

**NOTES**

1. SITE LAYOUT AND DESIGNS INDICATIVE ONLY AND SUBJECT TO CHANGE DURING DETAILED DESIGN DEVELOPMENT.
2. REFER TO DRAWING 2010673.415 FOR FULL SET OF PROJECT NOTES

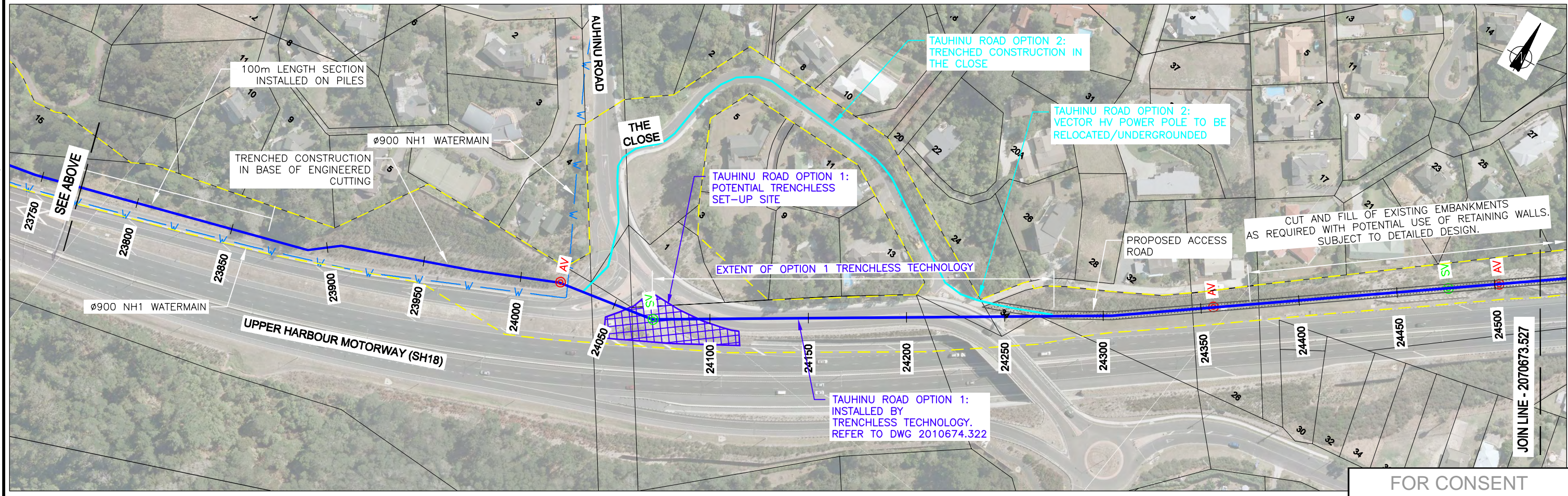
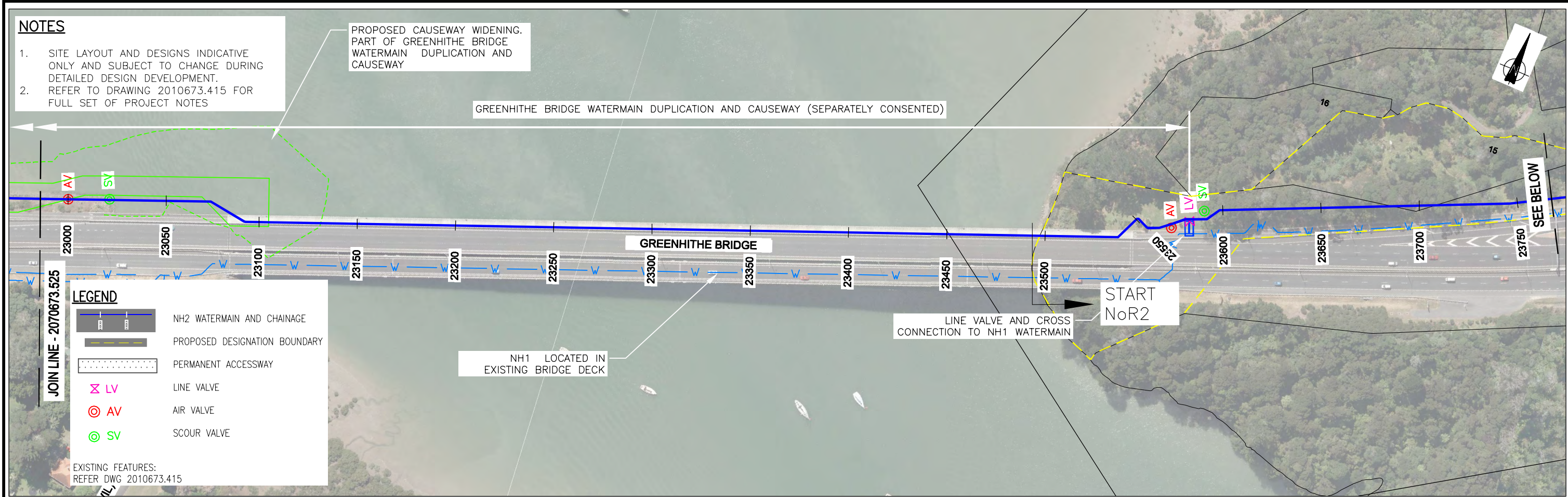
PROPOSED CAUSEWAY WIDENING. PART OF GREENHITHE BRIDGE WATERMAIN DUPLICATION AND CAUSEWAY

GREENHITHE BRIDGE WATERMAIN DUPLICATION AND CAUSEWAY (SEPARATELY CONSENTED)

**LEGEND**

- NH2 WATERMAIN AND CHAINAGE
- PROPOSED DESIGNATION BOUNDARY
- PERMANENT ACCESSWAY
- LV LINE VALVE
- AV AIR VALVE
- SV SCOUR VALVE

EXISTING FEATURES:  
REFER DWG 2010673.415



FOR CONSENT

ISSUE	DATE	AMENDMENT	BY	APPD.
2	22.02.16	ISSUED FOR CONSENT - UPDATED WITH WSL COMMENTS	W.O.	M.A.E.
1	03.12.15	ISSUED FOR CONSENT	W.O.	M.A.E.

