



**DRAWING LIST:**

**CIVIL DRAWINGS**

61-35637-C201	COVER SHEET AND LOCALITY PLAN
61-35637-C202	DRAWING LIST & GENERAL CIVIL NOTES
61-35637-C204	NORTHERN DRUMSITE WORKS - EXISTING SERVICES - PLAN - SHEET 1 OF 6
61-35637-C205	NORTHERN DRUMSITE WORKS - EXISTING SERVICES - PLAN - SHEET 2 OF 6
61-35637-C206	CENTRAL DRUMSITE WORKS - EXISTING SERVICES - PLAN - SHEET 3 OF 6
61-35637-C207	CENTRAL DRUMSITE WORKS - EXISTING SERVICES - PLAN - SHEET 4 OF 6
61-35637-C208	SOUTHERN DRUMSITE WORKS - EXISTING SERVICES - PLAN - SHEET 5 OF 6
61-35637-C209	SOUTHERN DRUMSITE WORKS - EXISTING SERVICES - PLAN - SHEET 6 OF 6
61-35637-C210	NORTHERN DRUMSITE WORKS - PLAN - SHEET 1
61-35637-C211	NORTHERN DRUMSITE WORKS - PLAN - SHEET 2
61-35637-C212	NORTHERN DRUMSITE WORKS - PLAN - SHEET 3
61-35637-C215	CENTRAL DRUMSITE WORKS - PLAN - SHEET 1
61-35637-C216	CENTRAL DRUMSITE WORKS - PLAN - SHEET 2
61-35637-C220	SOUTHERN DRUMSITE WORKS - PLAN - SHEET 1
61-35637-C221	SOUTHERN DRUMSITE WORKS - PLAN - SHEET 2
61-35637-C230	NORTHERN DRUMSITE WORKS - INCLINE BASIN - PLAN AND TYPICAL SECTIONS
61-35637-C231	NORTHERN DRUMSITE WORKS - INCLINE BASIN - LONGITUDINAL SECTION AND TYPICAL SECTIONS
61-35637-C232	NORTHERN DRUMSITE WORKS - INCLINE DRAIN - PLAN, LONGITUDINAL SECTION & TYPICAL SECTIONS
61-35637-C233	NORTHERN DRUMSITE WORKS - DRAINAGE LINE N17 - PLAN AND LONGITUDINAL SECTION
61-35637-C234	NORTHERN DRUMSITE WORKS - DRIVE OVER - PLAN, LONGITUDINAL SECTION & TYPICAL SECTIONS
61-35637-C235	NORTHERN DRUMSITE WORKS - INCLINE BUND - PLAN, LONGITUDINAL SECTION & TYPICAL SECTIONS
61-35637-C236	NORTHERN DRUMSITE WORKS - BASIN 1 - PLAN AND TYPICAL SECTIONS
61-35637-C245	SOUTHERN DRUMSITE BASIN - PLAN AND TYPICAL SECTIONS
61-35637-C250	NORTHERN DRUMSITE WORKS - LONGITUDINAL SECTIONS SHEET 1
61-35637-C251	NORTHERN DRUMSITE WORKS - LONGITUDINAL SECTIONS SHEET 2
61-35637-C252	NORTHERN DRUMSITE WORKS - LONGITUDINAL SECTIONS SHEET 3
61-35637-C253	NORTHERN DRUMSITE WORKS - LONGITUDINAL SECTIONS SHEET 4
61-35637-C254	NORTHERN DRUMSITE WORKS - LONGITUDINAL SECTIONS SHEET 5
61-35637-C255	NORTHERN DRUMSITE WORKS - LONGITUDINAL SECTIONS SHEET 6
61-35637-C260	CENTRAL DRUMSITE WORKS - LONGITUDINAL SECTIONS SHEET 1
61-35637-C261	CENTRAL DRUMSITE WORKS - LONGITUDINAL SECTIONS SHEET 2
61-35637-C270	SOUTHERN DRUMSITE WORKS - LONGITUDINAL SECTIONS SHEET 1
61-35637-C271	SOUTHERN DRUMSITE WORKS - LONGITUDINAL SECTIONS SHEET 2
61-35637-C272	SOUTHERN DRUMSITE WORKS - LONGITUDINAL SECTIONS SHEET 3
61-35637-C280	NORTHERN DRUMSITE ROAD AND PAVEMENT DESIGN - PAVEMENT REINSTATEMENT EXTENTS
61-35637-C281	NORTHERN DRUMSITE ROAD AND PAVEMENT DESIGN - TONG YAN LOH CAR PARK MODIFICATIONS
61-35637-C285	SOUTHERN DRUMSITE ROAD AND PAVEMENT DESIGN - CHRISTMAS ISLAND SCHOOL ENTRANCE MODIFICATIONS
61-35637-C286	SOUTHERN DRUMSITE ROAD AND PAVEMENT DESIGN - MURRAY ROAD SPEED REDUCTION HUMP
61-35637-C290	DRAINAGE STRUCTURES - TYPICAL DETAILS - SHEET 1
61-35637-C291	DRAINAGE STRUCTURES - TYPICAL DETAILS - SHEET 2
61-35637-C292	DRAINAGE STRUCTURES - TYPICAL DETAILS - SHEET 3
61-35637-C293	KERBING AND FOOTPATH - TYPICAL DETAILS
61-35637-C294	FENCING - TYPICAL DETAILS
61-35637-C296	ROAD AND PAVEMENT DESIGN

**STRUCTURAL DRAWINGS**

61-35637-S002	STRUCTURAL NOTES
61-35637-S003	TYPICAL STRUCTURAL DETAILS
61-35637-S005	NORTHERN DRUMSITE WORKS - INCLINE MISCELLANEOUS STRUCTURES - SECTIONS AND DETAILS
61-35637-S010	NORTHERN DRUMSITE WORKS - INCLINE DIVERSION PIT & CHANNEL - GENERAL ARRANGEMENT
61-35637-S011	NORTHERN DRUMSITE WORKS - INCLINE DIVERSION PIT & CHANNEL - REINF. DETAILS OF SHEET 1 OF 3
61-35637-S012	NORTHERN DRUMSITE WORKS - INCLINE DIVERSION PIT & CHANNEL - REINF. DETAILS OF SHEET 2 OF 3
61-35637-S013	NORTHERN DRUMSITE WORKS - INCLINE DIVERSION PIT & CHANNEL - REINF. DETAILS OF SHEET 3 OF 3
61-35637-S014	NORTHERN DRUMSITE WORKS - INCLINE DIVERSION PIT & CHANNEL - STEEL WORK SETOUT & DETAILS
61-35637-S020	NORTHERN DRUMSITE WORKS - PIT N17-2 - SECTIONS AND DETAILS
61-35637-S021	NORTHERN DRUMSITE WORKS - HEADWALL N17-3 - SECTIONS & DETAILS
61-35637-S025	NORTHERN DRUMSITE WORKS - INCLINE DRAIN OUTLET STRUCTURE - GENERAL ARRANGEMENT
61-35637-S026	NORTHERN DRUMSITE WORKS - INCLINE DRAIN OUTLET STRUCTURE - REINF. DETAILS OF SHEET 1 OF 2
61-35637-S027	NORTHERN DRUMSITE WORKS - INCLINE DRAIN OUTLET STRUCTURE - REINF. DETAILS OF SHEET 2 OF 2
61-35637-S030	SOUTHERN DRUMSITE WORKS - PIT S01-7 - SECTIONS & DETAILS
61-35637-S035	NORTHERN DRUMSITE WORKS - INCLINE TANK DRAIN - HEADWALL MODIFICATIONS - GENERAL ARRANGEMENT
61-35637-S036	NORTHERN DRUMSITE WORKS - INCLINE TANK DRAIN - HEADWALL MODIFICATIONS - REINFORCEMENT DETAILS

