# MURPHY STREET DEVELOPMENT

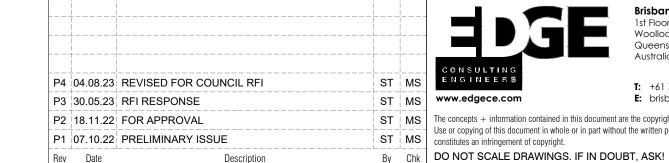
## 14 MURPHY STREET, PORT DOUGLAS QLD 4877



#### DRAWING REGISTER

DRAWING No.	DRAWING TITLE
C001	COVER SHEET
C002	CONSTRUCTION NOTES
C101	EROSION & SEDIMENT CONTROL PLAN
C201	BULK EARTHWORKS PLAN
C231	BULK EARTHWORKS DETAILS SHEET 1
C232	BULK EARTHWORKS DETAILS SHEET 2
C301	STORMWATER & SITE GRADING PLAN
C341	STORMWATER LONGITUDINAL SECTIONS
C391	STORMWATER CATCHMENT PLAN & CALCULATIONS
C601	WATER RETICULATION PLAN
C701	SEWER RETICULATION PLAN

RPEQ NAME: ERIN HOGAN
RPEQ No: 21411
DATE: 04.08.23
SIGN:





Project Name MURPH	HY STREE	T DEVELOP	PMENT									
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Client												
GEORGE ARGYROU												
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#### **GENERAL NOTES**

- 1. ALL LEVELS ARE TO AUSTRALIAN HEIGHT DATUM
- 2. ALL SERVICE AUTHORITIES SHALL BE NOTIFIED IN WRITING SEVEN DAYS PRIOR TO COMMENCEMENT OF
- 3. TBM'S TO BE RE-ESTABLISHED BY THE LICENSED SURVEYOR IF FOUND TO BE MISSING AT THE COMMENCEMENT OF CONSTRUCTION THE CONTRACTOR WILL BE RESPONSIBLE FOR CARE AND MAINTENANCE OF TBM'S THEREAFTER.
- 4. ALL EXISTING SURFACE LEVELS SHOWN ON THE ENGINEERING DRAWINGS HAVE BEEN RECREATED FROM 2D SURVEY AND LIDAR TERRAIN MODEL THESE LEVELS HAVE BEEN USED AS THE BASIS FOR ALL ENGINEERING DESIGN AND DETERMINATION OF QUANTITIES. CONTRACTOR TO ENSURE WORKS FOLLOW DESIGN INTENT. CONTRACTOR TO ADVISE SUPERINTENDENT OF MAJOR DISCREPANCIES.
- 5. THE CONTRACTOR IS RESPONSIBLE FOR GAINING APPROVAL OF THE TRAFFIC MANAGEMENT PLAN FROM COUNCIL AT LEAST 7 DAYS PRIOR TO WORKS COMMENCING OR EARLIER IF REQUIRED. THE TRAFFIC MANAGEMENT PLAN AND TRAFFIC CONTROL PLAN INCLUDING ANY ACCESS REQUIREMENTS SHALL BE
- APPROVED BY THE COORDINATING ROAD AUTHORITY APPROPRIATE TO THE PROJECT 6. THE CONTRACTOR IS REQUIRED TO CONFINE CONSTRUCTION VEHICLES TO THE INTERNAL ROAD RESERVE AND CARPARK. ANY DAMAGE CAUSED TO EXISTING KERB & CHANNEL OR FOOTPATHS MUST BE MADE
- INSTALL ALL VEGETATION PROTECTION, EROSION AND SEDIMENT CONTROL, AND SITE-SPECIFIC MEASURE PRIOR TO COMMENCEMENT OF ANY WORK.
- 8. ANY BUILDINGS, TROUGHS, FENCES AND OTHER STRUCTURES ON SITE ARE TO BE REMOVED AS DIRECTED BY THE ENGINEER THE COST OF REMOVAL IS TO BE INCLUDED IN THE OVERALL EARTHWORKS FIGURE UNLESS A SPECIFIC ITEM FOR REMOVAL IS DENOTED IN THE SCHEDULE
- 9. THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF WORK ALL EXISTING SERVICES AND STRUCTURES ARE TO BE MAINTAINED IN GOOD ORDER FOR THE DURATION OF THE CONTRACT ANY COSTS ASSOCIATED WITH REPAIRING DAMAGE TO EXISTING SERVICES SHALL BE BORNE BY THE CONTRACTOR
- 10. THE SITE OF THE PROPOSED WORKS SHALL BE CLEARED OF ALL UNDESIRABLE MATTER THIS SHALL INCLUDE DEAD TIMBER, BOULDERS, GRASS, OLD FOUNDATIONS, CONCRETE, REDUNDANT BUILDING MATERIALS, GARBAGE, DEBRIS AND OTHER OBSTRUCTIONS HOLES LEFT BY THE REMOVAL OF MATERIAL SHALL BE FILLED WITH APPROVED COMPACTED MATERIAL
- 11. CLEARED MATERIAL AND EARTHWORKS SPOIL SHALL BE REMOVED FROM SITE NO FILL OR STOCKPILING OF MATERIAL IS TO BE PLACED ON ANY RESERVE OR COMMON PROPERTY UNLESS OTHERWISE DIRECTED BY THE SITE ENGINEER OR SUPERINTENDENT.
- 12. TOPSOIL SHALL BE STRIPPED AND STOCKPILED PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS OPERATION. TOPSOIL IS TO BE RESPREAD TO LANDSCAPE AREAS AFTER CIVIL WORKS ARE COMPLETE SURPLUS TOPSOIL TO BE REMOVED FROM SITE
- 13. ALL BATTERS SHALL BE 1 IN 4, UNLESS OTHERWISE SHOWN.
- 14. THE LOCATION OF EXISTING SERVICES SHOWN ON THESE PLANS SHALL BE PROVEN ON SITE THE APPROPRIATE AUTHORITY SHALL BE CONTACTED AND THE SERVICES LOCATED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- 15. BULK EARTHWORKS LEVELS AT BUILDING PLATFORMS ARE BASED ON PRELIMINARY FOUNDATION DESIGNS. LEVELS TO SUIT FINAL DESIGN SHOULD BE CONFIRMED PRIOR TO FINAL TRIM OF BUILDING **PLATFORMS**

#### TREE PROTECTION NOTES

- 1. TREE PROTECTION MEASURES (TPZ FENCE & GROUND PROTECTION) ARE TO BE INSTALLED IN ACCORDANCE WITH AS 4970-2009 PROTECTION OF TREES ON DEVELOPMENT SITES.
- 2. WHERE TREES TO BE RETAINED HAVE A >10% ENCROACHMENT INTO THE TPZ. THE FOLLOWING CONDITION

100mm DEPTH OF FOREST MULCH TO BE APPLIED TO TPZ

#### EARTHWORKS NOTES

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- 1. GENERAL EARTHWORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE GEOTECHNICAL ENGINEER AND LOCAL REGIONAL COUNCIL.
- 2. THE CONTRACTOR SHALL PREPARE THE SUBGRADE FOR PROOF ROLLING TO BE WITNESSED BY THE SUPERINTENDENT AND SITE ENGINEER. PROOF ROLLING SHALL BE CARRIED OUT BY FULLY LADEN WATER TRUCK OR SIMILAR CONSTRUCTION MACHINERY APPROVED BY THE SUPERINTENDENT.
- 3. FILLING SHALL BE COMPACTED IN LAYERS TO A DENSITY NOT LESS THAN 95% OF MAXIMUM DRY DENSIT IN ACCORDANCE WITH AS 1289 5.1.1 (STANDARD COMPACTION). ROADWAY EARTHWORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH QUEENSLAND DEPARTMENT OF MAIN ROADS SPECIFICATION MRS04 GENERAL EARTHWORKS.
- 4. THE VOID BENEATH THE STIFFENED SLAB IS TO BE FILLED WITH NON-REACTIVE FILL MATERIAL WITH A MAXIMUM SHRINK-SWELL INDEX NO GREATER THAN 1% PER ΔpF.

## **EROSION AND SEDIMENT CONTROL NOTES**

- 1. ALL WORK SHALL BE GENERALLY CARRIED OUT IN ACCORDANCE WITH
  - A. LOCAL AUTHORITY REQUIREMENTS.
- B. EPA POLLUTION CONTROL MANUAL FOR URBAN STORMWATER.
- C. ICEA BEST PRACTICE EROSION & SEDIMENT CONTROL
- 2. EROSION AND SEDIMENT CONTROL DRAWINGS AND NOTES ARE PROVIDED FOR THE WHOLE OF THE WORKS SHOULD THE CONTRACTOR STAGES THESE WORKS THEN THE DESIGN MAY BE REQUIRED TO BE MODIFIED VARIATION TO THESE DETAILS MAY REQUIRE APPROVAL BY THE RELEVANT AUTHORITIES. THE EROSION AND SEDIMENT CONTROL PLAN SHALL BE IMPLEMENTED AND ADOPTED TO MEET THE VARYING SITUATIONS AS WORK ON SITE PROGRESSES
- 3. MAINTAIN ALL EROSION AND SEDIMENT CONTROL DEVICES TO THE SATISFACTION OF THE SUPERINTENDENT AND THE LOCAL AUTHORITY.
- 4. WHEN STORMWATER PITS ARE CONSTRUCTED PREVENT SITE RUNOFF ENTERING THE PITS UNLESS SILT FENCES ARE ERECTED AROUND PITS.
- 5. MINIMISE THE AREA OF SITE BEING DISTURBED AT ANY ONE TIME
- 6. PROTECT ALL STOCKPILES OF MATERIALS FROM SCOUR AND EROSION DO NOT STOCKPILE LOOSE MATERIAL IN ROADWAYS, NEAR DRAINAGE PITS OR IN WATERCOURSES.
- 7. ALL SOIL AND WATER CONTROL MEASURES ARE TO BE PUT BACK IN PLACE AT THE END OF EACH WORKING DAY AND MODIFIED TO BEST SUIT SITE CONDITIONS.
- 8. CONTROL WATER FROM UPSTREAM OF THE SITE SUCH THAT IT DOES NOT ENTER THE DISTURBED SITE.
- 9. ALL CONSTRUCTION VEHICLES SHALL ENTER AND EXIT THE SITE VIA THE TEMPORARY CONSTRUCTION ENTRY /EXIT.
- 10. ALL VEHICLES LEAVING THE SITE SHALL BE CLEANED AND INSPECTED BEFORE LEAVING.
- 11. CLEAN OUT ALL EROSION AND SEDIMENT CONTROL DEVICES AFTER EACH STORM EVENT. AFTER EACH RUNOFF EVENT. INSPECT THE EROSION DAMAGE AT EARTH BUNDS AND SEDIMENT FENCES IF DAMAGE HAS OCCURRED MAKE THE NECESSARY REPAIRS.
- 13. CHECK ALL EMBANKMENTS FOR EXCESSIVE SETTLEMENT, SLUMPING OF THE SLOPES; MAKE ALL NECESSARY REPAIRS.
- 14. SEDIMENT FLOCCULATION IS REQUIRED PRIOR TO DISCHARGE OF ACCUMULATED RUNOFF ON SEDIMENT BASINS.

