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Planning Agreement

China Oriental Investment Pty Ltd ABN 30 617 023 891 ATF
China Oriental Investment Denman Trust

Muswellbrook Shire Council
ABN 86 864 180 944

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THIS PLANNING AGREEMENT is made on 2026

BETWEEN:

(1) **China Oriental Investment Pty Ltd (ABN 30 617 023 891) ATF China Oriental Investment Denman Trust** of Suite 1201, Tower 1, 495 Victoria Avenue, Chatswood NSW 2067 ("**Developer**"); and

(2) **Muswellbrook Shire Council (ABN 86 864 180 944)** of 60-82 Bridge St, Muswellbrook NSW 2333 (the **"Council"**)

(collectively, the "**Parties**")

INTRODUCTION

(A) The Developer owns the Land and has been granted the Development Consent.

(B) Pursuant to the terms of the Development Consent, the Developer is required to pay certain monetary development contributions to the Council.

(C) The Developer has agreed to carry out and provide the Works and, where appropriate, to dedicate the completed Works to the Council as a material public benefit anticipated by the terms of this Agreement.

(D) Subject to the terms of this Agreement, Council has agreed to accept the completed Works in lieu of the monetary development contributions otherwise payable under the Development Consent

THE PARTIES AGREE AS FOLLOWS:

1. Interpretation

1.1 Definitions

The following definitions apply in this document.

Act means the *Environmental Planning and Assessment Act 1979* (NSW).

Agreement means this document and includes any variation or amendment to it agreed to by the Parties.

Business Day means a day other than a Saturday, Sunday or public holiday or bank holiday in New South Wales.

Development means the residential subdivision of the Land as anticipated by the Development Consent as modified.

Development Consent means development consent no. DA92/2022/2 issued by Council on 28 May 2024.

Development Contributions means the contributions to be provided by the Developer as development contributions under this Agreement and the Act as detailed in **Annexure A**.

Dispute Resolution Procedures means the procedures set out in **Annexure B**.

Explanatory Note means the note exhibited with a copy of this Agreement as prepared in accordance with cl.205 of the *Environmental Planning and Assessment Regulation 2021* (NSW)**Government Authority** means any government or any governmental, semi-governmental, administrative, fiscal or judicial body, department, commission, authority, tribunal, agency or entity

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(whether local, state or federal).

GST has the same meaning as in the GST Law.

GST Act means *A New Tax System (Goods and Services Tax) Act 1999* (Cth).

GST Law has the meaning given to that term in *A New Tax System (Goods and Services Tax) Act 1999* (Cth).

Land means the property known as 184 Almond Street, Denman being the land comprised in Lot 1 in Deposited Plan 616013.

Law means any constitution or provision, statute, act, regulation, rule, ordinance, proclamation, subordinate legislation, delegated legislation, by-law, judgment, rule of common law or equity, rule, Authorisation, consent or condition of Authorisation or consent imposed by a competent entity exercising statutory jurisdiction in the relevant matter.

Modification Application means the application to modify the Development Consent submitted to Council on 24 October 2025.

Subdivision Certificate has the same meaning as in the Act.

Works means the Almond Street civil road works (no allowance for stormwater works) to be carried out by the Developer as detailed in Annexure A

1.2 **Interpretation**

In this Agreement, headings and bold type are for convenience only and do not affect the interpretation of this Agreement and, unless the context otherwise requires:

(a) words importing the singular include the plural and vice versa;

(b) word importing a gender include any gender;

(c) other parts of speech and grammatical forms of a word or phrase defined in this Agreement have a corresponding meaning;

(d) an expression importing a natural person includes any company, partnership, joint venture, association, corporation or other body corporate and any Government Agency;

(e) a reference to any thing (including any right) includes a part of that thing but nothing in this clause 1.2(e) implies that performance of part of an obligation constitutes performance of the obligation;

(f) a reference to a clause, party, annexure, exhibit or schedule is a reference to a clause of, and a party, annexure, exhibit and schedule to, this Agreement and a reference to this Agreement includes any annexure, exhibit and schedule;

(g) a reference to a statute, regulation, proclamation, ordinance or by-law includes all statutes, regulations, proclamations, ordinances or by-laws amending, consolidating or replacing it, whether passed by the same or another Government Agency with legal power to do so, and a reference to a statute includes all regulations, proclamations, ordinances and by-laws issued under that statute;

(h) a reference to a document includes all amendments or supplements to, or replacements or novations of, that document;

(i) a reference to a party to a document includes that party's successors and permitted assigns and, in the case of the Developer, includes any person who at any time owns all or part of the Land;

(j) a covenant or agreement on the part of 2 or more persons binds them severally;

(k) a reference to an agreement other than this Agreement includes an undertaking, agreement, agreement or legally enforceable arrangement or understanding whether or not in writing;

(l) a reference to an asset includes all property of any nature, including a business, and all rights, revenues and benefits;

(m) a reference to a document includes any agreement in writing, or any certificate, notice, instrument or other document of any kind; and

(n) a reference to liquidation includes official management, appointment of an administrator, compromise, arrangement, merger, amalgamation, reconstruction, winding-up, dissolution, deregistration, assignment for the benefit of creditors, scheme, composition or arrangement with creditors, insolvency, bankruptcy, or any similar procedure or, where applicable, changes in the constitution of any partnership or person, or death.

1.3 Inclusive expressions

Specifying anything in this Agreement after the words "includes" or "for example" or similar expressions does not limit what else is included unless there is express wording to the contrary.

1.4 Business Day

Where the day on or by which anything is to be done is not a Business Day, that thing must be done on or by the next Business Day.

1.5 Contra preferentum

In the interpretation of this Agreement no rule of construction shall apply to disadvantage one party on the basis that that party put forward the particular covenant term or provision.

2. Planning Agreement under the Act

The Parties agree that this Agreement is a planning agreement, governed by Subdivision 2 of Division 7.1 of Part 7 of the Act.

3. Application of this Agreement

This Agreement applies to the Development and the Land.

4. Operation of this Agreement

This Agreement operates on and from the date it is made .

5. Development Contributions to be made under this Agreement

(a) The Developer must provide the Development Contributions in accordance with Annexure A.

(b) The Works must be commenced within 18 months of the execution of this Agreement. If the Works are not commenced within 18 months of the execution of this Agreement , Council may terminate this Agreement and the monetary contributions specified in the Development Consent will be payable in accordance with the terms of the Development Consent .

(c) The Works must be completed within 24 months from following the commencement of the Works. If the Works are not completed within 24 months following commencement of the Works , Council may terminate this Agreement and the monetary contributions specified in the Development Consent will be payable in accordance with the terms of the Development Consent.

(d) The nature and extent of the provisions of Works to be made under this Agreement are set

out in Annexure A.

6. Application of Section 7.11 and Section 7.12 of the Act to the Development

Subject to clauses 5(b) and (c),this Agreement excludes the applications of Sections 7.11 and 7.12 of the Act to the Development. If the Agreement is terminated for any reason, the Developer will pay the monetary contributions under the Development Consent

7. Registration of this Agreement

(a) The Developer shall do all things reasonably necessary after the date of this Agreement to enable Council to obtain registration of this Agreement on the title to the Land and each part of the Land under Section 7.6 of the Act by the Registrar-General such that on registration of this Agreement, the Registrar-General will have made an entry in the relevant folio of the register kept under the *Real Property Act, 1900* (NSW) in relation to the Land and each part of the Land.

(b) On the date on which this Agreement is made, the Developer shall deliver to Council all necessary documents in registrable form together with applicable registration and PEXA fees to enable Council to lodge those documents at New South Wales Land Registry Services and obtain registration of this Agreement.

(c) Subject to the other terms of this Agreement, within 20 Business Days after the date of issue of the final Subdivision Certificate in respect of the Development, Council will execute and provide to the Developer such documents as are reasonably required to remove notation of registration of this Agreement from the title to the Land.

(d) The Developer will provide Council with all documents required to be executed by Council under clause 7(c) at the time that the Developer lodges an application for the final Subdivision Certificate in respect of the Development with Council.

8. Precondition to Issue of Subdivision Certificate

The Developer must complete all the Works prior to making any application for a Subdivision Certificate in respect of the Development or any part of the Development or Land.

9. Review of this Agreement

(a) The Parties agree that from time to time, it may become necessary to review this Agreement, but any amendment to this Agreement shall only be effective in writing and signed by all Parties and registered under Section 7.6 of the Act.

(b) If a Party requires a review, it shall request the other Party to participate in a review and the review shall be undertaken accordingly. If both parties agree to a review, any such review will be conducted in the circumstances and in the manner determined by the Parties. Any amendment to the Agreement must be accepted by both parties in writing.

10. Dispute Resolution

In the event that Council and the Developer cannot agree in relation to any matter relating to this Agreement, then Council or the Developer may give notice and particulars of such matter the subject of the failure to agree to the other and may require that the matter be resolved by the Dispute Resolution Procedures t. Neither this clause nor the Dispute Resolution Procedures shall apply to either the Developer's principal obligation to carry out the Works nor the Developer's obligations in relation the registration of this Agreement on the title to the Land.

11. Notices

(a) Any notice or other communication, including any request, demand, consent or approval, to or by a Party to this Agreement:

(i) must be in legible writing and in English addressed as shown at the commencement of this Agreement or as specified to the sender by any Party by notice;

(ii) must be signed by the sender (if a natural person) or an officer or under the common seal of the sender (if a corporation);

(iii) is regarded as being given by the sender and received by the addressee:

(A) if by delivery in person, when delivered to the addressee;

(B) if by post, 5 Business Days from and including the date of postage; or

(C) if by email, when transmitted to the relevant email address,

but if the delivery or receipt is on a day which is not a Business Day or is after 4pm (addressee's time) it is regarded as received at 9am on the following Business Day; and

(iv) can be relied upon by the addressee and the addressee is not liable to any other person for any consequences of that reliance if the addressee believes it to be genuine, correct and authorised by the sender.

(b) In this clause 11, a reference to an addressee includes a reference to an addressee's officers, agents or employees.

12. Approvals and non-fetter

(a) This Agreement is not intended to operate to fetter, in any manner, the exercise of any statutory power or discretion of the Council, including, but not limited to, any statutory power or discretion of the Council relating to the Development or any application for development consent or any modification to an approval or consent (all referred to in this Agreement as a **"Discretion").**

(b) No provision of this Agreement is intended to constitute any fetter on the exercise of any Discretion. If, contrary to the operation of this clause 12, any provision of this Agreement is held by a court of competent jurisdiction to constitute a fetter on any Discretion, the Parties agree:

(i) They will take all practical steps, including the execution of any further documents, to ensure the objective of this clause is substantially satisfied, and

(ii) In the event that (i) cannot be achieved without giving rise to a fetter on the exercise of a Discretion, the relevant provision is to be severed and the remainder of this Agreement has full force and effect.

13. Assignment and Dealings

(a) Rights arising out of or under this Agreement are not assignable by one Party without the prior written consent of the other Party

(b) A Party must not unreasonably withhold its consent.

(c) It will be reasonable for the Council to withhold its consent to any proposed assignment by the Developer unless the proposed assignee of the Developer's interest:

The fact that a Party fails to do, or delays in doing, something the Party is entitled to do under this Agreement, does not amount to a waiver of any obligation of, or breach of obligation by, another Party. A written waiver by a Party is only effective in relation to the particular obligation or breach in respect of which it is given. It is not to be taken as an implied waiver of any other obligation or breach or as an implied waiver of that obligation or breach in relation to any other occasion.

EXECUTED as an agreement.

EXECUTED for and on behalf of **China Oriental Investment Pty Ltd (ACN 617 023 891) ATF China Oriental Investment Denman Trust** pursuant to s 127 of the *Corporations Act 2001* (Cth):

签署人： 0CD49B279889405...	签署人： F4ACDC900AF9460...
Signature of director	Signature of director/secretary
LI HAN	Rongzhen Zhao
Name of director	Name of signatory

Signed for and on behalf of **MUSWELLBROOK SHIRE COUNCIL** ABN 86 864 180 944 by its authorised delegate under section 377 of the *Local Government Act 1993* in the presence of:)

Signature of Witness

Sharon Pope, Acting General Manager

(10. 8. 2026)

Hamish McGaggart

Print name of Witness

(i) is proposed to accept the whole of the Developer's interest under this Agreement;

(ii) Is proposed to become the registered proprietor of the whole of the Land.; and

(iii) Is demonstrated by the Developer to be a solvent and reputable person with sufficient resources and experience to enable it to complete the Works and to otherwise carry out the Developer's obligations under this Agreement.

14. Costs

Each Party is to pay its own costs associated with the preparation and registration of this Agreement.

15. Entire Agreement

This Agreement contains everything to which the Parties have agreed in relation to the matters it deals with. No Party can rely on an earlier document, the Explanatory Note, anything said or done by another Party, or by an Authorised Officer, agent or employee of that Party, before this Agreement was executed, except as permitted by law.

16. Further Acts

Each Party must promptly execute all documents and do all things that another Party from time-to-time reasonably requests to affect, perfect or complete this Agreement and all transactions incidental to it.

17. Governing Law and Jurisdiction

This Agreement is governed by the law of New South Wales. The Parties submit to the non-exclusive jurisdiction of its courts and courts of appeal from them. The Parties will not object to the exercise of jurisdiction by those courts on any basis.

18. Joint and Individual Liability and Benefits

Except as otherwise set out in this Agreement, any agreement, covenant, representation or warranty under this Agreement by two or more persons binds them jointly and each of them individually, and any benefit in favour of two or more persons is for the benefit of them jointly and each of them individually.

19. Representations and warranties

The Parties represent and warrant that they have power to enter into this Agreement and comply with their obligations under the Agreement and that entry into this Agreement will not result in the breach of any law.

20. Severability

If a clause or part of a clause of this Agreement can be read in a way that makes it illegal, unenforceable or invalid, but can also be read in a way that makes it legal, enforceable and valid, it must be read in the latter way. If any clause or part of a clause is illegal, unenforceable or invalid, that clause or part is to be treated as removed from this Agreement, but the rest of the Agreement is not affected.

21. Modification

No modification of this Agreement will be of any force or effect unless it is in writing and signed by the Parties to this Agreement.

22. Waiver

Annexure A

Development Contributions

签署人：
0CD49B279889405...
签署人：
F4ACDC900AF9460...
Signed by:
Sharon Pope
4F53DD05B09440E...

TELFORD CIVIL
CONSULTING CIVIL & STORMWATER ENGINEERS

PROPOSED RESIDENTIAL SUBDIVISION
ALMOND STREET, DENMAN
VOLUNTARY PLANNING AGREEMENT

ISSUED FOR VOLUNTARY PLANNING AGREEMENT

LOCALITY PLAN
N.T.S

LOT 1 D.P.616013
DA 2022/92

CLIENT: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

muswellbrook shire council

sharon pope

DRAWING LIST

No.	SHEET TITLE
GENERAL	
000	COVER SHEET
001	GENERAL NOTES
002	EXISTING SERVICES AND DEMOLITION PLAN
EROSION AND SEDIMENT CONTROL	
100	EROSION AND SEDIMENT CONTROL PLAN
110	EROSION AND SEDIMENT CONTROL DETAILS
EARTHWORKS	
200	BULK EARTHWORKS PLAN SHEET 1
ENGINEERING PLANS	
300	ENGINEERING PLAN AND DETAILS SHEET 1
301	ENGINEERING PLAN AND DETAILS SHEET 2
ROADS SECTIONS	
400	ALMOND STREET LONGITUDINAL AND TYPICAL CROSS SECTION SHEET 1
401	ALMOND STREET LONGITUDINAL AND TYPICAL CROSS SECTION SHEET 2
402	ALMOND STREET LONGITUDINAL AND TYPICAL CROSS SECTION SHEET 3
420	ALMOND STREET CROSS SECTIONS SHEET 1
421	ALMOND STREET CROSS SECTIONS SHEET 2
422	ALMOND STREET CROSS SECTIONS SHEET 3
423	ALMOND STREET CROSS SECTIONS SHEET 4
424	ALMOND STREET CROSS SECTIONS SHEET 5
425	ALMOND STREET CROSS SECTIONS SHEET 6
426	ALMOND STREET CROSS SECTIONS SHEET 7
427	ALMOND STREET CROSS SECTIONS SHEET 8
428	ALMOND STREET CROSS SECTIONS SHEET 9
INTERSECTION	
500	INTERSECTION & KERB RETURN DETAILS SHEET 1
501	INTERSECTION & KERB RETURN DETAILS SHEET 2
502	INTERSECTION & KERB RETURN DETAILS SHEET 3
503	INTERSECTION & KERB RETURN DETAILS SHEET 4
504	INTERSECTION & KERB RETURN DETAILS SHEET 5
505	INTERSECTION & KERB RETURN DETAILS SHEET 6
506	INTERSECTION & KERB RETURN DETAILS SHEET 7
STORMWATER	
600	STORMWATER CATCHMENT PLAN
610	STORMWATER LONGITUDINAL SECTIONS SHEET 1
611	STORMWATER LONGITUDINAL SECTIONS SHEET 2
612	STORMWATER LONGITUDINAL SECTIONS SHEET 3
613	STORMWATER LONGITUDINAL SECTIONS SHEET 4
INTERSECTION	
500	INTERSECTION & KERB RETURN DETAILS SHEET 1
501	INTERSECTION & KERB RETURN DETAILS SHEET 2
502	INTERSECTION & KERB RETURN DETAILS SHEET 3
503	INTERSECTION & KERB RETURN DETAILS SHEET 4
504	INTERSECTION & KERB RETURN DETAILS SHEET 5
505	INTERSECTION & KERB RETURN DETAILS SHEET 6
506	INTERSECTION & KERB RETURN DETAILS SHEET 7
MISCELLANEOUS ROADWORKS PLANS	
700	SIGNAGE AND LINEMARKING PLAN SHEET 1
701	SIGNAGE AND LINEMARKING PLAN SHEET 2
702	ROUNDABOUT DETAILS
705	BUS SHELTER PLAN
710	PAVEMENT PLAN
720	SWEPT PATH PLAN SHEET 1
721	SWEPT PATH PLAN SHEET 2
722	SWEPT PATH PLAN SHEET 3
723	SWEPT PATH PLAN SHEET 4
724	SWEPT PATH PLAN SHEET 5
725	SWEPT PATH PLAN SHEET 6
726	SWEPT PATH PLAN SHEET 7
727	SWEPT PATH PLAN SHEET 8
728	SWEPT PATH PLAN SHEET 9
740	MISCELLANEOUS DETAILS SHEET 1
741	MISCELLANEOUS DETAILS SHEET 2
742	MISCELLANEOUS DETAILS SHEET 3

PROPOSED RESIDENTIAL SUBDIVISION
ALMOND STREET, DENMAN
CIVIL ENGINEERING PLANS

PROJECT No.:	STAGE:	MILESTONE:	REVISION DATE:	DRAWING No.:	REVISION:
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Signed by:
Sharon Pope
+61 4100290994 | sharon@telfordcivil.com.au | IP: 124.190.201.1 | 2026-05-28 | 08:44:27 AEST | SHA256: 7B89945...

COORDINATION NOTES

1. REFER ELECTRICAL CONSULTANTS DRAWINGS FOR ELECTRICAL RETICULATION SETOUT.
2. REFER LANDSCAPE PLANS PREPARED BY MOIR STUDIO, PROJECT NO. 2502, DATED 11 AUGUST 2025 REVISION D FOR SOIL STABILATION AND PLANTING DETAILS.
3. REFER SERVICE AUTHORITY FOR LOCATION AND CONSTRUCTION REQUIREMENTS APPLICABLE TO EXISTING SERVICES.

GENERAL NOTES

1. ALL WORK IS TO CONFORM TO THE CURRENT COUNCIL STANDARDS, DRAWINGS AND SPECIFICATIONS U.N.O.
2. WHERE CONNECTION IS TO BE MADE TO EXISTING CONSTRUCTION, THE CONTRACTOR SHALL CONFIRM THE LOCATION AND LEVEL OF THIS CONSTRUCTION PRIOR TO COMMENCING WORK ON ANY CRITICAL SECTION. THE SUPERINTENDENT MAY VARY LEVELS AND GRADIENTS OF NEW WORKS TO ACHIEVE A SATISFACTORY CONNECTION.
3. LEVEL DATUM IS AHD.
4. ALL DIMENSIONS ARE IN METRES U.N.O.
5. PRIOR TO CONSTRUCTION, THE CONTRACTOR IS TO BE SATISFIED OF THE CORRECT LOCATIONS OF ALL EXISTING SERVICES WHETHER INDICATED OR NOT ON THE PLANS. ANY DAMAGE TO EXISTING SERVICES IS TO BE RECTIFIED AT THE CONTRACTORS EXPENSE.
6. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY BENCH MARK LEVELS AND ADVISE THE SUPERINTENDENT OF ANY DISCREPANCIES.
7. PRIOR TO CONSTRUCTION, THE CONTRACTOR IS TO CONFIRM WITH THE SUPERINTENDENT THE FOLLOWING:
   - 7.A. ALL INSPECTION HOLD POINTS;
   - 7.B. ALL COMPLIANCE TESTING REQUIREMENTS.
8. ANY WORK ON EXISTING SERVICES THAT REQUIRE RELOCATION BY AUTHORITIES SHALL BE CARRIED OUT BY THE RELEVANT AUTHORITY, BUT WITHIN TERMS OF THE CONTRACT, AND SHALL BE CO-ORDINATED BY THE CONTRACTOR.
9. AT COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL ARRANGE FOR AN INDEPENDENT LICENSED SURVEYOR TO CARRY OUT A "WORKS AS CONSTRUCTED" SURVEY IN ACCORDANCE WITH THE CURRENT COUNCIL STANDARDS AND SUBMIT THE DETAILS SHOWN ON A PLAN TO THE SUPERINTENDENT.
10. ALL VERGES ARE TO BE FULLY TURFED WITH COUCH. REFER TO LANDSCAPE ARCHITECTS PLANS FOR DETAILS.

DISCLAIMER

ALL INFRASTRUCTURE INFORMATION (MAINS, SEWER, PIPES ETC.) IS DERIVED FROM BEFORE YOU DIG AUSTRALIA. EVERY EFFORT WAS MADE TO ENSURE ACCURACY OF THESE RECORDS WHEN COMPILED. NO WARRANTY IS GIVEN TO CURRENCY OF DEPTHS AND LEVELS DUE TO THE POSSIBILITY OF SUBSEQUENT ALTERATION OF LEVELS THROUGH FILLING OR EXCAVATION. USERS OF THE INFORMATION IN THIS DRAWING/DESIGN SHOULD TAKE ALL REASONABLE STEPS TO VERIFY THE RELEVANT INFORMATION BEFORE COMMENCING EXCAVATING OR CONSTRUCTION WORK. TELFORD CONSULTING ENGINEERS TAKE NO RESPONSIBILITY FOR APPARENT ERRORS OR INACCURACIES IN THE INFORMATION PROVIDED.

IT IS THE CONTRACTOR RESPONSIBILITY TO CONTACT "BEFORE YOU DIG AUSTRALIA" FOR THE LOCATION OF EXISTING PUBLIC UTILITIES, PRIOR TO EXCAVATION.

DANGER :

LOCATION OF ALL EXISTING UNDERGROUND SERVICES SHOWN ARE APPROXIMATE AS TAKEN OFF BYDA INFO. EXTREME CAUTION TO BE EXERCISED WHEN WORKING IN THE VICINITY OF AND AROUND THESE SERVICES. PLEASE CALL THE RELEVANT AUTHORITIES TWO DAYS PRIOR TO CONSTRUCTION FOR A MORE EXACT LOCATION OF THE EXISTING SERVICES.

BEFORE YOU DIG
www.byda.com.au
Zero Damage - Zero Harm

EROSION AND SEDIMENT CONTROL NOTES

1. EROSION & SEDIMENT CONTROL (ESC) NOTES ARE TO BE READ IN CONJUNCTION WITH THE GENERAL AND COORDINATION NOTES.
2. ALL ESC MEASURES SHALL BE IN ACCORDANCE CURRENT COUNCIL STANDARDS, DRAWINGS AND SPECIFICATIONS U.N.O.
3. CONSTRUCTION OF ALL SEDIMENT CONTROL MANAGEMENT DEVICES SHALL BE TO THE SATISFACTION OF THE SUPERINTENDENT. THE CONTRACTOR IS TO FOLLOW THE CONSTRUCTION PHASE AS OUTLINED:
   - 3.A. CONSTRUCTION OF EROSION AND SEDIMENT DEVICES;
   - 3.B. STRIPPING TOPSOIL;
   - 3.C. BULK EARTHWORKS;
   - 3.D. SERVICES, BUILDING, PAVEMENT AND ROAD CONSTRUCTION;
   - 3.E. LANDSCAPED AREAS TO BE TOPSOILED, TURFED, MULCHED OR PLANTED.
4. THE CONTRACTOR IS TO PROVIDE A CONSTRUCTION TRAFFIC SHAKEDOWN DEVICE AT ALL RELEVANT POINTS OF EXIT FROM THE SITE. THE CONTRACTOR SHALL CLEAN OUT AND MAINTAIN THE SHAKEDOWN DEVICE REGULARLY TO ENSURE EFFICIENT OPERATION.
5. THE CONTRACTOR SHALL PROVIDE SILT FENCES IMMEDIATELY DOWNSTREAM OF ANY SOIL STOCKPILES.
6. BOTH TEMPORARY AND PERMANENT ESC MEASURES SHALL BE MAINTAINED AT A SUITABLE LEVEL/CONDITION THROUGHOUT CONSTRUCTION TO THE SATISFACTION OF THE SUPERINTENDENT.
7. ALL TEMPORARY ESC MEASURES SHALL BE MAINTAINED AND FULLY OPERATIONAL DURING THE CONSTRUCTION AND MAINTENANCE PERIOD, AND ARE TO BE REMOVED AFTER THE SATISFACTORY COMPLETION OF AN 'OFF MAINTENANCE' INSPECTION BY THE SUPERINTENDENT.
8. ALL ESC MEASURES ARE TO BE INSPECTED AT LEAST DAILY, PRIOR TO EXPECTED RAINFALL AND AFTER RAINFALL. ANY DAMAGE OR EXCESS EROSION/SEDIMENT IS TO BE REPAIRED/MANAGED AS REQUIRED TO MAINTAIN CONTROL DEVICES.
9. ALL ESC MEASURES MUST SUIT THE PREVAILING CLIMATE/WEATHER CONDITIONS AT THE TIME OF CONSTRUCTION.
10. THE CONTRACTOR IS TO ENSURE THE SUPPRESSION OF DUST AT ALL TIMES DURING THE CONSTRUCTION AND MAINTENANCE PERIOD OF THE DEVELOPMENT. ENVIRONMENTAL HARM AND NUISANCE FROM DUST IS TO BE PREVENTED. ACCEPTABLE METHODS INCLUDE:
    - 10.A. WATERING;
    - 10.B. PROMOTING VEGETATION IN WIND EROSION PRONE AREAS;
    - 10.C. CONSTRUCTING WIND BREAKS;
    - 10.D. MULCHING.
11. THE CONTRACTORS VEHICLES & PLANT SHALL NOT OPERATE OUTSIDE THE LIMITS OF THE IMMEDIATE CONSTRUCTION AREA AND ARE RESTRICTED FROM CROSSING OR DISTURBING AREAS NOT SUBJECT TO CONSTRUCTION.
12. ANY WATER TRAPPED WITHIN THE TEMPORARY SEDIMENT BASIN IS TO BE REGULARLY TESTED DURING THE COURSE OF CONSTRUCTION. REFER WATER QUALITY MONITORING TABLE FOR DETAILS.
13. ALL DISTURBED GROUND IS TO BE GRASS SEEDED TO PREVENT EROSION IF THE DISTURBED GROUND IS TO BE LEFT "OPEN" FOR A PERIOD OF GREATER THEN ONE (1) MONTH.
14. REFER DRAWING AS TEL22048.CIV.CC - 100 TO 101 FOR EROSION AND SEDIMENT CONTROL DETAILS.

NOTE:

VPA IS FOR ROAD CONSTRUCTION ONLY.
ALL STORMWATER AND DRAINAGE WORKS ARE SHOWN FOR ILLUSTRATION AND INFORMATION ONLY AND DO NOT FORM PART OF THIS VPA.

EARTHWORKS NOTES

1. EARTHWORKS NOTES ARE TO BE READ IN CONJUNCTION WITH THE GENERAL AND COORDINATION NOTES.
2. EARTHWORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH PROCEDURES SET DOWN IN AS3798 'GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS'.
3. BULK EARTHWORKS INCLUDING CLEARING, FILLING AND TESTING, ARE TO BE CARRIED OUT IN ACCORDANCE WITH THE CURRENT COUNCIL STANDARDS, DRAWINGS AND SPECIFICATIONS. COUNCIL STANDARDS SUPERSEDE ANY NOTES OR SPECIFICATIONS WRITTEN ON THE DESIGN DRAWINGS.
4. BULK EARTHWORKS LEVELS SHALL BE DETERMINED RELATIVE TO THE FINISHED SURFACE LEVELS. REFER ARCHITECTURAL DRAWINGS FOR SLAB LEVELS, TO THE STRUCTURAL ENGINEERS DRAWINGS FOR BUILDING AND PATH SLAB THICKNESS AND TO THE CIVIL ENGINEERS DRAWINGS FOR EXTERNAL FINISHED SURFACE LEVELS AND EXTERNAL PAVEMENT THICKNESSES.
5. TOPSOIL SHALL BE STOCKPILED AS DIRECTED BY THE SUPERINTENDENT ON SITE.
6. PRIOR TO PLACEMENT OF ANY FILLING ALL TOPSOIL AND ORGANIC MATERIAL IS TO BE REMOVED AND THE SUBGRADE SHALL BE UNIFORMLY COMPACTED TO THE MINIMUM DRY DENSITY RATIOS SHOWN IN NOTE 10. ANY SOFT SPOTS REVEALED BY COMPACTION SHALL BE REMOVED AS DIRECTED BY THE SUPERINTENDENT AND BACKFILLED WITH COMPACTED SELECT FILL.
7. MOISTURE CONTENT OF COMPACTED FILL SHOULD BE MAINTAINED WITHIN 2% OF OPTIMUM MOISTURE CONTENT.
8. FILL SHALL BE COMPACTED IN MAXIMUM 200mm THICK LAYERS (LOOSE THICKNESS) TO THE FOLLOWING MINIMUM DRY DENSITY RATIOS (STANDARD COMPACTION A.S.1289.5-1).
   - 8.A. UPPER 0.3m OF PAVEMENT SUBGRADE = 100%;
   - 8.B. UNDER BUILDINGS = 98%;
   - 8.C. GENERAL FILL = 95%.
9. ALL FILL MATERIAL PLACED ON THE SITE SHALL COMPRISE ONLY NATURAL EARTH AND ROCK, AND IS TO BE FREE OF CONTAMINANTS (AS DEFINED BY SECTION 11 OF THE ENVIRONMENTAL PROTECTION ACT 1994), NOXIOUS, HAZARDOUS, DELETERIOUS AND ORGANIC MATERIALS. NO DEMOLITION MATERIAL IS TO BE USED. SUITABLE FILL MATERIAL IS DEEMED TO COMPLY WITH THE REQUIREMENTS OF CLAUSE 4.3 OF AS3798, 'GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS'.
10. IMPORTED FILL SHALL COMPLY WITH THE FOLLOWING:
    - 10.A. SOAKED CBR = MINIMUM OF 15%;
    - 10.B. LIQUID LIMIT = 30% MAX;
    - 10.C. PLASTICITY INDEX = 15% MAX;
    - 10.D. MAXIMUM AGGREGATE SIZE = 75mm;
    - 10.E. PASSING 0.075mm SIEVE = 30% MAX;
    - 10.F. SHRINK/SWELL INDEX = 1.0% MAX.
11. THE CONTRACTOR IS TO ENGAGE, AT THEIR EXPENSE, AN APPROVED NATA REGISTERED LABORATORY TO CARRY OUT SITE CONTROL TO 'LEVEL 1' STANDARD AS SET OUT IN APPENDIX B OF AS3798-2007 'GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS' AND PROVIDE A 'LEVEL 1' REPORT ON COMPLETION OF EARTHWORKS.

DRAINAGE NOTES

1. DRAINAGE NOTES ARE TO BE READ IN CONJUNTION WITH THE GENERAL AND COORDINATION NOTES.
2. CONTRACTOR IS TO CHECK THAT THE PROPOSED PIPE WORKS DO NOT CLASH WITH EXISTING SERVICES PRIOR TO ANY TRENCH EXCAVATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY CLASHES ARE FOUND FOR ADVICE ON ANY DESIGN REQUIREMENTS.
3. STRUCTURES HAVE BEEN DESIGNED FOR OPERATIONAL LOADS ONLY. THE CONTRACTOR IS RESPONSIBLE FOR THE ASSESSMENT OF CONSTRUCTION LOADS AND PROVISION OF ANY TEMPORARY BRACING, PROPPING, ETC. REQUIRED DURING CONSTRUCTION. STRUCTURES SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVERSTRESSED.
4. ALL TRENCH EXCAVATIONS AND CONSTRUCTION IS TO BE IN ACCORDANCE WITH THE WORKPLACE HEALTH AND SAFETY 1989 AS AMENDED AND THE MINE REGULATIONS ACT.
5. ALL TRENCHES IN TRAFFICABLE AND NON TRAFFICABLE ZONES SHALL BE BACKFILLED TO DENSITY RATIOS, FREQUENCIES AND LAYER INTERVALS IN ACCORANCE WITH THE CURRENT COUNCIL STANDARDS. ALL TEST RESULTS SHALL FORWARDED TO THE SUPERINTENDENT AS THEY BECOME AVAILABLE.
6. ALL PRECAST CONCRETE PIPES ARE TO BE MANUFACTURED IN ACCORDANCE WITH AS 4058. STORMWATER PIPES SHALL BE TO FOLLOWING CLASSES U.N.O.
   - 6.A. REINFORCED CONCRETE PIPES (RCP) = CLASS 2;
   - 6.B. FIBRE REINFORCED PIPES (FRC) = CLASS 2;
   - 6.C. uPVC = CLASS 'SEH'.
7. ALL RCP PIPES SHALL HAVE THE FOLLOWING JOINTS U.N.O.
   - 7.A. RCP <=600 DIA = RUBBER RING JOINTED (RRJ).
   - 7.B. RCP >600 DIA = FLUSH JOINTED (FJ);
8. ROOFWATER PIPES SHALL BE uPVC PIPES CLASS 'SH' U.N.O.
9. REFER TO STORMWATER LONGITUDINAL SECTIONS FOR ALL STRUCTURE TYPES, SIZES, LEVELS AND GRATE TYPES. GRATES SHALL BE TRAFFICABLE CLASS 'D' U.N.O.
10. MANHOLE AND FIELD INLET ACCESS SHALL BE INSTALLED AS DESCRIBED BELOW IN ACCORDANCE WITH AS1657:
    - 10.A. GULLY/FIELD INLETS >1.2m DEPTH: STEP IRONS;
    - 10.B. MANHOLES 0.850m-3.0m DEPTH: STEP IRONS;
    - 10.C. MANHOLES >3.0m DEPTH: FIXED ACCESS LADDER.
11. TEST CERTIFICATES AND MATERIAL CERTIFICATION DOCUMENTATION IS REQUIRED FOR ALL PIPES, FITTINGS, BOX CULVERTS AND OTHER PRECAST CONCRETE PRODUCTS.
12. ALL STORMWATER SETOUT IS TO CENTRE OF STRUCTURE U.N.O.

✓

sharon pope

Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

0 1cm at full size 10cm 20cm

Certification By Dr. Michel Chaaya B.E., M.E. (Res), Ph.D., F.I.E. Aust., CPEng., Civil & Structural Engineer.

Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale:

TELFORD CIVIL
CONSULTING CIVIL & STORMWATER ENGINEERS
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PO BOX 3579 Parramatta 2124
Email : info@telfordcivil.com.au
Phone : 02 7809 4931
Trading As : Telford Consulting Pty Ltd

Project: PROPOSED RESIDENTIAL SUBDIVISION ALMOND STREET, DENMAN CIVIL ENGINEERING PLANS VOLUNTARY PLANNING AGREEMENT

Drawing Title: GENERAL NOTES

Scale	Project No.	Dwg. No.	Issue
N.T.S. A1	22048	001	A

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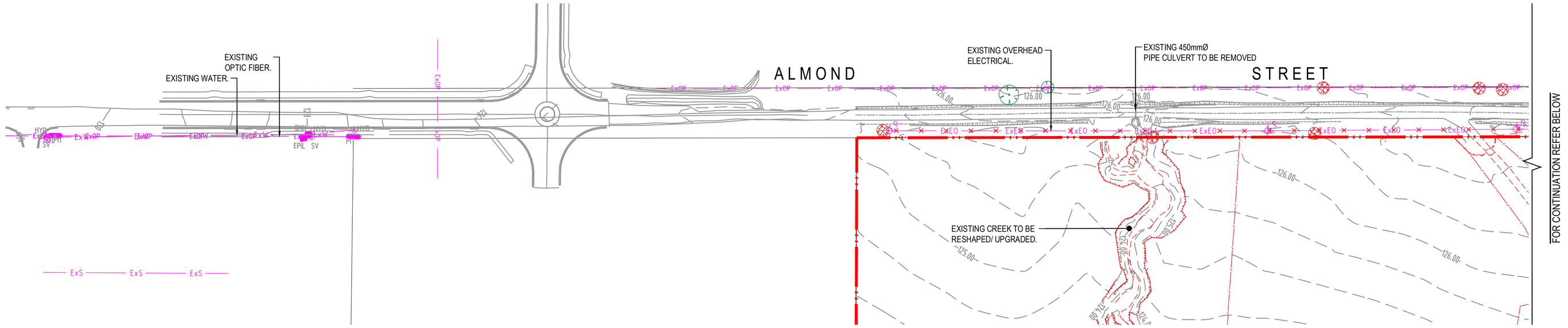

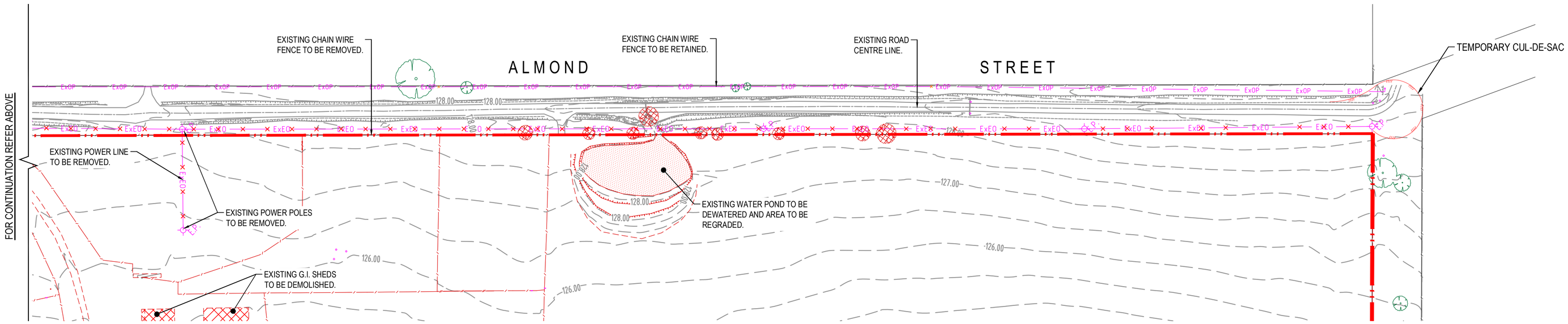

LEGEND

- EXISTING LOT BOUNDARY
- 30.00 — EXISTING CONTOUR
- Ex. K&G — EXISTING KERB & GUTTER
- ExW — EXISTING WATER
- ExS — EXISTING SEWER
- ExEX — EXISTING OVERHEAD ELECTRICAL LINE TO BE REMOVED
- ExEO — EXISTING OVERHEAD ELECTRICAL
- ExOP — EXISTING OPTIC FIBER
- EXISTING CHAIN WIRE FENCE TO BE REMOVED
- EXISTING CHAIN WIRE FENCE TO BE RETAINED
- EXISTING STRUCTURE TO BE DEMOLISHED
- EXISTING TREE TO BE REMOVED
- EXISTING TREE TO BE RETAINED

DEMOLITION AND REMOVAL

ALL ITEMS THAT ARE TO BE REMOVED / DEMOLISHED ARE TO BE REMOVED FROM SITE AND DISPOSED OF IN ACCORDANCE WITH ALL RELEVANT COUNCIL DETAILS AND SPECIFICATIONS.

WARNING

BEWARE OF UNDERGROUND SERVICES

THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

sharon pope

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Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

0 1cm at full size 10cm 20cm

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Civil & Structural Engineer

Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale: 0 20 40 60 m — SCALE 1:1000 @ A1

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Trading As : Telford Consulting Pty Ltd

Project: PROPOSED RESIDENTIAL SUBDIVISION ALMOND STREET, DENMAN CIVIL ENGINEERING PLANS VOLUNTARY PLANNING AGREEMENT

Drawing Title: EXISTING SERVICES & DEMOLITION PLAN

Scale A1	Project No.	Dwg. No.	Issue
1:1000	22048	002	A

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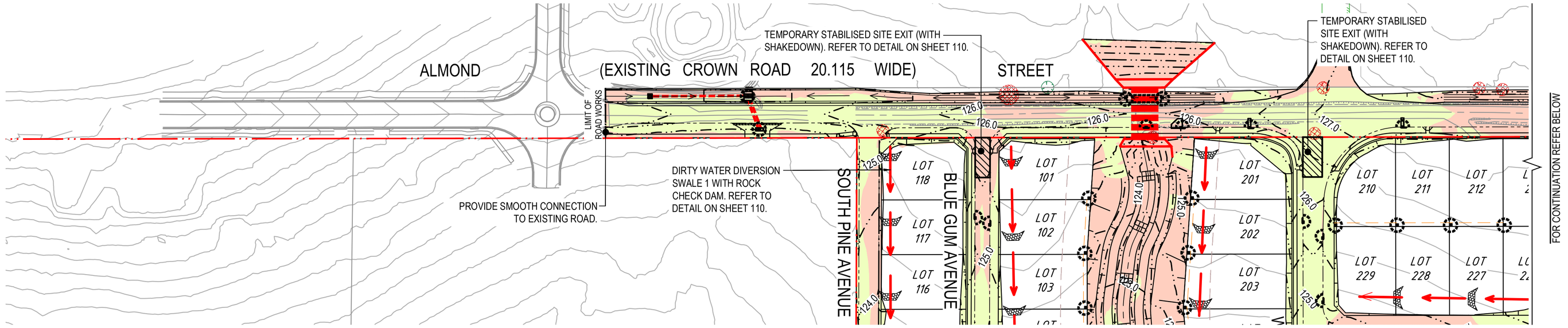

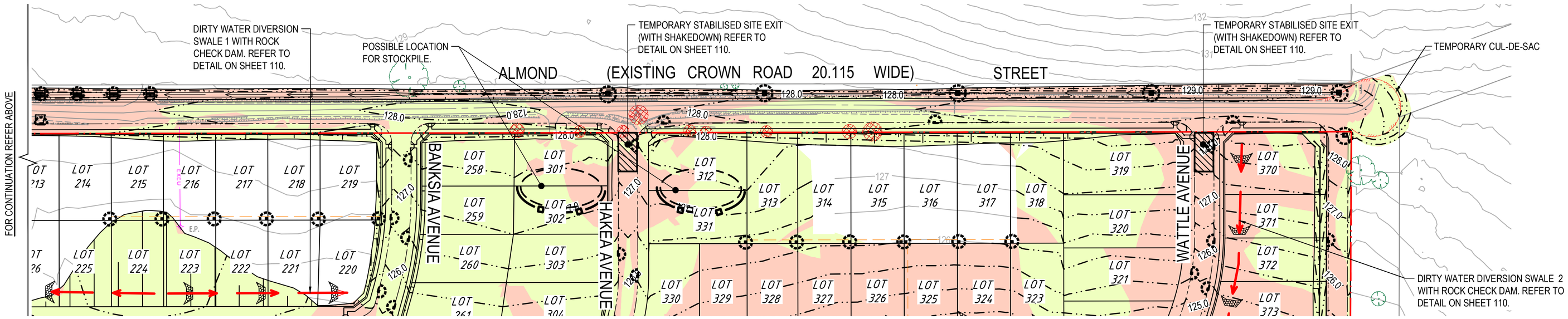

LEGEND

- PROPOSED SUBDIVISION LOT BOUNDARY
- PROPOSED INVERT OF KERB
- PROPOSED FINISHED CONTOURS (125.0)
- PROPOSED DESIGN CONTOURS (125.0)
- PROPOSED EDGE OF BITUMEN
- TEMPORARY SEDIMENT AND DIVERSION FENCE REFER TO DETAIL ON SHEET 110
- PROPOSED ACOUSTIC FENCE
- DIRTY WATER DIVERSION SWALE
- CLEAN WATER DIVERSION SWALE
- PROPOSED EASEMENT TO DRAIN WATER
- PROPOSED BUFFER APZ
- PROPOSED KERB INLET PIT
- PROPOSED SAG PIT
- INTERALLOTMENT DRAINAGE PIT
- PROPOSED HEADWALL OUTLET
- ROCK CHECK DAM
- TEMPORARY FIELD INLET TRAP REFER TO DETAIL ON SHEET 110
- TEMPORARY INLET PROTECT FOR GULLY SAG REFER TO DETAIIL ON SHEET 110
- TEMPORARY STABILISED SITE EXIT (WITH SHAKEDOWN) REFER TO DETAIL ON SHEET 110
- PROPOSED STOCK PILE
- EXISTING LOT BOUNDARY
- DENOTES FILL AREA
- DENOTES CUT AREA
- PROPOSED HAY-BALES

NOTE :
ALL DISTURBED BATTERS ALONG ALMOND ST AND ACOUSTIC MOUNDS TO BE STABILISED WITH FULLL JUTE MESH AND GRASS SEEDING IN ADDITION TO ANY LANDSCAPING REQUIREMENTS.

NOTE :
CONTRACTOR TO DESIGN FINAL SEDIMENT AND EROSION CONTROL PLAN IN CONSULTATION WITH THE ENGINEER CONSULTANT TO DETERMINE FINAL REQUIREMENTS INCLUDING PIPE SIZING (DEPENDANT ON CONSTRUCTION METHODOLOGY).

sharon pope

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Issue	Description	Date	Design	Checked
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1cm at full size

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Project: PROPOSED RESIDENTIAL SUBDIVISION ALMOND STREET, DENMAN CIVIL ENGINEERING PLANS VOLUNTARY PLANNING AGREEMENT

Drawing Title: EROSION AND SEDIMENT CONTROL PLAN

Scale A1	Project No.	Dwg. No.	Issue
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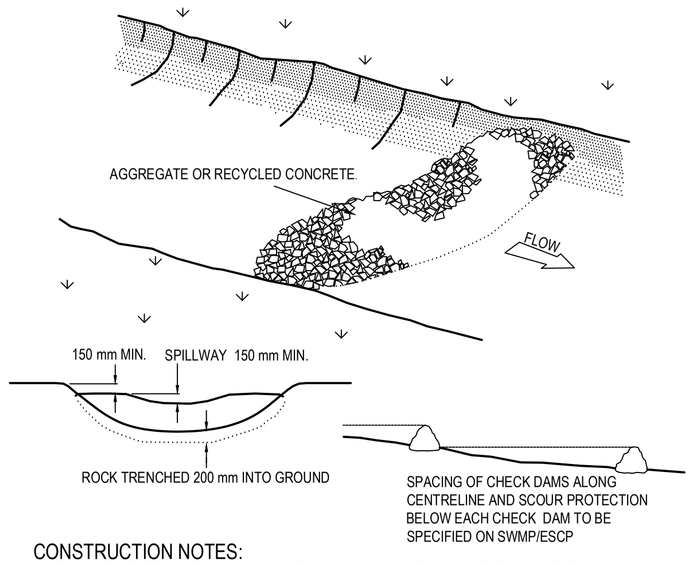
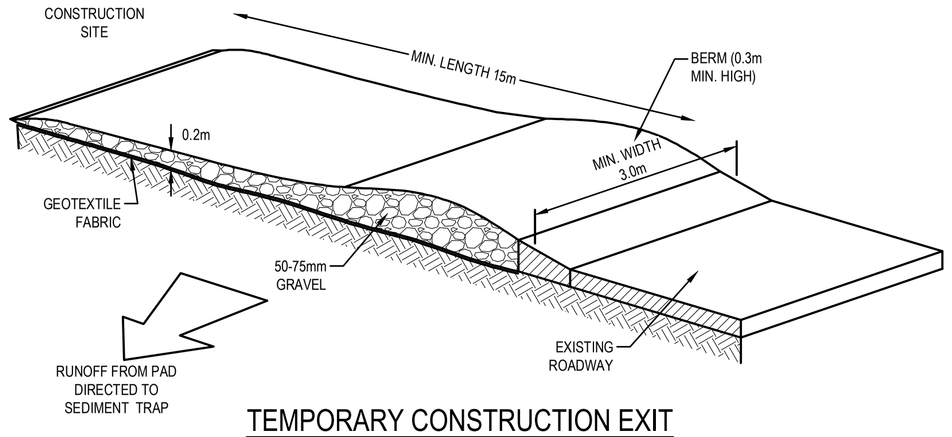


CONSTRUCTION NOTES:

1. CHECK DAMS CAN BE BUILT WITH VARIOUS MATERIALS, INCLUDING ROCKS, LOGS, SANDBAGS AND STRAW BALES. THE MAINTENANCE PROGRAM SHOULD ENSURE THEIR INTEGRITY IS RETAINED, ESPECIALLY WHERE CONSTRUCTED WITH STRAW BALES. IN THE CASE OF BALES, THIS MIGHT REQUIRE THEIR REPLACEMENT EACH TWO TO FOUR MONTHS.
2. TRENCH THE CHECK DAM 200 mm INTO THE GROUND ACROSS ITS WHOLE WIDTH. WHERE ROCK IS USED, FILL THE TRENCHES TO AT LEAST 100 mm ABOVE THE GROUND SURFACE TO REDUCE THE RISK OF UNDERCUTTING.
3. NORMALLY, THEIR MAXIMUM HEIGHT SHOULD NOT EXCEED 600 mm ABOVE THE GULLY FLOOR. THE CENTRE SHOULD ACT AS A SPILLWAY, BEING AT LEAST 150 mm LOWER THAN THE OUTER EDGES.
4. SPACE THE DAMS SO THE TOE OF THE UPSTREAM DAM IS LEVEL WITH THE SPILLWAY OF THE NEXT DOWNSTREAM DAM.

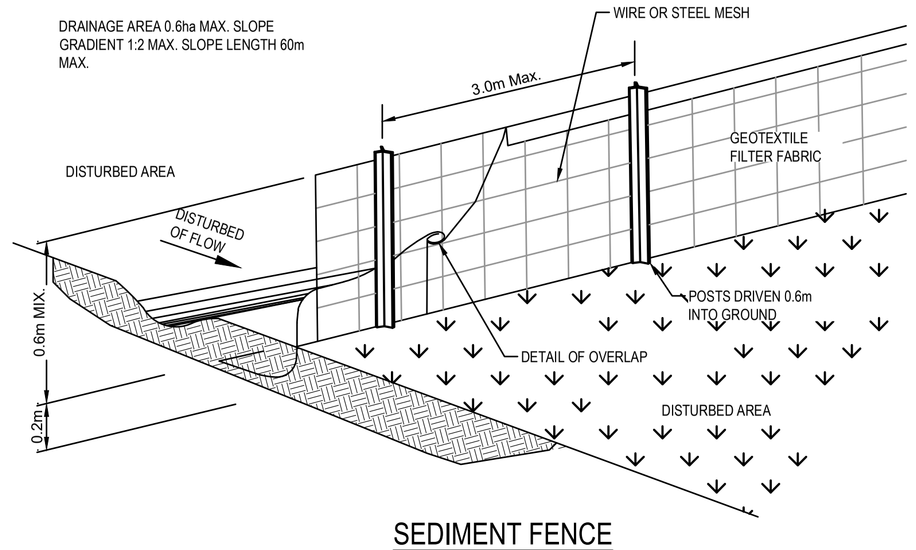
ROCK CHECK DAM

SCALE N.T.S



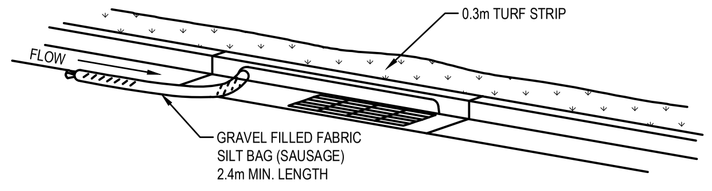
TEMPORARY CONSTRUCTION EXIT

SCALE N.T.S



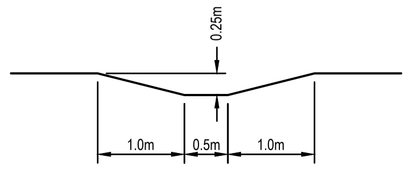
SEDIMENT FENCE

SCALE N.T.S



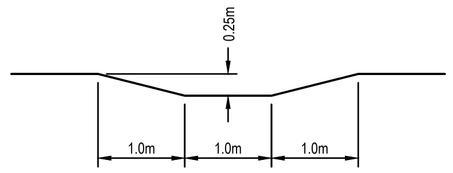
KERB INLET SEDIMENT TRAP

SCALE N.T.S



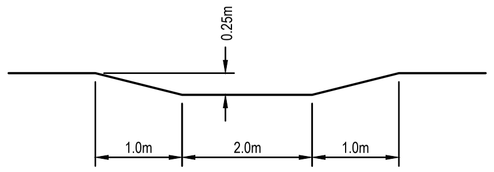
DIRTY WATER SWALE 1 TYPICAL SECTION

SCALE N.T.S



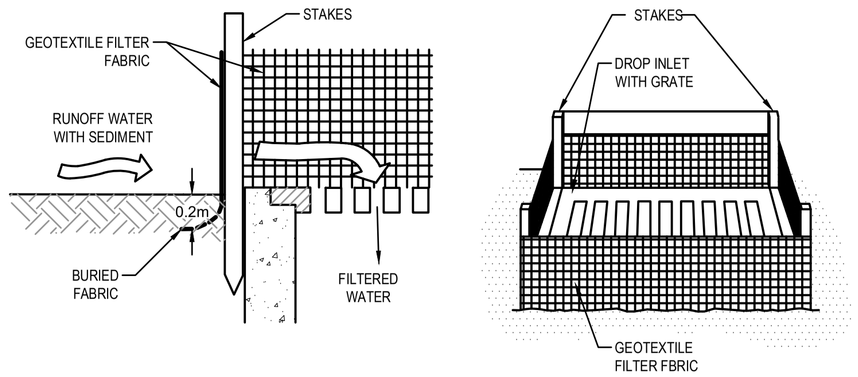
DIRTY WATER SWALE 2 TYPICAL SECTION

SCALE N.T.S



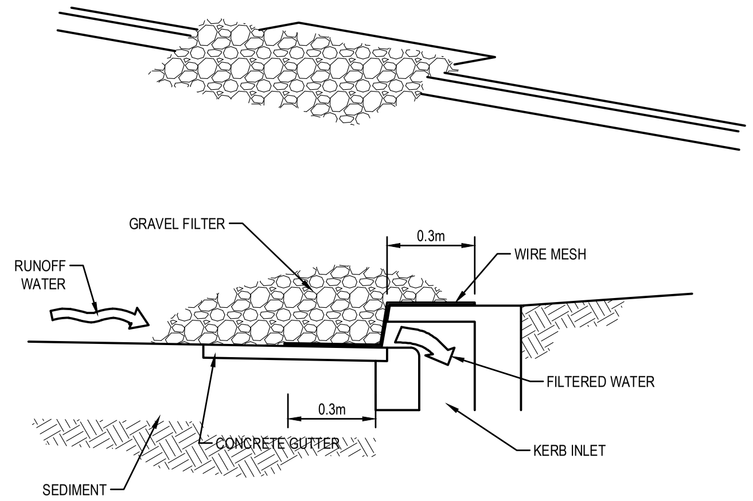
DIRTY WATER SWALE 3 TYPICAL SECTION

SCALE N.T.S



GEOTEXTILE FILTER FABRIC DROP INLET SEDIMENT TRAP

SCALE N.T.S



GRAVEL KERB INLET SEDIMENT TRAP

SCALE N.T.S

SEDIMENT BASIN SIZING CALCULATIONS - BASIN 1

$Vs = 10*R_{(Y\%,5\text{-day})}*C_V*A$

WHERE,

Vs = VOLUME OF SETTLING ZONE (m^3)
$R_{(Y\%,5\text{-day})}$ = Y%, 5-DAY RAINFALL DEPTH (mm)
C_V = VOLUMETRIC RUNOFF COEFFICIENT
A = EFFECTIVE CATCHMENT SURFACR AREA CONNECTED TO THE BASIN (ha)

$R_{(Y\%,5\text{-day})}$ = 23.3 mm
C_V = 0.5
A = 22.477 ha

SETTLING ZONE VOLUME = 2618.57 m^3

SEDIMENT STORAGE VOLUME = 50% SETTLING ZONE VOLUME = 1309 m^3

TOTAL SEDIMENT BASIN VOLUME = 3927.86 m^3

SEDIMENT BASIN SIZING CALCULATIONS - BASIN 2

$Vs = 10*R_{(Y\%,5\text{-day})}*C_V*A$

WHERE,

Vs = VOLUME OF SETTLING ZONE (m^3)
$R_{(Y\%,5\text{-day})}$ = Y%, 5-DAY RAINFALL DEPTH (mm)
C_V = VOLUMETRIC RUNOFF COEFFICIENT
A = EFFECTIVE CATCHMENT SURFACR AREA CONNECTED TO THE BASIN (ha)

$R_{(Y\%,5\text{-day})}$ = 23.3 mm
C_V = 0.5
A = 3.4639 ha

SETTLING ZONE VOLUME = 403.544 m^3

SEDIMENT STORAGE VOLUME = 50% SETTLING ZONE VOLUME = 202 m^3

TOTAL SEDIMENT BASIN VOLUME = 605.317 m^3

SEDIMENT BASIN SIZING CALCULATIONS - BASIN 3

$Vs = 10*R_{(Y\%,5\text{-day})}*C_V*A$

WHERE,

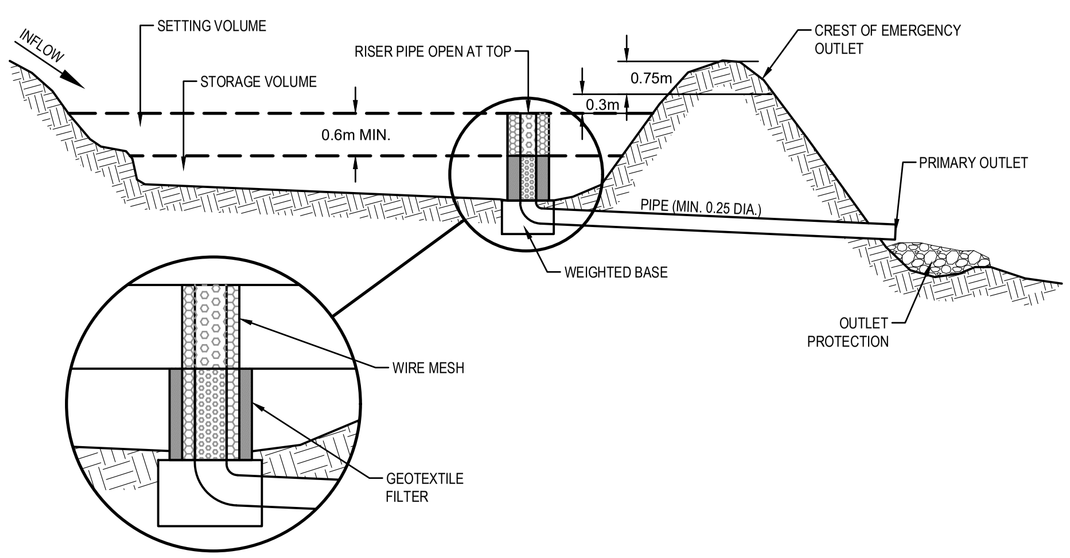
Vs = VOLUME OF SETTLING ZONE (m^3)
$R_{(Y\%,5\text{-day})}$ = Y%, 5-DAY RAINFALL DEPTH (mm)
C_V = VOLUMETRIC RUNOFF COEFFICIENT
A = EFFECTIVE CATCHMENT SURFACR AREA CONNECTED TO THE BASIN (ha)

$R_{(Y\%,5\text{-day})}$ = 23.3 mm
C_V = 0.5
A = 1.6989 ha

SETTLING ZONE VOLUME = 197.922 m^3

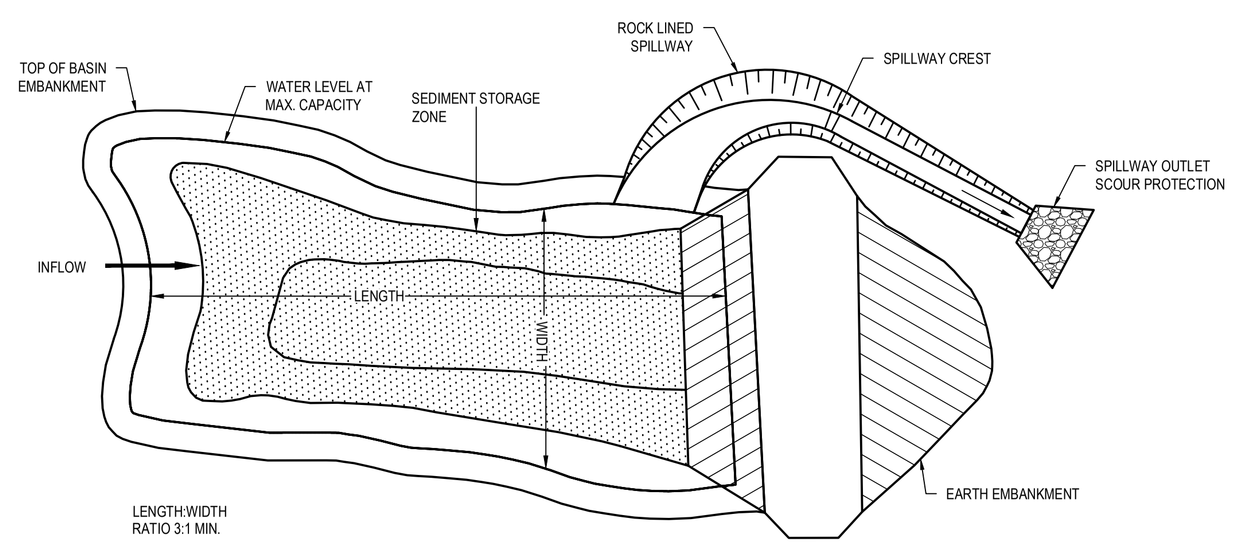
SEDIMENT STORAGE VOLUME = 50% SETTLING ZONE VOLUME = 99 m^3

TOTAL SEDIMENT BASIN VOLUME = 296.883 m^3



CROSS SECTION OF TYPICAL SEDIMENT BASIN

SCALE N.T.S



PLAN VIEW OF TYPICAL SEDIMENT BASIN

SCALE N.T.S

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A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

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Project: PROPOSED RESIDENTIAL SUBDIVISION ALMOND STREET, DENMAN CIVIL ENGINEERING PLANS VOLUNTARY PLANNING AGREEMENT

Drawing Title: EROSION AND SEDIMENT CONTROL DETAILS

Scale A1	Project No.	Dwg. No.	Issue
N.T.S.	22048	110	A

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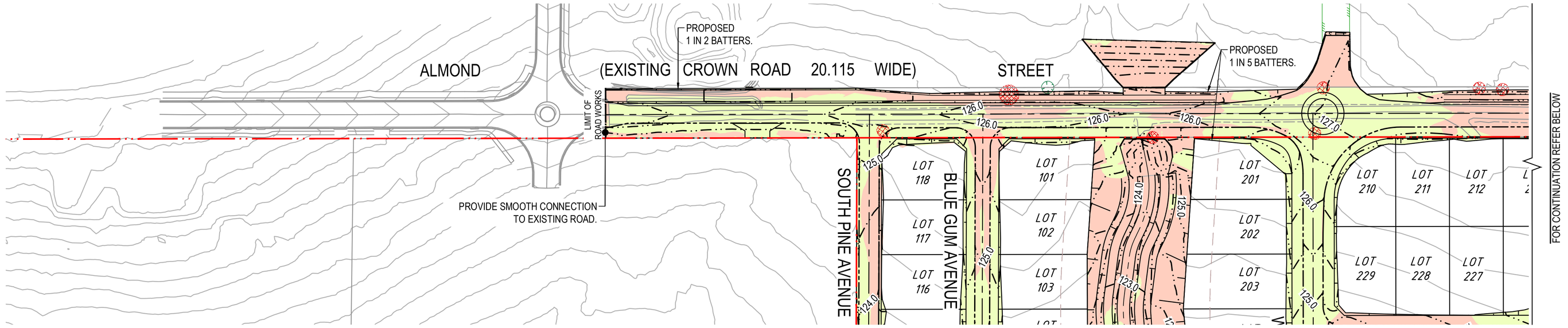
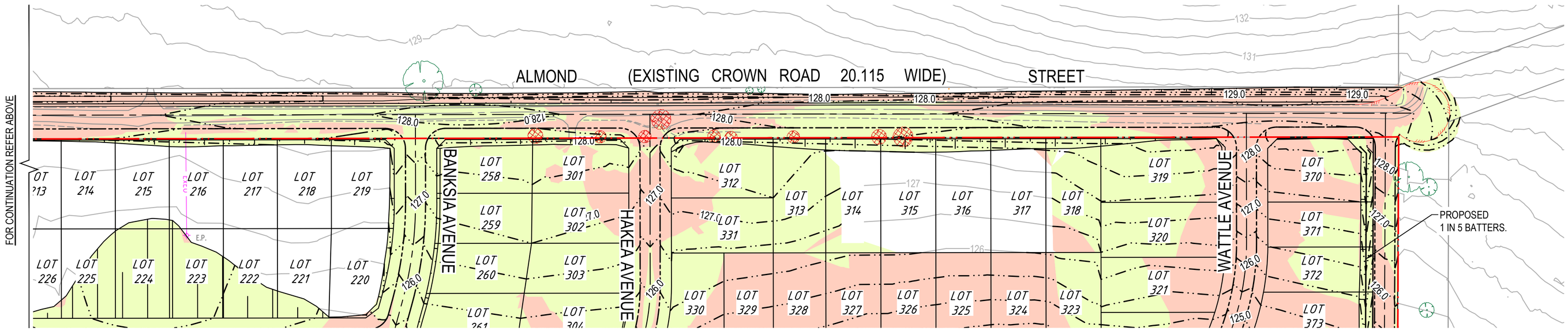




LEGEND

- EXISTING LOT BOUNDARY
- PROPOSED INVERT OF KERB
- 125.0 PROPOSED FINISHED CONTOURS
- 125.0 PROPOSED DESIGN CONTOURS
- PROPOSED ACOUSTIC FENCE
- DENOTES FILL AREA
- DENOTES CUT AREA

BULK EARTHWORKS VOLUMES

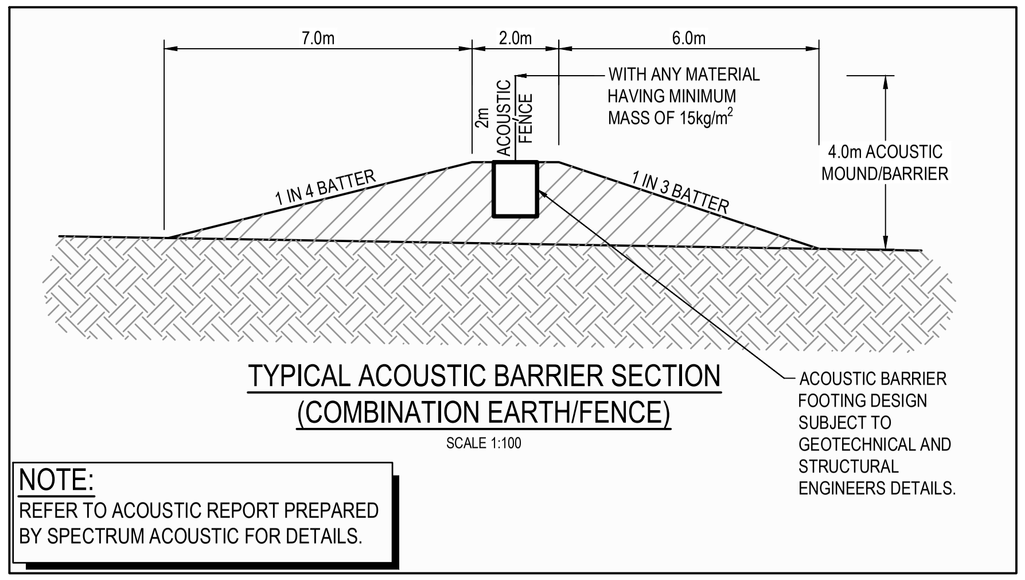
EXCLUDING TRIMMING WORKS, BOXING, AND TRENCHES

TOTAL CUT = 31,275m^3

TOTAL FILL = 49,406m^3

TOTAL CUT (FROM TRIMMING WORKS, BOXING, AND TRENCHES) = 17,495m^3

BALANCE = 18,131m^3



TYPICAL ACOUSTIC BARRIER SECTION
(COMBINATION EARTH/FENCE)
SCALE 1:100

NOTE:
REFER TO ACOUSTIC REPORT PREPARED BY SPECTRUM ACOUSTIC FOR DETAILS.

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sharon pope

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A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

1cm at full size

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Civil & Structural Engineer

Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale: 0 2 4 6 m — SCALE 1:100 @ A1; 0 20 40 60 m — SCALE 1:1000 @ A1

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ALMOND STREET, DENMAN
CIVIL ENGINEERING PLANS
VOLUNTARY PLANNING AGREEMENT

Drawing Title: BULK EARTHWORKS PLAN

Scale A1	Project No.	Dwg. No.	Issue
1:1000	22048	200	A

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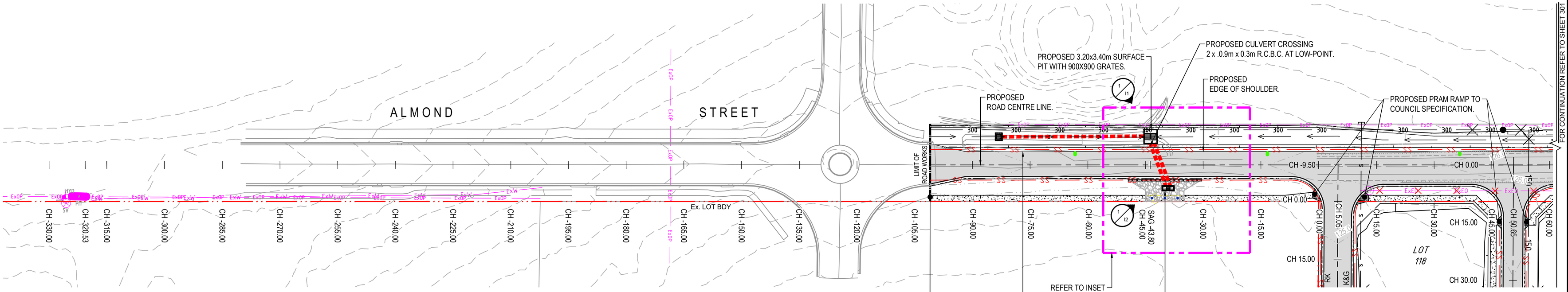
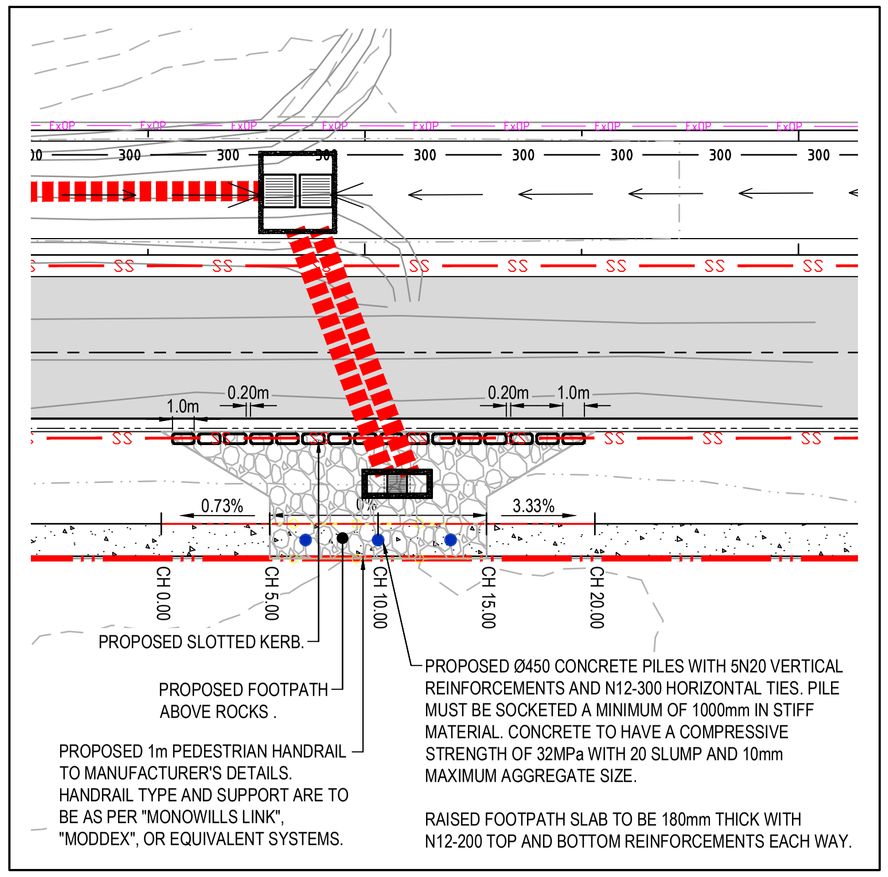


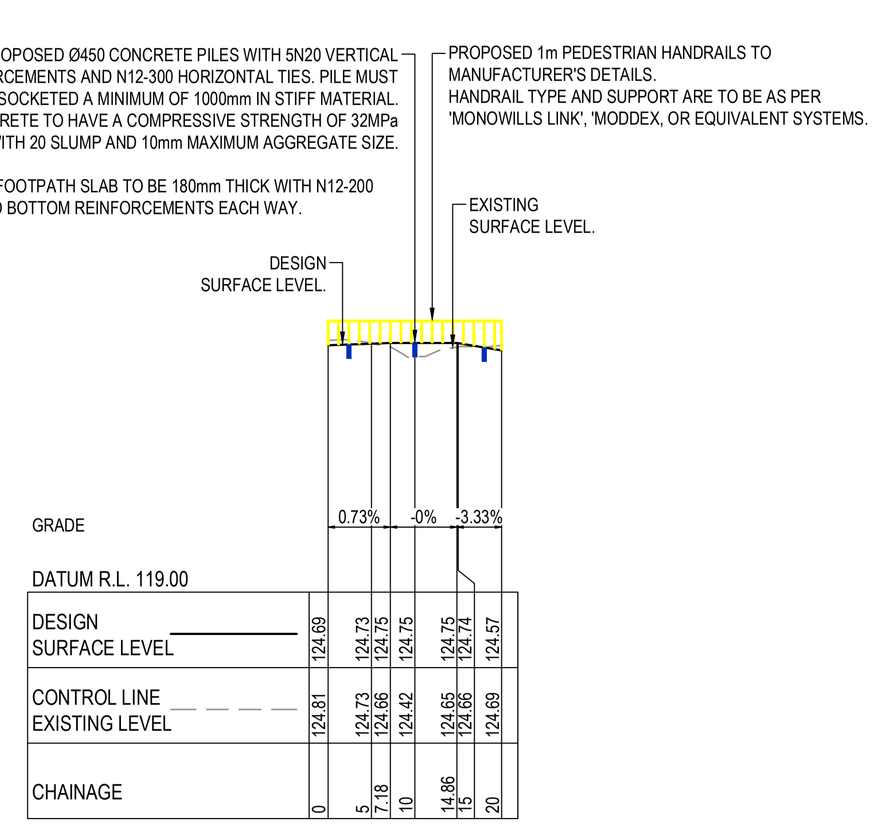
LEGEND

- PROPOSED ROAD CENTERLINE
- K&G — PROPOSED KERB & GUTTER
- RK — PROPOSED ROLLER KERB
- 125.0 — EXISTING CONTOURS
- 125.0 — PROPOSED FINISHED CONTOURS
- PROPOSED EDGE OF BITUMEN
- PROPOSED SWALE
- SW — PROPOSED STORMWATER PIPE
- PROPOSED CULVERT CROSSING
- PROPOSED WHITE REFLECTOR POLES
- PROPOSED 1m HANDRAILS TO MANUFACTURER'S DETAILS
- SS — PROPOSED SUBSOIL DRAINAGE
- PROPOSED KERB INLET PIT
- PROPOSED ROAD PAVEMENT
- PROPOSED DRIVEWAY
- EXISTING LOT BOUNDARY
- ExW — EXISTING WATER MAIN
- ExS — EXISTING SEWER MAIN
- ExOP — EXISTING OPTIC FIBER
- ExO — EXISTING OVERHEAD ELECTRICAL TO BE REMOVED
- S — PROPOSED DN 150 RRJ uPVC SN 8
- PROPOSED SEWER MANHOLE
- PROPOSED PROPERTY CONNECTION POINT
- PROPOSED STUB FOR FUTURE CONNECTION
- 300 — PROPOSED WATER TRUNK (DN300 PVCMS2 PN12 TYPE B)
- PROPOSED Ø450 CONCRETE PILES



INSET A PLAN

SCALE 1:200



FOOTPATH OVER SURCHARGE PIT CROSSING LONGITUDINAL SECTION

SCALE (H) 1:500
(V) 1:100

sharon pope

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Zero Damage - Zero Harm

NOTE:
ROCKERS TO BE INSTALLED AT ALL IN-SITU PITS ON BOTH THE INLET AND OUTLET SIDES. CONTRACTOR TO ENSURE PIPE ROCKERS ARE USED ON SITE DURING CONSTRUCTION.

Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

Certification By Dr. Michel Chaaya B.E., M.E. (Res), Ph.D., F.I.E. Aust., CPEng., Civil & Structural Engineer

Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale: SCALE 1:500 @ A1; SCALE 1:5000 @ A1

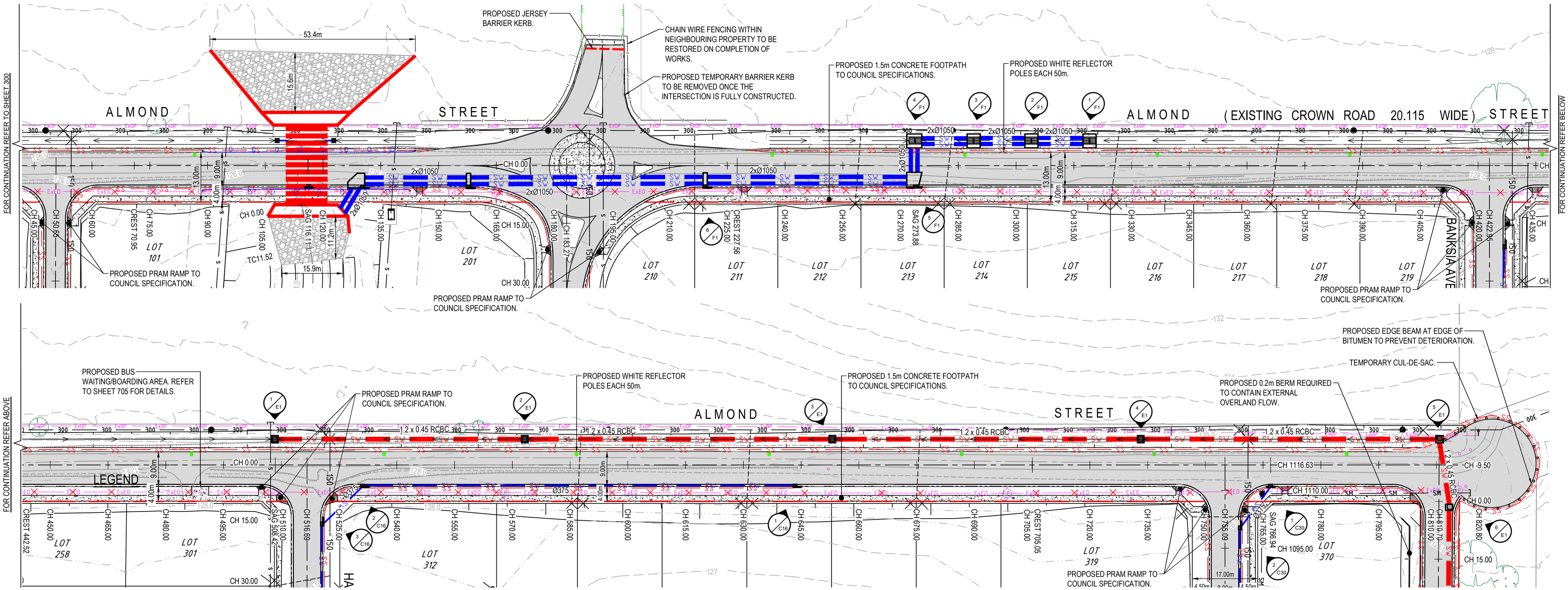
TELFORD CIVIL
CONSULTING CIVIL & STORMWATER ENGINEERS
Level 14, 32 Smith Street, Parramatta NSW 2150
PO BOX 3579 Parramatta 2124
Email : info@telfordcivil.com.au
Phone : 02 7809 4931
Trading As : Telford Consulting Pty Ltd

Project: PROPOSED RESIDENTIAL SUBDIVISION ALMOND STREET, DENMAN CIVIL ENGINEERING PLANS VOLUNTARY PLANNING AGREEMENT

Drawing Title: ENGINEERING PLAN AND DETAILS SHEET 1

Scale A1	Project No.	Dwg. No.	Issue
1:500	22048	300	A

Docusign Envelope ID: 46B645CE-3355-8491-8275-0785B8BE4346



LEGEND

	PROPOSED SUBDIVISION LOT BOUNDARY	SS	PROPOSED SUBSOIL DRAINAGE	EXO	EXISTING OVERHEAD ELECTRICAL TO BE REMOVED
K&G	PROPOSED KERB & GUTTER	SW	PROPOSED 1.2 x 0.45 RCBC	S	PROPOSED DN 150 RRJ uPVC SN 8
RK	PROPOSED ROLLER KERB		PROPOSED KERB INLET PIT	SM	PROPOSED DN 225 RRJ uPVC SN 8
	PROPOSED ROAD CENTERLINE		PROPOSED SAG PIT		PROPOSED SEWER MANHOLE
PR	PROPOSED PRAM RAMP		INTERALLOTMENT DRAINAGE PIT		PROPOSED PROPERTY CONNECTION POINT
	PROPOSED EDGE OF BITUMEN		PROPOSED CONCRETE FOOTPATH		PROPOSED STUB FOR FUTURE CONNECTION
125.0	PROPOSED FINISHED CONTOURS		PROPOSED ROAD PAVEMENT	SRM	PROPOSED SEWER RISING MAIN TO BE DETAILED BY AQUATEC
125.0	EXISTING CONTOURS	1/1	PROPOSED STRUCTURE NUMBER	300	PROPOSED WATER TRUNK (DN300 PVCMS2 PN12 TYPE B)
	PROPOSED SWALE		EXISTING LOT BOUNDARY		WATER SERVICE (POINT OF ENTRY)
	PROPOSED EASEMENT TO DRAIN WATER	ExEO	EXISTING OVERHEAD ELECTRICAL	DN25	WATER CONDUITS & SERVICES Ø100 uPVC PN9 SERIES SINGLE CONDUIT DEAD END
	PROPOSED WHITE REFLECTOR POLES	ExOP	EXISTING OPTIC FIBER	BK	PROPOSED TEMPORARY BARRIER KERB
SW	PROPOSED STORMWATER PIPE				

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NOTE:
ROCKERS TO BE INSTALLED AT ALL IN-SITU PITS ON BOTH THE INLET AND OUTLET SIDES. CONTRACTOR TO ENSURE PIPE ROCKERS ARE USED ON SITE DURING CONSTRUCTION.

Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

1cm at full size 10cm 20cm

Certification By Dr. Michel Chaaya
B.E., M.E. (Res), Ph.D., F.I.E. Aust., CPEng.,
Civil & Structural Engineer

Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale: 0 10 20 30 m — SCALE 1:500 @ A1; 0 100 200 300 m — SCALE 1:5000 @ A1

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Phone : 02 7809 4931
Trading As : Telford Consulting Pty Ltd

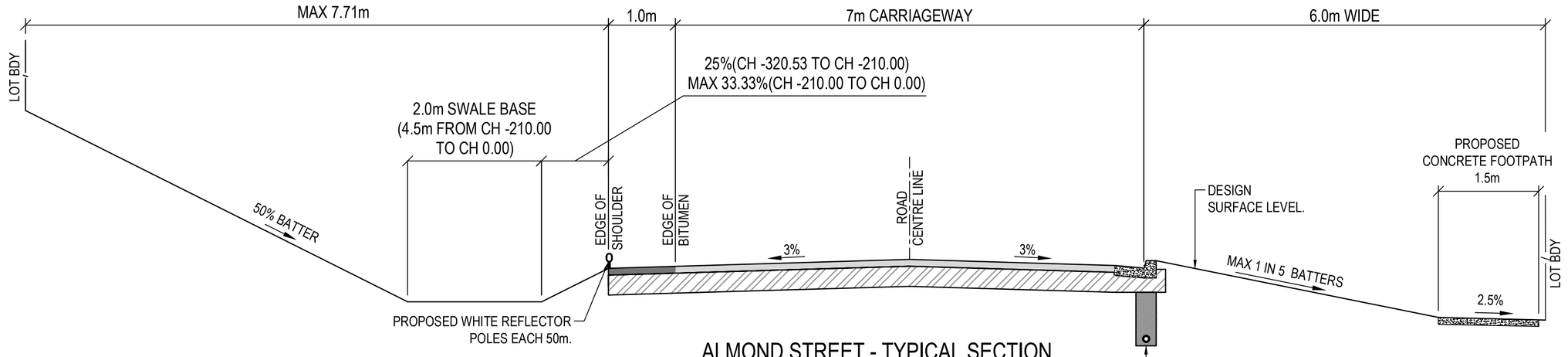
Project: PROPOSED RESIDENTIAL SUBDIVISION ALMOND STREET, DENMAN CIVIL ENGINEERING PLANS VOLUNTARY PLANNING AGREEMENT

Drawing Title: ENGINEERING PLAN AND DETAILS SHEET 2

Scale A1	Project No.	Dwg. No.	Issue
1:500	22048	301	A

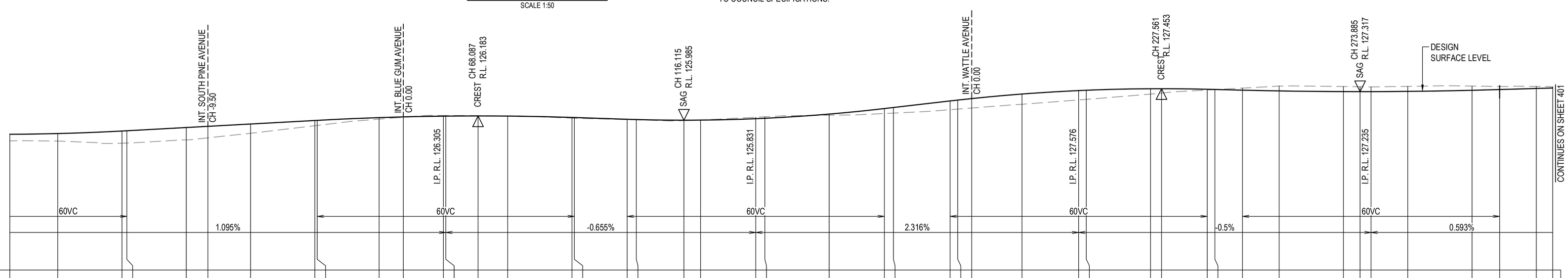
sharon pope

Docusign Envelope ID: 468845CE-3355-8491-8275-0706B4B8E4346



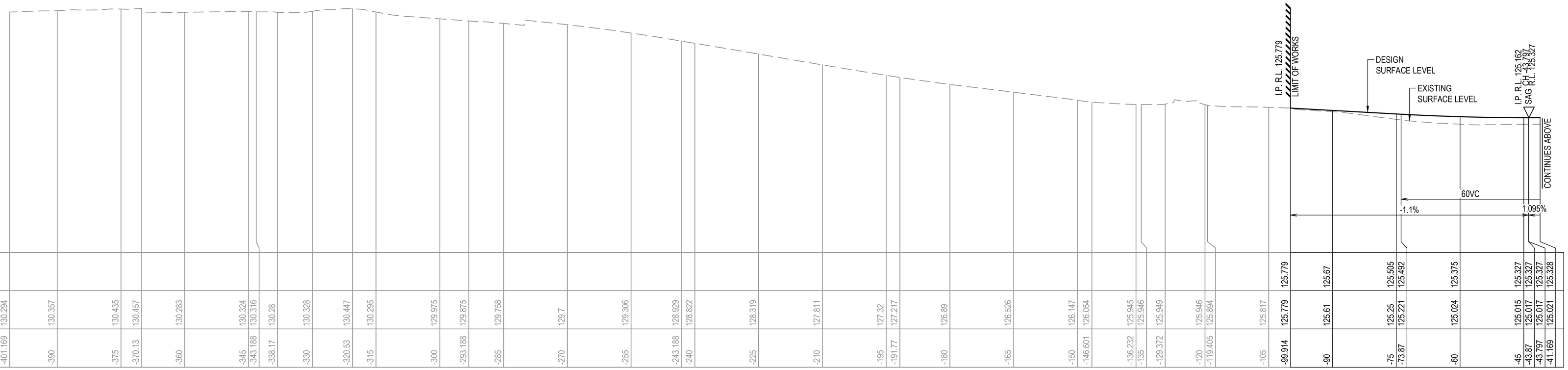
ALMOND STREET - TYPICAL SECTION
(CH -320.53 TO CH 0.00)
SCALE 1:50

ALMOND STEET - SETOUT TABLE					
PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING
IP 1	-101.000	282045.417	6415180.611	125.779	8°07'53.00"
IP 2	820.890	282175.658	6416092.157	128.930	8°07'53.00"



CHAINAGE	DESIGN SURFACE LEVEL	EXISTING SURFACE LEVEL
-41.169	125.328	125.021
-30	125.362	125.009
-15	125.479	124.912
-13.87	125.491	124.919
0	125.643	125.066
5.049	125.698	125.162
15	125.807	125.375
30	125.971	125.728
30.556	125.977	125.741
45	126.105	126.034
50.649	126.138	126.122
60	126.173	126.204
60.556	126.174	126.204
68.087	126.183	126.195
75	126.176	126.184
90	126.112	126.08
90.556	126.109	126.076
102.881	126.028	126.012
105	126.015	126.002
116.115	125.985	125.97
120	125.988	125.996
132.881	126.054	126.121
135	126.073	126.142
150	126.269	126.216
162.881	126.526	126.295
165	126.575	126.316
178.214	126.881	126.474
180	126.922	126.501
183.271	126.993	126.552
195	127.204	126.727
208.214	127.365	126.927
210	127.381	126.955
225	127.451	127.201
227.561	127.453	127.249
238.214	127.426	127.391
240	127.417	127.41
246.446	127.385	127.481
255	127.349	127.58
270	127.318	127.555
273.885	127.317	127.544
276.446	127.317	127.536
285	127.328	127.561
300	127.379	127.576
306.446	127.413	127.558
315	127.464	127.559
318.831	127.487	127.543

ALMOND STREET - LONGITUDINAL SECTION
SCALE (H) 1:500
(V) 1:100



CHAINAGE	DESIGN SURFACE LEVEL	EXISTING SURFACE LEVEL
-401.169	130.294	130.294
-390	130.357	130.357
-375	130.435	130.435
-370.13	130.457	130.457
-360	130.283	130.283
-345	130.324	130.324
-343.188	130.316	130.316
-338.17	130.28	130.28
-330	130.328	130.328
-320.53	130.447	130.447
-315	130.295	130.295
-300	129.975	129.975
-293.188	129.875	129.875
-285	129.758	129.758
-270	129.7	129.7
-255	129.306	129.306
-243.188	128.929	128.929
-240	128.822	128.822
-225	128.319	128.319
-210	127.811	127.811
-195	127.32	127.32
-191.77	127.217	127.217
-180	126.89	126.89
-165	126.526	126.526
-150	126.147	126.147
-146.601	126.054	126.054
-136.232	125.945	125.945
-135	125.946	125.946
-129.372	125.949	125.949
-120	125.946	125.946
-119.405	125.894	125.894
-105	125.817	125.817
-99.914	125.779	125.779
-90	125.67	125.61
-75	125.505	125.25
-73.87	125.492	125.221
-60	125.375	125.024
-45	125.327	125.015
-43.87	125.327	125.017
-43.797	125.327	125.017
-41.169	125.328	125.021

ALMOND STREET - LONGITUDINAL SECTION
SCALE (H) 1:500
(V) 1:100

sharon pope

Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

1cm at full size

Certification By Dr. Michel Chaaya
B.E., M.E. (Res), Ph.D., F.I.E. Aust., CPEng.,
Civil & Structural Engineer

Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale: SCALE 1:500 @ A1; SCALE 1:100 @ A1; SCALE 1:50 @ A1

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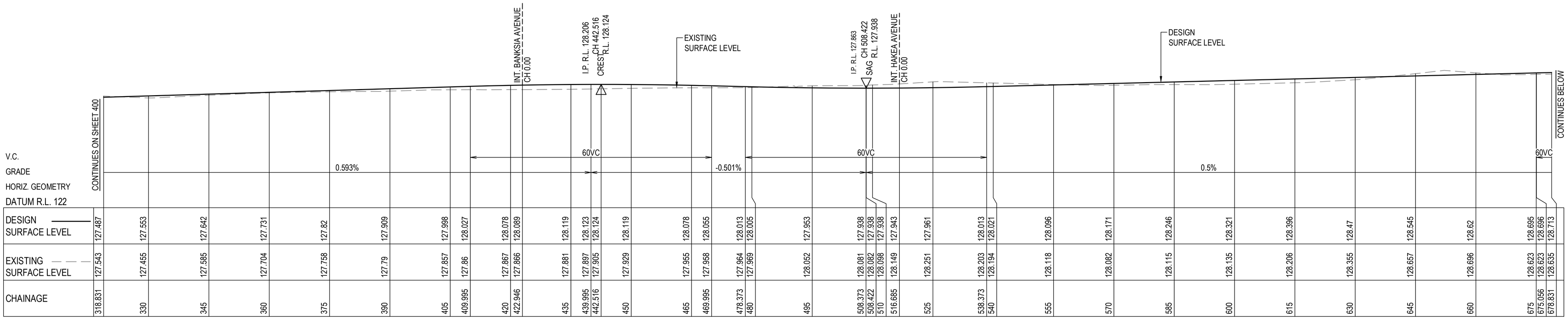
Phone : 02 7809 4931
Trading As : Telford Consulting Pty Ltd

Project: PROPOSED RESIDENTIAL SUBDIVISION
ALMOND STREET, DENMAN
CIVIL ENGINEERING PLANS
VOLUNTARY PLANNING AGREEMENT

Drawing Title: ALMOND STREET LONGITUDINAL AND TYPICAL CROSS SECTIONS SHEET 1

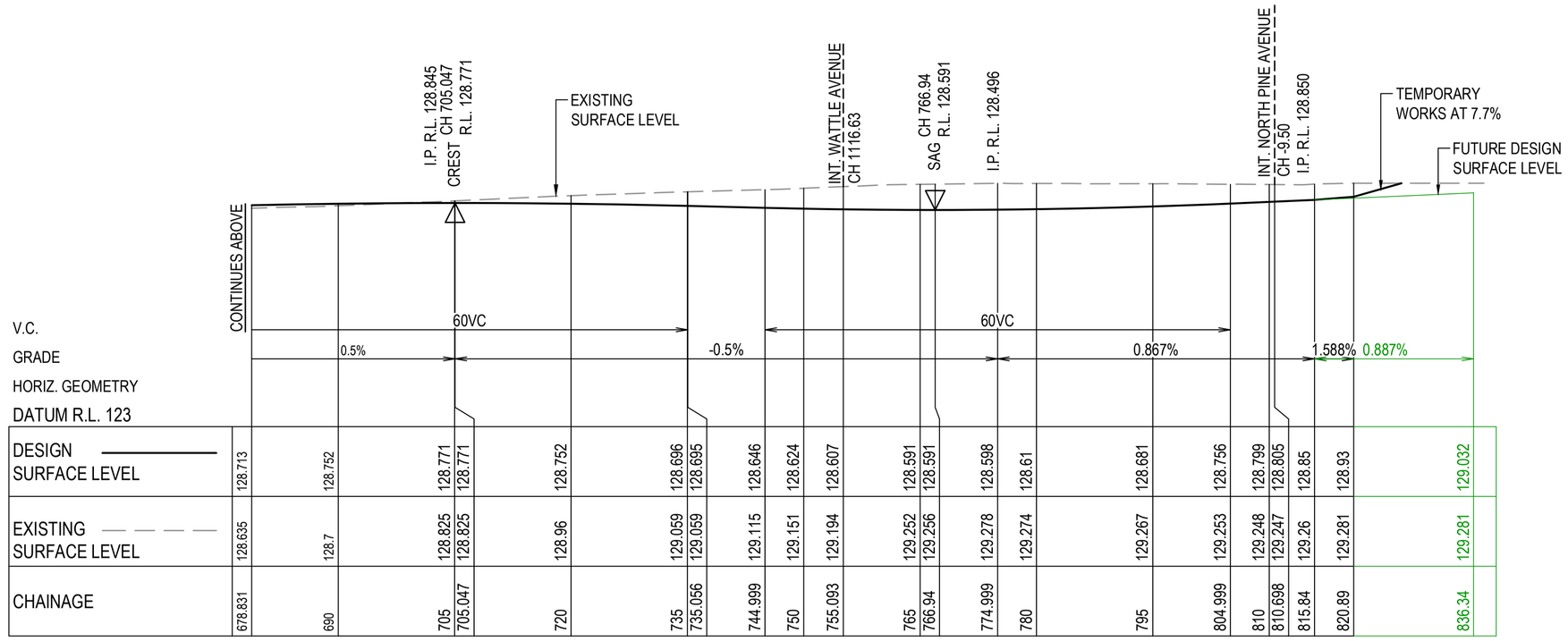
Scale A1	Project No.	Dwg. No.	Issue
As Shown	22048	400	A

Page 18 of 68
Docusign Envelope ID: 4686845CE-3355-8491-8275-0708A4B8E4346



ALMOND STREET - LONGITUDINAL SECTION

SCALE (H) 1:500
(V) 1:100



ALMOND STREET - LONGITUDINAL SECTION

SCALE (H) 1:500
(V) 1:100

sharon pope

Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

0 1cm at full size 10cm 20cm

Certification By Dr. Michel Chaaya
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Civil & Structural Engineer

Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale: 0 10 20 30 m — SCALE 1:500 @ A1; 0 2 4 6 m — SCALE 1:100 @ A1

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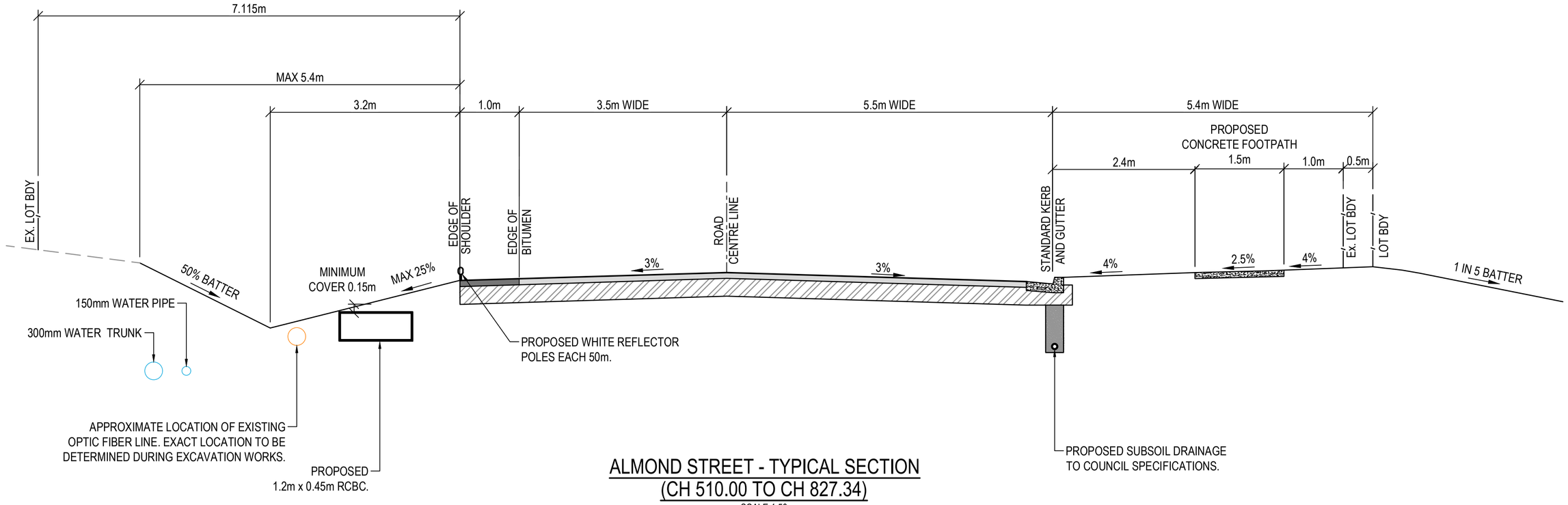
Project: PROPOSED RESIDENTIAL SUBDIVISION
ALMOND STREET, DENMAN
CIVIL ENGINEERING PLANS
VOLUNTARY PLANNING AGREEMENT

Drawing Title: ALMOND STREET LONGITUDINAL AND TYPICAL CROSS SECTIONS SHEET 2

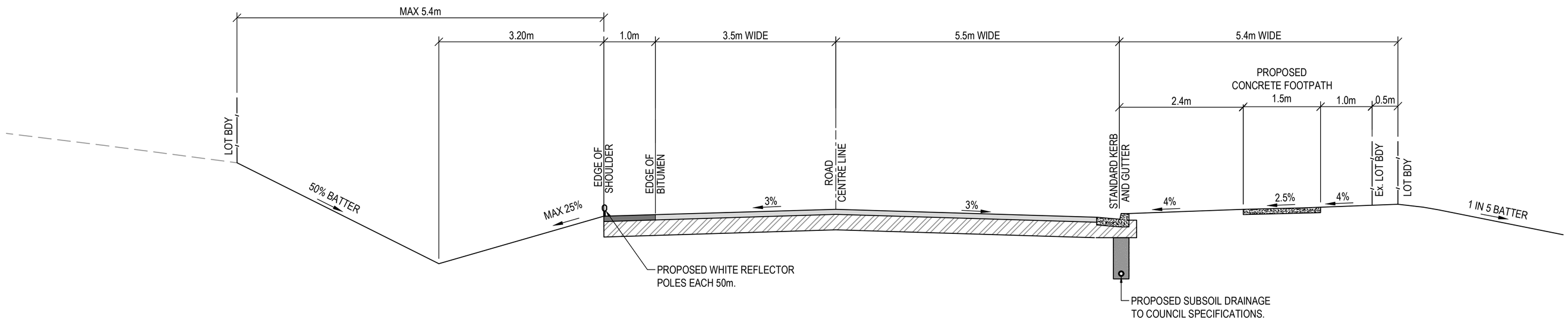
Scale	Project No.	Dwg. No.	Issue
As Shown (A1)	22048	401	A

Docusign Envelope ID: 46B645CE-3355-8491-8275-07B9488E4346



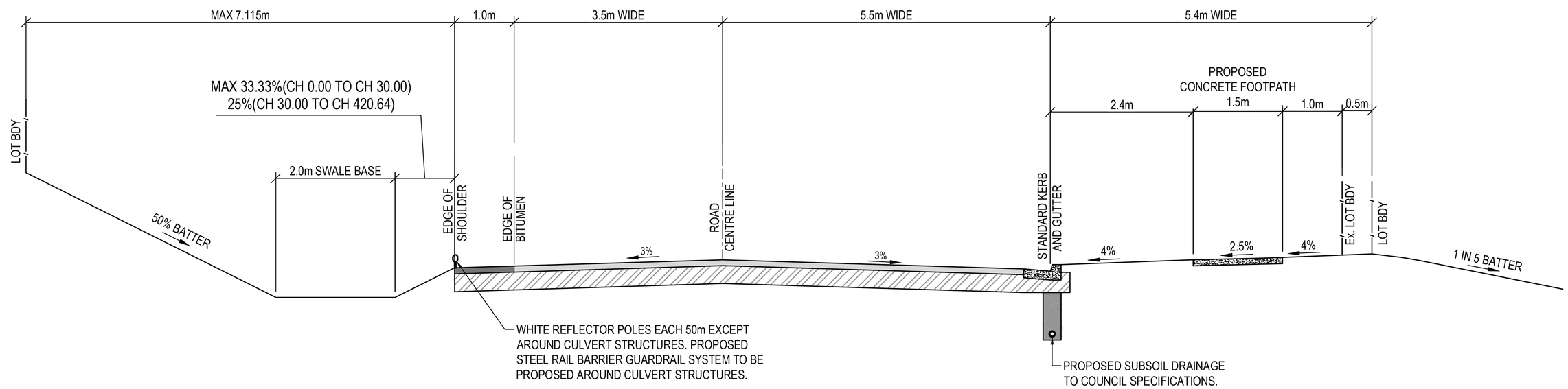
ALMOND STREET - TYPICAL SECTION
(CH 510.00 TO CH 827.34)

SCALE 1:50



ALMOND STREET - TYPICAL SECTION
(CH 420.64 TO CH 510.00)

SCALE 1:50



ALMOND STREET - TYPICAL SECTION
(CH 0.00 TO CH 420.64)

SCALE 1:50

sharon pope

Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

0 1cm at full size 10cm 20cm

Certification By Dr. Michel Chaaya
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Civil & Structural Engineer

Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale: 0 1 2 3 m — SCALE 1:50 @ A1

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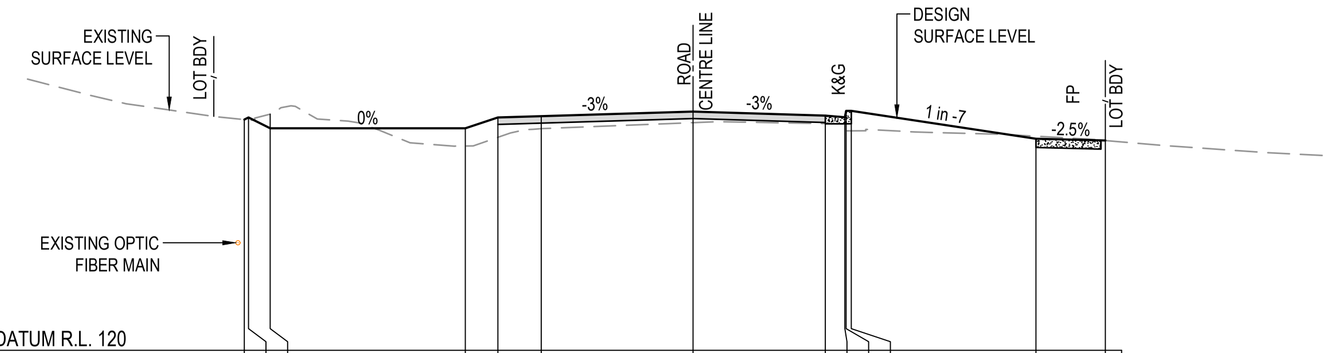
Trading As : Telford Consulting Pty Ltd

Project: PROPOSED RESIDENTIAL SUBDIVISION
ALMOND STREET, DENMAN
CIVIL ENGINEERING PLANS
VOLUNTARY PLANNING AGREEMENT

Drawing Title: ALMOND STREET LONGITUDINAL AND TYPICAL CROSS SECTIONS SHEET 3

Scale A1	Project No.	Dwg. No.	Issue
As Shown	22048	402	A

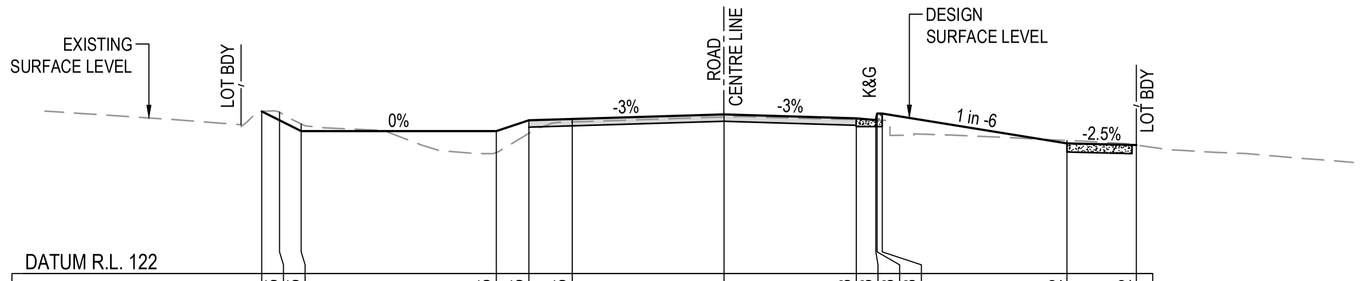
Page 20 of 68
Docusign Envelope ID: 468845CE-3355-8491-8275-0798B4B8E4346



DATUM R.L. 120

DESIGN SURFACE LEVEL	125.321	125.37	125.12	125.12	125.37	125.4	125.505	125.413	125.373	125.523	125.523	124.878	124.838
EXISTING SURFACE LEVEL	125.321	125.313	125.447	124.712	124.912	125.111	125.25	125.228	125.219	125.219	125.061	124.938	124.838
OFFSET	-10.348	-10.25	-9.75	-5.25	-4.5	-3.5	0	3.05	3.5	3.53	3.65	7.907	9.507

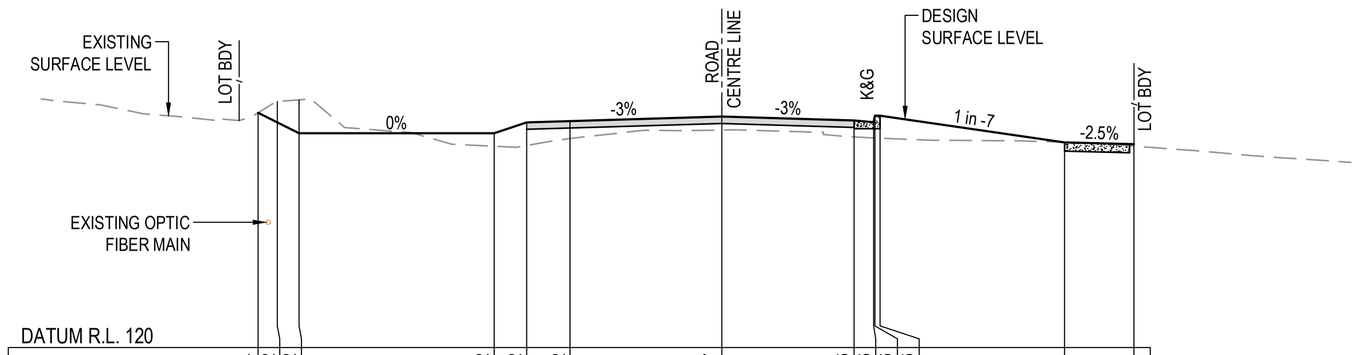
CH -75



DATUM R.L. 122

DESIGN SURFACE LEVEL	125.74	125.535	125.285	125.285	125.535	125.565	125.67	125.578	125.538	125.688	125.688	125.002	124.962
EXISTING SURFACE LEVEL	125.74	125.722	125.449	124.793	125.234	125.496	125.61	125.549	125.539	125.538	125.535	125.068	124.962
OFFSET	-10.66	-10.25	-9.75	-5.25	-4.5	-3.5	0	3.05	3.5	3.53	3.65	7.909	9.509

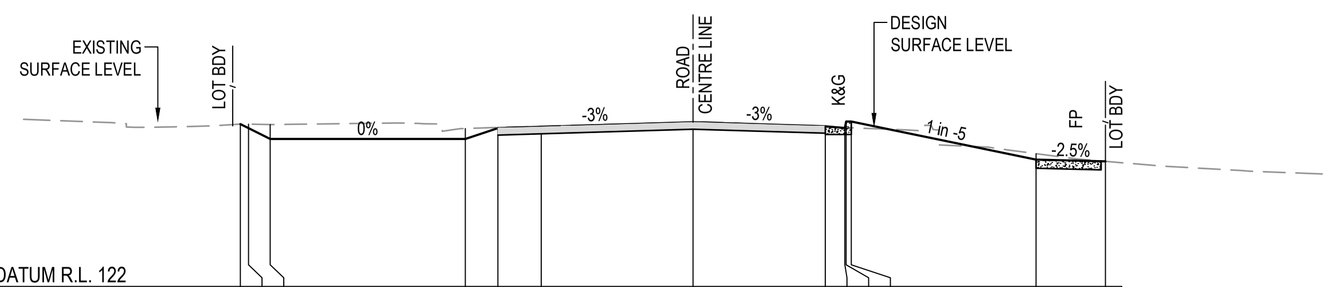
CH -90



DATUM R.L. 120

DESIGN SURFACE LEVEL	125.414	125.192	124.942	124.942	125.192	125.222	125.327	125.236	125.196	125.346	125.346	124.73	124.69
EXISTING SURFACE LEVEL	125.414	125.677	125.71	124.642	124.659	124.822	125.015	124.857	124.833	124.832	124.827	124.734	124.647
OFFSET	-10.693	-10.25	-9.75	-5.25	-4.5	-3.5	0	3.05	3.5	3.53	3.65	7.904	9.504

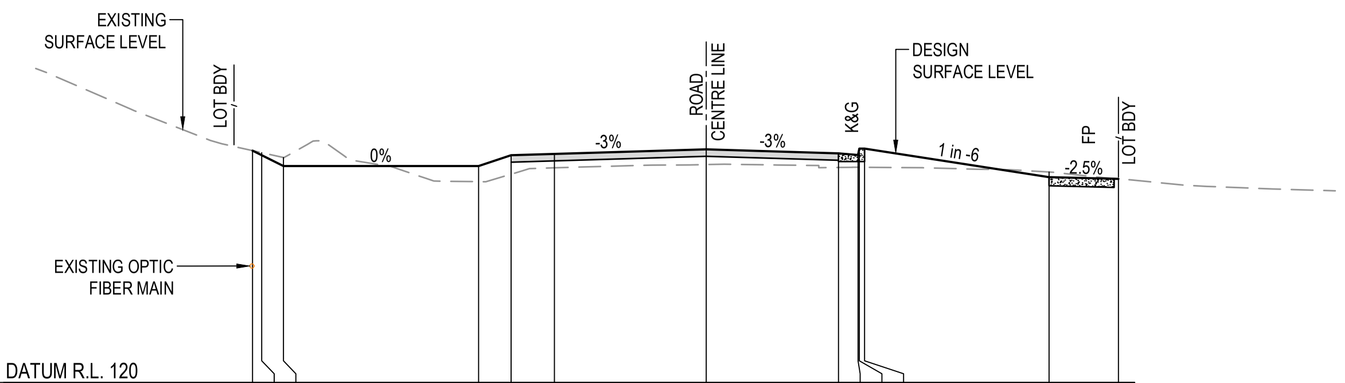
CH -45



DATUM R.L. 122

DESIGN SURFACE LEVEL	125.745	125.65	125.4	125.4	125.65	125.68	125.785	125.694	125.654	125.804	125.804	124.925	124.885
EXISTING SURFACE LEVEL	125.745	125.744	125.734	125.643	125.666	125.694	125.787	125.681	125.664	125.663	125.658	125.062	124.885
OFFSET	-10.439	-10.25	-9.75	-5.25	-4.5	-3.5	0	3.05	3.5	3.53	3.65	7.91	9.51

CH -101



DATUM R.L. 120

DESIGN SURFACE LEVEL	125.346	125.24	124.99	124.99	125.24	125.27	125.375	125.284	125.244	125.394	125.394	124.735	124.695
EXISTING SURFACE LEVEL	125.346	125.299	125.187	124.63	124.802	124.95	125.024	124.958	124.962	124.962	124.961	124.853	124.695
OFFSET	-10.462	-10.25	-9.75	-5.25	-4.5	-3.5	0	3.05	3.5	3.53	3.65	7.906	9.506

CH -60

sharon pope

Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

0 1cm at full size 10cm 20cm

Certification By Dr. Michel Chaaya
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Scale: 0 2 4 6 m — SCALE 1:100 @ A1

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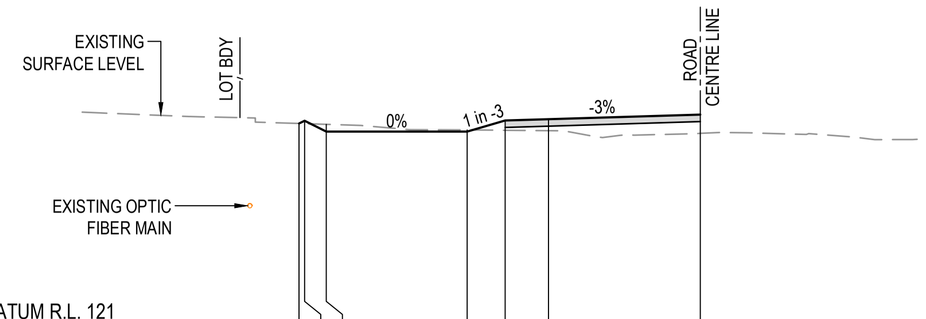
Level 14, 32 Smith Street, Parramatta NSW 2150
PO BOX 3579 Parramatta 2124
Email : info@telfordcivil.com.au
Phone : 02 7809 4931
Trading As : Telford Consulting Pty Ltd

Project: PROPOSED RESIDENTIAL SUBDIVISION
ALMOND STREET, DENMAN
CIVIL ENGINEERING PLANS
VOLUNTARY PLANNING AGREEMENT

Drawing Title: ALMOND STREET
CROSS SECTIONS
SHEET 1

Scale A1	Project No.	Dwg. No.	Issue
1:100	22048	420	A

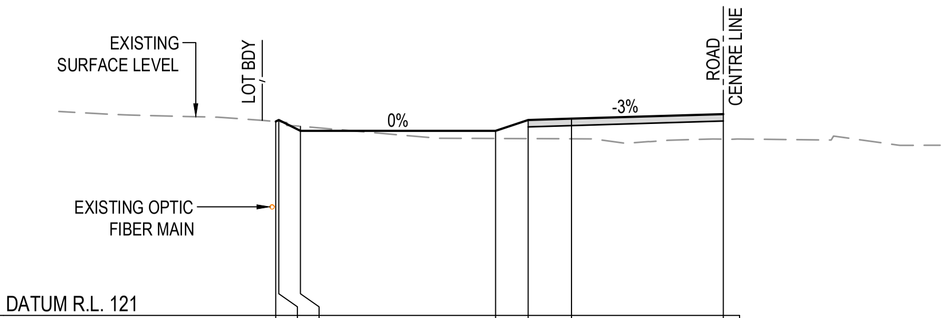
Docusign Envelope ID: 46B64C5E-3355-8491-8275-07B84B8E4346



DATUM R.L. 121

DESIGN SURFACE LEVEL	125.603	125.667	125.417	125.417	125.672	125.702	125.807
EXISTING SURFACE LEVEL	125.603	125.599	125.583	125.454	125.446	125.437	125.375
OFFSET	-9.253	-9.125	-8.625	-5.375	-4.5	-3.5	0

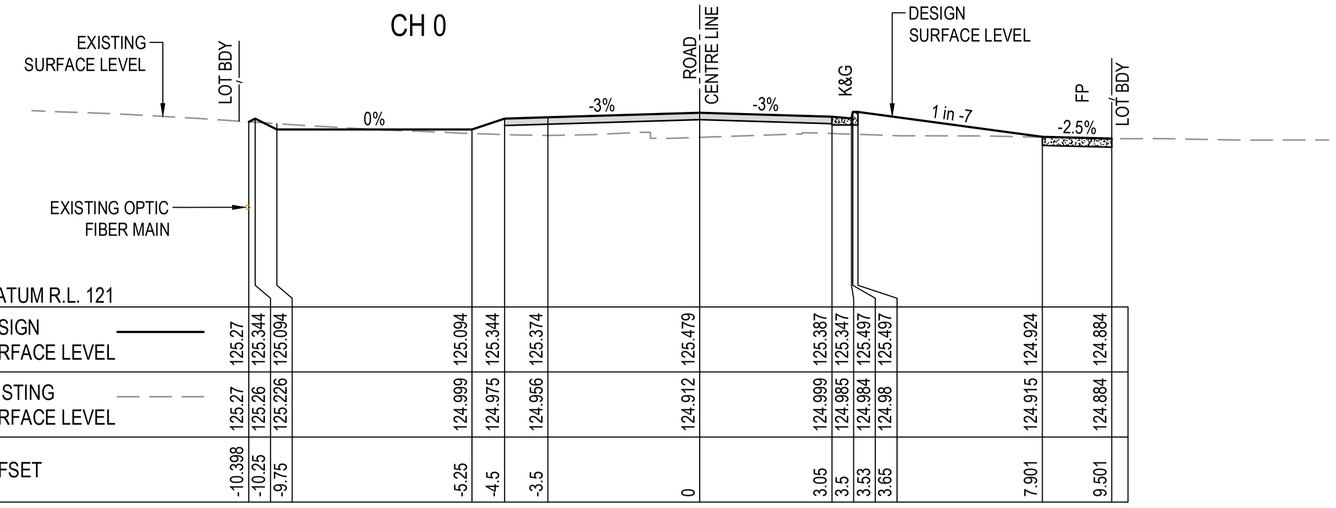
CH 15



DATUM R.L. 121

DESIGN SURFACE LEVEL	125.472	125.508	125.258	125.258	125.508	125.538	125.643
EXISTING SURFACE LEVEL	125.472	125.466	125.362	125.08	125.077	125.073	125.066
OFFSET	-10.321	-10.25	-9.75	-5.25	-4.5	-3.5	0

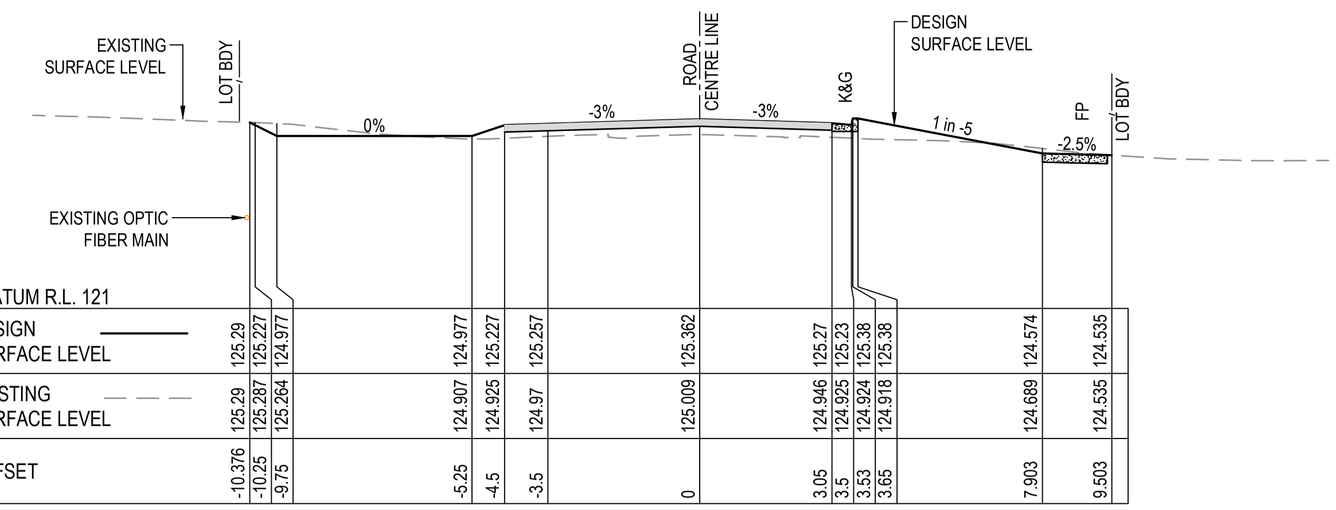
CH 0



DATUM R.L. 121

DESIGN SURFACE LEVEL	125.27	125.344	125.094	125.094	125.344	125.374	125.479	125.387	125.347	125.497	125.497	124.924	124.884
EXISTING SURFACE LEVEL	125.27	125.26	125.226	124.999	124.975	124.956	124.912	124.999	124.985	124.984	124.98	124.915	124.884
OFFSET	-10.398	-10.25	-9.75	-5.25	-4.5	-3.5	0	3.05	3.5	3.53	3.65	7.901	9.501

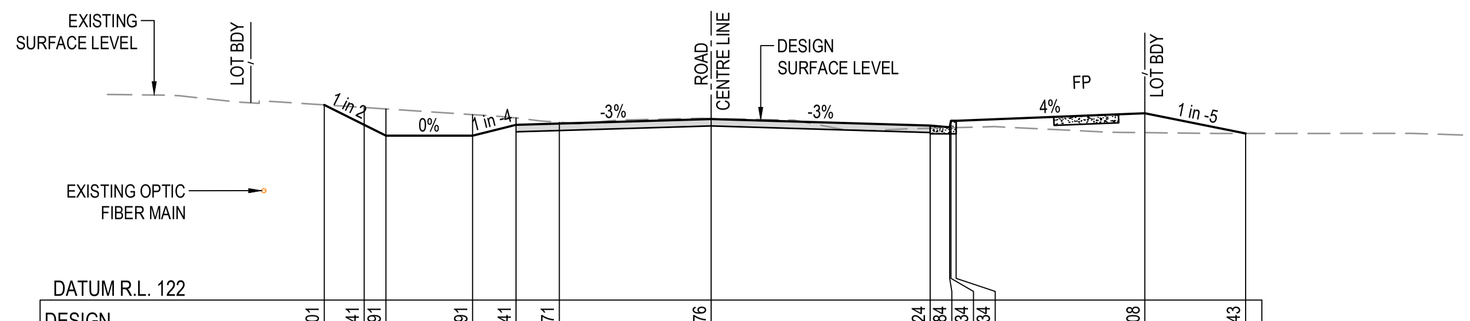
CH -15



DATUM R.L. 121

DESIGN SURFACE LEVEL	125.29	125.227	124.977	124.977	125.227	125.257	125.362	125.27	125.23	125.38	125.38	124.574	124.535
EXISTING SURFACE LEVEL	125.29	125.287	125.264	124.907	124.925	124.97	125.009	124.946	124.925	124.924	124.918	124.689	124.535
OFFSET	-10.376	-10.25	-9.75	-5.25	-4.5	-3.5	0	3.05	3.5	3.53	3.65	7.903	9.503

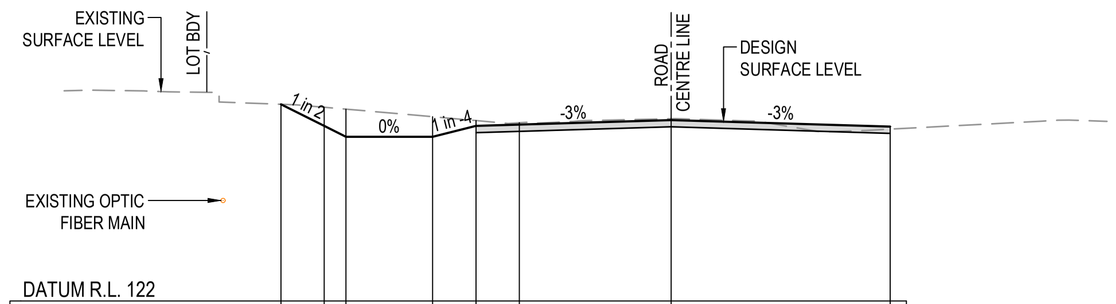
CH -30



DATUM R.L. 122

DESIGN SURFACE LEVEL	126.501	126.041	125.791	125.791	126.041	126.071	126.176	126.024	125.984	126.134	126.134	126.308	125.843
EXISTING SURFACE LEVEL	126.501	126.441	126.408	126.277	126.2	126.101	126.184	125.963	125.974	125.975	125.978	125.861	125.843
OFFSET	-8.921	-8	-7.5	-5.5	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10	12.324

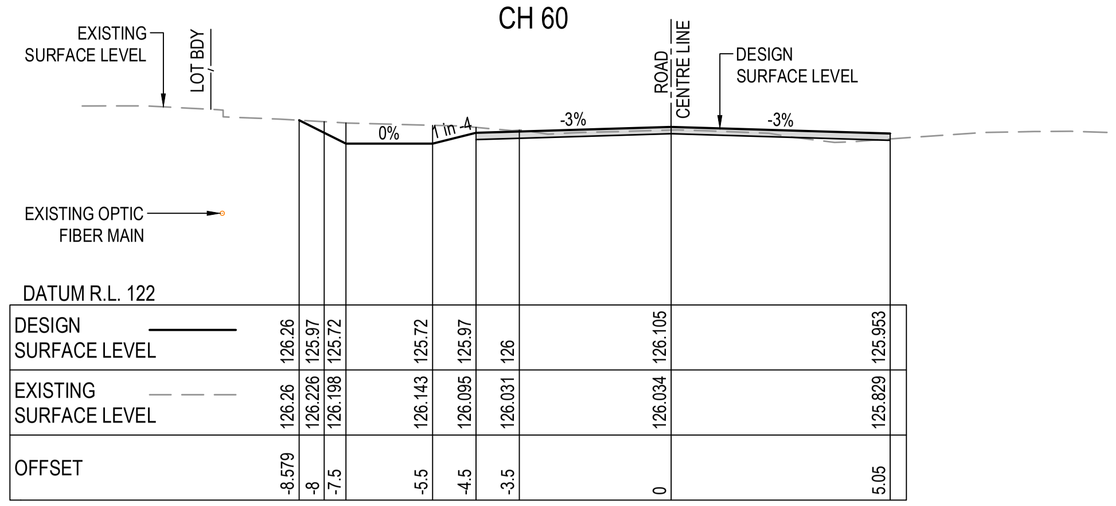
CH 75



DATUM R.L. 122

DESIGN SURFACE LEVEL	126.537	126.038	125.788	125.788	126.038	126.068	126.173	126.021
EXISTING SURFACE LEVEL	126.537	126.468	126.425	126.25	126.161	126.11	126.204	125.964
OFFSET	-8.998	-8	-7.5	-5.5	-4.5	-3.5	0	5.05

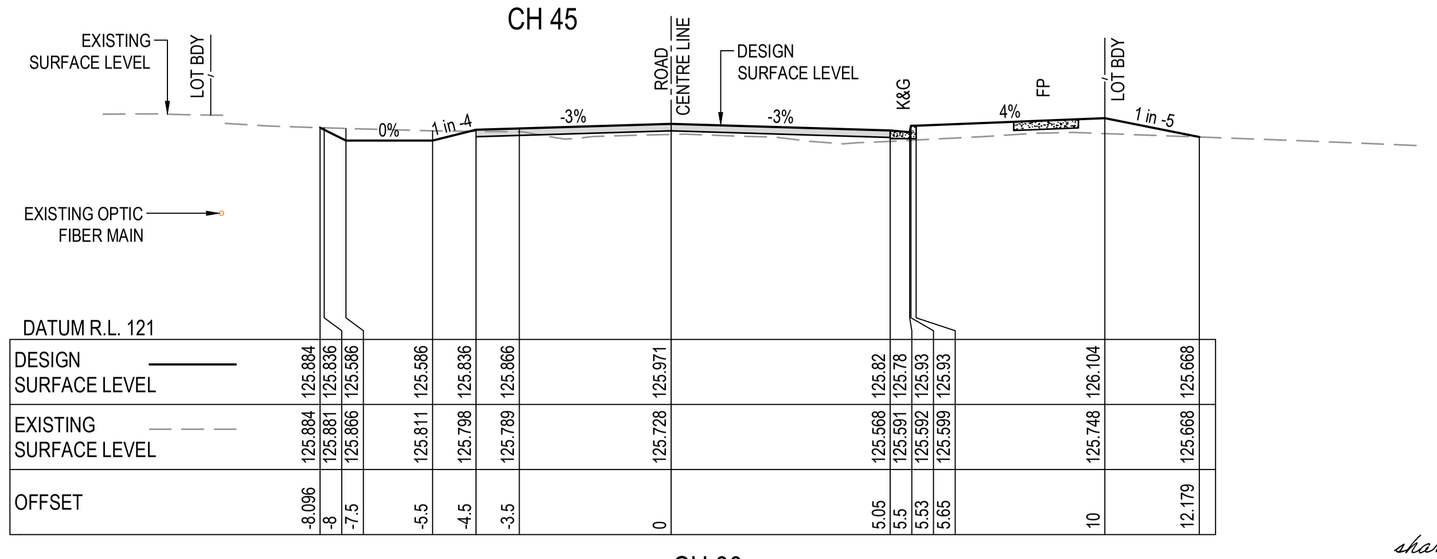
CH 60



DATUM R.L. 122

DESIGN SURFACE LEVEL	126.26	125.97	125.72	125.72	125.97	126	126.105	125.953
EXISTING SURFACE LEVEL	126.26	126.226	126.198	126.143	126.095	126.031	126.034	125.829
OFFSET	-8.579	-8	-7.5	-5.5	-4.5	-3.5	0	5.05

CH 45



DATUM R.L. 121

DESIGN SURFACE LEVEL	125.884	125.836	125.586	125.586	125.836	125.866	125.971	125.82	125.78	125.93	125.93	126.104	125.668
EXISTING SURFACE LEVEL	125.884	125.881	125.866	125.811	125.798	125.789	125.728	125.568	125.591	125.592	125.599	125.748	125.668
OFFSET	-8.096	-8	-7.5	-5.5	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10	12.179

CH 30

sharon pope

Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

0 10m at full size 10cm 20cm

Certification By Dr. Michel Chaaya B.E., M.E. (Res), Ph.D., F.I.E. Aust., CPEng., Civil & Structural Engineer

Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale: 0 2 4 6 m — SCALE 1:100 @ A1

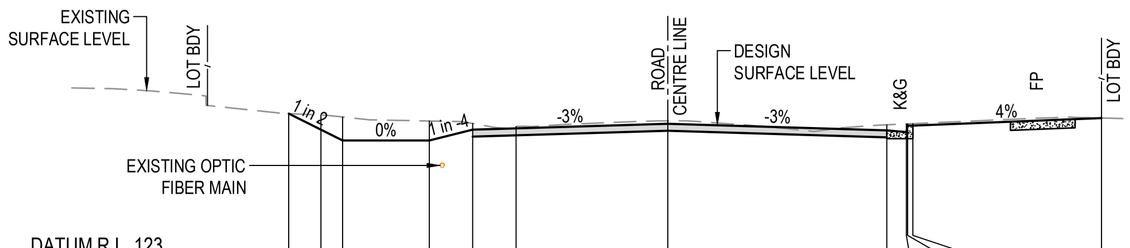
TELFORD CIVIL
CONSULTING CIVIL & STORMWATER ENGINEERS
Level 14, 32 Smith Street, Parramatta NSW 2150
PO BOX 3579 Parramatta 2124
Email : info@telfordcivil.com.au
Phone : 02 7809 4931
Trading As : Telford Consulting Pty Ltd

Project: PROPOSED RESIDENTIAL SUBDIVISION ALMOND STREET, DENMAN CIVIL ENGINEERING PLANS VOLUNTARY PLANNING AGREEMENT

Drawing Title: ALMOND STREET CROSS SECTIONS SHEET 2

Scale A1	Project No.	Dwg. No.	Issue
1:100	22048	421	A

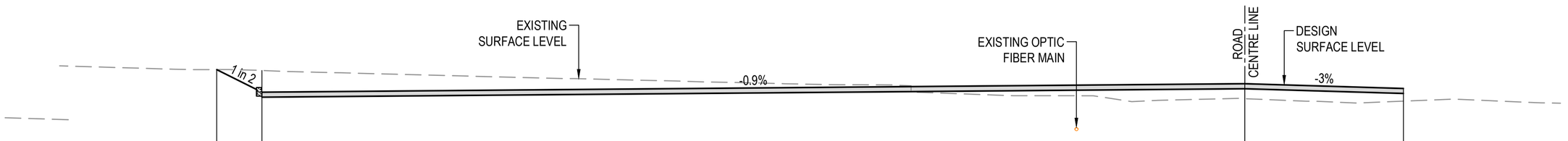
Docusign Envelope ID: 46B64SCE-3355-8491-8275-07B84B8E4346



DATUM R.L. 123

DESIGN SURFACE LEVEL	126.309	125.938	125.688	125.688	125.938	125.968	126.073	125.922	125.882	126.032	126.032	126.206
EXISTING SURFACE LEVEL	126.309	126.275	126.231	126.139	126.081	126.012	126.142	126.05	126.07	126.071	126.076	126.207
OFFSET	-8.743	-8	-7.5	-5.5	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10

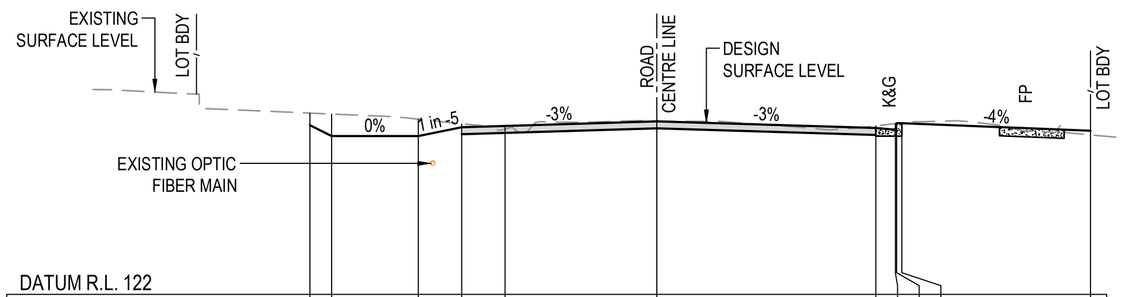
CH 135



DATUM R.L. 123

DESIGN SURFACE LEVEL	127.654	126.934	127.204	127.053
EXISTING SURFACE LEVEL	127.654	127.627	126.727	126.648
OFFSET	-32.734	-31.294	0	5.05

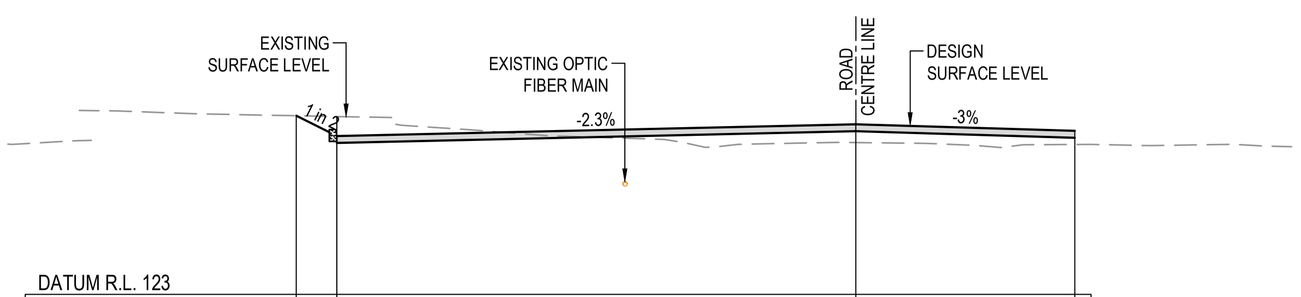
CH 195



DATUM R.L. 122

DESIGN SURFACE LEVEL	125.901	125.651	125.651	125.853	125.883	125.988	125.837	125.797	125.947	125.947	125.773
EXISTING SURFACE LEVEL	126.181	126.159	126.04	125.932	125.812	125.996	125.886	125.939	125.942	125.956	125.678
OFFSET	-8	-7.5	-5.5	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10

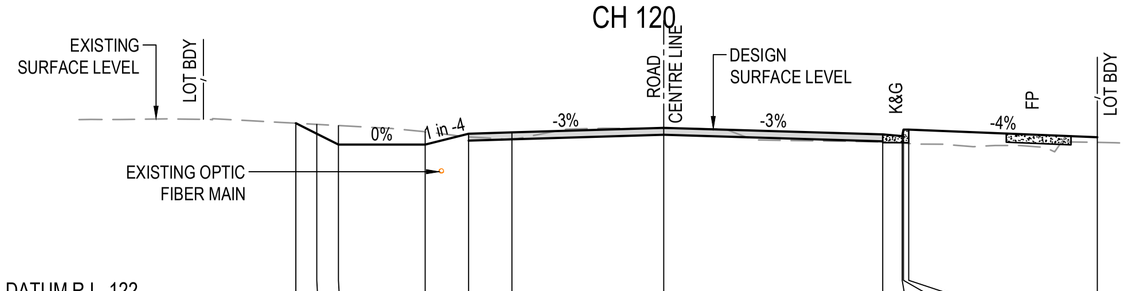
CH 120



DATUM R.L. 123

DESIGN SURFACE LEVEL	127.12	126.651	126.922	126.771
EXISTING SURFACE LEVEL	127.12	127.099	126.501	126.456
OFFSET	-12.904	-11.966	0	5.05

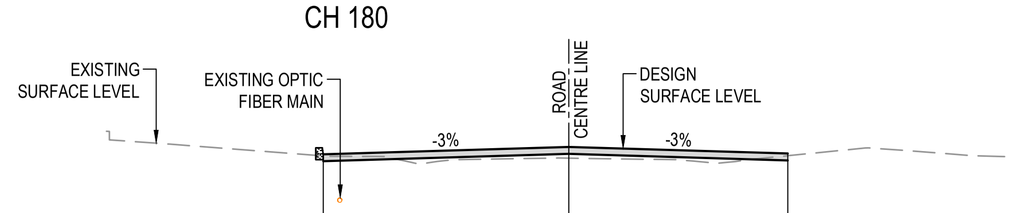
CH 180



DATUM R.L. 122

DESIGN SURFACE LEVEL	126.122	125.88	125.63	125.63	125.88	125.91	126.015	125.864	125.824	125.974	125.974	125.8
EXISTING SURFACE LEVEL	126.122	126.095	126.068	125.925	125.806	125.76	126.002	125.892	125.867	125.664	125.654	125.68
OFFSET	-8.483	-8	-7.5	-5.5	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10

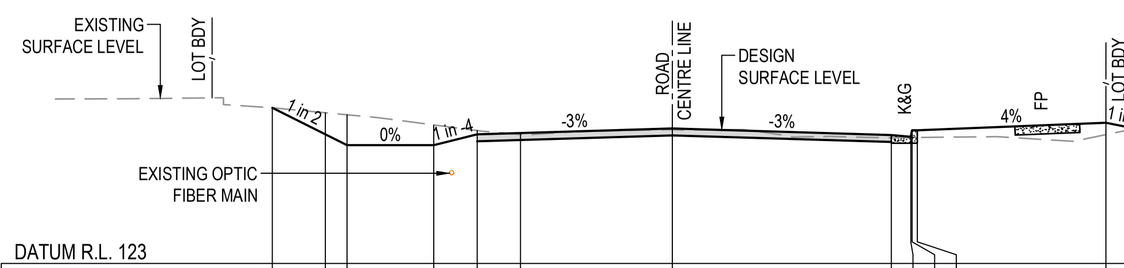
CH 105



DATUM R.L. 123

DESIGN SURFACE LEVEL	126.406	126.575	126.424
EXISTING SURFACE LEVEL	126.368	126.316	126.373
OFFSET	-5.661	0	5.05

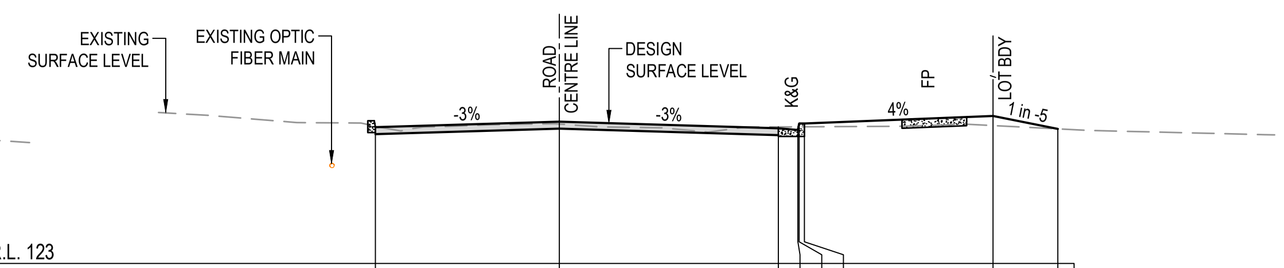
CH 165



DATUM R.L. 123

DESIGN SURFACE LEVEL	126.589	125.977	125.727	125.727	125.977	126.007	126.112	125.961	125.921	126.071	126.071	126.245	126.066
EXISTING SURFACE LEVEL	126.589	126.476	126.429	126.195	126.065	125.97	126.08	125.898	125.903	125.903	125.905	125.971	126.066
OFFSET	-9.224	-8	-7.5	-5.5	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10	10.893

CH 90



DATUM R.L. 123

DESIGN SURFACE LEVEL	126.142	126.269	126.118	126.078	126.228	126.228	126.402	126.103
EXISTING SURFACE LEVEL	126.165	126.216	126.148	126.151	126.151	126.151	126.179	126.103
OFFSET	-4.243	0	5.05	5.5	5.53	5.65	10	11.495

CH 150

sharon pope

Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

0 1cm at full size 10cm 20cm

Certification By Dr. Michel Chaaya
B.E., M.E. (Res), Ph.D., F.I.E. Aust., CPEng.,
Civil & Structural Engineer

Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale: 0 2 4 6 m — SCALE 1:100 @ A1

TELFORD CIVIL
CONSULTING CIVIL & STORMWATER ENGINEERS
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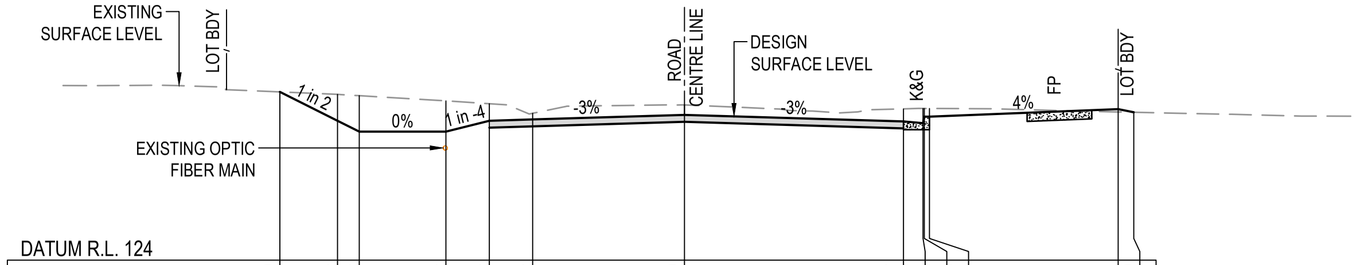
Project: PROPOSED RESIDENTIAL SUBDIVISION ALMOND STREET, DENMAN CIVIL ENGINEERING PLANS VOLUNTARY PLANNING AGREEMENT

Drawing Title: ALMOND STREET CROSS SECTIONS SHEET 3

Scale A1	Project No.	Dwg. No.	Issue
1:100	22048	422	A

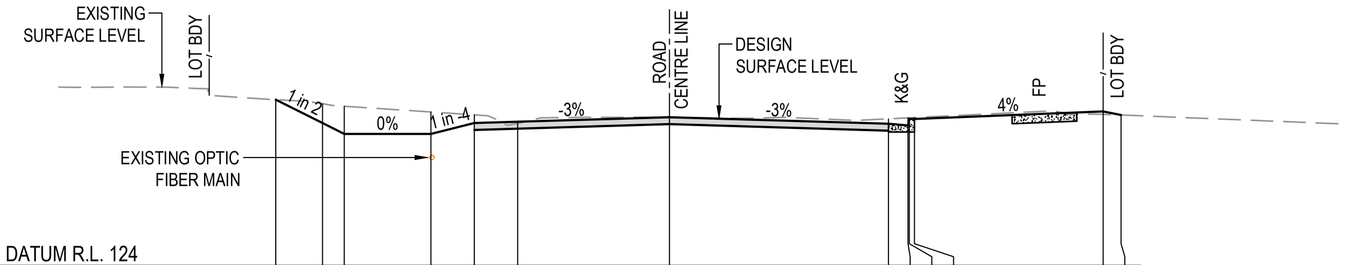
Page 23 of 68
Docusign Envelope ID: 468845CE-3355-8491-8275-0706B4B8E4346



DATUM R.L. 124

DESIGN SURFACE LEVEL	127.879	127.214	126.964	126.964	127.214	127.244	127.349	127.197	127.157	127.307	127.307	127.481	127.409
EXISTING SURFACE LEVEL	127.879	127.822	127.792	127.672	127.607	127.386	127.58	127.488	127.498	127.498	127.497	127.417	127.409
OFFSET	-9.33	-8	-7.5	-5.5	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10	10.361

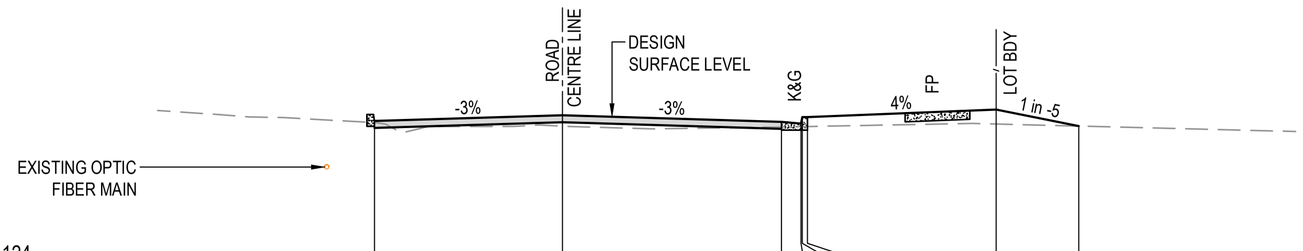
CH 255



DATUM R.L. 124

DESIGN SURFACE LEVEL	127.822	127.282	127.032	127.032	127.282	127.312	127.417	127.266	127.226	127.376	127.376	127.55	127.467
EXISTING SURFACE LEVEL	127.822	127.728	127.67	127.538	127.472	127.278	127.41	127.379	127.401	127.403	127.409	127.482	127.467
OFFSET	-9.078	-8	-7.5	-5.5	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10	10.414

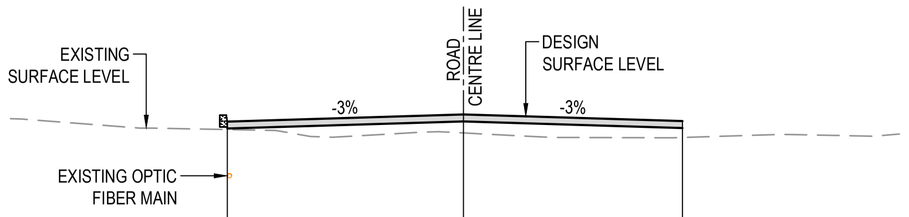
CH 240



DATUM R.L. 124

DESIGN SURFACE LEVEL	127.321	127.451	127.3	127.26	127.41	127.41	127.584	127.203
EXISTING SURFACE LEVEL	127.283	127.201	127.182	127.19	127.191	127.193	127.25	127.203
OFFSET	-4.335	0	5.05	5.5	5.53	5.65	10	11.906

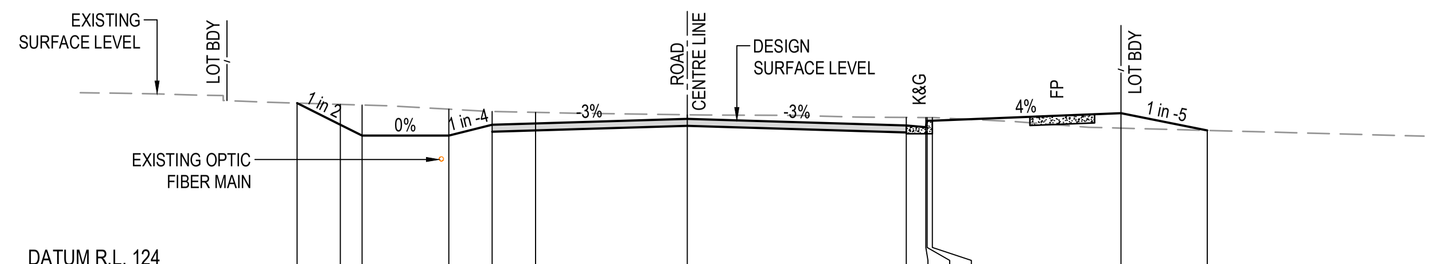
CH 225



DATUM R.L. 123

DESIGN SURFACE LEVEL	127.217	127.381	127.229
EXISTING SURFACE LEVEL	127.033	126.955	126.85
OFFSET	-5.446	0	5.05

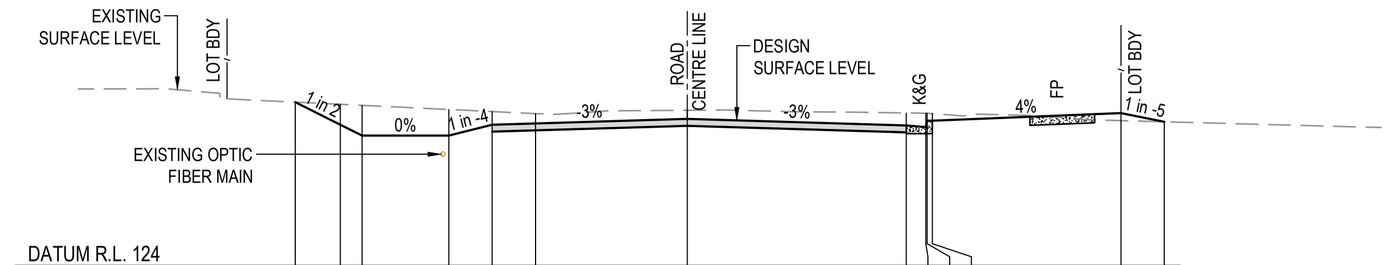
CH 210



DATUM R.L. 124

DESIGN SURFACE LEVEL	127.828	127.329	127.079	127.079	127.329	127.359	127.464	127.312	127.272	127.422	127.422	127.596	127.198
EXISTING SURFACE LEVEL	127.828	127.799	127.784	127.688	127.636	127.615	127.559	127.498	127.495	127.495	127.494	127.251	127.198
OFFSET	-8.998	-8	-7.5	-5.5	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10	11.989

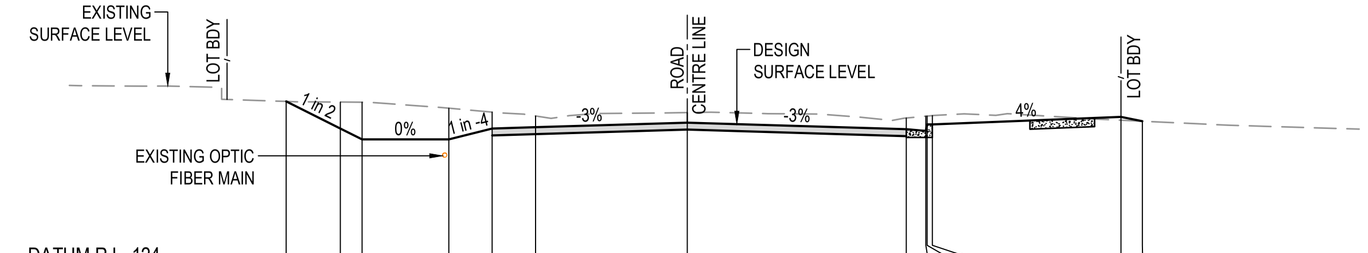
CH 315



DATUM R.L. 124

DESIGN SURFACE LEVEL	127.764	127.244	126.994	126.994	127.244	127.274	127.379	127.227	127.187	127.337	127.337	127.511	127.311
EXISTING SURFACE LEVEL	127.764	127.714	127.691	127.595	127.548	127.5	127.576	127.515	127.508	127.508	127.5	127.338	127.311
OFFSET	-9.041	-8	-7.5	-5.5	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10	11

