

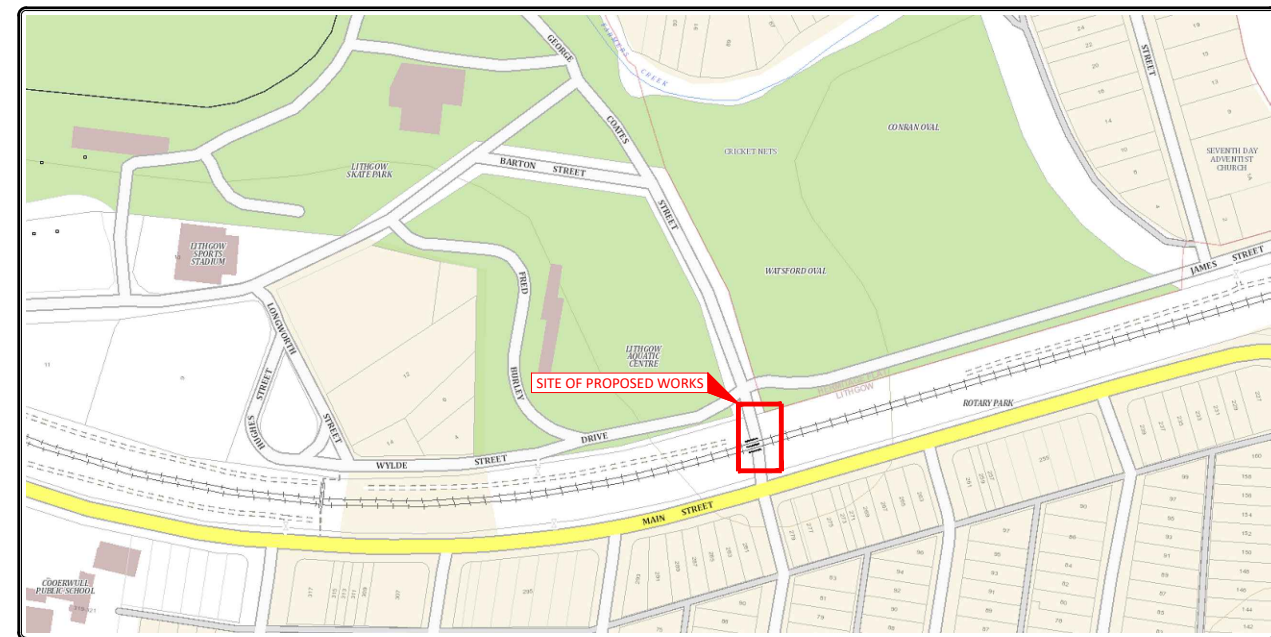
Civil Construction Documentation

PROPOSED STORMWATER UPGRADE

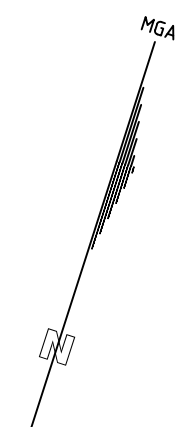
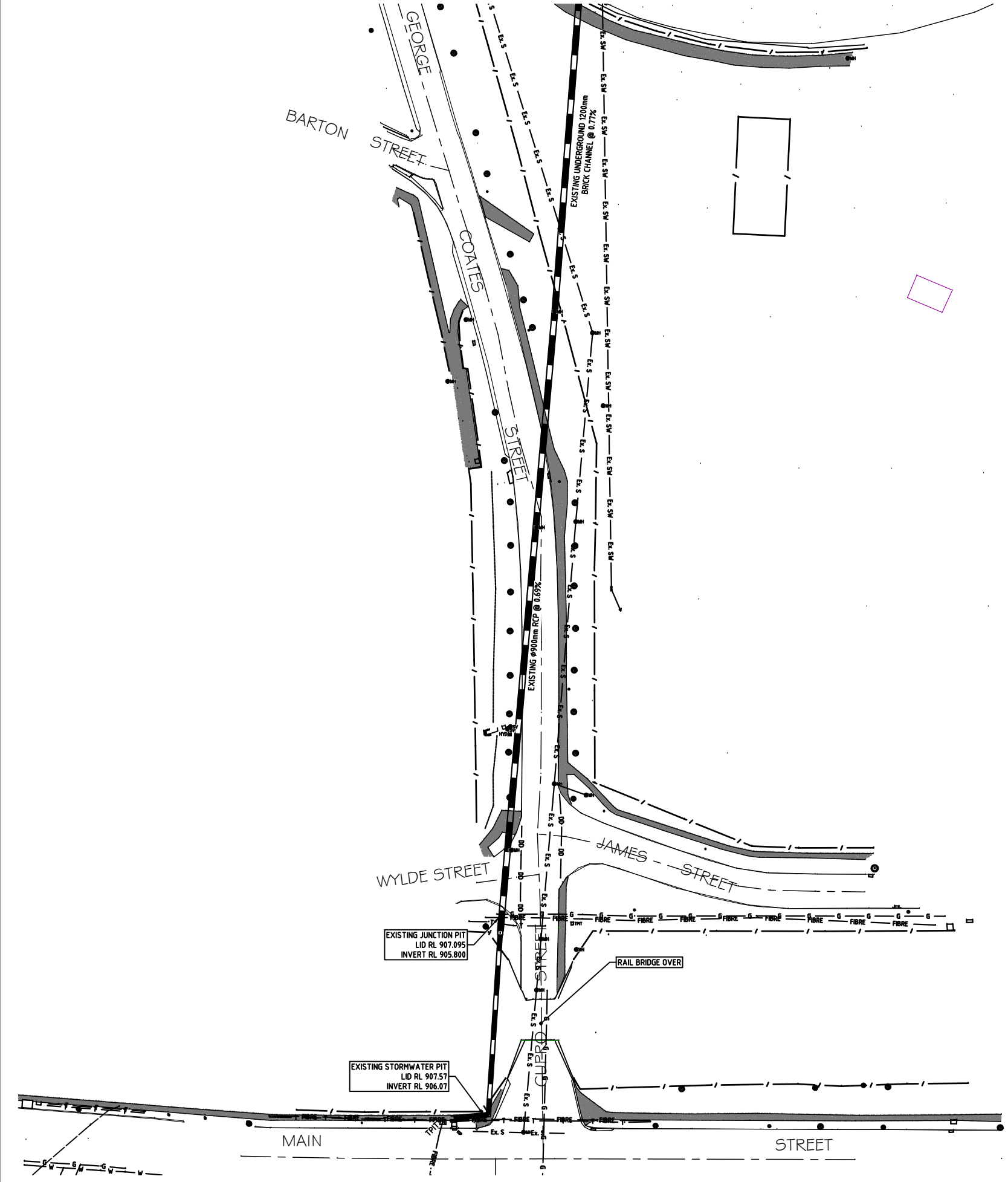
GEORGE COATES STREET, LITHGOW, NSW, 2790

