

ROUND MOUNTAIN - PRECINCT B

MOUNTAIN RIDGE ROAD, NEW BEITH

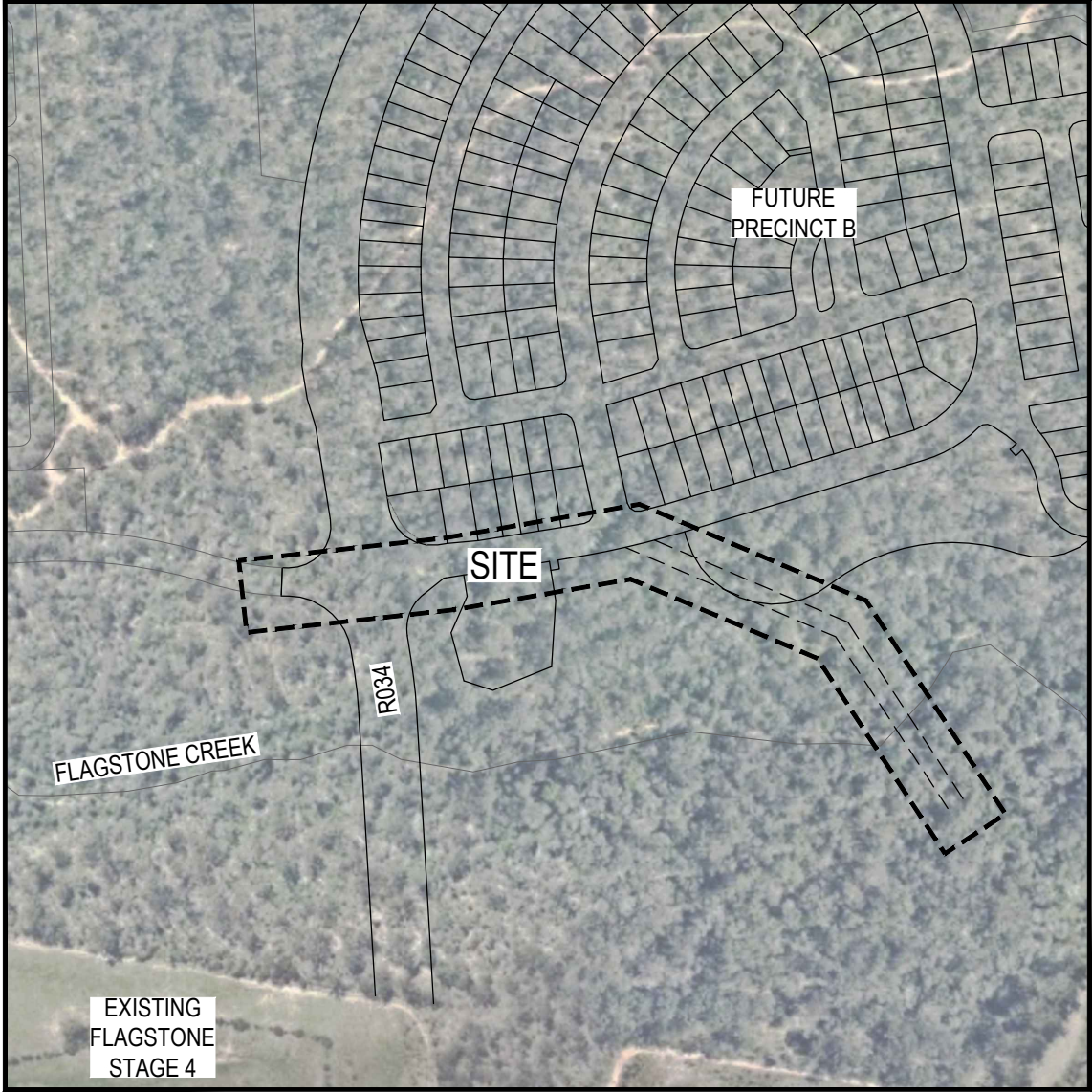
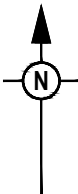
FOR 'FRASERS PROPERTY AUSTRALIA'

TRUNK SEWER MAIN

23-0154-6600	TRUNK SEWER COVER PLAN
23-0154-6601	TRUNK SEWER GENERAL NOTES
23-0154-6602	TRUNK SEWER MAIN MH CONSTRUCTION NOTES SHEET 1 OF 2
23-0154-6603	TRUNK SEWER MAIN MH CONSTRUCTION NOTES SHEET 2 OF 2
23-0154-6605	TRUNK SEWER KEY PLAN
23-0154-6610	TRUNK SEWER MAIN LAYOUT PLAN
23-0154-6611	TRUNK SEWER LONGITUDINAL SECTION
23-0154-6612	TRUNK SEWER MICROTUNNELING DETAIL

REFERENCE DRAWINGS

LW-SEW-DWG-0020 (B)	GENERAL NOTES SHEET 1 OF 4
LW-SEW-DWG-0021 (B)	GENERAL NOTES SHEET 2 OF 4
LW-SEW-DWG-0022 (B)	GENERAL NOTES SHEET 3 OF 4
LW-SEW-DWG-0023 (B)	GENERAL NOTES SHEET 4 OF 4
LW-SEW-DWG-0024 (B)	GENERAL STRUCTURAL NOTES SHEET 1 OF 2
LW-SEW-DWG-0025 (B)	GENERAL STRUCTURAL NOTES SHEET 2 OF 2
LW-SEW-DWG-2000 (B)	COVER SHEET AND DRAWING LIST
LW-SEW-DWG-2050 (A)	TYPICAL INTERNALLY LINED MAINTENANCE HOLE DETAILS SHEET 1 OF 3
LW-SEW-DWG-2051 (A)	TYPICAL INTERNALLY LINED MAINTENANCE HOLE DETAILS SHEET 2 OF 3
LW-SEW-DWG-2052 (A)	TYPICAL INTERNALLY LINED MAINTENANCE HOLE DETAILS SHEET 3 OF 3
LW-SEW-DWG-2053 (A)	TYPICAL TYPE 'D' MAINTENANCE HOLE MODIFIED P3 MAINTENANCE HOLE
LW-SEW-DWG-2100 (A)	TYPICAL MAINTENANCE STRUCTURE DETAILS ON EXISTING GRAVITY SEWER
LW-SEW-DWG-2101 (A)	MISCELLANEOUS CONNECTION DETAILS
LW-SEW-DWG-2102 (A)	PE TO PVC CONNECTION DETAILS
LW-SEW-DWG-2103 (A)	TYPICAL DIAMETER SEWER CONNECTION TO EXISTING
LW-SEW-DWG-2120 (A)	MAINTENANCE HOLE TYPICAL PVC INTERNAL DROP DETAILS



LOCALITY PLAN
SCALE 1:5000 (A1)
SCALE 1:10000 (A3)

PROJECT INFORMATION SUMMARY:

R034 TRUNK ROAD

RP DESCRIPTION

LOT 4 ON SP332712
LOT 910 ON SP346075

DATUM LEVEL AND LOCATION

P.S.M 107142
RL 39.078 AHD
LOCATED
LOCAL

LOCAL AUTHORITY: LOGAN CITY COUNCIL

COUNCIL REFERENCE NUMBER: TBC

NOTE:

THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH:

- VEGETATION MANAGEMENT PLAN
- LANDSCAPE ARCHITECT'S PLANS
- ELECTRICAL, COMMUNICATIONS AND GAS CONSULTANT'S PLANS
- SEDIMENT AND EROSION REPORT
- SAFETY IN DESIGN REPORT

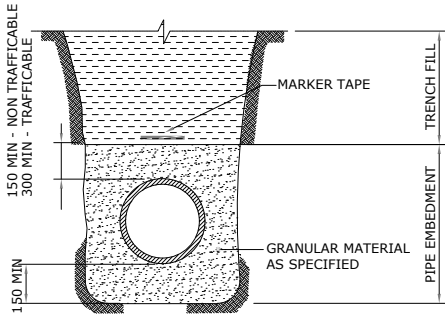
REV	DATE	DESIGN	DRAWN	REVISION DETAILS		DRAWN	STATUS			SCALE 1:2000 20 0 20 40 60 80 100 A1 1:4000  A3	CLIENT	PROJECT NAME	DRAWING TITLE				
0	15.04.26	BR	TG	ORIGINAL ISSUE		TG	ISSUED FOR CONSTRUCTION						ROUND MOUNTAIN PRECINCT B - ROAD 034			TRUNK SEWER COVER PLAN	
											BR	APPROVED DANIEL COLLINS  RPEQ 18631 DATE 15.04.26	ASSOCIATED CONSULTANT	MOUNTAIN RIDGE ROAD NEW BEITH	PROJECT No.	DRAWING No.	REVISION
							FOR AND ON BEHALF OF COLLIER'S INTERNATIONAL ENGINEERING & DESIGN PTY LTD								23-0154	6600	0