DESIGNED	N.H.	12.15
DES. CHECKED	M.A.E.	12.15
DRAWN	W.O.	12.15
DWG. CHECKED	N.H.	12.15
PROJECT LEADER	M.A.E.	12.15
INFRASTR'R APP'D		

OPERATIONS
INFRASTRUCTURE

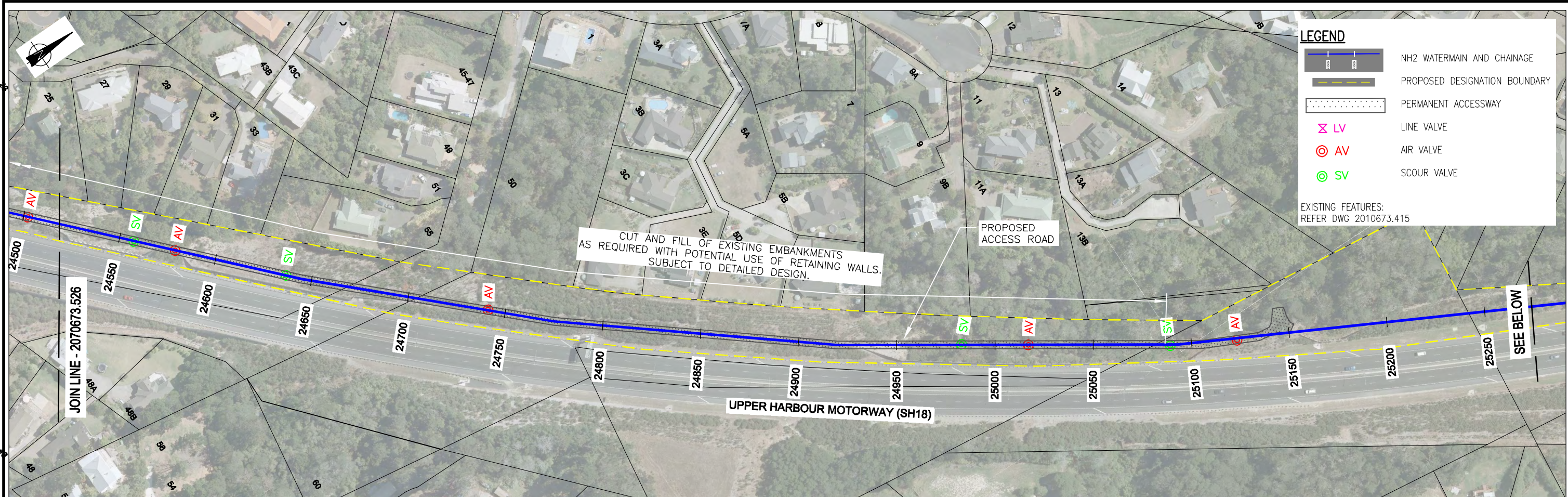
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**NORTH HARBOUR No.2 WATERMAIN**  
**GENERAL**  
**ROUTE PLAN**

CAD FILE	2010673.526-528	DATE	22.02.16
ORIGINAL SCALE	A3	CONTRACT No.	5663
REF No.	WMNH2-91-G-526	ISSUE	-
DWG No.	2010673.526		2

Plot Date: Mar 04, 2016 - 9:56am U:\naaba\2070673.526\01\_DWG\_Current\08\_AEE\Main Route\_AEE\_Drawing Set\ 2010673.526-528.dwg

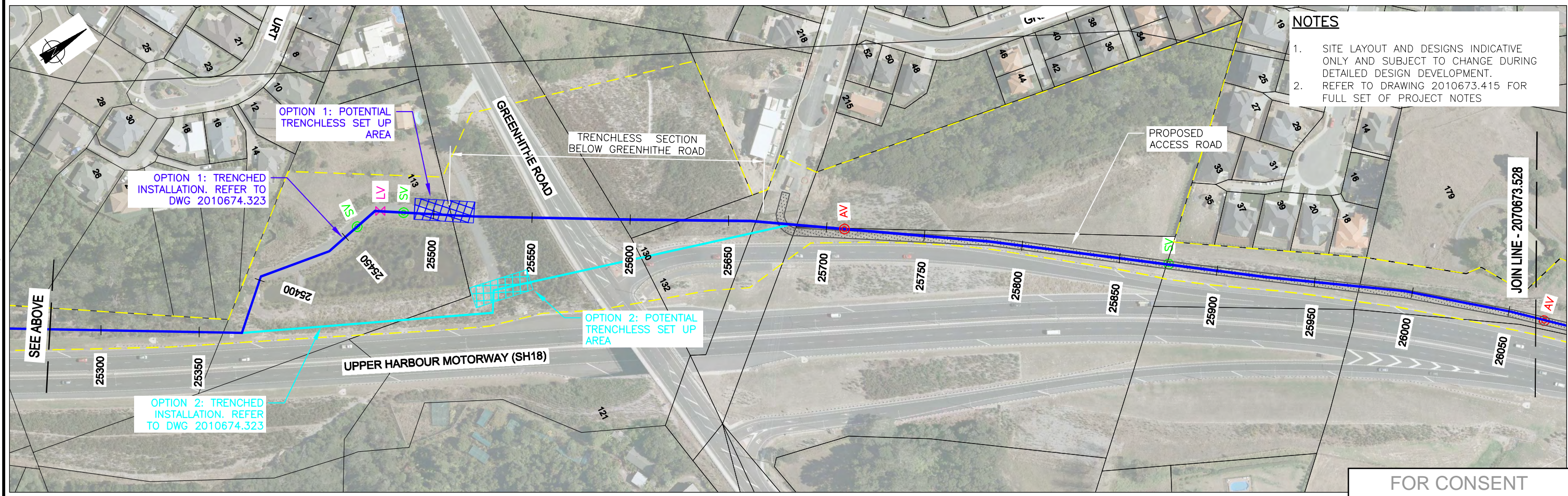




**LEGEND**

- NH2 WATERMAIN AND CHAINAGE
- PROPOSED DESIGNATION BOUNDARY
- PERMANENT ACCESSWAY
- LV LINE VALVE
- AV AIR VALVE
- SV SCOUR VALVE

