

AECOM New Zealand Ltd
NZ.B.N 9429032091335
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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6.25 12.5 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

E	12.04.24	100% DETAILED DESIGN
D	15.03.24	UPDATED DETAILED DESIGN
C	21.12.23	DETAILED DESIGN
B	12.07.23	FOR INFORMATION
A	14.06.23	FOR INFORMATION
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

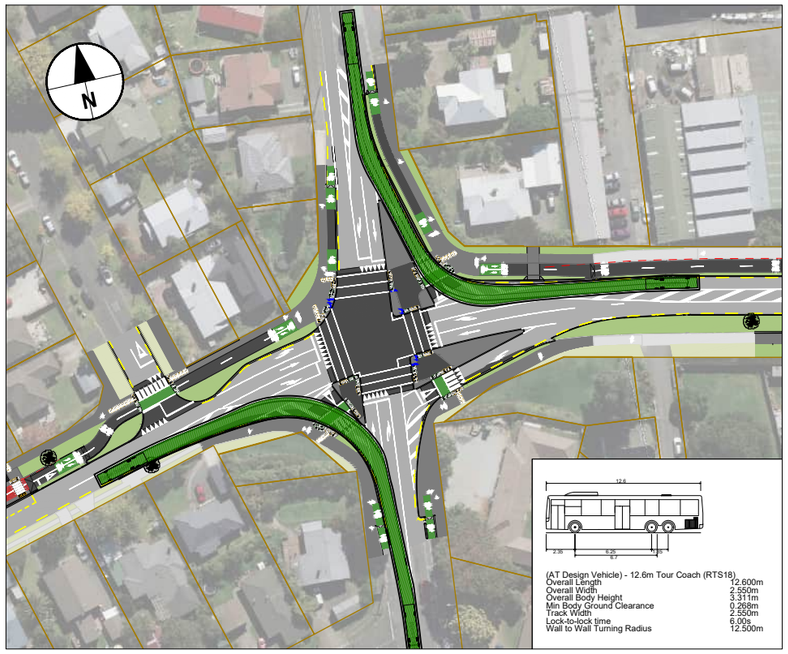
SHEET TITLE

TARSI
VEHICLE TRACKING PLAN
SHEET 4

SHEET NUMBER

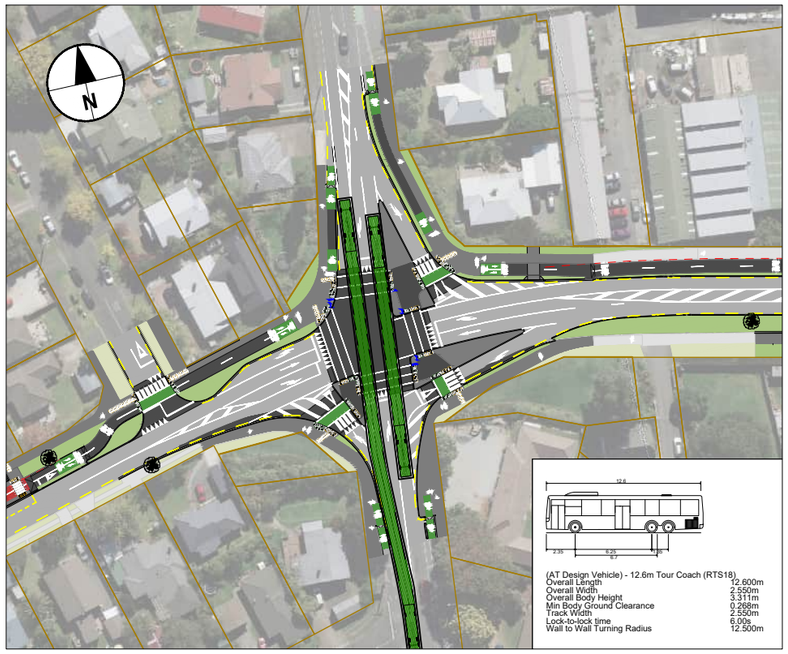
60687064-SHT-VT-8104

ISO A1 594mm x 841mm



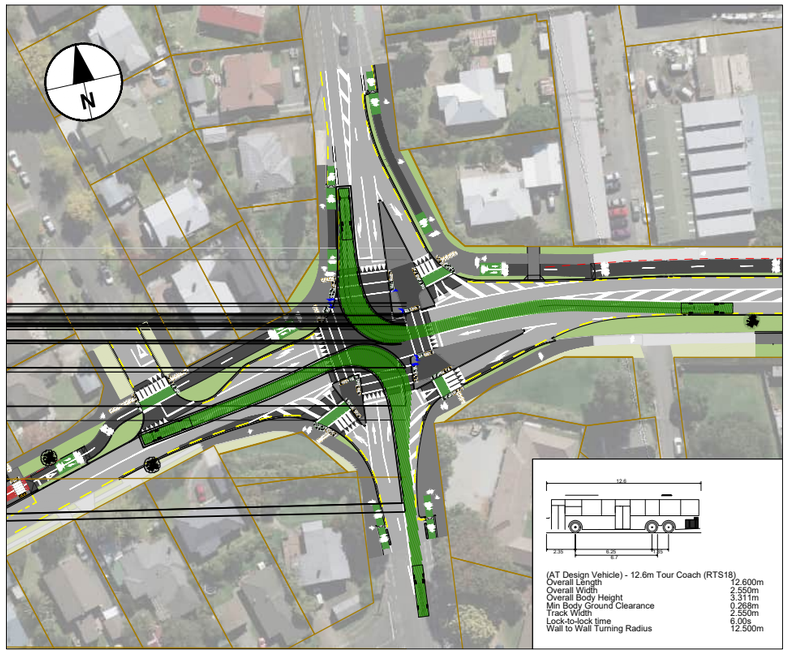
A.T. 12.6m BUS - LEFT TURNS

Scale 1:750m



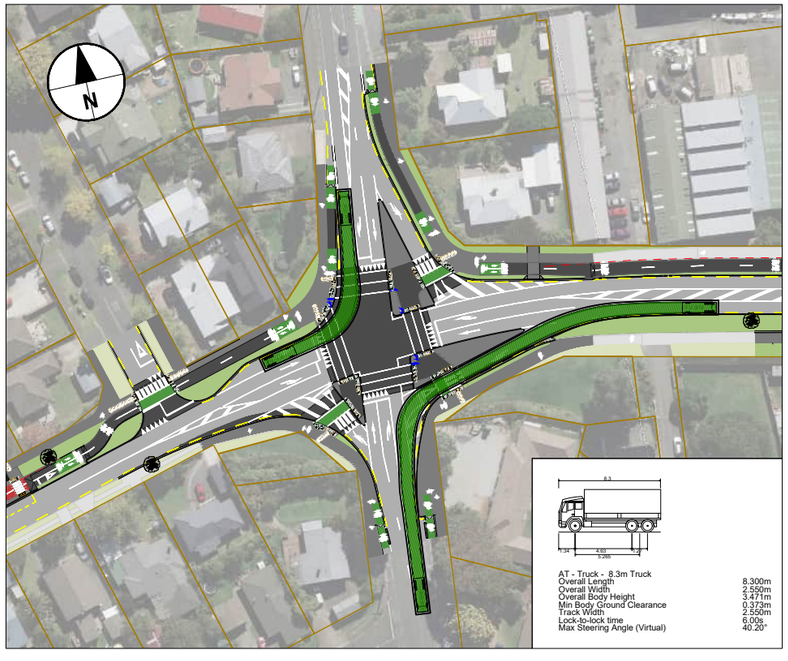
A.T. 12.6m BUS - STRAIGHT THROUGH

Scale 1:750m



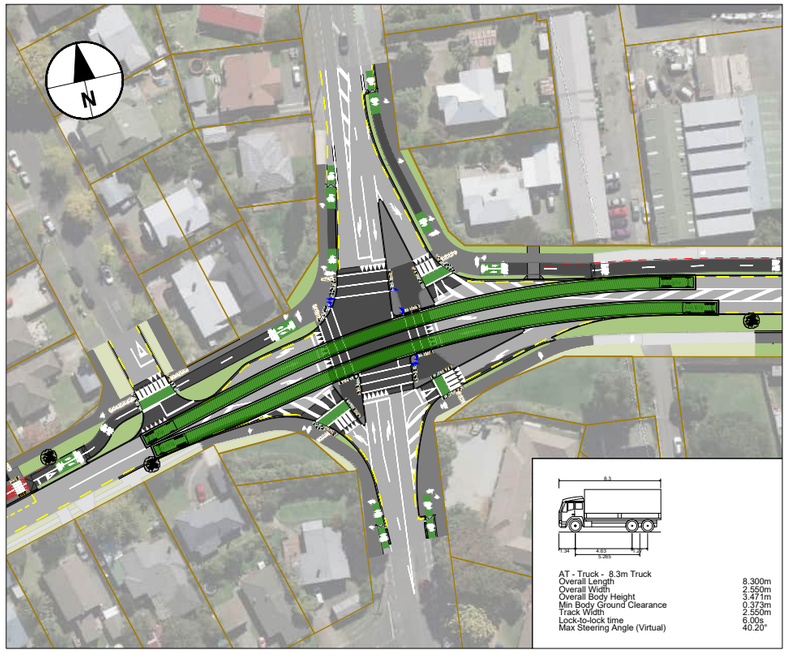
A.T. 12.6m BUS - RIGHT TURNS

Scale 1:750m



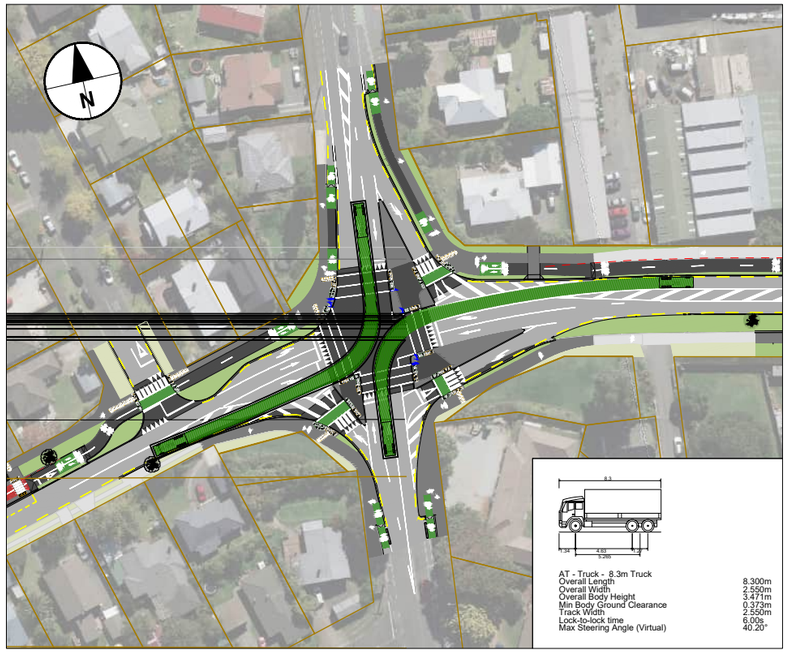
A.T. 8.3m TRUCK - LEFT TURNS

Scale 1:750m



A.T. 8.3m TRUCK - STRAIGHT THROUGH

Scale 1:750m



A.T. 8.3m TRUCK - RIGHT TURNS

Scale 1:750m

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Filename: C:\PWWORKING\AECOM_DS12_AU\ERIC.ARAMBULO@AECOM.COM\D0330697\60687064-SHT-VT-8105.DWG

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CONSULTANT

AECOM New Zealand Ltd
NZ.B.N 9429032091335
www.aecom.com

PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 18.75 37.5 m
1:750

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

E	12.04.24	100% DETAILED DESIGN
D	15.03.24	UPDATED DETAILED DESIGN
C	21.12.23	DETAILED DESIGN
B	12.07.23	FOR INFORMATION
A	14.06.23	FOR INFORMATION
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

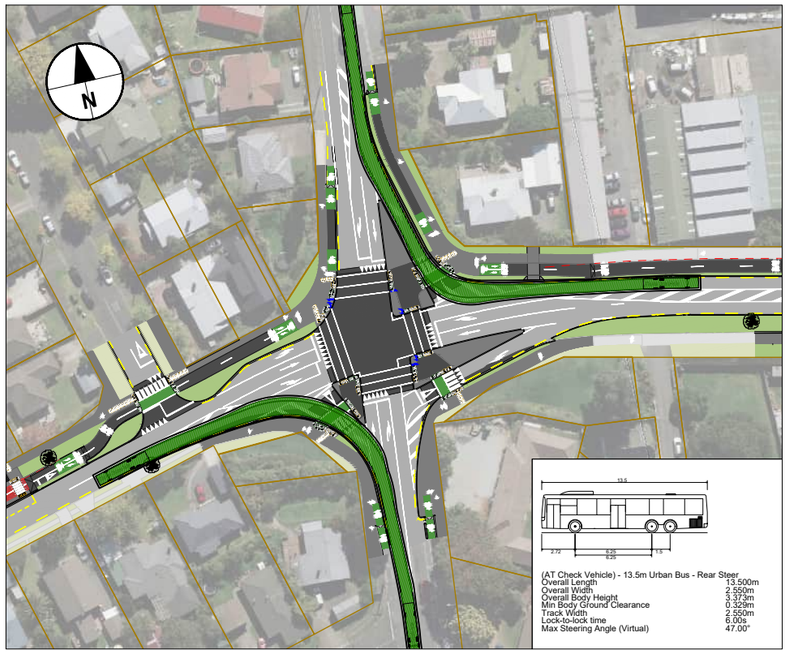
SHEET TITLE

TARSI
VEHICLE TRACKING PLAN
SHEET 5

SHEET NUMBER

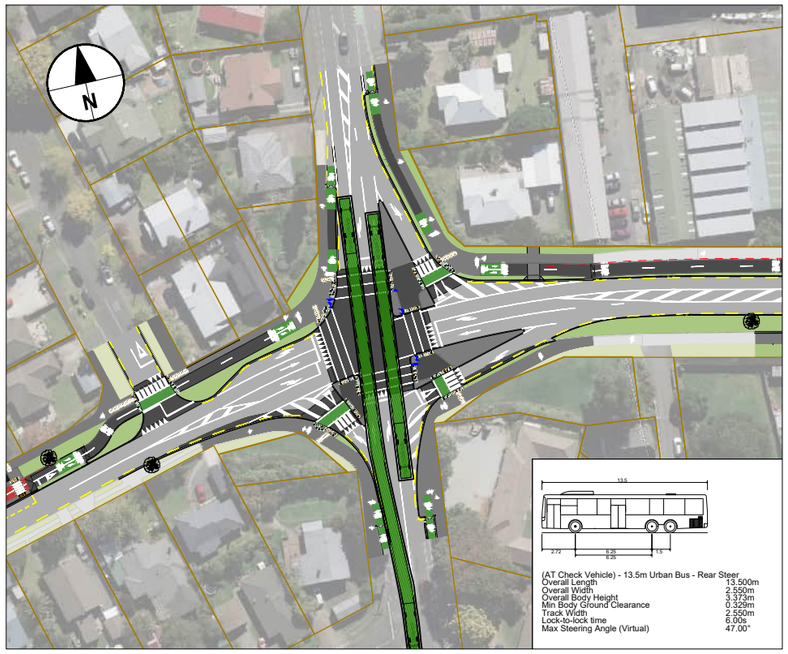
60687064-SHT-VT-8105

ISO A1 594mm x 841mm



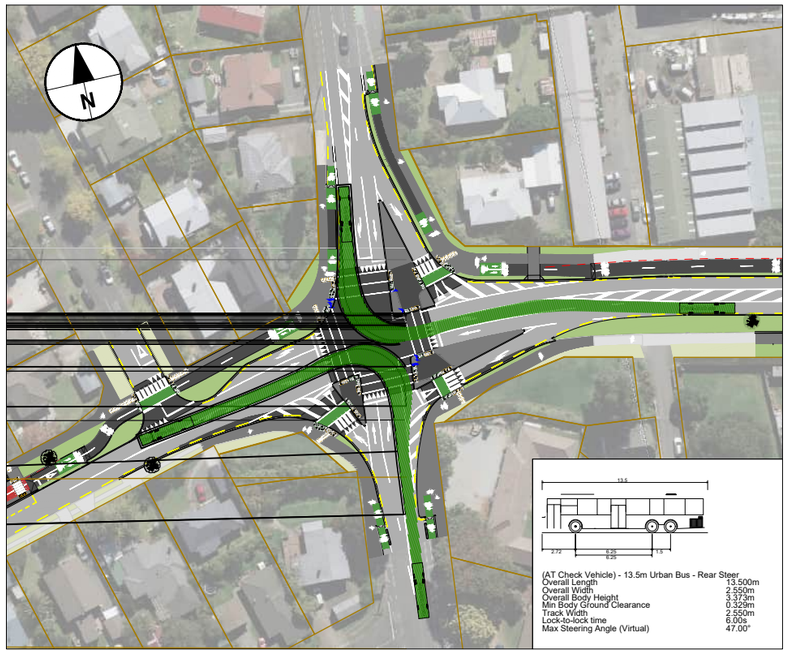
A.T. 13.5m BUS - LEFT TURNS

Scale 1:750m



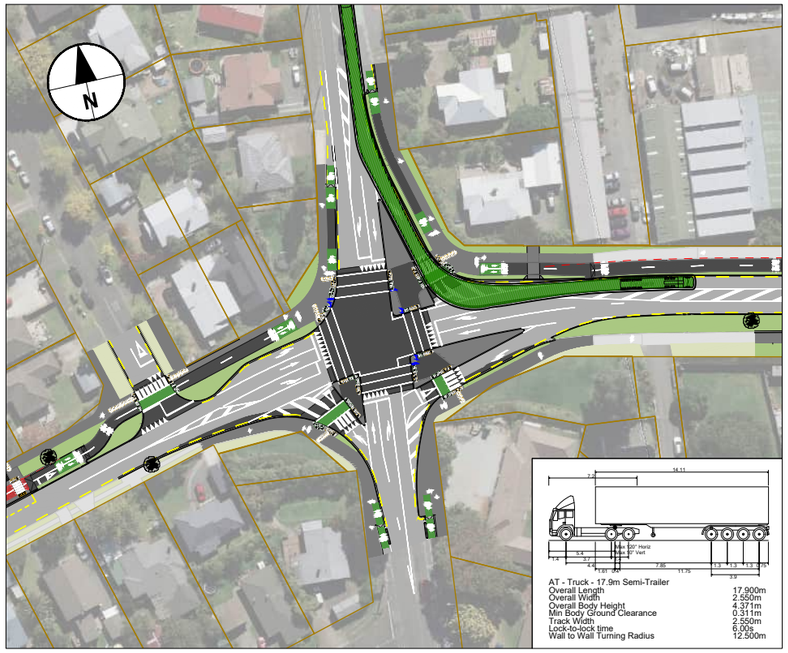
A.T. 13.5m BUS - STRAIGHT THROUGH

Scale 1:750m



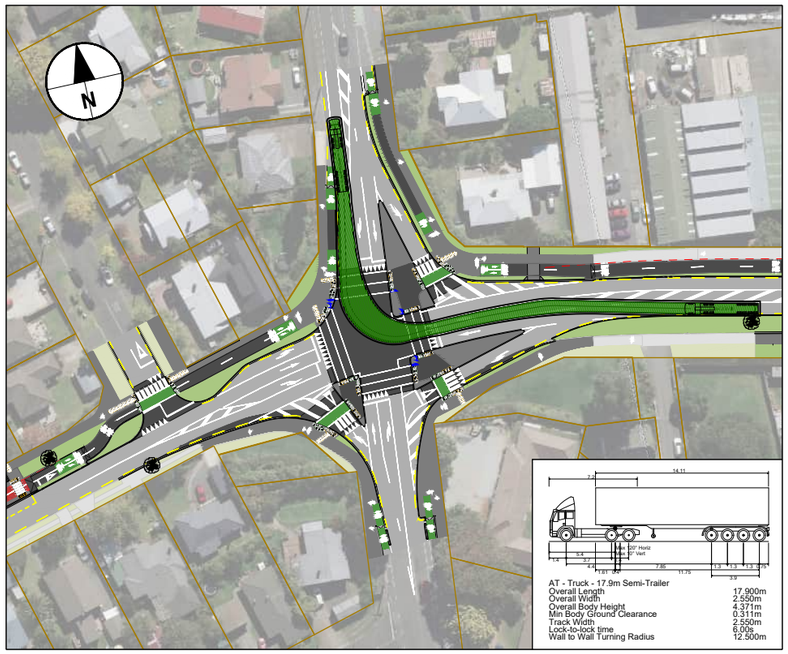
A.T. 13.5m BUS - RIGHT TURNS

Scale 1:750m



A.T. 17.9m SEMI-TRAILER - LEFT TURN

Scale 1:750m



A.T. 17.9m SEMI-TRAILER - RIGHT TURN

Scale 1:750m

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CONSULTANT

AECOM New Zealand Ltd
NZ.B.N 9429032091335
www.aecom.com

PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 18.75 37.5 m
1:750

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

E	12.04.24	100% DETAILED DESIGN
D	15.03.24	UPDATED DETAILED DESIGN
C	21.12.23	DETAILED DESIGN
B	12.07.23	FOR INFORMATION
A	14.06.23	FOR INFORMATION
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

SHEET TITLE

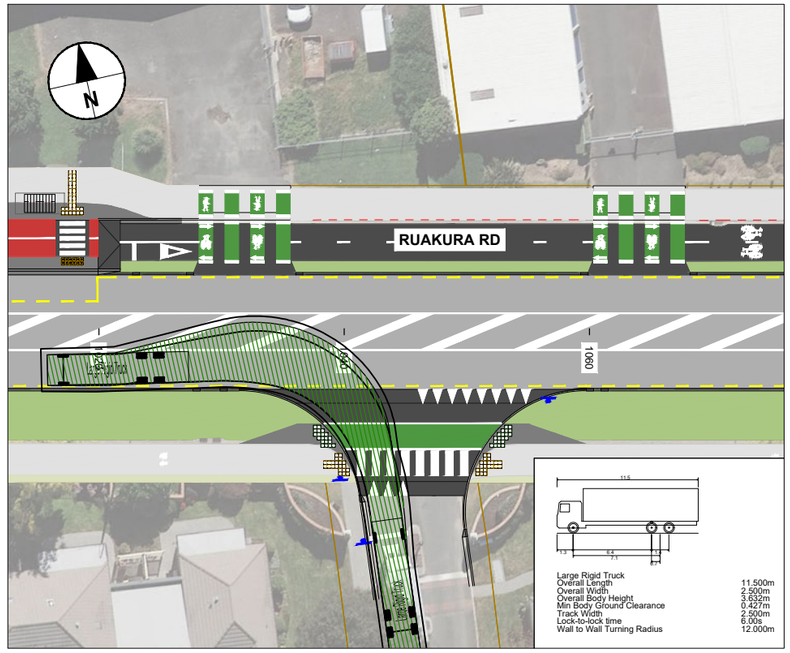
TARSI
VEHICLE TRACKING PLAN
SHEET 6

SHEET NUMBER

60687064-SHT-VT-8106

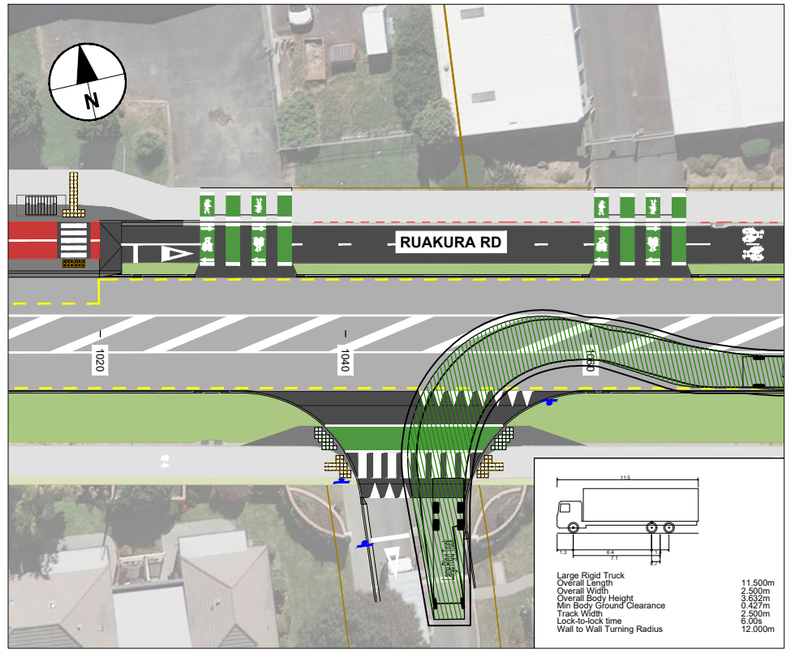
Last saved by: SCHUBELD Last Plotted: 2024-04-10
Filename: C:\PWWORKING\AECOM_DS12_AU\ERIC.ARAMBULO@AECOM.COM\D0330897\60687064-SHT-VT-8106.DWG

ISO A1 594mm x 841mm



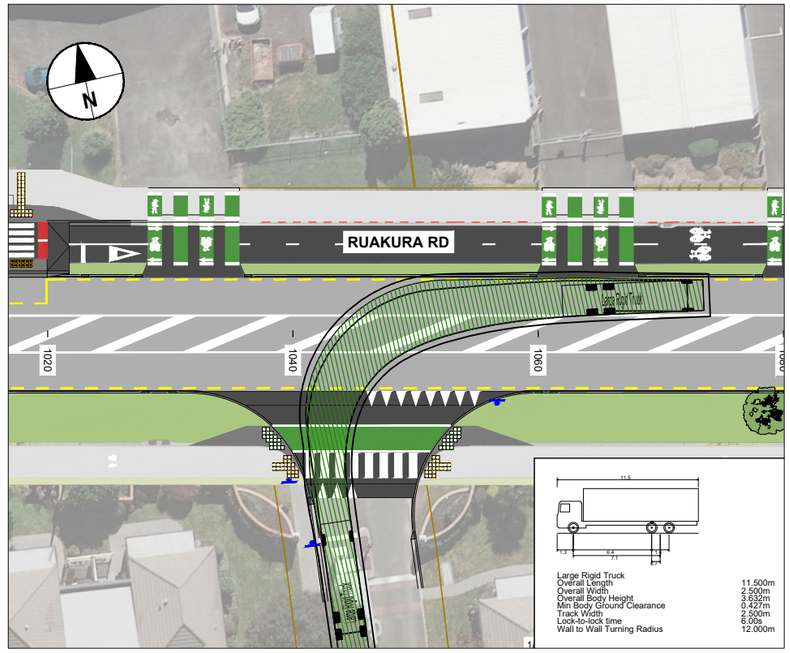
11.5m LARGE RIGID TRUCK - HILDA ROSS / RUAKURA RD #1

Scale 1:250m



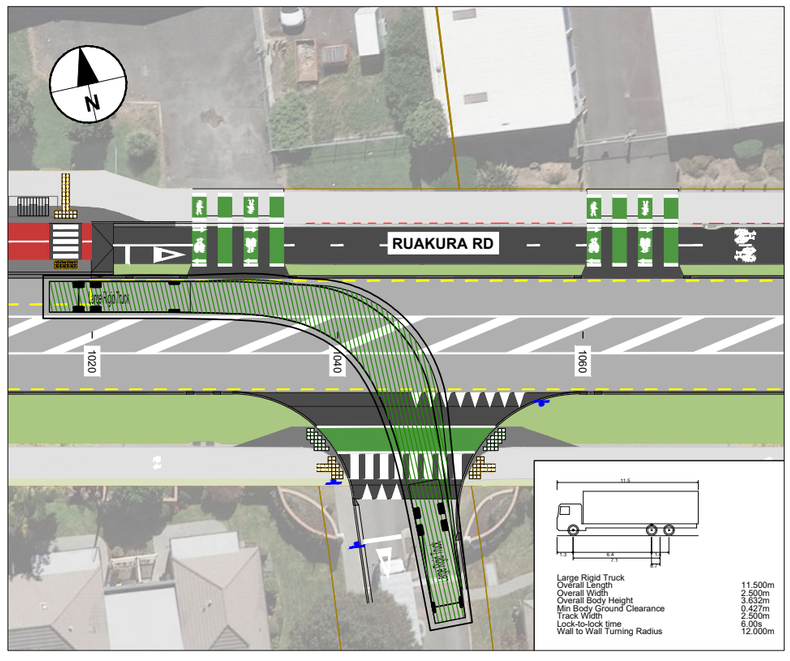
11.5m LARGE RIGID TRUCK - RUAKURA RD / HILDA ROSS #1

Scale 1:250m



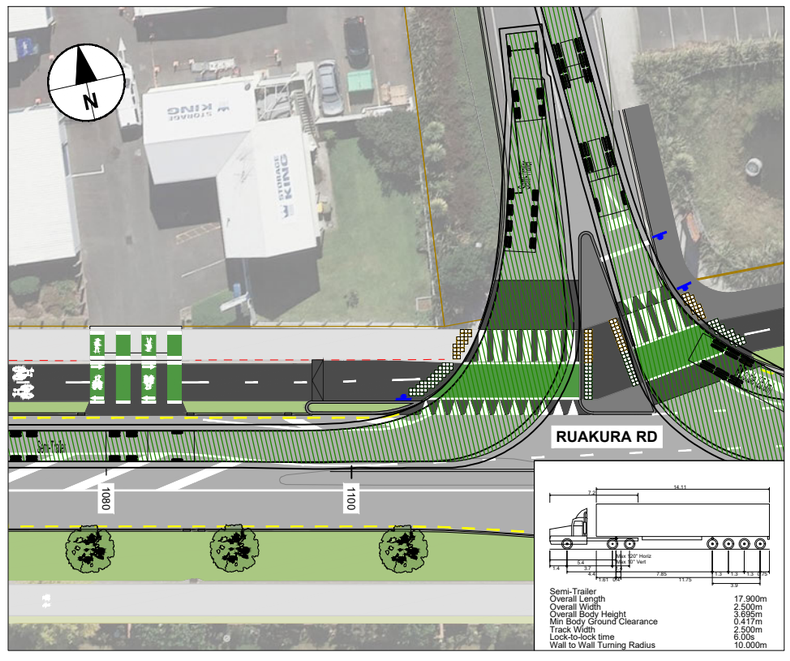
11.5m LARGE RIGID TRUCK - HILDA ROSS / RUAKURA RD #2

Scale 1:250m



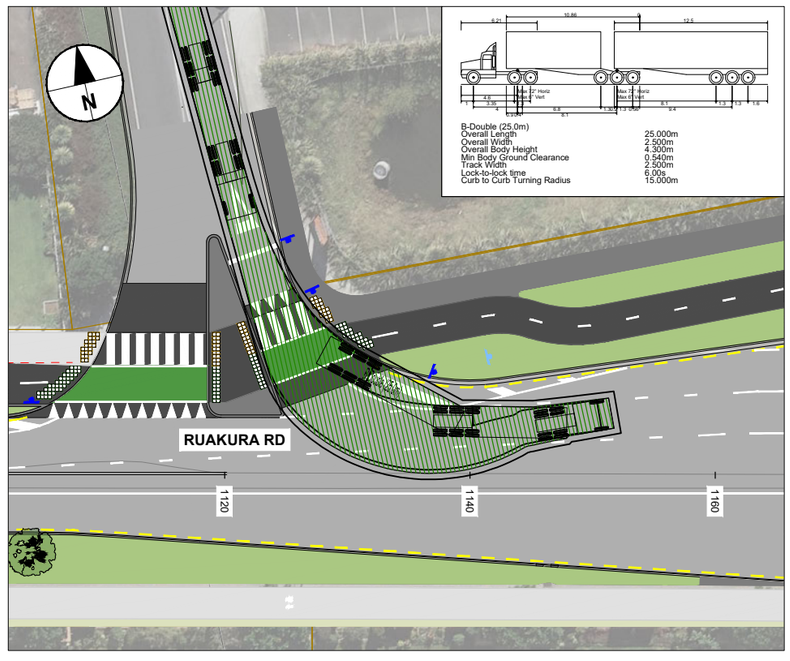
11.5m LARGE RIGID TRUCK - RUAKURA RD / HILDA ROSS #2

Scale 1:250m



17.9m SEMI-TRAILER - RUAKURA RD / MITRE 10 ENTRANCE

Scale 1:250m



25.0m B-DOUBLE - MITRE 10 EXIT / RUAKURA RD

Scale 1:250m

Last saved by: SCHUBELD(2024-03-07) Last Plotted: 2024-04-18
Filename: C:\PWWORKING\AECOM_DS12_AU\DANIEL.SCHUBEL@AECOM.COM\D033096976\60687064-SHT-VT-8107.DWG

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AECOM

CONSULTANT

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NZ.B.N 9429032091335
www.aecom.com

PROJECT

EP School Link
Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6.25 12.5 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

E	12.04.24	100% DETAILED DESIGN
D	15.03.24	UPDATED DETAILED DESIGN
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B	12.07.23	FOR INFORMATION
A	14.06.23	FOR INFORMATION
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

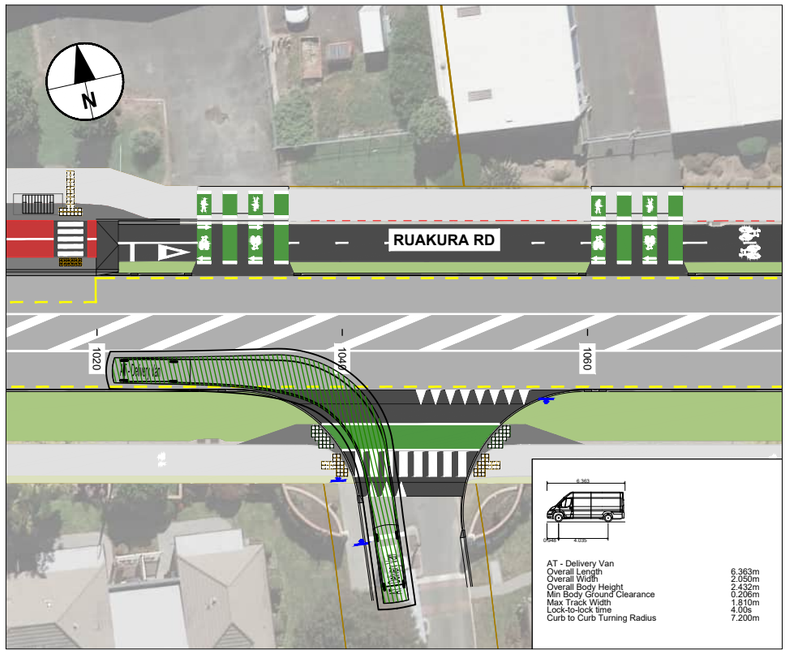
SHEET TITLE

TARSI
VEHICLE TRACKING PLAN
SHEET 7

SHEET NUMBER

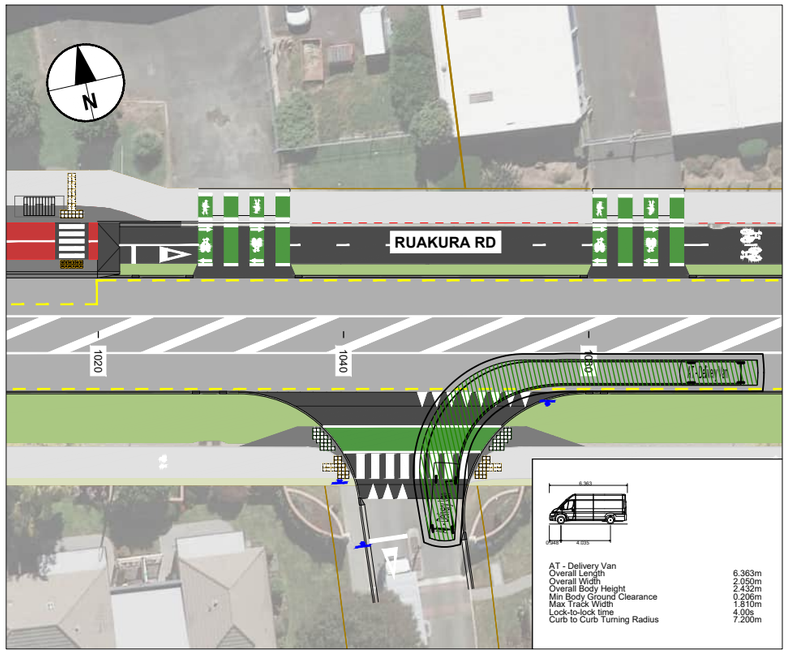
60687064-SHT-VT-8107

ISO A1 594mm x 841mm



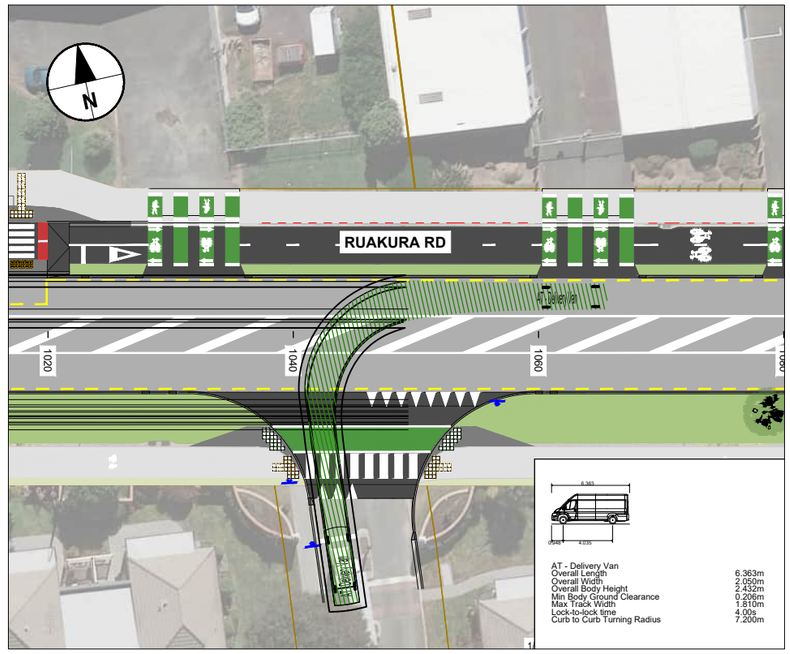
A.T. DELIVERY VAN - HILDA ROSS / RUAKURA RD #1

Scale 1:250m



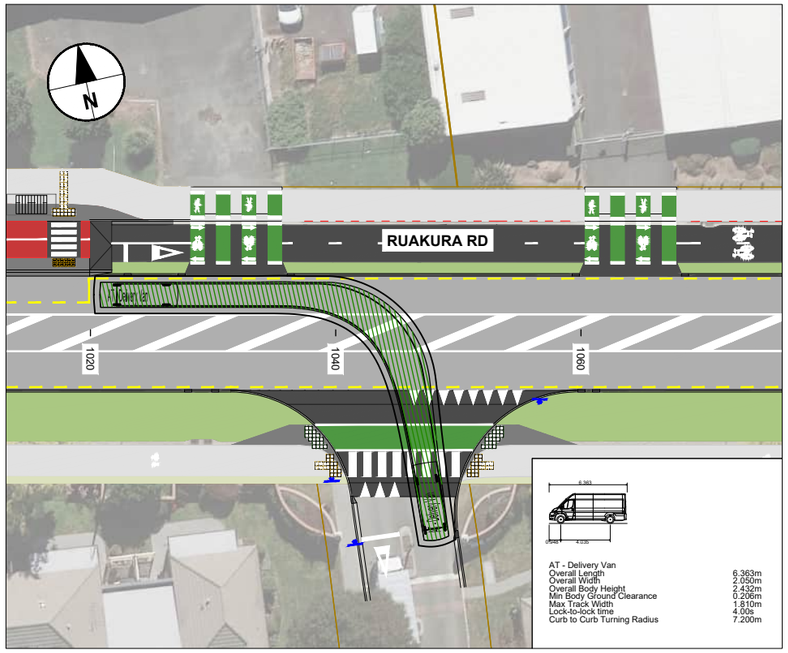
A.T. DELIVERY VAN - RUAKURA RD / HILDA ROSS #1

Scale 1:250m



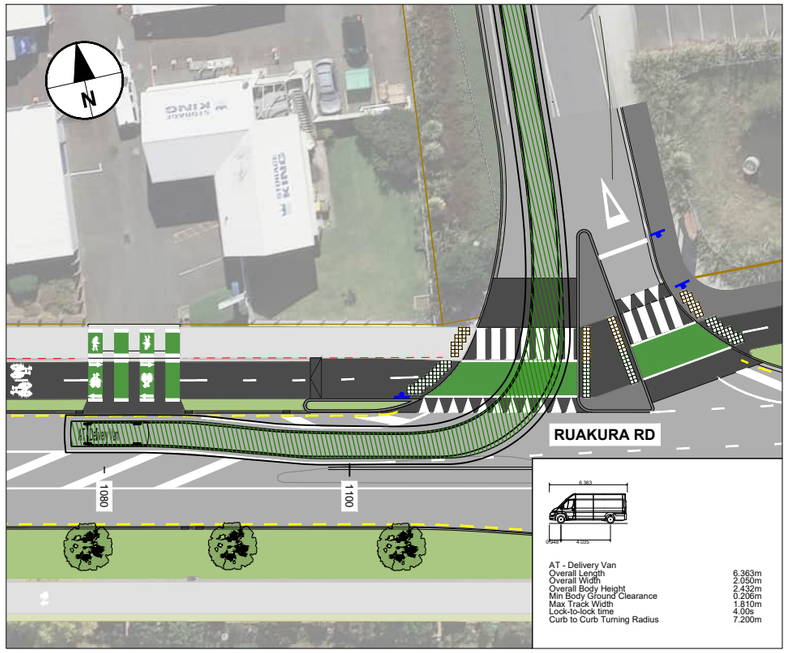
A.T. DELIVERY VAN - HILDA ROSS / RUAKURA RD #2

Scale 1:250m



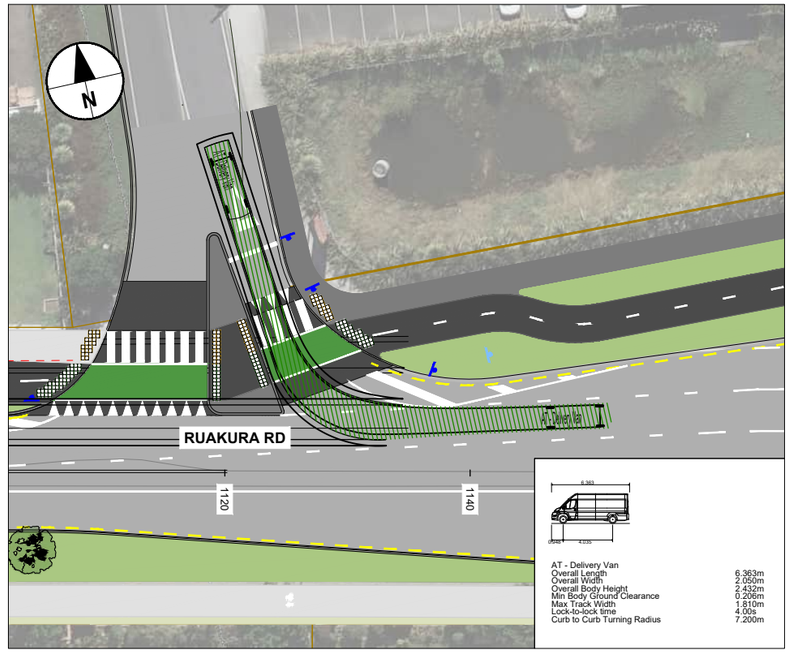
A.T. DELIVERY VAN - RUAKURA RD / HILDA ROSS #2

Scale 1:250m



A.T. DELIVERY VAN - RUAKURA RD / MITRE 10 ENTRANCE

Scale 1:250m



A.T. DELIVERY VAN - MITRE 10 EXIT / RUAKURA RD

Scale 1:250m

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CONSULTANT

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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6.25 12.5 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

E	12.04.24	100% DETAILED DESIGN
D	15.03.24	UPDATED DETAILED DESIGN
C	21.12.23	DETAILED DESIGN
B	12.07.23	FOR INFORMATION
A	14.06.23	FOR INFORMATION
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

SHEET TITLE

TARSI
VEHICLE TRACKING PLAN
SHEET 8

SHEET NUMBER

60687064-SHT-VT-8108

Last saved by: SCHUBEL (2024-03-07) Last Plotted: 2024-04-10
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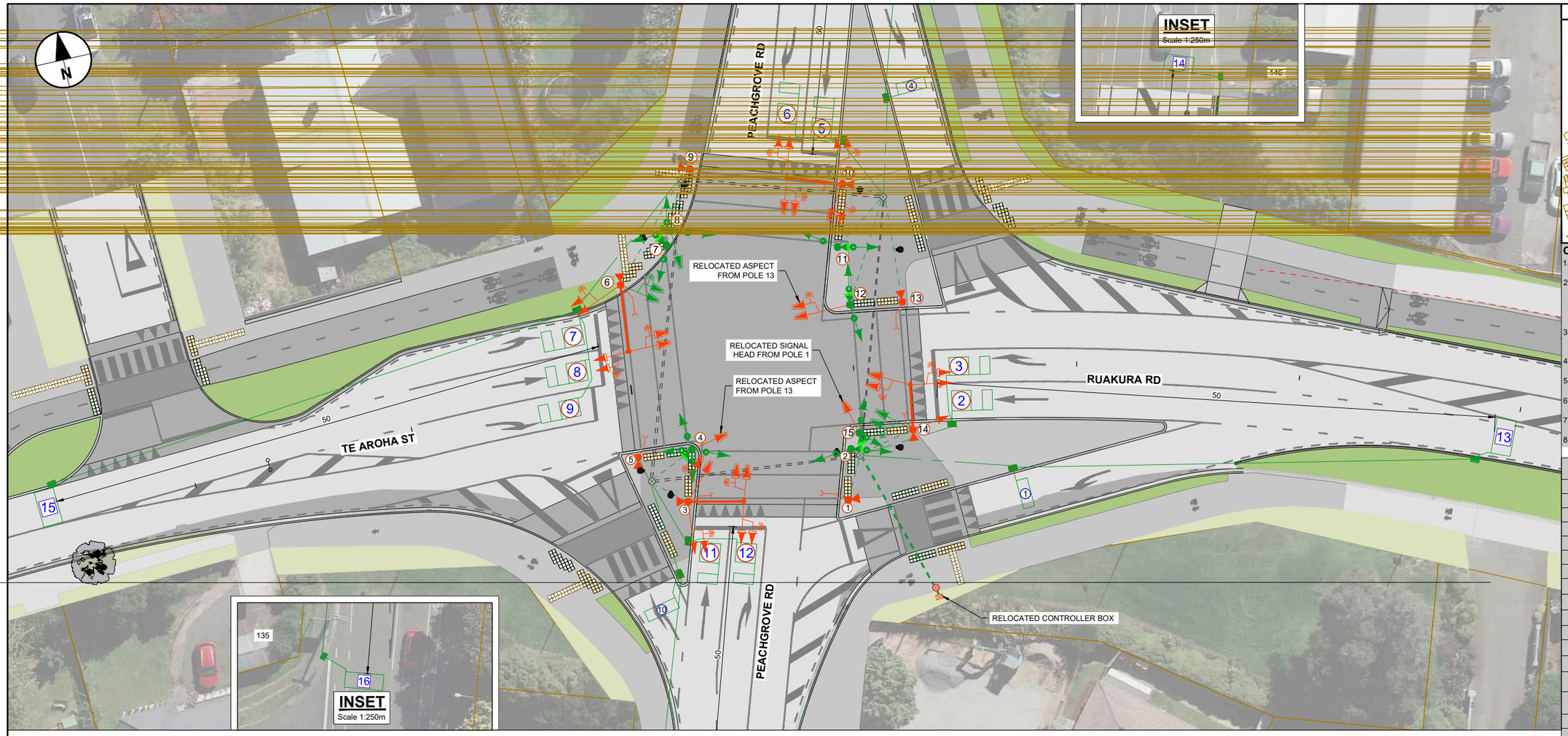
ISO A1 594mm x 841mm



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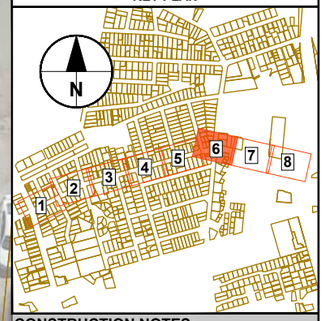


CONSTRUCTION NOTES:

1. POLE LOCATIONS TO BE CONFIRMED ON SITE BY COUNCIL'S ENGINEER PRIOR TO INSTALLATION.
2. ALL TRAFFIC SIGNAL EQUIPMENT TO BE IN ACCORDANCE WITH NATIONAL TRAFFIC SIGNAL SPECIFICATIONS P43 AND REGIONAL INFRASTRUCTURE TECHNICAL SPECIFICATIONS (RITS).
3. CONTRACTOR TO LIASE WITH SERVICE AUTHORITIES FOR LOCATION OF SERVICES BEFORE ANY EXCAVATION.
4. EXISTING LOOP DETECTORS AND JUNCTION BOXES SHOULD BE REMOVED.
5. ALL THE 100mm DUCTS BETWEEN POLES AND CHAMBERS WILL BE NEW.
6. ALL THE 50mm DUCTS BETWEEN KERB SIDE JUNCTION BOXES AND CHAMBERS SHOULD BE NEW.
7. ALL THE 36CORE CABLES AND FEEDER CABLES SHOULD BE NEW.
8. ALL THE CYCLE ASPECTS AND POLES ARE NEW.