GENERAL NOTES:

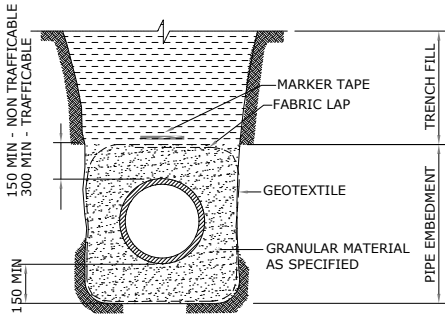
1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT SOUTH EAST QUEENSLAND WATER AND SEWERAGE CODE SPECIFICATIONS AND STANDARDS (SEQCODE).
2. UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.
3. THE CONSTRUCTION OF THE WORK SHOWN ON THIS DRAWING SHALL BE SUPERVISED BY AN ENGINEER WHO HAS RPEQ REGISTRATION. WORKS NOT COMPLYING WITH THIS REQUIREMENT WILL NOT BE PERMITTED TO CONNECT INTO THE SEQ SERVICE PROVIDER.
4. ALL DESIGN AND CONSTRUCTION ACTIVITIES UNDERTAKEN SHALL COMPLY WITH CURRENT WORKPLACE HEALTH AND SAFETY REQUIREMENTS AND LEGISLATION/
5. ALL PIPES AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE "ACCEPTED PRODUCTS AND MATERIALS" LIST.
6. WHERE PIPES ARE LAID IN FILL, THE FILLING SHALL BE TESTED BY A NATA CERTIFIED TEST LABORATORY IN ACCORDANCE WITH THE SEQ CODE. IN ALL SUCH CASES APPROVAL OF CONSTRUCTED WORKS WILL NOT BE ISSUED BY THE SEQ SERVICE PROVIDER UNLESS CERTIFICATES ARE PRODUCED CERTIFYING THAT THE REQUIRED COMPACTION HAS BEEN ACHIEVED.
7. WHERE PIPES HAVE A GRADE OF 1 IN 20 OR STEEPER, BULKHEADS OR TRENCHSTOPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SEQ-SEW-1206-1.
8. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF EXISTING SERVICES WITH RELEVANT AUTHORITIES BEFORE COMMENCING WORKS.
9. EXISTING MAINS SHALL BE DISUSED /ABANDONED IN ACCORDANCE WITH PROCEDURES SET OUT IN THE SEQ CODE.
10. **HOLD POINT:** ONCE THE BASE OF MANHOLES HAVE BEEN POURED, CONSTRUCTION SHALL ONLY RE-COMMENCE ONCE THE SUPERINTENDENT AND/OR ENGINEER HAVE INSPECTED THE WORKS
11. BENCH MARK AND LEVELS TO AHD.
12. THE CONTRACTOR SHALL SUPPLY ALL LABOR, MATERIALS, PLANT AND EQUIPMENT TO CONSTRUCT THE WORKS AS DOCUMENTED AND STRICTLY IN ACCORDANCE WITH THE RELEVANT AUTHORITY STANDARDS, SPECIFICATIONS AND REQUIREMENTS.
13. EXISTING SERVICES RELEVANT TO THE PROJECT HAVE BEEN CONSIDERED THROUGHOUT DESIGN AND IS BASED ON SURVEY INFORMATION PROVIDED BY THE SURVEYOR AND THE CONTRACTOR. THE RPEQ WHO CERTIFIED THE DESIGN OR THE PRINCIPAL'S CONSTRUCTION RPEQ HAVE RELIED UPON THIS INFORMATION TO INFORM THE DESIGN. THE CONTRACTOR SHALL VERIFY THE POSITION OF ANY UNDERGROUND SERVICES WITHIN THE AREAS OF WORKS AND SHALL BE RESPONSIBLE FOR MAKING GOOD ANY DAMAGE THERETO. ANY ALTERATION WORKS TO SERVICES WILL BE CARRIED OUT ONLY BY THE SERVICE OWNER AUTHORITY UNLESS APPROVED OTHERWISE.
14. PRIOR TO COMMENCING WORK, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL RELEVANT LOCAL AUTHORITY PERMITS.
15. THE CONTRACTOR SHALL NOT COMMENCE THE DEMOLITION OF ANY EXISTING BUILDINGS AND/OR STRUCTURES WITHOUT APPROVAL FROM THE SUPERINTENDENT.
16. THE CONTRACTOR SHALL APPLY INDUSTRY BEST PRACTICE SO WORKS SHALL NOT DISTURB OR AFFECT NEARBY RESIDENTS EITHER BY DUST, NOISE, FLOODING OR DISCONNECTION OF SERVICES. CONTRACTOR TO ENSURE THAT ACCESS AND SERVICES TO EXISTING PROPERTIES ARE AVAILABLE AT ALL TIMES.
17. THE CERTIFICATION OF THIS DESIGN IS BASED ON SURVEY AND POTHOLE INFORMATION PROVIDED BY THE SURVEYOR AND/OR CONTRACTOR AT THE TIME OF DESIGN. PRIOR TO COMMENCEMENT OF WORKS, THE CONTRACTOR SHALL VERIFY LEVELS OF EXISTING SERVICE CROSSINGS AND CONNECTION POINTS AND NOTIFY THE RPEQ WHO CERTIFIED THE DESIGN OR THE PRINCIPAL'S CONSTRUCTION RPEQ OF ANY DISCREPANCIES BETWEEN ACTUAL AND PROPOSED DESIGN LEVELS. THE CERTIFICATION OF THIS DESIGN IS BASED ON SURVEY AND POTHOLE INFORMATION PROVIDED BY THE SURVEYOR AND CONTRACTOR AT THE TIME OF DESIGN.
18. THESE ENGINEERING DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE APPROVED VEGETATION MANAGEMENT PLAN, WHERE APPLICABLE. WHEN IN DOUBT, ALL EXISTING TREES ARE TO REMAIN UNLESS DIRECTED OTHERWISE.
19. THE CONTRACTOR SHALL NOTE DURING THE COURSE OF THE WORKS WHEN JOINT INSPECTIONS WITH THE AUTHORITY AND THE SUPERINTENDENT ARE REQUIRED. THESE INCLUDE PRE-STARTS, SUBGRADES, PRE-SEALS, CLEARING, AND OTHER SUCH INSPECTIONS AS NOMINATED DURING THE PRE-START, IN THE APPROVAL AND THE SPECIFICATIONS. THE CONTRACTOR SHALL ENSURE NO WORKS PROCEED PAST THE INSPECTION POINT UNTIL THE JOINT INSPECTION HAS BEEN SUCCESSFULLY COMPLETED.
20. ALL EXISTING ROADS THAT ARE DISTURBED DURING THE WORKS ARE TO BE REINSTATED

GENERAL NOTES – SEWER

1. ALL WORK ASSOCIATED WITH LIVE SEWERS OR MAINTENANCE HOLES SHALL BE CARRIED OUT BY THE SEQ SERVICE PROVIDER AT THE DEVELOPER'S COST.
2. SEWERS SHALL BE DISUSED/ABANDONED IN ACCORDANCE WITH PROCEDURE SET OUT IN THE GRAVITY SEWER CODE.
3. DETECTABLE MARKER TAPE SHALL BE USED FOR ALL SEWER PIPES (EXPECT FOR PIPE IN A STEEL ENVELOPER PIPE) IN ACCORDANCE WITH SEQ STANDARD DRAWING SEQ-SEW-1200 SERIES AND SEQ CODE STANDARDS.
4. CONCRETE FOR MH CONSTRUCTION SHALL BE SPECIAL CLASS TO WSA PS-358 WITH REQUIREMENT OF CALCAREOUS AGGREGATES.
5. CONSTRUCTION OF PAVEMENT IN UNSEALED ROAD SHOULDERS SHALL BE IN ACCORDANCE WITH SEQ STANDARD DRAWING SEQ-SEW-1205-1.
6. FOR CAST-IN-SITU MAINTENANCE HOLES, COPING AND ANCHOR BRACKETS TO BE AS PER SEQ-SEW-1301-1, WITH AMENDMENTS AS SHOWN ON DETAIL DRAWING FOR PE LINED MANHOLES NECKS
 - TOP SLAB REINFORCEMENT TO BE AS PER SEQ-SEW-1301-26-A
7. FOR POLYETHYLENE LINER (PE LINER) MAINTENANCE HOLES REFER TO SEQ-SEW-1101-6 A FOR INSTALLATION REQUIREMENTS