SCHEDULE OF DRAWINGS

SHEET No.	DESCRIPTION
30976 C00	COVER SHEET AND SCHEDULE OF DRAWINGS
30976 C01	EXISTING SITE PLAN
30976 C02	PROPOSED SITE PLAN
30976 C03	PROPOSED PART SITE PLAN #1
30976 C04	PROPOSED PART SITE PLAN #2
30976 C05	PROPOSED STORMWATER SPECIFICATIONS
30976 C06	PROPOSED STORMWATER LONGTUDINAL SECTION

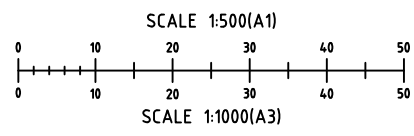


ISSUED FOR INTERNAL REVIEW



LEGEND	
	EXISTING CENTRELINE OF ROAD
	EXISTING FENCE
	EXISTING UNDERGROUND STORMWATER PIPE / CHANNEL
	EXISTING KERB INLET PIT
	EXISTING MANHOLE
	EXISTING UNDERGROUND OPTIC FIBRE CABLES
	EXISTING UNDERGROUND TELECOMMUNICATIONS CABLES
	EXISTING UNDERGROUND GAS MAIN
	EXISTING UNDERGROUND ELECTRICITY CABLES
	EXISTING UNDERGROUND WATER MAIN
	EXISTING HYDRANT
	EXISTING STOP VALVE
	EXISTING TELECOMMUNICATIONS PIT
	EXISTING TREE LOCATION - SIZE INDICATES TRUNK DIAMETER
	EXISTING BITUMEN ROAD
	EXISTING PEDESTRIAN PATH
	FOOTPRINT OF EXISTING BUILDING

EXISTING SITE PLAN
REDUCTION RATIO 1:500 @ A1
1:1000 @ A3



- NOTES:**
- NO CADASTRAL BOUNDARIES, EASEMENTS, RESTRICTIONS OR ENCUMBRANCES HAVE BEEN SHOWN OR INVESTIGATED BY BARNSON. EXISTING SITE LEVELS AND FEATURES ARE BASED ON CAD DATA SUPPLIED BY OTHERS. THE ACCURACY OF THIS INFORMATION IS NOT ASSURED BY BARNSON.
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 - THERE MAY BE ADDITIONAL UNDERGROUND SERVICES OTHER THAN THOSE SHOWN HEREON.
 - BARNSON TAKES NO RESPONSIBILITY FOR LOSSES, DAMAGES OR INJURIES TO ANY PERSON OR ORGANISATION THAT MAY OCCUR DUE TO THE RELIANCE ON THIS PLAN FOR THE LOCATION OF UNDERGROUND SERVICES.

PRELIMINARY DRAWING
Not to be used for construction purposes



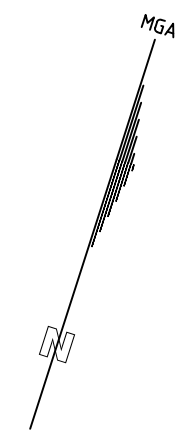
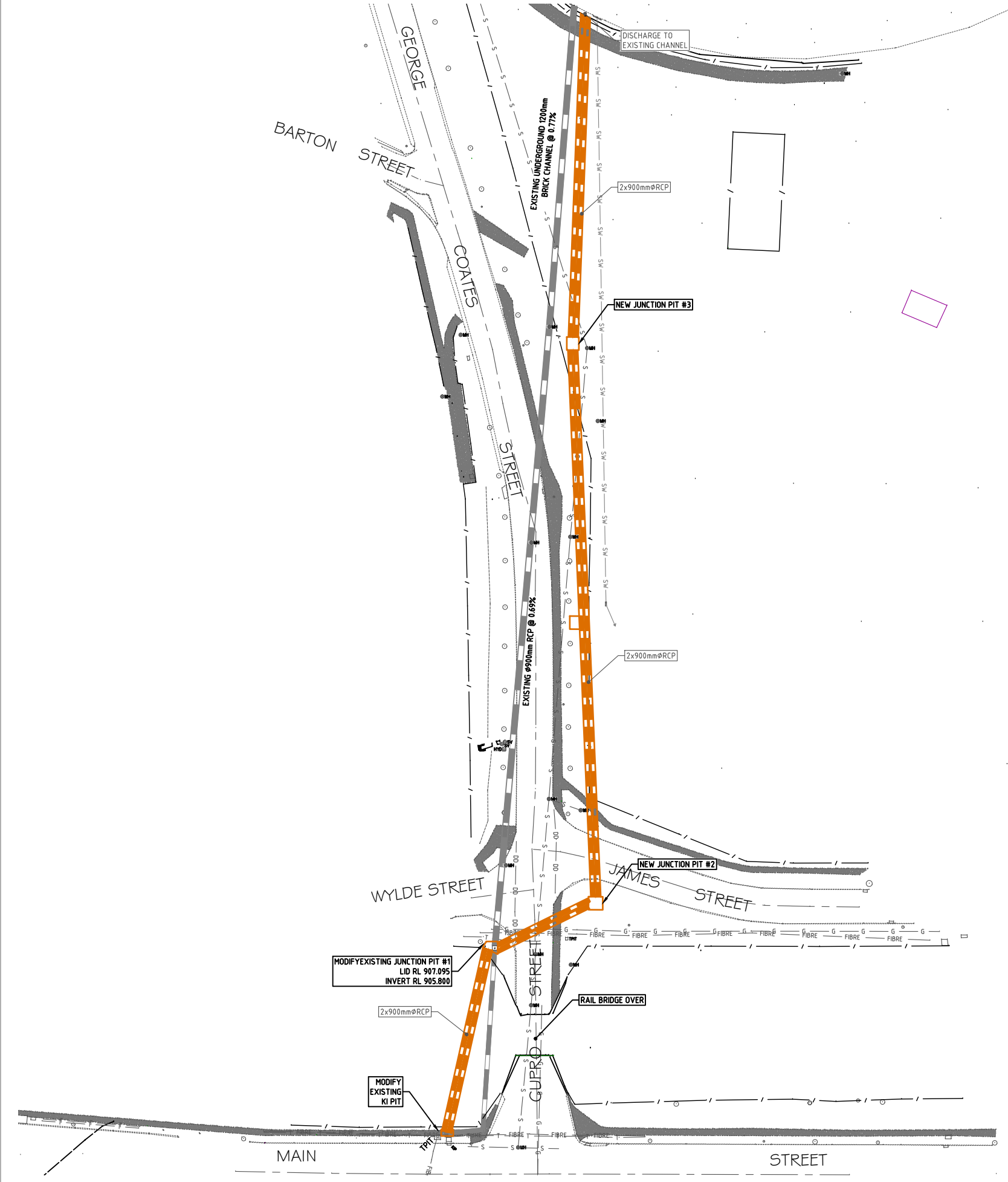
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Client: Lithgow City Council
Project: PROPOSED UPGRADE TO EXISTING STORMWATER GEORGE COATES STREET, LITHGOW, NSW, 2790
Drawing Title: EXISTING SITE PLAN

