



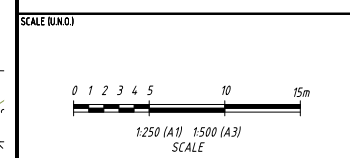
# 288-292 Granger Road, Park Ridge South

Lot 35 RP 206890

CLIENT  
**Gorman Property Group**

COPYRIGHT IS VESTED IN CIVIL DIMENSIONS P/L. WRITTEN CONSENT IS REQUIRED PRIOR TO USE. REPRODUCTION IN WHOLE OR PART THEREOF OR ALTERATION OF ANY FORM IS STRICTLY PROHIBITED. DO NOT SCALE FROM THESE DRAWINGS.

ASSOCIATED CONSULTANTS



ABN 66 103 198 527  
Postal:  
Unit 8, 51 Freda St  
Upper Mt Gravatt,  
Qld 4122  
Brisbane:  
Tel 3422 2020

**Civil Dimensions** Pty Ltd  
Consulting Engineers  
mail@civildimensions.com.au

R.P.E.O. Certification provided for and on behalf of Civil Dimensions expressly excludes, *inter alia*, all geotechnical testing, slope stability earthworks level 1, retaining walls, structures, landscaping (including vegetation and the effects thereof), detention basin and bio-retention basin sizing and hydraulics.

DA  
PLANS SHALL NOT BE USED FOR CONSTRUCTION PURPOSES UNLESS APPROVED, SIGNED AND STAMPED "FOR CONSTRUCTION"

DESIGNED	DRAWN	LAB	CHECKED	TPE

APPROVED

FOR AND ON BEHALF OF CIVIL DIMENSIONS PTY LTD

A	Initial Issue	08/09/22

DRAWING TITLE

## Water Reticulation Plan

PROJECT NUMBER  
**CD20-016**    **W2**    **A**

Live Water Connections		
ID No.	Location	Connection Details
1	GRANGER ROAD (OUTSIDE LOT 1 RP231093)	1. CONTRACTOR TO LAY PROPOSED MAIN WITH CONSTRUCTION HYDRANT ASSEMBLY (INCL. RISER AND BEND) TO WITHIN 3.0m OF EXISTING MAIN. 2. UPON SUCCESSFUL TESTING AND ON MAINTENANCE INSPECTION, SERVICE PROVIDER TO REMOVE EXISTING END CAPS, THRUST BLOCK AND MAKE LINE CONNECTION USING Ø100 APPROVED CONNECTOR. SERVICE PROVIDER TO LEAVE CONSTRUCTION HYDRANT ASSEMBLY FOR COLLECTION BY THE CONTRACTOR.

Live connections by SEQ Service Provider - refer Note 2 on Drg W1 & Std Drg SEQ-WAT-1303-1.