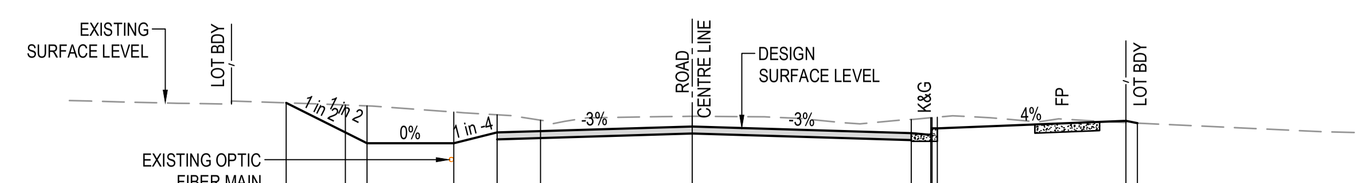
CH 300



DATUM R.L. 124

DESIGN SURFACE LEVEL	127.817	127.193	126.943	126.943	127.193	127.223	127.328	127.176	127.136	127.286	127.286	127.46	127.362
EXISTING SURFACE LEVEL	127.817	127.803	127.8	127.662	127.57	127.482	127.561	127.435	127.477	127.48	127.491	127.385	127.362
OFFSET	-9.249	-8	-7.5	-5.5	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10	10.493

CH 285



DATUM R.L. 124

DESIGN SURFACE LEVEL	127.865	127.183	126.933	126.933	127.183	127.213	127.318	127.166	127.126	127.276	127.276	127.45	127.397
EXISTING SURFACE LEVEL	127.865	127.816	127.795	127.653	127.59	127.465	127.555	127.482	127.521	127.524	127.534	127.41	127.397
OFFSET	-9.364	-8	-7.5	-5.5	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10	10.265

CH 270

sharon pope

Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

1cm at full size 10cm 20cm

Certification By Dr. Michel Chaaya
B.E., M.E. (Res), Ph.D., F.I.E. Aust., CPEng.,
Civil & Structural Engineer

Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale: 0 2 4 6 m — SCALE 1:100 @ A1

TELFORD CIVIL
CONSULTING CIVIL & STORMWATER ENGINEERS
Level 14, 32 Smith Street, Parramatta NSW 2150
PO BOX 3579 Parramatta 2124
Email : info@telfordcivil.com.au
Phone : 02 7809 4931
Trading As : Telford Consulting Pty Ltd

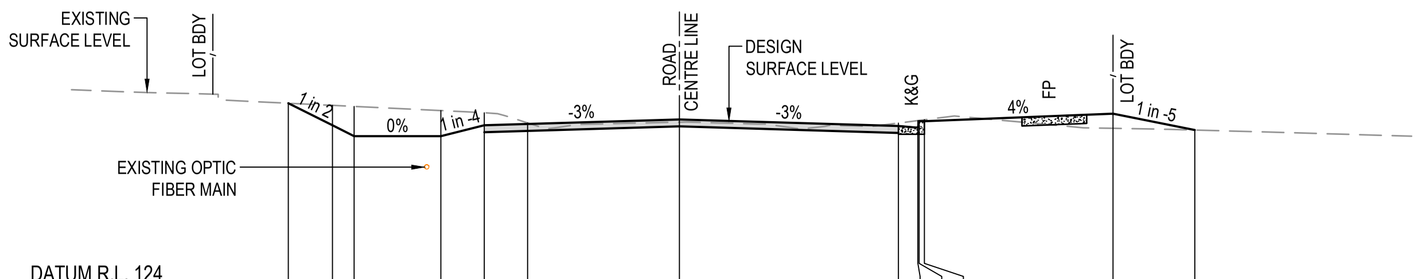
Project: PROPOSED RESIDENTIAL SUBDIVISION
ALMOND STREET, DENMAN
CIVIL ENGINEERING PLANS
VOLUNTARY PLANNING AGREEMENT

Drawing Title: ALMOND STREET
CROSS SECTIONS
SHEET 4

Scale A1	Project No.	Dwg. No.	Issue
1:100	22048	423	A

Docusign Envelope ID: 46B645CE-3355-8491-8275-07B4B8E5A346

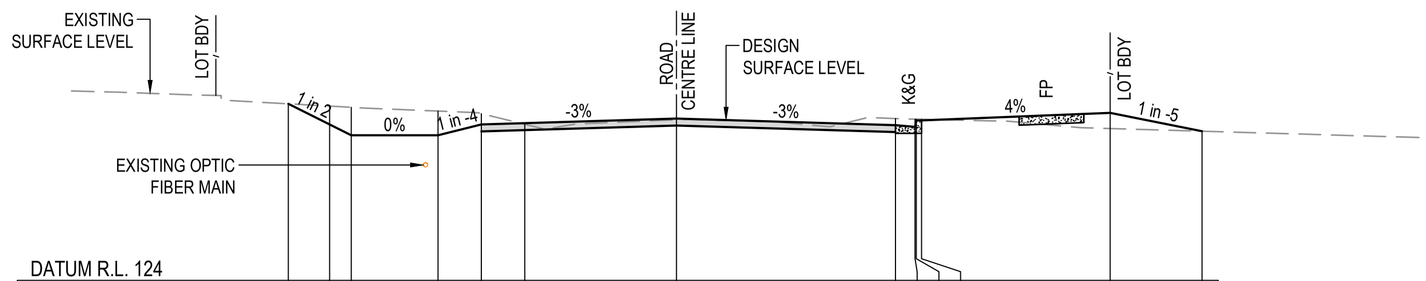
Page 26 of 68



DATUM R.L. 124

DESIGN SURFACE LEVEL	128.194	128.194	127.685	127.435	127.435	127.685	127.715	127.82	127.668	127.628	127.778	127.778	127.952	127.575
EXISTING SURFACE LEVEL	128.194	128.145	128.12	128.024	127.974	127.74	127.758	127.736	127.793	127.797	127.812	127.615	127.575
OFFSET	-9.017	-8	-7.5	-5.5	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10	11.886

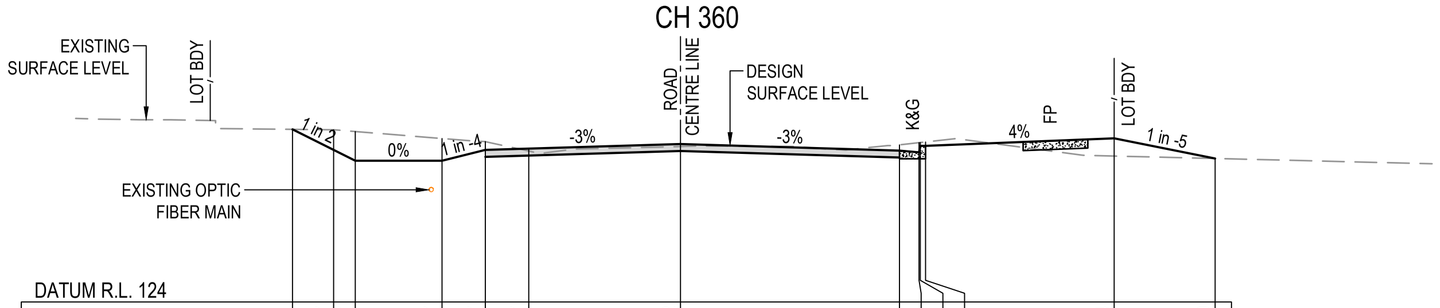
CH 375



DATUM R.L. 124

DESIGN SURFACE LEVEL	128.071	128.071	127.596	127.346	127.346	127.596	127.626	127.731	127.579	127.539	127.689	127.689	127.863	127.44
EXISTING SURFACE LEVEL	128.071	128.018	127.991	127.904	127.844	127.601	127.704	127.732	127.717	127.716	127.713	127.501	127.44
OFFSET	-8.951	-8	-7.5	-5.5	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10	12.118

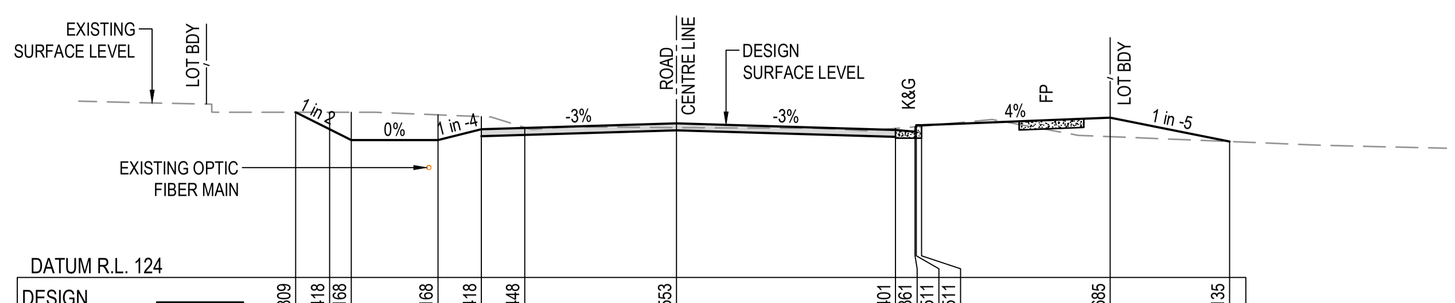
CH 360



DATUM R.L. 124

DESIGN SURFACE LEVEL	127.98	127.98	127.507	127.257	127.257	127.507	127.537	127.642	127.49	127.45	127.6	127.6	127.774	127.309
EXISTING SURFACE LEVEL	127.98	127.97	127.93	127.769	127.697	127.48	127.585	127.623	127.673	127.676	127.69	127.365	127.309
OFFSET	-8.947	-8	-7.5	-5.5	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10	12.329

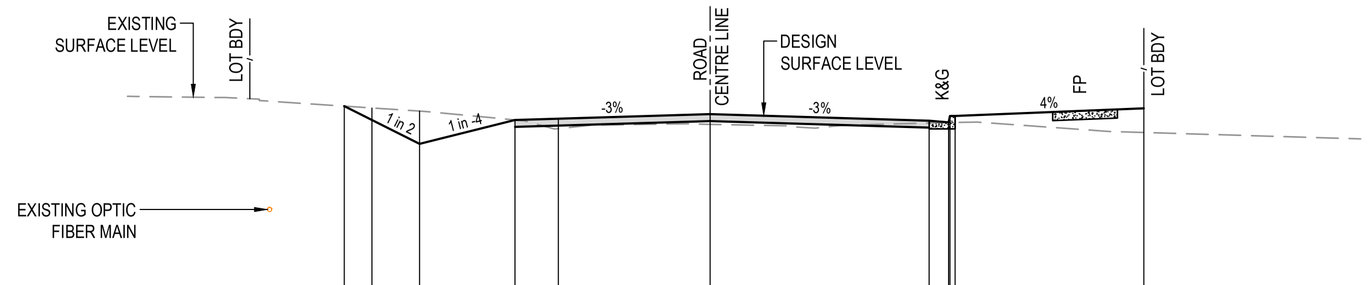
CH 345



DATUM R.L. 124

DESIGN SURFACE LEVEL	127.809	127.809	127.418	127.168	127.168	127.418	127.448	127.553	127.401	127.361	127.511	127.511	127.685	127.135
EXISTING SURFACE LEVEL	127.809	127.809	127.809	127.749	127.709	127.459	127.455	127.437	127.476	127.478	127.49	127.247	127.135
OFFSET	-8.783	-8	-7.5	-5.5	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10	12.754

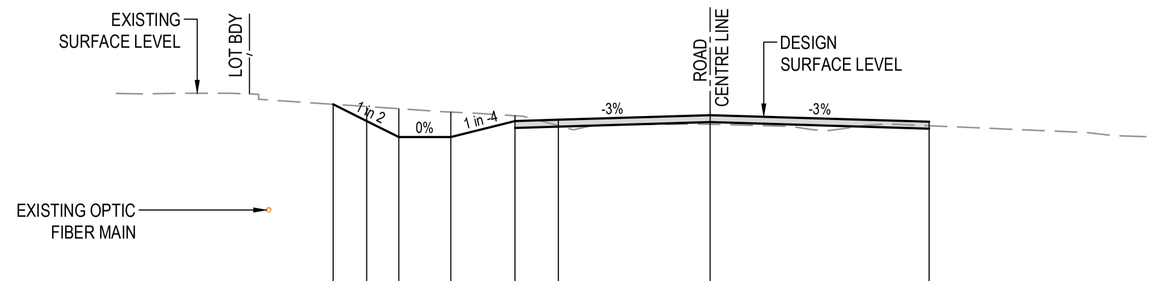
CH 330



DATUM R.L. 123

DESIGN SURFACE LEVEL	128.302	128.302	127.984	127.434	127.984	127.985	128.014	128.119	127.967	127.927	128.077	128.077	128.251
EXISTING SURFACE LEVEL	128.302	128.26	128.188	127.985	127.784	127.861	127.913	127.925	127.926	127.928	127.695
OFFSET	-8.436	-7.8	-6.7	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10

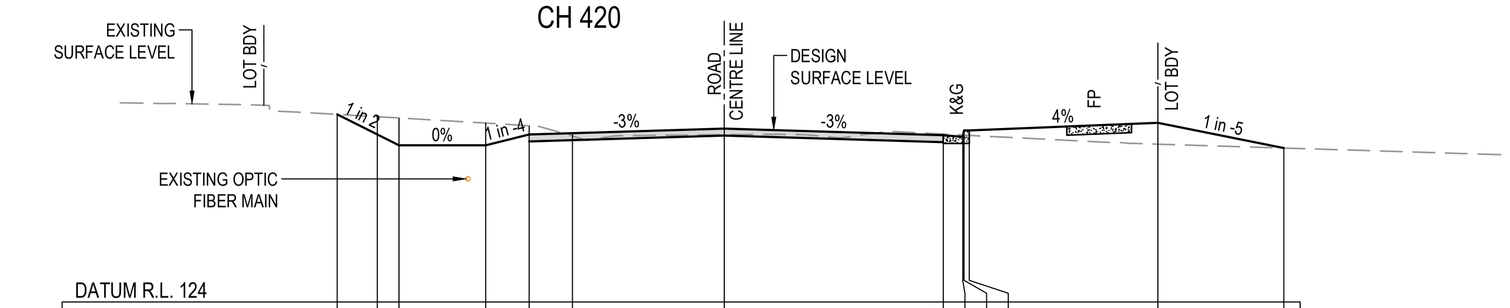
CH 435



DATUM R.L. 123

DESIGN SURFACE LEVEL	128.329	128.329	127.943	127.573	127.573	127.943	127.973	128.078	127.926
EXISTING SURFACE LEVEL	128.329	128.277	128.227	128.149	128.066	127.836	127.867	127.835
OFFSET	-8.692	-7.92	-7.18	-5.98	-4.5	-3.5	0	5.05

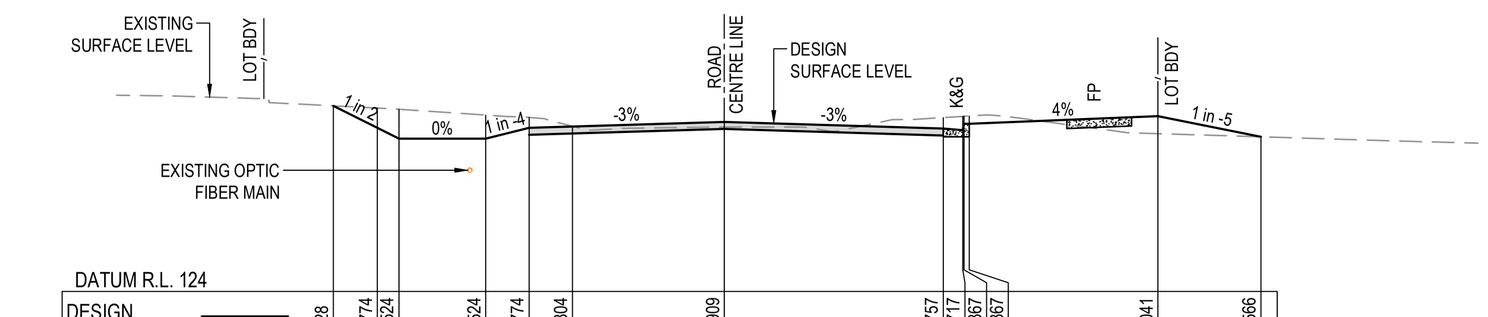
CH 420



DATUM R.L. 124

DESIGN SURFACE LEVEL	128.326	128.326	127.863	127.613	127.613	127.863	127.893	127.998	127.846	127.806	127.956	127.956	128.13	127.549
EXISTING SURFACE LEVEL	128.326	128.272	128.243	128.126	128.064	127.826	127.857	127.872	127.849	127.848	127.842	127.639	127.549
OFFSET	-8.926	-8	-7.5	-5.5	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10	12.904

CH 405



DATUM R.L. 124

DESIGN SURFACE LEVEL	128.28	128.28	127.774	127.524	127.524	127.774	127.804	127.909	127.757	127.717	127.867	127.867	128.041	127.566
EXISTING SURFACE LEVEL	128.28	128.229	128.202	128.067	128.013	127.809	127.79	128.009	128.037	128.039	128.046	128.039	127.566
OFFSET	-9.013	-8	-7.5	-5.5	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10	12.377

CH 390

sharon pope

Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

0 1cm at full size 10cm 20cm

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Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

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Scale: 0 2 4 6 m — SCALE 1:100 @ A1

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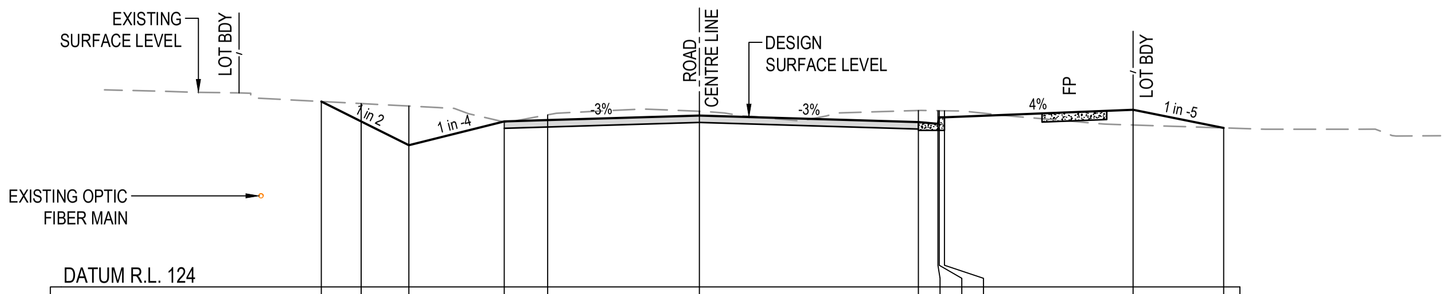
ALMOND STREET, DENMAN
CIVIL ENGINEERING PLANS
VOLUNTARY PLANNING AGREEMENT

Drawing Title: ALMOND STREET
CROSS SECTIONS
SHEET 5

Scale A1	Project No.	Dwg. No.	Issue
1:100	22048	424	A

Docusign Envelope ID: 468845CE-3355-8491-8275-0706B4B8E4346

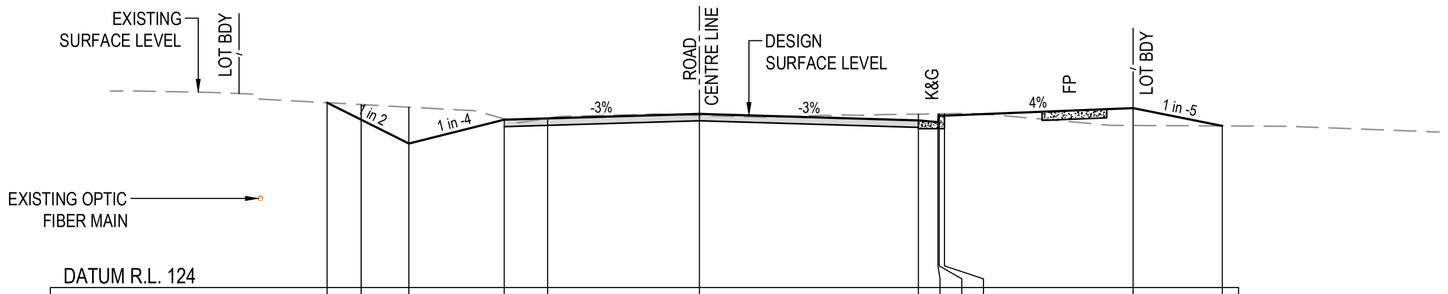
Page 25 of 68



DATUM R.L. 124

DESIGN SURFACE LEVEL	128.277	127.818	127.268	127.818	127.848	127.953	127.801	127.761	127.911	127.911	128.085	127.667
EXISTING SURFACE LEVEL	128.277	128.229	128.172	127.805	127.969	128.052	128.069	128.065	128.065	128.063	127.735	127.667
OFFSET	-8.718	-7.8	-6.7	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10	12.09

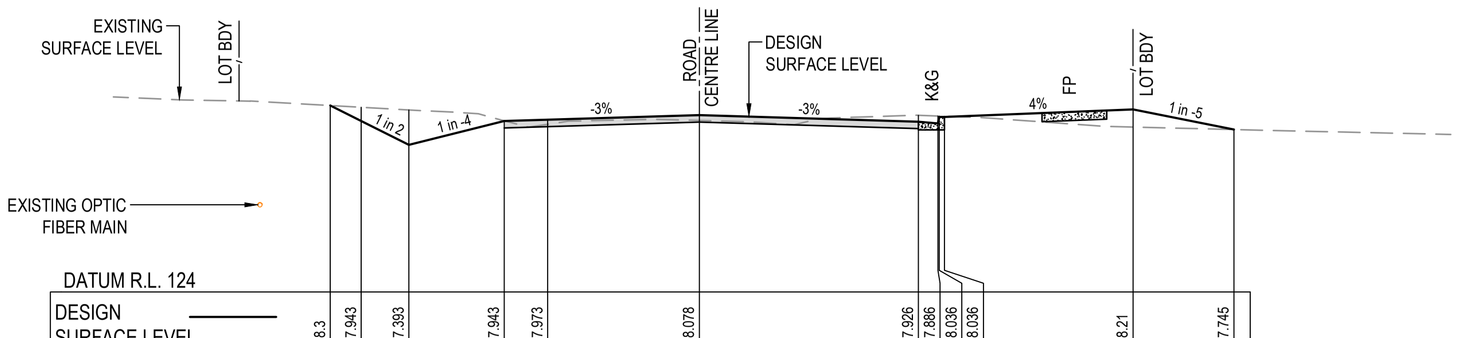
CH 495



DATUM R.L. 124

DESIGN SURFACE LEVEL	128.262	127.87	127.32	127.87	127.9	128.005	127.854	127.814	127.964	127.964	128.138	127.726
EXISTING SURFACE LEVEL	128.262	128.22	128.16	127.888	127.902	127.969	127.999	128.005	128.006	128.007	127.737	127.726
OFFSET	-8.584	-7.8	-6.7	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10	12.057

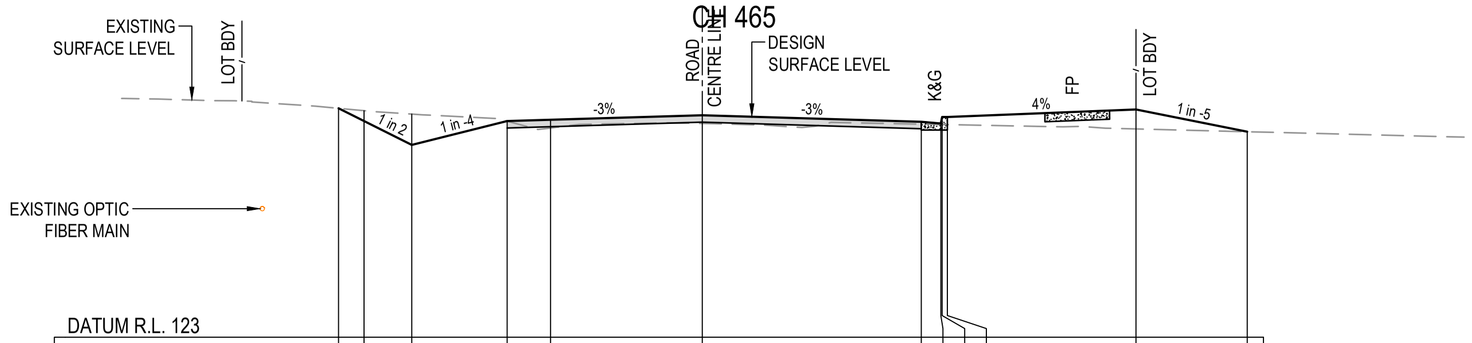
CH 480



DATUM R.L. 124

DESIGN SURFACE LEVEL	128.3	127.943	127.393	127.943	127.973	128.078	127.926	127.886	128.036	128.036	128.21	127.745
EXISTING SURFACE LEVEL	128.3	128.259	128.197	127.948	127.867	127.955	128.074	128.058	128.057	128.052	127.803	127.745
OFFSET	-8.513	-7.8	-6.7	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10	12.327

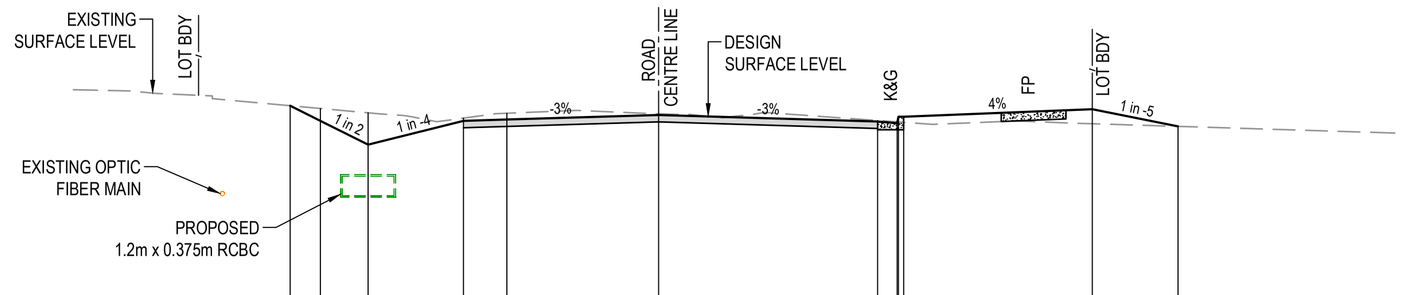
CH 465



DATUM R.L. 123

DESIGN SURFACE LEVEL	128.278	127.984	127.434	127.984	128.014	128.119	127.967	127.927	128.077	128.077	128.251	127.738
EXISTING SURFACE LEVEL	128.278	128.223	128.145	127.981	127.825	127.929	127.914	127.905	127.905	127.902	127.802	127.738
OFFSET	-8.389	-7.8	-6.7	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10	12.565

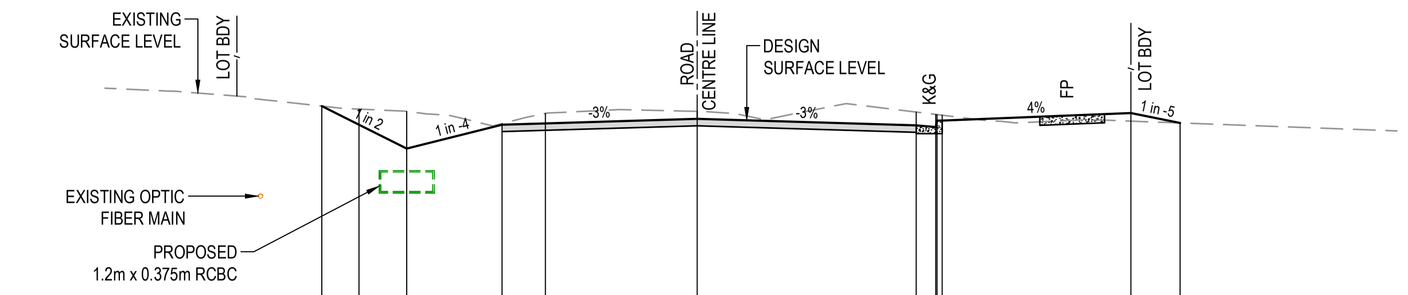
CH 450



DATUM R.L. 123

DESIGN SURFACE LEVEL	128.309	127.961	127.411	127.961	127.991	128.096	127.944	127.904	128.054	128.054	128.228	127.833
EXISTING SURFACE LEVEL	128.309	128.245	128.146	128.023	128.135	128.118	127.969	127.937	127.935	127.927	127.894	127.833
OFFSET	-8.496	-7.8	-6.7	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10	11.977

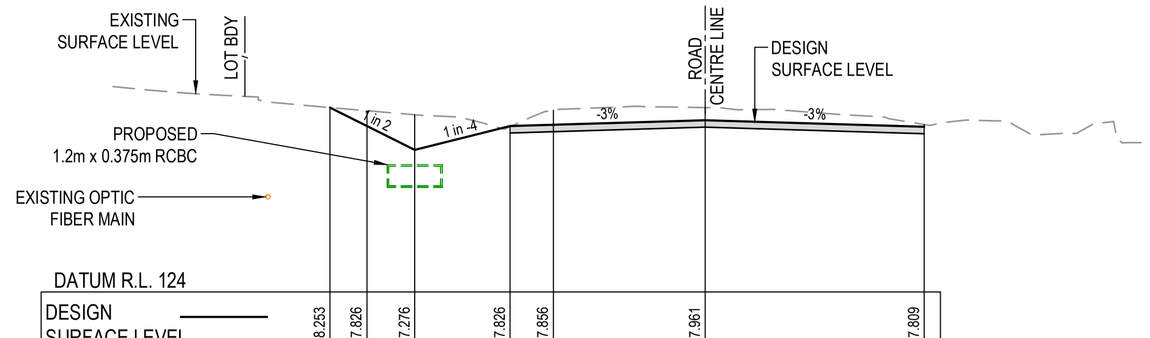
CH 555



DATUM R.L. 123

DESIGN SURFACE LEVEL	128.314	127.886	127.336	127.886	127.916	128.021	127.869	127.829	127.979	127.979	128.153	127.926
EXISTING SURFACE LEVEL	128.314	128.245	128.191	127.911	128.146	128.194	128.177	128.123	128.119	128.104	127.968	127.926
OFFSET	-8.657	-7.8	-6.7	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10	11.135

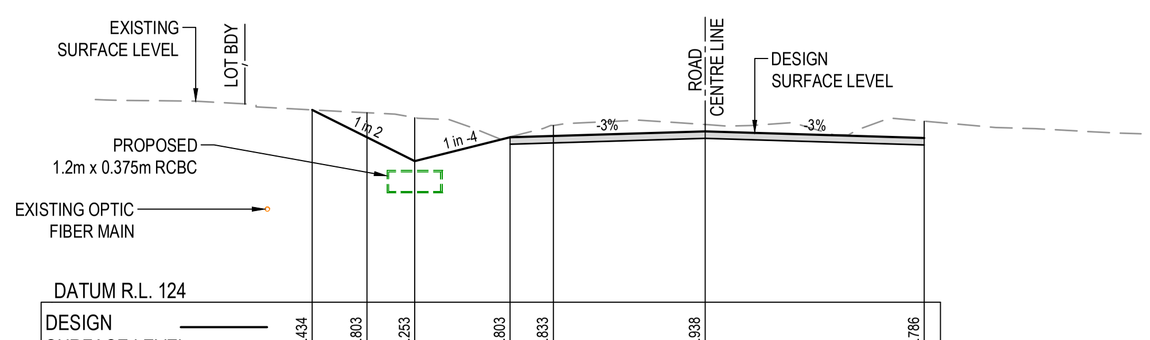
CH 540



DATUM R.L. 124

DESIGN SURFACE LEVEL	128.253	127.826	127.276	127.826	127.856	127.961	127.809
EXISTING SURFACE LEVEL	128.253	128.18	128.087	127.811	128.193	128.251	127.86
OFFSET	-8.654	-7.8	-6.7	-4.5	-3.5	0	5.05

CH 525



DATUM R.L. 124

DESIGN SURFACE LEVEL	128.434	127.803	127.253	127.803	127.833	127.938	127.786
EXISTING SURFACE LEVEL	128.434	128.369	128.255	127.813	128.074	128.098	128.175
OFFSET	-9.063	-7.8	-6.7	-4.5	-3.5	0	5.05

CH 510

sharon pope

Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

0 1cm at full size 10cm 20cm

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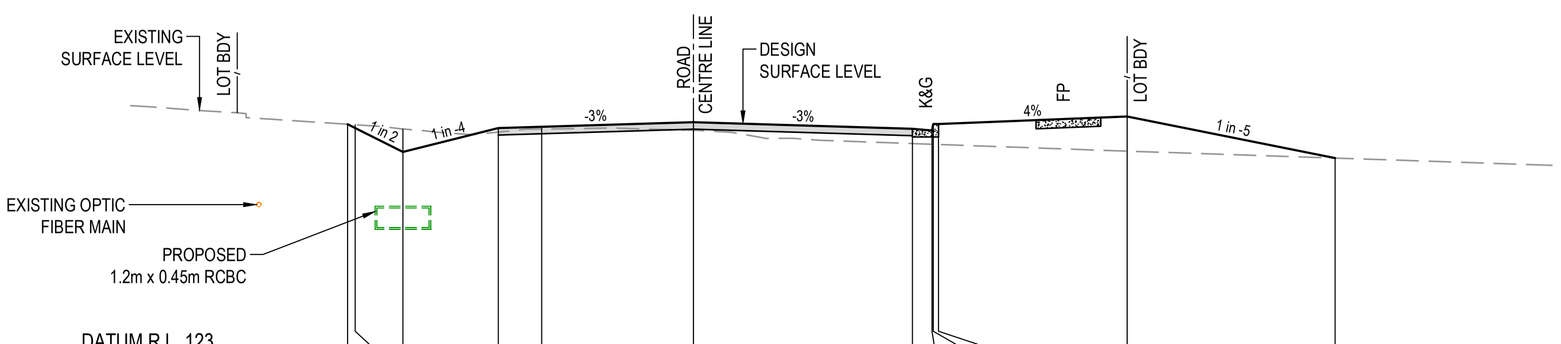
Project: PROPOSED RESIDENTIAL SUBDIVISION ALMOND STREET, DENMAN CIVIL ENGINEERING PLANS VOLUNTARY PLANNING AGREEMENT

Drawing Title: ALMOND STREET CROSS SECTIONS SHEET 6

Scale A1	Project No.	Dwg. No.	Issue
1:100	22048	425	A

Docusign Envelope ID: 468845CE-3355-8491-8275-0706B4B8E4346

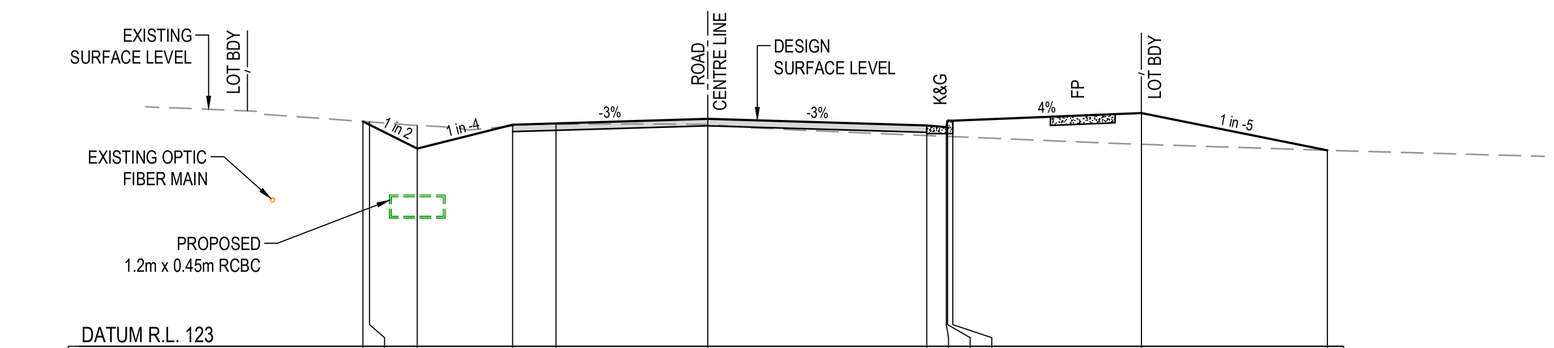
Page 26 of 68



DATUM R.L. 123

DESIGN SURFACE LEVEL	128.274	128.186	127.636	128.186	128.216	128.321	128.169	128.129	128.279	128.279	128.453	127.494
EXISTING SURFACE LEVEL	128.274	128.262	128.165	128.092	128.164	128.135	127.829	127.813	127.812	127.807	127.654	127.494
OFFSET	-7.977	-7.8	-6.7	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10	14.798

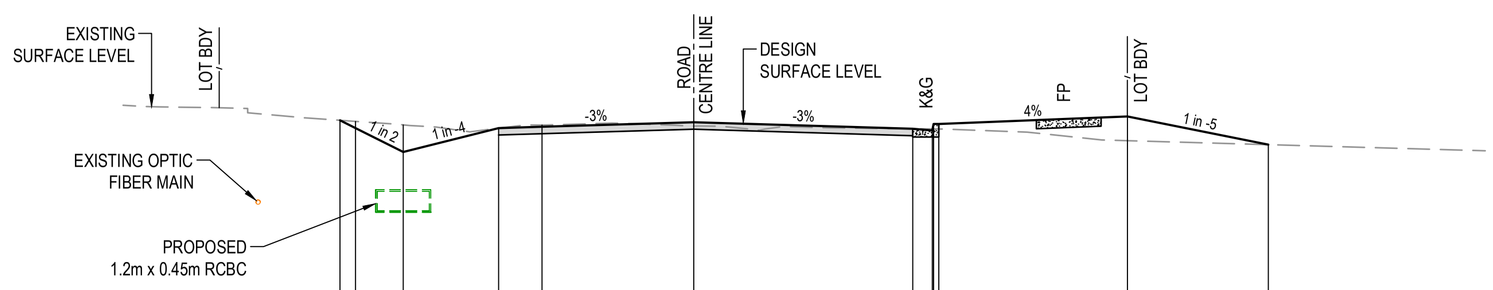
CH 600



DATUM R.L. 123

DESIGN SURFACE LEVEL	128.187	128.111	127.561	128.111	128.141	128.246	128.094	128.054	128.204	128.204	128.378	127.521
EXISTING SURFACE LEVEL	128.187	128.176	128.095	128.081	128.125	128.115	127.861	127.842	127.841	127.836	127.659	127.521
OFFSET	-7.953	-7.8	-6.7	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10	14.288

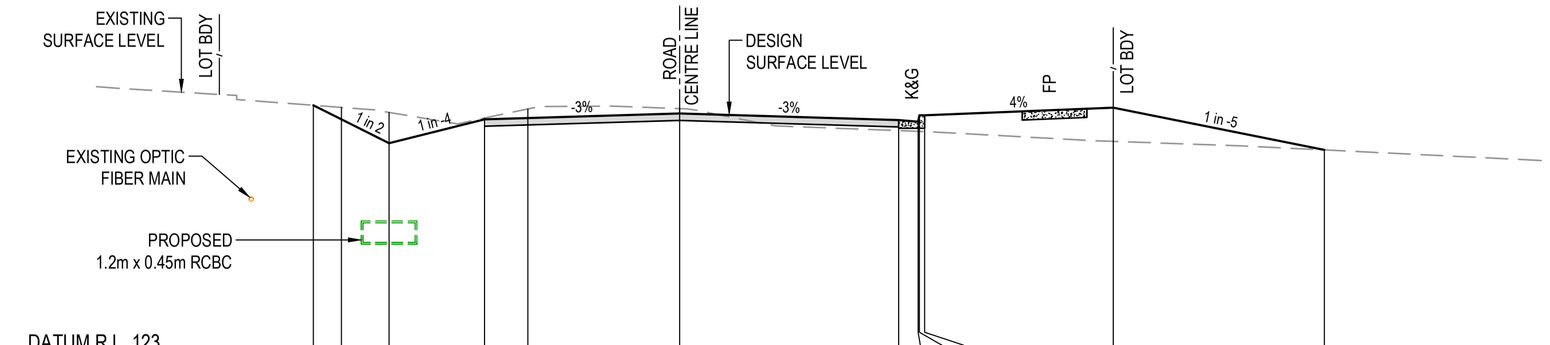
CH 585



DATUM R.L. 123

DESIGN SURFACE LEVEL	128.215	128.035	127.486	128.036	128.066	128.171	128.019	127.979	128.129	128.129	128.303	127.653
EXISTING SURFACE LEVEL	128.215	128.19	128.109	128.034	128.105	128.082	128.021	128.016	128.015	128.014	127.745	127.653
OFFSET	-8.159	-7.8	-6.7	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10	13.25

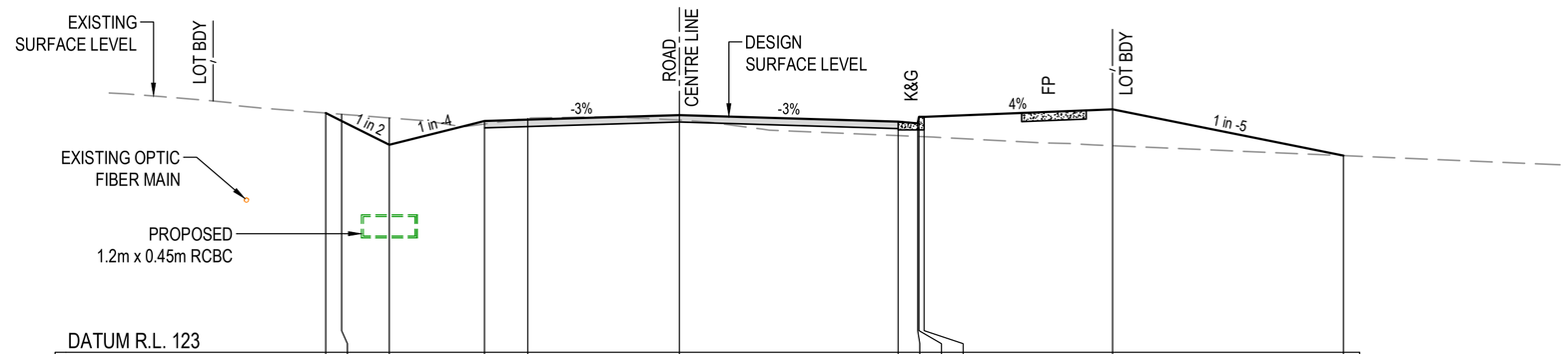
CH 570



DATUM R.L. 123

DESIGN SURFACE LEVEL	128.734	128.41	127.86	128.41	128.44	128.545	128.394	128.354	128.504	128.504	128.678	127.704
EXISTING SURFACE LEVEL	128.734	128.685	128.57	128.439	128.649	128.657	128.151	128.132	128.131	128.126	127.901	127.704
OFFSET	-8.447	-7.8	-6.7	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10	14.867

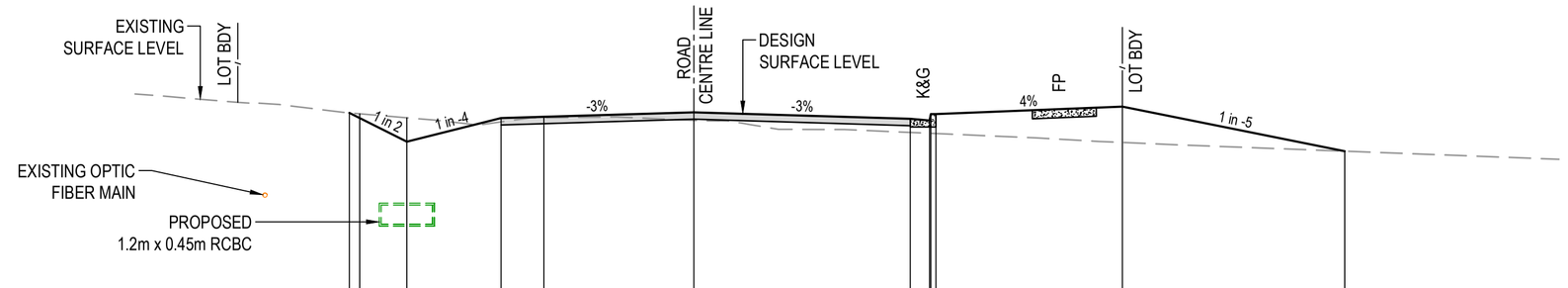
CH 645



DATUM R.L. 123

DESIGN SURFACE LEVEL	128.518	128.335	127.785	128.335	128.365	128.47	128.319	128.279	128.429	128.429	128.603	127.536
EXISTING SURFACE LEVEL	128.518	128.49	128.405	128.265	128.395	128.355	127.998	127.979	127.977	127.972	127.764	127.536
OFFSET	-8.165	-7.8	-6.7	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10	15.332

CH 630



DATUM R.L. 123

DESIGN SURFACE LEVEL	128.381	128.261	127.711	128.261	128.291	128.395	128.244	128.204	128.354	128.354	128.528	127.49
EXISTING SURFACE LEVEL	128.381	128.361	128.268	128.172	128.269	128.206	127.927	127.907	127.906	127.901	127.693	127.49
OFFSET	-8.042	-7.8	-6.7	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10	15.191

CH 615

sharon pope

Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

0 1cm at full size 10cm 20cm

Certification By Dr. Michel Chaaya B.E., M.E. (Res), Ph.D., F.I.E. Aust., CPEng., Civil & Structural Engineer

Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale: 0 2 4 6 m — SCALE 1:100 @ A1

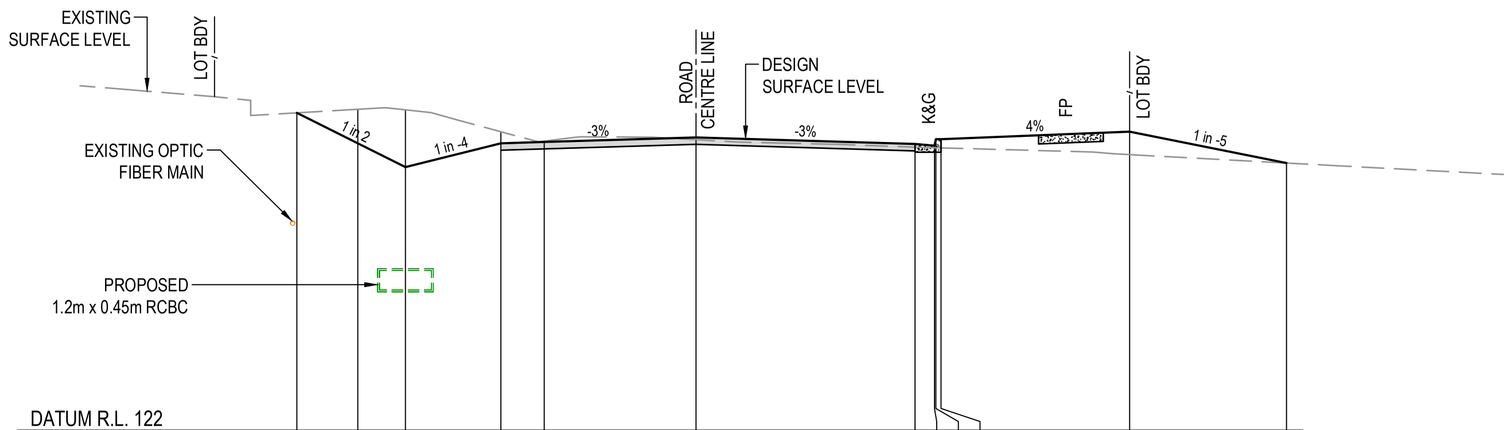
TELFORD CIVIL
CONSULTING CIVIL & STORMWATER ENGINEERS
Level 14, 32 Smith Street, Parramatta NSW 2150
PO BOX 3579 Parramatta 2124
Email : info@telfordcivil.com.au
Phone : 02 7809 4931
Trading As : Telford Consulting Pty Ltd

Project: PROPOSED RESIDENTIAL SUBDIVISION ALMOND STREET, DENMAN CIVIL ENGINEERING PLANS VOLUNTARY PLANNING AGREEMENT

Drawing Title: ALMOND STREET CROSS SECTIONS SHEET 7

Scale A1	Project No.	Dwg. No.	Issue
1:100	22048	426	A

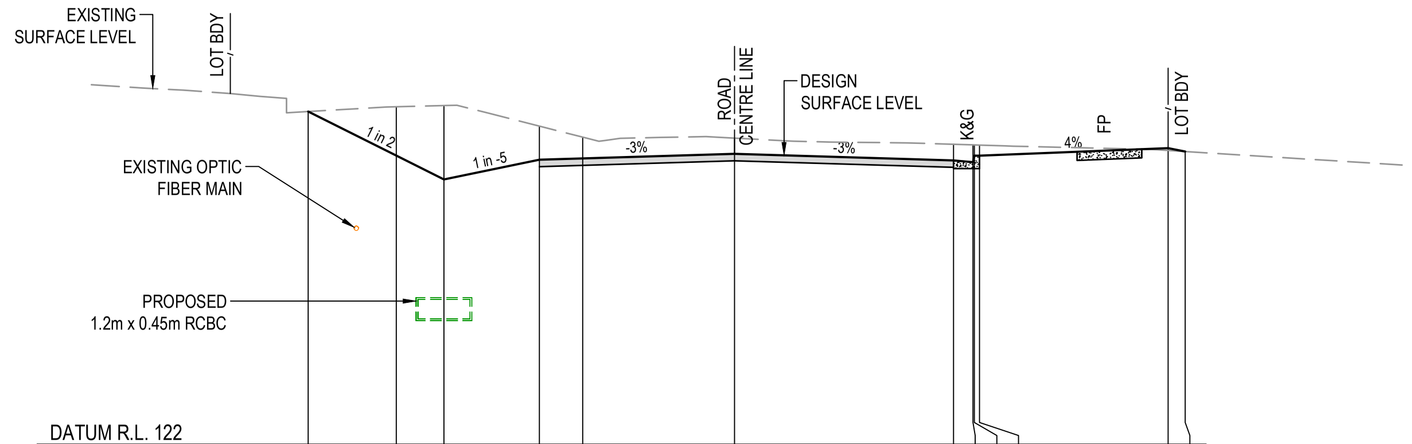
Page 27 of 98
Docusign Envelope ID: 4868445CE-3355-8491-8275-0769B4B8E4346



DATUM R.L. 122

DESIGN SURFACE LEVEL	129.319	128.617	128.067	128.617	128.647	128.752	128.6	128.56	128.71	128.71	128.884	128.161
EXISTING SURFACE LEVEL	129.319	129.4	129.388	128.883	128.666	128.7	128.527	128.515	128.514	128.511	128.355	128.161
OFFSET	-9.204	-7.8	-6.7	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10	13.615

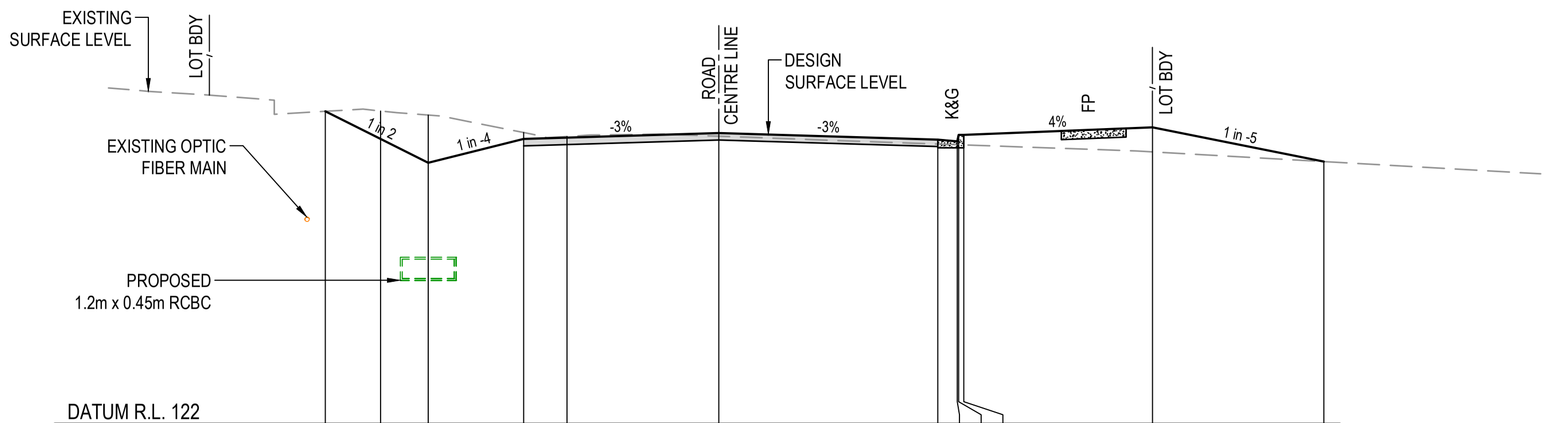
CH 690



DATUM R.L. 122

DESIGN SURFACE LEVEL	129.671	128.656	128.106	128.561	128.591	128.696	128.544	128.504	128.654	128.654	128.828	128.75
EXISTING SURFACE LEVEL	129.671	129.782	129.809	129.335	129.081	129.059	128.916	128.903	128.902	128.898	128.774	128.75
OFFSET	-9.831	-7.8	-6.7	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10	10.393

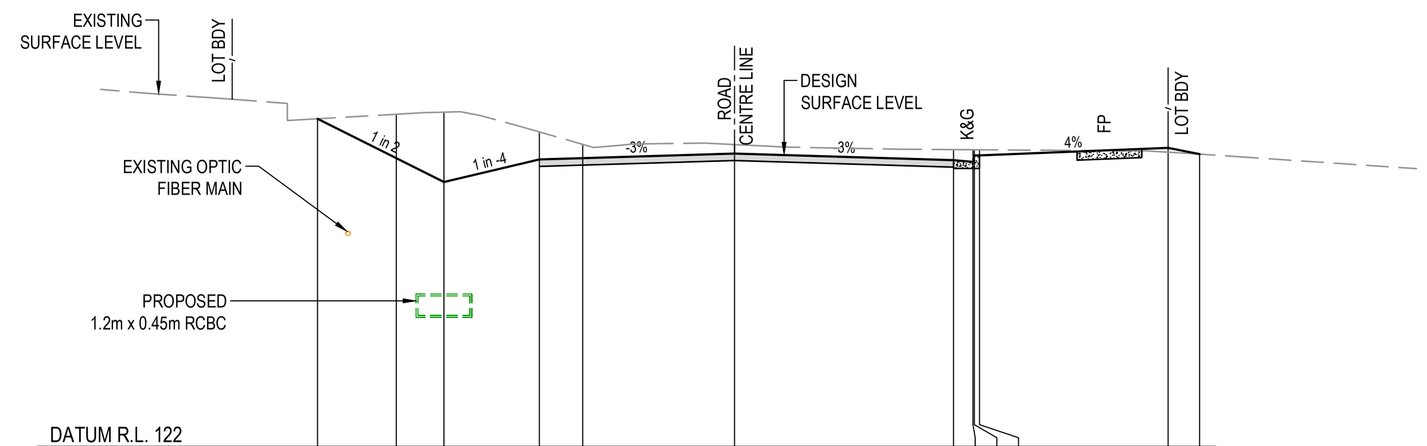
CH 735



DATUM R.L. 122

DESIGN SURFACE LEVEL	129.197	128.56	128.01	128.56	128.59	128.695	128.544	128.504	128.654	128.654	128.828	128.037
EXISTING SURFACE LEVEL	129.197	129.205	129.111	128.708	128.616	128.623	128.442	128.427	128.426	128.421	128.261	128.037
OFFSET	-9.073	-7.8	-6.7	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10	13.952

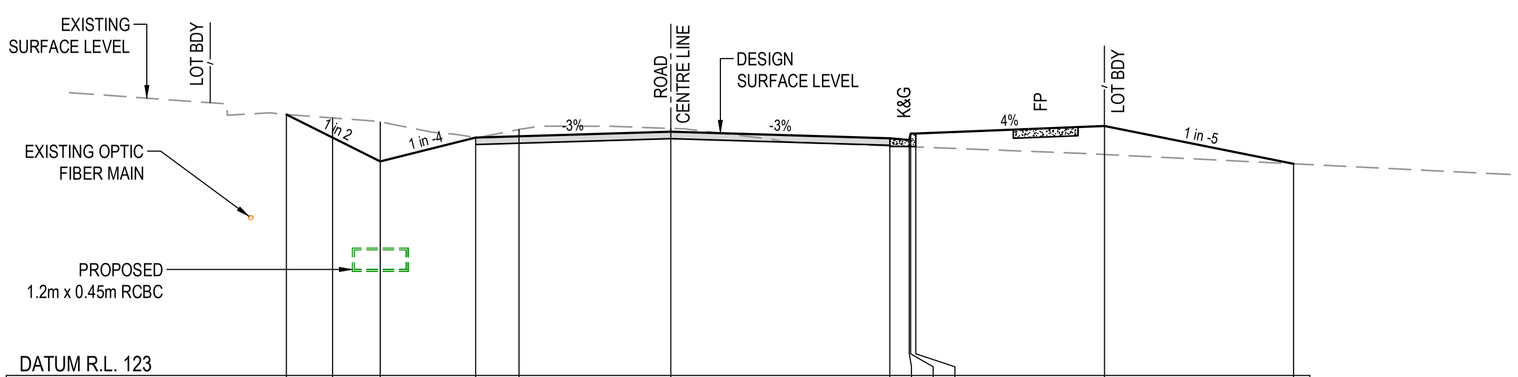
CH 675



DATUM R.L. 122

DESIGN SURFACE LEVEL	129.554	128.646	128.096	128.617	128.647	128.752	128.6	128.56	128.71	128.71	128.884	128.739
EXISTING SURFACE LEVEL	129.554	129.66	129.708	129.252	128.965	128.96	128.844	128.841	128.841	128.84	128.785	128.739
OFFSET	-9.616	-7.8	-6.7	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10	10.725

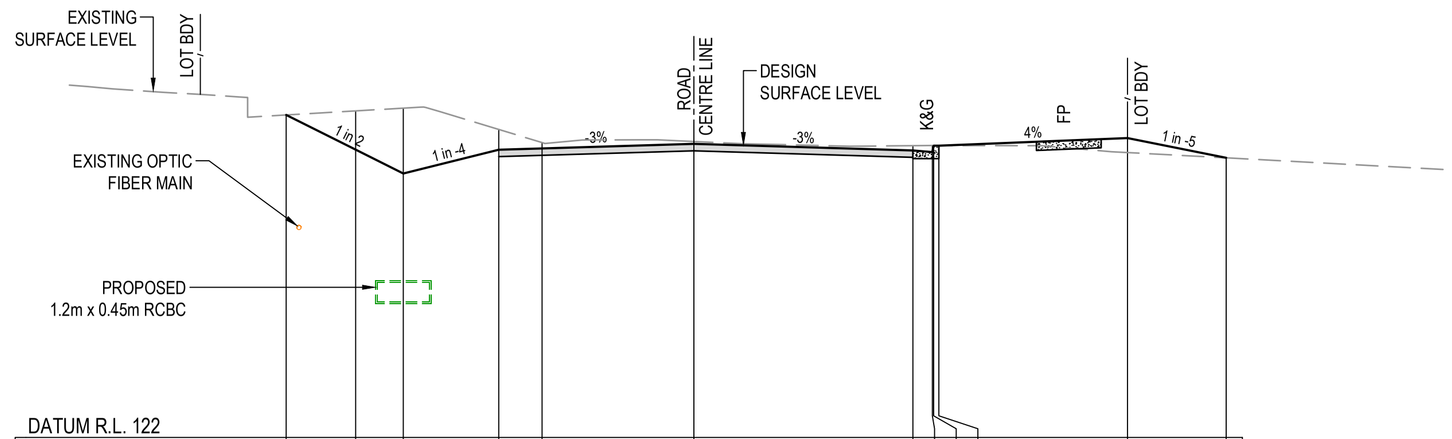
CH 720



DATUM R.L. 123

DESIGN SURFACE LEVEL	129.018	128.485	127.935	128.485	128.515	128.62	128.469	128.429	128.579	128.579	128.753	127.881
EXISTING SURFACE LEVEL	129.018	128.938	128.848	128.49	128.672	128.696	128.294	128.276	128.275	128.27	128.096	127.881
OFFSET	-8.865	-7.8	-6.7	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10	14.361

CH 660



DATUM R.L. 122

DESIGN SURFACE LEVEL	129.437	128.637	128.087	128.635	128.666	128.771	128.619	128.579	128.729	128.729	128.903	128.448
EXISTING SURFACE LEVEL	129.437	129.53	129.594	129.103	128.799	128.825	128.729	128.732	128.732	128.732	128.57	128.448
OFFSET	-9.401	-7.8	-6.7	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10	12.274

CH 705

sharon pope

Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

0 1cm at full size 10cm 20cm

Certification By Dr. Michel Chaaya B.E., M.E. (Res), Ph.D., F.I.E. Aust., CPEng., Civil & Structural Engineer

Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale: 0 2 4 6 m — SCALE 1:100 @ A1

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Trading As : Telford Consulting Pty Ltd

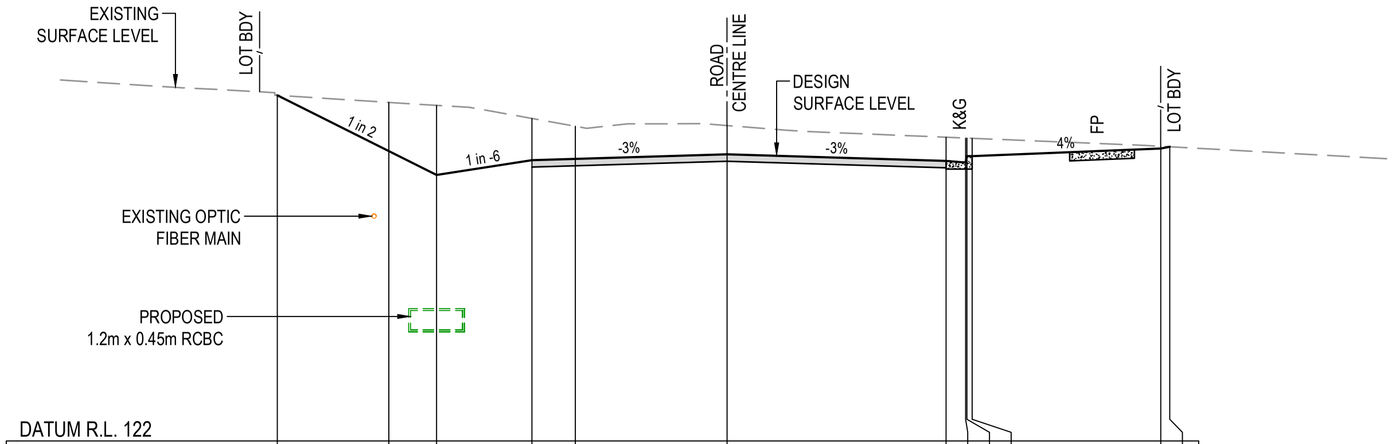
Project: PROPOSED RESIDENTIAL SUBDIVISION ALMOND STREET, DENMAN CIVIL ENGINEERING PLANS VOLUNTARY PLANNING AGREEMENT

Drawing Title: ALMOND STREET CROSS SECTIONS SHEET 8

Scale	Project No.	Dwg. No.	Issue
1:100 A1	22048	427	A

Docusign Envelope ID: 468645CE-3355-8491-8275-07B94B8E4346

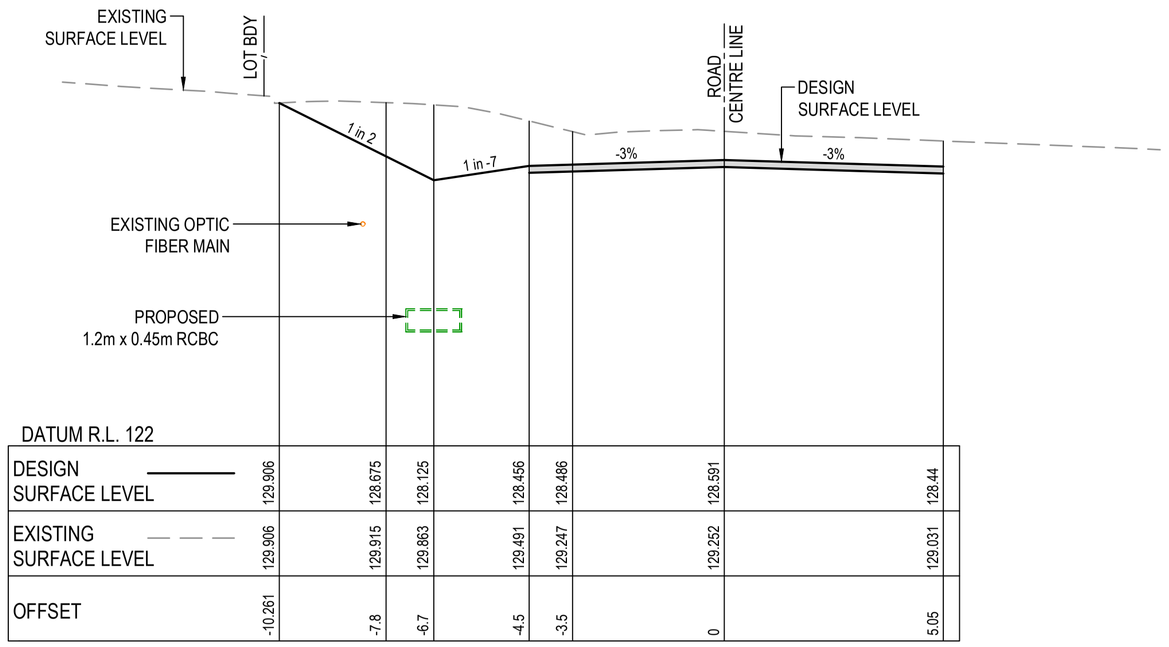
Page 28 of 68



DATUM R.L. 122

DESIGN SURFACE LEVEL	129.97	128.685	128.135	128.475	128.505	128.61	128.459	128.419	128.569	128.569	128.743	128.784
EXISTING SURFACE LEVEL	129.97	129.807	129.739	129.437	129.257	129.274	129.004	128.966	128.984	128.979	128.796	128.784
OFFSET	-10.371	-7.8	-6.7	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10	10.208

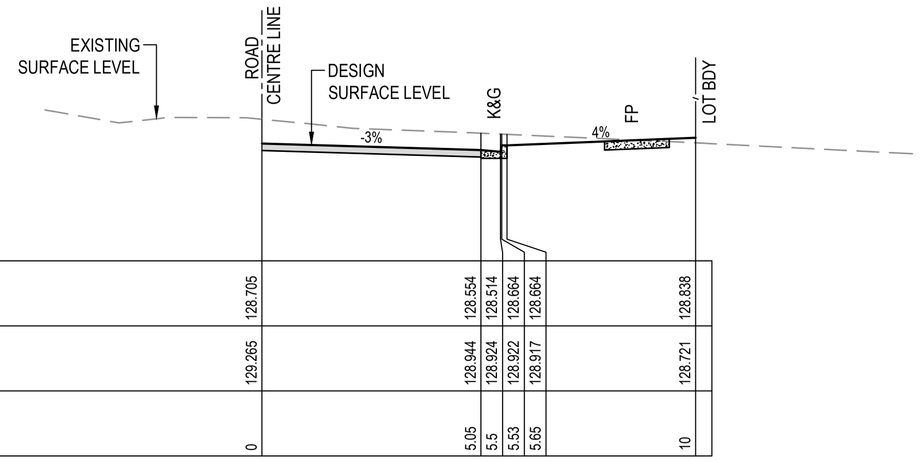
CH 780



DATUM R.L. 122

DESIGN SURFACE LEVEL	129.906	128.675	128.125	128.456	128.486	128.591	128.44
EXISTING SURFACE LEVEL	129.906	129.915	129.863	129.491	129.247	129.252	129.031
OFFSET	-10.261	-7.8	-6.7	-4.5	-3.5	0	5.05

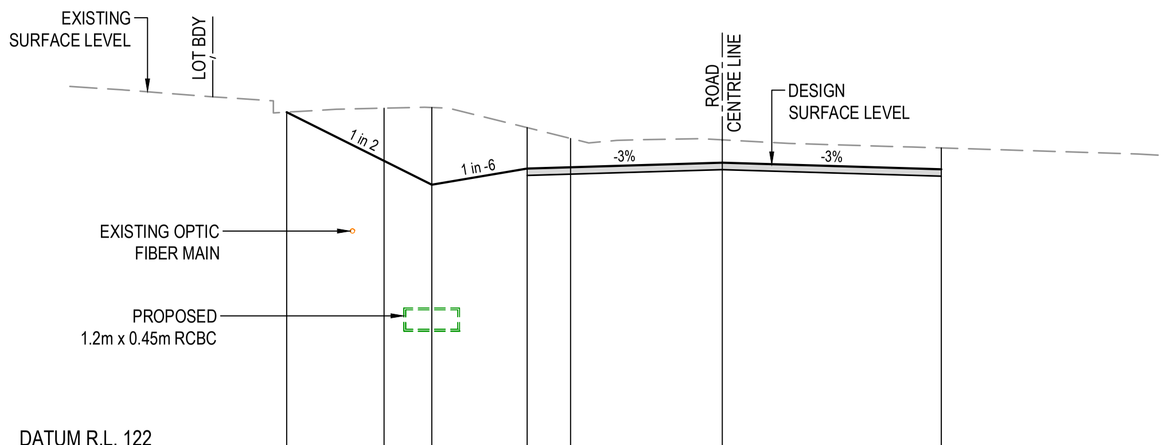
CH 765



DATUM R.L. 126

DESIGN SURFACE LEVEL	128.705	128.554	128.514	128.664	128.664	128.838
EXISTING SURFACE LEVEL	129.265	128.944	128.924	128.922	128.917	128.721
OFFSET	0	5.05	5.5	5.53	5.65	10

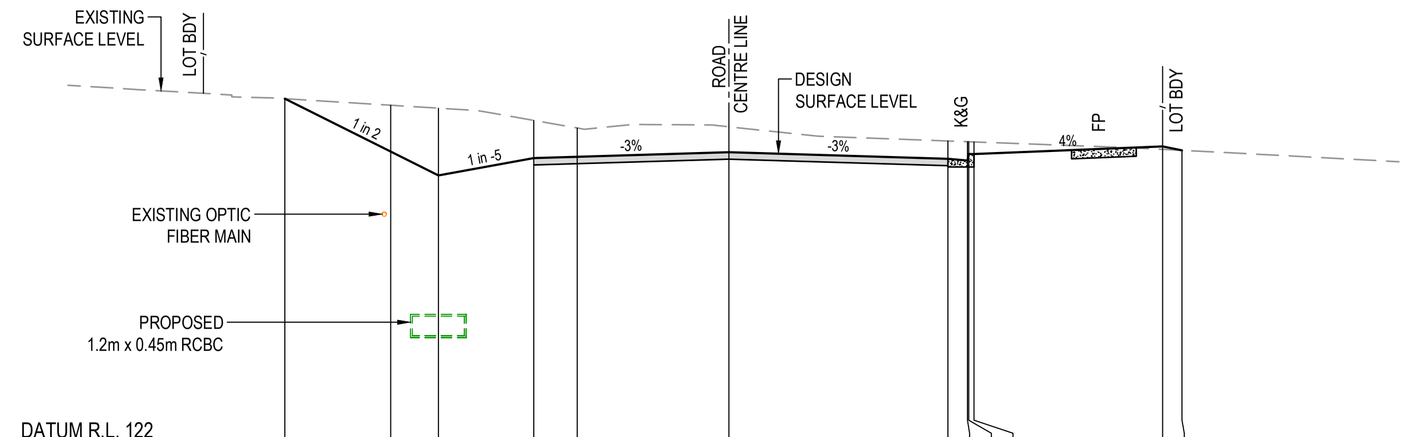
CH 798.615



DATUM R.L. 122

DESIGN SURFACE LEVEL	129.789	128.666	128.116	128.489	128.519	128.624	128.472
EXISTING SURFACE LEVEL	129.789	129.882	129.896	129.432	129.183	129.151	128.964
OFFSET	-10.046	-7.8	-6.7	-4.5	-3.5	0	5.05

CH 750



DATUM R.L. 122

DESIGN SURFACE LEVEL	129.914	128.695	128.145	128.546	128.576	128.681	128.529	128.489	128.639	128.639	128.813	128.724
EXISTING SURFACE LEVEL	129.914	129.764	129.696	129.414	129.239	129.267	128.94	128.923	128.922	128.918	128.746	128.724
OFFSET	-10.239	-7.8	-6.7	-4.5	-3.5	0	5.05	5.5	5.53	5.65	10	10.448

CH 795

sharon pope

Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

0 1cm at full size 10cm 20cm

Certification By Dr. Michel Chaaya B.E., M.E. (Res.), Ph.D., F.I.E. Aust., CPEng., Civil & Structural Engineer

Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale: 0 2 4 6 m — SCALE 1:100 @ A1

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Email : info@telfordcivil.com.au
Phone : 02 7809 4931
Trading As : Telford Consulting Pty Ltd

Project: PROPOSED RESIDENTIAL SUBDIVISION ALMOND STREET, DENMAN CIVIL ENGINEERING PLANS VOLUNTARY PLANNING AGREEMENT

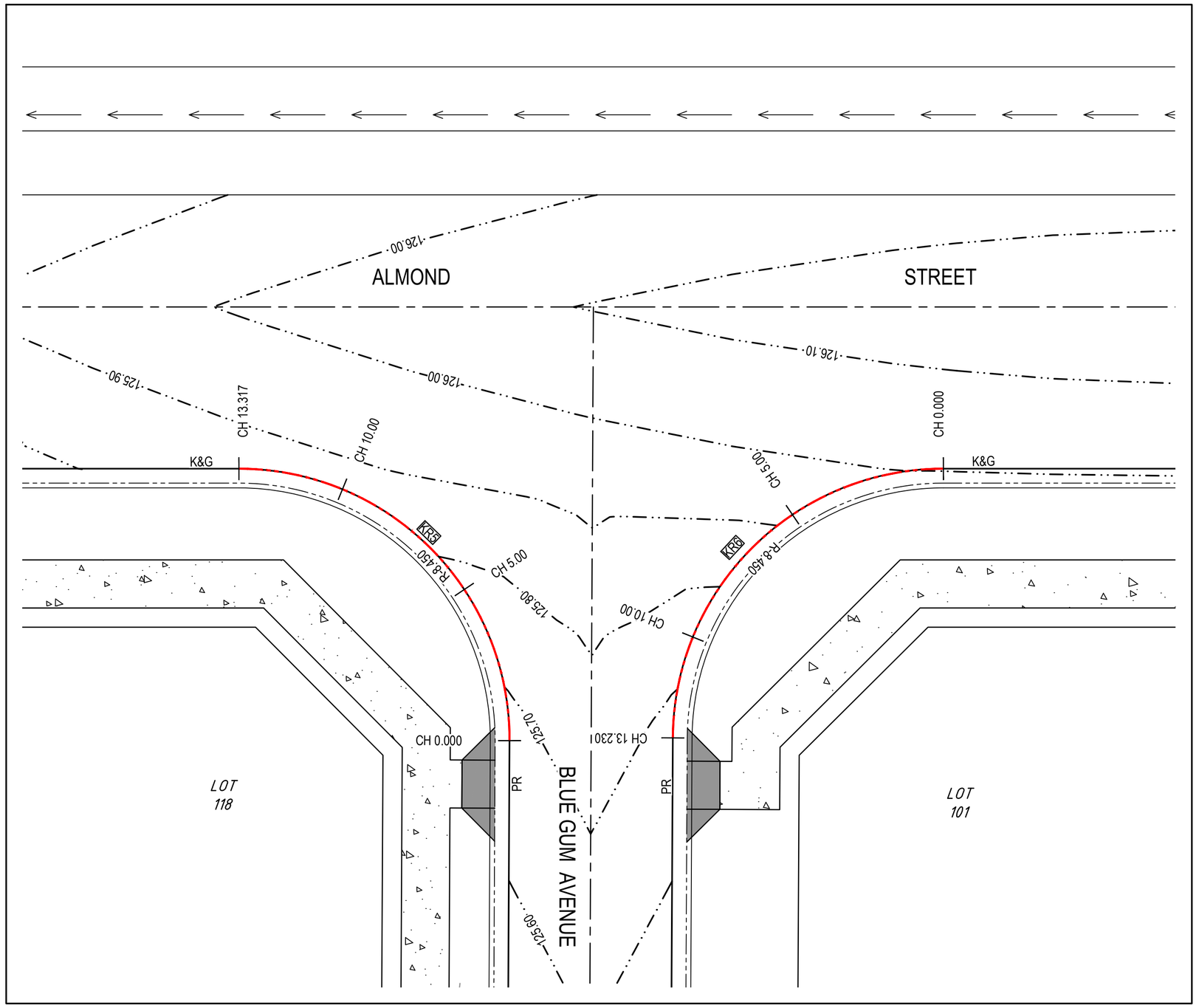
Drawing Title: ALMOND STREET CROSS SECTIONS SHEET 9

Scale A1	Project No.	Dwg. No.	Issue
1:100	22048	428	A

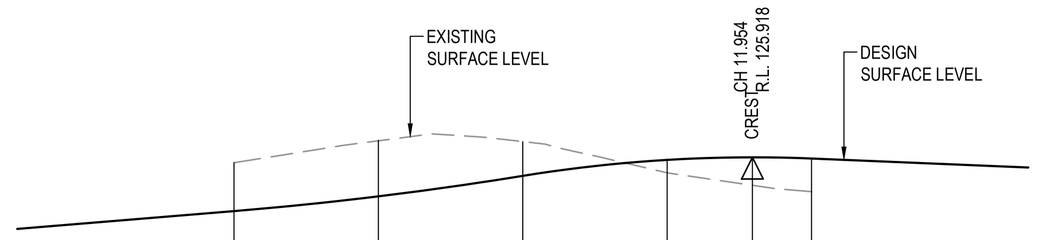
Docusign Envelope ID: 468845CE-3355-8491-8275-0798ABBE4346

