

CLIENT

QUEANBEYAN-PALERANG REGIONAL COUNCIL

COOMA STREET WATER MAIN REPLACEMENT

COVER SHEET AND
LOCALITY PLAN

ISSUE FOR TENDER

DECEMBER 2023

CLIENT:



LAND OWNER: QPRC



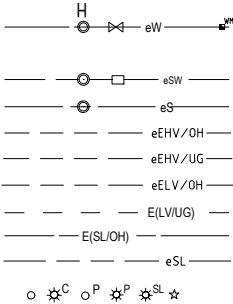
LOCALITY PLAN
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Plan number	Drawing Title
8654-01-000	COVER SHEET AND LOCALITY PLAN
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8654-01-053	CONCEPT EROSION AND SEDIMENT CONTROL PLAN SHEET 3 OF 4
8654-01-054	CONCEPT EROSION AND SEDIMENT CONTROL PLAN SHEET 4 OF 4
8654-01-060	CONCEPT TEMPORARY TRAFFIC MANAGEMENT PLAN SHEET 1 OF 4
8654-01-061	CONCEPT TEMPORARY TRAFFIC MANAGEMENT PLAN SHEET 2 OF 4
8654-01-062	CONCEPT TEMPORARY TRAFFIC MANAGEMENT PLAN SHEET 3 OF 4
8654-01-063	CONCEPT TEMPORARY TRAFFIC MANAGEMENT PLAN SHEET 4 OF 4
8654-01-064	CONCEPT TEMPORARY TRAFFIC MANAGEMENT PLAN PIPE WORKS STAGING
8654-01-065	LANDSCAPE MANAGEMENT AND PROTECTION PLAN NOTES

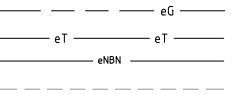
REV.	DESCRIPTION	DRAWN	DESIGNED	VERIFIED	APPROVED	DATE	CLIENT QPRC INDESCO INDESCO PTY LTD CO1, Level 5, 68 Northbourne Avenue CANBERRA CITY ACT 2601 GPO Box 565 Canberra, ACT 2601 (02) 6285 1022 www.indesco.com.au ABN: 37 008 581 066	PROJECT TITLE COOMA STREET WATER MAIN REPLACEMENT	CLIENT QUEANBEYAN COUNCIL			DRAWING TITLE DRAWING SCHEDULE
						DRAWING STATUS ISSUE FOR TENDER						
SCALE		COORDINATE SYSTEM	DATUM									
NA		GDA2020	AHD									
SHEET SIZE		PROJECT NUMBER		DRAWING NUMBER		REVISION						
A1		8654-01		001		B						

LEGEND

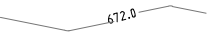
EXISTING



WATERMAIN, FIRE HYDRANT, SLUICE VALVE, THRUST BLOCK, WATER METER
STORMWATER, MAINTENANCE HOLE, SUMP
SEWER MAIN, MAINTENANCE HOLE,
ELECTRICITY HIGH VOLTAGE (OVERHEAD)
ELECTRICITY HIGH VOLTAGE (UNDERGROUND)
ELECTRICITY LOW VOLTAGE (OVERHEAD)
ELECTRICITY LOW VOLTAGE (UNDERGROUND)
ELECTRICITY STREETLIGHTING (OVERHEAD)
ELECTRICITY STREETLIGHTING (UNDERGROUND)
ELECTRICITY SYMBOLS (ELECTRIC COLUMN, STREET LIGHT ON COLUMN, STREET LIGHT ON PLOE, STREET LIGHT, UG EARTH/WIRES)



GAS
TELSTRA
NBN
EASEMENT
MAJOR CONTOUR



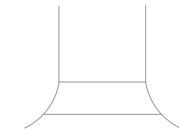
TREES



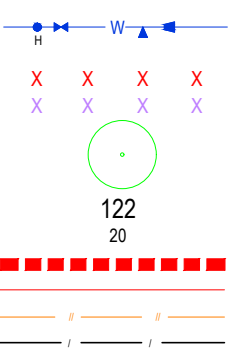
FOOTPATH



DRIVEWAY



PROPOSED



WATERMAIN, FIRE HYDRANT, SLUICE VALVE, THRUST BLOCK, REDUCER

EXISTING SERVICE TO BE REMOVED
SERVICES TO BE SEALED AND ABANDONED

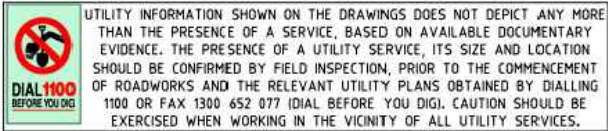
TREES

SECTION NUMBER
BLOCK NUMBER
EXTENT OF WORKS
FOOTPATH TO BE REMOVED
TREE PROTECTION FENCE
TEMPORARY CONSTRUCTION SITE FENCE

SERVICE CLEARANCES - WSA03, PART 3.1 TABLE 5.5

Utility (Existing or proposed service)	Minimum horizontal clearance mm		Minimum vertical clearance ¹ mm
	New main size		
	≤DN 200	>DN 200	
Water mains ² >DN 375	600	600	300
Water mains ≤DN 375	300 ³	600	150
Gas mains	300 ³	600	150
Telecommunication conduits and cables	300 ³	600	150
Electricity conduits and cables	500	1000	225 ⁷
Stormwater drains	300 ³	600	150 ⁴
Sewers – gravity	1000 ⁵ /600	1000 ⁵ /600	500 ⁴
Sewers – pressure and vacuum	600	600	300
Kerbs	150	600 ⁶	150 (where possible)

WARNING
BEWARE OF ASBESTOS.
SOME UNDERGROUND SERVICES MAYBE
CONSTRUCTED FROM ASBESTOS CONTAINING
MATERIAL. CONTACT THE SUPERINTENDENT FOR
INSTRUCTIONS ON HOW TO MANAGE ANY POTENTIAL
ASBESTOS HAZARD.



ABBREVIATIONS

AC	ASPHALTIC CONCRETE	WM, WZ, WY	WATER MAIN, WATER
CBR	CALIFORNIA BEARING RATIO		MAIN-DIGITISED, HOUSE
CL	CENTRE LINE		CONNECTION
CL	COVER LEVEL		
CH	CHAINAGE	HG, ZG, LG, NG	GAS PIPELINE HIGH
CJ	CONSTRUCTION JOINT		PRESSURE, GAS MAIN
CL2	CONCRETE PIPE CLASS		DIGITISED, GAS MAIN LOW
Ø	DIAMETER (NOMINAL INTERNAL)		PRESSURE, GAS MAIN NYLON
DIA	DIAMETER		
DRG	DRAWING	SM, SZ	SEWER MAIN, SEWER MAIN
DICL	DUCTILE IRON CEMENT LINED		DIGITISED
EC	END CAP		
EJ	EXPANSION JOINT	DZ, UU	STORMWATER DIGITISED,
EX	EXISTING		STORMWATER PIPE UNSPECIFIED
FP	FLUSHING POINT		DIAMETER
IL	INVERT LEVEL		
KT	KERB TRANSITION	TN, TZ	TELEPHONE LINE, TELEPHONE LINE
MH	MAINTENANCE HOLE		-DIGITISED
MMDD	MODIFIED MAXIMUM DRY DENSITY		
MK	MOUNTABLE KERB		
MKG	MOUNTABLE KERB AND GUTTER	EU	ELECTRIC LINE UNDERGROUND
NTS	NOT TO SCALE		
PAP	PRINCIPALS AUTHORISED PERSON	UP	UNIDENTIFIED PIPELINE

NOTE:

LINES DENOTED WITH Z INDICATE DBYD QUALITY LEVEL (DIGITISED)

GENERAL NOTES

- SETOUT OF ALL NEW WORKS SHALL BE CONFIRMED ON SITE WITH THE SUPERINTENDENT PRIOR TO THE COMMENCEMENT OF EACH ACTIVITY.
- EXISTING SERVICES HAVE BEEN PLOTTED FROM SUPPLIED DATA. THE PRINCIPAL DOES NOT GUARANTEE THE ACCURACY OF THIS INFORMATION AND IT IS THE CONTRACTORS RESPONSIBILITY TO ESTABLISH THE LOCATION OF ALL EXISTING SERVICES PRIOR TO COMMENCING WORK. CLEARANCES SHALL BE OBTAINED FROM THE RELEVANT SERVICE AUTHORITIES.
- THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF ALL TEMPORARY SUPPORT OF EXISTING SERVICES DURING EXCAVATION OF TRENCHES TO THE SATISFACTION OF THE SERVICE OWNER/AUTHORITY.
- PRIOR TO COMMENCING CONSTRUCTION, THE CONTRACTOR SHALL CONFIRM THE POSITION AND LEVEL OF ALL EXISTING SERVICE CONNECTION POINTS AND NOTIFY THE SUPERINTENDENT IMMEDIATELY IF A DISCREPANCY IS FOUND.
- ALL SURVEY SET-OUT SHALL BE UNDERTAKEN BY A REGISTERED SURVEYOR.
- ALL EXISTING AND FINISHED SURFACE LEVELS ARE TO THE AUSTRALIAN HEIGHT DATUM (AHD).
- ALL EARTHWORKS, BATTERS AND TRENCHLINES TO BE TOPSOILED, GRASSED AND BITUMEN STRAW MULCHED.
- WHERE NEW WORK ABUTS EXISTING WORK THE CONTRACTOR SHALL ENSURE THAT A SMOOTH EVEN PROFILE, FREE FROM ABRUPT CHANGES IS OBTAINED.
- ALL CLEARANCES IN LONG SECTIONS ARE EDGE OF PIPE TO EDGE OF PIPE/CONDUIT.
- CONTRACTOR TO RESTORE ALL SURFACES AND LINE MARKING TO MATCH EXISTING, THE CONTRACTOR IS RESPONSIBLE FOR SURVEYING ANY DISTURBED ASSETS TO THE EXTENT REQUIRED FOR RESTORATION.

GENERAL HYDRAULIC NOTES

- ALL WORKS MUST BE CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF QUEANBEYAN PALERANG REGIONAL COUNCIL ENGINEERING DESIGN AND CONSTRUCTION SPECIFICATIONS (VERSION 1, DATED DECEMBER 2018). REFER TO THE SPECIFICATION FOR DETAILS.
- FOR TRENCHING, BEDDING AND BACKFILLING REQUIREMENTS FOR CONDUITS REFER TO RELEVANT DETAILS PROVIDED BY SERVICE AUTHORITIES.

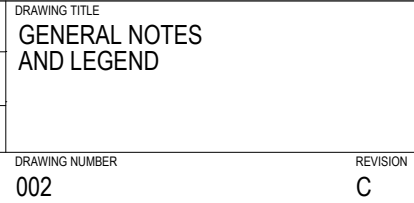
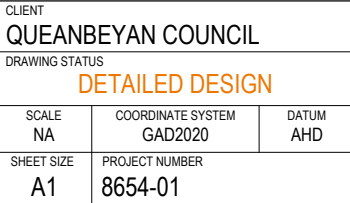
WATER NOTES

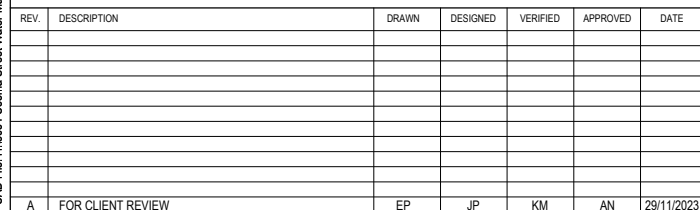
- DUCTILE IRON CEMENT LINED (DICL) PIPE PN16 SHALL BE USED FOR WATER MAIN UNLESS NOTED OTHERWISE AND COMPLY WITH AS2280-1991.
- WATER MAINS AND SERVICES SHALL BE CONSTRUCTED IN ACCORDANCE WITH QPRC DEVELOPMENT DESIGN SPECIFICATION, QPRC DEVELOPMENT CONSTRUCTION SPECIFICATION & WSA 03-2011 VERSION 3.1 WATER SUPPLY CODE OF AUSTRALIA.
- ANGLES OF DICL BENDS SHALL BE THE NEAREST AVAILABLE. THE CONTRACTOR SHALL, WITHOUT EXTRA COST, EITHER ADAPT THE BEND TO PROVIDE THE REQUIRED ANGLE OR LAY THE ADJACENT SECTIONS OF THE MAIN SO THAT THEY INTERSECT AT THE BEND ANGLE.
- ALL CONNECTIONS TO LIVE WATER SUPPLY MAINS SHALL BE MADE BY THE CONTRACTOR UNDER THE SUPERVISION OF QPRC.
- WHERE WATER FITTINGS ARE IMMEDIATELY ADJACENT TO EACH OTHER THE FITTINGS SHALL BE BOLTED TOGETHER WITH FLANGED JOINTS.
- SLUICE VALVES WHERE ADJACENT TO TEES, SHALL BE FLANGED TO THE TEE. WHERE THIS OCCURS THE IN-LINE THRUST BLOCK IS NOT REQUIRED. SLUICE VALVES SHALL BE LOCATED BEHIND KERBS (AND NOT IN PAVEMENTS AS SOMETIMES NOTIONALLY INDICATED ON PLANS).
- FOR WATER PIPE GRADES ≥5% CONSTRUCT TRENCH STOPS. FOR WATER PIPE GRADES ≥15% CONSTRUCT CONCRETE BULKHEADS IN ACCORDANCE WITH QPRC DEVELOPMENT CONSTRUCTION SPECIFICATION C401.14
- CURVED PIPES TO BE FORMED USING EVENLY SPACED JOINT DEFLECTIONS TO THE MANUFACTURES INSTALLATION LIMITS.
- WHERE JOINT TAPING IS SPECIFIED APPLY SEALANT TAPE TO WSA PS335 TO NEAREST 2 JOINTS EACH UPSTREAM AND DOWNSTREAM OF SEWER AND STORMWATER CROSSING
- WHERE EUH COATING IS SPECIFIED APPLY EUH HIGH PERFORMANCE ULTRA-HIGH BUILD SOLVENT-FREE EPOXY AND ELASTOMERIC POLYURETHANE IMMERSION-GRADE COATING SYSTEM TO WATER MAIN MIN 5M BEYOND EITHER SIDE OF SEWER CROSSING
- ALL PROPERTY CONNECTIONS TO BE DN25 HDPE PN16. PROPERTY CONNECTIONS GREATER THAN 16m IN LENGTH TO BE DN32.
- PROPERTY SERVICE CONNECTIONS ARE TO BE WSAA APPROVED PRETAPPED CONNECTORS OR TAPPING BANDS.
- RESTRAINED JOINTS SUCH AS TYTON LOK GASKET JOINTING SYSTEMS ARE PERMITTED TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURES SPECIFICATIONS, LENGTH DESIGNATION AND DETAILS. NOTE THE REQUIREMENT FOR PN35 PIPE IN THESE CASES.
- ALL LOW POINTS IN WATER MAIN ARE TO UTILISE COARSE WASHED RIVER SAND COMPLYING WITH THE SPECIFICATION AS BEDDING.

REDUNDANT WATER INFRASTRUCTURE

- TO ENSURE THAT REDUNDANT INFRASTRUCTURE, THE LOCATION OF EXISTING VALVE AND HYDRANT SURFACE MARKERS SHALL BE SURVEYED AND SUBMITTED AS PART OF WORKS-AS-EXECUTED INFORMATION
- EXISTING HYDRANTS SHALL BE REMOVED AND THE TEE BLANKED OFF.
- VALVE SPINDLES SHALL BE REMOVED FROM THE EXISTING VALVES.
- VALVE AND HYDRANT SURROUNDS SHALL BE REMOVED AND BACKFILLED TO MATCH EXISTING AND MAKE GOOD.
- REMOVE ALL REDUNDANT FIXTURE MARKINGS FROM VALVES AND HYDRANTS INCLUDING RRPM ROAD MARKINGS AND KERB PLATES

REV.	DESCRIPTION	DRAWN	DESIGNED	VERIFIED	APPROVED	DATE
C	ISSUED FOR TENDER	EP	JP	KM	AN	17/04/2023
B	RESPONSE TO COMMENTS	DN	JP	KM	KM	13/02/2023
A	FOR CLIENT REVIEW	PGN	JP	TN	KM	20/01/2023





CLIENT	QUEANBEYAN COUNCIL
DRAWING STATUS	ISSUE FOR TENDER

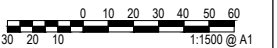
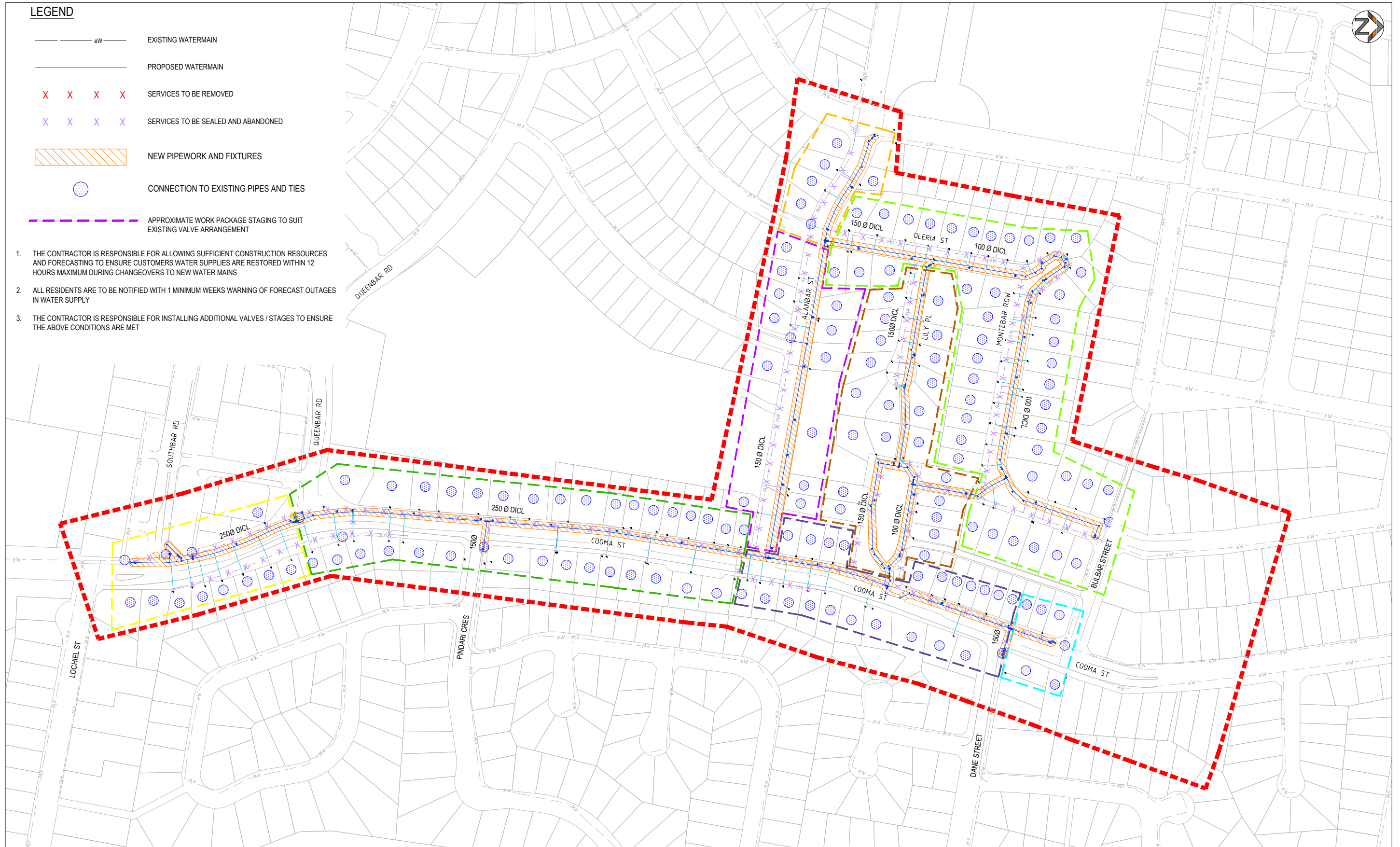
DRAWING TITLE
SHEET LAYOUT PLAN

REVISION

LEGEND

- eW — EXISTING WATERMAIN
- PROPOSED WATERMAIN
- X X X X SERVICES TO BE REMOVED
- X X X X SERVICES TO BE SEALED AND ABANDONED
- NEW PIPEWORK AND FIXTURES
- CONNECTION TO EXISTING PIPES AND TIES
- APPROXIMATE WORK PACKAGE STAGING TO SUIT EXISTING VALVE ARRANGEMENT

1. THE CONTRACTOR IS RESPONSIBLE FOR ALLOWING SUFFICIENT CONSTRUCTION RESOURCES AND FORECASTING TO ENSURE CUSTOMERS WATER SUPPLIES ARE RESTORED WITHIN 12 HOURS MAXIMUM DURING CHANGEOVERS TO NEW WATER MAINS
2. ALL RESIDENTS ARE TO BE NOTIFIED WITH 1 MINIMUM WEEKS WARNING OF FORECAST OUTAGES IN WATER SUPPLY
3. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING ADDITIONAL VALVES / STAGES TO ENSURE THE ABOVE CONDITIONS ARE MET



REV.	DESCRIPTION	DRAWN	DESIGNED	VERIFIED	APPROVED	DATE
B	DESIGN UPDATED	EP	DN	KM	AN	7/12/2023
A	FOR CLIENT REVIEW	EP	JP	KM	AN	29/11/2023

CLIENT



PROJECT TITLE

COOMA STREET
WATER MAIN
REPLACEMENT

CLIENT

QUEANBEYAN COUNCIL
DRAWING STATUS
ISSUE FOR TENDER

SCALE
AS SHOWN

COORDINATE SYSTEM
GDA2020

DATUM
AHD

SHEET SIZE
A1

PROJECT NUMBER
8654-01

DRAWING TITLE

STAGING PLAN

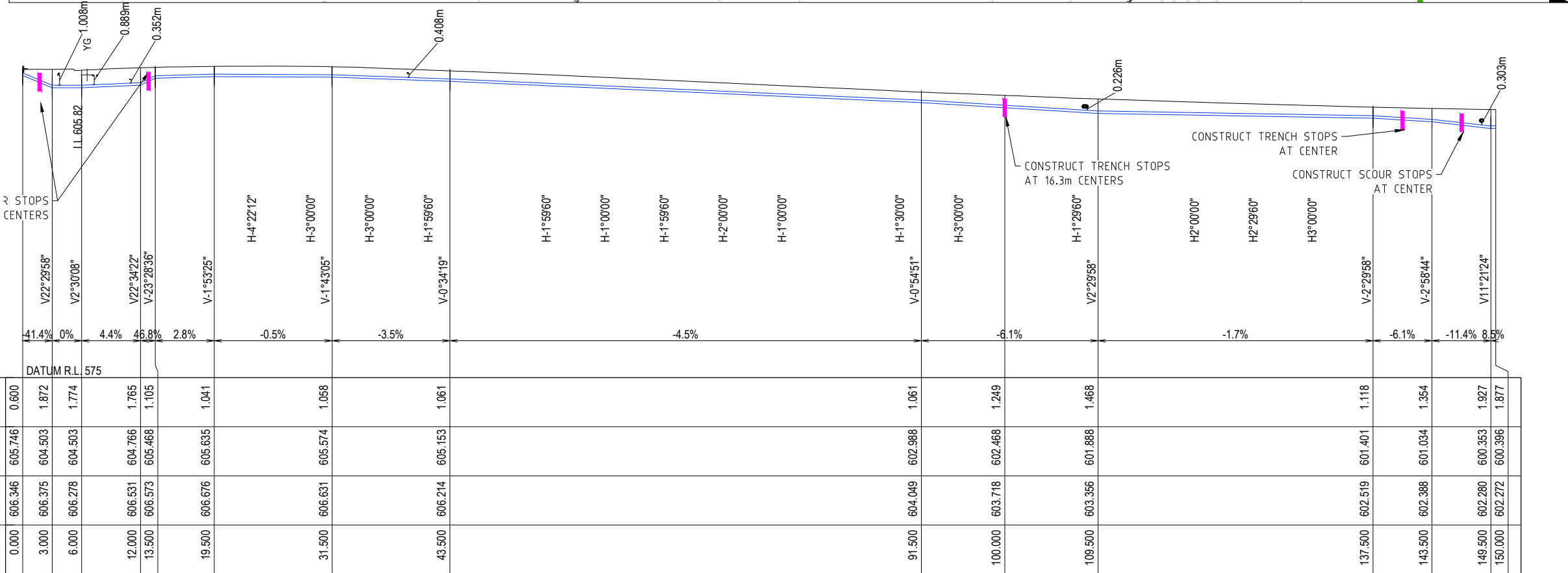
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REVISION
B

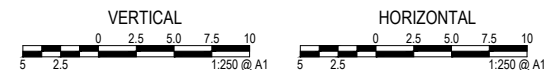
STAGING BOUNDARY

- ① CONNECT TO EXISTING WATERMAIN (REFER TO DETAILS).
- ② INSTALL STOP VALVES.
- ③ INSTALL HYDRANT OFFSET WITH WASHOUT BEND BEHIND KERB.
- ④ INSTALL 11.25° BEND & THRUST BLOCK.
- ⑤ INSTALL 22.25° BEND & THRUST BLOCK.
- ⑥ INSTALL 45° BEND & THRUST BLOCK.
- ⑦ INSTALL 90° BEND & THRUST BLOCK.
- ⑧ INSTALL TEE & THRUST BLOCK.
- ⑨ INSTALL REDUCER
- ⑩ CONNECT WATER TIE TO WATER MAIN.
- ⑪ MODIFY EXISTING SERVICE AND CONNECT TO NEW MAIN.
UNDERBORE UNDER ROAD PAVEMENT EXCAVATE
CONNECTIONS IN VERGE.
- ⑫ CONSTRUCT CONCRETE ENCASING
- ⑬ CONSTRUCT TRENCH/SCOUR STOPS
- ⑭ APPLY SEALANT TAPE TO JOINTS U/S AND D/S OF SEWER
- ⑮ APPLY EUH ELASTOMERIC POLYURETHANE COATING
- ⑯ INSTALL INLINE HYDRANT.
- Ⓐ ABANDON EXISTING WATER MAIN.

REV.	DESCRIPTION	DRAWN	DESIGNED	VERIFIED	APPROVED	DATE
B	DESIGN UPDATED	EP	DN	KM	AN	7/12/2023
A	EOR CLIENT REVIEW	EP	JP	KM	AN	29/11/2023



COOMA ST MAIN



PROJECT TITLE COOMA STREET WATER MAIN REPLACEMENT	CLIENT QUEANBEYAN COUNCIL			DRAWING TITLE CONSTRUCTION DETAILS PLAN SHEET 01 OF 20	
	DRAWING STATUS ISSUE FOR TENDER				
	SCALE AS SHOWN	COORDINATE SYSTEM GDA2020	DATUM AHD		
	SHEET SIZE A1	PROJECT NUMBER 8654-01		DRAWING NUMBER 010	REVISION B

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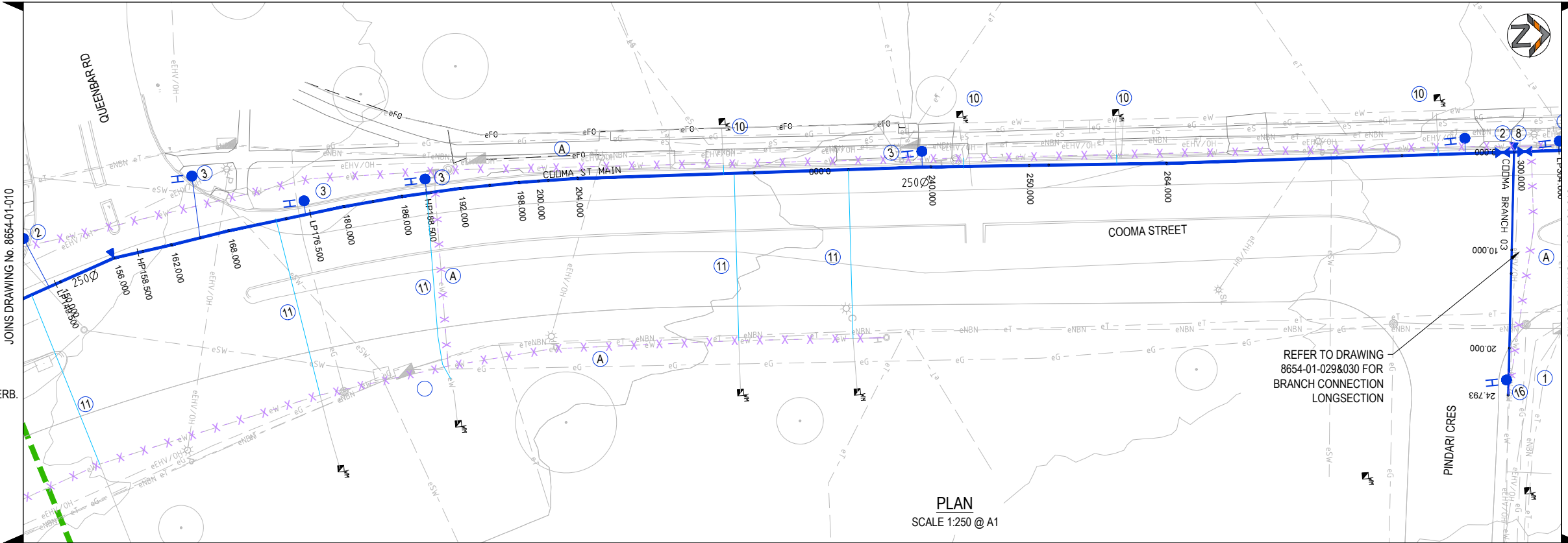
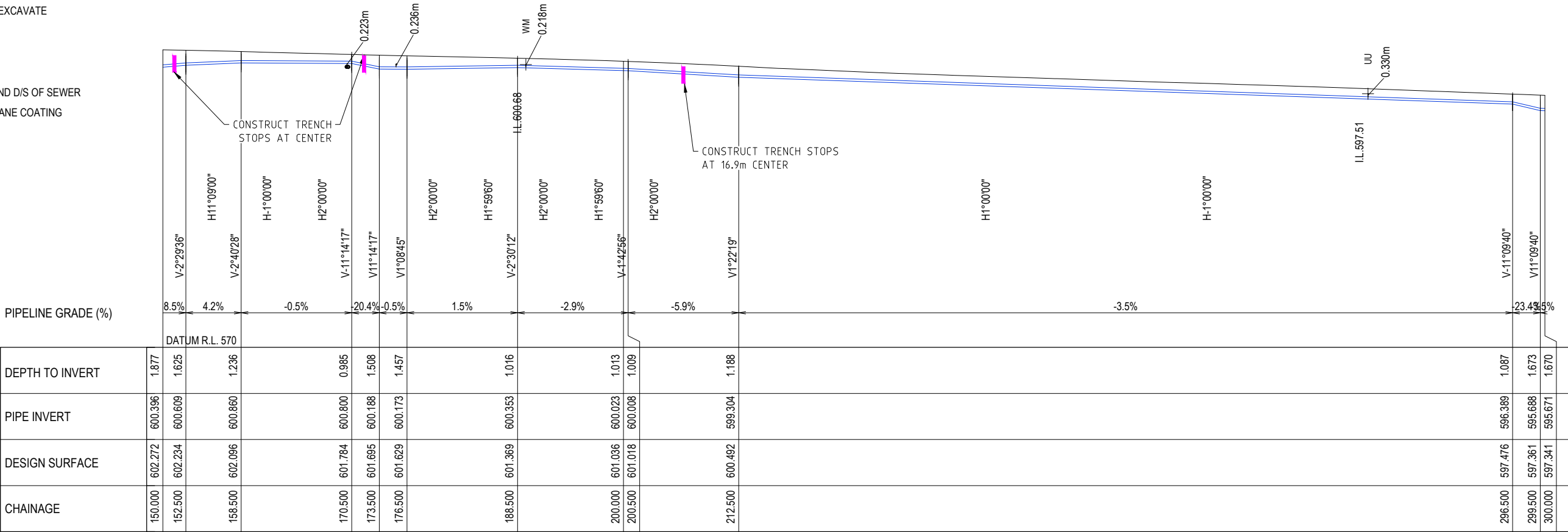
WARNING:
OVERHEAD ELECTRICITY IN THIS AREA.
ASBESTOS PIPES

STAGING BOUNDARY

NOTES ON WATERMAIN:

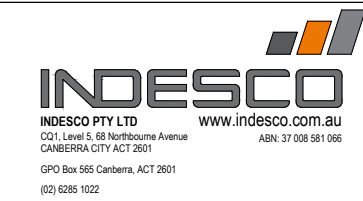
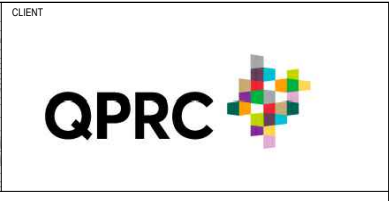
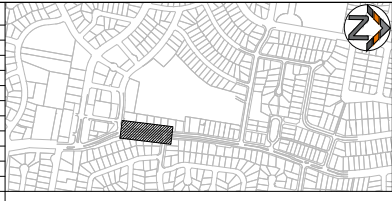
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- INSTALL TEE & THRUST BLOCK.
- INSTALL REDUCER
- CONNECT WATER TIE TO WATER MAIN.
- MODIFY EXISTING SERVICE AND CONNECT TO NEW MAIN.
- UNDERBORE UNDER ROAD PAVEMENT EXCAVATE CONNECTIONS IN VERGE.
- CONSTRUCT CONCRETE ENCASING
- CONSTRUCT TRENCH/SCOUR STOPS
- APPLY SEALANT TAPE TO JOINTS U/S AND D/S OF SEWER
- APPLY EUH ELASTOMERIC POLYURETHANE COATING
- INSTALL INLINE HYDRANT.
- ABANDON EXISTING WATER MAIN.