TYPE 3 SUPPORT
(NTS)



TYPE 4 SUPPORT - WITH GEOTEXTILE
(NTS)

PIPEWORK

8. WHERE CONNECTING TO EXISTING PIPEWORK, THE LEVEL AND DIAMETER OF THE EXISTING PIPEWORK, SHALL BE CONFIRMED BY THE CONTRACTOR, PRIOR TO CONNECTION.
9. ALL FLANGES SHALL BE IN ACCORDANCE WITH AS 4087, CLASS 14 FOR CAST IRON AND, CLASS 16 FOR DUCTILE IRON AND STEEL, UNO.
10. ALL BACKING PLATES, NUTS, BOLTS AND WASHERS TO BE A MINIMUM GRADE 316 STAINLESS STEEL. COAT THE THREADED SECTIONS OF ALL STAINLESS STEEL BOLTS WITH AN ANTI-SEIZE LUBRICANT
11. INSTALL VALVE IDENTIFICATION CAP ON ALL SPINDLES.
12. GASKET MATERIAL TO COMPLY WITH AS4087 AND IN ACCORDANCE WITH WSA 109.
13. ALL FLANGE BOLT HOLE ORIENTATIONS SHALL BE OFF-CENTRE UNO.
14. ALL FLANGE BOLT SETS SHALL BE GRADE 316 STAINLESS STEEL. REFER AS 4087 - TABLE C1 FOR CLASS.
15. FLANGE GASKET MATERIAL AND THICKNESS SHALL BE IN ACCORDANCE WITH AS 4087 - TABLE C1.
16. THRUST AND PUDDLE FLANGES SHALL BE CAST CENTRALLY WITHIN WALLS UNLESS SHOWN OTHERWISE.
17. ALL SPIGOT AND SOCKET DICL PIPEWORK SHALL BE CLASS PN35.
18. ALL GATE AND REFLUX VALVES SHALL BE INTERNALLY AND EXTERNALLY COATED WITH A POLYMERIC COATING. ALL GATE VALVES SHALL BE RESILIENT SEATED. ALL REFLUX VALVES SHALL BE RESILIENT SEATED SWING FLEX CHECK VALVE OR SIMILAR APPROVED TOP OPENING VALVE.
19. DUCTILE IRON FITTINGS MAY BE USED WITH DI & PVC PIPE. FITTINGS SHALL BE FBE COATED AND LINED. CEMENT LINED WITH A BITUMINOUS EXTERNAL COATING MAY BE USED WITH APPROVAL. DO NOT USE PVC FITTINGS.
20. PE SLEEVING, COLOURED FOR THE PRODUCT IS REQUIRED ON ALL DI PIPE AND FITTINGS APPLIED IN ACCORDANCE WITH AS 3681. TWO THICKNESS REQUIRED BETWEEN FITTINGS AND THRUST BLOCK. REINSTATE ANY DAMAGED SLEEVING AS PER MANUFACTURER'S SPECIFICATIONS.
21. DI SPIGOTS SHALL NOT BE FITTED INTO PVC SOCKETS.

PVC PIPE

1. PVC PIPE SHALL NOT BE IN CONTACT WITH THRUST BLOCK CONCRETE.
2. MAXIMUM SIZE OF DRILLED HOLES FOR SERVICE CONNECTIONS IN PVC PIPE TO BE 30% OF DN OR 50 (LOWER VALUE TO BE USED).
3. PVC PIPE SHALL NOT BE BENT OR CURVED

EMBEDMENT MATERIAL AND DESIGN

1. PLACEMENT OF EMBEDMENT, TRENCHFILL & COMPACTION TO MEET THE REQUIREMENTS OF THE SEQ CODE AND DESIGN DRAWINGS.
2. EXCAVATE OR COMPACT TRENCH FLOOR TO PROVIDE A FLAT FIRM BASE TO SUPPORT BEDDING MATERIAL AND MINIMISE PIPELINE SETTLEMENT. WHEN EXCAVATED, REPLACE WITH GRANULAR MATERIAL AS SPECIFIED FOR BEDDING OR ADOPT SUPPORT AS REQUIRED.
3. WHERE ADDITIONAL SUPPORT IS REQUIRED THIS SHALL BE REFERRED TO GEO-TECHNICAL ENGINEER FOR REVIEW. SUPPORT SHALL BE INSTALLED AT A MINIMUM DEPTH OF 300 WITH A 20mm NOMINAL SIZE CRUSHED ROCK COMPLYING WITH TABLE G2 OR G3 OF AS2566.2. ADDITIONAL BEDDING SHALL BE WRAPPED WITH GEOTEXTILE TO FORM A SEPARATE GEOTEXTILE PILLOW FOUNDATION FOR PIPE EMBEDMENT.
4. ENSURE BEDDING IS DEEP ENOUGH THAT PIPE JOINT PROJECTIONS (SOCKETS, FLANGES) DO NOT TOUCH TRENCH FLOOR.
5. GEOTEXTILE BIDIM A24 OR APPROVED EQUIVALENT TO BE USED WHERE TRENCH FILL IS A MIGRATORY NATIVE SOIL OR SAND OR FINE CLAY MATERIAL, AND WHERE SPECIFIED IN THE DESIGN.
6. LAY GEOTEXTILE FILTER FABRIC AGAINST TRENCH FLOOR AND WALLS SUCH THAT IT FULLY ENCASES THE EMBEDMENT AND SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS.
 - PRESS FABRIC INTO THE VOIDS BEFORE INSTALLING EMBEDMENT TO PREVENT FABRIC TEARING.
 - PROVIDE A MINIMUM OF 250 OVERLAP AT ALL FABRIC JOINTS.
7. PURCHASE SPECIFICATIONS FOR EMBEDMENT MATERIAL ARE DETAILED IN THE SEQ CODE ACCEPTED PRODUCTS AND MATERIALS LIST. TRENCH FILL SHALL COMPLY WITH SEQ-SEW-1200-2. 10. DETECTABLE MARKER TAPE SHALL BE PROVIDED EITHER ABOVE THE EMBEDMENT ZONE OR 1000 BELOW THE F.S.L, WHICHEVER IS CLOSEST TO F.S.L
8. MARKER TAPE SHALL BE DETECTABLE TYPE IN ACCORDANCE WITH IPAM LIST, COLOUR CREAM FOR NON-PRESSURE AND PRESSURE SEWERAGE. THE TAPE SHALL BE MARKED "CAUTION SEWER BURIED BELOW"
9. TEMPORARY OR SHORT TERM BATTERS (UP TO 4 WEEKS) CAN BE CONSTRUCTED TO THE GRADIENTS PRESENTED IN TABLE 7 OF REPORT 8043 – 24-231.
10. USE TYPE 4 EMBEDMENT WITH GEOFABRIC WRAPPING IN ALL DISPERSIVE/FILL AREAS.
11. WRAPPING MUST FULLY ENCAPSULATE BEDDING WITH 250mm OVERLAP AT JOINS.
12. TRENCH BASE TO ACHIEVE MINIMUM BEARING PRESSURE OF 100kPa UNLESS OTHERWISE SPECIFIED.
13. BACKFILL COMPACTED TO 95 TO 98% STANDARD COMPACTION PER AS3798 AND VERIFIED TO LCC REQUIREMENTS.
14. THRUST BLOCKS TO HAVE A MINIMUM HORIZONTAL BEARING PRESSURE ALLOWANCE OF 50kPa.