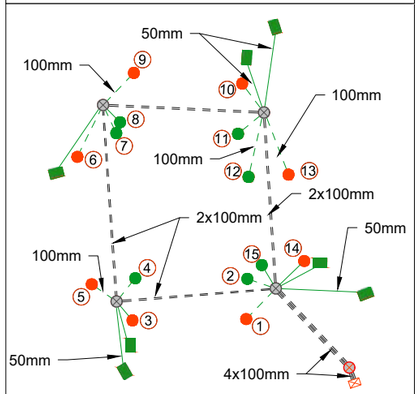
LEGEND: SIGNALS

	EXISTING SIGNAL HARDWARE
	NEW SIGNAL HARDWARE
	RELOCATED SIGNAL HARDWARE
	RELOCATED CONTROLLER
	SIGNAL DUCT CHAMBER
	RELOCATED SIGNAL DUCT CHAMBER
	EXISTING SIGNAL POLE
	SIGNAL POLE AND NUMBER
	PEDESTRIAN CALL BOX
	CYCLIST CALL BOX
	200mm ASPECT - OPEN VISOR
	200mm ASPECT - CLOSED VISOR
	300mm ASPECT
	3 ASPECT ARROW DISPLAY
	TWO COLUMN 6 ASPECT DISPLAY
	MAST ARM (5m)
	PEDESTRIAN ASPECT
	CYCLIST ASPECT
	INDUCTIVE LOOP DETECTOR AND NUMBER
	ADVANCE INDUCTIVE LOOP DETECTOR AND NUMBER
	KERB SIDE JUNCTION BOX
	100mm DUCT
	50mm DUCT
	NEW 36 CORE CABLE (36c)
	NEW LOOP FEEDER CABLE

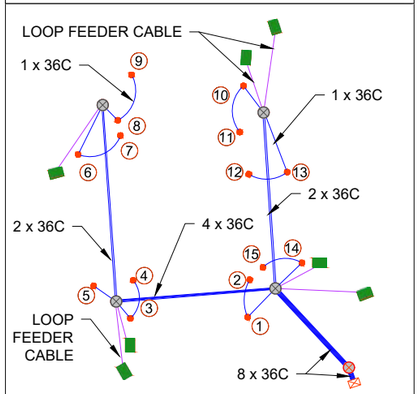
POLE DETAILS

POLE NO.	TYPES
1 (RELOCATED)	STANDARD POLE
2 (NEW)	STANDARD POLE
3 (RELOCATED)	MAST ARM TYPE POLE
4 (NEW)	STANDARD POLE
5 (RELOCATED)	STANDARD POLE
6 (RELOCATED)	MAST ARM TYPE POLE
7 (NEW)	STANDARD POLE
8 (NEW)	STANDARD POLE
9 (RELOCATED)	STANDARD POLE
10 (RELOCATED)	MAST ARM TYPE POLE
11 (NEW)	STANDARD POLE
12 (NEW)	STANDARD POLE
13 (RELOCATED)	STANDARD POLE
14 (RELOCATED)	MAST ARM TYPE POLE
15 (NEW)	STANDARD POLE

DUCTING DETAILS



SIGNAL CABLING DIAGRAM



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AECOM

CONSULTANT

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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 5 10 m
1:200

PROJECT MANAGEMENT INITIALS

SK	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

C	12.04.24	100% DETAILED DESIGN
B	15.03.24	UPDATED DETAILED DESIGN
A	21.12.23	DETAILED DESIGN
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

SHEET TITLE

TARSI
TRAFFIC SIGNAL PLAN
SHEET 3

SHEET NUMBER

60687064-SHT-TR-8101

ISO A1 (594mm x 841mm)

Last saved by: MANNINGB(2024-03-07) Last Plotted: 2024-04-10
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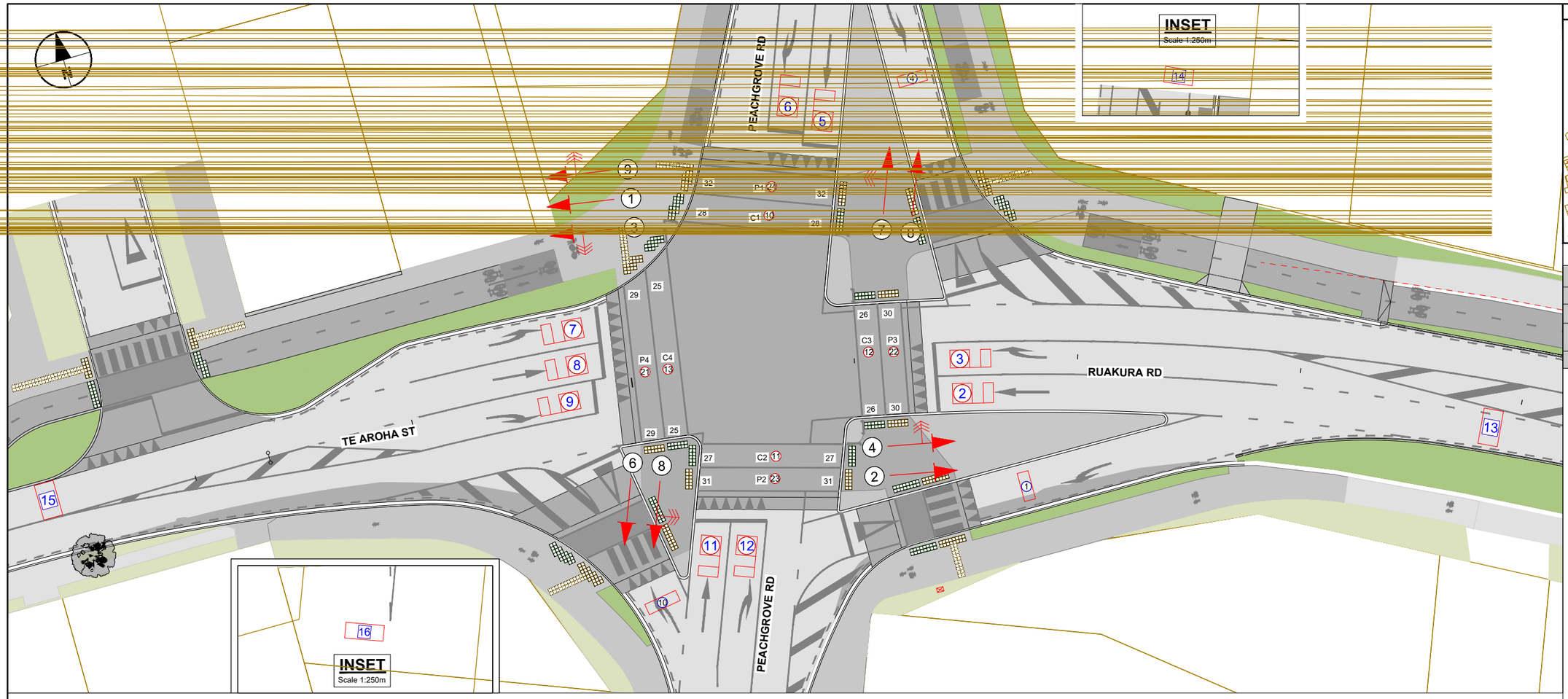
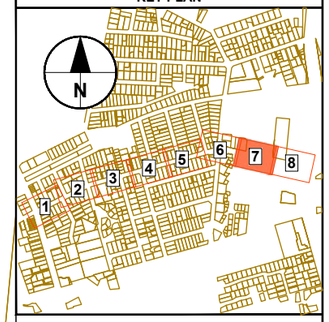


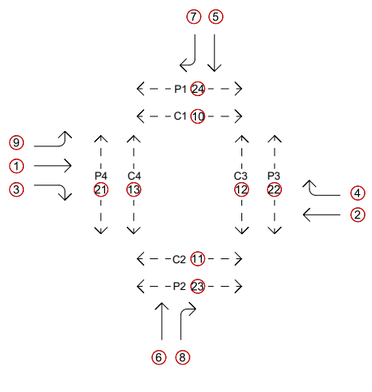
KEY PLAN



LEGEND: SIGNALS

⊠	ELV VC6 CONTROLLER
[#]	INDUCTIVE LOOP DETECTOR
[#]	ADVANCE INDUCTIVE LOOP DETECTOR AND NUMBER
24	PEDESTRIAN INPUT NUMBER

SIGNAL GROUPS



PHASE A	**PHASE D**	**PHASE E**	**PHASE G**
9 1 → 2 ← C2 11 → P2 23 →	7 ↓ 8	P4 C4 21 13 ↓ 6 5 ↓ C3 P3 12 22 ↓	3 ↓ 4 ←
PHASE B	**PHASE D1**	**PHASE F1 (XSF5)**	**PHASE G1**
P1 24 → C1 11 → 9 1 3 →	7 5 ↓ C3 P3 12 22 ↓	7 5 ↓ C3 P3 12 22 ↓	P1 24 → C1 10 → 9 1 3 →
PHASE C	**PHASE D2**	**PHASE F2(XSF2)**	**PHASE G2**
4 ← 2 ← C2 11 → P2 23 →	P4 C4 21 13 ↑ 6 8	P4 C4 21 13 ↑ 6 8	4 ← 2 ← C2 11 → P2 23 →

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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 2.4 4.8 m
1:100

PROJECT MANAGEMENT INITIALS

SK	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

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B	15.03.24	UPDATED DETAILED DESIGN
A	21.12.23	DETAILED DESIGN
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

SHEET TITLE

TARSI
TRAFFIC SIGNAL PLAN
SHEET 2

SHEET NUMBER

60687064-SHT-TR-8102

Last saved by: MANNINGB(2024-03-07) Last Plotted: 2024-04-10
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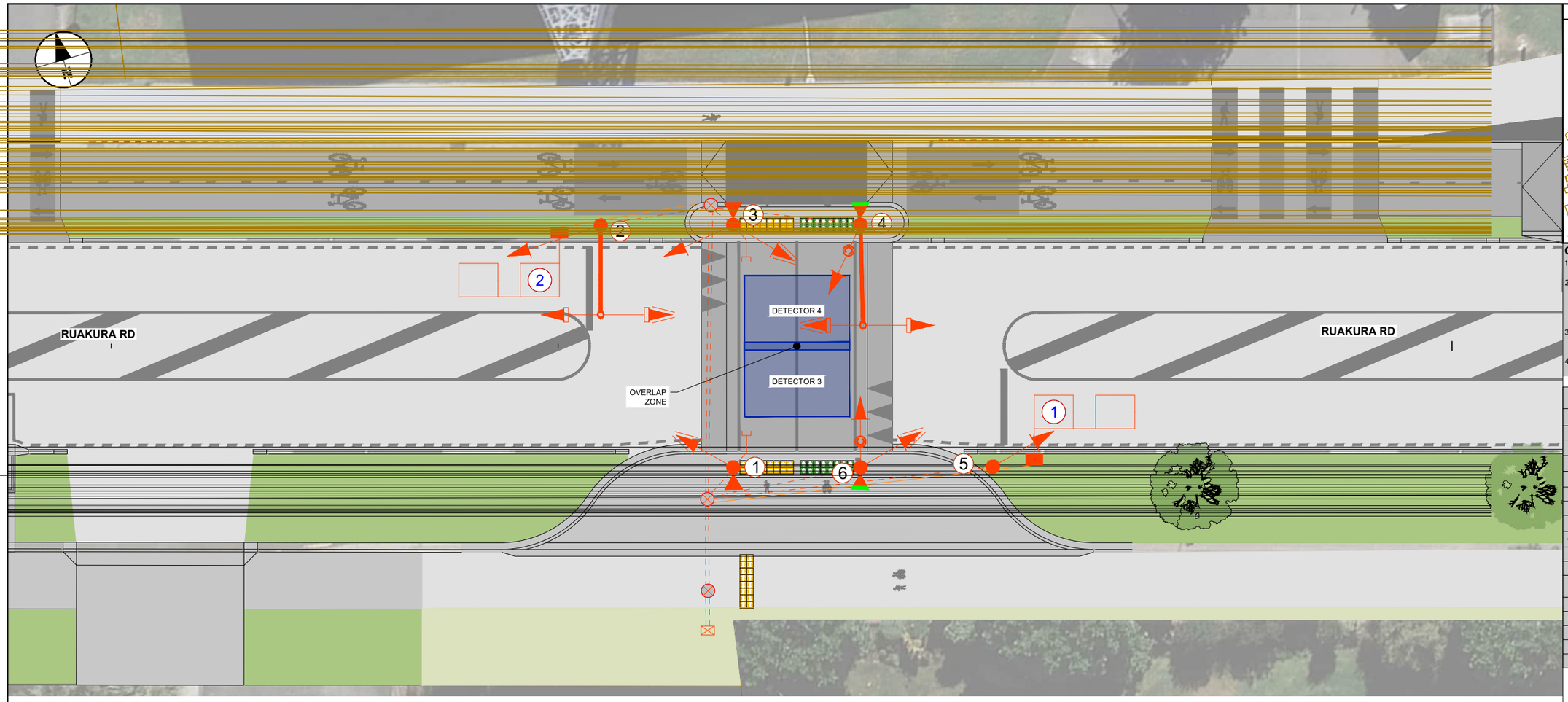
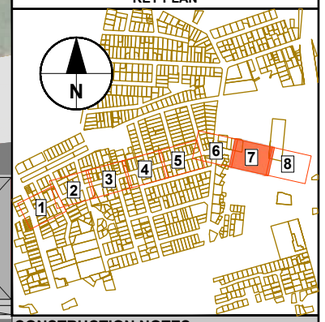
ISO A1 (594mm x 841mm



KEY PLAN



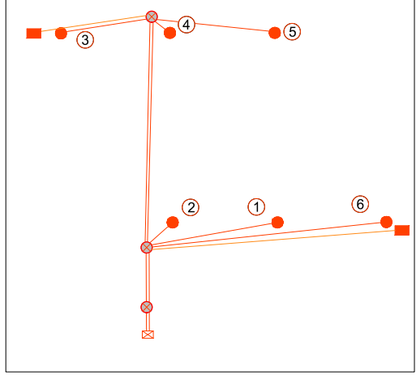
CONSTRUCTION NOTES:

1. POLE LOCATIONS TO BE CONFIRMED ON SITE BY COUNCIL'S ENGINEER PRIOR TO INSTALLATION.
2. ALL TRAFFIC SIGNAL EQUIPMENT TO BE IN ACCORDANCE WITH NATIONAL TRAFFIC SIGNAL SPECIFICATIONS P43 AND REGIONAL INFRASTRUCTURE TECHNICAL SPECIFICATIONS (RITS).
3. CONTRACTOR TO LIASE WITH SERVICE AUTHORITIES FOR LOCATION OF SERVICES BEFORE ANY EXCAVATION.
4. SECONDARY AND TERTIARY FAR SIDE DISPLAYS TO BE MOUNTED LOWER AT 2.5m ABOVE GROUND.

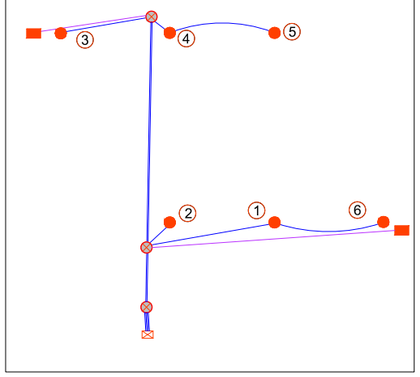
LEGEND: SIGNALS

	CONTROLLER
	SIGNAL DUCT CHAMBER
	PEDESTRIAN CALL BOX
	CYCLIST CALL BOX
	SIGNAL POLE AND NUMBER
	200mm ASPECT - OPEN VISOR
	200mm ASPECT - CLOSED VISOR
	300mm ASPECT
	MAST ARM (5m)
	PEDESTRIAN ASPECT
	CYCLIST ASPECT
	INDUCTIVE LOOP DETECTOR AND NUMBER
	KERB SIDE JUNCTION BOX
	100mm DUCT
	50mm DUCT
	36 CORE CABLE 36c
	LOOP FEEDER CABLE

DUCTING DETAILS



SIGNAL CABLING DIAGRAM



POLE DETAILS

POLE NO.	TYPES
1	FOLD DOWN TYPE POLE
2	MAST ARM TYPE POLE
3	FOLD DOWN TYPE POLE
4	MAST ARM TYPE POLE
5	FOLD DOWN TYPE POLE
6	FOLD DOWN TYPE POLE

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CONSULTANT

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NZ.B.N 9429032091335
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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 2.4 4.8 m
1:100

PROJECT MANAGEMENT INITIALS

SK	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

C	12.04.24	100% DETAILED DESIGN
B	15.03.24	UPDATED DETAILED DESIGN
A	21.12.23	DETAILED DESIGN
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

SHEET TITLE

TARSI
TRAFFIC SIGNAL PLAN
SHEET 3

SHEET NUMBER

60687064-SHT-TR-8103

ISO A1 (594mm x 841mm
Last saved by: ARAMBULOEV(2024-04-08) Last Plotted: 2024-04-10
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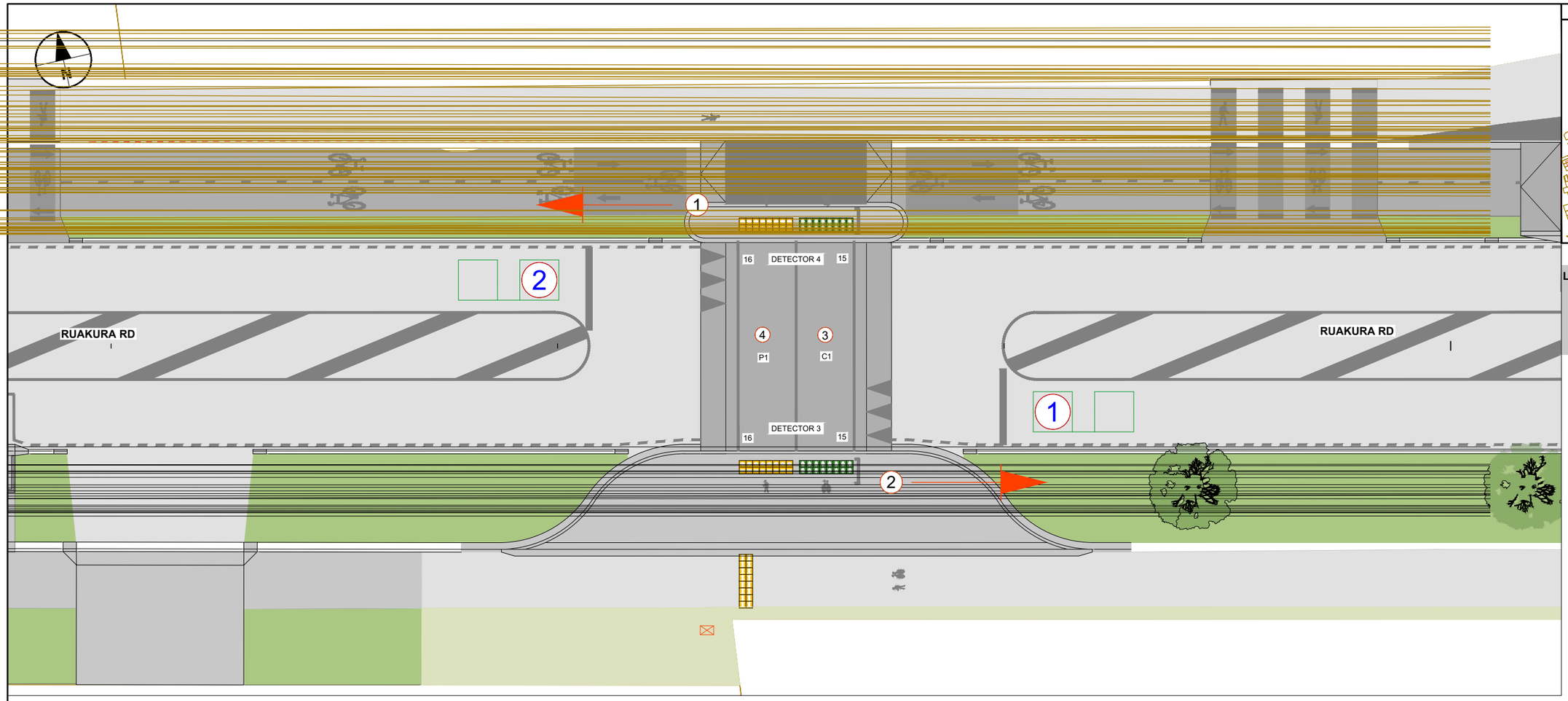
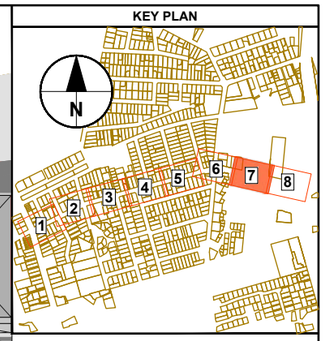
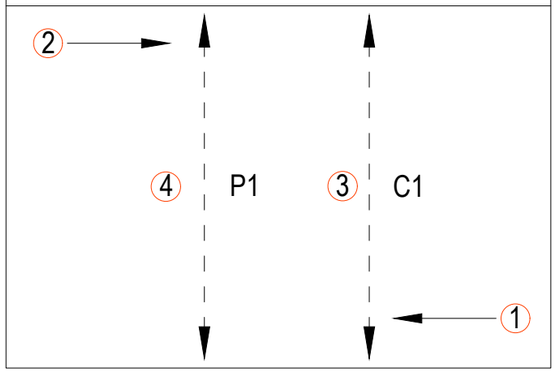




LEGEND

- ELV VC6 CONTROLLER
- INDUCTIVE LOOP DETECTOR
- 16 PEDESTRIAN INPUT NUMBER
- 15 CYCLE INPUT NUMBER

SIGNAL GROUPS



SIGNAL PHASING

PHASE A	PHASE B
2 → ← 1	4 P1 3 C1

1. PHASE SEQUENCE A,B

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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 2.4 4.8 m
1:100

PROJECT MANAGEMENT INITIALS

SK	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

C	12.04.24	100% DETAILED DESIGN
B	15.03.24	UPDATED DETAILED DESIGN
A	21.12.23	DETAILED DESIGN
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

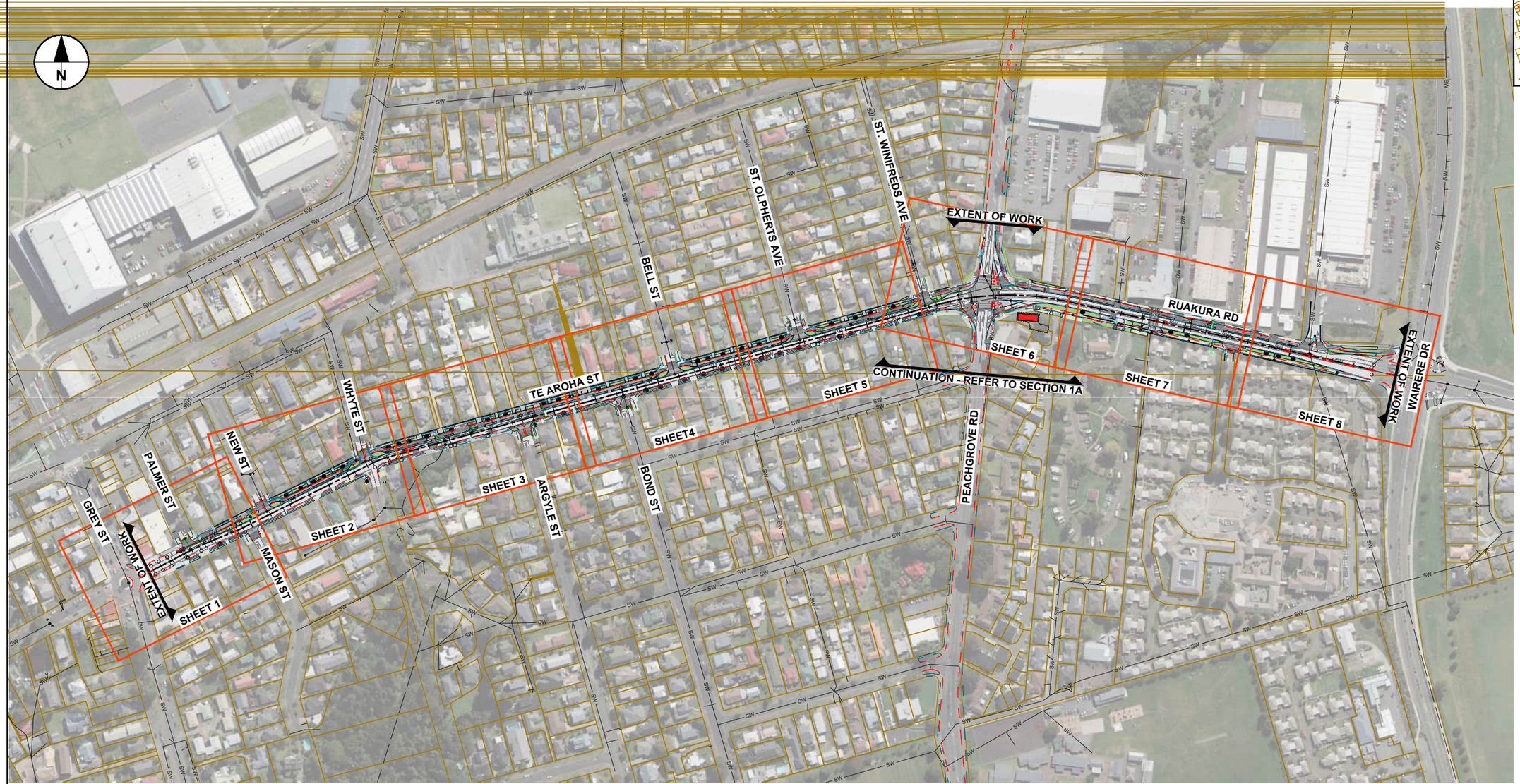
SHEET TITLE

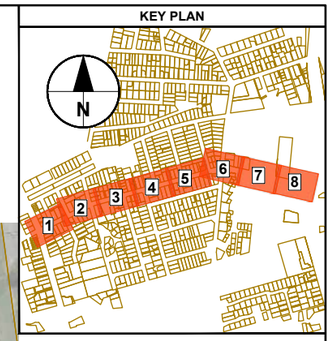
TARSI
TRAFFIC SIGNAL PLAN
SHEET 4

SHEET NUMBER

60687064-SHT-TR-8104

ISO A1 594mm x 841mm





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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 48 96 m
1:2000

PROJECT MANAGEMENT INITIALS

BA	IH	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

C	12.04.24	100% DETAILED DESIGN
B	15.03.24	UPDATED DETAILED DESIGN
A	21.12.23	DETAILED DESIGN
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

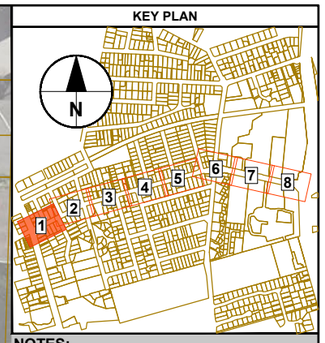
SHEET TITLE

TARSI
STORM WATER LAYOUT PLAN OVERVIEW

SHEET NUMBER

60687064-SHT-SW-8100

ISO A1 594mm x 841mm



NOTES:

1. ALL STORMWATER CONSTRUCTION WILL BE IN ACCORDANCE WITH REGIONAL INFRASTRUCTURE TECHNICAL SPECIFICATIONS (RITS) SECTION 4.
2. MANHOLES TO BE BUILT ACCORDING TO RITS STANDARD DETAILS (DRAWING 4-28 AND DRAWING 4-29).
3. ALL CATCHPITS IN THE ROAD KERB ARE TO BUILT ACCORDING TO RITS STANDARD DETAILS DRAWING 4-16: BACK ENTRY CATCHPIT. CAST IRON GRATE TO BE CYCLE FRIENDLY (PERPENDICULAR).
4. ALL CATCHPITS OUTSIDE THE ROAD KERB ARE TO BUILT ACCORDING TO RITS STANDARD DETAILS DRAWING 4-18: VERTICAL ENTRY CATCHPIT. CAST IRON GRATE TO BE CYCLE FRIENDLY (PERPENDICULAR).
5. CONTRACTOR TO VERIFY THE ACTUAL LEVELS AND LOCATIONS OF EXISTING SERVICES ON SITE AND MAKE NECESSARY ADJUSTMENT TO AVOID CLASHES WITH PROPOSED STORM WATER PIPES, MANHOLES AND CATCHPITS.
6. ALL SUBSOIL DRAINAGE FOR KERB AND CHANNEL ARE TO BE BUILT IN ACCORDANCE TO RITS STANDARD DETAILS DRAWING 3-21.
7. ALL INVERT LEVELS SPECIFIED IN THE DRAWINGS MUST BE VERIFIED BY THE CONTRACTOR AT SITE PRIOR TO CONSTRUCTION TO ENSURE FEASIBILITY OF CONNECTIONS TO THE EXISTING NETWORK IN THE ABSENCE OF SURVEY AND GIS INVERT LEVEL INFORMATION AT THIS STAGE. CONTRACTOR MUST MAKE NECESSARY ADJUSTMENTS ON THE SPECIFIED INVERT LEVELS TO SUIT ACTUAL SITE CONDITION.

LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB
- NEW KERB
- EXISTING ASPHALT
- NEW ASPHALT
- NEW CONCRETE
- NEW BERM
- NEW BUS SHELTER
- NEW VEHICLE CROSSING
- TREE
- TRAFFIC LIGHT
- NEW / EXISTING SIGN
- EXISTING STORMWATER PIPE
- EXISTING STORMWATER PIPE TO BE DEMOLISHED
- NEW STORMWATER PIPE
- NEW SUBSOIL DRAINAGE PIPE
- NEW VEE CHANNEL
- EXISTING STORMWATER CATCHPIT
- EXISTING STORMWATER CATCHPIT TO BE RELOCATED
- RELOCATED STORMWATER CATCHPIT
- NEW STORMWATER CYCLE FRIENDLY CATCHPIT
- EXISTING STORMWATER MANHOLE
- NEW STORMWATER MANHOLE
- HIGH POINT
- LOW POINT

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CONSULTANT

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NZ.B.N 9429032091335
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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6 12 m
1:250

PROJECT MANAGEMENT INITIALS

BA	IH	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

I/R	DATE	DESCRIPTION
E	12.04.24	100% DETAILED DESIGN
E	15.03.24	UPDATED DETAILED DESIGN
D	21.12.23	DETAILED DESIGN
C	25.07.23	FOR INFORMATION
B	12.07.23	FOR INFORMATION
A	14.06.23	FOR INFORMATION

PROJECT NUMBER

60687064

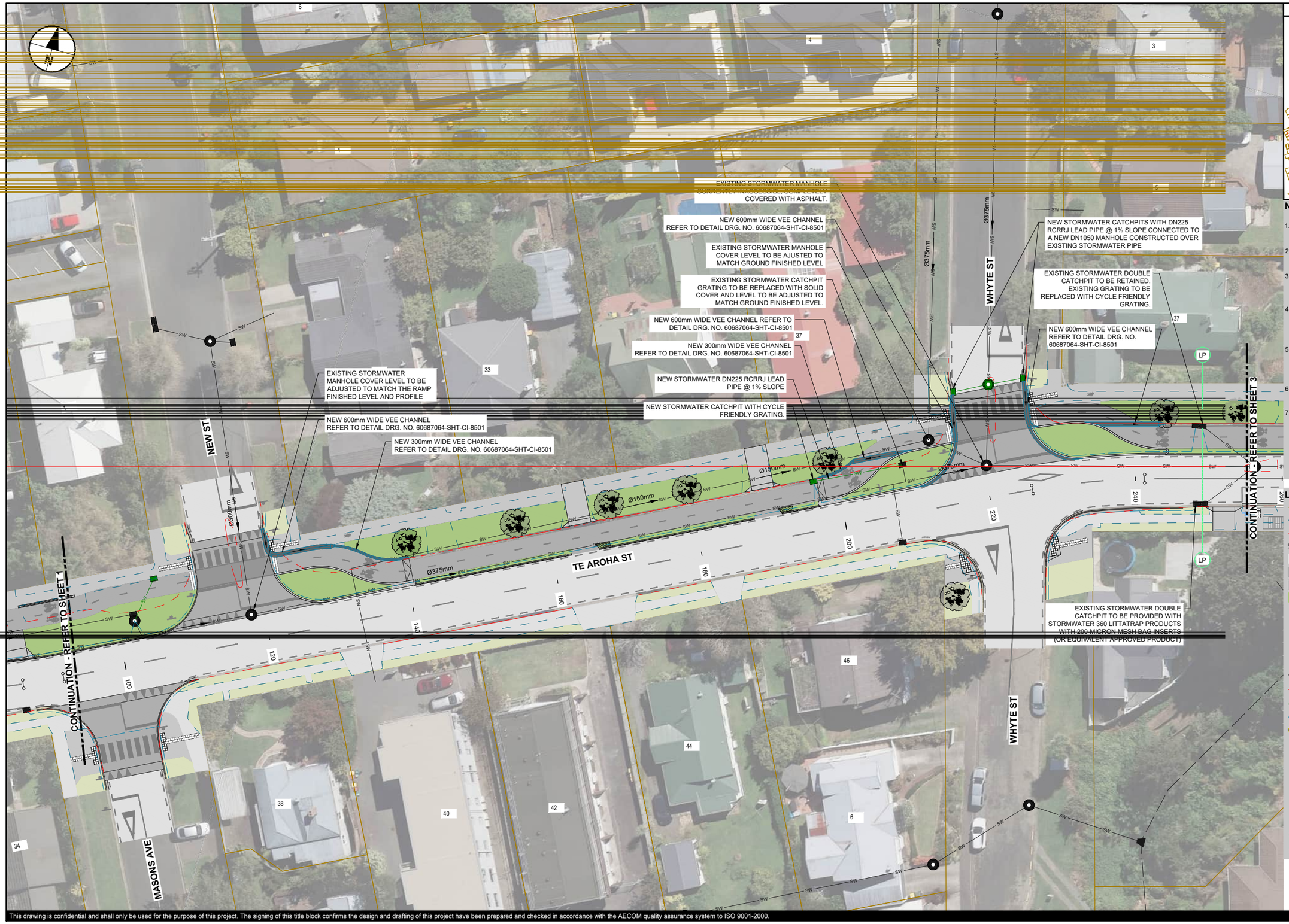
SHEET TITLE

TARSI
STORM WATER LAYOUT PLAN
SHEET 1

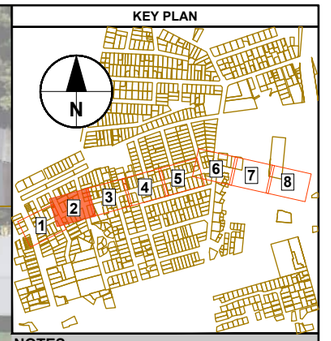
SHEET NUMBER

60687064-SHT-SW-8101

ISO A1 (594mm x 841mm)



KEY PLAN



NOTES:

1. ALL STORMWATER CONSTRUCTION WILL BE IN ACCORDANCE WITH REGIONAL INFRASTRUCTURE TECHNICAL SPECIFICATIONS (RITS) SECTION 4.
2. MANHOLES TO BE BUILT ACCORDING TO RITS STANDARD DETAILS (DRAWING 4-28 AND DRAWING 4-29).
3. ALL CATCHPITS IN THE ROAD KERB ARE TO BUILT ACCORDING TO RITS STANDARD DETAILS DRAWING 4-16: BACK ENTRY CATCHPIT. CAST IRON GRATE TO BE CYCLE FRIENDLY (PERPENDICULAR).
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5. CONTRACTOR TO VERIFY THE ACTUAL LEVELS AND LOCATIONS OF EXISTING SERVICES ON SITE AND MAKE NECESSARY ADJUSTMENT TO AVOID CLASHES WITH PROPOSED STORM WATER PIPES, MANHOLES AND CATCHPITS.
6. ALL SUBSOIL DRAINAGE FOR KERB AND CHANNEL ARE TO BE BUILT IN ACCORDANCE TO RITS STANDARD DETAILS DRAWING 3-21.
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LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB
- NEW KERB
- EXISTING ASPHALT
- NEW ASPHALT
- NEW CONCRETE
- NEW BERM
- NEW BUS SHELTER
- NEW VEHICLE CROSSING
- TREE
- TRAFFIC LIGHT
- NEW / EXISTING SIGN
- EXISTING STORMWATER PIPE
- EXISTING STORMWATER PIPE TO BE DEMOLISHED
- NEW STORMWATER PIPE
- NEW SUBSOIL DRAINAGE PIPE
- NEW VEE CHANNEL
- EXISTING STORMWATER CATCHPIT
- EXISTING STORMWATER CATCHPIT TO BE RELOCATED
- RELOCATED STORMWATER CATCHPIT
- NEW STORMWATER CYCLE FRIENDLY CATCHPIT
- EXISTING STORMWATER MANHOLE
- NEW STORMWATER MANHOLE
- HIGH POINT
- LOW POINT

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Last saved by: MANNINGR(2024-03-11) Last Plotted: 2024-04-10
Filename: C:\PWWORKING\AECOM_DS12_AU\ERIC.ARAMBULO@AECOM.COM\D0330697\60687064-SHT-SW-8102.DWG

AECOM

CONSULTANT

AECOM New Zealand Ltd
NZ.B.N 9429032091335
www.aecom.com

PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6 12 m
1:250

PROJECT MANAGEMENT INITIALS

BA	IH	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

F	12.04.24	100% DETAILED DESIGN
E	15.03.24	UPDATED DETAILED DESIGN
D	21.12.23	DETAILED DESIGN
C	25.07.23	FOR SUBMISSION
B	12.07.23	FOR SUBMISSION
A	14.06.23	FOR SUBMISSION
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

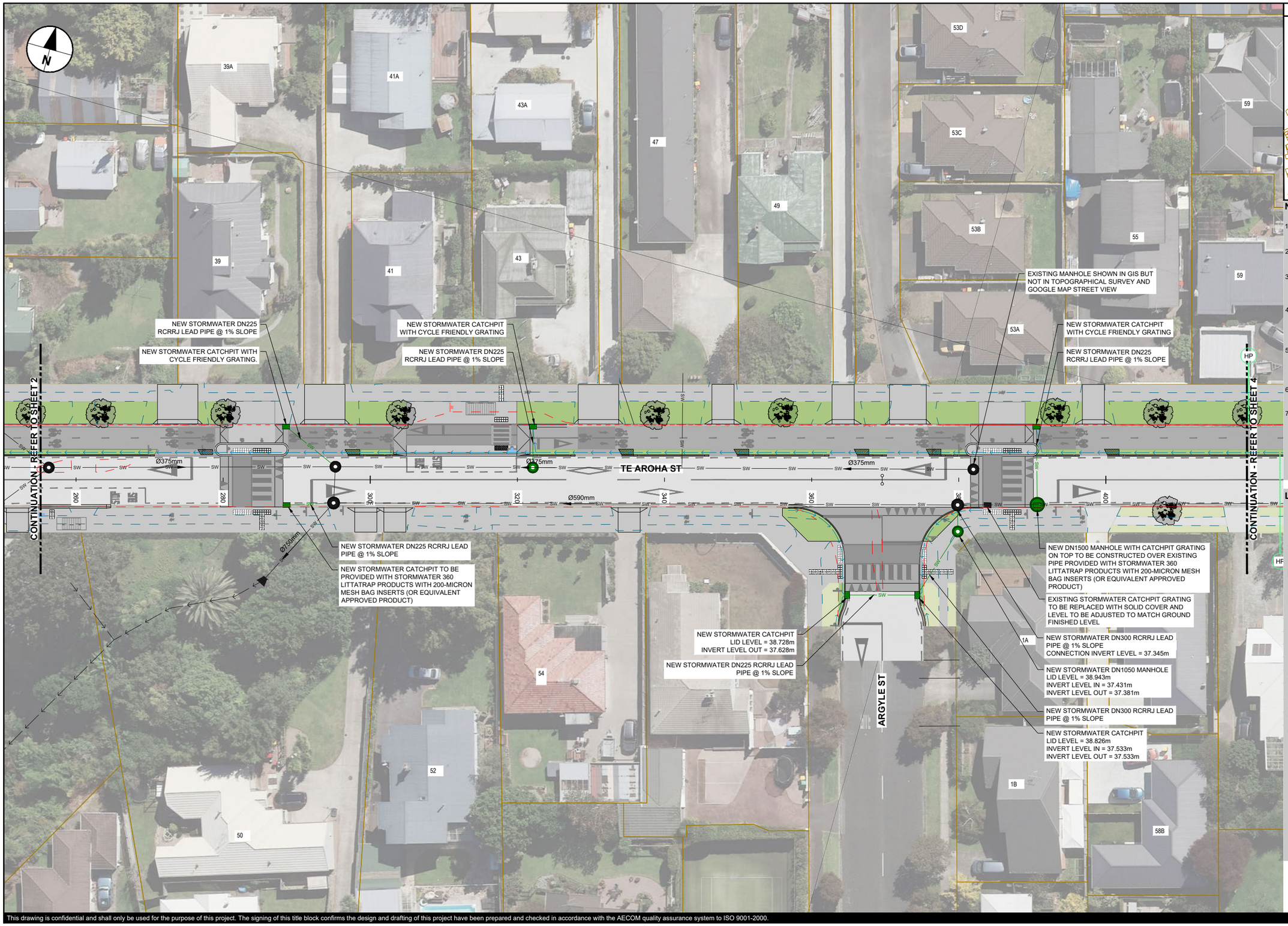
SHEET TITLE

TARSI
STORM WATER LAYOUT PLAN
SHEET 2

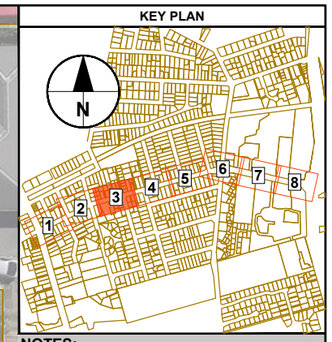
SHEET NUMBER

60687064-SHT-SW-8102

ISO A1 594mm x 841mm



KEY PLAN



NOTES:

1. ALL STORMWATER CONSTRUCTION WILL BE IN ACCORDANCE WITH REGIONAL INFRASTRUCTURE TECHNICAL SPECIFICATIONS (RITS) SECTION 4.
2. MANHOLES TO BE BUILT ACCORDING TO RITS STANDARD DETAILS (DRAWING 4-28 AND DRAWING 4-29).
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LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB
- NEW KERB
- EXISTING ASPHALT
- NEW ASPHALT
- NEW CONCRETE
- NEW BERM
- NEW BUS SHELTER
- NEW VEHICLE CROSSING
- TREE
- TRAFFIC LIGHT
- NEW / EXISTING SIGN
- SW — EXISTING STORMWATER PIPE
- SW — EXISTING STORMWATER PIPE TO BE DEMOLISHED
- SW — NEW STORMWATER PIPE
- NEW SUBSOIL DRAINAGE PIPE
- NEW VEE CHANNEL
- EXISTING STORMWATER CATCHPIT
- EXISTING STORMWATER CATCHPIT TO BE RELOCATED
- RELOCATED STORMWATER CATCHPIT
- NEW STORMWATER CYCLE FRIENDLY CATCHPIT
- EXISTING STORMWATER MANHOLE
- NEW STORMWATER MANHOLE
- HP — HP HIGH POINT
- LP — LP LOW POINT

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AECOM

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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6 12 m
1:250

PROJECT MANAGEMENT INITIALS

BA	IH	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

E	12.04.24	100% DETAILED DESIGN
D	15.03.24	UPDATED DETAILED DESIGN
C	21.12.23	DETAILED DESIGN
B	12.07.23	FOR INFORMATION
A	14.06.23	FOR INFORMATION
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

SHEET TITLE

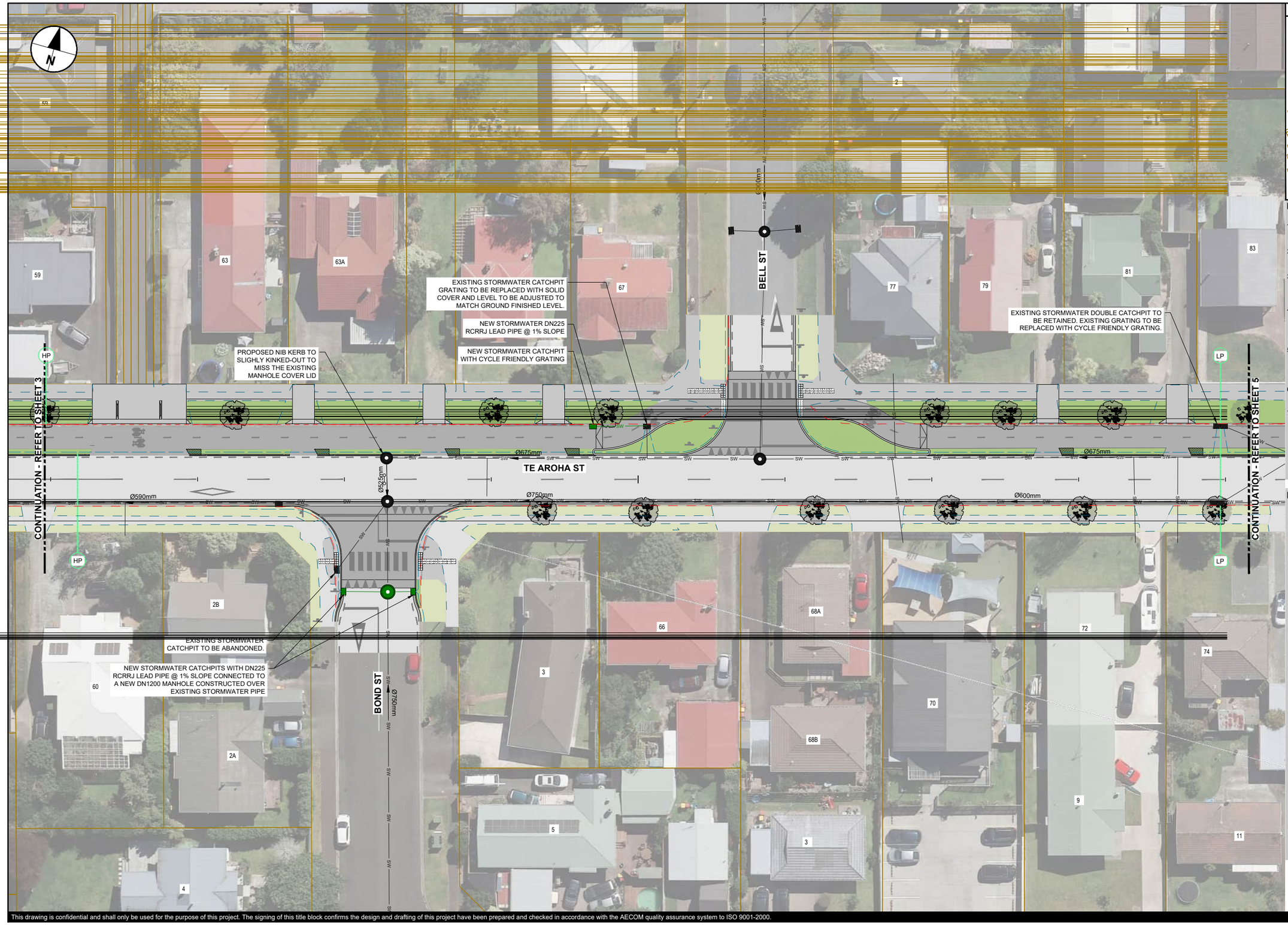
TARSI
STORM WATER LAYOUT PLAN
SHEET 3

SHEET NUMBER

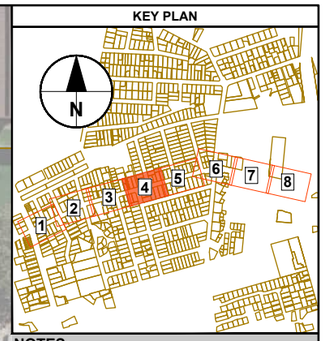
60687064-SHT-SW-8103

Last saved by: MANNINGR(2024-03-11) Last Plotted: 2024-04-18
Filename: C:\PWWORKING\AECOM_DS12_AU\DANIEL.SCHUBEL@AECOM.COM\D0330697\60687064-SHT-SW-8103.DWG

ISO A1 594mm x 841mm



KEY PLAN



NOTES:

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LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB
- NEW KERB
- EXISTING ASPHALT
- NEW ASPHALT
- NEW CONCRETE
- NEW BERM
- NEW BUS SHELTER
- NEW VEHICLE CROSSING
- TREE
- TRAFFIC LIGHT
- NEW / EXISTING SIGN
- EXISTING STORMWATER PIPE
- EXISTING STORMWATER PIPE TO BE DEMOLISHED
- NEW STORMWATER PIPE
- NEW SUBSOIL DRAINAGE PIPE
- NEW VEE CHANNEL
- EXISTING STORMWATER CATCHPIT
- EXISTING STORMWATER CATCHPIT TO BE RELOCATED
- RELOCATED STORMWATER CATCHPIT
- NEW STORMWATER CYCLE FRIENDLY CATCHPIT
- EXISTING STORMWATER MANHOLE
- NEW STORMWATER MANHOLE
- HIGH POINT
- LOW POINT

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AECOM

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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6.25 12.5 m
1:250

PROJECT MANAGEMENT INITIALS

BA	IH	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

E	12.04.24	100% DETAILED DESIGN
D	15.03.24	UPDATED DETAILED DESIGN
C	21.12.23	DETAILED DESIGN
B	12.07.23	FOR SUBMISSION
A	14.06.23	FOR SUBMISSION
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

SHEET TITLE

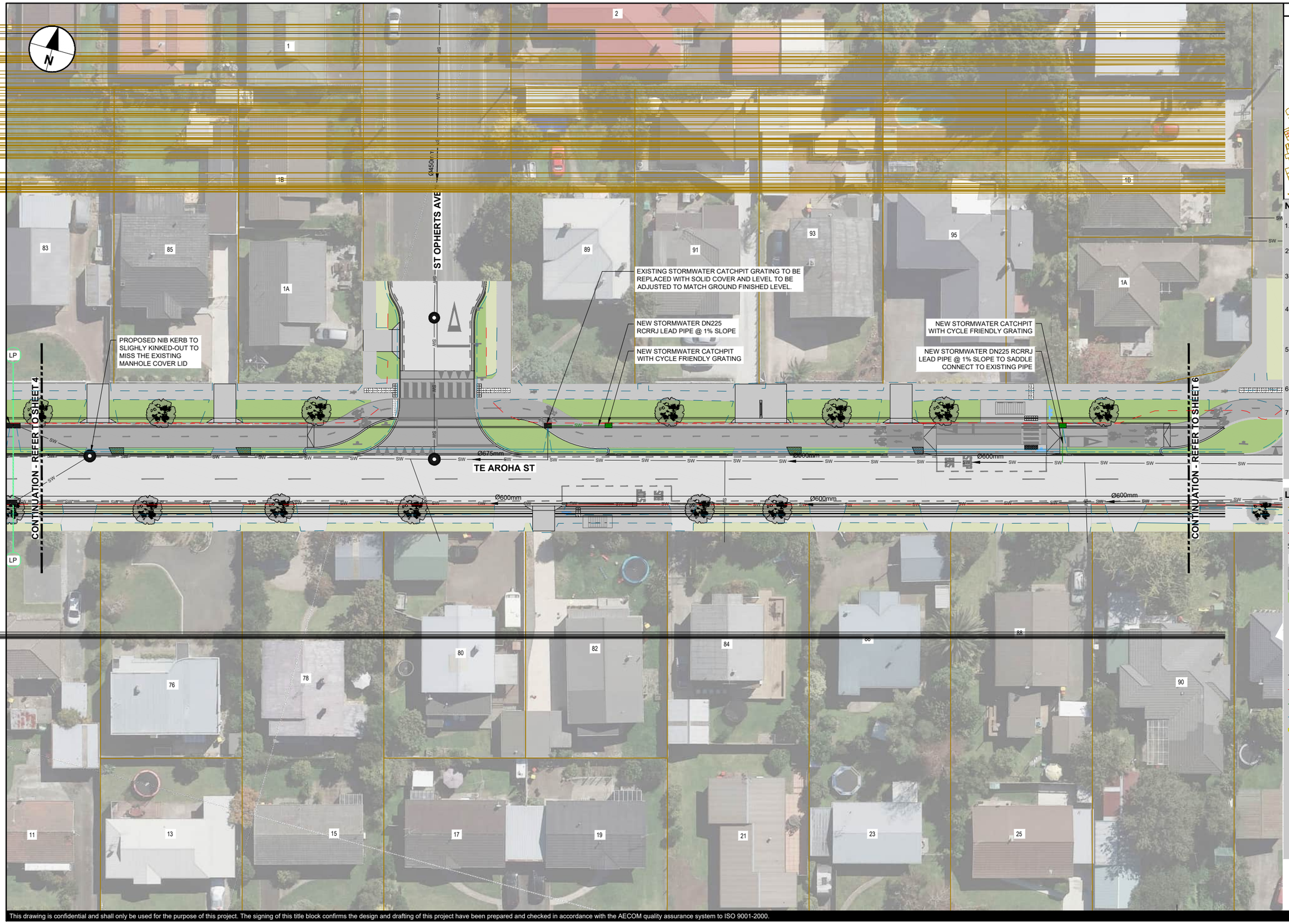
TARSI
STORM WATER LAYOUT PLAN
SHEET 4

SHEET NUMBER

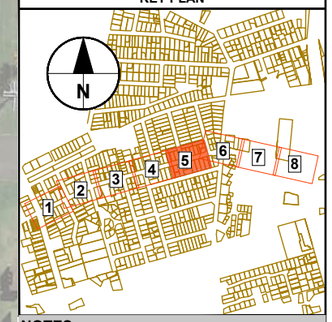
60687064-SHT-SW-8104

Last saved by: MANNINGR(2024-03-11) Last Plotted: 2024-04-10
Filename: C:\PWWORKING\AECOM_DS12_AU\ERIC.ARAMBULO@AECOM.COM\D0330697\60687064-SHT-SW-8104.DWG

ISO A1 594mm x 841mm



KEY PLAN



NOTES:

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LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB
- NEW KERB
- EXISTING ASPHALT
- NEW ASPHALT
- NEW CONCRETE
- NEW BERM
- NEW BUS SHELTER
- NEW VEHICLE CROSSING
- TREE
- TRAFFIC LIGHT
- NEW / EXISTING SIGN
- EXISTING STORMWATER PIPE
- EXISTING STORMWATER PIPE TO BE DEMOLISHED
- NEW STORMWATER PIPE
- NEW SUBSOIL DRAINAGE PIPE
- NEW VEE CHANNEL
- EXISTING STORMWATER CATCHPIT
- EXISTING STORMWATER CATCHPIT TO BE RELOCATED
- RELOCATED STORMWATER CATCHPIT
- NEW STORMWATER CYCLE FRIENDLY CATCHPIT
- EXISTING STORMWATER MANHOLE
- NEW STORMWATER MANHOLE
- HIGH POINT
- LOW POINT

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www.aecom.com

PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6 12 m
1:250

PROJECT MANAGEMENT INITIALS

BA	IH	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

I/R	DATE	DESCRIPTION
D	12.04.24	100% DETAILED DESIGN
C	15.03.24	DETAILED DESIGN
B	12.07.23	FOR INFORMATION
A	14.06.23	FOR INFORMATION

PROJECT NUMBER

60687064

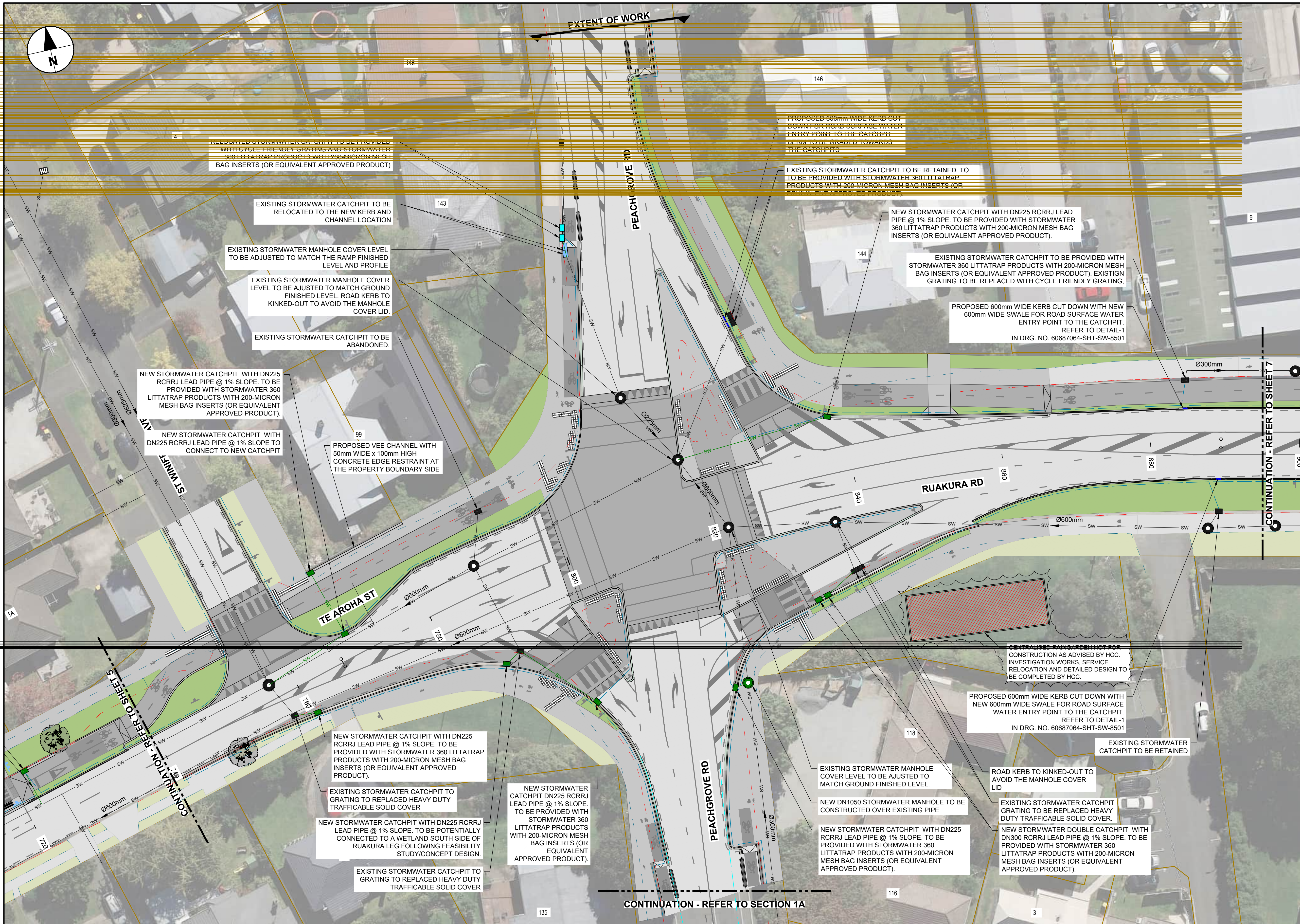
SHEET TITLE

TARSI
STORM WATER LAYOUT PLAN
SHEET 5

SHEET NUMBER

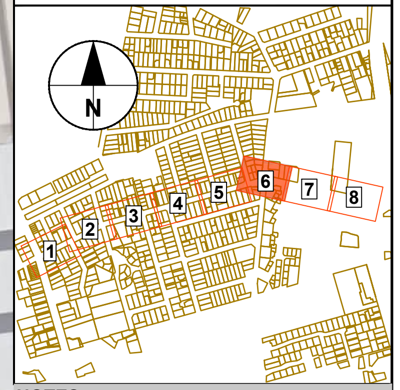
60687064-SHT-SW-8105

Last saved by: SCHUBELD (2024-03-11) Last Plotted: 2024-04-10
Filename: C:\PWWORKING\AECOM_DS12_AUERIC.ARAMBULO@AECOM.COM\D0330897\60687064-SHT-SW-8105.DWG



EXTENT OF WORK
PEACHGROVE RD
RUAKURA RD
TE AROHA ST
ST WINIFRED AVE
RELOCATED STORMWATER CATCHPIT TO BE PROVIDED WITH CYCLE FRIENDLY GRATING AND STORMWATER 360 LITTATRAP PRODUCTS WITH 200-MICRON MESH BAG INSERTS (OR EQUIVALENT APPROVED PRODUCT)
PROPOSED 600mm WIDE KERB CUT DOWN FOR ROAD SURFACE WATER ENTRY POINT TO THE CATCHPIT. BERM TO BE GRADED TOWARDS THE CATCHPITS
EXISTING STORMWATER CATCHPIT TO BE RETAINED. TO TO BE PROVIDED WITH STORMWATER 360 LITTATRAP PRODUCTS WITH 200-MICRON MESH BAG INSERTS (OR EQUIVALENT APPROVED PRODUCT).
EXISTING STORMWATER CATCHPIT TO BE RELOCATED TO THE NEW KERB AND CHANNEL LOCATION
NEW STORMWATER CATCHPIT WITH DN225 RCRRJ LEAD PIPE @ 1% SLOPE. TO BE PROVIDED WITH STORMWATER 360 LITTATRAP PRODUCTS WITH 200-MICRON MESH BAG INSERTS (OR EQUIVALENT APPROVED PRODUCT).
EXISTING STORMWATER MANHOLE COVER LEVEL TO BE ADJUSTED TO MATCH THE RAMP FINISHED LEVEL AND PROFILE
EXISTING STORMWATER CATCHPIT TO BE PROVIDED WITH STORMWATER 360 LITTATRAP PRODUCTS WITH 200-MICRON MESH BAG INSERTS (OR EQUIVALENT APPROVED PRODUCT). EXISTIGN GRATING TO BE REPLACED WITH CYCLE FRIENDLY GRATING.
EXISTING STORMWATER MANHOLE COVER LEVEL TO BE AJUSTED TO MATCH GROUND FINISHED LEVEL. ROAD KERB TO KINKED-OUT TO AVOID THE MANHOLE COVER LID.
PROPOSED 600mm WIDE KERB CUT DOWN WITH NEW 600mm WIDE SWALE FOR ROAD SURFACE WATER ENTRY POINT TO THE CATCHPIT. REFER TO DETAIL-1 IN DRG. NO. 60687064-SHT-SW-8501
EXISTING STORMWATER CATCHPIT TO BE ABANDONED.
NEW STORMWATER CATCHPIT WITH DN225 RCRRJ LEAD PIPE @ 1% SLOPE. TO BE PROVIDED WITH STORMWATER 360 LITTATRAP PRODUCTS WITH 200-MICRON MESH BAG INSERTS (OR EQUIVALENT APPROVED PRODUCT).
NEW STORMWATER CATCHPIT WITH DN225 RCRRJ LEAD PIPE @ 1% SLOPE TO CONNECT TO NEW CATCHPIT
PROPOSED VEE CHANNEL WITH 50mm WIDE x 100mm HIGH CONCRETE EDGE RESTRAINT AT THE PROPERTY BOUNDARY SIDE
CONTINUATION - REFER TO SHEET 7
CONTINUATION - REFER TO SHEET 5
CONTINUATION - REFER TO SECTION 1A
CENTRALISED RAINGARDEN NOT FOR CONSTRUCTION AS ADVISED BY HCC. INVESTIGATION WORKS, SERVICE RELOCATION AND DETAILED DESIGN TO BE COMPLETED BY HCC.
PROPOSED 600mm WIDE KERB CUT DOWN WITH NEW 600mm WIDE SWALE FOR ROAD SURFACE WATER ENTRY POINT TO THE CATCHPIT. REFER TO DETAIL-1 IN DRG. NO. 60687064-SHT-SW-8501
EXISTING STORMWATER CATCHPIT TO BE RETAINED
NEW STORMWATER CATCHPIT WITH DN225 RCRRJ LEAD PIPE @ 1% SLOPE. TO BE PROVIDED WITH STORMWATER 360 LITTATRAP PRODUCTS WITH 200-MICRON MESH BAG INSERTS (OR EQUIVALENT APPROVED PRODUCT).
EXISTING STORMWATER CATCHPIT TO GRATING TO REPLACED HEAVY DUTY TRAFFICABLE SOLID COVER
NEW STORMWATER CATCHPIT WITH DN225 RCRRJ LEAD PIPE @ 1% SLOPE. TO BE POTENTIALLY CONNECTED TO A WETLAND SOUTH SIDE OF RUAKURA LEG FOLLOWING FEASIBILITY STUDY/CONCEPT DESIGN.
EXISTING STORMWATER CATCHPIT TO GRATING TO REPLACED HEAVY DUTY TRAFFICABLE SOLID COVER
NEW STORMWATER CATCHPIT DN225 RCRRJ LEAD PIPE @ 1% SLOPE. TO BE PROVIDED WITH STORMWATER 360 LITTATRAP PRODUCTS WITH 200-MICRON MESH BAG INSERTS (OR EQUIVALENT APPROVED PRODUCT).
EXISTING STORMWATER MANHOLE COVER LEVEL TO BE AJUSTED TO MATCH GROUND FINISHED LEVEL.
NEW DN1050 STORMWATER MANHOLE TO BE CONSTRUCTED OVER EXISTING PIPE
NEW STORMWATER CATCHPIT WITH DN225 RCRRJ LEAD PIPE @ 1% SLOPE. TO BE PROVIDED WITH STORMWATER 360 LITTATRAP PRODUCTS WITH 200-MICRON MESH BAG INSERTS (OR EQUIVALENT APPROVED PRODUCT).
ROAD KERB TO KINKED-OUT TO AVOID THE MANHOLE COVER LID
EXISTING STORMWATER CATCHPIT GRATING TO BE REPLACED HEAVY DUTY TRAFFICABLE SOLID COVER.
NEW STORMWATER DOUBLE CATCHPIT WITH DN300 RCRRJ LEAD PIPE @ 1% SLOPE. TO BE PROVIDED WITH STORMWATER 360 LITTATRAP PRODUCTS WITH 200-MICRON MESH BAG INSERTS (OR EQUIVALENT APPROVED PRODUCT).
Ø300mm
Ø600mm
Ø225mm

KEY PLAN



NOTES:

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LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB
- NEW KERB
- EXISTING ASPHALT
- NEW ASPHALT
- NEW CONCRETE
- NEW BERM
- NEW BUS SHELTER
- NEW VEHICLE CROSSING
- TREE
- TRAFFIC LIGHT
- NEW / EXISTING SIGN
- EXISTING STORMWATER PIPE
- EXISTING STORMWATER PIPE TO BE DEMOLISHED
- NEW STORMWATER PIPE
- NEW SUBSOIL DRAINAGE PIPE
- NEW VEE CHANNEL
- EXISTING STORMWATER CATCHPIT
- EXISTING STORMWATER CATCHPIT TO BE RELOCATED
- RELOCATED STORMWATER CATCHPIT
- NEW STORMWATER CYCLE FRIENDLY CATCHPIT
- EXISTING STORMWATER MANHOLE
- NEW STORMWATER MANHOLE
- HIGH POINT
- LOW POINT

ISO A1 594mm x 841mm

Last saved by: SCHUBELD(2024-03-11) Last Plotted: 2024-04-10

Filename: C:\PWWORKING\AECOM_DS12_AUE\RIC.ARAMBULO@AECOM.COM\D0330697\60687064-SHT-SW-8106.DWG

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AECOM

CONSULTANT

AECOM New Zealand Ltd
NZ.B.N 9429032091335
www.aecom.com

PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6 12 m
1:250

PROJECT MANAGEMENT INITIALS

BA	IH	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

I/R	DATE	DESCRIPTION
E	12.04.24	100% DETAILED DESIGN
D	15.03.24	UPDATED DETAILED DESIGN
C	21.12.23	DETAILED DESIGN
B	12.07.23	FOR INFORMATION
A	14.06.23	FOR INFORMATION

PROJECT NUMBER

60687064

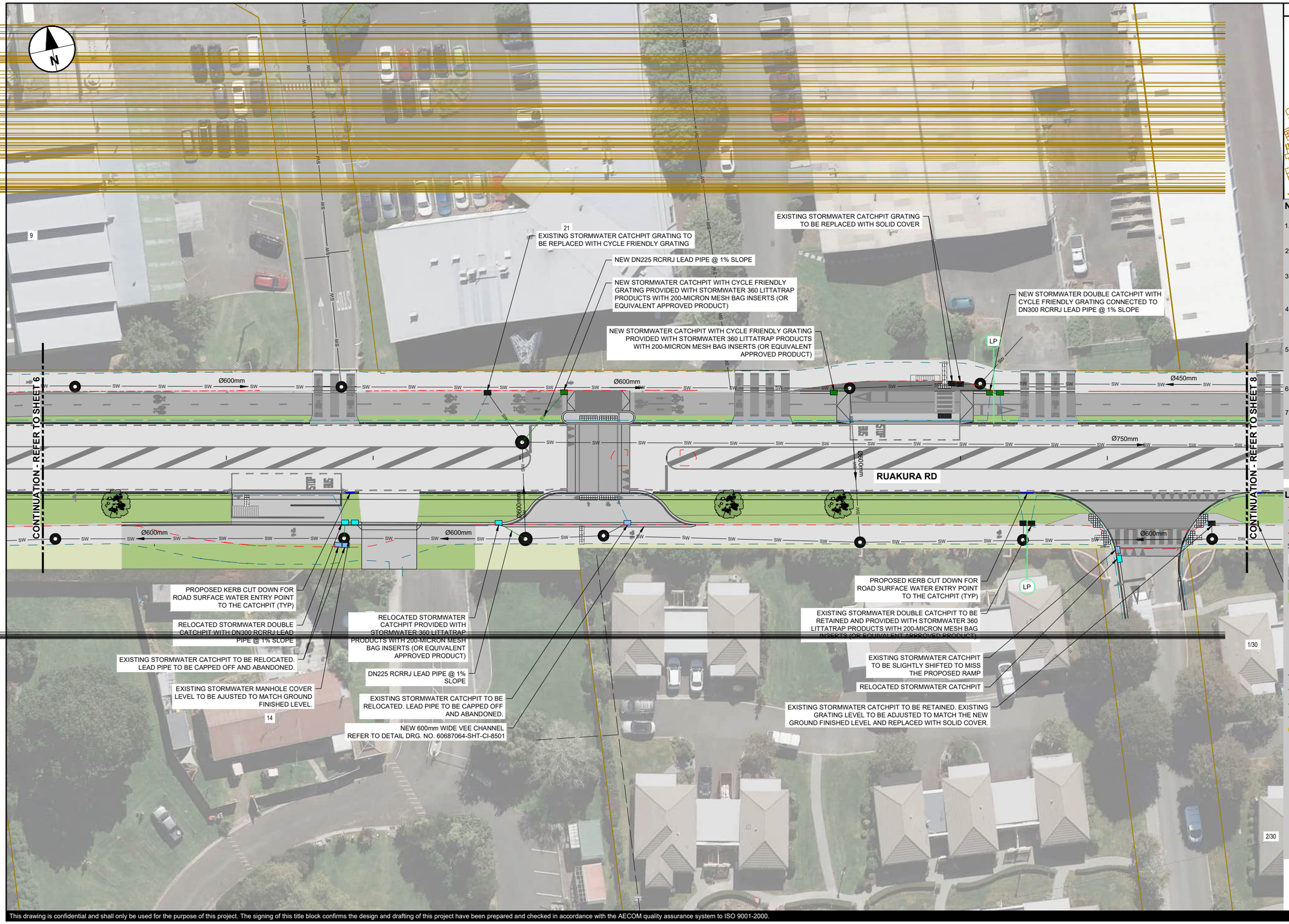
SHEET TITLE

TARSI
STORM WATER LAYOUT PLAN
SHEET 6

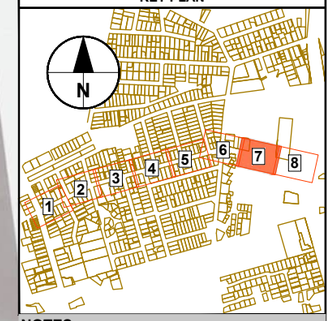
SHEET NUMBER

60687064-SHT-SW-8106

ISO A1 594mm x 841mm



KEY PLAN



NOTES:

1. ALL STORMWATER CONSTRUCTION WILL BE IN ACCORDANCE WITH REGIONAL INFRASTRUCTURE TECHNICAL SPECIFICATIONS (RITS) SECTION 4.
2. MANHOLES TO BE BUILT ACCORDING TO RITS STANDARD DETAILS (DRAWING 4-28 AND DRAWING 4-29).
3. ALL CATCHPITS IN THE ROAD KERB ARE TO BUILT ACCORDING TO RITS STANDARD DETAILS DRAWING 4-16: BACK ENTRY CATCHPIT. CAST IRON GRATE TO BE CYCLE FRIENDLY (PERPENDICULAR).
4. ALL CATCHPITS OUTSIDE THE ROAD KERB ARE TO BUILT ACCORDING TO RITS STANDARD DETAILS DRAWING 4-18: VERTICAL ENTRY CATCHPIT. CAST IRON GRATE TO BE CYCLE FRIENDLY (PERPENDICULAR).
5. CONTRACTOR TO VERIFY THE ACTUAL LEVELS AND LOCATIONS OF EXISTING SERVICES ON SITE AND MAKE NECESSARY ADJUSTMENT TO AVOID CLASHES WITH PROPOSED STORM WATER PIPES, MANHOLES AND CATCHPITS.
6. ALL SUBSOIL DRAINAGE FOR KERB AND CHANNEL ARE TO BE BUILT IN ACCORDANCE TO RITS STANDARD DETAILS DRAWING 3-21.
7. ALL INVERT LEVELS SPECIFIED IN THE DRAWINGS MUST BE VERIFIED BY THE CONTRACTOR AT SITE PRIOR TO CONSTRUCTION TO ENSURE FEASIBILITY OF CONNECTIONS TO THE EXISTING NETWORK IN THE ABSENCE OF SURVEY AND GIS INVERT LEVEL INFORMATION AT THIS STAGE. CONTRACTOR MUST MAKE NECESSARY ADJUSTMENTS ON THE SPECIFIED INVERT LEVELS TO SUIT ACTUAL SITE CONDITION.

LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB
- NEW KERB
- EXISTING ASPHALT
- NEW ASPHALT
- NEW CONCRETE
- NEW BERM
- NEW BUS SHELTER
- NEW VEHICLE CROSSING
- TREE
- TRAFFIC LIGHT
- NEW / EXISTING SIGN
- SW — EXISTING STORMWATER PIPE
- SW — EXISTING STORMWATER PIPE TO BE DEMOLISHED
- SW — NEW STORMWATER PIPE
- NEW SUBSOIL DRAINAGE PIPE
- NEW VEE CHANNEL
- EXISTING STORMWATER CATCHPIT
- EXISTING STORMWATER CATCHPIT TO BE RELOCATED
- RELOCATED STORMWATER CATCHPIT
- NEW STORMWATER CYCLE FRIENDLY CATCHPIT
- EXISTING STORMWATER MANHOLE
- NEW STORMWATER MANHOLE
- HP — HP HIGH POINT
- LP — LP LOW POINT

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AECOM

CONSULTANT

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NZ.B.N 9429032091335
www.aecom.com

PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6 12 m
1:250

PROJECT MANAGEMENT INITIALS

BA	IH	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

E	12.04.24	100% DETAILED DESIGN
D	15.03.24	UPDATED DETAILED DESIGN
C	21.12.23	DETAILED DESIGN
B	12.07.23	FOR INFORMATION
A	14.06.23	FOR INFORMATION
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

SHEET TITLE

TARSI
STORM WATER LAYOUT PLAN
SHEET 7

SHEET NUMBER

60687064-SHT-SW-8107

Last saved by: SCHUBELD(2024-03-11) Last Plotted: 2024-04-10
Filename: C:\PWWORKING\AECOM_DS12_AU\ERIC.ARAMBULO@AECOM.COM\D0330697\60687064-SHT-SW-8107.DWG

ISO A1 594mm x 841mm

EXISTING STORMWATER CATCHPIT GRATING TO BE REPLACED WITH CYCLE FRIENDLY GRATING

EXISTING HEAD WALL LOCATION AS PER GIS DATA. CONTRACTOR TO CONFIRM HEADWALL AT SITE AND TO BE REMOVED AND PIPE TO BE CAPPED-OFF IF FOUND.

EXISTING STORMWATER MANHOLE COVER LEVEL TO BE AJUSTED TO MATCH NEW GROUND FINISHED LEVEL.

RELOCATED STORMWATER CATCHPIT WITH DN225 RCRRJ LEAD PIPE @ 1% SLOPE

EXISTING STORMWATER CATCHPIT TO BE RELOCATED. LEAD PIPE TO BE CAPPED OFF AND ABANDONED.

EXISTING HEAD WALL LOCATION AS PER GIS DATA.

NEW STORMWATER CATCHPIT WITH DN225 RCRRJ LEAD PIPE @ 1% SLOPE TO SADDLE CONNECT TO EXISTING PIPE

CONTINUATION - REFER TO SHEET 7

EXTENT OF WORKS

RUAKURA RD

Ø600mm

Ø225mm

Ø1200mm

PROPOSED 600mm WIDE KERB CUT DOWN WITH NEW 600mm WIDE SWALE FOR ROAD SURFACE WATER ENTRY POINT TO THE CATCHPIT. REFER TO DETAIL-1 IN DRG. NO. 60687064-SHT-SW-8501

NEW STORMWATER CATCHPIT CONNECTED TO DN225 RCRRJ LEAD PIPE @ 1% SLOPE.

PROPOSED 600mm WIDE KERB CUT DOWN WITH NEW 600mm WIDE SWALE FOR ROAD SURFACE WATER ENTRY POINT TO THE CATCHPIT. REFER TO DETAIL-1 IN DRG. NO. 60687064-SHT-SW-8501

EXISTING STORMWATER CATCHPIT TO BE RETAINED

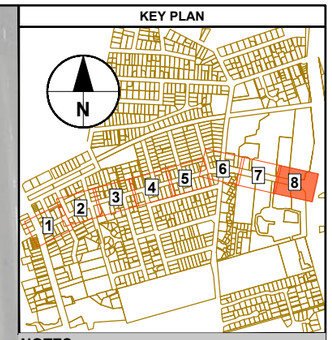
PROPOSED 600mm WIDE KERB CUT DOWN WITH NEW 600mm WIDE SWALE FOR ROAD SURFACE WATER ENTRY POINT TO THE CATCHPIT. REFER TO DETAIL-1 IN DRG. NO. 60687064-SHT-SW-8501

EXISTING STORMWATER CATCHPIT TO BE RETAINED

NEW DN1050 STORMWATER MANHOLE TO BE CONSTRUCTED OVER EXISTING PIPE

1/30 3/30 5/30 7/30 11/30 2/30 4/30 6/30 8/30 10/30 12/30

KEY PLAN



NOTES:

1. ALL STORMWATER CONSTRUCTION WILL BE IN ACCORDANCE WITH REGIONAL INFRASTRUCTURE TECHNICAL SPECIFICATIONS (RITS) SECTION 4.
2. MANHOLES TO BE BUILT ACCORDING TO RITS STANDARD DETAILS (DRAWING 4-28 AND DRAWING 4-29).
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LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB
- NEW KERB
- EXISTING ASPHALT
- NEW ASPHALT
- NEW CONCRETE
- NEW BERM
- NEW BUS SHELTER
- NEW VEHICLE CROSSING
- TREE
- TRAFFIC LIGHT
- NEW / EXISTING SIGN
- EXISTING STORMWATER PIPE
- EXISTING STORMWATER PIPE TO BE DEMOLISHED
- NEW STORMWATER PIPE
- NEW SUBSOIL DRAINAGE PIPE
- NEW VEE CHANNEL
- EXISTING STORMWATER CATCHPIT
- EXISTING STORMWATER CATCHPIT TO BE RELOCATED
- RELOCATED STORMWATER CATCHPIT
- NEW STORMWATER CYCLE FRIENDLY CATCHPIT
- EXISTING STORMWATER MANHOLE
- NEW STORMWATER MANHOLE
- HIGH POINT
- LOW POINT

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AECOM

CONSULTANT

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NZ.B.N 9429032091335
www.aecom.com

PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6 12 m
1:250

PROJECT MANAGEMENT INITIALS

BA	IH	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

E	12.04.24	100% DETAILED DESIGN
D	15.03.24	UPDATED DETAILED DESIGN
C	21.12.23	DETAILED DESIGN
B	12.07.23	FOR INFORMATION
A	14.06.23	FOR INFORMATION
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

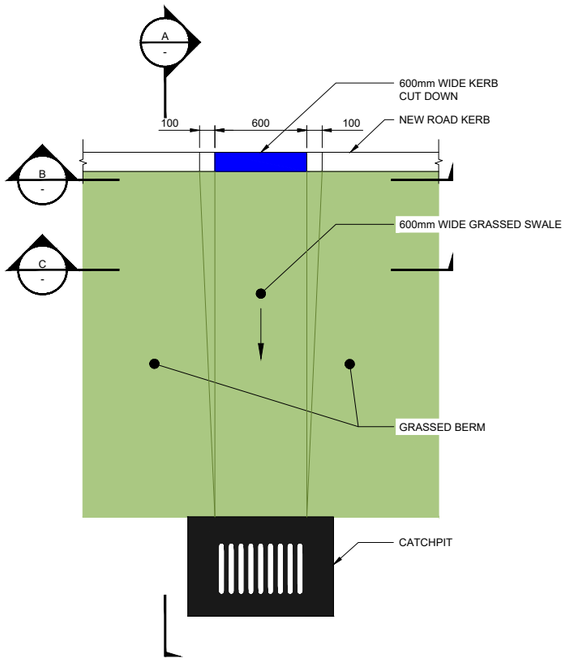
SHEET TITLE

TARSI
STORM WATER LAYOUT PLAN
SHEET 8

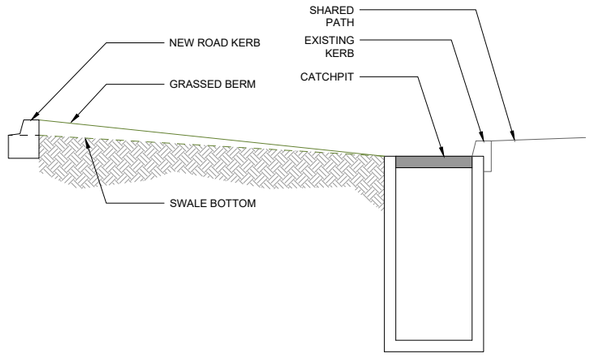
SHEET NUMBER

60687064-SHT-SW-8108

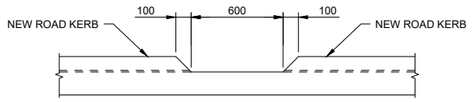
ISO A1 594mm x 841mm



1 | KERB CUT DOWN & SWALE DETAIL
Scale 1:20



A | SECTION
Scale 1:20



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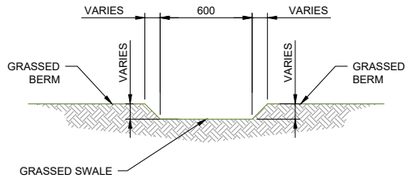
Scale 1:20



C | SECTION
Scale 1:20

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Filename: C:\PWWORKING\AECOM_DS12_AU\ERIC.ARAMBULO@AECOM.COM\D0330697\60687064-SHT-SW-8501.DWG

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AECOM

CONSULTANT
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NZ.B.N 9429032091335
www.aecom.com

PROJECT
EP School Link
Design

CLIENT
Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION
DETAILED DESIGN

SCALE
0 0.48 0.96 m
1:20

PROJECT MANAGEMENT INITIALS

BA/RP	IH	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

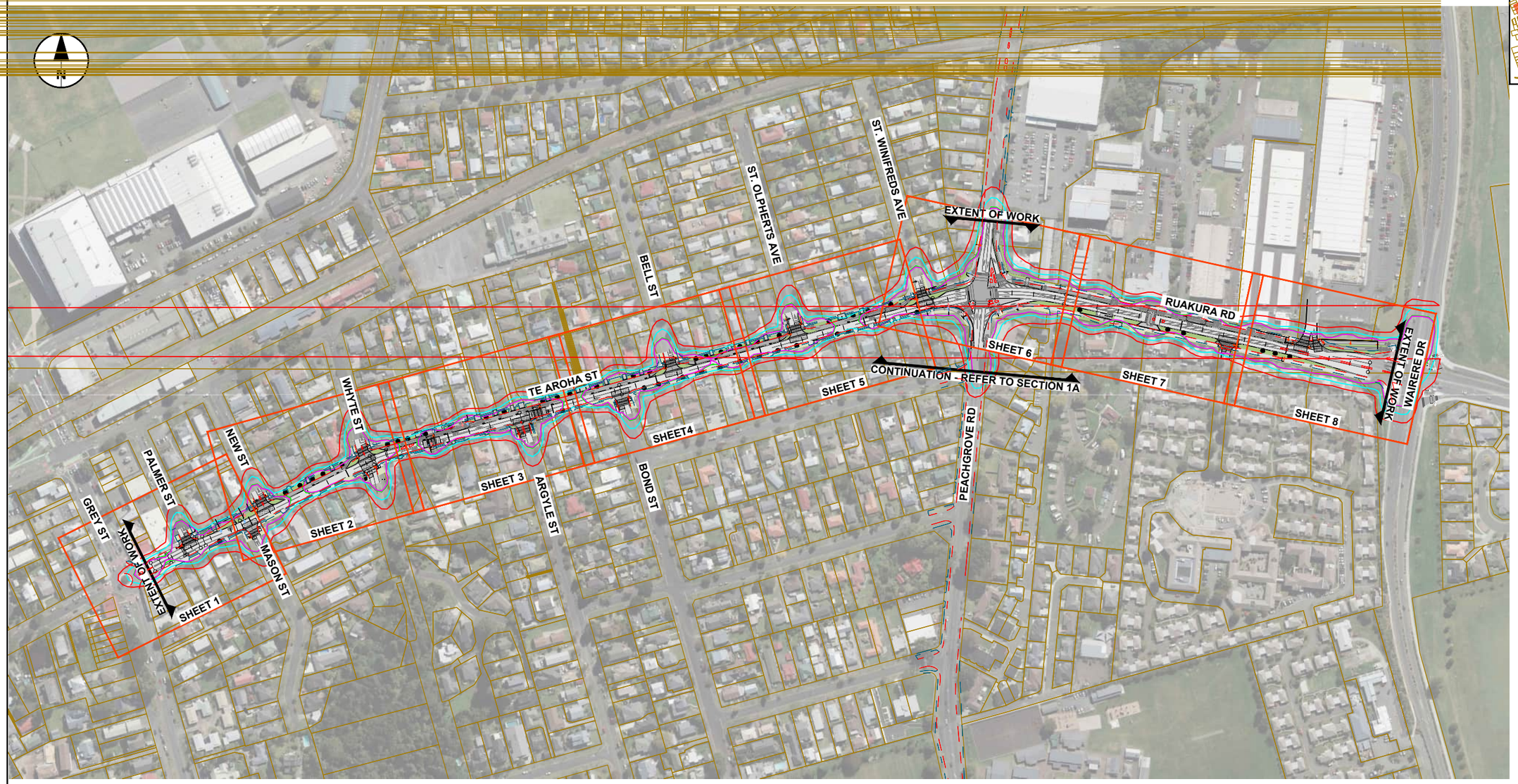
C	12.04.24	100% DETAILED DESIGN
B	15.03.24	UPDATED DETAILED DESIGN
A	21.12.23	DETAILED DESIGN
I/R	DATE	DESCRIPTION

PROJECT NUMBER
60687064

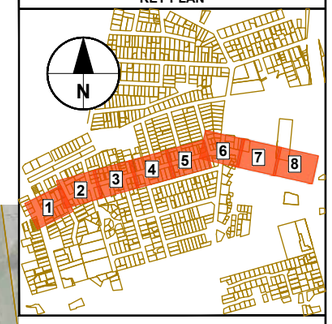
SHEET TITLE
TARSI
KERB CUTDOWN & SWALE DETAIL

SHEET NUMBER
60687064-SHT-SW-8501

ISO A1 (594mm x 841mm



KEY PLAN



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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 50 100 m
1:2000

PROJECT MANAGEMENT INITIALS

AK	JY	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

I/R	DATE	DESCRIPTION
C	12.04.24	100% DETAILED DESIGN
B	15.03.24	UPDATED DETAILED DESIGN
A	21.12.23	DETAILED DESIGN

PROJECT NUMBER

60687064

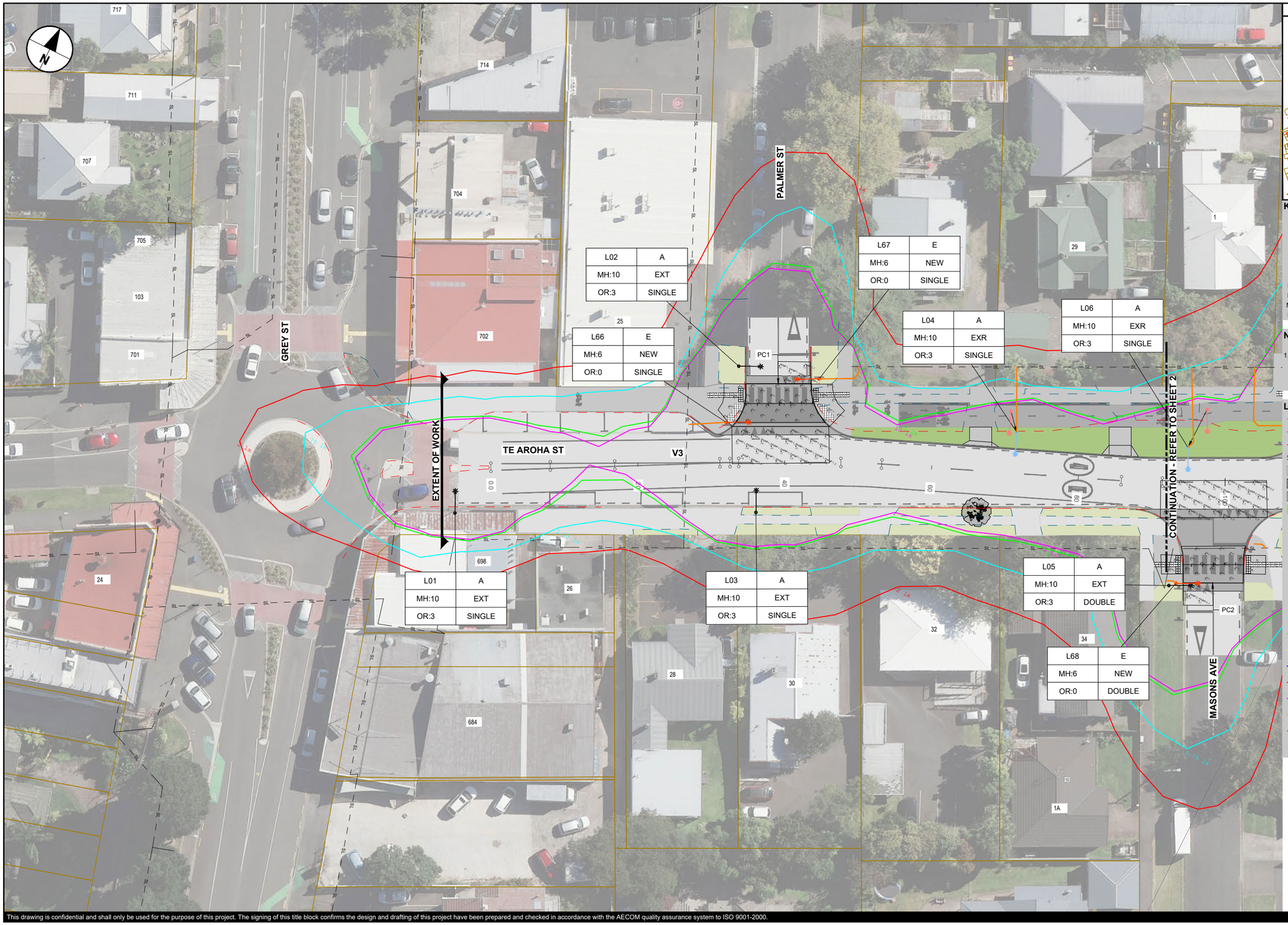
SHEET TITLE

TARSI
LIGHTING PLAN
OVERVIEW

SHEET NUMBER

60687064-SHT-SL-8100

ISO A1 594mm x 841mm



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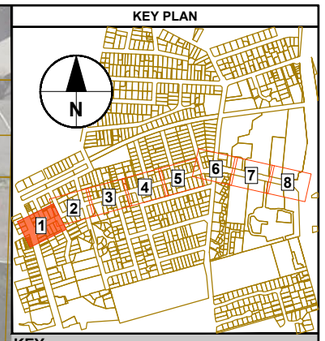

KEY:

A	92W, PHILLIPS
B	120W, PHILLIPS
C	110W, PHILLIPS
D	30W, ITALO 1
E	51W, ITALO 1 (SX)
F	51W, ITALO 1 (DX)
G	99W, ITALO 1 (SX)
EXT	RETAINED EXISTING POLE AND LUMINAIRE
EXR	RELOCATED EXISTING POLE AND LUMINAIRE
NEW	NEW POLE AND LUMINAIRE
PC#	PEDESTRIAN CROSSING NUMBER

NOTES:

1. 1. PLEASE NOTE THAT THE PROVIDED DUCTING PLAN IS INDICATIVE ONLY. THE FINAL DECISION FOR CONNECTING POWER SUPPLY TO NEW OR RELOCATED STREET LIGHTING LIES WITH WEL NETWORK AUTHORITY.

LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB FACE
- NEW KERB
- EXISTING ASPHALT
- NEW ASPHALT
- NEW CONCRETE
- NEW BERM
- NEW VEHICLE CROSSING
- EXISTING STREET LIGHT
- RELOCATED EXISTING STREET LIGHT POSITION
- EXISTING STREET LIGHT AND POLE TO BE REMOVED
- NEW STREET LIGHT AND POLE
- NEW PEDESTRIAN LIGHT AND POLE
- LUX 3.75 HALF OF V3 CATEGORY
- LUX 7.5 V3 CATEGORY
- LUX 20 X2 CATEGORY
- LUX 30 X1 CATEGORY
- LUX 2 SPILL LIGHT
- LUX 10 SPILL LIGHT
- NEW 100mm DUCTING
- SL — SERVICE LINE FROM EXISTING WEL NETWORK
- NEW TREE POSITION TBC DEPENDANT ON SERVICES

This drawing is confidential and shall only be used for the purpose of this project. The signing of this title block confirms the design and drafting of this project have been prepared and checked in accordance with the AECOM quality assurance system to ISO 9001-2000.

Last saved by: MANNINGB(2024-04-04) Last Plotted: 2024-04-18
Filename: C:\PW\WORKING\AECOM_DS12_AU\DANIEL.SCHUBEL@AECOM.COM\D0330697\60687064-SHT-SL-8101.DWG

AECOM

CONSULTANT

AECOM New Zealand Ltd
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www.aecom.com

PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6.25 12.5 m
1:250

PROJECT MANAGEMENT INITIALS

AK	JY	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

I/R	DATE	DESCRIPTION
F	12.04.24	100% DETAILED DESIGN
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D	21.12.23	DETAILED DESIGN
C	25.07.23	FOR INFORMATION
B	25.07.23	FOR INFORMATION
A	12.07.23	FOR INFORMATION

PROJECT NUMBER

60687064

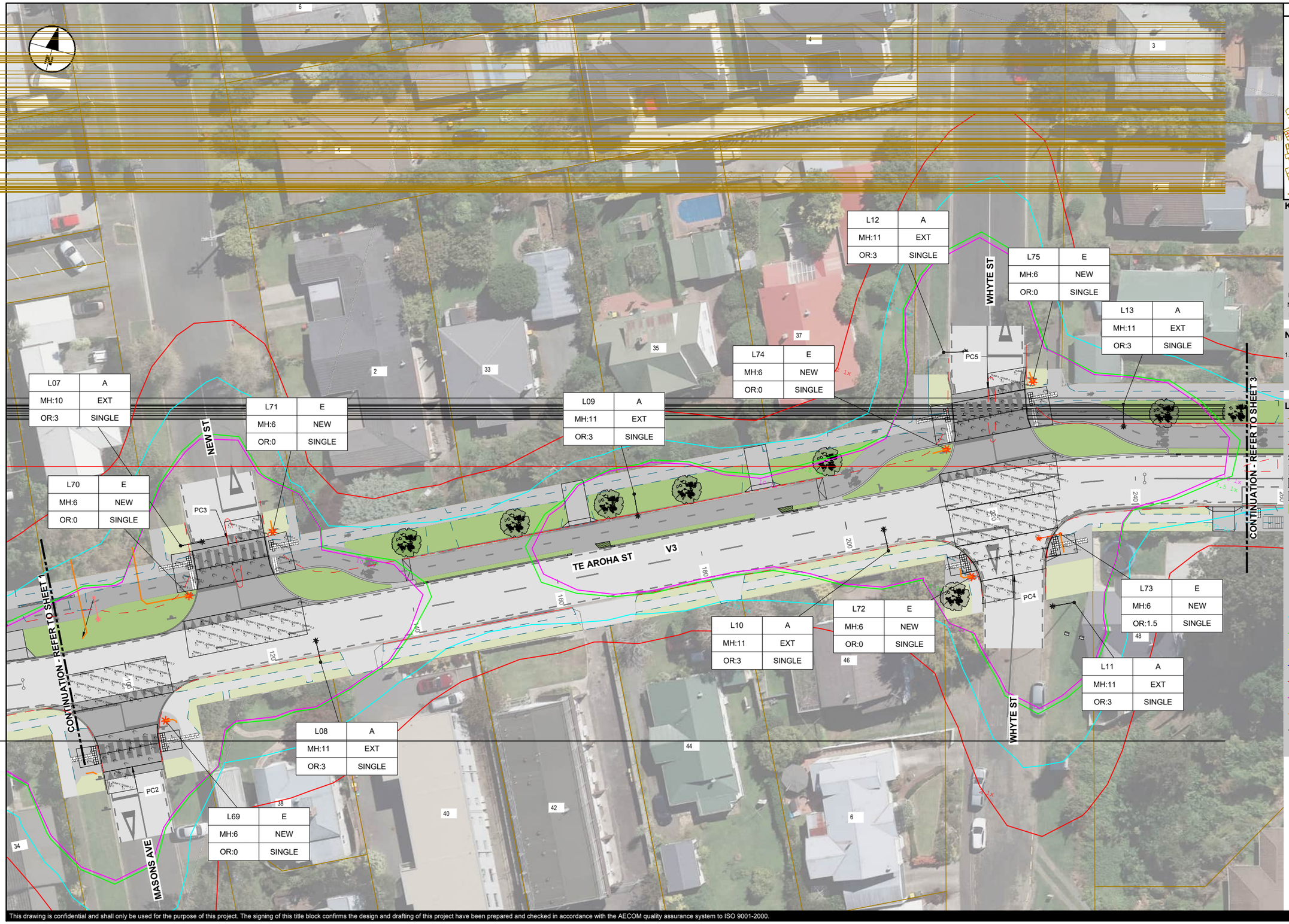
SHEET TITLE

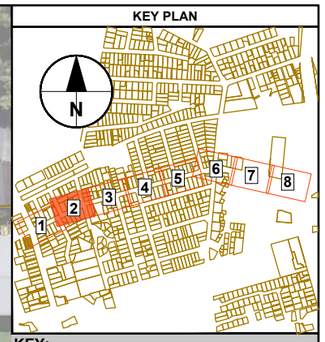
TARSI
LIGHTING PLAN
SHEET1

SHEET NUMBER

60687064-SHT-SL-8101

ISO A1 (594mm x 841mm)





KEY:

A	92W, PHILLIPS
B	120W, PHILLIPS
C	110W, PHILLIPS
D	30W, ITALO 1
E	51W, ITALO 1 (SX)
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G	99W, ITALO 1 (SX)
EXT	RETAINED EXISTING POLE AND LUMINAIRE
EXR	RELOCATED EXISTING POLE AND LUMINAIRE
NEW	NEW POLE AND LUMINAIRE
PC#	PEDESTRIAN CROSSING NUMBER

NOTES:

1. 1. PLEASE NOTE THAT THE PROVIDED DUCTING PLAN IS INDICATIVE ONLY. THE FINAL DECISION FOR CONNECTING POWER SUPPLY TO NEW OR RELOCATED STREET LIGHTING LIES WITH WEL NETWORK AUTHORITY.

LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB FACE
- NEW KERB
- EXISTING ASPHALT
- NEW ASPHALT
- NEW CONCRETE
- NEW BERM
- NEW VEHICLE CROSSING
- EXISTING STREET LIGHT
- RELOCATED EXISTING STREET LIGHT POSITION
- EXISTING STREET LIGHT AND POLE TO BE REMOVED
- NEW STREET LIGHT AND POLE
- NEW PEDESTRIAN LIGHT AND POLE
- LUX 3.75 HALF OF V3 CATEGORY
- LUX 7.5 V3 CATEGORY
- LUX 20 X2 CATEGORY
- LUX 30 X1 CATEGORY
- LUX 2 SPILL LIGHT
- LUX 10 SPILL LIGHT
- NEW 100mm DUCTING
- SERVICE LINE FROM EXISTING WEL NETWORK
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www.aecom.com

PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6.25 12.5 m
1:250

PROJECT MANAGEMENT INITIALS

AK	JY	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

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C	25.07.23	FOR INFORMATION
B	25.07.23	FOR INFORMATION
A	12.07.23	FOR INFORMATION
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

SHEET TITLE

TARSI
LIGHTING PLAN
SHEET 2

SHEET NUMBER

60687064-SHT-SL-8102

Last saved by: MANNINGR(2024-04-02) Last Plotted: 2024-04-10
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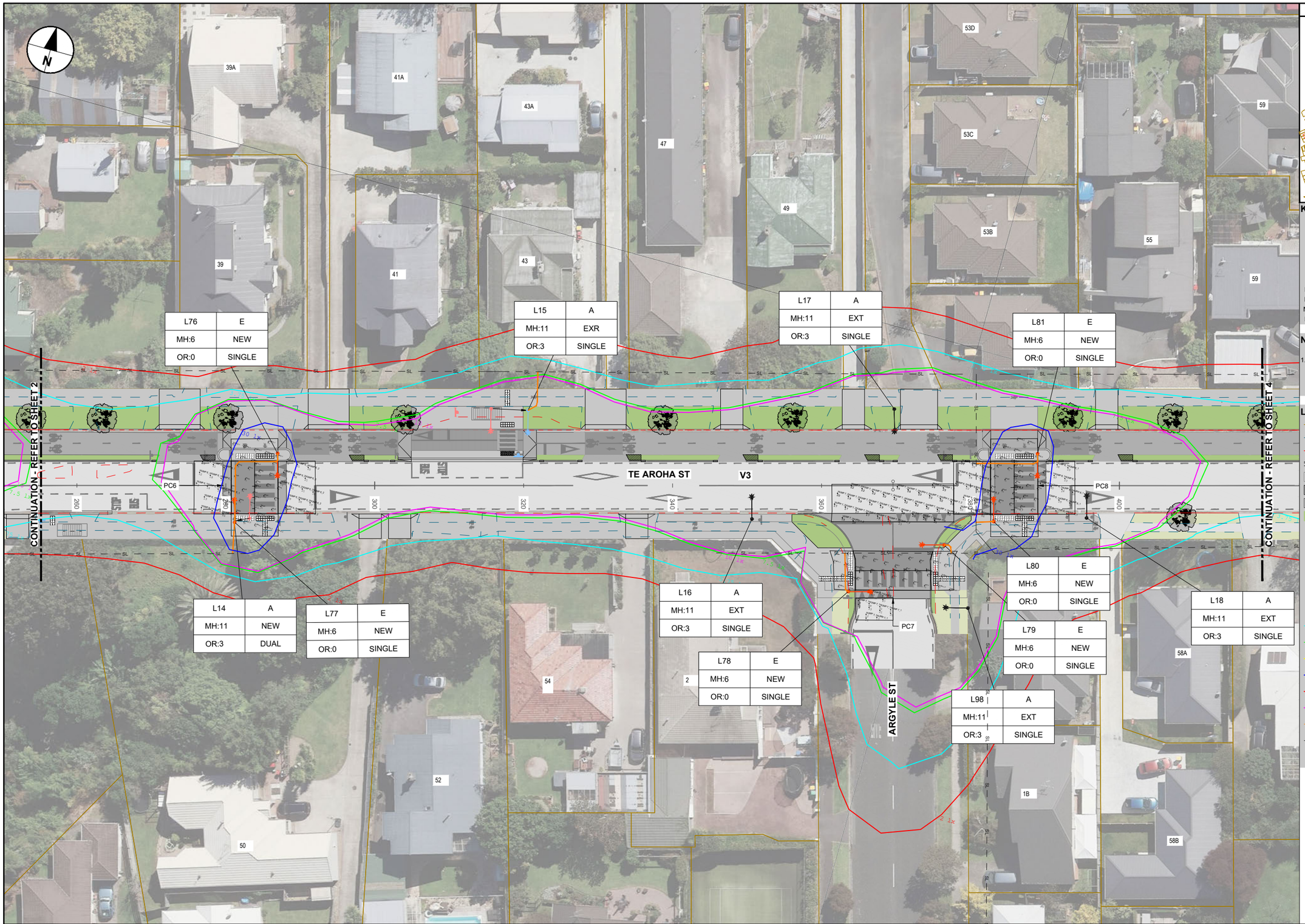
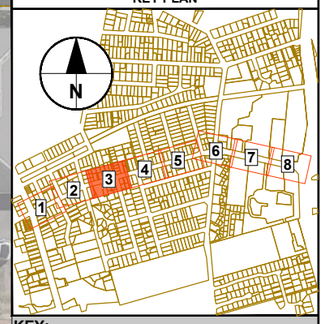
ISO A1 594mm x 841mm



KEY PLAN



KEY:

A	92W, PHILLIPS
B	120W, PHILLIPS
C	110W, PHILLIPS
D	30W, ITALO 1
E	51W, ITALO 1 (SX)
F	51W, ITALO 1 (DX)
G	99W, ITALO 1 (SX)
EXT	RETAINED EXISTING POLE AND LUMINAIRE
EXR	RELOCATED EXISTING POLE AND LUMINAIRE
NEW	NEW POLE AND LUMINAIRE
PC#	PEDESTRIAN CROSSING NUMBER

NOTES:

1. 1. PLEASE NOTE THAT THE PROVIDED DUCTING PLAN IS INDICATIVE ONLY. THE FINAL DECISION FOR CONNECTING POWER SUPPLY TO NEW OR RELOCATED STREET LIGHTING LIES WITH WEL NETWORK AUTHORITY.

LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB FACE
- NEW KERB
- EXISTING ASPHALT
- NEW ASPHALT
- NEW CONCRETE
- NEW BERM
- NEW VEHICLE CROSSING
- EXISTING STREET LIGHT
- RELOCATED EXISTING STREET LIGHT POSITION
- EXISTING STREET LIGHT AND POLE TO BE REMOVED
- NEW STREET LIGHT AND POLE
- NEW PEDESTRIAN LIGHT AND POLE
- LUX 3.75 HALF OF V3 CATEGORY
- LUX 7.5 V3 CATEGORY
- LUX 20 X2 CATEGORY
- LUX 30 X1 CATEGORY
- LUX 2 SPILL LIGHT
- LUX 10 SPILL LIGHT
- NEW 100mm DUCTING
- SERVICE LINE FROM EXISTING WEL NETWORK
- NEW TREE POSITION TBC DEPENDANT ON SERVICES

This drawing is confidential and shall only be used for the purpose of this project. The signing of this title block confirms the design and drafting of this project have been prepared and checked in accordance with the AECOM quality assurance system to ISO 9001-2000.

Last saved by: MANNINGR(2024-04-02) Last Plotted: 2024-04-18
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AECOM

CONSULTANT

AECOM New Zealand Ltd
NZ.B.N 9429032091335
www.aecom.com

PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6.25 12.5 m
1:250

PROJECT MANAGEMENT INITIALS

AK	JY	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

E	12.04.24	100% DETAILED DESIGN
D	15.03.24	UPDATED DETAILED DESIGN
C	21.12.23	DETAILED DESIGN
B	25.07.23	FOR INFORMATION
A	12.07.23	FOR INFORMATION
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

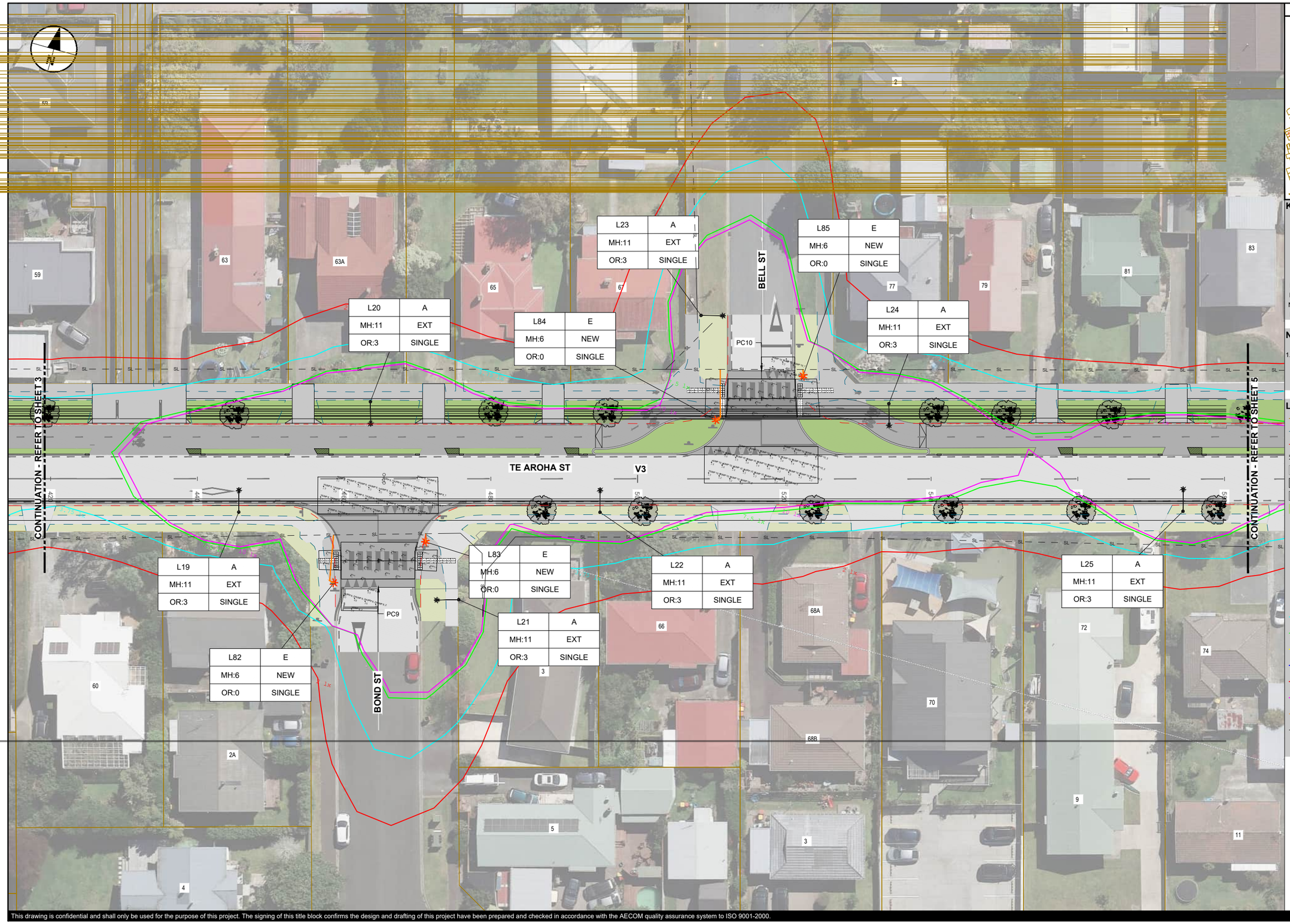
SHEET TITLE

TARSI
LIGHTING PLAN
SHEET 3

SHEET NUMBER

60687064-SHT-SL-8103

ISO A1 594mm x 841mm



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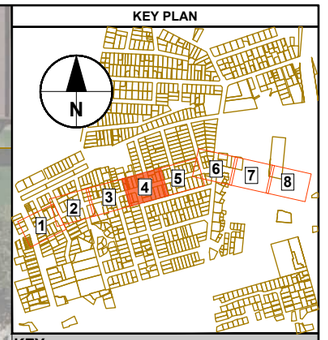

KEY:

A	92W, PHILLIPS
B	120W, PHILLIPS
C	110W, PHILLIPS
D	30W, ITALO 1
E	51W, ITALO 1 (SX)
F	51W, ITALO 1 (DX)
G	99W, ITALO 1 (SX)
EXT	RETAINED EXISTING POLE AND LUMINAIRE
EXR	RELOCATED EXISTING POLE AND LUMINAIRE
NEW	NEW POLE AND LUMINAIRE
PC#	PEDESTRIAN CROSSING NUMBER

NOTES:

1. 1. PLEASE NOTE THAT THE PROVIDED DUCTING PLAN IS INDICATIVE ONLY. THE FINAL DECISION FOR CONNECTING POWER SUPPLY TO NEW OR RELOCATED STREET LIGHTING LIES WITH WEL NETWORK AUTHORITY.

LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB FACE
- NEW KERB
- EXISTING ASPHALT
- NEW ASPHALT
- NEW CONCRETE
- NEW BERM
- NEW VEHICLE CROSSING
- EXISTING STREET LIGHT
- RELOCATED EXISTING STREET LIGHT POSITION
- EXISTING STREET LIGHT AND POLE TO BE REMOVED
- NEW STREET LIGHT AND POLE
- NEW PEDESTRIAN LIGHT AND POLE
- LUX 3.75 HALF OF V3 CATEGORY
- LUX 7.5 V3 CATEGORY
- LUX 20 X2 CATEGORY
- LUX 30 X1 CATEGORY
- LUX 2 SPILL LIGHT
- LUX 10 SPILL LIGHT
- NEW 100mm DUCTING
- SERVICE LINE FROM EXISTING WEL NETWORK
- NEW TREE POSITION TBC DEPENDANT ON SERVICES

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CONSULTANT
AECOM New Zealand Ltd
NZ.B.N 9429032091335
www.aecom.com

PROJECT
EP School Link Design

CLIENT
Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION
DETAILED DESIGN

SCALE
0 6.25 12.5 m
1:250

PROJECT MANAGEMENT INITIALS

AK	JY	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

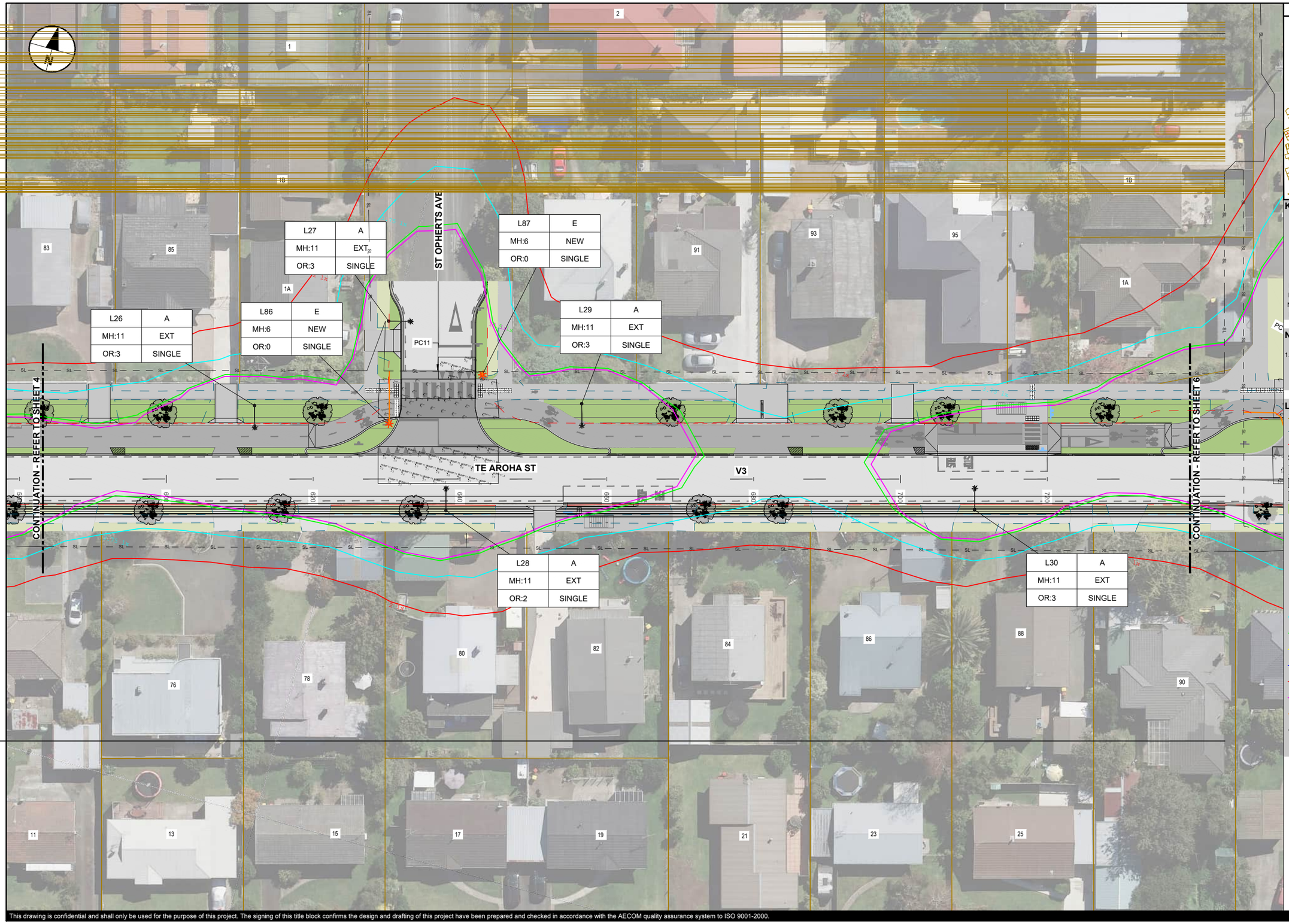
E	12.04.24	100% DETAILED DESIGN
D	15.03.24	UPDATED DETAILED DESIGN
C	21.12.23	DETAILED DESIGN
B	25.07.23	FOR INFORMATION
A	12.07.23	FOR INFORMATION
I/R	DATE	DESCRIPTION

PROJECT NUMBER
60687064

SHEET TITLE
TARSI
LIGHTING PLAN
SHEET 4

SHEET NUMBER
60687064-SHT-SL-8104

ISO A1 (594mm x 841mm)



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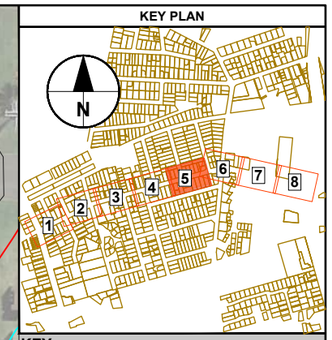

KEY:

A	92W, PHILLIPS
B	120W, PHILLIPS
C	110W, PHILLIPS
D	30W, ITALO 1
E	51W, ITALO 1 (SX)
F	51W, ITALO 1 (DX)
G	99W, ITALO 1 (SX)
EXT	RETAINED EXISTING POLE AND LUMINAIRE
EXR	RELOCATED EXISTING POLE AND LUMINAIRE
NEW	NEW POLE AND LUMINAIRE
PC#	PEDESTRIAN CROSSING NUMBER

NOTES:

1. 1. PLEASE NOTE THAT THE PROVIDED DUCTING PLAN IS INDICATIVE ONLY. THE FINAL DECISION FOR CONNECTING POWER SUPPLY TO NEW OR RELOCATED STREET LIGHTING LIES WITH WEL NETWORK AUTHORITY.

LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB FACE
- NEW KERB
- EXISTING ASPHALT
- NEW ASPHALT
- NEW CONCRETE
- NEW BERM
- NEW VEHICLE CROSSING
- EXISTING STREET LIGHT
- RELOCATED EXISTING STREET LIGHT POSITION
- EXISTING STREET LIGHT AND POLE TO BE REMOVED
- NEW STREET LIGHT AND POLE
- NEW PEDESTRIAN LIGHT AND POLE
- LUX 3.75 HALF OF V3 CATEGORY
- LUX 7.5 V3 CATEGORY
- LUX 20 X2 CATEGORY
- LUX 30 X1 CATEGORY
- LUX 2 SPILL LIGHT
- LUX 10 SPILL LIGHT
- NEW 100mm DUCTING
- SERVICE LINE FROM EXISTING WEL NETWORK
- NEW TREE POSITION TBC DEPENDANT ON SERVICES

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AECOM

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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6.25 12.5 m
1:250

PROJECT MANAGEMENT INITIALS

AK	JY	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

E	12.04.24	100% DETAILED DESIGN
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C	21.12.23	DETAILED DESIGN
B	25.07.23	FOR INFORMATION
A	12.07.23	FOR INFORMATION
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

SHEET TITLE

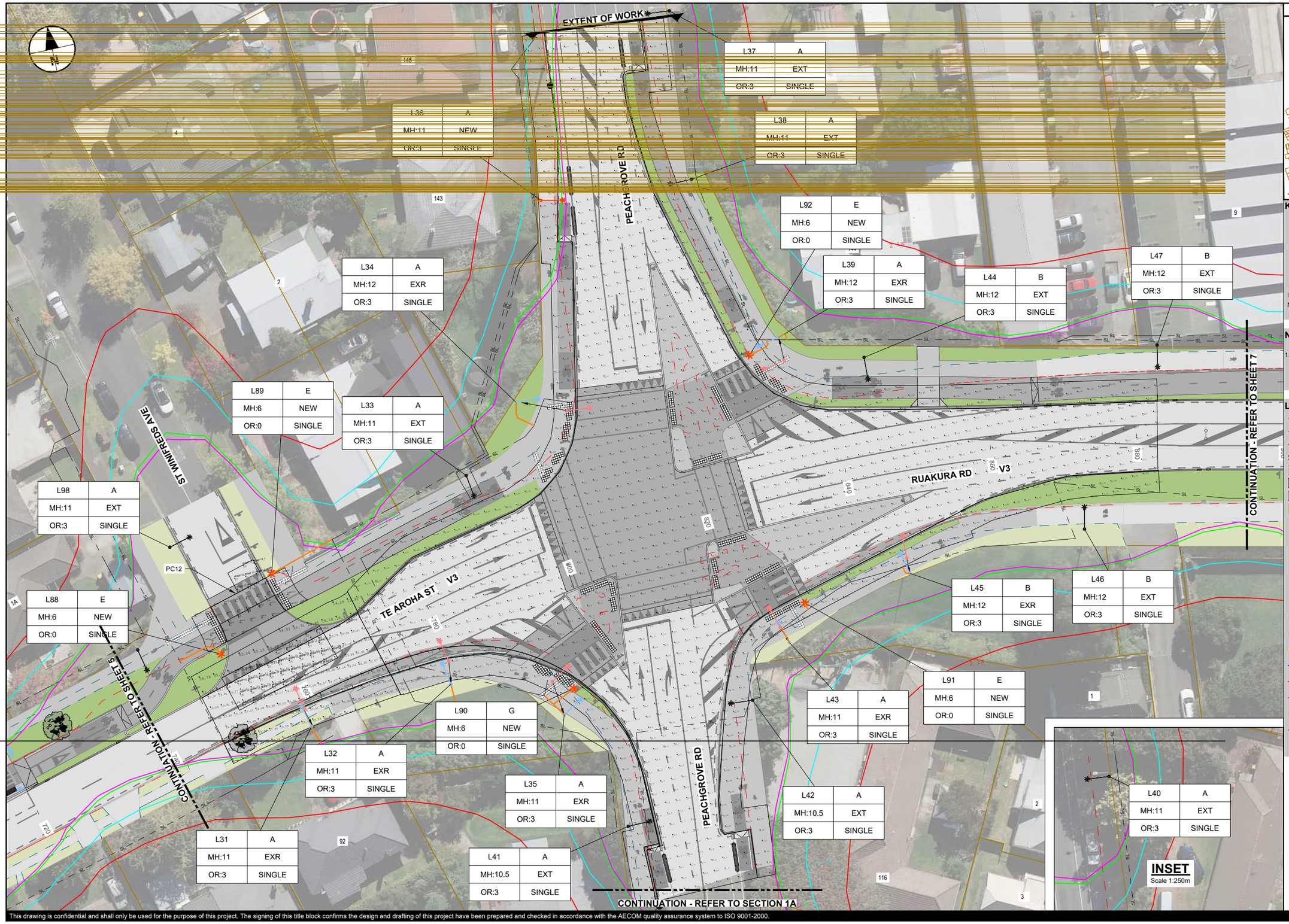
TARSI
LIGHTING PLAN
SHEET 5

SHEET NUMBER

60687064-SHT-SL-8105

Last saved by: MANNINGR(2024-03-18) Last Plotted: 2024-04-10
Filename: C:\PW\WORKING\AECOM_DS12_AU\ERIC.ARAMBULO@AECOM.COM\D0330697\60687064-SHT-SL-8105.DWG

ISO A1 594mm x 841mm



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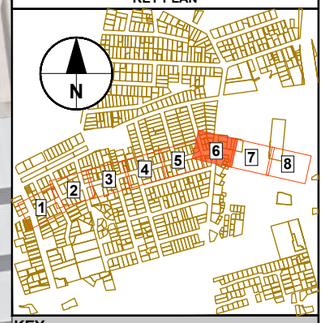

KEY:

A	92W, PHILLIPS
B	120W, PHILLIPS
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D	30W, ITALO 1
E	51W, ITALO 1 (SX)
F	51W, ITALO 1 (DX)
G	99W, ITALO 1 (SX)
EXT	RETAINED EXISTING POLE AND LUMINAIRE
EXR	RELOCATED EXISTING POLE AND LUMINAIRE
NEW	NEW POLE AND LUMINAIRE
PC#	PEDESTRIAN CROSSING NUMBER

NOTES:

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LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB FACE
- NEW KERB
- EXISTING ASPHALT
- NEW ASPHALT
- NEW CONCRETE
- NEW BERM
- NEW VEHICLE CROSSING
- EXISTING STREET LIGHT
- RELOCATED EXISTING STREET LIGHT POSITION
- EXISTING STREET LIGHT AND POLE TO BE REMOVED
- NEW STREET LIGHT AND POLE
- NEW PEDESTRIAN LIGHT AND POLE
- LUX 3.75 HALF OF V3 CATEGORY
- LUX 7.5 V3 CATEGORY
- LUX 20 X2 CATEGORY
- LUX 30 X1 CATEGORY
- LUX 2 SPILL LIGHT
- LUX 10 SPILL LIGHT
- NEW 100mm DUCTING
- SL — SERVICE LINE FROM EXISTING WEL NETWORK
- NEW TREE POSITION TBC DEPENDANT ON SERVICES

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PROJECT
EP School Link Design

CLIENT
Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION
DETAILED DESIGN

SCALE
0 6.25 12.5 m
1:250

PROJECT MANAGEMENT INITIALS

AK	JY	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

E	12.04.24	100% DETAILED DESIGN
D	15.03.24	UPDATED DETAILED DESIGN
C	21.12.23	DETAILED DESIGN
B	25.07.23	FOR INFORMATION
A	12.07.23	FOR INFORMATION
I/R	DATE	DESCRIPTION

PROJECT NUMBER
60687064

SHEET TITLE
TARSI
LIGHTING PLAN
SHEET 6

SHEET NUMBER
60687064-SHT-SL-8106

Last saved by: MANNINGR(2024-04-04) Last Plotted: 2024-04-10
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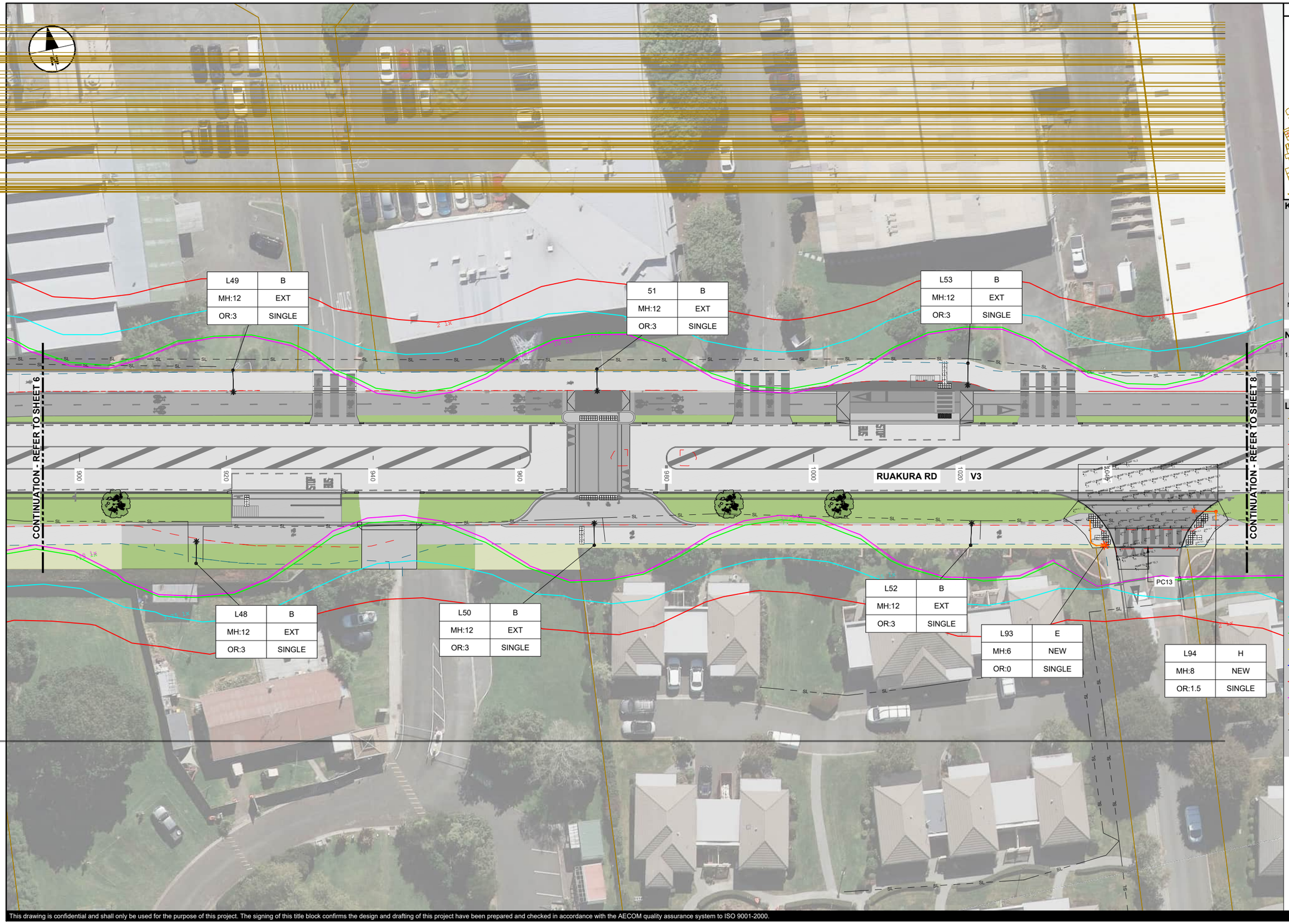
ISO A1 594mm x 841mm



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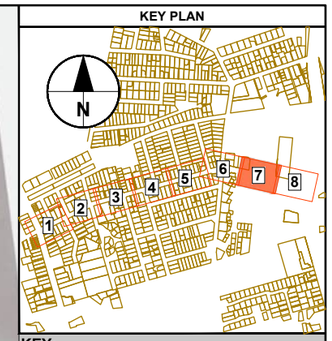

KEY:

A	92W, PHILLIPS
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E	51W, ITALO 1 (SX)
F	51W, ITALO 1 (DX)
G	99W, ITALO 1 (SX)
EXT	RETAINED EXISTING POLE AND LUMINAIRE
EXR	RELOCATED EXISTING POLE AND LUMINAIRE
NEW	NEW POLE AND LUMINAIRE
PC#	PEDESTRIAN CROSSING NUMBER

NOTES:

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LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB FACE
- NEW KERB
- EXISTING ASPHALT
- NEW ASPHALT
- NEW CONCRETE
- NEW BERM
- NEW VEHICLE CROSSING
- EXISTING STREET LIGHT
- RELOCATED EXISTING STREET LIGHT POSITION
- EXISTING STREET LIGHT AND POLE TO BE REMOVED
- NEW STREET LIGHT AND POLE
- NEW PEDESTRIAN LIGHT AND POLE
- LUX 3.75 HALF OF V3 CATEGORY
- LUX 7.5 V3 CATEGORY
- LUX 20 X2 CATEGORY
- LUX 30 X1 CATEGORY
- LUX 2 SPILL LIGHT
- LUX 10 SPILL LIGHT
- NEW 100mm DUCTING
- SERVICE LINE FROM EXISTING WEL NETWORK
- NEW TREE POSITION TBC DEPENDANT ON SERVICES

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Last saved by: MANNINGR(2024-03-19) Last Plotted: 2024-04-10
Filename: C:\PWWORKING\AECOM_DS12_AU\ERIC.ARAMBULO@AECOM.COM\D0330697\60687084-SHT-SL-8107.DWG

AECOM

CONSULTANT

AECOM New Zealand Ltd
NZ.B.N 9429032091335
www.aecom.com

PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6.25 12.5 m
1:250

PROJECT MANAGEMENT INITIALS

AK	JY	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

E	12.04.24	100% DETAILED DESIGN
D	15.03.24	UPDATED DETAILED DESIGN
C	21.12.23	DETAILED DESIGN
B	25.07.23	FOR INFORMATION
A	12.07.23	FOR INFORMATION
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

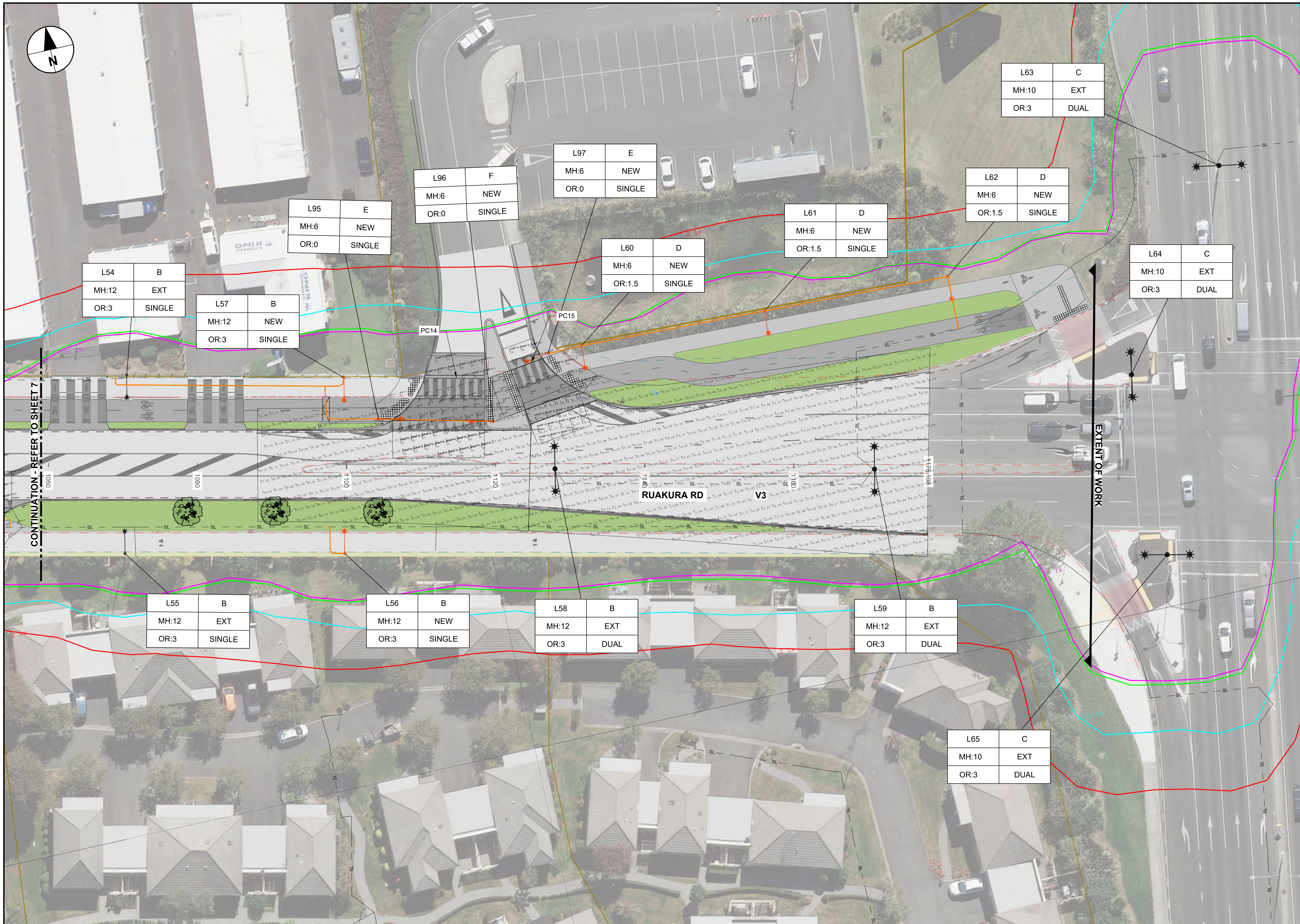
SHEET TITLE

TARSI
LIGHTING PLAN
SHEET 7

SHEET NUMBER

60687064-SHT-SL-8107

ISO A1 594mm x 841mm
Last saved by: MANNINGB(2024-04-04) Last Plotted: 2024-04-18
Filename: C:\PWWORKING\AECOM_DS12_AU\DANIEL.SCHUBEL@AECOM.COM\D0330697\60687064-SHT-SL-8108.DWG



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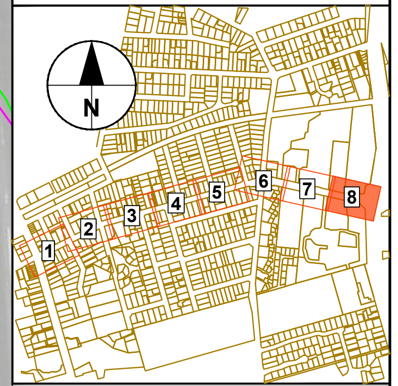

KEY:

A	92W, PHILLIPS
B	120W, PHILLIPS
C	110W, PHILLIPS
D	30W, ITALO 1
E	51W, ITALO 1 (SX)
F	51W, ITALO 1 (DX)
G	99W, ITALO 1 (SX)
EXT	RETAINED EXISTING POLE AND LUMINAIRE
EXR	RELOCATED EXISTING POLE AND LUMINAIRE
NEW	NEW POLE AND LUMINAIRE
PC#	PEDESTRIAN CROSSING NUMBER

NOTES:

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LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB FACE
- NEW KERB
- EXISTING ASPHALT
- NEW ASPHALT
- NEW CONCRETE
- NEW BERM
- NEW VEHICLE CROSSING
- EXISTING STREET LIGHT
- RELOCATED EXISTING STREET LIGHT POSITION
- EXISTING STREET LIGHT AND POLE TO BE REMOVED
- NEW STREET LIGHT AND POLE
- NEW PEDESTRIAN LIGHT AND POLE
- LUX 3.75 HALF OF V3 CATEGORY
- LUX 7.5 V3 CATEGORY
- LUX 20 X2 CATEGORY
- LUX 30 X1 CATEGORY
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- LUX 10 SPILL LIGHT
- NEW 100mm DUCTING
- SL — SERVICE LINE FROM EXISTING WEL NETWORK
- NEW TREE POSITION TBC DEPENDANT ON SERVICES

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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6.25 12.5 m
1:250

PROJECT MANAGEMENT INITIALS

AK	JY	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

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B	25.07.23	FOR INFORMATION
A	12.07.23	FOR INFORMATION

PROJECT NUMBER

60687064

SHEET TITLE

TARSI
LIGHTING PLAN
SHEET 8

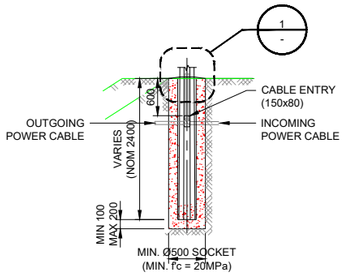
SHEET NUMBER

60687064-SHT-SL-8108

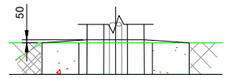
ISO A1 594mm x 841mm

NOTES.

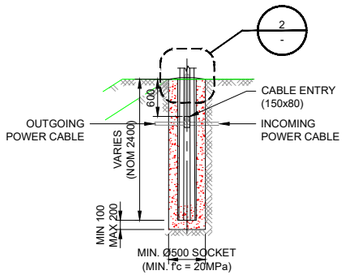
1. DETAILS SHOWN ARE INDICATIVE ONLY.
2. FOUNDATION DETAILS SHALL BE AGREED WITH THE SUPPLIER AND STRUCTURAL ENGINEER PRIOR TO INSTALLATION.
3. WHERE NO CONCRETE COVER IS PROVIDED LIGHTING DUCT/CIRCUIT(S) SHALL BE INSTALLED AT A MINIMUM OF 600mm BELOW FINISHED GROUND LEVEL WITH ELECTRICAL WARNING TAPE AT 300mm.
4. WHERE REQUIRED POWER SUPPLY DUCTS SHALL CROSS ROADS AT 90 DEGREES AT 1m DEPTHS FOR STATE HIGHWAYS AND 0.6m FOR LOCAL ROADS.
5. COLUMN LOCATIONS SHALL BE COORDINATED WITH ALL OTHER SERVICES AS REQUIRED.
6. POLE MANUFACTURER TO PROVIDE SPECIFIC FOOTING DESIGNS. NOMINAL EMBEDMENT DEPTH 2.4m.



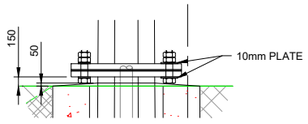
TYPICAL LIGHTING DETAIL



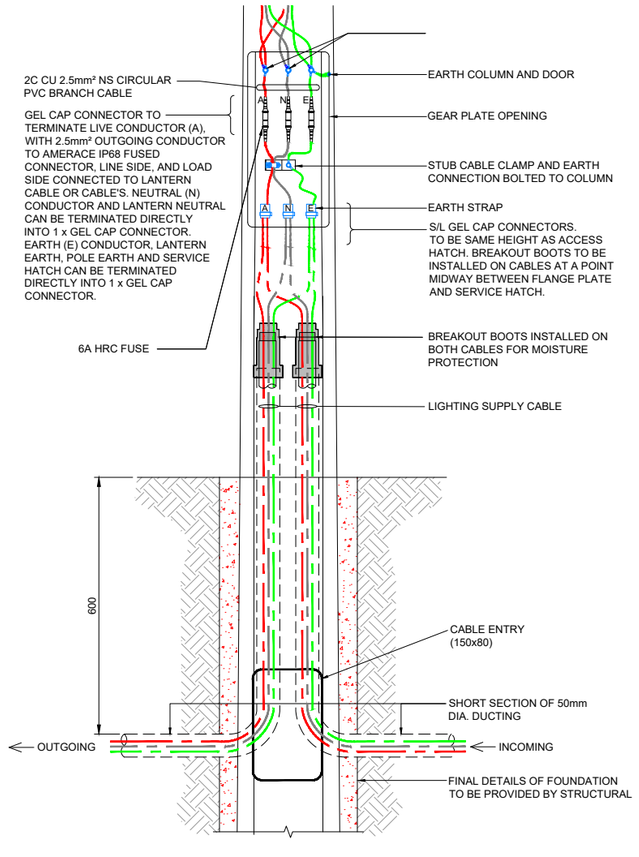
1 TYPICAL GROUT DETAIL



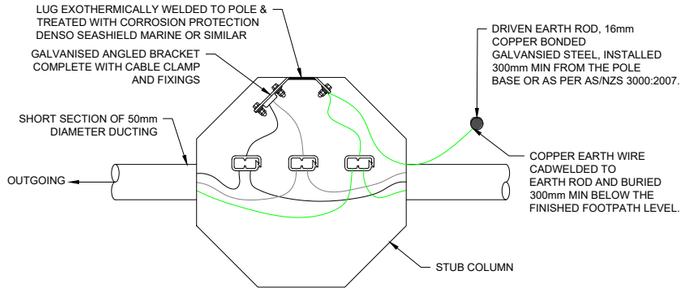
TYPICAL LIGHTING DETAIL



2 TYPICAL GROUT DETAIL



TYPICAL POWER INSTALLATION
WITHIN BASE OF COLUMN



CABLE CLAMP AND EARTH CONNECTION
BOLTED TO STUB COLUMN DETAIL

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PROJECT

EP School Link
Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

PROJECT MANAGEMENT INITIALS

AK	JY	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

C	12.04.24	100% DETAILED DESIGN
B	15.03.24	UPDATED DETAILED DESIGN
A	21.12.23	DETAILED DESIGN
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

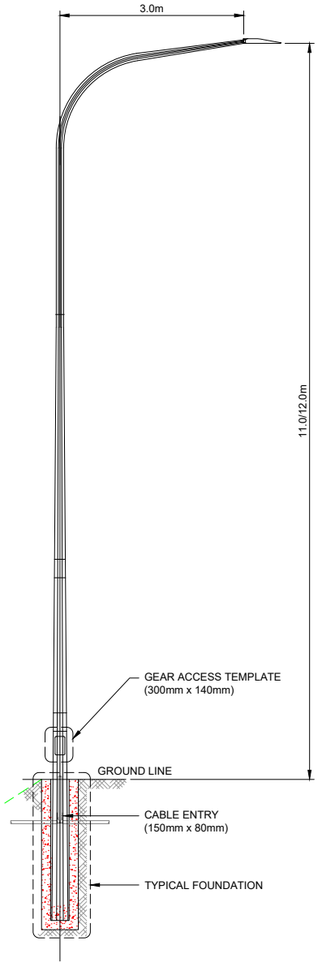
SHEET TITLE

TARSI
LIGHTING DETAILS
SHEET 1

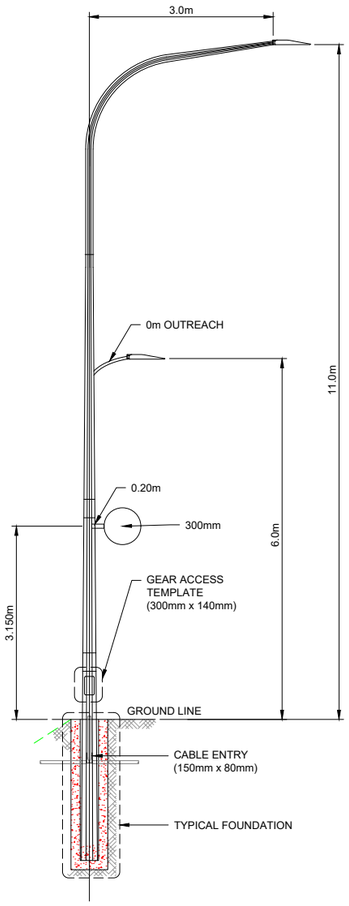
SHEET NUMBER

60687064-SHT-SL-8501

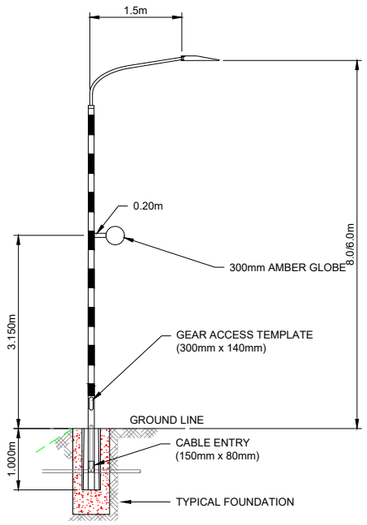
ISO A1 594mm x 841mm



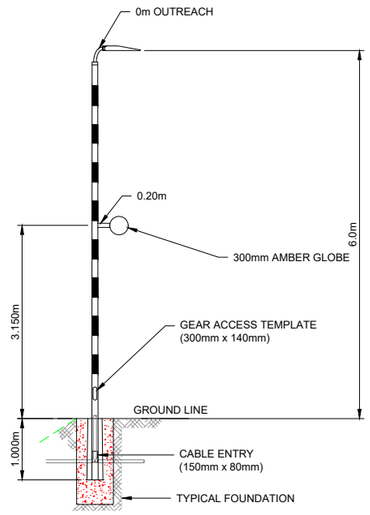
DETAIL - GROUND PLANT 12.0m
Scale 1:50



DETAIL - DOUBLE ARMED GP
PEDESTRIAN CROSSING COLUMN Scale 1:50



DETAIL - PEDESTRIAN CROSSING COLUMN
Scale 1:50



DETAIL - PEDESTRIAN CROSSING COLUMN
Scale 1:50

LUMINAIRE TYPE

	TYPE A	TYPE B	TYPE C	TYPE D	TYPE E	TYPE F	TYPE G	TYPE H
MODEL	BRP712 LED115WW 92W PSU DW1	BRP712 LED150WW 120W PSU DW1	BRP712 LED133WW 110W PSU DW0	ITALO 1 0F2H1 STU-M 3_3-3M	ITALO 1 0F4 OPA-SX 4_5-2M	ITALO 1 0F4 OPA-DX 4_5-2M	ITALO 1 0F4 OPA-SX 4_7-2M	ITALO 1 0F4 OPA-SX 4_100-2M
MODEL REFERENCE	PHILLIPS	PHILLIPS	PHILLIPS	TECHLIGHT	TECHLIGHT	TECHLIGHT	TECHLIGHT	TECHLIGHT
POWER	92W	120W	110W	30W	51W	51W	67.5W	99W

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PROJECT
EP School Link Design

CLIENT
Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION
DETAILED DESIGN

SCALE
0 1.2 2.4 m
1:50

PROJECT MANAGEMENT INITIALS

AK	JY	MS
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PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

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C	12.04.24	100% DETAILED DESIGN
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I/R	DATE	DESCRIPTION

PROJECT NUMBER
60687064

SHEET TITLE
TARSI
LIGHTING DETAILS
SHEET 2

SHEET NUMBER
60687064-SHT-SL-8502

ISO A1 594mm x 841mm

X2 PEDESTRIAN CROSSINGS CALCULATION DETAILS

PEDESTRIAN CROSSING (PC)	SUBCATEGORY	EPH (≥20 lx)	EPV PC_1 (≥12 lx)	EPV PC_2 (≥12 lx)	SURR PC_1 (≥6 lx)	SURR PC_2 (≥6 lx)	HUMP PC_1 (EH OF PR2; ≥3.75 lx)	HUMP PC_2 (EPH OF V3; ≥7.5 lx)
1	X2	33	12	28	40	24	45	20
2	X2	54	27	25	66	65	37	22
3	X2	33	22	20	33	38	39	19
4	X2	51	19	13	54	56	20	19
5	X2	26	20	19	28	27	44	18
7	X2	32	22	19	34	16	15	18
9	X2	56	23	18	36	56	13	16
10	X2	43	26	21	24	33	29	12
11	X2	31	24	20	16	19	36	22
12	X2	34	28	25	15	27	20	16
13	X2	30	14	17	19	51	21	15
14	X2	26	20	NA	21	51	15	28
15	X2	37	NA	26	11	45	29	29

X1 PEDESTRIAN CROSSINGS CALCULATION DETAILS

PEDESTRIAN CROSSING (PC)	SUBCATEGORY	EPH (≥30 lx)	EPV PC_1 ≥20 lx	EPV PC_2 ≥20 lx	SURR PC_1 (≥10 lx)	SURR PC_2 (≥10 lx)	HUMP PC_1 (EPH OF V3; ≥7.5 lx)	HUMP PC_2 (EPH OF V3; ≥7.5 lx)
6	X1	50	32	35	20	25	12	18
8	X1	50	34	34	24	20	21	20

INTERSECTION AND OTHER AREA CALCULATION DETAILS

CALCULATION AREA	SUBCATEGORY	EPH (≥7.5lx)	SURROUNDINGS (≥3.75lx)	UNIFORMITY (MAXIMUM / MINIMUM ≤8)
MAIN INTERSECTION	V3	9.4	NA	3.35
MAIN INTERSECTION SURROUNDING 1	V3	NA	9.06	2.64
MAIN INTERSECTION SURROUNDING 2	V3	NA	8.45	3.42
MAIN INTERSECTION SURROUNDING 3	V3	NA	5.7	3.92
MAIN INTERSECTION SURROUNDING 4	V3	NA	13.99	1.81
DIVERGENCE	V3	11.4	NA	2.23
DIVERGENCE SURROUNDING 1	V3	NA	11.29	5.6
DIVERGENCE SURROUNDING 2	V3	NA	11.54	2.56
DIVERGENCE 2	V3	24.18	NA	3.25
DIVERGENCE 2 SURROUNDING 1	V3	NA	20.29	1.46
DIVERGENCE 2 SURROUNDING 2	V3	NA	21.63	5.56
DIVERGENCE 3	V3	11.37	NA	3.68
DIVERGENCE 3 SURROUNDING 1	V3	NA	12.18	5.03
DIVERGENCE 3 SURROUNDING 2	V3	NA	10.7	2.63

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REGISTRATION

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PROJECT DATA

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ISSUE/REVISION

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B	12.04.24	100% DETAILED DESIGN
A	15.03.24	UPDATED DETAILED DESIGN

PROJECT NUMBER

60687064

SHEET TITLE

TARSI
LIGHTING DETAILS
SHEET 3

SHEET NUMBER

60687064-SHT-SL-8503

ISO A1 594mm x 841mm

LUMINAIRE SCHEDULE

POLE REFERENCE	L01	L02	L03	L04	L05	L06	L07	L08	L09	L10
POLE ID	10324	-	10342	10326	-	10335	-	10334	10333	10332
EXISTING / NEW / RELOCATED / DUAL COLUMN	EXT	EXT	EXT	EXR	EXT	EXR	EXT	EXT	EXT	EXT
MOUNTING HEIGHT	10	10	10	10	10	10	10	11	11	11
OUTREACH (m)	3	3	3	3	3	3	3	3	3	3
OUTREACH TYPE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE
EXISTING / RETROFIT / NEW LUMINAIRE	EXT	EXT	EXT	EXT	EXT	EXT	EXT	EXT	EXT	EXT
LUMINAIRE TYPE	A	A	A	A	A	A	A	A	A	A
LUMINAIRE MODEL	LED	LED	LED	LED	LED	LED	LED	LED	LED	LED
LUMINAIRE WATTAGE (W)	92	92	92	92	92	92	92	92	92	92
TILT (deg)	0	0	0	0	0	0	0	0	0	0
MF	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
MINIMUM SETBACK (m) (FROM KERB)	1	1	1	1	1	1	1	1	1	1
SHEAR BASE (SB) / GROUND PLANT (GP)	EXT	EXT	EXT	EXT	EXT	EXT	EXT	EXT	EXT	EXT
NORTHING	446291.465	446317.094	446328.069	446354.938	446382.79	446376.711	446386.259	446408.875	446443.905	446479.341
EASTING	699672.797	699707.917	699691.155	699716.775	699707.342	699725.309	699741.084	699730.906	699764.385	699766.191
AIAL USER LABEL	EXT	EXT	EXT	EXT	EXT	EXT	EXT	EXT	EXT	EXT
POLE COORDINATES	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC

LUMINAIRE SCHEDULE

POLE REFERENCE	L11	L12	L13	L14	L15	L16	L17	L18	L19	L20
POLE ID	-	-	10330	10329	10336	10338	10339	10341	10337	10345
EXISTING / NEW / RELOCATED / DUAL COLUMN	EXT	EXT	EXT	DUAL	EXR	EXT	EXT	EXT	EXT	EXT
MOUNTING HEIGHT	11	11	11	11	11	11	11	11	11	11
OUTREACH (m)	3	3	3	3	3	3	3	3	3	3
OUTREACH TYPE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE
EXISTING / RETROFIT / NEW LUMINAIRE	EXT	EXT	EXT	EXT	EXT	EXT	EXT	EXT	EXT	EXT
LUMINAIRE TYPE	A	A	A	A	A	A	A	A	A	A
LUMINAIRE MODEL	LED	LED	LED	LED	LED	LED	LED	LED	LED	LED
LUMINAIRE WATTAGE (W)	92	92	92	92	92	92	92	92	92	92
TILT (deg)	0	0	0	0	0	0	0	0	0	0
MF	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
MINIMUM SETBACK (m) (FROM KERB)	1	1	1	1	1	1	1	1	1	1
SHEAR BASE (SB) / GROUND PLANT (GP)	EXT	EXT	EXT	EXT	EXT	EXT	EXT	EXT	EXT	EXT
NORTHING	446505.611	446479.359	446504.844	446550.1	446584.083	446616.956	446631.42	446660.22	446708.5	446721.764
EASTING	699766.196	699794.261	699793.967	699790.954	699815.952	699809.934	699829.271	699822.089	699835.273	699854.554
AIAL USER LABEL	EXT	EXT	EXT	EXT	EXT	EXT	EXT	EXT	EXT	EXT
POLE COORDINATES	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC

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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

PROJECT MANAGEMENT INITIALS

AK	JY	MS
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PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

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B	12.04.24	100% DETAILED DESIGN
A	15.03.24	UPDATED DETAILED DESIGN

PROJECT NUMBER

60687064

SHEET TITLE

TARSI
LIGHTING SCHEDULE
SHEET 1

SHEET NUMBER

60687064-SHT-SL-8601

ISO A1 594mm x 841mm

LUMINAIRE SCHEDULE

POLE REFERENCE	L21	L22	L23	L24	L25	L26	L27	L28	L29	L30
POLE ID	-	10325	-	10331	10320	10323	-	10327	10343	10346
EXISTING / NEW / RELOCATED / DUAL COLUMN	EXT	EXT	EXT	EXT	EXT	EXT	EXT	EXT	EXT	EXT
MOUNTING HEIGHT (m)	11	11	11	11	11	11	11	11	11	11
OUTREACH (m)	3	3	3	3	3	3	3	3	3	3
OUTREACH TYPE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE
EXISTING / RETROFIT / NEW LUMINAIRE	EXT	EXT	EXT	EXT	EXT	EXT	EXT	EXT	EXT	EXT
LUMINAIRE TYPE	A	A	A	A	A	A	A	A	A	A
LUMINAIRE MODEL	LED	LED	LED	LED	LED	LED	LED	LED	LED	LED
LUMINAIRE WATTAGE (W)	92	92	92	92	92	92	92	92	92	92
TILT (deg)	0	0	0	0	0	0	0	0	0	0
MF	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
MINIMUM SETBACK (m) (FROM KERB)	1	1	1	1	1	1	1	1	1	1
SHEAR BASE (SB) / GROUND PLANT (GP)	EXT	EXT	EXT	EXT	EXT	EXT	EXT	EXT	EXT	EXT
NORTHING	446740.572	446755.947	446762.043	446789.93	446832.478	446864.935	446879.462	446893.873	446907.801	446963.25
EASTING	699831.795	699848.419	699877.942	699873.195	699869.8	699893.753	699909.721	699886.941	699905.909	699906.273
AIAL USER LABEL	EXT	EXT	EXT	EXT	EXT	EXT	EXT	EXT	EXT	EXT
POLE COORDINATES	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC

LUMINAIRE SCHEDULE

POLE REFERENCE	L31	L32	L33	L34	L35	L36	L37	L38	L39	L40
POLE ID	36559	36557	36556	-	36560	NEW	-	-	36564	7935
EXISTING / NEW / RELOCATED / DUAL COLUMN	EXR	EXR	EXT	EXR	EXR	NEW	EXT	EXT	EXR	EXT
MOUNTING HEIGHT (m)	11	11	11	12	11	11	11	11	12	10.5
OUTREACH (m)	3	3	3	3	3	3	3	3	3	3
OUTREACH TYPE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE
EXISTING / RETROFIT / NEW LUMINAIRE	EXT	EXT	EXT	EXT	EXT	NEW	EXT	EXT	EXT	EXT
LUMINAIRE TYPE	A	A	A	A	A	A	A	A	A	A
LUMINAIRE MODEL	LED	LED	LED	LED	LED	LED	LED	LED	LED	LED
LUMINAIRE WATTAGE (W)	92	92	92	92	92	92	92	92	92	92
TILT (deg)	0	0	0	0	0	0	0	0	0	0
MF	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
MINIMUM SETBACK (m) (FROM KERB)	1	1	1	1	1	1	1	1	1	1
SHEAR BASE (SB) / GROUND PLANT (GP)	EXT	EXT	EXT	EXT	EXT	GP	EXT	EXT	EXT	EXT
NORTHING	447010.531	447030.351	447038.581	447047.371	447044.514	447056.66	447079.348	447077.327	447084.208	447066.173
EASTING	699916.244	699917.792	699945.068	699953.328	699910.371	699979.452	700000.83	699977.771	699954.179	699866.943
AIAL USER LABEL	EXT	EXT	EXT	EXT	EXT	NEW	EXT	EXT	EXT	EXT
POLE COORDINATES	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC

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PROJECT DATA

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PROJECT NUMBER

60687064

SHEET TITLE

TARSI
LIGHTING SCHEDULE
SHEET 2

SHEET NUMBER

60687064-SHT-SL-8602

ISO A1 594mm x 841mm

LUMINAIRE SCHEDULE

POLE REFERENCE	L41	L42	L43	L44	L45	L46	L47	L48	L49	L50
POLE ID	7962	36560	40772	36550	36551	36549	36548	36547	36546	-
EXISTING / NEW / RELOCATED / DUAL COLUMN	EXT	EXT	EXR	EXT	EXR	EXT	EXT	EXT	EXT	EXT
MOUNTING HEIGHT (m)	10.5	10.5	11	12	12	12	12	12	12	12
OUTREACH (m)	3	3	3	3	3	3	3	3	3	3
OUTREACH TYPE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE
EXISTING / RETROFIT / NEW LUMINAIRE	EXT	EXT	EXR	EXT	EXT	EXT	EXT	EXT	EXT	EXT
LUMINAIRE TYPE	A	A	A	B	B	B	B	B	B	B
LUMINAIRE MODEL	LED	LED	LED	LED	LED	LED	LED	LED	LED	LED
LUMINAIRE WATTAGE (W)	92	92	92	120	120	120	120	120	120	120
TILT (deg)	0	0	0	0	0	0	0	0	0	0
MF	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
MINIMUM SETBACK (m) (FROM KERB)	1	1	1	1	1	1	1	1	1	1
SHEAR BASE (SB) / GROUND PLANT (GP)	EXT	EXT	EXT	EXT	EXT	EXT	EXT	EXT	EXT	EXT
NORTHING	447049.715	447069.974	447076.581	447094.972	447094.65	447119.188	447134.293	447160.809	447171.431	447214.281
EASTING	699893.635	699906.708	699913.304	699948.977	699918.921	699919.615	699941.927	699908.75	699933.345	699899.357
AIAL USER LABEL	EXT	EXT	EXT	EXT	EXT	EXT	EXT	EXT	EXT	EXT
POLE COORDINATES	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC

LUMINAIRE SCHEDULE

POLE REFERENCE	L51	L52	L53	L54	L55	L56	L57	L58	L59	L60
POLE ID	-	-	-	-	-	NEW	NEW	-	-	NEW
EXISTING / NEW / RELOCATED / DUAL COLUMN	EXT	EXT	EXT	EXT	EXT	NEW	NEW	DOUBLE	DOUBLE	NEW
MOUNTING HEIGHT (m)	10.5	10.5	11	12	12	12	12	12	12	6
OUTREACH (m)	3	3	3	3	3	3	3	3	3	1.5
OUTREACH TYPE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE
EXISTING / RETROFIT / NEW LUMINAIRE	EXT	EXT	EXR	EXT	EXT	NEW	NEW	EXT	EXT	NEW
LUMINAIRE TYPE	A	A	A	B	B	B	B	B	B	D
LUMINAIRE MODEL	LED	LED	LED	LED	LED	LED	LED	LED	LED	LED
LUMINAIRE WATTAGE (W)	120	120	120	120	120	120	120	120	120	30
TILT (deg)	0	0	0	0	0	0	0	0	0	0
MF	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
MINIMUM SETBACK (m) (FROM KERB)	1	1	1	1	1	1	1	1	1	1
SHEAR BASE (SB) / GROUND PLANT (GP)	EXT	EXT	EXT	EXT	EXT	GP	GP	EXT	EXT	GP
NORTHING	447219.854	447264.318	447269.354	447317.459	447312.026	447340.801	447345.836	447370.815	447412.654	447377.86
EASTING	699922.703	699888.187	699912.477	699900.837	699877.487	699871.09	699894.113	699876.029	699866.658	699891.368
AIAL USER LABEL	EXT	EXT	EXT	EXT	EXT	NEW	NEW	EXT	EXT	NEW
POLE COORDINATES	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC

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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

PROJECT MANAGEMENT INITIALS

AK	JY	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

I/R	DATE	DESCRIPTION
B	12.04.24	100% DETAILED DESIGN
A	15.03.24	UPDATED DETAILED DESIGN

PROJECT NUMBER

60687064

SHEET TITLE

TARSI
LIGHTING SCHEDULE
SHEET 3

SHEET NUMBER

60687064-SHT-SL-8603

ISO A1 594mm x 841mm

LUMINAIRE SCHEDULE

POLE REFERENCE	L61	L62	L63	L64	L65	L66	L67	L68	L69	L70
POLE ID	NEW	NEW	-	-	-	NEW	NEW	NEW	NEW	NEW
EXISTING / NEW / RELOCATED / DUAL COLUMN	NEW	NEW	EXT	EXT	EXT	NEW	NEW	NEW	NEW	NEW
MOUNTING HEIGHT (m)	6	6	10	10	10	6	6	6	6	6
OUTREACH (m)	1.5	1.5	3	3	3	0	0	0	0	0
OUTREACH TYPE	CURVE	CURVE	DUAL	DUAL	DUAL	CURVE	CURVE	CURVE	CURVE	CURVE
EXISTING / RETROFIT / NEW LUMINAIRE	NEW	NEW	EXT	EXT	NEW	NEW	NEW	NEW	NEW	NEW
LUMINAIRE TYPED	D	D	C	C	C	E	E	E	E	E
LUMINAIRE MODEL	LED	LED	LED	LED	LED	LED	LED	LED	LED	LED
LUMINAIRE WATTAGE (W)	30	30	110	110	110	51	51	51	51	51
TILT (deg)	0	0	0	0	0	0	0	0	0	0
MF	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
MINIMUM SETBACK (m) (FROM KERB)	1	1	1	1	1	1	1	1	1	1
SHEAR BASE (SB) / GROUND PLANT (GP)	GP	GP	EXT	EXT	EXT	GP	GP	GP	GP	GP
NORTHING	447402.849	447427.825	447466.681	447449.1	447448.469	446319.193	446327.653	446383.514	446390.634	446389.191
EASTING	699890.589	699889.732	699896.356	699871.621	699846.872	699700.245	699711.254	699708.039	699717.576	699734.819
AIAL USER LABEL	NEW	NEW	EXT	EXT	EXT	NEW	NEW	NEW	NEW	NEW
POLE COORDINATES	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC

LUMINAIRE SCHEDULE

POLE REFERENCE	L71	L72	L73	L74	L75	L76	L77	L78	L79	L80
POLE ID	NEW	NEW	NEW	NEW	NEW	NEW	NEW	NEW	NEW	NEW
EXISTING / NEW / RELOCATED / DUAL COLUMN	NEW	NEW	NEW	NEW	NEW	NEW	DUAL	NEW	NEW	NEW
MOUNTING HEIGHT (m)	6	6	6	6	6	6	6	6	6	6
OUTREACH (m)	0	0	1.5	0	0	0	0	0	0	0
OUTREACH TYPE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE
EXISTING / RETROFIT / NEW LUMINAIRE	NEW	NEW	NEW	NEW	NEW	NEW	NEW	NEW	NEW	NEW
LUMINAIRE TYPE	E	E	E	E	E	E	E	E	E	E
LUMINAIRE MODEL	LED	LED	LED	LED	LED	LED	LED	LED	LED	LED
LUMINAIRE WATTAGE (W)	51	51	51	51	51	51	51	51	51	51
TILT (deg)	0	0	0	0	0	0	0	0	0	0
MF	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
MINIMUM SETBACK (m) (FROM KERB)	1	1	1	1	1	1	1	1	1	1
SHEAR BASE (SB) / GROUND PLANT (GP)	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP
NORTHING	446397.828	446491.208	446501.295	446483.297	446492.123	446553.223	446550.119	446632.013	446642.763	446648.242
EASTING	699746.262		699774.672	699781.634	699793.674	699801.389	699790.997	699803.996	699813.469	699818.373
AIAL USER LABEL	NEW	NEW	NEW	NEW	NEW	NEW	NEW	NEW	NEW	NEW
POLE COORDINATES	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC

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AECOM

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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

PROJECT MANAGEMENT INITIALS

AK	JY	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

I/R	DATE	DESCRIPTION
B	12.04.24	100% DETAILED DESIGN
A	15.03.24	UPDATED DETAILED DESIGN

PROJECT NUMBER

60687064

SHEET TITLE

TARSI
LIGHTING SCHEDULE
SHEET 4

SHEET NUMBER

60687064-SHT-SL-8604

ISO A1 594mm x 841mm

LUMINAIRE SCHEDULE

POLE REFERENCE	L81	L82	L83	L84	L85	L86	L87	L88	L89	L90
POLE ID	NEW	NEW	NEW	NEW	NEW	NEW	NEW	NEW	NEW	NEW
EXISTING / NEW / RELOCATED / DUAL COLUMN	NEW	NEW	NEW	NEW	NEW	NEW	NEW	NEW	NEW	NEW
MOUNTING HEIGHT (m)	6	6	6	6	6	6	6	6	6	6
OUTREACH (m)	0	0	0	0	0	0	0	0	0	0
OUTREACH TYPE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE
EXISTING / RETROFIT / NEW LUMINAIRE	NEW	NEW	NEW	NEW	NEW	NEW	NEW	NEW	NEW	NEW
LUMINAIRE TYPE	E	E	E	E	E	E	E	E	E	G
LUMINAIRE MODEL	LED	LED	LED	LED	LED	LED	LED	LED	LED	LED
LUMINAIRE WATTAGE (W)	51	51	51	51	51	51	51	51	51	67.5
TILT (deg)	0	0	0	0	0	0	0	0	0	0
MF	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
MINIMUM SETBACK (m) (FROM KERB)	1	1	1	1	1	1	1	1	1	1
SHEAR BASE (SB) / GROUND PLANT (GP)	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP
NORTHING	446651.666	446723.652	446734.092	446767.832	446777.65	446883.269	446893.703	447000.67	447009.807	447046.648
EASTING	699828.631	699828.603	699838.166	699864.745	699873.674	699896.294	699906.066	699928.61	699937.804	699913.869
AIAL USER LABEL	NEW	NEW	NEW	NEW	NEW	NEW	NEW	NEW	NEW	NEW
POLE COORDINATES	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC

LUMINAIRE SCHEDULE

POLE REFERENCE	L91	L92	L93	L94	L95	L96	L97	L98
POLE ID	NEW	NEW	NEW	NEW	NEW	NEW	NEW	-
EXISTING / NEW / RELOCATED / DUAL COLUMN	NEW	NEW	NEW	NEW	NEW	NEW	NEW	EXT
MOUNTING HEIGHT (m)	6	6	6	8	6	6	6	11
OUTREACH (m)	0	0	0	1.5	0	0	0	3
OUTREACH TYPE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE	CURVE
EXISTING / RETROFIT / NEW LUMINAIRE	NEW	NEW	NEW	NEW	NEW	NEW	NEW	EXT
LUMINAIRE TYPE	E	E	E	H	E	F	E	A
LUMINAIRE MODEL	LED	LED	LED	LED	LED	LED	LED	LED
LUMINAIRE WATTAGE (W)	51	51	51	99	51	51	51	92
TILT (deg)	0	0	0	0	0	0	0	0
MF	0.8	0.8	0.8	0.80	0.8	0.8	0.8	0.8
MINIMUM SETBACK (m) (FROM KERB)	1	1	1	1	1	1	1	1
SHEAR BASE (SB) / GROUND PLANT (GP)	GP	GP	GP	GP	GP	GP	GP	EXT
NORTHING	447080.127	447079.072	447282.164	447349.126	447349.126	447364.129	447373.277	446997.047
EASTING	699918.601	699953.895	699884.205	699887.724	699884.037	699884.037	699891.391	699944.334
AIAL USER LABEL	NEW	NEW	NEW	NEW	NEW	NEW	NEW	EXT
POLE COORDINATES	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC	AS PER IFC

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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

PROJECT MANAGEMENT INITIALS

AK	JY	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

I/R	DATE	DESCRIPTION
B	12.04.24	100% DETAILED DESIGN
A	15.03.24	UPDATED DETAILED DESIGN

PROJECT NUMBER

60687064

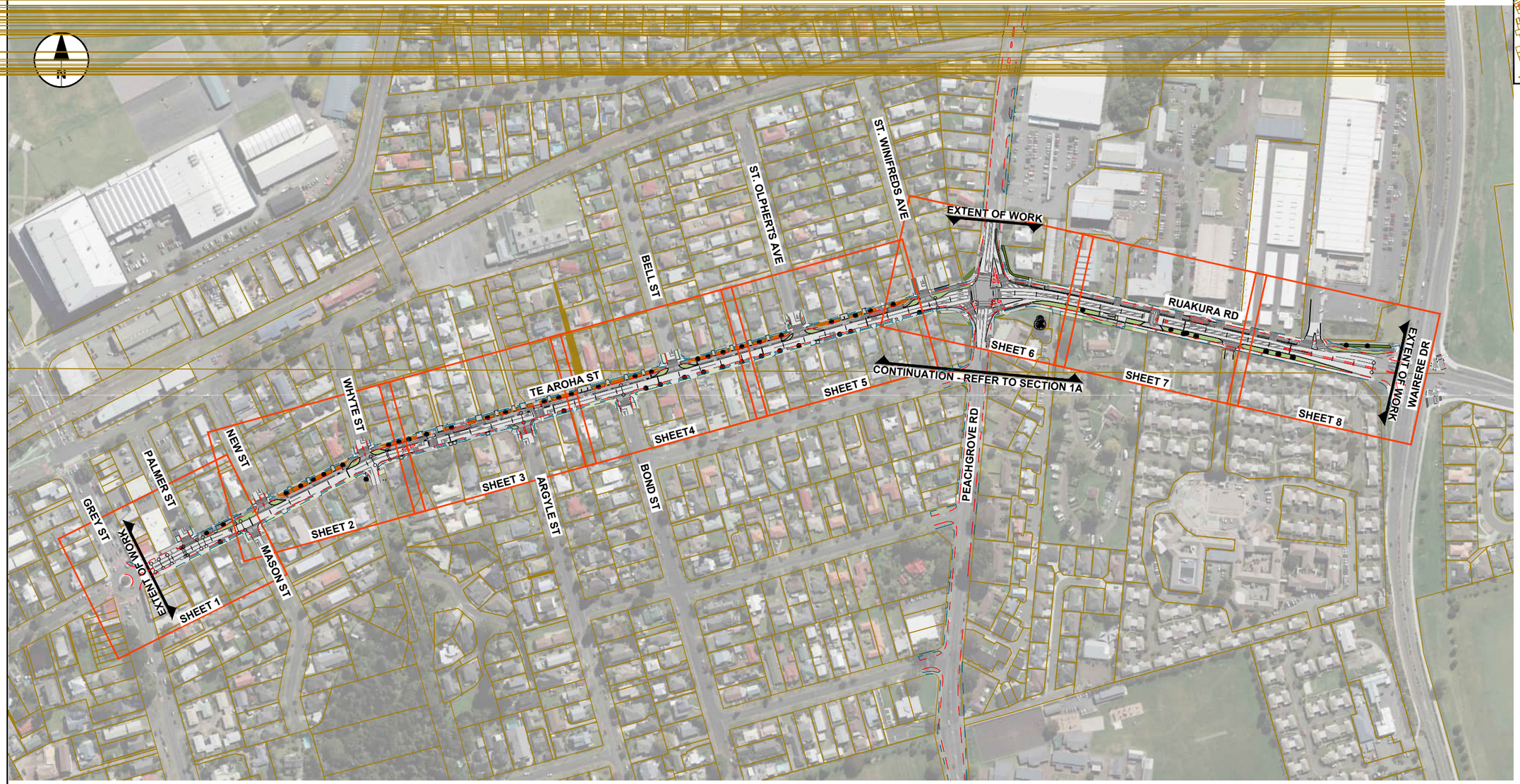
SHEET TITLE

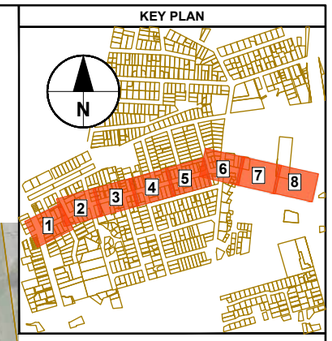
TARSI
LIGHTING SCHEDULE
SHEET 5

SHEET NUMBER

60687064-SHT-SL-8605

ISO A1 (594mm x 841mm)





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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 48 96 m
1:2000

PROJECT MANAGEMENT INITIALS

AJ	BD	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

C	12.04.24	100% DETAILED DESIGN
B	15.03.24	UPDATED DETAILED DESIGN
A	21.12.23	DETAILED DESIGN
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