TN	COMMS	TELEPHONE
OZ	COMMS	OPTIC FIBRE - DIGITIZED
OU	COMMS	OPTIC FIBRE - UNKNOWN
EU	ELECTRIC	LINE UNDERGROUND
EY	ELECTRIC	HOUSE CONNECTION
UE	ELECTRIC	MAJOR TRANSMISSION
LG	GAS	MAIN-LOW-PRESSURE
NG	GAS	MAIN(NYLON)
UP	MISC	UNIDENTIFIED PIPELINE
YG	GAS	POLYETHYLENE MAIN(DIGITIZED)
ZG	GAS	MAIN(DIGITIZED)
SM	SEWER	MAIN
SZ	SEWER	MAIN-DIGITIZED
D0	STORMWATER	BOX CULVERT (H1050)
DZ	STORMWATER	DIGITIZED
U2	STORMWATER	PIPE (300)
U3	STORMWATER	PIPE (375)
U5	STORMWATER	PIPE(525)
U9	STORMWATER	PIPE(900)
UU	STORMWATER	PIPE (UNSPECIFIED)
V1	STORMWATER	PIPE (1050)
V3	STORMWATER	PIPE(1350)
WM	WATER	MAIN
WY	WATER	HOUSE CONNECTION
WZ	WATER	MAIN-DIGITIZED



CAD File: H:\8654 Cooma Street Water Main Replacement Design and Survey\20 Drawings\20.1 Civil\01 Substage\101 Current Drawings\8654-01-010 CON.dwg

REV.	DESCRIPTION	DRAWN	DESIGNED	VERIFIED	APPROVED	DATE
B	DESIGN UPDATED	EP	DN	KM	AN	7/12/2023
A	FOR CLIENT REVIEW	EP	JP	KM	AN	29/11/2023



PROJECT TITLE
COOMA STREET
WATER MAIN
REPLACEMENT

CLIENT
QUEANBEYAN COUNCIL
DRAWING STATUS
ISSUE FOR TENDER
SCALE AS SHOWN
COORDINATE SYSTEM
GDA2020
DATUM
AHD
SHEET SIZE
A1
PROJECT NUMBER
8654-01

DRAWING TITLE
CONSTRUCTION DETAILS PLAN
SHEET 02 OF 20
DRAWING NUMBER
011
REVISION
B

WARNING:
OVERHEAD ELECTRICITY IN THIS AREA.
ASBESTOS PIPES

STAGING BOUNDARY

NOTES ON WATERMAIN:

- 1 CONNECT TO EXISTING WATERMAIN (REFER TO DETAILS).
- 2 INSTALL STOP VALVES.
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- 10 CONNECT WATER TIE TO WATER MAIN.
- 11 MODIFY EXISTING SERVICE AND CONNECT TO NEW MAIN.
UNDERBORE UNDER ROAD PAVEMENT EXCAVATE
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- 12 CONSTRUCT CONCRETE ENCASING
- 13 CONSTRUCT TRENCH/SCOUR STOPS
- 14 APPLY SEALANT TAPE TO JOINTS U/S AND D/S OF SEWER
- 15 APPLY EUH ELASTOMERIC POLYURETHANE COATING
- 16 INSTALL INLINE HYDRANT.
- A ABANDON EXISTING WATER MAIN.

TN	COMMS	TELEPHONE
OZ	COMMS	OPTIC FIBRE - DIGITIZED
OU	COMMS	OPTIC FIBRE - UNKNOWN
EU	ELECTRIC	LINE UNDERGROUND
EY	ELECTRIC	HOUSE CONNECTION
UE	ELECTRIC	MAJOR TRANSMISSION
LG	GAS	MAIN-LOW-PRESSUR E
NG	GAS	MAIN(NYLON)
UP	MISC	UNIDENTIFIED PIPELINE
YG	GAS	POLYETHELENE MAIN(DIGITIZED)
ZG	GAS	MAIN(DIGITIZED)
SM	SEWER	MAIN
SZ	SEWER	MAIN-DIGITIZED
D0	STORMWATER	BOX CULVERT (H1050)
DZ	STORMWATER	DIGITIZED
U2	STORMWATER	PIPE (300)
U3	STORMWATER	PIPE (375)
U5	STORMWATER	PIPE(525)
U9	STORMWATER	PIPE(900)
UU	STORMWATER	PIPE (UNSPECIFIED)
V1	STORMWATER	PIPE (1050)
V3	STORMWATER	PIPE(1350)
WM	WATER	MAIN
WY	WATER	HOUSE CONNECTION
WZ	WATER	MAIN-DIGITIZED

PIPELINE GRADE (%)

DEPTH TO INVERT	1.670	1.653	1.146	1.117								1.087			1.014		1.065
PIPE INVERT	595.671	595.532	595.943	595.526								592.022			590.366		589.728
DESIGN SURFACE	597.341	597.186	597.089	596.644								593.109			591.380		590.793
CHAINAGE	300.000	304.000	306.500	318.500								400.000			438.500		450.000

COOMA ST MAIN

REV.	DESCRIPTION	DRAWN	DESIGNED	VERIFIED	APPROVED	DATE
B	DESIGN UPDATED	EP	DN	KM	AN	7/12/2023
A	FOR CLIENT REVIEW	EP	JP	KM	AN	29/11/2023



PROJECT TITLE	COOMA STREET WATER MAIN REPLACEMENT
---------------	-------------------------------------

CLIENT	QUEANBEYAN COUNCIL
DRAWING STATUS	ISSUE FOR TENDER
SCALE AS SHOWN	COORDINATE SYSTEM GDA2020
SHEET SIZE	DATUM AHD
A1	PROJECT NUMBER 8654-01

DRAWING TITLE	CONSTRUCTION DETAILS PLAN SHEET 03 OF 20
DRAWING NUMBER	012
REVISION	B

STAGING BOUNDARY

- 1 CONNECT TO EXISTING WATERMAIN (REFER TO DETAILS).
- 2 INSTALL STOP VALVES.
- 3 INSTALL HYDRANT OFFSET WITH WASHOUT BEND BEHIND KERB.
- 4 INSTALL 11.25° BEND & THRUST BLOCK.
- 5 INSTALL 22.25° BEND & THRUST BLOCK.
- 6 INSTALL 45° BEND & THRUST BLOCK.
- 7 INSTALL 90° BEND & THRUST BLOCK.
- 8 INSTALL TEE & THRUST BLOCK.
- 9 INSTALL REDUCER
- 10 CONNECT WATER TIE TO WATER MAIN.
- 11 MODIFY EXISTING SERVICE AND CONNECT TO NEW MAIN.
UNDERBORE UNDER ROAD PAVEMENT EXCAVATE
CONNECTIONS IN VERGE.
- 12 CONSTRUCT CONCRETE ENCASING
- 13 CONSTRUCT TRENCH/SCOUR STOPS
- 14 APPLY SEALANT TAPE TO JOINTS U/S AND D/S OF SEWER
- 15 APPLY EUH ELASTOMERIC POLYURETHANE COATING
- 16 INSTALL INLINE HYDRANT.
- A ABANDON EXISTING WATER MAIN.

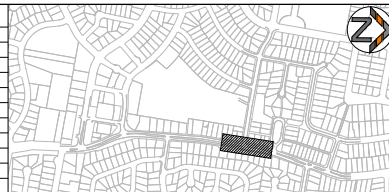
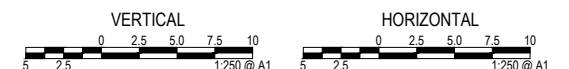
TN	COMMS	TELEPHONE
OZ	COMMS	OPTIC FIBRE - DIGITIZED
OU	COMMS	OPTIC FIBRE - UNKNOWN
EU	ELECTRIC	LINE UNDERGROUND
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REV.	DESCRIPTION	DRAWN	DESIGNED	VERIFIED	APPROVED	DATE
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DEPTH TO INVERT	1.065		1.124		1.354		1.117		1.149
PIPE INVERT	589.728		586.953		585.038		584.732		582.673
DESIGN SURFACE	590.793		588.077		586.392		585.850		583.822
CHAINAGE	450.000		500.000		534.500		546.500		600.000

COOMA ST MAIN



QPRC 


INDESCO
INDESCO PTY LTD www.indesco.com.au
CQ1, Level 5, 68 Northbourne Avenue
CANBERRA CITY ACT 2601
ABN: 37 008 581 066

GPO Box 565 Canberra, ACT 2601
(02) 6285 1022

PROJECT TITLE

COOMA STREET
WATER MAIN
REPLACEMENT

CLIENT	QUEANBEYAN COUNCIL
DRAWING STATUS	ISSUE FOR TENDER

DRAWING TITLE
CONSTRUCTION DETAILS PLAN
SHEET 04 OF 20

DRAWING NUMBER	REVISION
013	B

STAGING BOUNDARY

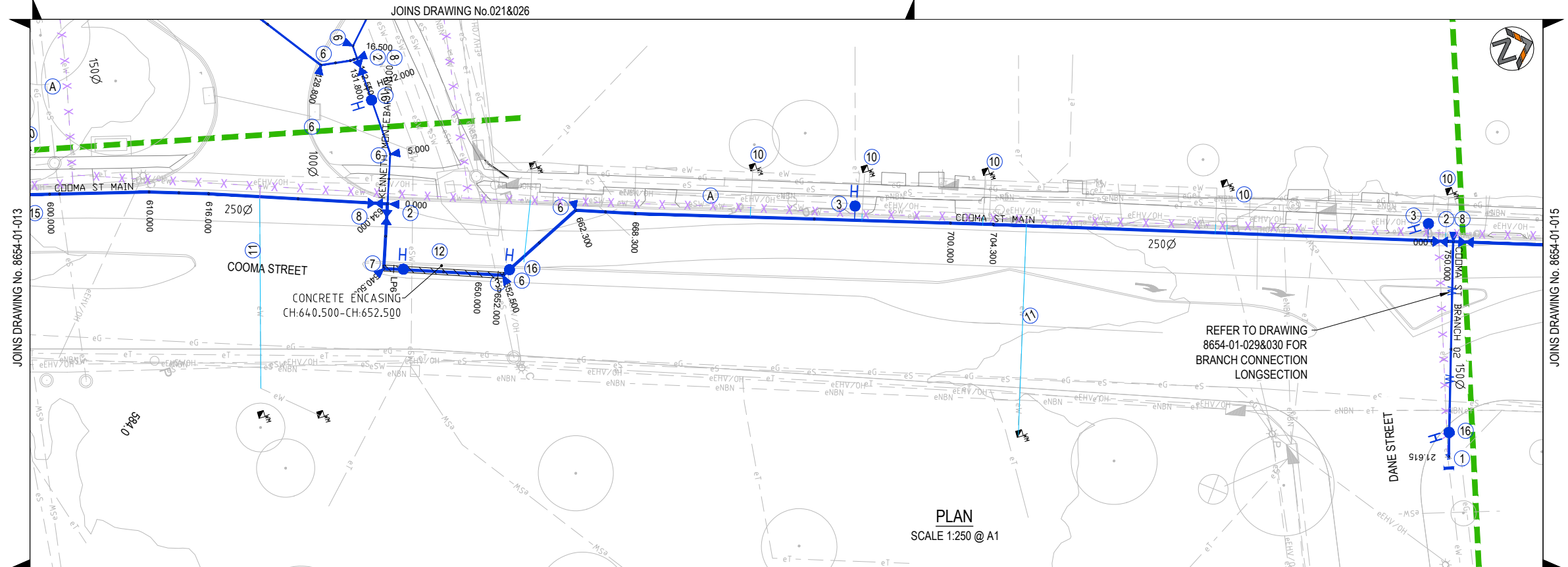
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- ⑭ APPLY SEALANT TAPE TO JOINTS U/S AND D/S OF SEWER
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		DATE: 05/05/2023													
DEPTH TO INVERT	1.149	1.228		1.154	2.391	2.254	1.342	1.008	1.028	1.046	1.039				
PIPE INVERT	582.673	582.422		582.047	580.990	581.042	581.891	581.767	581.180	580.985	580.441				
DESIGN SURFACE	583.822	583.651		583.201	583.381	583.296	583.233	582.775	582.209	582.031	581.481				
CHAINAGE	600.000	606.500		636.500	641.500	647.500	652.000	664.000	700.000	712.000	750.000				

COOMA ST MAIN

JOINS DRAWING No.021&026



REFER TO DRAWING
8654-01-029&030 FOR
BRANCH CONNECTION
LONGSECTION

PLAN
SCALE 1:250 @ A1

REMOVE EXISTING BOX CULVERT AND BASE SLAB TO ALLOW TRENCH CONSTRUCTION BELOW CULVERT. REFER DRAWING 8654-01-034 FOR WATER MAIN PROTECTION DETAIL BELOW CULVERT.

- CONSTRUCT SCOUR STOPS
AT CENTER

VERTICAL



HORIZONTAL



5 2.5 0 2.5 5.0 7.5 10 1:250 @ A1

5 2.5 0 2.5 5.0 7.5 10 1:250 @ A1

PROJECT TITLE

COOMA STREET
WATER MAIN
REPLACEMENT

CLIENT	QUEANBEYAN COUNCIL
DRAWING STATUS	ISSUE FOR TENDER

DRAWING TITLE
CONSTRUCTION DETAILS PLAN
SHEET 05 OF 20

SCALE AS SHOWN	COORDINATE SYSTEM GDA2020
SHEET SIZE A1	PROJECT NUMBER 8654-01

DRAWING NUMBER	REVISION
014	B

STAGING BOUNDARY 

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NG	GAS	MAIN(NYLON)
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ZG	GAS	MAIN(DIGITIZED)
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SZ	SEWER	MAIN-DIGITIZED
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REV.	DESCRIPTION	DRAWN	DESIGNED	VERIFIED	APPROVED	DATE
B A	DESIGN UPDATED FOR CLIENT REVIEW	EP EP	DN JP	KM KM	AN AN	7/12/2023 29/11/2023



CLIENT	
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QPRC 


INDESCO
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CQ1, Level 5, 68 Northbourne Avenue
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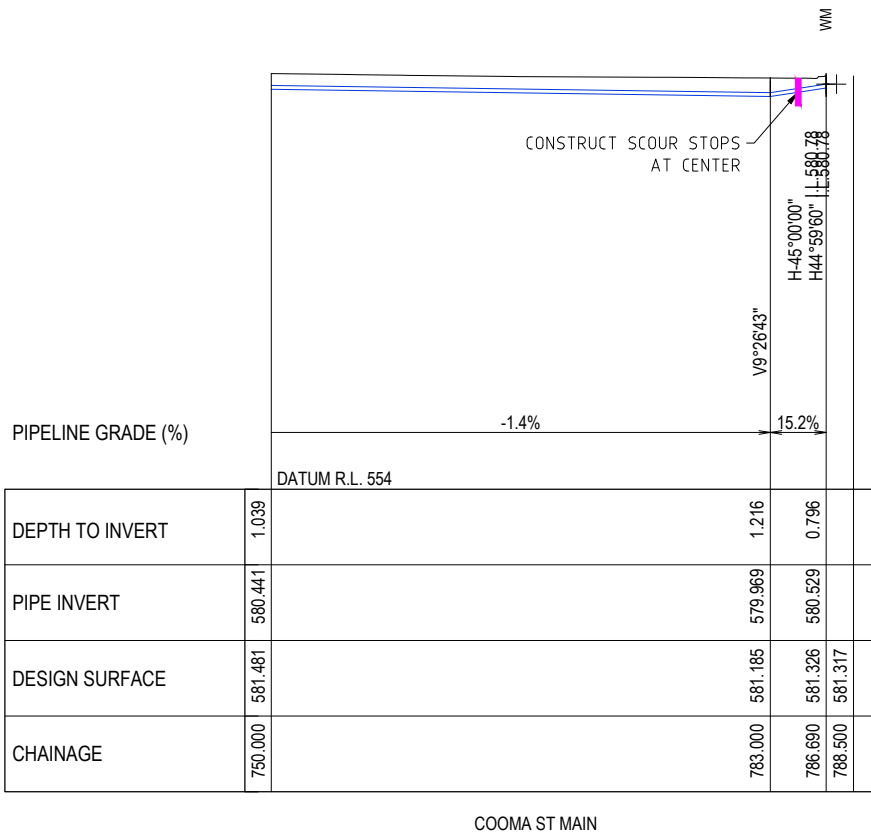
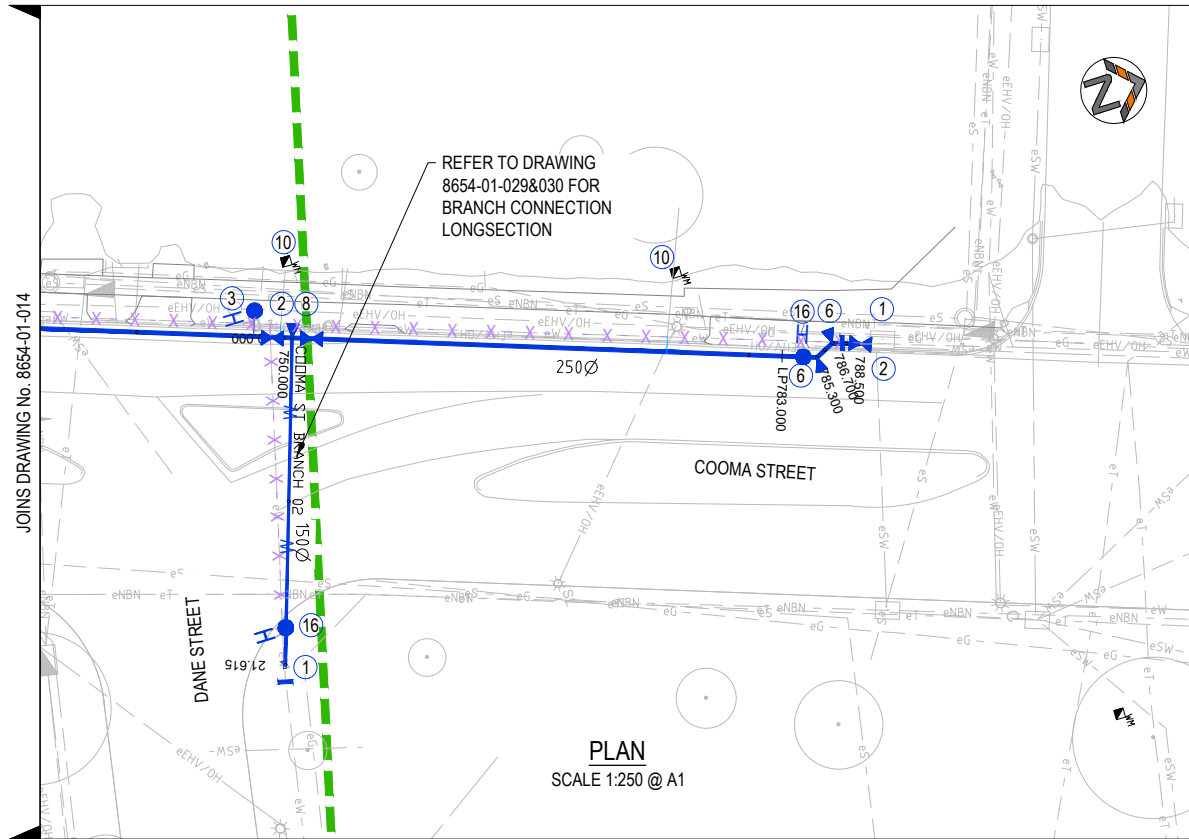
PROJECT TITLE

COOMA STREET
WATER MAIN
REPLACEMENT

CLIENT		
QUEANBEYAN COUNCIL		
DRAWING STATUS		
ISSUE FOR TENDER		
SCALE AS SHOWN	COORDINATE SYSTEM GDA2020	DATUM AHD
SHEET SIZE A1	PROJECT NUMBER 8654-01	

DRAWING TITLE	CONSTRUCTION DETAILS PLAN SHEET 06 OF 20
---------------	---

DRAWING NUMBER	REVISION
015	B



VERTICAL

5 2.5 1:250 @ A1

HORIZONTAL

5 2.5 0 2.5 5.0 7.5 10

1:250 @ A1

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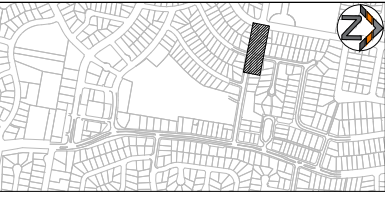
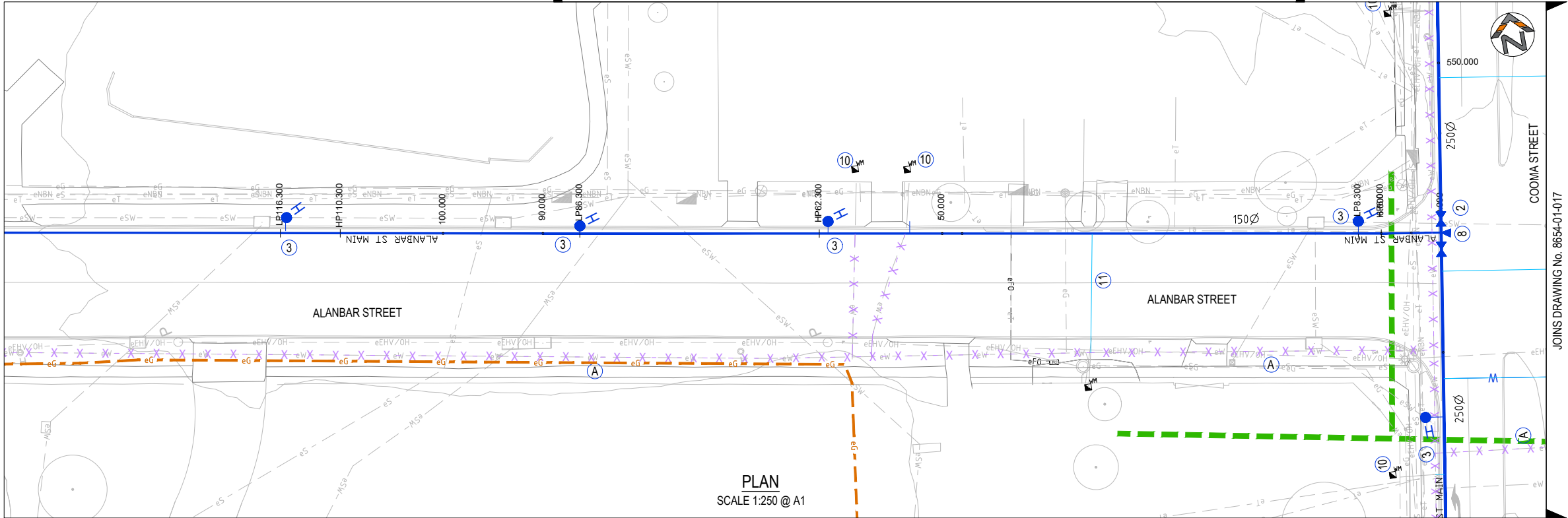
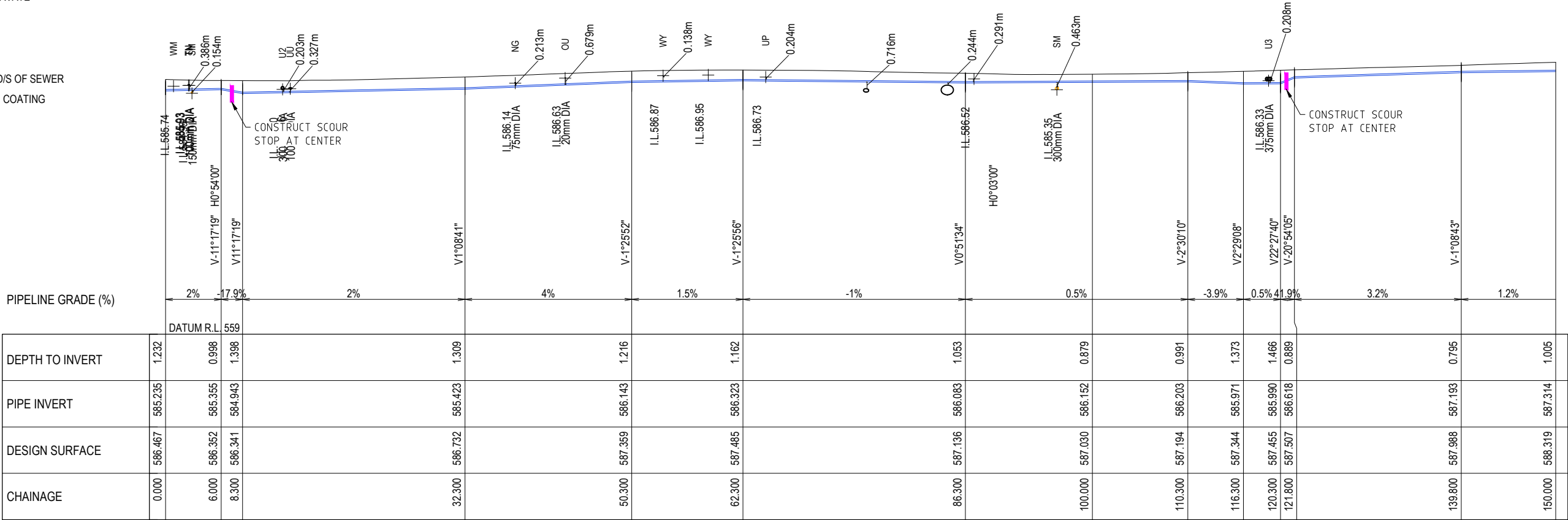
WARNING:
OVERHEAD ELECTRICITY IN THIS AREA.
ASBESTOS PIPES

STAGING BOUNDARY

NOTES ON WATERMAIN:

- CONNECT TO EXISTING WATERMAIN (REFER TO DETAILS).
- INSTALL STOP VALVES.
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PROJECT TITLE
COOMA STREET
WATER MAIN
REPLACEMENT

CLIENT
QUEANBEYAN COUNCIL
DRAWING STATUS
ISSUE FOR TENDER
SCALE
AS SHOWN
COORDINATE SYSTEM
GDA2020
DATUM
AHD
SHEET SIZE
A1
PROJECT NUMBER
8654-01

DRAWING TITLE
CONSTRUCTION DETAILS PLAN
SHEET 07 OF 20

DRAWING NUMBER
016
REVISION
B

WARNING:
OVERHEAD ELECTRICITY IN THIS AREA.
ASBESTOS PIPES

STAGING BOUNDARY

NOTES ON WATERMAIN:

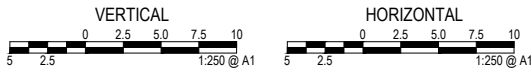
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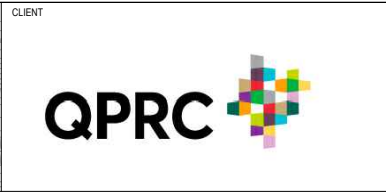
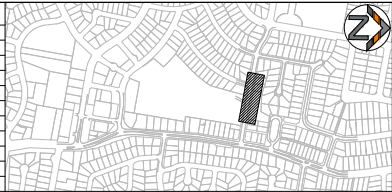
PIPELINE GRADE (%)

DEPTH TO INVERT	1.005	1.043	1.536	1.594	1.115	1.385	1.020	0.807	0.851	2.004	2.249	1.088	0.873	0.774	0.883	0.879
PIPE INVERT	587.314	587.348	587.094	587.129	587.678	587.909	588.733	589.177	590.450	589.509	589.621	590.920	591.495	591.927	592.670	592.783
DESIGN SURFACE	588.319	588.391	588.630	588.724	588.793	589.293	589.753	589.983	591.301	591.513	591.870	592.008	592.368	592.701	593.553	593.662
CHAINAGE	150.000	152.800	160.800	163.800	166.400	184.400	200.000	208.400	254.150	259.650	265.650	268.650	280.650	286.650	298.650	300.000

ALANBAR ST MAIN



REV.	DESCRIPTION	DRAWN	DESIGNED	VERIFIED	APPROVED	DATE
B	DESIGN UPDATED	EP	DN	KM	AN	7/12/2023
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PROJECT TITLE
**COOMA STREET
WATER MAIN
REPLACEMENT**