LIVE SEWER WORKS

No.	DESCRIPTION	DIA. SEWER	EXISTING ASSET ID AT CONNECTION	MH/MS TYPE	COVER TYPE	LOT & PLAN No.	F.S.L.	E.S.L.	CONNECTION I.L.	CONNECTION DEPTH TO INVERT	ALTERATION TO EXISTING MH BENCHING REQUIRED (Y/N)
1 (A)	0.50m FROM EXISTING STUB, CONSTRUCTOR, TO LAY NEW SEWERS. AFTER CLEANSING, TESTING AND INSPECTION, NOTIFY LOGAN WATER.	525	1 / 1	C3	D	LOT 4 ON SP332712	38.183	38.183	31.522	8.519	N
1 (B)	CONSTRUCTOR, UNDER LOGAN WATER SUPERVISION, TO REMOVE TEMPORARY END CAP ON EXISTING STUB AND MAKE LIVE CONNECTION AFTER SUCCESSFUL 'ON MAINTENANCE' INSPECTION.										

ENVIRONMENTAL CONDITIONS

VEGETATION PROTECTION

1. TREES LOCATED ALONG THE FOOTPATH SHALL BE TRANSPLANTED PRIOR TO CONSTRUCTION, OR REPLACED IF DESTROYED.
2. WHEN WORKING WITHIN 4 m OF TREES, RUBBER OR HARDWOOD GIRDLES SHALL BE CONSTRUCTED WITH 1.8 m BATTENS CLOSELY SPACED AND ARRANGED VERTICALLY FROM GROUND LEVEL. GIRDLES SHALL BE STRAPPED TO TREES PRIOR TO CONSTRUCTION AND REMAIN UNTIL COMPLETION.
3. TREE ROOTS SHALL BE TUNNELED UNDER, RATHER THAN SEVERED. IF ROOTS ARE SEVERED THE DAMAGED AREA SHALL BE TREATED WITH A SUITABLE FUNGICIDE. CONTACT RELEVANT COUNCIL ARBORIST FOR FURTHER ADVICE.
4. ANY TREE LOPPING REQUIRED SHOULD BE UNDERTAKEN BY AN APPROVED ARBORIST.
5. ALL ENVIRONMENTAL PROTECTION MEASURES SHALL BE IMPLEMENTED PRIOR TO ANY CONSTRUCTION WORK COMMENCING, INCLUDING CLEARING

SOIL

1. TOPSOIL AND SUBSOIL SHALL BE STOCKPILED SEPARATELY.
2. CARE SHALL BE TAKEN TO PREVENT SEDIMENT FROM ENTERING THE STORMWATER SYSTEM. THIS MAY INVOLVE PLACING APPROPRIATE SEDIMENT CONTROLS AROUND STOCKPILES.
3. THE CONTRACTOR SHALL HAVE READ THE GEOTECHNICAL REPORT.
4. THE CONTRACTOR SHALL HAVE READ THE DISPERSIVE SOILS MANAGEMENT PLAN.

CREEK CROSSINGS

1. SILTATION CONTROL MEASURES SHALL BE PLACED DOWNSTREAM OF ANY EXCAVATION WORK.
2. APPROPRIATE SEDIMENT CONTROLS SHALL BE USED TO PREVENT SEDIMENT FROM ENTERING THE CREEK.
3. NO SOIL SHALL BE STOCKPILED WITHIN 5 m OF THE CREEK OR WATER WAY.

REHABILITATION

1. PREDISTURBANCE SOIL PROFILES AND COMPACTION LEVELS SHALL BE REINSTATED.
2. PREDISTURBANCE VEGETATION PATTERNS SHALL BE RESTORED.

SAFETY

1. THE DESIGN AND CONSTRUCTION OF THE WORKS SHALL COMPLY WITH ALL QUEENSLAND LEGISLATION.
2. THE SAFETY IN DESIGN, DESIGN AND RISK MITIGATION MEASURES FOR THESE DRAWINGS DO NOT NECESSARILY ACCOUNT FOR ALL DESIGN, CONSTRUCTION, OPERATION, MAINTENANCE AND DEMOLITION ASSESSMENTS. IT DOES NOT REDUCE OR LIMIT THE OBLIGATIONS OF THE CONSTRUCTOR, USER, OPERATOR, MAINTAINER AND DEMOLISHER TO PERFORM THEIR OWN SAFETY IN DESIGN RISK ASSESSMENT.
3. DEVELOP CONSTRUCTION AND INSTALLATION SAFE WORK METHOD STATEMENTS TO ELIMINATE AND MINIMISE INSTALLATION RISKS. THE SAFE METHOD STATEMENT SHALL BE REVIEWED AND APPROVED BY A SUITABLY QUALIFIED STRUCTURAL ENGINEER

EMBEDMENT MATERIAL DESIGN NOTES

1. ALL DIMENSIONS IN MILLIMETERS.
2. BEDDING MATERIAL SHALL BE A SINGLE SIZED 5mm OR 7mm NOMINAL SIZE CRUSHED ROCK COMPLYING WITH TABLE G2 OF AS2566.2.
3. IMPORTED BACKFILL MATERIAL SHALL HAVE A SOAKED CBR VALUE OF NOT LESS THAN 15% AND A MAXIMUM PARTICLE SIZE OF 75mm.
4. FLOWABLE FILL OR LEAN MIX CONCRETE SHALL BE THOROUGHLY MIXED PRIOR TO PLACEMENT WITH A CEMENT CONTENT OF 5%. SHALL CONSIST OF A GRADED SAND AND GRAVEL AGGREGATE OF 40mm MAXIMUM SIZE AND SUFFICIENT WATER TO ENSURE SLUMP OF LESS THAN 12mm.

EMBEDMENT MATERIAL CONSTRUCTION

1. FOR EACH BEDDING ZONE, BEDDING MATERIAL SHALL BE PLACED IN THE TRENCH TO THE DEPTH SHOWN ON THE DRAWINGS AND COMPACTED IN 150mm LAYERS FOR THE FULL WIDTH OF THE TRENCH BY TWO PASSES OF A VIBRATING PLATE.
2. TRENCH BACKFILL ABOVE BEDDING ZONE SHALL BE COMPACTED IN ACCORDANCE WITH THE BELOW TABLE U.N.O.

MATERIAL TYPE	TRAFFICABLE AREA	NON-TRAFFICABLE AREA
COHESIONLESS (DENSITY INDEX)	70	60
COHESIVE (STD COMPACTION)	95	90

3. SINGLE SIZE COARSE AGGREGATES OF SIZES 7 & 10 mm ARE DEEMED "SELF COMPACTING" AND DO NOT REQUIRE COMPACTION TESTING WHEN USED AS EMBEDMENT U.N.O.
4. THE INSTALLED MAIN AND STRUCTURES SHALL CONFORM WITH THE CONSTRUCTION TOLERANCES NOMINATED WITHIN SEQ-CODE.

SPRING LINE CLEARANCE

NOMINAL DIAMETER (DN)	MINIMUM CLEARANCE "Lc" TO AS/NZ 2566.1
≤300	150
>300 - ≤450	200
>450 - ≤900	300

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								FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD			ASSOCIATED CONSULTANT RPS GROUP (07) 3539 9500					
											MOUNTAIN RIDGE ROAD NEW BEITH			PROJECT No. 23-0154	DRAWING No. 6601	REVISION 0

1. DESIGN AND CONSTRUCTION OF ALL SEWERAGE INFRASTRUCTURE SHALL BE RPEQ CERTIFIED.
2. TOP SLABS HAVE BEEN DESIGNED FOR THE FOLLOWING LIVE LOADS AND LOCATIONS

LOCATION	LIVE LOAD	ACCESS COVER TO AS 3996
RESERVES, RESIDENTIAL ALLOTMENTS, FOOTPATHS AND VERGES	25 kN	CLASS RATING B
ROADWAYS AND DRIVEWAYS, COMMERCIAL, INDUSTRIAL AND NON-RESIDENTIAL ALLOTMENTS	80 kN	CLASS RATING D

- DESIGN LIFE 100 YEARS
 - DEAD LOAD AS DETERMINED FROM SEQ SEWER CODE STANDARD DRAWINGS.
 - LIVE LOADS TO AS 1170.1 AND AS 5100.2
3. DURABILITY CLASSIFICATION

STRUCTURE	COVER LOCATION	EXPOSURE CLASSIFICATION AS3600, AS3735	REINFORCEMENT COVER (mm)
SLABS	TOP	B2 TO AS3600-	40
	BOTTOM	B2 TO AS3735	50 INCLUDING PE LINER THICKNESS

4. SEQ CODE SEWER MH STANDARD DRAWINGS THAT ARE APPLICABLE TO LOGAN WATER HAVE ASSUMED THAT A MINIMUM SOIL BEARING PRESSURE OF 50 KPA CAN BE ACHIEVED. RESPONSIBILITY FOR ALL ASPECTS OF THE DESIGN AND CONSTRUCTION OF SEWER INFRASTRUCTURE RESTS SOLELY WITH THE CERTIFYING RPEQ.
5. SEQ CODE SEWER MH STANDARD DRAWINGS THAT ARE APPLICABLE TO LOGAN WATER HAVE ASSUMED THAT A MINIMUM SOIL BEARING PRESSURE OF 50 KPA CAN BE ACHIEVED. RESPONSIBILITY FOR ALL ASPECTS OF THE DESIGN AND CONSTRUCTION OF SEWER INFRASTRUCTURE RESTS SOLELY WITH THE CERTIFYING RPEQ.