EXISTING FEATURES:  
REFER DWG 2010673.415



- NOTES**
- SITE LAYOUT AND DESIGNS INDICATIVE ONLY AND SUBJECT TO CHANGE DURING DETAILED DESIGN DEVELOPMENT.
  - REFER TO DRAWING 2010673.415 FOR FULL SET OF PROJECT NOTES

FOR CONSENT

ISSUE	DATE	AMENDMENT	BY	APPD.
2	22.02.16	ISSUED FOR CONSENT - UPDATED WITH WSL COMMENTS	W.O.	M.A.E.
1	03.12.15	ISSUED FOR CONSENT	W.O.	M.A.E.

DESIGNED	N.H.	12.15
DES. CHECKED	M.A.E.	12.15
DRAWN	W.O.	12.15
DWG. CHECKED	N.H.	12.15
PROJECT LEADER	M.A.E.	12.15
INFRASTR APP'D		

**Watercare**

**NORTH HARBOUR No.2 WATERMAIN**  
**GENERAL ROUTE PLAN**

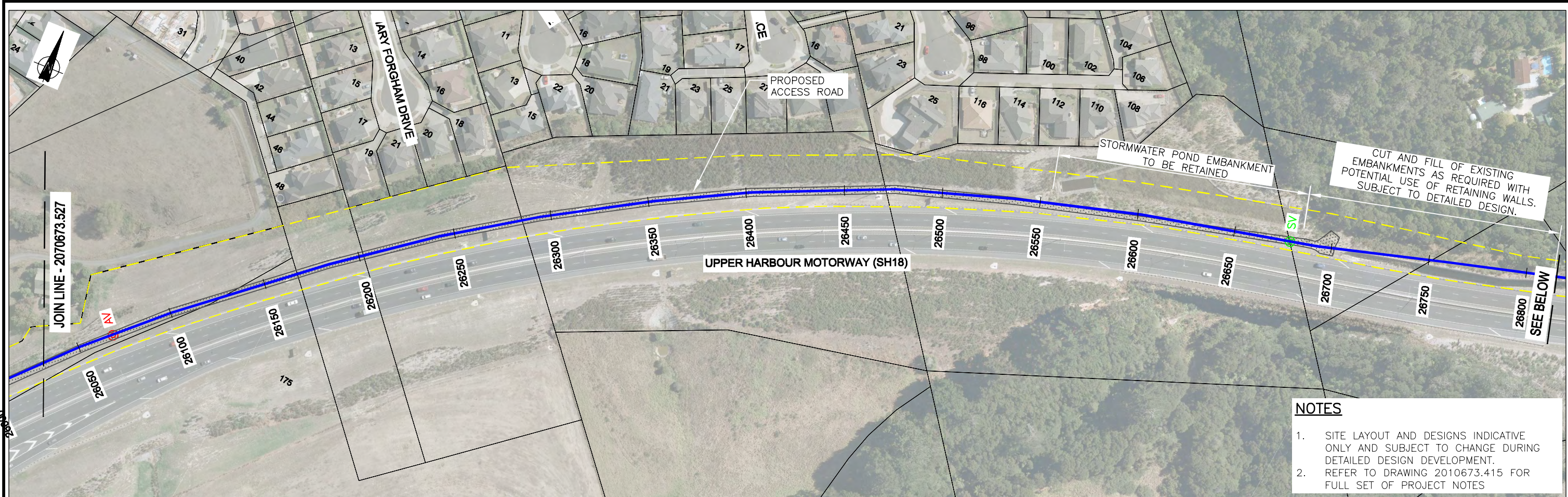
OPERATIONS  
INFRASTRUCTURE

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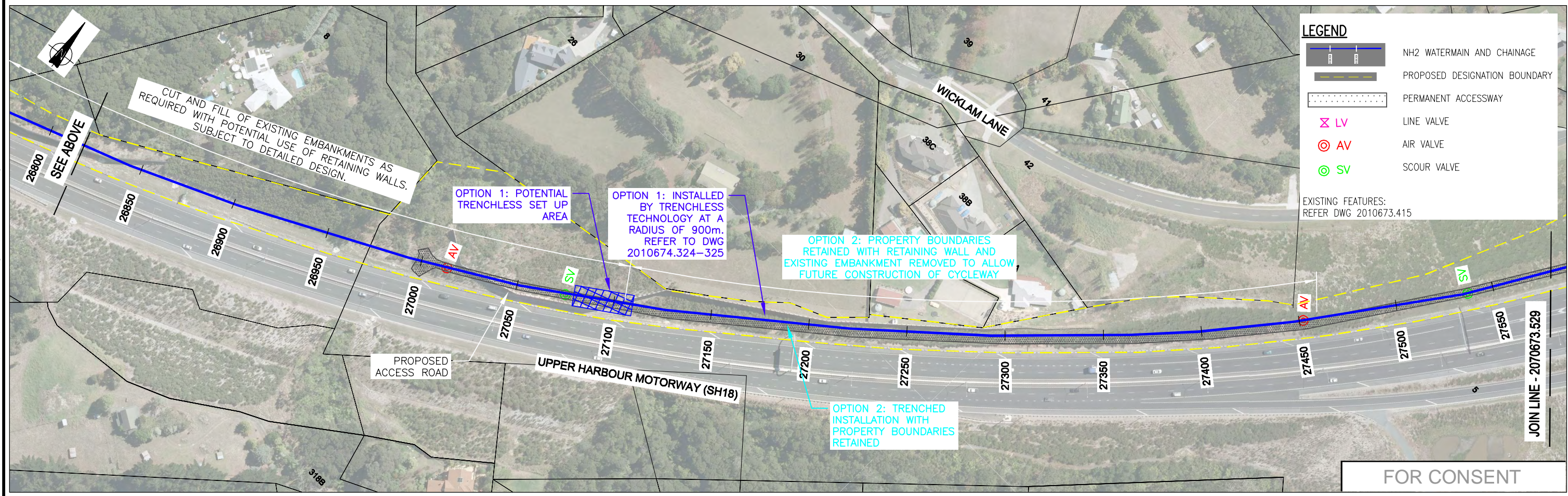
CAD FILE	2010673.526-528	DATE	22.02.16
ORIGINAL SCALE	A3 1:2,000	CONTRACT No.	5663
REF No.	WMNH2-91-G-527	ISSUE	-
DWG No.	2010673.527		2