#### APPLICATION

- GENERALLY, GYPSUM IS MIXED INTO SLURRY WITH WATER AND THEN SPRAYED OVER THE PONDED WATER. ALTERNATE FLOCCULENTS SHOULD BE APPLIED PER MANUFACTURER GUIDELINES. IT IS ESSENTIAL THAT THE FLOCCULATING AGENT IS SPREAD EVENLY OVER THE ENTIRE SURFACE FOR PROPER
- TREATMENT OF WATER UNLESS LOCAL EXPERIENCE OR OTHER CRITERIA SUGGEST DIFFERENTLY. . STANDARD BASIN FLOCCULATION RATES FOR GYPSUM GENERALLY VARY BETWEEN 32 KILOGRAMS PER 100 CUBIC METRES TO 70 KILOGRAMS PER 100 CUBIC METRES IN AREAS WHERE REPEATED HIGH INTENSITY STORMS ARE LIKELY. THE APPLICATION RATE MUST BE CALIBRATED.
- 3. SETTLEMENT TIME NORMALLY, SUFFICIENT SEDIMENT WILL HAVE FLOCCULATED AND SETTLES WITHIN ABOUT 24 TO 48 HOURS IN THE CASE OF GYPSUM. HOWEVER, RESULTS MAY BE EVIDENT SOONER DEPENDING ON THE FLOCCULENT AGENT.

#### WATER QUALITY & TESTING

- A SUSPENDED SOLID CONTENT OF LESS THAN 50 MILLIGRAMS PER LITRE IS REQUIRED.
- 2. TURBIDITY (NTU) VALUE LESS THAN OR EQUAL TO 8 NTU PER THE ACID SULFATE SOILS MANAGEMENT PLAN.
- 3. PH VALUE MUST BE IN THE RANGE 7.0 TO 8.4 PER THE ACID SULFATE SOILS MANAGEMENT PLAN.
- UPON THE FIRST DISCHARGES, OBTAIN SAMPLES AND TEST SAMPLES IN A LABORATORY TO ENSURE THAT THE SUSPENDED SOLID CONTENT, TURBIDITY, AND PH ARE WITHIN ACCEPTABLE LEVELS. REGULAR SAMPLING OF THE DISCHARGED WATER SHOULD BE COMPLETED TO VERIFY COMPLIANCE WITH TSS, TURBIDITY AND PH DISCHARGE REQUIREMENTS.
- 5. WATER QUALITY RESULTS ARE TO BE RECORDED WITHIN A WATER QUALITY TESTING REGISTER.

#### WATER DISCHARGE

- 1. DISCHARGE SHOULD BE ACHIEVED WITH A SYSTEM THAT PERMITS DRAINAGE OF THE BASIN IN LESS THAN 24 HOURS.
- THE OUTFLOW MUST NOT CAUSE EROSION OR ADVERSELY AFFECT DOWNSTREAM ENVIRONMENTS.
- 3. A MARKER PEG SHOULD BE INSTALLED IN THE BASIN TO CLEARLY IDENTIFY THE MAXIMUM SEDIMENT STORAGE LEVEL.
- 4. SEDIMENT EXTRACTED FROM THE BASIN SHALL BE SUITABLY DISPOSED OF IN SEDIMENT DUMPS, OR MIXED WITH ON-SITE SOILS IN A MANNER THAT WILL NOT RESULT IN UNNECESSARY SOIL EROSION OR SEDIMENT RUNOFF FROM THE SITE. OTHERWISE. THE SEDIMENT SHALL BE DRIED AND REMOVED FROM THE SITE.

#### SEQUENCE OF WORKS

- PRIOR TO COMMENCEMENT OF EXCAVATION THE FOLLOWING SOIL MANAGEMENT DEVICES MUST BE INSTALLED.
- A. CONSTRUCT SILT FENCES BELOW THE SITE AND ACROSS ALL POTENTIAL RUNOFF SITES B. CONSTRUCT TEMPORARY CONSTRUCTION ENTRY EXIT AND DIVERT RUNOFF TO SUITABLE CONTROL
- C. CONSTRUCT MEASURES TO DIVERT UPSTREAM FLOWS INTO EXISTING STORMWATER SYSTEM
- D. CONSTRUCT SEDIMENTATION TRAPS BASIN INCLUDING OUTLET CONTROL AND OVERFLOW

PROVIDE SANDBAG SEDIMENT TRAPS UPSTREAM OF EXISTING PITS.

#### **ROADWORKS:**

- 1. ALL DIMENSIONS AND SETOUT ARE TO LIP OF KERB U.N.O.
- 2. LEVELS ARE TO FACE OF KERB/LIP OF KERB/KERB AND CHANNEL U.N.O.
- 3. PAVEMENT DEPTHS SHOWN ON THE DRAWINGS ARE NOMINAL ONLY AND SHALL BE DETERMINED AFTER INSPECTION AND TESTING OF SUBGRADE. THE CONTRACTOR SHALL IN ALL CASES OBTAIN PARTICULARS OF THE PAVEMENT THICKNESS BEFORE PROCEEDING WITH THE FORMATION OF THE ROAD BOX. CBR TESTING SHALL BE UNDERTAKEN AT 25m INTERVALS ALONG THE PAVEMENT AND ANY ADDITIONAL LOCATIONS DETERMINED BY THE GEOTECHNICAL ENGINEER/OR SUPERINTENDENT SUPERVISING THE
- WORKS AND SHALL BE AT LEAST THE MINIMUM SPECIFIED IN THE PROJECT SPECIFICATION.
- 4. PAVEMENTS MATERIALS SHALL BE AS FOLLOWS: A. ASPHALTIC CONCRETE TO AS 2150;
  - B. BASE COURSE DTMR TYPE 2.1, SOAKED CBR 80;
- C. SUBBASE COURSE DTMR TYPE 2.3, SOAKED CBR 45;
- D. SUBGRADE REPLACEMENT DTMR TYPE 2.5, SOAKED CBR 15:
- 5. MINIMUM PAVEMENT COMPACTION TO BE AS FOLLOWS:
- A. SUBBASE AND BASE 95% MODIFIED MAXIMUM DRY DENSITY TO AS1289.5.4.1
- 6. SUB-SOIL DRAINAGE SHALL BE INSTALLED UNDER ALL NEW KERB AND CHANNEL AND ROAD EDGES AND
- GRADED TO CONNECT WITH DRAINAGE INLET PITS AT A MINIMUM OF 0.5%.
- 7. EARTHWORKS SUBGRADE SHALL BE COMPACTED TO 98% R.D.D STANDARD COMPACTION 8. GRAVEL PAVEMENT SHALL BE CRUSHED ROCK OR SOIL AGGREGATE HAVING A FOUR DAY CBR-SOAKED
- VALUE OF 80 AND COMPACTED TO 95% R.D.D. MODIFIED COMPACTION. 9. ASPHALT SURFACING SHALL BE MIN. 30mm COMPACTED THICKNESS AND IN ACCORDANCE WITH DEPARTMENT OF TRANSPORT AND MAIN ROAD SPECIFICATIONS.
- 10. SUBSOIL DRAIN SHALL BE IN ACCORDANCE WITH IPWEAQ STD DRG RS-140 AND 142.
- 11. CONSTRUCTION OVER PIPES TO USE SUITABLE CONSTRUCTION/COMPACTION PLANT TO ENSURE MAXIMUM STRUCTURAL CAPACITY OF PIPEWORK IS NOT EXCEEDED.
- 12. ALL WORKS TO CONFORM TO LOCAL AUTHORITY STANDARDS U.N.O. 13. ALL IMPORTED AND EXPORTED MATERIALS ARE TO BE TRANSPORTED ONLY ON ROUTES APPROVED BY THE LOCAL AUTHORITY.
- 14. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THE SAFETY OF VEHICULAR AND PEDESTRIAN TRAFFIC DURING CONSTRUCTION. 15. COMPACTION TEST RESULTS AND TEST LOCATIONS FOR SUBGRADE SHALL BE SUBMITTED TO AND
- APPROVED BY THE ENGINEERS PRIOR TO PLACING PAVEMENT MATERIALS.
- 16. PROOF ROLL TESTS OF THE SUBGRADE ARE TO BE UNDERTAKEN TO IDENTIFY LOCALISED POOR GROUND TO BE REMOVED OR REWORKED PRIOR TO THE PLACING OF PAVEMENT MATERIAL. 17. ALL LAYERS OF PAVEMENT WORKS AND EARTHWORKS ARE TO BE PROOF ROLLED AND TESTED AS PER
- THE SPECIFICATION, AND TO THE APPROVAL OF THE SUPERINTENDENT. 18. ALL CONSTRUCTION SHALL JOIN SMOOTHLY AND NEATLY TO EXISTING SURFACES AND STRUCTURES. TACTILE INDICATORS TO BE PROVIDED AT PRAM RAMPS WHERE THEY CONNECT WITH CONCRETE

#### SIGNAGE AND LINEMARKING

- 1. ALL WORKS TO BE IN ACCORDANCE WITH AS1742, AS2890 AND DTMR MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- 2. ALL LINEMARKING AND SIGNAGE TO BE IN ACCORDANCE WITH LOCAL COUNCIL'S LINEMARKING AND TRAFFIC MANUALS.

#### CONCRETE

FOOTPATH.

- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3600 UNLESS SHOWN OTHERWISE.
- 2. CONCRETE SHALL HAVE A STRENGTH GRADE OF N32 UNLESS NOTED OTHERWISE.