LEGEND

- RK — PROPOSED ROLLER KERB
- PROPOSED ROAD CENTERLINE
- PROPOSED CONTROL LINE
- 125.0 — PROPOSED DESIGN CONTOURS
- PROPOSED SWALE
- KR1 — PROPOSED KERB RETURN
- PROPOSED CONCRETE FOOTPATH
- PR — PROPOSED PRAM RAMP

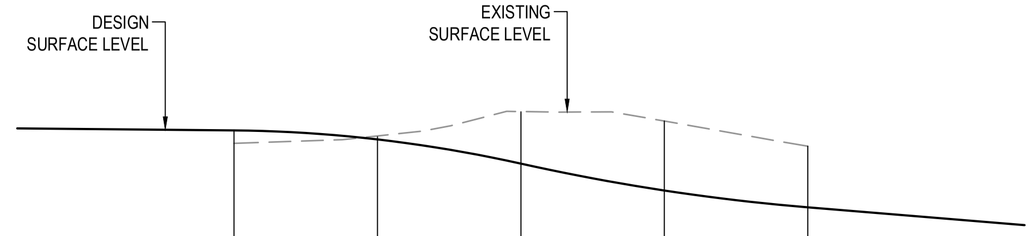


KERB RETURN
ALMOND STREET - BLUE GUM AVENUE
SCALE 1:100



V.C.		6.658VC		6.658VC		
GRADE	1.646%		3.232%		-0.831%	
HORIZ. GEOMETRY			R-8.45			
DATUM R.L. 124						
WAE LEVEL						
DESIGN LEVEL	125.67	125.738	125.833	125.906	125.918	125.912
EXISTING LEVEL	125.893	125.996	125.99	125.847	125.785	125.76
CHAINAGE	0	3.329	6.658	9.987	11.954	13.317

KERB RETURN 5 - LONGITUDINAL SECTION - (BLUE GUM AVENUE - ALMOND STREET)
SCALE 1:100 (H)
SCALE 1:20 (V)



V.C.		6.615VC		6.615VC	
GRADE	-0.19%		-4.443%		-1.646%
HORIZ. GEOMETRY			R-8.45		
DATUM R.L. 124					
WAE LEVEL					
DESIGN LEVEL	126.025	125.983	125.872	125.748	125.67
EXISTING LEVEL	125.965	125.995	126.111	126.068	125.952
CHAINAGE	0	3.307	6.615	9.922	13.23

KERB RETURN 6 - LONGITUDINAL SECTION - (ALMOND STREET - BLUE GUM AVENUE)
SCALE 1:100 (H)
SCALE 1:20 (V)

KERB RETURN 5 SETOUT TABLE								
PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	282079.749	6415325.151	125.670	278°25'33.00"			
IP 2	6.658	282071.348	6415326.396	125.833		R = -8.450	13.317	90°17'40.00"
IP 3	13.317	282070.146	6415317.988	125.912	188°07'53.00"			

KERB RETURN 6 SETOUT TABLE								
PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	282073.258	6415339.767	126.025	188°07'53.00"			
IP 2	6.615	282072.069	6415331.445	125.872		R = -8.450	13.230	89°42'20.00"
IP 3	13.230	282080.385	6415330.213	125.670	98°25'33.00"			

sharon pope

Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

Certification By Dr. Michel Chaaya
B.E., M.E. (Res), Ph.D., F.I.E. Aust., CPEng.,
Civil & Structural Engineer

Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale: SCALE 1:100 @ A1 (0, 2, 4, 6 m); SCALE 1:20 @ A1 (0, 400, 800, 1200 mm)

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Project: PROPOSED RESIDENTIAL SUBDIVISION
ALMOND STREET, DENMAN
CIVIL ENGINEERING PLANS
VOLUNTARY PLANNING AGREEMENT

Drawing Title: INTERSECTION AND KERB RETURN DETAILS SHEET 1

Scale	Project No.	Dwg. No.	Issue
AS SHOWN A1	22048	500	A

Page 30 of 68
Docusign Envelope ID: 46B945CE-3355-8491-8275-07B84B8E4346

KERB RETURN 7 SETOUT TABLE

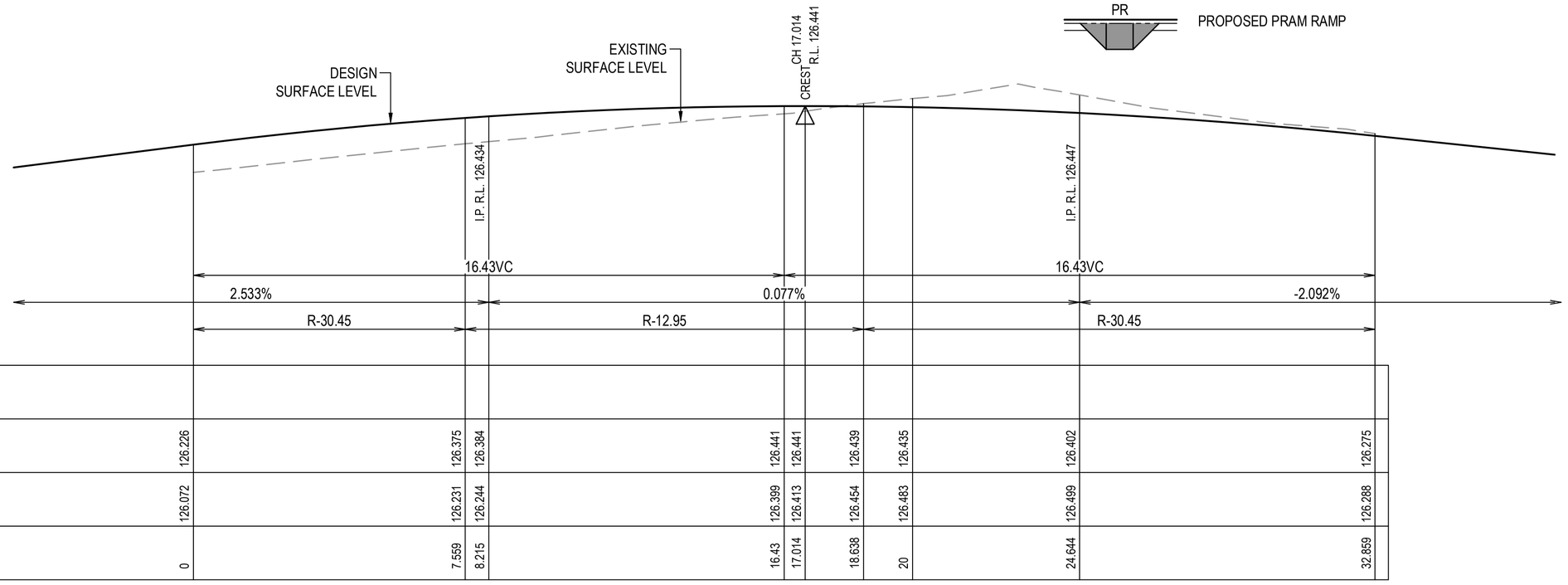
PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	282108.900	6415454.015	126.226	278°07'53.00"			
IP 2	3.779	282105.139	6415454.552	126.311		R = -30.450	7.559	14°13'22.09"
CC	7.559	282101.362	6415454.149	126.375	263°54'30.91"			
IP 3	13.098	282095.491	6415453.522	126.430		R = -12.950	11.079	49°01'01.92"
CC	18.638	282092.114	6415448.680	126.439	214°53'29.00"			
IP 4	25.748	282087.971	6415442.739	126.390		R = -30.450	14.222	26°45'36.00"
IP 5	32.859	282086.946	6415435.568	126.275	188°07'53.00"			

KERB RETURN 8 SETOUT TABLE

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	282095.471	6415495.231	127.283	188°07'53.00"			
IP 2	24.247	282091.149	6415464.983	126.839		R = -31.450	48.493	88°20'41.81"
CT	48.493	282121.259	6415459.790	125.975	99°47'11.19"			
IP 3	61.146	282133.728	6415457.639	125.617	99°47'11.19"			

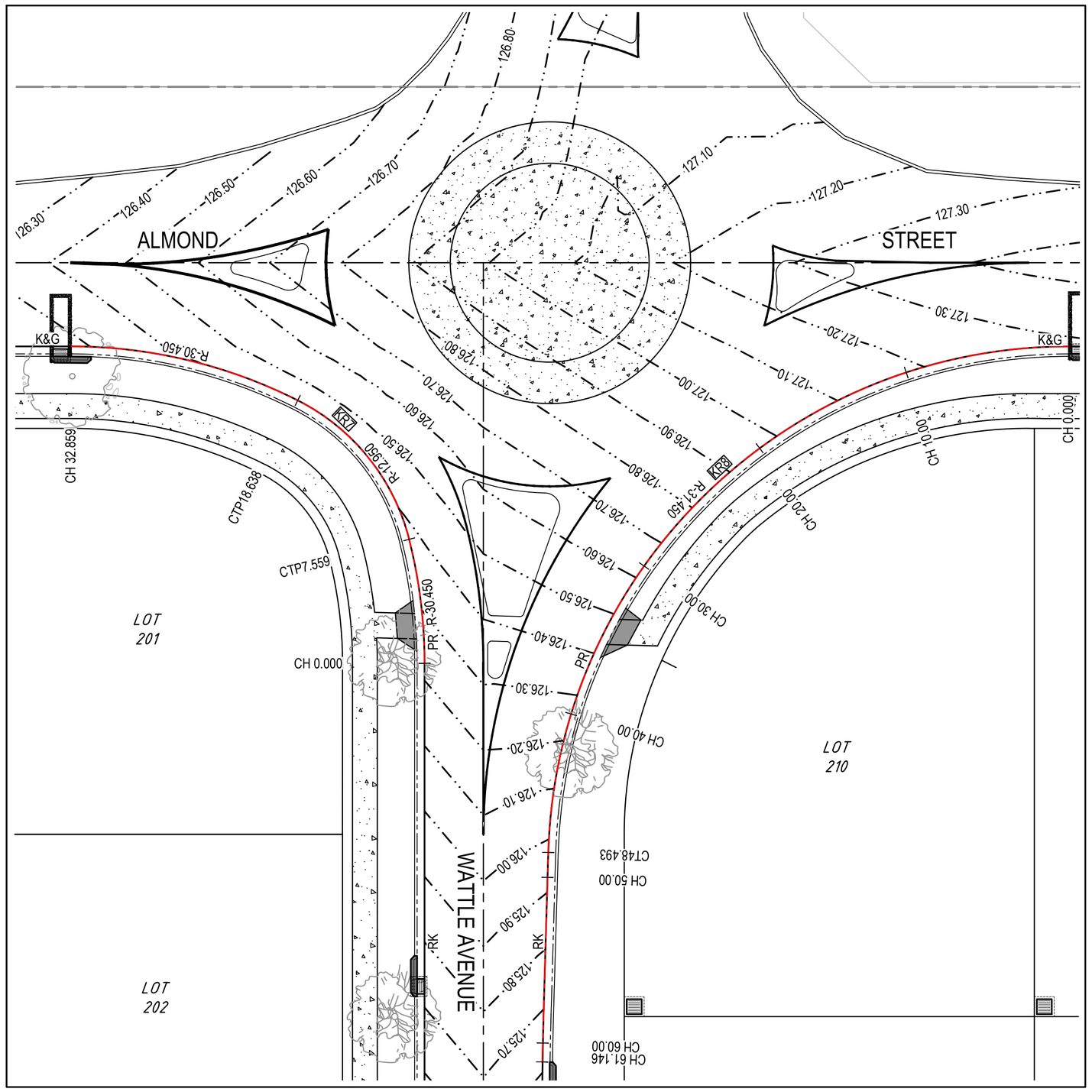
LEGEND

- K&G — PROPOSED KERB & GUTTER
- RK — PROPOSED ROLLER KERB
- PROPOSED ROAD CENTERLINE
- PROPOSED CONTROL LINE
- 125.0 — PROPOSED DESIGN CONTOURS
- KR1 — PROPOSED KERB RETURN
- PROPOSED KERB INLET PIT
- PROPOSED CONCRETE FOOTPATH
- PR — PROPOSED PRAM RAMP



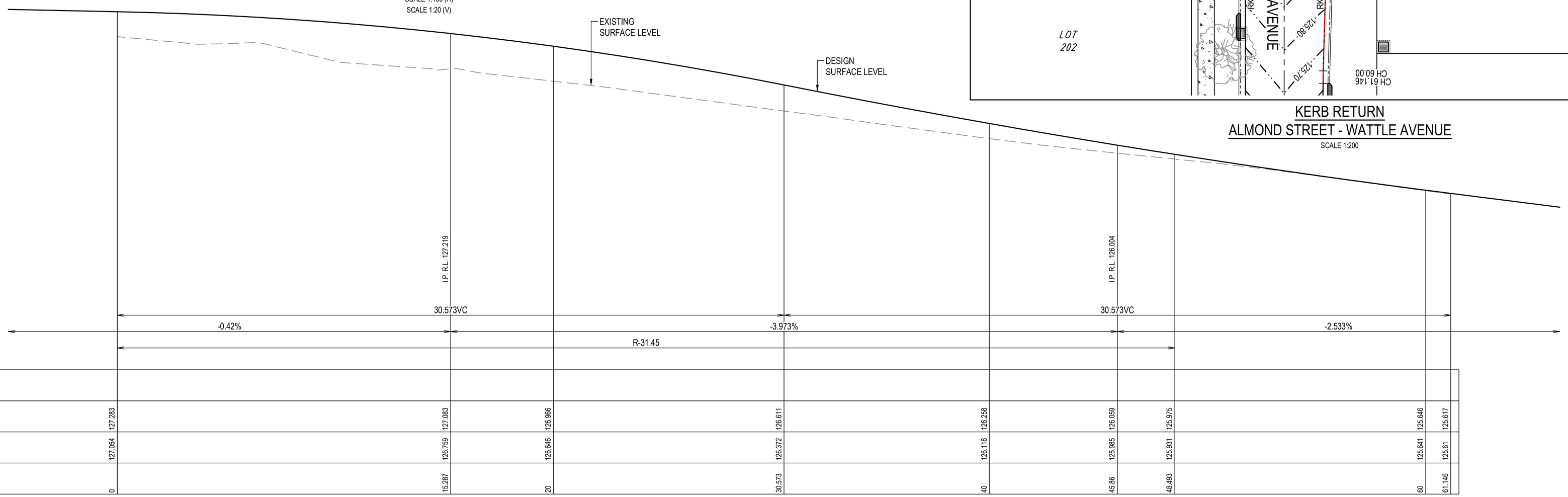
KERB RETURN 7 - LONGITUDINAL SECTION - (WATTLE AVENUE - ALMOND STREET)

SCALE 1:100 (H)
SCALE 1:20 (V)



KERB RETURN
ALMOND STREET - WATTLE AVENUE

SCALE 1:200



KERB RETURN 8 - LONGITUDINAL SECTION - (ALMOND STREET - WATTLE AVENUE)

SCALE 1:100 (H)
SCALE 1:20 (V)

sharon pope

Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

1cm at full size — 10cm — 20cm

Certification By Dr. Michel Chaaya
B.E., M.E. (Res), Ph.D., F.I.E. Aust., CPEng.,
Civil & Structural Engineer

Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale: SCALE 1:200 @ A1 (0, 2, 4, 6 m); SCALE 1:100 @ A1 (0, 400, 800, 1200 mm); SCALE 1:20 @ A1

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Project: PROPOSED RESIDENTIAL SUBDIVISION
ALMOND STREET, DENMAN
CIVIL ENGINEERING PLANS
VOLUNTARY PLANNING AGREEMENT

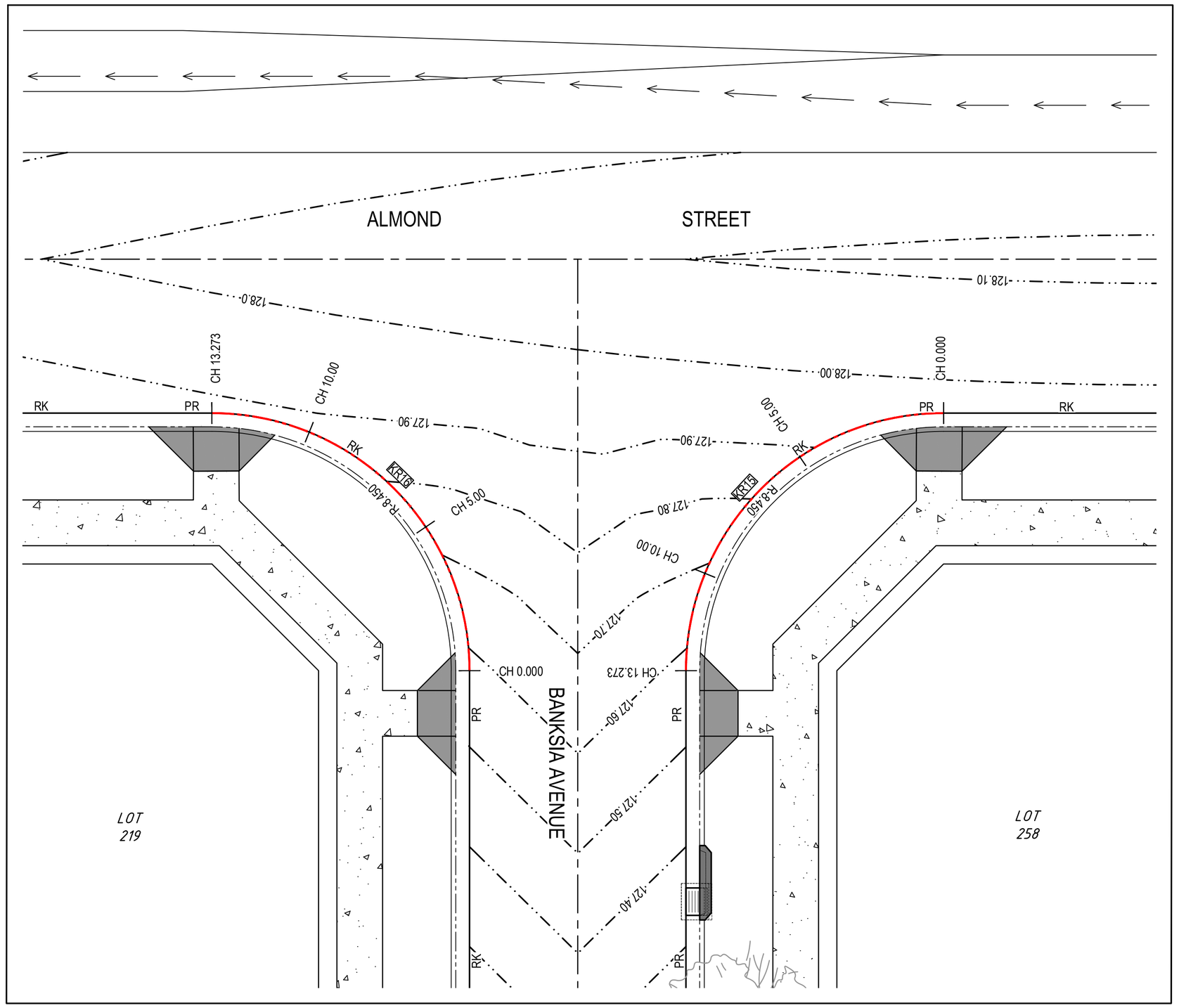
Drawing Title: INTERSECTION AND KERB RETURN DETAILS SHEET 2

Scale A1	Project No.	Dwg. No.	Issue
AS SHOWN	22048	501	A

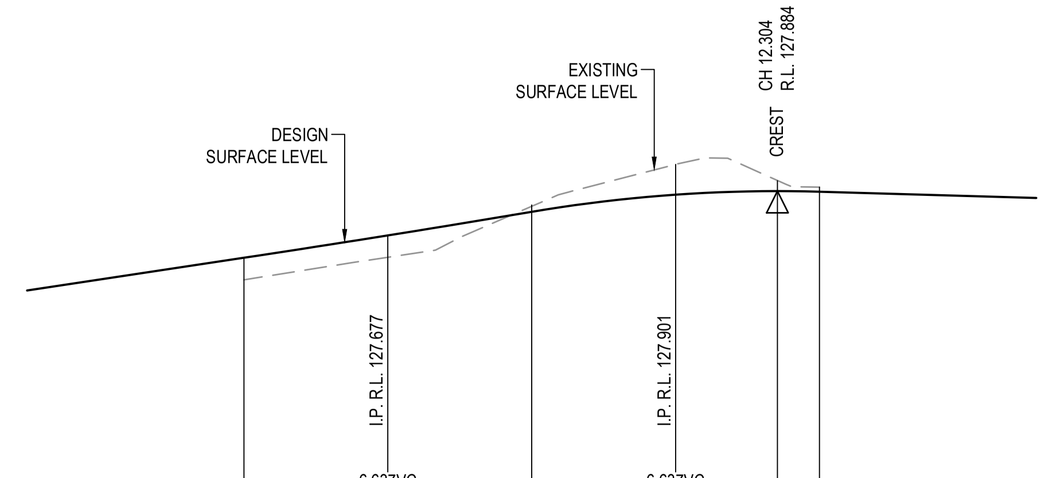
Docusign Envelope ID: 468845CE-3355-8491-8275-0768A4B8E4346

LEGEND

- RK — PROPOSED ROLLER KERB
- PROPOSED ROAD CENTERLINE
- PROPOSED CONTROL LINE
- 125.0 — PROPOSED DESIGN CONTOURS
- PROPOSED SWALE
- KR1 — PROPOSED KERB RETURN
- PROPOSED CONCRETE FOOTPATH
- PR — PROPOSED PRAM RAMP

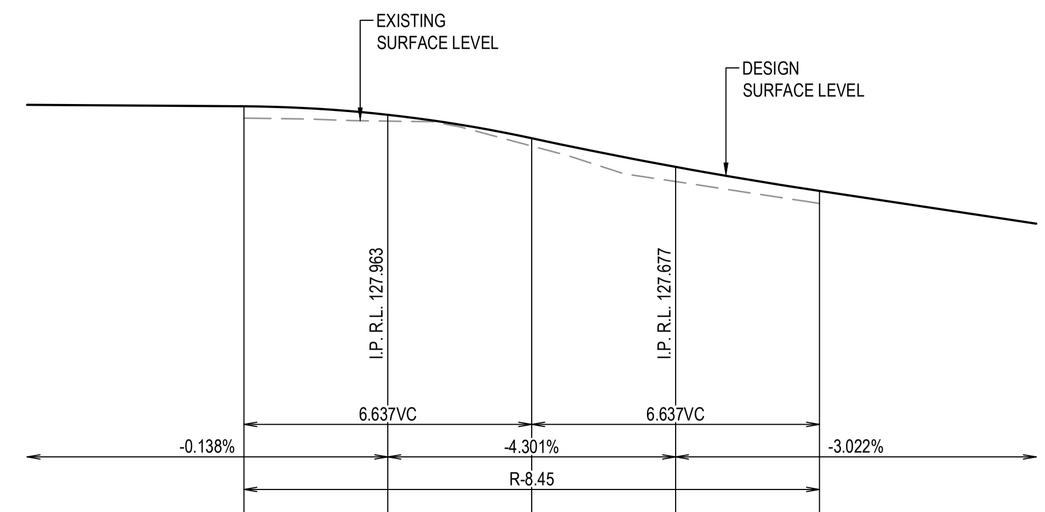


KERB RETURN
ALMOND STREET - BANKSIA AVENUE
SCALE 1:100



V.C.						
GRADE						
HORIZ. GEOMETRY						
DATUM R.L. 126						
WAE LEVEL						
DESIGN LEVEL	127.577	127.68	127.789	127.868	127.884	127.882
EXISTING LEVEL	127.475	127.58	127.82	128.008	127.932	127.903
CHAINAGE	0	3.318	6.637	9.955	12.304	13.273

KERB RETURN 16 - LONGITUDINAL SECTION - (BANKSIA AVENUE - ALMOND STREET)
SCALE 1:100 (H)
SCALE 1:20 (V)



V.C.					
GRADE					
HORIZ. GEOMETRY					
DATUM R.L. 126					
WAE LEVEL					
DESIGN LEVEL	127.967	127.928	127.82	127.688	127.577
EXISTING LEVEL	127.913	127.898	127.788	127.62	127.519
CHAINAGE	0	3.318	6.637	9.955	13.273

KERB RETURN 15 - LONGITUDINAL SECTION - (ALMOND STREET - BANKSIA AVENUE)
SCALE 1:100 (H)
SCALE 1:20 (V)

sharon pope

KERB RETURN 15 SETOUT TABLE

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	282126.068	6415709.379	127.967	188°07'53.00"			
IP 2	6.637	282124.873	6415701.014	127.820		R = -8.450	13.273	90°00'00.00"
IP 3	13.273	282133.238	6415699.819	127.577	98°07'53.00"			

KERB RETURN 16 SETOUT TABLE

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	282132.234	6415692.790	127.577	278°07'53.01"			
IP 2	6.637	282123.869	6415693.985	127.789		R = -8.450	13.273	89°59'60.00"
IP 3	13.273	282122.674	6415685.620	127.882	188°07'53.01"			

Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

1cm at full size

Certification By Dr. Michel Chaaya
B.E., M.E. (Res), Ph.D., F.I.E. Aust., CPEng.,
Civil & Structural Engineer

Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale: SCALE 1:100 @ A1 (0, 2, 4, 6 m); SCALE 1:20 @ A1 (0, 400, 800, 1200 mm)

TELFORD CIVIL
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PO BOX 3579 Parramatta 2124
Email : info@telfordcivil.com.au
Phone : 02 7809 4931
Trading As : Telford Consulting Pty Ltd

Project: PROPOSED RESIDENTIAL SUBDIVISION
ALMOND STREET, DENMAN
CIVIL ENGINEERING PLANS
VOLUNTARY PLANNING AGREEMENT

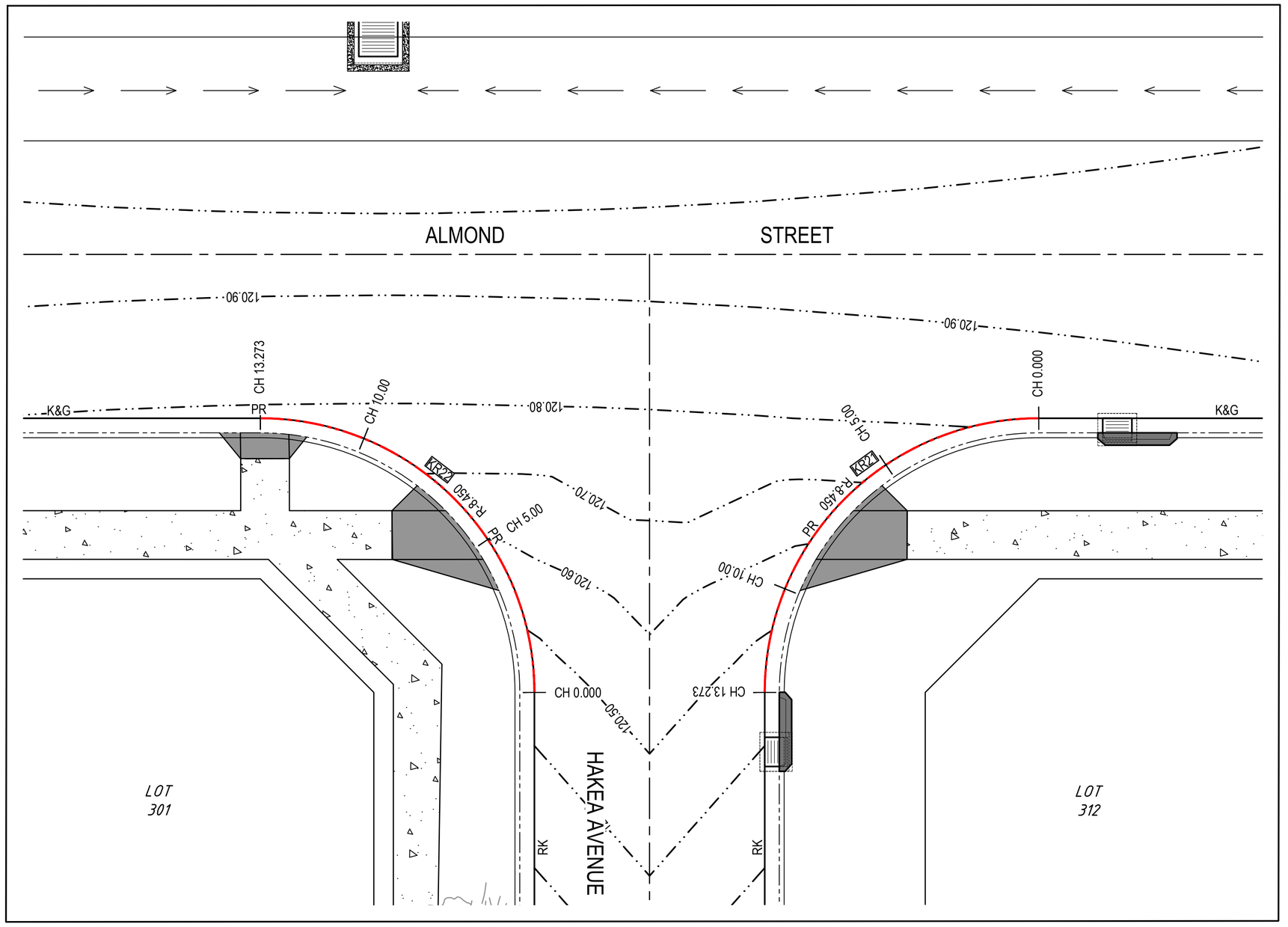
Drawing Title: INTERSECTION AND KERB RETURN DETAILS SHEET 2

Scale	Project No.	Dwg. No.	Issue
AS SHOWN (A1)	22048	502	A

Docusign Envelope ID: 46B645CE-3335-8491-8275-0789B4B8E5346

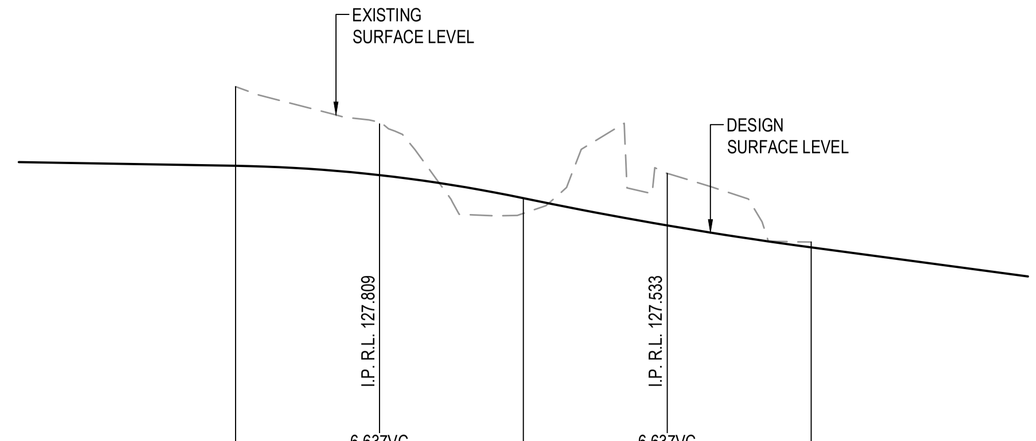
LEGEND

- K&G — PROPOSED KERB & GUTTER
- RK — PROPOSED ROLLER KERB
- PROPOSED ROAD CENTERLINE
- PROPOSED CONTROL LINE
- 125.0 — PROPOSED DESIGN CONTOURS
- PROPOSED SWALE
- KR1 — PROPOSED KERB RETURN
- PROPOSED KERB INLET PIT
- PROPOSED GRATED PIT
- PROPOSED CONCRETE FOOTPATH
- PR — PROPOSED PRAM RAMP



KERB RETURN
HAKEA AVENUE - ALMOND STREET

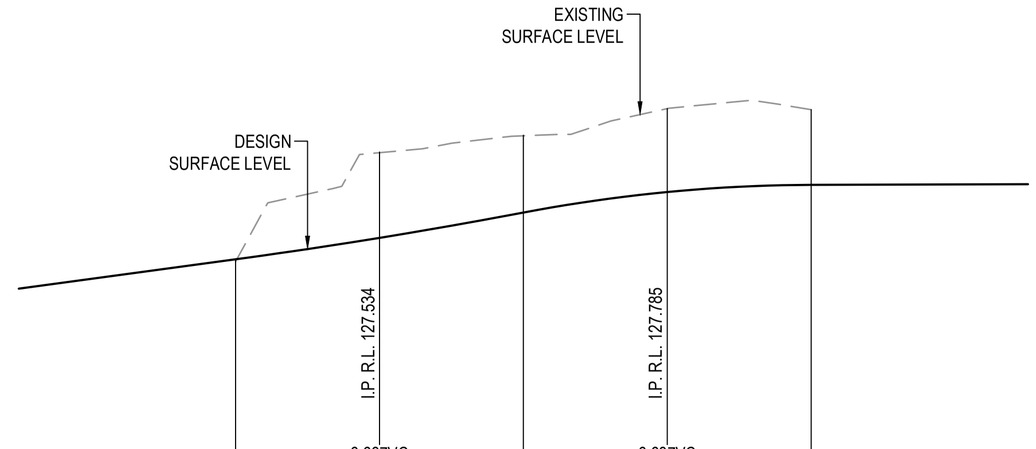
SCALE 1:100



V.C.					
GRADE	-0.338%	-4.159%	-2.685%		
HORIZ. GEOMETRY	R-8.45				
DATUM R.L. 126					
WAE LEVEL					
DESIGN LEVEL	127.821	127.778	127.671	127.546	127.444
EXISTING LEVEL	128.186	128.014	127.603	127.786	127.469
CHAINAGE	0	3.318	6.637	9.955	13.273

KERB RETURN 21 - LONGITUDINAL SECTION - (ALMOND STREET - HAKEA AVENUE)

SCALE 1:100 (H)
SCALE 1:20 (V)



V.C.					
GRADE	2.711%	3.786%	0.062%		
HORIZ. GEOMETRY	R-8.45				
DATUM R.L. 126					
WAE LEVEL					
DESIGN LEVEL	127.444	127.543	127.66	127.754	127.787
EXISTING LEVEL	127.433	127.939	128.017	128.14	128.134
CHAINAGE	0	3.318	6.637	9.955	13.273

KERB RETURN 22 - LONGITUDINAL SECTION - (HAKEA AVENUE - ALMOND STREET)

SCALE 1:100 (H)
SCALE 1:20 (V)

KERB RETURN 21 SETOUT TABLE

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	282139.327	6415802.176	127.821	188°07'53.00"			
IP 2	6.637	282138.132	6415793.811	127.671		R = -8.450	13.273	90°00'00.00"
IP 3	13.273	282146.497	6415792.616	127.444	98°07'52.99"			

KERB RETURN 22 SETOUT TABLE

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	282145.493	6415785.587	127.444	278°07'53.01"			
IP 2	6.637	282137.128	6415786.782	127.660		R = -8.450	13.273	89°59'60.00"
IP 3	13.273	282135.932	6415778.417	127.787	188°07'53.01"			

sharon pope

Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

1cm at full size — 10cm — 20cm

Certification By Dr. Michel Chaaya B.E., M.E. (Res), Ph.D., F.I.E. Aust., CPEng., Civil & Structural Engineer

Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale: 0 2 4 6 m — SCALE 1:100 @ A1; 0 400 800 1200 mm — SCALE 1:20 @ A1

TELFORD CIVIL
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PO BOX 3579 Parramatta 2124
Email : info@telfordcivil.com.au
Phone : 02 7809 4931
Trading As : Telford Consulting Pty Ltd

Project: PROPOSED RESIDENTIAL SUBDIVISION ALMOND STREET, DENMAN CIVIL ENGINEERING PLANS VOLUNTARY PLANNING AGREEMENT

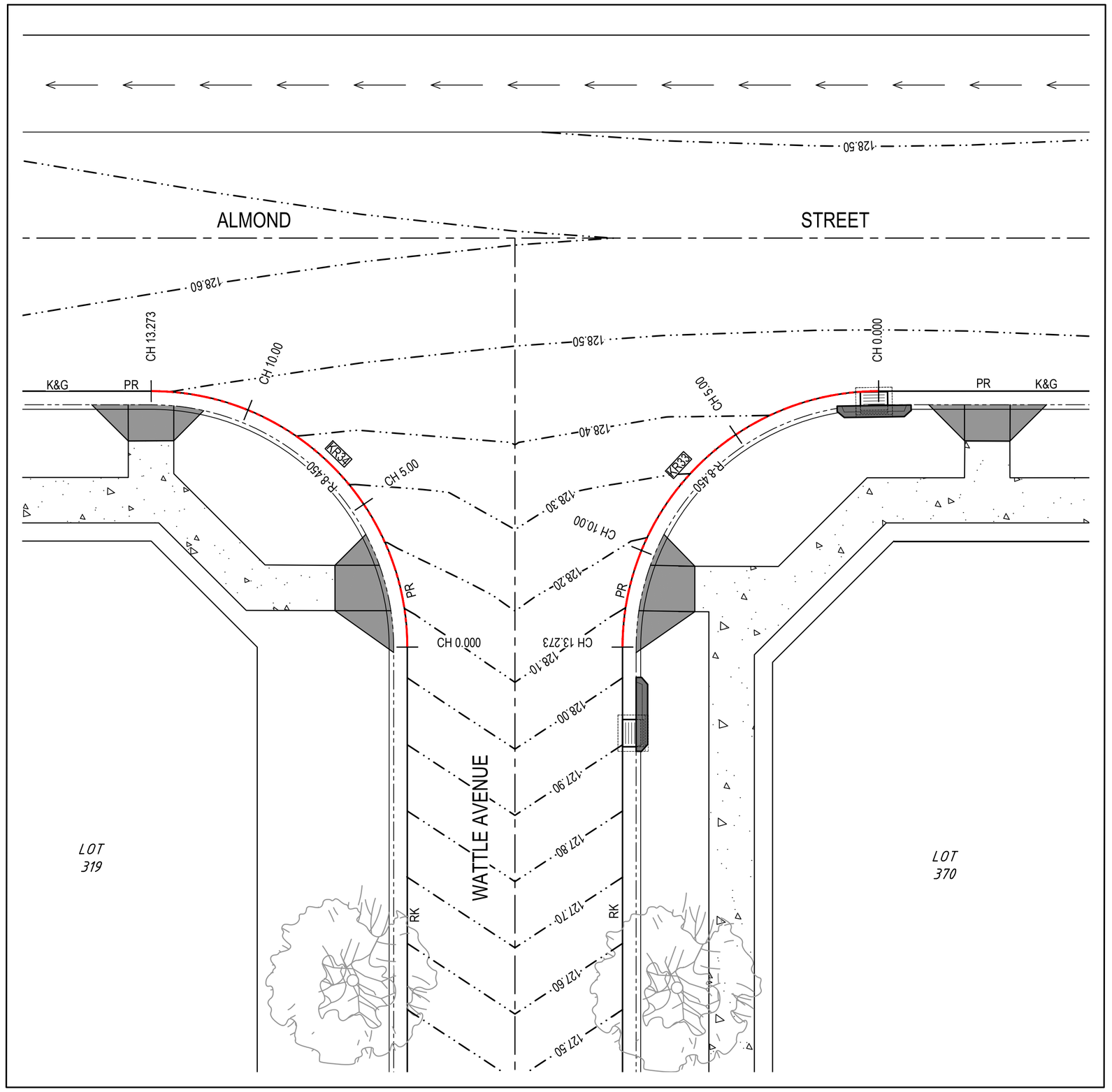
Drawing Title: INTERSECTION AND KERB RETURN DETAILS SHEET 4

Scale	Project No.	Dwg. No.	Issue
1:100 A1	22048	503	A

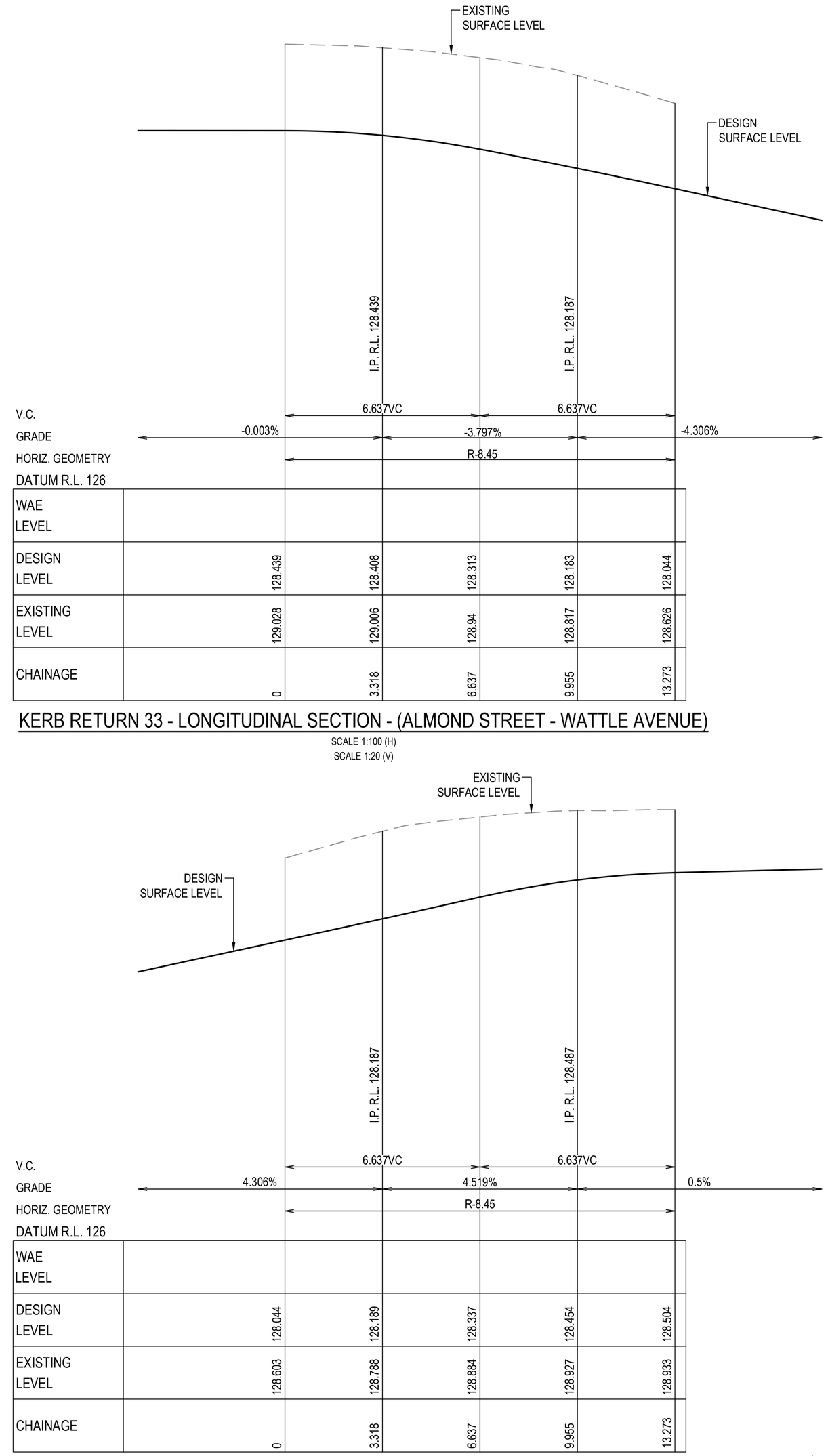
Docusign Envelope ID: 46B845CE-3355-8491-8275-0769B4B8E4346
Page 33 of 68

LEGEND

- K&G — PROPOSED KERB & GUTTER
- RK — PROPOSED ROLLER KERB
- PROPOSED ROAD CENTERLINE
- PROPOSED CONTROL LINE
- 125.0 — PROPOSED DESIGN CONTOURS
- PROPOSED SWALE
- KR1 — PROPOSED KERB RETURN
- PROPOSED KERB INLET PIT
- PROPOSED CONCRETE FOOTPATH
- PR — PROPOSED PRAM RAMP



KERB RETURN
ALMOND STREET - WATTLE AVENUE
SCALE 1:100



KERB RETURN 33 - LONGITUDINAL SECTION - (ALMOND STREET - WATTLE AVENUE)
SCALE 1:100 (H)
SCALE 1:20 (V)

KERB RETURN 34 - LONGITUDINAL SECTION - (WATTLE AVENUE - ALMOND STREET)
SCALE 1:100 (H)
SCALE 1:20 (V)

KERB RETURN 33 SETOUT TABLE

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	282173.048	6416038.187	128.439	188°07'53.00"			
IP 2	6.637	282171.853	6416029.822	128.313		R = -8.450	13.273	89°59'60.00"
IP 3	13.273	282180.218	6416028.627	128.044	98°07'53.00"			

KERB RETURN 34 SETOUT TABLE

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	282179.214	6416021.598	128.044	278°07'53.01"			
IP 2	6.637	282170.849	6416022.793	128.337		R = -8.450	13.273	89°59'60.00"
IP 3	13.273	282169.654	6416014.428	128.504	188°07'53.01"			

sharon pope

Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

Certification By Dr. Michel Chaaya B.E., M.E. (Res), Ph.D., F.I.E. Aust., CPEng., Civil & Structural Engineer

Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale: SCALE 1:100 @ A1 (0, 2, 4, 6 m); SCALE 1:20 @ A1 (0, 400, 800, 1200 mm)

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Trading As : Telford Consulting Pty Ltd

Project: PROPOSED RESIDENTIAL SUBDIVISION ALMOND STREET, DENMAN CIVIL ENGINEERING PLANS VOLUNTARY PLANNING AGREEMENT

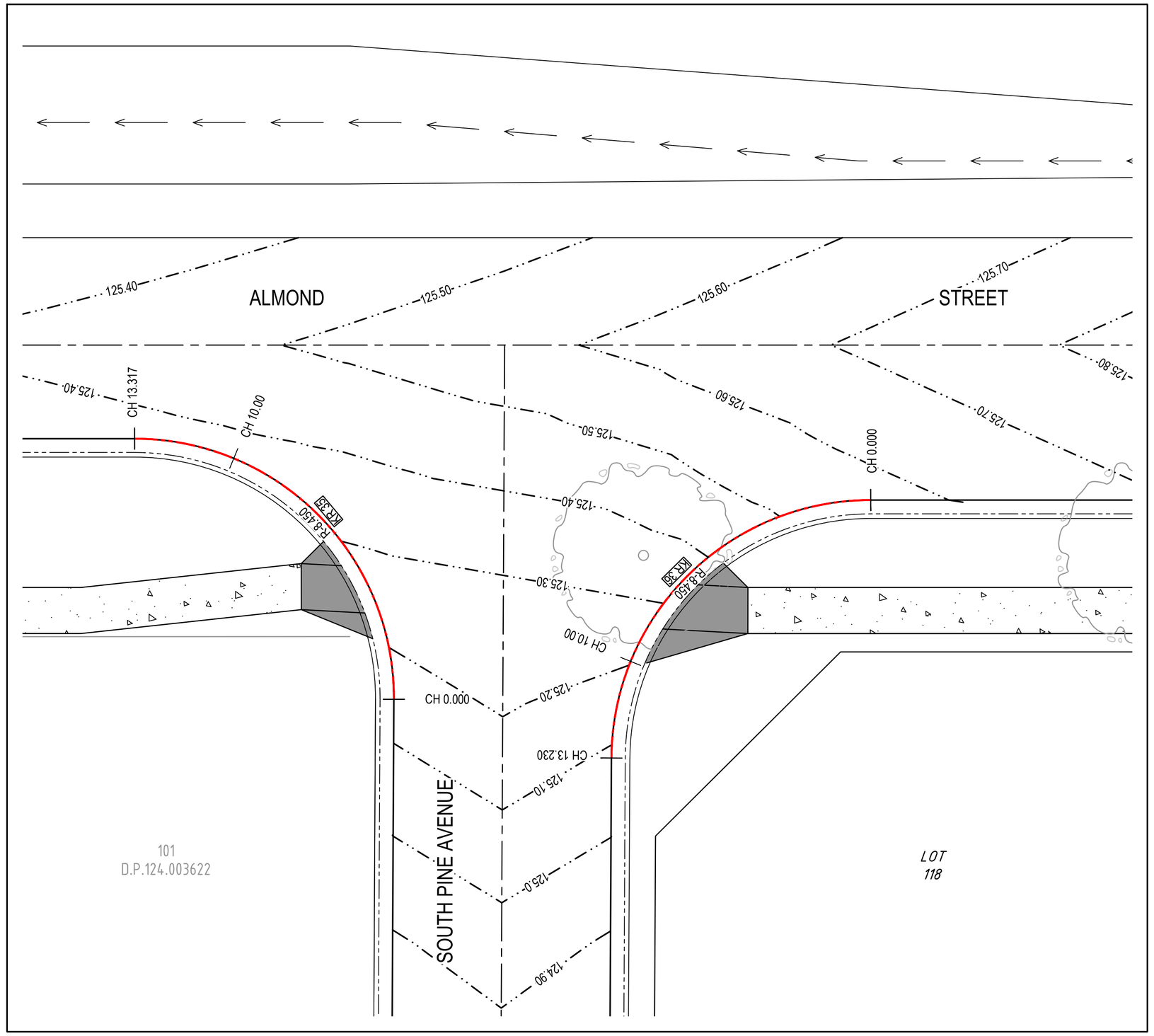
Drawing Title: INTERSECTION AND KERB RETURN DETAILS SHEET 5

Scale: AS SHOWN (A1) | Project No. 22048 | Dwg. No. 504 | Issue A

Docusign Envelope ID: 468645CE-3355-8491-8275-0768A4B8E4346

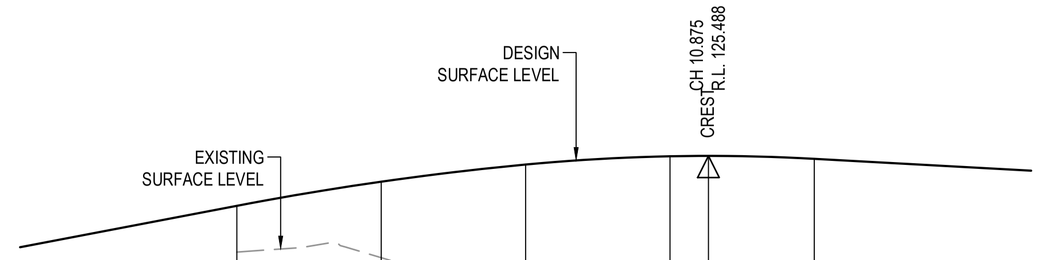
LEGEND

- K&G — PROPOSED KERB & GUTTER
- RK — PROPOSED ROLLER KERB
- PROPOSED ROAD CENTERLINE
- PROPOSED CONTROL LINE
- 125.0 — PROPOSED DESIGN CONTOURS
- KR1 — PROPOSED KERB RETURN
- PROPOSED KERB INLET PIT
- PROPOSED CONCRETE FOOTPATH



KERB RETURN
SOUTH PINE AVENUE - ALMOND STREET

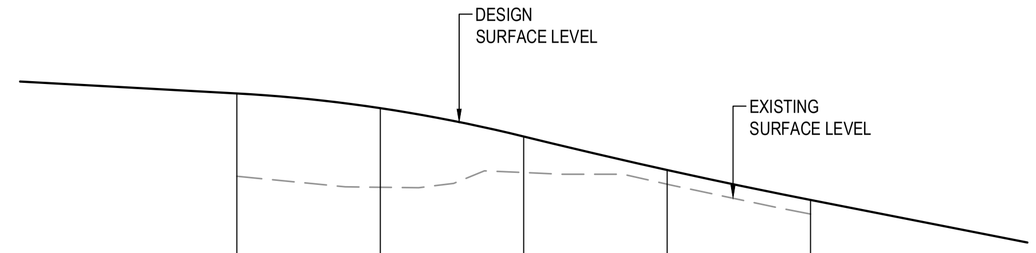
SCALE 1:100



V.C.						
GRADE						
HORIZ. GEOMETRY						
DATUM R.L. 123						
WAE LEVEL						
DESIGN LEVEL	125.258	125.369	125.448	125.486	125.488	125.474
EXISTING LEVEL	125.044	125.019	124.981	124.956	124.958	124.978
CHAINAGE	0	3.329	6.658	9.987	10.875	13.317

KERB RETURN 35 - LONGITUDINAL SECTION - (SOUTH PINE AVENUE - ALMOND STREET)

SCALE 1:100 (H)
SCALE 1:20 (V)



V.C.						
GRADE						
HORIZ. GEOMETRY						
DATUM R.L. 123						
WAE LEVEL						
DESIGN LEVEL	125.677	125.609	125.478	125.324	125.186	
EXISTING LEVEL	125.295	125.239	125.31	125.258	125.121	
CHAINAGE	0	3.307	6.615	9.922	13.23	

KERB RETURN 36 - LONGITUDINAL SECTION - (ALMOND STREET - SOUTH PINE AVENUE)

SCALE 1:100 (H)
SCALE 1:20 (V)

KERB RETURN 35 SETOUT TABLE

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	282071.180	6415279.312	125.258	278°25'33.00"			
IP 2	6.658	282062.778	6415280.557	125.448		R = -8.450	13.317	90°17'40.00"
IP 3	13.317	282061.576	6415272.149	125.474	188°07'53.00"			

KERB RETURN 36 SETOUT TABLE

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	282066.950	6415295.615	125.677	188°07'53.00"			
IP 2	6.615	282065.761	6415287.292	125.478		R = -8.450	13.230	89°42'20.00"
IP 3	13.230	282074.076	6415286.061	125.186	98°25'33.00"			

sharon pope

Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

10m at full size

Certification By Dr. Michel Chaaya B.E., M.E. (Res), Ph.D., F.I.E. Aust., CPEng., Civil & Structural Engineer

Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale: 0 2 4 6 m — SCALE 1:100 @ A1; 0 400 800 1200 mm — SCALE 1:20 @ A1

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Email : info@telfordcivil.com.au
Phone : 02 7809 4931
Trading As : Telford Consulting Pty Ltd

Project: PROPOSED RESIDENTIAL SUBDIVISION ALMOND STREET, DENMAN CIVIL ENGINEERING PLANS VOLUNTARY PLANNING AGREEMENT

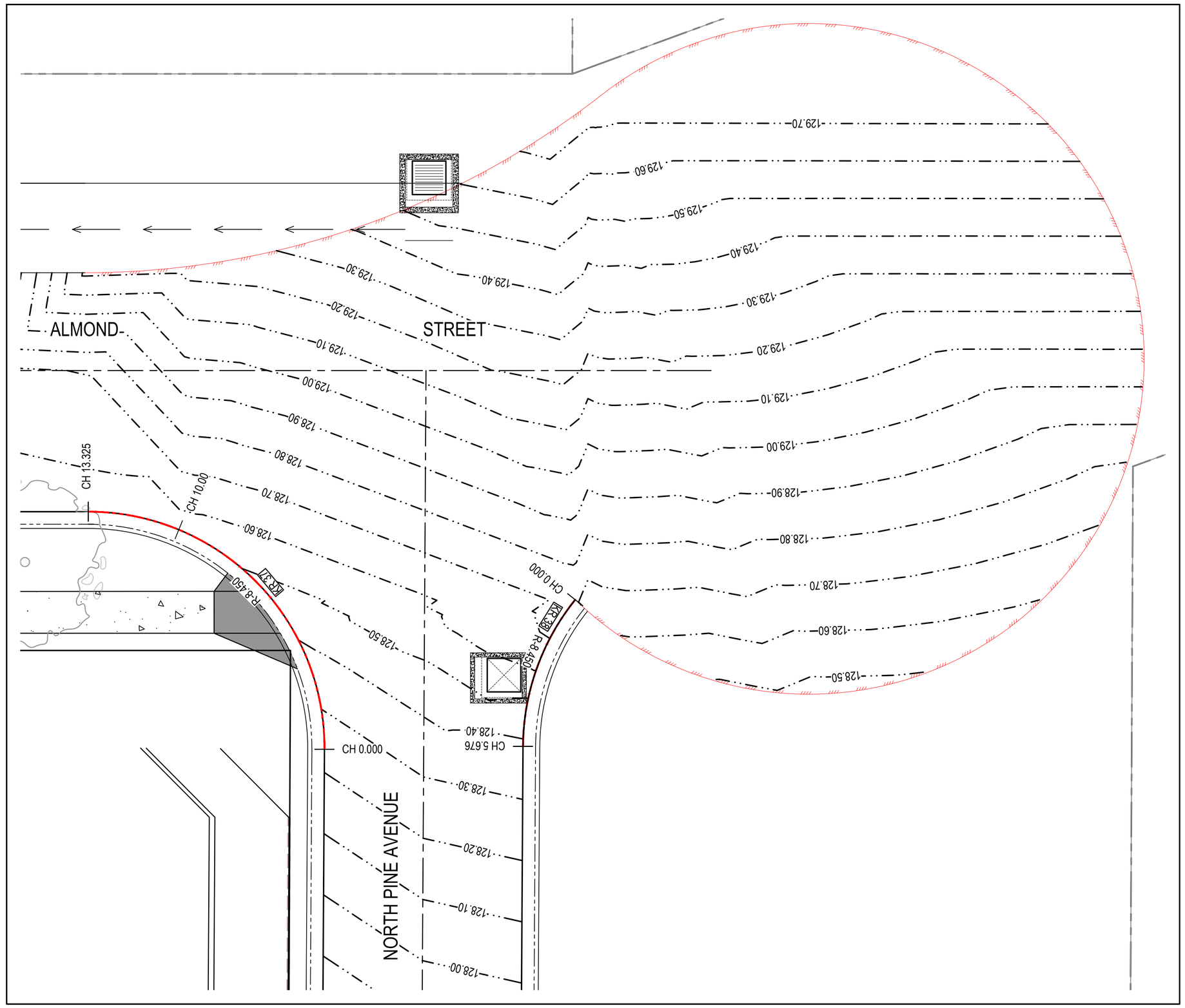
Drawing Title: INTERSECTION AND KERB RETURN DETAILS SHEET 6

Scale A1	Project No.	Dwg. No.	Issue
AS SHOWN	22048	505	A

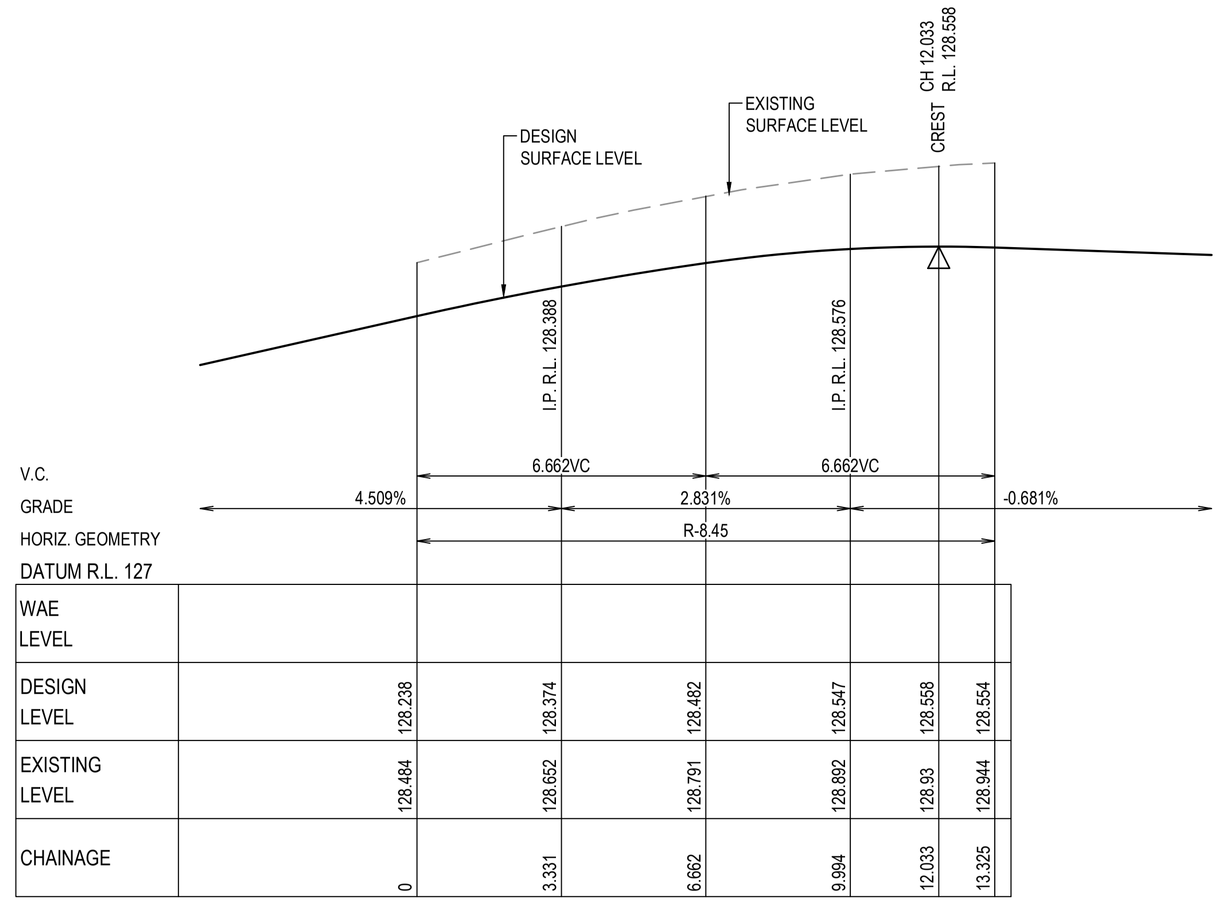
Docusign Envelope ID: 46B64SCE-3355-8491-8275-07B84B8E4346

LEGEND

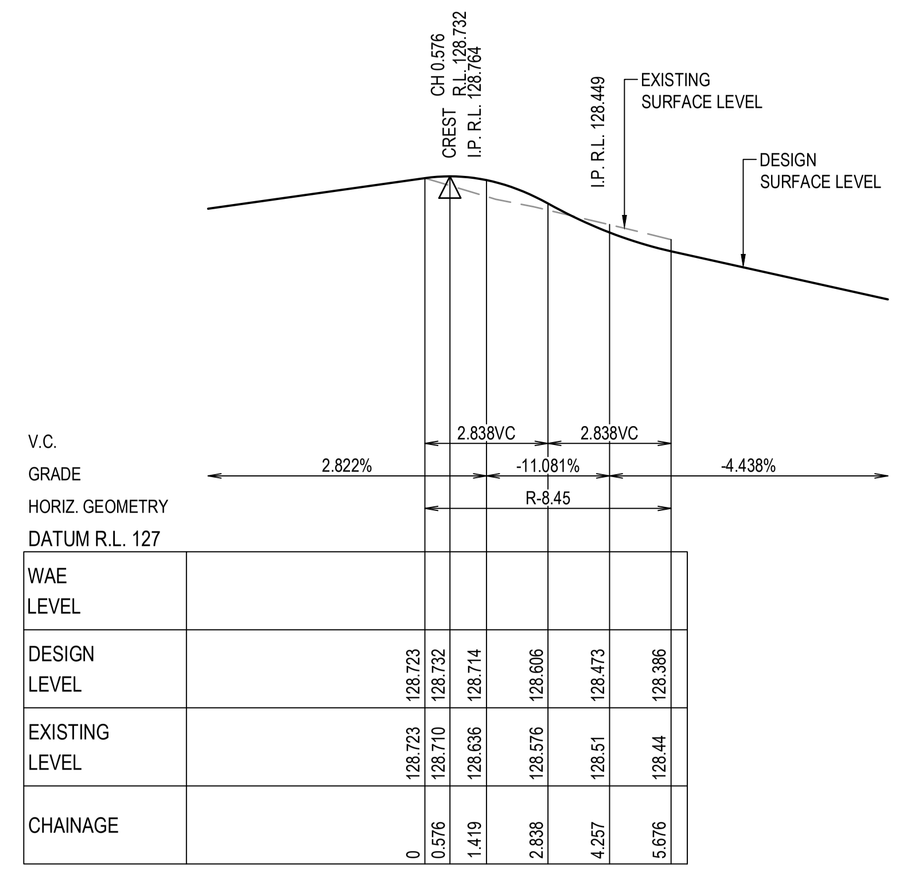
K&G	PROPOSED KERB & GUTTER
RK	PROPOSED ROLLER KERB
	PROPOSED ROAD CENTERLINE
	PROPOSED CONTROL LINE
125.0	PROPOSED DESIGN CONTOURS
KR1	PROPOSED KERB RETURN
	PROPOSED SURFACE PIT
	PROPOSED CONCRETE FOOTPATH



KERB RETURN
NORTH PINE AVENUE - ALMOND STREET
SCALE 1:100



KERB RETURN 37 - LONGITUDINAL SECTION - (NORTH PINE AVENUE - ALMOND STREET)
SCALE 1:100 (H)
SCALE 1:20 (V)



KERB RETURN 38 - LONGITUDINAL SECTION - (ALMOND STREET - NORTH PINE AVENUE)
SCALE 1:100 (H)
SCALE 1:20 (V)

KERB RETURN 37 SETOUT TABLE

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	282187.118	6416076.555	128.238	278°28'46.16"			
IP 2	6.662	282178.709	6416077.808	128.482		R = -8.450	13.325	90°20'55.60"
IP 3	13.325	282177.507	6416069.392	128.554	188°07'50.56"			

KERB RETURN 38 SETOUT TABLE

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	282183.090	6416086.189	128.723	136°57'59.97"			
IP 2	2.838	282185.103	6416084.033	128.606		R = -8.450	5.676	38°29'13.81"
IP 3	5.676	282188.021	6416083.598	128.386	98°28'46.16"			

sharon pope

Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

1cm at full size

Certification By Dr. Michel Chaaya
B.E., M.E. (Res), Ph.D., F.I.E. Aust., CPEng.,
Civil & Structural Engineer

Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale: SCALE 1:100 @ A1 (0, 2, 4, 6 m); SCALE 1:20 @ A1 (0, 400, 800, 1200 mm)

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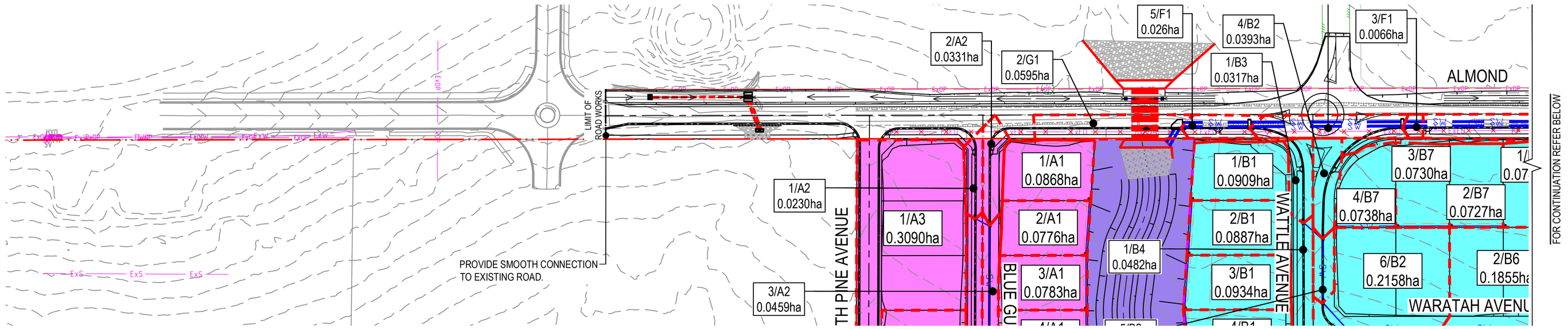
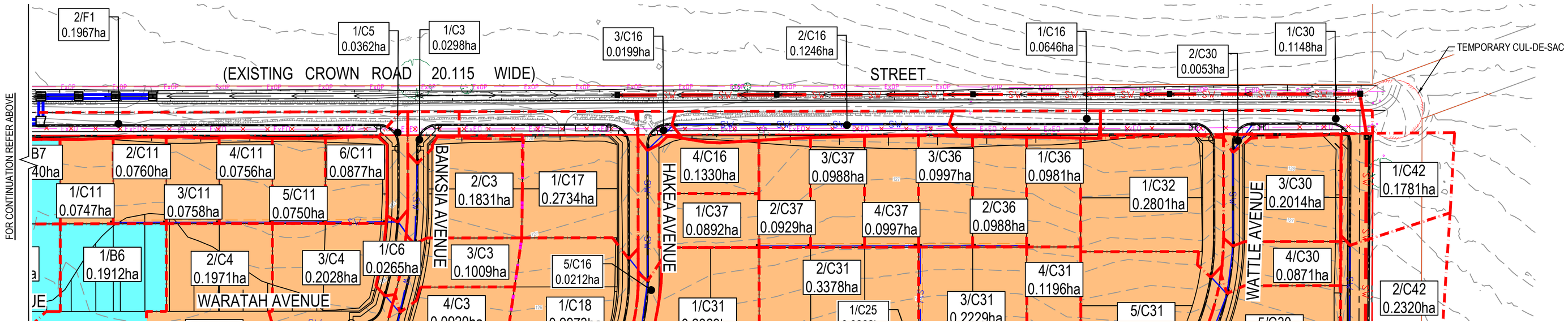
Project: PROPOSED RESIDENTIAL SUBDIVISION
ALMOND STREET, DENMAN
CIVIL ENGINEERING PLANS
VOLUNTARY PLANNING AGREEMENT

Drawing Title: INTERSECTION AND KERB RETURN DETAILS SHEET 7

Scale	Project No.	Dwg. No.	Issue
AS SHOWN	22048	506	A

Docusign Envelope ID: 46B645CE-3355-8491-8275-07BB4B8E4346





LEGEND

	PROPOSED SUBDIVISION LOT BOUNDARY
K&G	PROPOSED KERB & GUTTER
RK	PROPOSED ROLLER KERB
DD	PROPOSED DISH DRAIN
125.0	PROPOSED FINISHED CONTOURS
	PROPOSED CATCHMENT BOUNDARY
1/A6 0.0514ha	CATCHMENT NUMBER
SW	PROPOSED STORMWATER PIPE
	PROPOSED KERB INLET PIT
	PROPOSED SAG PIT
	INTERALLOTMENT DRAINAGE PIT
	EXISTING LOT BOUNDARY
	EXISTING CULVERTS
	BASIN 1 CATCHMENT = 22.63ha
	BASIN 2 CATCHMENT = 3.322ha
	BASIN 3 CATCHMENT = 1.694ha
	BYPASS CATCHMENT = 1.78ha
	AREA EXCLUDED FROM CALCULATION

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sharon pope

Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

0 1cm at full size 10cm 20cm

Certification By Dr. Michel Chaaya
B.E., M.E. (Res), Ph.D., F.I.E. Aust., CPEng.,
Civil & Structural Engineer

Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale: 0 20 40 60 80 m — SCALE 1:1500 @ A1

TELFORD CIVIL
CONSULTING CIVIL & STORMWATER ENGINEERS
Level 14, 32 Smith Street, Parramatta NSW 2150
PO BOX 3579 Parramatta 2124
Email : info@telfordcivil.com.au
Phone : 02 7809 4931
Trading As : Telford Consulting Pty Ltd

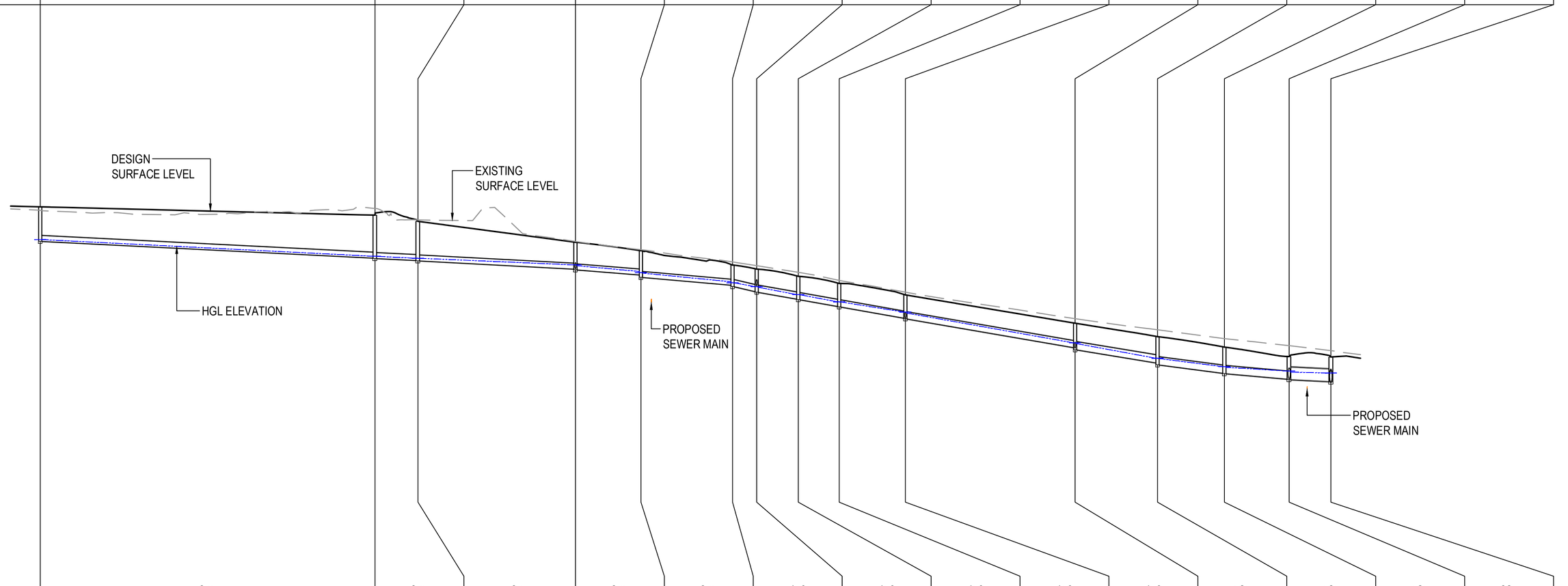
Project: PROPOSED RESIDENTIAL SUBDIVISION ALMOND STREET, DENMAN CIVIL ENGINEERING PLANS VOLUNTARY PLANNING AGREEMENT

Drawing Title: STORMWATER CATCHMENT PLAN

Scale A1	Project No.	Dwg. No.	Issue
1:1500	22048	600	A

Docusign Envelope ID: 46B645CE-3355-8491-8275-076B4B8E4346

STRUCTURE NAME	1\C16	2\C16	3\C16	4\C16	5\C16	6\C16	7\C16	8\C16	9\C16	10\C16	11\C16	12\C16	13\C16	14\C16	12\C2
STRUCTURE DESCRIPTION	3.6m Lintel KIP	2.4m Lintel KIP (SAG)	2.4m Lintel KIP	3.6m Lintel KIP	2.4m Lintel KIP	2.4m Lintel KIP	2.4m Lintel KIP	2.4m Lintel KIP	2.4m Lintel KIP	2.4m Lintel KIP	2.4m Lintel KIP	2.4m Lintel KIP	2.4m Lintel KIP	2.4m Lintel KIP (SAG)	2.4m Lintel KIP



PIPE SIZE (mm)	375	375	375	375	375	450	450	450	450	450	525	525	525	825
PIPE CLASS	RCP CLASS 2	RCP CLASS 2	RCP CLASS 2	RCP CLASS 2	RCP CLASS 2	RCP CLASS 2	RCP CLASS 2	RCP CLASS 2	RCP CLASS 2	RCP CLASS 2	RCP CLASS 2	RCP CLASS 2	RCP CLASS 2	RCP CLASS 3
PIPE GRADE (%)	1.00%	0.88%	1.05%	1.54%	1.70%	4.16%	3.29%	3.30%	3.40%	3.39%	3.18%	2.50%	1.69%	0.93%
PIPE SLOPE (1 in X)	99.9	113.3	95.5	65.0	58.9	24.0	30.4	30.3	29.4	29.5	31.5	40.0	59.1	107.4
PIPE FLOW (cumecs)	0.015	0.040	0.044	0.144	0.148	0.152	0.225	0.227	0.230	0.308	0.397	0.394	0.396	0.533
CAPACITY FLOW (cumecs)															
DATUM RL	90.000														
HGL ELEVATION	126.140 126.137	125.007 125.010	125.007 124.873 124.870	124.873 124.428 124.430	124.376 123.978 123.980	123.874 123.284 123.220	122.956 122.960 122.921	122.415 122.420 122.415	121.927 121.930 121.927	121.240 121.171	119.157 119.160 119.111	118.117 118.120 118.106	117.551 117.550 117.513	117.257 117.260 117.182	117.124 117.120 117.059
DEPTH TO INVERT	2.324	2.893 2.923	2.633 2.663	1.808 1.860	1.624 1.790	1.351 1.451	1.515 1.554	1.528 1.569	1.544 1.578	1.561 1.610	1.638 1.785	1.765 1.900	1.756 1.786	1.518 1.548	1.644 1.678
INVERT LEVEL OF DRAIN	126.024	124.894 124.864	124.736 124.706	124.150 124.098	123.758 123.592	123.067 122.967	122.628 122.589	122.128 122.087	121.632 121.598	120.839 120.790	118.848 118.701	117.817 117.682	117.118 117.088	116.718 116.688	116.557 116.523
DESIGN (& EXISTING) SURFACE LEVEL	128.348 (128.103)	127.787 (128.235)	127.369 (127.462)	125.958 (126.010)	125.382 (125.451)	124.418 (124.627)	124.143 (124.375)	123.656 (123.924)	123.176 (123.381)	122.400 (122.585)	120.486 (120.794)	119.582 (120.043)	118.874 (119.445)	118.236 (118.972)	118.201 (118.635)
SETOUT COORDINATES	282156.005E 6415915.719N	282140.030E 6415803.917N	282148.943E 6415792.478N	282201.530E 6415784.960N	282222.768E 6415778.857N	282252.027E 6415768.859N	282260.101E 6415767.798N	282274.126E 6415767.582N	282287.816E 6415769.362N	282309.034E 6415776.318N	282361.362E 6415799.553N	282387.222E 6415809.820N	282409.773E 6415809.885N	282430.394E 6415802.658N	282443.431E 6415807.945N
CHAINAGE	0.000	112.938 112.938	14.502 127.439	53.121 180.560	22.097 202.658	30.920 233.578	8.144 241.721	14.027 255.748	13.805 269.553	22.329 291.882	57.255 349.137	27.824 376.961	22.551 399.512	21.850 421.362	14.069 435.431