CLIENT
QUEANBEYAN COUNCIL

DRAWING STATUS
ISSUE FOR TENDER

SCALE
AS SHOWN

COORDINATE SYSTEM
GDA2020

DATUM
AHD

SHEET SIZE
A1

PROJECT NUMBER
8654-01

DRAWING TITLE
**CONSTRUCTION DETAILS PLAN
SHEET 08 OF 20**

DRAWING NUMBER
017

REVISION
B

WARNING:
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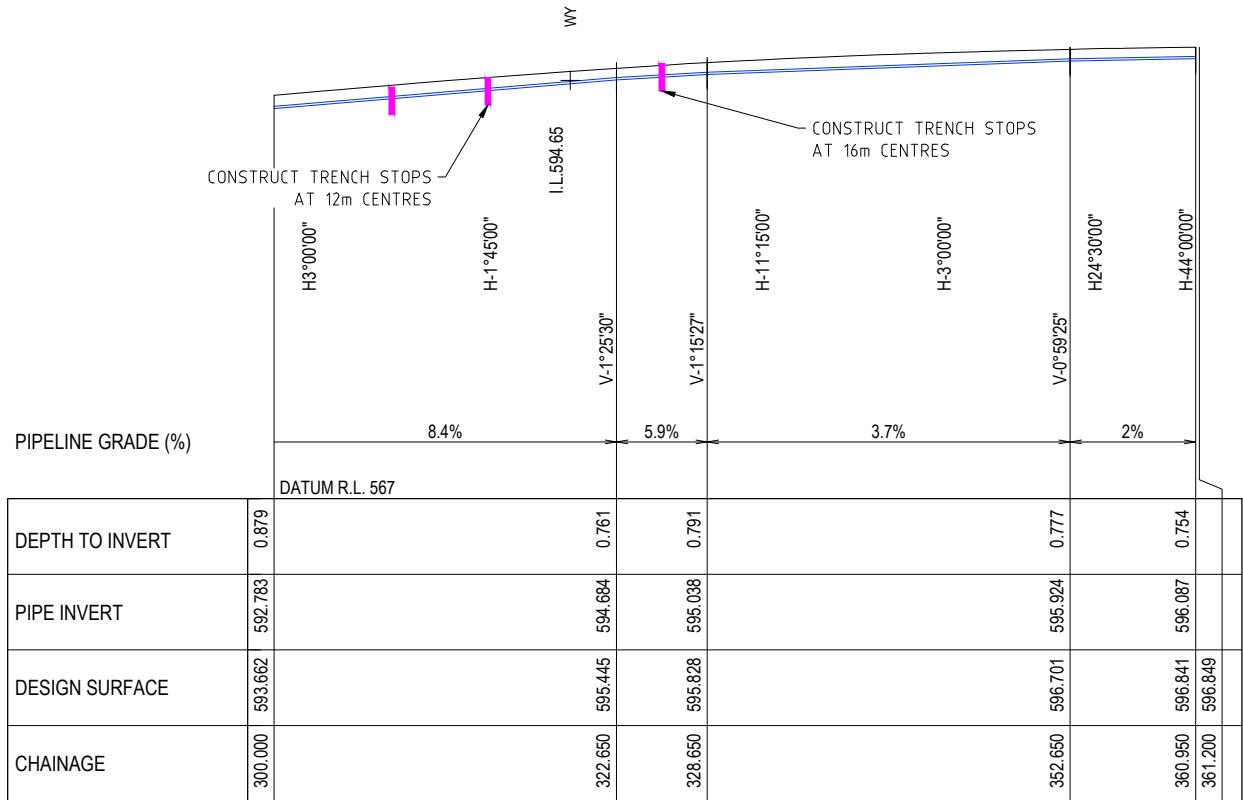
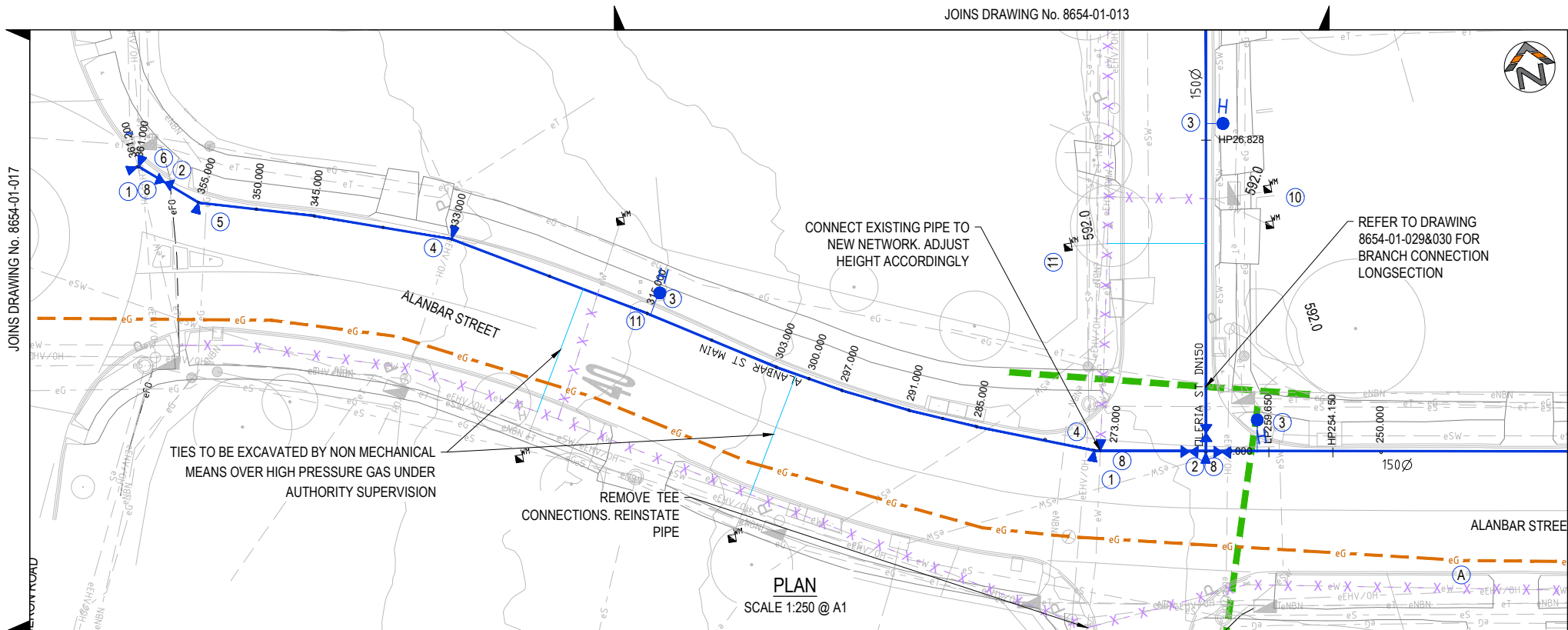
STAGING BOUNDARY

NOTES ON WATERMAIN:

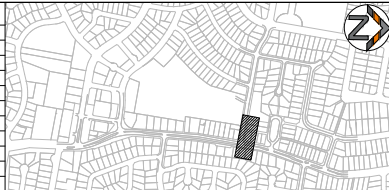
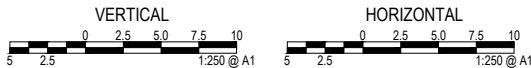
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ALANBAR ST MAIN



PROJECT TITLE
**COOMA STREET
WATER MAIN
REPLACEMENT**

CLIENT QUEANBEYAN COUNCIL		
DRAWING STATUS ISSUE FOR TENDER		
SCALE AS SHOWN	COORDINATE SYSTEM GDA2020	DATUM AHD
SHEET SIZE A1	PROJECT NUMBER 8654-01	DRAWING NUMBER 018

DRAWING TITLE
**CONSTRUCTION DETAILS PLAN
SHEET 09 OF 20**

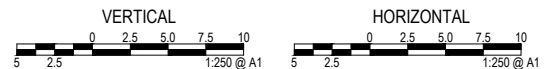
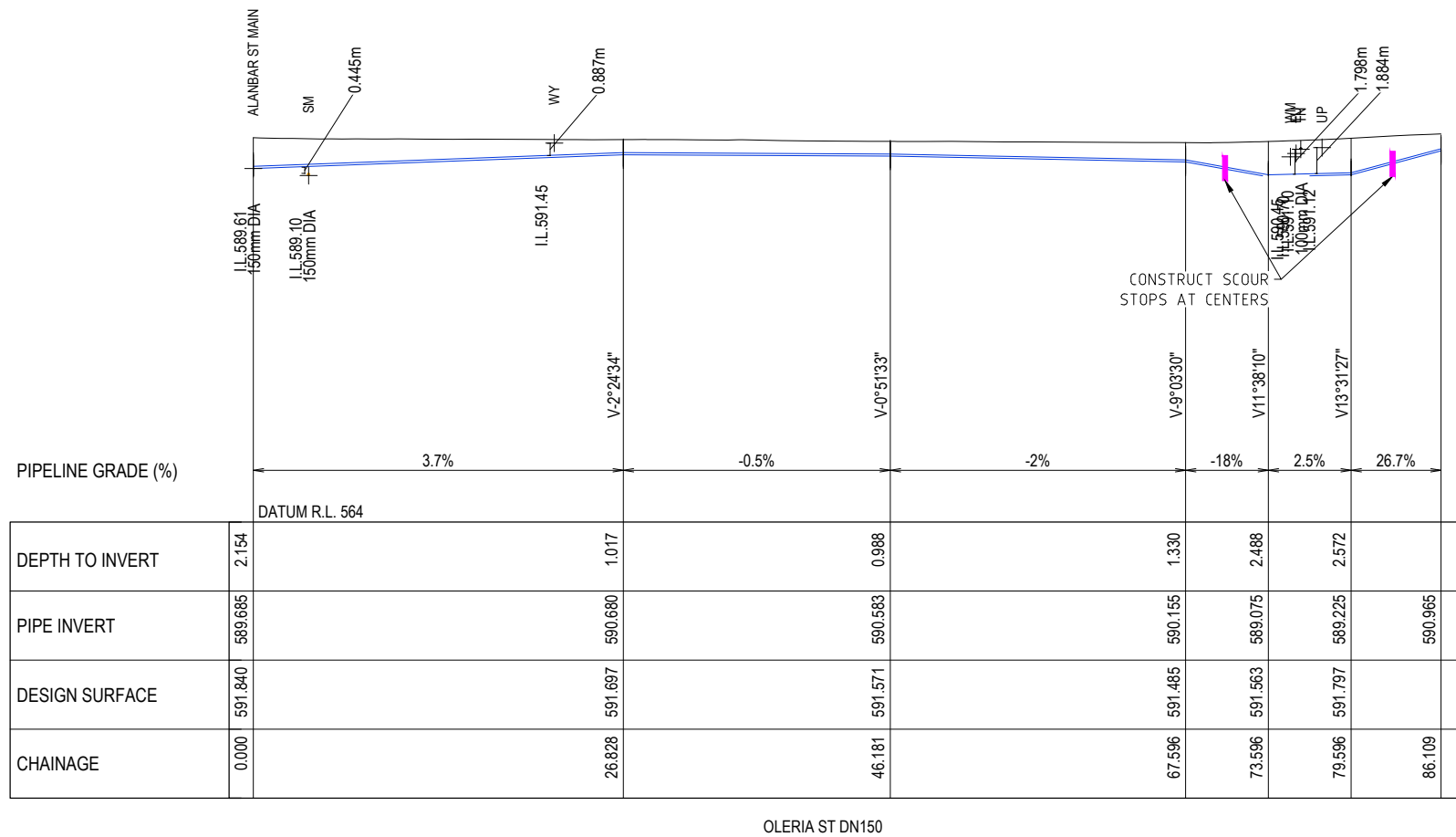
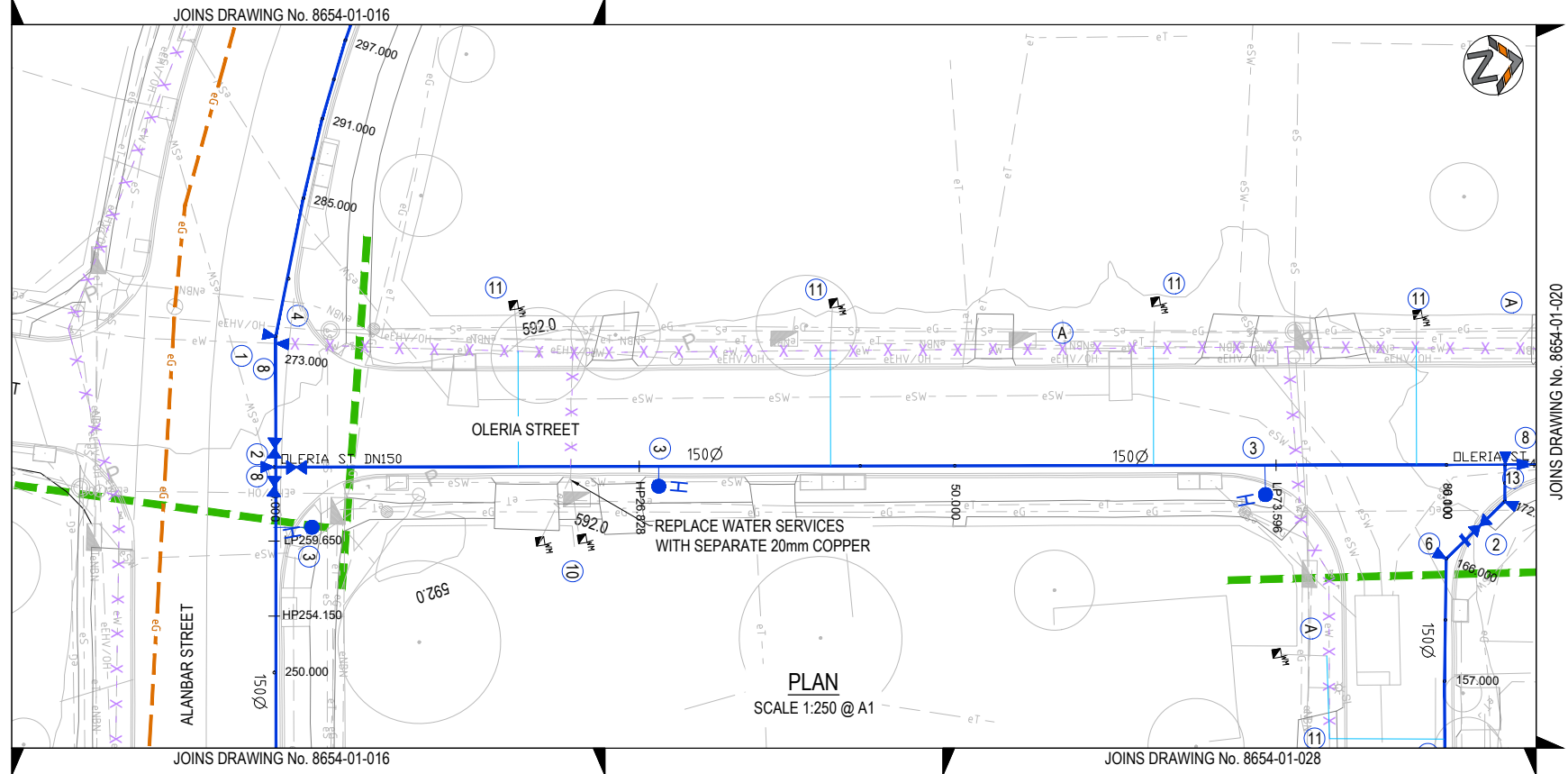
REVISION B

STAGING BOUNDARY 

- ① CONNECT TO EXISTING WATERMAIN (REFER TO DETAILS).
- ② INSTALL STOP VALVES.
- ③ INSTALL HYDRANT OFFSET WITH WASHOUT BEND BEHIND KERB.
- ④ INSTALL 11.25° BEND & THRUST BLOCK.
- ⑤ INSTALL 22.25° BEND & THRUST BLOCK.
- ⑥ INSTALL 45° BEND & THRUST BLOCK.
- ⑦ INSTALL 90° BEND & THRUST BLOCK.
- ⑧ INSTALL TEE & THRUST BLOCK.
- ⑨ INSTALL REDUCER
- ⑩ CONNECT WATER TIE TO WATER MAIN.
- ⑪ MODIFY EXISTING SERVICE AND CONNECT TO NEW MAIN.
UNDERBORE UNDER ROAD PAVEMENT EXCAVATE
CONNECTIONS IN VERGE.
- ⑫ CONSTRUCT CONCRETE ENCASING
- ⑬ CONSTRUCT TRENCH/SCOUR STOPS
- ⑭ APPLY SEALANT TAPE TO JOINTS U/S AND D/S OF SEWER
- ⑮ APPLY EUH ELASTOMERIC POLYURETHANE COATING
- ⑯ INSTALL INLINE HYDRANT.
- ⑰ ABANDON EXISTING WATER MAIN.

TN	COMMS	TELEPHONE
OZ	COMMS	OPTIC FIBRE - DIGITIZED
OU	COMMS	OPTIC FIBRE - UNKNOWN
EU	ELECTRIC	LINE UNDERGROUND
EY	ELECTRIC	HOUSE CONNECTION
UE	ELECTRIC	MAJOR TRANSMISSION
LG	GAS	MAIN-LOW-PRESSURE
NG	GAS	MAIN(NYLON)
UP	MISC	UNIDENTIFIED PIPELINE
YG	GAS	POLYETHYLENE
ZG	GAS	MAIN(DIGITIZED)
SM	SEWER	MAIN
SZ	SEWER	MAIN-DIGITIZED
D0	STORMWATER	BOX CULVERT (H1950)
DZ	STORMWATER	DIGITIZED
U2	STORMWATER	PIPE (300)
U3	STORMWATER	PIPE (375)
U5	STORMWATER	PIPE(525)
U9	STORMWATER	PIPE(900)
UU	STORMWATER	PIPE (UNSPECIFIED)
V1	STORMWATER	PIPE (1050)
V3	STORMWATER	PIPE(1350)
WM	WATER	MAIN
WY	WATER	HOUSE CONNECTION
WZ	WATER	MAIN-DIGITIZED

REV.	DESCRIPTION	DRAWN	DESIGNED	VERIFIED	APPROVED	DATE
B A	DESIGN UPDATED FOR CLIENT REVIEW	EP EP	DN JP	KM KM	AN AN	7/12/2023 29/11/2023



CLIENT QUEANBEYAN COUNCIL			DRAWING TITLE CONSTRUCTION DETAILS PLAN SHEET 10 OF 20
DRAWING STATUS ISSUE FOR TENDER			
SCALE AS SHOWN	COORDINATE SYSTEM GDA2020	DATUM AHD	
SHEET SIZE A1	PROJECT NUMBER 8654-01	DRAWING NUMBER 019	REVISION B

WARNING:
OVERHEAD ELECTRICITY IN THIS AREA.
ASBESTOS PIPES

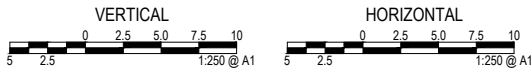
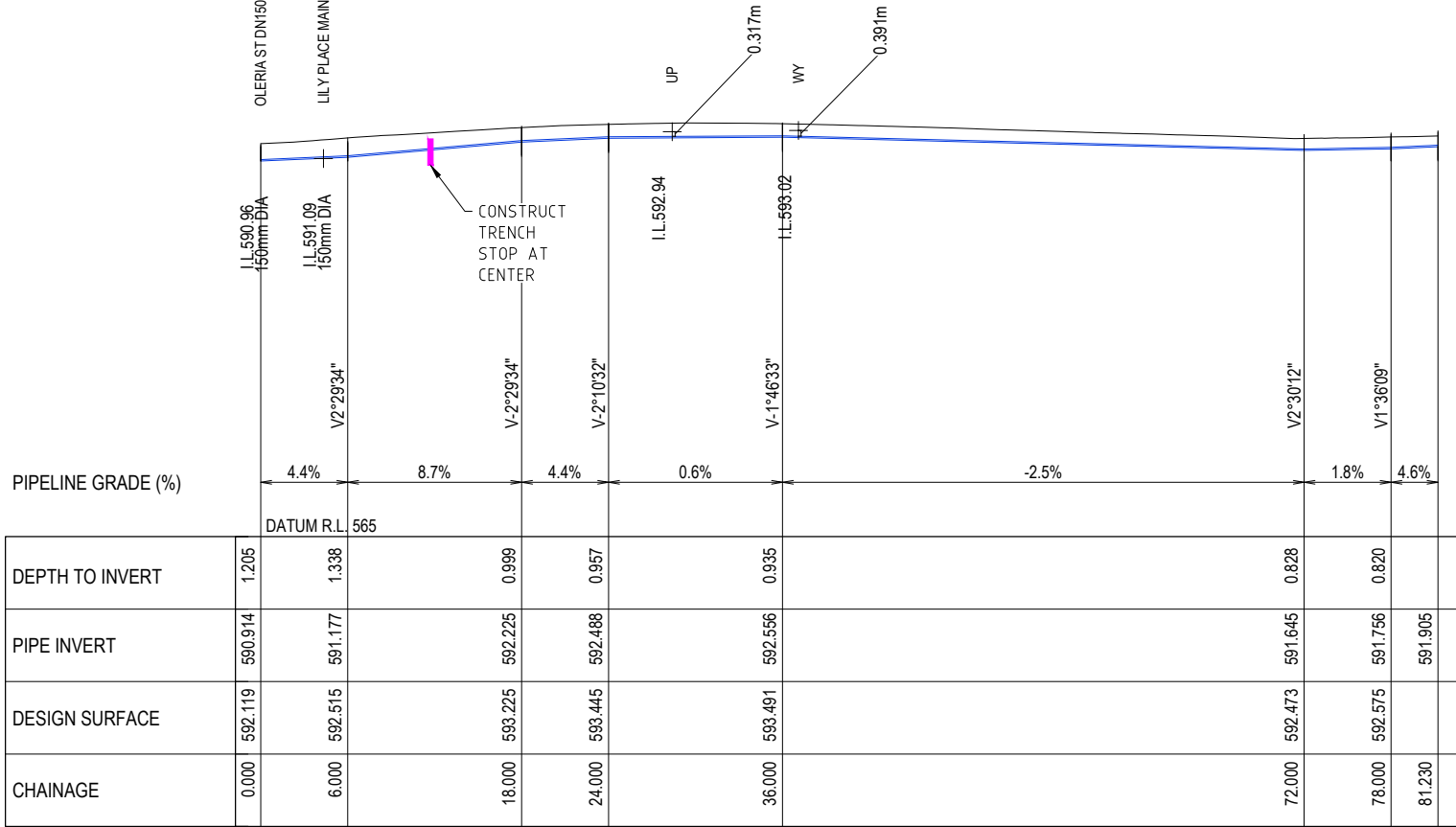
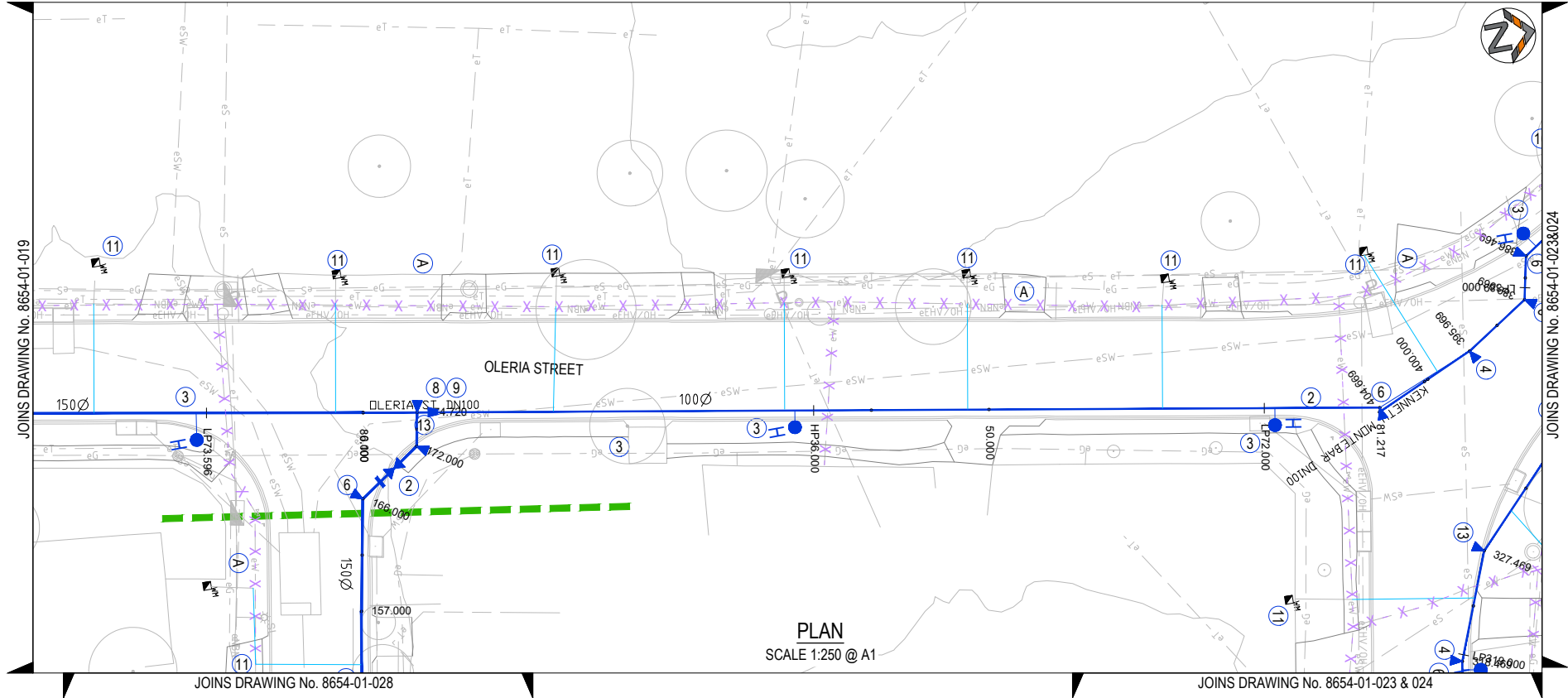
STAGING BOUNDARY

NOTES ON WATERMAIN:

- 1 CONNECT TO EXISTING WATERMAIN (REFER TO DETAILS).
- 2 INSTALL STOP VALVES.
- 3 INSTALL HYDRANT OFFSET WITH WASHOUT BEND BEHIND KERB.
- 4 INSTALL 11.25° BEND & THRUST BLOCK.
- 5 INSTALL 22.25° BEND & THRUST BLOCK.
- 6 INSTALL 45° BEND & THRUST BLOCK.
- 7 INSTALL 90° BEND & THRUST BLOCK.
- 8 INSTALL TEE & THRUST BLOCK.
- 9 INSTALL REDUCER
- 10 CONNECT WATER TIE TO WATER MAIN.
- 11 MODIFY EXISTING SERVICE AND CONNECT TO NEW MAIN.
UNDERBORE UNDER ROAD PAVEMENT EXCAVATE
CONNECTIONS IN VERGE.
- 12 CONSTRUCT CONCRETE ENCASING
- 13 CONSTRUCT TRENCH/SCOUR STOPS
- 14 APPLY SEALANT TAPE TO JOINTS U/S AND D/S OF SEWER
- 15 APPLY EUH ELASTOMERIC POLYURETHANE COATING
- 16 INSTALL INLINE HYDRANT.
- A ABANDON EXISTING WATER MAIN.

TN	COMMS	TELEPHONE
OZ	COMMS	OPTIC FIBRE - DIGITIZED
OU	COMMS	OPTIC FIBRE - UNKNOWN
EU	ELECTRIC	LINE UNDERGROUND
EY	ELECTRIC	HOUSE CONNECTION
UE	ELECTRIC	MAJOR TRANSMISSION
LG	GAS	MAIN-LOW-PRESSURE
NG	GAS	MAIN(NYLON)
UP	MISC	UNIDENTIFIED PIPELINE
YG	GAS	POLYETHELENE
ZG	GAS	MAIN(DIGITIZED)
SM	SEWER	MAIN
SZ	SEWER	MAIN-DIGITIZED
D0	STORMWATER	BOX CULVERT (H1050)
DZ	STORMWATER	DIGITIZED
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UU	STORMWATER	PIPE (UNSPECIFIED)
V1	STORMWATER	PIPE (1050)
V3	STORMWATER	PIPE(1350)
WM	WATER	MAIN
WY	WATER	HOUSE CONNECTION
WZ	WATER	MAIN-DIGITIZED

REV.	DESCRIPTION	DRAWN	DESIGNED	VERIFIED	APPROVED	DATE
B	DESIGN UPDATED	EP	DN	KM	AN	7/12/2023
A	FOR CLIENT REVIEW	EP	JP	KM	AN	29/11/2023



QPRC

QPRC

INDESCO

INDESCO PTY LTD
CO1, Level 5, 68 Northbourne Avenue
CANBERRA CITY ACT 2601
GPO Box 565 Canberra, ACT 2601
(02) 6285 1022

CLIENT

PROJECT TITLE

COOMA STREET
WATER MAIN
REPLACEMENT

CLIENT
QUEANBEYAN COUNCIL
DRAWING STATUS
ISSUE FOR TENDER
SCALE
AS SHOWN
SHEET SIZE
A1

COORDINATE SYSTEM
GDA2020

DATUM
AHD

PROJECT NUMBER
8654-01

DRAWING TITLE
CONSTRUCTION DETAILS PLAN
SHEET 11 OF 20

DRAWING NUMBER
020

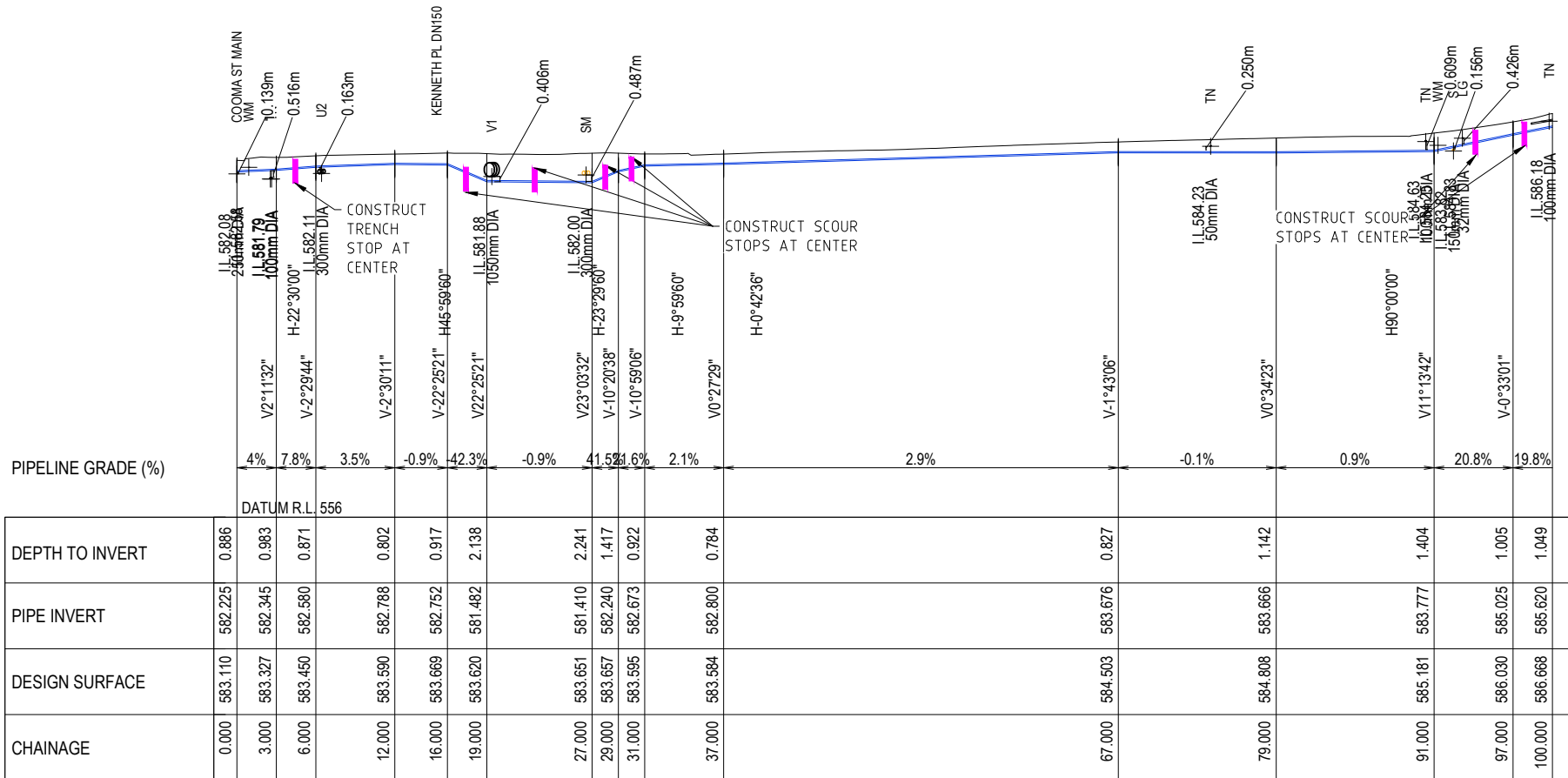
REVISION
B

STAGING BOUNDARY

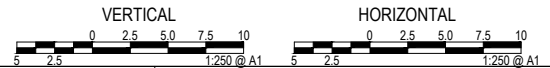
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OZ	COMMS	OPTIC FIBRE - DIGITIZED
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EY	ELECTRIC	HOUSE CONNECTION
UE	ELECTRIC	MAJOR TRANSMISSION
LG	GAS	MAIN-LOW-PRESSURE
NG	GAS	MAIN(NYLON)
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YG	GAS	POLYETHELENE
ZG	GAS	MAIN(DIGITIZED)
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SZ	SEWER	MAIN-DIGITIZED
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DZ	STORMWATER	DIGITIZED
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WM	WATER	MAIN
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REV.	DESCRIPTION	DRAWN	DESIGNED	VERIFIED	APPROVED	DATE
B	DESIGN UPDATED	EP	DN	KM	AN	7/12/2023
A	FOR CLIENT REVIEW	EP	JP	KM	AN	29/11/2023