- 3. NOMINAL MAXIMUM AGGREGATE SIZE SHALL BE 20mm UNLESS NOTED OTHERWISE.
- 4. CONCRETE SLUMP SHALL BE NOMINAL 80mm UNLESS NOTED OTHERWISE.
- 5. ADMIXTURES SHALL NOT BE USED WITHOUT WRITTEN APPROVAL.
- 6. ALL CONCRETE SURFACES SHALL BE CURED BY APPROVED MEANS FOR A MINIMUM CONTINUOUS DURATION OF 7 DAYS COMMENCING IMMEDIATELY AFTER THE INITIAL SET OF THE CONCRETE.
- 7. CONCRETE COVER TO REINFORCEMENT INCLUDING FITMENTS SHALL BE 50mm UNLESS NOTED OTHERWISE.
- 8. CONCRETE FACES AT CONSTRUCTION JOINTS SHALL BE THOROUGHLY SCABBLED, FREE OF LAITANCE, CLEANED AND WETTED THOROUGHLY PRIOR TO THE PLACEMENT OF ABUTTING CONCRETE.
- 9. CONSTRUCTION JOINTS WHERE NOT SHOWN ON THE DRAWINGS SHALL BE LOCATED TO THE APPROVAL OF THE SUPERINTENDENT

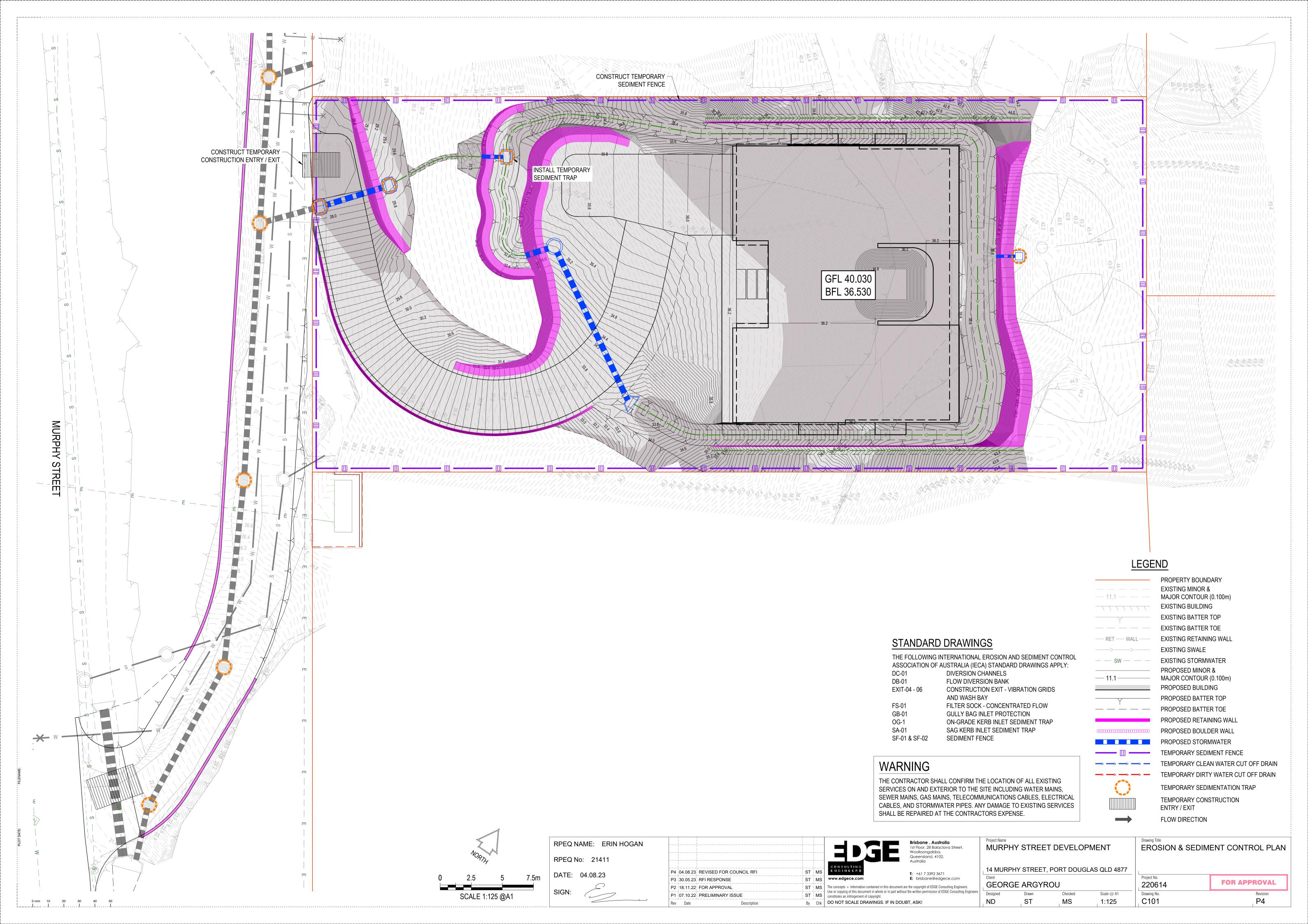
### STORMWATER

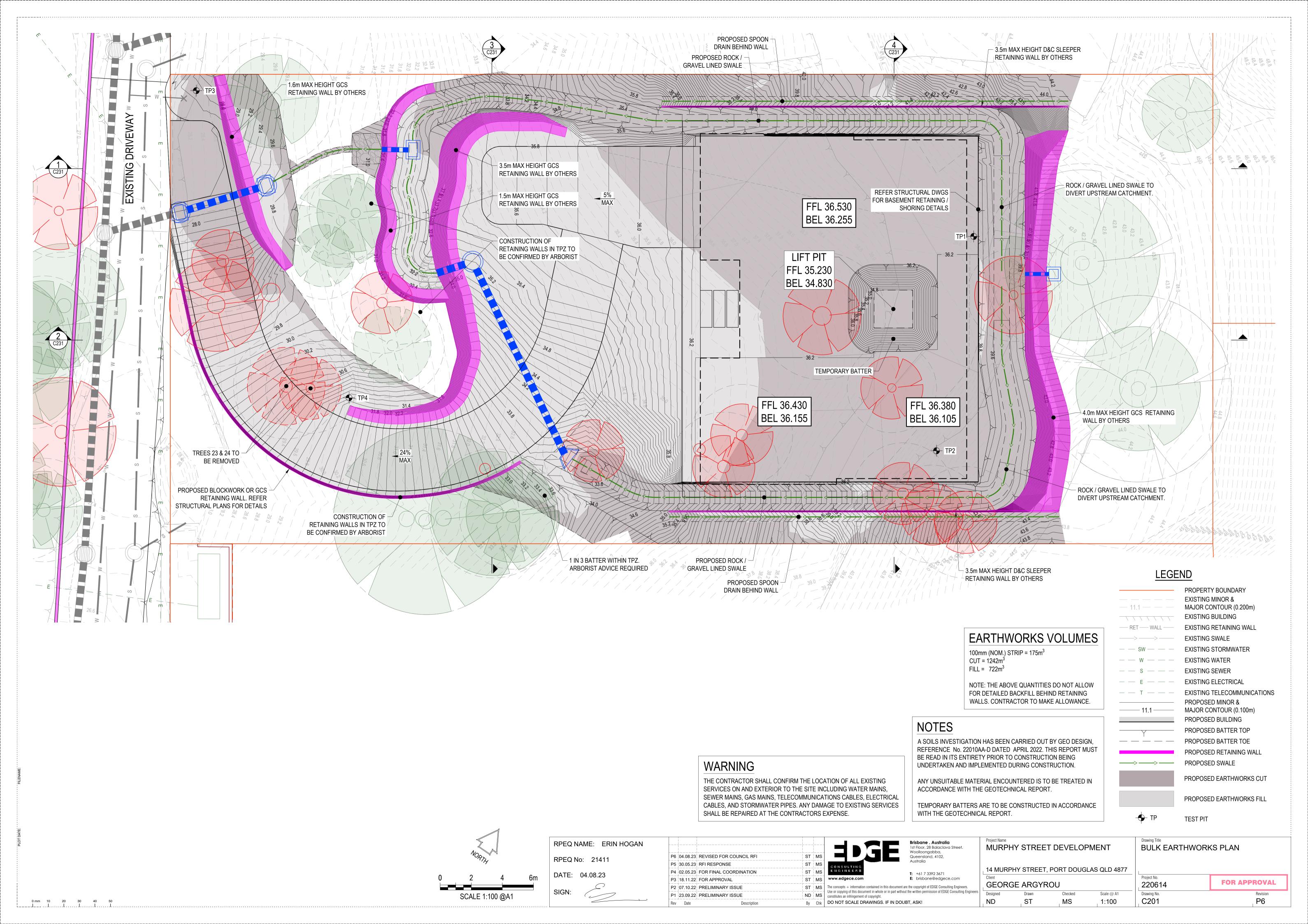
- 1. ALL PIPES LESS THAN OR EQUAL TO 225Ø ARE TO BE SOLVENT WELD-JOINTED SEWER GRADE uPVC CLASS SH, OR (MIN) CLASS 2 RUBBER-RING JOINTED RCP (UNO).
- 2. WHERE uPVC STORMWATER LINES PASS UNDER FLOOR SLABS SEWER GRADE RUBBER RING JOINTS ARE TO BE USED.
- 3. PIPES GREATER THAN OR EQUAL TO 300Ø ARE TO BE (MIN) CLASS 2 RUBBER-RING JOINTED RCP (UNO).
- 4. FRC PIPES EQUIVALENT TO THE STEEL REINFORCED CONCRETE PIPE CLASS SPECIFIED ON THE DRAWINGS MAY BE USED - OBTAIN SUPERINTENDENTS APPROVAL
- 5. ALL PIPES ARE TO BE LAID AT (MIN) 1.0% GRADE (UNO)
- 6. THE USE OF PRE-CAST STORMWATER DRAINAGE PITS IS NOT ACCEPTED WITHOUT CONFIRMATION BETWEEN EDGE CONSULTING ENGINEERS AND THE CONTRACTOR REGARDING QUALITY CONTROL. AND CERTIFICATION OF FINISHES.
- 7. COVERS
  - A. USE HOT DIPPED GALVANISED COVERS AND GRATES COMPLYING WITH RELEVANT AUSTRALIAN AND COUNCIL STANDARDS.
- B. ALL COVERS AND GRATES TO BE POSITIONED IN A FRAME AND MANUFACTURE AS A UNIT
- C. ALL COVERS AND GRATES TO BE FITTED WITH POSITIVE COVER LIFTING KEYS. D. OBTAIN SUPERINTENDENT'S APPROVAL FOR THE USE OF CAST IRON SOLID COVERS AND GRATES. CAST IRON SOLID COVERS (IF APPROVED) TO CONSIST OF CROSS-WEBBED, CELLULAR CONSTRUCTION WITH THE RIBS UPPERMOST TO ALLOW INFILLING WITH CONCRETE. INSTALL POSITIVE COVER LIFTING KEYS AND PLASTIC PLUGS.
- E. UNLESS DETAILED OR SPECIFIED OTHERWISE COVERS AND GRATES TO BE CLASS "C" IN VEHICULAR
- PAVEMENTS AND CLASS "B" ELSEWHERE. 8. ALL PIPE BENDS, JUNCTIONS, ETC. ARE TO BE PROVIDED USING PURPOSE MADE FITTINGS OR
- STORMWATER PITS. 9. ALL CONNECTIONS TO EXISTING DRAINAGE PITS SHALL BE MADE IN A TRADESMAN-LIKE MANNER AND THE INTERNAL WALL OF THE PIT AT PIPE PENETRATIONS SHALL BE CEMENT RENDERED TO ENSURE A SMOOTH **FINISH**
- 10. THE CONTRACTOR SHALL SUPPLY AND INSTALL ALL FITTINGS AND SPECIALS INCLUDING VARIOUS PIPE
- ADAPTERS TO ENSURE PROPER CONNECTION BETWEEN DISSIMILAR PIPEWORK. 11. U.N.O. MATERIAL USED FOR BEDDING OF PIPES SHALL BE APPROVED NON-COHESIVE GRANULAR MATERIAL HAVING HIGH PERMEABILITY AND HIGH STABILITY WHEN SATURATED AND FREE OF ORGANIC AND CLAY