**GENERAL NOTES:**

- ALL DRAWINGS TO BE PRINTED IN COLOUR.
- ALL DIMENSIONS IN METRES U.N.O. PIT LOCATIONS TO BE CONFIRMED UPON FINALISATION OF EARTHWORKS AND ROAD SETOUT.
- ALL CONSTRUCTION TO BE IN ACCORDANCE WITH THE SPECIFICATION REQUIREMENTS.
- THE CONTRACTOR SHALL LIAISE WITH ALL RELEVANT AUTHORITIES TO LOCATE ALL EXISTING SERVICES WITHIN THE CONTRACT AREA PRIOR TO THE COMMENCEMENT OF WORK. WHERE EXISTING AND PROPOSED WORKS INTERSECT, LEVELS ARE TO BE TAKEN AND SUPPLIED TO THE CLIENT'S REPRESENTATIVE.
- THE CONTRACTOR SHALL LOCATE ALL LEVELS FROM ESTABLISHED BENCH MARKS.
- ALL BENCH MARKS ARE TO BE PROTECTED AND PRESERVED.
- THE CONTRACTOR SHALL LIAISE WITH TELSTRA, VOCUS AND SHIRE OF CHRISTMAS ISLAND, WATER CORPORATION, CHRISTMAS ISLAND PHOSPHATE AND INDIAN OCEAN POWER AUTHORITY TO GAIN ALL REQUIRED APPROVALS AND PERMITS.
- ALL CONSTRUCTION SHALL MAKE SMOOTH CONNECTION TO EXISTING WORK.
- STORMWATER PIPE ALIGNMENT SHALL BE AS INDICATED ON THE PLANS.
- STORMWATER PIPES MATERIALS VARY ON THE SITE (REFER TO DETAILED PLANS AND LONG SECTIONS FOR REQUIREMENTS).
- JUNCTION AND ENTRY PITS ARE TO BE LOCATED IN POSITIONS SHOWN, IRRESPECTIVE OF THE INDICATED PIPE LENGTHS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SUPPORT OF ALL EXISTING SERVICES. WHERE SERVICES CROSS, THE UPPER SERVICE SHALL BE PROVIDED WITH A SUITABLE SUPPORT AS REQUIRED, BY THE RELEVANT SERVICE AUTHORITY MANUAL.
- WHERE CONNECTING INTO EXISTING DRAINAGE, THE CONTRACTOR SHALL PICK UP UPSTREAM AND DOWNSTREAM INVERT LEVELS OF EXISTING DRAINAGE LINE IMMEDIATELY DOWNSTREAM OF PROPOSED CONNECTION. THE CONTRACTOR TO SUPPLY THIS SURVEY INFORMATION TO THE CLIENT'S REPRESENTATIVE PRIOR TO THE COMMENCEMENT OF ANY DRAINAGE CONSTRUCTION. THE CONTRACTOR TO THEN AWAIT NOTIFICATION FROM THE PRINCIPAL THAT DRAINAGE CONSTRUCTION MAY COMMENCE.
- ALL PLAN DRAWINGS ARE TO BE READ IN CONJUNCTION WITH TYPICAL CROSS SECTION DETAILS TYPICAL DRAWINGS DETAILS.
- ALL TRENCH DRAINS ARE TO BE ACO KLASSIK DRAIN WITH SLOPED CHANNEL OR APPROVED EQUIVALENT UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- WHERE AN EXISTING PIT IS TO BE RETAINED WITHIN THE SITE, LEVELS ARE TO BE ADJUSTED TO MATCH WITH REVISED GROUND LEVELS. ADJUSTED LEVELS SPECIFIED IN LONG SECTION DRAWINGS AND INCLUDE REFERENCE.
- ACO GRATED PIT TYPE 45 WITH RISER AND GALVANISED CLASS D GRATE OR EQUIVALENT TO BE INSTALLED TO MANUFACTURERS SPECIFICATION.
- ALL DRAWINGS TO BE READ IN CONJUNCTION WITH STRUCTURAL NOTES CONTAINED ON DRAWING 61-35637-S002.
- ALL DRAWINGS TO BE READ IN CONJUNCTION WITH WATER MAIN CONSTRUCTION NOTES CONTAINED ON DRAWING 61-35637-C300.
- ALL DRAWINGS PREPARED IN MGA COORDINATES BASED ON ZONE 48.
- ALL DRAWINGS PREPARED IN CHD (CHRISTMAS ISLAND HEIGHT DATUM).
- LOCATIONS AND POSITIONS OF EXISTING SERVICES AND INFRASTRUCTURE BASED UPON A VARIETY OF SITE SURVEY AND SERVICE PROVIDER INFORMATION.
- OVERHEAD CONVEYOR TO BE PROTECTED DURING CONSTRUCTION. ALL REQUIRED CHRISTMAS ISLAND PHOSPHATE REQUIREMENTS TO BE ADHERED TO AT ALL TIMES.

**PIPE FOUNDATION MATERIAL SPECIAL NOTE:**

CHRISTMAS ISLAND GEOLOGICAL FEATURES INCLUDE LIMESTONE LAYERS. LIMESTONE MATERIAL CAN BE AFFECTED BY KARSTIFICATION PROCESSES WHEREBY AQUEOUS SOLUTIONS DISSOLVE CALCITE RESULTING IN THE FORMATION OF CAVES, SINKHOLES AND OTHER VOIDS.

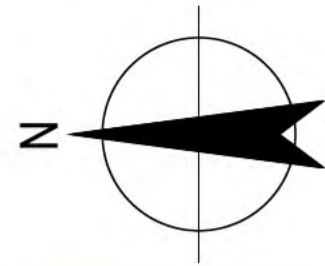
PIPE TRENCH FOUNDATION SHALL BE MONITORED FOR SIGNS OF KARSTIFICATION. WHERE KARSTIFICATION IS OBSERVED THE CONTRACTOR SHALL NOTIFY THE CLIENT'S REPRESENTATIVE FOR FURTHER DIRECTION.