KENNETH MONTEBAR DN100

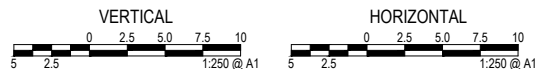
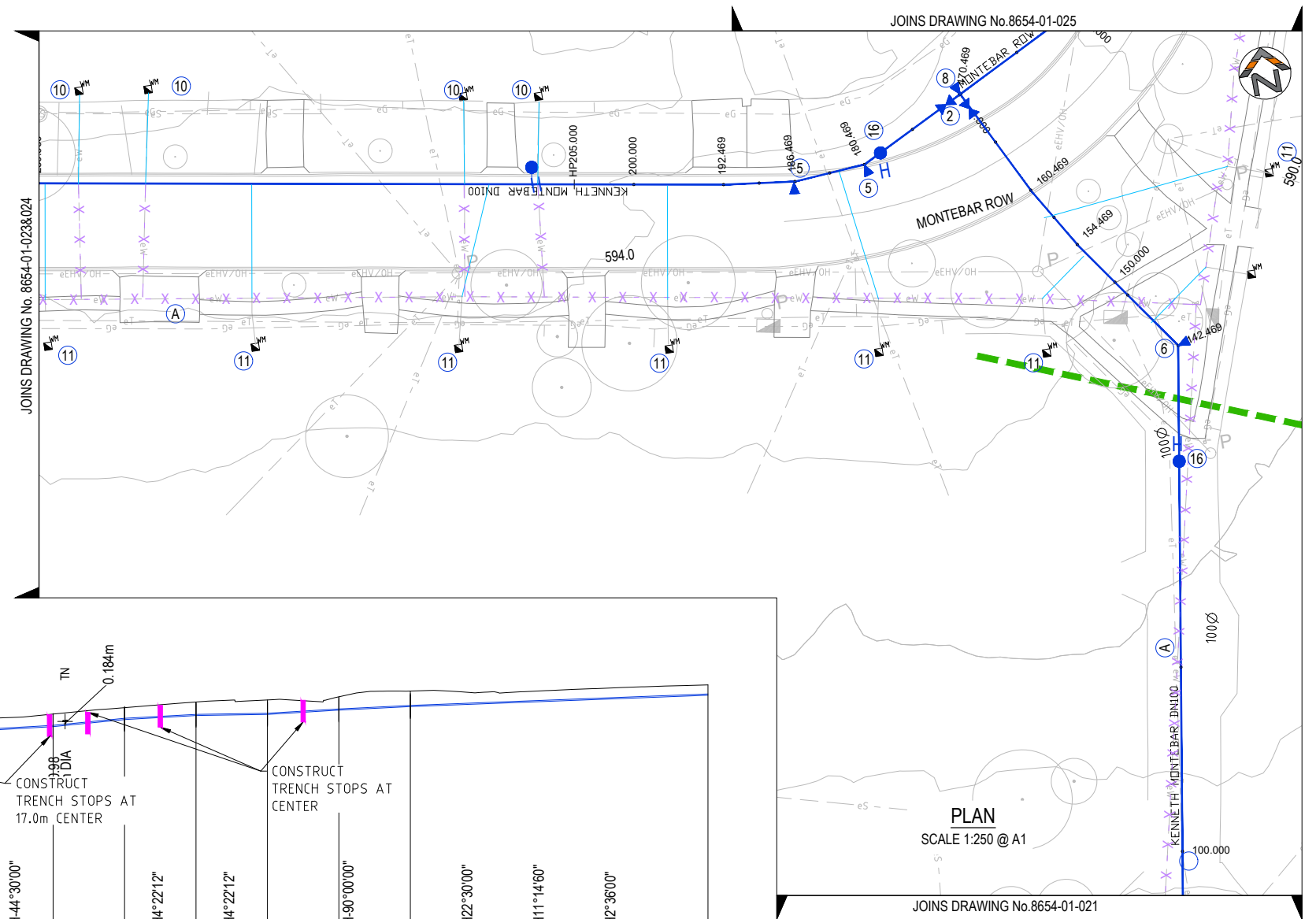


PROJECT TITLE COOMA STREET WATER MAIN REPLACEMENT	CLIENT QUEANBEYAN COUNCIL			DRAWING TITLE CONSTRUCTION DETAILS PLAN SHEET 12 OF 20	
	DRAWING STATUS ISSUE FOR TENDER				
	SCALE AS SHOWN	COORDINATE SYSTEM GDA2020	DATUM AHD		
	SHEET SIZE A1	PROJECT NUMBER 8654-01		DRAWING NUMBER 021	REVISION B

STAGING BOUNDARY

- ① CONNECT TO EXISTING WATERMAIN (REFER TO DETAILS).
- ② INSTALL STOP VALVES.
- ③ INSTALL HYDRANT OFFSET WITH WASHOUT BEND BEHIND KERB.
- ④ INSTALL 11.25° BEND & THRUST BLOCK.
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- ⑭ APPLY SEALANT TAPE TO JOINTS U/S AND D/S OF SEWER
- ⑮ APPLY EUH ELASTOMERIC POLYURETHANE COATING
- ⑯ INSTALL INLINE HYDRANT.
- ⑰ ABANDON EXISTING WATER MAIN.

REV.	DESCRIPTION	DRAWN	DESIGNED	VERIFIED	APPROVED	DATE
B	DESIGN UPDATED	EP	DN	KM	AN	7/12/2023
A	FOR CLIENT REVIEW	EP	JP	KM	AN	29/11/2023



PROJECT TITLE COOMA STREET WATER MAIN REPLACEMENT	CLIENT QUEANBEYAN COUNCIL			DRAWING TITLE CONSTRUCTION DETAILS PLAN SHEET 13 OF 20	
	DRAWING STATUS ISSUE FOR TENDER				
	SCALE AS SHOWN	COORDINATE SYSTEM GDA2020	DATUM AHD	DRAWING NUMBER 022	REVISION B
	SHEET SIZE A1	PROJECT NUMBER 8654-01			

WARNING:
OVERHEAD ELECTRICITY IN THIS AREA.
ASBESTOS PIPES

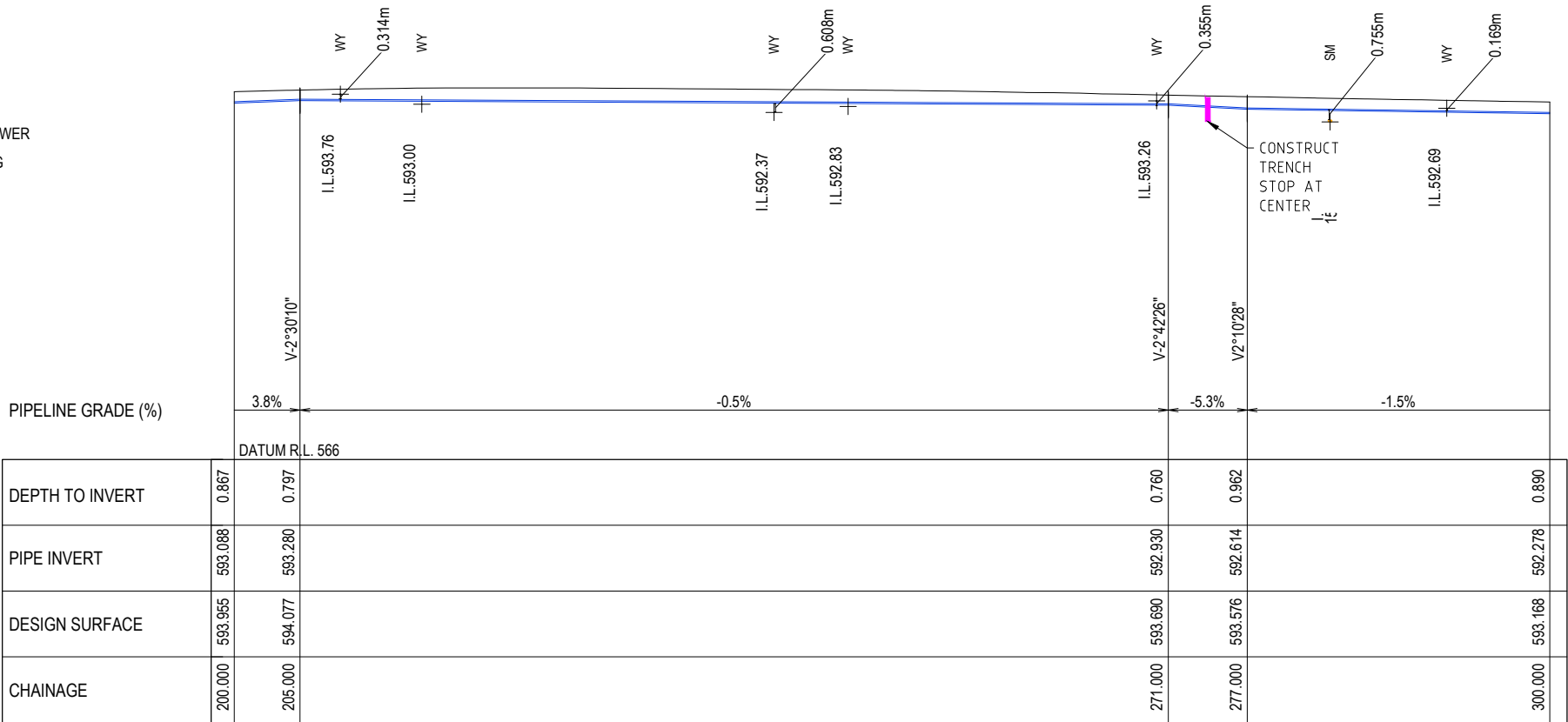
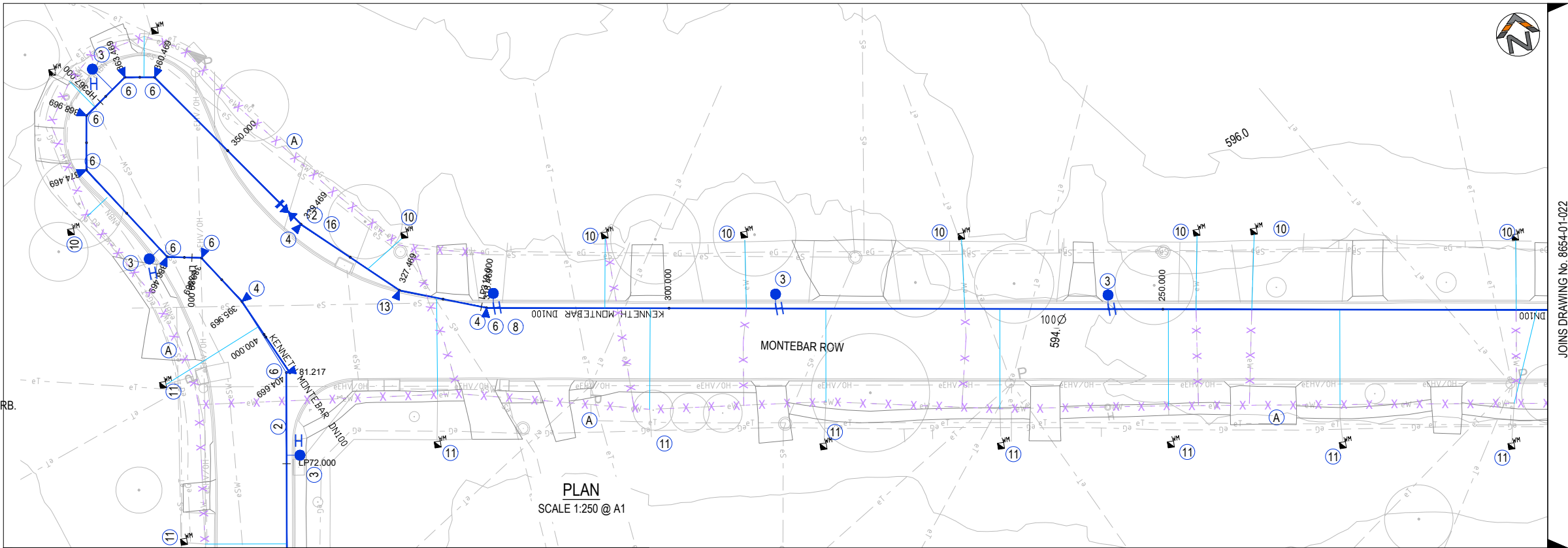
STAGING BOUNDARY

NOTES ON WATERMAIN:

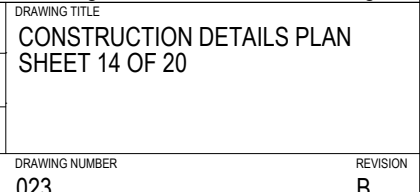
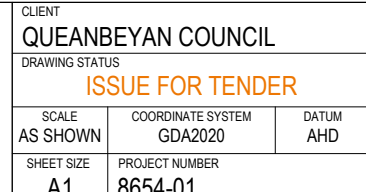
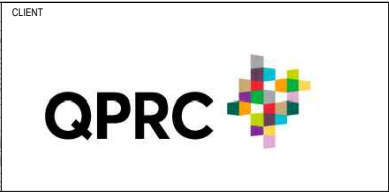
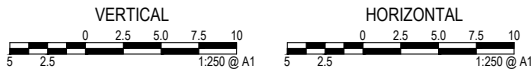
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- INSTALL STOP VALVES.
- INSTALL HYDRANT OFFSET WITH WASHOUT BEND BEHIND KERB.
- INSTALL 11.25° BEND & THRUST BLOCK.
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- CONNECT WATER TIE TO WATER MAIN.
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- INSTALL INLINE HYDRANT.
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TN	COMMS	TELEPHONE
OZ	COMMS	OPTIC FIBRE - DIGITIZED
OU	COMMS	OPTIC FIBRE - UNKNOWN
EU	ELECTRIC	LINE UNDERGROUND
EY	ELECTRIC	HOUSE CONNECTION
UE	ELECTRIC	MAJOR TRANSMISSION
LG	GAS	MAIN-LOW-PRESSURE
NG	GAS	MAIN(NYLON)
UP	MISC	UNIDENTIFIED PIPELINE
YG	GAS	POLYETHYLENE
ZG	GAS	MAIN(DIGITIZED)
SM	SEWER	MAIN
SZ	SEWER	MAIN-DIGITIZED
D0	STORMWATER	BOX CULVERT (H1050)
DZ	STORMWATER	DIGITIZED
U2	STORMWATER	PIPE (300)
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REV.	DESCRIPTION	DRAWN	DESIGNED	VERIFIED	APPROVED	DATE
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KENNETH MONTEBAR DN100



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Last Plotted: 11/12/2023 3:14:19 PM By: DANIEL NIKOLICH

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WARNING:
OVERHEAD ELECTRICITY IN THIS AREA.
ASBESTOS PIPES

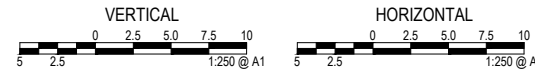
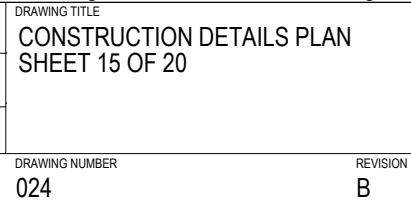
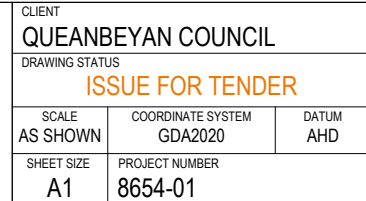
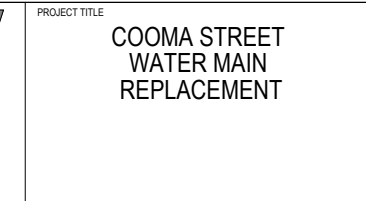
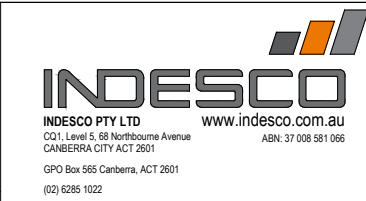
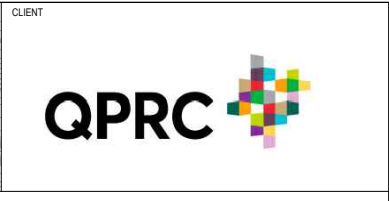
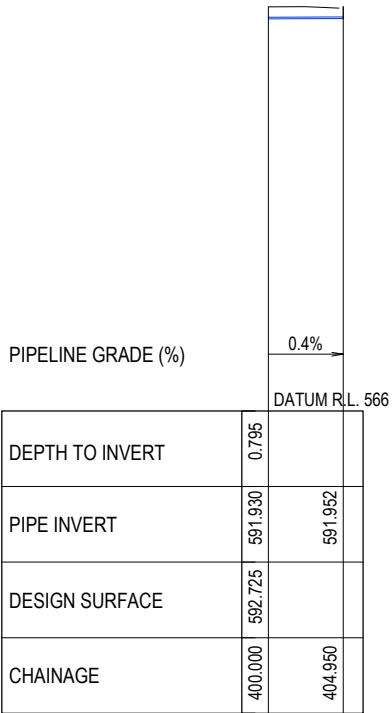
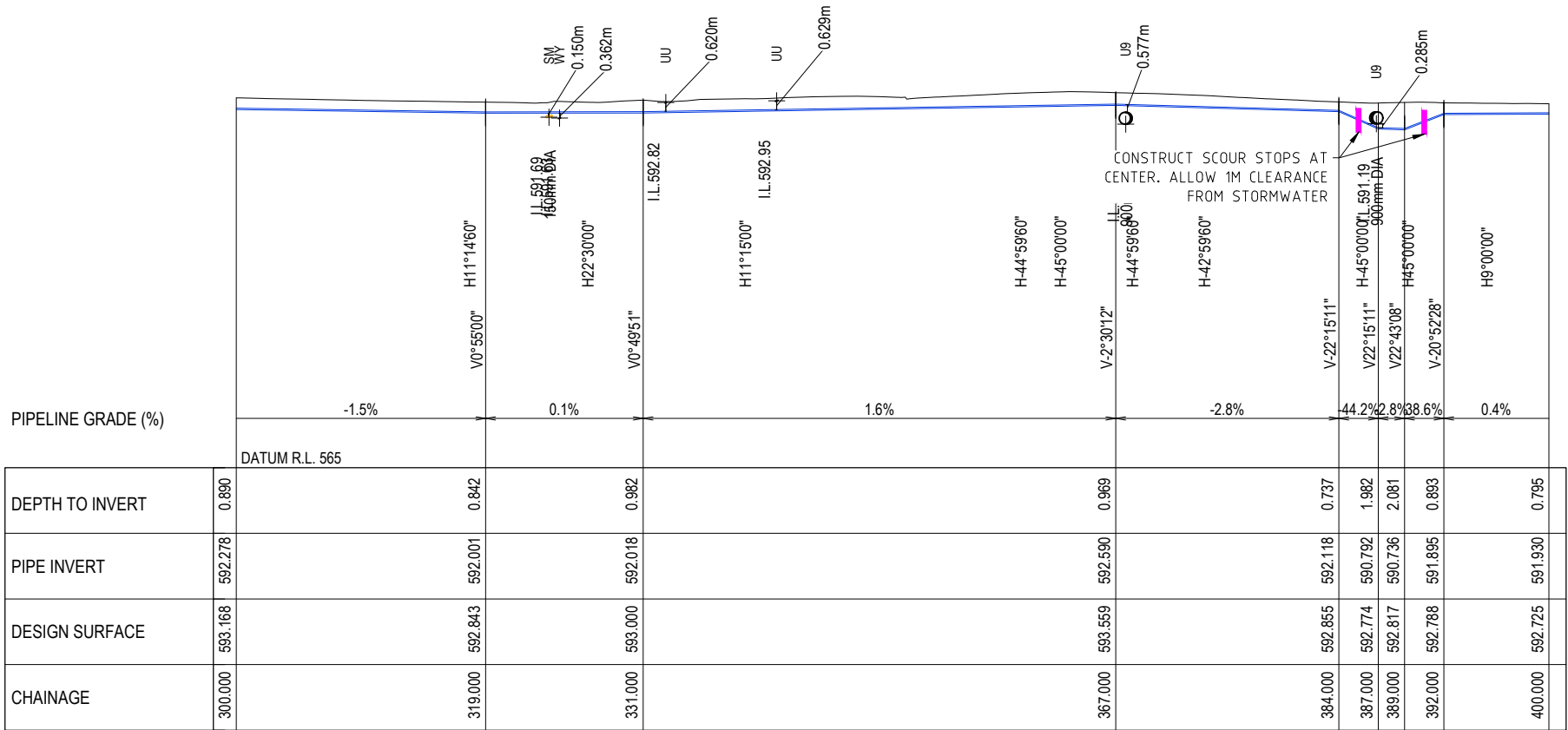
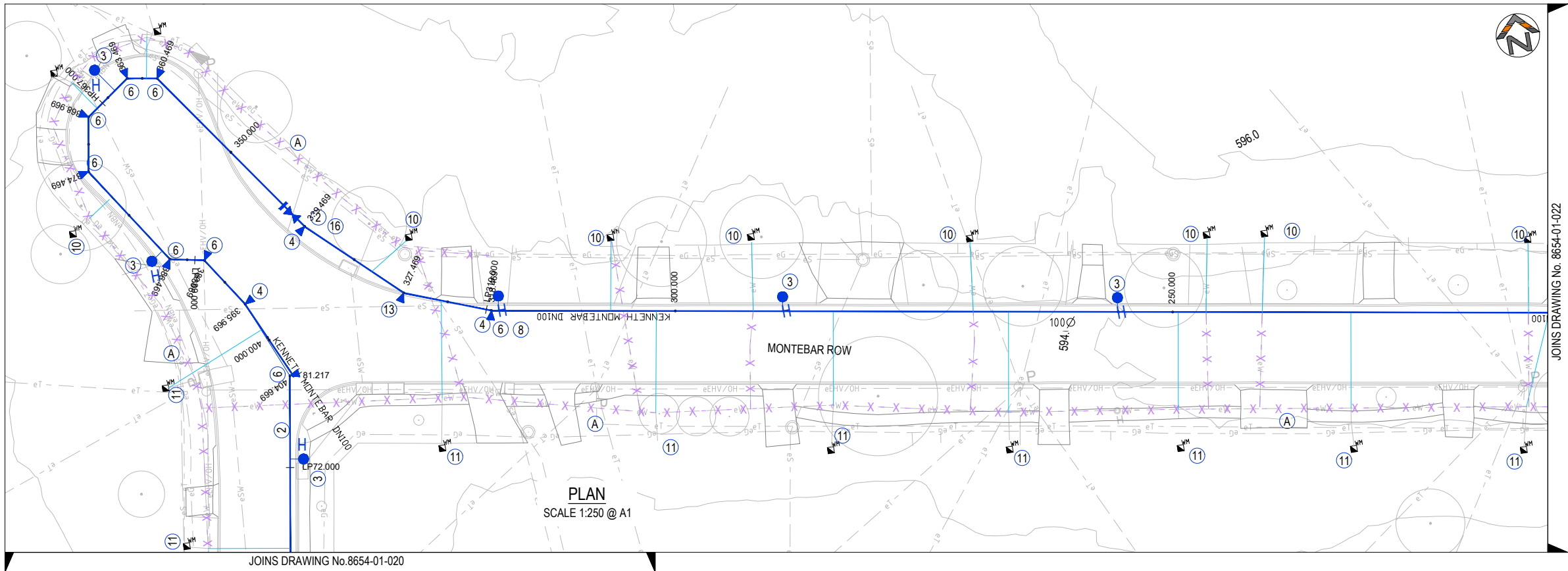
STAGING BOUNDARY

NOTES ON WATERMAIN:

- CONNECT TO EXISTING WATERMAIN (REFER TO DETAILS).
- INSTALL STOP VALVES.
- INSTALL HYDRANT OFFSET WITH WASHOUT BEND BEHIND KERB.
- INSTALL 11.25° BEND & THRUST BLOCK.
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OZ	COMMS	OPTIC FIBRE - DIGITIZED
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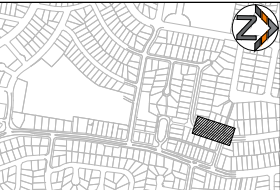
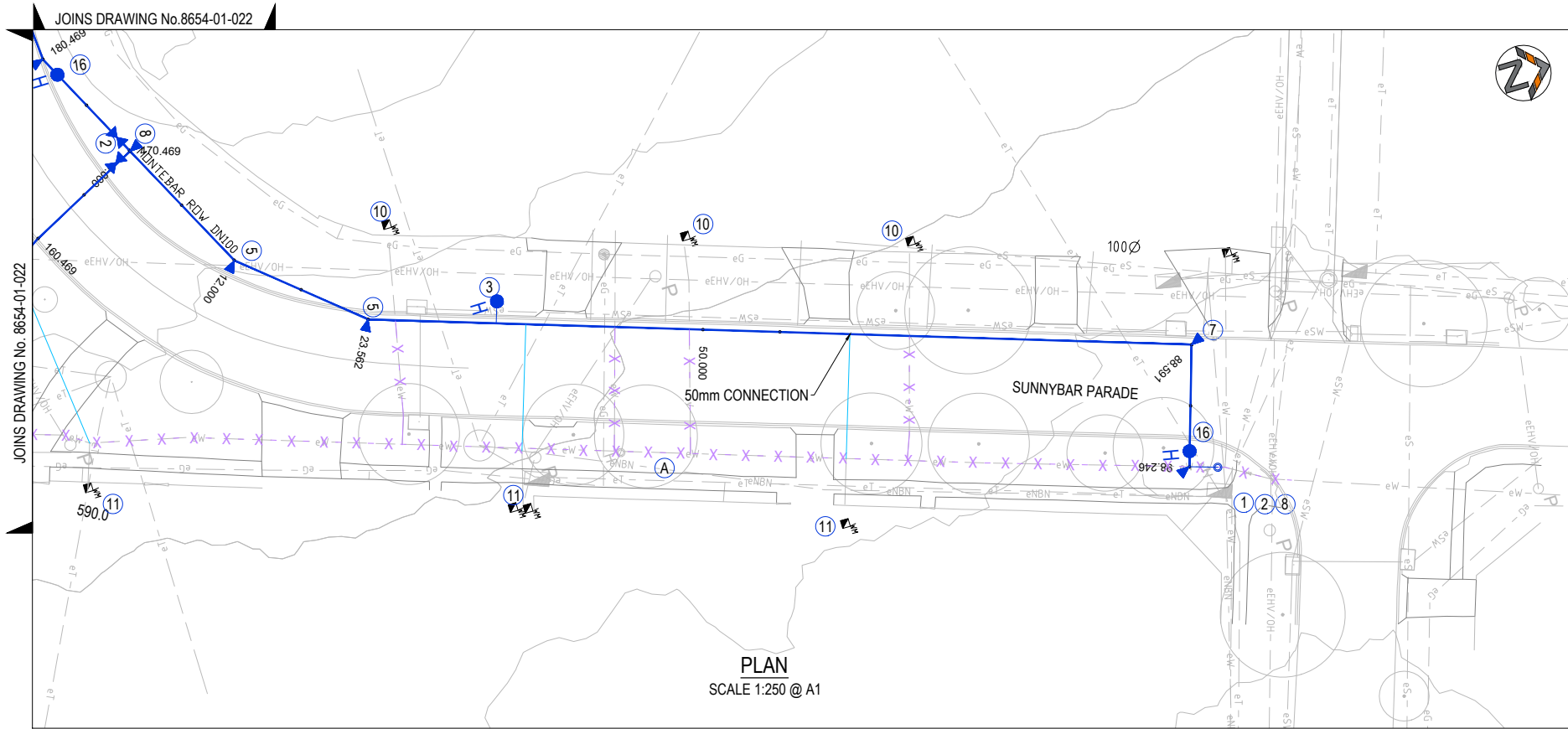
STAGING BOUNDARY

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COOMA STREET
WATER MAIN
REPLACEMENT