SHEET TITLE

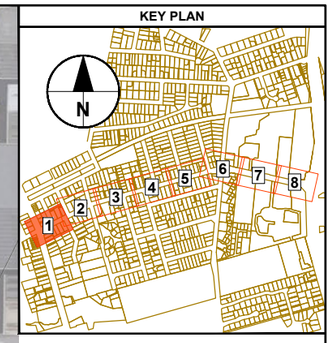
TARSI
LANDSCAPING PLAN
OVERVIEW

SHEET NUMBER

60687064-SHT-LD-8100

ISO A1 594mm x 841mm

KEY PLAN



LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING KERB
- NEW KERB
- EXISTING ASHPHALT
- NEW ASPHALT
- NEW CONCRETE
- GRASSED BERM
- HARDY PLANTING
- INFILL PLANTING
- HERITAGE ZONE - STRIP BERM PLANTING
- EXISTING TREE TO BE RETAINED OR REPLACED
- EXISTING TREE TO BE REMOVED
- NEW TREE POSITION TBC DEPENDANT ON SERVICES
- STREET LIGHTS
- STREET SIGN

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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6.25 12.5 m
1:250

PROJECT MANAGEMENT INITIALS

AJ	BD	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

I/R	DATE	DESCRIPTION
F	12.04.24	100% DETAILED DESIGN
E	15.03.24	UPDATED DETAILED DESIGN
D	21.12.23	DETAILED DESIGN
C	25.07.23	FOR INFORMATION
B	12.07.23	FOR INFORMATION
A	30.03.23	FOR INFORMATION

PROJECT NUMBER

60687064

SHEET TITLE

TARSI
LANDSCAPING PLAN
SHEET 1

SHEET NUMBER

60687064-SHT-LD-8101

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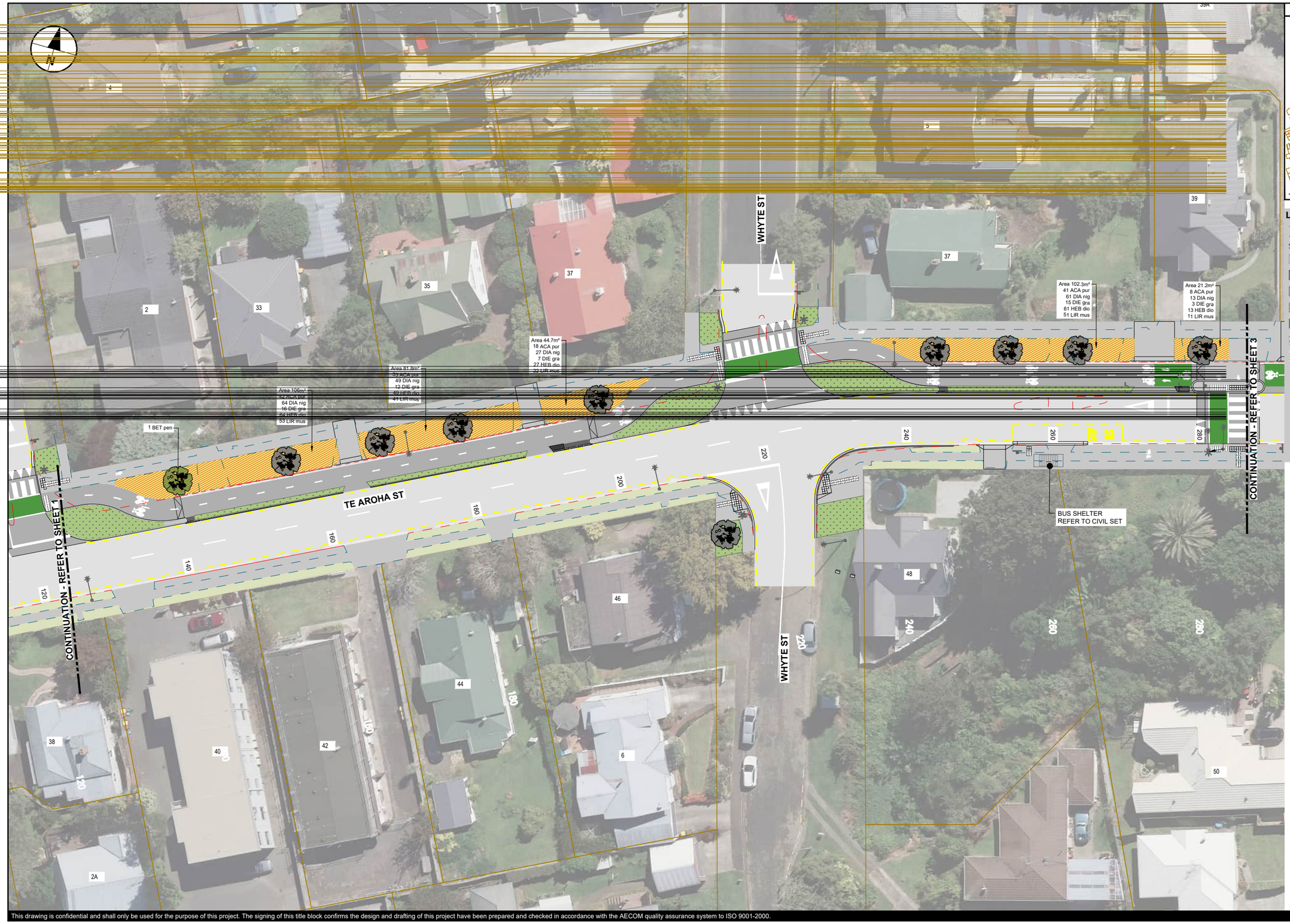
ISO A1 (594mm x 841mm)



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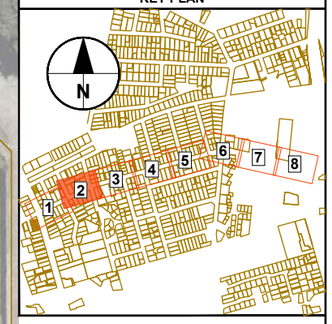

LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING KERB
- NEW KERB
- EXISTING ASHPHALT
- NEW ASPHALT
- NEW CONCRETE
- GRASSED BERM
- HARDY PLANTING
- INFILL PLANTING
- HERITAGE ZONE - STRIP BERM PLANTING
- EXISTING TREE TO BE RETAINED OR REPLACED
- EXISTING TREE TO BE REMOVED
- NEW TREE POSITION TBC DEPENDANT ON SERVICES
- STREET LIGHTS
- STREET SIGN

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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6 12 m
1:250

PROJECT MANAGEMENT INITIALS

AJ	BD	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

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F	12.04.24	100% DETAILED DESIGN
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D	21.12.23	DETAILED DESIGN
C	25.07.23	FOR INFORMATION
B	12.07.23	FOR INFORMATION
A	30.06.23	FOR INFORMATION

PROJECT NUMBER

60687064

SHEET TITLE

TARSI
LANDSCAPING PLAN
SHEET 2

SHEET NUMBER

60687064-SHT-LD-8102

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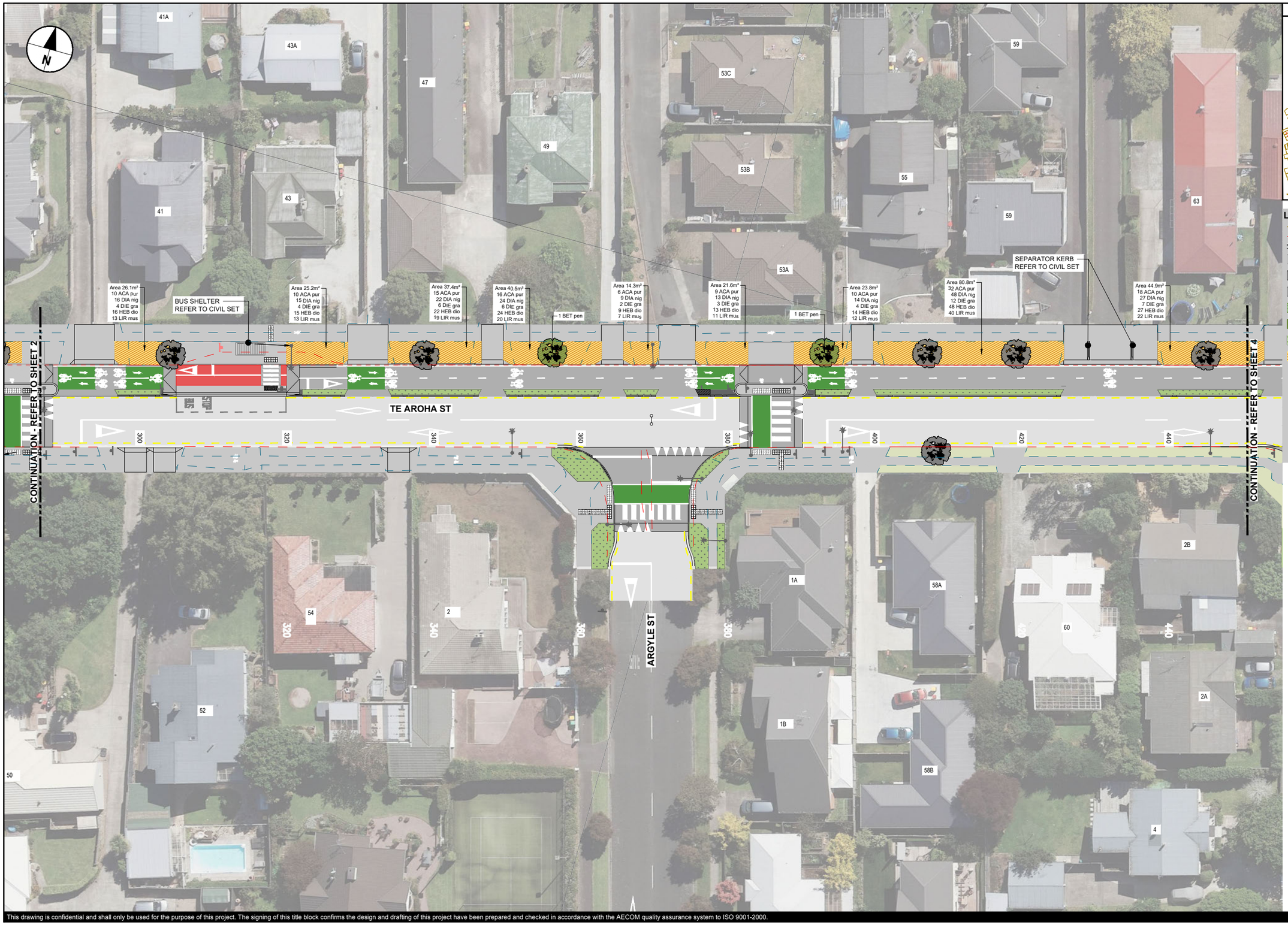
ISO A1 594mm x 841mm



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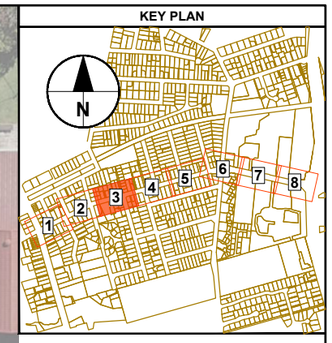

LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING KERB
- NEW KERB
- EXISTING ASHPHALT
- NEW ASPHALT
- NEW CONCRETE
- GRASSED BERM
- HARDY PLANTING
- INFILL PLANTING
- HERITAGE ZONE - STRIP BERM PLANTING
- EXISTING TREE TO BE RETAINED OR REPLACED
- EXISTING TREE TO BE REMOVED
- NEW TREE POSITION TBC DEPENDANT ON SERVICES
- STREET LIGHTS
- STREET SIGN

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CONSULTANT

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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6 12 m
1:250

PROJECT MANAGEMENT INITIALS

AJ	BD	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

E	12.04.24	100% DETAILED DESIGN
D	15.03.24	UPDATED DETAILED DESIGN
C	21.12.23	DETAILED DESIGN
B	12.07.23	FOR INFORMATION
A	30.06.23	FOR INFORMATION
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

SHEET TITLE

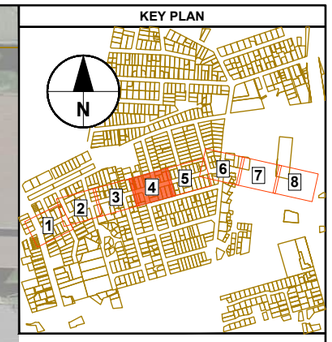
TARSI
LANDSCAPING PLAN
SHEET 3

SHEET NUMBER

60687064-SHT-LD-8103

ISO A1 594mm x 841mm

KEY PLAN



LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING KERB
- NEW KERB
- EXISTING ASHPHALT
- NEW ASPHALT
- NEW CONCRETE
- GRASSED BERM
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PROJECT
EP School Link Design

CLIENT
Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION
DETAILED DESIGN

SCALE
0 6 12 m
1:250

PROJECT MANAGEMENT INITIALS

AJ	BD	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

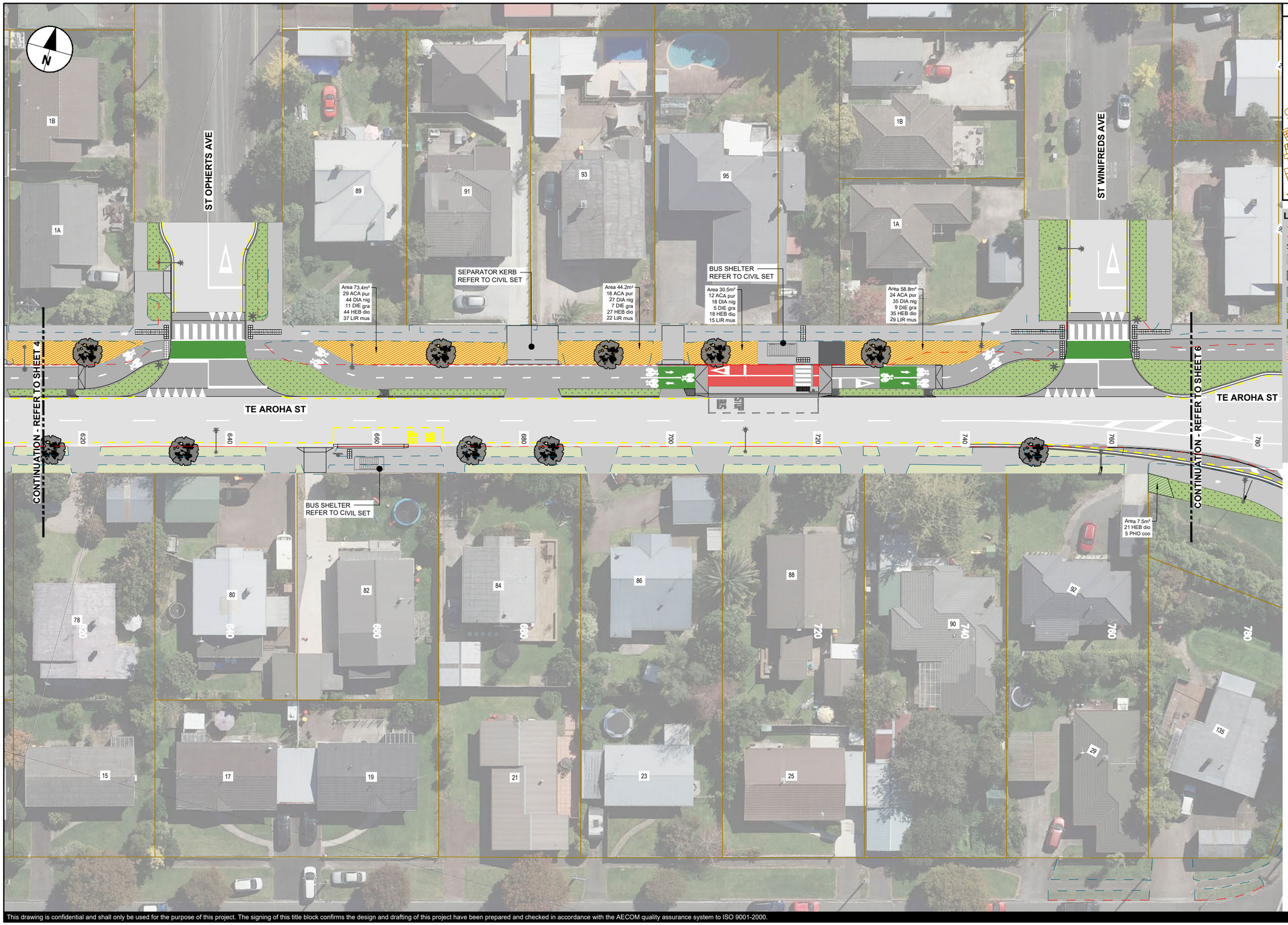
E	12.04.24	100% DETAILED DESIGN
D	15.03.24	UPDATED DETAILED DESIGN
C	21.12.23	DETAILED DESIGN
B	12.07.23	FOR INFORMATION
A	30.06.23	FOR INFORMATION
I/R	DATE	DESCRIPTION

PROJECT NUMBER
60678064

SHEET TITLE
TARSI
LANDSCAPING PLAN
SHEET 4

SHEET NUMBER
60678064-SHT-LD-8104

ISO A1 594mm x 841mm



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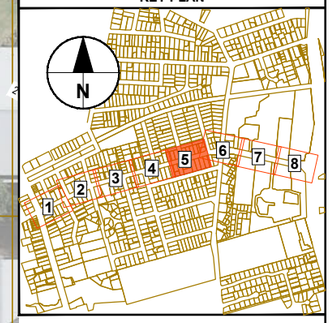

LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING KERB
- NEW KERB
- EXISTING ASHPHALT
- NEW ASPHALT
- NEW CONCRETE
- GRASSED BERM
- HARDY PLANTING
- INFILL PLANTING
- HERITAGE ZONE - STRIP BERM PLANTING
- EXISTING TREE TO BE RETAINED OR REPLACED
- EXISTING TREE TO BE REMOVED
- NEW TREE POSITION TBC DEPENDANT ON SERVICES
- STREET LIGHTS
- STREET SIGN

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PROJECT

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CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6 12 m
1:250

PROJECT MANAGEMENT INITIALS

AJ	BD	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

E	12.04.24	100% DETAILED DESIGN
D	15.03.24	UPDATED DETAILED DESIGN
C	21.12.23	DETAILED DESIGN
B	12.07.23	FOR INFORMATION
A	30.06.23	FOR INFORMATION
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

SHEET TITLE

TARSI
LANDSCAPING PLAN
SHEET 5

SHEET NUMBER

60687064-SHT-LD-8105

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ISO A1 594mm x 841mm

EXTENT OF WORK

PEACHGROVE RD

RUAKURA RD

TE AROHA ST

PEACHGROVE RD

Area 39.1m²
23 CAR com
23 DIA nig
23 HEB dio
23 LIB per
12 LOM lit
12 LOM tan
8 PHO coo

Area 76.7m²
46 CAR com
46 DIA nig
46 HEB dio
46 LIB per
23 LOM lit
23 LOM tan
15 PHO coo

Area 11.4m²
32 HEB dio
7 PHO coo

Area 7m²
20 HEB dio
4 PHO coo

1
NOTABLE TREES WITH ROOT PROTECTION AREA (PC9)

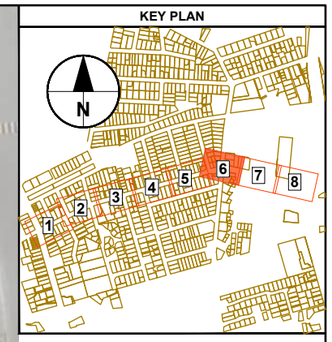
BUS SHELTER
REFER TO CIVIL SET

CONTINUATION - REFER TO SHEET 5

CONTINUATION - REFER TO SHEET 7

CONTINUATION - REFER TO SECTION 1A

KEY PLAN



LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING KERB
- NEW KERB
- EXISTING ASHPHALT
- NEW ASPHALT
- NEW CONCRETE
- GRASSED BERM
- HARDY PLANTING
- INFILL PLANTING
- HERITAGE ZONE - STRIP BERM PLANTING
- EXISTING TREE TO BE RETAINED OR REPLACED
- EXISTING TREE TO BE REMOVED
- NEW TREE POSITION TBC DEPENDANT ON SERVICES
- STREET LIGHTS
- STREET SIGN

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PROJECT
EP School Link Design

CLIENT
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REGISTRATION
DETAILED DESIGN

SCALE
0 6 12 m
1:250

PROJECT MANAGEMENT INITIALS

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PROJECT DATA

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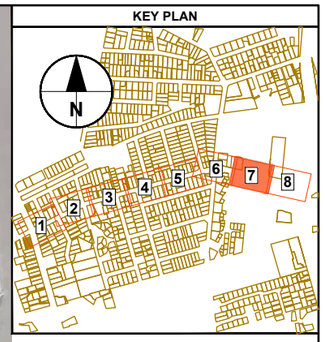
PROJECT NUMBER
60687064

SHEET TITLE
TARSI
LANDSCAPING PLAN
SHEET 6

SHEET NUMBER
60687064-SHT-LD-8106

ISO A1 (594mm x 841mm)



LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING KERB
- NEW KERB
- EXISTING ASHPHALT
- NEW ASPHALT
- NEW CONCRETE
- GRASSED BERM
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PROJECT

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CLIENT

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Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6 12 m
1:250

PROJECT MANAGEMENT INITIALS

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PROJECT DATA

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I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

SHEET TITLE

TARSI
LANDSCAPING PLAN
SHEET 7

SHEET NUMBER

60687064-SHT-LD-8107

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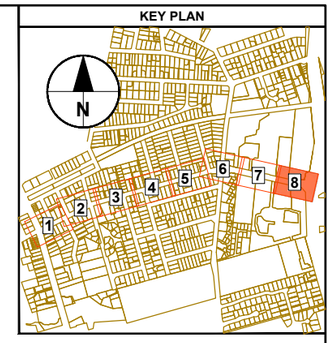
ISO A1 594mm x 841mm



LEGEND:

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- EXISTING KERB
- NEW KERB
- EXISTING ASHPHALT
- NEW ASPHALT
- NEW CONCRETE
- GRASSED BERM
- HARDY PLANTING
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DETAILED DESIGN

SCALE

0 6 12 m
1:250

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I/R	DATE	DESCRIPTION

PROJECT NUMBER

60678064

SHEET TITLE

TARSI
LANDSCAPING PLAN
SHEET 8

SHEET NUMBER

60678064-SHT-LD-8108

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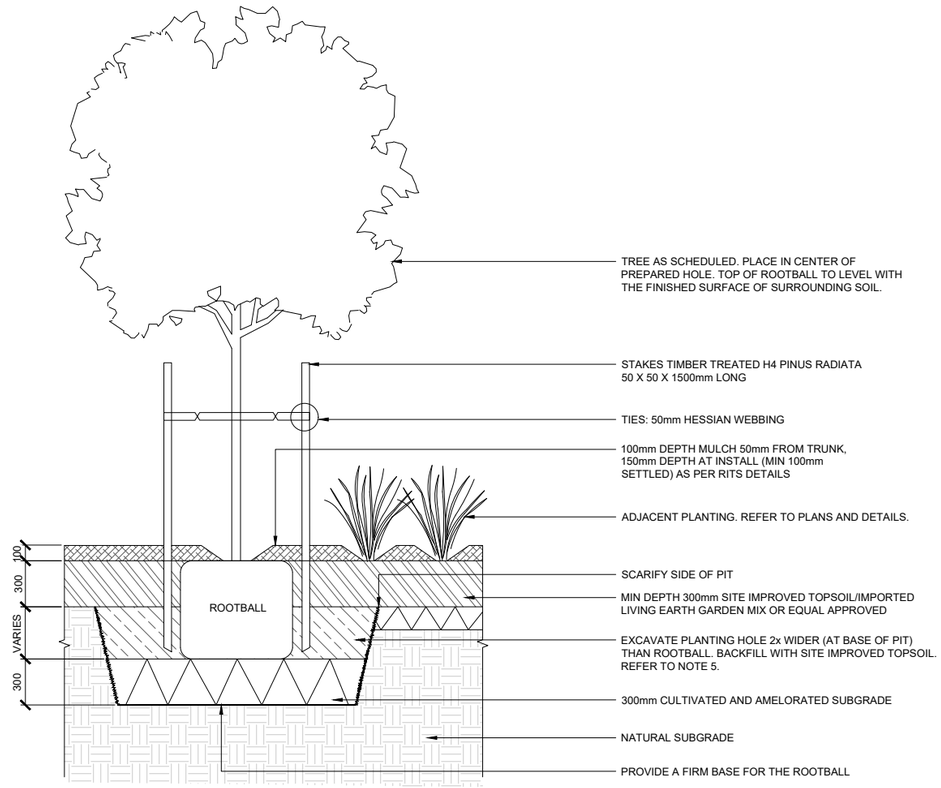
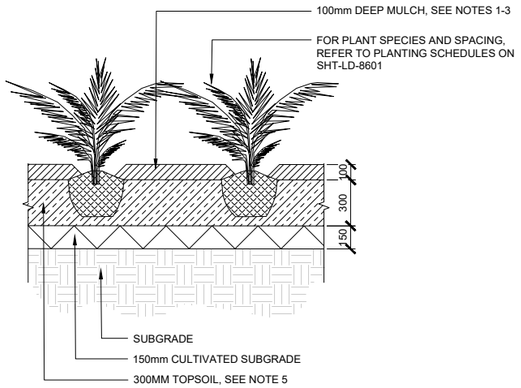
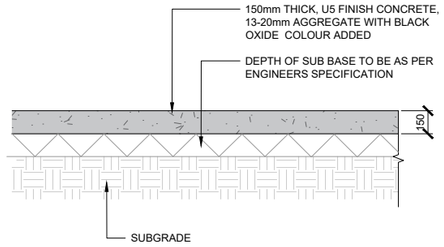
ISO A1 594mm x 841mm



TYPICAL TREE PLANTING DETAIL
A1 1 : 20 (A3 1 : 40)



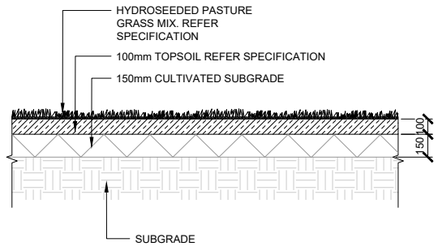
TYPICAL PLANTING DETAIL
A1 1 : 20 (A3 1 : 40)



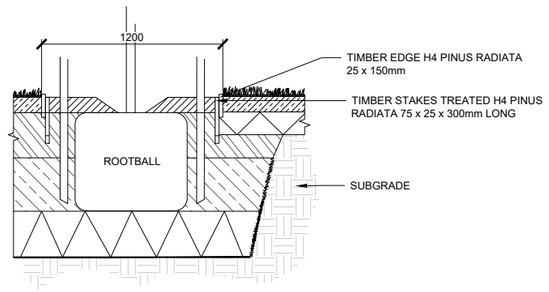
TYPICAL CONCRETE DETAIL
A1 1 : 20 (A3 1 : 40)

GENERAL NOTES:

1. MULCH SHALL BE 100% PALLET MULCH OR 50% ARBORIST MULCH, FROM ON-SITE CHIPPING OR APPROVED EXTERNAL SOURCE AND 50% PALLET MULCH
2. MULCH SHALL BE APPLIED (GENERALLY BLOWN ONTO THE SITE) PRIOR TO PLANTING TO A DEPTH OF 100mm AFTER SETTLING. PLANTING SHALL BE COMPLETED THROUGH THE MULCH LAYER, WHICH SHALL BE SCRAPED BACK THEN CAREFULLY PLACED BACK, AS SPECIFIED BELOW.
3. MULCH SHALL BE KEPT CLEAR OF PLANT STEMS TO AVOID ROT.
4. ALL PLANTS SHALL BE PLANTED WITH CONTROLLED, SLOW RELEASE FERTILISER SUCH AS 'NUTRICOTE' OR 'OSMOCOTE PLUS' OR 'GROTABS' OF COMPOSITION 6:15:3 (N:P:K)
5. CLEAN TOPSOIL - IMPORTED TREE PLANTING MIXTURE, OR EXISTING TOPSOIL (STOCKPILED ONSITE) LIGHTLY COMPACTED. NO ORGANIC SOIL ADDITIVES BELOW 300mm.
6. FOR INFORMATION ON PLANTING INCLUDING SPECIES, SIZE AND SPACING, REFER TO THE PLANT SCHEDULE ON SHT-LD-8601.
7. FOR MORE DETAILED INFORMATION, REFER TO SPECIFICATION SPECIMEN TREE NOTES:
8. STAKES TO BE STRAIGHT POINTED TIMBER TREATED H4 PINUS RADIATA 50 X 50 X 1500MM LONG (OR SIMILAR, TO BE APPROVED). CUT TOPS AFTER DRIVING.
9. STAKES TO BE VERTICAL AND MATCHING HEIGHTS. THE FINAL DESIRED HEIGHT FOR THE STAKES SHALL BE SET TO ENSURE TIES SECURE THE PLANT.
10. ALL STAKES SHALL BE DRIVEN SUFFICIENTLY DEEP ENOUGH TO SECURE THE PLANT. IN TOTAL 2, 3, OR 4 STAKES PER TREE SHALL BE USED DEPENDING UPON THE TREE SIZE OR SITUATION.
11. TIES SHALL BE 50mm WIDE HESSIAN WEBBING ATTACHED TO STAKES WITH APPROVED GALVANISED FASTENINGS (OR SIMILAR PROPRIETARY PRODUCTS, TO BE APPROVED). TIES AND FIXINGS TO THE STAKES SHALL BE SUFFICIENTLY DURABLE TO PROVIDE REQUIRED SUPPORT TO THE PLANTS FOR A MINIMUM OF 3 YEARS
12. STAKES AND TIES TO BE CHECKED AND REPAIRED REGULARLY UNTIL THE END OF THE MAINTENANCE PERIOD.
13. ALL TREES SHALL BE MULCHED TO 100mm DEPTH AT LEAST WITH NOT LESS THAN 75mm DEPTH REMAINING AFTER SETTLING.



TYPICAL HYDROSEED DETAIL
A1 1 : 20 (A3 1 : 40)



TYPICAL TREE PIT TIMBER EDGE DETAIL
A1 1 : 20 (A3 1 : 40)

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Te kaunihera o Kirikiriroa

REGISTRATION
DETAILED DESIGN

SCALE
0 6 12 m
1:250

PROJECT MANAGEMENT INITIALS

AJ	BD	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

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PROJECT NUMBER
60687064

SHEET TITLE
TARSI
LANDSCAPING DETAILS
SHEET 1

SHEET NUMBER
60687064-SHT-LD-8110

ISO A1 594mm x 841mm

Plant Schedule

Code	Botanical Name	Common Name	Height x Spread (m)	Size	Spacing	% of Mix	Total Plant Numbers	Comments
PLANT MIX 1: HERITAGE ZONE - STRIP BERM							**Total Area: 1,243m²**	
ACA pur	*Acaena purpurea*	Purple Bidibidi	0.2 x 1.0	1L	2/m2	20%	498	
DIA nig	*Dianella nigra*	Turutu (New Zealand blueberry)	0.5 x 0.5	1 L	4/m2	15%	745	
DIE gra	*Dietes grandiflora*	Wild Iris	1.0 x 0.6	1L	1.5/m2	10%	189	plant in centre of planting strip away from the intersection and driveways
HEB dio	*Hebe diosmifolia minor*		0.4 x 0.5	1L	2/m2	30%	745	
LIR mus	*Liriope muscari* 'Blue Skies'	Blue flower Liriope	0.3 x 0.4	1L	2/m2	25%	621	
	Individual Trees							
BET pen	*Betula pendula*	Silver Birch	15.0 x	45L	As shown		4	
	TOTAL						**2,802**	
PLANT MIX 2: HARDY PLANTING							**Total Area: 224.2m²**	
	Grasses and Groundcovers							
CAR com	*Carex commans 'Frosted Curl'*	NZ Hair Sedge	0.5 x 0.5	1L	4/m2	15%	135	
DIA nig	*Dianella nigra*	Turutu (New Zealand blueberry)	0.5 x 0.5	1 L	4/m2	15%	135	
HEB dio	*Hebe diosmifolia minor*		0.4 x 0.5	1L	4/m2	15%	135	
LIB per	*Libertia peregrians*	Creeping Iris	0.5 x 1.0	1L	4/m2	15%	135	
LOM lit	*Lomandra* 'Little Lime'	Dwarf Lomandra	0.5 x 0.5	1L	2/m2	15%	67	
LOM tan	*Lomandra Tanika*	Lomandra	0.7 x 0.7	1L	2/m2	15%	67	
PHO coo	*Phormium cookianum* 'Emerald Green'	Dwarf Mountain Flax	1.0 x 1.0	1L	2/m2	10%	45	
	Individual Trees							
KNI exc	*Knightea excelsa*	Rewarewa	20.0 x 5.0	45L	As shown		7	
	TOTAL						**717**	
PLANT MIX 3: INFILL PLANTING							**Total Area: 25.9m²**	
	Grasses and Groundcovers							
HEB dio	*Hebe diosmifolia minor*		0.4 x 0.5	1L	4/m2	70%	73	
PHO coo	*Phormium cookianum* 'Emerald Green'	Dwarf Mountain Flax	1.0 x 1.0	1L	2/m2	30%	16	
	TOTAL						**88**	
HYDROSEEDED BERM GRASS[4]							**Total Area: 2913m²**	
	Species TBC						25-30kg/ha	

Notes:
1) Mature height and spread are estimates only
2) Mixed planting areas; plant prostrate low growing plants at the edge of planting beds unless drawn as shown
3) Do not plant grasses and groundcovers within; 400mm of paths or structures
4) Confirmation required from maintence team on preferred mix
5) Grass seed species mix percentages to suppliers specifications

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REGISTRATION
DETAILED DESIGN

SCALE
0 6 12 m
1:250

PROJECT MANAGEMENT INITIALS

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DESIGNER	CHECKED	APPROVED

PROJECT DATA

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ISSUE/REVISION

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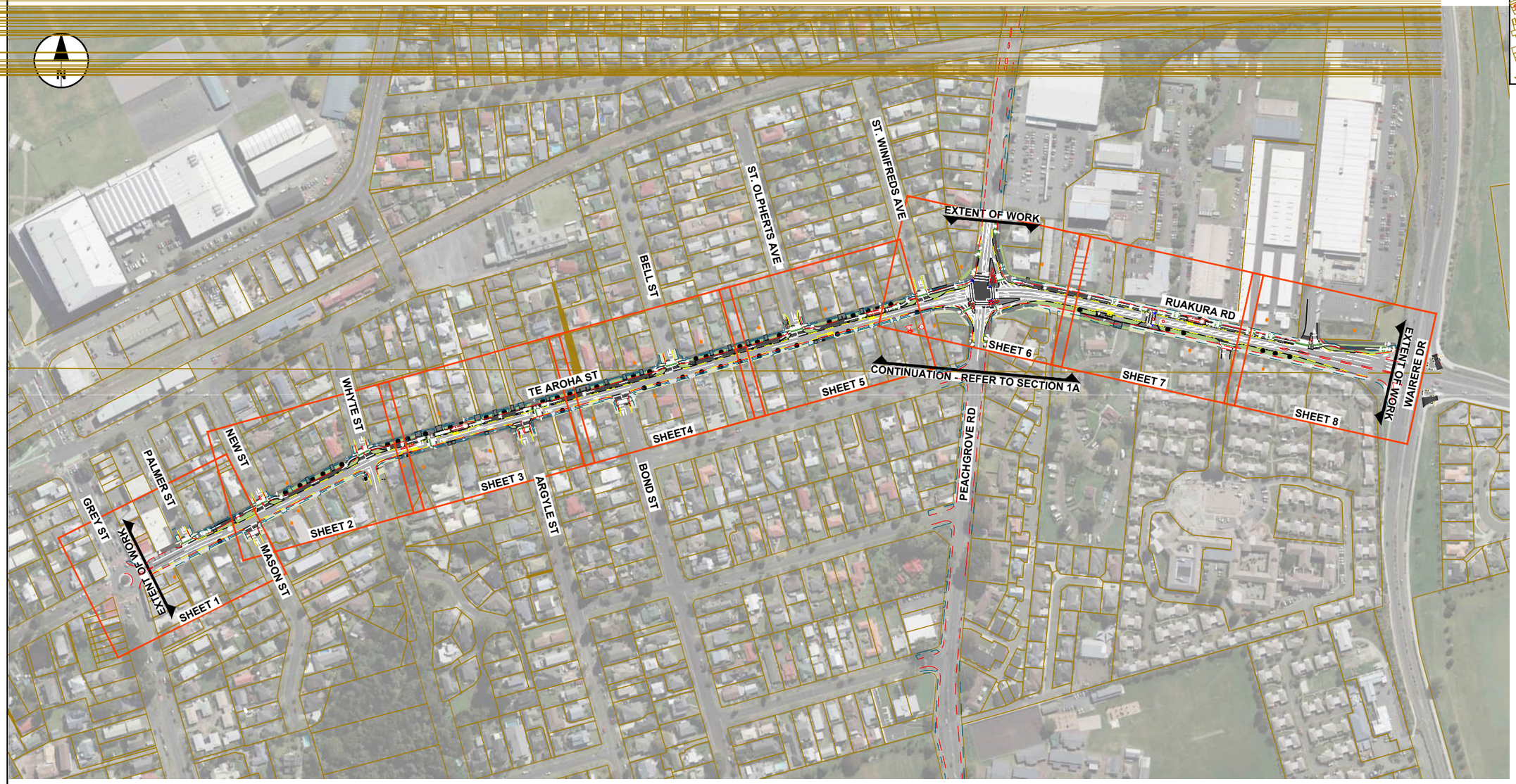
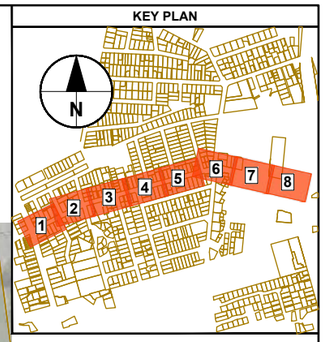
PROJECT NUMBER
60687064

SHEET TITLE
TARSI
LANDSCAPING PLANT SCHEDULE

SHEET NUMBER
60687064-SHT-LD-8601

ISO A1 (594mm x 841mm)





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REGISTRATION

DETAILED DESIGN

SCALE

0 50 100 m
1:2000

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

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PROJECT NUMBER

60687064

SHEET TITLE

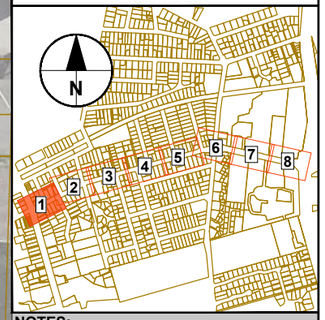
TARSI
LINEMARKING & SIGNAGE PLAN
OVERVIEW

SHEET NUMBER

60687064-SHT-LS-8100

ISO A1 594mm x 841mm

KEY PLAN



NOTES:

1. REFER TO SCHEDULE ON SHT-LS-8601 FOR LINEMARKING DETAILS

LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB
- NEW KERB
- EXISTING ASPHALT
- NEW ASPHALT
- NEW CONCRETE
- NEW BERM
- NEW BUS SHELTER
- NEW VEHICLE CROSSING
- EXISTING TRAFFIC LIGHT
- EXISTING TRAFFIC LIGHT TO BE RELOCATED
- EXISTING TRAFFIC LIGHT TO BE REMOVED
- NEW TRAFFIC LIGHT
- EXISTING SIGN TO BE RELOCATED
- EXISTING SIGN TO BE REMOVED
- NEW SIGN

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REGISTRATION

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SCALE

0 6.25 12.5 m
1:250

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SHEET TITLE

TARSI
LINEMARKING & SIGNAGE PLAN
SHEET 1

SHEET NUMBER

60687064-SHT-LS-8101

Last saved by: SCHUBELD (2024-03-12) Last Plotted: 2024-04-18
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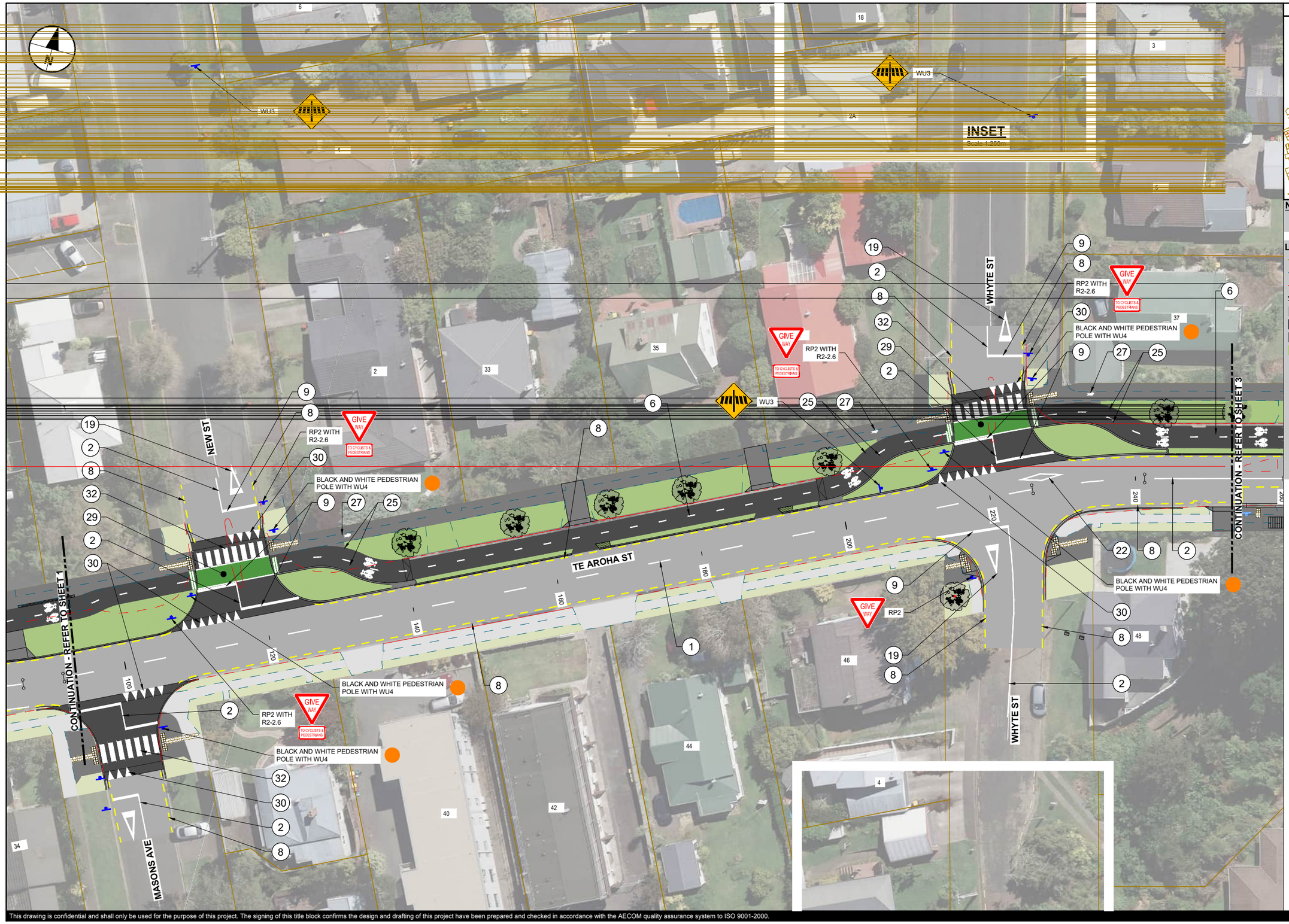
ISO A1 (594mm x 841mm)



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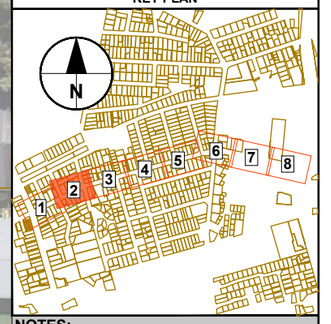

NOTES:

1. REFER TO SCHEDULE ON SHT-LS-8601 FOR LINEMARKING DETAILS

LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB
- NEW KERB
- EXISTING ASPHALT
- NEW ASPHALT
- NEW CONCRETE
- NEW BERM
- NEW BUS SHELTER
- NEW VEHICLE CROSSING
- EXISTING TRAFFIC LIGHT
- EXISTING TRAFFIC LIGHT TO BE RELOCATED
- EXISTING TRAFFIC LIGHT TO BE REMOVED
- NEW TRAFFIC LIGHT
- EXISTING SIGN TO BE RELOCATED
- EXISTING SIGN TO BE REMOVED
- NEW SIGN

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CONSULTANT
AECOM New Zealand Ltd
NZ.B.N 9429032091335
www.aecom.com

PROJECT
EP School Link Design

CLIENT
Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION
DETAILED DESIGN

SCALE
0 6.25 12.5 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

C	12.04.24	100% DETAILED DESIGN
B	15.03.24	UPDATED DETAILED DESIGN
A	21.12.23	DETAILED DESIGN
I/R	DATE	DESCRIPTION

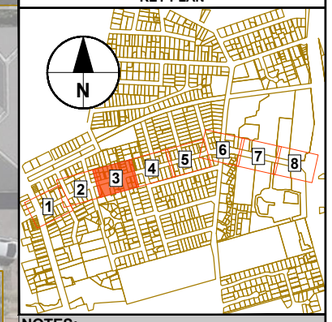
PROJECT NUMBER
60687064

SHEET TITLE
TARSI
LINEMARKING & SIGNAGE PLAN
SHEET 2

SHEET NUMBER
60687064-SHT-LS-8102

ISO A1 594mm x 841mm

KEY PLAN



NOTES:

1. REFER TO SCHEDULE ON SHT-LS-8601 FOR LINEMARKING DETAILS

LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB
- NEW KERB
- EXISTING ASPHALT
- NEW ASPHALT
- NEW CONCRETE
- NEW BERM
- NEW BUS SHELTER
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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6.25 12.5 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

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A	21.12.23	DETAILED DESIGN
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