**WATER MAIN DRAWINGS**

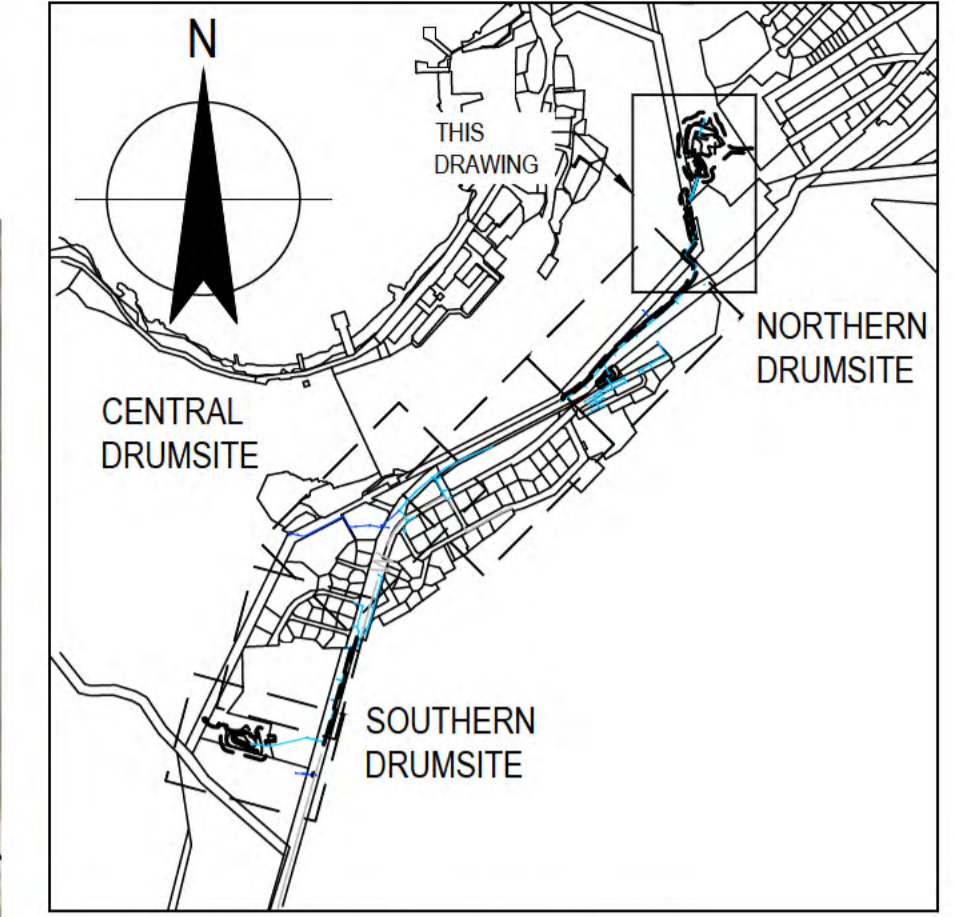
61-35637-C300	DN250 PVC WATER MAIN - CONSTRUCTION NOTES
61-35637-C301	DN250 PVC WATER MAIN - PLAN AND LONGITUDINAL SECTION
61-35637-C302	DN250 PVC WATER MAIN - THRUST BLOCK AND BEND DETAILS
61-35637-C303	DN250 PVC WATER MAIN - SCOUR VALVE DETAILS

**PRELIMINARY**

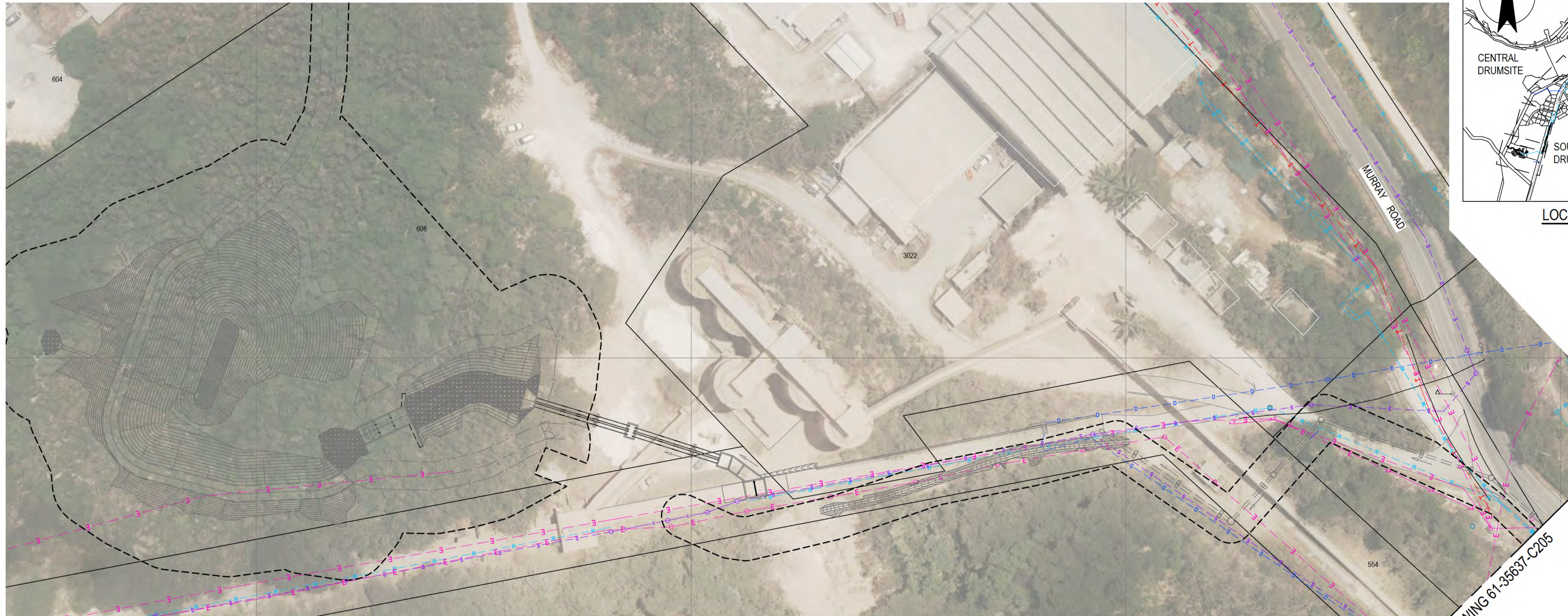
					 <p><b>Australian Government</b> Department of Infrastructure, Transport, Regional Development and Communications</p>		 <p>Level 10, 999 Hay Street Perth WA 6000 PO Box Y3106 Perth WA 6832 Australia T 61 8 6222 8222 F 61 8 6222 8555 E permail@ghd.com.au W www.ghd.com</p>		<p><b>DO NOT SCALE</b></p> <p>Conditions of Use. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.</p>		<table border="1"> <tr><td>Drawn</td><td>J.OVERHEU</td><td>Designer</td><td>J.OVERHEU</td></tr> <tr><td>Drafting Check</td><td>S.HORTON*</td><td>Design Check</td><td>S.CLEARY*</td></tr> <tr><td>Approved (Project Director)</td><td colspan="3">Date</td></tr> <tr><td>Scale</td><td>NTS</td><td colspan="2">This Drawing must not be used for Construction unless signed as Approved</td></tr> </table>		Drawn	J.OVERHEU	Designer	J.OVERHEU	Drafting Check	S.HORTON*	Design Check	S.CLEARY*	Approved (Project Director)	Date			Scale	NTS	This Drawing must not be used for Construction unless signed as Approved		<table border="1"> <tr><td>Client</td><td>DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT &amp; COMMUNICATIONS</td></tr> <tr><td>Project</td><td>CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS</td></tr> <tr><td>Title</td><td>DRAWING LIST AND GENERAL CIVIL NOTES</td></tr> <tr><td>Original Size</td><td>A1</td></tr> <tr><td>Drawing No:</td><td>61-35637-C202</td></tr> <tr><td>Rev:</td><td>B</td></tr> </table>		Client	DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS	Project	CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS	Title	DRAWING LIST AND GENERAL CIVIL NOTES	Original Size	A1	Drawing No:	61-35637-C202	Rev:	B
Drawn	J.OVERHEU	Designer	J.OVERHEU																																							
Drafting Check	S.HORTON*	Design Check	S.CLEARY*																																							
Approved (Project Director)	Date																																									
Scale	NTS	This Drawing must not be used for Construction unless signed as Approved																																								
Client	DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS																																									
Project	CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS																																									
Title	DRAWING LIST AND GENERAL CIVIL NOTES																																									
Original Size	A1																																									
Drawing No:	61-35637-C202																																									
Rev:	B																																									
<table border="1"> <tr><td>B</td><td>REISSUED FOR 90% DESIGN - CLIENT COMMENT</td><td>GT</td><td>JM*</td><td>PS*</td><td>20/11/20</td></tr> <tr><td>A</td><td>ISSUED FOR 90% DESIGN - CLIENT COMMENT</td><td>JO</td><td>JM*</td><td>PS*</td><td>30/09/20</td></tr> <tr><td>No</td><td>Revision</td><td>Note: * indicates signatures on original issue of drawing or last revision of drawing</td><td>Drawn</td><td>Job Manager</td><td>Project Director</td><td>Date</td></tr> </table>					B	REISSUED FOR 90% DESIGN - CLIENT COMMENT	GT	JM*	PS*	20/11/20	A	ISSUED FOR 90% DESIGN - CLIENT COMMENT	JO	JM*	PS*	30/09/20	No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date																			
B	REISSUED FOR 90% DESIGN - CLIENT COMMENT	GT	JM*	PS*	20/11/20																																					
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT	JO	JM*	PS*	30/09/20																																					
No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date																																				



THIS DRAWING IS TO BE PRINTED IN COLOUR



LOCALITY PLAN  
N.T.S.