Plot Date: Mar 04, 2016 - 9:39am U:\naaba\2073500\01\_DWG\_Current\08\_AEE\Main Route AEE Drawing Set\ 2010673.526-528.dwg





- NOTES**
- SITE LAYOUT AND DESIGNS INDICATIVE ONLY AND SUBJECT TO CHANGE DURING DETAILED DESIGN DEVELOPMENT.
  - REFER TO DRAWING 2010673.415 FOR FULL SET OF PROJECT NOTES



**LEGEND**

- NH2 WATERMAIN AND CHAINAGE
- PROPOSED DESIGNATION BOUNDARY
- PERMANENT ACCESSWAY
- LV LINE VALVE
- AV AIR VALVE
- SV SCOUR VALVE

EXISTING FEATURES:  
REFER DWG 2010673.415

FOR CONSENT

ISSUE	DATE	AMENDMENT	BY	APPD.
2	22.02.16	ISSUED FOR CONSENT - UPDATED WITH WSL COMMENTS	W.O.	M.A.E.
1	03.12.15	ISSUED FOR CONSENT	W.O.	M.A.E.

DESIGNED	N.H.	12.15
DES. CHECKED	M.A.E.	12.15
DRAWN	W.O.	12.15
DWG. CHECKED	N.H.	12.15
PROJECT LEADER	M.A.E.	12.15
INFRASTR APP'D		

**Watercare**

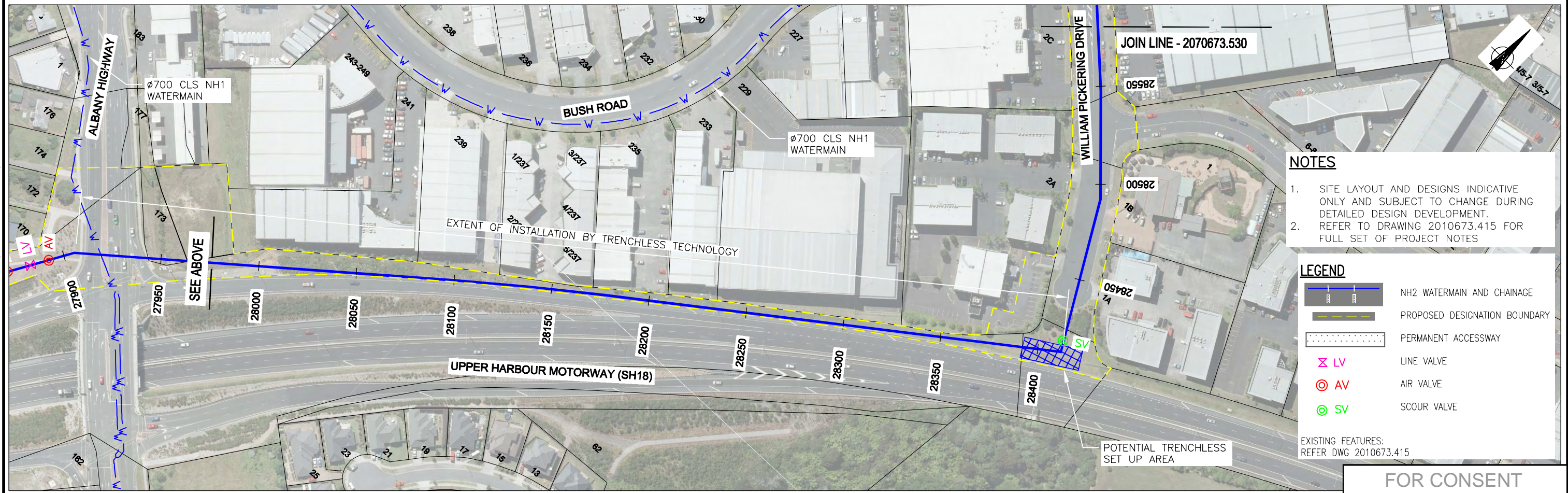
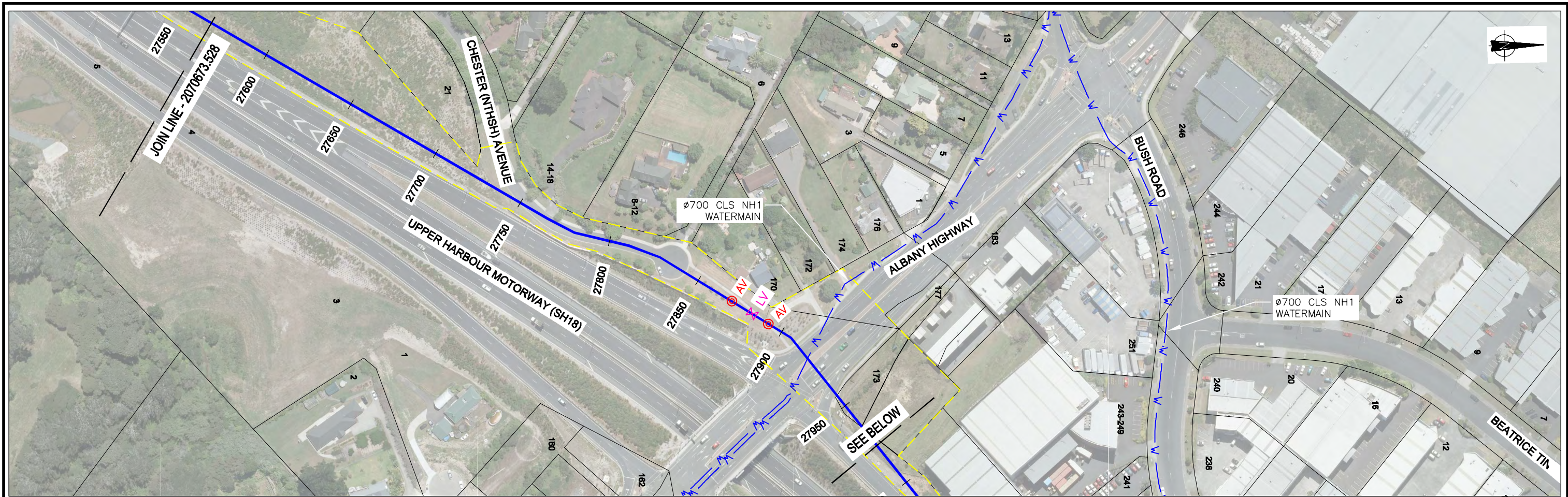
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**NORTH HARBOUR No.2 WATERMAIN GENERAL ROUTE PLAN**