1. THESE NOTES RELATE TO ALL TOP SLABS AND CAST-INSITU MAINTENANCE HOLES FOR LOGAN WATER.

2. MAINTENANCE HOLE TOP SLABS SHALL BE PRECAST ELEMENTS.
3. DIMENSIONS IN MILLIMETRES U.N.O.
4. DIMENSIONS NOT TO BE SCALED FROM DRAWINGS.
5. VERIFY ALL DIMENSIONS ON SITE PRIOR TO COMMENCING WORK ON SITE.
6. MATERIALS AND WORKMANSHIP TO COMPLY WITH THE CURRENT STANDARDS AUSTRALIA CODES, BUILDING CODE OF AUSTRALIA, SEW CODE, WSAA PRODUCT SPECIFICATIONS, BY-LAWS AND ORDINANCES OF RELEVANT BUILDING AUTHORITIES.
7. EXISTING STRUCTURES TO BE MAINTAINED IN A STABLE CONDITION AND NO PART TO BE OVER-STRESSED DURING CONSTRUCTION.
8. ADDITIONAL SITE EXAVATION SHALL OCCUR UNTIL SUITABLE FOUNDATION MATERIAL IS LOCATED. ALL OVEREXCAVATION SHALL BE REPLACED WITH A LEAN MIX CONCRETE OR C.L.S.M.

1. MAINTENANCE HOLES SHALL BE LOCATED CENTRALLY OVER SEWERS UNLESS SPECIFIED OTHERWISE. REFER DRAWINGS SEQ-SEW-1304-1 AND SEQ-SEW-1305-1
2. OBVERT LEVEL OF THE UPSTREAM SEWER PIPE SHALL ALWAYS BE ABOVE THE OBVERT LEVEL OF THE DOWNSTREAM SEWER PIPE UNLESS APPROVED OTHERWISE.
3. ALL CONSTRUCTION JOINTS SHALL INCLUDE HYDROPHILIC SEALS INSTALLED TO MANUFACTURER'S SPECIFICATIONS.
4. MAINTENANCE HOLE CONNECTORS, INCLUDING HYDROPHILIC SEALS AND PUDDLE FLANGES SHALL BE THE PRE-FABRICATED TYPE UNLESS APPROVED OTHERWISE.
5. ENDS OF SEWER PIPES SHALL FINISH FLUSH WITH THE INSIDE FACE OF MAINTENANCE HOLE WALL.
6. FINISHED BENCHING SHALL PROVIDE A SMOOTH NON-TURBULENT FLOW.
7. SAFETY CHAINS AND ALL CONNECTIONS SHALL BE STAINLESS STEEL GRADE 316.
8. PROPERTY CONNECTION JUNCTIONS SHALL NOT BE CONSTRUCTED ON SHORT PIPES AT MAINTENANCE HOLES OR BULKHEADS.

1. CIRCULAR ACCESS COVERS AND FRAMES SHALL BE RATED TO CLASS RATING B OR CLASS RATING D TO AS 3996.
2. PRODUCT CERTIFICATION TO AS 3996 SHALL BE SUPPLIED FOR EACH COVER ASSEMBLY.
3. COVERS, FRAMES AND RISER RINGS, WHERE REQUIRED, SHALL BE SUPPLIED ASSEMBLED.
4. COVERS SHALL BE SOLID TOP. IN LOGAN WATER AREAS ONLY, CLASS B CONCRETE INFILL COVERS MAY BE USED.
5. COVERS SHALL HAVE IDENTIFICATION TAGS DETAILING, SEWER / VACUUM SEWER / CLASS RATING B, D / SEALED / COVER PATTERN DETAIL / SEQ-SP NAME / WEIGHT.
6. BOLT DOWN COVERS SHALL BE PROVIDED IN FLOOD PRONE AREAS, STORM SURGE AREAS, SURCHARGING SEWERS AND WHERE SPECIFIED IN THE DESIGN.
7. BOLT DOWN COVER FRAMES TO BE FIXED TO THE TOP SLAB WITH 4 M16 STAINLESS STEEL CHEMICAL ANCHORS. EMBEDMENT LENGTH SHALL BE MINIMUM 110 mm UNLESS APPROVED OTHERWISE.

1. CONCRETE WORKMANSHIP AND MATERIALS TO COMPLY WITH AS 3600 AND AS 3610
2. CONCRETE TO COMPLY WITH AS 1379, AS 1478.1, AS 1478.2, AS 3582.1, AS 3582.2, AS 3582.3 AND AS 3972.
3. SLUMP TO BE AS REQUIRED FOR PLACEMENT, COMPACTION AND FINISHING. A SAMPLE OF FRESH CONCRETE SHALL BE TESTED FOR SLUMP AND STRENGTH UPON ARRIVAL ON SITE.
4. WATER NOT TO BE ADDED TO CONCRETE AFTER TRUCK HAS LEFT BATCHING PLANT UNLESS APPROVED OTHERWISE.
5. TEST SLUMP OF EACH BATCH OF CONCRETE DELIVERED.
6. DESIGN, CERTIFICATION, CONSTRUCTION AND PERFORMANCE OF FORMWORK BY CONTRACTOR.
7. CONCRETE CONSTRUCTION TOLERANCES TO AS 3610.
8. CONCRETE SIZES DO NOT INCLUDE FINISHES. SIZES NOT TO BE REDUCED OR PENETRATIONS ADDED.
9. CONDUITS, PIPES, ETC. NOT TO BE PLACED IN CONCRETE COVER TO THE REINFORCEMENT.
10. EXPOSED EDGES AND RE-ENTRANT CORNERS TO HAVE 25 MM CHAMFERS OR FILLETS UNLESS NOTED OTHERWISE.
11. CONSTRUCTION JOINTS AS DETAILED AND LOCATED ON DESIGN DRAWINGS.
12. CONCRETE SURFACE FINISHES TO AS 3610. FORMED EXPOSED SURFACES - CLASS 2
13. CONCRETE TEMPERATURE NOT TO EXCEED TEMPERATURES STATED BELOW.

CONCRETE STRUCTURE	CONCRETE STRENGTH	TEMPERATURE LIMIT
CONCRETE SECTIONS LESS THAN 600mm THICK	EQUAL TO OR MORE THAN 40MPa	35°C
CONCRETE SECTIONS EQUAL TO OR GREATER THAN 600mm THICK	EQUAL TO OR MORE THAN 40 MPa	27°C

14. CONCRETE CURING TO AS3600 AS SOON AS POSSIBLE AFTER PLACING AND FINISHING.
15. CONCRETE GRADE S40.

TYPE OF AGGREGATE	CALCAREOUS
COMPRESSIVE STRENGTH AT 28 DAYS	40 MPa
MIN. CEMENT CONTENT	380 kg/m ³
MAX. CEMENTITIOUS MATERIAL	25%
MAX W/C RATIO	0.5
NOMINAL SLUMB	80 mm±15
DRYING SHRINKAGE AT 21 DAYS	500 x 10 ⁻⁶
MAXIMUM AGGREGATE SIZE	20 mm
MINIMUM AGGREGATE SIZE	10 mm

16. CONCRETE SHALL BE SPECIAL CLASS TO WSA-PS 358 WITH CALCAREOUS AGGREGATE.
17. BENCHING FINISH SHALL CONSIST OF EQUAL PARTS OF CEMENT AND SAND.
18. HOLD POINT: ONCE THE BASE OF MANHOLES HAVE BEEN POURED, CONSTRUCTION SHALL ONLY RE-COMMENCE ONCE THE SUPERINTENDENT AND/OR ENGINEER HAVE INSPECTED THE WORKS