PLAN  
SCALE 1:500

MATCHLINE JOINS DRAWING 61-35637-C205

**NOTES:**

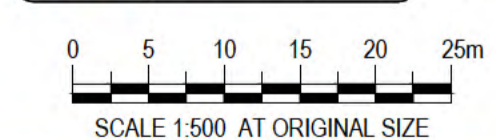
- FOR FURTHER SURVEY INFORMATION, REFER TO DRAWINGS 61-35637-V01 SHEETS 1-3.
- EXISTING SERVICES LOCATIONS ARE INDICATIVE ONLY. CONTRACTOR TO CONFIRM LOCATION, SIZE AND LEVEL PRIOR TO COMMENCING CONSTRUCTION. SHOULD ANY CLASHES BE IDENTIFIED WITH PROPOSED WORKS THE CONTRACTOR IS TO IMMEDIATELY NOTIFY THE CLIENT'S REPRESENTATIVE.
- EXTENT OF CLEARING PERMITTED. REFER TO SPECIFICATION FOR FURTHER DETAILS AND SETOUT REQUIREMENTS.
- FOR OTHER NOTES, REFER DRAWING 61-35637-C202.

**LEGEND:**

- PROPOSED DRAINAGE
- EXISTING CADASTRAL BOUNDARY
- PERMITTED CLEARING EXTENT
- EXISTING DRAINAGE
- EXISTING ELECTRICAL CABLE
- EXISTING FUEL LINE
- EXISTING SEWER LINE
- EXISTING TELCO CABLE
- EXISTING WATER PIPE



ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.



**PRELIMINARY**

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
B	REISSUED FOR 90% DESIGN - CLIENT COMMENT		GT	JM*	PS*	20/11/20
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT		JO	JM*	PS*	30/09/20



**Australian Government**  
**Department of Infrastructure, Transport, Regional Development and Communications**



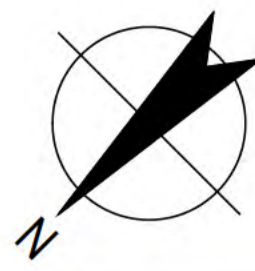
Level 10, 999 Hay Street Perth WA 6000  
PO Box Y3106 Perth WA 6832 Australia  
T 61 8 6222 8222 F 61 8 6222 8555  
E permail@ghd.com.au W www.ghd.com

**DO NOT SCALE**

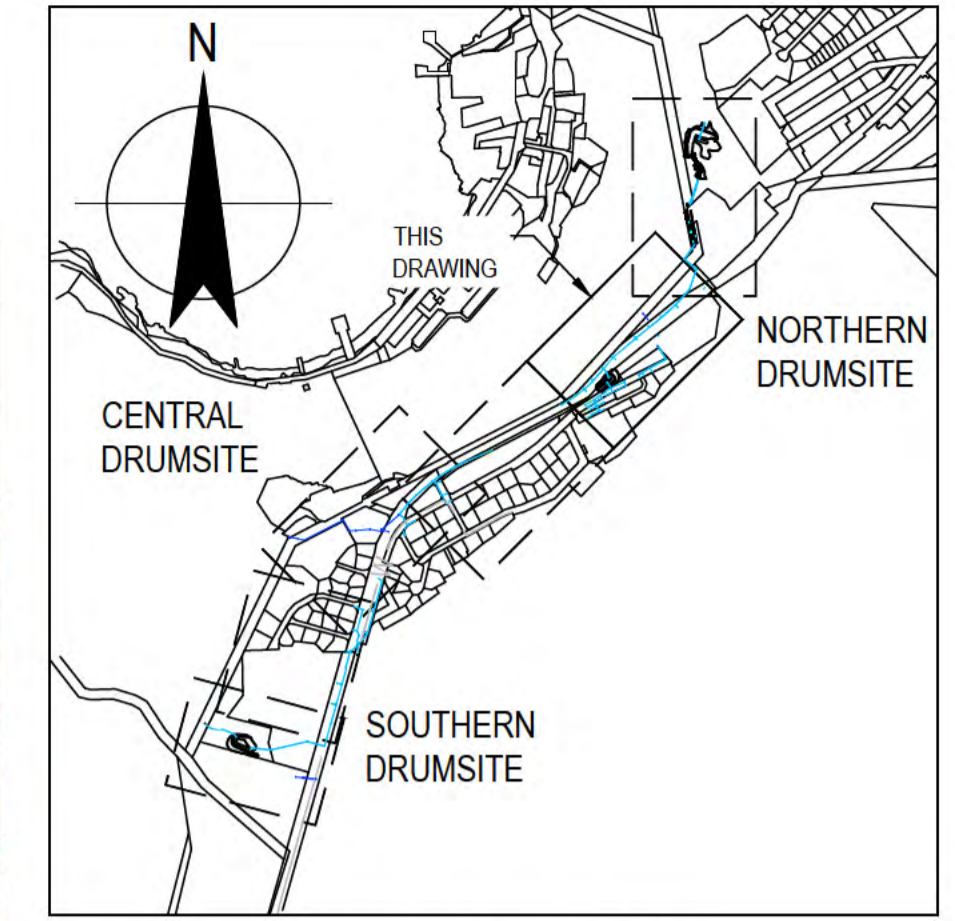
Conditions of Use.  
This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

Drawn	J.OVERHEU	Designer	J.OVERHEU
Drafting Check	S.HORTON*	Design Check	S.CLEARY*
Approved (Project Director)	Date		
Scale	1:500	This Drawing must not be used for Construction unless signed as Approved	

Client	DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS		
Project	CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS		
Title	NORTHERN DRUMSITE WORKS EXISTING SERVICES - PLAN - SHEET 1 OF 6		
Original Size	A1	Drawing No:	61-35637-C204
Rev:	B		



THIS DRAWING IS TO BE PRINTED IN COLOUR



LOCALITY PLAN  
N.T.S.