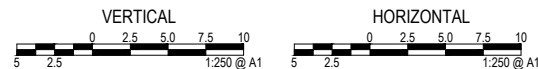
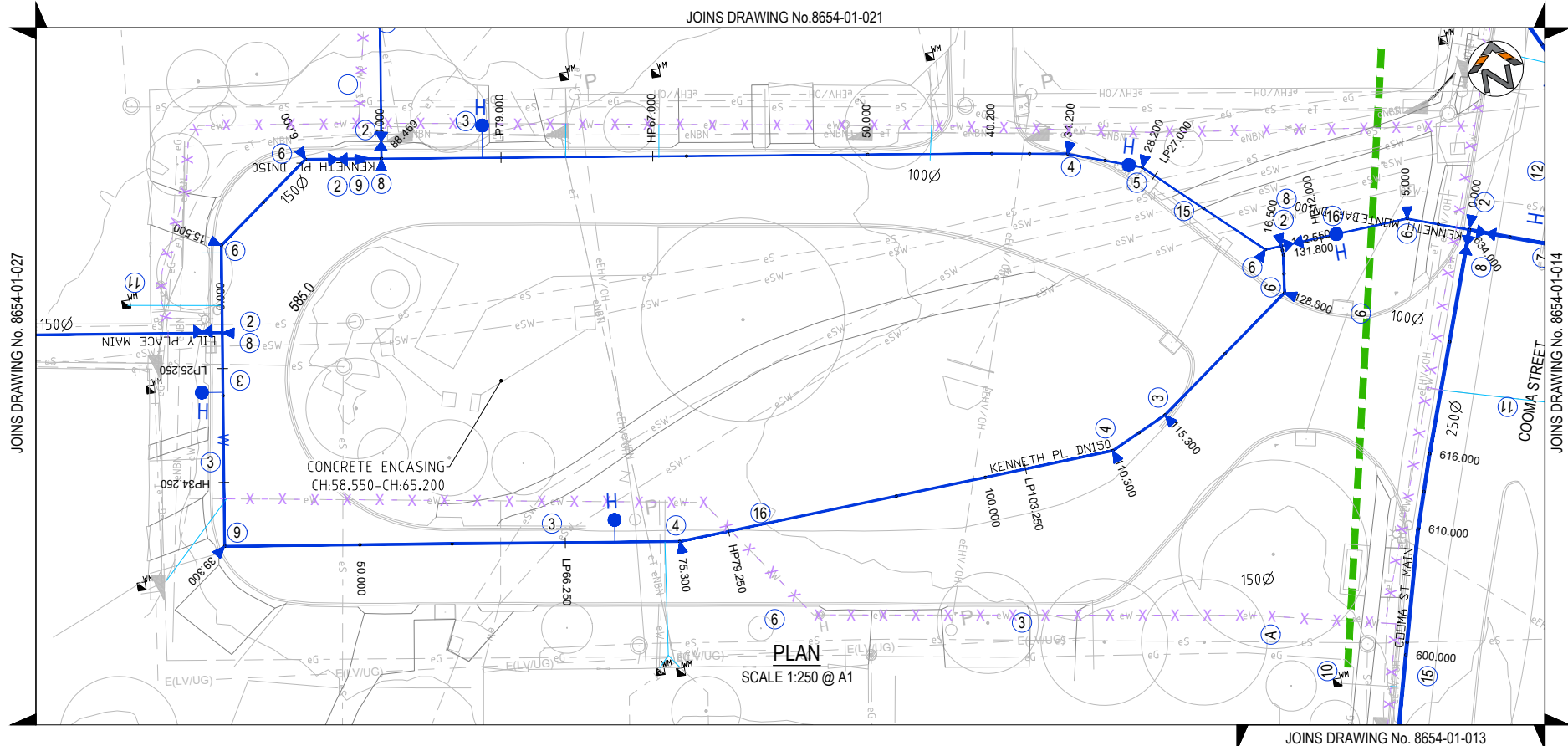
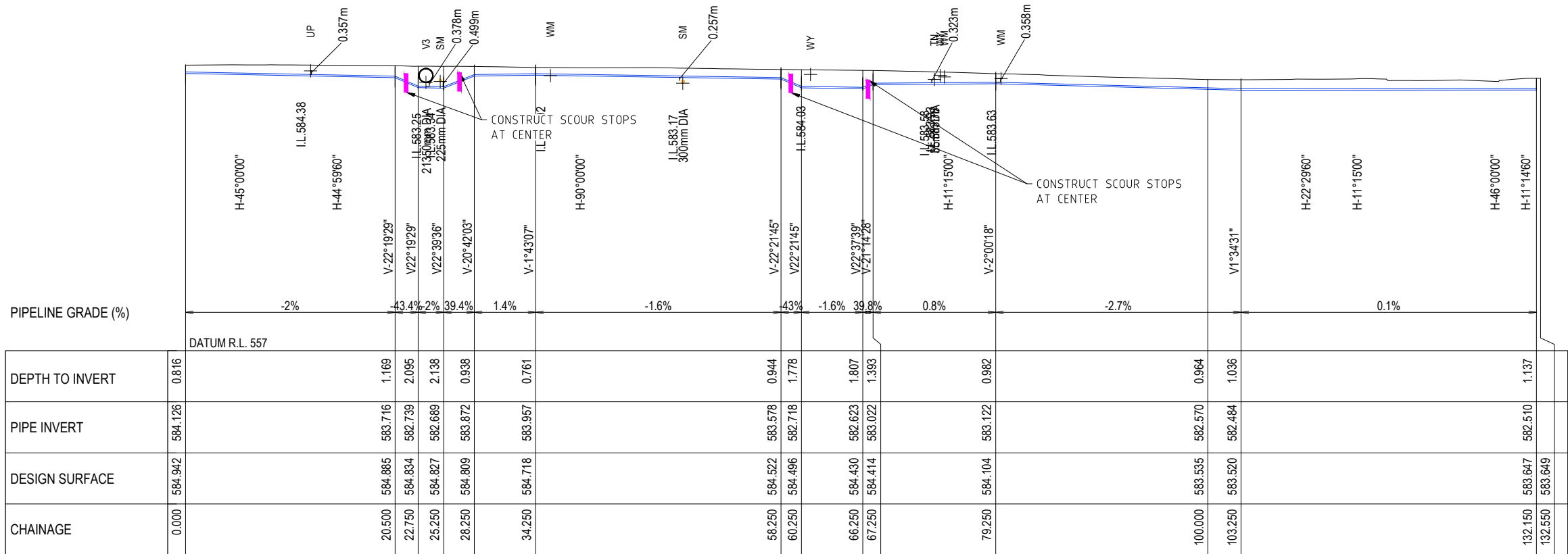
CLIENT QUEANBEYAN COUNCIL		
DRAWING STATUS ISSUE FOR TENDER		
SCALE AS SHOWN	COORDINATE SYSTEM GDA2020	DATUM AHD
SHEET SIZE A1	PROJECT NUMBER 8654-01	

DRAWING TITLE CONSTRUCTION DETAILS PLAN SHEET 16 OF 20	
DRAWING NUMBER 025	REVISION B

STAGING BOUNDARY

- ① CONNECT TO EXISTING WATERMAIN (REFER TO DETAILS).
- ② INSTALL STOP VALVES.
- ③ INSTALL HYDRANT OFFSET WITH WASHOUT BEND BEHIND KERB.
- ④ INSTALL 11.25° BEND & THRUST BLOCK.
- ⑤ INSTALL 22.25° BEND & THRUST BLOCK.
- ⑥ INSTALL 45° BEND & THRUST BLOCK.
- ⑦ INSTALL 90° BEND & THRUST BLOCK.
- ⑧ INSTALL TEE & THRUST BLOCK.
- ⑨ INSTALL REDUCER
- ⑩ CONNECT WATER TIE TO WATER MAIN.
- ⑪ MODIFY EXISTING SERVICE AND CONNECT TO NEW MAIN.
UNDERBORE UNDER ROAD PAVEMENT EXCAVATE
CONNECTIONS IN VERGE.
- ⑫ CONSTRUCT CONCRETE ENCASING
- ⑬ CONSTRUCT TRENCH/SCOUR STOPS
- ⑭ APPLY SEALANT TAPE TO JOINTS U/S AND D/S OF SEWER
- ⑮ APPLY EUH ELASTOMERIC POLYURETHANE COATING
- ⑯ INSTALL INLINE HYDRANT.
- ⑰ ABANDON EXISTING WATER MAIN.

REV.	DESCRIPTION	DRAWN	DESIGNED	VERIFIED	APPROVED	DATE
B	DESIGN UPDATED	EP	DN	KM	AN	7/12/2023
A	FOR CLIENT REVIEW	EP	JP	KM	AN	29/11/2023



PROJECT TITLE COOMA STREET WATER MAIN REPLACEMENT	CLIENT QUEANBEYAN COUNCIL			DRAWING TITLE CONSTRUCTION DETAILS PLAN SHEET 17 OF 20	
	DRAWING STATUS ISSUE FOR TENDER				
	SCALE AS SHOWN	COORDINATE SYSTEM GDA2020	DATUM AHD		
	SHEET SIZE A1	PROJECT NUMBER 8654-01		DRAWING NUMBER 026	REVISION B

WARNING:
OVERHEAD ELECTRICITY IN THIS AREA.
ASBESTOS PIPES

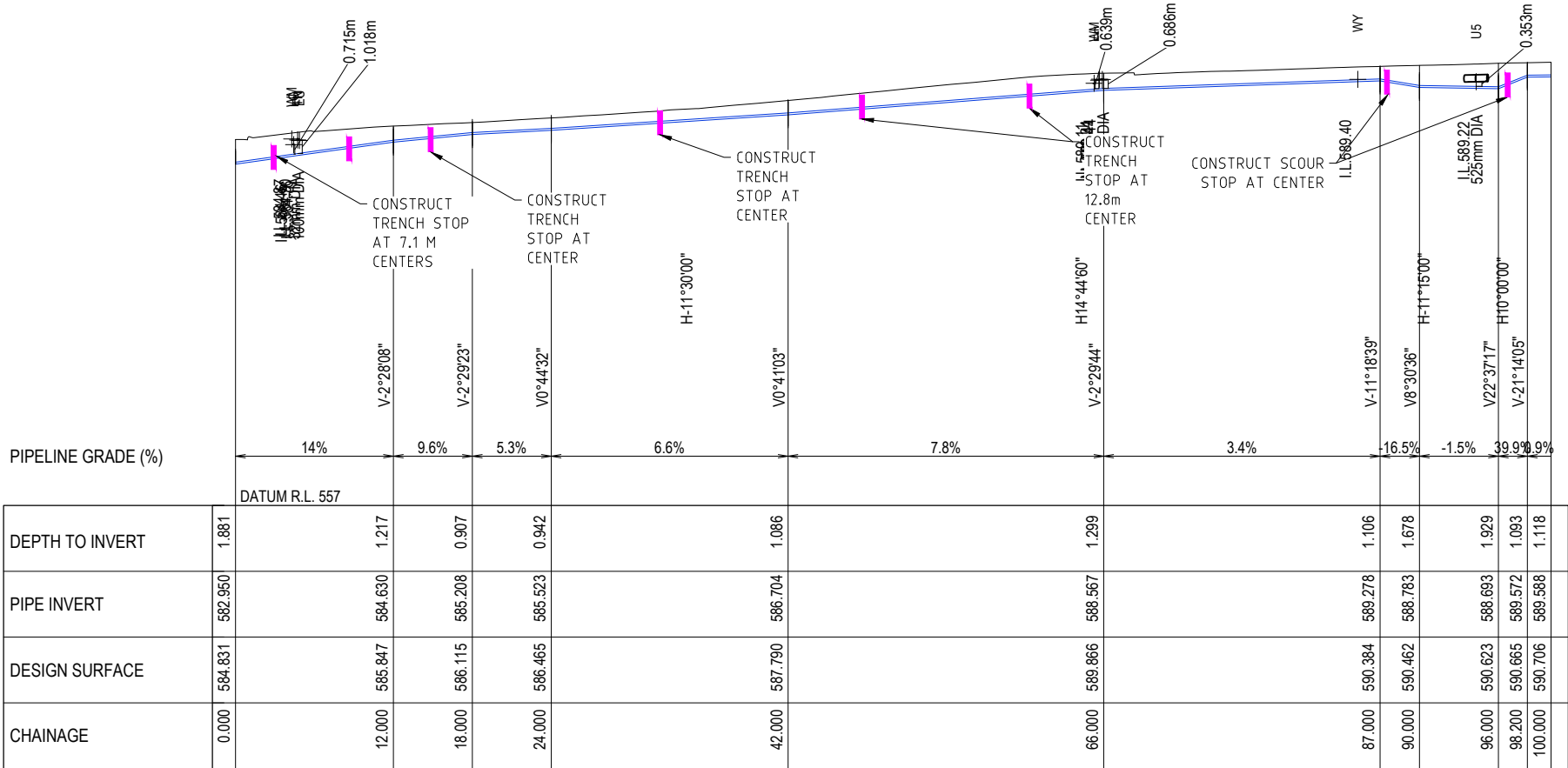
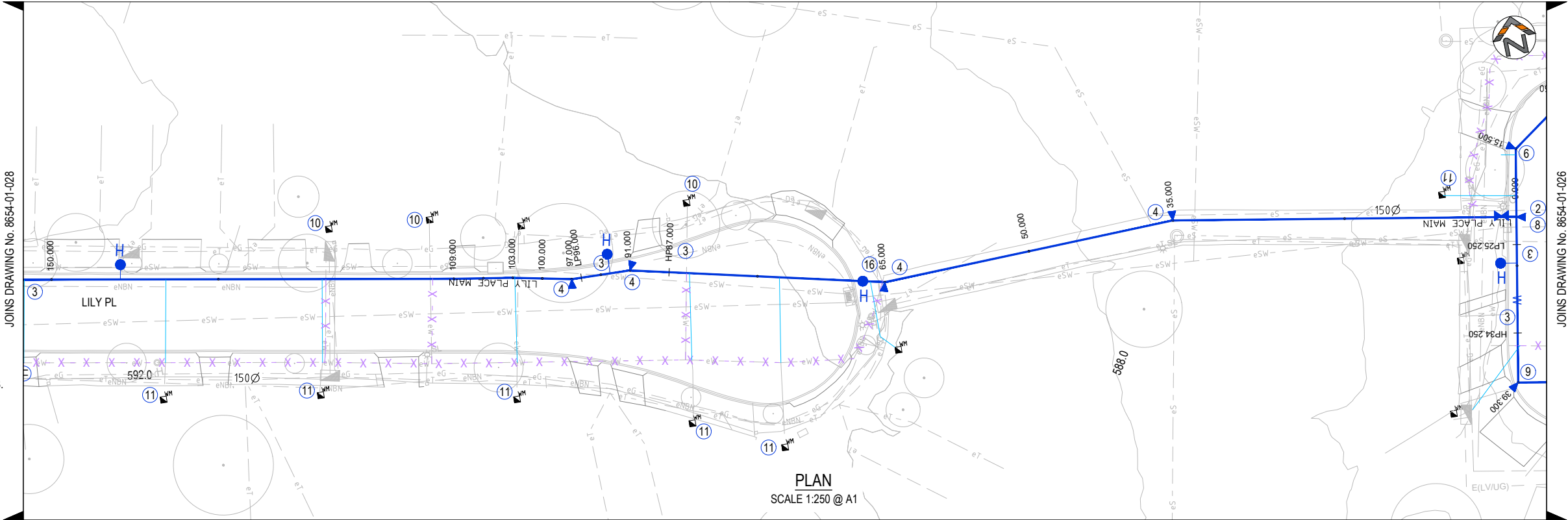
STAGING BOUNDARY

NOTES ON WATERMAIN:

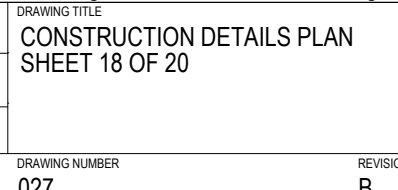
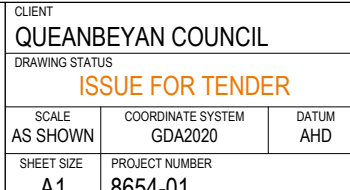
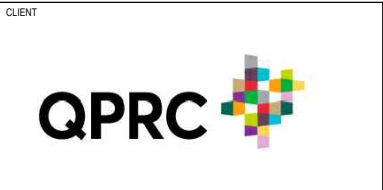
- CONNECT TO EXISTING WATERMAIN (REFER TO DETAILS).
- INSTALL STOP VALVES.
- INSTALL HYDRANT OFFSET WITH WASHOUT BEND BEHIND KERB.
- INSTALL 11.25° BEND & THRUST BLOCK.
- INSTALL 22.25° BEND & THRUST BLOCK.
- INSTALL 45° BEND & THRUST BLOCK.
- INSTALL 90° BEND & THRUST BLOCK.
- INSTALL TEE & THRUST BLOCK.
- INSTALL REDUCER
- CONNECT WATER TIE TO WATER MAIN.
- MODIFY EXISTING SERVICE AND CONNECT TO NEW MAIN.
- UNDERBORE UNDER ROAD PAVEMENT EXCAVATE CONNECTIONS IN VERGE.
- CONSTRUCT CONCRETE ENCASING
- CONSTRUCT TRENCH/SCOUR STOPS
- APPLY SEALANT TAPE TO JOINTS U/S AND D/S OF SEWER
- APPLY EUH ELASTOMERIC POLYURETHANE COATING
- INSTALL INLINE HYDRANT.
- ABANDON EXISTING WATER MAIN.

TN	COMMS	TELEPHONE
OZ	COMMS	OPTIC FIBRE - DIGITIZED
OU	COMMS	OPTIC FIBRE - UNKNOWN
EU	ELECTRIC	LINE UNDERGROUND
EY	ELECTRIC	HOUSE CONNECTION
UE	ELECTRIC	MAJOR TRANSMISSION
LG	GAS	MAIN-LOW-PRESSURE
NG	GAS	MAIN(NYLON)
UP	MISC	UNIDENTIFIED PIPELINE
YG	GAS	POLYETHELENE
ZG	GAS	MAIN(DIGITIZED)
SM	SEWER	MAIN
SZ	SEWER	MAIN-DIGITIZED
D0	STORMWATER	BOX CULVERT (H1050)
DZ	STORMWATER	DIGITIZED
U2	STORMWATER	PIPE (300)
U3	STORMWATER	PIPE (375)
U5	STORMWATER	PIPE(525)
U9	STORMWATER	PIPE(900)
UU	STORMWATER	PIPE (UNSPECIFIED)
V1	STORMWATER	PIPE (1050)
V3	STORMWATER	PIPE(1350)
WM	WATER	MAIN
WY	WATER	HOUSE CONNECTION
WZ	WATER	MAIN-DIGITIZED

REV.	DESCRIPTION	DRAWN	DESIGNED	VERIFIED	APPROVED	DATE
B	DESIGN UPDATED	EP	DN	KM	AN	7/12/2023
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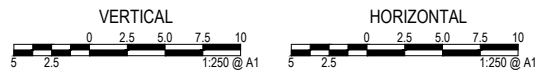
LILY PLACE MAIN



STAGING BOUNDARY

- ① CONNECT TO EXISTING WATERMAIN (REFER TO DETAILS).
- ② INSTALL STOP VALVES.
- ③ INSTALL HYDRANT OFFSET WITH WASHOUT BEND BEHIND KERB.
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- ⑮ APPLY EUH ELASTOMERIC POLYURETHANE COATING
- ⑯ INSTALL INLINE HYDRANT.
- ⑰ ABANDON EXISTING WATER MAIN.

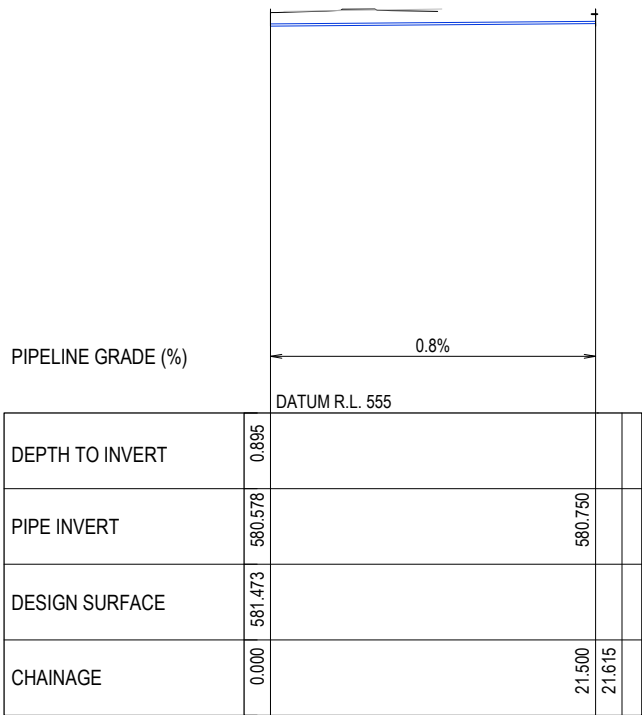
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B	DESIGN UPDATED	EP	DN	KM	AN	7/12/2023
A	FOR CLIENT REVIEW	EP	JP	KM	AN	29/11/2023



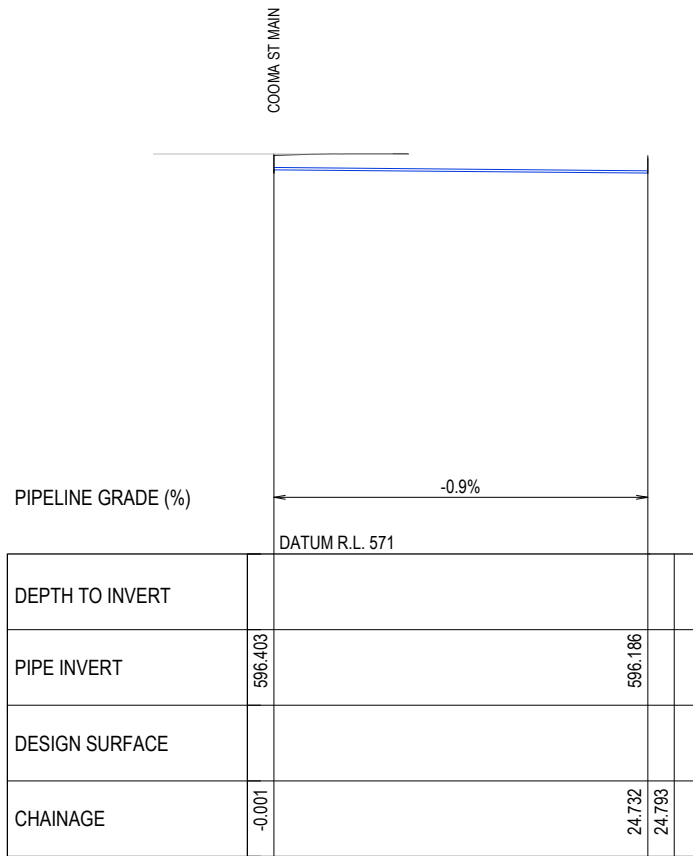
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	DRAWING STATUS ISSUE FOR TENDER				
	SCALE AS SHOWN	COORDINATE SYSTEM GDA2020	DATUM AHD		
	SHEET SIZE A1	PROJECT NUMBER 8654-01		DRAWING NUMBER 028	REVISION B

DEPTH TO INVERT			
PIPE INVERT	601.495		602.311
DESIGN SURFACE			
CHAINAGE	-0.000		5.876

COOMA ST BRANCH 01
(DRAWING 8654-01-010)

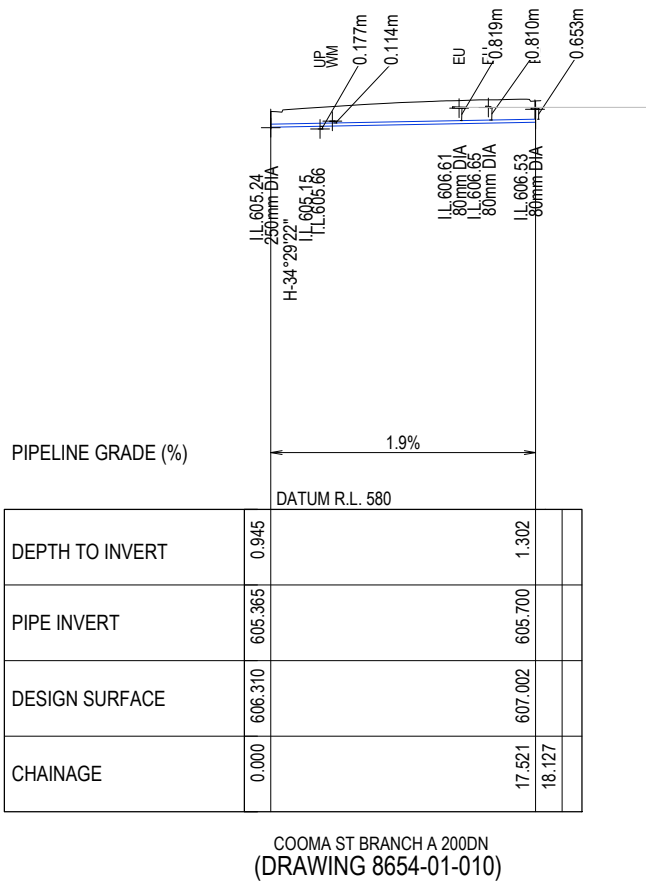


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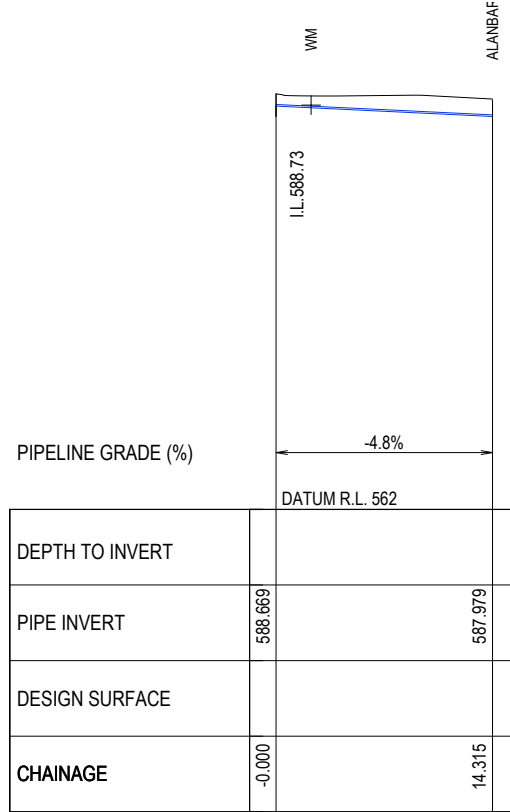


COOMA BRANCH 03
(DRAWING 8654-01-011&012)

TN	COMMS	TELEPHONE
OZ	COMMS	OPTIC FIBRE - DIGITIZED
OU	COMMS	OPTIC FIBRE - UNKNOWN
EU	ELECTRIC	LINE UNDERGROUND
EY	ELECTRIC	HOUSE CONNECTION
UE	ELECTRIC	MAJOR TRANSMISSION
LG	GAS	MAIN-LOW-PRESSURE
NG	GAS	MAIN(NYLON)
UP	MISC	UNIDENTIFIED PIPELINE
YG	GAS	POLYETHELENE
ZG	GAS	MAIN(DIGITIZED)
SM	SEWER	MAIN
SZ	SEWER	MAIN-DIGITIZED
D0	STORMWATER	BOX CULVERT (H1050)
DZ	STORMWATER	DIGITIZED
U2	STORMWATER	PIPE (300)
U3	STORMWATER	PIPE (375)
U5	STORMWATER	PIPE(525)
U9	STORMWATER	PIPE(900)
UU	STORMWATER	PIPE (UNSPECIFIED)
V1	STORMWATER	PIPE (1050)
V3	STORMWATER	PIPE(1350)
WM	WATER	MAIN
WY	WATER	HOUSE CONNECTION
WZ	WATER	MAIN-DIGITIZED



COOMA ST BRANCH A 200DN
(DRAWING 8654-01-010)



ALANBAR BRANCH
(DRAWING 8654-01-017)

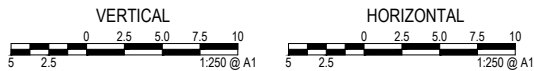
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B	DESIGN UPDATED	EP	DN	KM	AN	7/12/2023
A	FOR CLIENT REVIEW	EP	JP	KM	AN	29/11/2023

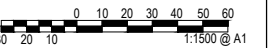


PROJECT TITLE

COOMA STREET
WATER MAIN
REPLACEMENT

CLIENT QUEANBEYAN COUNCIL			DRAWING TITLE CONSTRUCTION DETAILS PLAN SHEET 20 OF 20
DRAWING STATUS ISSUE FOR TENDER			
SCALE AS SHOWN	COORDINATE SYSTEM GDA2020	DATUM AHD	
SHEET SIZE A1	PROJECT NUMBER 8654-01	DRAWING NUMBER 029	
			REVISION B





REV.	DESCRIPTION	DRAWN	DESIGNED	VERIFIED	APPROVED	DATE
A	FOR CLIENT REVIEW	EP	DN	KM	AN	11/12/2023

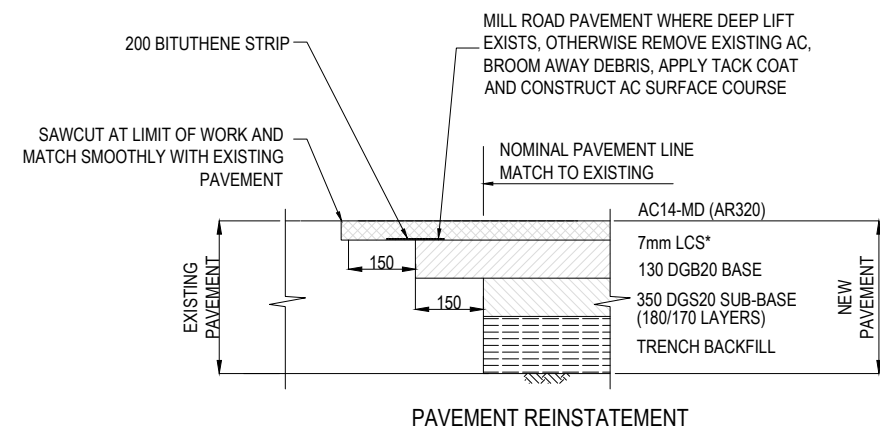
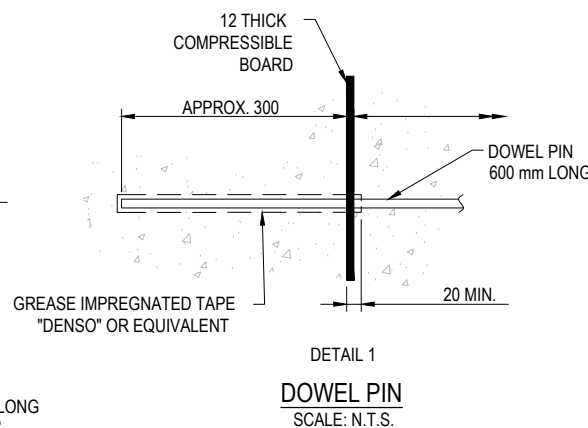
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INDESCO PTY LTD
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GPO Box 565 Canberra, ACT 2601
(02) 6285 1022