- **MATERIAL** 12. WHERE TRENCHES ARE IN ROCK, THE PIPE SHALL BE BEDDED ON A MIN. 50mm CONCRETE BED (OR 75mm THICK BED OF 12mm BLUE METAL) UNDER THE BARREL OF THE PIPE. THE PIPE COLLAR AT NO POINT SHALL BEAR ON THE ROCK.
- 13. BEDDING SHALL BE (UNO) TYPE HS2 UNDER ROADS; H2 GENERAL AREAS, IN ACCORDANCE WITH CURRENT
- RELEVANT INDUSTRY STANDARDS AND GUIDELINES. 14. THE WEATHER PROOFING OF THE BUILDING IS THE ARCHITECT'S /BUILDER'S RESPONSIBILITY. THIS INCLUDES THE SPECIFICATION AND FIXING DETAILS OF CLADDINGS, SHEETING, FLASHING AND
- MEMBRANES. 15. THE CONTRACTOR SHALL ENSURE AND PROTECT THE INTEGRITY OF ALL STORMWATER PIPES DURING CONSTRUCTION. ANY AND ALL DAMAGE TO THESE PIPES AS A RESULT OF THESE WORKS SHALL BE REPAIRED BY THE CONTRACTOR UNDER THE DIRECTION OF THE SUPERINTENDENT, AND AT NO EXTRA
- 16. NOTE THAT THE PIT COVER LEVEL NOMINATED IN GUTTERS ARE TO THE INVERT OF THE GUTTER WHICH ARE 40mm LOWER THAN THE PAVEMENT LEVEL AT LIP OF GUTTER.
- 17. Ø100mm SUB-SOIL DRAINAGE LINES WITH NON-WOVEN GEOTEXTILE SOCK SURROUND SHALL BE CONNECTED TO A STORMWATER DRAINAGE PIT (AT min. 1% LONGITUDINAL GRADE) AND PROVIDED IN THE **FOLLOWING LOCATIONS:**
- A. THE HIGH SIDE OF PROPOSED TRAFFICKED AND CARPARK PAVEMENT AREAS.
- B. ALL PLANTER AND TREE BEDS PROPOSED ADJACENT TO PAVEMENT AREAS.
- C. BEHIND RETAINING WALLS (IN ACCORDANCE WITH DRAWINGS).
- D. ALL OTHER AREAS SHOWN ON THE DRAWINGS. 18. THE CONTRACTOR SHALL INSTALL INSPECTION OPENINGS TO ALL SUBSOIL DRAINAGE LINES AND DOWNPIPE LINES AS SPECIFIED ON DRAWINGS. AT MAXIMUM 60m CENTERS AND AT ALL UPSTREAM ENDPOINTS.
- 19. WHERE SUBSOIL DRAINAGE LINES PASS UNDER FLOOR SLABS AND VEHICULAR PAVEMENTS SEALED uPVC SEWER GRADE PIPE SHALL BE USED.
- 20. PROVIDE 3.0m LENGTH OF Ø100 SUBSOIL DRAINAGE PIPE WRAPPED IN A NON-WOVEN GEOTEXTILE FABRIC. TO THE UPSTREAM SIDE OF STORMWATER PITS, LAID IN STORMWATER PIPE TRENCHES AND CONNECTED
- TO THE DRAINAGE PIT. 21. ALL RECTANGULAR HOLLOW SECTIONS (RHS) SPECIFIED AS STORMWATER CONDUITS TO BE HOT DIPPED GALVANISED AND HAVE (MIN) 5mm WALL THICKNESS

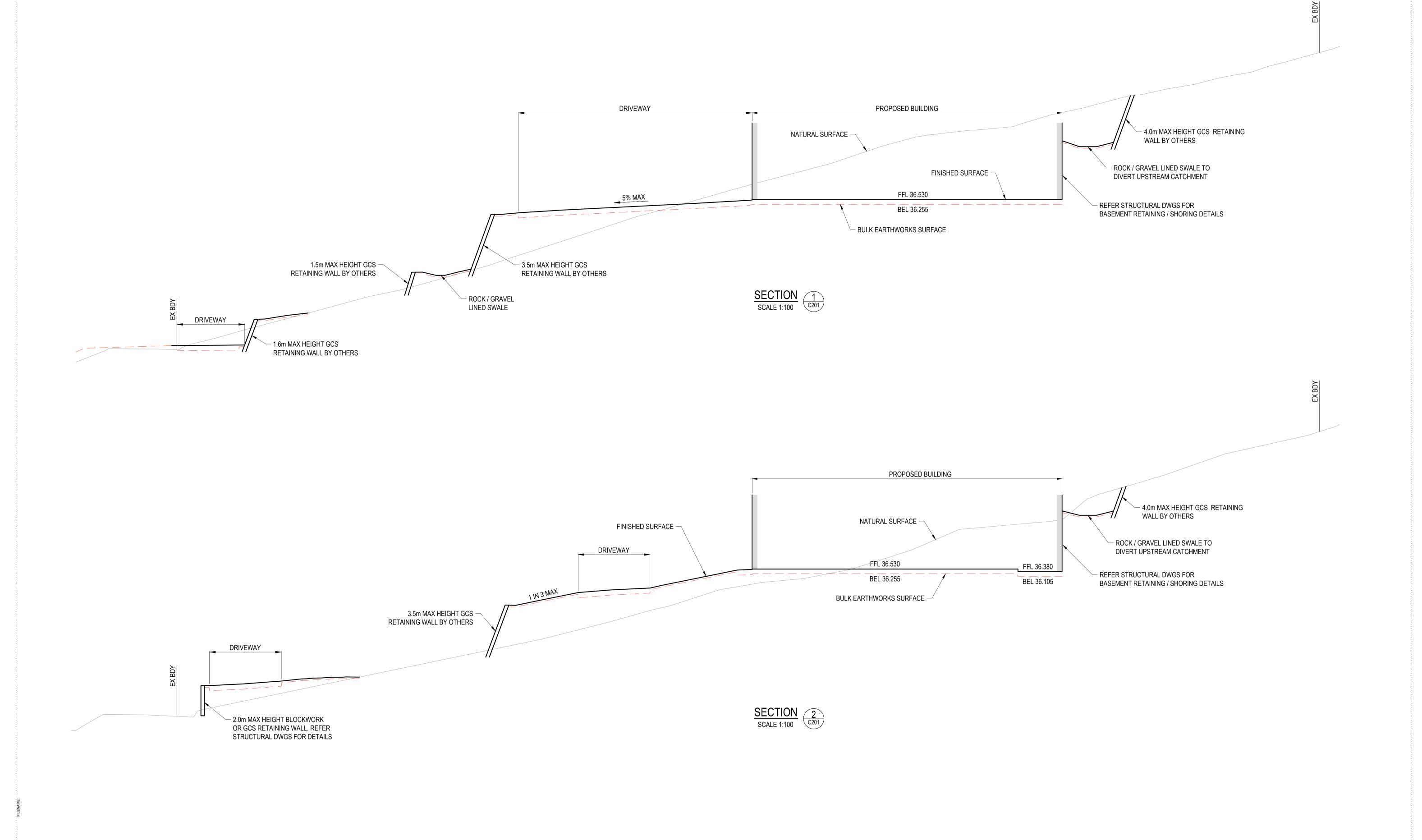
## **TENDER NOTES**

- THESE DRAWINGS ARE PRELIMINARY DRAWINGS ISSUED FOR TENDER AS AN INDICATION OF THE EXTENT.
- OF WORKS ONLY. THEY ARE NOT A COMPLETE CONSTRUCTION SET OF DRAWINGS. 2. TO DETERMINE THE FULL EXTENT OF WORK. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS AND OTHER CONTRACT DOCUMENTS. ALLOW FOR ALL ITEMS SHOWN ON ARCHITECTURAL AND OTHER DRAWINGS AS NOT ALL ITEMS ARE SHOWN ON THE STRUCTURAL/CIVIL
- WORKS DRAWINGS. 3. SHOULD ANY AMBIGUITY, ERROR, OMISSIONS, DISCREPANCY, INCONSISTENCY OR OTHER FAULT EXIST OR
- SEEM TO EXIST IN THE DOCUMENTS, IMMEDIATELY NOTIFY IN WRITING TO THE SUPERINTENDENDENT 4. RATES SHOWN ON THE DRAWINGS ARE FOR THE FINAL STRUCTURE/CIVIL WORKS IN PLACE AND DO NOT ALLOW FOR ANY WASTAGE. ROLLING MARGINS. OVER SUPPLY OR FABRICATION REQUIREMENTS.