MATCHLINE JOINS DRAWING 61-35637-C204

MATCHLINE JOINS DRAWING 61-35637-C206

PLAN  
SCALE 1:500

LEGEND:

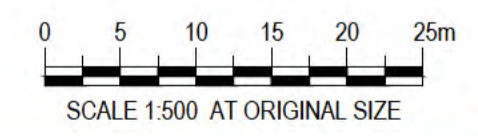
- PROPOSED DRAINAGE
- PERMITTED CLEARING EXTENT
- EXISTING CADASTRAL BOUNDARY
- EXISTING DRAINAGE
- EXISTING ELECTRICAL CABLE
- EXISTING FUEL LINE
- EXISTING SEWER LINE
- EXISTING TELCO CABLE
- EXISTING WATER PIPE

NOTES:

1. FOR FURTHER SURVEY INFORMATION, REFER TO DRAWINGS 61-35637-V01 SHEETS 1-3.
2. EXISTING SERVICES LOCATIONS ARE INDICATIVE ONLY. CONTRACTOR TO CONFIRM LOCATION, SIZE AND LEVEL PRIOR TO COMMENCING CONSTRUCTION. SHOULD ANY CLASHES BE IDENTIFIED WITH PROPOSED WORKS THE CONTRACTOR IS TO IMMEDIATELY NOTIFY THE CLIENT'S REPRESENTATIVE.
3. EXTENT OF CLEARING PERMITTED. REFER TO SPECIFICATION FOR FURTHER DETAILS AND SETOUT REQUIREMENTS.
4. FOR OTHER NOTES, REFER DRAWING 61-35637-C202.



ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.



SCALE 1:500 AT ORIGINAL SIZE **PRELIMINARY**

No	Revision	Note	Drawn	Job Manager	Project Director	Date
B		REISSUED FOR 90% DESIGN - CLIENT COMMENT	GT	JM*	PS*	20/11/20
A		ISSUED FOR 90% DESIGN - CLIENT COMMENT	JO	JM*	PS*	30/09/20

**Australian Government**  
Department of Infrastructure, Transport, Regional Development and Communications

Level 10, 999 Hay Street Perth WA 6000  
PO Box Y3106 Perth WA 6832 Australia  
T 61 8 6222 8222 F 61 8 6222 8555  
E permail@ghd.com.au W www.ghd.com

**DO NOT SCALE**

Conditions of Use:  
This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

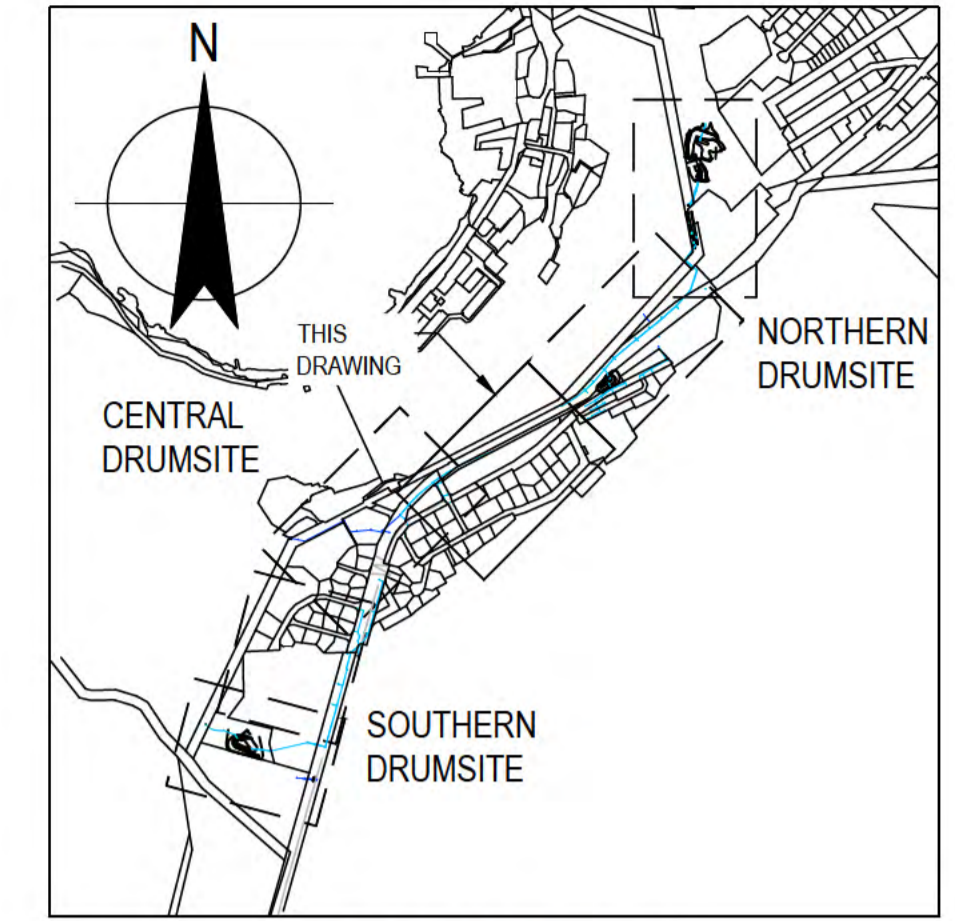
Drawn	J.OVERHEU	Designer	J.OVERHEU
Drafting Check	S.HORTON*	Design Check	S. CLEARY*
Approved (Project Director)	Date		
Scale	1:500	This Drawing must not be used for Construction unless signed as Approved	

Client **DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS**  
Project **CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS**  
Title **NORTHERN DRUMSITE WORKS EXISTING SERVICES - PLAN - SHEET 2 OF 6**

Original Size **A1** Drawing No: **61-35637-C205** Rev: **B**



THIS DRAWING IS TO BE PRINTED IN COLOUR



LOCALITY PLAN  
N.T.S.



MATCHLINE JOINS DRAWING 61-35637-C205

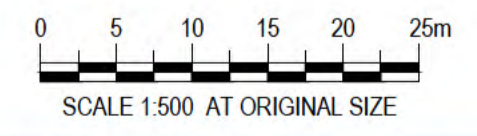
MATCHLINE JOINS DRAWING 61-35637-C207

- NOTES:**
- FOR FURTHER SURVEY INFORMATION, REFER TO DRAWINGS 61-35637-W01 SHEETS 1-3.
  - EXISTING SERVICES LOCATIONS ARE INDICATIVE ONLY. CONTRACTOR TO CONFIRM LOCATION, SIZE AND LEVEL PRIOR TO COMMENCING CONSTRUCTION. SHOULD ANY CLASHES BE IDENTIFIED WITH PROPOSED WORKS THE CONTRACTOR IS TO IMMEDIATELY NOTIFY THE CLIENT'S REPRESENTATIVE.
  - FOR OTHER NOTES, REFER DRAWING 61-35637-C202.

- LEGEND:**
- PROPOSED DRAINAGE
  - EXISTING CADASTRAL BOUNDARY
  - EXISTING DRAINAGE
  - EXISTING ELECTRICAL CABLE
  - EXISTING FUEL LINE
  - EXISTING SEWER LINE
  - EXISTING TELCO CABLE
  - EXISTING WATER PIPE
  - PROPOSED WATER

**DIAL BEFORE YOU DIG**  
www.1100.com.au

ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.