CAD FILE	2010673.526-528	DATE	22.02.16
ORIGINAL SCALE	A3 1:2,000	CONTRACT No.	5663
REF No.	WMNH2-91-G-528	ISSUE	-
DWG No.	2010673.528		2

Plot Date: Mar 04, 2016 - 9:40am U:\data\2010673\000\01\_DWG\_Current\08\_AEE\Main Route\_AEE\_Drawing Set\ 2010673.526-528.dwg





- NOTES**
- SITE LAYOUT AND DESIGNS INDICATIVE ONLY AND SUBJECT TO CHANGE DURING DETAILED DESIGN DEVELOPMENT.
  - REFER TO DRAWING 2010673.415 FOR FULL SET OF PROJECT NOTES

- LEGEND**
- NH2 WATERMAIN AND CHAINAGE
  - PROPOSED DESIGNATION BOUNDARY
  - PERMANENT ACCESSWAY
  - LV LINE VALVE
  - AV AIR VALVE
  - SV SCOUR VALVE

EXISTING FEATURES:  
REFER DWG 2010673.415

**FOR CONSENT**

ISSUE	DATE	AMENDMENT	BY	APPD.
2	22.02.16	ISSUED FOR CONSENT - UPDATED WITH WSL COMMENTS	W.O.	M.A.E.
1	03.12.15	ISSUED FOR CONSENT	W.O.	M.A.E.

DESIGNED	N.H.	12.15
DES. CHECKED	M.A.E.	12.15
DRAWN	W.O.	12.15
DWG. CHECKED	N.H.	12.15
PROJECT LEADER	M.A.E.	12.15
INFRASTR APP'D		