**REFER ALSO:  
DRG W1 FOR WATER RETICULATION NOTES**

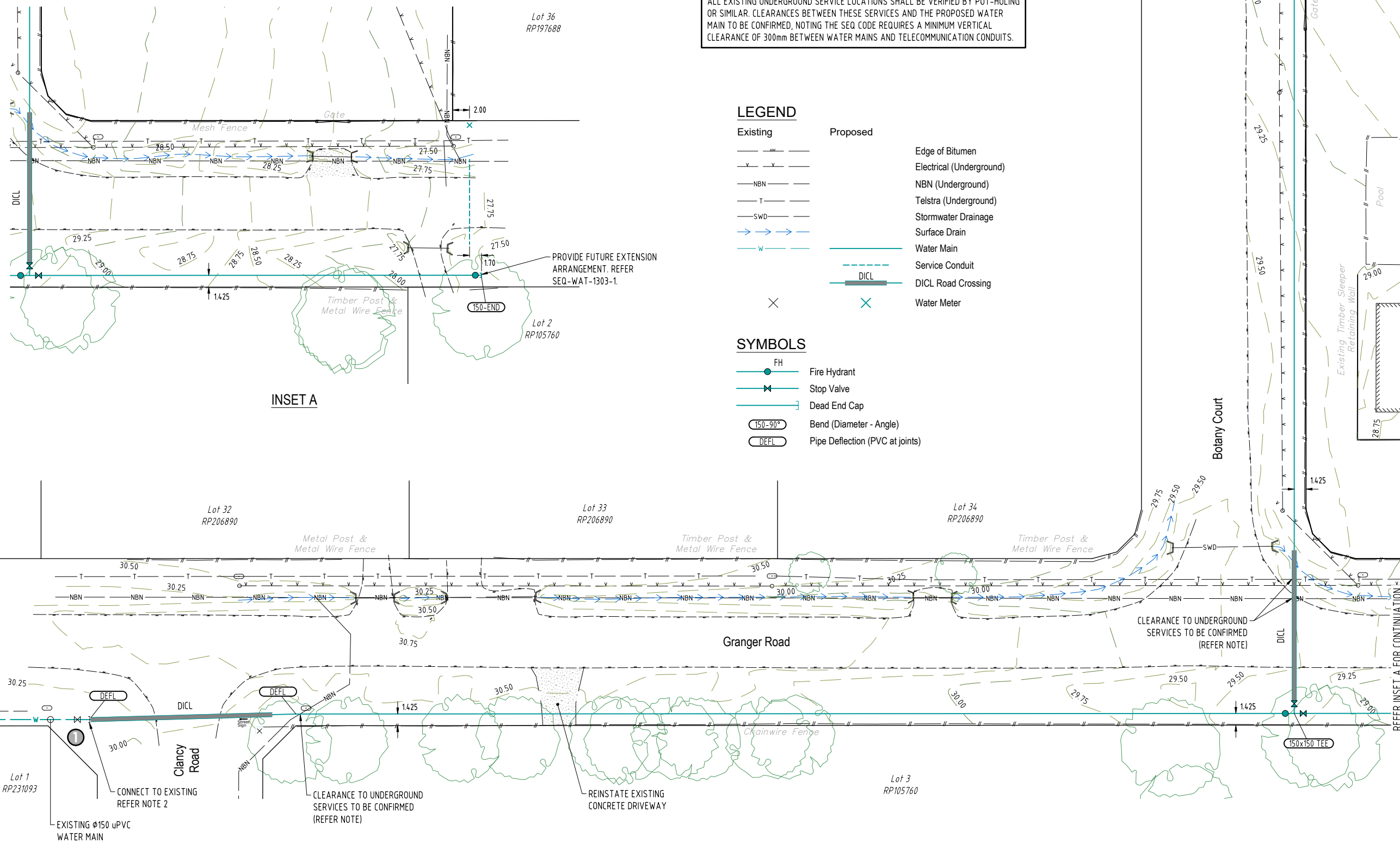
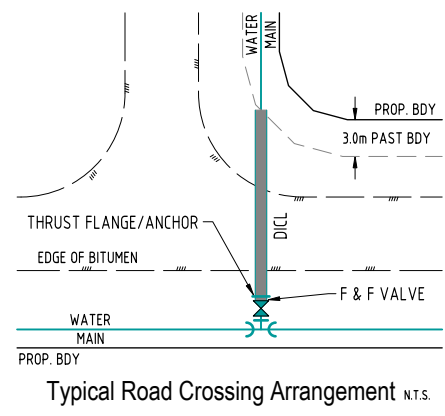
**CLEARANCE TO EXISTING SERVICES**  
ALL EXISTING UNDERGROUND SERVICE LOCATIONS SHALL BE VERIFIED BY POT-HOLING OR SIMILAR. CLEARANCES BETWEEN THESE SERVICES AND THE PROPOSED WATER MAIN TO BE CONFIRMED, NOTING THE SEQ CODE REQUIRES A MINIMUM VERTICAL CLEARANCE OF 300mm BETWEEN WATER MAINS AND TELECOMMUNICATION CONDUITS.

**LEGEND**

<b>Existing</b>	<b>Proposed</b>	
—	—	Edge of Bitumen
- - -	- - -	Electrical (Underground)
-NBN-	-NBN-	NBN (Underground)
-T-	-T-	Telstra (Underground)
-SWD-	-SWD-	Stormwater Drainage
→ → →	→ → →	Surface Drain
— W —	— W —	Water Main
— S —	— S —	Service Conduit
— D —	— D —	DICL Road Crossing
×	×	Water Meter

**SYMBOLS**

●	FH	Fire Hydrant
⊕	Stop Valve	
⊔	Dead End Cap	
⊖	Bend (Diameter - Angle)	
⊘	Pipe Deflection (PVC at joints)	



INSET A

REFER INSET A FOR CONTINUATION

P:\2020-016 Granger Road\CD20-016-W2-Water Reticulation\08/09/22\02.DWG

**288-292  
Granger Road,  
Park Ridge South**

Lot 35 RP 206890

CLIENT

**Gorman Property  
Group**

COPYRIGHT IS VESTED IN CIVIL DIMENSIONS P/L. WRITTEN CONSENT IS REQUIRED PRIOR TO USE. REPRODUCTION IN WHOLE OR PART THEREOF OR ALTERATION OF ANY FORM IS STRICTLY PROHIBITED. DO NOT SCALE FROM THESE DRAWINGS.

ASSOCIATED CONSULTANTS

SCALE (N/A)

ABN 66 103 198 527  
Postal:  
Unit 8, 51 Freda St  
Upper Mt Gravatt,  
Qld 4122  
Brisbane:  
Tel 3422 2020

**Civil Dimensions** Pty Ltd  
Consulting Engineers

R.P.E.O. Certification provided for and on behalf of Civil Dimensions expressly excludes, inter alia, all geotechnical testing, slope stability earthworks level 1, retaining walls, structures, landscaping (including vegetation and the effects thereof), detention basin and bio-retention basin sizing and hydraulics.