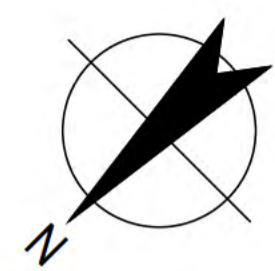
**PRELIMINARY**

PLAN  
SCALE 1:500

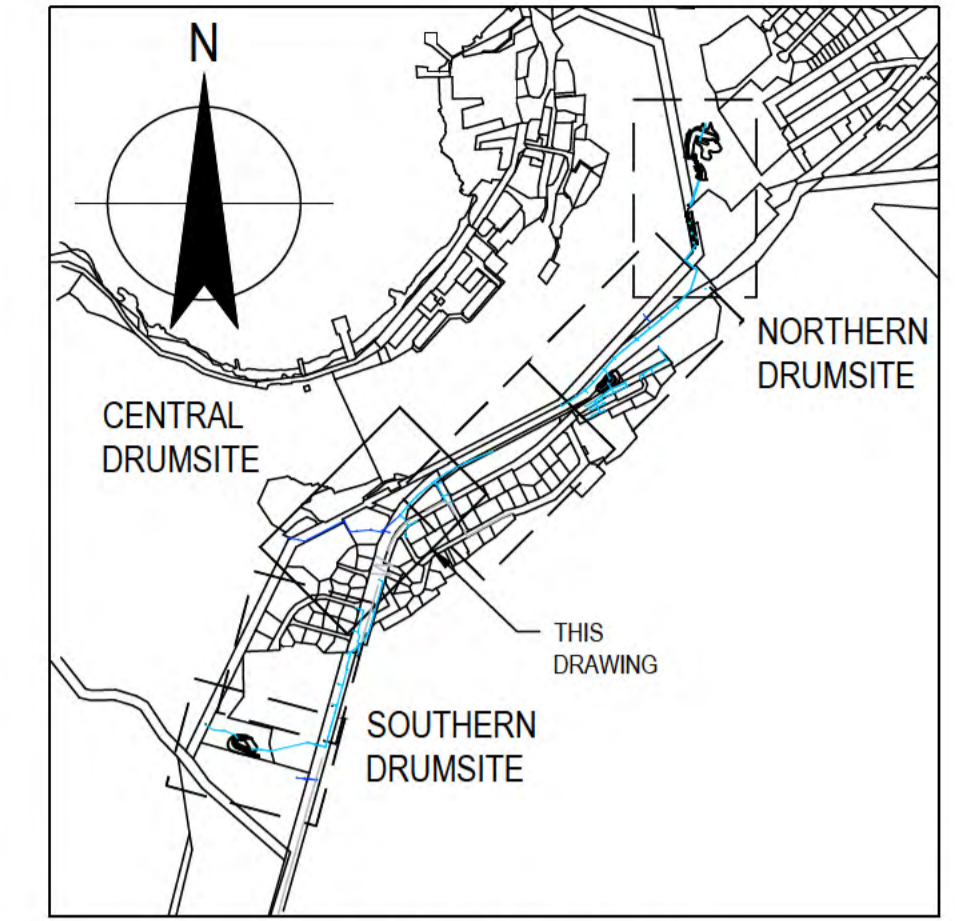
No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
B		REISSUED FOR 90% DESIGN - CLIENT COMMENT	GT	JM*	PS*	20/11/20
A		ISSUED FOR 90% DESIGN - CLIENT COMMENT	JO	JM*	PS*	30/09/20



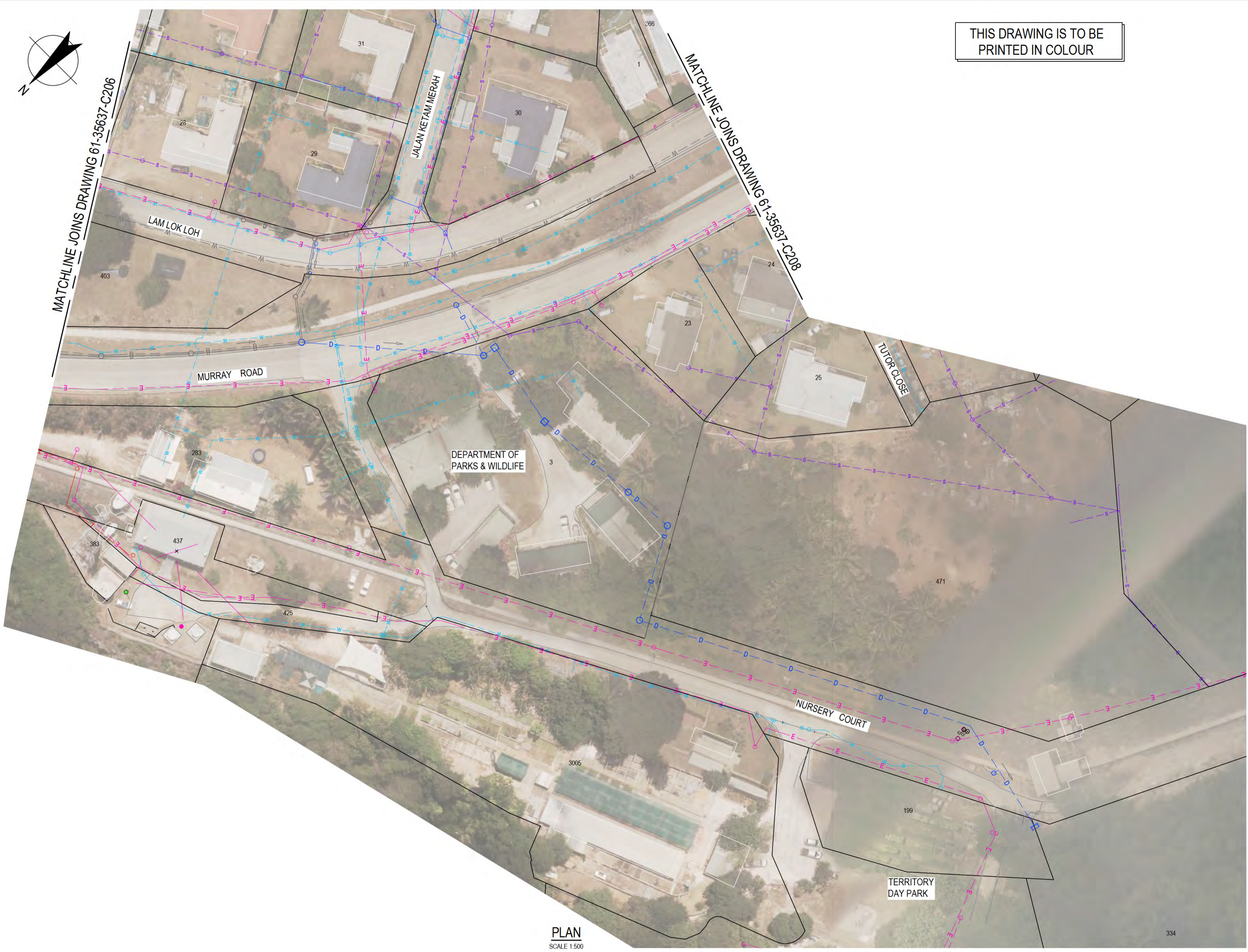
<b>DO NOT SCALE</b>	Drawn J.OVERHEU	Designer J.OVERHEU	Client DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS
Conditions of Use. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.	Drafting Check S.HORTON*	Design Check S.CLEARY*	Project CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS
	Approved (Project Director) Date		Title CENTRAL DRUMSITE WORKS EXISTING SERVICES - PLAN - SHEET 3 OF 6
	Scale 1:500	This Drawing must not be used for construction unless signed as Approved	Original Size A1 Drawing No: <b>61-35637-C206</b> Rev: B



THIS DRAWING IS TO BE PRINTED IN COLOUR



LOCALITY PLAN  
N.T.S.