1. REINFORCEMENT FOR THE TOP SLABS SHALL BE A PREFABRICATED ELEMENT.
2. REINFORCEMENT TO COMPLY WITH AS4671.
3. SYMBOLS ON DRAWINGS FOR GRADE AND TYPE OF REINFORCEMENT ARE:
 - R - STRUCTURAL GRADE 250 PLAIN ROUND BARS
 - N - HOT ROLLED GRADE 500 DEFORMED BAR, DUCTILITY CLASS N
 - L - HOT ROLLED GRADE 500 DEFORMED BAR, DUCTILITY CLASS L
 - SL - HARD DRAWN WIRE GRADE 500 MESH, DUCTILITY CLASS L
 - RL - HARD DRAWN WIRE GRADE 500 MESH, DUCTILITY CLASS L
 - W - STEEL REINFORCING WIRE GRADE 500
4. REINFORCEMENT DESIGNATION AS FOLLOWS (e.g. 14/N16-250 EF)
 - 14 - NUMBER OF BARS
 - N - BAR GRADE AND DUCTILITY CLASS
 - 16 - BAR DIAMETER IN mm
 - 250 - SPACING OF BARS IN mm
 - EF - LOCATION
5. ABBREVIATIONS TO REINFORCEMENT LOCATION:
 - EW - EACH WAY
 - EF - EACH FACE
 - B - BOTTOM
 - T - TOP
 - CP - CENTRALLY PLACED
6. REINFORCEMENT IS SHOWN DIAGRAMMATICALLY ONLY AND NOT NECESSARILY IN TRUE PROJECTION.
7. REINFORCEMENT TO BE FIXED SECURELY AND SUPPORTED ON PROPRIETARY CONCRETE, METAL OR PLASTIC SUPPORTS.
8. REINFORCEMENT TO BE SPICED AS SHOWN ON PROJECT DRAWINGS. LAP LENGTHS TO COMPLY WITH AS 3600 AND TABLE BELOW U.N.O.

BAR SIZE	LAP LENGTH (mm)
N12	350
N16	500
N20	600
N24	700
N28	850
N32	950

9. REINFORCEMENT NOT TO BE WELDED UNLESS SHOWN ON PROJECT DRAWINGS OR APPROVED OTHERWISE.
10. REINFORCEMENT NOT TO BE BENT, CUT OR HEATED ON SITE UNLESS APPROVED OTHERWISE.
11. REINFORCEMENT TO BE CLEAN, FREE OF MILL SCALE, RUST, OIL, GREASE ETC.
12. DOWEL LOCATION TOLERANCE SHALL BE +/- HALF THE DIAMETER OF THE DOWEL. THE ALIGNMENT TOLERANCE SHALL BE 2 mm IN 300 mm.

REV	DATE	DESIGN	DRAWN	REVISION DETAILS		DRAWN	STATUS		SCALE	CUSTOMER	PROJECT NAME	DRAWING TITLE			
0	15.04.26	BR	TG	ORIGINAL ISSUE		TG	ISSUED FOR CONSTRUCTION				FRASERS PROPERTY AUSTRALIA	ROUND MOUNTAIN PRECINCT B - ROAD 034	TRUNK SEWER MAIN MH CONSTRUCTION NOTES SHEET 1 OF 2		
						DESIGN	APPROVED DANIEL COLLINS RPEQ 18631 DATE 15.04.26			ASSOCIATED CONSULTANT RPS GROUP (07) 3539 9500	MOUNTAIN RIDGE ROAD NEW BEITH	PROJECT No. 23-0154	DRAWING No. 6602	REVISION 0	
						BR	 FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD								

PRECAST CONCRETE - TOP SLABS ONLY

1. PRECAST CONCRETE MEMBERS TO COMPLY WITH AS 3850.1 AND AS 3850.2
2. PRECAST MEMBERS ARE DESIGNED FOR THE FINAL INSTALLED CONDITIONS ONLY. PRECAST MANUFACTURER TO DESIGN THE PRECAST MEMBERS INCLUDING CONNECTIONS, FIXING DETAILS, JOINTS, FIRE RESISTANCE, ETC. FOR STABILITY, SERVICEABILITY AND STRENGTH REQUIREMENTS REQUIRED DURING MANUFACTURE, TRANSPORT, LIFTING, ERECTION AND INSTALLATION.
3. PRECAST MANUFACTURER TO PROVIDE THEIR SHOP DRAWINGS AND RPEQ CERTIFICATION FOR CONSTRUCTION OF THE PRECAST SLAB TO THE DESIGNS PROVIDED IN MAINTENANCE HOLE DRAWINGS INCLUDING DESIGN AND CONSTRUCTION CERTIFICATION FOR CONNECTIONS AND FIXING REQUIRED FOR MANUFACTURE, TRANSPORT, ERECTION AND INSTALLATION. (FORM 16)
4. PRECAST CONCRETE MEMBERS TO BE SUPPLIED AND CONSTRUCTED BY A PRECAST CONCRETE CONSTRUCTOR.
5. ADEQUATELY DESIGNED TEMPORARY BRACING, AS REQUIRED, TO BE PROVIDED DURING ERECTION AND INSTALLATION.
6. MINIMUM CHARACTERISTIC COMPRESSIVE STRENGTH OF CONCRETE AT REMOVAL FROM MOULDS SHALL BE 15MPa.
7. ALL INSERTS IN PRECAST CONCRETE MEMBERS TO BE STAINLESS STEEL.
8. ALL STRUCTURAL STEELWORK CONNECTIONS TO PRECAST CONCRETE MEMBERS TO BE HOT DIP GALVANISED TO AS 4680 SYSTEM DESIGNATION HDG600.
9. PROVIDE 15 MM CHAMFERS OR FILLETS AT EDGES AND CORNERS OF PRECAST MEMBERS EXCEPT AT UNDERSIDE OF MH SLAB ACCESS OPENING UNLESS APPROVED OTHERWISE.
10. PRECAST CONCRETE MEMBERS NOT TO BE ERECTED ON REINFORCED CONCRETE STRUCTURES UNTIL THE REINFORCED CONCRETE STRUCTURES HAVE BEEN CURED TO ACHIEVE 28 DAYS STRENGTH.
11. WEIGHT OF TOP SLAB TO BE STAMPED ON THE SLAB.
12. CONCRETE TO BE SPECIAL CLASS TO WSA PS-358 WITH CALCAREOUS AGGREGATE.
13. APPROVED LIFTING PLAN IS TO BE AVAILABLE ON REQUEST.

FORMWORK

1. DESIGN, CERTIFICATION, CONSTRUCTION, INSPECTION AND PERFORMANCE OF THE FORMWORK AND FALSE WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, EXCEPT TO THE EXTENT THAT FORMWORK DESIGN IS SHOWN ON THE STRUCTURAL DRAWINGS.
2. FORMWORK SHALL NOT BE DESIGNED TO RELY ON RESTRAINT OR SUPPORT FROM THE PERMANENT STRUCTURE WITHOUT PRIOR APPROVAL FROM THE STRUCTURAL ENGINEER.
3. INFORMATION FOR THE FOUNDATIONS UNDER THE FORMWORK SHALL BE DETERMINED FROM THE CONDITIONS EXISTING ON SITE AT THE TIME OF CONSTRUCTION.
4. CONSTRUCTION TOLERANCES AND STRIPPING TIMES SHALL COMPLY WITH AS3610 AND AS3600 FOR THE APPROPRIATE FINISH CLASS UNLESS OTHERWISE APPROVED BY THE STRUCTURAL ENGINEER.
5. CONSTRUCTION, NO MATERIALS ARE TO BE STACKED ON THE VALVE PIT UNTIL THE NOMINATED 28 DAY STRENGTH HAS BEEN ATTAINED, THESE LOADS SHALL NOT EXCEED THE DESIGN SUPERIMPOSED LOADS OF 10 kPa.
6. PERMANENT LOADS ON THE CONCRETE STRUCTURE SHALL NOT BE APPLIED UNTIL AFTER FORMWORK AND FALSEWORK IS REMOVED.
7. APPLY A RELEASE AGENT TO THE FACE OF THE FORMWORK COMPATIBLE WITH THE REQUIRED SURFACE FINISH WHEN PLACING REINFORCEMENT IN THE FORMWORK..
8. RE-ENTRANT ANGLES AND FILLET AT CORNERS BY 25mm UNO.
9. PRIOR TO PLACING CONCRETE, REMOVE ALL WATER, DUST, AND DEBRIS FROM THE FORMWORK.
10. WHERE HOLES ARE LEFT BY FORM TIE BOLTS THESE SHALL BE FILLED WITH MORTAR MATCHING THE SURFACE COLOUR OF THE FINISHED SURFACE.