LINE C16

sharon pope

Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

0 1cm at full size 10cm 20cm

Certification By Dr. Michel Chaaya B.E., M.E. (Res), Ph.D., F.I.E. Aust., CPEng., Civil & Structural Engineer

Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale: 0 4 8 12 m — SCALE 1:200 @ A1; 0 20 40 60 m — SCALE 1:1000 @ A1

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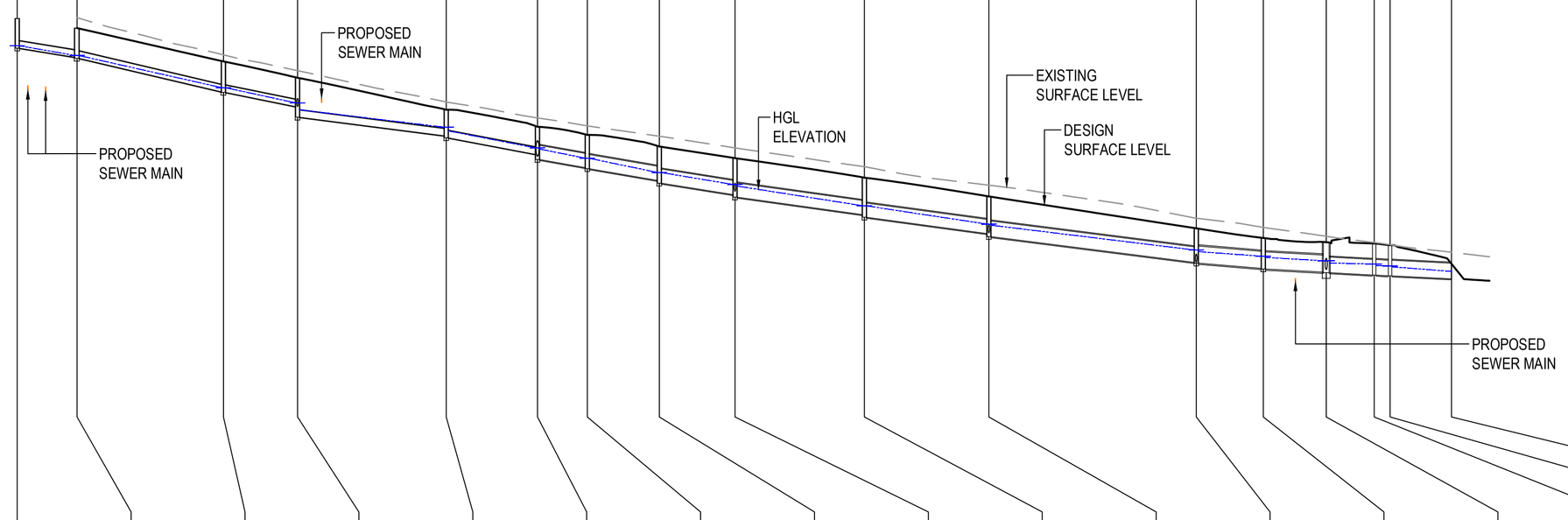
Project: PROPOSED RESIDENTIAL SUBDIVISION ALMOND STREET, DENMAN CIVIL ENGINEERING PLANS VOLUNTARY PLANNING AGREEMENT

Drawing Title: STORMWATER LONGITUDINAL SECTIONS SHEET 1

Scale	Project No.	Dwg. No.	Issue
As Shown (A1)	22048	610	A

Docusign Envelope ID: 4868445CE-3355-8491-8275-0769B4B8E4346

STRUCTURE NAME	1\C30	2\C30	3\C30	4\C30	5\C30	6\C30	7\C30	8\C30	9\C30	10\C30	11\C30	12\C30	13\C30	14\C30	15\C30	16\C30	17\C30
STRUCTURE DESCRIPTION	2.4m Lintel KIP (SAG)	2.4m Lintel KIP	3.6m Lintel KIP	2.4m Lintel KIP	3.6m Lintel KIP	3.6m Lintel KIP	3.6m Lintel KIP	2.4m Lintel KIP	2.4m Lintel KIP	3.6m Lintel KIP	3.6m Lintel KIP	3.6m Lintel KIP	3.6m Lintel KIP	JUNCTION PIT	HUMEGARD GPT HG27-MC	HUMECEPTOR STC9	HEADWALL



PIPE SIZE (mm)		375	375	375	375	375	750	750	750	750	750	825	900	900	(2x)825	(2x)825	(2x)825
PIPE CLASS		RCP CLASS 2	RCP CLASS 2	RCP CLASS 2	RCP CLASS 2	RCP CLASS 2	RCP CLASS 2	RCP CLASS 2	RCP CLASS 2	RCP CLASS 2	RCP CLASS 2	RCP CLASS 2	RCP CLASS 3	RCP CLASS 3	RCP CLASS 3	RCP CLASS 3	RCP CLASS 4
PIPE GRADE (%)		3.04%	4.59%	3.87%	2.50%	3.64%	3.29%	3.26%	3.03%	2.72%	2.63%	2.50%	1.59%	1.00%	1.00%	1.00%	0.96%
PIPE SLOPE (1 in X)		32.8	21.8	25.9	40.0	27.5	30.4	30.7	33.0	36.8	38.0	40.0	62.9	100.0	100.0	100.0	104.1
PIPE FLOW (cumecs)		0.025	0.036	0.122	0.270	0.318	0.815	0.842	0.868	0.902	0.945	1.007	1.063	1.091	1.275	1.274	1.275
CAPACITY FLOW (cumecs)																	
DATUM RL		89.000															
HGL ELEVATION	126.960	126.964	126.447 126.450	124.754 124.750	124.754	123.588	122.663 122.670	122.478	121.578 121.580	121.526	121.033 121.030	120.284 120.280	120.284	118.649 118.650	119.572	117.564 117.560	117.510	116.168 116.210	116.117	115.873 115.870	115.814	115.630	115.516	115.458 115.460	115.386	115.358 115.360	115.314	115.071	115.071
DEPTH TO INVERT	1.563	1.535	1.590	1.604	1.628	1.520	2.078	1.376	1.480	1.457	1.725	1.728	1.782	1.789	1.934	1.925	2.055	1.954	2.088	1.959	2.116	1.800	1.830	1.606	1.636	1.576	1.606	1.667	1.667	1.621	1.621	0.825	0.825
INVERT LEVEL OF DRAIN	126.838	126.358	126.303	124.533	124.509	123.754	123.196	122.217	122.113	121.238	120.970	120.538	120.484	119.866	119.721	119.116	118.986	118.061	117.927	117.063	116.906	115.541	115.511	115.230	115.200	115.034	115.004	114.878	114.878	114.836	114.836	114.681	114.681
DESIGN (& EXISTING) SURFACE LEVEL	128.401 (129.007)	127.893 (128.441)	126.137 (126.483)	125.274 (125.650)	123.593 (123.998)	122.695 (123.158)	122.266 (122.738)	121.655 (122.195)	121.041 (121.580)	120.015 (120.590)	119.022 (119.617)	117.341 (117.875)	116.836 (117.389)	116.610 (116.921)	116.545 (116.594)	116.457 (116.477)	115.471 (116.080)
SETOUT COORDINATES	282173.905E 6416041.001N	282183.364E 6416028.389N	282221.520E 6416022.889N	282240.358E 6416017.742N	282274.698E 6415998.916N	282297.427E 6415991.094N	282310.462E 6415989.583N	282329.375E 6415990.925N	282348.978E 6415994.621N	282382.771E 6415998.940N	282415.255E 6415994.359N	282468.878E 6415983.976N	282486.218E 6415980.619N	282502.572E 6415977.917N	282515.062E 6415976.111N	282519.210E 6415975.514N	282535.236E 6415973.264N
CHAINAGE	0.000	15.765	15.765	38.551	54.315	19.528	73.844	39.162	113.005	24.037	137.043	13.122	150.165	18.961	169.126	19.948	189.074	34.068	223.142	32.805	255.947	54.619	310.566	17.662	328.228	16.575	344.804	12.620	357.424	4.191	361.615	16.183	377.798

LINE C30

sharon pope

Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

0 1cm at full size 10cm 20cm

Certification By Dr. Michel Chaaya
B.E., M.E. (Res), Ph.D., F.I.E. Aust., CPEng.,
Civil & Structural Engineer

Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale: SCALE 1:200 @ A1 (0, 4, 8, 12 m); SCALE 1:1000 @ A1 (0, 20, 40, 60 m)

TELFORD CIVIL
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Phone : 02 7809 4931
Trading As : Telford Consulting Pty Ltd

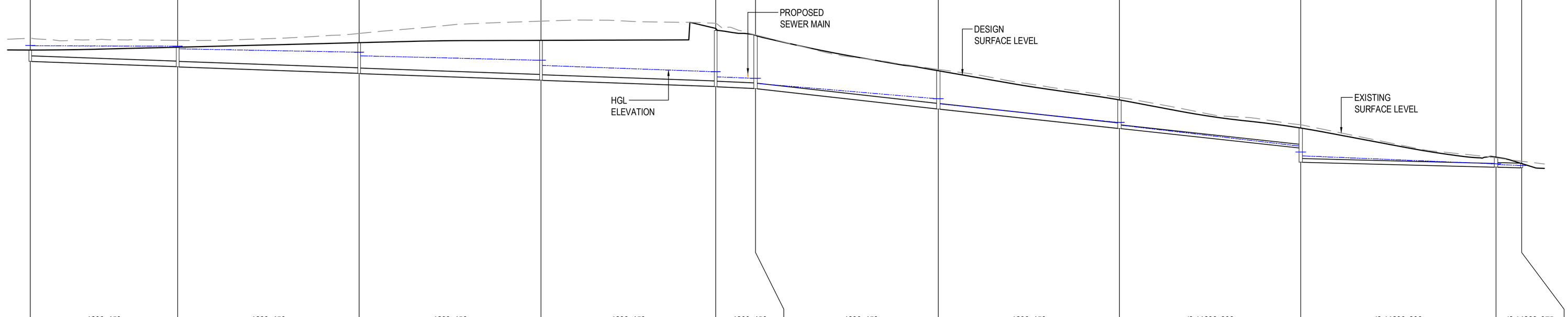
Project: PROPOSED RESIDENTIAL SUBDIVISION
ALMOND STREET, DENMAN
CIVIL ENGINEERING PLANS
VOLUNTARY PLANNING AGREEMENT

Drawing Title: STORMWATER LONGITUDINAL SECTIONS SHEET 2

Scale	Project No.	Dwg. No.	Issue
As Shown (A1)	22048	611	A

Docusign Envelope ID: 46B64 5CE-3355-8491-8275-07B84B8E4346

STRUCTURE NAME	E111	E112	E113	E114	E115	E116	E117	E118	E119	E1110	E1111
STRUCTURE DESCRIPTION	1.7m x 1.5m PIT WITH 1.2 x 1.2 GRATES	1.7m x 1.5m PIT WITH 1.2 x 1.2 GRATES	1.7m x 1.5m PIT WITH 1.2 x 1.2 GRATES	1.7m x 1.5m PIT WITH 1.2 x 1.2 GRATES	1.7m x 1.7m PIT WITH 1.2 x 1.2 GRATES	1.7m x 1.5m JUNCTION PIT	1.7m x 1.5m JUNCTION PIT	1.7m x 1.5m JUNCTION PIT	1.7m x 1.5m JUNCTION PIT	1.7m x 1.5m JUNCTION PIT	HEADWALL



PIPE SIZE (mm)	1200x450	1200x450	1200x450	1200x450	1200x450	1200x450	1200x450	(2x)1200x300	(2x)1200x300	(2x)1200x375	
PIPE CLASS	RCP CLASS 4	RCP CLASS 2	RCP CLASS 2	RCP CLASS 2	RCP CLASS 2	RCP CLASS 2	RCP CLASS 2	RCP CLASS 2	RCP CLASS 2	RCP CLASS 2	
PIPE GRADE (%)	0.70%	0.70%	0.70%	0.70%	0.83%	2.20%	2.12%	2.13%	0.50%	0.50%	
PIPE SLOPE (1 in X)	142.9	142.9	142.9	142.9	119.8	45.5	47.2	46.9	200.0	200.2	
PIPE FLOW (cumecs)	0.797	0.941	0.991	1.143	1.144	1.143	1.143	1.147	1.171	1.142	
CAPACITY FLOW (cumecs)											
DATUM RL	91.000										
HGL ELEVATION	127.660 127.628 127.592 127.590	127.357 127.061 127.060	126.746 126.349 126.350	125.894 125.341 125.340	124.886 124.760	124.303 122.961 122.960	122.504 120.870	120.620 118.790 118.260	117.918 117.222 117.220	117.153 117.074 117.070	117.074
DEPTH TO INVERT	0.990 1.694	1.724 2.683	2.713 3.477	3.507 4.920	4.950 4.675	4.705 3.343	3.373 2.490	2.520 1.742	3.008 0.868	0.868 0.375	0.375
INVERT LEVEL OF DRAIN	126.263 125.808	125.778 125.219	125.189 124.628	124.598 124.059	124.029 123.883	123.853 122.084	122.054 120.364	120.334 118.633	117.366 116.936	116.936 116.880	116.880
DESIGN (& EXISTING) SURFACE LEVEL	127.253 127.502 (128.299) (128.098)	127.902 (128.714)	128.105 (129.798)	129.161 (129.614)	128.558 (128.589)	125.427 (125.546)	122.854 (123.072)	120.375 (120.661)	117.805 (117.747)	117.243 (117.445)	
SETOUT COORDINATES	282124.829E 6415783.778N	282134.014E 6415848.060N	282145.320E 6415927.191N	282156.650E 6416006.488N	282167.533E 6416082.661N	282185.086E 6416083.029N	282264.702E 6416071.100N	282343.609E 6416059.278N	282422.572E 6416047.447N	282507.694E 6416035.028N	282518.914E 6416033.727N
CHAINAGE	0.000 64.934 64.934	79.935 144.870	80.102 224.971	76.947 301.918	17.556 319.474	80.505 399.979	79.787 479.766	79.844 559.611	86.024 645.634	11.295 656.929	

LINE E1

sharon pope

Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

0 10m at full size 10cm 20cm

Certification By Dr. Michel Chaaya
B.E., M.E. (Res.), Ph.D., F.I.E. Aust., CPEng.,
Civil & Structural Engineer

Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale: 0 4 8 12 m — SCALE 1:200 @ A1; 0 20 40 60 m — SCALE 1:1000 @ A1

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Trading As : Telford Consulting Pty Ltd

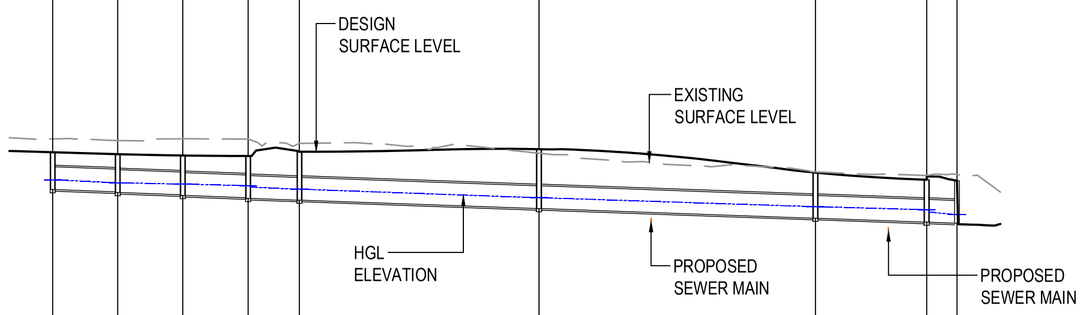
Project: PROPOSED RESIDENTIAL SUBDIVISION ALMOND STREET, DENMAN CIVIL ENGINEERING PLANS VOLUNTARY PLANNING AGREEMENT

Drawing Title: STORMWATER LONGITUDINAL SECTIONS SHEET 3

Scale A1	Project No.	Dwg. No.	Issue
As Shown	22048	612	A

Page 40 of 68
Docusign Envelope ID: A6B845CE-3355-8491-8275-0708B4BBE4346

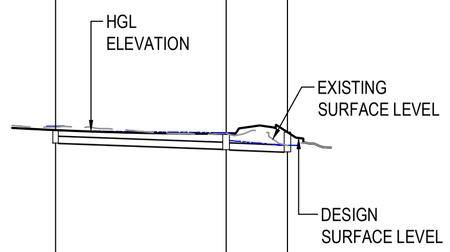
STRUCTURE NAME	1|F1	2|F1	3|F1	4|F1	5|F1	6|F1	7|F1	8|F1	9|F1
STRUCTURE DESCRIPTION	900x900 GSIP	900x900 GSIP	900x900 GSIP	900x900 GSIP	3.6m Lintel KIP (SAG)	2.4m Lintel KIP	2.4m Lintel KIP	2.4m Lintel KIP	HEADWALL



	1|F1	2|F1	3|F1	4|F1	5|F1	6|F1	7|F1	8|F1	9|F1
PIPE SIZE (mm)	(2x)1050	(2x)1050	(2x)1050	(2x)1050	(2x)1050	(2x)1050	(2x)1050	(2x)1050	
PIPE CLASS	RCP CLASS 3	RCP CLASS 3	RCP CLASS 3	RCP CLASS 2	RCP CLASS 2	RCP CLASS 2	RCP CLASS 2	RCP CLASS 2	
PIPE GRADE (%)	0.70%	0.70%	0.70%	0.70%	0.70%	0.70%	0.70%	0.70%	
PIPE SLOPE (1 in X)	142.9	142.9	142.9	142.9	142.9	142.9	142.9	142.9	
PIPE FLOW (cumecs)	0.536	0.783	1.085	1.378	1.421	1.407	1.402	1.403	
CAPACITY FLOW (cumecs)									
DATUM RL	93.000								
HGL ELEVATION	125.830 125.831	125.694 125.690	125.694	125.635 125.635 125.635	125.635	125.560	125.498	125.398 125.398 125.398	125.398
DEPTH TO INVERT	1.722	1.739	1.769	1.812	1.842	1.927	1.957	2.233	2.233
INVERT LEVEL OF DRAIN	125.380	125.275	125.245	125.140	125.110	125.005	124.975	124.892	124.892
DESIGN (& EXISTING) SURFACE LEVEL	127.102 (127.718)	127.014 (127.644)	126.953 (127.725)	126.932 (127.712)	127.125 (127.510)	127.243 (127.060)	126.165 (126.199)	125.837 (126.032)	125.790 (126.076)
SETOUT COORDINATES	282098.358E 6415596.169N	282096.339E 6415581.313N	282094.217E 6415566.453N	282092.036E 6415551.544N	282103.733E 6415549.873N	282095.916E 6415495.167N	282086.900E 6415432.063N	282083.271E 6415406.666N	282088.678E 6415402.236N
CHAINAGE	-48.026	14.993	-33.033	15.011	-18.023	15.068	-2.955	11.815	8.860

LINE F1

STRUCTURE NAME	1|I1	2|I1	3|I1
STRUCTURE DESCRIPTION	2.4m Lintel KIP	2.4m Lintel KIP	2.4m Lintel KIP



	1|I1	2|I1	3|I1
PIPE SIZE (mm)	900x300	(2x)900x300	
PIPE CLASS	RCP CLASS 4	RCP CLASS 4	
PIPE GRADE (%)	0.70%	0.70%	
PIPE SLOPE (1 in X)	142.9	142.9	
PIPE FLOW (cumecs)	0.379	1.315	
CAPACITY FLOW (cumecs)			
DATUM RL	92.000		
HGL ELEVATION	125.280 125.070	124.974 124.970 124.612	124.391 124.390 124.391
DEPTH TO INVERT	0.600	0.704 0.733	0.908 0.908
INVERT LEVEL OF DRAIN	124.495	124.220 124.190	124.091 124.091
DESIGN (& EXISTING) SURFACE LEVEL	125.096 (125.234)	124.924 (124.947)	124.999 (124.386)
SETOUT COORDINATES		282046.157E 6415237.189N	282060.010E 6415239.935N
CHAINAGE	-16.200	39.356	23.155

LINE I1

sharon pope

Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

0 1cm at full size 10cm 20cm

Certification By Dr. Michel Chaaya
B.E., M.E. (Res), Ph.D., F.I.E. Aust., CPEng.,
Civil & Structural Engineer

Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale: 0 4 8 12 m — SCALE 1:200 @ A1; 0 20 40 60 m — SCALE 1:1000 @ A1

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Trading As : Telford Consulting Pty Ltd

Project: PROPOSED RESIDENTIAL SUBDIVISION ALMOND STREET, DENMAN CIVIL ENGINEERING PLANS VOLUNTARY PLANNING AGREEMENT

Drawing Title: STORMWATER LONGITUDINAL SECTIONS SHEET 4

Scale	Project No.	Dwg. No.	Issue
As Shown (A1)	22048	613	A

Docusign Envelope ID: 46B64BCE-3355-8491-8275-07B84B8E4346

10% AEP RESULTS

DRAINS results prepared from Version 2022.012

PIT / NODE DETAILS Version 8

Name	Max HGL	Max Pond HGL	Max Surface Flow Arriving (cu.m/s)	Max Pond Volume (cu.m)	Min Freeboard (m)	Overflow (cu.m/s)	Constraint
1\C1	117.58		0.053			0.77	0.004 Inlet Capacity
2\C1	117.43		0.041			0.83	0 Inlet Capacity
3\C1	117.32		0.036			0.85	0 None
4\C1	117.19		0.036			0.96	0 None
5\C1	117.02		0.036			0.76	0 None
6\C1	116.87		0.036			0.65	0 None
7\C1	116.72		0.036			0.59	0 None
8\C1	116.56		0.036			0.51	0 None
9\C1	116.44		0.036			0.58	0 None
10\C1	116.31		0.036			0.63	0 None
11\C1	116.16		0.036			0.69	0 None
12\C1	116		0.036			0.58	0 None
13\C1	115.86		0.036			0.51	0 None
14\C1	115.72		0.036			0.53	0 None
15\C1	115.57		0.036			0.61	0 None
16\C1	115.39		0.036			0.69	0 None
17\C1	115.24		0.036			0.72	0 None
18\C1	115.06		0.036			0.74	0 None
2\H1	113.42		0				
1\C10	120.56	121.81	0.096	0.9		1.14	0 Inlet Capacity
4\C2	120.41	121.71	0.014	0.1		1.27	0 Inlet Capacity
5\C2	120.18		0.003			1.48	0 None
6\C2	119.78		0.037			1.39	0 None
7\C2	119.41		0.037			1.27	0 None
8\C2	119.11		0.001			1.25	0 None
9\C2	118.33		0.073			1.24	0 None
10\C2	117.58		0.017			1.28	0 None
11\C2	117.31		0.009			1.23	0 None
12\C2	117.12		0.003			1.08	0 None
13\C2	116.77		0.009			1.04	0 None
14\C2	116.31		0.001			0.97	0 None
15\C2	116.08		0.01			0.87	0 None
16\C2	115.82		0.009			0.86	0 None
17\C2	115.65	116.62	0.021	0.2		0.94	0 Inlet Capacity
18\C2	115.53	116.62	0.027	0.7		1.06	0 Inlet Capacity
2\C2.1	115.41		0			1.1	None
3\C2.1	115.31		0			0.88	None
4\C2.1	115.23		0			0.77	None
1\C11	125.86		0.025			0.46	0 None
2\C11	125.65		0.025			0.68	0 None
3\C11	125.46		0.025			0.99	0 None
4\C11	125.26		0.025			1.39	0 None
5\C11	125.04		0.025			1.58	0 None
6\C11	124.88		0.029			1.58	0 None
7\C11	124.82		0.012			1.78	0 None
2\C3	124.7		0.06			1.65	0 None
3\C3	123.98		0.033			1.51	0.001 Inlet Capacity
4\C3	123.75		0.033			1.35	0 Inlet Capacity
5\C3	122.41		0.065			1.2	0 None
6\C3	120.4		0.04			2.01	0 None
7\C3	119.86		0.008			1.91	0 None
8\C3	119.34	120.2	0.024	0.1		0.83	0 Inlet Capacity
1\C12	123.96		0.028			0.65	0 None
2\C12	123.54		0.025			0.71	0 None
3\C12	123.13		0.025			0.47	0 None
4\C12	122.6		0.025			0.42	0 None
5\C12	122.02		0.025			0.54	0 None
6\C12	121.24		0.026			0.78	0 None
7\C12	120.07		0.025			1.41	0 None
1\C13	122.58		0.027			0.7	0 None
2\C13	121.8		0.028			0.82	0 None
3\C13	121.21		0.032			0.71	0 None
4\C13	120.19		0.043			0.77	0 None
5\C13	118.49		0.026			1.45	0 None
1\C14	120.32		0.01			1.43	0 None
1\C15	119.44		0.021			1.36	0 None
1\C16	126.14		0.021			2.21	0 None
2\C16	125.01	127.85	0.036	0.3		2.78	0 Inlet Capacity
3\C16	124.87		0.007			2.5	0 None
4\C16	124.43		0.044			1.53	0 None
5\C16	123.9		0.007			1.48	0 None
6\C16	123.22		0.005			1.2	0 None
7\C16	122.96		0.002			1.19	0 None
8\C16	122.42		0.004			1.24	0 None
9\C16	121.93		0.004			1.25	0 None
10\C16	121.24		0.006			1.16	0 None
11\C16	119.16		0.017			1.33	0 None
12\C16	118.12		0.008			1.47	0 None
13\C16	117.55		0.008			1.32	0 None
14\C16	117.26	118.26	0.02	0.5		0.98	0 Inlet Capacity
1\C17	124.63		0.096			1.57	0 None
1\C18	123.43		0.098			0.88	0 None
1\C19	121.38		0.092			1.3	0 None
1\C2	121.65		0.047			1.48	0 None
2\C2	121.37		0.023			1.54	0 None
3\C2	120.93		0.007			1.3	0 None
1\C20	119.41		0.101			1.35	0 None
1\C21	117.31	118.34	0.188	1.7		0.92	0 Inlet Capacity
1\C22	117.63		0.04			1.32	0 None
1\C23	116.77		0.023			1.1	0 None
1\C24	116.09		0.026			0.95	0 None
1\C25	121.97		0.01			0.95	0 None
2\C25	121.02		0.007			0.98	0 None
3\C25	120.85		0.014			0.94	0 None
4\C25	119.67		0.073			0.7	0 None
5\C25	118.89		0.038			0.74	0 None
6\C25	117.93		0.04			1.01	0 None
7\C25	117.46		0.033			1.07	0 None
8\C25	116.83		0.031			1.23	0 Inlet Capacity
9\C25	116.4	117.26	0.015	0.5		0.84	0 Inlet Capacity
1\C26	122.96		0.03			0.89	0 Inlet Capacity
2\C31	122.94		0.112			0.81	0 None
3\C31	122.5		0.074			0.89	0 None
4\C31	122.27		0.04			0.93	0.001 Inlet Capacity
5\C31	122.09	123.07	0.097	0.9		0.87	0 Inlet Capacity
6\C31	121.94		0.023			1.02	0 None
7\C31	121.76		0.005			1.02	0 None
6\C30	121.58		0.04			1.12	0 None
7\C30	121.03		0.039			1.23	0 None
8\C30	120.28		0.04			1.37	0.002 Inlet Capacity
9\C30	119.65		0.041			1.39	0.001 Inlet Capacity
10\C30	118.53		0.064			1.48	0 None
11\C30	117.56		0.056			1.46	0 None
12\C30	116.2		0.086			1.14	0 None
13\C30	115.87		0.043			0.96	0 None
14\C30	115.63		0			0.98	None
15\C30	115.46		0			1.09	None
16\C30	115.36		0			1.1	None
1\C27	119.15		0.113			0.68	0 None
1\C28	116.92		0.073			1.28	0 None
1\C3	125.44		0.01			1.9	0 None
1\C30	126.96	128.45	0.038	4.3		1.44	0 Inlet Capacity
2\C30	126.45		0.018			1.45	0 None
3\C30	124.75		0.067			1.38	0 None
4\C30	123.95		0.029			1.32	0 Inlet Capacity
5\C30	122.67		0.066			0.92	0 None
1\C31	123.36		0.077			0.94	0 None
1\C33	119.75		0.014			1.59	0 None
1\C34	117.57		0.022			1.58	0 None
1\C35	116.2		0.02			1.27	0 None
1\C36	125.13		0.032			0.95	0 None
2\C36	124.68		0.033			1.31	0 None
3\C36	124.48		0.033			1.5	0 None
4\C36	123.41		0			0.65	None
1\C37	125.64		0.029			0.71	0 None
2\C37	125.22		0.031			0.94	0 None
3\C37	124.8		0.033			1.26	0 None
4\C37	124.55		0.033			1.44	0 None
1\C38	122.48		0.027			0.85	0 None
2\C38	122.08		0.027			0.99	0 None
3\C38	121.82		0.026			0.99	0 None
4\C38	121.43		0.027			1.12	0 None
5\C38	121.15		0.03			1.14	0 None
1\C39	120.82		0.04			1.27	0 None
2\C39	120.2		0.033			1.39	0 None
3\C39	119.48		0.027			1.38	0 None
4\C39	118.75		0.025			1.4	0 None
5\C39	118.32		0			1.2	0 None
6\C39	118.11		0.026			1.24	0 None
7\C39	117.6		0.027			1.19	0 None
8\C39	116.86		0.029			1.4	0 None
1\C4	124.09		0.011			1.38	0 None
2\C4	124.07		0.065			1.35	0 None
3\C4	123.84	125.06	0.067	0.9		1.14	0 Inlet Capacity
1\C40	121.56		0.035			0.76	0 None
2\C40	121.29		0.028			1.06	0 None
3\C40	120.75		0.031			0.87	0 None
4\C40	120.23		0.031			0.64	0 None
5\C40	119.51		0.031			0.68	0 None
6\C40	118.88		0.029			0.58	0 None
7\C40	118.1		0.025			0.61	0 None
8\C40	117.44		0.025			0.62	0 None
9\C40	116.86		0.027			0.6	0 None
10\C40	116.15		0.025			0.96	0 None
1\C41	121.49		0.026			0.9	0 None
1\C6	123.98		0.009			1.66	0 None
1\C7	122.45		0.05			1.47	0 None
1\C8	121.2		0.064			1.43	0 None
N675343	124.77		0.051				
N675345	124.37		0.078				
1\C32	124.36		0.094			1.15	0 None
1\C9	119.38	120.29	0.137	0.9		0.8	0 Inlet Capacity
1\D1	118.93		0.053			0.66	0.001 Inlet Capacity
2\D1	118.83		0.043			0.76	0.001 Inlet Capacity
3\D1	118.75		0.033			0.81	0 Inlet Capacity
4\D1	118.69		0.04			0.87	0.001 Inlet Capacity
5\D1	118.4		0				
1\A1	124.49		0.027			0.56	0 None
2\A1	124.09		0.024			0.64	0 None
3\A1	123.58		0.024			0.61	0 None
4\A1	123.28		0.024			0.79	0 None
5\A1	122.98		0.025			0.82	0 None
6\A1	122.52		0.027			0.64	0 None
7\A1	121.61		0.046			0.54	0 Inlet Capacity
2\H3	119.32		0				
1\A2	123.44		0.007			1.76	0 None
2\A2	123.28		0.01			1.88	0 None
3\A2	122.05		0.014			1.8	0 None
4\A2	121.23	122	0.014	0.5		0.74	0 Inlet Capacity
5\A2	121.18		0.007			0.63	0 None
6\A2	121.06		0.004			0.68	0 None
7\A2	120.91		0			1.09	None
8\A2	120.83		0			0.87	None
1\A3	122.29		0.095			1.35	0 None
2\A3	121.85		0.091			0.49	0 None
3\A3	121.66		0.005			0.4	0 None
4\A3	121.4		0.046			0.56	0 None
1\A4	122.44		0.014			1.48	0 None
1\A6	121.07		0.016			0.67	0 None
1\B1	124.38		0.031			1.11	0 None
2\B1	123.82		0.03			1.32	0 None
3\B1	123.43		0.032			1.15	0 None
4\B1	122.97		0.032			1.11	0 None
5\B1	122.63		0.032			0.93	0 None
6\B1	122		0.031			1.02	0 None
7\B1	121.31		0.03			1.07	0 None
8\B1	120.84		0.03			0.7	0 None
9\B1	120.8		0.031			0.51	0 None
2\H2	119.5		0.019				
1\B9	122.75		0.026			1.17	0 None
2\B9	122.4		0.029			1.04	0 None
3\B9	122.06		0.029			0.87	0 None
4\B9	121.79		0.029			0.77	0 None
5\B9	121.32		0.034			0.99	0 None
8\B2	121.24		0.006			0.79	0 None
9\B2	121.04	121.86	0.068	3		0.73	0 Inlet Capacity
10\B2	120.9	121.84	0.043	1.1		0.87	0 Inlet Capacity
11\B2	120.83		0			0.84	None
12\B2	120.82		0			0.94	None
1\B7	125.46		0.025			1.12	0 None
2\B7	125.03		0.025			1.36	0 None
3\B7	124.63		0.025			1.48	0 None
4\B7	124.12		0.025			1.85	0 None
1\B2	123.8		0.013			1.76	0 None
2\B2	123.24		0.008			1.66	0 None
3\B2	122.92	124.31	0.074	0.9		1.32	0.005 Inlet Capacity
4\B2	122.72	124.29	0.052	0.6		1.53	0 Inlet Capacity
5\B2	122.45		0.001			1.74	0 None
6\B2	121.96		0.011			1.21	0 None
7\B2	121.54		0.046			1.01	0 None
1\B3	123.81		0.011			1.91	0 None
1\B4	122.46		0.017			1.9	0 None
1\B8	122.62		0.031			0.84	0 None
2\B8	122.12		0.031			1.19	0 None
3\B8	121.98		0.036			1.21	0 None
1\B5	121.96		0.012			1.35	0 None
1\B6	123.91		0.066			1.47	0 None
2\B6	123.33		0.064			1.49	0 None
N1704359	116.41		0.062				
1\C29	116.41	117.28	0.026	0.3		0.84	0 Inlet Capacity
N1724779	116.4		0.025				
N1724781	116.09		0.028				
E1\1	127.66	127.82	0.459	19		0	0.019 Outlet System
E1\2	127.59		0.137			0	0 Outlet System
E1\3	127.06		0.115			0.84	0.001 Inlet Capacity
E1\4	126.35		0.098			1.76	0 None
E1\5	125.34		0			4.09	0 None
E1\6	124.76		0			3.75	None
E1\7	122.96		0			2.69	None
E1\8	120.87		0			1.99	None
E1\9	118.26		0			2.15	None
E1\10	117.22		0			0.53	None
E1\11	117.07		0				
N2382093	113.34		1.581				
N2382095	113.38		0.353				
N2405140	122.56		0				
N2405141	122.44		0				
N2416749	117.69		0				
N2416750	117.58		0				
N2416755	117.69		0				
N2416756	117.58		0				
N2416761	122.55		0				
N2416762	122.44		0				
E1.2\4	128.26		0.013				
E1.3\4	128.25		0.073				
N2488288	127.66		0.032				
N2500262	117.11		0				
N2500263	117.07		0				
E1.2\2	127.82		0.034				
E1.3\2	127.82		0.138				
1.3\C16	127.84		0.003				
1.2\C16	127.84		0				
N2500284	117.07		0				
N2500285	117.11		0				
N2500293	118.71		0				
N2500294	118.76		0				
N2500299	118.71		0				
N2500300	118.58		0				
8.2\C2	120.32		0				
N2500311	120.36		0				
N2500312	120.32		0				
7.2\F1	126.03		0				
7.3\F1	125.98		0				
6.1\B2	123.02		0				
6.2\B2	122.93		0				
1.2\B5	123.02		0				
1.3\B5	122.93		0				
N2719919	127.64		0				
N2875694	127.86		0				
1\F1	125.83		0.381			1.27	0.195 Inlet Capacity
2\F1	125.69		0.263			1.32	0.063 Inlet Capacity
3\F1	125.64		0.127			1.32	0 Inlet Capacity
4\F1	125.56	127.05	0.108	13.7		1.37	0 Inlet Capacity
5\F1	125.4	127.18	0.067	3.4		1.73	0 Inlet Capacity
6\F1	125.01		0.002			2.24	0 None
7\F1	124.6		0.019			1.57	0 None
8\F1	124.45		0.009			1.38	0 None
9\F1	124.23		0				
1\C42	125.37		0.039			1.09	0.001 Inlet Capacity
2\C42	123.49		0.053			1.09	0.003 Inlet Capacity
3\C42	121.79		0.048			1.11	0.003 Inlet Capacity
4\C42	119.98		0.05			1.02	0.003 Inlet Capacity
5\C42	118.5		0.05			0.94	0.002 Inlet Capacity
6\C42	116.6		0.049			0.92	0.002 Inlet Capacity
7\C42	116.27		0.014			1.08	0 None
8\C42	116.09		0.004			0.98	0 None
9\C42	115.69		0.01			0.98	0 None
1.2\A4	122.1		0				
1.3\A4	121.98		0				
4.2\A2	121.96		0				
4.3\A2	121.83		0				
1\J2	124.7	125.78	0.077	0.2		0.91	0 Inlet Capacity
1\G1	124.62		10.051			1.57	0.006 Inlet Capacity
2\G1	124.43	125.8	0.021	0		1.36	0 Inlet Capacity
3\G1	124.15		0				
1\J1	124.69	125.77	0.034	0.9		0.92	0 Inlet Capacity
1\I1	125.28		0.409			0	0.506 Outlet System
2\I1	124.97	125.24	0.864	0.6		0	0 Outlet System
3\I1	124.39		0				
N8435513	130.17		0				
N8532079	125.79		0				
19\C2	115.37		0			0.81	None
20\C2	115.29		0			0.7	None

SUB-CATCHMENT DETAILS

Name	Max Flow Q (cu.m/s)	Paved Max Q (cu.m/s)	Grassed Max Q (cu.m/s)	Paved Tc (min)	Grassed Tc (min)	Supp. Tc (min)	Due to Storm
C 1\C1	0.049	0.037	0.012	10.27	33.98	0	10% AEP, 10 min burst, Storm 10
C 2\C1	0.034	0.026	0.008	10.06	33.15	0	10% AEP, 10 min burst, Storm 9
C 3\C1	0.033	0.025	0.008	10.06	33.15	0	10% AEP, 10 min burst, Storm 9
C 4\C1	0.033	0.025	0.008	10.06	33.15	0	10% AEP, 10 min burst, Storm 9
C 5\C1	0.033	0.025	0.008	10.06	33.15	0	10% AEP, 10 min burst, Storm 9
C 6\C1	0.033	0.025	0.008	10.06	33.15	0	10% AEP, 10 min burst, Storm 9
C 7\C1	0.033	0.025	0.008	10.06	33.15	0	10% AEP, 10 min burst, Storm 9
C 8\C1	0.033	0.025	0.008	10.06	33.15	0	10% AEP, 10 min burst, Storm 9
C 9\C1	0.033	0.025	0.008	10.06	33.15	0	10% AEP, 10 min burst, Storm 9
C 10\C1	0.033	0.025	0.008	10.06	33.15	0	10% AEP, 10 min burst, Storm 9
C 11\C1	0.033	0.025	0.008	10.06	33.15	0	10% AEP, 10 min burst, Storm 9
C 12\C1	0.033	0.025	0.008	10.06	33.15	0	10% AEP, 10 min burst, Storm 4
C 13\C1	0.033	0.025	0.008	10.06	33.15	0	10% AEP, 10 min burst, Storm 9
C 14\C1	0.033	0.025	0.008	10.06	33.15	0	10% AEP, 10 min burst, Storm 9
C 15\C1	0.033	0.025	0.008	10.06	33.15	0	10% AEP, 10 min burst, Storm 9
C 16\C1	0.033	0.025	0.008	10.06	33.15	0	10% AEP, 10 min burst, Storm 9
C 17\C1	0.033	0.025	0.008	10.06	33.15	0	10% AEP, 10 min burst, Storm 9
C 18\C1	0.033	0.025	0.008	10.06	33.15	0	10% AEP, 10 min burst, Storm 9
C 1\C10	0.074	0.063	0.011	5	13	0	10% AEP, 15 min burst, Storm 5
C 4\C2	0.011	0.009	0.002	5	13	0	10% AEP, 15 min burst, Storm 5
C 5\C2	0.002	0.002	0	5	13	0	10% AEP, 15 min burst, Storm 5
C 6\C2	0.028	0.024	0.004	5	13	0	10% AEP, 15 min burst, Storm 5
C 7\C2	0.028	0.024	0.004	5	13	0	10% AEP, 15 min burst, Storm 5
C 8\C2	0.001	0.001	0	5	13	0	10% AEP, 15 min burst, Storm 5
C 9\C2	0.057	0.048	0.008	5	13	0	10% AEP, 15 min burst, Storm 5
C 10\C2	0.013	0.011	0.002	5	13	0	10% AEP, 15 min burst, Storm 5
C 11\C2	0.007	0.006	0.001	5	13	0	10% AEP, 15 min burst, Storm 5
C 12\C2	0.002	0.002	0	5	13	0	10% AEP, 15 min burst, Storm 5
C 13\C2	0.007	0.006	0.001	5	13	0	10% AEP, 15 min burst, Storm 5
C 14\C2	0.001	0.001	0	5	13	0	10% AEP, 15 min burst, Storm 5
C 15\C2	0.008	0.007	0.001	5	13	0	10% AEP, 15 min burst, Storm 5
C 16\C2	0.007	0.006	0.001	5	13	0	10% AEP, 15 min burst, Storm 5
C 17\C2	0.016	0.014	0.002	5	13	0	10% AEP, 15 min burst, Storm 5
C 18\C2	0.021	0.021	0.001	5	13	0	10% AEP, 15 min burst, Storm 4
C 1\C11	0.019	0.016	0.003	5	13	0	10% AEP, 15 min burst, Storm 5
C 2\C11	0.019	0.017	0.003	5	13	0	10% AEP, 15 min burst, Storm 5
C 3\C11	0.019	0.017	0.003	5	13	0	10% AEP, 15 min burst, Storm 5
C 4\C11	0.019	0.016	0.003	5	13	0	10% AEP, 15 min burst, Storm 5
C 5\C11	0.019	0.016	0.003	5	13	0	10% AEP, 15 min burst, Storm 5
C 6\C11	0.022	0.019	0.003	5	13	0	10% AEP, 15 min burst, Storm 5
C 7\C11	0.009	0.008	0.001	5	13	0	10% AEP, 15 min burst, Storm 5
C 2\C3	0.047	0.04	0.007	5	13	0	10% AEP, 15 min burst, Storm 5
C 3\C3	0.026	0.022	0.004	5	13	0	10% AEP, 15 min burst, Storm 5
C 4\C3	0.023	0.02	0.003	5	13	0	10% AEP, 15 min burst, Storm 5
C 5\C3	0.05	0.043	0.007	5	13	0	10% AEP, 15 min burst, Storm 5
C 6\C3	0.031	0.026	0.004	5	13	0	10% AEP, 15 min burst, Storm 5
C 7\C3	0.006	0.005	0.001	5	13	0	10% AEP, 15 min burst, Storm 5
C 8\C3	0.019	0.016	0.003	5	13	0	10% AEP, 15 min burst, Storm 5
C 1\C12	0.021	0.018	0.003	5	13	0	10% AEP, 15 min burst, Storm 5
C 2\C12	0.019	0.016	0.003	5	13	0	10% AEP, 15 min burst, Storm 5
C 3\C12	0.019	0.016	0.003	5	13	0	10% AEP, 15 min burst, Storm 5
C 4\C12	0.019	0.016	0.003	5	13	0	10% AEP, 15 min burst, Storm 5
C 5\C12	0.019	0.016	0.003	5	13	0	10% AEP, 15 min burst, Storm 5
C 6\C12	0.02	0.017	0.003	5	13	0	10% AEP, 15 min burst, Storm 5
C 7\C12	0.019	0.017	0.003	5	13	0	10% AEP, 15 min burst, Storm 5
C 1\C13	0.021	0.018	0.003	5	13	0	10% AEP, 15 min burst, Storm 5
C 2\C13	0.022	0.019	0.003	5	13	0	10% AEP, 15 min burst, Storm 5
C 3\C13	0.025	0.021	0.004	5	13	0	10% AEP, 15 min burst, Storm 5
C 4\C13	0.033	0.029	0.005	5	13	0	10% AEP, 15 min burst, Storm 5
C 5\C13	0.02	0.017	0.003	5	13	0	10% AEP, 15 min burst, Storm 5
C 1\C14	0.008	0.007	0.001	5	13	0	10% AEP, 15 min burst, Storm 5
C 1\C15	0.016	0.014	0.002	5	13	0	10% AEP, 15 min burst, Storm 5
C 1\C16	0.016	0.014	0.002	5	13	0	10% AEP, 15 min burst, Storm 5
C 2\C16	0.032	0.027	0.005	5	13	0	10% AEP, 15 min burst, Storm 5
C 3\C16	0.005	0.004	0.001	5	13	0	10% AEP, 15 min burst, Storm 5
C 4\C16	0.034	0.029	0.005	5	13	0	10% AEP, 15 min burst, Storm 5
C 5\C16	0.005	0.005	0.001	5	13	0	10% AEP, 15 min burst, Storm 5
C 6\C16	0.004	0.003	0.001	5	13	0	10% AEP, 15 min burst, Storm 5
C 7\C16	0.002	0.001	0	5	13	0	10% AEP, 15 min burst, Storm 5
C 8\C16	0.003	0.002	0	5	13	0	10% AEP, 15 min burst, Storm 5
C 9\C16	0.003	0.003	0	5	13	0	10% AEP, 15 min burst, Storm 5
C 10\C16	0.005	0.004	0.001	5	13	0	10% AEP, 15 min burst, Storm

10% AEP RESULTS

C 3\C30	0.051	0.044	0.007	5	13	0 10% AEP, 15 min burst, Storm 5
C 4\C30	0.022	0.019	0.003	5	13	0 10% AEP, 15 min burst, Storm 5
C 5\C30	0.051	0.044	0.007	5	13	0 10% AEP, 15 min burst, Storm 5
C 1\C31	0.059	0.051	0.009	5	13	0 10% AEP, 15 min burst, Storm 5
C 1\C33	0.011	0.009	0.002	5	13	0 10% AEP, 15 min burst, Storm 5
C 1\C34	0.017	0.015	0.002	5	13	0 10% AEP, 15 min burst, Storm 5
C 1\C35	0.016	0.013	0.002	5	13	0 10% AEP, 15 min burst, Storm 5
C 1\C36	0.025	0.021	0.004	5	13	0 10% AEP, 15 min burst, Storm 5
C 2\C36	0.025	0.022	0.004	5	13	0 10% AEP, 15 min burst, Storm 5
C 3\C36	0.025	0.022	0.004	5	13	0 10% AEP, 15 min burst, Storm 5
C 1\C37	0.023	0.019	0.003	5	13	0 10% AEP, 15 min burst, Storm 5
C 2\C37	0.024	0.02	0.003	5	13	0 10% AEP, 15 min burst, Storm 5
C 3\C37	0.025	0.022	0.004	5	13	0 10% AEP, 15 min burst, Storm 5
C 4\C37	0.025	0.022	0.004	5	13	0 10% AEP, 15 min burst, Storm 5
C 1\C38	0.021	0.018	0.003	5	13	0 10% AEP, 15 min burst, Storm 5
C 2\C38	0.021	0.018	0.003	5	13	0 10% AEP, 15 min burst, Storm 5
C 3\C38	0.02	0.017	0.003	5	13	0 10% AEP, 15 min burst, Storm 5
C 4\C38	0.021	0.018	0.003	5	13	0 10% AEP, 15 min burst, Storm 5
C 5\C38	0.023	0.02	0.003	5	13	0 10% AEP, 15 min burst, Storm 5
C 1\C39	0.031	0.027	0.005	5	13	0 10% AEP, 15 min burst, Storm 5
C 2\C39	0.025	0.022	0.004	5	13	0 10% AEP, 15 min burst, Storm 5
C 3\C39	0.021	0.018	0.003	5	13	0 10% AEP, 15 min burst, Storm 5
C 4\C39	0.019	0.016	0.003	5	13	0 10% AEP, 15 min burst, Storm 5
C 6\C39	0.02	0.017	0.003	5	13	0 10% AEP, 15 min burst, Storm 5
C 7\C39	0.021	0.018	0.003	5	13	0 10% AEP, 15 min burst, Storm 5
C 8\C39	0.023	0.019	0.003	5	13	0 10% AEP, 15 min burst, Storm 5
C 1\C4	0.008	0.007	0.001	5	13	0 10% AEP, 15 min burst, Storm 5
C 2\C4	0.05	0.043	0.007	5	13	0 10% AEP, 15 min burst, Storm 5
C 3\C4	0.052	0.044	0.008	5	13	0 10% AEP, 15 min burst, Storm 5
C 1\C40	0.027	0.023	0.004	5	13	0 10% AEP, 15 min burst, Storm 5
C 2\C40	0.022	0.019	0.003	5	13	0 10% AEP, 15 min burst, Storm 5
C 3\C40	0.024	0.02	0.003	5	13	0 10% AEP, 15 min burst, Storm 5
C 4\C40	0.024	0.02	0.003	5	13	0 10% AEP, 15 min burst, Storm 5
C 5\C40	0.024	0.021	0.003	5	13	0 10% AEP, 15 min burst, Storm 5
C 6\C40	0.022	0.019	0.003	5	13	0 10% AEP, 15 min burst, Storm 5
C 7\C40	0.02	0.017	0.003	5	13	0 10% AEP, 15 min burst, Storm 5
C 8\C40	0.019	0.016	0.003	5	13	0 10% AEP, 15 min burst, Storm 5
C 9\C40	0.021	0.018	0.003	5	13	0 10% AEP, 15 min burst, Storm 5
C 10\C40	0.02	0.017	0.003	5	13	0 10% AEP, 15 min burst, Storm 5
C 1\C41	0.02	0.017	0.003	5	13	0 10% AEP, 15 min burst, Storm 5
C 1\C6	0.007	0.006	0.001	5	13	0 10% AEP, 15 min burst, Storm 5
C 1\C7	0.039	0.033	0.006	5	13	0 10% AEP, 15 min burst, Storm 5
C 1\C8	0.05	0.042	0.007	5	13	0 10% AEP, 15 min burst, Storm 5
C 9\C30	0.039	0.033	0.006	5	13	0 10% AEP, 15 min burst, Storm 5
Cat536013	0.06	0.051	0.009	5	13	0 10% AEP, 15 min burst, Storm 5
C 1\C32	0.073	0.062	0.011	5	13	0 10% AEP, 15 min burst, Storm 5
C 1\C9	0.106	0.09	0.015	5	13	0 10% AEP, 15 min burst, Storm 5
C 1\D1	0.041	0.028	0.018	5.78	23	0 10% AEP, 20 min burst, Storm 3
C 2\D1	0.039	0.029	0.009	10.06	33.15	0 10% AEP, 10 min burst, Storm 10
C 3\D1	0.03	0.022	0.007	10.06	33.15	0 10% AEP, 10 min burst, Storm 2
C 4\D1	0.039	0.035	0.005	10.06	33.15	0 10% AEP, 10 min burst, Storm 3
C 1\A1	0.021	0.017	0.004	6	10	2 10% AEP, 15 min burst, Storm 5
C 2\A1	0.019	0.015	0.004	6	10	2 10% AEP, 15 min burst, Storm 5
C 3\A1	0.019	0.016	0.004	6	10	2 10% AEP, 15 min burst, Storm 5
C 4\A1	0.019	0.016	0.004	6	10	2 10% AEP, 15 min burst, Storm 5
C 5\A1	0.02	0.017	0.004	6	10	2 10% AEP, 15 min burst, Storm 5
C 6\A1	0.021	0.017	0.004	6	10	2 10% AEP, 15 min burst, Storm 5
C 7\A1	0.037	0.03	0.007	6	10	2 10% AEP, 15 min burst, Storm 5
C 1\A2	0.006	0.005	0.001	6	10	2 10% AEP, 15 min burst, Storm 5
C 2\A2	0.008	0.007	0.002	6	10	2 10% AEP, 15 min burst, Storm 5
C 3\A2	0.011	0.009	0.002	6	10	2 10% AEP, 15 min burst, Storm 5
C 4\A2	0.012	0.009	0.002	6	10	2 10% AEP, 15 min burst, Storm 5
C 5\A2	0.005	0.004	0.001	6	10	2 10% AEP, 15 min burst, Storm 5
C 6\A2	0.003	0.003	0.001	6	10	2 10% AEP, 15 min burst, Storm 5
C 1\A3	0.076	0.062	0.015	6	10	2 10% AEP, 15 min burst, Storm 5
C 2\A3	0.073	0.059	0.014	6	10	2 10% AEP, 15 min burst, Storm 5
C 3\A3	0.004	0.003	0.001	6	10	2 10% AEP, 15 min burst, Storm 5
C 4\A3	0.037	0.03	0.007	6	10	2 10% AEP, 15 min burst, Storm 5
C 1\A4	0.011	0.009	0.002	6	10	2 10% AEP, 15 min burst, Storm 5
C 1\A6	0.013	0.01	0.002	6	10	2 10% AEP, 15 min burst, Storm 5
C 1\B1	0.024	0.02	0.004	5	10	2 10% AEP, 15 min burst, Storm 5
C 2\B1	0.024	0.019	0.004	5	10	2 10% AEP, 15 min burst, Storm 5
C 3\B1	0.025	0.02	0.004	5	10	2 10% AEP, 15 min burst, Storm 5
C 4\B1	0.025	0.02	0.004	5	10	2 10% AEP, 15 min burst, Storm 5
C 5\B1	0.025	0.02	0.004	5	10	2 10% AEP, 15 min burst, Storm 5
C 6\B1	0.024	0.02	0.004	5	10	2 10% AEP, 15 min burst, Storm 5
C 7\B1	0.023	0.019	0.004	5	10	2 10% AEP, 15 min burst, Storm 5
C 8\B1	0.023	0.019	0.004	5	10	2 10% AEP, 15 min burst, Storm 5
C 9\B1	0.024	0.02	0.004	5	10	2 10% AEP, 15 min burst, Storm 5
C 1\B9	0.02	0.016	0.004	5	10	2 10% AEP, 15 min burst, Storm 5
C 2\B9	0.023	0.019	0.004	5	10	2 10% AEP, 15 min burst, Storm 5
C 3\B9	0.023	0.019	0.004	5	10	2 10% AEP, 15 min burst, Storm 5
C 4\B9	0.023	0.019	0.004	5	10	2 10% AEP, 15 min burst, Storm 5
C 5\B9	0.026	0.021	0.005	5	10	2 10% AEP, 15 min burst, Storm 5
C 8\B2	0.005	0.004	0.001	5	10	2 10% AEP, 15 min burst, Storm 5
C 9\B2	0.052	0.043	0.009	5	10	2 10% AEP, 15 min burst, Storm 5
C 10\B2	0.033	0.027	0.006	5	10	2 10% AEP, 15 min burst, Storm 5
C 1\B7	0.02	0.016	0.004	5	10	2 10% AEP, 15 min burst, Storm 5
C 2\B7	0.019	0.016	0.003	5	10	2 10% AEP, 15 min burst, Storm 5
C 3\B7	0.019	0.016	0.003	5	10	2 10% AEP, 15 min burst, Storm 5
C 4\B7	0.02	0.016	0.004	5	10	2 10% AEP, 15 min burst, Storm 5
C 1\B2	0.01	0.009	0.002	5	10	2 10% AEP, 15 min burst, Storm 5
C 2\B2	0.006	0.005	0.001	5	10	2 10% AEP, 15 min burst, Storm 5
C 3\B2	0.057	0.047	0.01	5	10	2 10% AEP, 15 min burst, Storm 5
C 4\B2	0.03	0.024	0.005	5	10	2 10% AEP, 15 min burst, Storm 5
C 5\B2	0.001	0.001	0	5	10	2 10% AEP, 15 min burst, Storm 5
C 6\B2	0.009	0.007	0.002	5	10	2 10% AEP, 15 min burst, Storm 5
C 7\B2	0.036	0.029	0.006	5	10	2 10% AEP, 15 min burst, Storm 5
C 1\B3	0.008	0.007	0.002	5	10	2 10% AEP, 15 min burst, Storm 5
C 1\B4	0.013	0.011	0.002	5	10	2 10% AEP, 15 min burst, Storm 5
C 1\B8	0.024	0.02	0.004	5	10	2 10% AEP, 15 min burst, Storm 5
C 2\B8	0.024	0.02	0.004	5	10	2 10% AEP, 15 min burst, Storm 5
C 3\B8	0.028	0.023	0.005	5	10	2 10% AEP, 15 min burst, Storm 5
C 1\B5	0.01	0.008	0.002	5	10	2 10% AEP, 15 min burst, Storm 5
C 1\B6	0.051	0.042	0.009	5	10	2 10% AEP, 15 min burst, Storm 5
C 2\B6	0.049	0.04	0.009	5	10	2 10% AEP, 15 min burst, Storm 5
Cat1490103	0.048	0.041	0.007	5	13	0 10% AEP, 15 min burst, Storm 5
C 1\C29	0.02	0.017	0.003	5	13	0 10% AEP, 15 min burst, Storm 5
Cat1508484	0.02	0.017	0.003	5	13	0 10% AEP, 15 min burst, Storm 5
Cat1508532	0.022	0.018	0.003	5	13	0 10% AEP, 15 min burst, Storm 5
C E1\1	0.616	0.174	0.442	12.97	29.79	0 10% AEP, 20 min burst, Storm 8
C E1\2	0.294	0.059	0.255	5.82	13.36	0 10% AEP, 20 min burst, Storm 4
C E1\3	0.069	0.014	0.06	5.68	13.05	0 10% AEP, 20 min burst, Storm 4
C E1\4	0.174	0.036	0.15	6.01	13.81	0 10% AEP, 20 min burst, Storm 4
PRE 1	1.622	0.241	1.382	15.3	28.37	0 10% AEP, 20 min burst, Storm 8
PRE 2	0.325	0.043	0.289	10.71	19.87	0 10% AEP, 20 min burst, Storm 4
PRE 3	0.208	0.023	0.191	8.26	15.32	0 10% AEP, 20 min burst, Storm 4
Cat Bypass	0.287	0.153	0.178	6.26	11.6	0 10% AEP, 15 min burst, Storm 7
PRE	2.643	0.37	2.322	11.52	21.9	0 10% AEP, 20 min burst, Storm 4
Cat3658574	0.1	0.02	0.087	5.68	13.05	0 10% AEP, 20 min burst, Storm 4
Cat3658531	0.008	0.002	0.007	5.68	13.05	0 10% AEP, 20 min burst, Storm 4
Cat3679741	0.182	0.052	0.131	12.97	29.79	0 10% AEP, 20 min burst, Storm 8
Cat3679699	0.019	0.005	0.013	12.97	29.79	0 10% AEP, 20 min burst, Storm 8
C 1\F1	0.742	0.187	0.555	13.8	25.59	0 10% AEP, 20 min burst, Storm 8
C 2\F1	0.121	0.03	0.09	13.8	25.59	0 10% AEP, 20 min burst, Storm 8
C 3\F1	0.121	0.03	0.09	13.8	25.59	0 10% AEP, 20 min burst, Storm 8
C 4\F1	0.428	0.108	0.32	13.8	25.59	0 10% AEP, 20 min burst, Storm 8
C 5\F1	0.052	0.043	0.009	5	10	2 10% AEP, 15 min burst, Storm 5
C 6\F1	0.002	0.001	0	5	10	2 10% AEP, 15 min burst, Storm 5
C 7\F1	0.015	0.012	0.003	5	10	2 10% AEP, 15 min burst, Storm 5
C 8\F1	0.007	0.006	0.001	5	10	2 10% AEP, 15 min burst, Storm 5
C 1\C42	0.028	0.017	0.016	5	13	0 10% AEP, 20 min burst, Storm 2
C 2\C42	0.036	0.022	0.021	5	13	0 10% AEP, 20 min burst, Storm 2
C 3\C42	0.032	0.019	0.019	5	13	0 10% AEP, 20 min burst, Storm 2
C 4\C42	0.035	0.029	0.015	5	13	0 10% AEP, 15 min burst, Storm 3
C 5\C42	0.035	0.03	0.012	5	13	0 10% AEP, 15 min burst, Storm 3
C 6\C42	0.036	0.032	0.011	5	13	0 10% AEP, 15 min burst, Storm 3
C 7\C42	0.008	0.008	0	5	13	0 10% AEP, 15 min burst, Storm 4
C 8\C42	0.003	0.003	0	5	13	0 10% AEP, 15 min burst, Storm 4
C 9\C42	0.007	0.007	0	5	13	0 10% AEP, 15 min burst, Storm 4
C 1\U2	0.112	0.02	0.098	6.55	12.16	0 10% AEP, 20 min burst, Storm 4
Cat West South	10.019	3.074	6.945	18.87	35	0 10% AEP, 20 min burst, Storm 8
C 2\G1	0.016	0.013	0.003	5	10	2 10% AEP, 15 min burst, Storm 5
C 1\U1	0.025	0.003	0.022	3.1	5.75	0 10% AEP, 10 min burst, Storm 7
C \U1	0.774	0.189	0.623	10.2	18.93	0 10% AEP, 20 min burst, Storm 4
Cat West South2	0.636	0.155	0.512	10.2	18.93	0 10% AEP, 20 min burst, Storm 4

PIPE DETAILS Name	Max Q (cu.m/s)	Max V (m/s)	Max U/S HGL (m)	Max D/S HGL (m)	Due to Storm
P 1\C1	0.045	0.86	117.53	117.43	10% AEP, 10 min burst, Storm 9
P 2\C1	0.081	1.13	117.42	117.317	10% AEP, 15 min burst, Storm 6
P 3\C1	0.114	1.13	117.306	117.191	10% AEP, 15 min burst, Storm 6
P 4\C1	0.146	1.33	117.168	117.023	10% AEP, 15 min burst, Storm 6
P 5\C1	0.179	1.28	117.005	116.875	10% AEP, 15 min burst, Storm 6
P 6\C1	0.211	1.36	116.849	116.722	10% AEP, 15 min burst, Storm 6
P 7\C1	0.242	1.43	116.687	116.561	10% AEP, 15 min burst, Storm 9
P 8\C1	0.272	1.3	116.535	116.437	10% AEP, 15 min burst, Storm 9
P 9\C1	0.302	1.35	116.404	116.306	10% AEP, 15 min burst, Storm 9
P 10\C1	0.332	1.41	116.266	116.162	10% AEP, 15 min burst, Storm 9
P 11\C1	0.361	1.51	116.114	115.998	10% AEP, 15 min burst, Storm 9
P 12\C1	0.39	1.43	115.963	115.863	10% AEP, 15 min burst, Storm 9
P 13\C1	0.419	1.47	115.822	115.72	10% AEP, 15 min burst, Storm 9
P 14\C1	0.448	1.53	115.673	115.565	10% AEP, 15 min burst, Storm 9
P 15\C1	0.477	1.64	115.512	115.391	10% AEP, 15 min burst, Storm 8
P 16\C1	0.506	1.58	115.35	115.236	10% AEP, 15 min burst, Storm 8
P 17\C1	0.535	1.67	115.19	115.065	10% AEP, 15 min burst, Storm 8
P 18\C1	0.564	1.98	114.987	114.927	10% AEP, 15 min burst, Storm 8
P 1\H1	1.013	2.78	114.581	113.655	10% AEP, 25 min burst, Storm 2
P 1\C10	0.07	1.23	120.467	120.41	10% AEP, 15 min burst, Storm 5
P 4\C2	0.139	1.7	120.371	120.182	10% AEP, 15 min burst, Storm 10
P 5\C2	0.149	1.66	120.106	119.781	10% AEP, 15 min burst, Storm 5
P 6\C2	0.304	1.86	119.7	119.415	10% AEP, 15 min burst, Storm 4
P 7\C2	0.335	1.94	119.325	119.112	10% AEP, 15 min burst, Storm 4
P 8\C2	0.921	2.31	119.029	118.333	10% AEP, 15 min burst, Storm 4
P 9\C2	1.063	2.99	118.249	117.595	10% AEP, 15 min burst, Storm 3
P 10\C2	1.092	1.95	117.527	117.306	10% AEP, 15 min burst, Storm 3
P 11\C2	1.092	1.87	117.261	117.124	10% AEP, 15 min burst, Storm 3
P 12\C2	1.593	2.17	117.059	116.766	10% AEP, 15 min burst, Storm 3
P 13\C2	1.73	2	116.651	116.311	10% AEP, 15 min burst, Storm 3
P 14\C2	2.149	1.81	116.212	116.083	10% AEP, 15 min burst, Storm 6
P 15\C2	2.375	1.91	115.926	115.82	10% AEP, 15 min burst, Storm 6
P 16\C2	2.379	1.74	115.687	115.651	10% AEP, 15 min burst, Storm 6
P 17\C2	2.391	1.4	115.546	115.526	10% AEP, 15 min burst, Storm 6
P 1\C2.1	1.145	1.44	115.435	115.412	10% AEP, 15 min burst, Storm 6
P 18\C2	1.261	1.6	115.425	115.371	10% AEP, 15 min burst, Storm 6
P 2\C2.1	1.145	1.51	115.348	115.312	10% AEP, 15 min burst, Storm 6
P 3\C2.1	1.145	1.59	115.253	115.233	10% AEP, 15 min burst, Storm 6
P 4\C2.1	1.145	2.23	115.15	115.051	10% AEP, 15 min burst, Storm 6
P 1\C11	0.019	0.56	125.865	125.649	10% AEP, 15 min burst, Storm 5
P 2\C11	0.037	1.02	125.648	125.462	10% AEP, 15 min burst, Storm 5
P 3\C11	0.056	1.23	125.451	125.256	10% AEP, 15 min burst, Storm 5
P 4\C11	0.074	1.23	125.244	125.04	10% AEP, 15 min burst, Storm 5
P 5\C11	0.091	1.16	125.04	124.877	10% AEP, 15 min burst, Storm 5
P 6\C11	0.112	1.09	124.859	124.821	10% AEP, 15 min burst, Storm 5
P 7\C11	0.12	1.33	124.761	124.697	10% AEP, 15 min burst, Storm 5
P 2\C3	0.179	1.62	124.692	123.98	10% AEP, 15 min burst, Storm 5
P 3\C3	0.198	1.69	123.944	123.747	10% AEP, 15 min burst, Storm 4
P 4\C3	0.331	2.26	123.676	122.406	10% AEP, 15 min burst, Storm 5
P 5\C3	0.4	3.42	122.322	121.092	10% AEP, 15 min burst, Storm 4
P 6\C3	0.483	2.11	120.36	119.859	10% AEP, 15 min burst, Storm 4
P 7\C3	0.475	2.09	119.791	119.342	10% AEP, 15 min burst, Storm 4
P 8\C3	0.585	2.01	119.224	119.112	10% AEP, 15 min burst, Storm 4
P 1\C12	0.022	1.62	123.937	123.547	10% AEP, 15 min burst, Storm 4
P 2\C12	0.04	1.23	123.542	123.126	10% AEP, 15 min burst, Storm 5
P 3\C12	0.058	1.45	123.125	122.598	10% AEP, 15 min burst, Storm 5
P 4\C12	0.08	2.53	122.573	122.029	10% AEP, 15 min burst, Storm 5
P 5\C12	0.095	2.83	122.023	121.332	10% AEP, 15 min burst, Storm 5
P 6\C12	0.113	2.38	121.218	120.13	10% AEP, 15 min burst, Storm 5
P 7\C12	0.131	2.32	120.041	119.833	10% AEP, 15 min burst, Storm 5
P 1\C13	0.021	1.97	122.492	121.803	10% AEP, 15 min burst, Storm 5
P 2\C13	0.042	1.29	121.801	121.209	10% AEP, 15 min burst, Storm 5
P 3\C13	0.066	1.78	121.201	120.186	10% AEP, 15 min burst, Storm 5
P 4\C13	0.096	3.03	120.156	118.592	10% AEP, 15 min burst, Storm 5
P 5\C13	0.114	1.61	118.486	118.333	10% AEP, 15 min burst, Storm 5
P 1\C14	0.008	0.87	120.323	120.21	10% AEP, 15 min burst, Storm 5
P 1\C15	0.015	0.42	119.439	119.415	10% AEP, 15 min burst, Storm 5
P 1\C16	0.015	0.54	126.137	125.007	10% AEP, 15 min burst, Storm 3
P 2\C16	0.04	1.11	125.007	124.873	10% AEP, 15 min burst, Storm 5
P 3\C16	0.044	0.93	124.873	124.428	10% AEP, 15 min burst, Storm 5
P 4\C16	0.144	2.13	124.376	123.978	10% AEP, 15 min burst, Storm 3
P 5\C16	0.148	2.24	123.874	123.284	10% AEP, 15 min burst, Storm 5
P 6\C16	0.152	1.64	123.22	122.956	10% AEP, 15 min burst, Storm 5
P 7\C16	0.225	2.1	122.921	122.415	10% AEP, 15 min burst, Storm 5
P 8\C16	0.227	2.05	122.415	121.927	10% AEP, 15 min burst, Storm 5
P 9\C16	0.23	1.84	121.927	121.24	10% AEP, 15 min burst, Storm 5
P 10\C16	0.308	2.65	121.171	119.157	10% AEP, 15 min burst, Storm 5
P 11\C16	0.397	3.52	119.111	118.317	10% AEP, 15 min burst, Storm 5
P 12\C16	0.394	2.1	118.106	117.551	10% AEP, 15 min burst, Storm 5
P 13\C16	0.396	2.11	117.513	117.257	10% AEP, 15 min burst, Storm 5
P 14\C16	0.533	1.6	117.182	117.124	10% AEP, 15 min burst, Storm 5
P 1\C17	0.074	1.25	124.554	124.428	10% AEP, 15 min burst, Storm 5
P 1\C18	0.075	1.76	123.372	123.191	10% AEP, 15 min burst, Storm 5
P 1\C19	0.07	1.23	121.288	121.24	10% AEP, 15 min burst, Storm 5
P 1\C2	0.038	1.67	121.652	121.412	10% AEP, 15 min burst, Storm 5
P 2\C2	0.054	1.62	121.37	120.935	10% AEP, 15 min burst, Storm 5
P 3\C2	0.058	1.12	120.935	120.41	10% AEP, 15 min burst, Storm 5
P 1\C20	0.078	1.27	119.319	119.157	10% AEP, 15 min burst, Storm 5
P 1\C21	0.135	0.56	117.264	117.257	10% AEP, 15 min burst, Storm 5
P 1\C22	0.03	0.56	117.63	117.582	10% AEP, 15 min burst, Storm 5
P 1\C23	0.017	0.17	116.767	116.766	10% AEP, 5 min burst, Storm 1
P 1\C24	0.019	0.17	116.084	116.083	10% AEP, 15 min burst, Storm 4
P 1\C25	0.007	0.42	121.973	121.016	10% AEP, 15 min burst, Storm 5
P 2\C25	0.113	1.49	120.977	120.847	10% AEP, 15 min burst, Storm 5
P 3\C25	0.122	1.52	120.84	119.672	10% AEP, 15 min burst, Storm 4
P 4\C25	0.174	1.8	119.666	118.894	10% AEP, 15 min burst, Storm 4
P 5\C25	0.284	2.25	118.828	117.928	10% AEP, 15 min burst, Storm 5
P 6\C25	0.313	2.11	117.928	117.464	10% AEP, 15 min burst, Storm 5
P 7\C25	0.336	2.01	117.464	116.832	10% AEP, 15 min burst, Storm 5
P 8\C25	0.41	1.96	116.768	116.397	10% AEP, 15 min burst, Storm 4
P 9\C25	0.487	1.23	116.337	116.311	10% AEP, 15 min burst, Storm 5
P 1\C26	0.022	0.29	122.951	122.945	10% AEP, 15 min burst, Storm 9
P 2\C31	0.323	1.77	122.925	122.501	10% AEP, 15 min burst, Storm 5
P 3\C31	0.372	1.77	122.475	122.266	10% AEP, 15 min burst, Storm 4
P 4\C31	0.397	1.74	122.235	122.094	10% AEP, 15 min burst, Storm 4
P 5\C31	0.463	1.62	121.973	121.943	10% AEP, 15 min burst, Storm 4
P 6\C31	0.479	1.86	121.827	121.756	10% AEP, 15 min burst, Storm 4
P 7\C31	0.483	2	121.689	121.578	10% AEP, 15 min burst, Storm 4
P 6\C30	0.815	2.63	121.526	121.033	10% AEP, 15 min burst, Storm 4
P 7\C30	0.842	3.32	121.033	120.284	10% AEP, 15 min burst, Storm 4
P 8\C30	0.868	2.58	120.284	119.649	10% AEP, 15 min burst, Storm 4
P 9\C30	0.902	3.09	119.572	118.531	10% AEP, 15 min burst, Storm 4
P 10\C30	0.945	3.01	118.527	117.564	10% AEP, 15 min burst, Storm 4
P 11\C30	1.007	2.4	117.51	116.199	10% AEP, 15 min burst, Storm 4
P 12\C30	1.063	2.33	116.117	115.873	10% AEP, 15 min burst, Storm 4
P 13\C30	1.091	2.44	115.814	115.63	10% AEP, 15 min burst, Storm 4
P 14\C30	1.275	1.83	115.516	115.458	10% AEP, 15 min burst, Storm 3
P 15\C30	1.274	1.85	115.386	115.356	10% AEP, 15 min burst, Storm 3
P 16\C30	1.275	2.57	115.314	115.071	10% AEP, 15 min burst, Storm 3
P 1\C27	0.087	1.33	119.084	118.894	10% AEP, 15 min burst, Storm 5
P 1\C28	0.056	0.83	116.852	116.832	10% AEP, 15 min burst, Storm 5
P 1\C3	0.007	0.42	125.443	124.697	10% AEP, 15 min burst, Storm 5
P 1\C30	0.025	1.25	126.964	126.447	10% AEP, 15 min burst, Storm 3
P 2\C30	0.036	0.93	126.447	124.754	10% AEP, 15 min burst, Storm 4
P 3\C30	0.122	2.08	124.754	123.95	10% AEP, 15 min burst, Storm 3
P 4\C30	0.27	2.45	123.588	122.669	10% AEP, 15 min burst, Storm 5
P 5\C30	0.318	3.02	122.478	121.578	10% AEP, 15 min burst, Storm 5
P 1\C31	0.057	1.14	123.271	122.945	10% AEP, 15 min burst, Storm 5
P 1\C33	0.012	0.52	119.748	119.649	10% AEP, 5 min burst, Storm 1
P 1\C34	0.016	0.16	117.565	117.564	10% AEP, 5 min burst, Storm 1
P 1\C35	0.015	0.14	116.2	116.199	10% AEP