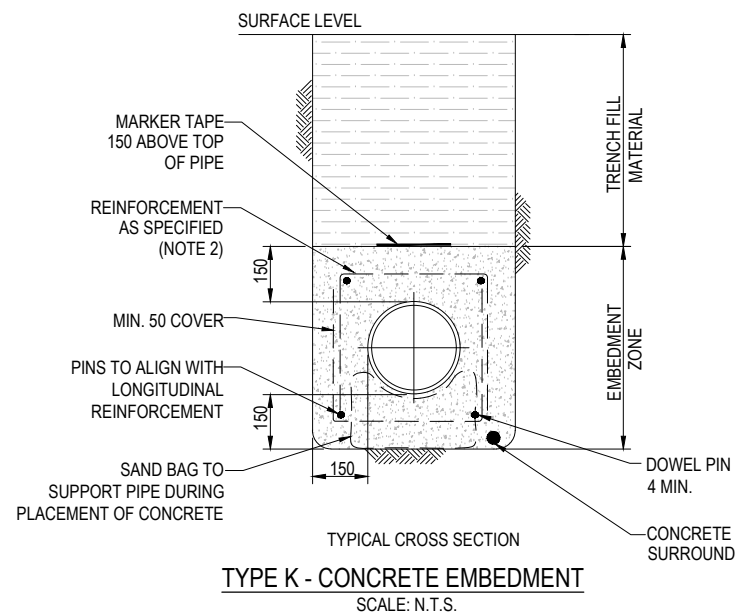
www.indesco.com.au
ABN: 37 008 581 066

COOMA STREET
WATER MAIN
REPLACEMENT

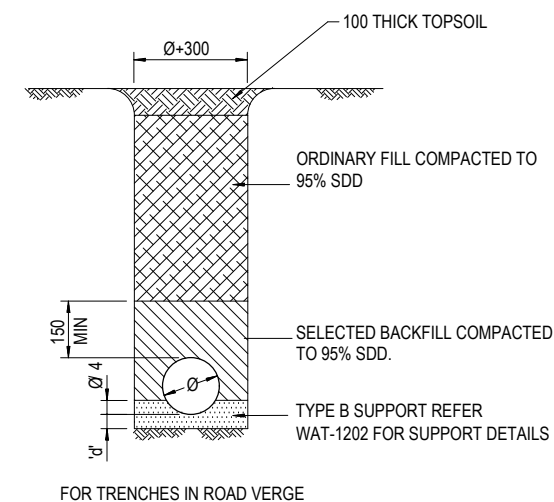
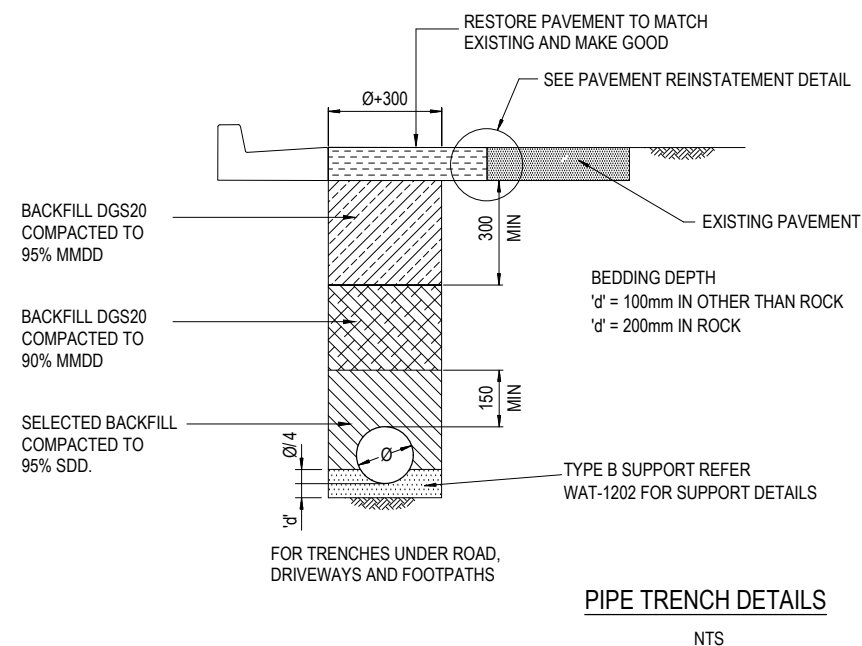
DRAWING
035



* LOW CUTTER SEAL TO BE CONFIRMED WITH SUPERINTENDENT TO SUIT WEATHER AT TIME OF CONSTRUCTION NOMINALLY AMC3 OR EQUAL



NOTE:
CONCRETE GRADE N25 TO AS 3600.
STRENGTH - 25 MPa
MAX AGGREGATE - 20
MAX SLUMP - 80



REV.	DESCRIPTION	DRAWN	DESIGNED	VERIFIED	APPROVED	DATE
A	FOR CLIENT REVIEW	EP	ID	KM	ΔNI	20/11/2023




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PROJECT TITLE

COOMA STREET
WATER MAIN
REPLACEMENT

CLIENT	QUEANBEYAN COUNCIL
DRAWING STATUS	ISSUE FOR TENDER

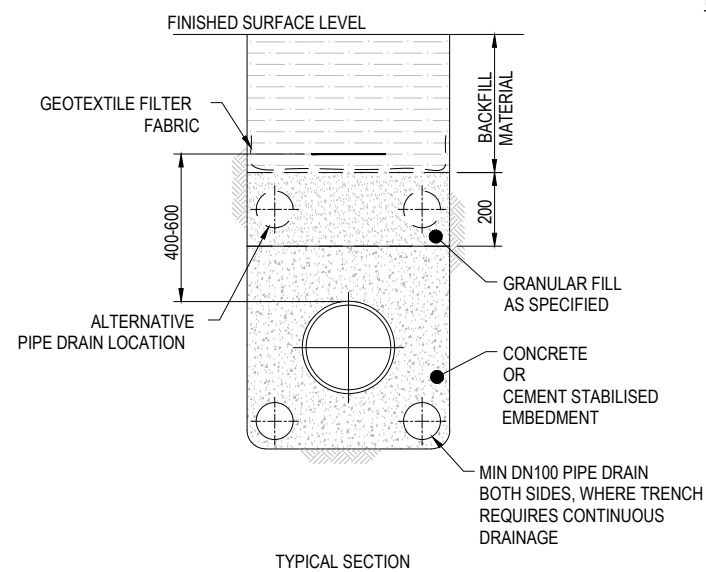
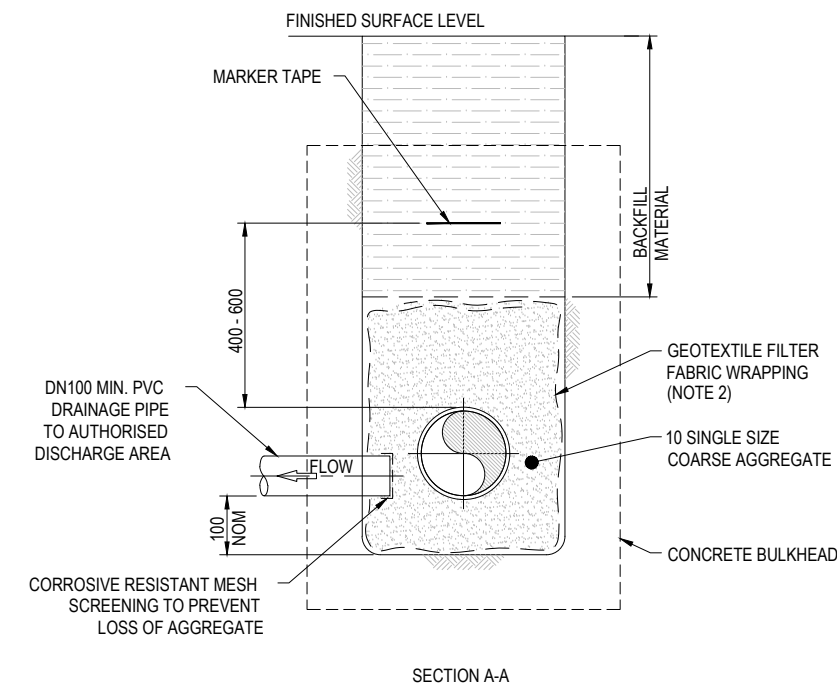
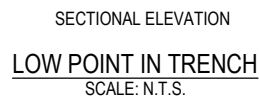
DRAWING TITLE	TYPICAL DETAILS
	SHEET 1 OF 5

SCALE	COORDINATE SYSTEM
NA	GDA2020

SHEET SIZE	PROJECT NUMBER
A1	8654-01

DRAWING NUMBER
040

REVISION
A



DRAINAGE FOR CONCRETE ENCASEMENT AND
CEMENT STABILISATION
SCALE: N.T.S.

1. LAY GEOTEXTILE FILTER FABRIC IN TRENCH TO FULLY ENCAPSULATE THE DRAINAGE MATERIAL (COARSE AGGREGATE). PROVIDE MINIMUM 250 LAP AT ALL FILTER FABRIC JOINTS.
2. WRAP BOTH ENDS OF DRAINAGE PIPE WITH GEOTEXTILE FILTER FABRIC AND INSTALL SUCH THAT THE PIPE PROTRUDES PAST THE CONCRETE ENCASMENT INTO THE GRANULAR EMBEDMENT.
3. PROVIDE A CONTINUOUS DRAINAGE PATH:
 - TRENCH STOPS AND
 - IN TRENCH EXCAVATIONS ACROSS ROADWAYS.

REV.	DESCRIPTION	DRAWN	DESIGNED	VERIFIED	APPROVED	DATE
A	FOR CLIENT REVIEW	EP	ID	KM	AM	29/11/2023

CLIENT	
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	PROJECT TITLE
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COOMA STREET
WATER MAIN
REPLACEMENT

CLIENT

QUEANBEYAN COUNCIL

DRAWING STATUS

114

SCALE

NA

SHEET SIZE
A1

COORDINATE SYSTEM	UTM
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GDA2020

PROJECT NUMBER
8654-01

DRAWING TITLE

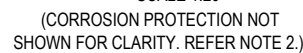
TYPICAL DETAILS
SHEET 2 OF 5

DRAWING NUMBER

041

REVISION

A



DETAIL
SCALE 1:10

A
032

MATERIAL: STAINLESS STEEL - GRADE 316
COATING: N/A
FINISH COLOUR: N/A
MASS: N/A



(FOR HORIZONTAL THRUST)



(FOR HORIZONTAL THRUST)



TAPER THRUST BLOCK

SCALE 1:20

(FOR HORIZONTAL THRUST)



FLUSHING/WASHOUT BEND THRUST BLOCK

SCALE 1:20

(FOR HORIZONTAL THRUST)
(MINIMUM REQUIRED THRUST AREA
AS PER DEAD END)



SCALE 1:50



SCALE: N.T.S.



SCALE: N.T.S.

REV.	DESCRIPTION	DRAWN	DESIGNED	VERIFIED	APPROVED	DATE
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CLIENT	
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	PROJECT TITLE
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COOMA STREET WATER MAIN REPLACEMENT

	CLIENT
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EANBEYAN COUNCIL

DRAWING STATUS

110

	SCALE
--	-------

NA

SHEET SIZE	
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A1

COORDINATE SYSTEM

GDA2020

PROJECT NUMBER

8654-01

DRAWING TITLE

DRAWING TITLE
TYPICAL DETAILS
SHEET 3 OF 5

DRAWING NUMBER

042

REVISION

A

TABLE 1 : MINIMUM BLOCK VOLUME FOR ANCHORAGE OF VERTICAL COMPONENT OF THRUST

FOR VERTICAL BENDS FOR TEST PRESSURE OF 1400 kPa				
PIPE DN	TYPICAL PIPE OD	CONCRETE VOLUME m³		
		11.25° BEND	22.25° BEND	45° BEND
100	122	0.14	0.28	0.49
150	177	0.28	0.56	1.05
200	232	0.49	0.98	1.75
225	259	0.63	1.19	2.24
250	286	0.77	1.47	2.73
300	345	1.05	2.20	3.92

IN CALCULATING THE CONCRETE VOLUME NO CONTRIBUTION FROM THE PIPELINE SELF

WEIGHT HAS BEEN INCLUDED.

NOTES TO TABLE 1:

- LOCATE ANCHOR BLOCK CENTRALLY AROUND BEND.
- KEY ANCHOR BLOCK INTO BASE OF UNDISTURBED TRENCH A MINIMUM DEPTH OF 250 mm.
- POUR CONCRETE AGAINST A SOLID EXCAVATION FACE.
- USE GRADE N20 CONCRETE.
- KEEP CONCRETE CLEAR OF ALL BOLTS, NUTS AND PIPE JOINTS.
- ANCHOR BLOCKS IN TABLE 1 ARE DESIGNED FOR A TEST PRESSURE OF 1000 kPa (NOMINALLY 100 m HEAD). ADJUST THE CONCRETE VOLUME TO SUIT THE ACTUAL TEST PRESSURE. REFER TABLE 2 NOTE 12.

TABLE 2 : MINIMUM THRUST AREA FOR THRUST BLOCKS

SOIL CLASSIFICATION AND ALLOWABLE HORIZONTAL BEARING PRESSURE OF GROUND (SEE NOTE 3)	FOR HORIZONTAL THRUST IN BEDS, TEES TAPERS, VALVES AND DEAD ENDS FOR TEST PRESSURE OF 1400 kPa. (SEE NOTE 6 & 12)					
	FOR HORIZONTAL THRUST ON TRENCH WALLS WHERE THE COVER PIPES 450 mm OR GREATER	90°& 60° HORIZONTAL BENDS	45°& 30 ° HORIZONTAL BENDS	22.5° HORIZONTAL BENDS	11.25° HORIZONTAL BENDS	TEES AND DEAD ENDS
		STIFF CLAY MEDIUM CLEAN SAND	STIFF CLAY MEDIUM CLEAN SAND	STIFF CLAY MEDIUM CLEAN SAND	STIFF CLAY MEDIUM CLEAN SAND	STIFF CLAY MEDIUM CLEAN SAND
	AHBP kPa	50.00	50.00	50.00	50.00	50.00
	100.00	0.46	0.25	0.13	0.1	0.33
	150.00	0.97	0.53	0.27	0.14	0.69
	200.00	1.68	0.91	0.46	0.23	1.12
	250.00	2.54	1.38	0.7	0.35	1.80

NOTES TO TABLE 2:

- 'N' DENOTES NOMINAL THRUST AREA - (SEE NOTES 4 & 5) . 'AHBP' - ALLOWABLE HORIZONTAL BEARING PRESSURE.
- CAST THE THRUST AREA OF ALL THRUST BLOCKS AGAINST A CLEAN FACE OF UNDISTURBED NATURAL SOIL. THRUST BLOCKS SHALL NOT INTERFERE WITH OTHER SERVICES.
- THE NOMINAL THRUST AREA 'N' TO BE ACHIEVED BY POURING CONCRETE THE FULL LENGTH OF THE FITTING AND EXTENDING FROM THE FLOOR OF THE TRENCH TO ABOVE THE FITTING (NOTE 7).
- DESIGN PRESSURES OTHER THAN 1400 kPa REDUCE OR INCREASE THE MINIMUM THRUST AREA BY THE RATIO OF THE DESIGN PRESSURES EXCEPT WHERE:
 - MINIMUM THRUST AREA IS = 0.1 m²
- FINISH THRUST BLOCKS APPROXIMATELY 100 mm ABOVE THE TOP OF THE FITTING OR BEARING PAD AND EXTEND TO THE FLOOR OF THE TRENCH OR DEEPER IF NECESSARY TO ACHIEVE THE REQUIRED THRUST AREA.
- THE MINIMUM THRUST AREA FOR TAPER THRUST BLOCKS TO BE EQUAL TO THE DIFFERENCE BETWEEN THE THRUST AREAS FOR DEAD ENDS OF EQUIVALENT DIAMETER TO THOSE EACH SIDE OF TAPER. MAXIMUM PIPE ENGAGEMENT TO BE 180°.
- 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 OR PVC BETWEEN THE FITTING AND CONCRETE TO PREVENT DAMAGE TO THE FITTING. BOLTS, NUTS AND JOINTS ARE TO BE KEPT CLEAR OF CONCRETE.
- STATIC TEST PRESSURE SHALL BE 1400 kPa UNLESS NOTED OTHERWISE ON PROJECT SPECIFIC DOCUMENTATION.
- THRUST AREA IS TO BE CENTRALISED ABOUT THE PIPE CENTRELINE.

REV.	DESCRIPTION	DRAWN	DESIGNED	VERIFIED	APPROVED	DATE
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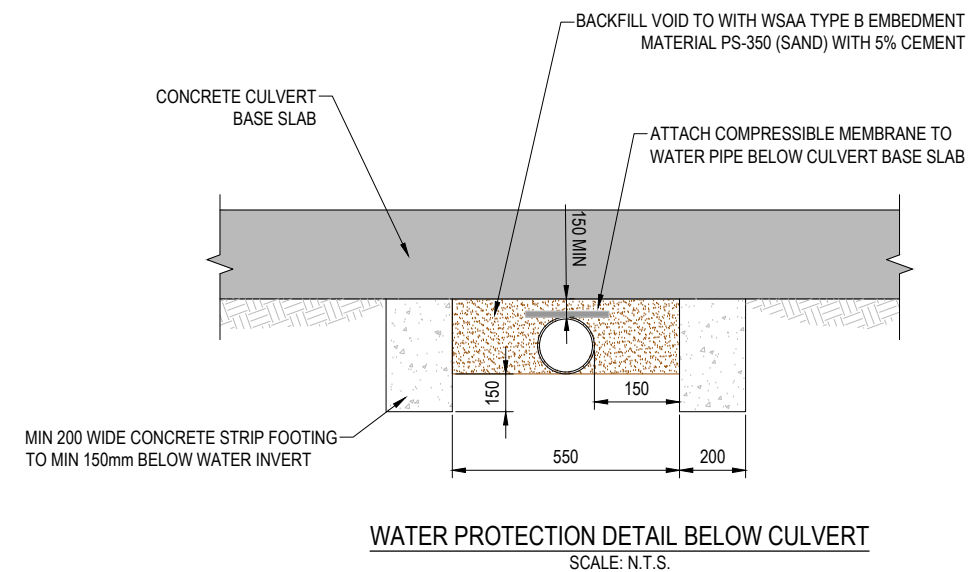
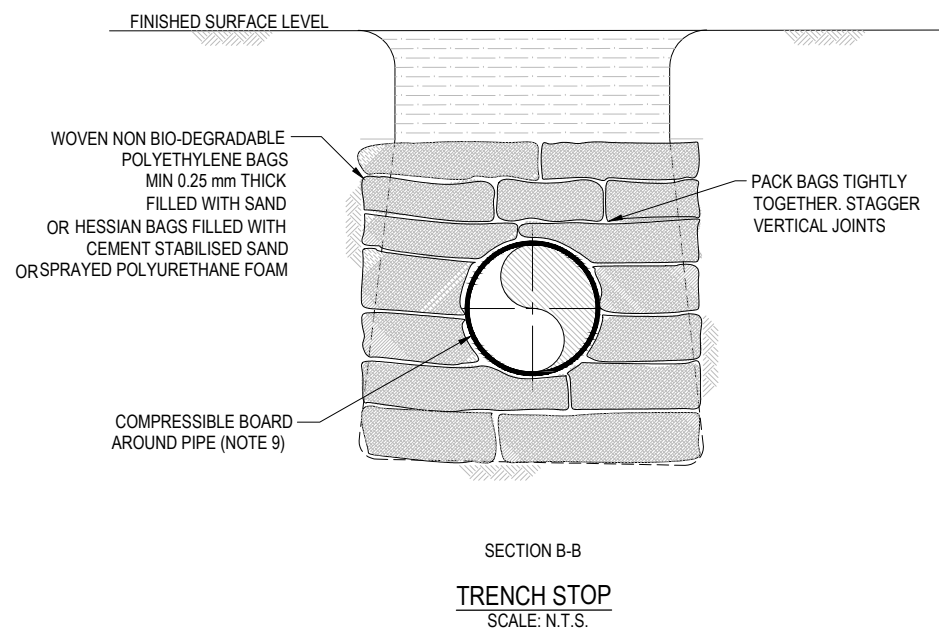
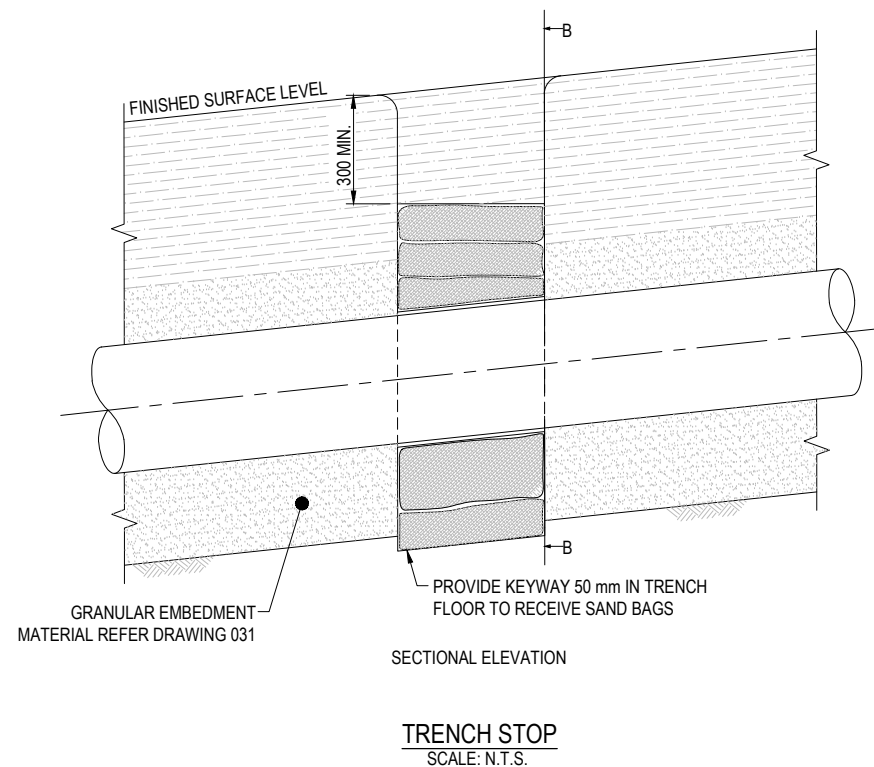
PROJECT TITLE
 COOMA STREET WATER MAIN REPLACEMENT

CLIENT
 QUEANBEYAN COUNCIL
 DRAWING STATUS
 ISSUE FOR TENDER

SCALE NA	COORDINATE SYSTEM GDA2020	DATUM AHD
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SHEET SIZE A1	PROJECT NUMBER 8654-01	DRAWING NUMBER 043	REVISION A
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DRAWING TITLE
 TYPICAL DETAILS SHEET 4 OF 5



- ## NOTES:
1. CONSTRUCT CONCRETE BULKHEADS AND TRENCH STOPS AT LOCATIONS SPECIFIED ON DESIGN DRAWINGS.
 2. BULKHEADS LOCATED UNDER RETAINING WALLS TO BE DIRECTLY UNDER THE WALL.
 3. KEY CONCRETE BULKHEADS AND TRENCH STOPS INTO SIDES AND BOTTOM OF TRENCH AGAINST A BEARING SURFACE OF UNDISTURBED SOIL.
 4. CONCRETE TO BE CLASS N25.
 5. DO NOT DEFORM PIPES DURING PLACEMENT OF CONCRETE.
 6. SEAL BAGS TO PREVENT LEAKAGE OF MATERIAL CONTAINED INSIDE.
 7. PROVIDE A CONTINUOUS DRAINAGE PATH:
 - THROUGH BULKHEADS AND TRENCH STOPS.
 - AROUND MAINTENANCE HOLES.
 - IN TRENCH EXCAVATIONS ACROSS ROADWAYS.
 8. TRENCH DRAINAGE TO BE IN ACCORDANCE WITH SD-2105.
 9. COMPRESSIBLE BOARD AROUND PIPE TO BE 3 mm THICK RUBBER FOR BULKHEADS AND TRENCH STOPS.
 10. EMBEDMENT AND BACKFILL MATERIAL TO BE PLACED PROGRESSIVELY ON BOTH SIDES OF BULKHEAD / TRENCH STOP.
 11. STANDARD TRENCH DETAILS NOT TO BE USED IN REGIONS OF POTENTIAL SLIP, UNSTABLE OR TALUS GROUND.

REQUIREMENTS FOR BULKHEADS AND TRENCH STOPS		
TRENCH/PIPE GRADE (%)	REQUIREMENT	SPACING "S" (m)
5-14	TRENCH STOP	S = 100/GRADE(%)
15-29	CONCRETE BULKHEAD	S = Lp/GRADE(%), WHERE Lp = 80 x PIPE LENGTH (m) (450 MAX.) WHERE Lp > 100 m - USE INTERMEDIATE TRENCH STOPS AT SPACING <100/GRADE(%)

* PIPE LENGTH IS THE STANDARD PIPE LENGTH INSTALLED

REV.	DESCRIPTION	DRAWN	DESIGNED	VERIFIED	APPROVED	DATE
A	FOR CLIENT REVIEW	EP	ID	KM	ΔNI	20/11/2023

CLIENT



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PROJECT TITLE

COOMA STREET WATER MAIN REPLACEMENT

	CLIENT
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EANBEYAN COUNCIL
 BIDDING STATUS
ISSUE FOR TENDER

SCALE
NA

COORDINATE SYSTEM
GDA2020

DATUM
AHD

	DRAWING TITLE
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DRAWING TITLE
TYPICAL DETAILS
SHEET 5 OF 6

SHEET SIZE
A1

PROJECT NUMBER	8654-01
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DRAWING NUMBER
044

REVISION
A



WATERMAIN SLUICE VALVE & THRUST BLOCK/WALL DETAIL

SIZE DN	MIN. BEARING AREA (m2)
100	0.5
150	1.0
200	1.8
225	2.1
250	2.6

REV.	DESCRIPTION	DRAWN	DESIGNED	VERIFIED	APPROVED	DATE
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PROJECT TITLE

COOMA STREET
WATER MAIN
REPLACEMENT

CLIENT	QUEANBEYAN COUNCIL
DRAWING STATUS	ISSUE FOR TENDER

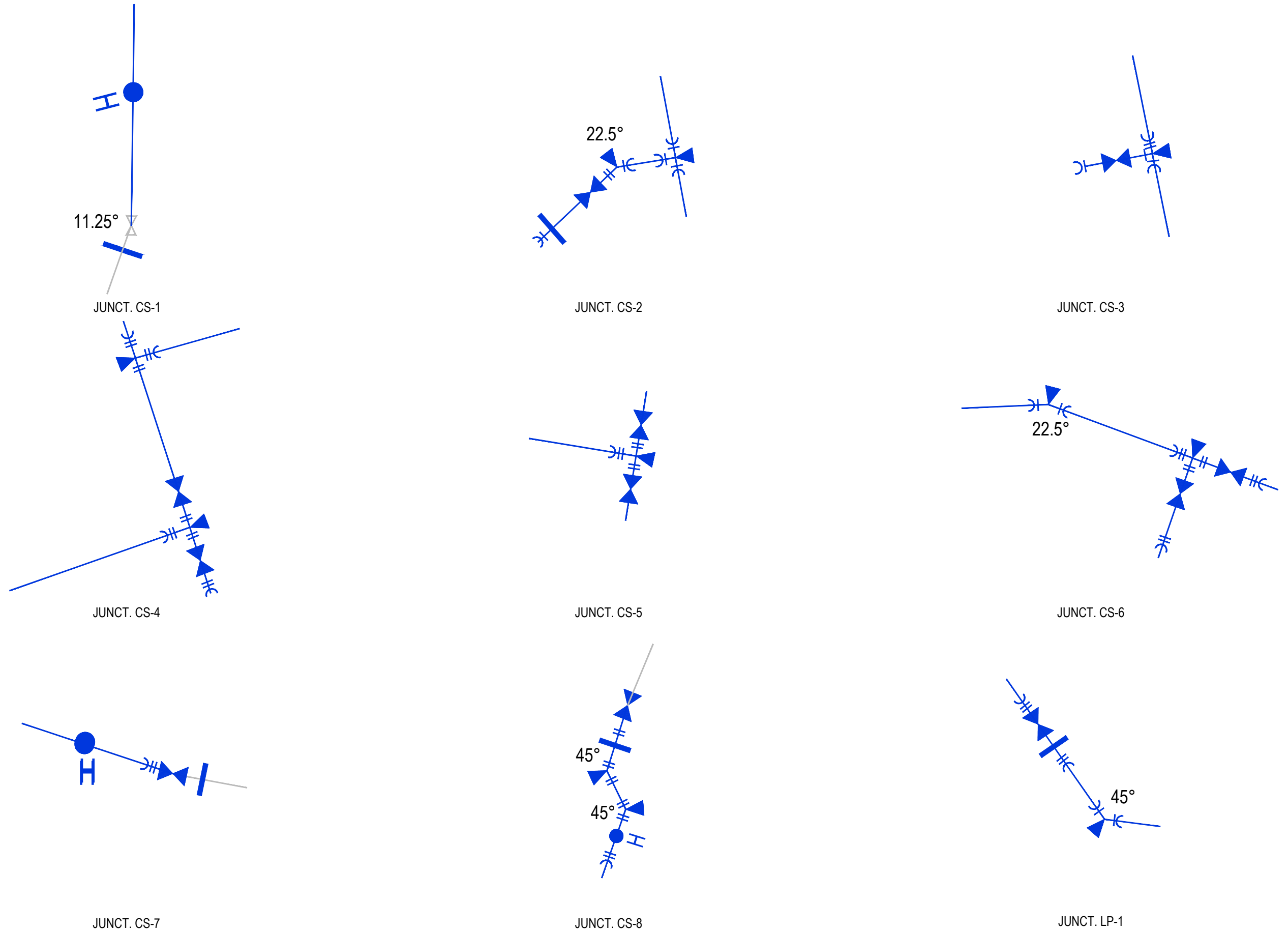
DRAWING TITLE	TYPICAL DETAILS SHEET 6 OF 6
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SCALE NA	COORDINATE SYSTEM GDA2020	DATUM AHD
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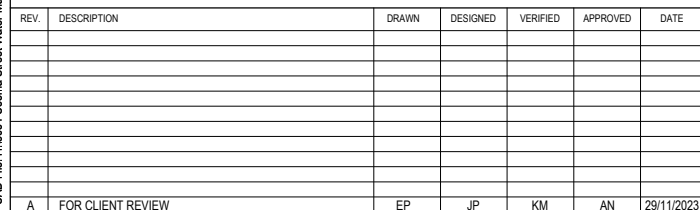
SHEET SIZE	PROJECT NUMBER
A1	8654-01

DRAWING NUMBER
045

REVISION
A



REV.	DESCRIPTION	DRAWN	DESIGNED	VERIFIED	APPROVED	DATE			PROJECT TITLE COOMA STREET WATER MAIN REPLACEMENT	CLIENT QUEANBEYAN COUNCIL	DRAWING TITLE VALVE LAYOUT DETAILS SHEET 1 OF 2
A	FOR CLIENT REVIEW	DN	DN	KM	AN	29/11/2023					



CLIENT	QUEANBEYAN COUNCIL
DRAWING STATUS	ISSUE FOR TENDER

DRAWING TITLE	VALVE LAYOUT PLAN
---------------	-------------------

DRAWING NUMBER	REVISION
048	A

GENERAL NOTES

- ALL WORK TO COMPLY WITH ENVIRONMENT PROTECTION GUIDELINES IN ACCORDANCE WITH THE BLUE BOOK AND COUNCIL REQUIREMENTS.
- WASTE ENCLOSURES WILL BE USED FOR ALL RUBBISH ON SITE AND RUBBISH REMOVED FROM ENCLOSURE(S) WHEN REQUIRED OR FULL
- THE CONTRACTOR PROPOSING TO DEVELOP THE SITE MUST HOLD AN ENVIRONMENT AUTHORISATION OR ENTER INTO AN ENVIRONMENT PROTECTION AGREEMENT WITH THE ENVIRONMENT PROTECTION AUTHORITY (EPA) IN RESPECT OF THE ACTIVITY PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- CONTRACTOR TO ENSURE ALL APPROVALS ARE OBTAINED PRIOR TO COMMENCEMENT OF CONSTRUCTION.

DUST MANAGEMENT

WHERE BUILDING WORK GENERATES DUST, ALL REASONABLE AND PRACTICABLE MEASURES SHOULD BE TAKEN TO MINIMISE THAT DUST.