PLAN  
SCALE 1:500

**NOTES:**

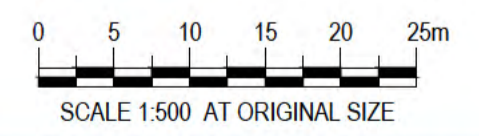
1. FOR FURTHER SURVEY INFORMATION, REFER TO DRAWINGS 61-35637-V01 SHEETS 1-3.
2. EXISTING SERVICES LOCATIONS ARE INDICATIVE ONLY. CONTRACTOR TO CONFIRM LOCATION, SIZE AND LEVEL PRIOR TO COMMENCING CONSTRUCTION, SHOULD ANY CLASHES BE IDENTIFIED WITH PROPOSED WORKS THE CONTRACTOR IS TO IMMEDIATELY NOTIFY THE CLIENT'S REPRESENTATIVE.
3. FOR OTHER NOTES, REFER DRAWING 61-35637-C202.

**LEGEND:**

- PROPOSED DRAINAGE
- EXISTING CADASTRAL BOUNDARY
- EXISTING DRAINAGE
- EXISTING ELECTRICAL CABLE
- EXISTING FUEL LINE
- EXISTING SEWER LINE
- EXISTING TELCO CABLE
- EXISTING WATER PIPE
- PROPOSED WATERMAIN



ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.



SCALE 1:500 AT ORIGINAL SIZE

**PRELIMINARY**

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
B	REISSUED FOR 90% DESIGN - CLIENT COMMENT		GT	JM*	PS*	20/11/20
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT		JO	JM*	PS*	30/09/20

**Australian Government**  
Department of Infrastructure, Transport, Regional Development and Communications

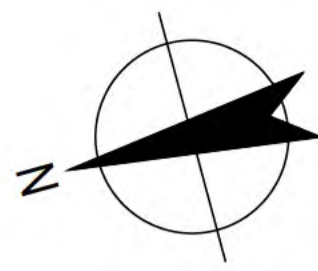
Level 10, 999 Hay Street Perth WA 6000  
PO Box Y3106 Perth WA 6832 Australia  
T 61 8 6222 8222 F 61 8 6222 8555  
E permail@ghd.com.au W www.ghd.com

**DO NOT SCALE**

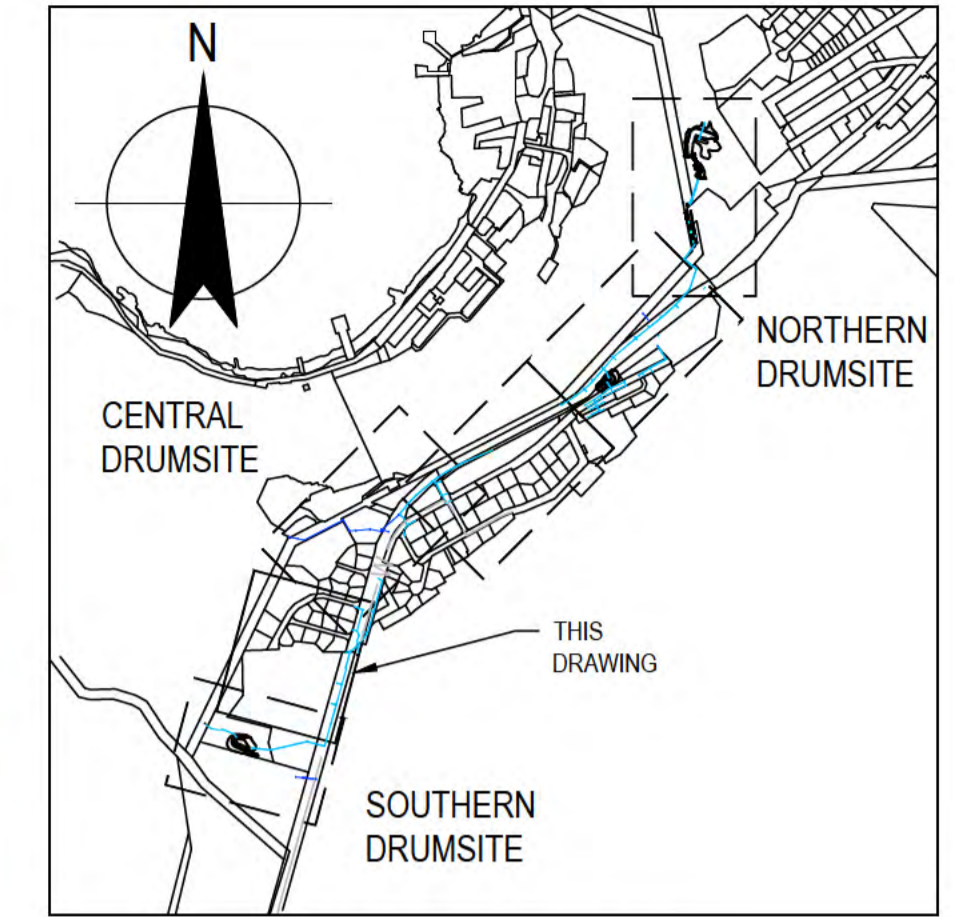
Conditions of Use.  
This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

Drawn	J.OVERHEU	Designer	J.OVERHEU
Drafting Check	S.HORTON*	Design Check	S.CLEARY*
Approved (Project Director)	Date		
Scale	1:500	This Drawing must not be used for construction unless signed as Approved	

Client	DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS		
Project	CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS		
Title	CENTRAL DRUMSITE WORKS EXISTING SERVICES - PLAN - SHEET 4 OF 6		
Original Size	A1	Drawing No:	61-35637-C207
Rev:	B		



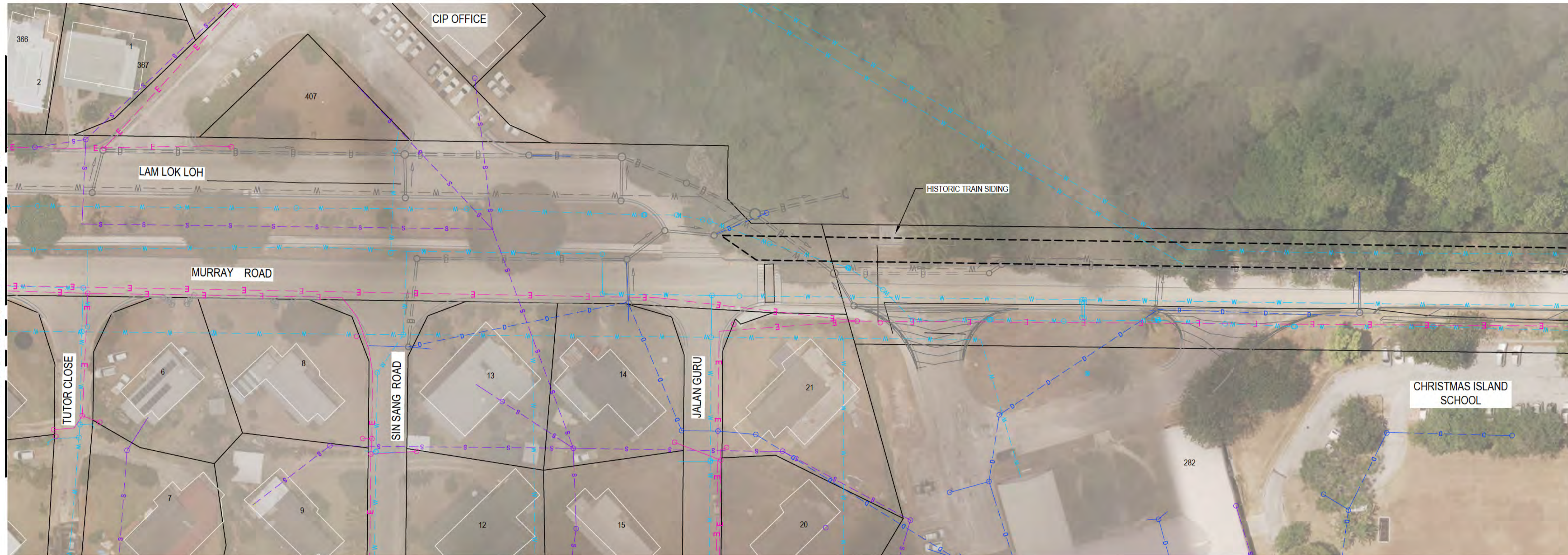
THIS DRAWING IS TO BE PRINTED IN COLOUR



LOCALITY PLAN  
N.T.S.