10% AEP RESULTS

F 16\C1	0	0	0.043	0	0	0	0	
F 17\C1	0	0	0.043	0	0	0	0	
F 18\C1	0	0	0.043	0	0	0	0	
F 1\H1	0	0	0	0	0	0	0	
OF2097695	1.013	1.013	0	0.107	0.1	17.41	1.09	10% AEP, 25 min burst, Storm 2
F 1\C10	0	0	0.34	0	0	0	0	
F 4\C2	0	0	0.408	0	0	0	0	
F 5\C2	0	0	0.408	0	0	0	0	
F 6\C2	0	0	0.408	0	0	0	0	
F 7\C2	0	0	0.358	0	0	0	0	
F 8\C2	0	0	0.183	0	0	0	0	
F 9\C2	0	0	0.408	0	0	0	0	
F 10\C2	0	0	0.408	0	0	0	0	
F 11\C2	0	0	0.438	0	0	0	0	
F 12\C2	0	0	0.358	0	0	0	0	
F 13\C2	0	0	0.392	0	0	0	0	
OF2198139	0	0	0.34	0	0	0	0	
F 15\C2	0	0	0.34	0	0	0	0	
F 16\C2	0	0	0.226	0	0	0	0	
F 17\C2	0	0	0	0	0	0	0	
F 18\C2	0	0	0	0	0	0	0	
F 1\C11	0	0	0.057	0	0	0	0	
F 2\C11	0	0	0.043	0	0	0	0	
F 3\C11	0	0	0.043	0	0	0	0	
F 4\C11	0	0	0.043	0	0	0	0	
F 5\C11	0	0	0.043	0	0	0	0	
F 6\C11	0	0	0.043	0	0	0	0	
F 7\C11	0	0	0.61	0	0	0	0	
F 2\C3	0	0	0.599	0	0	0	0	
F 3\C3	0.001	0.001	0.61	0.007	0	0.1	0	10% AEP, 15 min burst, Storm 5
F 4\C3	0	0	0.61	0	0	0	0	
F 5\C3	0	0	0.599	0	0	0	0	
F 6\C3	0	0	0.588	0	0	0	0	
F 7\C3	0	0	0.358	0	0	0	0	
F 8\C3	0	0	0.358	0	0	0	0	
F 1\C12	0	0	0.043	0	0	0	0	
F 2\C12	0	0	0.043	0	0	0	0	
F 3\C12	0	0	0.043	0	0	0	0	
F 4\C12	0	0	0.043	0	0	0	0	
F 5\C12	0	0	0.043	0	0	0	0	
F 6\C12	0	0	0.043	0	0	0	0	
F 7\C12	0	0	0.05	0	0	0	0	
F 1\C13	0	0	0.043	0	0	0	0	
F 2\C13	0	0	0.043	0	0	0	0	
F 3\C13	0	0	0.043	0	0	0	0	
F 4\C13	0	0	0.043	0	0	0	0	
F 5\C13	0	0	0.05	0	0	0	0	
F 1\C14	0	0	0.408	0	0	0	0	
F 1\C15	0	0	0.408	0	0	0	0	
F 1\C16	0	0	0.358	0	0	0	0	
F 2\C16	0	0	0.506	0	0	0	0	
F 3\C16	0	0	0.493	0	0	0	0	
F 4\C16	0	0	0.519	0	0	0	0	
F 5\C16	0	0	0.32	0	0	0	0	
F 6\C16	0	0	0.67	0	0	0	0	
F 7\C16	0	0	0.679	0	0	0	0	
F 8\C16	0	0	0.679	0	0	0	0	
F 9\C16	0	0	0.66	0	0	0	0	
F 10\C16	0	0	0.66	0	0	0	0	
F 11\C16	0	0	0.64	0	0	0	0	
F 12\C16	0	0	0.64	0	0	0	0	
F 13\C16	0	0	0.438	0	0	0	0	
F 14\C16	0	0	0.408	0	0	0	0	
F 1\C17	0	0	0.588	0	0	0	0	
F 1\C18	0	0	0.65	0	0	0	0	
F 1\C19	0	0	0.66	0	0	0	0	
F 1\C2	0	0	0.34	0	0	0	0	
F 2\C2	0	0	0.543	0	0	0	0	
F 3\C2	0	0	0.34	0	0	0	0	
F 1\C20	0	0	0.438	0	0	0	0	
F 1\C21	0	0	0	0	0	0	0	
F 1\C22	0	0	0.375	0	0	0	0	
OF2198334	0	0	0.34	0	0	0	0	
F 1\C24	0	0	0.196	0	0	0	0	
F 1\C25	0	0	0.63	0	0	0	0	
F 2\C25	0	0	0.63	0	0	0	0	
F 3\C25	0	0	0.64	0	0	0	0	
F 4\C25	0	0	0.64	0	0	0	0	
F 5\C25	0	0	0.62	0	0	0	0	
F 6\C25	0	0	0.63	0	0	0	0	
F 7\C25	0	0	0.62	0	0	0	0	
F 8\C25	0	0	0.392	0	0	0	0	
F 9\C25	0	0	0.34	0	0	0	0	
F 1\C26	0	0	0.63	0	0	0	0	
F 2\C31	0	0	0.32	0	0	0	0	
F 3\C31	0	0	0.32	0	0	0	0	
F 4\C31	0.001	0.001	0.16	0.011	0.01	0.17	1.24	10% AEP, 15 min burst, Storm 4
F 5\C31	0	0	0	0	0	0	0	
F 6\C31	0	0	0.65	0	0	0	0	
OF2127094	0	0	0.65	0	0	0	0	
OF2117152	0	0	0.67	0	0	0	0	
F 7\C30	0	0	0.67	0	0	0	0	
F 8\C30	0.002	0.002	0.63	0.009	0.03	0.15	3.58	10% AEP, 15 min burst, Storm 5
F 9\C30	0.001	0.001	0.599	0.009	0.02	0.14	1.84	10% AEP, 15 min burst, Storm 4
F 10\C30	0	0	0.62	0	0	0	0	
OF2126989	0	0	0.62	0	0	0	0	
F 12\C30	0	0	0.48	0	0	0	0	
F 13\C30	0	0	0.196	0	0	0	0	
F 1\C27	0	0	0.64	0	0	0	0	
F 1\C28	0	0	0.392	0	0	0	0	
F 1\C3	0	0	0.588	0	0	0	0	
F 1\C30	0	0	0.742	0	0	0	0	
F 2\C30	0	0	0.725	0	0	0	0	
F 3\C30	0	0	0.725	0	0	0	0	
F 4\C30	0	0	0.698	0	0	0	0	
F 5\C30	0	0	0.66	0	0	0	0	
F 1\C31	0	0	0.32	0	0	0	0	
F 1\C33	0	0	0.62	0	0	0	0	
OF2127066	0	0	0.62	0	0	0	0	
F 1\C35	0	0	0.226	0	0	0	0	
F 1\C36	0	0	0.043	0	0	0	0	
F 2\C36	0	0	0.043	0	0	0	0	
F 3\C36	0	0	0.039	0	0	0	0	
F 1\C37	0	0	0.043	0	0	0	0	
F 2\C37	0	0	0.043	0	0	0	0	
F 3\C37	0	0	0.043	0	0	0	0	
F 4\C37	0	0	0.043	0	0	0	0	
F 1\C38	0	0	0.043	0	0	0	0	
F 2\C38	0	0	0.043	0	0	0	0	
F 3\C38	0	0	0.043	0	0	0	0	
F 4\C38	0	0	0.043	0	0	0	0	
F 5\C38	0	0	0.077	0	0	0	0	
F 1\C39	0	0	0.043	0	0	0	0	
F 2\C39	0	0	0.043	0	0	0	0	
F 3\C39	0	0	0.043	0	0	0	0	
F 4\C39	0	0	0.043	0	0	0	0	
F 5\C39	0	0	0.043	0	0	0	0	
F 6\C39	0	0	0.043	0	0	0	0	
F 7\C39	0	0	0.043	0	0	0	0	
F 8\C39	0	0	0.043	0	0	0	0	
F 1\C4	0	0	0.588	0	0	0	0	
F 2\C4	0	0	0.438	0	0	0	0	
F 3\C4	0	0	0.588	0	0	0	0	
F 1\C40	0	0	0.043	0	0	0	0	
F 2\C40	0	0	0.043	0	0	0	0	
F 3\C40	0	0	0.043	0	0	0	0	
F 4\C40	0	0	0.043	0	0	0	0	
F 5\C40	0	0	0.043	0	0	0	0	
F 6\C40	0	0	0.043	0	0	0	0	
F 7\C40	0	0	0.043	0	0	0	0	
F 8\C40	0	0	0.043	0	0	0	0	
F 9\C40	0	0	0.043	0	0	0	0	
F 10\C40	0	0	0.041	0	0	0	0	
F 1\C41	0	0	0.043	0	0	0	0	
F 1\C6	0	0	0.438	0	0	0	0	
F 1\C7	0	0	0.61	0	0	0	0	
F 1\C8	0	0	0.358	0	0	0	0	
F 1\C32	0	0	0.16	0	0	0	0	
F 1\C9	0	0	0	0	0	0	0	
F 1\D1	0.001	0.001	0.043	0.059	0	0.48	0	10% AEP, 15 min burst, Storm 4
F 2\D1	0.001	0.001	0.043	0.048	0	0.38	0	10% AEP, 15 min burst, Storm 9
F 3\D1	0	0	0.043	0	0	0	0	
F 4\D1	0.001	0.001	0.043	0.034	0.01	0.28	0.23	10% AEP, 10 min burst, Storm 9
F 1\A1	0	0	0.647	0	0	0	0	
F 2\A1	0	0	0.583	0	0	0	0	
F 3\A1	0	0	0.68	0	0	0	0	
F 4\A1	0	0	0.38	0	0	0	0	
F 5\A1	0	0	0.451	0	0	0	0	
F 6\A1	0	0	0.485	0	0	0	0	
F 7\A1	0	0	0	0	0	0	0	
F 1\H3	0	0	0	0	0	0	0	
F Basin 3.2	0.194	0.194	0	0.108	0.05	17.45	2.68	10% AEP, 20 min burst, Storm 8
F 1\A2	0	0	0.449	0	0	0	0	
F 2\A2	0	0	0.47	0	0	0	0	
F 3\A2	0	0	0.259	0	0	0	0	
F 4\A2	0	0	0.217	0	0	0	0	
F 5\A2	0	0	0.259	0	0	0	0	
F 6\A2	0	0	0.671	0	0	0	0	
F 1\A3	0	0	0.284	0	0	0	0	
F 2\A3	0	0	0.183	0	0	0	0	
F 3\A3	0	0	0.183	0	0	0	0	
F 4\A3	0	0	0.183	0	0	0	0	
F 1\A4	0	0	0.401	0	0	0	0	
F1\A6	0	0	0	0	0	0	0	
F 1\B1	0	0	0.332	0	0	0	0	
F 2\B1	0	0	0.332	0	0	0	0	
F 3\B1	0	0	0.332	0	0	0	0	
F 4\B1	0	0	0.332	0	0	0	0	
F 5\B1	0	0	0.332	0	0	0	0	
F 6\B1	0	0	0.332	0	0	0	0	
F 7\B1	0	0	0.332	0	0	0	0	
F 8\B1	0	0	0.332	0	0	0	0	
F 9\B1	0	0	16.587	0	0	0	0	
F 1\H2	0	0	0	0	0	0	0	
F Basin 2.2	0.182	0.182	0	0.11	0.04	17.63	2.65	10% AEP, 25 min burst, Storm 9
F 1\B9	0	0	0.259	0	0	0	0	
F 2\B9	0	0	0.259	0	0	0	0	
F 3\B9	0	0	0.259	0	0	0	0	
F 4\B9	0	0	0.259	0	0	0	0	
F 5\B9	0	0	0.366	0	0	0	0	
F 8\B2	0	0	0.142	0	0	0	0	
F 9\B2	0	0	0	0	0	0	0	
F 10\B2	0	0	0	0	0	0	0	
F 1\B7	0	0	0.259	0	0	0	0	
F 2\B7	0	0	0.259	0	0	0	0	
F 3\B7	0	0	0.259	0	0	0	0	
F 4\B7	0	0	0.375	0	0	0	0	
F 1\B2	0	0	0.375	0	0	0	0	
F 2\B2	0	0	0.259	0	0	0	0	
F 3\B2	0.005	0.005	0	0.009	0	5.15	0.2	10% AEP, 15 min burst, Storm 9
F 4\B2	0	0	0.375	0	0	0	0	
F 5\B2	0	0	0.375	0	0	0	0	
F 6\B2	0	0	0.375	0	0	0	0	
F 7\B2	0	0	0.366	0	0	0	0	
F 1\B3	0	0	0.375	0	0	0	0	
F 1\B4	0	0	0.375	0	0	0	0	
F 1\B8	0	0	0.259	0	0	0	0	
F 2\B8	0	0	0.259	0	0	0	0	
F 3\B8	0	0	0.375	0	0	0	0	
F 1\B5	0	0	0.116	0	0	0	0	
F 1\B6	0	0	0.372	0	0	0	0	
F 2\B6	0	0	0.311	0	0	0	0	
F 1\C29	0	0	0	0	0	0	0	
OF2522706	0.019	0.009	0.432	0.166	0.06	0.66	0.64	10% AEP, 20 min burst, Storm 8
F E1\2	0	0.119	0.542	0.457	0.13	1.83	0.29	10% AEP, 15 min burst, Storm 8
F E1\3	0.001	0.268	0.404	0.3	0.45	1.2	1.49	10% AEP, 20 min burst, Storm 4
F E1\4	0	0.061	0.432	0.21	0.15	0.84	0.78	10% AEP, 20 min burst, Storm 4
F E1\5	0	0.173	0.432	0.218	0.42	0.87	2.08	10% AEP, 20 min burst, Storm 4
OF2097700	1.501	1.501	0	0.109	0.13	17.53	1.22	10% AEP, 25 min burst, Storm 8
OF2097706	0.287	0.287	0	0.107	0.04	17.33	0.74	10% AEP, 15 min burst, Storm 7
OF2117169	0	0	0.301	0	0	0	0	
OF2117163	0	0	0.67	0	0	0	0	
OF2127035	0	0	0.279	0	0	0	0	
OF2127041	0	0	0.62	0	0	0	0	
OF2127075	0	0	0.279	0	0	0	0	
OF2127080	0	0	0.62	0	0	0	0	
OF2127103	0	0	0.292	0	0	0	0	
OF2127113	0	0	0.65	0	0	0	0	
F E1.2\4	0.061	0.069	0.432	0.198	0.18	0.79	0.89	10% AEP, 20 min burst, Storm 4
F E1.3\4	0.069	0.136	0.432	0.235	0.29	0.94	1.23	10% AEP, 20 min burst, Storm 4
OF2287482	0.008	0.733	1.057	0.179	0.31	2.72	1.73	10% AEP, 20 min burst, Storm 8
OF2198190	0	0	0.153	0	0	0	0	
OF2198237	0	0	0.34	0	0	0	0	
F E1.2\2	0.121	0.139	0.542	0.474	0.15	1.89	0.31	10% AEP, 15 min burst, Storm 8
F E1.3\2	0.138	0.261	0.542	0.515	0.13	2.29	0.26	10% AEP, 15 min burst, Storm 8
F 1.3\C16	0.002	0.002	0.358	0.047	0	1.26	0.08	10% AEP, 10 min burst, Storm 7
F 1.2\C16	0.002	0.002	0.161	0.044	0.01	0.52	0.25	10% AEP, 10 min burst, Storm 7
F 1\C23	0	0	0.34	0	0	0	0	
OF2198332	0	0	0.153	0	0	0	0	
OF2198369	0	0	0.408	0	0	0	0	
OF2198362	0	0	0.183	0	0	0	0	
OF2198393	0	0	0.375	0	0	0	0	
OF2198391	0	0	0.169	0	0	0	0	
F 8.2\C2	0	0	0.408	0	0	0	0	
OF2198435	0	0	0.183	0	0	0	0	
OF2198438	0	0	0.408	0	0	0	0	
F 7.2\F1	0	0	1.643	0	0	0	0	
F 7.3\F1	0	0	2.702	0	0	0	0	
F 6.1\B2	0	0	0.191	0	0	0	0	
F 6.2\B2	0	0	0.375	0	0	0	0	
F 1.2\B5	0	0	0.059	0	0	0	0	
F 1.3\B5	0	0	0.116	0	0	0	0	
OF2399538	0	0.307	1.495	0.051	0.1	2.2	1.91	10% AEP, 20 min burst, Storm 8
OF2187965	0.006	0.456	0.461	0.195	0.02	0.78	0.08	10% AEP, 15 min burst, Storm 8
F 1\F1	0.195	0.314	1.495	0.109	0.14	2.44	1.3	10% AEP, 20 min burst, Storm 8
F 2\F1	0.063	0.182	1.495	0.088	0.08	2.35	0.95	10% AEP, 20 min burst, Storm 8
F 3\F1	0	0.031	1.495	0.095	0	2.38	0	10% AEP, 5 min burst, Storm 1
F 4\F1	0	0	0	0	0	0	0	
F 5\F1	0	0	0.52	0	0	0	0	
F 6\F1	0	0	2.702	0	0	0	0	
F 7\F1	0	0	2.702	0	0	0	0	
F 8\F1	0	0	0.259	0	0	0	0	
F 1\C42	0.001	0.001	0.669	0.015	0.02	0.24	3.11	10% AEP, 20 min burst, Storm 4
F 2\C42	0.003	0.003	0.633	0.022	0.03	0.4	2.21	10% AEP, 20 min burst, Storm 4
F 3\C42	0.003	0.003	0.672	0.021	0.03	0.35	2.51	10% AEP, 20 min burst, Storm 4
F 4\C42	0.003	0.002	0.61	0.021	0.03	0.35	2.26	10% AEP, 20 min burst, Storm 2
F 5\C42	0.002	0.003	0.668	0.025	0.04	0.48	3.81	10% AEP, 20 min burst, Storm 4
F 6\C42	0.002	0.002	0.189	0.028	0.01	0.6	0.36	10% AEP, 15 min burst, Storm 4
F 7\C42	0	0	0.189	0	0	0	0	
F 8\C42	0	0	0.189	0	0	0	0	
F 9\C42	0	0	0.189	0	0	0	0	
F 1.2\A4	0	0	0.162	0	0	0	0	
F 1.3\A4	0	0	0.401	0	0	0	0	
F4.2\A2	0	0	0.109	0	0	0	0	
F 4.3\A2	0	0	0.217	0	0	0	0	
F 1\J2	0	0	0	0	0	0	0	
F 1\G1	0.006	0.006	0	0.008	0	4.84	0.29	10% AEP, 25 min burst, Storm 2
F 2\G1	0	0	0	0	0	0	0	
F 1\J1	0	0	1.495	0	0	0	0	
Swale South	0.506	0.63	0.981	0.192	0.21	2.77	1.1	10% AEP, 20 min burst, Storm 8
F 2\J1	0	0	0	0	0	0	0	
OF7447448	0	0.761	1.434	0.193	0.32	2.77	2.24	10% AEP, 20 min burst, Storm 4
OF7533488	0	0.468	1.295	0.128	0.14	2.51	1.08	10% AEP, 20 min burst, Storm 4

DETENTION BASIN DETAILS

Name	Max WL	MaxVol	Max Q Total	Max Q Low Level	Max Q High Level
Basin 1	114.87	2706.8	1.013	1.013	0
Basin 3	120.7	143.5	0.194	0.194	0
Basin 2	120.8	399.8	0.186	0.186	0

sharon pope

Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

1cm at full size — 10cm — 20cm

Certification By Dr. Michel Chaaya
B.E., M.E. (Rese), Ph.D., F.I.E. Aust., CPEng.,
Civil & Structural Engineer

Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale:

TELFORD CIVIL
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Project: PROPOSED RESIDENTIAL SUBDIVISION ALMOND STREET, DENMAN CIVIL ENGINEERING PLANS VOLUNTARY PLANNING AGREEMENT

Drawing Title: STOMRWATER CALCULATION TABLE SHEET 3

Scale: AS SHOWN A1 | Project No. 22048 | Dwg. No. 632 | Issue A

Page as of 00:00
Docusign Envelope ID: 468845CE-3355-8491-8275-070B4B8E4346

100% AEP RESULTS

DRAINS results prepared from Version 2022.012

PIT / NODE DETAILS Version 8

Name	Max HGL	Max Pond HGL	Max Surface Flow Arriving (cu.m/s)	Max Pond Volume (cu.m)	Min Freeboard (m)	Overflow (cu.m/s)	Constraint
1\C1	118.51		0.107			0	0.039 Outlet System
2\C1	118.45		0.118			0	0.056 Outlet System
3\C1	118.36		0.14			0	0.06 Outlet System
4\C1	118.24		0.149			0	0.031 Outlet System
5\C1	117.94		0.12			0	0.055 Outlet System
6\C1	117.75		0.148			0	0.131 Outlet System
7\C1	117.58		0.229			0	0.212 Outlet System
8\C1	117.45		0.317			0	0.272 Outlet System
9\C1	117.37		0.376			0	0.287 Outlet System
10\C1	117.27		0.395			0	0.284 Outlet System
11\C1	117.12		0.397			0	0.253 Outlet System
12\C1	116.89		0.372			0	0.292 Outlet System
13\C1	116.74		0.419			0	0.368 Outlet System
14\C1	116.61		0.506			0	0.363 Outlet System
15\C1	116.45		0.523			0	0.205 Outlet System
16\C1	116.12		0.384			0	0.094 Outlet System
17\C1	115.84		0.235			0.11	0.042 Inlet Capacity
18\C1	115.51		0.133			0.3	0.019 Inlet Capacity
2\H1	113.48		1.775				
1\C10	121.83	121.89	0.164	0.9		0	0.076 Outlet System
4\C2	121.82	121.89	0.158	0.9		0	0.019 Outlet System
5\C2	121.62		0.082			0.04	0 None
6\C2	121.2		0.091			0	0.012 Outlet System
7\C2	120.68		0.163			0.01	0.004 Inlet Capacity
8\C2	120.15		0.233			0.21	0 None
9\C2	119.47		0.15			0.1	0 None
10\C2	118.75		0.035			0.1	0 Inlet Capacity
11\C2	118.47		0.015			0.06	0 None
12\C2	118.26		0.222			0	0.027 Outlet System
13\C2	117.85		0.254			0	0.019 Outlet System
14\C2	117.32		0.188			0	0.006 Outlet System
15\C2	116.94		0.23			0.02	0 None
16\C2	116.4		0.124			0.28	0 None
17\C2	116.05	116.63	0.232	0.9		0.54	0 Inlet Capacity
18\C2	115.82	116.63	0.202	3.8		0.77	0 Inlet Capacity
2\C2.1	115.64		0			0.88	None
1\C2.1	115.49		0			0.7	None
4\C2.1	115.39		0			0.62	None
1\C11	126.38		0.063			0	0.003 Outlet System
2\C11	126.36		0.046			0	0.001 Outlet System
3\C11	126.31		0.044			0.14	0 None
4\C11	126.19		0.043			0.46	0 None
5\C11	126.08		0.042			0.54	0 None
6\C11	126.01		0.05			0.44	0 None
7\C11	125.95		0.02			0.65	0 None
2\C3	125.79		0.103			0.56	0 None
3\C3	125.38		0.057			0.12	0.005 Inlet Capacity
4\C3	125		0.111			0.1	0.004 Inlet Capacity
5\C3	123.26		0.193			0.35	0 None
6\C3	122.04		0.184			0.36	0 None
7\C3	121.38		0.137			0.39	0 None
8\C3	120.4	120.41	0.307	1.3		0	0.014 Outlet System
1\C12	124.05		0.047			0.57	0 None
2\C12	123.83		0.046			0.42	0 None
3\C12	123.58		0.044			0.02	0 None
4\C12	123.08		0.075			0	0.008 Outlet System
5\C12	122.35		0.117			0.21	0 None
6\C12	121.91		0.089			0.11	0 None
7\C12	121.34		0.085			0.13	0 None
1\C13	123.22		0.045			0.06	0 None
2\C13	121.86		0.066			0.76	0 Inlet Capacity
3\C13	121.5		0.061			0.43	0.001 Inlet Capacity
4\C13	120.54		0.109			0.41	0.005 Inlet Capacity
5\C13	119.63		0.074			0.31	0 Inlet Capacity
1\C14	121.63		0.018			0.12	0 None
1\C15	120.69		0.035			0.11	0.001 Inlet Capacity
1\C16	126.18		0.036			2.16	0 None
2\C16	125.21	127.87	0.063	0.6		2.57	0 Inlet Capacity
3\C16	125.17		0.011			2.2	0 None
4\C16	125.11		0.075			0.85	0 None
5\C16	124.57		0.021			0.81	0 None
6\C16	123.95		0.008			0.47	0 None
7\C16	123.83		0.004			0.32	0 None
8\C16	123.34		0.006			0.32	0 None
9\C16	122.96		0.007			0.21	0 None
10\C16	122.45		0.011			0	0.023 Outlet System
11\C16	120.63		0.082			0	0.108 Outlet System
12\C16	119.48		0.175			0.1	0.029 Inlet Capacity
13\C16	118.92		0.089			0	0.032 Outlet System
14\C16	118.37	118.45	0.367	4.3		0	0.049 Outlet System
1\C17	125.4		0.164			0.79	0 None
1\C18	124.12		0.196			0.18	0 None
1\C19	122.69		0.211			0	0.002 Outlet System
1\C2	122.18		0.081			0.95	0 None
2\C2	122.09		0.04			0.82	0.001 Inlet Capacity
3\C2	121.96		0.014			0.27	0 None
1\C20	120.8		0.221			0	0.034 Outlet System
1\C21	118.38	118.46	0.406	1.7		0	0.169 Outlet System
1\C22	118.8		0.068			0.14	0 None
1\C23	117.86		0.04			0.01	0.001 Inlet Capacity
1\C24	116.95		0.044			0.08	0.001 Inlet Capacity
1\C25	122.01		0.038			0.91	0 None
2\C25	121.38		0.056			0.62	0 None
3\C25	121.06		0.036			0.72	0 None
4\C25	120.41		0.125			0	0.028 Outlet System
5\C25	119.69		0.175			0	0.037 Outlet System
6\C25	118.86		0.222			0.07	0 None
7\C25	118.51		0.155			0.02	0 None
8\C25	118.07		0.169			0	0.004 Outlet System
9\C25	117.45	117.41	0.374	4.3		0	0.002 Outlet System
1\C26	123.85		0.05			0	0.004 Outlet System
2\C31	123.83		0.198			0	0.059 Outlet System
3\C31	123.42		0.316			0	0.022 Outlet System
4\C31	123.24		0.277			0	0.023 Outlet System
5\C31	123	123.11	0.622	0.9		0	0.11 Outlet System
6\C31	122.78		0.666			0.19	0.04 Inlet Capacity
7\C31	122.49		0.578			0.29	0 None
6\C30	122.25		0.284			0.45	0 None
7\C30	121.58		0.22			0.68	0 None
8\C30	121.01		0.157			0.64	0.007 Inlet Capacity
9\C30	120.39		0.135			0.65	0.006 Inlet Capacity
10\C30	119.24		0.222			0.78	0 None
11\C30	118.26		0.169			0.76	0 None
12\C30	117.07		0.147			0.27	0 None
13\C30	116.49		0.325			0.35	0 None
14\C30	116.06		0			0.55	None
15\C30	115.74		0			0.8	None
16\C30	115.58		0			0.88	None
1\C27	119.87		0.193			0	0.043 Outlet System
1\C28	118.24		0.227			0	0.029 Outlet System
1\C3	125.81		0.017			1.53	0 None
1\C30	126.99	128.48	0.065	7		1.41	0 Inlet Capacity
2\C30	126.49		0.03			1.4	0 Inlet Capacity
3\C30	125.69		0.114			0.44	0 None
4\C30	125.32		0.049			0	0.034 Outlet System
5\C30	123.65		0.213			0	0.054 Outlet System
1\C31	124.16		0.131			0.14	0 None
1\C33	120.4		0.492			0.94	0 None
1\C34	118.28		0.405			0.87	0 None
1\C35	117.09		0.281			0.39	0 None
1\C36	125.88		0.055			0.2	0.001 Inlet Capacity
2\C36	125.65		0.079			0.34	0.001 Inlet Capacity
3\C36	125.26		0.106			0.73	0.002 Inlet Capacity
4\C36	124.1		0			0	Outlet System
1\C37	126.23		0.05			0.12	0 Inlet Capacity
2\C37	126.04		0.07			0.12	0 Inlet Capacity
3\C37	125.7		0.103			0.37	0.001 Inlet Capacity
4\C37	125.44		0.104			0.56	0.003 Inlet Capacity
1\C38	123.22		0.047			0.11	0 None
2\C38	123.04		0.053			0.04	0 None
3\C38	122.75		0.072			0.07	0 None
4\C38	122.1		0.106			0.45	0 None
5\C38	121.71		0.098			0.58	0.001 Inlet Capacity
1\C39	121		0.069			1.09	0.005 Inlet Capacity
2\C39	120.73		0.064			0.87	0.003 Inlet Capacity
3\C39	120.24		0.058			0.62	0 Inlet Capacity
4\C39	119.92		0.047			0.23	0 None
5\C39	119.45		0.043			0.07	0 None
6\C39	119.08		0.114			0.27	0 None
7\C39	118.72		0.074			0.08	0 None
8\C39	118.12		0.108			0.13	0 Inlet Capacity
1\C4	125.24		0.019			0.23	0 None
2\C4	125.24		0.111			0.18	0 None
3\C4	125.09	125.13	0.118	1.4		0	0.006 Outlet System
1\C40	121.64		0.059			0.68	0.002 Inlet Capacity
2\C40	121.37		0.05			0.99	0 Inlet Capacity
3\C40	120.87		0.056			0.75	0.001 Inlet Capacity
4\C40	120.39		0.061			0.48	0.001 Inlet Capacity
5\C40	119.62		0.1			0.57	0.001 Inlet Capacity
6\C40	118.99		0.066			0.47	0 Inlet Capacity
7\C40	118.2		0.08			0.51	0 None
8\C40	117.7		0.048			0.36	0 None
9\C40	117.32		0.06			0.13	0 None
10\C40	117.07		0.06			0.04	0 None
1\C41	121.56		0.044			0.83	0 None
1\C6	125.38		0.015			0.27	0 None
1\C7	123.35		0.157			0.57	0 None
1\C8	122.17		0.119			0.46	0 None
N675343	125.71		0.086				
N675345	125.61		0.133				
1\C32	125.59		0.161			0	0.093 Outlet System
1\C9	120.4	120.41	0.338	0.9		0	0.15 Outlet System
1\D1	119.71		0.115			0	0.013 Outlet System
2\D1	119.58		0.133			0.01	0.014 Inlet Capacity
3\D1	119.33		0.099			0.23	0.009 Inlet Capacity
4\D1	119.12		0.093			0.44	0.013 Inlet Capacity
5\D1	118.5		0				
1\A1	124.56		0.047			0.5	0 Inlet Capacity
2\A1	124.16		0.044			0.57	0 None
3\A1	123.71		0.043			0.48	0 None
4\A1	123.49		0.064			0.58	0 None
5\A1	123.08		0.046			0.72	0 Inlet Capacity
6\A1	122.63		0.048			0.54	0 Inlet Capacity
7\A1	121.8		0.082			0.35	0.006 Inlet Capacity
2\H3	119.32		0.131				
1\A2	123.46		0.012			1.74	0 None
2\A2	123.3		0.018			1.85	0 None
3\A2	122.1		0.025			1.75	0 None
4\A2	121.61	122.01	0.025	0.8		0.35	0 Inlet Capacity
5\A2	121.55		0.111			0.26	0 None
6\A2	121.36		0.032			0.37	0 None
7\A2	121.16		0			0.84	None
8\A2	121.1		0			0.6	None
1\A3	123.11		0.166			0.54	0 None
2\A3	122.41		0.188			0	0.063 Outlet System
3\A3	122.12		0.142			0	0.018 Outlet System
4\A3	121.83		0.205			0.12	0 None
1\A4	122.47		0.024			1.45	0 None
1\A6	121.37		0.028			0.37	0 None
1\B1	125.21		0.054			0.28	0.001 Inlet Capacity
2\B1	124.98		0.058			0.16	0.001 Inlet Capacity
3\B1	124.6		0.071			0	0.002 Outlet System
4\B1	123.77		0.112			0.31	0.002 Inlet Capacity
5\B1	123.24		0.108			0.32	0.002 Inlet Capacity
6\B1	122.41		0.141			0.6	0.001 Inlet Capacity
7\B1	121.92		0.099			0.46	0.001 Inlet Capacity
8\B1	121.45		0.103			0.1	0.001 Inlet Capacity
9\B1	121.27		0.096			0.05	0.001 Inlet Capacity
2\H2	119.51		0.694				
1\B9	123.13		0.045			0.8	0 None
2\B9	122.98		0.053			0.45	0 Inlet Capacity
3\B9	122.72		0.055			0.21	0 Inlet Capacity
4\B9	122.54		0.062			0.02	0 Inlet Capacity
5\B9	122.15		0.118			0.15	0.002 Inlet Capacity
9\B2	122.04		0.251			0	0.002 Outlet System
9\B2	121.66	121.9	0.305	4.4		0.11	0 Inlet Capacity
10\B2	121.43	121.85	0.233	3.7		0.35	0 Inlet Capacity
11\B2	121.34		0			0.34	None
12\B2	121.26		0			0.5	None
1\B7	126.11		0.044			0.48	0 None
2\B7	125.96		0.05			0.43	0 None
3\B7	125.71		0.059			0.4	0 None
4\B7	125.11		0.067			0.87	0 None
1\B2	124.99		0.029			0.57	0 None
2\B2	124.66		0.013			0.24	0 None
3\B2	124.4	124.35	0.168	0.9		0	0.102 Outlet System
4\B2	124.24	124.35	0.201	0.9		0	0.004 Inlet Capacity
5\B2	123.92		0.064			0.27	0 None
6\B2	123.27		0.12			0	0.093 Outlet System
7\B2	122.59		0.249			0	0.034 Outlet System
1\B3	125		0.019			0.73	0 None
1\B4	123.93		0.028			0.43	0 Inlet Capacity
1\B8	123.5		0.053			0	0.01 Outlet System
2\B8	123.39		0.077			0	0.033 Outlet System
3\B8	123.29		0.125			0	0.049 Outlet System
1\B5	123.27		0.022			0.04	0 None
1\B6	124.96		0.171			0.42	0 None
2\B6	124.77		0.124			0.06	0 None
N1704359	117.45		0.105				
1\C29	117.45	117.4	0.331	1.7		0	0.088 Outlet System
N1724779	117.45		0.043				
N1724781	116.94		0.048				
E1\1	128.16	128.31	1.031	19		0	0.63 Outlet System
E1\2	128.33		0.276			0	0.064 Outlet System
E1\3	127.99		0.273			0	0 Outlet System
E1\4	127.32		0.239			0.79	0 None
E1\5	125.84		0			3.6	0 None
E1\6	124.98		0			3.53	None
E1\7	123.18		0			2.47	None
E1\8	121.01		0			1.85	None
E1\9	119.08		0			1.33	None
E1\10	117.34		0			0.41	None
E1\11	117.1		0				
N2382093	113.4		3.868				
N2382095	113.41		0.8				
N2405140	122.56		0.155				
N2405141	122.44		0.156				
N2416749	117.69		0.013				
N2416750	117.58		0.003				
N2416755	117.69		0.385				
N2416756	117.58		0.259				
N2416761	122.55		0.481				
N2416762	122.44		0.481				
E1.2\4	128.33		0.024				
E1.3\4	128.33		0.169				
N2488288	127.81		0.663				
N2500262	117.13		0.223				
N2500263	117.09		0.218				
E1.2\2	128.33		0.476				
E1.3\2	128.33		0.703				
1.3\C16	127.87		0.005				
1.2\C16	127.87		0				
N2500284	117.08		0.006				
N2500285	117.11		0.013				
N2500293	118.71		0				
N2500294	118.76		0.001				
N2500299	118.71		0				
N2500300	118.58		0				
8.2\C2	120.32		0.1				
N2500311	120.37		0.002				
N2500312	120.32		0.001				
7.2\F1	126.04		0.002				
7.3\F1	125.98		0.002				
6.1\B2	123.12		0.173				
6.2\B2	123.02		0.173				
1.2\B5	123.02		0.001				
1.3\B5	122.93		0.001				
N2719919	127.64		0				
N2875694	128.33		0				
1\F1	127.21		1.379			0	0.801 Outlet System
2\F1	127.07		0.962			0	0.326 Outlet System
3\F1	127		0.493			0	0.001 Outlet System
4\F1	126.87	127.16	0.53	42.8		0.07	0 Inlet Capacity
5\F1	126.48	127.2	0.116	5.6		0.64	0 Inlet Capacity
6\F1	125.9		0.004			1.34	0 None
7\F1	125.46		0.033			0.7	0.001 Inlet Capacity
8\F1	125.19		0.015			0.65	0 None
9\F1	124.7		0				
1\C42	125.44		0.073			1.03	0.008 Inlet Capacity
2\C42	123.56		0.108			1.03	0.016 Inlet Capacity
3\C42	121.88		0.106			1.02	0.016 Inlet Capacity
4\C42	120.43		0.111			0.58	0.015 Inlet Capacity
5\C42	119.33		0.114			0.11	0.014 Inlet Capacity
6\C42	117.59		0.161			0	0.044 Outlet System
7\C42	117.18		0.215			0.17	0.004 Inlet Capacity
8\C42	116.82		0.007			0.25	0 None
9\C42	116.2		0.016			0.47	0 None
1.2\A4	122.1		0				
1.3\A4	121.98		0				
4.2\A2	121.96		0				
4.3\A2	121.83		0				
1\U2	125.82	125.96	0.143	0.9		0	0 Outlet System
1\G1	125.79		25.466			0.4	0.004 Inlet Capacity
2\G1	125.22	125.81	0.077	0.1		0.57	0 Inlet Capacity
3\G1	124.7		0				
1\U1	125.82	125.96	0.068	0.9		0	0.044 Outlet System
1\I1	125.81		1.049			0	1.355 Outlet System
2\I1	125.13	125.43	2.263	0.9		0	1.762 Outlet System
3\I1	124.39		1.948				
N8435513	130.17		0				
N8532079	125.79		0				
19\C2	115.57		0			0.61	None
20\C2	115.46		0			0.54	None

SUB-CATCHMENT DETAILS

Name	Max Flow Q (cu.m/s)	Paved Max Q (cu.m/s)	Grassed Max Q (cu.m/s)	Paved Tc (min)	Grassed Tc (min)	Supp. Tc (min)	Due to Storm
C 1\C1	0.57	0.008	0.065	0.032	9.36	30.37	0 1% AEP, 10 min burst, Storm 7
C 2\C1		0.066	0.044	0.022	9.19	29.68	0 1% AEP, 10 min burst, Storm 7
C 3\C1		0.065	0.044	0.022	9.19	29.68	0 1% AEP, 10 min burst, Storm 7
C 4\C1		0.065	0.044	0.022	9.19	29.68	0 1% AEP, 10 min burst, Storm 7
C 5\C1	0.54	0.065	0.044	0.022	9.19	29.68	0 1% AEP, 10 min burst, Storm 7
C 6\C1		0.065	0.044	0.022	9.19	29.68	0 1% AEP, 10 min burst, Storm 7
C 7\C1		0.065	0.044	0.022	9.19	29.68	0 1% AEP, 10 min burst, Storm 7
C 8\C1		0.065	0.044	0.022	9.19	29.68	0 1% AEP, 10 min burst, Storm 7
C 9\C1		0.065	0.044	0.022	9.19	29.68	0 1% AEP, 10 min burst, Storm 7
C 10\C1		0.065	0.044	0.022	9.19	29.68	0 1% AEP, 10 min burst, Storm 7
C 11\C1		0.065	0.044	0.022	9.19	29.68	0 1% AEP, 10 min burst, Storm 7
C 12\C1		0.065	0.044	0.022	9.19	29.68	0 1% AEP, 10 min burst, Storm 7
C 13\C1		0.065	0.044	0.022	9.19	29.68	0 1% AEP, 10 min burst, Storm 7
C 14\C1		0.065	0.044	0.022	9.19	29.68	0 1% AEP, 10 min burst, Storm 7
C 15\C1		0.065	0.044	0.022	9.19	29.68	0 1% AEP, 10 min burst, Storm 7
C 16\C1		0.065	0.044	0.022	9.19	29.68	0 1% AEP, 10 min burst, Storm 7
C 17\C1		0.065	0.044	0.022	9.19	29.68	0 1% AEP, 10 min burst, Storm 7
C 18\C1		0.065	0.044	0.022	9.19	29.68	0 1% AEP, 10 min burst, Storm 7
C 1\C10		0.122	0.111	0.02	5	13	0 1% AEP, 10 min burst, Storm 1
C 4\C2		0.017	0.016	0.003	5	13	0 1% AEP, 10 min burst, Storm 1
C 5\C2		0.004	0.003	0.001	5	13	0 1% AEP, 10 min burst, Storm 1
C 6\C2		0.046	0.042	0.008	5	13	0 1% AEP, 10 min burst, Storm 1
C 7\C2		0.046	0.042	0.008	5	13	0 1% AEP, 10 min burst, Storm 1
C 8\C2		0.002	0.002	0	5	13	0 1% AEP, 10 min burst, Storm 1
C 9\C2		0.093	0.085	0.015	5	13	0 1% AEP, 10 min burst, Storm 1
C 10\C2		0.022	0.02	0.004	5	13	0 1% AEP, 10 min burst, Storm 1
C 11\C2		0.011	0.01	0.002	5	13	0 1% AEP, 10 min burst, Storm 1
C 12\C2		0.003	0.003	0.001	5	13	0 1% AEP, 10 min burst, Storm 1
C 13\C2		0.012	0.011	0.002	5	13	0 1% AEP, 10 min burst, Storm 1
C 14\C2		0.002	0.002	0	5	13	0 1% AEP, 10 min burst, Storm 1
C 15\C2		0.013	0.012	0.002	5	13	0 1% AEP, 10 min burst, Storm 1
C 16\C2		0.011	0.01	0.002	5	13	0 1% AEP, 10 min burst, Storm 1
C 17\C2		0.026	0.024	0.004	5	13	0 1% AEP, 10 min burst, Storm 1
C 18\C2		0.034	0.033	0.002	5	13	0 1% AEP, 10 min burst, Storm 5
C 1\C11		0.031	0.029	0.005	5	13	0 1% AEP, 10 min burst, Storm 1
C 2\C11		0.032	0.029	0.005	5	13	0 1% AEP, 10 min burst, Storm 1
C 3\C11		0.032	0.029	0.005	5	13	0 1% AEP, 10 min burst, Storm 1
C 4\C11		0.032	0.029	0.005	5	13	0 1% AEP, 10 min burst, Storm 1
C 5\C11		0.031	0.029	0.005	5	13	0 1% AEP, 10 min burst, Storm 1
C 6\C11		0.037	0.033	0.006	5	13	0 1% AEP, 10 min burst, Storm 1
C 7\C11		0.015	0.014	0.002	5	13	0 1% AEP, 10 min burst, Storm 1
C 2\C3		0.077	0.07	0.012	5	13	0 1% AEP, 10 min burst, Storm 1
C 3\C3		0.042	0.039	0.007	5	13	0 1% AEP, 10 min burst, Storm 1
C 4\C3		0.039	0.035	0.006	5	13	0 1% AEP, 10 min burst, Storm 1
C 5\C3		0.082	0.075	0.013	5	13	0 1% AEP, 10 min burst, Storm 1
C 6\C3		0.05	0.046	0.008	5	13	0 1% AEP, 10 min burst, Storm 1
C 7\C3		0.01	0.009	0.002	5	13	0 1% AEP, 10 min burst, Storm 1
C 8\C3		0.03	0.028	0.005	5	13	0 1% AEP, 10 min burst, Storm 1
C 1\C12		0.035	0.032	0.006	5	13	0 1% AEP, 10 min burst, Storm 1
C 2\C12		0.032	0.029	0.005	5	13	0 1% AEP, 10 min burst, Storm 1
C 3\C12		0.031	0.029	0.005	5	13	0 1% AEP, 10 min burst, Storm 1
C 4\C12		0.031	0.029	0.005	5	13	0 1% AEP, 10 min burst, Storm 1
C 5\C12		0.032	0.029	0.005	5	13	0 1% AEP, 10 min burst, Storm 1
C 6\C12		0.033	0.03	0.005	5	13	0 1% AEP, 10 min burst, Storm 1
C 7\C12		0.032	0.029	0.005	5	13	0 1% AEP, 10 min burst, Storm 1
C 1\C13		0.034	0.031	0.005	5	13	0 1% AEP, 10 min burst, Storm 1
C 2\C13		0.036	0.033	0.006	5	13	0 1% AEP, 10 min burst, Storm 1
C 3\C13		0.041	0.037	0.007	5	13	0 1% AEP, 10 min burst, Storm 1
C 4\C13		0.055	0.05	0.009	5	13	0 1% AEP, 10 min burst, Storm 1
C 5\C13		0.032	0.029	0.005	5	13	0 1% AEP, 10 min burst, Storm 1
C 1\C14		0.013	0.012	0.002	5	13	0 1% AEP, 10 min burst, Storm 1
C 1\C15		0.026	0.024	0.004	5	13	0 1% AEP, 10 min burst, Storm 1
C 1\C16		0.027	0.025	0.004	5	13	0 1% AEP, 10 min burst, Storm 1
C 2\C16		0.052	0.048	0

100% AEP RESULTS

C 3\,C30	0.084	0.077	0.014	5	13	0 1% AEP, 10 min burst, Storm 1
C 4\,C30	0.036	0.033	0.006	5	13	0 1% AEP, 10 min burst, Storm 1
C 5\,C30	0.084	0.076	0.014	5	13	0 1% AEP, 10 min burst, Storm 1
C 1\,C31	0.098	0.089	0.016	5	13	0 1% AEP, 10 min burst, Storm 1
C 1\,C33	0.018	0.016	0.003	5	13	0 1% AEP, 10 min burst, Storm 1
C 1\,C34	0.028	0.026	0.005	5	13	0 1% AEP, 10 min burst, Storm 1
C 1\,C35	0.026	0.024	0.004	5	13	0 1% AEP, 10 min burst, Storm 1
C 1\,C36	0.041	0.037	0.007	5	13	0 1% AEP, 10 min burst, Storm 1
C 2\,C36	0.041	0.038	0.007	5	13	0 1% AEP, 10 min burst, Storm 1
C 3\,C36	0.042	0.038	0.007	5	13	0 1% AEP, 10 min burst, Storm 1
C 1\,C37	0.037	0.034	0.006	5	13	0 1% AEP, 10 min burst, Storm 1
C 2\,C37	0.039	0.035	0.006	5	13	0 1% AEP, 10 min burst, Storm 1
C 3\,C37	0.041	0.038	0.007	5	13	0 1% AEP, 10 min burst, Storm 1
C 4\,C37	0.042	0.038	0.007	5	13	0 1% AEP, 10 min burst, Storm 1
C 1\,C38	0.035	0.032	0.006	5	13	0 1% AEP, 10 min burst, Storm 1
C 2\,C38	0.034	0.031	0.005	5	13	0 1% AEP, 10 min burst, Storm 1
C 3\,C38	0.033	0.03	0.005	5	13	0 1% AEP, 10 min burst, Storm 1
C 4\,C38	0.034	0.031	0.006	5	13	0 1% AEP, 10 min burst, Storm 1
C 5\,C38	0.038	0.035	0.006	5	13	0 1% AEP, 10 min burst, Storm 1
C 1\,C39	0.051	0.047	0.008	5	13	0 1% AEP, 10 min burst, Storm 1
C 2\,C39	0.041	0.038	0.007	5	13	0 1% AEP, 10 min burst, Storm 1
C 3\,C39	0.035	0.032	0.006	5	13	0 1% AEP, 10 min burst, Storm 1
C 4\,C39	0.032	0.029	0.005	5	13	0 1% AEP, 10 min burst, Storm 1
C 6\,C39	0.033	0.03	0.005	5	13	0 1% AEP, 10 min burst, Storm 1
C 7\,C39	0.034	0.031	0.005	5	13	0 1% AEP, 10 min burst, Storm 1
C 8\,C39	0.037	0.034	0.006	5	13	0 1% AEP, 10 min burst, Storm 1
C 1\,C4	0.014	0.013	0.002	5	13	0 1% AEP, 10 min burst, Storm 1
C 2\,C4	0.083	0.075	0.013	5	13	0 1% AEP, 10 min burst, Storm 1
C 3\,C4	0.085	0.077	0.014	5	13	0 1% AEP, 10 min burst, Storm 1
C 1\,C40	0.044	0.04	0.007	5	13	0 1% AEP, 10 min burst, Storm 1
C 2\,C40	0.036	0.033	0.006	5	13	0 1% AEP, 10 min burst, Storm 1
C 3\,C40	0.039	0.035	0.006	5	13	0 1% AEP, 10 min burst, Storm 1
C 4\,C40	0.039	0.036	0.006	5	13	0 1% AEP, 10 min burst, Storm 1
C 5\,C40	0.039	0.036	0.006	5	13	0 1% AEP, 10 min burst, Storm 1
C 6\,C40	0.036	0.033	0.006	5	13	0 1% AEP, 10 min burst, Storm 1
C 7\,C40	0.032	0.029	0.005	5	13	0 1% AEP, 10 min burst, Storm 1
C 8\,C40	0.031	0.028	0.005	5	13	0 1% AEP, 10 min burst, Storm 1
C 9\,C40	0.034	0.031	0.006	5	13	0 1% AEP, 10 min burst, Storm 1
C 10\,C40	0.032	0.029	0.005	5	13	0 1% AEP, 10 min burst, Storm 1
C 1\,C41	0.033	0.03	0.005	5	13	0 1% AEP, 10 min burst, Storm 1
C 1\,C6	0.011	0.01	0.002	5	13	0 1% AEP, 10 min burst, Storm 1
C 1\,C7	0.064	0.058	0.01	5	13	0 1% AEP, 10 min burst, Storm 1
C 1\,C8	0.082	0.074	0.013	5	13	0 1% AEP, 10 min burst, Storm 1
C 3\,C30I	0.064	0.059	0.01	5	13	0 1% AEP, 10 min burst, Storm 1
Cat536013	0.098	0.09	0.016	5	13	0 1% AEP, 10 min burst, Storm 1
C 1\,C32	0.119	0.109	0.019	5	13	0 1% AEP, 10 min burst, Storm 1
C 1\,C9	0.173	0.158	0.028	5	13	0 1% AEP, 10 min burst, Storm 1
C 1\,D1	0.086	0.055	0.05	4.78	19.05	0 1% AEP, 20 min burst, Storm 2
C 2\,D1	0.075	0.05	0.025	9.19	29.68	0 1% AEP, 30 min burst, Storm 7
C 3\,D1	0.058	0.039	0.019	9.19	29.68	0 1% AEP, 30 min burst, Storm 7
C 4\,D1	0.072	0.06	0.013	9.19	29.68	0 1% AEP, 30 min burst, Storm 7
C 1\,A1	0.036	0.031	0.008	6	10	2 1% AEP, 10 min burst, Storm 1
C 2\,A1	0.032	0.028	0.007	6	10	2 1% AEP, 10 min burst, Storm 1
C 3\,A1	0.033	0.028	0.007	6	10	2 1% AEP, 10 min burst, Storm 1
C 4\,A1	0.033	0.028	0.007	6	10	2 1% AEP, 10 min burst, Storm 1
C 5\,A1	0.035	0.03	0.007	6	10	2 1% AEP, 10 min burst, Storm 1
C 6\,A1	0.036	0.031	0.008	6	10	2 1% AEP, 10 min burst, Storm 1
C 7\,A1	0.063	0.054	0.013	6	10	2 1% AEP, 10 min burst, Storm 1
C 1\,A2	0.01	0.008	0.002	6	10	2 1% AEP, 10 min burst, Storm 1
C 2\,A2	0.014	0.012	0.003	6	10	2 1% AEP, 10 min burst, Storm 1
C 3\,A2	0.019	0.017	0.004	6	10	2 1% AEP, 10 min burst, Storm 1
C 4\,A2	0.02	0.017	0.004	6	10	2 1% AEP, 10 min burst, Storm 1
C 5\,A2	0.009	0.008	0.002	6	10	2 1% AEP, 10 min burst, Storm 1
C 6\,A2	0.005	0.005	0.001	6	10	2 1% AEP, 10 min burst, Storm 1
C 1\,A3	0.129	0.111	0.027	6	10	2 1% AEP, 10 min burst, Storm 1
C 2\,A3	0.124	0.107	0.026	6	10	2 1% AEP, 10 min burst, Storm 1
C 3\,A3	0.007	0.006	0.002	6	10	2 1% AEP, 10 min burst, Storm 1
C 4\,A3	0.062	0.054	0.013	6	10	2 1% AEP, 10 min burst, Storm 1
C 1\,A4	0.018	0.016	0.004	6	10	2 1% AEP, 10 min burst, Storm 1
C 1\,A6	0.021	0.019	0.005	6	10	2 1% AEP, 10 min burst, Storm 1
C 1\,B1	0.039	0.035	0.008	5	10	2 1% AEP, 10 min burst, Storm 1
C 2\,B1	0.038	0.034	0.008	5	10	2 1% AEP, 10 min burst, Storm 1
C 3\,B1	0.04	0.036	0.008	5	10	2 1% AEP, 10 min burst, Storm 1
C 4\,B1	0.04	0.036	0.008	5	10	2 1% AEP, 10 min burst, Storm 1
C 5\,B1	0.04	0.036	0.008	5	10	2 1% AEP, 10 min burst, Storm 1
C 6\,B1	0.039	0.034	0.008	5	10	2 1% AEP, 10 min burst, Storm 1
C 7\,B1	0.038	0.033	0.008	5	10	2 1% AEP, 10 min burst, Storm 1
C 8\,B1	0.038	0.034	0.008	5	10	2 1% AEP, 10 min burst, Storm 1
C 9\,B1	0.038	0.034	0.008	5	10	2 1% AEP, 10 min burst, Storm 1
C 1\,B9	0.032	0.029	0.007	5	10	2 1% AEP, 10 min burst, Storm 1
C 2\,B9	0.037	0.033	0.008	5	10	2 1% AEP, 10 min burst, Storm 1
C 3\,B9	0.037	0.033	0.008	5	10	2 1% AEP, 10 min burst, Storm 1
C 4\,B9	0.037	0.033	0.008	5	10	2 1% AEP, 10 min burst, Storm 1
C 5\,B9	0.042	0.037	0.009	5	10	2 1% AEP, 10 min burst, Storm 1
C 8\,B2	0.008	0.007	0.002	5	10	2 1% AEP, 10 min burst, Storm 1
C 9\,B2	0.085	0.075	0.017	5	10	2 1% AEP, 10 min burst, Storm 1
C 10\,B2	0.054	0.048	0.011	5	10	2 1% AEP, 10 min burst, Storm 1
C 1\,B7	0.032	0.028	0.007	5	10	2 1% AEP, 10 min burst, Storm 1
C 2\,B7	0.031	0.028	0.006	5	10	2 1% AEP, 10 min burst, Storm 1
C 3\,B7	0.031	0.028	0.006	5	10	2 1% AEP, 10 min burst, Storm 1
C 4\,B7	0.032	0.028	0.007	5	10	2 1% AEP, 10 min burst, Storm 1
C 1\,B2	0.017	0.015	0.003	5	10	2 1% AEP, 10 min burst, Storm 1
C 2\,B2	0.01	0.008	0.002	5	10	2 1% AEP, 10 min burst, Storm 1
C 3\,B2	0.093	0.082	0.019	5	10	2 1% AEP, 10 min burst, Storm 1
C 4\,B2	0.048	0.043	0.01	5	10	2 1% AEP, 10 min burst, Storm 1
C 5\,B2	0.002	0.002	0	5	10	2 1% AEP, 10 min burst, Storm 1
C 6\,B2	0.014	0.013	0.003	5	10	2 1% AEP, 10 min burst, Storm 1
C 7\,B2	0.058	0.051	0.012	5	10	2 1% AEP, 10 min burst, Storm 1
C 1\,B3	0.014	0.012	0.003	5	10	2 1% AEP, 10 min burst, Storm 1
C 1\,B4	0.021	0.018	0.004	5	10	2 1% AEP, 10 min burst, Storm 1
C 1\,B8	0.039	0.035	0.008	5	10	2 1% AEP, 10 min burst, Storm 1
C 2\,B8	0.039	0.034	0.008	5	10	2 1% AEP, 10 min burst, Storm 1
C 3\,B8	0.045	0.04	0.009	5	10	2 1% AEP, 10 min burst, Storm 1
C 1\,B5	0.015	0.014	0.003	5	10	2 1% AEP, 10 min burst, Storm 1
C 1\,B6	0.082	0.073	0.017	5	10	2 1% AEP, 10 min burst, Storm 1
C 2\,B6	0.08	0.071	0.016	5	10	2 1% AEP, 10 min burst, Storm 1
Cat1490103	0.078	0.071	0.013	5	13	0 1% AEP, 10 min burst, Storm 1
C 1\,C29	0.033	0.03	0.005	5	13	0 1% AEP, 10 min burst, Storm 1
Cat1508484	0.032	0.029	0.005	5	13	0 1% AEP, 10 min burst, Storm 1
Cat1508532	0.035	0.032	0.006	5	13	0 1% AEP, 10 min burst, Storm 1
C E1\,1	1.527	0.323	1.258	10.74	24.67	0 1% AEP, 20 min burst, Storm 7
C E1\,2	0.672	0.094	0.599	4.53	10.4	0 1% AEP, 15 min burst, Storm 8
C E1\,3	0.155	0.022	0.133	4.12	9.46	0 1% AEP, 10 min burst, Storm 7
C E1\,4	0.406	0.057	0.362	4.68	10.75	0 1% AEP, 15 min burst, Storm 8
PRE 1	4.353	0.378	4.009	13.37	24.81	0 1% AEP, 25 min burst, Storm 1
PRE 2	0.877	0.06	0.824	8.87	16.45	0 1% AEP, 20 min burst, Storm 10
PRE 3	0.528	0.037	0.498	6.43	11.92	0 1% AEP, 15 min burst, Storm 8
Cat Bypass	0.648	0.223	0.425	4.82	8.94	0 1% AEP, 10 min burst, Storm 1
PRE	7.078	0.585	6.595	9.54	18.13	0 1% AEP, 20 min burst, Storm 4
Cat3658574	0.226	0.032	0.194	4.12	9.46	0 1% AEP, 10 min burst, Storm 7
Cat3658531	0.019	0.003	0.016	4.12	9.46	0 1% AEP, 10 min burst, Storm 7
Cat3679741	0.452	0.096	0.372	10.74	24.67	0 1% AEP, 20 min burst, Storm 7
Cat3679699	0.046	0.01	0.038	10.74	24.67	0 1% AEP, 20 min burst, Storm 7
C 1\,F1	1.881	0.344	1.582	11.42	21.19	0 1% AEP, 20 min burst, Storm 7
C 2\,F1	0.307	0.056	0.258	11.42	21.19	0 1% AEP, 20 min burst, Storm 7
C 3\,F1	0.307	0.056	0.258	11.42	21.19	0 1% AEP, 20 min burst, Storm 7
C 4\,F1	1.085	0.198	0.913	11.42	21.19	0 1% AEP, 20 min burst, Storm 7
C 5\,F1	0.085	0.075	0.017	5	10	2 1% AEP, 10 min burst, Storm 1
C 6\,F1	0.003	0.003	0.001	5	10	2 1% AEP, 10 min burst, Storm 1
C 7\,F1	0.024	0.021	0.005	5	10	2 1% AEP, 10 min burst, Storm 1
C 8\,F1	0.011	0.01	0.002	5	10	2 1% AEP, 10 min burst, Storm 1
C 1\,C42	0.055	0.025	0.038	5	13	0 1% AEP, 20 min burst, Storm 7
C 2\,C42	0.072	0.033	0.05	5	13	0 1% AEP, 20 min burst, Storm 7
C 3\,C42	0.064	0.029	0.045	5	13	0 1% AEP, 20 min burst, Storm 7
C 4\,C42	0.063	0.036	0.027	5	13	0 1% AEP, 20 min burst, Storm 7
C 5\,C42	0.061	0.038	0.023	5	13	0 1% AEP, 20 min burst, Storm 7
C 6\,C42	0.06	0.04	0.02	5	13	0 1% AEP, 10 min burst, Storm 7
C 7\,C42	0.013	0.012	0.001	5	13	0 1% AEP, 10 min burst, Storm 5
C 8\,C42	0.005	0.005	0	5	13	0 1% AEP, 10 min burst, Storm 5
C 9\,C42	0.012	0.012	0.001	5	13	0 1% AEP, 10 min burst, Storm 5
C 1\,U2	0.25	0.034	0.216	4.75	8.81	0 1% AEP, 10 min burst, Storm 7
Cat West South	24.868	5.339	19.842	15.62	28.98	0 1% AEP, 20 min burst, Storm 2
C 2\,G1	0.026	0.023	0.005	5	10	2 1% AEP, 10 min burst, Storm 1
C 1\,U1	0.043	0.007	0.043	2.56	4.76	0 1% AEP, 10 min burst, Storm 1
C 1\,V1	1.974	0.354	1.621	8.45	15.67	0 1% AEP, 20 min burst, Storm 9
Cat West South2	1.623	0.291	1.332	8.45	15.67	0 1% AEP, 20 min burst, Storm 9

PIPE DETAILS

Name	Max Q (cu.m/s)	Max V (m/s)	Max U/S HGL (m)	Max D/S HGL (m)	Due to Storm
P 1\,C1	0.065	0.56	118.462	118.445	1% AEP, 20 min burst, Storm 3
P 2\,C1	0.116	0.99	118.42	118.363	1% AEP, 20 min burst, Storm 4
P 3\,C1	0.171	1.07	118.33	118.242	1% AEP, 25 min burst, Storm 1
P 4\,C1	0.245	1.54	118.158	117.938	1% AEP, 15 min burst, Storm 8
P 5\,C1	0.281	1.3	117.878	117.75	1% AEP, 10 min burst, Storm 7
P 6\,C1	0.287	1.33	117.697	117.583	1% AEP, 10 min burst, Storm 7
P 7\,C1	0.303	1.4	117.539	117.445	1% AEP, 10 min burst, Storm 7
P 8\,C1	0.33	1.17	117.418	117.37	1% AEP, 10 min burst, Storm 5
P 9\,C1	0.373	1.32	117.333	117.269	1% AEP, 10 min burst, Storm 8
P 10\,C1	0.415	1.47	117.216	117.121	1% AEP, 10 min burst, Storm 7
P 11\,C1	0.471	1.67	117.037	116.887	1% AEP, 25 min burst, Storm 4
P 12\,C1	0.514	1.44	116.83	116.743	1% AEP, 25 min burst, Storm 4
P 13\,C1	0.566	1.58	116.692	116.615	1% AEP, 10 min burst, Storm 7
P 14\,C1	0.635	1.77	116.549	116.448	1% AEP, 10 min burst, Storm 7
P 15\,C1	0.725	2.03	116.319	116.123	1% AEP, 10 min burst, Storm 3
P 16\,C1	0.866	1.96	116.002	115.842	1% AEP, 15 min burst, Storm 10
P 17\,C1	0.969	2.19	115.699	115.509	1% AEP, 15 min burst, Storm 10
P 18\,C1	1.045	2.37	115.363	115.294	1% AEP, 15 min burst, Storm 10
P 1\,H1	1.198	2.62	114.934	113.745	1% AEP, 25 min burst, Storm 1
P 1\,C10	0.109	0.99	121.818	121.816	1% AEP, 5 min burst, Storm 1
P 4\,C2	0.21	1.9	121.702	121.624	1% AEP, 15 min burst, Storm 5
P 5\,C2	0.218	1.97	121.484	121.203	1% AEP, 15 min burst, Storm 8
P 6\,C2	0.414	1.91	120.968	120.681	1% AEP, 10 min burst, Storm 6
P 7\,C2	0.473	2.18	120.421	120.147	1% AEP, 5 min burst, Storm 1
P 8\,C2	1.298	2.43	119.863	119.474	1% AEP, 10 min burst, Storm 9
P 9\,C2	1.53	2.41	119.093	118.755	1% AEP, 10 min burst, Storm 9
P 10\,C2	1.5	1.7	118.583	118.474	1% AEP, 10 min burst, Storm 1
P 11\,C2	1.515	1.71	118.374	118.258	1% AEP, 10 min burst, Storm 1
P 12\,C2	2.174	2.03	118.026	117.85	1% AEP, 10 min burst, Storm 7
P 13\,C2	2.375	1.79	117.608	117.318	1% AEP, 15 min burst, Storm 2
P 14\,C2	3.015	1.88	117.107	116.935	1% AEP, 10 min burst, Storm 7
P 15\,C2	3.412	2.13	116.59	116.395	1% AEP, 10 min burst, Storm 7
P 16\,C2	3.422	2.13	116.118	116.048	1% AEP, 10 min burst, Storm 7
P 17\,C2	3.446	1.61	115.85	115.823	1% AEP, 10 min burst, Storm 7
P 1\,C2.1	1.677	1.58	115.66	115.636	1% AEP, 10 min burst, Storm 7
P 18\,C2	1.799	1.7	115.635	115.574	1% AEP, 10 min burst, Storm 7
P 2\,C2.1	1.677	1.68	115.523	115.491	1% AEP, 10 min burst, Storm 7
P 3\,C2.1	1.676	1.79	115.401	115.386	1% AEP, 10 min burst, Storm 7
P 4\,C2.1	1.676	1.97	115.309	115.294	1% AEP, 10 min burst, Storm 7
P 1\,C11	0.03	0.42	126.361	126.356	1% AEP, 10 min burst, Storm 4
P 2\,C11	0.064	0.89	126.342	126.31	1% AEP, 10 min burst, Storm 7
P 3\,C11	0.089	1.24	126.273	126.187	1% AEP, 10 min burst, Storm 6
P 4\,C11	0.119	1.07	126.156	126.082	1% AEP, 10 min burst, Storm 6
P 5\,C11	0.146	0.91	126.059	126.013	1% AEP, 10 min burst, Storm 4
P 6\,C11	0.176	1.11	125.974	125.940	1% AEP, 10 min burst, Storm 4
P 7\,C11	0.189	1.19	125.837	125.793	1% AEP, 10 min burst, Storm 3
P 2\,C3	0.266	1.67	125.623	125.376	1% AEP, 10 min burst, Storm 7
P 3\,C3	0.31	1.95	125.146	124.998	1% AEP, 10 min burst, Storm 7
P 4\,C3	0.459	2.89	124.405	123.26	1% AEP, 10 min burst, Storm 5
P 5\,C3	0.595	2.75	122.776	122.045	1% AEP, 10 min burst, Storm 8
P 6\,C3	0.709	2.51	121.662	121.379	1% AEP, 10 min burst, Storm 4
P 7\,C3	0.718	2.54	121.151	120.395	1% AEP, 10 min burst, Storm 4
P 8\,C3	0.896	2.03	120.201	120.147	1% AEP, 10 min burst, Storm 4
P 1\,C12	0.037	1.17	123.973	123.834	1% AEP, 5 min burst, Storm 1
P 2\,C12	0.065	1.42	123.762	123.577	1% AEP, 10 min burst, Storm 1
P 3\,C12	0.093	2.01	123.438	123.08	1% AEP, 10 min burst, Storm 5
P 4\,C12	0.119	2.59	122.876	122.352	1% AEP, 10 min burst, Storm 6
P 5\,C12	0.156	2.16	122.205	121.911	1% AEP, 10 min burst, Storm 10
P 6\,C12	0.188	1.7	121.754	121.343	1% AEP, 10 min burst, Storm 8
P 7\,C12	0.218	1.37	121.233	121.203	1% AEP, 10 min burst, Storm 1
P 1\,C13	0.033	1.81	122.51	121.862	1% AEP, 10 min burst, Storm 5
P 2\,C13	0.069	1.63	121.848	121.497	1% AEP, 10 min burst, Storm 5
P 3\,C13	0.107	2.32	121.319	120.543	1% AEP, 10 min burst, Storm 1
P 4\,C13	0.155	2.14	120.258	119.631	1% AEP, 10 min burst, Storm 1
P 5\,C13	0.196	1.77	119.533	119.474	1% AEP, 10 min burst, Storm 1
P 1\,C14	0.024	0.22	121.625	121.624	1% AEP, 5 min burst, Storm 1
P 1\,C15	0.026	0.24	120.683	120.681	1% AEP, 5 min burst, Storm 1
P 1\,C16	0.024	0.54	126.185	125.213	1% AEP, 10 min burst, Storm 7
P 2\,C16	0.096	0.92	125.197	125.173	1% AEP, 10 min burst, Storm 7
P 3\,C16	0.118	1.07	125.161	125.109	1% AEP, 10 min burst, Storm 7
P 4\,C16	0.223	2.02	124.886	124.568	1% AEP, 10 min burst, Storm 4
P 5\,C16	0.229	2.07	124.428	123.947	1% AEP, 10 min burst, Storm 4
P 6\,C16	0.239	1.51	123.876	123.825	1% AEP, 10 min burst, Storm 2
P 7\,C16	0.343	2.16	123.541	123.338	1% AEP, 10 min burst, Storm 2
P 8\,C16	0.348	2.19	123.168	122.963	1% AEP, 10 min burst, Storm 4
P 9\,C16	0.353	2.22	122.788	122.448	1% AEP, 10 min burst, Storm 1
P 10\,C16	0.446	2.8	121.984	120.635	1% AEP, 10 min burst, Storm 9
P 11\,C16	0.556	3.5	120.158	119.483	1% AEP, 5 min burst, Storm 1
P 12\,C16	0.565	2.61	119.268	118.924	1% AEP, 5 min burst, Storm 1
P 13\,C16	0.573	2.65	118.706	118.369	1% AEP, 5 min burst, Storm 1
P 14\,C16	0.774	1.45	118.283	118.258	1% AEP, 10 min burst, Storm 5
P 1\,C17	0.121	1.1	125.158	125.109	1% AEP, 10 min burst, Storm 1
P 1\,C18	0.122	1.11	123.865	123.825	1% AEP, 10 min burst, Storm 1
P 1\,C19	0.112	1.01	122.487	122.448	1% AEP, 5 min burst, Storm 1
P 1\,C2	0.062	0.56	122.105	122.093	1% AEP, 10 min burst, Storm 5
P 2\,C2	0.091	0.82	122.035	121.962	1% AEP, 10 min burst, Storm 1
P 3\,C2	0.102	0.92	121.934	121.816	1% AEP, 10 min burst, Storm 8
P 1\,C20	0.119	1.08	120.661	120.635	1% AEP, 5 min burst, Storm 1
P 1\,C21	0.256	0.71	118.37	118.369	1% AEP, 10 min burst, Storm 7
P 1\,C22	0.052	0.47	118.762	118.755	1% AEP, 10 min burst, Storm 5
P 1\,C23	0.036	0.32	117.852	117.85	1% AEP, 10 min burst, Storm 4
P 1\,C24	0.035	0.32	116.938	116.935	1% AEP, 10 min burst, Storm 2
P 1\,C25	0.014	0.51	122.008	121.382	1% AEP, 10 min burst, Storm 1
P 2\,C25	0.186	1.69	121.17	121.065	1% AEP, 10 min burst, Storm 1
P 3\,C25	0.205	2	120.912	120.411	1% AEP, 10 min burst, Storm 1
P 4\,C25	0.274	2.48	120.22	119.69	1% AEP, 5 min burst, Storm 1
P 5\,C25	0.445	2.8	119.344	118.864	1% AEP, 5 min burst, Storm 1
P 6\,C25	0.491	2.27	118.701	118.513	1% AEP, 5 min burst, Storm 1
P 7\,C25	0.523	2.42	118.325	118.07	1% AEP, 5 min burst, Storm 1
P 8\,C25	0.639	2.26	117.786	117.448	1% AEP, 5 min burst, Storm 1
P 9\,C25	0.758	1.42	117.343	117.318	1% AEP, 5 min burst, Storm 1
P 1\,C26	0.034	0.31	123.834	123.83	1% AEP, 10 min burst, Storm 1
P 2\,C31	0.498	1.76	123.646	123.424	1% AEP, 10 min burst, Storm 6
P 3\,C31	0.582	1.63	123.338	123.235	1% AEP, 10 min burst, Storm 6
P 4\,C31	0.62	1.73	123.137	123	1% AEP, 10 min burst, Storm 6
P 5\,C31	0.727	1.64	122.803	122.777	1% AEP, 10 min burst, Storm 6
P 6\,C31	0.812	1.84	122.55	122.489	1% AEP, 10 min burst, Storm 5
P 7\,C31	0.845	1.91	122.29	122.249	1% AEP, 10 min burst, Storm 5
P 6\,C30	1.287	2.91	121.752	121.584	1% AEP, 10 min burst, Storm 5
P 7\,C30	1.331	3.01	121.273	121.013	1% AEP, 10 min burst, Storm 5
P 8\,C30	1.358	3.07	120.684	120.394	1% AEP, 10 min burst, Storm 4
P 9\,C30	1.407	3.18	119.778	119.239	1% AEP, 10 min burst, Storm 7
P 10\,C30	1.482	3.36	118.839	118.26	1% AEP, 10 min burst, Storm 2
P 11\,C30	1.572	2.94	117.73	117.075	1% AEP, 10 min burst, Storm 7
P 12\,C30	1.696	2.67	116.64	116.485	1% AEP, 10 min burst, Storm 7
P 13\,C30	1.747	2.75	116.217	116.062	1% AEP, 10 min burst, Storm 7
P 14\,C30	2.096	1.97	115.808	115.741	1% AEP, 10 min burst, Storm 7
P 15\,C30	2.096	2.1	115.604	115.582	1% AEP, 10 min burst, Storm 7
P 16\,C30	2.096	2.46	115.452	115.294	1% AEP, 10 min burst, Storm 7
P 1\,C27	0.129	1.17	119.719	119.69	1% AEP, 5 min burst, Storm 1
P 1\,C28	0.095	0.86	118.093	118.07	1% AEP, 10 min burst, Storm 9
P 1\,C3	0.026	0.24	125.799	125.793	1% AEP, 10 min burst, Storm 7
P 1\,C30	0.045	1.25	126.99	126.494	1% AEP, 10 min burst, Storm 3
P 2\,C30	0.061	1.14	126.486	125.695	1% AEP, 10 min burst, Storm 7
P 3\,C30	0.201	1.82	125.578	125.324	1% AEP, 10 min burst, Storm 7
P 4\,C30	0.325	2.95	124.849	123.645	1% AEP, 20 min

100% AEP RESULTS

F 16\C1	0.094	0.094	0.043	0.216	0.15	1.73	0.94 1% AEP, 25 min burst, Storm 1
F 17\C1	0.042	0.042	0.043	0.159	0.09	1.27	0.82 1% AEP, 20 min burst, Storm 4
F 18\C1	0.019	0.019	0.043	0.114	0.04	0.91	0.37 1% AEP, 20 min burst, Storm 4
F 1\H1	1.66	1.66	0.288	0.147	0.16	20.81	1.89 1% AEP, 25 min burst, Storm 1
OF2097695	2.861	2.861	0.288	0.163	0.21	21.76	1.44 1% AEP, 25 min burst, Storm 1
F 1\C10	0.076	0.076	0.34	0.074	0.08	2.26	1.05 1% AEP, 10 min burst, Storm 7
F 4\C2	0.019	0.019	0.408	0.058	0.03	1.68	0.46 1% AEP, 15 min burst, Storm 8
F 5\C2	0	0	0.408	0	0	0	0
F 6\C2	0.012	0.012	0.408	0.048	0.11	1.3	8.12 1% AEP, 10 min burst, Storm 7
F 7\C2	0.004	0.004	0.358	0.014	0.03	0.23	2.41 1% AEP, 10 min burst, Storm 7
F 8\C2	0	0	1.061	0	0	0	0
F 9\C2	0	0	0.408	0	0	0	0
F 10\C2	0	0	0.408	0	0	0	0
F 11\C2	0	0	0.438	0	0	0	0
F 12\C2	0.027	0.027	0.358	0.057	0.05	1.64	0.98 1% AEP, 10 min burst, Storm 7
F 13\C2	0.019	0.019	0.392	0.049	0.03	1.36	0.68 1% AEP, 10 min burst, Storm 7
OF2198139	0.006	0.006	0.34	0.038	0.03	0.97	1.26 1% AEP, 10 min burst, Storm 7
F 15\C2	0	0	0.34	0	0	0	0
F 16\C2	0	0	0.226	0	0	0	0
F 17\C2	0	0	0.158	0	0	0	0
F 18\C2	0	0	0.019	0	0	0	0
F 1\C11	0.003	0.001	0.057	0.067	0.01	0.54	0.38 1% AEP, 10 min burst, Storm 7
F 2\C11	0.001	0.001	0.043	0.067	0	0.53	0 1% AEP, 10 min burst, Storm 7
F 3\C11	0	0	0.043	0	0	0	0
F 4\C11	0	0	0.043	0	0	0	0
F 5\C11	0	0	0.043	0	0	0	0
F 6\C11	0	0	0.043	0	0	0	0
F 7\C11	0	0	0.61	0	0	0	0
F 2\C3	0	0	0.599	0	0	0	0
F 3\C3	0.005	0.005	0.61	0.031	0.02	0.7	0.92 1% AEP, 10 min burst, Storm 1
F 4\C3	0.004	0.004	0.61	0.027	0.02	0.56	0.65 1% AEP, 10 min burst, Storm 7
F 5\C3	0	0	0.599	0	0	0	0
F 6\C3	0	0	0.588	0	0	0	0
F 7\C3	0	0	0.358	0	0	0	0
F 8\C3	0.014	0.014	0.358	0.075	0.01	2.3	0.18 1% AEP, 15 min burst, Storm 8
F 1\C12	0	0	0.043	0	0	0	0
F 2\C12	0	0	0.043	0	0	0	0
F 3\C12	0	0	0.043	0	0	0	0
F 4\C12	0.008	0.008	0.043	0.073	0.28	0.58	40.6 1% AEP, 10 min burst, Storm 7
F 5\C12	0	0	0.043	0	0	0	0
F 6\C12	0	0	0.043	0	0	0	0
F 7\C12	0	0	0.05	0	0	0	0
F 1\C13	0	0	0.043	0	0	0	0
F 2\C13	0	0	0.043	0	0	0	0
F 3\C13	0.001	0.001	0.043	0.059	0.01	0.47	0.34 1% AEP, 10 min burst, Storm 1
F 4\C13	0.005	0.005	0.043	0.059	0.06	0.48	3.04 1% AEP, 10 min burst, Storm 1
F 5\C13	0	0	0.05	0	0	0	0
F 1\C14	0	0	0.408	0	0	0	0
F 1\C15	0.001	0.001	0.408	0.007	0	0.11	0 1% AEP, 10 min burst, Storm 7
F 1\C16	0	0	0.358	0	0	0	0
F 2\C16	0	0	0.506	0	0	0	0
F 3\C16	0	0	0.493	0	0	0	0
F 4\C16	0	0	0.519	0	0	0	0
F 5\C16	0	0	0.32	0	0	0	0
F 6\C16	0	0	0.67	0	0	0	0
F 7\C16	0	0	0.679	0	0	0	0
F 8\C16	0	0	0.679	0	0	0	0
F 9\C16	0	0	0.66	0	0	0	0
F 10\C16	0.023	0.017	0.66	0.081	0.05	2.5	1.03 1% AEP, 10 min burst, Storm 4
F 11\C16	0.108	0.108	0.64	0.081	0.18	2.52	3.64 1% AEP, 10 min burst, Storm 4
F 12\C16	0.029	0.029	0.64	0.051	0.05	1.43	1.02 1% AEP, 10 min burst, Storm 4
F 13\C16	0.032	0.032	0.438	0.05	0.05	1.39	1.09 1% AEP, 10 min burst, Storm 4
F 14\C16	0.049	0.049	0.408	0.071	0.08	2.13	1.55 1% AEP, 15 min burst, Storm 8
F 1\C17	0	0	0.588	0	0	0	0
F 1\C18	0	0	0.65	0	0	0	0
F 1\C19	0.002	0.002	0.66	0.053	0.02	1.48	2.79 1% AEP, 10 min burst, Storm 7
F 1\C2	0	0	0.34	0	0	0	0
F 2\C2	0.001	0.001	0.543	0.01	0.02	0.15	1.72 1% AEP, 10 min burst, Storm 4
F 3\C2	0	0	0.34	0	0	0	0
F 1\C20	0.034	0.028	0.438	0.055	0.05	1.56	1.14 1% AEP, 10 min burst, Storm 7
F 1\C21	0.169	0.169	0.353	0.098	0.02	16.44	0.16 1% AEP, 10 min burst, Storm 4
F 1\C22	0	0	0.375	0	0	0	0
OF2198334	0.001	0	0.34	0.01	0	0.16	0 1% AEP, 15 min burst, Storm 2
F 1\C24	0.001	0.001	0.196	0.014	0.01	0.23	0.85 1% AEP, 15 min burst, Storm 8
F 1\C25	0	0	0.63	0	0	0	0
F 2\C25	0	0	0.63	0	0	0	0
F 3\C25	0	0	0.64	0	0	0	0
F 4\C25	0.028	0.028	0.64	0.066	0.05	1.96	1.08 1% AEP, 10 min burst, Storm 4
F 5\C25	0.037	0.037	0.62	0.066	0.04	1.97	0.67 1% AEP, 10 min burst, Storm 7
F 6\C25	0	0	0.63	0	0	0	0
F 7\C25	0	0	0.62	0	0	0	0
F 8\C25	0.004	0.004	0.392	0.025	0.02	0.48	0.72 1% AEP, 10 min burst, Storm 1
F 9\C25	0.002	0.002	0.34	0.018	0.04	0.29	5.69 1% AEP, 15 min burst, Storm 8
F 1\C26	0.004	0.004	0.63	0.015	0.03	0.24	1.95 1% AEP, 10 min burst, Storm 3
F 2\C31	0.059	0.059	0.32	0.081	0.09	2.52	1.64 1% AEP, 10 min burst, Storm 2
F 3\C31	0.022	0.022	0.32	0.056	0.03	1.59	0.61 1% AEP, 10 min burst, Storm 2
F 4\C31	0.023	0.023	0.16	0.056	0.03	1.61	0.61 1% AEP, 10 min burst, Storm 2
F 5\C31	0.11	0.11	0.091	0.07	0.02	13.66	0.64 1% AEP, 10 min burst, Storm 2
F 6\C31	0.04	0.04	0.65	0.07	0.04	2.12	0.61 1% AEP, 10 min burst, Storm 2
OF2127094	0	0	0.65	0	0	0	0
OF2117152	0	0	0.67	0	0	0	0
F 7\C30	0	0	0.67	0	0	0	0
F 8\C30	0.007	0.007	0.63	0.037	0.02	0.92	0.74 1% AEP, 10 min burst, Storm 1
F 9\C30	0.006	0.006	0.599	0.038	0.02	0.95	0.44 1% AEP, 10 min burst, Storm 7
F 10\C30	0	0	0.62	0	0	0	0
OF2126989	0	0	0.62	0	0	0	0
F 12\C30	0	0	0.48	0	0	0	0
F 13\C30	0	0	0.196	0	0	0	0
F 1\C27	0.043	0.045	0.64	0.061	0.06	1.8	1.13 1% AEP, 10 min burst, Storm 7
F 1\C28	0.029	0.029	0.392	0.05	0.05	1.39	1.01 1% AEP, 10 min burst, Storm 7
F 1\C3	0	0	0.588	0	0	0	0
F 1\C30	0	0	0.742	0	0	0	0
F 2\C30	0	0	0.725	0	0	0	0
F 3\C30	0	0	0.725	0	0	0	0
F 4\C30	0.034	0.034	0.698	0.056	0.06	1.6	1.05 1% AEP, 10 min burst, Storm 2
F 5\C30	0.054	0.054	0.66	0.059	0.07	1.71	1.27 1% AEP, 10 min burst, Storm 7
F 1\C31	0	0	0.32	0	0	0	0
F 1\C33	0	0	0.62	0	0	0	0
OF2127066	0	0	0.62	0	0	0	0
F 1\C35	0	0	0.226	0	0	0	0
F 1\C36	0.001	0.001	0.043	0.055	0.01	0.44	0.15 1% AEP, 10 min burst, Storm 1
F 2\C36	0.001	0.001	0.043	0.056	0.01	0.44	0.23 1% AEP, 10 min burst, Storm 1
F 3\C36	0.002	0.002	0.039	0.078	0.02	0.63	0.48 1% AEP, 10 min burst, Storm 1
F 1\C37	0	0	0.043	0	0	0	0
F 2\C37	0	0	0.043	0	0	0	0
F 3\C37	0.001	0.001	0.043	0.049	0.01	0.39	0.15 1% AEP, 10 min burst, Storm 1
F 4\C37	0.003	0.003	0.043	0.05	0.02	0.4	0.54 1% AEP, 10 min burst, Storm 1
F 1\C38	0	0	0.043	0	0	0	0
F 2\C38	0	0	0.043	0	0	0	0
F 3\C38	0	0	0.043	0	0	0	0
F 4\C38	0	0	0.043	0	0	0	0
F 5\C38	0.001	0.001	0.077	0.026	0	0.21	0 1% AEP, 10 min burst, Storm 1
F 1\C39	0.005	0.005	0.043	0.05	0.03	0.4	0.56 1% AEP, 10 min burst, Storm 1
F 2\C39	0.003	0.003	0.043	0.047	0.04	0.38	1.83 1% AEP, 10 min burst, Storm 1
F 3\C39	0	0	0.043	0	0	0	0
F 4\C39	0	0	0.043	0	0	0	0
F 5\C39	0	0	0.043	0	0	0	0
F 6\C39	0	0	0.043	0	0	0	0
F 7\C39	0	0	0.043	0	0	0	0
F 8\C39	0	0	0.043	0	0	0	0
F 1\C4	0	0	0.588	0	0	0	0
F 2\C4	0	0	0.438	0	0	0	0
F 3\C4	0.006	0.006	0.588	0.032	0.02	0.73	0.62 1% AEP, 10 min burst, Storm 8
F 1\C40	0.002	0.002	0.043	0.049	0.01	0.39	0.22 1% AEP, 10 min burst, Storm 1
F 2\C40	0	0	0.043	0	0	0	0
F 3\C40	0.001	0.001	0.043	0.025	0	0.2	0 1% AEP, 10 min burst, Storm 1
F 4\C40	0.001	0.001	0.043	0.028	0	0.23	0 1% AEP, 10 min burst, Storm 1
F 5\C40	0.001	0.001	0.043	0.029	0	0.23	0 1% AEP, 10 min burst, Storm 1
F 6\C40	0	0	0.043	0	0	0	0
F 7\C40	0	0	0.043	0	0	0	0
F 8\C40	0	0	0.043	0	0	0	0
F 9\C40	0	0	0.043	0	0	0	0
F 10\C40	0	0	0.041	0	0	0	0
F 1\C41	0	0	0.043	0	0	0	0
F 1\C6	0	0	0.438	0	0	0	0
F 1\C7	0	0	0.61	0	0	0	0
F 1\C8	0	0	0.358	0	0	0	0
F 1\C32	0.093	0.094	0.16	0.075	0.11	2.3	1.63 1% AEP, 10 min burst, Storm 6
F 1\C9	0.15	0.15	0.288	0.116	0.01	18.27	0.11 1% AEP, 10 min burst, Storm 1
F 1\D1	0.013	0.013	0.043	0.146	0.03	1.17	0.22 1% AEP, 20 min burst, Storm 10