RPEQ NAME: ERIN HOGAN **CONSTRUCTION NOTES** MURPHY STREET DEVELOPMENT st Floor, 28 Balaclava Street Woolloongabba, Queensland, 4102, RPEQ No: 21411 14 MURPHY STREET, PORT DOUGLAS QLD 4877 P4 04.08.23 REVISED FOR COUNCIL RFI DATE: 04.08.23 **T:** +61 7 3392 3671 www.edgece.com E: brisbane@edgece.com P3 | 30.05.23 | RFI RESPONSE ⊹ ST ⊹ MS **FOR APPROVAL** 220614 **GEORGE ARGYROU** P2 18.11.22 FOR APPROVAL The concepts + information contained in this document are the copyright of EDGE Consulting Engineers. Use or copying of this document in whole or in part without the written permission of EDGE Consulting Engineer Scale @ A1 Drawing No. ST MS constitutes an infringement of copyright. P1 07.10.22 PRELIMINARY ISSUE C002 P4 ND MS NTS By Chk DO NOT SCALE DRAWINGS. IF IN DOUBT, ASK! ST







## WARNING

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THE CONTRACTOR SHALL CONFIRM THE LOCATION OF ALL EXISTING SERVICES ON AND EXTERIOR TO THE SITE INCLUDING WATER MAINS, SEWER MAINS, GAS MAINS, TELECOMMUNICATIONS CABLES, ELECTRICAL CABLES, AND STORMWATER PIPES. ANY DAMAGE TO EXISTING SERVICES SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.

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	RPEQ No: 21411
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RPEQ NAME: ERIN HOGAN

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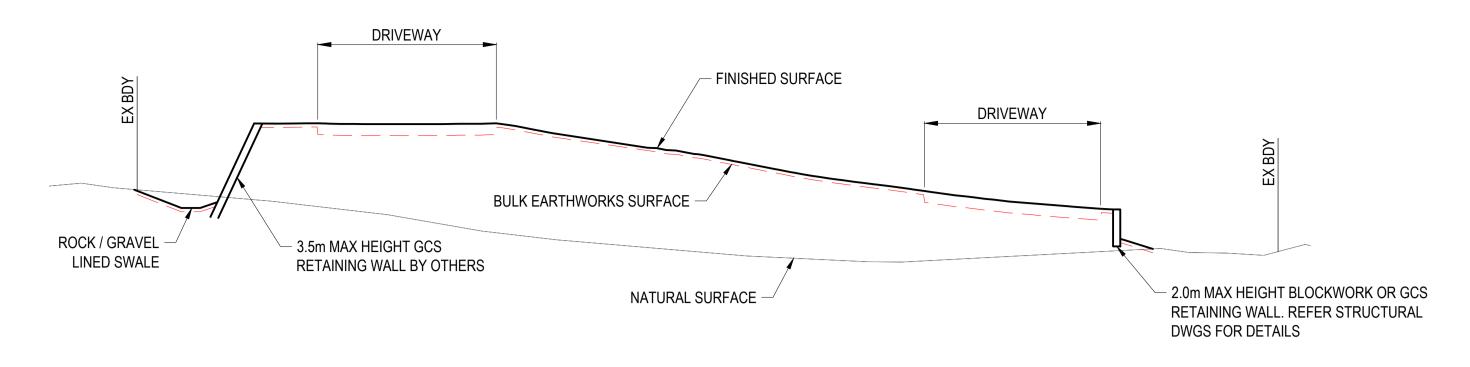
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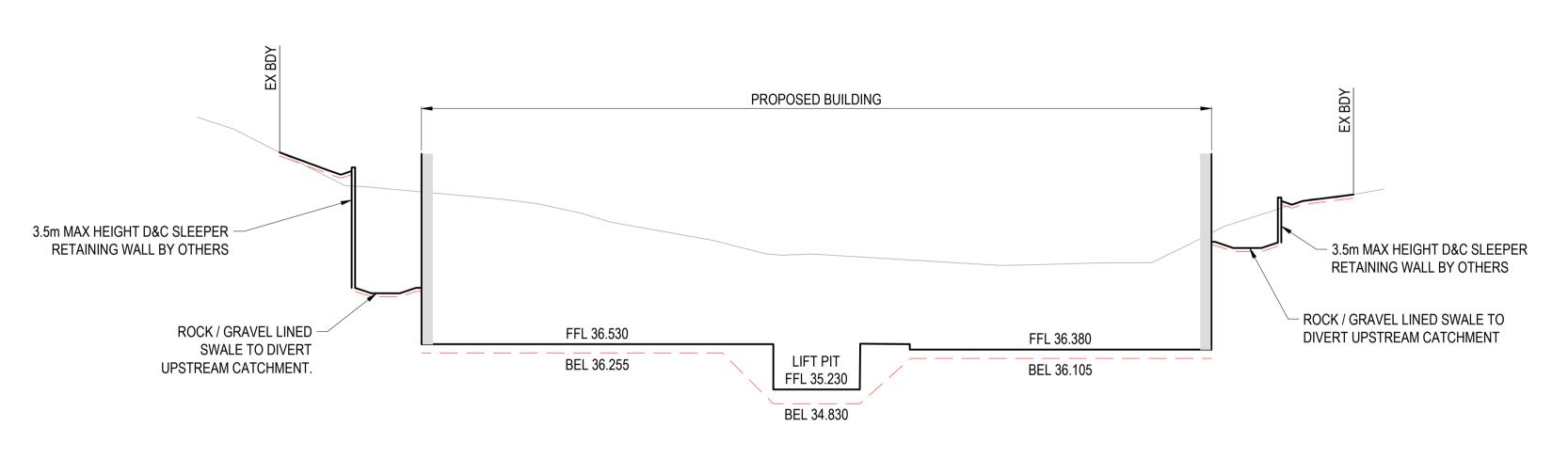
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	BULK EARTHWORK SHEET 1	(S DETAILS	
7_			
	Project No.		
	220614	FOR APP	ROVAL
	Drawing No.		Revision
	C231		P6







SECTION 4
C201

FINISHED FLOOR LEVEL - FFL CONCRETE SLAB. REFER STRUCTURAL DWGS FOR DETAILS 100 CBR 15 BULK EARTHWORKS LEVEL - BEL

**BUILDING WORKING PLATFORM DETAIL** 

FINISHED SURFACE LEVEL - FSL CONCRETE SLAB. REFER STRUCTURAL DWGS FOR DETAILS 100 CBR 15 BULK EARTHWORKS LEVEL - BEL

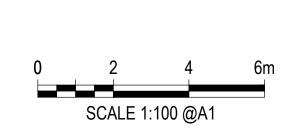
> **DRIVEWAY WORKING** PLATFORM DETAIL

FINISHED SURFACE LEVEL - FSL 100 TOPSOIL BULK EARTHWORKS LEVEL - BEL

> LANDSCAPING WORKING PLATFORM DETAIL

## WARNING

THE CONTRACTOR SHALL CONFIRM THE LOCATION OF ALL EXISTING SERVICES ON AND EXTERIOR TO THE SITE INCLUDING WATER MAINS, SEWER MAINS, GAS MAINS, TELECOMMUNICATIONS CABLES, ELECTRICAL CABLES, AND STORMWATER PIPES. ANY DAMAGE TO EXISTING SERVICES SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.



RPEQ NAME: ERIN HOGAN RPEQ No: 21411 DATE: 04.08.23

P6 04.08.23 REVISED FOR COUNCIL RFI P5 30.05.23 RFI RESPONSE P4 02.05.23 FOR FINAL COORDINATION P3 18.11.22 FOR APPROVAL P1 07.10.22 PRELIMINARY ISSUE ND MS Use or copying of this document in whole or in part without the written permission of EDGE Consulting Engineer constitutes an infringement of copyright. P1 23.09.22 PRELIMINARY ISSUE By Chk DO NOT SCALE DRAWINGS. IF IN DOUBT, ASK!

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MURPHY STREET DEVELOPMENT 14 MURPHY STREET, PORT DOUGLAS QLD 4877 GEORGE ARGYROU Scale @ A1