**DA**  
PLANS SHALL NOT BE USED FOR CONSTRUCTION PURPOSES UNLESS APPROVED, SIGNED AND STAMPED "FOR CONSTRUCTION"

DESIGNED	DRAWN	CHECKED
TPE	LAB	TPE

APPROVED

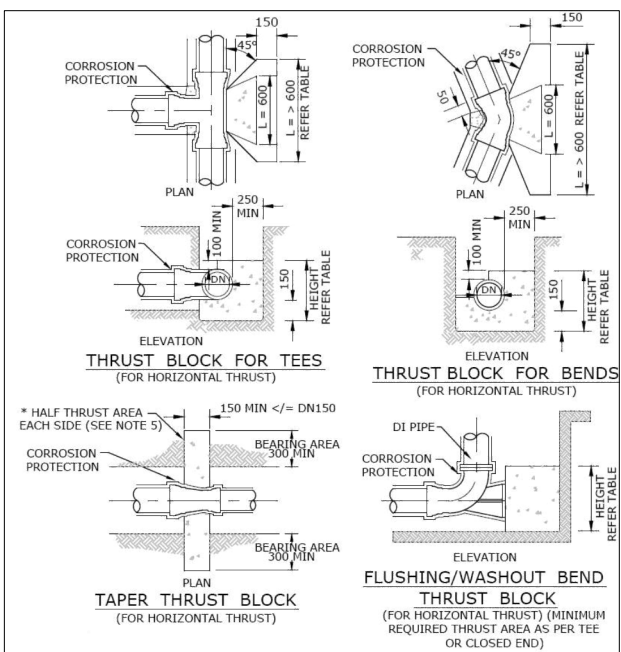
FOR AND ON BEHALF OF CIVIL DIMENSIONS PTY LTD

A	Initial Issue	08/09/22

DRAWING TITLE

**Water Reticulation  
Thrust Block Notes  
and Details**

PROJECT NUMBER	ORG	REV
CD20-016	W3	A



**THRUST BLOCK NOTES**

- All dimensions in millimetres unless otherwise specified.
- Cast the thrust area of all thrust blocks against a clean face of undisturbed natural soil. Soil classifications used on this drawing are explained in SEQ-WAT-1200-1. Do not use standard thrust blocks as specified in this drawing in soils with <50kPa bearing capacity e.g.;
  - Very soft, soft or firm clay
  - Loose clean sand
  - Uncompacted fill or refuse
 A geotechnical assessment and individual design is required for these soils.
- Thrust blocks not to interfere with other services or be located outside the water main allocation without water agency approval.
- All concrete grade N20. Table of dimensions based on required test pressure of 1200kPa and actual DI/CL pipe diameters.
- The minimum thrust area for taper thrust blocks to be equal the difference between the thrust areas for tees or closed ends of equivalent diameter to those each side of the taper. The detail shown is for <OR = DN150 mains. For larger mains, the taper thrust block shall be reinforced and of a size as shown in SEQ-WAT-1206-1.
- For downward vertical thrust, the allowable bearing pressures for various soils may be taken as twice that for horizontal thrust shown.
- When pouring concrete against fittings place a membrane of polyethylene, PVC or felt between the fitting and concrete to prevent damage to the fitting. Pipe joints to be clear of concrete.
- Concrete thrust block anchors for valves to be as detailed on SEQ-WAT-1206-1.
- Refer SEQ-WAT-1205-1 for additional thrust block details and notes.
- Refer SEQ-WAT-1209-1 AND SEQ-WAT-1210-1 for trench drainage details.

PIPE DN.	FITTING	MAX. THRUST IN KN	THRUST BLOCK HEIGHT	STIFF CLAY 50kPa	VERY STIFF CLAY SANDY LOAM 100kPa	SAND & GRAVEL HARDCLAY 150kPa	SAND & GRAVEL CEMENTED WITH CLAY 200kPa	ROCK 240kPa
100	90° BEND	19.8	400	1000	•	•	•	•
	60° BEND	14.0		700	•	•	•	•
	45° BEND	10.7		•	•	•	•	•
	22.5° BEND	5.5		•	•	•	•	•
	11.25° BEND	2.7		•	•	•	•	•
	TEE OR CLOSED END	14.0		700	•	•	•	•
150	90° BEND	41.7	450	1860	930	•	•	•
	60° BEND	29.5		1320	660	•	•	•
	45° BEND	22.6		1000	•	•	•	•
	22.5° BEND	11.5		•	•	•	•	•
	11.25° BEND	5.8		•	•	•	•	•
	TEE OR CLOSED END	29.5		1300	660	•	•	•

**THRUST BLOCK DIMENSIONS (MINIMUM) - 1200kPa**

• INDICATES BLOCK LENGTH OF 600  
ASSUME VERY STIFF CLAY / SANDY LOAM 100kPa - TO BE CONFIRMED ON SITE  
REFER STD DRG SEQ-WAT-1205-1 FOR COMPLETE TABLE

(SOURCE: ALL THRUST BLOCK DETAILS AND NOTES HAVE BEEN TAKEN FROM SEQ WS&S D&C CODE; STANDARD DRAWING SEQ-WAT-1205-1)