THIS CAN OFTEN BE ACHIEVED BY:

- STRIPPING AREAS PROGRESSIVELY AND ONLY WHERE IT IS NECESSARY FOR WORKS TO OCCUR.
- EMPLOYING STABILISING METHODS SUCH AS MATTING, GRASSING OR MULCH.
- DAMPENING THE GROUND WITH A LIGHT WATER SPRAY (CONTACT ENVIRONMENT PROTECTION AUTHORITY FOR REQUIREMENTS DURING EXTREME DROUGHT CONDITIONS).
- ROUGHENING SURFACE OF EXPOSED SOIL.
- COVERING STOCKPILES AND LOCATING THEM WHERE THEY ARE PROTECTED FROM THE WIND.
- RESTRICTING VEHICLE MOVEMENTS.
- ALL LOADS TO BE COVERED WHEN TRANSPORTING MATERIAL OFF SITE
- CONSTRUCTING WIND BREAKS SUCH AS WIND FENCES IN ACCORDANCE WITH THE BLUE BOOK.
- A WATER CART OR SUFFICIENT WATER SPRAYS SHALL BE MADE AVAILABLE AT ALL TIMES. IN ADVERSE CONDITIONS WHEN DUST CANNOT BE ADEQUATELY CONTROLLED WHEN WORKS AREA BEING UNDERTAKEN, WORKS WILL CEASE IN THESE AREAS UNTIL CONDITIONS IMPROVE.
- WATER SHALL BE APPLIED TO SUPPRESS DUST FROM OPEN EARTHWORKS AS WELL AS UNPROTECTED STOCKPILES.
- AREAS OF COMPLETED EARTHWORKS SHALL BE PROGRESSIVELY REHABILITATED WITH DRYLAND GRASS AND FENCED OFF AS SOON AS PRACTICABLE TO PREVENT FURTHER EROSION.
- THE CONTRACTOR IS TO CONTACT THE WATER RESOURCES UNIT TO OBTAIN AN EXEMPTION TO USE NON-POTABLE WATER FROM ON OR OFF THE SITE IF REQUIRED.
- ALL WORK TO STOP IF DUST CONTINUES TO LEAVE SITE WHEN ALL ABOVE METHODS HAVE BEEN UNDERTAKEN

NOISE

ENSURE ALL BUILDING WORK THAT GENERATES NOISE IS CONDUCTED WITHIN THE TIME PERIODS DETAILED IN SCHEDULE 2 OF THE ENVIRONMENT PROTECTION REGULATIONS 2005.

IN ADDITION:

- SCHEDULE NOISY ACTIVITIES FOR THE LEAST SENSITIVE TIMES OF THE DAY SUCH AS MID-MORNING OR MID-AFTERNOON.
- SELECT MACHINERY THAT PRODUCES LESS NOISE; AND ENSURE MACHINERY IS WELL MAINTAINED.

DISPOSAL OF SPOIL

BEFORE DISPOSAL OF SPOIL OFF SITE, THE FOLLOWING INFORMATION MUST BE PROVIDED TO COUNCIL:

- WHERE THE SPOIL WILL ORIGINATE FROM
- WHO IS DISPOSING OF THE SPOIL
- WHERE THE SPOIL WILL BE TAKEN
- THE AMOUNT OF SPOIL TO BE TAKEN AWAY
- DESCRIPTION OF THE TYPE OF SPOIL TAKEN AWAY
- DETAILS OF HOW RECORDS WILL BE KEPT; AND
- TIME FRAME TO COMPLETE WORKS TO THE SATISFACTION OF ENVIRONMENT ACT.

SPOIL MAY BE TAKEN TO AN APPROVED LANDFILL SITE WITHOUT APPROVAL. HOWEVER, IF THE SPOIL IS TAKEN TO AN AREA OTHER THAN APPROVED LANDFILL SITE, ENSURE THE ACCEPTOR OF THE SPOIL IS AWARE OF THE REQUIREMENTS SETOUT IN THE BLUE BOOK AND COUNCIL REQUIREMENTS.

FIRE

BURNING OF WASTE MATERIALS ON THE SITE, SUCH AS PLASTICS, CHEMICALS OR WOOD THAT MAY BE PAINTED, CHEMICALLY TREATED OR CONTAMINATED WITH CHEMICALS IS ILLEGAL. A FIRE MAY BE PERMITTED FOR HEATING PURPOSES PROVIDED IT IS IN A BRAZIER OR CONSTRUCTED FIREPLACE. ONLY SEASONED, UNTREATED TIMBER CAN BE BURNT FOR HEATING PURPOSES.

SEDIMENT CONTROL NOTES

- SEDIMENT AND EROSION CONTROL DEVICES TO BE INSTALLED AND FULLY OPERATIONAL PRIOR TO STRIPPING OF SITE TOPSOIL.
- STOCK PILE/S TO BE LOCATED AWAY FROM DRAINAGE LINES AND SURFACE FLOW PATHS, CONTOURED STRIATIONS OR FURROWS TO BE PROVIDED TO STOCK PILES TO MINIMISE EROSION.
- STABILISED CONSTRUCTION ENTRANCE TO BE CONSTRUCTED PRIOR TO ACCESS TO SITE BY CONSTRUCTION VEHICLES. AGGREGATE TO BE TURNED WHEN SEDIMENT BUILDS UP AND RENEWED WHEN REQUIRED.
- WHERE STORMWATER DRAINAGE IS INSTALLED TO INTERNAL ROADWORKS, PROVIDE GRATED SUMP FILTER IN ACCORDANCE WITH EPA GUIDELINES.
- BUILDER IS TO ESTABLISH A MAINTENANCE PROGRAM FOR SEDIMENT & EROSION CONTROL DEVICES TO ENSURE INSPECTION AFTER SIGNIFICANT RAINFALL AND THAT ANY REPAIRS NECESSARY ARE QUICKLY ATTENDED TO.
- ALL NEW CONSTRUCTION WORK MUST BE CONTAINED WITHIN THE SITE EXCEPT FOR APPROVED SERVICE CONNECTIONS AND ROADWORKS.
- LIMIT ACCESS TO SITE DURING AND IMMEDIATELY AFTER WET WEATHER.
- REMOVE ANY SOIL FROM ROADS ADJACENT TO THE SITE AT THE END OF EACH DAY.
- NO STORAGE OF CONSTRUCTION MATERIALS, PARKING OF VEHICLES NOR EQUIPMENT PERMITTED OUTSIDE OF BLOCK WITHOUT TAMS APPROVAL.
- NO SITE SHEDS, STORAGE SHEDS, SITE AMENITIES TO BE ERECTED OUTSIDE OF BLOCK WITHOUT TAMS APPROVAL.
- PROVIDE KERBSIDE FILTER ROLL TO SUMPS / STORMWATER INLETS ADJACENT TO THE SITE AND ANY ADDITIONAL SUMPS AS DETAILED.
- KERBSIDE FILTER ROLLS TO BE REMOVED, CLEANED AND REINSTATED ON A WEEKLY BASIS AT A MINIMUM. TRAPPED SEDIMENT ABOUT SUMPS IS ALSO TO BE REMOVED. CLEANING IS ALSO TO TAKE PLACE IMMEDIATELY AFTER PERIODS OF RAINFALL DURING CONSTRUCTION.
- ALL SERVICE TRENCHES TO BE BACKFILLED WITHIN 24 HOURS OF INSPECTION.
- EXCESS SOIL IS TO BE DISPOSED AT AN ENVIRONMENT PROTECTION AUTHORITY APPROVED LOCATION.
- THE SITE FOREMAN IS TO CONTACT ENVIRONMENT PROTECTION AUTHORITY (131555) TO ARRANGE A SITE INSPECTION AND ENDORSEMENT OF SEDIMENT AND EROSION CONTROL MEASURES PRIOR TO WORKS COMMENCING.
- THE SITE FOREMAN IS TO CONTACT ENVIRONMENT PROTECTION AUTHORITY (131555) TO DISCUSS ANY MAJOR CHANGES TO SEDIMENT AND EROSION CONTROLS ON SITE PRIOR TO IMPLEMENTING THE CHANGES.
- THE SITE FOREMAN WILL ENSURE CONTRACTORS ACCESS AND EXIT THE SITE USING ONLY ENVIRONMENT PROTECTION AUTHORITY APPROVED STABILISED ACCESS/EXIT POINTS AS DETAILED ON ENDORSED SEDIMENT AND EROSION CONTROL PLANS.
- THE CONTRACTOR TO LIMIT STRIPPING OF TOPSOIL AND REMOVAL OF VEGETATION TO AREAS ESSENTIAL FOR UNDERTAKING THE WORKS.
- DISTURBED AREAS TO BE RESTORED TO ORIGINAL CONDITION AS SOON AS PRACTICABLE.
- THE CONTRACTOR SHALL LIMIT VEHICLES AND PLANT MOVEMENT TO PARKING AREAS AND ACCESS ROUTES AS APPROVED OR ONLY IN AREAS WHERE WORK IS PROCEEDING.
- THE CONTRACTOR IS NOT ALLOWED TO PARK ON OR DISTURB ROAD VERGES EXCEPT WHERE NEW DRAINAGE LINES ARE REQUIRED.
- CONTRACTOR TO RETAIN A COPY OF THE APPROVED "EROSION AND SEDIMENT CONTROL PLAN" DURING LAND DEVELOPMENT IN THE SITE OFFICE.

- EXCAVATIONS SHALL BE LEFT OPEN FOR THE MINIMUM PRACTICAL TIME AND SHALL NOT BE OPENED FOR A GREATER LENGTH THAN PIPES CAN BE REMOVED IN A DAY. PROGRESSIVELY CONSTRUCT WORK AND STABILISE.
- ALL WATER DISCHARGED FROM BASEMENT AFTER RAIN EVENTS WILL BE TREATED WITH GYPSUM AS PER ENVIRONMENT GUIDELINE BEFORE BEING PUMPED OUT.

TURBIDITY LESS THAN 50 NTA ON TURBIDITY TUBE

PH IN RANGE OF 6.5 TO 8.5

MAINTENANCE SCHEDULE

WEEKLY:

- TURN OVER STABILISED CONSTRUCTION ENTRY MATERIAL AND RENEW WHEN REQUIRED.
- CHECK AND REINSTATE SILT CONTROL FENCES

DAILY:

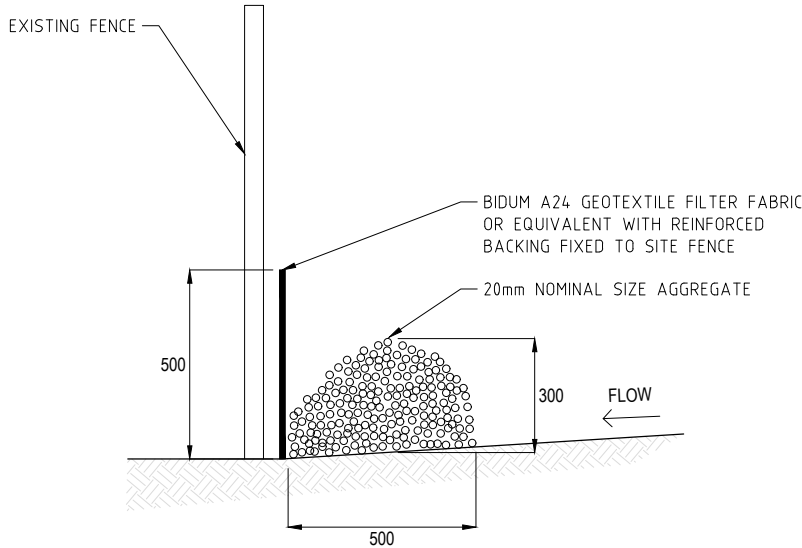
- SWEEP AND REMOVE DIRT AND ANY OTHER BUILDING MATERIAL FROM GUTTERS, FOOTPATHS OR ROADWAYS ADJACENT TO THE SITE BY CLOSE OF BUSINESS AND PRIOR TO RAIN AND WHEN REQUIRED. ALL NECESSARY STEPS SHOULD BE TAKEN THAT ARE PRACTICAL AND REASONABLE TO MINIMISE DUST POLLUTION ON LAND DEVELOPMENT AND CONSTRUCTION SITE.

DURING/AFTER WET WEATHER:

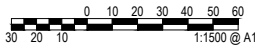
- LIMIT CONSTRUCTION VEHICLE ACCESS TO SITE DURING AND IMMEDIATELY FOLLOWING WET WEATHER.

SITE CONTACT	PERSON	MOBILE
TBA	TBA	TBA

- SITE AREA: 0.4 ha



TYPICAL SILT FENCE DETAIL
NTS



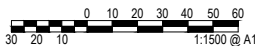
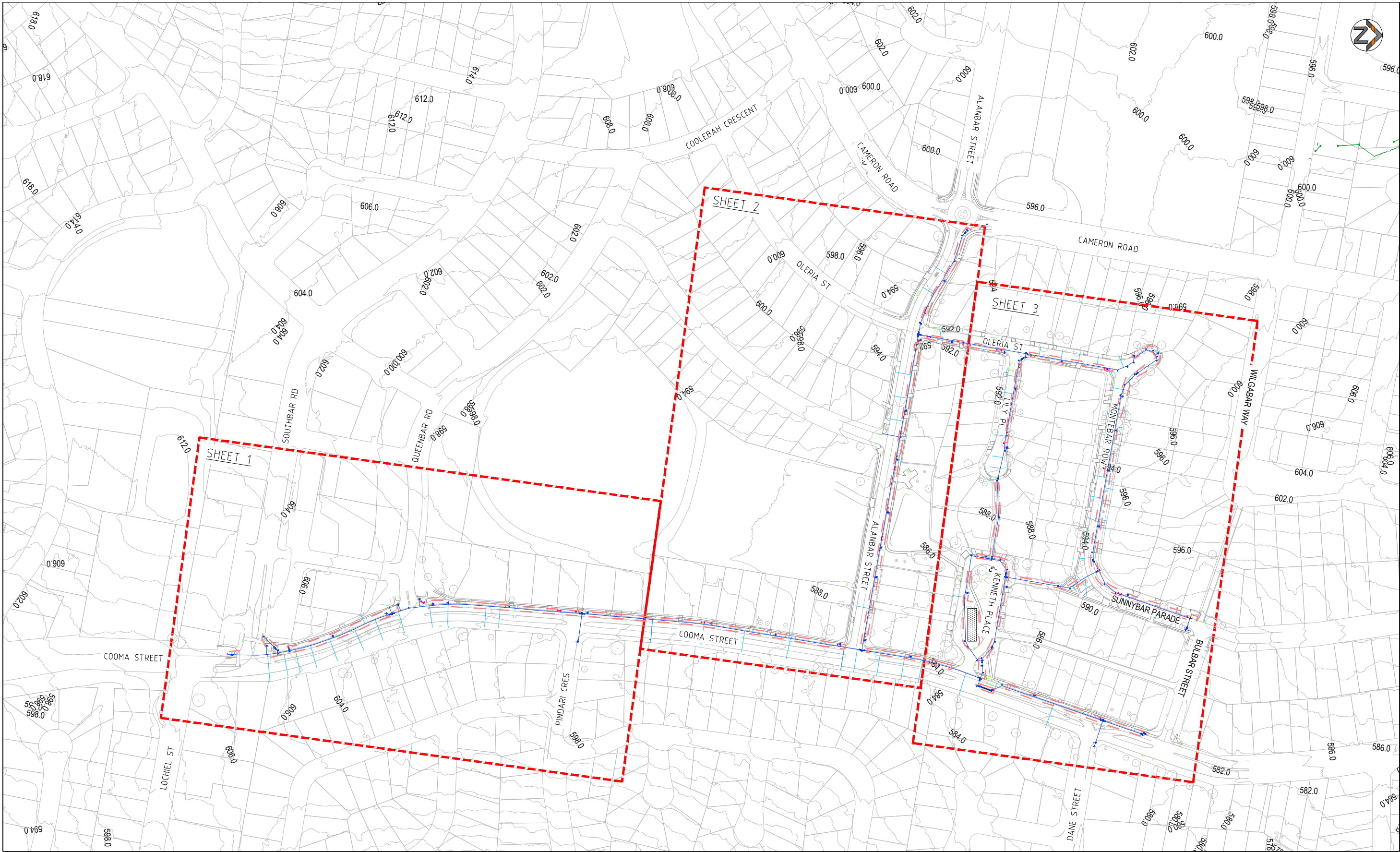
REV.	DESCRIPTION	DRAWN	DESIGNED	VERIFIED	APPROVED	DATE
B	DESIGN UPDATED	EP	DN	KM	AN	7/12/2023
A	FOR CLIENT REVIEW	EP	JP	KM	AN	29/11/2023



PROJECT TITLE
COOMA STREET WATER MAIN REPLACEMENT

CLIENT	QUEANBEYAN COUNCIL
DRAWING STATUS	ISSUE FOR TENDER
SCALE	NA
COORDINATE SYSTEM	GDA2020
DATUM	AHD
SHEET SIZE	A1
PROJECT NUMBER	8654-01

DRAWING TITLE	CONCEPT EROSION AND SEDIMENT CONTROL NOTES
DRAWING NUMBER	050
REVISION	B



REV.	DESCRIPTION	DRAWN	DESIGNED	VERIFIED	APPROVED	DATE
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PROJECT TITLE

COOMA STREET
WATER MAIN
REPLACEMENT

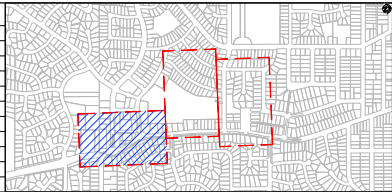
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DRAWING STATUS ISSUE FOR TENDER			
SCALE AS SHOWN	COORDINATE SYSTEM GDA2020	DATUM AHD	
SHEET SIZE A1	PROJECT NUMBER 8654-01	DRAWING NUMBER 051	REVISION B

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REV.	DESCRIPTION	DRAWN	DESIGNED	VERIFIED	APPROVED	DATE
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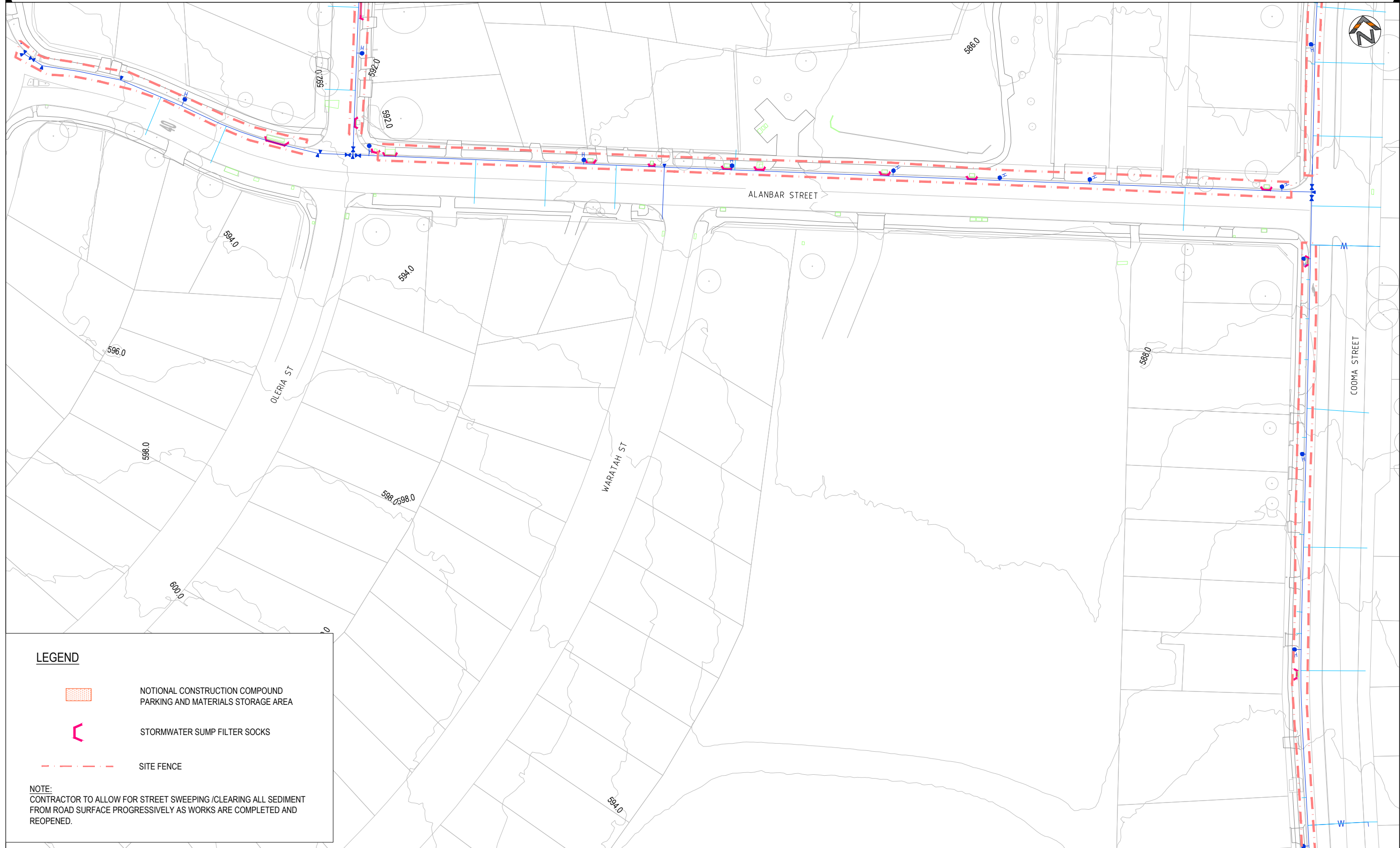
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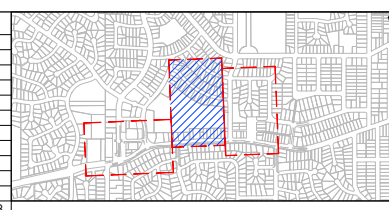
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**COOMA STREET
WATER MAIN
REPLACEMENT**

CLIENT QUEANBEYAN COUNCIL		
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SCALE AS SHOWN	COORDINATE SYSTEM GDA2020	DATUM AHD
SHEET SIZE A1	PROJECT NUMBER 8654-01	

DRAWING TITLE CONCEPT EROSION AND SEDIMENT CONTROL PLAN SHEET 2 OF 4	
DRAWING NUMBER 052	REVISION B



REV.	DESCRIPTION	DRAWN	DESIGNED	VERIFIED	APPROVED	DATE
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7	PROJECT TITLE
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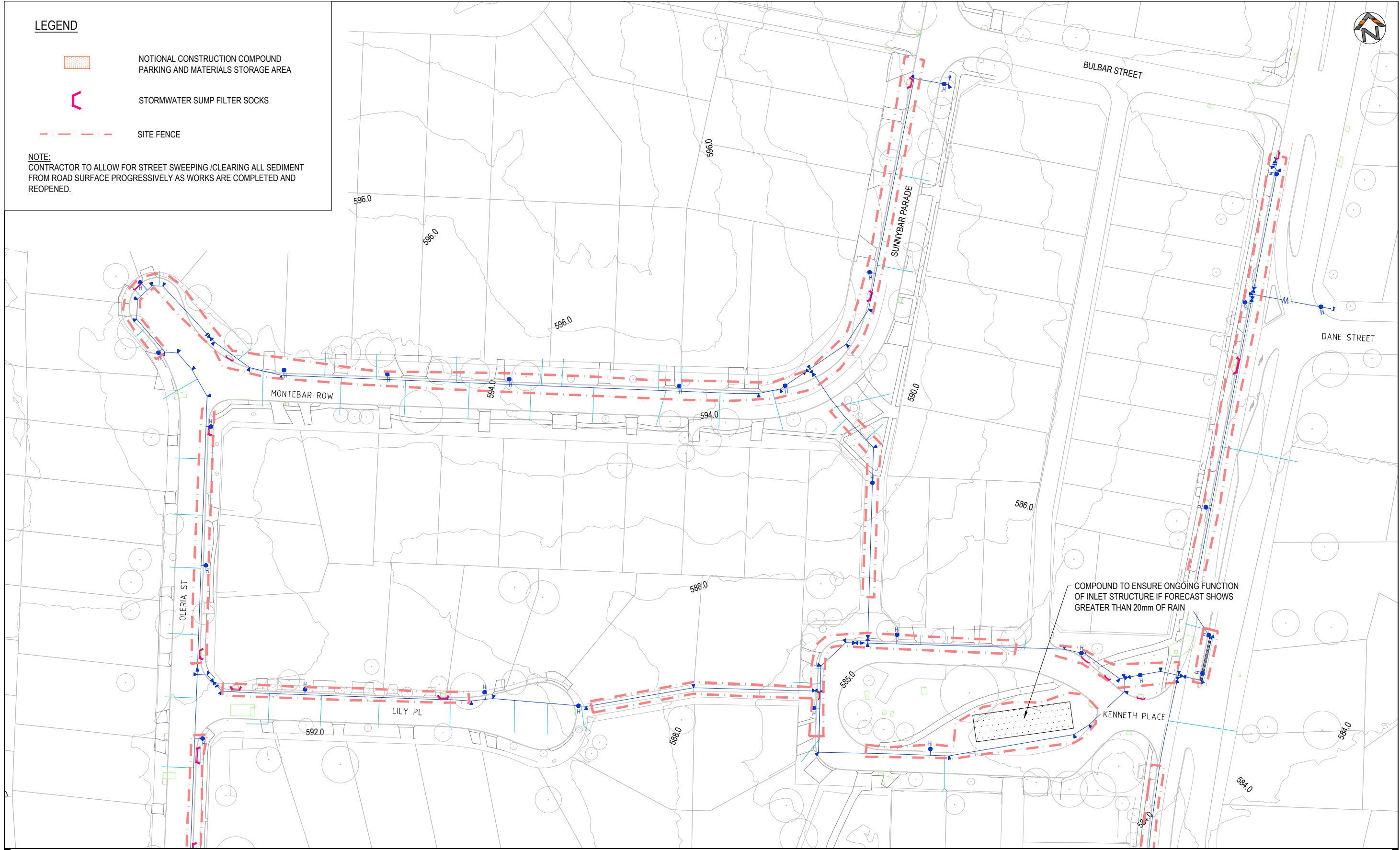
COOMA STREET WATER MAIN REPLACEMENT

CLIENT	QUEANBEYAN COUNCIL
DRAWING STATUS	ISSUE FOR TENDER

SCALE AS SHOWN	COORDINATE SYSTEM GDA2020	DATUM AHRS
SHEET SIZE A1	PROJECT NUMBER 8654-01	

DRAWING TITLE	CONCEPT EROSION AND SEDIMENT CONTROL PLAN SHEET 3 OF 4
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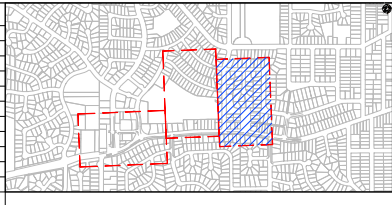
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053	B



JOINS DRAWING No.8654-01-062



REV.	DESCRIPTION	DRAWN	DESIGNED	VERIFIED	APPROVED	DATE
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CLIENT



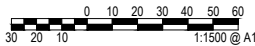
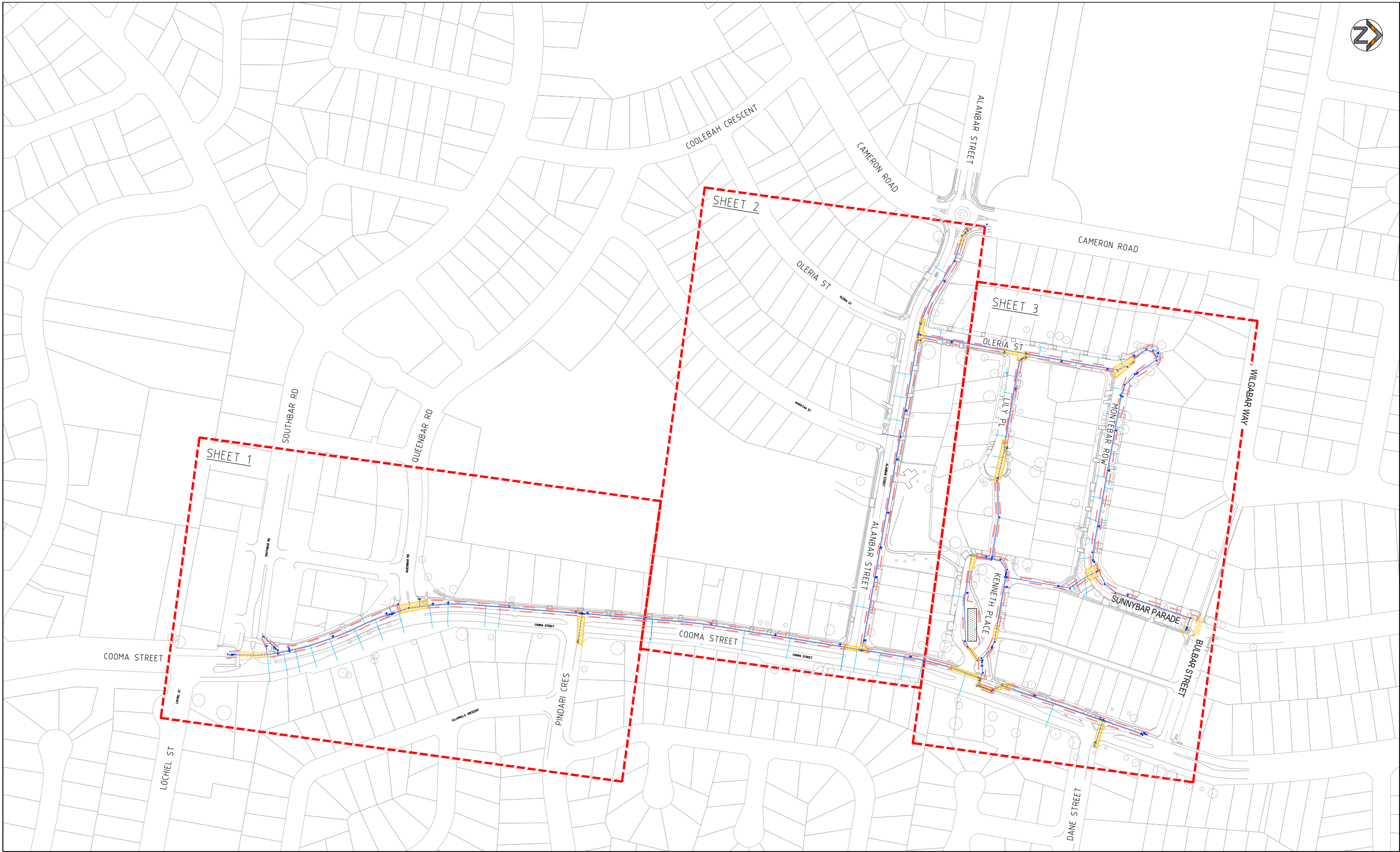
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PROJECT TITLE
**COOMA STREET
WATER MAIN
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CLIENT QUEANBEYAN COUNCIL		
DRAWING STATUS ISSUE FOR TENDER		
SCALE AS SHOWN	COORDINATE SYSTEM GDA2020	DATUM AHD
SHEET SIZE A1	PROJECT NUMBER 8654-01	

DRAWING TITLE CONCEPT EROSION AND SEDIMENT CONTROL PLAN SHEET 4 OF 4	
DRAWING NUMBER 054	REVISION B



REV.	DESCRIPTION	DRAWN	DESIGNED	VERIFIED	APPROVED	DATE
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PROJECT TITLE

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CLIENT
QUEANBEYAN COUNCIL

DRAWING STATUS
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GDA2020

DATUM
AHD

SHEET SIZE
A1

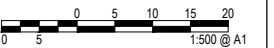
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TRAFFIC MANAGEMENT PLAN
SHEET 1 OF 4