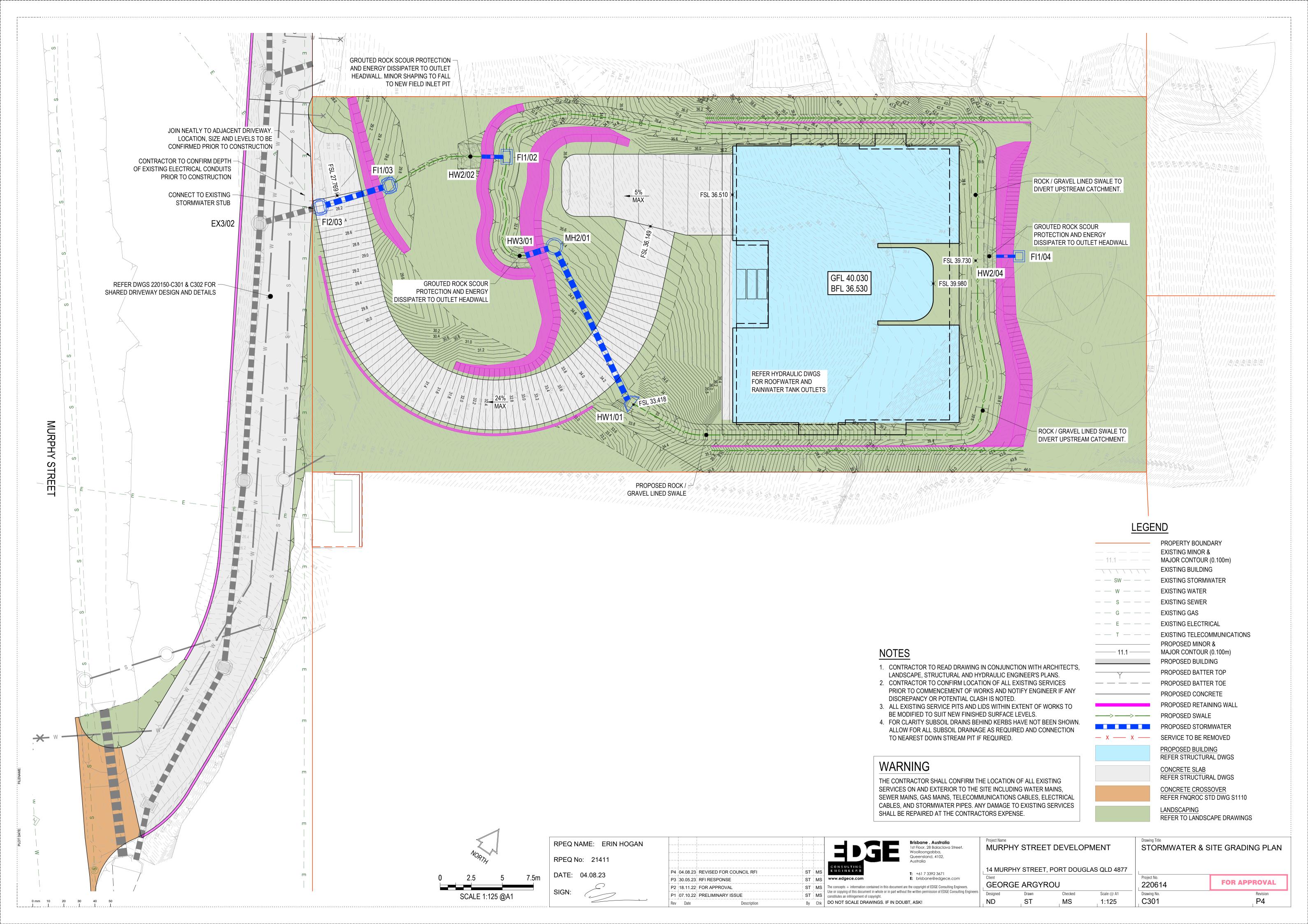
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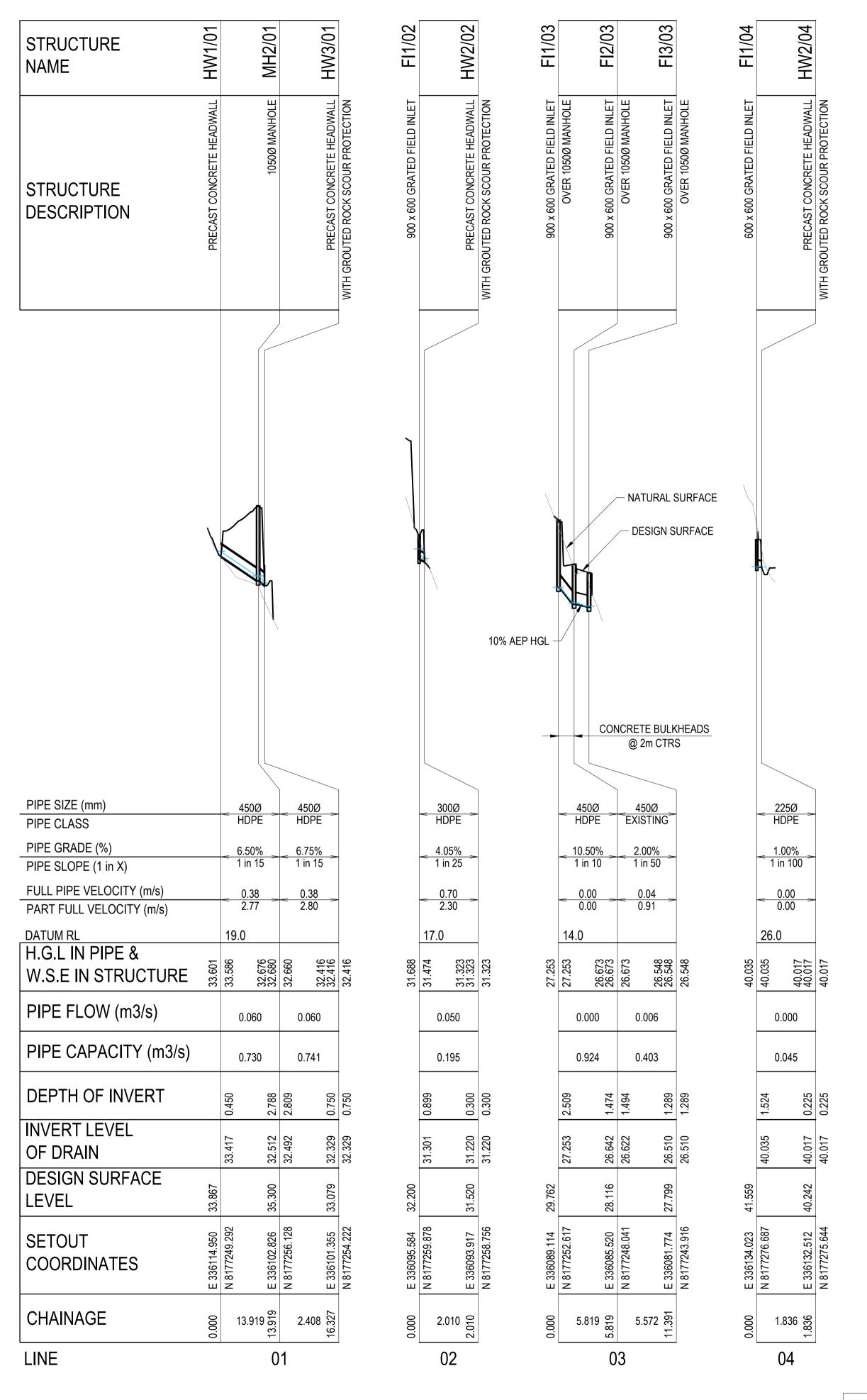
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BULK EARTHWORKS DETAILS SHEET 2 Project No. **220614** FOR APPROVAL Drawing No. C232

P6





0 mm 10 20 30 40 50

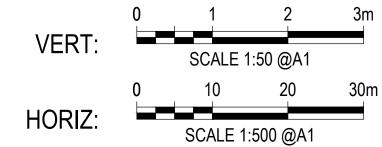
## NOTE:

STORMWATER PIPE MATERIALS TO BE IN ACCORDANCE WITH FNQROC DEVELOPMENT MANUAL APPROVED PRODUCTS REGISTERED UNLESS APPROVED OTHERWISE BY COUNCIL

#### WARNING

Scale @ A1

THE CONTRACTOR SHALL CONFIRM THE LOCATION OF ALL EXISTING SERVICES ON AND EXTERIOR TO THE SITE INCLUDING WATER MAINS, SEWER MAINS, GAS MAINS, TELECOMMUNICATIONS CABLES, ELECTRICAL CABLES, AND STORMWATER PIPES. ANY DAMAGE TO EXISTING SERVICES SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.



RPEQ NAME: ERIN HOGAN RPEQ No: 21411 DATE: 04.08.23

P4 04.08.23 REVISED FOR COUNCIL RFI P3 30.05.23 RFI RESPONSE ST MS www.edgece.com P2 18.11.22 FOR APPROVAL ST MS Use or copying of this document in whole or in part without the written permission of EDGE Consulting Engineers constitutes an infringement of copyright. P1 07.10.22 PRELIMINARY ISSUE

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E: brisbane@edgece.com GEORGE ARGYROU

ND

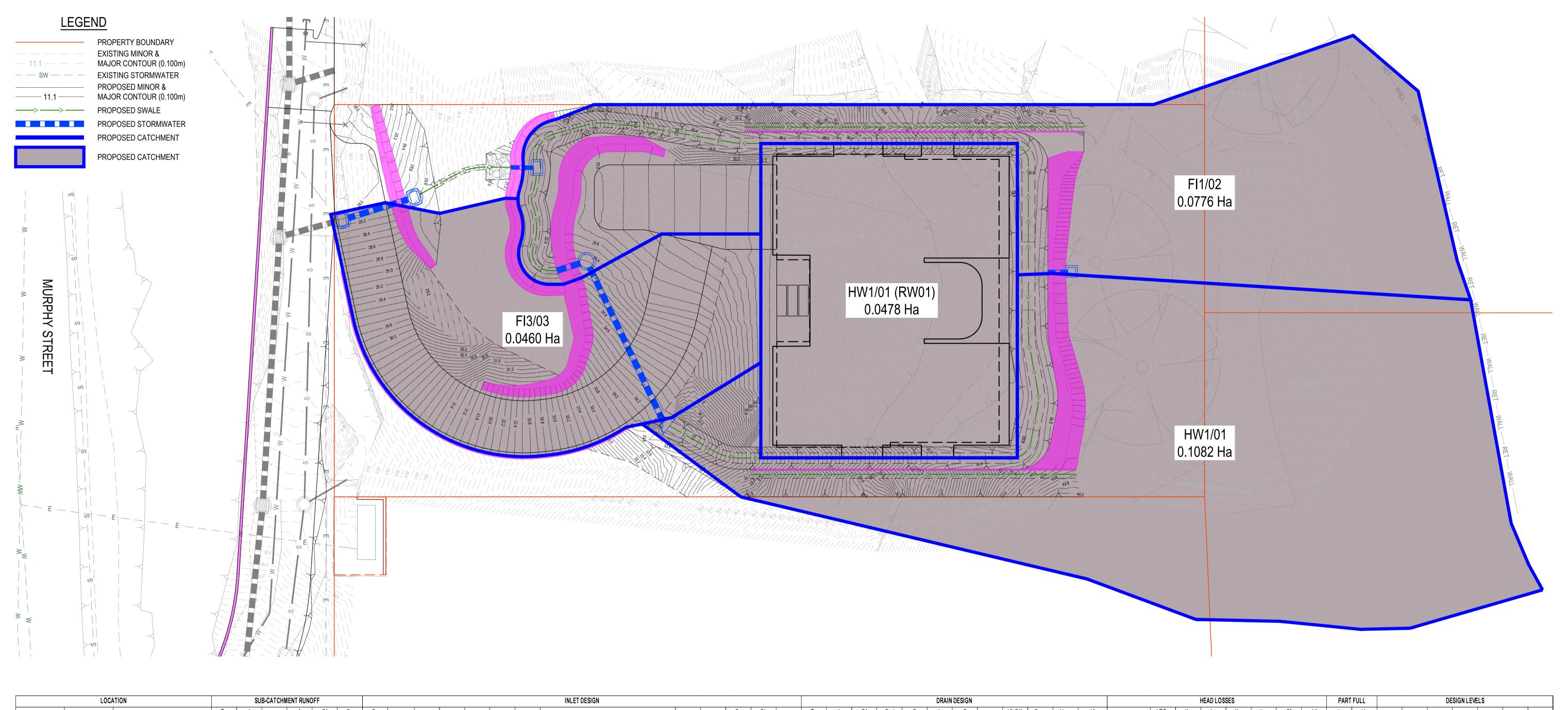
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MURPHY STREET DEVELOPMENT 14 MURPHY STREET, PORT DOUGLAS QLD 4877