STAINLESS STEEL

1. STAINLESS STEEL TO COMPLY TO ASTM A240/A240M AND ASTM A480/ A480M.
2. FABRICATION BY MANUFACTURERS ASSDA ACCREDITED OR APPROVED EQUIVALENT.
3. STAINLESS STEEL TO BE GRADE 316 OR 316L U.N.O.
4. STORAGE, FABRICATION AND WELDING TO BE IN APPROVED DEDICATED AREAS.
5. WELDING, CLEANING, PICKLING AND PASSIVATION TO COMPLY TO AS 1554.6 AND WTIA TECHNICAL NOTE 16 WELDING OR STAINLESS STEEL.
6. SURFACE FINISH TO BE 2B OR BETTER TO ASTM A480.
7. MEMBERS TO BE ACID PASSIVATED AFTER FABRICATION.
8. ANTI GALLING COMPOUND "DURALAC" OR SEQ-SP APPROVED EQUIVALENT REQUIRED ON ALL FASTENERS UNLESS APPROVED OTHERWISE.

POLYETHYLENE LINER (PE LINER)

1. THE PE LINER SHALL FORM A COMPLETELY SEALED AND WELDED ROBUST CONTINUOUS MEMBRANE SYSTEM. THE PE LINER SHALL BE BUILT TO THE MH CONSTRUCTION TOLERANCES WITHOUT ANY DEFECTS SUCH AS BULGING, WARPING, PINCHING, OVERLAPPING.
2. THE PE SHEETS SHALL:
 - HAVE A MINIMUM THICKNESS OF 2.5 mm.
 - ACHIEVE A MECHANICAL BOND BETWEEN THE CONCRETE AND LINER.
 - BE INSTALLED BY AN ACCREDITED APPLICATOR APPROVED BY THE MANUFACTURER.
 - BE TENSIONED OVER THE FORMWORK WITHIN THE YIELD ELONGATION LIMIT PRIOR TO SECURING TO THE FORMWORK.
3. PREPARATION, APPLICATION AND INSTALLATION TO COMPLY WITH THE MANUFACTURER'S SPECIFICATION.
4. POURED CONCRETE TO BE AT A COOLER AMBIENT TEMPERATURE THAN THE TEMPERATURE WHEN THE PE SHEETS WERE ATTACHED TO THE FORMWORK.
5. EXTRUSION WELDING AND WELD TESTING AT SEAMS TO BE UNDERTAKEN BY THE APPROVED APPLICATOR TO THE MANUFACTURER'S SPECIFICATION.
6. ENCAPSULATION OF ANCHORS TO BE CHECKED BY TAPPING THE SURFACE TO DETECT HOLLOW

- SOUNDS THAT INDICATE VOIDS. VOIDS TO BE FILLED BY INJECTION GROUT AND PE SHEET REPAIRED BY EXTRUSION WELDING OVER THE INJECTION HOLE.
7. REFER TO SEQ CODE CIVIL IPAM LIST FOR APPROVED PE LINER PRODUCTS. PREPARATION, APPLICATION AND INSTALLATION OF LINER TO COMPLY WITH MANUFACTURER'S SPECIFICATIONS AND BE READ IN CONJUNCTION WITH WSA 201 MANUAL FOR SELECTION AND APPLICATION OF PROTECTIVE COATINGS AND SEQ-SEW-1101-6.

PE LINING TO EXTEND TO BASE OF MANHOLE PRIOR TO BENCHING BEING POURED.

STRUCTURAL STEEL

1. STRUCTURAL STEEL WORKMANSHIP AND MATERIALS TO COMPLY WITH AS 4100.
2. STEEL TO COMPLY WITH:
 - AS 1163 GRADE C350 FOR RECTANGULAR AND HOLLOW SECTIONS.
 - AS 3678 FOR PLATES AND FLOOR PLATES.
 - AS 3679.1 GRADE 300 OR BHP GRADE 300 PLUS FOR PARALLEL FLANGE CHANNELS.
 - AS 3679.2 GRADE 300 FOR WELDED BEAMS AND COLUMNS.
 - OTHER SECTIONS TO COMPLY WITH AS 3678 OR AS 3679 GRADE 250.
3. WELDS TO AS 1554.
 - WELD CATEGORY SP.
 - BUTT WELDS TO BE FULL PENETRATION WELDS.
 - WELDS TO BE 6 MM CONTINUOUS FILLET WELDS ALL ROUND INTERFACES.
 - ELECTRODES TO AS 1554 CLASSIFICATION E48XX.
4. BOLTS TO AS 1275. COMMERCIAL GRADE 4.6/S TO AS 1111 AND AS 1112. HIGH STRENGTH STRUCTURAL BOLTS TO AS 1252.
 - BOLTS, NUTS AND WASHERS M16 AND LARGER TO GRADE 8.8/S. M12 TO BE GRADE 4.6/S
 - STRUCTURAL CONNECTIONS TO BE 2 M16 8.8/S WITH 10 mm THICK CLEAT PLATE U.N.O.
 - INSTALL WASHERS UNDER BOLT HEAD AND NUT. INSTALL TAPERED WASHERS AS REQUIRED.
 - BOLT PROJECTION BEYOND NUT TO BE MINIMUM TWO THREADS AND MAXIMUM 10 mm
5. HOLD DOWN BOLTS TO BE GRADE 4.6/S U.N.O. HOLD DOWN BOLTS GROUPS TO BE RIGIDLY
6. TIED FOR CORRECT SET-OUT AND LOCATION.
7. SEAL WELD HOLLOW SECTIONS WITH 3 MM THICK CAP PLATE UNLESS NOTED OTHERWISE.
8. GROUT BASE PLATES WITH HIGH STRENGTH NON-SHRINK PRE-MIXED GROUT BEFORE COLUMNS ARE LOADED.

STEEL WORK PROTECTIVE COATING

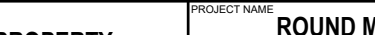
1. STEELWORK TO BE HOT DIP GALVANISED TO AS 4680 SYSTEM DESIGNATION HDG600 AND THREADED FASTENERS TO AS 1214.
2. DAMAGED GALVANISED COATING REPAIR:
POWER CLEAN TO AS 1627.2
SOLVENT CLEAN/ DEGREASE TO AS 1627.1
APPLY TIN/ZINC TO PRE-HEATED STEEL OVERLAPPING THE GALVANISING COATING.

REPAIR OF EXPOSED REINFORCEMENT AND CONCRETE AROUND NEW PIPE PENETRATION IN EXISTING CONCRETE

1. EXPOSED REINFORCEMENT AND CONCRETE REPAIRED AS FOLLOWS:
 - CORE HOLES ON EACH CORNER OF AREA TO BE CUT.
 - SAW CUT CONCRETE, PERPENDICULAR TO CONCRETE SURFACE, 15 mm DEEP AROUND PERIMETER OF THE OPENING.
 - BREAKOUT REMAINING CONCRETE AROUND THE OPENING WITHOUT DAMAGING REINFORCEMENT.
 - CUT EXPOSED REINFORCEMENT SO THAT IS 30 mm CLEAR OF THE PIPE.
 - CLEAN CONCRETE SURFACE AND REMOVE ALL LOOSE MATERIAL.
 - ABRASIVE BLAST CLEAN EXPOSED REINFORCEMENT. IF IT IS CORRODED AND APPLY "NITOPRIME" ZINC RICH PRIMER UNLESS APPROVED OTHERWISE.
 - THOROUGHLY SOAK SUBSTRATE WITH CLEAN WATER FOR A MINIMUM OF TWO HOURS.
 - PLACE N12 CIRCULAR TRIMMER ON BOTH SIDES OF THE PIPE FLANGE.
 - INSTALL HYDROTITE CJ-07-25 SEAL ON PIPE 50 mm FROM CONCRETE SURFACE UNLESS APPROVED OTHERWISE.
 - APPLY "NITOBOND HAR" PRIMER TO CONCRETE SURFACE UNLESS APPROVED OTHERWISE.
 - POUR CONCRETE/GROUT UNDER PRESSURE TO FILL OPENING.
 - FILL CONCRETE/GROUT TO SUPPLIER REQUIREMENTS.