**Watercare**

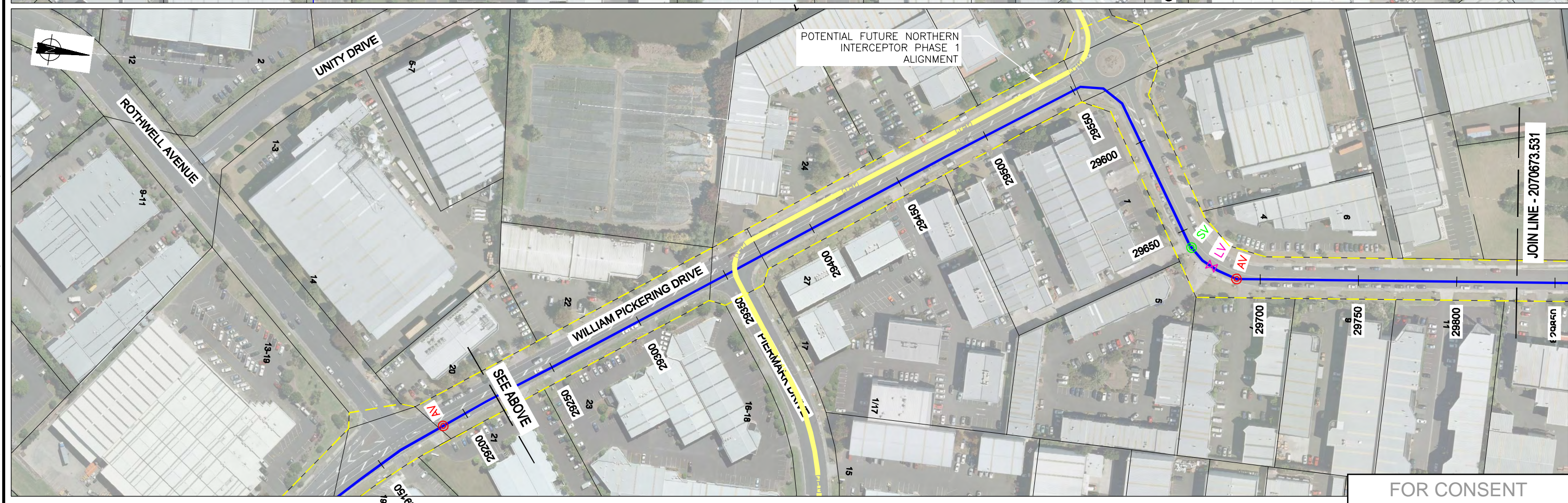
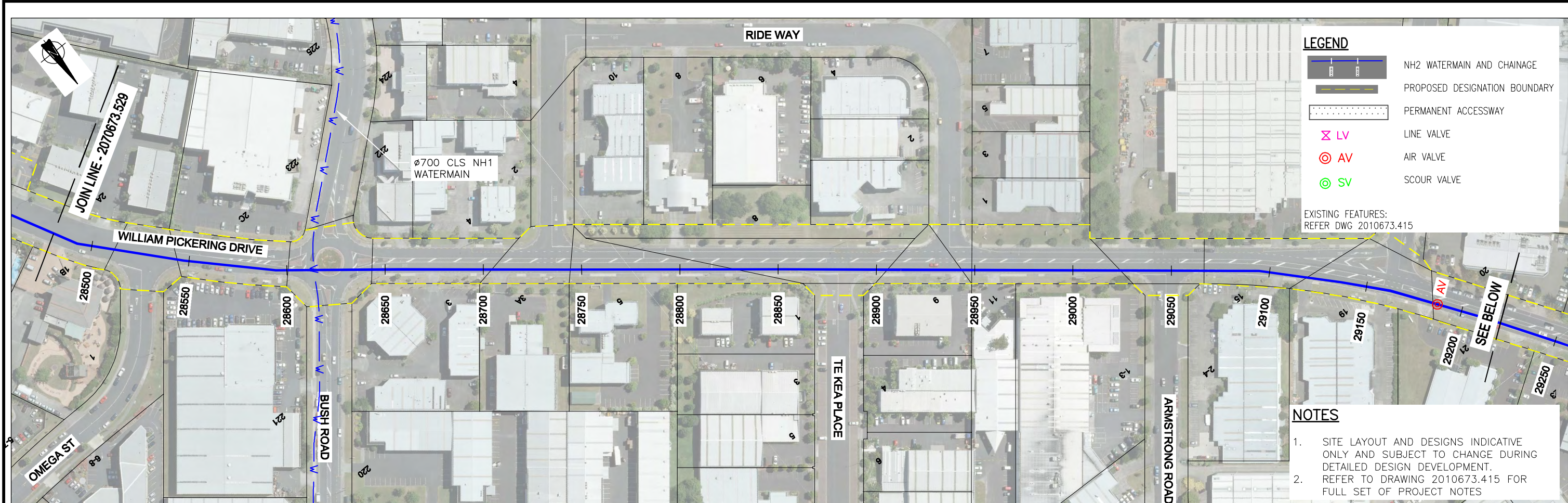
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**NORTH HARBOUR No.2 WATERMAIN**  
GENERAL ROUTE PLAN

CAD FILE	2010673.529-532	DATE	22.02.16
ORIGINAL SCALE	A3	CONTRACT No.	5663
REF No.	WMNH2-91-G-529	ISSUE	-
DWG No.	2010673.529		2

Plot Date: Mar 04, 2016 - 9:48am U:\naaa\2010673.529\01\_DWG\_Current\08\_AEE\Main Route\_AEE\_Drawing Set\ 2010673.529-532.dwg





FOR CONSENT

ISSUE	DATE	AMENDMENT	BY	APPD.
2	22.02.16	ISSUED FOR CONSENT - UPDATED WITH WSL COMMENTS	W.O.	M.A.E.
1	03.12.15	ISSUED FOR CONSENT	W.O.	M.A.E.

DESIGNED	N.H.	12.15
DES. CHECKED	M.A.E.	12.15
DRAWN	W.O.	12.15
DWG. CHECKED	N.H.	12.15
PROJECT LEADER	M.A.E.	12.15
INFRASTR'R APP'D		

OPERATIONS
INFRASTRUCTURE

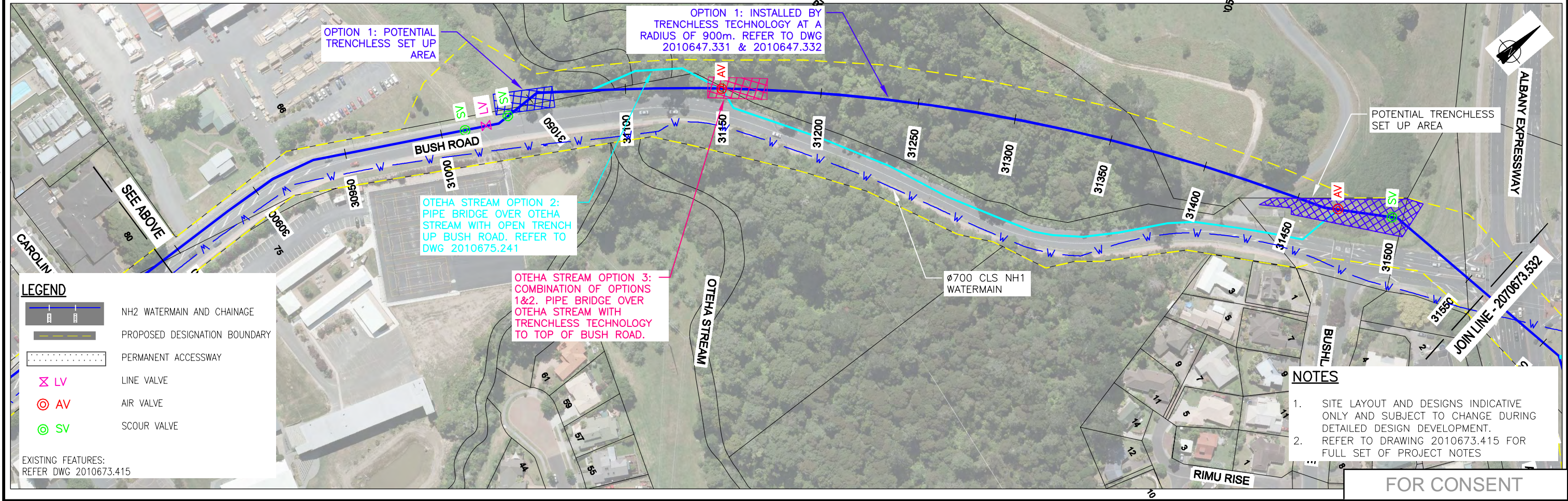
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**NORTH HARBOUR No.2 WATERMAIN  
 GENERAL  
 ROUTE PLAN**