Rev Date Amendment
A 15/05/2019 DRAFT ISSUE FOR INTERNAL REVIEW

Design	L.M.	Certification	
Drawn	J.C.		
Check	L.M.	Drawing Number	
Original Sheet Size = A1		31035_C01	Revision A



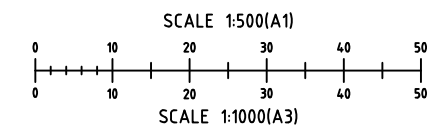
LEGEND (proposed)

	PROPOSED STORMWATER PIPE
	PROPOSED STORMWATER PIT

LEGEND (existing)

	EXISTING CENTRELINE OF ROAD
	EXISTING FENCE
	EXISTING UNDERGROUND STORMWATER PIPE / CHANNEL
	EXISTING KERB INLET PIT
	EXISTING MANHOLE
	EXISTING UNDERGROUND OPTIC FIBRE CABLES
	EXISTING UNDERGROUND TELECOMMUNICATIONS CABLES
	EXISTING UNDERGROUND GAS MAIN
	EXISTING UNDERGROUND ELECTRICITY CABLES
	EXISTING UNDERGROUND WATER MAIN
	EXISTING HYDRANT
	EXISTING STOP VALVE
	EXISTING TELECOMMUNICATIONS PIT
	EXISTING TREE LOCATION - SIZE INDICATES TRUNK DIAMETER
	EXISTING BITUMEN ROAD
	EXISTING PEDESTRIAN PATH
	FOOTPRINT OF EXISTING BUILDING

PROPOSED SITE PLAN
REDUCTION RATIO 1:500 @ A1
1:1000 @ A3



- NOTES:**
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ISSUED FOR INTERNAL REVIEW



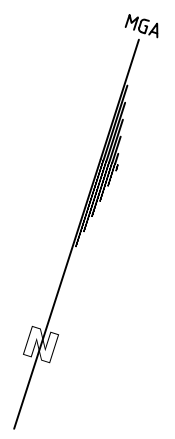
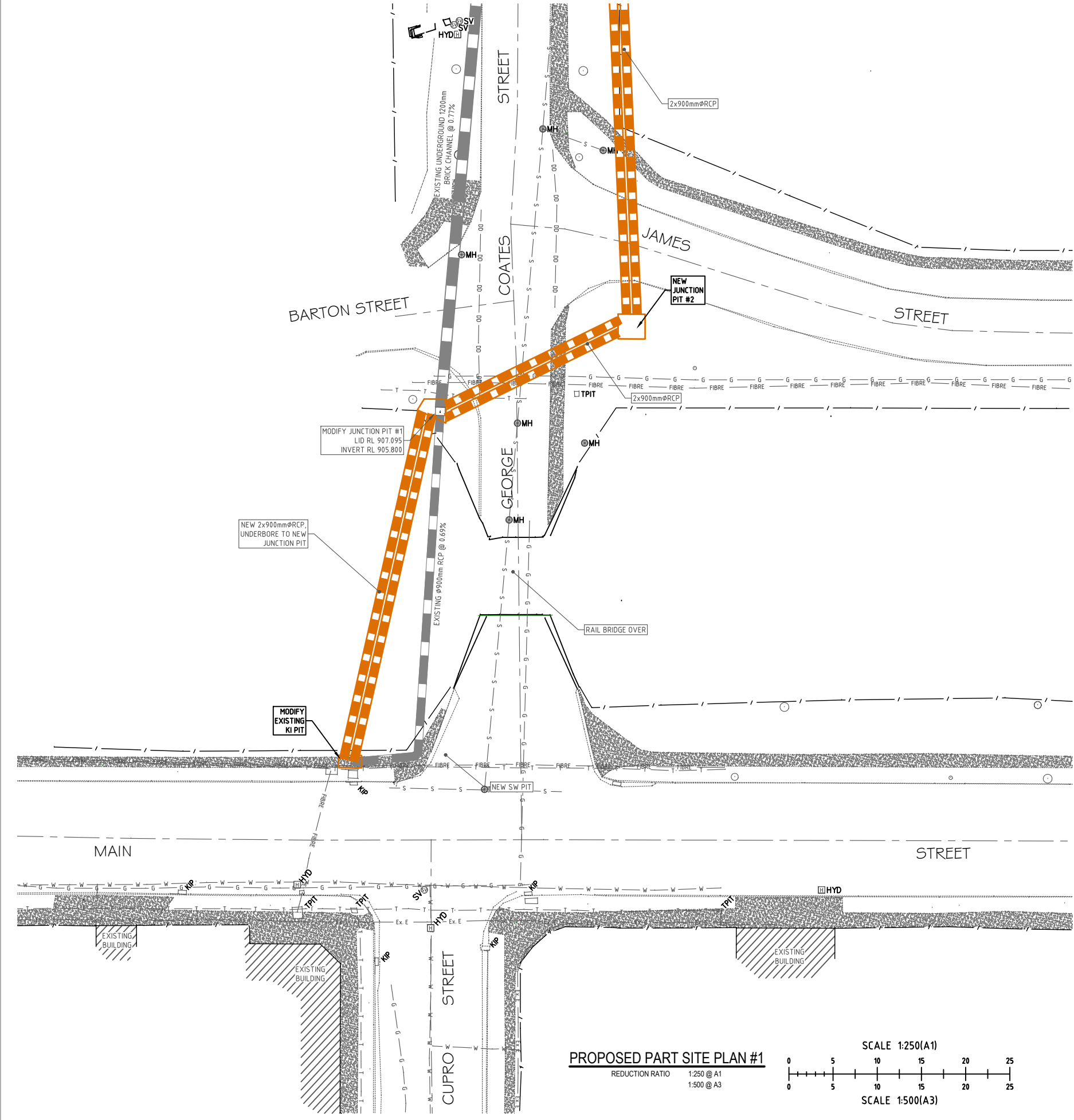
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Client: Lithgow City Council
Project: PROPOSED UPGRADE TO EXISTING STORMWATER GEORGE COATES STREET, LITHGOW, NSW, 2790
Drawing Title: PROPOSED STORMWATER PLAN

Rev Date Amendment
A 30/05/2019 DRAFT ISSUE FOR INTERNAL REVIEW

Design	L.M.	Certification	
Drawn	J.C.		
Check	L.M.	Drawing Number	
Original Sheet Size = A1	31035_C02	Revision	A



LEGEND (proposed)

- PROPOSED STORMWATER PIPE
- PROPOSED STORMWATER PIT

LEGEND (existing)