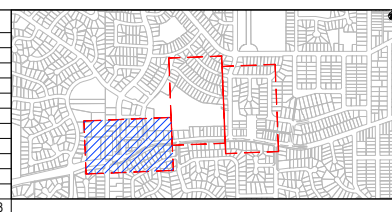
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060

REVISION
B

CONTRACTOR TO ORGANISE LANE
CLOSURES AS REQUIRED



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PROJECT TITLE

COOMA STREET
WATER MAIN
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CLIENT	QUEANBEYAN COUNCIL
DRAWING STATUS	ISSUE FOR TENDER

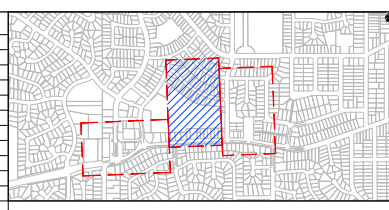
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DRAWING TITLE
CONCEPT TEMPORARY
TRAFFIC MANAGEMENT PLAN
SHEET 2 OF 4

DRAWING NUMBER	REVISION
061	B



REV.	DESCRIPTION	DRAWN	DESIGNED	VERIFIED	APPROVED	DATE
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PROJECT TITLE

COOMA STREET WATER MAIN REPLACEMENT

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SEANBEYAN COUNCIL

ISSUE FOR TENDER

SCALE	AS SHOWN
SHEET SIZE	A1

COORDINATE SYSTEM GDA2020
PROJECT NUMBER 8654-01

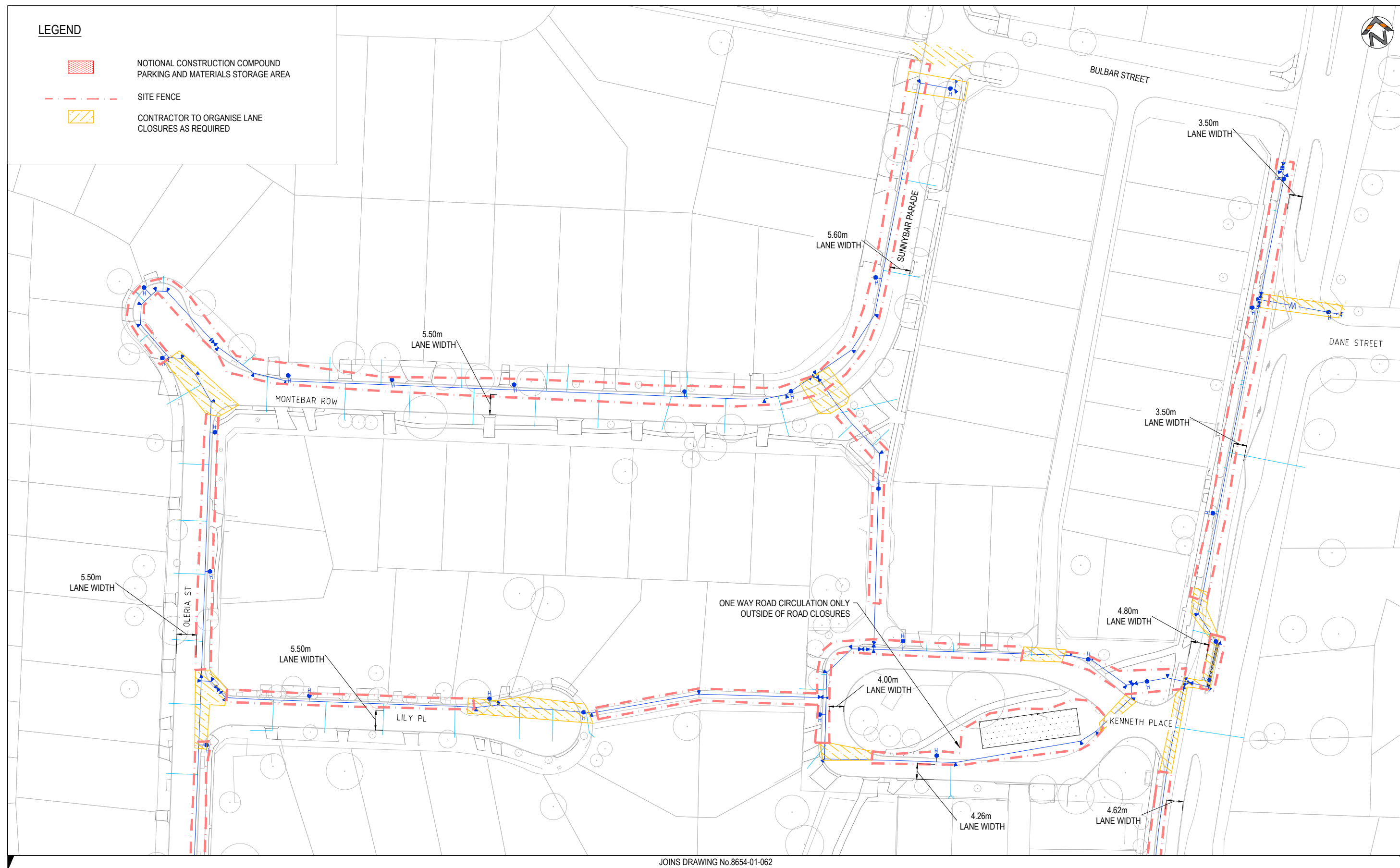
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DRAWING TITLE

DRAWING TITLE
CONCEPT TEMPORARY
TRAFFIC MANAGEMENT PLAN
SHEET 3 OF 4

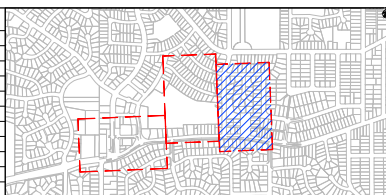
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062

REVISION
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JOINS DRAWING No.8654-01-062

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DRAWING TITLE

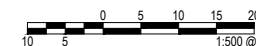
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CONCEPT TEMPORARY
TRAFFIC MANAGEMENT PLAN
SHEET 4 OF 4

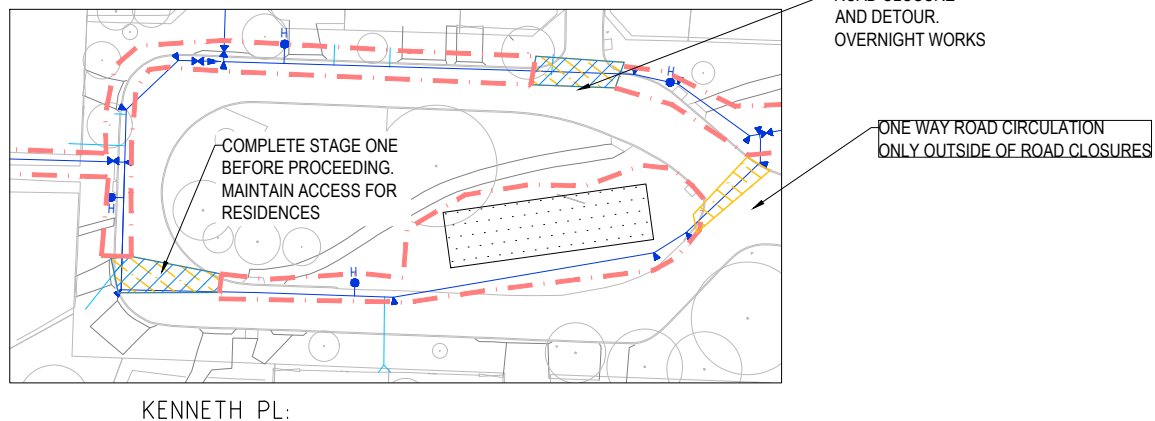
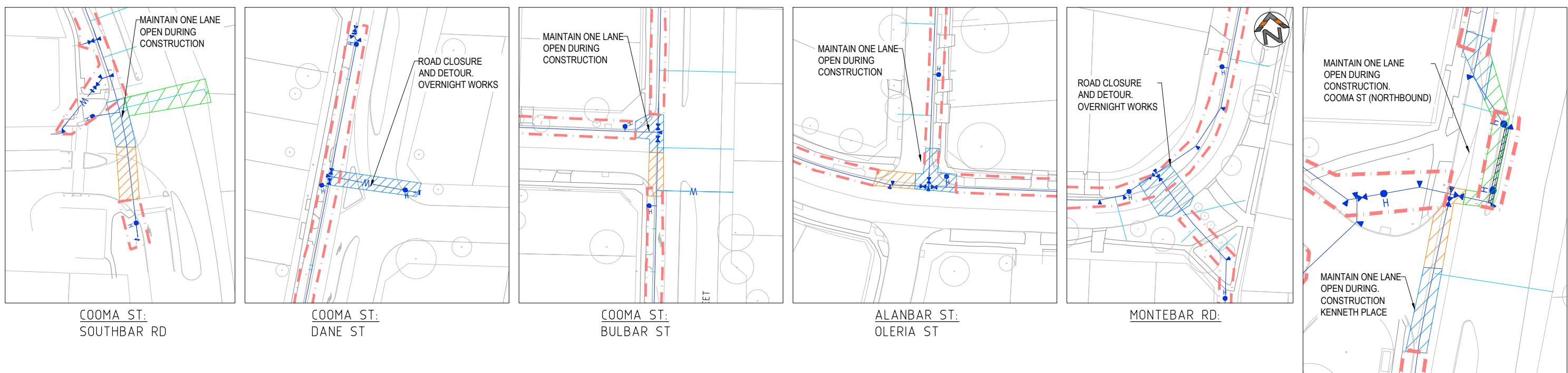
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063

REVISION

B



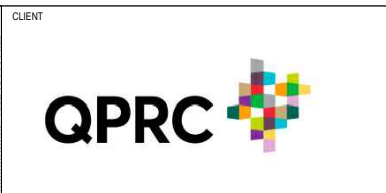
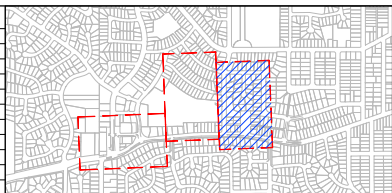


LEGEND

- STAGE 1
- STAGE 2
- STAGE 3

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REV.	DESCRIPTION	DRAWN	DESIGNED	VERIFIED	APPROVED	DATE
B	DESIGN UPDATED	EP	DN	KM	AN	7/12/2023
A	FOR CLIENT REVIEW	EP	DN	KM	AN	29/11/2023



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PROJECT TITLE

COOMA STREET
WATER MAIN
REPLACEMENT

CLIENT
QUEANBEYAN COUNCIL

DRAWING STATUS
ISSUE FOR TENDER

SCALE AS SHOWN	COORDINATE SYSTEM GDA2020	DATUM AHD
SHEET SIZE A1	PROJECT NUMBER 8654-01	

DRAWING TITLE
CONCEPT TEMPORARY
TRAFFIC MANAGEMENT PLAN
PIPE WORKS STAGING

DRAWING NUMBER
064

REVISION
B

1. GENERAL

- 1.1. NO WORKS OTHER THAN THOSE IDENTIFIED ON THE APPROVED PLANS ARE TO TAKE PLACE WITHIN THE TREE PROTECTION ZONE (TPZ) OF AN EXISTING TREE. NO CONSTRUCTION ACTIVITIES SUCH AS STORAGE, PARKING, STOCKPILING, SITE SHEDS, CONSTRUCTION ACCESS, WASHDOWN, EXCAVATION ETC. ARE ACCEPTED WITHOUT APPROVAL.

2. SITE ACCESS - SITE ACCESS MUST BE STRICTLY THROUGH THE ACCESS POINTS IDENTIFIED ON THE APPROVED PLANS. ACCESS THROUGH LAND THAT IS NOT IDENTIFIED ON THE APPROVED PLANS IS PROHIBITED.

3. STORAGE OF MATERIALS

THE STORAGE OF CONSTRUCTION MATERIALS AND THE PARKING OF VEHICLES OR EQUIPMENT ON VERGES OR ADJACENT PUBLIC OPEN SPACES ARE NOT PERMITTED WITHOUT PRIOR APPROVAL.

4. FENCING
PROTECTION FENCING

- 4.0.1. FENCING MUST BE ERECTED AROUND ALL EXISTING TREES TO BE RETAINED BEFORE COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES ON SITE, THIS INCLUDES BUT IS NOT LIMITED TO STARTING OF DEMOLITION WORKS, DELIVERY OF MACHINERY OR MATERIALS, STOCKPILING, STORAGE ETC.
- 4.0.2. FENCING MUST REMAIN IN PLACE FOR THE ENTIRETY OF THE PROJECT, AND MAINTAINED IN GOOD, SAFE WORKING ORDER UNTIL PRACTICAL COMPLETION IS GRANTED. REMOVAL BEFORE PC IS GRANTED MUST BE APPROVED IN WRITING.
- 4.0.3. FENCING MUST BE RIGID MESH TEMPORARY FENCE PANELS SUPPORTED BY STEEL POSTS AND CONCRETE BASES. SUPPORT POSTS DRIVEN INTO THE GROUND ARE STRICTLY PROHIBITED.
- 4.0.4. ALL CONNECTING FIXTURES/HARDWARE MUST BE SECURELY MOUNTED SO FENCING CANNOT BE DISMANTLED AND REMOVED BY THE PUBLIC.
- 4.0.5. THE USE OF ALTERNATIVE FENCING MATERIALS MUST BE DISCUSSED WITH, AND APPROVED BY QPRC
- 4.0.6. FENCING MUST BE SETBACK FROM FOOTPATHS AND CIVIL INFRASTRUCTURE.

5. CANOPY PROTECTION

THIS SECTION OF NOTES IS APPLICABLE WHERE THE EXISTING CANOPY OF A TREE ON PUBLIC LAND IS LIKELY TO BE IMPACTED BY CONSTRUCTION WORKS. THE FOLLOWING CANOPY PROTECTION REQUIREMENTS ARE MANDATORY

- 5.1. THE CONTRACTOR IS RESPONSIBLE TO MINIMISE ANY IMPACTS ON THE TREE CANOPIES AND PROTECT ALL EXISTING TREE CANOPIES FROM CONSTRUCTION ACTIVITIES.
- 5.2. WHERE CANOPY IMPACTS ARE IDENTIFIED, THE FOLLOWING REQUIREMENTS ARE MANDATORY.
- 5.2.1. IDENTIFY ANY PRUNING REQUIREMENTS WHERE THE LIMBS MAY NEED TO BE PRUNED OR TIED BACK.
- 5.2.2. WHERE DIRECTED BY QPRC, A SUITABLY QUALIFIED ARBORIST WITH A MINIMUM CERTIFICATE 5 QUALIFICATION MUST BE ENGAGED TO IDENTIFY THE CANOPY IMPACTS AND PROPOSE THE PREFERRED TIE BACK OF LIMBS OR EXTENT OF PRUNING REQUIRED.
- 5.2.3. WHERE PRUNING IS IDENTIFIED, REFER TO SECTION 5 OF THESE NOTES.
- 5.3. BRANCH PRUNING OF COUNCIL TREES
- 5.3.1. THIS SECTION OF NOTES IS APPLICABLE WHEREVER PRUNING IS REQUIRED TO TREES ON PUBLIC LAND.
- 5.3.2. ALL PRUNING AND TYING OF BRANCHES MUST BE UNDERTAKEN BY SUITABLY QUALIFIED ARBORISTS WITH A MINIMUM CERTIFICATE 3 QUALIFICATION AS PER BEST PRACTICE AS4373.
- 5.3.3. WHERE PRACTICAL BRANCHES SHOULD BE TIED BACK CLEAR OF THE WORK, AND PRUNING SHOULD ONLY BE USED AS LAST RESORT.

6. TRUNK/BRANCH PROTECTION

THIS SECTION IS APPLICABLE WHERE WORK IS REQUIRED WITHIN THE TREE PROTECTION ZONE OF AN EXISTING TREE. TRUNK PROTECTION MUST BE INSTALLED WHEN WORK IS REQUIRED WITHIN THE TPZ OF A TREE.

- 6.1. PROTECTION BATTENS MUST BE PUT IN PLACE BEFORE COMMENCING WORKS AND MAINTAIN IN GOOD CONDITION THROUGHOUT THE WORK PERIOD. PROTECTION BATTENS CAN ONLY BE REMOVED AT THE COMPLETION OF WORKS.
- 6.2. TRUNK PROTECTION (AS PER CURRENT AS4970 REQUIREMENTS)
- 6.2.1. LOOSELY WRAP THE TRUNK REQUIRING PROTECTION IN A THICK LAYER OF HESSIAN.
- 6.2.2. USE MINIMUM 2M LENGTHS OF TIMBER FOR THE TRUNK PROTECTION AND INSTALL AT BASE OF TRUNK FOR FULL CIRCUMFERENCE OF TREE. SPACE BATTENS SO GAPS BETWEEN BATTENS ARE NO GREATER THAN 20MM. BATTENS MUST BE UNTREATED TIMBER FREE OF NAILS, SCREWS OR BOLTS.
- 6.2.3. LASH BATTENS TO TREE USING STRAPS, ROPE OR HESSIAN WEBBING ENSURING THE BATTENS ARE SECURE AGAINST THE TREE, BUT NOT TOO TIGHT ON THE TRUNK. BATTENS MUST BE LASHED AT THE TOP, BOTTOM AND MIDDLE AS A MINIMUM.
- 6.3. BRANCH PROTECTION (AS PER CURRENT AS4970 REQUIREMENTS)
- 6.3.1. WHERE LOW HANGING BRANCHES GREATER THAN 100MM IN DIAMETER ARE LIKELY TO BE

- IMPACTED BY THE WORKS THEY WILL REQUIRE ADDITIONAL PROTECTION.
- 6.3.2. LOOSELY WRAP THE BRANCHES REQUIRING PROTECTION IN A THICK LAYER OF HESSIAN.
- 6.3.3. USE TIMBER CUT TO LENGTH TO SUIT THE BRANCH REQUIRING PROTECTION AND INSTALL TO FULL CIRCUMFERENCE OF BRANCH. SPACE BATTENS SO GAPS BETWEEN BATTENS ARE NO GREATER THAN 20MM. BATTENS MUST BE UNTREATED TIMBER FREE OF NAILS, SCREWS OF BOLTS.
- 6.3.4. LASH BATTENS TO TREE USING STRAPS, ROPE OR HESSIAN WEBBING ENSURING THE BATTENS ARE SECURE AGAINST THE TREE, BUT NOT TOO TIGHT ON THE TRUNK. BATTENS MUST BE LASHED AT THE TOP, BOTTOM AND MIDDLE AS A MINIMUM.

7. DEMOLITION WITHIN THE TPZ - REFER ALSO CANOPY, TRUNK/BRANCH, ROOT PROTECTION NOTES
THIS SECTION OF NOTES IS APPLICABLE WHERE EXISTING INFRASTRUCTURE IS REQUIRED TO BE DEMOLISHED WITHIN THE TPZ OF AN EXISTING TREE

- 7.1. ONLY THE DEMOLITION WORKS WITHIN TPZ AREAS AS INDICATED ON THE APPROVED PLANS. ANY DEMOLITION WORK WITHIN TPZ AREAS, THAT IS NOT INDICATED ON THE ENDORSED PLAN IS NOT APPROVED BY URBAN TREESCAPES AND AN UPDATED PLANS MUST BE PROVIDED TO QPRC FOR RE-ENDORSEMENT BEFORE COMMENCING THE WORKS.
- 7.2. DEMOLITION OF OLD PAVEMENT WITHIN TPZ -
- 7.2.1. ALL CONSTRUCTION WORK IS TO BE COMPLETED PRIOR TO EXCAVATION AND REMOVAL OF THE EXISTING PAVEMENT. THIS IS TO ENSURE THE TREE ROOTS DO NOT DRY OUT BEFORE WORK IS COMPLETED.
- 7.2.2. TO MINIMISE ROOT DAMAGE, THE REMOVAL OF THE EXISTING PAVEMENT SHALL BE CAREFULLY DONE IN SMALL STAGED SECTIONS AND ONLY TO THE DEPTH OF THE EXISTING MATERIAL (SURFACE LAYER AND BASE LAYER), SO AS TO NOT CAUSE DAMAGE TO TREE ROOTS.
- 7.2.3. NO VEHICLES OR MACHINERY ARE TO BE ALLOWED WITHIN THE TPZ AND VEHICLES AND MACHINERY MUST ALWAYS STAY OUTSIDE THIS ZONE DURING THE REMOVAL OF THE OLD PAVEMENT MATERIAL.

8. EXCAVATION WITHIN THE TREE PROTECTION ZONE (TPZ)- REFER ALSO NOTES SECTION 5.2 AND 8

THIS SECTION OF NOTES IS APPLICABLE WHERE EXCAVATION WITHIN THE TPZ OF A TREE ON PUBLIC LAND IS APPROVED BY QPRC. ALL EXCAVATIONS WITHIN THE TPZ MUST BE SHOWN ON THE PLANS, OTHERWISE IF EXCAVATION IS NOT SHOWN ON THE PLANS THE IMPACT ON THE TREES CAUSED BY THE EXCAVATION IS CONSIDERED UNAPPROVED

- 8.1. THE TERM "EXCAVATION" IN RELATION TO THIS CLAUSE MEANS ANY EARTH WORKS GREATER THAN 50MM IN DEPTH FROM THE EXISTING SURFACE LEVEL, INCLUDING TRENCHING FOR SERVICES.
- 8.2. ONLY THE EXCAVATIONS IDENTIFIED ON THE PLANS ARE APPROVED WITHIN THE TPZ.
- 8.3. EXCAVATION WITHIN THE STRUCTURAL ROOT ZONE (SRZ) OF A TREE AS OUTLINED IN AS4970, IS STRICTLY PROHIBITED FOR TREES PROPOSED FOR RETENTION.
- 8.4. EXCAVATION WITHIN THE TPZ MUST BE EXECUTED USING EITHER UNDER-BORING, HYDRO-EXCAVATION OR HAND DIGGING TECHNIQUES, UNLESS AN ALTERNATIVE METHOD HAS BEEN DOCUMENTED AND ENDORSED BY QPRC.
- 8.5. WHERE IDENTIFIED, EXCAVATION TO EXPOSE ROOTS MAY BE REQUIRED TO BE UNDERTAKEN BY LOW-PRESSURE HYDRO-EXCAVATION USING A FAN SHAPED NOZZLE HEAD THAT IS KEPT 15CM FROM SOIL PROFILE.
- 8.6. A SUITABLY QUALIFIED ARBORIST MUST BE PRESENT WHEN EXCAVATIONS THROUGH THE TPZ OF A TREE ARE BEING EXECUTED.
- 8.7. NO ROOTS GREATER THAN 30MM IN DIAMETER ARE TO BE CUT UNLESS APPROVED BY QPRC, REFER SECTION 5.2 OF THESE NOTES.
- 8.8. IF ADDITIONAL EXCAVATION WITHIN THE TPZ IS IDENTIFIED TO BE REQUIRED THROUGH THE CONSTRUCTION PERIOD, THE CONTRACTOR/CONTRACTOR MUST SEEK APPROVAL FOR THIS EXCAVATION FROM QPRC BEFORE STARTING THE WORKS.

9. TREE ROOT PROTECTION - REFER ALSO NOTES SECTION 5.2

THIS SECTION IS APPLICABLE WHERE EXISTING TREE ROOTS ARE FOUND IN EXCAVATION LOCATIONS.

- 9.1. MOST TREE ROOTS ARE FOUND WITHIN THE TOP 300MM DEPTH OF SOIL, SO THE FOLLOWING PROTECTION MEASURES MUST BE FOLLOWED WHEN ROOTS ARE ENCOUNTERED
- 9.2. MAINTAIN THE GOOD HEALTH OF THE TREES THAT HAVE HAD DISTURBANCE IN THEIR ROOT ZONE BY CONTINUAL WATERING, AT NO TIME SHALL THE DISTURBED AREA BE ALLOWED TO DRY OUT TO THE DETRIMENT OF THE TREES HEALTH.
- 9.3. WHERE EXTENSIVE ROOT DAMAGE HAS BEEN CAUSED, THE CONTRACTOR MUST SEEK ADVICE FROM AN ARBORIST ABOUT MEASURES TO MINIMISE THE IMPACT OF THE DAMAGE ON THE TREES' HEALTH (I.E. ADDITIONAL WATERING, FERTILISING ETC.)
- 9.4. ALL EXPOSED ROOTS MUST BE BACKFILLED/COVERED WITH SOIL IMMEDIATELY.
- 9.4.1. BACKFILL AROUND TREE ROOTS WILL BE IN ACCORDANCE WITH AS 4970 TO MATCH FINISHED LEVELS USING SITE SOIL.
- 9.4.2. WHERE ROOTS CANNOT BE COVERED IMMEDIATELY THE ROOTS MUST BE PROTECTED FROM DESICCATION BY LIGHTLY WATERING OR COVERING WITH HESSIAN WHICH MUST BE KEPT MOIST,
- 9.4.3. WHERE PROPOSED WORKS COME IN CONTACT WITH TREE ROOTS, A LAYER OF GEOTEXTILE FABRIC MUST BE PLACED OVER ROOTS AND UNDERNEATH ANY NEW PAVEMENT OR INFRASTRUCTURE (DRIVEWAYS AND FOOTPATHS FOR EXAMPLE).
- 9.5. ROOT PRUNING

- 9.5.1. CUTTING OF ROOTS SHOULD BE THE LAST RESORT AND ONLY UNDERTAKEN IF NO OTHER OPTION IS AVAILABLE.
- 9.5.1.1. ALTERNATIVE CONSTRUCTION METHODOLOGY MAY BE PROPOSED, SUCH AS BRIDGING OVER, OR UNDER- BORING UNDER A LARGE ROOT THAT WOULD COMPROMISE ONGOING TREE HEALTH. ROOTS GREATER THAN 30MM IN DIAMETER MUST NOT BE CUT. IF ROOTS GREATER THAN 30MM IN DIAMETER ARE REQUIRED TO BE CUT, APPROVAL FROM QPRC MUST BE SOUGHT BEFORE CUTTING.
- 9.5.2. ALL ROOTS SHALL BE CUT WITH SUITABLE PROFESSIONAL EQUIPMENT AND BY SUITABLY QUALIFIED ARBORISTS WITH A MINIMUM CERTIFICATE 3 QUALIFICATION.
- 9.5.3. ANY ROOTS THAT ARE REQUIRED TO BE REMOVED MUST BE CUT CLEANLY WITH CLEAN AND SHARP ARBORIST TOOLS. TREE ROOTS ARE NOT TO BE RIPPED, TORN, OR PULLED AWAY FROM THE ROOT MASS.
- 9.5.4. ANY DAMAGE TO THE TREE/ TREE ROOTS WHICH CAUSES THE TREE TO DECLINE, WILL REQUIRE TREE REPLACEMENT AT THE CONTRACTOR'S EXPENSE.

10. VEHICLE ACCESS WITHIN THE TPZ

THIS SECTION OF NOTES IS APPLICABLE WHERE ANY VEHICLE MOVEMENT IS REQUIRED THROUGH THE TPZ OF AN EXISTING TREE.

- 10.1. VEHICLE ACCESS THROUGH THE TPZ OF AN EXISTING TREE IS PROHIBITED UNLESS INDICATED AND APPROVED ON THE PROJECT PLANS
- 10.2. VEHICLE ACCESS WITHIN THE STRUCTURAL ROOTS ZONE (REFER CURRENT AS4970) IS PROHIBITED.
- 10.3. VEHICLE ACCESS THROUGH A LOW HANGING CANOPY IS PROHIBITED (LESS THAN 3.5M CLEARANCE FROM EXISTING GROUND TO THE LOWEST MAJOR LIMB)
- 10.4. CLEARLY MARK OUT THE APPROVED ACCESS ROUTE ONSITE SO VEHICLES DO NOT DEVIATE FROM THE APPROVED ROUTE.
- 10.5. ACCESS ROUTE STABILISATION WITHIN THE TPZ
- 10.5.1. PLACE A MINIMUM 200MM LAYER OF ORGANIC 25MM WOOD CHIP MULCH ON THE AREA OF THE TPZ THE VEHICLE ROUTE THAT PASSES THROUGH. THE MULCH LAYER IS TO BE MAINTAINED AT THIS THICKNESS UNDER AREAS OF TRAFFIC FOR AS LONG AS ACCESS IS REQUIRED.
- 10.5.2. PLACE A PROTECTIVE BOARD (RUMBLE BOARD) OVER THE MULCH ENSURING EACH BOARD IS SECURELY CONNECTED TO THE NEXT BOARD (AS REQUIRED) WITH GAPS NO BETWEEN BOARDS NO GREATER THAN 30MM.
- 10.5.3. BOARDS MUST BE KEPT IN PLACE AND IN GOOD CONDITION FOR THE DURATION OF THE ACCESS REQUIREMENTS.
- 10.5.4. ALTERNATIVE STABILISATION MATERIALS FOR THE ACCESS ROUTE SUCH AS ACCESS FOR HEAVY VEHICLES, MUST BE DISCUSSED AND APPROVED BY QPRC.
- 10.6. WHERE VEHICLES ARE LIKELY TO CONFLICT WITH BRANCHES, BRANCH PROTECTION MUST BE IMPLEMENTED. REFER NOTES SECTION 3 FOR LIMB PROTECTION REQUIREMENTS
- 10.7. VEHICLE ACCESS THROUGH THE TPZ OF AN EXISTING TREE MUST NOT BE CLOSER THAN 3M TO THE TRUNK OF THE TREE (UNLESS OTHERWISE AGREED WITH QPRC)

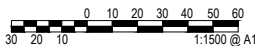
11. RECTIFICATION OF PUBLIC LAND

THIS SECTION OF NOTES IS APPLICABLE TO ALL DEVELOPMENTS

- 11.1. AT THE FINALISATION OF THE DEVELOPMENT WORKS, THE COUNCIL ASSETS IN PUBLIC LAND ADJACENT THE WORKS MUST BE UNALTERED AND IN THE SAME OR BETTER CONDITION THAN BEFORE THE WORKS COMMENCED, UNLESS ADJUSTMENTS TO THESE ASSETS HAVE BEEN APPROVED BY QPRC AS PART OF THE APPROVALS
- 11.2. WHERE COUNCIL ASSETS ON PUBLIC LAND HAVE BEEN DAMAGED BY THE WORKS, THESE ASSETS MUST BE FULLY RECTIFIED AT THE COST OF THE CONTRACTOR TO THE REQUIREMENTS IN THE QPRC SPECIFICATIONS.

12. SITE SPECIFIC REQUIREMENTS

- 12.1. INSTALL TIMBER BATTEN PROTECTION TO ALL TRUNKS WHERE VEHICLE ACCESS ENTERS THE DRIP LINE OF A TREE



REV.	DESCRIPTION	DRAWN	DESIGNED	VERIFIED	APPROVED	DATE
B	DESIGN UPDATED	EP	DN	KM	AN	7/12/2023
A	FOR CLIENT REVIEW	EP	JP	KM	AN	29/11/2023



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PROJECT TITLE COOMA STREET WATER MAIN REPLACEMENT	CLIENT QUEANBEYAN COUNCIL			DRAWING TITLE LANDSCAPE MANAGEMENT AND PROTECTION PLAN NOTES	
	DRAWING STATUS ISSUE FOR TENDER				
	SCALE AS SHOWN	COORDINATE SYSTEM GDA2020	DATUM AHD		
	SHEET SIZE A1	PROJECT NUMBER 8654-01		DRAWING NUMBER 065	REVISION B