CAD FILE	2010673.529-532	DATE	22.02.16
ORIGINAL SCALE	A3 1:2,000	CONTRACT No.	5663
REF No.	WMNH2-91-G-530	ISSUE	-
DWG No.	2010673.530		2

Plot Date: Mar 04, 2016 - 9:46am U:\data\2073500\01\_DWG\_Current\08\_AEE\Main Route AEE Drawing Set\ 2010673.529-532.dwg





**LEGEND**

	NH2 WATERMAIN AND CHAINAGE
	PROPOSED DESIGNATION BOUNDARY
	PERMANENT ACCESSWAY
	LV LINE VALVE
	AV AIR VALVE
	SV SCOUR VALVE

EXISTING FEATURES:  
REFER DWG 2010673.415

OPTION 1: INSTALLED BY TRENCHLESS TECHNOLOGY AT A RADIUS OF 900m. REFER TO DWG 2010647.331 & 2010647.332

OTEHA STREAM OPTION 2: PIPE BRIDGE OVER OTEHA STREAM WITH OPEN TRENCH UP BUSH ROAD. REFER TO DWG 2010675.241

OTEHA STREAM OPTION 3: COMBINATION OF OPTIONS 1&2. PIPE BRIDGE OVER OTEHA STREAM WITH TRENCHLESS TECHNOLOGY TO TOP OF BUSH ROAD.

- NOTES**
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FOR CONSENT

ISSUE	DATE	AMENDMENT	BY	APPD.
2	22.02.16	ISSUED FOR CONSENT - UPDATED WITH WSL COMMENTS	W.O.	M.A.E.
1	03.12.15	ISSUED FOR CONSENT	W.O.	M.A.E.

DESIGNED	N.H.	12.15
DES. CHECKED	M.A.E.	12.15
DRAWN	W.O.	12.15
DWG. CHECKED	N.H.	12.15
PROJECT LEADER	M.A.E.	12.15
INFRASTR APP'D		

OPERATIONS
INFRASTRUCTURE

**Watercare**

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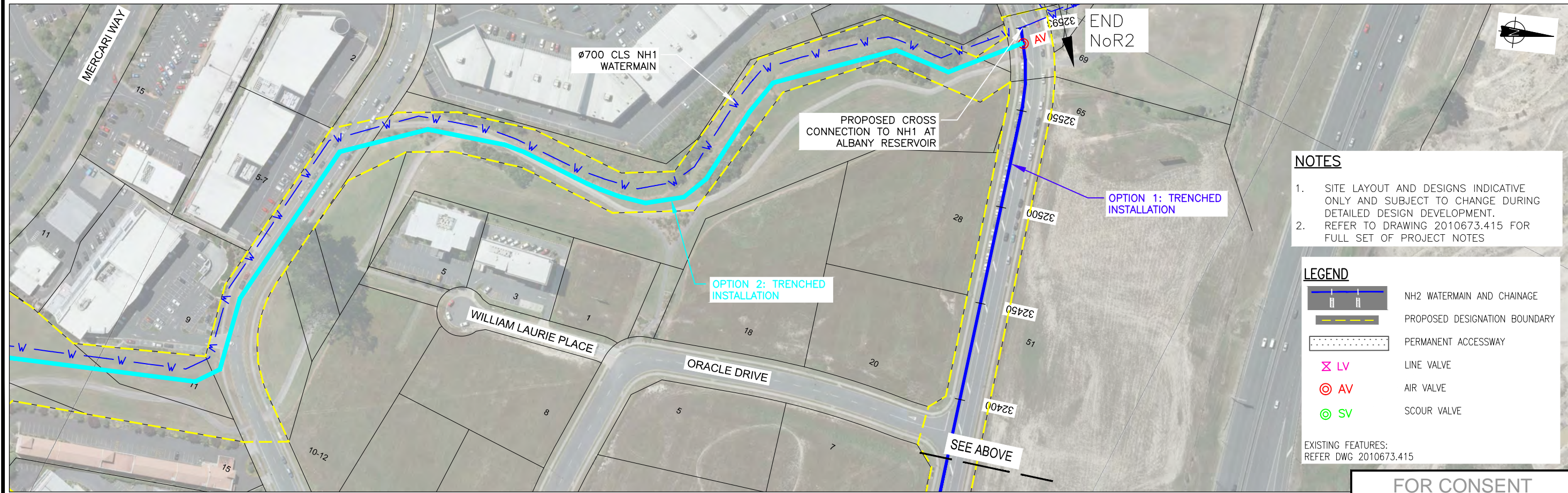
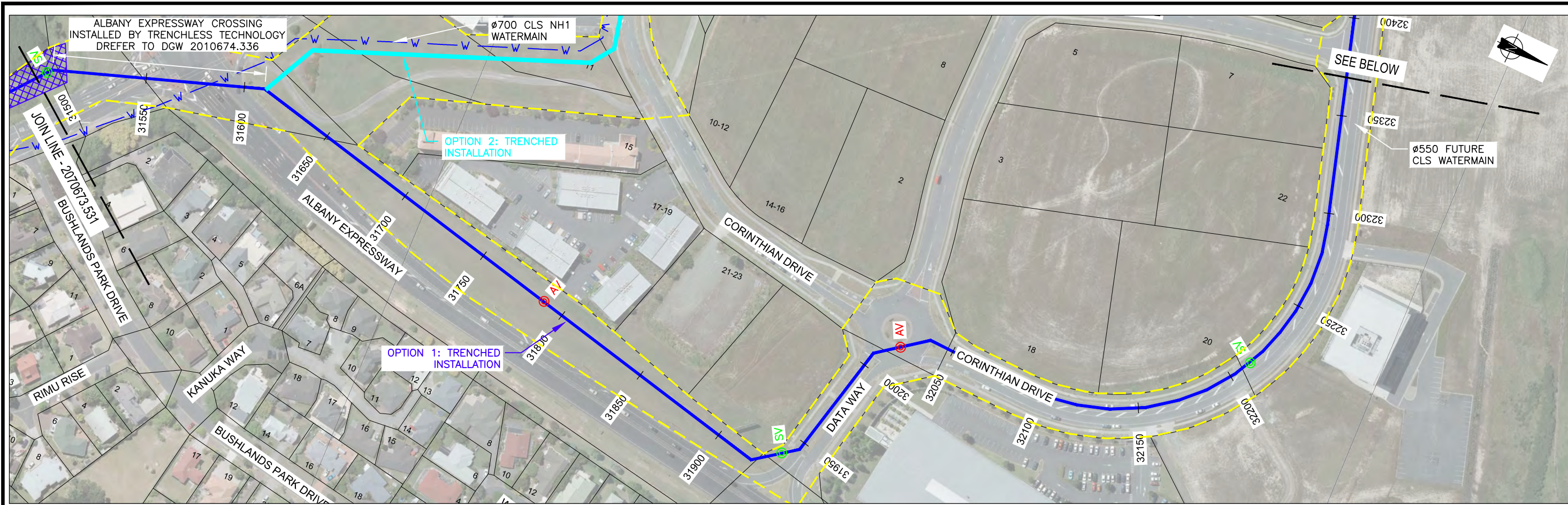
**NORTH HARBOUR No.2 WATERMAIN**