- EXISTING CENTRELINE OF ROAD
- - - EXISTING FENCE
- ▬ EXISTING UNDERGROUND STORMWATER PIPE / CHANNEL
- ⊕ KIP EXISTING KERB INLET PIT
- ⊙ MH EXISTING MANHOLE
- FIBRE — EXISTING UNDERGROUND OPTIC FIBRE CABLES
- T — EXISTING UNDERGROUND TELECOMMUNICATIONS CABLES
- G — EXISTING UNDERGROUND GAS MAIN
- Ex. E — EXISTING UNDERGROUND ELECTRICITY CABLES
- W — EXISTING UNDERGROUND WATER MAIN
- ⊠ HYD EXISTING HYDRANT
- ⊙ SV EXISTING STOP VALVE
- TPIT EXISTING TELECOMMUNICATIONS PIT
- EXISTING TREE LOCATION - SIZE INDICATES TRUNK DIAMETER
- ▭ EXISTING BITUMEN ROAD
- ▨ EXISTING PEDESTRIAN PATH
- ▩ FOOTPRINT OF EXISTING BUILDING

- NOTES:**
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PROPOSED PART SITE PLAN #1

REDUCTION RATIO: 1:250 @ A1, 1:500 @ A3

SCALE 1:250(A1)

SCALE 1:500(A3)

ISSUED FOR INTERNAL REVIEW



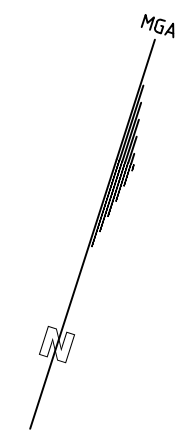
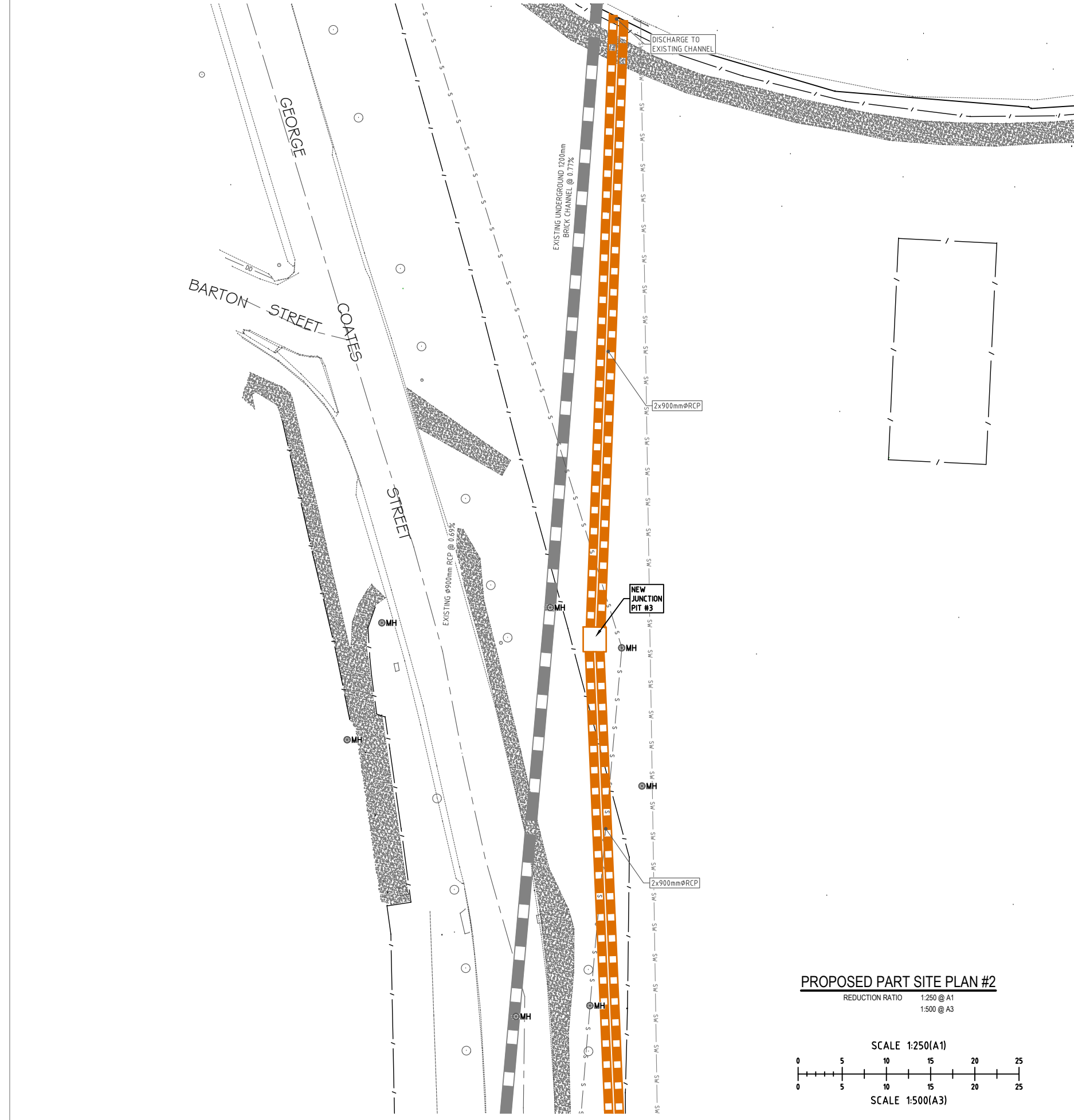
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Client: Lithgow City Council
 Project: PROPOSED UPGRADE TO EXISTING STORMWATER GEORGE COATES STREET, LITHGOW, NSW, 2790
 Drawing Title: PROPOSED PART SITE PLAN #1

Rev Date Amendment
 A 30/05/2019 DRAFT ISSUE FOR INTERNAL REVIEW

Design L.M. Certification
 Drawn J.C.
 Check L.M. Drawing Number
 Original Sheet Size = A1 31035_C03
 Revision A



LEGEND (proposed)

- PROPOSED STORMWATER PIPE
- PROPOSED STORMWATER PIT

LEGEND (existing)

- EXISTING CENTRELINE OF ROAD
- - - EXISTING FENCE
- ▬ EXISTING UNDERGROUND STORMWATER PIPE / CHANNEL
- KIP EXISTING KERB INLET PIT
- ⊙ MH EXISTING MANHOLE
- FIBRE — FIBRE — EXISTING UNDERGROUND OPTIC FIBRE CABLES
- T — EXISTING UNDERGROUND TELECOMMUNICATIONS CABLES
- G — EXISTING UNDERGROUND GAS MAIN
- Ex. E — Ex. E — EXISTING UNDERGROUND ELECTRICITY CABLES
- W — EXISTING UNDERGROUND WATER MAIN
- HYD EXISTING HYDRANT
- SV EXISTING STOP VALVE
- TPIT EXISTING TELECOMMUNICATIONS PIT
- EXISTING TREE LOCATION - SIZE INDICATES TRUNK DIAMETER
- ▬ EXISTING BITUMEN ROAD
- ▬ EXISTING PEDESTRIAN PATH
- ▬ FOOTPRINT OF EXISTING BUILDING