MS

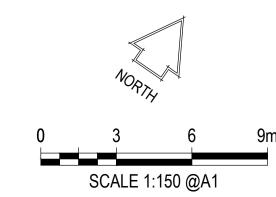
STORMWATER LONGITUDINAL SECTIONS

**FOR APPROVAL** 220614 Revision AS SHOWN C341 P4



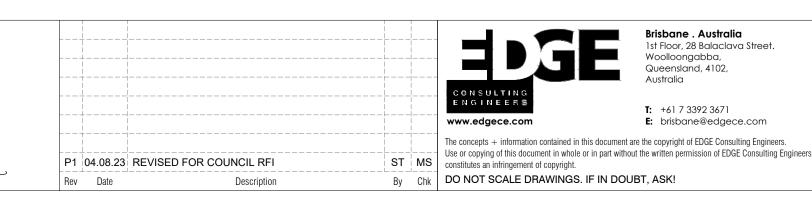
	L	LOCATION	N		S	UB-CATC	HMENT RU	NOFF										INLET D	DESIGN											DRAIN	DESIGN									HEAD LO	OSSES				PART	FULL			DE	SIGN LEVELS	;	
				Tc			А	CA	4 (	)c (	Qa											Qg	Qb		Tc	I	CA	Qrat	Q	L	S		Vf=Q/A	Qcap	Vcap	Vt		Vf²/2g	ı Ku	hu	Kw	hw	Sf	hf	dn	Vn						
STRUCTURE No.	CATCHMENT		DRAIN SECTION	SUB-CATCHMENT TIME OF CONC.	RAINFALL INTENSITY	CO-EFFICIENT OF RUNOFF	SUB-CATCHMENT AREA	EQUIVALENT AREA	SUB-CATCHMENT	DISCHARGE FLOW IN K&C (INC.	BYPASS)	HALF ROAD CAPACITY	FLOW WIDTH	FLOW DEPTH	FLOW DxV	ROAD GRADE AT INLET	ROAD XFALL AT INLET		INLET TYPE	BLOCKAGE FACTOR	INLET CURVE	FLOW INTO INLET	BYPASS FLOW	BYPASS STRUCTURE No.	CRITICAL TIME OF CONC.	RAINFALL INTENSITY	TOTAL (C x A)	PEAK FLOW	PIPE FLOW	REACH LENGTH	PIPE GRADE	PIPE SIZE	FULL PIPE VELOCITY	CAPACITY FLOW	CAPACITY VELOCITY	TRAVEL VELOCITY	CHART(S) USED	VELOCITY HEAD	U/S HEAD LOSS COEFFICIENT	U/S HEAD LOSS	W.S.E COEFFICIENT	CHANGE IN W.S.E	PIPE FRICTION SLOPE	PIPE FRICTION HEAD LOSS	NORMAL DEPTH	NORMAL DEPTH VEL.	PIPE U/S I.L	PIPE D/S I.L	PIPE U/S H.G.L	PIPE D/S H.G.L	W.S.E	SURFACE LEVEL
				min	mm/h		ha	ha	a L	./s l	L/s	L/s	m	m	m^2/s	%	%					L/s	L/s		min	mm/hr	ha	L/s	L/s	m	%	mm	m/s	L/s	m/s	m/s		m		m		m	%	m	Э	m/s	m	m	m	m	m	m
HW1/01	HW1/01	1	HW1/01 to MH2/01	5.00	225.00	0.89	0.11	0.1	.0 60	.38 60	0.38	260.94	0.89	0.09	0.10	16.84	-3.83		HEADWALL	1.00		60.38		BYPASS	5.00	225.00	0.10	60.38	60.38	13.92	6.50	450.00	0.38	729.98	4.59	2.00		0.01	2.00	0.01		0.01	6.54	0.90	0.09	2.77	33.42	32.51	33.59	32.68	33.60	33.87 0.27
MH2/01	MH2/01	1	MH2/01 to HW3/01																1050DIA. MANHOLE						5.12	223.96	0.10	60.10	60.10	2.41	6.75	450.00	0.38	741.09	4.66	2.00	T9/T10	0.01	2.24	0.02	2.70	0.02	10.15		0.09	2.80	32.49	32.33	32.66	32.42	32.68	35.30 2.62
HW3/01	HW3/01	1																	HEADWALL																																32.42	33.11
FI1/02	FI1/02	2	FI1/02 to HW2/02	5.00	225.00	0.89	0.09	0.0	08 49	.57 49	9.57	223.00		0.07			46.78		900 x 600 FIELD INLET	1.00	SAG	49.57		FI1/03	5.00	225.00	0.08	49.57	49.57	2.01	4.05	300.00	0.70	195.33	2.76	2.00	G2	0.03	8.54	0.21		0.21	7.49		0.10	2.30	31.30	31.22	31.47	31.32	31.69	32.20 0.51
HW2/02	HW2/02	2																	HEADWALL																																31.32	31.52
FI1/03	FI1/03	3	FI1/03 to FI2/03									79.00				19.35	-160.02		900 x 600 FIELD INLET	1.00	SAG			FI2/03	1.00	293.00				5.82	10.50	450.00		924.22	5.81	2.00							9.95	0.58			27.25	26.64	27.25	26.67	27.25	29.76 2.51
FI2/03	FI2/03	3	FI2/03 to FI3/03	5.00	225.00	0.90	0.03	0.0	3 19	.29 19	9.29	0.10	1.66	0.00	0.02	20.00	5.00		900 x 600 FIELD INLET	1.00	16G,3.3	3X 5.86	13.44	BYPASS	5.00	225.00	0.03	19.29	5.86	5.57	2.00	450.00	0.04	403.37	2.54	2.00	G2	0.00	9.70	0.00		0.00	2.24	0.10	0.04	0.91	26.62	26.51	26.67	26.55	26.67	28.12 1.44
FI3/03	FI3/03	3																	900 x 600 FIELD INLET																																26.55	27.80
FI1/04	FI1/04	ļ	FI1/04 to HW2/04																600 x 600 FIELD INLET	1.00					1.00	293.00				1.84	1.00	225.00		44.92	1.13	2.00							1.00	0.02			40.04	40.02	40.04	40.02	40.04	41.56 1.52
HW2/04	HW2/04	14																	HEADWALL																																40.02	40.53
HW1/01 (RW01)	HW1/01 (RW0	W01) HW	W1/01 (RW01) to HW1/01 (RW01a)	5.00	225.00	0.89	0.05	0.0	)4 26	i.66 26	6.66 10	00.000		-0.07			-13.99		ROOFWATER INLET	1.00		26.66			5.00	225.00	0.04	26.66	26.66	1.53	1.00	150.00	1.51	15.24	0.86	2.00	G1	0.12	2.86	0.33		0.33	3.46	0.05	0.15	1.51	34.51	34.50	34.69	34.64	35.02	35.24 0.22
HW1/01 (RW01a)	HW1/01 (RW0	W01a)																	HEADWALL																																34.64	,4.80

## 10% AEP STORMWATER CALCULATIONS



0 mm 10 20 30 40 50

RPEQ NAME: ERIN HOGAN RPEQ No: 21411 DATE: 04.08.23



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MS

ST

ND

Drawing Title
STORMWATER CATCHMENT PLAN & CALCULATIONS Project No. **220614** FOR APPROVAL

Revision P1

Drawing No.

Scale @ A1

1:150



## **VEGETATION PROTECTION**

- A. TREES LOCATED ALONG THE FOOTPATH SHOULD BE, WHERE POSSIBLE TRANSPLANTED PRIOR TO CONSTRUCTION, OR REPLACED IF DESTROYED.
- B. WHEN WORKING WITHIN 4m OF TREES, RUBBER OR HARDWOOD GIRDLES SHOULD BE CONSTRUCTED WITH 1.8m BATTENS CLOSELY SPACED AND ARRANGED VERTICALLY FROM GROUND LEVEL. GIRDLES MUST BE STRAPPED TO TREES PRIOR TO CONSTRUCTION AND REMAIN UNTIL COMPLETION.

LEGEND

PROPERTY BOUNDARY

EXISTING BUILDING

PROPOSED WATER

PROPOSED BUILDING PROPOSED CONCRETE

PROPOSED RETAINING WALL

**EXISTING WATER** 

- C. TREE ROOTS SHALL BE TUNNELLED 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.
- D. ANY TREE LOPPING REQUIRED SHOULD BE UNDERTAKEN BY AN APPROVED ARBORIST.

- A. TOPSOIL AND SUBSOIL SHALL BE STOCKPILED SEPARATELY.
- B. CARE SHALL BE TAKEN TO PREVENT SEDIMENT FROM ENTERING THE STORMWATER SYSTEM. THIS MAY INVOLVE PLACING APPROPRIATE SEDIMENT CONTROLS AROUND STOCKPILES.

#### REHABILITATION

- A. PRE DISTURBANCE SOIL PROFILES AND COMPACTION LEVELS SHALL BE REINSTATED.
- B. PRE DISTURBANCE VEGETATION PATTERNS SHALL BE RESTORED.

#### SAFETY

A. THE DESIGN AND CONSTRUCTION OF THE WORKS SHALL COMPLY WITH ALL QUEENSLAND LEGISLATION.

ALL WATER AND SEWER CONSTRUCTION WORK UNDERTAKEN BY THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE WORKPLACE HEALTH AND SAFETY LEGISLATION.

ALL ENVIRONMENTAL PROTECTION MEASURES SHALL BE IMPLEMENTED PRIOR TO ANY CONSTRUCTION WORK, INCLUDING CLEARING, COMMENCING.

## **GENERAL NOTES**

SERVICES.

& S2005.

FNQROC STD DWG S2015.

WATER NOTES

DOUGLAS SHIRE COUNCIL FOR ROADWAYS.

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT FAR NORTH QUEENSLAND REGIONAL ORGANISATION OF COUNCILS WATER RETICULATION CODE SPECIFICATIONS AND STANDARDS.