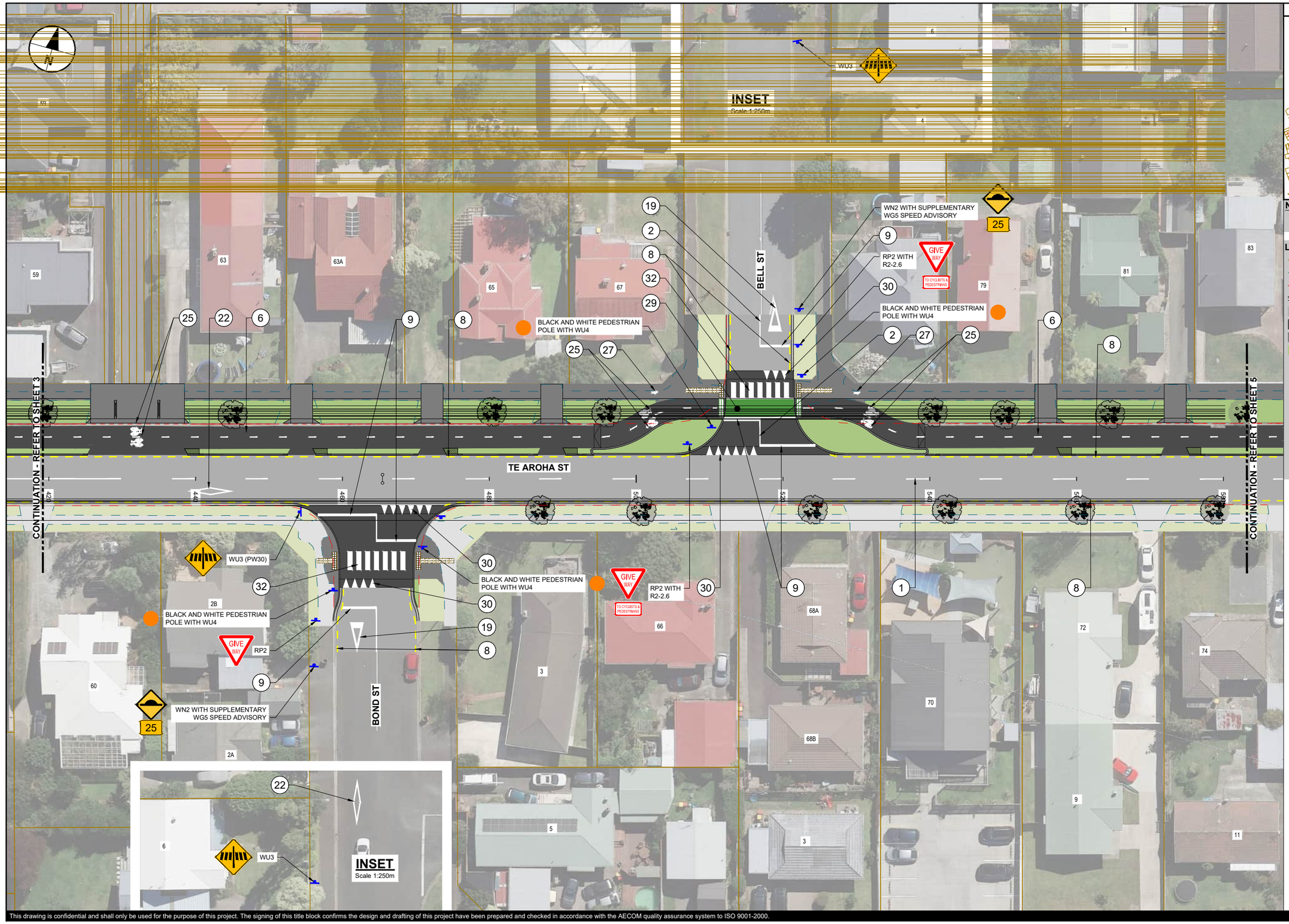
SHEET TITLE

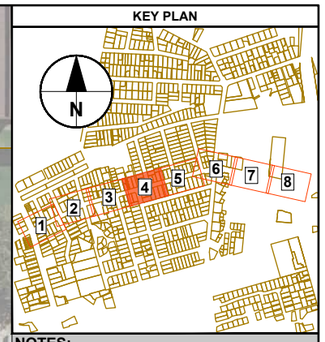
TARSI
LINEMARKING & SIGNAGE PLAN
SHEET 3

SHEET NUMBER

60687064-SHT-LS-8103

ISO A1 594mm x 841mm





NOTES:

1. REFER TO SCHEDULE ON SHT-LS-8601 FOR LINEMARKING DETAILS

LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB
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PROJECT
EP School Link Design

CLIENT
Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION
DETAILED DESIGN

SCALE
0 6.25 12.5 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

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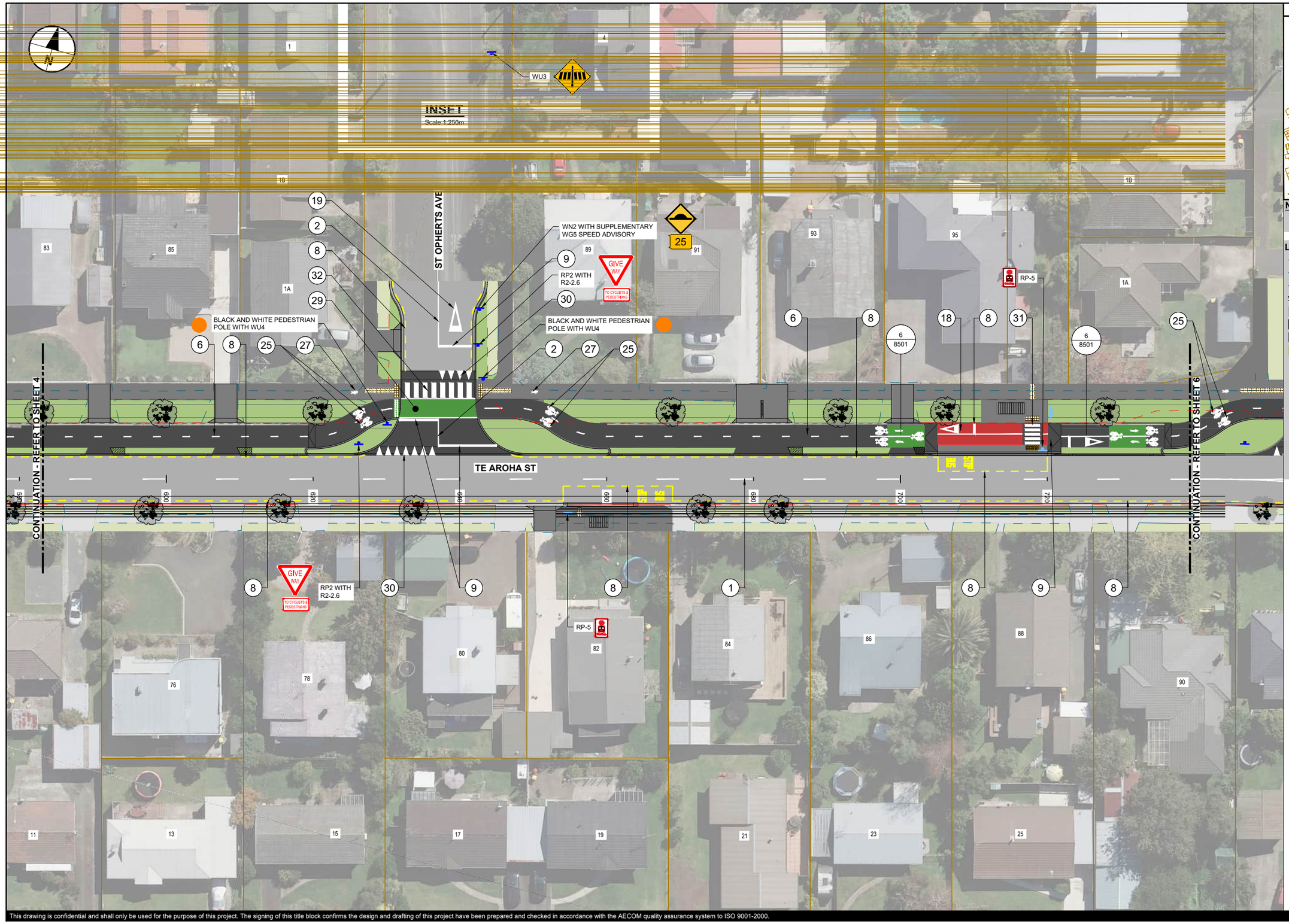
A	21.12.23	DETAILED DESIGN
I/R	DATE	DESCRIPTION

PROJECT NUMBER
60687064

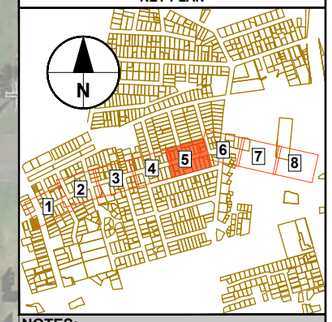
SHEET TITLE
TARSI
LINEMARKING & SIGNAGE PLAN
SHEET 4

SHEET NUMBER
60687064-SHT-LS-8104

ISO A1 594mm x 841mm



KEY PLAN



NOTES:

1. REFER TO SCHEDULE ON SHT-LS-8601 FOR LINEMARKING DETAILS

LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB
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PROJECT

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CLIENT

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Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6.25 12.5 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

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A	21.12.23	DETAILED DESIGN

PROJECT NUMBER

60687064

SHEET TITLE

TARSI
LINEMARKING & SIGNAGE PLAN
SHEET 5

SHEET NUMBER

60687064-SHT-LS-8105

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ISO A1 594mm x 841mm

EXTENT OF WORK

PEACHGROVE RD

ST WINIFREDS AVE

TE AROHA ST

RUAKURA RD

CONTINUATION - REFER TO SHEET 7

CONTINUATION - REFER TO SHEET 5

CONTINUATION - REFER TO SECTION 1A

WU3

WN2 WITH SUPPLEMENTARY WG5 SPEED ADVISORY

25

GIVE WAY

TO CYCLISTS & PEDESTRIANS

RP2 WITH R2-2.6

RP2

BLACK AND WHITE PEDESTRIAN POLE WITH WU4

RS1

50

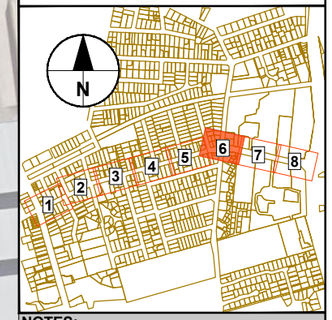
40

WL1

W4-11

6 8501

KEY PLAN



NOTES:

1. REFER TO SCHEDULE ON SHT-LS-8601 FOR LINEMARKING DETAILS

LEGEND:

- EXISTING PROPERTY BOUNDARY
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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6.25 12.5 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

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C	12.04.24	100% DETAILED DESIGN
B	15.03.24	UPDATED DETAILED DESIGN
A	21.12.23	DETAILED DESIGN

PROJECT NUMBER

60678064

SHEET TITLE

TARSI
LINEMARKING & SIGNAGE PLAN
SHEET 6

SHEET NUMBER

60678064-SHT-LS-8106

Last saved by: ARAMBULOEV(2024-02-22) Last Plotted: 2024-04-11
Filename: C:\PWWORKING\AECOM_DS12_AU1ERIC.ARAMBULO@AECOM.COM\D0330697\60687064-SHT-LS-8106.DWG

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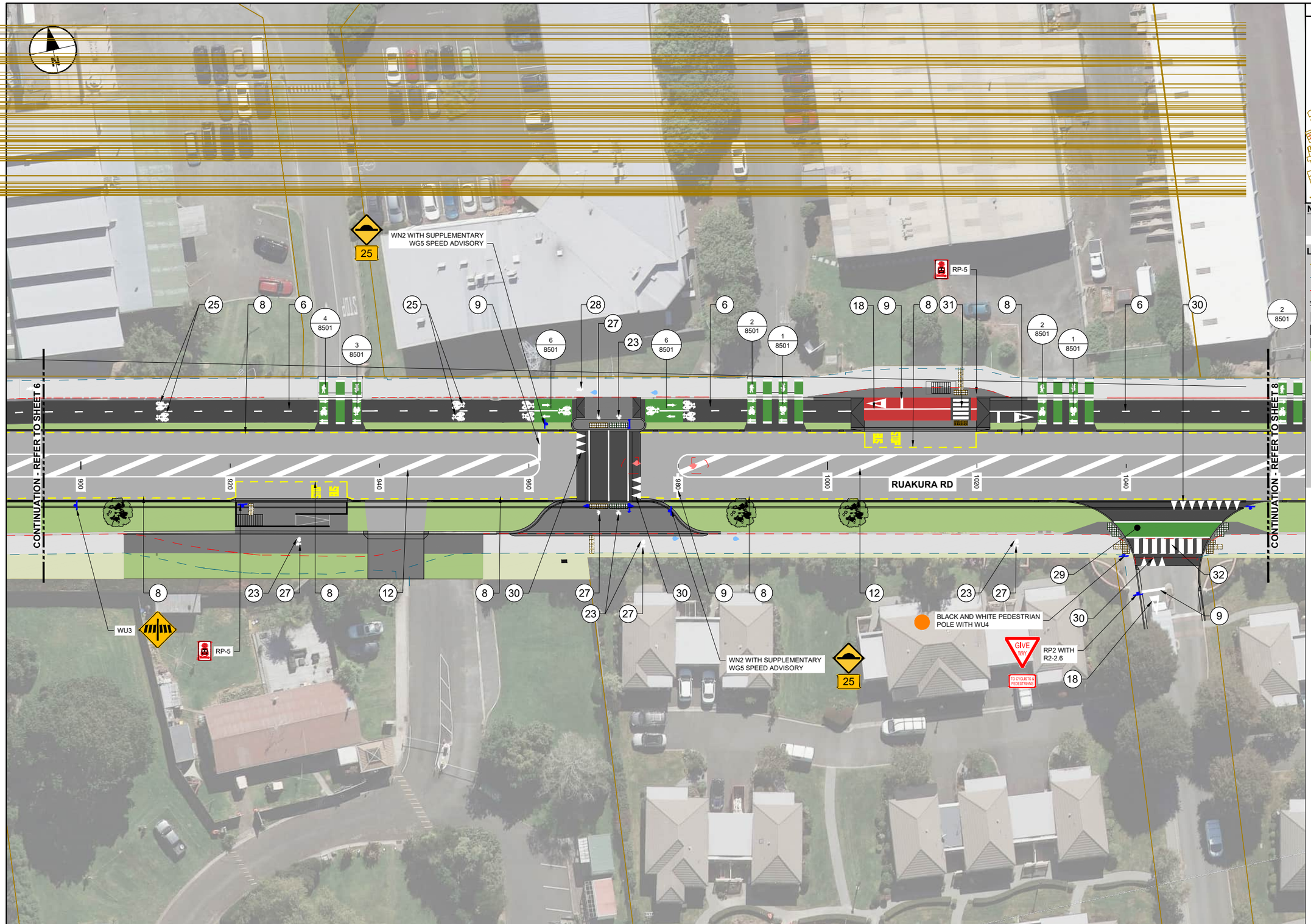

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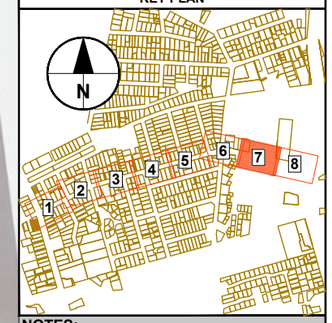

NOTES:

1. REFER TO SCHEDULE ON SHT-LS-8601 FOR LINEMARKING DETAILS

LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB
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- EXISTING TRAFFIC LIGHT TO BE REMOVED
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- EXISTING SIGN TO BE RELOCATED
- EXISTING SIGN TO BE REMOVED
- NEW SIGN

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CONSULTANT

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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6.25 12.5 m
1:250

PROJECT MANAGEMENT INITIALS

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PROJECT DATA

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ISSUE/REVISION

C	12.04.24	100% DETAILED DESIGN
B	15.03.24	UPDATED DETAILED DESIGN
A	21.12.23	DETAILED DESIGN
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

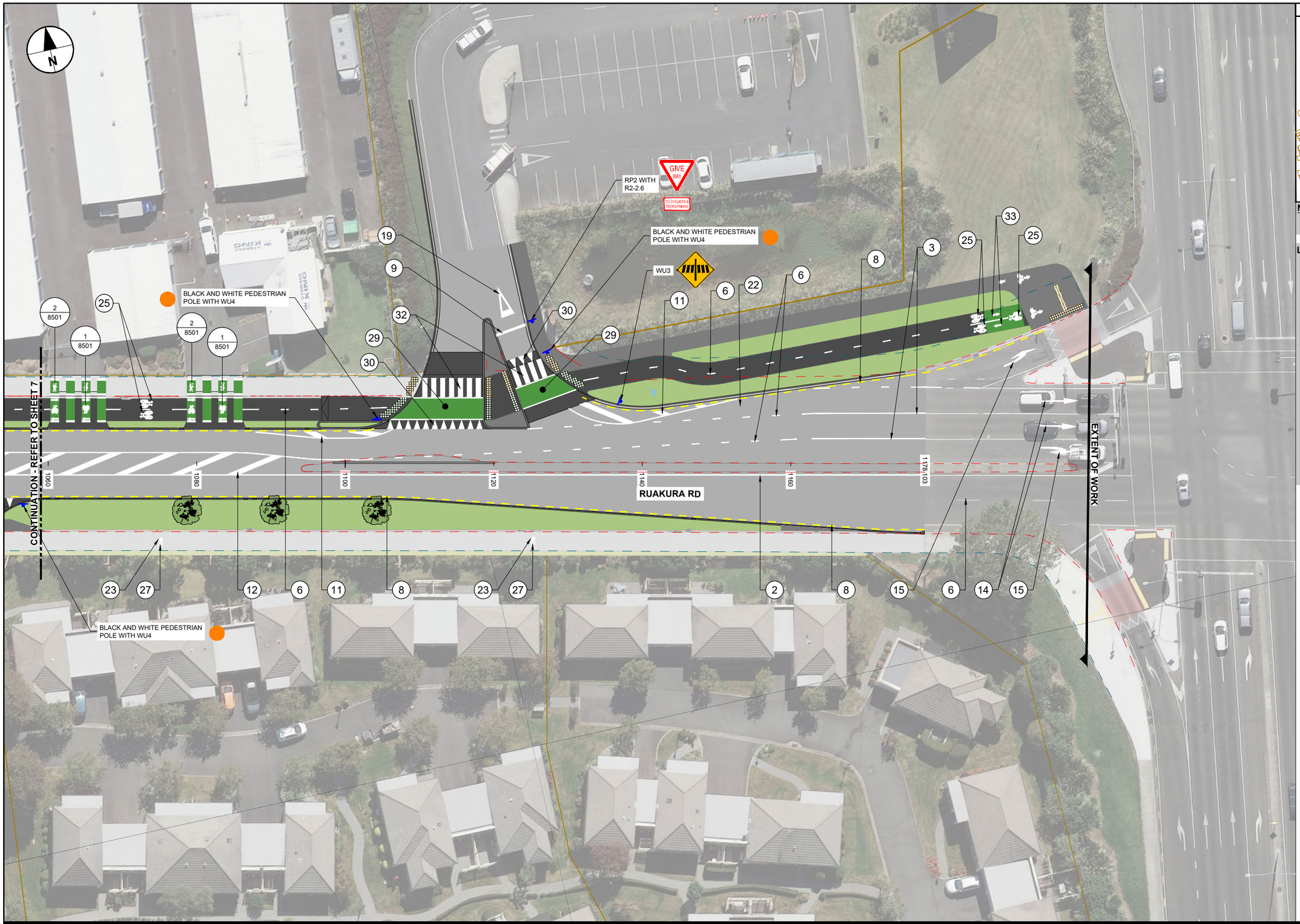
SHEET TITLE

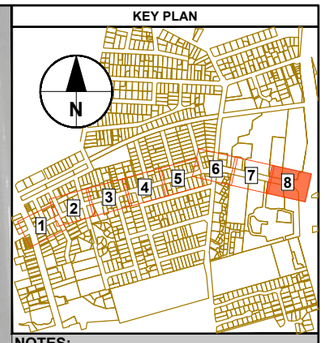
TARSI
LINEMARKING & SIGNAGE PLAN
SHEET 7

SHEET NUMBER

60687064-SHT-LS-8107

ISO A1 594mm x 841mm





NOTES:

1. REFER TO SCHEDULE ON SHT-LS-8601 FOR LINEMARKING DETAILS

LEGEND:

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Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

SCALE

0 6.25 12.5 m
1:250

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I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

SHEET TITLE

TARSI
LINEMARKING & SIGNAGE PLAN
SHEET 8

SHEET NUMBER

60687064-SHT-LS-8108

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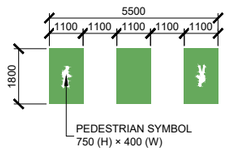
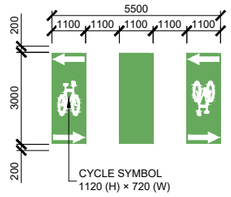
ISO A1 594mm x 841mm

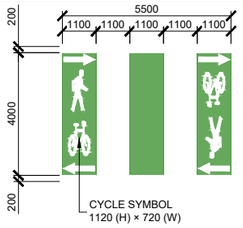


1 / 8501 DETAIL VEHICLE CROSSING - BI-DIRECTIONAL CYCLEWAY 7.5M X 3M
1:100 m

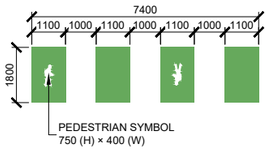


3 / 8501 DETAIL VEHICLE CROSSING - BI-DIRECTIONAL CYCLEWAY 5.5M X 3M
1:100 m

6 / 8501 DETAIL BI-DIRECTIONAL CYCLEWAY END TREATMENT
1:100 m



2 / 8501 DETAIL VEHICLE CROSSING - FOOTPATH 7.5M X 3M
1:100 m



4 / 8501 DETAIL VEHICLE CROSSING - FOOTPATH 5.5M X 3M
1:100 m

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REGISTRATION

DETAILED DESIGN

PROJECT MANAGEMENT INITIALS

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I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

SHEET TITLE

TARSI
LINEMARKING DETAILS

SHEET NUMBER

60687064-SHT-LS-8501

ISO A1 594mm x 841mm

PAVEMENT MARKING SCHEDULE

NO.	PAVEMENT MARKING	SYMBOL	SPECIFICATIONS	MATERIAL
1	CENTRELINE		3m STRIPE, 7m GAP, 100mm WIDE, AS PER TCD PART 5	WHITE, REFLECTORISED PAINT, NZTA M/7 CLASS C
2	CENTRELINE		CONTINUOUS, 100mm WIDE, AS PER TCD PART 5	WHITE, REFLECTORISED PAINT, NZTA M/7 CLASS C
3	LANE LINE		CONTINUOUS, 100mm WIDE, AS PER TCD PART 5	WHITE, REFLECTORISED PAINT, NZTA M/7 CLASS C
4	LANE LINE		3m STRIPE, 7m GAP, 100mm WIDE, AS PER TCD PART 5	WHITE, REFLECTORISED PAINT, NZTA M/7 CLASS C
5	EDGE LINE		CONTINUOUS, 100mm WIDE, AS PER TCD PART 5	WHITE, REFLECTORISED PAINT, NZTA M/7 CLASS C
6	CONTINUITY LINE		1m STRIPE, 3m GAP, 100mm WIDE, AS PER TCD PART 5	WHITE, REFLECTORISED PAINT, NZTA M/7 CLASS C
7	CYCLE LANE		1m STRIPE, 3m GAP, 100mm WIDE, AS PER HCC CYCLE LANE MARKINGS D0.0.0	GREEN, REFLECTORISED PAINT, NZTA M/7 CLASS C
8	NO-STOPPING AT ALL TIMES (NSAAT)		1m STRIPE, 1m GAP, 100mm WIDE, AS PER TCD PART 13	YELLOW, REFLECTORISED PAINT, NZTA M/7 CLASS C
9	LIMIT LINE		CONTINUOUS, 300mm WIDE, AS PER TCD PART 5	WHITE, REFLECTORISED PAINT, NZTA M/7 CLASS C
10	HOLD LINE		CONTINUOUS, 300mm WIDE, AS PER TCD PART 4	WHITE, REFLECTORISED PAINT, NZTA M/7 CLASS C
11	DIAGONAL SHOULDER MARKING		300mm BAR WIDTH, 2:1 BAR SLOPE, 6m SPACING, AS PER TCD PART 5	WHITE, REFLECTORISED PAINT, NZTA M/7 CLASS C
12	FLUSH MEDIAN		600mm BAR WIDTH, 2:1 BAR SLOPE, 10m SPACING, AS PER TCD PART 5	WHITE, REFLECTORISED PAINT, NZTA M/7 CLASS C
13	LANE ARROW COMBINED RIGHT OR LEFT		6.8m HIGH, AS PER TCD PART 4 FIGURE 10-1	WHITE, REFLECTORISED PAINT, NZTA M/7 CLASS C
14	LANE ARROW STRAIGHT AHEAD		4.8m HIGH, AS PER TCD PART 4 FIGURE 10-1	WHITE, REFLECTORISED PAINT, NZTA M/7 CLASS C
15	LANE ARROW RIGHT OR LEFT TURN		4.8m HIGH, AS PER TCD PART 4 FIGURE 10-1	WHITE, REFLECTORISED PAINT, NZTA M/7 CLASS C
16	LANE ARROW ACUTE RIGHT OR LEFT TURN		3.8m HIGH, AS PER TCD PART 4 FIGURE 10-1	WHITE, REFLECTORISED PAINT, NZTA M/7 CLASS C
17	LANE ARROW BEAR RIGHT OR LEFT TURN		4.8m HIGH, AS PER TCD PART 4 FIGURE 10-1	WHITE, REFLECTORISED PAINT, NZTA M/7 CLASS C
18	GIVE WAY SYMBOL		2.5m HIGH, AS PER TCD PART 4	WHITE, REFLECTORISED PAINT, NZTA M/7 CLASS C
19	GIVE WAY SYMBOL		4m HIGH (URBAN), AS PER TCD PART 4	WHITE, REFLECTORISED PAINT, NZTA M/7 CLASS C

PAVEMENT MARKING SCHEDULE

NO.	PAVEMENT MARKING	SYMBOL	SPECIFICATIONS	MATERIAL
20	GIVE WAY SYMBOL		6.1m HIGH (RURAL), AS PER TCD PART 4	WHITE, REFLECTORISED PAINT, NZTA M/7 CLASS C
21	ADVANCE WARNING DIAMOND		4m HIGH, 0.6m WIDE, 100mm LINE WIDTH, AS PER TCD PART 5	WHITE, REFLECTORISED PAINT, NZTA M/7 CLASS C
22	ADVANCE WARNING DIAMOND		6m HIGH, 1m WIDE, 100mm LINE WIDTH, AS PER TCD PART 5	WHITE, REFLECTORISED PAINT, NZTA M/7 CLASS C
23	CYCLE SYMBOL		560mm HIGH, 360mm WIDE, AS PER TCD PART 5 TABLE 8.2	WHITE, REFLECTORISED PAINT, NZTA M/7 CLASS C
24	CYCLE SYMBOL		1120mm HIGH, 720mm WIDE, AS PER TCD PART 5 TABLE 8.2	WHITE, REFLECTORISED PAINT, NZTA M/7 CLASS C
25	CYCLE SYMBOL		1680mm HIGH, 1080mm WIDE, AS PER TCD PART 5 TABLE 8.2	WHITE, REFLECTORISED PAINT, NZTA M/7 CLASS C
26	CYCLE SYMBOL		2240mm HIGH, 1440mm WIDE, AS PER TCD PART 5 TABLE 8.2	WHITE, REFLECTORISED PAINT, NZTA M/7 CLASS C
27	PEDESTRIAN SYMBOL		320mm HIGH, 160mm WIDE, AS PER LAND TRANSPORT RULE: TRAFFIC CONTROL DEVICES 2004 M2-4	WHITE, REFLECTORISED PAINT, NZTA M/7 CLASS C
28	PEDESTRIAN SYMBOL		960mm HIGH, 480mm WIDE, AS PER LAND TRANSPORT RULE: TRAFFIC CONTROL DEVICES 2004 M2-4	WHITE, REFLECTORISED PAINT, NZTA M/7 CLASS C
29	CYCLE MARKING		A PER TCD MANUAL PART 5	AS 2700S-2011 COLOUR G26 APPLE GREEN
30	RAMP HUMP SYMBOL		150mm HIGH, 750mm WIDE, AS PER TCD MANUAL 5 FIGURE 14-1	WHITE, REFLECTORISED PAINT, NZTA M/7 CLASS C
31	ZEBRA CROSSING		300mm BAR WIDTH, 300mm BAR GAP, 2m BAR LENGTH AS PER NZTA PUBLIC TRANSPORT DESIGN GUIDANCE: BUS STOP,FIGURE 74	WHITE, REFLECTORISED PAINT, NZTA M/7 CLASS C
32	ZEBRA CROSSING		600mm BAR WIDTH, 600mm BAR GAP, 2m BAR LENGTH AS PER TCD MANUAL 5 TABLE 7-5	WHITE, REFLECTORISED PAINT, NZTA M/7 CLASS C
33	CYCLE PATH ARROW		AS PER NZTA HIGH-USE DRIVEWAY TREATMENT FOR CYCLE PATHS AND SHARED PATHS	WHITE, REFLECTORISED PAINT, NZTA M/7 CLASS C

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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

DETAILED DESIGN

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

C	12.04.24	100% DETAILED DESIGN
B	15.03.24	UPDATED DETAILED DESIGN
A	21.12.23	DETAILED DESIGN
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60687064

SHEET TITLE

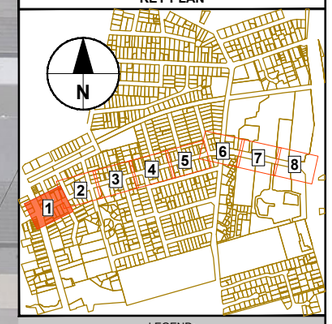
TARSI
PAVEMENT MARKING SCHEDULE

SHEET NUMBER

60687064-SHT-LS-8601

ISO A1 594mm x 841mm

KEY PLAN



LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB
- NEW KERB
- EXISTING ASPHALT
- NEW ASPHALT
- NEW CONCRETE
- NEW BERM
- EXISTING TREE
- EXISTING TREE TO BE REMOVED
- NEW TREE
- EXISTING WATER PIPE
- EXISTING WATER PIPE TO BE ABANDONED
- EXISTING WATER PIPE TO BE REMOVED
- NEW WATER PIPE
- EXISTING HYDRANT
- EXISTING HYDRANT TO BE REMOVED
- NEW HYDRANT
- EXISTING WATER VALVE TO BE RELOCATED
- EXISTING WATER VALVE TO BE REMOVED
- NEW WATER VALVE

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PROJECT

EP School Link Design

CLIENT

Hamilton City Council
Te kaunihera o Kirikiriroa

REGISTRATION

FOR INFORMATION ONLY

SCALE

0 6.25 12.5 m
1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

I/R	DATE	DESCRIPTION
A	12.04.24	100% DETAILED DESIGN

PROJECT NUMBER

60687064

SHEET TITLE

TARSI
WATER PLAN
SHEET 1

SHEET NUMBER

60687064-SHT-WT-8101

ISO A1 594mm x 841mm

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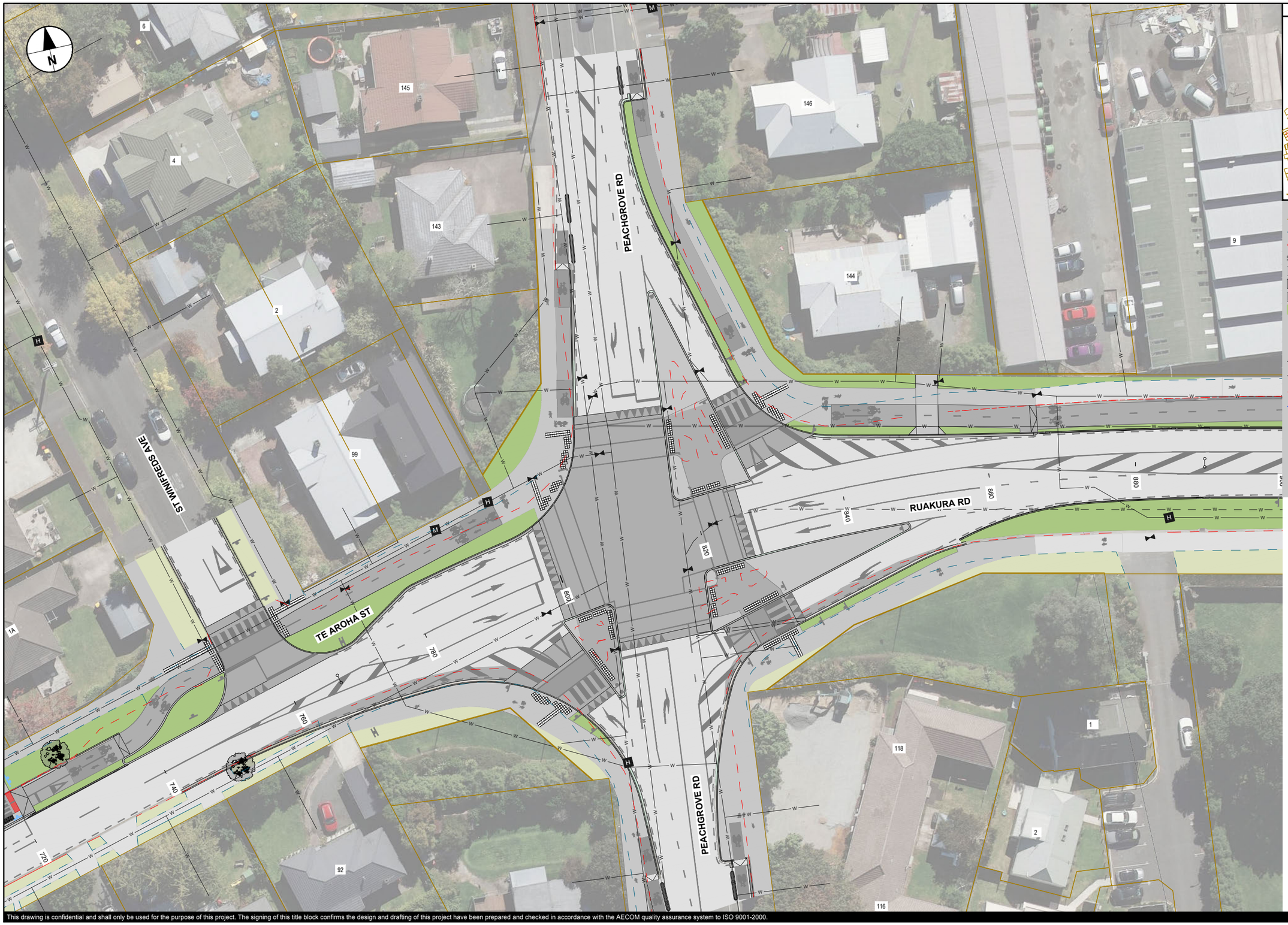
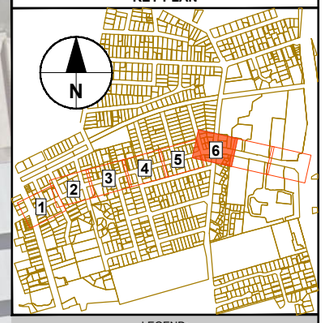


KEY PLAN



LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING FOOTPATH EDGE
- EXISTING KERB
- NEW KERB
- EXISTING ASPHALT
- NEW ASPHALT
- NEW CONCRETE
- NEW BERM
- EXISTING TREE
- EXISTING TREE TO BE REMOVED
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- NEW WATER PIPE
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REGISTRATION

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SCALE

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1:250

PROJECT MANAGEMENT INITIALS

DS	VK	MS
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	MOTURIKI	SURVEY	MT EDEN 2000

ISSUE/REVISION

I/R	DATE	DESCRIPTION
A	12.04.24	100% DETAILED DESIGN

PROJECT NUMBER

60687064

SHEET TITLE

TARSI
WATER PLAN
SHEET 2

SHEET NUMBER

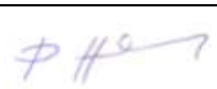
60687064-SHT-WT-8106

Client: **Hamilton City Council**
Project: **EP School Link – Te Aroha and Ruakura Safety Improvements - Section 1B**
Revision: **0**
Quality Information

Quality Information

Document	EP School Link – Te Aroha and Ruakura Safety Improvements - Section 1B
Ref	60687064
Date	17-Apr-24
Originator	Srinesh Fernando
Checker/s	Manoj Dissanayaka
Verifier/s	Paula Haman

Revision History

Rev	Revision Date	Details	Approved	
			Name / Position	Signature
0	17-Apr-24	For Client review	Paula Haman, Practice Leader - Cost Management NZ	

Client: Hamilton City Council
Project: EP School Link – Te Aroha and Ruakura Safety Improvements - Section 1B
Revision: 0
Detail Design Estimate

1.0	Cost Estimate Summary (excluding GST)		
	Works Total	$	2,939,108.00
	Professional Fees	$	152,280.00
	Project Base Estimate: Works + Professional Fees	**$**	**3,091,388.00**
	Rounding	$	12.00
	P50 Contingency - Design Development and Construction Contingency	$	479,700.00
	Project Expected Estimate (P50)	**$**	**3,571,100.00**
	Funding Risk Contingency	$	639,600.00
	Rounding	$	700.00
	95th Percentile Project Estimate (P95, rounded to nearest 10,000)	**$**	**4,211,400.00**
	Pre-contract escalation	$	-
	Post contract escalation	$	106,600.00
	P95 Funding Risk Total (including escalation)	**$**	**4,318,000.00**

2.0	Basis	Received
2.1	EP School Link – Te Aroha and Ruakura Safety Improvements 100% Detailed Design Revision B	from AECOM design team on 15/03/2024 via email
2.2	EP School Link – Te Aroha and Ruakura Safety Improvements 100% Detailed Design Revision C	from AECOM design team on 10/04/2024 via email

3.0 Assumptions

3.1 Full access, normal working hours.
3.2 Each project performed concurrently/ procured separately/ assumed minimum of 3 tenderers.
3.3 Earthwork quantities were provided by the engineering team.
3.4 All existing traffic signals to be relocated.
3.5 All existing traffic signs and poles to be relocated.
3.6 Assume depth for the pipes DN225/300 range from 0-1.5m depth to invert level.
3.7 Assume depth for manhole range from 0-1.5m deep.
3.8 Assume depth for 800 x 500mm catchpits range from 1.5-3.0m deep.
3.9 Allowed provisional sum allowance of $420k for the installation of a centralised rain garden system and associated scope
3.10 Assume 110mm dia perforated subsoil drainage pipe 0-1.5m depth to invert level
3.11 The shared path has been assumed to have the same design details and specifications as per the footpath
3.12 Kerb at raised pedestrian and cycle crossing allows kerb and channel
3.13 Allowed provisional sum allowance of $400k for service relocations for underground utilities relevant to the rain garden scope
3.14 Planting quantities based on schedule in the landscape drawings
3.15 Assume three months construction period for traffic management and temporary works.
3.16 Environmental compliance - allowed 2.5% of the physical works value.
3.17 Pre-contract escalation has been excluded and post contract escalation is allowed at 3.5%. Based on the implementation program
3.18 Contractor's Preliminary and General - allowed 20% of the physical works value.
3.19 Professional fees - allowance for pre-implementation phase excluded and allowed 3% of work value for implementation phase.
3.20 Client direct cost - allowance for pre-implementation phase excluded and allowed 2% of work value for implementation phase.
3.21 P50 Contingency - allowed 15% of works value.
3.22 Funding risk contingency - allowed 20% of works value.

4.0 Exclusions

4.1 Insurance.
4.2 Legal and financing costs.
4.3 Land purchase and property costs.
4.4 Project development phase
4.5 Consent costs.
4.6 GST.