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PROPOSED PART SITE PLAN #2
 REDUCTION RATIO 1:250 @ A1
 1:500 @ A3

SCALE 1:250(A1)
 0 5 10 15 20 25

SCALE 1:500(A3)
 0 5 10 15 20 25



ISSUED FOR INTERNAL REVIEW



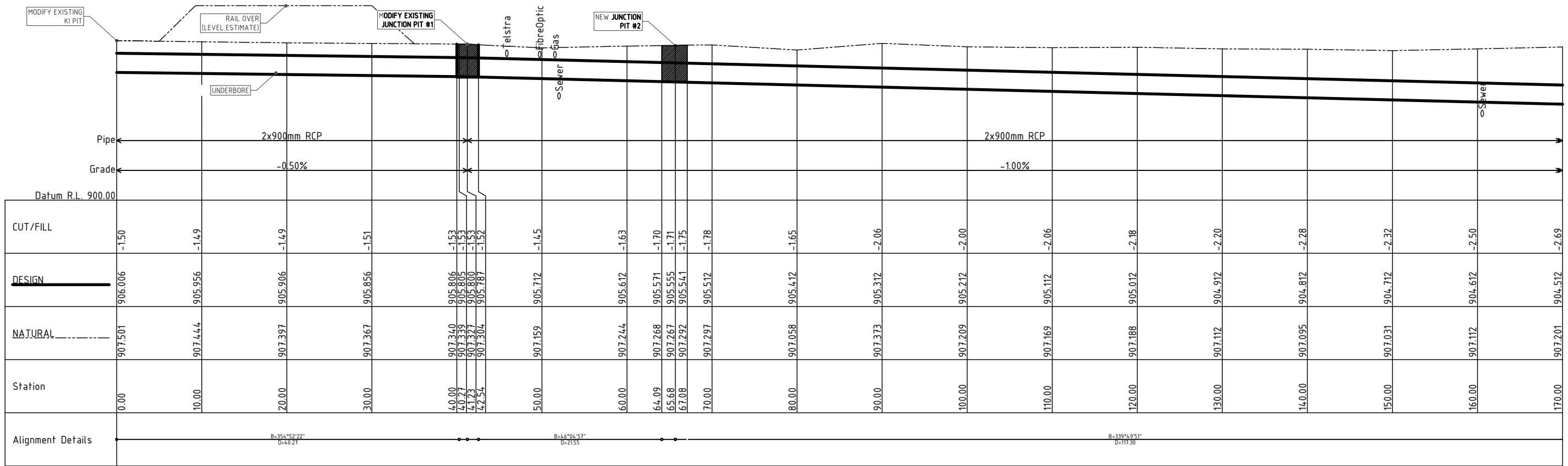
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Client: **Lithgow City Council**
 Project: **PROPOSED UPGRADE TO EXISTING STORMWATER GEORGE COATES STREET, LITHGOW, NSW, 2790**
 Drawing Title: **PROPOSED PART SITE PLAN #2**

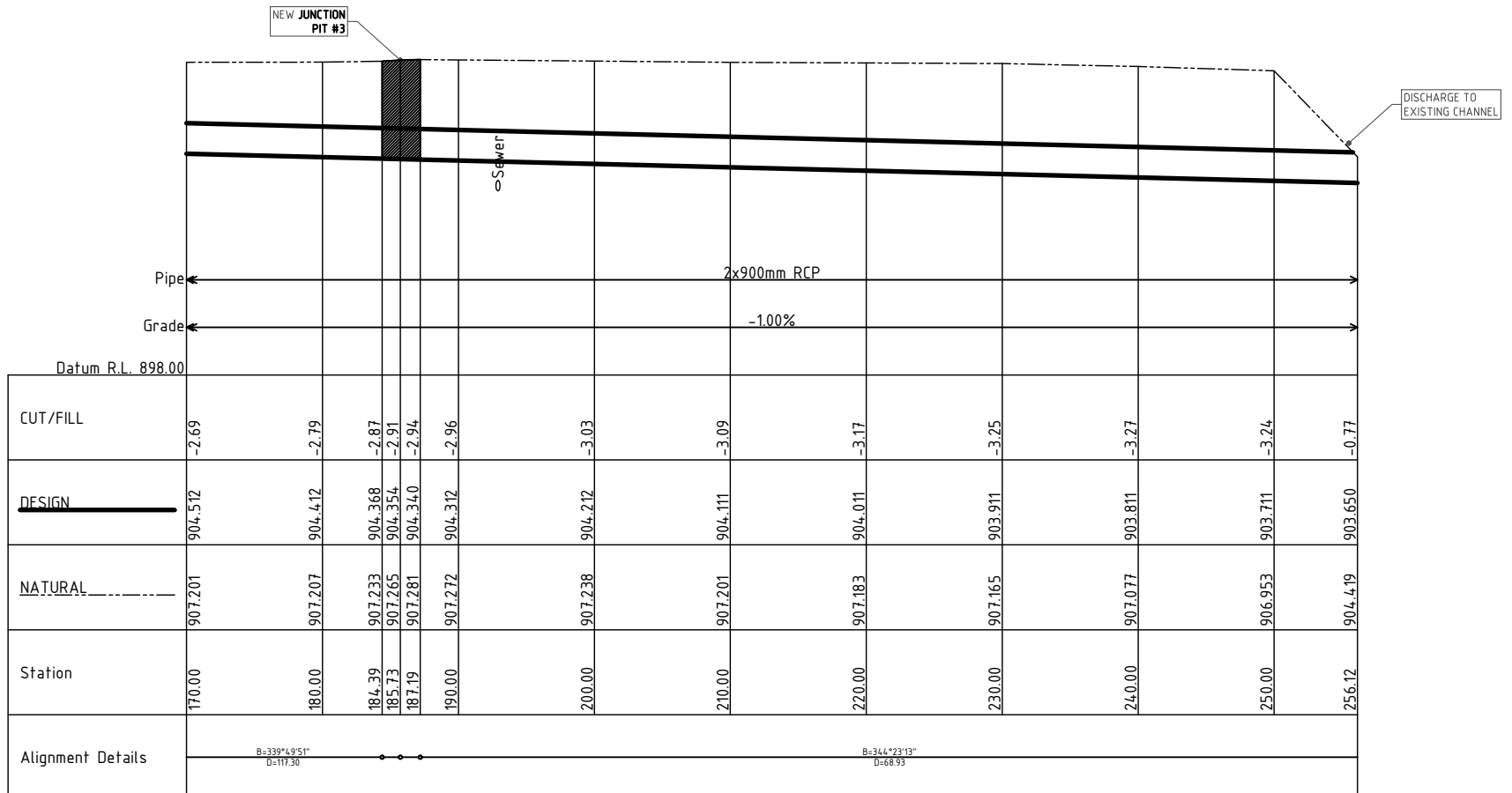
Rev Date Amendment
 A 30/05/2019 DRAFT ISSUE FOR INTERNAL REVIEW