F 2\D1	0.014	0.014	0.043	0.131	0.03	1.04	0.36 1% AEP, 10 min burst, Storm 7
F 3\D1	0.009	0.009	0.043	0.099	0.03	0.79	0.29 1% AEP, 10 min burst, Storm 7
F 4\D1	0.013	0.013	0.043	0.089	0.04	0.71	0.41 1% AEP, 10 min burst, Storm 7
F 1\A1	0	0	0.503	0	0	0	0
F 2\A1	0	0	0.572	0	0	0	0
F 3\A1	0	0	0.469	0	0	0	0
F 4\A1	0	0	0.262	0	0	0	0
F 5\A1	0	0	0.311	0	0	0	0
F 6\A1	0	0	0.335	0	0	0	0
F 7\A1	0.006	0.006	1.031	0.007	0	4.51	0.37 1% AEP, 10 min burst, Storm 7
F 1\H3	0.055	0.055	0.499	0.021	0.01	7.45	0.71 1% AEP, 20 min burst, Storm 2
F Basin 3.2	0.297	0.297	0.288	0.151	0.06	21.08	3.06 1% AEP, 20 min burst, Storm 2
F 1\A2	0	0	0.449	0	0	0	0
F 2\A2	0	0	0.47	0	0	0	0
F 3\A2	0	0	0.259	0	0	0	0
F 4\A2	0	0	0.217	0	0	0	0
F 5\A2	0	0	0.259	0	0	0	0
F 6\A2	0	0	0.463	0	0	0	0
F 1\A3	0	0	0.284	0	0	0	0
F 2\A3	0.063	0.063	0.183	0.08	0.1	1.81	1.3 1% AEP, 10 min burst, Storm 7
F 3\A3	0.018	0.018	0.183	0.077	0.03	1.7	0.37 1% AEP, 10 min burst, Storm 7
F 4\A3	0	0	0.183	0	0	0	0
F 1\A4	0	0	0.401	0	0	0	0
F1\A6	0	0	0.838	0	0	0	0
F 1\B1	0.001	0.001	0.979	0.028	0	0.23	0 1% AEP, 10 min burst, Storm 4
F 2\B1	0.001	0.001	0.979	0.04	0	0.32	0 1% AEP, 10 min burst, Storm 1
F 3\B1	0.002	0.002	0.979	0.041	0.02	0.32	0.41 1% AEP, 10 min burst, Storm 1
F 4\B1	0.002	0.002	0.979	0.038	0.01	0.3	0.35 1% AEP, 10 min burst, Storm 1
F 5\B1	0.002	0.002	0.979	0.037	0.02	0.3	0.55 1% AEP, 10 min burst, Storm 1
F 6\B1	0.001	0.001	0.979	0.028	0	0.22	0 1% AEP, 10 min burst, Storm 1
F 7\B1	0.001	0.001	0.979	0.03	0	0.24	0 1% AEP, 10 min burst, Storm 1
F 8\B1	0.001	0.001	0.979	0.03	0	0.24	0 1% AEP, 10 min burst, Storm 1
F 9\B1	0.001	0.001	16.636	0.003	0	1.79	0 1% AEP, 10 min burst, Storm 1
F 1\H2	0.594	0.594	0.288	0.047	0.1	11.36	3.19 1% AEP, 20 min burst, Storm 4
F Basin 2.2	0.779	0.779	0.288	0.15	0.13	20.99	4.19 1% AEP, 20 min burst, Storm 4
F 1\B9	0	0	0.259	0	0	0	0
F 2\B9	0	0	0.259	0	0	0	0
F 3\B9	0	0	0.259	0	0	0	0
F 4\B9	0	0	0.259	0	0	0	0
F 5\B9	0.002	0.002	0.366	0.016	0.03	0.18	1.71 1% AEP, 10 min burst, Storm 1
F 8\B2	0.002	0.002	0.142	0.017	0.02	0.2	1.04 1% AEP, 10 min burst, Storm 7
F 9\B2	0	0	0.129	0	0	0	0
F 10\B2	0	0	0.16	0	0	0	0
F 1\B7	0	0	0.259	0	0	0	0
F 2\B7	0	0	0.259	0	0	0	0
F 3\B7	0	0	0.259	0	0	0	0
F 4\B7	0	0	0.375	0	0	0	0
F 1\B2	0	0	0.375	0	0	0	0
F 2\B2	0	0	0.259	0	0	0	0
F 3\B2	0.102	0.102	0.091	0.045	0.01	11.15	0.31 1% AEP, 10 min burst, Storm 7
F 4\B2	0.004	0.004	0.375	0.041	0.02	0.5	0.42 1% AEP, 10 min burst, Storm 7
F 5\B2	0	0	0.375	0	0	0	0
F 6\B2	0.093	0.093	0.375	0.099	0.12	2.44	1.41 1% AEP, 10 min burst, Storm 7
F 7\B2	0.034	0.034	0.366	0.074	0.35	1.59	20.29 1% AEP, 10 min burst, Storm 7
F 1\B3	0	0	0.375	0	0	0	0
F 1\B4	0	0	0.375	0	0	0	0
F 1\B8	0.01	0.01	0.259	0.078	0.03	1.72	0.61 1% AEP, 10 min burst, Storm 7
F 2\B8	0.033	0.033	0.259	0.096	0.05	2.33	0.65 1% AEP, 10 min burst, Storm 7
F 3\B8	0.049	0.049	0.375	0.096	0.06	2.34	0.75 1% AEP, 10 min burst, Storm 7
F 1\B5	0	0	0.116	0	0	0	0
F 1\B6	0	0	0.257	0	0	0	0
F 2\B6	0	0	0.311	0	0	0	0
F 1\C29	0.088	0.088	0.316	0.043	0.01	11.01	0.28 1% AEP, 10 min burst, Storm 7
OF2522706	0.63	0.689	0.433	0.684	0.72	13.58	1.53 1% AEP, 25 min burst, Storm 1
F E1\2	0.064	0.339	0.544	0.847	0.07	17.29	0.08 1% AEP, 10 min burst, Storm 4
F E1\3	0	0.53	0.403	0.752	0.2	15.99	0.33 1% AEP, 10 min burst, Storm 7
F E1\4	0	0.131	0.433	0.284	0.24	1.14	0.87 1% AEP, 10 min burst, Storm 7
F E1\5	0	0.405	0.433	0.292	0.72	1.17	2.58 1% AEP, 15 min burst, Storm 8
OF2097700	3.721	3.721	0.288	0.163	0.26	21.76	1.6 1% AEP, 25 min burst, Storm 1
OF2097706	0.647	0.647	0.288	0.12	0.07	18.68	0.95 1% AEP, 10 min burst, Storm 7
OF2117169	0	0	0.624	0	0	0	0
OF2117163	0	0	0.67	0	0	0	0
OF2127035	0	0	0.67	0	0	0	0
OF2127041	0	0	0.62	0	0	0	0
OF2127075	0	0	0.67	0	0	0	0
OF2127080	0	0	0.62	0	0	0	0
OF2127103	0	0	0.637	0	0	0	0
OF2127113	0	0	0.65	0	0	0	0
F E1.2\4	0.132	0.15	0.433	0.276	0.27	1.1	0.99 1% AEP, 10 min burst, Storm 7
F E1.3\4	0.151	0.304	0.433	0.318	0.48	1.27	1.51 1% AEP, 15 min burst, Storm 8
OF2287482	0.632	2.193	3.081	0.356	0.54	11.73	1.61 1% AEP, 25 min burst, Storm 3
OF2198190	0.002	0.002	1.242	0.023	0.02	0.35	1.51 1% AEP, 10 min burst, Storm 7
OF2198237	0.001	0.001	0.34	0.013	0.01	0.21	0.92 1% AEP, 10 min burst, Storm 7
F E1.2\2	0.506	0.605	0.544	1.03	0.09	17.66	0.09 1% AEP, 25 min burst, Storm 3
F E1.3\2	0.22	0.52	0.544	1.059	0.05	17.72	0.05 1% AEP, 25 min burst, Storm 5
F 1.3\C16	0.004	0.004	0.358	0.071	0	2.15	0.07 1% AEP, 5 min burst, Storm 1
F 1.2\C16	0.004	0.004	1.175	0.062	0.01	0.68	0.23 1% AEP, 5 min burst, Storm 1
F 1\C23	0	0	0.34	0	0	0	0
OF2198332	0	0	1.242	0	0	0	0
OF2198369	0	0	0.408	0	0	0	0
OF2198362	0	0	1.061	0	0	0	0
OF2198393	0	0	0.375	0	0	0	0
OF2198391	0	0	1.144	0	0	0	0
F 8.2\C2	0	0	0.408	0	0	0	0
OF2198435	0	0	1.061	0	0	0	0
OF2198438	0	0	0.408	0	0	0	0
F 7.2\F1	0.001	0.001	1.643	0.014	0	0.16	0 1% AEP, 10 min burst, Storm 7
F 7.3\F1	0	0	2.702	0	0	0	0
F 6.1\B2	0.094	0.094	0.192	0.099	0.21	0.83	2.25 1% AEP, 10 min burst, Storm 7
F 6.2\B2	0.094	0.094	0.375	0.092	0.16	2.2	2.18 1% AEP, 10 min burst, Storm 7
F 1.2\B5	0	0	0.059	0	0	0	0
F 1.3\B5	0	0	0.116	0	0	0	0
OF2399538	0	0.78	1.921	0.088	0.24	2.35	2.7 1% AEP, 20 min burst, Storm 7
OF2187965	0.099	0.966	0.463	0.937	0.09	17.47	0.1 1% AEP, 25 min burst, Storm 4
F 1\F1	0.801	1.086	1.921	0.234	0.43	3.39	1.85 1% AEP, 25 min burst, Storm 3
F 2\F1	0.326	0.625	1.921	0.201	0.26	2.87	1.29 1% AEP, 25 min burst, Storm 8
F 3\F1	0.001	0.096	1.921	0.21	0	3.02	0 1% AEP, 25 min burst, Storm 6
F 4\F1	0	0	0.288	0	0	0	0
F 5\F1	0	0	0.52	0	0	0	0
F 6\F1	0	0	2.702	0	0	0	0
F 7\F1	0.001	0.001	2.702	0.013	0	0.15	0 1% AEP, 10 min burst, Storm 1
F 8\F1	0	0	0.259	0	0	0	0
F 1\C42	0.008	0.008	0.669	0.038	0.03	0.97	0.86 1% AEP, 20 min burst, Storm 2
F 2\C42	0.016	0.016	0.633	0.04	0.04	1.02	1.02 1% AEP, 15 min burst, Storm 6
F 3\C42	0.016	0.016	0.672	0.04	0.04	1.04	1.04 1% AEP, 20 min burst, Storm 2
F 4\C42	0.015	0.015	0.61	0.04	0.04	1.04	0.97 1% AEP, 20 min burst, Storm 7
F 5\C42	0.014	0.014	0.668	0.079	0.04	2.44	0.99 1% AEP, 20 min burst, Storm 4
F 6\C42	0.044	0.044	0.189	0.078	0.17	2.42	5.82 1% AEP, 10 min burst, Storm 7
F 7\C42	0.004	0.004	0.189	0.034	0.01	0.82	0.33 1% AEP, 20 min burst, Storm 7
F 8\C42	0	0	0.189	0	0	0	0
F 9\C42	0	0	0.189	0	0	0	0
F 1.2\A4	0	0	0.161	0	0	0	0
F 1.3\A4	0	0	0.401	0	0	0	0
F4.2\A2	0	0	0.112	0	0	0	0
F 4.3\A2	0	0	0.217	0	0	0	0
F 1\J2	0	0	0.288	0	0	0	0
F 1\G1	0.004	0.004	0.288	0.007	0	4.32	0.27 1% AEP, 5 min burst, Storm 1
F 2\G1	0	0	0.288	0	0	0	0
F 1\U1	0.044	0.044	1.921	0.264	0.02	4.97	0.06 1% AEP, 20 min burst, Storm 8
Swale South	1.355	1.767	3.263	0.45	0.32	16.75	0.87 1% AEP, 20 min burst, Storm 7
F 2\U1	1.762	1.762	0.204	0.096	0.16	16.24	1.72 1% AEP, 20 min burst, Storm 9
OF7447448	0	1.944	1.418	0.363	0.67	12.36	2.94 1% AEP, 20 min burst, Storm 6
OF7533488	0	1.213	2.417	0.243	0.32	3.73	1.31 1% AEP, 20 min burst, Storm 6

sharon pope

Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

0 1cm at full size 10cm 20cm

Certification By Dr. Michel Chaaya
B.E., M.E. (Res), Ph.D., F.I.E. Aust., CPEng.,
Civil & Structural Engineer

Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale

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Project: PROPOSED RESIDENTIAL SUBDIVISION ALMOND STREET, DENMAN CIVIL ENGINEERING PLANS VOLUNTARY PLANNING AGREEMENT

Drawing Title: STOMRWATER CALCULATION TABLE SHEET 6

Scale	Project No.	Dwg. No.	Issue
AS SHOWN (A1)	22048	635	A

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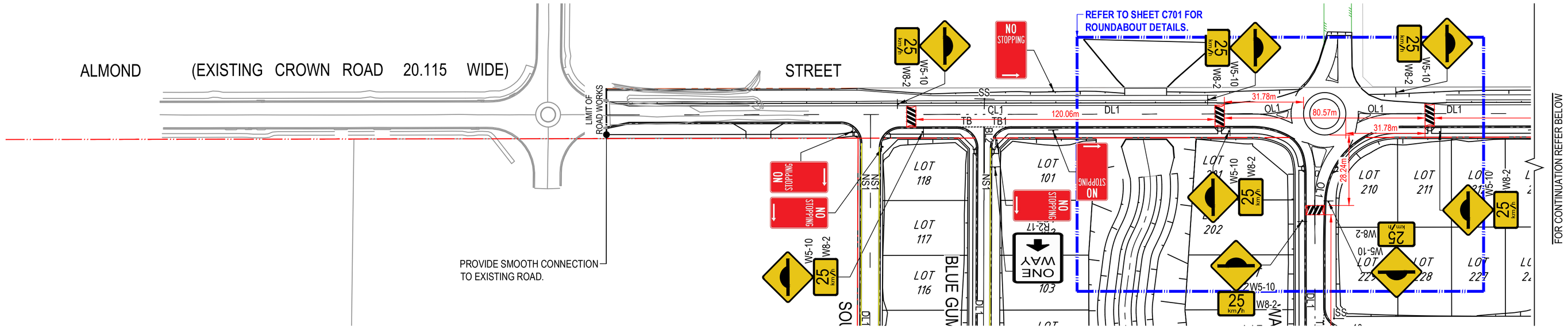
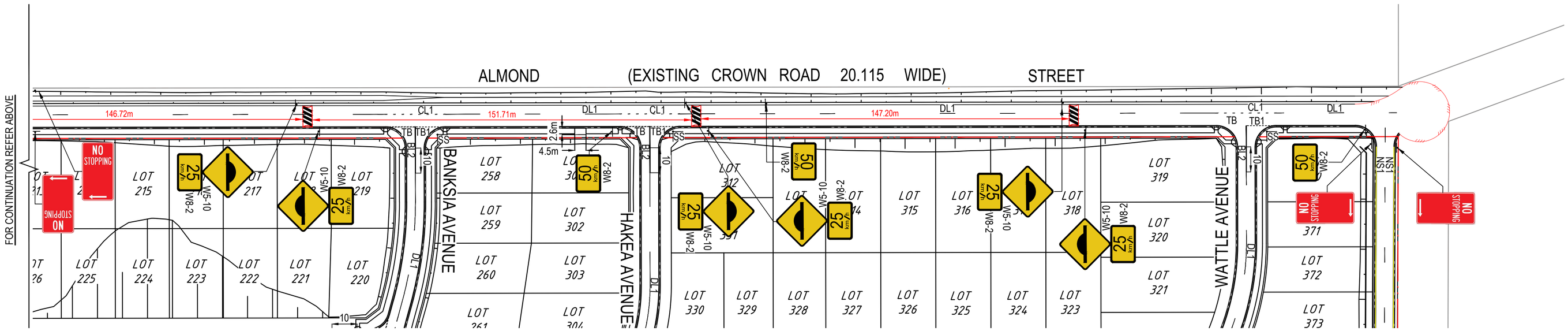
Docusign Envelope ID: 46B64CCE-3355-8491-8275-0708B4B8E4346

STRUCTURE NUMBER	STRUCTURE TYPE	STEP IRONS REQUIRED	EASTING	NORTHING	INVERT LEVEL	SURFACE LEVEL	DEPTH TO INVERT
1\A1	900x900 GSIP	NO	282106.331	6415367.187	124.558	125.056	0.498
2\A1	900x900 GSIP	NO	282127.887	6415362.593	124.163	124.734	0.571
3\A1	900x900 GSIP	NO	282149.671	6415359.526	123.62	124.19	0.57
4\A1	900x900 GSIP	NO	282171.446	6415356.392	123.276	124.065	0.789
5\A1	900x900 GSIP	NO	282193.64	6415356.191	122.989	123.802	0.813
6\A1	900x900 GSIP	NO	282215.862	6415356.148	122.344	123.163	0.819
7\A1	900x900 GSIP	NO	282258.891	6415361.959	121.271	122.138	0.867
8\A1	HEADWALL	NO	282269.456	6415354.293		120.96	0.18
1\A2	2.4m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282107.594	6415320.814	123.366	125.17	1.804
2\A2	2.4m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282111.364	6415325.836	123.187	125.124	1.937
3\A2	2.4m Lintel KIP (900x700 - Refer to Detail on sheet 741)	YES	282177.709	6415316.009	121.902	123.853	1.951
4\A2	2.4m Lintel KIP (SAG) (900x700- Refer to Detail on sheet 741)	NO	282236.257	6415311.94	121.091	122	0.909
5\A2	2.4m Lintel KIP (900x650- Refer to Detail on sheet 741)	NO	282247.546	6415319.177	120.965	121.809	0.844
6\A2	2.4m Lintel KIP (900x700 - Refer to Detail on sheet 741)	NO	282252.915	6415333.449	120.856	121.732	0.876
7\A2	HUMEGARD GPT HG18-MC	YES	282259.206	6415351.524	120.638	122.008	1.371
8\A2	HUMECEPTOR STC3	NO	282261.325	6415351.412	120.587	121.7	1.113
9\A2	HEADWALL	NO	282267.132	6415350.624	120.424	120.956	
1\A3	3.6m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282149.383	6415275.361	121.973	123.646	1.673
2\A3	3.0m Lintel KIP (900x650 - Refer to Detail on sheet 741)	NO	282221.862	6415264.624	121.45	122.339	0.889
3\A3	2.4m Lintel KIP (900x750 - Refer to Detail on sheet 741)	NO	282231.067	6415270.928	121.349	122.061	0.712
4\A3	2.4m Lintel KIP (900x650 - Refer to Detail on sheet 741)	NO	282237.887	6415293.498	121.161	121.946	0.785
1\A4	2.4m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282174.336	6415310.928	122.35	123.927	1.577
1\A6	2.4m Lintel KIP (900x650- Refer to Detail on sheet 741)	NO	282257.555	6415330.106	120.913	121.74	0.827
1\B1	900x900 GSIP	YES	282112.164	6415408.137	124.244	125.491	1.247
2\B1	900x900 GSIP	YES	282133.73	6415403.547	123.643	125.146	1.503
3\B1	900x900 GSIP	YES	282155.31	6415398.965	123.192	124.586	1.394
4\B1	900x900 GSIP	YES	282177.377	6415397.916	122.711	124.074	1.363
5\B1	900x900 GSIP	YES	282200.762	6415396.905	122.339	123.557	1.218
6\B1	900x900 GSIP	YES	282224.159	6415399.264	121.719	123.014	1.295
7\B1	900x900 GSIP	YES	282247.325	6415401.753	121.007	122.381	1.374
8\B1	900x900 GSIP	NO	282268.685	6415406.549	120.513	121.548	1.036
9\B1	900x900 GSIP	NO	282283.126	6415409.846	120.334	121.314	0.979
10\B1	HEADWALL	NO	282294.937	6415412.488		120.575	0.375
1\B2	2.4m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282135.5	6415457.598	123.57	125.562	1.993
2\B2	2.4m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282161.177	6415453.929	122.986	124.905	1.919
3\B2	3.6m Lintel KIP (SAG) (900x650 - Refer to Detail on sheet 741)	YES	282172.464	6415461.844	122.556	124.247	1.691
4\B2	3.0m Lintel KIP (1000x650 - Refer to Detail on sheet 741)	YES	282179.886	6415460.622	122.326	124.246	1.92
5\B2	2.4m Lintel KIP (1000x700 - Refer to Detail on sheet 741)	YES	282189.04	6415450.117	122.015	124.189	2.174
6\B2	2.4m Lintel KIP (900x700 - Refer to Detail on sheet 741)	YES	282228.317	6415450.102	121.361	123.174	1.813
7\B2	2.4m Lintel KIP (900x750 - Refer to Detail on sheet 741)	YES	282251.987	6415453.947	121.062	122.554	1.492
8\B2	2.4m Lintel KIP (900x850 - Refer to Detail on sheet 741)	YES	282272.217	6415459.67	120.8	122.032	1.232
9\B2	2.4m Lintel KIP (SAG) (900x850 - Refer to Detail on sheet 741)	YES	282295.33	6415469.238	120.55	121.776	1.226
10\B2	2.4m Lintel KIP (SAG) (1000x650 - Refer to Detail on sheet 741)	YES	282299.248	6415462.806	120.475	121.776	1.301
11\B2	HUMEGARD GPT HG24-MC	YES	282300.628	6415454.861	120.393	121.677	1.284
12\B2	HUMECEPTOR STC9	YES	282301.155	6415451.828	120.364	121.759	1.395
13\B2	HEADWALL	NO	282303.522	6415438.195	120.225	120.827	
1\B3	2.4m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282128.098	6415451.059	123.689	125.724	2.036
1\B4	2.4m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282181.489	6415443.437	122.256	124.359	2.103
1\B5	2.4m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282223.487	6415442.138	121.513	123.314	1.801
1\B6	3.0m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282182.956	6415535.273	123.678	125.376	1.699
2\B6	3.0m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282177.931	6415500.104	123.093	124.827	1.733
1\B7	900x900 GSIP	YES	282140.748	6415531.021	125.133	126.584	1.452
2\B7	900x900 GSIP	YES	282137.77	6415509.534	124.699	126.392	1.693
3\B7	900x900 GSIP	YES	282134.707	6415488.132	124.253	126.11	1.857
4\B7	900x900 GSIP	YES	282131.208	6415463.628	123.706	125.978	2.273
1\B8	900x900 GSIP	NO	282234.555	6415495.02	122.447	123.314	0.867
2\B8	900x900 GSIP	YES	282231.803	6415475.168	121.946	123.232	1.286
3\B8	900x900 GSIP	YES	282229.046	6415456.041	121.463	123.195	1.732
1\B9	900x900 GSIP	YES	282225.276	6415516.472	122.591	123.918	1.327
2\B9	900x900 GSIP	YES	282243.092	6415513.928	122.231	123.504	1.273
3\B9	900x900 GSIP	NO	282260.921	6415511.395	121.871	122.945	1.074
4\B9	900x900 GSIP	NO	282277.104	6415509.062	121.532	122.629	1.097
5\B9	900x900 GSIP	YES	282270.827	6415465.087	120.897	122.308	1.41
1\C1	900x900 GSIP	NO	282418.403	6415441.603	117.353	118.278	0.925
2\C1	900x900 GSIP	NO	282429.211	6415469.575	117.193	118.109	0.916
3\C1	900x900 GSIP	NO	282440.023	6415497.565	117.033	118.001	0.968
4\C1	900x900 GSIP	NO	282450.832	6415525.548	116.873	117.867	0.994
5\C1	900x900 GSIP	NO	282461.65	6415553.533	116.683	117.692	1.009
6\C1	900x900 GSIP	NO	282472.459	6415581.518	116.496	117.525	1.029
7\C1	900x900 GSIP	NO	282483.26	6415609.508	116.304	117.317	1.013
8\C1	900x900 GSIP	NO	282494.078	6415637.491	116.12	117.067	0.947
9\C1	900x900 GSIP	NO	282504.879	6415665.475	115.96	117.018	1.058
10\C1	900x900 GSIP	NO	282515.693	6415693.459	115.8	116.834	1.034
11\C1	900x900 GSIP	YES	282526.503	6415721.438	115.64	116.851	1.211
12\C1	900x900 GSIP	NO	282537.319	6415749.426	115.48	116.526	1.046
13\C1	900x900 GSIP	NO	282548.125	6415777.417	115.32	116.152	0.832
14\C1	900x900 GSIP	NO	282558.939	6415805.404	115.16	116.083	0.923
15\C1	900x900 GSIP	NO	282569.756	6415833.399	115	116.061	1.061
16\C1	900x900 GSIP	NO	282580.555	6415861.374	114.84	116.007	1.167
17\C1	900x900 GSIP	YES	282591.371	6415889.375	114.68	115.916	1.236
18\C1	900x900 GSIP	YES	282602.174	6415917.342	114.52	115.801	1.281
19\C1	HEADWALL	NO	282596.937	6415931.839		114.34	-0.103
1\C10	2.4m Lintel KIP (SAG) (900x650 - Refer to Detail on sheet 741)	YES	282331.167	6415545.927	120.275	121.7	1.425
1\C11	900x900 GSIP	NO	282146.746	6415572.485	125.873	126.323	0.45
2\C11	900x900 GSIP	NO	282149.824	6415593.865	125.593	126.283	0.69
3\C11	900x900 GSIP	NO	282152.876	6415615.247	125.367	126.454	1.087
4\C11	900x900 GSIP	YES	282155.947	6415636.646	125.087	126.65	1.563
5\C11	900x900 GSIP	YES	282158.98	6415658.042	124.861	126.621	1.76
6\C11	900x900 GSIP	YES	282162.482	6415682.441	124.604	126.728	2.124
1\C5	2.4m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282163.332	6415687.791		126.597	2.051

STRUCTURE NUMBER	STRUCTURE TYPE	STEP IRONS REQUIRED	EASTING	NORTHING	INVERT LEVEL	SURFACE LEVEL	DEPTH TO INVERT
1\C12	900x900 GSIP	NO	282227.65	6415622.188	123.817	124.625	0.808
2\C12	900x900 GSIP	NO	282245.467	6415619.617	123.381	124.285	0.904
3\C12	900x900 GSIP	NO	282263.228	6415617.105	122.943	123.927	0.984
4\C12	900x900 GSIP	NO	282281.11	6415614.55	122.486	123.455	0.969
5\C12	900x900 GSIP	NO	282298.93	6415612.004	121.788	122.94	1.152
6\C12	900x900 GSIP	YES	282317.727	6415609.318	120.973	122.225	1.252
7\C12	900x900 GSIP	YES	282355.409	6415594.889	119.789	121.35	1.561
1\C13	900x900 GSIP	NO	282292.772	6415717.689	122.361	123.282	0.921
2\C13	900x900 GSIP	NO	282313.265	6415719.725	121.64	122.593	0.953
3\C13	900x900 GSIP	NO	282333.757	6415721.755	120.995	121.971	0.976
4\C13	900x900 GSIP	NO	282364.186	6415724.801	119.916	120.966	1.05
5\C13	900x900 GSIP	YES	282400.434	6415711.433	118.255	119.94	1.685
1\C14	2.4m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282352.019	6415550.423	120.253	121.751	1.498
1\C15	2.4m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282378.319	6415618.509	119.301	120.802	1.501
1\C16	3.6m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282156.005	6415915.719	126.024	128.348	2.324
2\C16	2.4m Lintel KIP (SAG) (900x650 - Refer to Detail on sheet 741)	YES	282140.03	6415803.917	124.864	127.787	2.923
3\C16	2.4m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282148.943	6415792.478	124.706	127.369	2.663
4\C16	3.6m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282201.53	6415784.96	124.098	125.958	1.86
5\C16	2.4m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282222.768	6415778.857	123.592	125.382	1.79
6\C16	2.4m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282252.027	6415768.859	122.967	124.418	1.451
7\C16	2.4m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282260.101	6415767.798	122.589	124.143	1.554
8\C16	2.4m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282274.126	6415767.582	122.087	123.656	1.569
9\C16	2.4m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282287.816	6415769.362	121.598	123.176	1.578
10\C16	2.4m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282309.034	6415776.318	120.79	122.4	1.61
11\C16	2.4m Lintel KIP (900x700 - Refer to Detail on sheet 741)	YES	282361.362	6415799.553	118.701	120.486	1.785
12\C16	2.4m Lintel KIP (900x700 - Refer to Detail on sheet 741)	YES	282387.222	6415809.82	117.682	119.582	1.9
13\C16	2.4m Lintel KIP (900x700 - Refer to Detail on sheet 741)	YES	282409.773	6415809.885	117.088	118.874	1.786
14\C16	2.4m Lintel KIP (SAG) (1300x700 - Refer to Detail on sheet 741)	YES	282430.394	6415802.658	116.688	118.236	1.548
1\C17	3.6m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282191.495	6415778.802	124.356	126.198	1.842
1\C18	3.6m Lintel KIP (900x650 - Refer to Detail on sheet 741)	NO	282254.387	6415760.88	123.172	124.305	1.133
1\C19	3.6m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282304.212	6415766.208	121.095	122.678	1.583
1\C2	3.6m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282268.413	6415562.412	121.493	123.127	1.634
2\C2	2.4m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282275.331	6415569.02	121.185	122.908	1.723
3\C2	2.4m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282299.518	6415564.832	120.757	122.234	1.477
4\C2	2.4m Lintel KIP (SAG) (900x650 - Refer to Detail on sheet 741)	YES	282336.192	6415552.058		121.683	1.585
5\C2	2.4m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282347.321	6415559.13		121.667	1.844
6\C2	3.6m Lintel KIP (900x700 - Refer to Detail on sheet 741)	YES	282361.197	6415595.053		121.167	1.838
7\C2	3.6m Lintel KIP (900x700 - Refer to Detail on sheet 741)	YES	282374.473	6415629.462		120.687	1.752
8\C2	2.4m Lintel KIP (900x900 - Refer to Detail on sheet 741)	YES	282383.625	6415653.118	118.452	120.358	1.906
9\C2	3.6m Lintel KIP (900x1000 - Refer to Detail on sheet 741)	YES	282405.408	6415709.509		119.572	1.929
10\C2	2.4m Lintel KIP (900x1000 - Refer to Detail on sheet 741)	YES	282425.227	6415760.818	117.073	118.858	1.785
11\C2	2.4m Lintel KIP (900x1000 - Refer to Detail on sheet 741)	YES	282434.068	6415783.704	116.789	118.539	1.75
12\C2	2.4m Lintel KIP (Customized Pit - Refer to TEL22048.CIV.SK - PIT STRUCTURAL) SHEET SK100A	YES	282443.431	6415807.945		118.201	1.678
13\C2	2.4m Lintel KIP (Customized Pit - Refer to TEL22048.CIV.SK - PIT STRUCTURAL) SHEET SK100	YES	282455.47	6415839.111	116.185	117.805	1.62
14\C2	2.4m Lintel KIP (Customized Pit - Refer to TEL22048.CIV.SK - PIT STRUCTURAL) SHEET SK101	YES	282476.431	6415893.376	115.64	117.28	1.64
15\C2	3.6m Lintel KIP (Customized Pit - Refer to TEL22048.CIV.SK - PIT STRUCTURAL) SHEET SK102	YES	282489.345	6415926.809	115.33	116.958	1.628
16\C2	2.4m Lintel KIP (Customized Pit - Refer to TEL22048.CIV.SK - PIT STRUCTURAL) SHEET SK103	YES	282500.546	6415955.806	115.033	116.678	1.645
17\C2	2.4m Lintel KIP (SAG) (Customized Pit - Refer to TEL22048.CIV.SK - PIT STRUCTURAL) SHEET SK104	YES	282501.969	6415966.722	114.933	116.586	1.653
18\C2	3.6m Lintel KIP (SAG) (Customized Pit - Refer to TEL22048.CIV.SK - PIT STRUCTURAL) SHEET SK105	YES	282508.699	6415970.078	114.86	116.588	1.728
19\C2	HUMEGARD GPT HG30A-MC	YES	282524.058	6415967.111	114.725	116.183	1.458
20\C2	HUMECEPTOR STC9	YES	282527.573	6415966.375	114.693	115.998	1.306
21\C2	HEADWALL	NO	282533.531	6415966.276	114.651	115.484	
1\C2.1	JUNCTION PIT	YES	282515.588	6415972.118	114.796	116.521	1.725
2\C2.1	HUMEGARD GPT HG30A-MC	YES	282524.723	6415970.516	114.726	116.188	1.462
3\C2.1	HUMECEPTOR STC9	YES	282528.244	6415970.056	114.697	116.008	1.311
4\C2.1	HEADWALL	NO	282533.531	6415966.276N	114.651	115.484	
1\C20	3.6m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282356.918	6415789.352	119.116	120.76	1.644
1\C21	4.2m Lintel KIP (SAG) (900x650 - Refer to Detail on sheet 741)	YES	282427.855	6415795.577	116.836	118.229	1.393
1\C22	3.6m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282429.783	6415751.742	117.447	118.946	1.499
1\C23	2.4m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282460.006	6415829.984	116.458	117.874	1.416
1\C24	2.4m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282493.185	6415915.879	115.46	117.037	1.577
1\C25	2.4m Lintel KIP (900x650 - Refer to Detail on sheet 741)	NO	282276.43	6415888.308	121.897	122.919	1.022
2\C25	2.4m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282301.336	6415884.772	120.731	122	1.269
3\C25	2.4m Lintel KIP (900x650 - Refer to Detail on sheet 741)	NO	282308.212	6415891.412	120.584	121.783	1.199
4\C25	3.6m Lintel KIP (900x650 - Refer to Detail on sheet 741)	NO	282346.198	6415890.742	119.36	120.374	1.014
5\C25	3.6m Lintel KIP (900x650 - Refer to Detail on sheet 741)	NO	282370.83	6415894.748	118.456	119.63	1.174
6\C25	3.6m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282397.288	6415901.16	117.554	118.937	1.383
7\C25	3.6m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282413.479	6415902.199	117.085	118.536	1.451
8\C25	2.4m Lintel KIP (900x700 - Refer to Detail on sheet 741)	YES	282432.35	6415899.843	116.351	118.064	1.713
9\C25	2.4m Lintel KIP (SAG) (1300x700 - Refer to Detail on sheet 741)	YES	282464.712	6415888.366	115.763	117.233	1.47
1\C26	2.4m Lintel KIP (900x650 - Refer to Detail on sheet 741)	NO	282255.881	6415878.859	122.71	123.847	1.137
1\C27	3.6m Lintel KIP (900x650 - Refer to Detail on sheet 741)	NO	282365.041	6415885.818	118.869	119.828	0.959
1\C28	3.6m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282425.708	6415893.501	116.632	118.199	1.567
1\C29	3.6m Lintel KIP (SAG) (900x650 - Refer to Detail on sheet 741)	YES	282461.302	6415881.622	115.953	117.243	1.29
1\C3	2.4m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282140.654	6415698.971	125.363	127.339	1.976
2\C3	3.6m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282172.99	6415693.19	124.396	126.35	1.954
3\C3	2.4m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282199.76	6415683.316	123.633	125.494	1.861
4\C3	2.4m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282211.504	6415678.717	123.287	125.099	1.812
5\C3	4.2m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282258.365	6415670.816	121.895	123.605	1.71
6\C3	3.6m Lintel KIP (900x700 - Refer to Detail on sheet 741)	YES	282297.944	6415669.727	119.907	122.406	2.499
7\C3	1.8m Lintel KIP (900x700 - Refer to Detail on sheet 741)	YES	282319.014	6415665.996	119.342	121.77	2.428
8\C3	3.6m Lintel KIP (SAG) (900x700 - Refer to Detail on sheet 741)	YES	282371.483	6415646.989	118.754	120.172	1.418
1\C30	2.4m Lintel KIP (SAG) (900x650 - Refer to Detail on sheet 741)	YES	282173.905	6416041.001	126.838	128.401	1.563
2\C30	2.4m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282183.364	6416028.389	126.303	127.893	1.59
3\C30	2.4m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282221.52	6416022.889	124.509	126.137	1.628
4\C30	2.4m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282240.358	6416017.742	123.196	125.274	2.078
5\C30	3.6m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282274.698	6415998.916	122.113	123.593	1.48
6\C30	3.6m Lintel KIP (1050x750 - Refer to Detail on sheet 741)	YES	282297.427	6415991.094	120.97	122.695	1.725
7\C30	3.6m Lintel KIP (900x750 - Refer to Detail on sheet 741)	YES	282310.462	6415989.583	120.484	122.266	1.782
8\C30	2.4m Lintel KIP (900x750 - Refer to Detail on sheet 741)	YES	282329.375	6415990.925	119.721	121.655	1.934

STRUCTURE NUMBER	STRUCTURE TYPE	STEP IRONS REQUIRED	EASTING	NORTHING	INVERT LEVEL	SURFACE LEVEL	DEPTH TO INVERT
9\C30	2.4m Lintel KIP (900x750 - Refer to Detail on sheet 741)	YES	282348.978	6415994.621	118.986	121.041	2.055
10\C30	3.6m Lintel KIP (900x850 - Refer to Detail on sheet 741)	YES	282382.771	6415998.94	117.927	120.015	2.088
11\C30	3.6m Lintel KIP (900x850 - Refer to Detail on sheet 741)	YES	282415.255	6415994.359	116.906	119.022	2.116
12\C30	3.6m Lintel KIP (900x900 - Refer to Detail on sheet 741)	YES	282468.878	6415983.976	115.511	117.341	1.83
13\C30	2.4m Lintel KIP (900x900 - Refer to Detail on sheet 741)	YES	282493.092	6415979.288	115.09	116.703	1.613
14\C30	JUNCTION PIT	YES	282502.572	6415977.917	115.04	116.61	1.606
15\C30	HUMEGARD GPT HG27-MC	YES	282515.062	6415976.111	114.863	116.545	1.682
16\C30	HUMECEPTOR STC9	YES	282519.21	6415975.514	114.816	116.457	1.641
17\C30	HEADWALL	NO	282537.051	6415973.01	114.65	115.015	
1\C31	3.6m Lintel KIP (900x650 - Refer to Detail on sheet 741)	NO	282244.268	6415826.92	123.098	124.298	1.2
2\C31	3.6m Lintel KIP (900x700 - Refer to Detail on sheet 741)	YES	282249.542	6415890.219		123.757	1.201
3\C31	3.6m Lintel KIP (900x700 - Refer to Detail on sheet 741)	YES	282258.052	6415932.927	122.091	123.391	1.3
4\C31	2.4m Lintel KIP (900x750- Refer to Detail on sheet 741)	YES	282265.19	6415955.427	121.824	123.193	1.369
5\C31	2.4m Lintel KIP (SAG) (900x750 - Refer to Detail on sheet 741)	YES	282274.412	6415981.266	121.509	122.968	1.459
6\C31	2.4m Lintel KIP (1100x650 - Refer to Detail on sheet 741)	YES	282281.495	6415978.739	121.403	122.968	1.565
7\C31	2.4m Lintel KIP (1100x650 - Refer to Detail on sheet 741)	YES	282293.411	6415984.251	121.263	122.78	1.517
1\C32	3.0m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282232.906	6416012.374	124.012	125.514	1.502
1\C33	2.4m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282340.745	6415985.416	119.65	121.342	1.692
1\C34	2.4m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282409.82	6415987.752	117.263	119.148	1.885
1\C35	2.4m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282463.262	6415977.404	115.734	117.472	1.738
1\C36	900x900 GSIP	NO	282209.32	6415940.593	124.965	126.08	1.115
2\C36	900x900 GSIP	YES	282206.203	6415918.744	124.493	125.993	1.5
3\C36	900x900 GSIP	YES	282203.219	6415896.908	124.106	125.984	1.878
4\C36	900x900 GSIP	YES	282244.254	6415891.045	122.773	124.152	1.379
1\C37	900x900 GSIP	NO	282193.865	6415831.374	125.491	126.393	0.902
2\C37	900x900 GSIP	NO	282196.825	6415852.162	125.041	126.158	1.117
3\C37	900x900 GSIP	YES	282199.937	6415873.941	124.601	126.062	1.461
4\C37	900x900 GSIP	YES	282202.948	6415895.011	124.145	125.995	1.85
1\C38	900x900 GSIP	NO	282287.143	6415791.249	122.344	123.277	0.933
2\C38	900x900 GSIP	NO	282290.405	6415813.006	121.909	123.064	1.155
3\C38	900x900 GSIP	YES	282293.668	6415834.763	121.604	122.871	1.267
4\C38	900x900 GSIP	YES	282296.93	6415856.521	121.201	122.59	1.389
5\C38	900x900 GSIP	YES	282300.349	6415879.322	120.832	122.368	1.536
1\C39	900x900 GSIP	YES	282315.137	6415829.531	120.669	122.131	1.462
2\C39	900x900 GSIP	YES	282328.902	6415833.074	120.009	121.555	1.546
3\C39	900x900 GSIP	YES	282350.112	6415838.919	119.275	120.773	1.498
4\C39	900x900 GSIP	YES	282371.321	6415844.763	118.511	119.978	1.467
5\C39	900x900 GSIP	YES	282391.146	6415850.084	118.046	119.521	1.475
6\C39	900x900 GSIP	YES	282398.315	6415850.118	117.855	119.35	1.495
7\C39	900x900 GSIP	YES	282425.253	6415850.242	117.306	118.792	1.486
8\C39	900x900 GSIP	YES	282450.197	6415841.053	116.464	118.255	1.791
1\C4	2.4m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282203.491	6415625.827	123.984	125.467	1.483
2\C4	3.6m Lintel KIP (900x650 - Refer to Detail on sheet 741)	YES	282196.594	6415630.727	123.867	125.419	1.552
3\C4	2.4m Lintel KIP (SAG) (900x650 - Refer to Detail on sheet 741)	YES	282201.733	6415666.688	123.493	124.981	1.488
1\C40	900x900 GSIP	NO	282305.419	6415924.142	121.398	122.16	0.762
2\C40	900x900 GSIP	NO	282306.864	6415935.203	121.064	122.156	1.092
3\C40	900x900 GSIP	NO	282329.455	6415938.161	120.511	121.4	0.889
4\C40	900x900 GSIP	NO	282352.031	6415941.128	119.967	120.735	0.768
5\C40	900x900 GSIP	NO	282374.602	6415944.094	119.243	120.04	0.797
6\C40	900x900 GSIP	NO	282397.164	6415947.069	118.556	119.351	0.795
7\C40	900x900 GSIP	NO	282419.074	6415944.895	117.812	118.708	0.896
8\C40	900x900 GSIP	NO	282441.021





LEGEND

	PROPOSED ASPHALTIC SPEED HUMP. REFER TO DETAIL ON SHEET 740
SS	PROPOSED STREET NAME SIGN

LINEMARKING LEGEND

LINE TYPE	USE	DIMENSIONS (m) (FOR DIMENSIONS SHOWN * SEE MARKER SPACING COLUMN.)	COLOUR
BL2	REPLACES DIVIDING LINE IF THERE IS RESTRICTED SIGHT DISTANCE FOR BOTH DIRECTIONS, AT APPROACHES TO A MEDIAN ISLAND OR AT APPROACHES TO A PEDESTRIAN CROSSING	0.10 / 0.10 / 0.10	WHITE
TB	GIVE WAY LINE (USED WITH SIGNS)	0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.30	WHITE
TB1	GIVE WAY LINE (USED OF RIGHT SIDE OF ROAD)	0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.15	WHITE
OL1	OUTLINE OF SPLAYS, MEDIANS, ISLANDS AND SHOULDERS	0.15	WHITE
NS1	KERBSIDE LINE MARKING FOR FULL-TIME NO STOPPING	0.10	YELLOW
DL1	DIVIDING LINE ON A TWO LANE ROAD	3 9 3 9 3 9 3 / 0.10	WHITE
CL1	DEFINES EDGE OF THROUGH CARRIAGEWAY	1 3 1 3 1 3 1 3 1 3 1 / 0.15	WHITE

sharon pope

Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

1cm at full size

Certification By Dr. Michel Chaaya
B.E., M.E. (Res), Ph.D., F.I.E. Aust., CPEng.,
Civil & Structural Engineer

Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale: 0 20 40 60 m — SCALE 1:1000 @ A1

TELFORD CIVIL
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Trading As : Telford Consulting Pty Ltd

Project: PROPOSED RESIDENTIAL SUBDIVISION ALMOND STREET, DENMAN CIVIL ENGINEERING PLANS VOLUNTARY PLANNING AGREEMENT

Drawing Title: SIGNAGE AND LINEMARKING PLAN

Scale A1	Project No.	Dwg. No.	Issue
1:1000	22048	700	A

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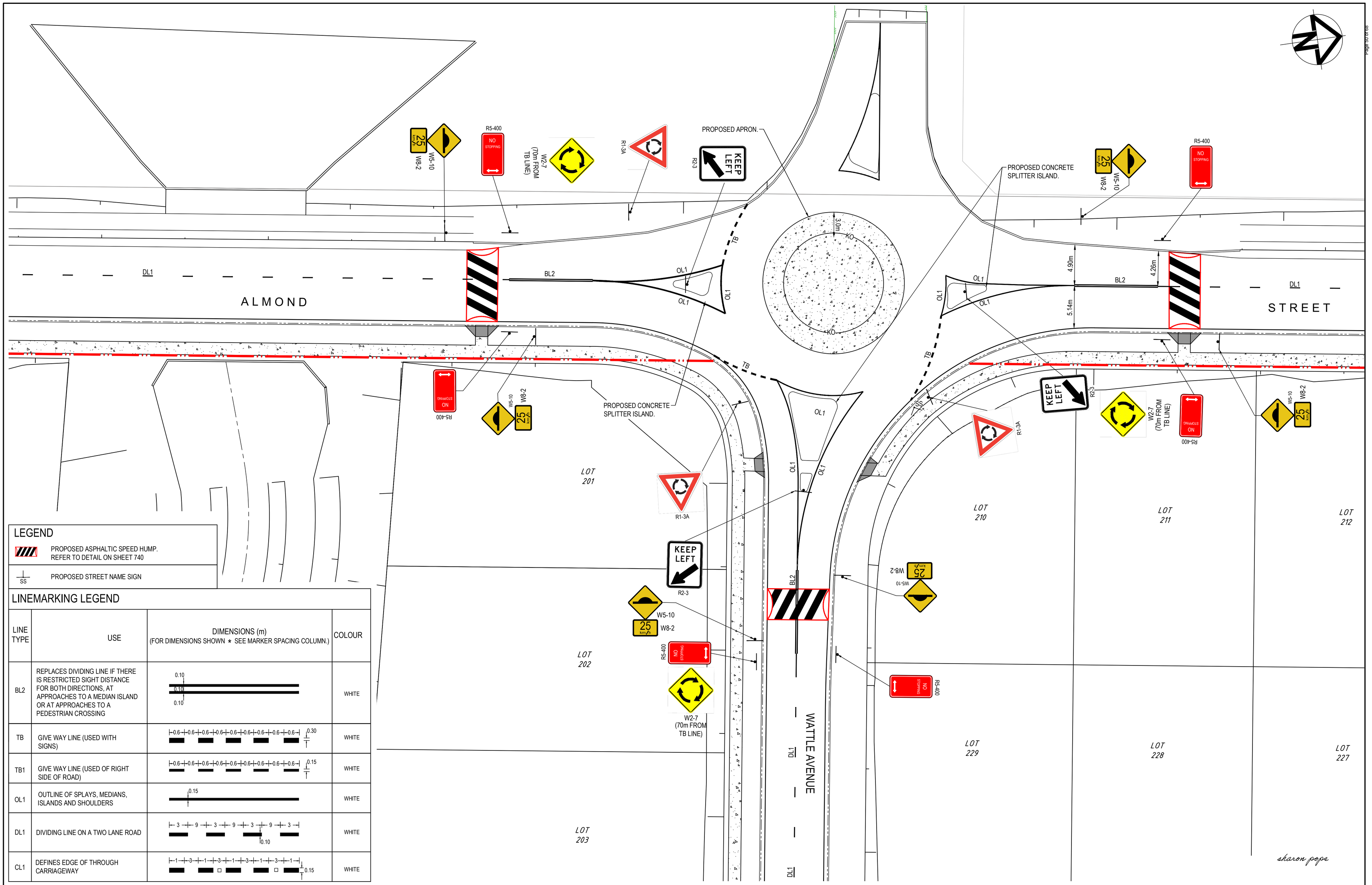

LEGEND

▨	PROPOSED ASPHALTIC SPEED HUMP. REFER TO DETAIL ON SHEET 740
SS	PROPOSED STREET NAME SIGN

LINEMARKING LEGEND

LINE TYPE	USE	DIMENSIONS (m) (FOR DIMENSIONS SHOWN * SEE MARKER SPACING COLUMN.)	COLOUR
BL2	REPLACES DIVIDING LINE IF THERE IS RESTRICTED SIGHT DISTANCE FOR BOTH DIRECTIONS, AT APPROACHES TO A MEDIAN ISLAND OR AT APPROACHES TO A PEDESTRIAN CROSSING	0.10 / 0.10 / 0.10	WHITE
TB	GIVE WAY LINE (USED WITH SIGNS)	0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 — 0.30	WHITE
TB1	GIVE WAY LINE (USED OF RIGHT SIDE OF ROAD)	0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 — 0.15	WHITE
OL1	OUTLINE OF SPLAYS, MEDIANS, ISLANDS AND SHOULDERS	0.15	WHITE
DL1	DIVIDING LINE ON A TWO LANE ROAD	3 9 3 9 3 9 3 — 0.10	WHITE
CL1	DEFINES EDGE OF THROUGH CARRIAGEWAY	1 3 1 3 1 3 1 3 1 — 0.15	WHITE

Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

1cm at full size — 10cm — 20cm

Certification By Dr. Michel Chaaya
B.E., M.E. (Res), Ph.D., F.I.E. Aust., CPEng.,
Civil & Structural Engineer

Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale: 0 20 40 60 80 m — SCALE 1:1500 @ A1

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Project: PROPOSED RESIDENTIAL SUBDIVISION ALMOND STREET, DENMAN CIVIL ENGINEERING PLANS VOLUNTARY PLANNING AGREEMENT

Drawing Title: SIGNAGE AND LINEMARKING PLAN SHEET 2

Scale A1	Project No.	Dwg. No.	Issue
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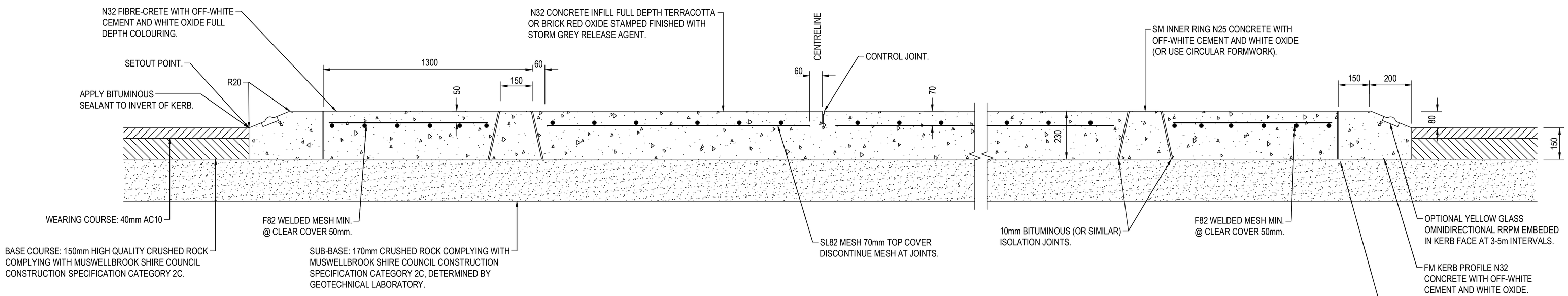
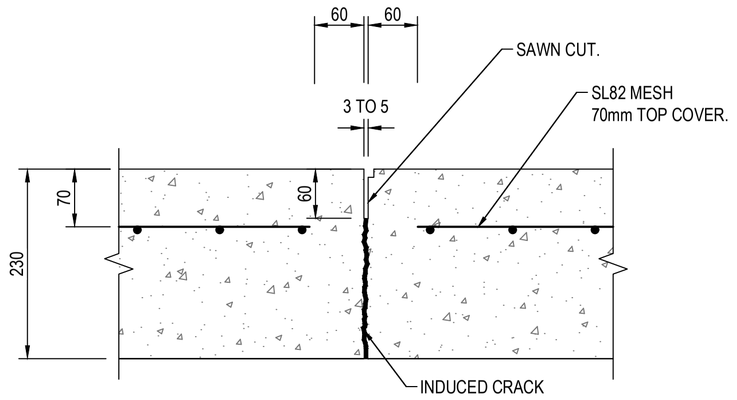


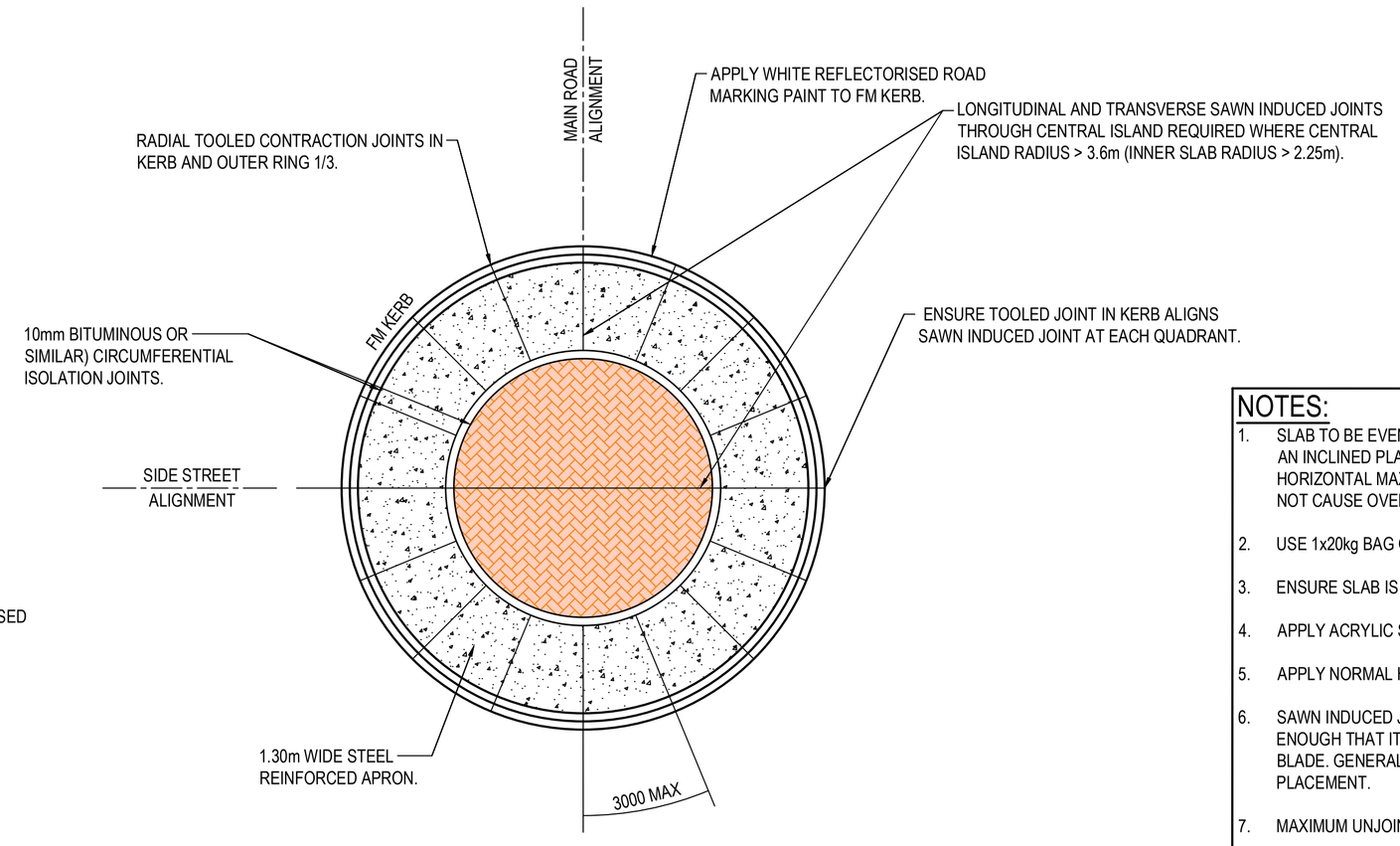
FULLY MOUNTABLE ROUNDABOUT - CONCRETE CENTRAL ISLAND DETAIL

SCALE N.T.S.



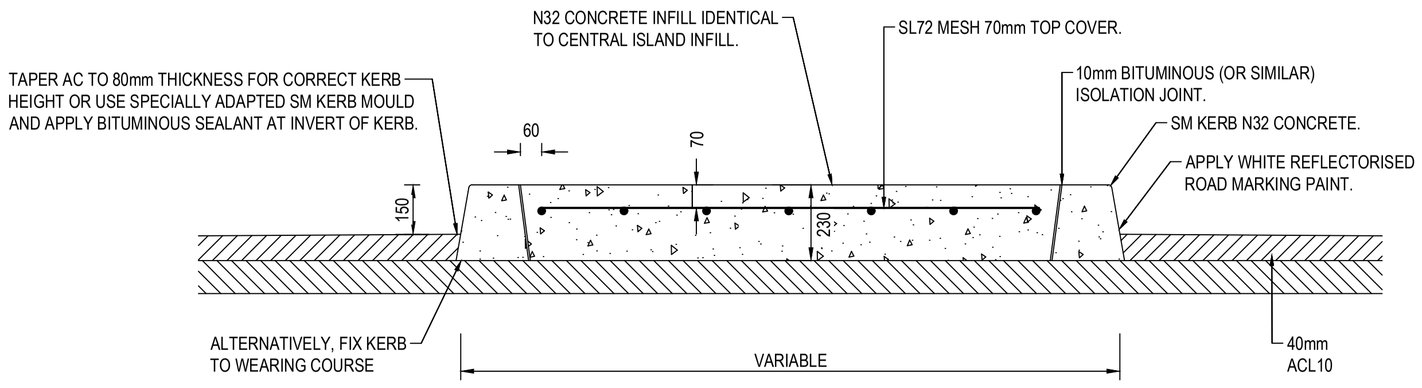
CONTROL JOINT

SCALE N.T.S.



JOINT DIAGRAM

SCALE N.T.S.



TYPICAL PEDESTRIAN REFUGE ISLAND ON BASE COURSE DETAIL

SCALE N.T.S.

NOTES:

1. SLAB TO BE EVEN GRADE ACROSS CENTRAL ISLAND (PREFERABLY ON AN INCLINED PLANE). DOME TO CENTRE ONLY WHEN SLAB IS HORIZONTAL MAX 1% GRADE. ENSURE CENTRAL ISLAND HEIGHT WILL NOT CAUSE OVERTRACKING BUSES TO GROUND.
2. USE 1x20kg BAG OF OXIDE COLOURING FOR EACH $1m^3$ OF CONCRETE.
3. ENSURE SLAB IS SUFFICIENTLY COMPACTED BY IMMERSION VIBRATOR.
4. APPLY ACRYLIC SAME-DAY-SEALER AS SOON AS CONCRETE HAS SET.
5. APPLY NORMAL HARDSEAL AFTER CONCRETE HAS HARDENED.
6. SAWN INDUCED JOINTS SHOULD BE CUT AS SOON AS SURFACE IS HARD ENOUGH THAT IT WILL NOT CHIP, SPALL AND COLLAPSE ON THE CUTTING BLADE. GENERALLY, THIS SHOULD BE WITHIN 24 HOURS OF CONCRETE PLACEMENT.
7. MAXIMUM UNJOINTED SLAB DIMENSION TO BE 4.5m.
8. PREVENT VEHICULAR OVERRUN OF CENTRAL ISLAND FOR AT LEAST 7 DAYS.
9. SLAB SURFACE SHOULD BE RESEALED EVERY 1 TO 2 YEARS.
10. ENSURE COMPACTED AC WEARING COURSE MATCHES THE FM KERB INVERT LEVEL (SETOUT POINT) FOR AN ISLAND HEIGHT OF 80mm (ESSENTIAL).

TRAFFICE MANAGEMENT SERIES FULLY MOUNTABLE ROUNDABOUT

SCALE N.T.S.

sharon pope

Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

1cm at full size (0 – 10cm – 20cm)

Certification By Dr. Michel Chaaya B.E., M.E. (Res), Ph.D., F.I.E. Aust., CPEng., Civil & Structural Engineer

Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale:

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Trading As : Telford Consulting Pty Ltd

Project: PROPOSED RESIDENTIAL SUBDIVISION ALMOND STREET, DENMAN CIVIL ENGINEERING PLANS VOLUNTARY PLANNING AGREEMENT

Drawing Title: ROUNDABOUT DETAILS

Scale A1	Project No.	Dwg. No.	Issue
N.T.S.	22048	703	A

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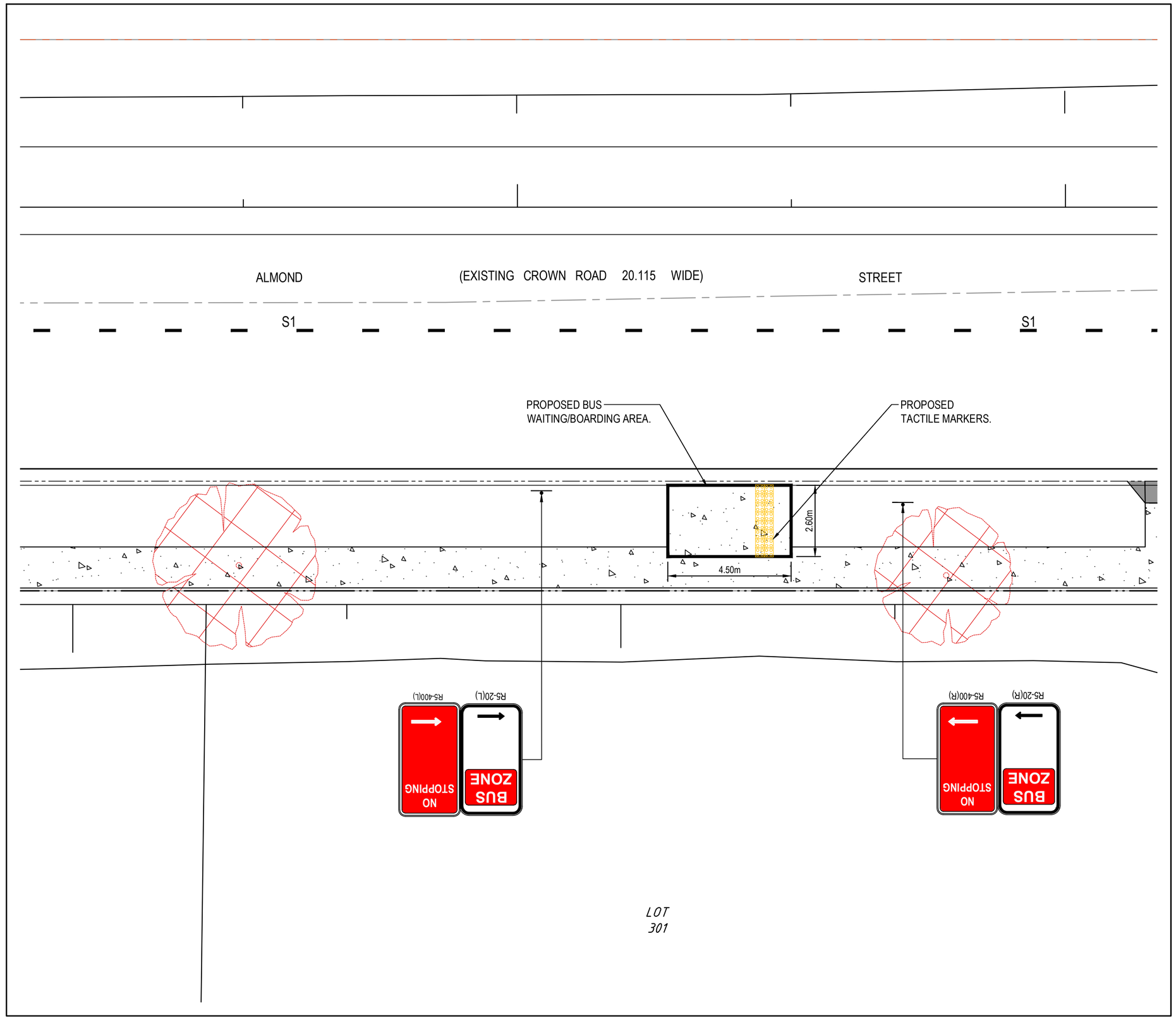
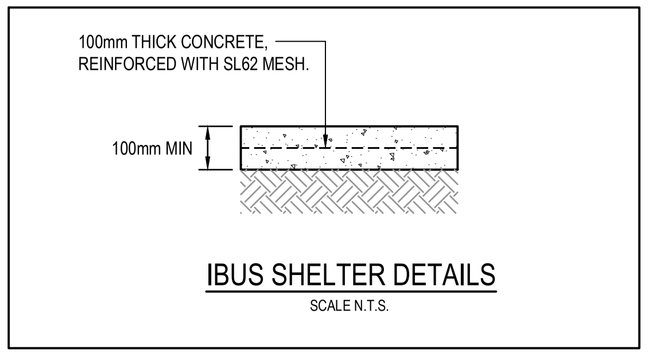


BUS SHELTER PLAN

SCALE 1:100



IBUS SHELTER DETAILS

SCALE N.T.S.

sharon pope

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Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

0 1cm at full size 10cm 20cm

Certification By Dr. Michel Chaaya
B.E., M.E. (Res), Ph.D., F.I.E. Aust., CPEng.,
Civil & Structural Engineer

Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale: 0 2 4 6 m — SCALE 1:100 @ A1

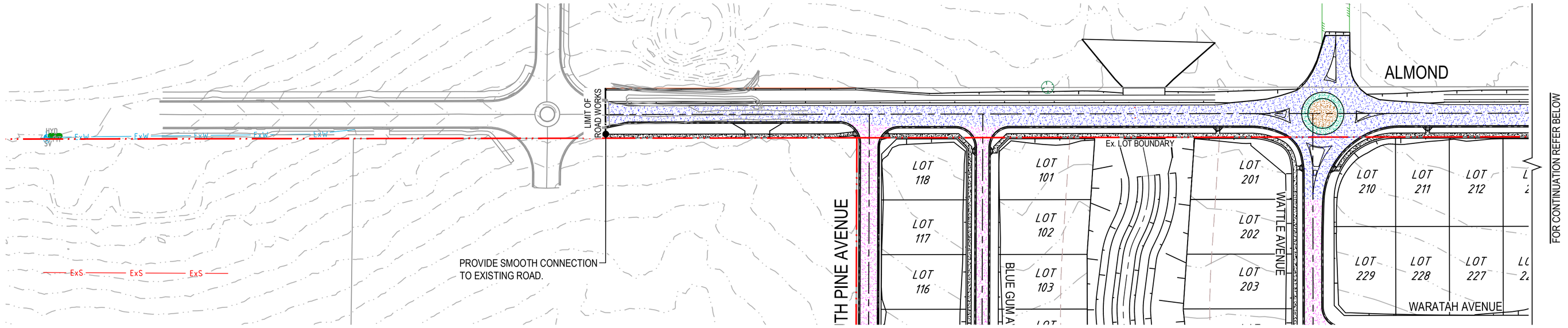
TELFORD CIVIL
CONSULTING CIVIL & STORMWATER ENGINEERS
Level 14, 32 Smith Street, Parramatta NSW 2150
PO BOX 3579 Parramatta 2124
Email : info@telfordcivil.com.au
Phone : 02 7809 4931
Trading As : Telford Consulting Pty Ltd

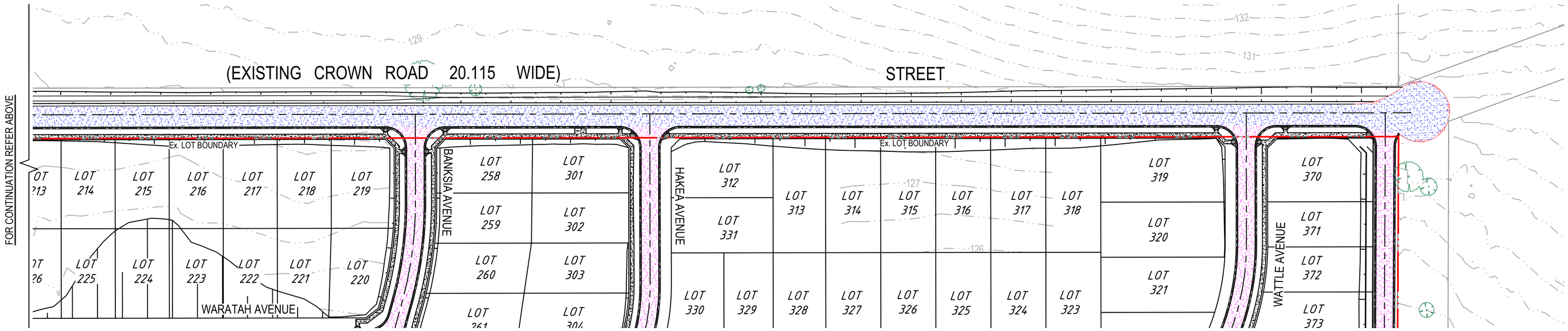
Project: PROPOSED RESIDENTIAL SUBDIVISION
ALMOND STREET, DENMAN
CIVIL ENGINEERING PLANS
VOLUNTARY PLANNING AGREEMENT

Drawing Title: BUS SHELTER PLAN

Scale A1	Project No.	Dwg. No.	Issue
1:100	22048	705	A

Docusign Envelope ID: 46B645CE-3355-8491-8275-07B84B8E4346





PAVEMENT DETAILS LEGEND

PROPOSED LOCAL STREET PAVEMENT

WEARING COURSE:	30mm AC10
SEAL:	10mm OR 7mm PRIMER SEAL
BASE COURSE:	150mm HIGH QUALITY CRUSHED ROCK COMPLYING WITH MUSWELLBROOK SHIRE COUNCIL CONSTRUCTION SPECIFICATION CATEGORY 2C.
SUBBASE COURSE:	130mm CRUSHED ROCK COMPLYING WITH MUSWELLBROOK SHIRE COUNCIL CONSTRUCTION SPECIFICATION CATEGORY 2C.
CBR:	MIN 6%
ALLOWABLE DESA:	3×10^5

PROPOSED COLLECTOR STREET PAVEMENT

WEARING COURSE:	40mm AC10
SEAL:	10mm OR 7mm PRIMER SEAL
BASE COURSE:	150mm HIGH QUALITY CRUSHED ROCK COMPLYING WITH MUSWELLBROOK SHIRE COUNCIL CONSTRUCTION SPECIFICATION CATEGORY 2C.
SUBBASE COURSE:	170mm CRUSHED ROCK COMPLYING WITH MUSWELLBROOK SHIRE COUNCIL CONSTRUCTION SPECIFICATION CATEGORY 2C.
CBR:	MIN 6%
ALLOWABLE DESA:	1×10^6

FOOTPATH (1.5m): 100mm THICK CONCRETE, REINFORCED WITH SL62 MESH.

TEMPORARY BASIN MAINTENANCE ACCESS (3m): MIN THICKNESS: 200mm
ROCK SIZE (Avoid 75-100mm) : 50-75mm, or 100-150mm

GEOTEXTILE FABRIC:
HEAVY-DUTY, NON-WOVEN FILTER CLOTH ('BIDIM' A 24 OR EQUIVALENT).

PRAM RAMP
PLAY GREY BROOM FINISH

1m WIDE STEEL REINFORCED APRON.

N32 FIBRE-CRETE WITH OFF-WHITE CEMENT AND WHITE OXIDE FULL DEPTH COLOURING.

F82 WELDED MESH MIN. @ CLEAR COVER 50mm.

N32 CONCRETE INFILL FULL DEPTH TERRACOTTA OR BRICK RED OXIDE STAMPED FINISHED WITH STORM GREY RELEASE AGENT.

SL82 MESH 70mm TOP COVER DISCONTINUE MESH AT JOINTS.

NOTE: PAVEMENT TO BE IN ACCORDANCE WITH THE GEOTECHNICAL PAVEMENT INVESTIGATION REPORT PREPARED BY "EP RISK", REF "EP2517.001", DATED 25 FEBRUARY 2022.

NOTES:

- IN CASE THE DSL IS AT THE EXTREMELY WEATHERED (XW) BEDROCK, A PAVEMENT DESIGN WITH AN ASSUMED CBR OF 8% IS PROVIDED AS AN OPTION 2 AS SHOWN BELOW .