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Project : School Link

Cost Plan : TARSI 100% Detailed Design - Section 1B

PROJECT SUMMARY

No.	Description	Quantity	Unit	Rate	Total
	Property Costs				**Excluded**
	Project Development Phase				**Excluded**
	Pre-Implementation Phase				**Excluded**
	Implementation Phase				
	Implementation Fees				152,280
	Environmental Compliance				60,000
	Earthworks and Site Clearance				243,103
	Ground Improvements				N/A
	Drainage				563,220
	Pavement and Surfacing				516,030
	Bridges				N/A
	Retaining Walls				N/A
	Traffic Services				263,341
	Service Relocations				415,000
	Landscaping				27,564
	Traffic Management and Temporary Works				361,000
	Preliminaries and General				489,850
	Extraordinary Construction Costs				106,600
	Project Base Estimate				**3,197,988**
	Rounding				12
	Contingency				**479,700**
	Project Expected Estimate				**3,677,700**
	Funding Risk Contingency				**639,600**
	95th Percentile Project Estimate				**4,317,300**
	Rounding				700
	Total				**$4,318,000**

Project : School Link

Cost Plan : TARSI 100% Detailed Design - Section 1B

Implementation Fees

No.	Description	Quantity	Unit	Rate	Amount
1	Consultancy fees (3%)	1	Sum	91,370	91,370
2	Hamilton City Council managed costs (2%)	1	Sum	60,910	60,910
	Total				**$152,280**

No.	Description	Quantity	Unit	Rate	Amount
	Environmental compliance				
1	Prepare, update, implement and maintain the Contractor's Environmental Management Plan (CEMP) & Erosion and Sediment Control Plan and controls including all temporary works and removal on completion	1	Sum	60,000	60,000
	Total				**$60,000**

No.	Description	Quantity	Unit	Rate	Amount
	Earthworks and site clearance				
	Demolition				
	Hard surfaces				
1	Demolition of median island	57	m²	20	1,140
2	Remove concrete slab 125mm thick to tip offsite	780	m²	25	19,500
3	Remove concrete slab 150mm thick to tip offsite	26	m²	30	780
4	Remove kerb & channel to tip offsite	901	m	30	27,030
5	Remove median kerb to tip offsite	100	m	30	3,000
6	Remove tactile pavers to tip offsite	8	m²	20	160
7	Remove existing light poles to store off site for reuse	7	no	1,800	12,600
8	Remove existing traffic signals with MAST arm type pole for reuse	7	no	1,800	12,600
9	Remove existing signs including post to store off site for reuse	5	no	150	750
10	Remove existing pavement	1,552	m²	30	46,560
11	Remove existing bus stop shelter to store off site	1	no	3,500	3,500
12	Saw cut existing average 50mm thick asphalt along new kerb line	671	m	12	8,052
13	Cut to waste (assume 100mm for footpaths & cycleways, and 300mm where existing road removed for planted berm)	557	m³	60	33,420
14	Extra value over for cutting contaminated materials to waste (assume 5% of total cut)	28	m³	200	5,570
15	Undercut to waste and backfill with imported GAP65 fill (assume 10% of total cut)	56	m³	220	12,254
	Blackout line markings				
16	100mm line marking	727	m	10	7,270
17	300mm line marking	54	m	15	810
18	600mm line marking	28	m	30	840
19	Bike symbol	11	no	50	550
20	Green bike lane patch	169	m²	50	8,450
21	Bus stop lines and letters	2	no	50	100
22	Lane arrow	12	no	50	600
23	Giveway triangle symbol	3	no	100	300
	Earthworks				
	Site clearance				
24	General site clearance area grassed berm	613	m²	10	6,130
25	150mm thick topsoil removal and dispose offsite	92	m³	60	5,517
	Cut to waste				

No.	Description	Quantity	Unit	Rate	Amount
26	Excavation of materials within earthworks area and disposal offsite.	47	m³	90	4,230
27	Extra value over for cutting contaminated materials to waste (assume 10% of total cut volume)	5	m³	250	1,250
	<u>Imported fill</u>				
28	Supply and place imported fill material	178	m³	95	16,910
29	Undercut soft spots and backfill with engineered fill	19	m³	170	3,230
	Total				**$243,103**

No.	Description	Quantity	Unit	Rate	Amount
	Drainage				
	Structure				
	New stormwater manhole				
	Manhole to be built according to RITS standard details				
1	DN1050 Manhole to be constructed over existing pipe - 0-1.5m deep	1	no	6,500	6,500
	New stormwater catch-pit				
2	Construct new catch-pit with DN225 lead pipe and 360 littatrap products and 200 micro mesh bag inserts - 0-1.5m deep	7	no	3,500	24,500
3	Construct new double catch-pit with DN225 lead pipe and 360 littatrap products and 200 micro mesh bag inserts - 0-1.5m deep	1	no	6,000	6,000
	New RCRRJ stormwater pipe lead				
	Provide and laying new RCRRJ lead pipe in trenches including, all pipe fittings and accessories, excavation in all ground condition, including disposal of all excavated materials, trench backfilling with approved suitable imported material and compaction. In accordance with RITS Section 4.				
4	DN225 RCRRJ Lead pipe 0-1.5m depth to invert level	60	m	350	20,968
5	DN300 RCRRJ Lead pipe a 0-1.5m depth to invert level	5	m	400	1,918
6	Subsoil drainage pipe 0-1.5m depth to invert level	550	m	140	76,984
	Relocate catch-pit				
7	Relocated stormwater double catch-pit to be provided with 3360 littatrap products and 200 micro mesh bag inserts	1	no	2,000	2,000
8	Relocated stormwater catch-pit to be provided with 360 littatrap products and 200 micro mesh bag inserts	1	no	600	600
	Existing catch-pit				
9	Existing single stormwater catch-pit to be replaced with steel solid cover	2	no	500	1,000
10	Existing double stormwater catch-pit to be replaced with steel solid cover	1	no	1,000	1,000
11	Existing single stormwater catch-pit to be abandoned	1	no	250	250
	Stormwater manhole for adjustment				
12	DN1050 manhole cover to be adjusted to match the ramp finished level profile	3	no	500	1,500
	Raingarden system				

No.	Description	Quantity	Unit	Rate	Amount
13	Provisional sum allowance for installation of centralised raingarden system	1	PS	420,000	420,000
	Total				**$563,220**

No.	Description	Quantity	Unit	Rate	Amount
	Pavement and Surfacing				
	Hard surfacing				
1	Raised pedestrian crossing	313	m²	125	39,125
2	Bi - directional cycle path 25mm mix 10 asphalt on GAP 40 basecourse 175mm thick	419	m²	110	46,090
3	Footpath 100mm in situ concrete mix (20MPa) on Sand/GAP 20 basecourse 75mm thick	1,001	m²	120	120,120
4	Shared path 100mm in situ concrete mix (20MPa) on Sand/GAP 20 basecourse 75mm thick	76	m²	120	9,120
5	Residential vehicle crossing 125mm in situ concrete mix (20MPa) on Sand/GAP 20 basecourse 75mm thick	26	m²	140	3,640
6	Raised intersection asphalt	598	m²	180	107,640
7	Tactile directional & warning indicator yellow	38	m²	650	24,700
8	Tactile warning indicator green	23	m²	650	14,950
9	Triangular median island	376	m²	180	67,680
10	Resurface existing road pavement with 40mm SMA (allowance for 0.5m along each new kerb line for tie in to existing road surface)	47	m²	45	2,115
11	Resurface existing road pavement with 40mm SMA	69	m²	45	3,105
	Kerb				
12	Vertical nib kerb	69	m	80	5,520
13	Kerb and channel	446	m	120	53,520
14	Median kerb	99	m	120	11,880
15	Cycle lane barrier	2	m	100	200
16	400mm wide precast concrete separator	20	m	200	4,000
17	Vehicle cut down kerb	6	m	100	600
18	Proposed 600mm wide kerb cut	4	no	100	400
	Vee channel				
19	Supply and install 50mm x 100mm concrete vee channel	14	m	120	1,625
	Total				**$516,030**

No.	Description	Quantity	Unit	Rate	Amount
	Traffic Services				
	Signage - Ground mounted single post signage				
1	WU3 Pedestrian crossing sign	1	no	450	450
2	WN2 Hump sign with WG5 speed advisory sign	1	no	750	750
3	RG-1 Speed sign 40kmh	5	no	600	3,000
4	RP2 Giveway sign with R2-2.6 "To cyclists & pedestrians"	8	no	800	6,400
5	Black and white pedestrian pole with WU4	8	no	500	4,000
6	WL1 Two directional arrows sign	3	no	350	1,050
	Relocate traffic signals and sign				
7	Relocation of traffic signals with MAST arm type pole	7	no	14,000	98,000
8	Instillation of existing road sign relocated	5	no	200	1,000
	Line marking and Symbols				
9	Solid area in reflectorised green paint - Cycle marking apple green	182	m²	70	12,708
10	Continuous line in reflectorised white paint 100mm wide	792	m	5	3,960
11	Continuous line in reflectorised white paint 300mm wide	60	m	15	900
12	Continuous line in reflectorised white paint 600mm wide	109	m	30	3,270
13	Intermittent line in reflectorised white paint 100mm wide with 1m line and 3m gap	214	m	5	1,070
14	Intermittent line in reflectorised yellow paint 100mm wide with 1m line and 1m gap	381	m	5	1,905
15	Give way symbol in reflectorised white paint 2.5m long as per TCD specification	1	no	250	250
16	Give way symbol in reflectorised white paint 4m long as per TCD specification	3	no	80	240
17	Cycle symbol in reflectorised white paint to 560mm high 360mm wide	8	no	40	320
18	Cycle symbol in reflectorised white paint to 1120mm high 720mm wide	2	no	54	109
19	Cycle symbol in reflectorised white paint to 1680mm high 1080mm wide	20	no	75	1,500
20	Pedestrian symbol in reflectorised white paint to 320mm high 160mm wide	24	no	55	1,320
21	Bike lane arrow in reflectorised white paint marking 1m high	4	no	10	40
22	Lane arrow in reflectorised white paint marking 4.8m high	12	no	55	660
23	Ramp hump symbol in triangle reflectorised white paint 150mm high 750mm wide	48	no	75	3,600
24	Zebra crossing in reflectorised white paint 600mm bar width 2m bar length	19	no	60	1,140
	Lighting				

No.	Description	Quantity	Unit	Rate	Amount
25	New lighting pole 6m high including footing	5	no	5,000	25,000
26	New dual lighting pole 11m high 3m reach including footing	1	no	5,000	5,000
27	Luminaire type E - Techlight ITALO 1 0F4 OPA-SX 3_5-2M	4	no	1,500	6,000
28	Luminaire type A - Phillips BRP712 LED115WW 92W PSU DW1	1	no	1,500	1,500
29	Cabling and ducting (provisional quantity)	194	m	200	38,800
	Relocation				
30	Relocation of existing street light including luminaire from store for installation	7	no	4,200	29,400
31	Allowance for relocate existing transformer	1	sum	10,000	10,000
	Total				**$263,341**

No.	Description	Quantity	Unit	Rate	Amount
	Service Relocations				
1	Service Investigation - Locate, protect and identify existing services via GPR, hydro-excavation and potholing	1	LS	10,000	10,000
2	Service Investigation - Record location of existing services	1	LS	5,000	5,000
3	Provisional allowance for service relocations for underground utilities at this intersection	1	PS	400,000	400,000
	Total				**$415,000**

No.	Description	Quantity	Unit	Rate	Amount
	Landscaping				
	Typical planting				
1	100mm Deep mulch	8	m³	25	200
2	300mm Topsoil/garden mix	79	m²	20	1,580
3	150mm Cultivated subgrade	79	m²	2	158
	Planting				
4	Small trees 1L pot size	432	no	23	9,936
	Typical grass				
5	Plant hydro-seed pasture grass mix	730	m²	5	3,650
6	100mm Topsoil	73	m³	80	5,840
7	150mm Cultivated subgrade	730	m²	2	1,460
	Maintenance				
8	Maintenance including, plants, mulch and grass berm areas (24 months)	790	m²	6	4,740
	Total				**$27,564**

No.	Description	Quantity	Unit	Rate	Amount
	Traffic management and Temporary works				
1	Prepare contractor's temporary traffic management plan for 3 months construction period	1	LS	10,000	10,000
2	Complete one side road close for 60 days, allow for stop & go, $5200/per day	60	Day	5,200	312,000
3	Shoulder close for 30 days, $1300/per day	30	Day	1,300	39,000
	Total				**$361,000**

No.	Description	Quantity	Unit	Rate	Amount
	Preliminaries and General				
1	Preliminaries and general (20%)	1	Sum	489,850	489,850
	Total				**$489,850**

No.	Description	Quantity	Unit	Rate	Amount
1	Post-contract escalation(3.5%)	1	Sum	106,600	106,600
	Total				**$106,600**

No.	Description	Quantity	Unit	Rate	Amount
1	Rounding	1	Sum	12	12
	Total				**$12**

No.	Description	Quantity	Unit	Rate	Amount
	Contingency				
1	P50 Contingency - Design development and Construction contingency (15%)	1	Sum	479,700	479,700
	Total				**$479,700**

Funding Risk Contingency

No.	Description	Quantity	Unit	Rate	Amount
1	Funding risk contingency(20%)	1	Sum	639,600	639,600
	Total				**$639,600**

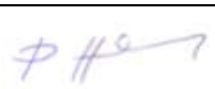
No.	Description	Quantity	Unit	Rate	Amount
1	Rounding	1	Sum	700	700
	Total				**$700**

Client: **Hamilton City Council**
Project: **EP School Link – Te Aroha and Ruakura Safety Improvements - Section 1D**
Revision: **0**
Quality Information

Quality Information

Document	EP School Link – Te Aroha and Ruakura Safety Improvements - Section 1D
Ref	60687064
Date	17-Apr-24
Originator	Srinesh Fernando
Checker/s	Manoj Dissanayaka
Verifier/s	Paula Haman

Revision History

Rev	Revision Date	Details	Approved	
			Name / Position	Signature
0	17-Apr-24	For Client review	Paula Haman, Practice Leader - Cost Management NZ	

Client: Hamilton City Council
Project: EP School Link – Te Aroha and Ruakura Safety Improvements - Section 1D
Revision: 0
Detail Design Estimate

1.0 Cost Estimate Summary (excluding GST)

Works Total	$	2,051,167.00
Professional Fees	$	106,280.00
Project Base Estimate: Works + Professional Fees	**$**	**2,157,447.00**
Rounding	$	153.00
P50 Contingency - Design Development and Construction Contingency	$	334,800.00
Project Expected Estimate (P50)	**$**	**2,492,400.00**
Funding Risk Contingency	$	446,400.00
Rounding	$	800.00
95th Percentile Project Estimate (P95, rounded to nearest 10,000)	**$**	**2,940,000.00**
Pre-contract escalation	$	-
Post contract escalation	$	74,400.00
P95 Funding Risk Total (including escalation)	**$**	**3,014,000.00**

2.0	**Basis**	**Received**
2.1	EP School Link – Te Aroha and Ruakura Safety Improvements 100% Detailed Design Revision B - Section 1D	from AECOM design team on 15/03/2024 via email
2.2	EP School Link – Te Aroha and Ruakura Safety Improvements 100% Detailed Design Revision C	from AECOM design team on 10/04/2024 via email

3.0 Assumptions

3.1 Full access, normal working hours.
3.2 Each project performed/ procured separately/ assumed minimum of 3 tenderers.
3.3 Earthwork quantities were provided by the engineering team.
3.4 All existing traffic signals and poles to be relocated.
3.5 All existing traffic signs including post to be relocated.
3.6 Assume depth for the pipes DN225/300 range from 0-1.5m depth to invert level.
3.7 Assume depth for manhole range from 0-1.5m deep.
3.8 Assume depth for 800 x 500mm catchpits range from 1.5-3.0m deep.
3.9 Assume 110mm dia perforated subsoil drainage pipe 0-1.5m depth to invert level
3.10 Kerb at raised pedestrian and cycle crossing allows kerb and channel
3.11 Allow resurfacing existing road pavement for 500mm along each new kerb line tie in to existing road surface
3.12 The shared path has been assumed to have the same design details and specifications as per the footpath
3.13 Provisional amount of $10k for every road crossing for service relocations for the underground
3.14 Planting quantities based on schedule in the landscape drawings
3.15 Assume three months construction period for traffic management and temporary works.
3.16 Environmental compliance - allowed 2.5% of the physical works value.
3.17 Pre-contract escalation has been excluded and post contract escalation at 3.5%.
3.18 Contractor's Preliminary and General - allowed 20% of the physical works value.
3.19 Professional fees - allowance for pre-implementation phase excluded and allowed 3% of work value for implementation phase.
3.20 Client direct cost - allowance for pre-implementation phase excluded and allowed 2% of work value for implementation phase.
3.21 P50 Contingency - allowed 15% of works value.
3.22 Funding risk contingency - allowed 20% of works value.

4.0 Exclusions

4.1 Insurance.
4.2 Legal and financing costs.
4.3 Land purchase and property costs.
4.4 Project development phase
4.5 Consent costs.
4.6 GST.

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Project : School Link

Cost Plan : TARSI 100% Detailed Design - Section 1D

PROJECT SUMMARY

No.	Description	Quantity	Unit	Rate	Total
	Property Costs				**Excluded**
	Project Development Phase				**Excluded**
	Pre-Implementation Phase				**Excluded**
	Implementation Phase				
	Implementation Fees				106,280
	Environmental Compliance				40,000
	Earthworks and Site Clearance				275,584
	Ground Improvements				N/A
	Drainage				143,358
	Pavement and Surfacing				310,276
	Bridges				N/A
	Retaining Walls				N/A
	Traffic Services				484,427
	Service Relocations				45,000
	Landscaping				49,662
	Traffic Management and Temporary Works				361,000
	Preliminaries and General				341,860
	Extraordinary Construction Costs				74,400
	Project Base Estimate				**2,231,847**
	Rounding				153
	Contingency				**334,800**
	Project Expected Estimate				**2,566,800**
	Funding Risk Contingency				**446,400**
	95th Percentile Project Estimate				**3,013,200**
	Rounding				800
	Total				**$3,014,000**

Project : School Link

Cost Plan : TARSI 100% Detailed Design - Section 1D

Implementation Fees

No.	Description	Quantity	Unit	Rate	Amount
1	Consultancy fees (3%)	1	Sum	63,770	63,770
2	Hamilton City Council managed costs (2%)	1	Sum	42,510	42,510
	Total				**$106,280**

No.	Description	Quantity	Unit	Rate	Amount
	Environmental compliance				
1	Prepare, update, implement and maintain the Contractor's Environmental Management Plan (CEMP) & Erosion and Sediment Control Plan and controls including all temporary works and removal on completion	1	Sum	40,000	40,000
	Total				**$40,000**

No.	Description	Quantity	Unit	Rate	Amount
	Earthworks and site clearance				
	Demolition				
	Hard surfaces				
1	Demolition of median island	39	m²	20	780
2	Remove concrete slab 125mm thick to tip offsite	316	m²	25	7,900
3	Remove kerb & channel to tip offsite	691	m	30	20,730
4	Remove median kerb to tip offsite	83	m	30	2,490
5	Remove tactile pavers to tip offsite	3	m²	20	60
6	Remove existing steel pedestrian fencing to store off site	14	m	15	210
7	Remove existing pavement	2,600	m²	30	78,000
8	Remove existing footpath	316	m²	50	15,800
9	Remove vehicle crossing	172	m²	50	8,600
10	Remove existing bus stop shelter to store off site	1	no	3,500	3,500
11	Remove traffic signs, including posts to store off site	2	no	150	300
12	Remove traffic signs, including posts to store off site for reuse	5	no	150	750
13	Remove existing traffic poles to store off site	2	no	1,800	3,600
14	Remove existing traffic poles to store off site for reuse	4	no	1,800	7,200
15	Saw cut existing average 50mm thick asphalt along new kerb line	1,265	m	12	15,180
16	Cut to waste (assume 100mm for footpaths & cycleways, and 300mm where existing road removed for planted berm)	844	m³	60	50,640
17	Extra value over for cutting contaminated materials to waste (assume 5% of total cut)	42	m³	200	8,440
18	Undercut to waste and backfill with imported GAP65 fill (assume 10% of total cut)	84	m³	220	18,568
	Blackout line markings				
19	100mm line marking	107	m	10	1,070
	Earthworks				
	Site clearance				
20	General site clearance area grassed berm	389	m²	10	3,890
21	150mm thick topsoil removal and dispose offsite	58	m³	60	3,501
	Cut to waste				
22	Excavation of materials within earthworks area and disposal offsite.	34	m³	90	3,060
23	Extra value over for cutting contaminated materials to waste (assume 10% of total cut volume)	3	m³	250	750

No.	Description	Quantity	Unit	Rate	Amount
	Imported fill				
24	Supply and place imported fill material	195	m³	95	18,525
25	Undercut soft spots and backfill with engineered fill	12	m³	170	2,040
	Total				**$275,584**

No.	Description	Quantity	Unit	Rate	Amount
	Drainage				
	Structure				
	New stormwater manhole				
	Manhole to be built according to RITS standard details				
1	DN1050 Manhole to be constructed over existing pipe - assumed 0 - 1.5 m deep	1	no	6,500	6,500
	New stormwater catch-pit				
2	Construct new stormwater double catch-pit with cycle friendly grating - assumed 0 - 1.5 m deep	1	no	6,000	6,000
3	Construct new stormwater catch-pit - assumed 0 - 1.5 m deep	2	no	3,000	6,000
4	Construct new stormwater catch-pit with cycle friendly grating and stormwater 360 littatrap products and 200 micro mesh bag inserts - assumed 0 - 1.5 m deep	2	no	3,500	7,000
	New RCRRJ stormwater pipe lead				
	Provide and laying new RCRRJ lead pipe in trenches including, all pipe fittings and accessories, excavation in all ground condition, including disposal of all excavated materials, trench backfilling with approved suitable imported material and compaction. In accordance with RITS Section 4.				
5	DN225 RCRRJ Lead pipe 0-1.5m depth to invert level	36	m	350	12,600
6	DN300 RCRRJ Lead pipe a 0-1.5m depth to invert level	2	m	400	800
7	Subsoil drainage pipe 0-1.5m depth to invert level	627	m	140	87,808
	Existing catch-pit				
8	Existing catch-pit lead pipes to be abandoned	4	no	500	2,000
9	Existing stormwater catch-pit grating to be replaced with solid cover and level to be adjusted to match the finished level	3	no	800	2,400
10	Existing stormwater catch-pit grating to replaced with cycle friendly grating	2	no	1,000	2,000
11	Existing stormwater double catch-pit to be provided with stormwater 360 littatrap products and 200 micro mesh bag inserts	1	no	400	400
12	Existing stormwater catch-pit cover level to be adjusted to miss the proposed ramp finished level	1	no	500	500
	Relocated catch-pit				
13	Relocated stormwater double catch-pit with DN 300mm RCRRJ lead pipe- assumed 0 - 1.5 m deep	1	no	2,000	2,000
14	Relocated stormwater catch-pit - assumed 0 - 1.5 m deep	3	no	2,000	6,000

No.	Description	Quantity	Unit	Rate	Amount
15	Relocated stormwater catch-pit to be provided with stormwater 360 littatrap products and 200 micro mesh bag inserts - assumed 0 - 1.5 m deep	1	no	350	350
	Stormwater manhole for adjustment				
16	Existing stormwater manhole to be cover level to be adjusted to match ground finished level	2	no	500	1,000
	Total				**$143,358**

No.	Description	Quantity	Unit	Rate	Amount
	Pavement and Surfacing				
	Hard surfacing				
1	Raised concrete pedestrian crossing	132	m²	125	16,500
2	Raised Asphalt pedestrian crossing	274	m²	125	34,250
3	Bi - directional cycle path 25mm mix 10 asphalt on GAP 40 basecourse 175mm thick	659	m²	110	72,490
4	Footpath 100mm in situ concrete mix (20MPa) on Sand/GAP 20 basecourse 75mm thick	392	m²	120	47,040
5	Residential vehicle crossing 125mm in situ concrete mix (20MPa) on Sand/GAP 20 basecourse 75mm thick	149	m²	140	20,860
6	Tactile directional & warning indicator yellow	20	m²	650	13,000
7	Tactile warning indicator green	16	m²	650	10,400
8	Bus station concrete platform	129	m²	140	18,060
9	Resurface existing road pavement with 40mm SMA (allowance for 0.5m along each new kerb line for tie in to existing road surface)	52	m²	45	2,340
	Kerb				
10	Vertical nib kerb	356	m	80	28,480
11	Kerb and channel	204	m	120	24,480
12	Median kerb	112	m	120	13,440
13	Bus kerb	35	m	120	4,200
14	Vehicle cut down kerb	2	m	100	200
	Vee channel				
15	Supply and install 600mm wide concrete vee channel	25	m	180	4,536
	Total				**$310,276**

No.	Description	Quantity	Unit	Rate	Amount
	Traffic Services				
	Signage - Ground mounted single post signage				
1	PW-39 Hump sign with PW-25 speed advisory sign	2	no	750	1,500
2	WU-3 Pedestrian crossing sign	2	no	750	1,500
3	Black and White Pedestrian crossing pole with WU4 sign	4	no	750	3,000
4	RG-6 Giveway sign with R2-2.6 "To cyclists & pedestrians"	2	no	800	1,600
5	RP-5 Bus stop sign	2	no	500	1,000
	Relocation traffic sign				
6	Instillation of existing road sign relocated	5	no	200	1,000
	Relocate traffic signals				
7	Relocation of existing traffic signal, including post, in a new location	4	no	14,000	56,000
	Traffic signals				
8	Allow to locate all existing utilities and excavate for pilot hole at each traffic signal location to confirm constructibility and foundation type	1	sum	3,000	3,000
9	100mm Duct	65	m	180	11,700
10	50mm Duct	20	m	90	1,800
11	36 Core Cable 36c	71	m	90	6,373
12	Loop Feeder Cable	23	m	90	2,100
13	600mm Chamber (Signal Duct chamber)	3	no	2,500	7,500
14	Controller	1	no	30,000	30,000
15	Inductive loop detector	2	no	5,500	11,000
16	Kerb side junction box	2	no	1,000	2,000
17	Pedestrian call box	2	no	1,250	2,500
18	Cycle call box	2	no	1,250	2,500
19	Traffic signal pole with mast arm (5m)	2	no	10,000	20,000
20	Electrical cabling (provisional quantity)	150	m	35	5,250
21	200mm Aspec t- open visor	7	no	1,800	12,600
22	200mm Aspect- closed visor	4	no	1,800	7,200
23	300mm Aspect	2	no	1,800	3,600
24	Cycle aspect	2	no	1,800	3,600
25	Pedestrian aspect	2	no	1,800	3,600
26	Design, coordination, testing and commissioning of traffic signal system and liaison with all relevant authorities	1	no	8,000	8,000
	Line marking and Symbols				

No.	Description	Quantity	Unit	Rate	Amount
27	Solid area in reflectorised green paint - Cycle marking apple green	212	m²	70	14,823
28	Solid area in reflectorised red paint - Bus stop red patch marking	37	m²	70	2,590
29	Continuous line in reflectorised white paint 100mm wide	968	m	5	4,840
30	Continuous line in reflectorised white paint 300mm wide	18	m	15	270
31	Continuous line in reflectorised white paint 600mm wide	192	m	30	5,760
32	Intermittent line in reflectorised white paint 100mm wide with 1m line and 3m gap	328	m	5	1,640
33	Intermittent line in reflectorised yellow paint 100mm wide with 1m line and 1m gap	545	m	5	2,725
34	Give way symbol in reflectorised white paint 2.5m long as per TCD specification	3	no	250	750
35	Give way symbol in reflectorised white paint 4m long as per TCD specification	1	no	80	80
36	Cycle symbol in reflectorised white paint to 560mm high 360mm wide	7	no	40	280
37	Cycle symbol in reflectorised white paint to 1120mm high 720mm wide	12	no	54	651
38	Cycle symbol in reflectorised white paint to 1680mm high 1080mm wide	15	no	75	1,125
39	Pedestrian symbol in reflectorised white paint to 320mm high 160mm wide	7	no	55	385
40	Pedestrian symbol in reflectorised white paint to 960mm high 480mm wide	14	no	75	1,050
41	BUS symbol in reflectorised yellow paint	2	no	120	240
42	STOP symbol in reflectorised yellow paint	2	no	120	240
43	Bike lane arrow in reflectorised white paint marking 1m high	26	no	10	260
44	Bike lane line in reflectorised white paint marking 1m high	72	no	5	360
45	Lane arrow in reflectorised white paint marking 4.8m high	4	no	55	220
46	Ramp hump symbol in triangle reflectorised white paint 150mm high 750mm wide	31	no	75	2,325
47	Zebra crossing in reflectorised white paint 300mm bar width 2m bar length	5	no	30	150
48	Zebra crossing in reflectorised white paint 600mm bar width 2m bar length	19	no	60	1,140
	<u>Bus shelters</u>				
49	Bus stop	2	no	45,000	90,000
	<u>Lighting</u>				
50	New lighting pole 6m high 0m outreach including footing	4	no	5,000	20,000
51	New lighting pole 6m high 1.5m reach including footing	4	no	5,000	20,000
52	New lighting pole 7m high 3m reach including footing	1	no	5,500	5,500

No.	Description	Quantity	Unit	Rate	Amount
53	New lighting pole 12m high 3m reach including footing	2	no	6,500	13,000
54	Luminaire type B - 120W, Philips	2	no	1,500	3,000
55	Luminaire type D - 30W, Italo 1	3	no	1,500	4,500
56	Luminaire type E - 51W, Italo 1 (SX)	4	no	1,500	6,000
57	Luminaire type F - 51W, Italo 1 (DX)	1	no	1,500	1,500
58	Luminaire type G - 67.5W, Italo 1 (SX)	1	no	1,500	1,500
59	Cabling and ducting (provisional quantity)	338	m	200	67,600
	Total				**$484,427**

No.	Description	Quantity	Unit	Rate	Amount
	Service Relocations				
1	Service Investigation - Locate, protect and identify existing services via GPR, hydro-excavation and potholing	1	LS	10,000	10,000
2	Service Investigation - Record location of existing services	1	LS	5,000	5,000
3	Provisional allowance for service relocations for underground utilities at this intersection	1	PS	30,000	30,000
	Total				**$45,000**

No.	Description	Quantity	Unit	Rate	Amount
	Landscaping				
	Typical planting				
1	100mm Deep mulch	11	m³	25	275
2	300mm Topsoil/garden mix	109	m²	20	2,180
3	150mm Cultivated subgrade	109	m²	2	218
	Typical tree planting surround				
4	Pinus radiata 50x50x1500mm long treated H4	28	no	10	280
5	Ties: 50mm hessian webbing	28	no	5	140
6	Timber edging for 5 trees	24	m	20	480
	Typical grass				
7	Plant hydro-seed pasture grass mix	1,093	m²	5	5,465
8	100mm Topsoil	110	m³	80	8,800
9	150mm Cultivated subgrade	1,093	m²	2	2,186
	Planting				
10	Small trees 1L pot size	348	no	23	8,004
11	Large trees - 45L pot size Rewarewa	7	no	350	2,450
	Balustrade				
12	Bus station steel balustrade barrier	25	m	500	12,500
	Maintenance				
13	Maintenance including, plants, mulch and grass berm areas (24 months)	1,114	m²	6	6,684
	Total				**$49,662**

No.	Description	Quantity	Unit	Rate	Amount
	Traffic management and Temporary works				
1	Prepare contractor's temporary traffic management plan for 3 months construction period	1	LS	10,000	10,000
2	Complete one side road close for 60 days, allow for stop & go, $5200/per day	60	Day	5,200	312,000
3	Shoulder close for 30 days, $1300/per day	30	Day	1,300	39,000
	Total				**$361,000**

No.	Description	Quantity	Unit	Rate	Amount
	Preliminaries and General				
1	Preliminaries and general (20%)	1	Sum	341,860	341,860
	Total				**$341,860**

No.	Description	Quantity	Unit	Rate	Amount
1	Post-contract escalation	1	Sum	74,400	74,400
	Total				**$74,400**

No.	Description	Quantity	Unit	Rate	Amount
1	Rounding	1	Sum	153	153
	Total				**$153**

No.	Description	Quantity	Unit	Rate	Amount
	Contingency				
1	P50 Contingency - Design development and Construction contingency (15%)	1	Sum	334,800	334,800
	Total				**$334,800**

No.	Description	Quantity	Unit	Rate	Amount
1	Funding risk contingency(20%)	1	Sum	446,400	446,400
	Total				**$446,400**

No.	Description	Quantity	Unit	Rate	Amount
1	Rounding	1	Sum	800	800
	Total				**$800**

Client: **Hamilton City Council**
Project: **EP School Link – Te Aroha and Ruakura Safety Improvements - Section 1E**
Revision: **0**
Quality Information

Quality Information

Document	EP School Link – Te Aroha and Ruakura Safety Improvements - Section 1E
Ref	60687064
Date	17-Apr-24
Originator	Srinesh Fernando
Checker/s	Manoj Dissanayaka
Verifier/s	Paula Haman

Revision History

Rev	Revision Date	Details	Approved	
			Name / Position	Signature
0	17-Apr-24	For Client review	Paula Haman, Practice Leader - Cost Management NZ	

Client: Hamilton City Council
Project: EP School Link – Te Aroha and Ruakura Safety Improvements - Section 1E
Revision: 0
Detail Design Estimate

1.0	**Cost Estimate Summary (excluding GST)**		
	Works Total	$	3,936,764.00
	Professional Fees	$	203,980.00
	Project Base Estimate: Works + Professional Fees	**$**	**4,140,744.00**
	Rounding	$	456.00
	P50 Contingency - Design Development and Construction Contingency	$	642,600.00
	Project Expected Estimate (P50)	**$**	**4,783,800.00**
	Funding Risk Contingency	$	856,800.00
	Rounding	$	600.00
	95th Percentile Project Estimate (P95, rounded to nearest 10,000)	**$**	**5,641,000.00**
	Pre-contract escalation	$	-
	Post contract escalation	$	142,800.00
	P95 Funding Risk Total (including escalation)	**$**	**5,784,000.00**

2.0	**Basis**	**Received**
2.1	EP School Link – Te Aroha and Ruakura Safety Improvements 100% Detailed Design Revision B - Section 1E	from AECOM design team on 15/03/2024 via email
2.2	EP School Link – Te Aroha and Ruakura Safety Improvements 100% Detailed Design Revision C	from AECOM design team on 10/04/2024 via email

3.0 Assumptions

3.1 Full access, normal working hours.
3.2 Each project performed concurrently/ procured separately/ assumed minimum of 3 tenderers.
3.3 Earthwork quantities were provided by the engineering team.
3.4 Assume depth for the pipes DN225/300 range from 0-1.5m depth to invert level.
3.5 Assume depth for manhole range from 0-1.5m deep.
3.6 Assume depth for 800 x 500mm catchpits range from 1.5-3.0m deep.
3.7 Assume 110mm dia perforated subsoil drainage pipe 0-1.5m depth to invert level
3.8 Assume depth for the pipes 150mm uPVC pipe range from 0-1.5m depth to invert level.
3.9 Assume 150mm diameter water valve
3.10 The shared path has been assumed to have the same design details and specifications as per the footpath
3.11 Kerb at raised pedestrian and cycle crossing allows kerb and channel
3.12 Allow resurfacing existing road pavement for 500mm along each new kerb line tie in to existing road surface
3.13 Provisional amount of $10k for every road crossing for service relations for the underground
3.14 Planting quantities based on schedule in the landscape drawings
3.15 Assume six months construction period for traffic management and temporary works.
3.16 Environmental compliance - allowed 2.5% of the physical works value.
3.17 Pre-contract escalation has been excluded and post contract escalation at 3.5%.
3.18 Contractor's Preliminary and General - allowed 20% of the physical works value.
3.19 Professional fees - allowance for pre-implementation phase excluded and allowed 3% of work value for implementation phase.
3.20 Client direct cost - allowance for pre-implementation phase excluded and allowed 2% of work value for implementation phase.
3.21 P50 Contingency - allowed 15% of works value.
3.22 Funding risk contingency - allowed 20% of works value.

4.0 Exclusions

4.1 Insurance.
4.2 Legal and financing costs.
4.3 Land purchase and property costs.
4.4 Project development phase
4.5 Consent costs.
4.6 GST.

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Project : School Link

Cost Plan : TARSI 100% Detailed Design - Section 1E

PROJECT SUMMARY

No.	Description	Quantity	Unit	Rate	Total
	Property Costs				**Excluded**
	Project Development Phase				**Excluded**
	Pre-Implementation Phase				**Excluded**
	Implementation Phase				
	Implementation Fees				203,980
	Environmental Compliance				70,000
	Earthworks and Site Clearance				495,844
	Ground Improvements				N/A
	Drainage				340,056
	Pavement and Surfacing				935,851
	Bridges				N/A
	Retaining Walls				N/A
	Traffic Services				564,038
	Service Relocations				115,000
	Landscaping				164,845
	Traffic Management and Temporary Works				595,000
	Preliminaries and General				656,130
	Extraordinary Construction Costs				142,800
	Project Base Estimate				**4,283,544**
	Rounding				456
	Contingency				**642,600**
	Project Expected Estimate				**4,926,600**
	Funding Risk Contingency				**856,800**
	95th Percentile Project Estimate				**5,783,400**
	Rounding				600
	Total				**$5,784,000**

No.	Description	Quantity	Unit	Rate	Amount
1	Consultancy fees (3%)	1	Sum	122,390	122,390
2	Hamilton City Council managed costs (2%)	1	Sum	81,590	81,590
	Total				**$203,980**

No.	Description	Quantity	Unit	Rate	Amount
	Environmental compliance				
1	Prepare, update, implement and maintain the Contractor's Environmental Management Plan (CEMP) & Erosion and Sediment Control Plan and controls including all temporary works and removal on completion	1	Sum	70,000	70,000
	Total				**$70,000**

No.	Description	Quantity	Unit	Rate	Amount
	Earthworks and site clearance				
	Demolition				
	Hard surfaces				
1	Demolition of median island	42	m²	20	840
2	Remove concrete slab 125mm thick to tip offsite	1,010	m²	25	25,250
3	Remove concrete slab 150mm thick to tip offsite	749	m²	30	22,470
4	Remove kerb & channel to tip offsite	399	m	30	11,970
5	Remove median kerb to tip offsite	88	m	30	2,640
6	Remove existing tree, assume 0-0.5m girth	2	no	1,200	2,400
7	Remove tactile pavers to tip offsite	9	m²	20	180
8	**Remove existing light poles to store off site**	2	no	1,800	3,600
9	**Remove existing light poles to store off site for reuse**	3	no	1,800	5,400
10	Remove existing pavement	3,429	m²	30	102,870
11	**Remove traffic sign including posts to store off site**	9	no	150	1,350
12	**Remove traffic sign including posts to store off site for reuse**	13	no	150	1,950
13	Remove existing 50mm upvc water pipe to store off site	33	m	100	3,262
14	Remove existing water value to store off site	2	no	200	400
15	Saw cut existing average 50mm thick asphalt along new kerb line	987	m	12	11,844
16	Cut to waste (assume 100mm for footpaths & cycleways, and 300mm where existing road removed for planted berm)	1,220	m³	60	73,200
17	Extra value over for cutting contaminated materials to waste (assume 5% of total cut)	61	m³	200	12,200
18	Undercut to waste and backfill with imported GAP65 fill (assume 10% of total cut)	122	m³	220	26,840
	Blackout line markings				
19	100mm line marking	1,523	m	10	15,230
20	300mm line marking	51	m	15	765
21	600mm line marking	17	m	50	850
22	Lane arrow	1	no	50	50
	Earthworks				
	Site clearance				
23	General site clearance area grassed berm	2,217	m²	10	22,170
24	150mm thick topsoil removal and dispose offsite	333	m³	60	19,953
	Cut to waste				
25	Excavation of materials within earthworks area and disposal offsite.	134	m³	90	12,060

No.	Description	Quantity	Unit	Rate	Amount
26	Extra value over for cutting contaminated materials to waste (assume 10% of total cut volume)	13	m³	250	3,250
	Imported fill				
27	Supply and place imported fill material	319	m³	95	30,305
28	Undercut soft spots and backfill with engineered fill	67	m³	170	11,390
	To Bi-directional asphalt				
29	Supply,place,and compact GAP 40 basecourse (175mm thick)	538	m³	95	51,110
	To Footpath/sharepath/residential crossing				
30	Supply,place,and compact GAP 20 basecourse (75mm thick)	211	m³	95	20,045
	Total				**$495,844**

No.	Description	Quantity	Unit	Rate	Amount
	Drainage				
	Structure				
	New stormwater manhole				
	Manhole to be built according to RITS standard details				
1	DN1050 Manhole - assumed 0 - 1.5 m deep	5	no	6,500	32,500
2	DN1200 Manhole - assumed 0 - 1.5 m deep	1	no	7,900	7,900
3	DN1500 Manhole with catch-pit grating on top to be constructed over existing pipe and provided with stormwater 360 littatrap products and 200 micro mesh bag inserts - 0-1.5m deep	1	no	10,000	10,000
4	Manhole with cat-pit grating on top- assumed DN1050 and 0 - 1.5 m deep	1	no	7,500	7,500
	New stormwater catch-pit				
5	Construct new stormwater catch-pit with cycle friendly grating- assumed 0 - 1.5 m deep	8	no	3,500	28,000
6	Construct new stormwater catch-pit with 60 littatrap products and 200 micro mesh bag inserts - assumed 0 - 1.5 m deep	2	no	3,500	7,000
7	Construct new stormwater catch-pit- assumed 0 - 1.5 m deep	9	no	3,000	27,000
	New RCRRJ stormwater pipe lead				
	Provide and laying new RCRRJ lead pipe in trenches including, all pipe fittings and accessories, excavation in all ground condition, including disposal of all excavated materials, trench backfilling with approved suitable imported material and compaction. In accordance with RITS Section 4.				
8	DN225 RCRRJ Lead pipe 0-1.5m depth to invert level	121	m	350	42,350
9	DN300 RCRRJ Lead pipe a 0-1.5m depth to invert level	15	m	400	6,000
10	Subsoil drainage pipe 0-1.5m depth to invert level	1,017	m	140	142,388
	Existing catch-pit				
11	Existing stormwater catch-pit to be covered and level to be adjusted to match ground finished level	5	no	500	2,500
12	Existing stormwater catch-pit grating to be replaced with solid cover and level to be adjusted to match ground finished level	5	no	800	4,000
13	Existing stormwater double catch-pit to be provided with stormwater 360 Littatrap product with 200-micron mesh bag	1	no	400	400
14	Existing stormwater double catch-pit grating to replaced with cycle friendly grating	2	no	1,000	2,000
	Stormwater manhole for adjustment				

No.	Description	Quantity	Unit	Rate	Amount
15	Existing stormwater manhole to be cover level to be adjusted to match new ground finished level	3	no	500	1,500
16	Allowance for existing manhole to be covered with asphalt	1	sum	500	500
	Water supply				
17	150mm uPVC pipe - assumed 0-1.5m depth to invert level	33	m	200	6,517
18	New water valve - assumed 150mm diameter	3	no	2,000	6,000
19	Tie-in to existing water pipes	5	no	1,200	6,000
	Total				**$340,056**

No.	Description	Quantity	Unit	Rate	Amount
	Pavement and Surfacing				
	Hard surfacing				
1	Raised pedestrian crossing	1,111	m²	125	138,875
2	Bi - directional cycle path 25mm mix 10 asphalt on GAP 40 basecourse 175mm thick	1,962	m²	110	215,820
3	Footpath 100mm in situ concrete mix (20MPa) on Sand/GAP 20 basecourse 75mm thick	1,228	m²	120	147,360
4	Shared path 100mm in situ concrete mix (20MPa) on Sand/GAP 20 basecourse 75mm thick	1,043	m²	120	125,160
5	Residential vehicle crossing 125mm in situ concrete mix (20MPa) on Sand/GAP 20 basecourse 75mm thick	533	m²	140	74,620
6	Tactile directional & warning indicator yellow	81	m²	650	52,650
7	Tactile warning indicator green	24	m²	650	15,600
8	Bus station concrete platform	176	m²	140	24,640
9	Resurface existing road pavement with 40mm SMA (allowance for 0.5m along each new kerb line for tie in to existing road surface)	26	m²	45	1,170
	Kerb				
10	Vertical nib kerb	382	m	80	30,560
11	Kerb and channel	384	m	120	46,080
12	Median kerb	239	m	120	28,680
13	Bus kerb	58	m	120	6,960
14	400mm wide precast concrete separator	21	m	200	4,100
15	Vehicle cut down kerb	139	m	100	13,900
	Vee channel				
16	Supply and install 300mm wide concrete vee channel	16	m	120	1,913
17	Supply and install 600mm wide concrete vee channel	43	m	180	7,763
	Total				**$935,851**

No.	Description	Quantity	Unit	Rate	Amount
	Traffic Services				
	Signage - Ground mounted single post signage				
1	WU3 Pedestrian crossing sign	12	no	450	5,400
2	WN2 Hump sign with WG5 speed advisory sign	8	no	750	6,000
3	RG-1 Speed sign 40kmh	1	no	600	600
4	RP2 Giveway sign	3	no	350	1,050
5	RP2 Giveway sign with R2-2.6 "To cyclists & pedestrians"	16	no	800	12,800
6	Black and white pedestrian pole with WU4	20	no	500	10,000
	Relocate traffic sign				
7	Instillation of existing road sign relocated	13	no	200	2,600
	Traffic signals				
8	Allow to locate all existing utilities and excavate for pilot hole at each traffic signal location to confirm constructibility and foundation type	1	sum	3,000	3,000
	Line marking and Symbols				
9	Solid area in reflectorised red paint - Bus stop marking red	69	m²	70	4,830
10	Solid area in reflectorised green paint - Cycle marking apple green	306	m²	70	21,415
11	Continuous line in reflectorised white paint 100mm wide	531	m	5	2,655
12	Continuous line in reflectorised white paint 300mm wide	155	m	15	2,325
13	Intermittent line in reflectorised white paint 100mm wide with 1m line and 3m gap	601	m	5	3,005
14	Intermittent line in reflectorised white paint 100mm wide with 3m line and 7m gap	552	m	5	2,760
15	Intermittent line in reflectorised yellow paint 100mm wide with 1m line and 1m gap	1,350	m	5	6,750
16	Give way symbol in reflectorised white paint 2.5m long as per the TCD specification	4	no	250	1,000
17	Give way symbol in reflectorised white paint 4m long as per the TCD specification	13	no	80	1,040
18	Cycle symbol in reflectorised white paint to 560mm high 360mm wide	5	no	40	200
19	Cycle symbol in reflectorised white paint to 1120mm high 720mm wide	3	no	54	163
20	Cycle symbol in reflectorised white paint to 1680mm high 1080mm wide	49	no	75	3,675
21	Pedestrian symbol in reflectorised white paint to 320mm high 160mm wide	14	no	55	770
22	Pedestrian symbol in reflectorised white paint to 960mm high 480mm wide	4	no	75	300
23	Pedestrian crossing diamond symbol in reflectorised white paint 6m high 1m wide	6	no	75	450

No.	Description	Quantity	Unit	Rate	Amount
24	BUS symbol in reflectorised yellow paint	4	no	120	480
25	STOP symbol in reflectorised yellow paint	4	no	120	480
26	Speed symbol in reflectorised white paint	1	no	120	120
27	Bike lane arrow in reflectorised white paint marking 1m high	18	no	10	180
28	Ramp hump symbol in triangle reflectorised white paint 150mm high 750mm wide	90	no	75	6,750
29	Zebra crossing in reflectorised white paint 300mm bar width 2m bar length	10	no	30	300
30	Zebra crossing in reflectorised white paint 600mm bar width 2m bar length	69	no	60	4,140
	Bus shelters				
31	Bus stop	4	no	45,000	180,000
	Lighting				
32	New lighting pole 6m high including footing	20	no	5,000	100,000
33	New dual lighting pole 11m high 3m & 1.5m reach including footing	1	no	7,500	7,500
34	New dual lighting pole 6m high 1.5m reach including footing	2	no	5,000	10,000
35	Luminaire type A - Phillips BRP712 LED115WW 92W PSU DW1	1	no	1,500	1,500
36	Luminaire type E - Techlight ITALO 1 0F4 OPA-SX 3_5-2M	21	no	1,500	31,500
37	Luminaire type G - Techlight ITALO 1 0F4 OPA-SX 3_7-2M	1	no	1,500	1,500
38	Cabling and ducting (provisional quantity)	571	m	200	114,200
39	Relocation of existing street light including luminaire from store for installation	3	no	4,200	12,600
	Total				**$564,038**

No.	Description	Quantity	Unit	Rate	Amount
	Service Relocations				
1	Service Investigation - Locate, protect and identify existing services via GPR, hydro-excavation and potholing	1	LS	10,000	10,000
2	Service Investigation - Record location of existing services	1	LS	5,000	5,000
3	Provisional allowance for service relocations for underground utilities at this intersection	1	PS	100,000	100,000
	Total				**$115,000**

No.	Description	Quantity	Unit	Rate	Amount
	Landscaping				
	Typical planting				
1	100mm Deep mulch	126	m³	25	3,150
2	300mm Topsoil/garden mix	1,251	m²	20	25,020
3	150mm Cultivated subgrade	1,251	m²	2	2,502
	Typical tree planting surround				
4	Pinus radiata 50x50x1500mm long treated H4	16	no	10	160
5	Ties: 50mm hessian webbing	16	no	5	80
	Typical grass				
6	Plant hydro-seed pasture grass mix	1,221	m²	5	6,105
7	100mm Topsoil	123	m³	80	9,840
8	150mm Cultivated subgrade	1,221	m²	2	2,442
	Planting				
9	Small trees 1L pot size	4,318	no	23	99,314
10	Large trees - 45L pot size	4	no	350	1,400
	Maintenance				
11	Maintenance including, plants, mulch and grass berm areas (24 months)	2,472	m²	6	14,832
	Total				**$164,845**

No.	Description	Quantity	Unit	Rate	Amount
	Traffic management and Temporary works				
1	Prepare contractor's temporary traffic management plan for 6 months construction period	1	LS	10,000	10,000
2	Complete one side road close for 90 days, allow for stop & go, $5200/per day	90	Day	5,200	468,000
3	Shoulder close for 90 days, $1300/per day	90	Day	1,300	117,000
	Total				**$595,000**

No.	Description	Quantity	Unit	Rate	Amount
	Preliminaries and General				
1	Preliminaries and general (20%)	1	Sum	656,130	656,130
	Total				**$656,130**

No.	Description	Quantity	Unit	Rate	Amount
1	Post-contract escalation	1	Sum	142,800	142,800
	Total				**$142,800**

Rounding

No.	Description	Quantity	Unit	Rate	Amount
1	Rounding	1	Sum	456	456
	Total				**$456**

No.	Description	Quantity	Unit	Rate	Amount
	Contingency				
1	P50 Contingency - Design development and Construction contingency (15%)	1	Sum	642,600	642,600
	Total				**$642,600**

No.	Description	Quantity	Unit	Rate	Amount
1	Funding risk contingency(20%)	1	Sum	856,800	856,800
	Total				**$856,800**

Rounding

No.	Description	Quantity	Unit	Rate	Amount
1	Rounding	1	Sum	600	600
	Total				**$600**