Design **L.M.** Certification
 Drawn **J.C.**
 Check **L.M.** Drawing Number
 Original Sheet Size = A1 **31035_C04** Revision **A**



Scale Horizontal 1:250 Vertical 1:100

PROPOSED STORMWATER LONGSECTION



Scale Horizontal 1:250 Vertical 1:100

PROPOSED STORMWATER LONGSECTION

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Client: **Lithgow City Council**
 Project: **PROPOSED UPGRADE TO EXISTING STORMWATER GEORGE COATES STREET, LITHGOW, NSW, 2790**
 Drawing Title: **PROPOSED STORMWATER SPECIFICATIONS**

Rev Date Amendment
 A 13/06/2019 DRAFT ISSUE FOR INTERNAL REVIEW

Design **L.M.** Certification
 Drawn **J.C.**
 Check **L.M.** Drawing Number
 Original Sheet Size = A1 **31035_C05** Revision **A**

STORMWATER NOTES

- CONTRACTOR IS TO ADEQUATELY INFORM HIMSELF AS TO THE DEPTH AND LOCATION OF ALL EXISTING SERVICES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- PIPE IS TO BE LAID AT UNIFORM GRADE BETWEEN INVERT LEVELS SHOWN WITH MINIMUM COVER MAINTAINED UNLESS OTHERWISE APPROVED BY THE SUPERINTENDENT.
- MINIMUM COVER OVER ALL PIPES IN NON-TRAFFICABLE AREAS TO BE 450mm UNO. MINIMUM COVER OVER ALL PIPES IN TRAFFICABLE AREAS TO BE 600mm UNO. WHEN THIS CRITERIA CANNOT BE ACHIEVED, PIPES TO BE ENCASED IN 150 CONCRETE.
- ALL CONNECTIONS TO EXISTING DRAINAGE PITS SHALL BE MADE IN A TRADESMAN-LIKE MANNER AND THE INTERNAL WALL OF THE PIT AT THE POINT OF ENTRY SHALL BE CEMENT RENDERED TO ENSURE A SMOOTH FINISH.
- PRECAST PITS MAY BE USED AS APPROVED BY THE SUPERINTENDENT.
- ALL PIPES SHALL BE RUBBER RING JOINTED CLASS '2' UNLESS NOTED OTHERWISE.