1. CONSTRUCT EMBEDMENT AND TRENCH FILL TO FNQROC STD DWG S2016 AND

2. PROVIDE BULKHEADS / TRENCH STOPS IN ACCORDANCE WITH FNQROC STD DWG

4. CONSTRUCT PROPERTY SERVICES TO FNQROC STD DWGS S2025, S2038 & S2050.

6. CONSTRUCT FIRE HYDRANTS AND STOP VALVES TO FNQROC STD DWG S2000, 2001,

5. INSTALL DETECTABLE MARKER TAPE ON ALL WATER MAINS AND PROPERTY

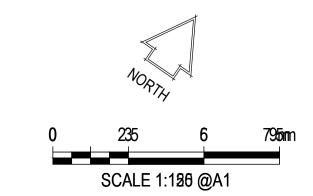
7. INSTALL PAVEMENT MARKERS TO FNQROC STD DWG S2010, S2011, & S2012.

CONSTRUCT THRUST BLOCKS ON ALL BENDS, TEES, TAPERS AND DEAD ENDS TO

- 2. UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.
- 3. ADOPT LIP OF KERB OR SHOULDER OF ROAD AS PERMANENT LEVEL.
- 4. COVER ON MAINS FROM PERMANENT LEVEL TO BE AS SHOWN IN FNQROC STD DWG S2016.
- 5. CONDUITS TO BE INSTALLED IN ACCORDANCE WITH THE STANDARD DRAWINGS.
- 6. A WATER METER SUPPLIED AT THE DEVELOPER'S COST, IS TO BE INSTALLED AT THE SERVICE POINT OF EACH LOT IN ACCORDANCE WITH THE STANDARD DRAWINGS.
- ALL MATERIALS USED IN THE WORKS SHALL COMPLY WITH THE COUNCIL APPROVED PRODUCT REGISTER OR BE APPROPRIATELY SHOWN, LISTED AND DEFINED IN THE ENGINEERING SUBMISSION SO THAT THE ALTERNATIVE PRODUCT OR MATERIAL CAN BE ASSESSED AND IF APPROPRIATE, APPROVED BY DOUGLAS SHIRE COUNCIL.
- 8. ALL CONCRETE FOOTPATHS TO BE CLEAR OF WATER MAINS.
- 9. THE CONSTRUCTION OF THE WATER RETICULATION WORK SHOWN ON THIS DRAWING MUST BE SUPERVISED BY AN ENGINEER WHO HAS RPEQ REGISTRATION. WORKS NOT COMPLYING WITH THIS REQUIREMENT WILL NOT BE PERMITTED TO CONNECT TO THE RETICULATION SYSTEM.
- 10. PROPOSED WATER CONNECTION WORKS TO BE COMPLETED USING SUPPORT EMBEDMENT IN ACCORDANCE WITH FNQROC STD DWG S2016.

## WARNING

THE CONTRACTOR SHALL CONFIRM THE LOCATION OF ALL EXISTING SERVICES ON AND EXTERIOR TO THE SITE INCLUDING WATER MAINS, SEWER MAINS, GAS MAINS, TELECOMMUNICATIONS CABLES, ELECTRICAL CABLES, AND STORMWATER PIPES. ANY DAMAGE TO EXISTING SERVICES SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.



RPEQ No: 21411 DATE: 04.08.23

RPEQ NAME: ERIN HOGAN

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WATER RETICULATION PLAN

P4

MURPHY STREET DEVELOPMENT **FOR APPROVAL** 220614 Scale @ A1 Drawing No.

C601

- EXISTING WATER CONNECTION AND METER. REFER 220150-C601 FOR DESIGN AND DETAILS



## **VEGETATION PROTECTION**

- A. TREES LOCATED ALONG THE FOOTPATH SHOULD BE, WHERE POSSIBLE TRANSPLANTED PRIOR TO CONSTRUCTION, OR REPLACED IF DESTROYED.
- B. WHEN WORKING WITHIN 4m OF TREES, RUBBER OR HARDWOOD GIRDLES SHOULD BE CONSTRUCTED WITH 1.8m BATTENS CLOSELY SPACED AND ARRANGED VERTICALLY FROM GROUND LEVEL. GIRDLES MUST BE STRAPPED TO TREES PRIOR TO CONSTRUCTION AND REMAIN UNTIL COMPLETION.

LEGEND

PROPERTY BOUNDARY **EXISTING MINOR &** 

PROPOSED MINOR & MAJOR CONTOUR (0.100m)

**EXISTING BUILDING** 

PROPOSED SEWER

PROPOSED BUILDING PROPOSED CONCRETE

PROPOSED RETAINING WALL

EXISTING SEWER

MAJOR CONTOUR (0.100m)

- C. TREE ROOTS SHALL BE TUNNELLED 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.
- D. ANY TREE LOPPING REQUIRED SHOULD BE UNDERTAKEN BY AN APPROVED ARBORIST.
- A. TOPSOIL AND SUBSOIL SHALL BE STOCKPILED SEPARATELY.
- B. CARE SHALL BE TAKEN TO PREVENT SEDIMENT FROM ENTERING THE STORMWATER SYSTEM. THIS MAY INVOLVE PLACING APPROPRIATE SEDIMENT CONTROLS AROUND STOCKPILES.

#### **REHABILITATION**

- A. PRE DISTURBANCE SOIL PROFILES AND COMPACTION LEVELS SHALL BE REINSTATED.
- B. PRE DISTURBANCE VEGETATION PATTERNS SHALL BE RESTORED.

#### SAFETY

A. THE DESIGN AND CONSTRUCTION OF THE WORKS SHALL COMPLY WITH ALL QUEENSLAND LEGISLATION.

ALL WATER AND SEWER CONSTRUCTION WORK UNDERTAKEN BY THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE WORKPLACE HEALTH AND SAFETY LEGISLATION.

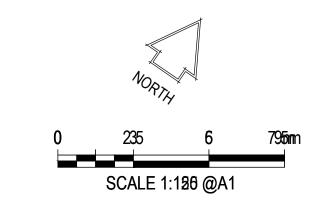
ALL ENVIRONMENTAL PROTECTION MEASURES SHALL BE IMPLEMENTED PRIOR TO ANY CONSTRUCTION WORK, INCLUDING CLEARING, COMMENCING.

## **SEWER NOTES**

- 1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT FAR NORTH QUEENSLAND REGIONAL ORGANISATION OF COUNCILS SEWER SYSTEM CODE SPECIFICATIONS AND STANDARDS.
- 2. UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.
- 3. THE CONSTRUCTION OF THE SEWERAGE WORK SHOWN ON THIS DRAWING SHALL BE SUPERVISED BY AN ENGINEER WHO HAS RPEQ REGISTRATION. SEWERAGE WORKS NOT COMPLYING WITH THIS REQUIREMENT WILL NOT BE PERMITTED TO CONNECT INTO THE FNQROC SERVICE PROVIDER SEWERAGE SYSTEM.
- 4. ALL WORK ASSOCIATED WITH LIVE SEWERS OR MAINTENANCE HOLES SHALL BE CARRIED OUT BY THE FNQROC SERVICE PROVIDER AT THE DEVELOPER'S COST. 5. ALL PIPES AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE
- COUNCIL APPROVED PRODUCT REGISTER. 6. FOR ALLOTMENTS OTHER THAN SINGLE RESIDENTIAL, A 150Ø PROPERTY
- CONNECTION SHALL BE PROVIDED. 7. PROPERTY CONNECTIONS SHALL BE LOCATED WITHIN THE PROPERTY AS SHOWN IN THE DRAWINGS.
- 8. PROPERTY CONNECTION BRANCHES SHALL EXTEND INTO THE PROPERTY A MINIMUM OF 300mm AND A MAXIMUM OF 1000mm.
- 9. WHERE PIPES ARE LAID IN FILL, THE FILLING SHALL BE CARRIED OUT IN LAYERS NOT EXCEEDING 300mm (LOOSE) IN DEPTH AND SHALL BE COMPACTED UNTIL THE COMPACTION IS NOT LESS THAN 95% OF THE MATERIALS MAXIMUM COMPACTION WHEN TESTED IN ACCORDANCE WITH A.S. 1289 (MODIFIED COMPACTION). TESTING SHALL BE CARRIED OUT AFTER EACH ALTERNATE LAYER. IN ALL SUCH CASES APPROVAL OF CONSTRUCTED SEWERS WILL NOT BE ISSUED BY THE FNQROC SERVICE PROVIDER UNLESS CERTIFICATES ARE PRODUCED CERTIFYING THAT THE REQUIRED COMPACTION HAS BEEN ACHIEVED.
- 10. WHERE SEWERS HAVE A GRADE OF 1 IN 20 OR STEEPER, BULKHEADS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE FNQROC SEWER CODE.
- 11. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF EXISTING SERVICES WITH RELEVANT AUTHORITIES BEFORE COMMENCING WORKS. 12. SEWERS SHALL BE DISUSED / ABANDONED IN ACCORDANCE WITH PROCEDURES
- SET OUT IN THE FNQROC SEWER CODE. 13. BENCH MARK AND LEVELS TO AHD.
- 14. EXISTING ALLOTMENTS REQUIRING A PROPERTY CONNECTION FROM EXISTING SEWERS SHALL BE PROVIDED BY THE FNQROC SERVICE PROVIDER AT THE DEVELOPERS COST.

## WARNING

THE CONTRACTOR SHALL CONFIRM THE LOCATION OF ALL EXISTING SERVICES ON AND EXTERIOR TO THE SITE INCLUDING WATER MAINS, SEWER MAINS, GAS MAINS, TELECOMMUNICATIONS CABLES, ELECTRICAL CABLES, AND STORMWATER PIPES. ANY DAMAGE TO EXISTING SERVICES SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.



RPEQ NAME: ERIN HOGAN RPEQ No: 21411 DATE: 04.08.23

P4 04.08.23 REVISED FOR COUNCIL RFI ST MS www.edgece.com P3 30.05.23 RFI RESPONSE P2 18.11.22 FOR APPROVAL P1 07.10.22 PRELIMINARY ISSUE ST MS constitutes an infringement of copyright.

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Scale @ A1

1:150

- EXISTING DN100 SEWER HOUSE CONNECTION.

REFER 220150-C701 FOR DESIGN AND DETAILS

SEWER RETICULATION PLAN

**FOR APPROVAL** 220614 Drawing No. C701 P4