PROPOSED LOCAL STREET PAVEMENT

WEARING COURSE:	30mm AC10
SEAL:	10mm OR 7mm PRIMER SEAL
BASE COURSE:	150mm HIGH QUALITY CRUSHED ROCK COMPLYING WITH MUSWELLBROOK SHIRE COUNCIL CONSTRUCTION SPECIFICATION CATEGORY 2C.
SUBBASE COURSE:	100mm CRUSHED ROCK COMPLYING WITH MUSWELLBROOK SHIRE COUNCIL CONSTRUCTION SPECIFICATION CATEGORY 2C.
CBR:	≥ 8%
ALLOWABLE DESA:	3×10^5

PROPOSED COLLECTOR STREET PAVEMENT

WEARING COURSE:	40mm AC10
SEAL:	10mm OR 7mm PRIMER SEAL
BASE COURSE:	150mm HIGH QUALITY CRUSHED ROCK COMPLYING WITH MUSWELLBROOK SHIRE COUNCIL CONSTRUCTION SPECIFICATION CATEGORY 2C.
SUBBASE COURSE:	135mm CRUSHED ROCK COMPLYING WITH MUSWELLBROOK SHIRE COUNCIL CONSTRUCTION SPECIFICATION CATEGORY 2C.
CBR:	≥ 8%
ALLOWABLE DESA:	1×10^6

sharon pope

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Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

1cm at full size

Certification By Dr. Michel Chaaya
B.E., M.E. (Res), Ph.D., F.I.E. Aust., CPEng.,
Civil & Structural Engineer

Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale: 0 20 40 60 80 m — SCALE 1:1500 @ A1

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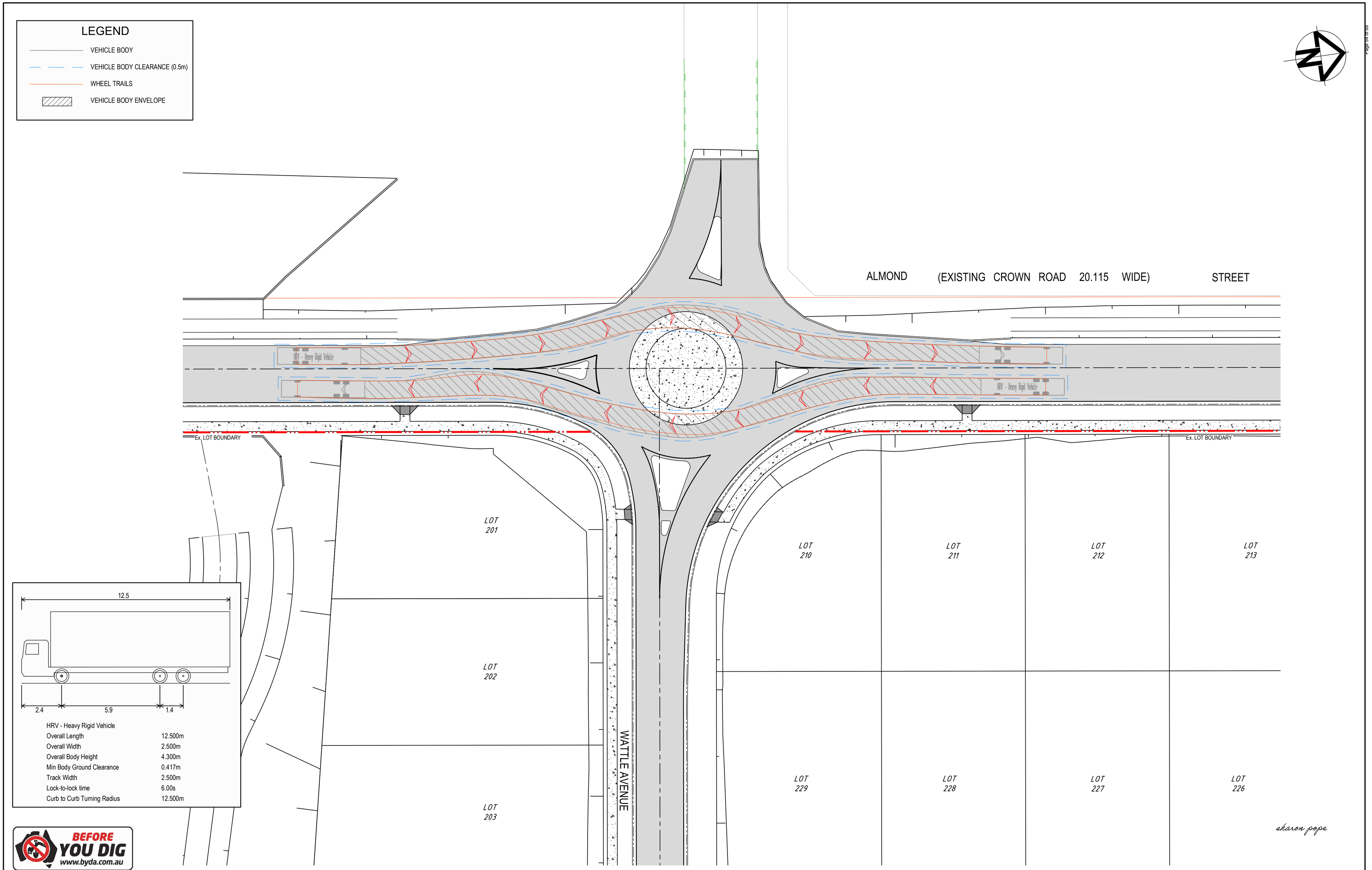
Project: PROPOSED RESIDENTIAL SUBDIVISION
ALMOND STREET, DENMAN
CIVIL ENGINEERING PLANS
VOLUNTARY PLANNING AGREEMENT

Drawing Title: PAVEMENT PLAN

Scale A1	Project No.	Dwg. No.	Issue
1:1500	22048	710	A

Docusign Envelope ID: 46B645CE-3355-8491-8275-07B848BE4346



Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

0 1cm at full size 10cm 20cm

Certification By Dr. Michel Chaaya
B.E., M.E. (Res), Ph.D., F.I.E. Aust., CPEng.,
Civil & Structural Engineer

Client
CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council
muswellbrook shire council

Scale
0 2 4 6 8 10 12 m
SCALE 1:250 @ A1

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Project
PROPOSED RESIDENTIAL SUBDIVISION
ALMOND STREET, DENMAN
CIVIL ENGINEERING PLANS
VOLUNTARY PLANNING AGREEMENT

Drawing Title
SWEPT PATH PLAN
SHEET 1

Scale	A1	Project No.	Dwg. No.	Issue
1:250		22048	720	A

Docusign Envelope ID: 46B64C5E-3355-8491-8275-07B84B8E4346

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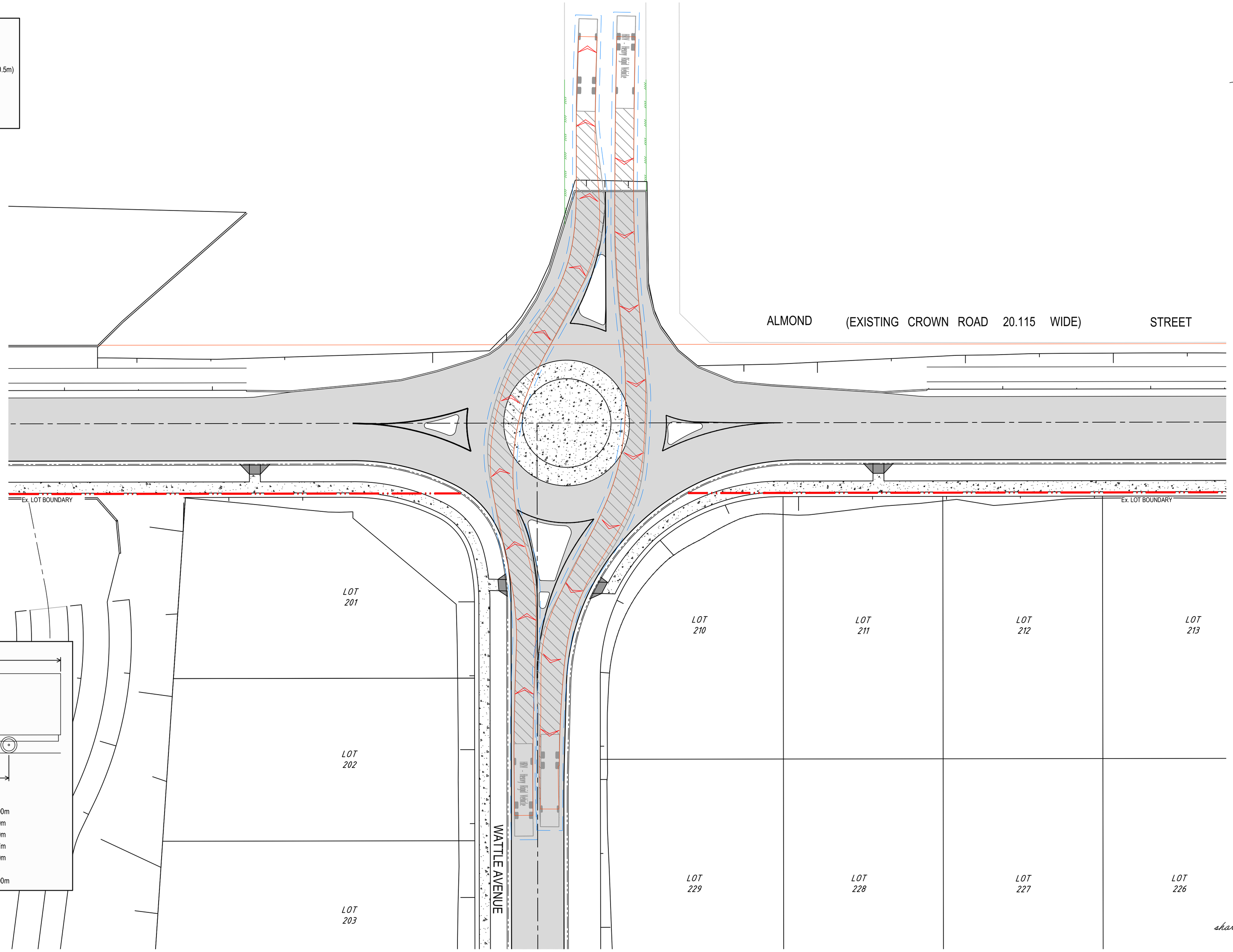
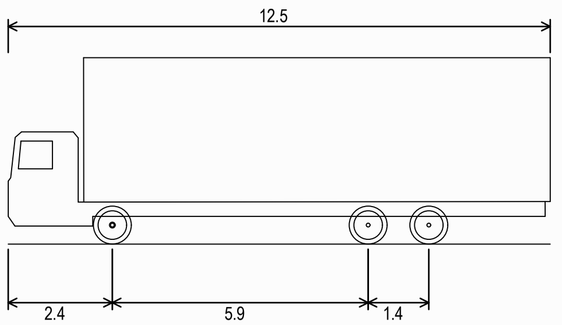


LEGEND

- VEHICLE BODY
- VEHICLE BODY CLEARANCE (0.5m)
- WHEEL TRAILS
- VEHICLE BODY ENVELOPE



HRV - Heavy Rigid Vehicle	
Overall Length	12.500m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.417m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m

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Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

1cm at full size 10cm 20cm

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Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale: 0 2 4 6 8 10 12 m — SCALE 1:250 @ A1

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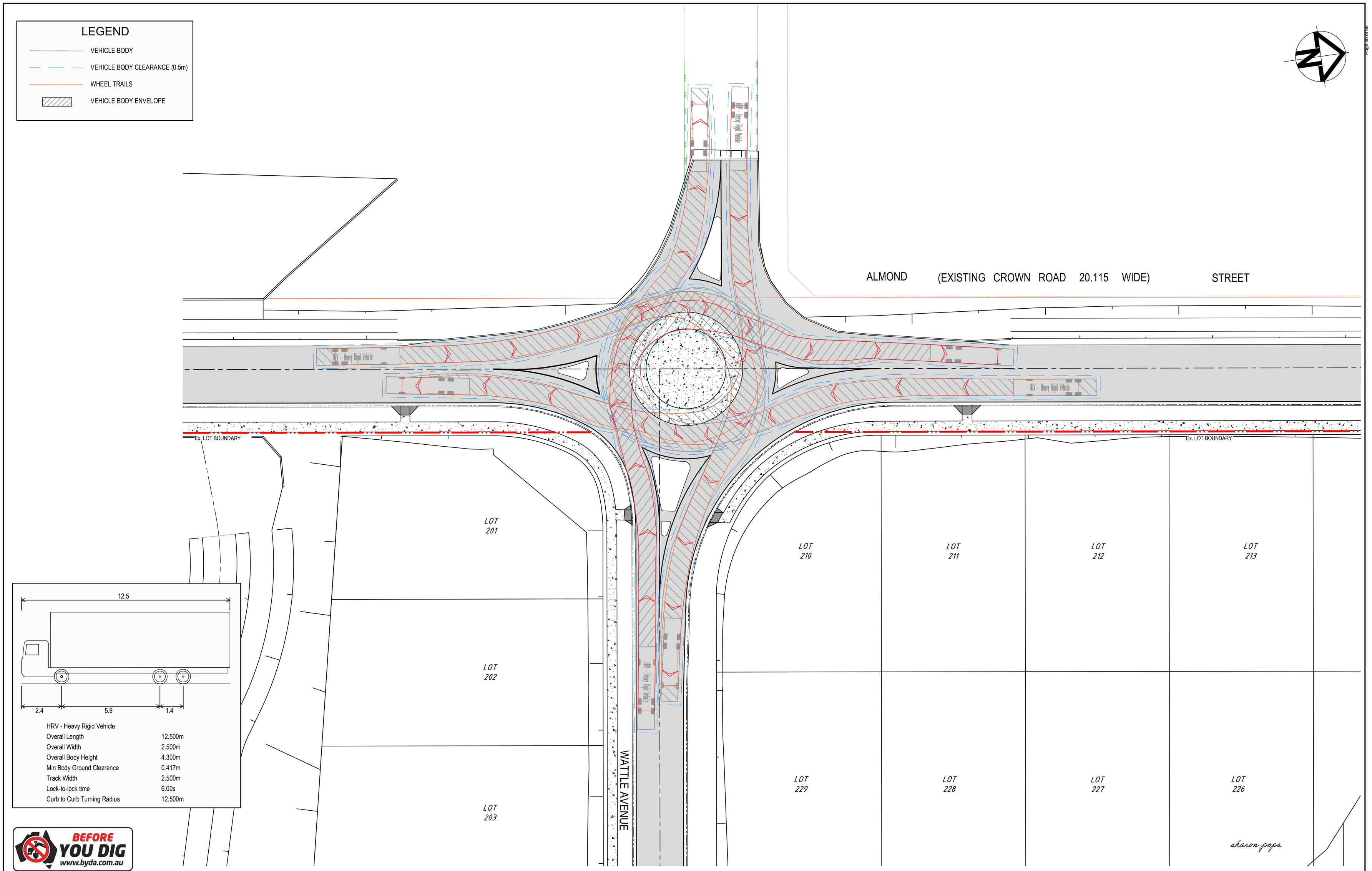
CIVIL ENGINEERING PLANS
VOLUNTARY PLANNING AGREEMENT

Drawing Title: SWEPT PATH PLAN
SHEET 2

Scale A1	Project No.	Dwg. No.	Issue
1:250	22048	721	A

Page 55 of 68
Docusign Envelope ID: 468845CE-3355-8491-8275-0708B4B8E4346



Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

1cm at full size 10cm 20cm

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Client
CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council
muswellbrook shire council

Scale
0 2 4 6 8 10 12 m
SCALE 1:250 @ A1

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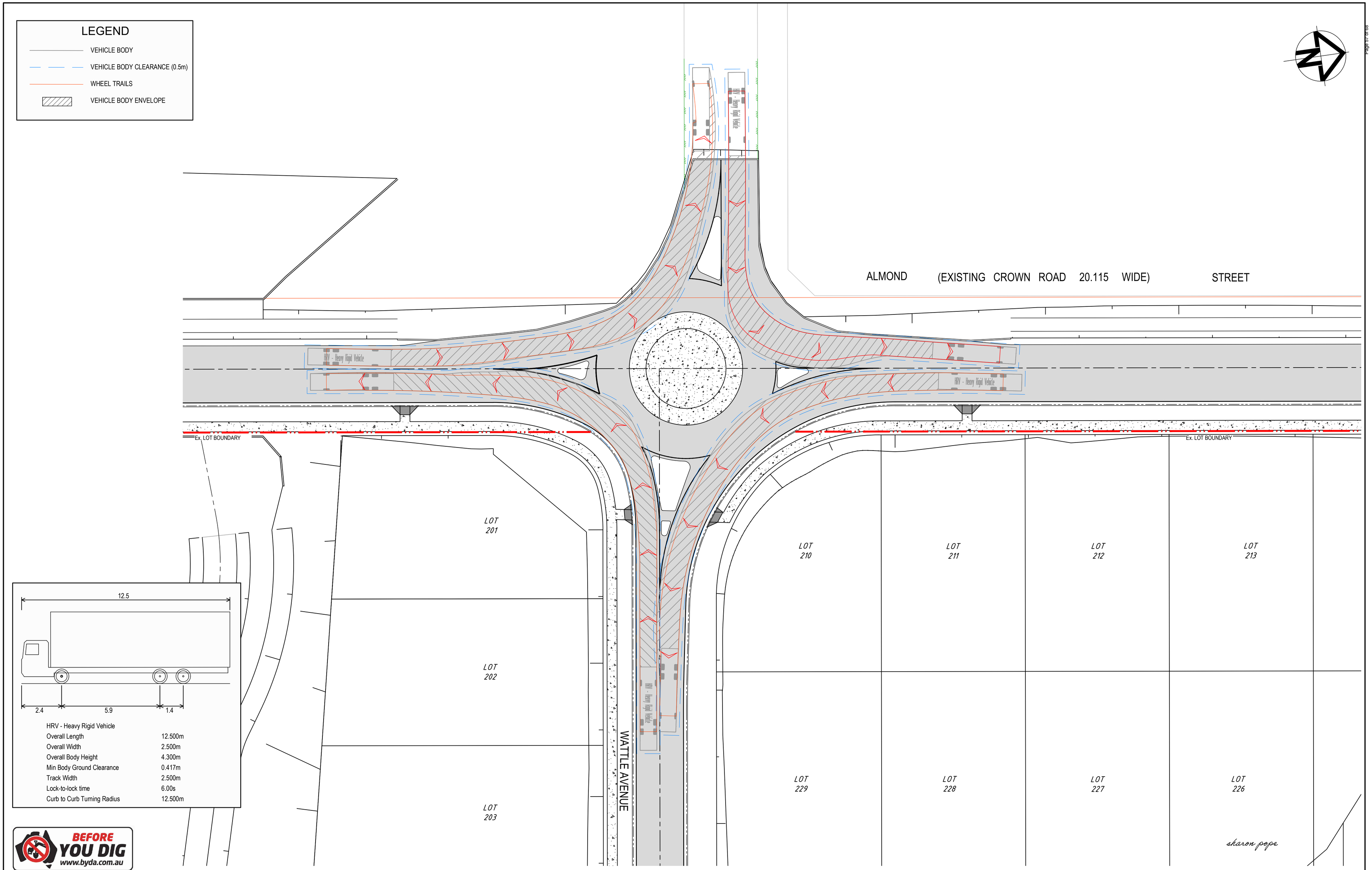
Project
PROPOSED RESIDENTIAL SUBDIVISION
ALMOND STREET, DENMAN
CIVIL ENGINEERING PLANS
VOLUNTARY PLANNING AGREEMENT

Drawing Title
SWEPT PATH PLAN
SHEET 3

Scale A1	Project No.	Dwg. No.	Issue
1:250	22048	722	A

Page 35 of 68
Docusign Envelope ID: 46B64CCE-3355-8491-8275-07B4B8E5A346



Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

1cm at full size

Certification By Dr. Michel Chaaya
B.E., M.E. (Res), Ph.D., F.I.E. Aust., CPEng.,
Civil & Structural Engineer

Client
CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council
muswellbrook shire council

Scale
0 2 4 6 8 10 12 m
SCALE 1:250 @ A1

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Project
PROPOSED RESIDENTIAL SUBDIVISION
ALMOND STREET, DENMAN
CIVIL ENGINEERING PLANS
VOLUNTARY PLANNING AGREEMENT

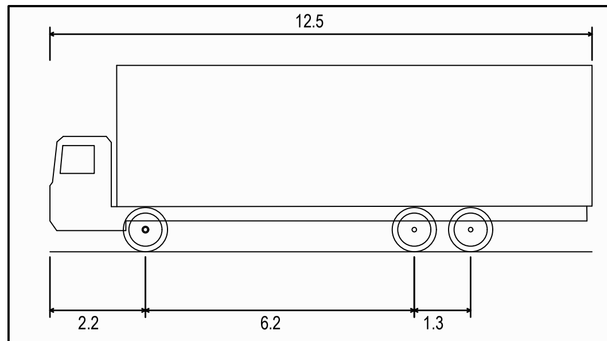
Drawing Title
SWEPT PATH PLAN
SHEET 4

Scale	Project No.	Dwg. No.	Issue
1:250 A1	22048	723	A

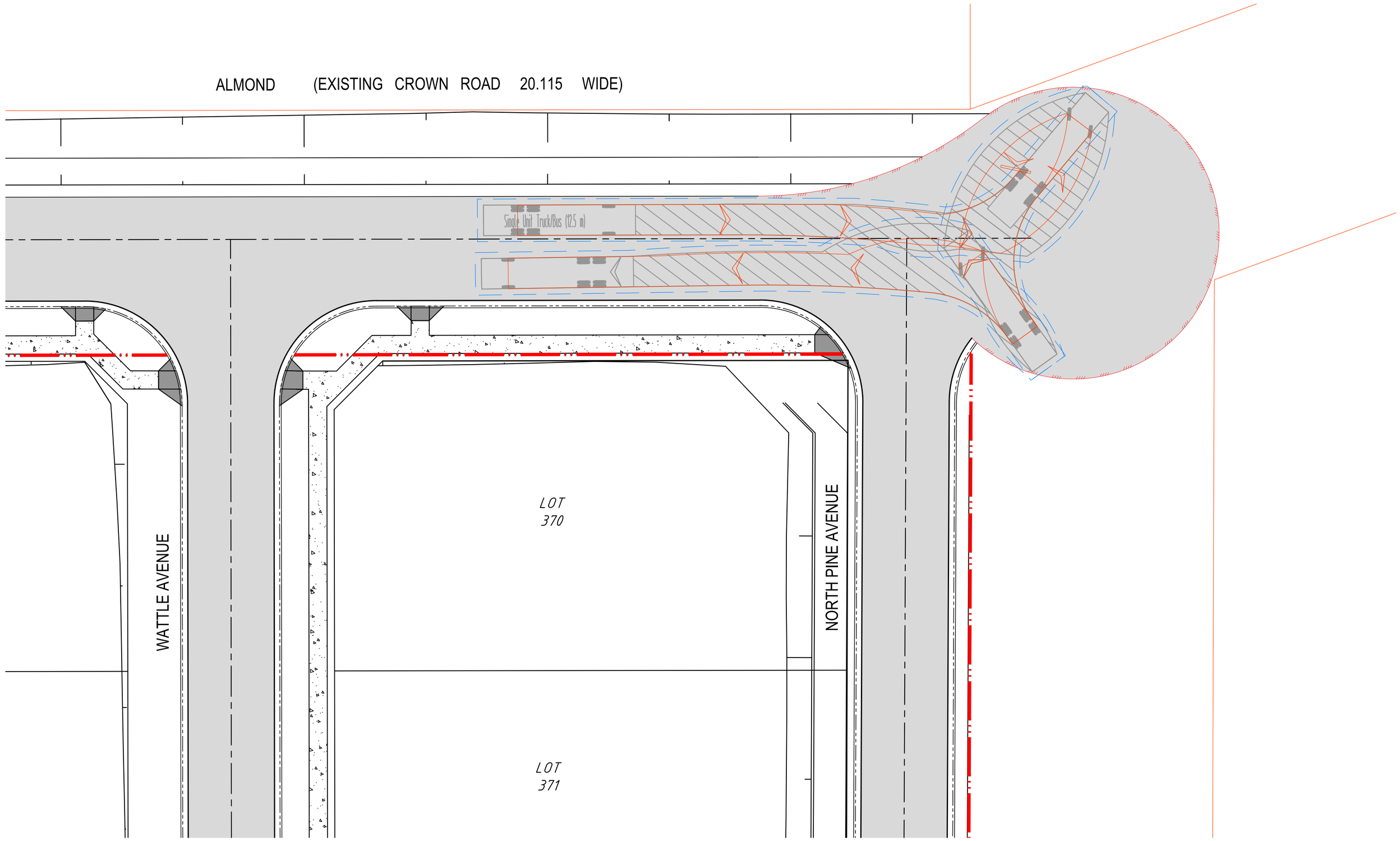
Docusign Envelope ID: 46B64CCE-3355-8491-8275-07B84B8E4346

LEGEND

- VEHICLE BODY
- VEHICLE BODY CLEARANCE (0.5m)
- WHEEL TRAILS
- VEHICLE BODY ENVELOPE



Single Unit Truck/Bus (12.5 m)	
Overall Length	12.500m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.490m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m



sharon pope

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Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

0 10m at full size 10cm 20cm

Certification By Dr. Michel Chaaya
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Civil & Structural Engineer

Client
CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council
muswellbrook shire council

Scale
0 10 20 30 m
SCALE 1:500 @ A1

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Project
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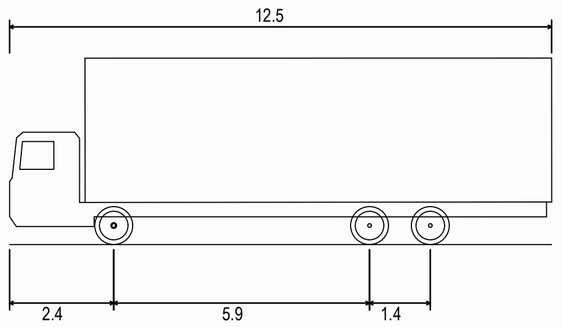
Drawing Title
SWEPT PATH PLAN
SHEET 5

Scale A1	Project No.	Dwg. No.	Issue
1:500	22048	724	A

Docusign Envelope ID: 46B645CE-3355-8491-8275-07B84B8E4346
Page 35 of 68

LEGEND

- VEHICLE BODY
- VEHICLE BODY CLEARANCE (0.5m)
- WHEEL TRAILS
- VEHICLE BODY ENVELOPE



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Overall Body Height	4.300m
Min Body Ground Clearance	0.417m
Track Width	2.500m
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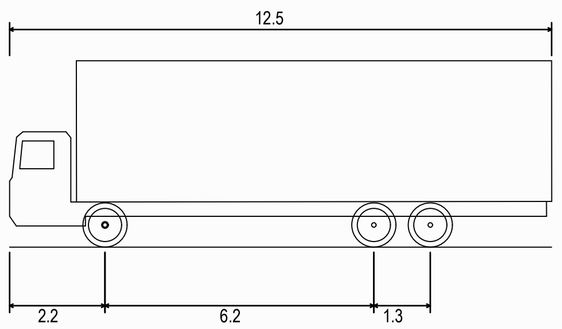
Curb to Curb Turning Radius	12.500m



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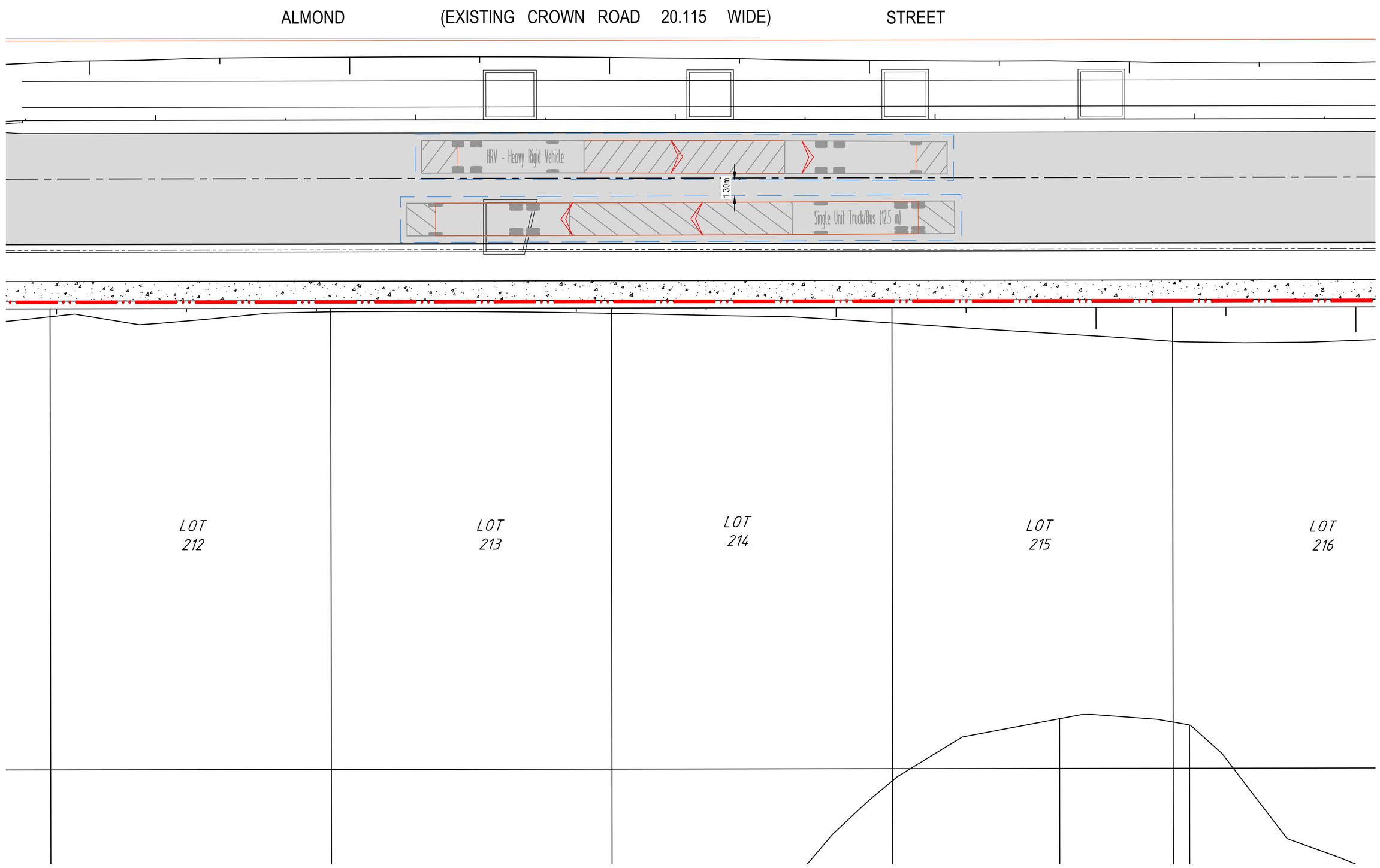
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.490m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m



sharon pope

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Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

1cm at full size 0 10cm 20cm

Certification By Dr. Michel Chaaya
B.E., M.E. (Res), Ph.D., F.I.E. Aust., CPEng.,
Civil & Structural Engineer

Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale: 0 4 8 12 m — SCALE 1:200 @ A1

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Trading As : Telford Consulting Pty Ltd

Project: PROPOSED RESIDENTIAL SUBDIVISION
ALMOND STREET, DENMAN
CIVIL ENGINEERING PLANS
VOLUNTARY PLANNING AGREEMENT

Drawing Title: SWEPT PATH PLAN
SHEET 6

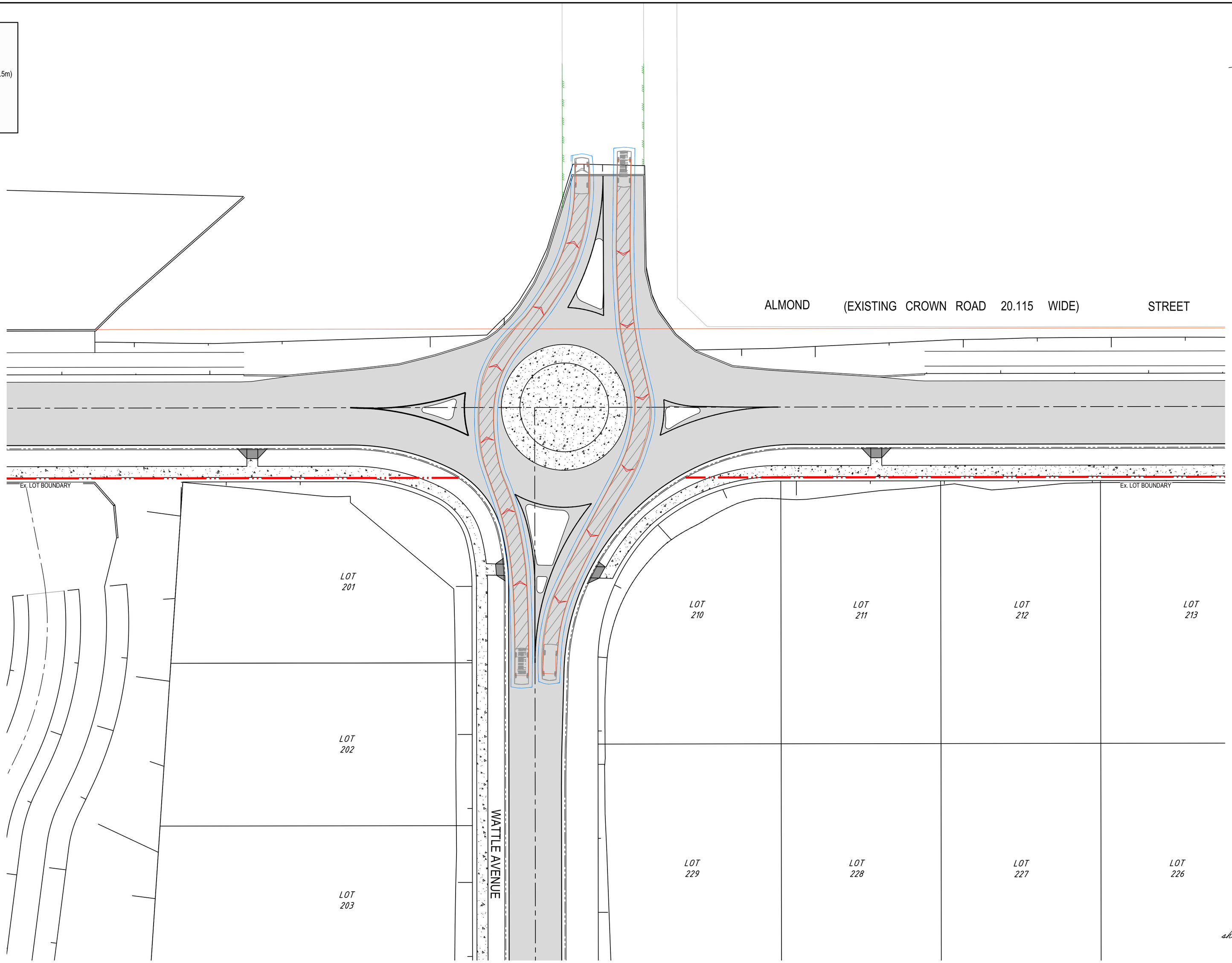
Scale A1	Project No.	Dwg. No.	Issue
1:200	22048	725	A

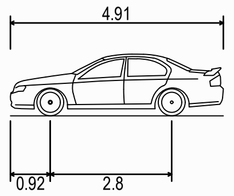
Page 7 of 89
Docusign Envelope ID: 46B945CE-3355-8491-8275-07B84B8E4346

Page 60 of 68

LEGEND

- VEHICLE BODY
- VEHICLE BODY CLEARANCE (0.5m)
- WHEEL TRAILS
- VEHICLE BODY ENVELOPE





B85 Vehicle (Realistic min radius) (2004)

Overall Length	4.910m
Overall Width	1.870m
Overall Body Height	1.421m
Min Body Ground Clearance	0.159m
Track Width	1.770m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	5.750m

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Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

0 1cm at full size 10cm 20cm

Certification By Dr. Michel Chaaya B.E., M.E. (Res), Ph.D., F.I.E. Aust., CPEng., Civil & Structural Engineer

Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale: 0 2 4 6 8 10 12 m — SCALE 1:250 @ A1

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Trading As : Telford Consulting Pty Ltd

Project: PROPOSED RESIDENTIAL SUBDIVISION ALMOND STREET, DENMAN CIVIL ENGINEERING PLANS VOLUNTARY PLANNING AGREEMENT

Drawing Title: SWEPT PATH PLAN SHEET 7

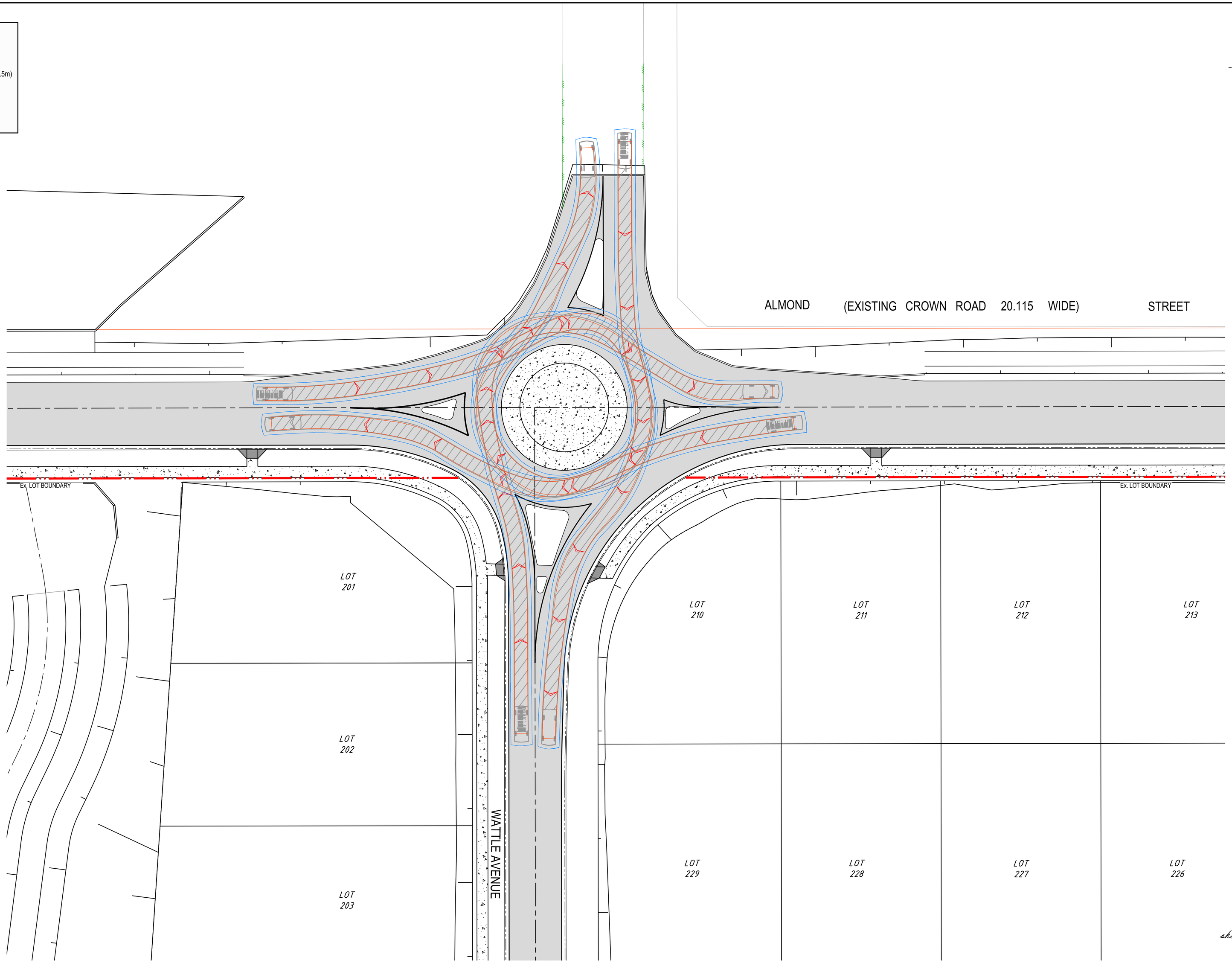
Scale	Project No.	Dwg. No.	Issue
1:250 A1	22048	726	A

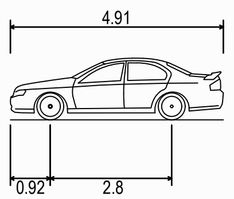
Docusign Envelope ID: 46B845CE-3355-8491-8275-0769B4B8E4346

Page 61 of 88

LEGEND

- VEHICLE BODY
- VEHICLE BODY CLEARANCE (0.5m)
- WHEEL TRAILS
- VEHICLE BODY ENVELOPE





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Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

0 1cm at full size 10cm 20cm

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Civil & Structural Engineer

Client
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Council
muswellbrook shire council

Scale
0 2 4 6 8 10 12 m
SCALE 1:250 @ A1

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Trading As : Telford Consulting Pty Ltd

Project
PROPOSED RESIDENTIAL SUBDIVISION
ALMOND STREET, DENMAN
CIVIL ENGINEERING PLANS
VOLUNTARY PLANNING AGREEMENT

Drawing Title
SWEPT PATH PLAN
SHEET 8

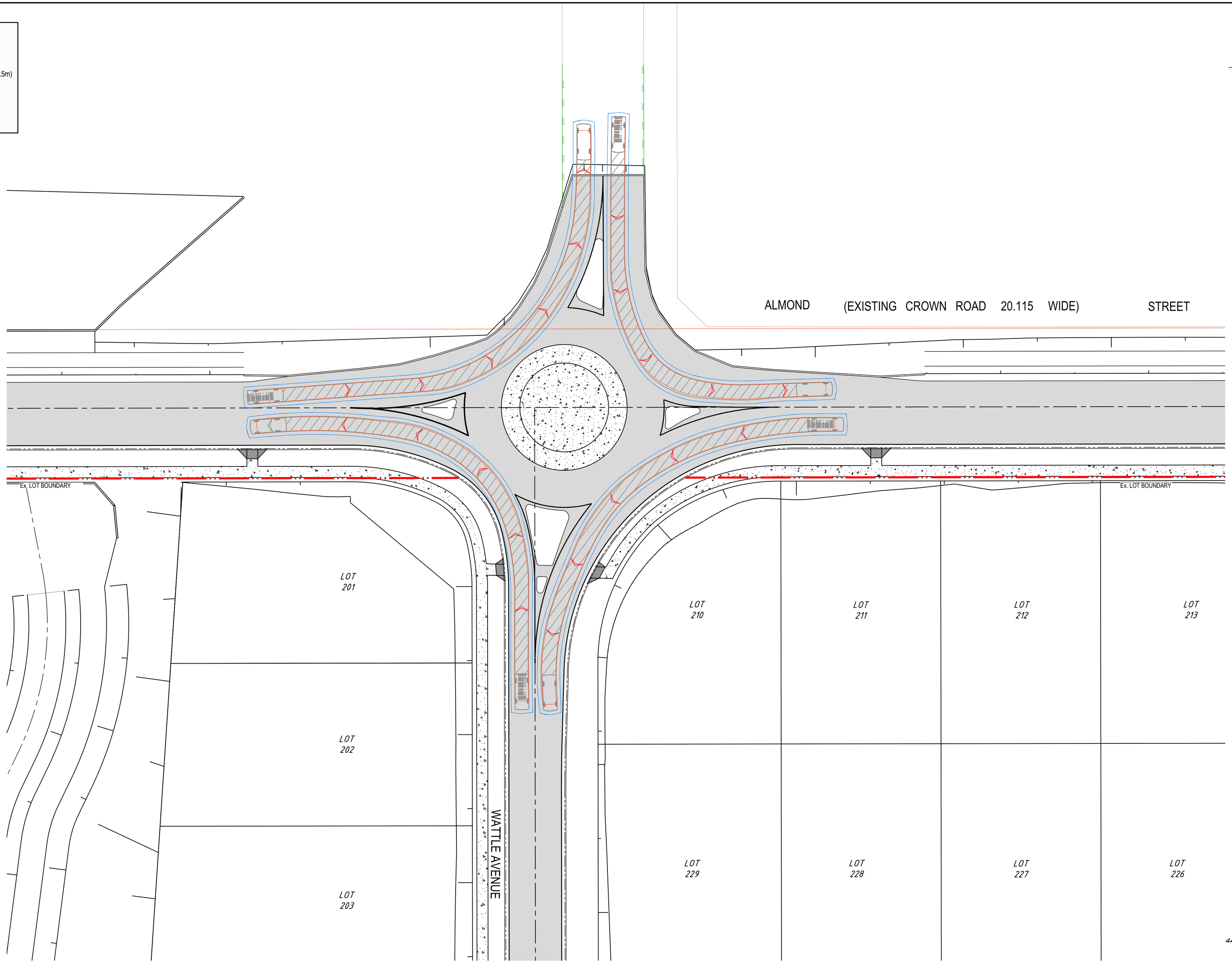
Scale A1	Project No.	Dwg. No.	Issue
1:250	22048	727	A

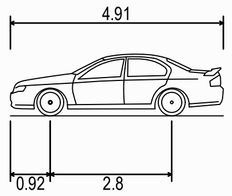
Docusign Envelope ID: 46B645CE-3355-8491-8275-0768485BE4346

Page 52 of 88

LEGEND

- VEHICLE BODY
- VEHICLE BODY CLEARANCE (0.5m)
- WHEEL TRAILS
- VEHICLE BODY ENVELOPE





B85 Vehicle (Realistic min radius) (2004)

Overall Length	4.910m
Overall Width	1.870m
Overall Body Height	1.421m
Min Body Ground Clearance	0.159m
Track Width	1.770m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	5.750m

BEFORE YOU DIG
www.byda.com.au
Zero Damage - Zero Harm

Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

0 1cm at full size 10cm 20cm

Certification By Dr. Michel Chaaya B.E., M.E. (Res), Ph.D., F.I.E. Aust., CPEng., Civil & Structural Engineer

Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale: 0 2 4 6 8 10 12 m — SCALE 1:250 @ A1

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Project: PROPOSED RESIDENTIAL SUBDIVISION ALMOND STREET, DENMAN CIVIL ENGINEERING PLANS VOLUNTARY PLANNING AGREEMENT

Drawing Title: SWEPT PATH PLAN SHEET 9

Scale	A1	Project No.	Dwg. No.	Issue
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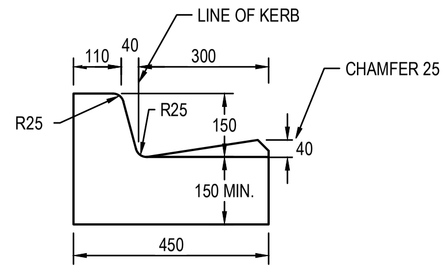
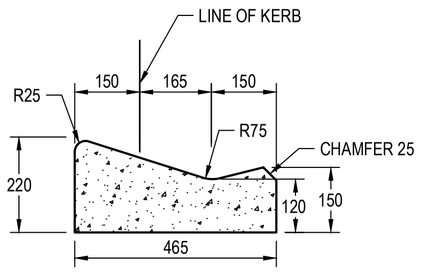


STANDARD KERB & CHANNEL
SCALE N.T.S.



LAYBACK KERB & CHANNEL
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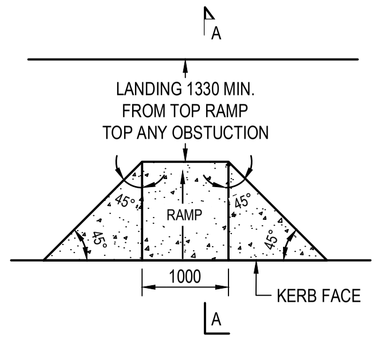
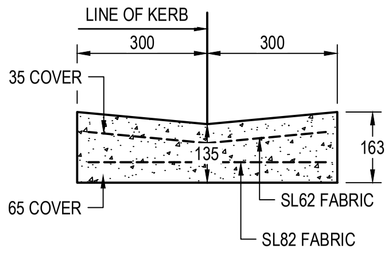
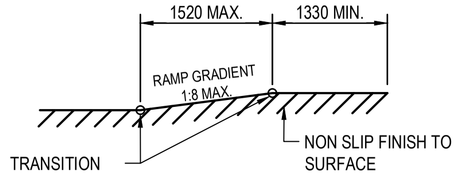


PRAM RAMP PLAN
SCALE N.T.S.

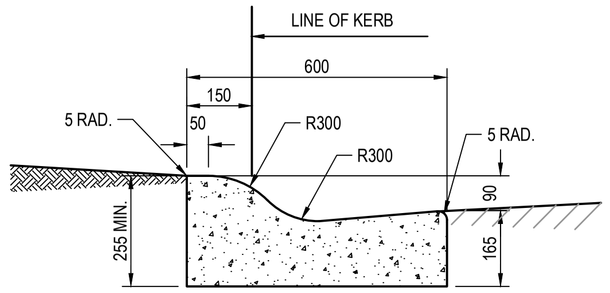


DISH CROSSING
SCALE N.T.S.

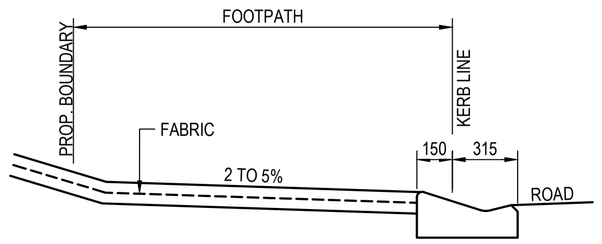


PRAM RAMP - SECTION A-A
SCALE N.T.S.

KERB AND GUTTER STANDARDS
SCALE N.T.S.



ROLLER KERB
SCALE N.T.S.



SECTION
CONCRETE VEHICULAR DRIVEWAY
SCALE N.T.S.

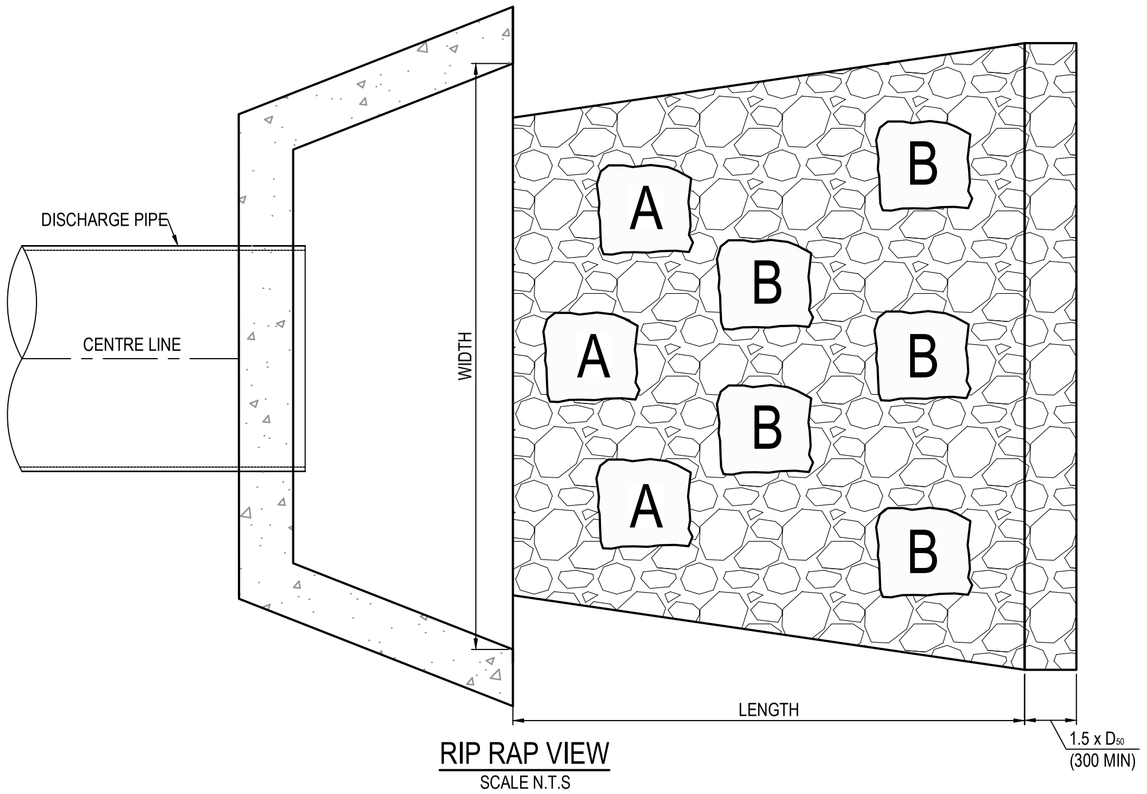
NOTES:

1. FULL ARPON TYPE DRIVEWAYS SHALL BE CONSTRUCTED FROM DRIVEWAY LAYBACK TO PROPERTY BOUNDARY.
2. A DRIVEWAY DESIGN SHOULD BE COMPLETED AS A PREREQUISITE FOR DETERMINING HOUSE/GARAGE POSITION AND FLOOR LEVELS, AND BEFORE ANY DRIVEWAY WORK IS UNDERTAKEN.
3. THE CROSS SLOPE OF THE DRIVEWAY CROSSING OVER THE FOOTWAY WITHIN 3m. OF THE KERB LINE IS TO BE THE SAME AS THE SLOPE OF THE ABUTTING KERB AND GUTTER.

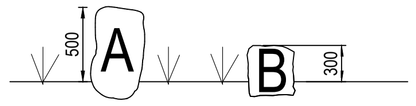
CONSTRUCTION STANDARDS: CONCRETE PAVING TO BE A MIN. OF 125mm THICK 25MPa CONCRETE REINFORCED WITH ONE LAYER OF SL62 FABRIC PLACED IN THE UPPER HALF OF THE CONCRETE (MIN. COVER 40mm).

"HEAVY DUTY" CROSSINGS TO BE A MIN. OF 175mm THICK 25MPa CONCRETE REINFORCED WITH ONE LAYER OF SL82 FABRIC PLACE IN THE UPPER HALF OF THE CONCRETE (MIN. COVER 40mm).

VEHICULAR DRIVEWAY STANDARD
SCALE N.T.S.



RIP RAP VIEW
SCALE N.T.S



RIP RAP SECTION
SCALE N.T.S

GENERAL NOTES:

1. PROVIDE ROCK-LINED ENERGY DISSIPATION APRON AT BASIN OUTLET AS SHOWN.
2. ROCK TO BE HARD, DURABLE QUARRIED ROCK, SPECIFIC GRAVITY ≥ 2.5, FREE FROM ORGANIC MATERIAL, LAMINATIONS AND WEAK OR FRIABLE PIECES.
3. ROCK GRADING:
   D_{50} = 200mm
   D_{MAX} = 300mm.
4. MINIMUM ROCK LAYER THICKNESS = 400mm. PLACE ROCK IN TWO LAYERS TO ACHIEVE A TIGHTLY INTERLOCKED SURFACE WITH MINIMAL VOIDS.
5. PLACE ROCK OVER NON-WOVEN GEOTEXTILE FILTER (CLASS A OR EQUIVALENT) EXTENDING AT LEAST 300mm BEYOND THE ROCK EDGE ON ALL SIDES.
6. APRON LENGTH L TO BE NOT LESS THAN 3.0m DOWNSTREAM OF OUTLET AND NOT LESS THAN 3 TIMES THE OUTLET WIDTH, UNLESS NOTED OTHERWISE ON PLAN.
7. APRON WIDTH W TO BE NOT LESS THAN 2 TIMES THE OUTLET WIDTH, UNLESS NOTED OTHERWISE ON PLAN.
8. EXTEND ROCK UP SIDE BATTERS TO A MINIMUM OF 300mm ABOVE DESIGN WATER LEVEL OR TO THE TOP OF BATTER, WHICHEVER IS LOWER.
9. PROTECT GEOTEXTILE FROM DAMAGE DURING ROCK PLACEMENT. REPLACE ANY DAMAGED GEOTEXTILE PRIOR TO PLACING ROCK.
10. FINAL LEVELS TO ENSURE POSITIVE DRAINAGE FROM OUTLET INTO DOWNSTREAM CHANNEL/FLOW PATH WITH NO PONDING ON APRON.

OUTLET RIP RAP SIZING

OUTLET	LENGTH	WIDTH
2/H2	5.3m	1.6m
2/H3	17.2m	1.6m
8/A1	1.5m	2.2m
9/A2	1.5m	2.4m
10/B1	1.5m	1.6m
13/B2	2.2m	2.4m
5/D1	1.7m	2.5m
19/C1	3.2m	3.5m
21/C2	3.2m	6.0m
17/C30	3.2m	5.0m
11/E1	5.3m	3.3m

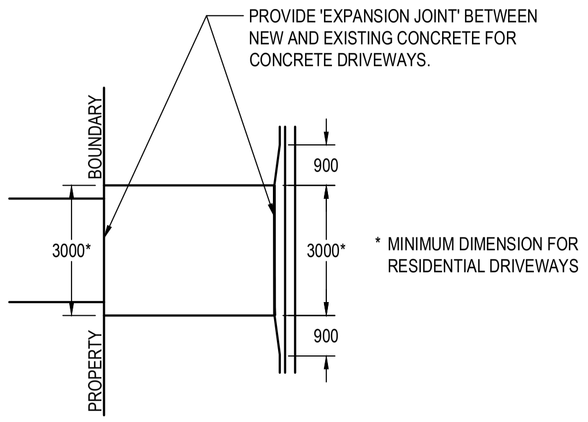
FOOTPATH CONSTRUCTION NOTES:

CONCRETE FOOTPATHS/CYCLEPATHS

STANDARD CONCRETE FOOTPATHS AND CYCLEWAYS SHALL BE A MINIMUM OF 100MM THICK, REINFORCED WITH SL62 MESH AND OTHERWISE GENERALLY IN ACCORDANCE WITH CEMENT AND CONCRETE ASSOCIATION GUIDE TO RESIDENTIAL STREETS AND PATHS.

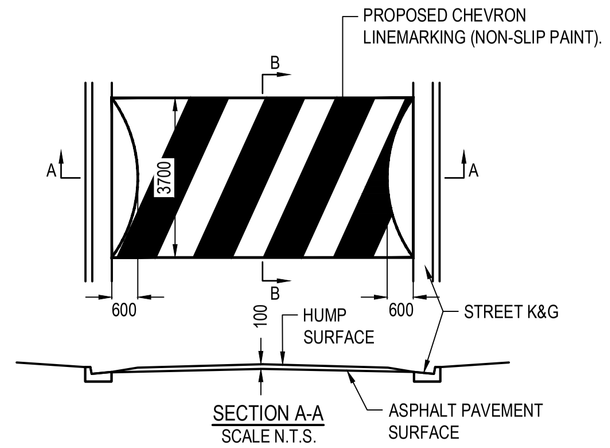
FOOTPATHS AND CYCLEPATHS ACROSS DRIVEWAYS SHALL BE STRENGTHENED FOR THE FULL WIDTH OF THE DRIVE GENERALLY IN ACCORDANCE WITH CEMENT AND CONCRETE ASSOCIATION GUIDE TO RESIDENTIAL STREETS AND PATHS.

CONCRETE SHALL BE FINISHED WITH A LIGHT BROOM FINISH.

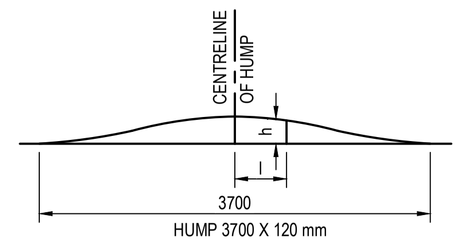


DRIVEWAY PLAN
SCALE N.T.S.

VEHICULAR DRIVEWAY STANDARD
SCALE N.T.S.



SECTION A-A
SCALE N.T.S.

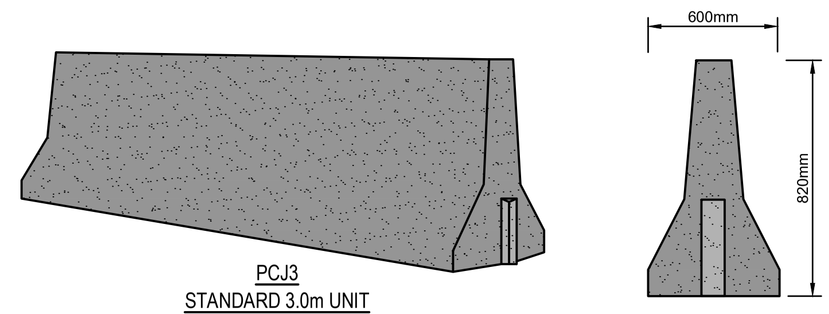


HUMP 3700 X 120 mm

l (m)	0	0.2	0.4	0.6	0.8	1.0	1.2	1.4	1.6	1.7
h (m)	120	116	104	87	66	44	24	9	1	0

SECTION B-B
SCALE N.T.S.

ASPHALT SPEED HUMP - SINUSOIDAL
SCALE N.T.S.



PCJ3
STANDARD 3.0m UNIT
N.T.S

PRODUCT TYPE	TYPE	LENGTH (mm)	WIDTH (mm)	WEIGHT (kg)
PCJ3	STANDARD UNIT	3000	600	2300

JERSEY BARRIER KERB DETAIL
N.T.S

sharon pope

Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

0 1cm at full size 10cm 20cm

Certification By Dr. Michel Chaaya
B.E., M.E. (Res), Ph.D., F.I.E. Aust., CPEng.,
Civil & Structural Engineer

Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale

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VOLUNTARY PLANNING AGREEMENT

Drawing Title: MISCELLANEOUS DETAILS
SHEET 1

Scale	Project No.	Dwg. No.	Issue
N.T.S. A1	22048	740	A

Docusign Envelope ID: 468645CE-3355-8491-8275-07B94B8E4346

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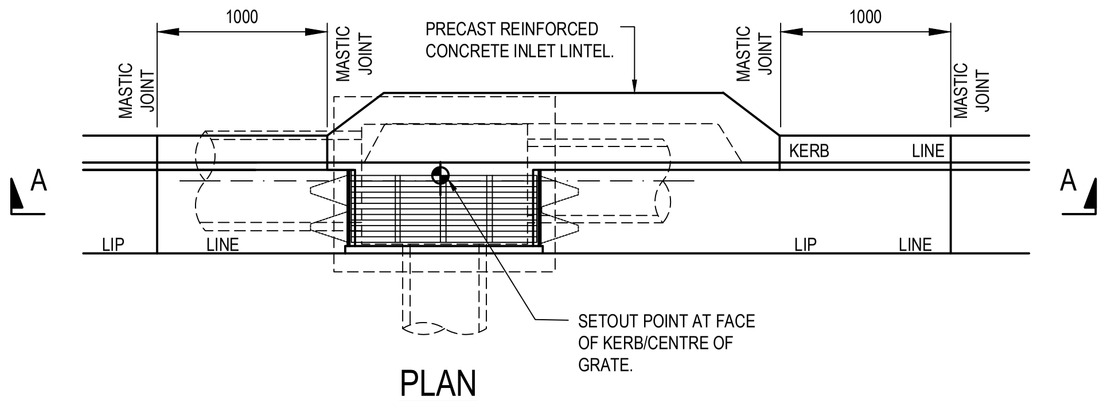


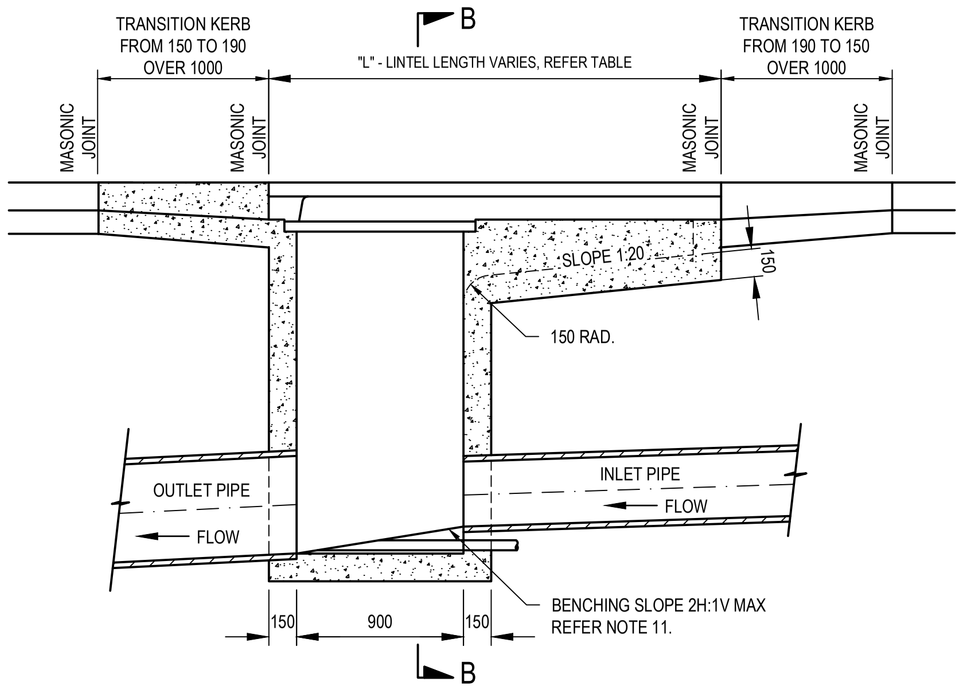
PLAN

N.T.S.

PRECAST LINTEL SIZES.	
NOMINAL OPENING SIZE METRES	OVERALL LENGTH "L" mm
0.9	
1.2	1825
1.8	2438
2.4	3048
3.0	3657
3.6	4267
4.2	4877
4.8	5486

NOTES:

1. CONCRETE TO BE 25MPa AT 28 DAYS.
2. SAG PITS TO HAVE LINTEL LOCATED CENTRALLY OVER PIT.
3. BACKFILL ADJACENT TO PITS TO BE APPROVED GRANULAR MATERIAL.
4. A 3m LENGTH APPROVED "FILTER FABRIC" WRAPPED 100mm SUB-SOIL DRAIN OR EQUIVALENT IS TO BE PROVIDED AND CONNECTED TO THE UPSTREAM PIT WALL.
5. PIT GRATE AND FRAME TO BE "WELDLOK" GG50D OR EQUIVALENT FOR RESIDENTIAL ROADS AND "WELDLOCK" GG42D OR EQUIVALENT FOR INDUSTRIAL ROADS, FITTED WITH A LOCKABLE "J" BOLT.
6. APPROVED STEP IRONS SHALL BE PROVIDED WHERE THE PIT EXCEEDS 1200 IN DEPTH. PROVIDE GALVANISED STEP IRONS AT 250mm CENTERS IN ACCORDANCE WITH COUNCIL STANDARD DRAWINGS.
7. THE CENTRE LINES OF INTERSECTING PIPES ARE TO MEET AT THE DOWNSTREAM FACE OF THE PIT WHERE POSSIBLE.
8. WHERE ENTERING PIPE EXCEEDS 525 IN DIAMETER, EXTENDED PIT CHAMBER, AS SHOWN IN SECTION B - B, TO BE USED.
9. FOR PIPES 1200 DIAMETER AND OVER CONSIDER USING PREFABRICATED JUNCTIONS AND /OR SADDLE PITS INSTEAD OF CAST-INSITU PITS.
10. FLOOR OF PIT TO BE BENCHED TO MID POINT OF OUTLET PIPE WHERE OUTLET PIPE >600mm DIAMETER.
11. WHERE EXTENDED CHAMBER WIDTH EXCEEDS 1200, ROOF REINFORCEMENT TO BE DESIGNED BY A PROFESSIONAL STRUCTURAL ENGINEER.
12. CONTRACTOR TO ENSURE CLEARANCE BETWEEN LINTEL AND OPENED GRATE. REFER DIAGRAM 1.
13. ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.
14. *WHERE DEPTH > 2.5m, INTERNAL WIDTH OF PIT TO BE INCREASED TO 900x900mm, FOR A MINIMUM HEIGHT OF 2m.



SECTION A - A

N.T.S.

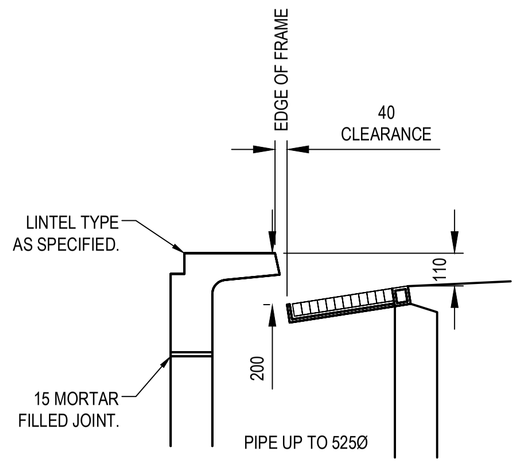
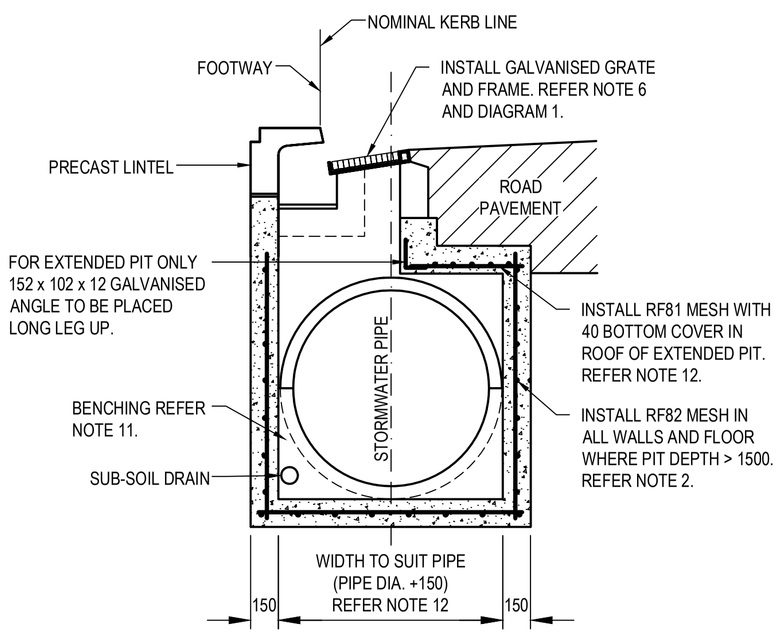


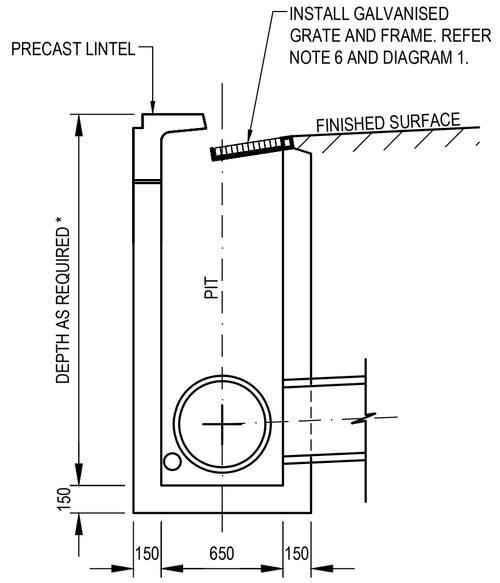
DIAGRAM 1

N.T.S.



SECTION B - B
EXTENDED PIT CHAMBER

REFER NOTE 9



SECTION B - B
STANDARD PIT

REFER NOTE 9

GRATED GULLY PIT

N.T.S.

sharon pope

Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

1cm at full size

Certification By Dr. Michel Chaaya B.E., M.E. (Res), Ph.D., F.I.E. Aust., CPEng., Civil & Structural Engineer

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Council: muswellbrook shire council

Scale:

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Drawing Title: MISCELLANEOUS DETAILS SHEET 2

Scale	Project No.	Dwg. No.	Issue
N.T.S. A1	22048	741	A

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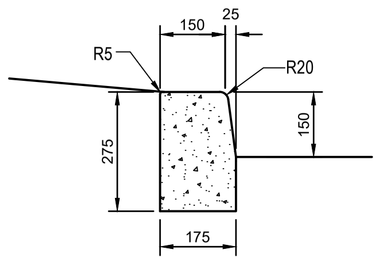
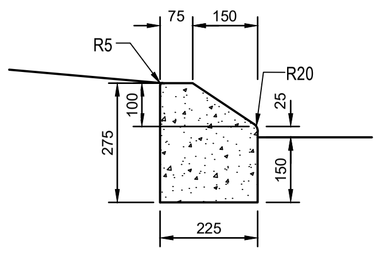


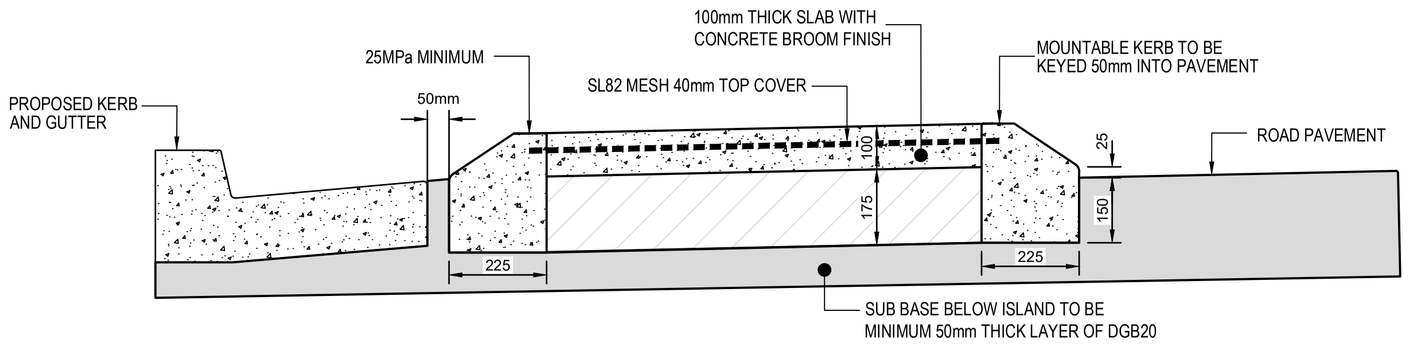
KERB ONLY (BARRIER)

SCALE 1:100



MEDIAN MOUNTABLE KERB

SCALE 1:100



TYPICAL DETAIL - BLISTER ISLAND

SCALE 1:100

sharon pope

Issue	Description	Date	Design	Checked
A	ISSUE FOR VOLUNTARY PLANNING AGREEMENT	28/05/2026	J.J.B.	J.A.B.

0 1cm at full size 10cm 20cm

Certification By Dr. Michel Chaiya
B.E., M.E. (Res), Ph.D., F.I.E. Aust., CPEng.,
Civil & Structural Engineer

Client: CHINA ORIENTAL INVESTMENT DOMAIN TRUST

Council: muswellbrook shire council

Scale: 0 2 4 6 m — SCALE 1:100 @ A1

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Drawing Title: MISCELLANEOUS DETAILS
SHEET 3

Scale	A1	Project No.	Dwg. No.	Issue
1:100		22048	742	A

Signed by:
Sharon Pope
Page 15 of 16
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签署人： 0CD49B279889405... 签署人： F4ACDC900AF9460... Signed by: Sharon Pope 4F53DD05B09440E...

Annexure B

Dispute Resolution Procedures

1.1 Dispute Resolution Procedure

(a) Council and the Developer agree that in the interests of expeditiously resolving any dispute or difference which arises between them under or in connection with this Agreement (**Dispute**) they will use their best endeavours to resolve the Dispute by procuring the directors of The Developer and the General Manager of Council to enter into good faith negotiations within 10 Business Days (or such other period that the Parties may agree) of the Dispute arising.

(b) If the Dispute cannot be resolved within the period stipulated in or agreed pursuant to clause 1.1(a) above, the Parties may, subject to clause 1.1(c), submit to the process of adjudication set out in clauses 1.2 – 1.5.

(c) However, nothing in this Annexure B prevents either Party seeking final or interlocutory relief from a court in connection with a Dispute the subject of this Agreement without first having to attempt to negotiate and determine the Dispute in accordance with this Annexure B.

1.2 Either Party may issue a notice of dispute to the other within 14 days of the first occurrence or manifestation of the said Dispute or difference or act or omission if the Dispute or difference involves an act or omission. The notice is to set out the nature of the Dispute or difference and an outline of that Party's contentions in respect of the same with such reasonable particularity as is appropriate in the circumstances to allow the other Party to understand the matter in dispute and what is being contended.

1.3 Within 7 days of receiving such notice of Dispute, the receiving Party shall issue to the other a response, setting out what it believes the nature of the Dispute is (if this is different to that set out in the notice of Dispute) and an outline of its contentions with such reasonable particularity as is appropriate in the circumstances to allow the Party who issued the notice of Dispute what the receiving Party contends in relation to the Dispute.

1.4 The directors of the Developer and the General Manager of Council may direct that the Dispute be resolved by the process of expert determination as set out in sub-clause 1.7 below and the Dispute is then referred to expert determination. Such a direction is and will be final and binding and not in itself subject to a notice of Dispute.

1.5 In every other case, the Dispute is to be resolved by arbitration pursuant to the provisions of the Commercial Arbitration Act, 2010.

1.6 Where such Dispute fails to be resolved by expert determination, such a determination shall be conducted in accordance with and subject to the Resolution Institute Determination Rules and an appropriately qualified expert is to be appointed, subject to the reasonable objection by either Party, by the Chairman of the NSW Chapter of the Institute.

1.7 Subject to clause 2 below, where such Dispute or difference is to be resolved by arbitration, the arbitration shall be conducted in accordance with and subject to the Resolution Institute Rules for the Conduct of Commercial Arbitrations with the arbitrator to be appointed, subject to reasonable objection by either Party, by the Chairman of the NSW Chapter of the Institute.

1.8 In respect of all questions of procedure for any arbitration or expert determination the Parties shall participate in the same in good faith and do all and agree to do all things as are appropriate so as to achieve expedition in determination of the issues so referred.

2 Continuing liability

The reference of any Dispute for resolution under this Agreement will not relieve either Party

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from any liability for the due and punctual performance of that Party's duties and obligations under this Agreement.

Signed by: Sharon Poon 4F53DD05B09440E...

签署人： F4ACDC900AF9460...

签署人： 0CD49B279889405...

Signed by:
Sharon Popp
4F53DD05B09446E...

签署人：
F4ACDC900AF9460...

签署人：
0CD49B279889405...