COMPACTION OF BACKFILL

1. BEDDING SAND

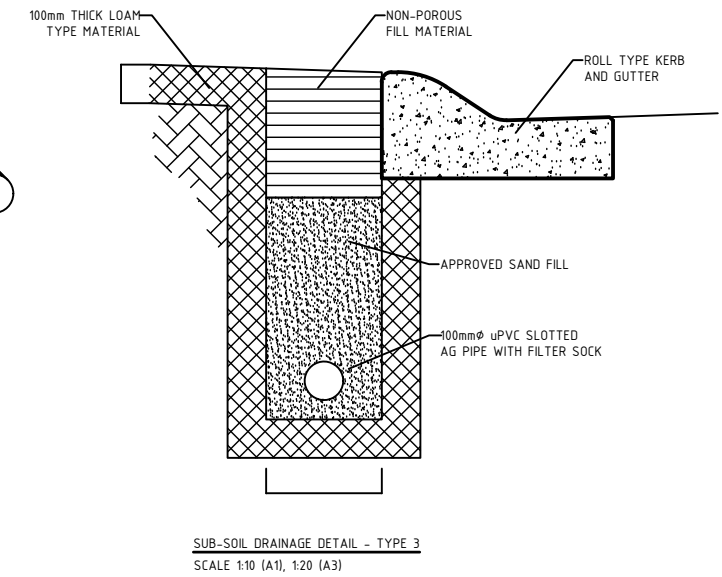
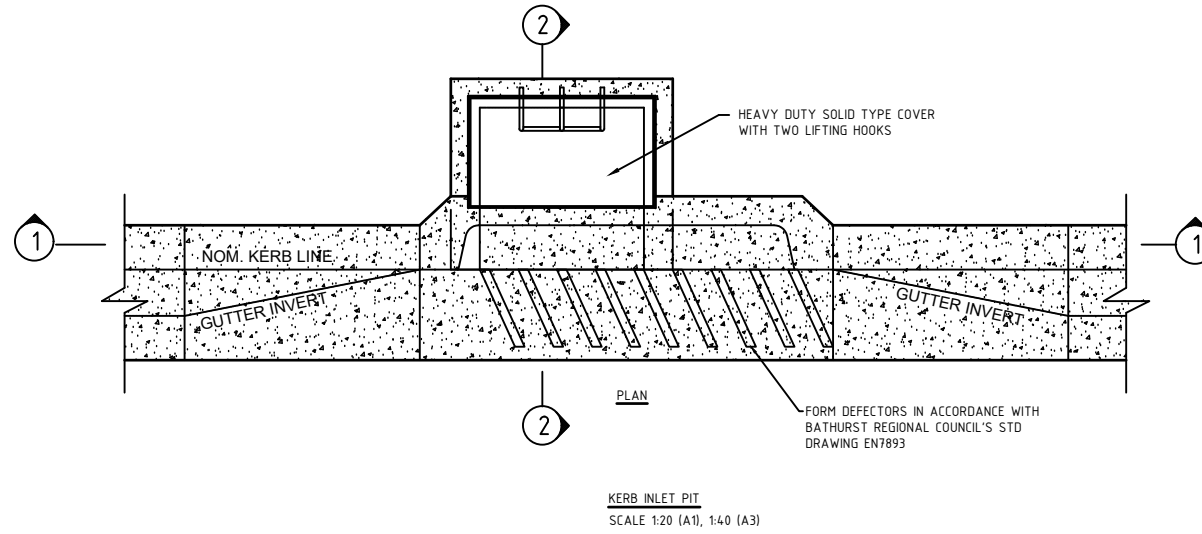
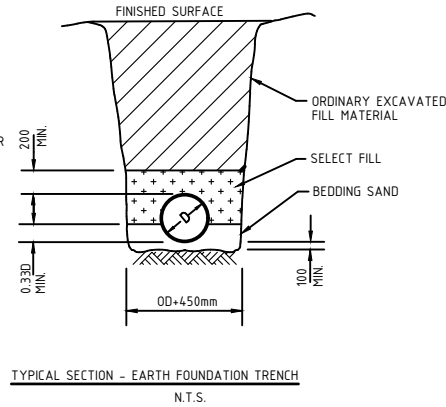
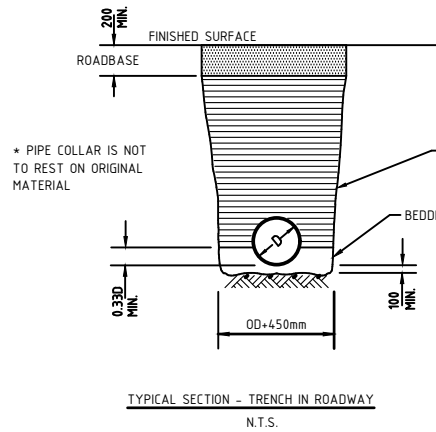
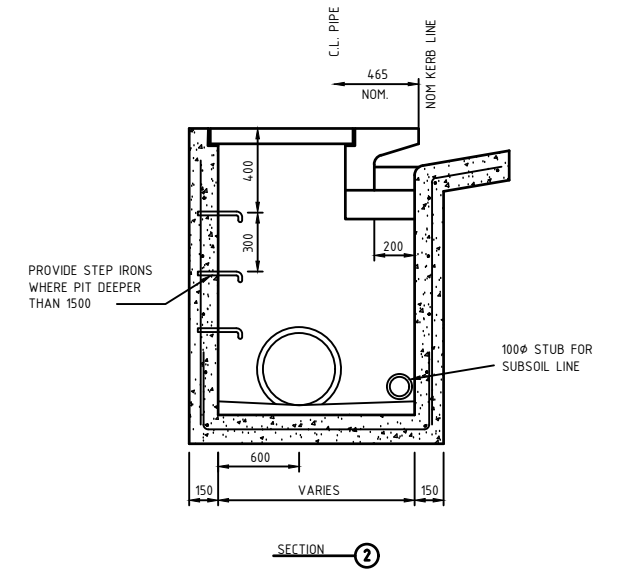
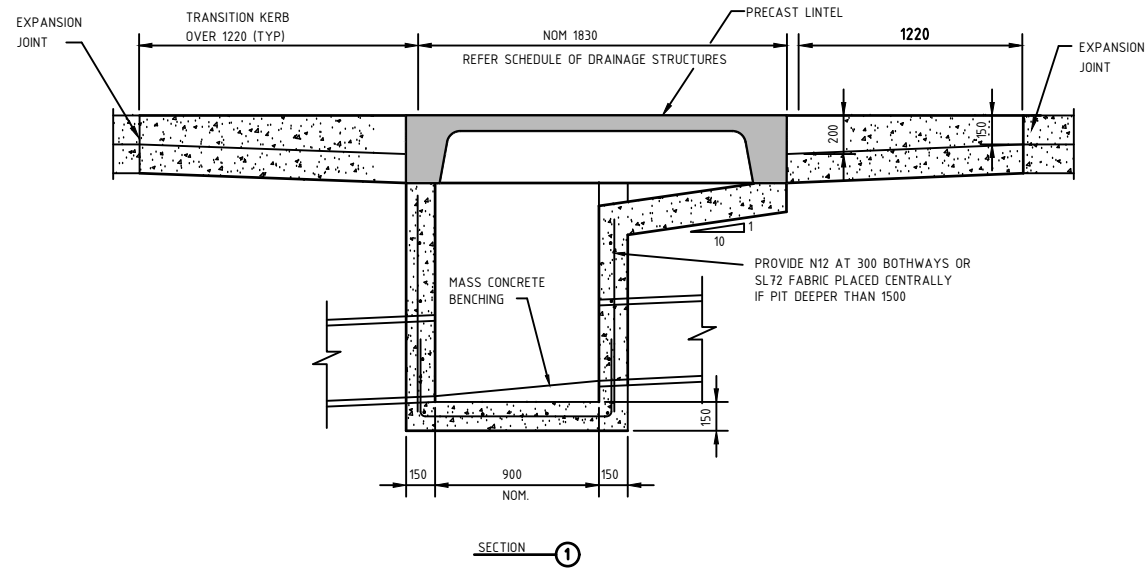
BEDDING SAND SHALL BE GRANULAR MATERIAL HAVING A LOW PERMEABILITY AND HIGH STABILITY WHEN SATURATED, CONFORMING TO THE GRADING LIMITS FOR BEDDING SAND AS INDICATED IN THE CONTRACT DOCUMENTS. BEDDING SAND SHALL BE COMPACTED TO A DENSITY INDEX OF 70% AS DETERMINED IN ACCORDANCE WITH AS1289.

2. APPROVED IMPORTED GRANULAR FILL

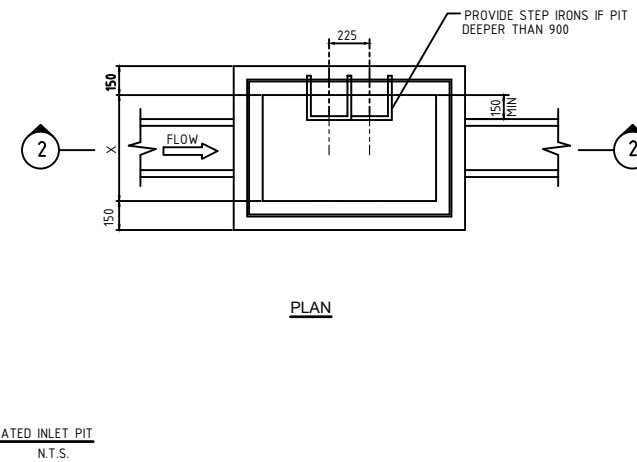
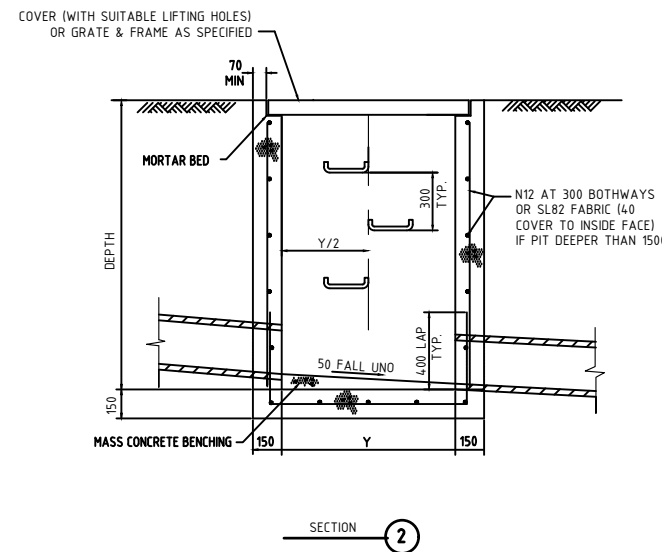
ONLY IMPORTED GRANULAR FILL MATERIAL APPROVED BY THE SUPERINTENDENT SHALL BE USED. THIS FILL MATERIAL SHALL BE COMPACTED IN LAYERS NOT EXCEEDING 150mm THICK TO A DRY DENSITY OF 95% OF THE STANDARD MAXIMUM DRY DENSITY OF THE MATERIAL AND WITH A MOISTURE CONTENT NO MORE THAN 1% ABOVE OPTIMUM MOISTURE CONTENT AS DETERMINED IN ACCORDANCE WITH AS1289.