REPAIR OF EXPOSED REINFORCEMENT AND ANCHOR AT CONCRETE SURFACE

1. ALL EXPOSED REINFORCEMENT AND MILD STEEL ANCHORED TO BE REPAIRED AS FOLLOWS:
 - SAW CUT OR CHISEL CUT CONCRETE, PERPENDICULAR TO CONCRETE SURFACE, 15 mm DEEP AROUND REINFORCEMENT/ANCHOR.
 - BREAKOUT CONCRETE AROUND REINFORCEMENT/ANCHOR TO A DEPTH OF 60 mm.
 - CUT EXPOSED REINFORCEMENT/ANCHOR AT A MINIMUM DEPTH OF 50 mm FROM CONCRETE SURFACE.
 - CLEAN CONCRETE SURFACE AND REMOVE ALL LOOSE MATERIAL.
 - ABRASIVE BLAST CLEAN EXPOSED REINFORCEMENT/ANCHOR.
 - APPLY "NITOPRIME" ZINC RICH PRIMER TO REINFORCEMENT/ANCHOR UNLESS APPROVED OTHERWISE.
 - THOROUGHLY SOAK SUBSTRATE WITH CLEAN WATER.
 - APPLY "NITOBOND HAR" PRIMER TO CONCRETE UNLESS APPROVED OTHERWISE.
 - APPLY "RENDEROC HB40" TO FILL OPENING UNLESS APPROVED OTHERWISE.

REV	DATE	DESIGN	DRAWN	REVISION DETAILS			DRAWN	STATUS			SCALE	CLIENT	PROJECT NAME	DRAWING TITLE					
0	15.04.26	BR	TG	ORIGINAL ISSUE			TG	ISSUED FOR CONSTRUCTION						ROUND MOUNTAIN PRECINCT B - ROAD 034			TRUNK SEWER MAIN MH CONSTRUCTION NOTES SHEET 2 OF 2		
												FRASERS PROPERTY AUSTRALIA							
												ASSOCIATED CONSULTANT							
												RPS GROUP (07) 3539 9500							
														MOUNTAIN RIDGE ROAD NEW BEITH					
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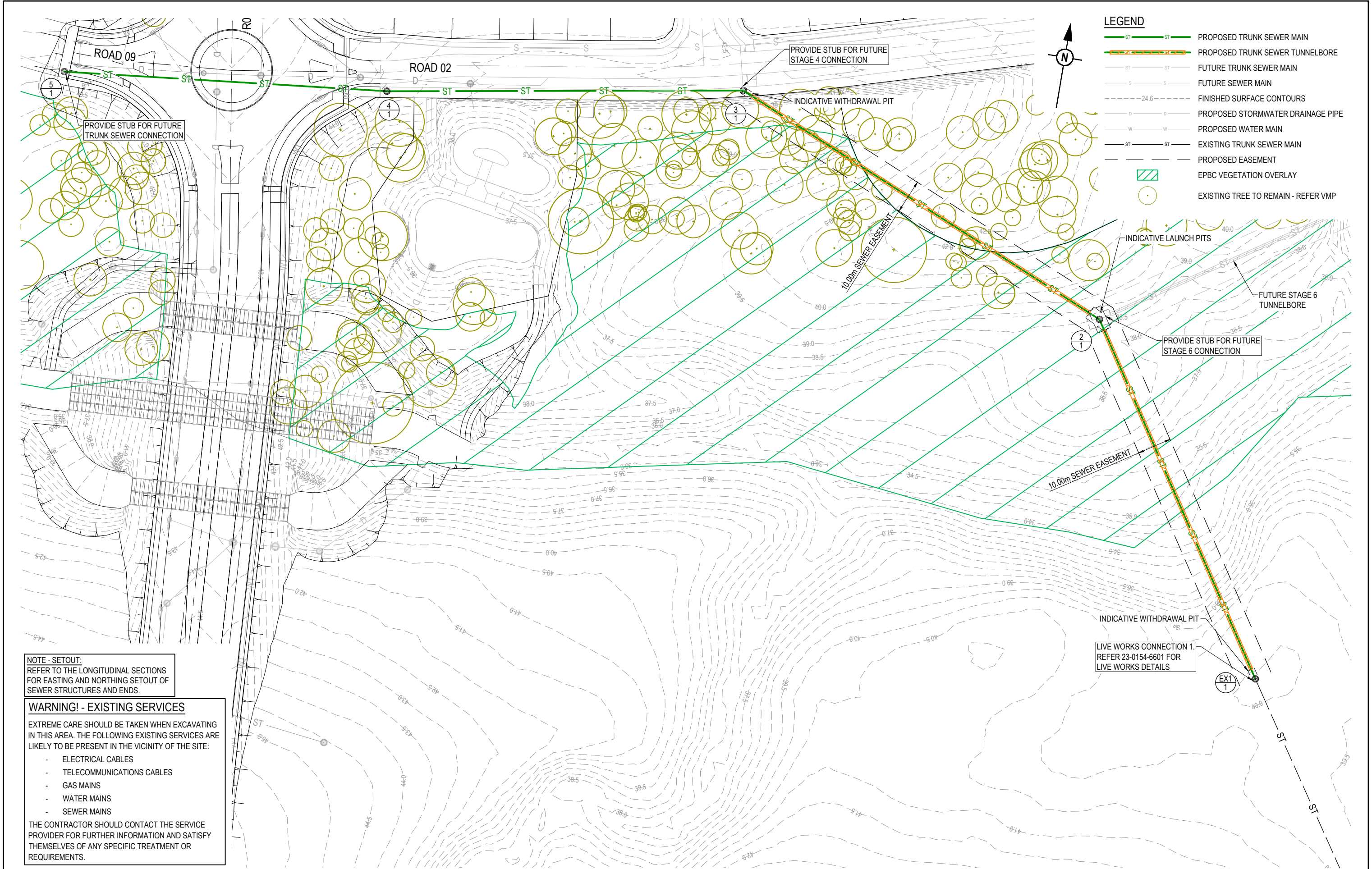
PROPOSED TRUNK SEWER MAIN
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FUTURE TRUNK SEWER MAIN

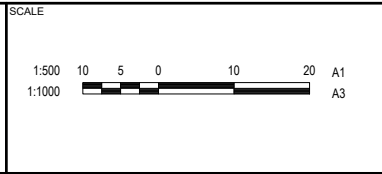


REV	DATE	DESIGN	DRAWN	REVISION DETAILS			DRAWN	STATUS			SCALE	CLIENT	PROJECT NAME	DRAWING TITLE		
0	15.04.26	BR	TG	ORIGINAL ISSUE			TG	ISSUED FOR CONSTRUCTION						ROUND MOUNTAIN PRECINCT B - ROAD 034		
														MOUNTAIN RIDGE ROAD NEW BEITH		



REV	DATE	DESIGN	DRAWN	REVISION DETAILS
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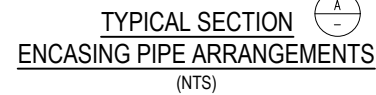
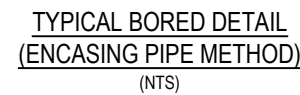
DRAWN	STATUS
TG	ISSUED FOR CONSTRUCTION
DESIGN	APPROVED
BR	DANIEL COLLINS RPEQ 18631 DATE 15.04.26
FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD	



CLIENT	FRASERS PROPERTY AUSTRALIA
ASSOCIATED CONSULTANT	RPS GROUP (07) 3539 9500

PROJECT NAME	ROUND MOUNTAIN PRECINCT B - ROAD 034
MOUNTAIN RIDGE ROAD NEW BEITH	

DRAWING TITLE	TRUNK SEWER MAIN LAYOUT PLAN
PROJECT No.	23-0154
DRAWING No.	6610
REVISION	0



REV	DATE	DESIGN	DRAWN	REVISION DETAILS		DRAWN	STATUS			SCALE	CLIENT	PROJECT NAME	DRAWING TITLE			
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1	30.06.26	BR	TG	RFI RESPONSE										23-0154	6612	1
						BR	APPROVED DANIEL COLLINS RPEQ 18631 DATE 30.06.26  FOR AND ON BEHALF OF COLLIER'S INTERNATIONAL ENGINEERING & DESIGN PTY LTD									