**GENERAL ROUTE PLAN**

CAD FILE	2010673.529-532	DATE	22.02.16
ORIGINAL SCALE	A3	CONTRACT No.	5663
REF No.	WMNH2-91-G-531	ISSUE	-
DWG No.	2010673.531		2

Plot Date: Mar 04, 2016 9:45am U:\naeh\2010673\000\01\_DWG\_Current\08\_AEE\Main Route\_AEE\_Drawing Set\ 2010673.529-532.dwg





- NOTES**
1. SITE LAYOUT AND DESIGNS INDICATIVE ONLY AND SUBJECT TO CHANGE DURING DETAILED DESIGN DEVELOPMENT.
  2. REFER TO DRAWING 2010673.415 FOR FULL SET OF PROJECT NOTES

**LEGEND**

- NH2 WATERMAIN AND CHAINAGE
- PROPOSED DESIGNATION BOUNDARY
- PERMANENT ACCESSWAY
- LV LINE VALVE
- AV AIR VALVE
- SV SCOUR VALVE

EXISTING FEATURES:  
REFER DWG 2010673.415

**FOR CONSENT**

Plot Date: May 23, 2016 - 9:26am U:\Jobs\42073300\01\_DWG\_Current\08\_AEE\_Main\_Route\_AEE\_Drawing\_Set\2010673.529-532.dwg

ISSUE	DATE	AMENDMENT	BY	APPD.
3	23.05.16	ISSUED FOR CONSENT - UPDATED AS PER WSL REQUEST	A.T.	S.J.
2	22.02.16	ISSUED FOR CONSENT - UPDATED WITH WSL COMMENTS	W.O.	M.A.E.
1	03.12.15	ISSUED FOR CONSENT	W.O.	M.A.E.

DESIGNED	N.H.	12.15
DES. CHECKED	M.A.E.	12.15
DRAWN	W.O.	12.15
DWG. CHECKED	N.H.	12.15
PROJECT LEADER	M.A.E.	12.15
INFRASTR'R APP'D		

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**NORTH HARBOUR No.2 WATERMAIN GENERAL ROUTE PLAN**

CAD FILE	2010673.529-532	DATE	23.05.16
ORIGINAL SCALE A3	1:2,000	CONTRACT No.	5663
REF No.	WMNH2-91-G-532	ISSUE	-
DWG No.	2010673.532		3





**NOTES**

1. SITE LAYOUT AND DESIGNS INDICATIVE ONLY AND SUBJECT TO CHANGE DURING DETAILED DESIGN DEVELOPMENT.
2. REFER TO DRAWING 2010673.415 FOR FULL SET OF PROJECT NOTES

**LEGEND**

- NH2 WATERMAIN AND CHAINAGE
- PROPOSED DESIGNATION BOUNDARY
- PERMANENT ACCESSWAY
- LV LINE VALVE
- AV AIR VALVE
- SV SCOUR VALVE

EXISTING FEATURES:  
REFER DWG 2010673.415

**FOR CONSENT**

Plot Date: Mar 04, 2016 - 10:07am U:\Jobs\2016\201601\_DWG\_Current\08\_AEE\Main Route\_AEE\_Drawing Set\ 2010673.533.dwg

ISSUE	DATE	AMENDMENT	BY	APPD.
2	22.02.16	ISSUED FOR CONSENT -- UPDATED WITH WSL COMMENTS	N.H.	M.A.E.
1	03.12.15	ISSUED FOR CONSENT	N.H.	M.A.E.

DESIGNED	N.H.	12.15
DES. CHECKED	M.A.E.	12.15
DRAWN	N.H.	12.15
DWG. CHECKED	M.A.E.	12.15
PROJECT LEADER	M.A.E.	12.15
INFRASTR'R APP'D		

**Watercare**

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**NORTH HARBOUR No.2 WATERMAIN  
GENERAL  
CATHODIC PROTECTION ANODE BED**

OPERATIONS	
INFRASTRUCTURE	

CAD FILE	2010673.533	DATE	22.02.16
ORIGINAL SCALE	A3	CONTRACT No.	5663
1:2,000			
REF No.	WMNH2-91-G-533	ISSUE	-
DWG No.	2010673.533		2