3. ORDINARY EXCAVATED FILL MATERIAL

ORDINARY EXCAVATED FILL MATERIAL IS EXCAVATED TRENCH MATERIAL THAT IS FREE OF VEGETABLE MATTER, HUMUS, LARGE CLAY LUMPS AND ROCK BOULDERS. THIS FILL MATERIAL SHALL BE COMPACTED IN LAYERS NOT EXCEEDING 300mm THICK, TO A DENSITY OF 90% OF THE STANDARD MAXIMUM DRY DENSITY OF THE MATERIAL WITH A MOISTURE CONTENT OF NOT MORE THAN 1% ABOVE THE OPTIMUM MOISTURE CONTENT AS DETERMINED IN ACCORDANCE WITH AS1289.

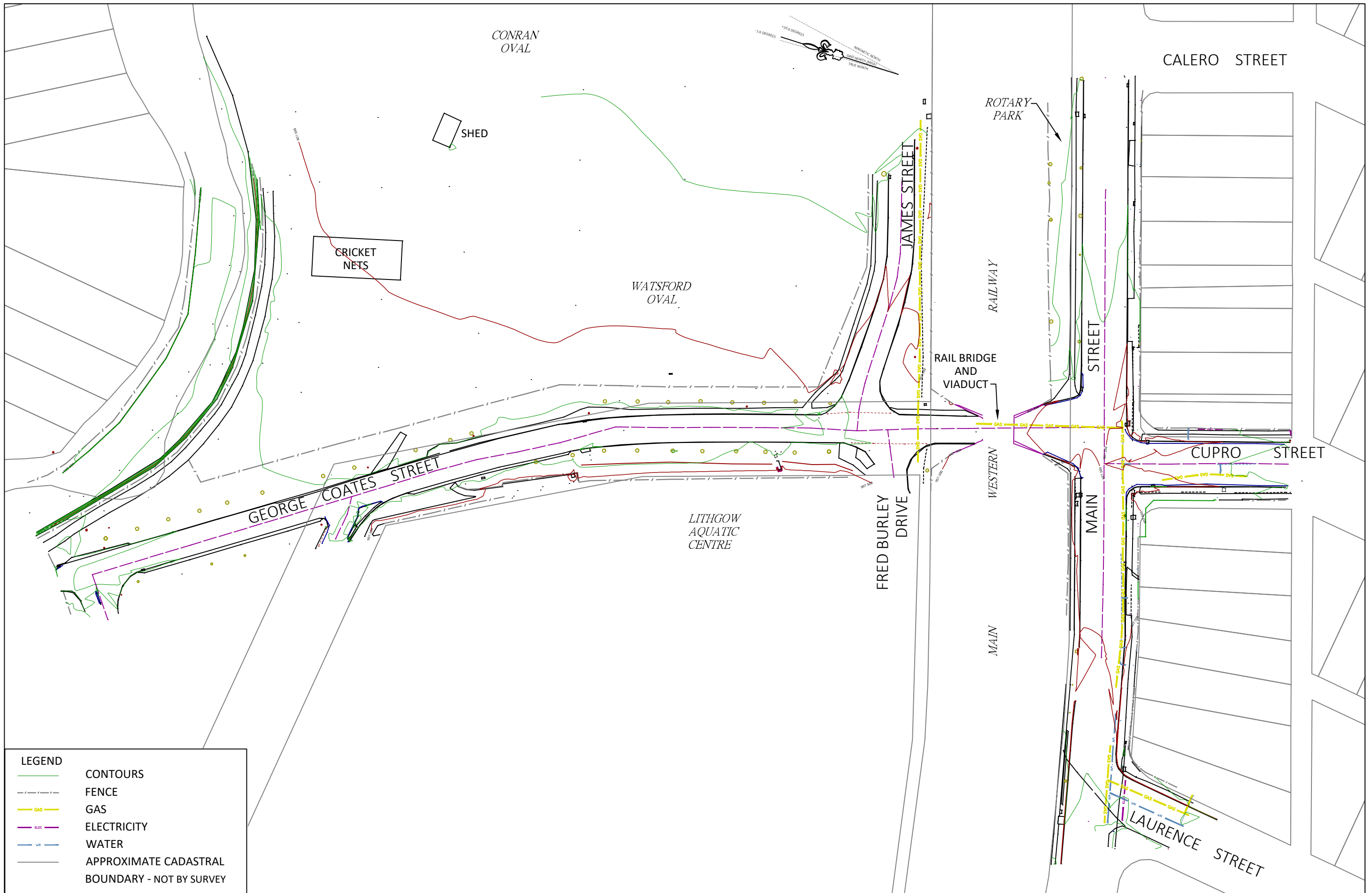


INSPECTION HOLD POINTS
1. INSTALLATION OF SEDIMENT & EROSION CONTROL MEASURES.
2. WATER & SEWER LINE INSTALLATION PRIOR TO BACKFILL.
3. ESTABLISHMENT OF LINE & LEVEL FOR KERB & GUTTER PLACEMENT.
4. ROAD PAVEMENT CONSTRUCTION.
5. ROAD PAVEMENT SURFACING.
6. PRACTICAL COMPLETION.
SERVICES INSTALLATION
1. INSTALLATION OF ALL UNDERGROUND PIPES BE INSTALLED PRIOR TO INSTALLATION OF ROAD PAVEMENT.



PIT DIMENSIONS		
DEPTH	X	Y
D=600	450	450
D=1000	600	600
D=1500	600	900
1500-D+2400	900	900
D=2400	750	1200

ISSUED FOR INTERNAL REVIEW



LEGEND	
	CONTOURS
	FENCE
	GAS
	ELECTRICITY
	WATER
	APPROXIMATE CADASTRAL BOUNDARY - NOT BY SURVEY

NOTES:	No.	AMENDMENT	DATE	DRAWN	CHECK'D	AUTH'D

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 CONSULTING LAND, ENGINEERING AND MINING SURVEYORS
 "Ambulance" 14th/15th Street, LITHGOW NSW
 APLN: 89 0361 244 361 OFFICE: 029 0361 2181
 EMAIL: surveys@ceh.com.au Website: www.ceh.com.au

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SCALE: 1 : 1000 (A3)

CLIENT:	LITHGOW CITY COUNCIL
LOCALITY:	LITHGOW NSW 2790
LGA:	LITHGOW CITY

PLAN: LITHGOW CITY COUNCIL FLOOD STUDY - MAIN STREET, LITHGOW NSW 2790 - DETAIL PLAN			
SURVEYOR:	DRAWN:	DATE:	PLAN No.
P.SILINIS	D.MACKIE	20-12-2018	1978_MAIN_FS