MATCHLINE JOINS DRAWING 61-35637-C207

MATCHLINE JOINS DRAWING 61-35637-C209



PLAN  
SCALE 1:500

**NOTES:**

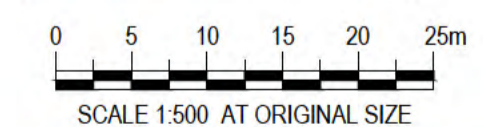
- FOR FURTHER SURVEY INFORMATION, REFER TO DRAWINGS 61-35637-V01 SHEETS 1-3.
- EXISTING SERVICES LOCATIONS ARE INDICATIVE ONLY. CONTRACTOR TO CONFIRM LOCATION, SIZE AND LEVEL PRIOR TO COMMENCING CONSTRUCTION, SHOULD ANY CLASHES BE IDENTIFIED WITH PROPOSED WORKS THE CONTRACTOR IS TO IMMEDIATELY NOTIFY THE CLIENT'S REPRESENTATIVE.
- EXTENT OF CLEARING PERMITTED. REFER TO SPECIFICATION FOR FURTHER DETAILS AND SETOUT REQUIREMENTS.
- FOR OTHER NOTES, REFER DRAWING 61-35637-C202.

**LEGEND:**

- PROPOSED DRAINAGE
- PERMITTED CLEARING EXTENT
- EXISTING CADASTRAL BOUNDARY
- EXISTING DRAINAGE
- EXISTING ELECTRICAL CABLE
- EXISTING FUEL LINE
- EXISTING SEWER LINE
- EXISTING TELCO CABLE
- EXISTING WATER PIPE
- PROPOSED WATER MAIN



ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.



SCALE 1:500 AT ORIGINAL SIZE

**PRELIMINARY**

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
B		REISSUED FOR 90% DESIGN - CLIENT COMMENT	GT	JM*	PS*	20/11/20
A		ISSUED FOR 90% DESIGN - CLIENT COMMENT	JO	JM*	PS*	30/09/20



**Australian Government**  
Department of Infrastructure, Transport,  
Regional Development and Communications



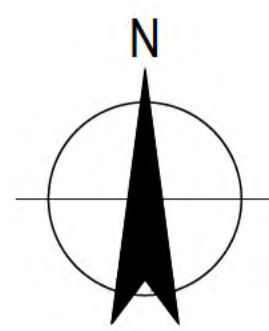
Level 10, 999 Hay Street Perth WA 6000  
PO Box Y3106 Perth WA 6832 Australia  
T 61 8 6222 8222 F 61 8 6222 8555  
E permail@ghd.com.au W www.ghd.com

**DO NOT SCALE**

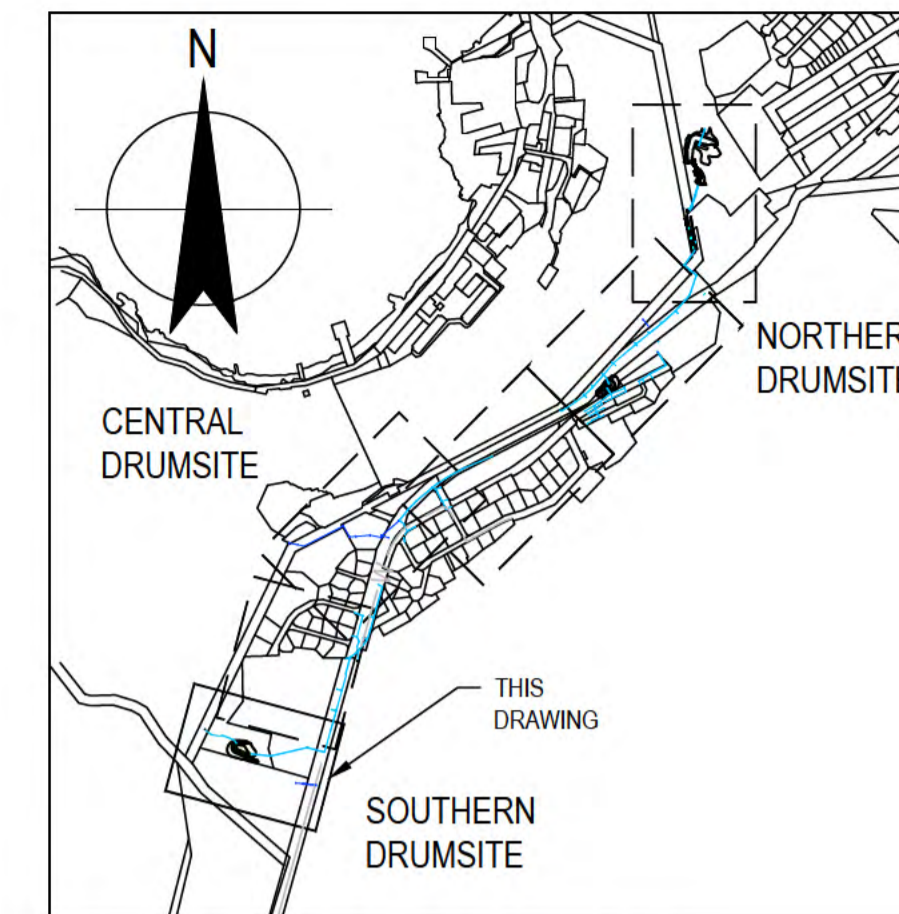
Conditions of Use.  
This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

Drawn	J.OVERHEU	Designer	J.OVERHEU
Drafting Check	S.HORTON*	Design Check	S.CLEARY*
Approved (Project Director)	Date		
Scale	1:500	This Drawing must not be used for Construction unless signed as Approved	

Client	DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS		
Project	CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS		
Title	SOUTHERN DRUMSITE WORKS EXISTING SERVICES - PLAN - SHEET 5 OF 6		
Original Size	A1	Drawing No:	61-35637-C208
Rev:	B		



THIS DRAWING IS TO BE PRINTED IN COLOUR



LOCALITY PLAN  
N.T.S.



PLAN  
SCALE 1:500

**NOTES:**

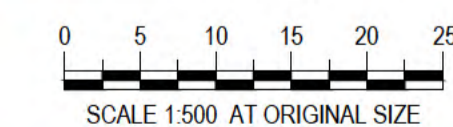
1. FOR FURTHER SURVEY INFORMATION, REFER TO DRAWINGS 61-35637-V01 SHEETS 1-3.
2. EXISTING SERVICES LOCATIONS ARE INDICATIVE ONLY. CONTRACTOR TO CONFIRM LOCATION, SIZE AND LEVEL PRIOR TO COMMENCING CONSTRUCTION. SHOULD ANY CLASHES BE IDENTIFIED WITH PROPOSED WORKS THE CONTRACTOR IS TO IMMEDIATELY NOTIFY THE CLIENT'S REPRESENTATIVE.
3. EXTENT OF CLEARING PERMITTED. REFER TO SPECIFICATION FOR FURTHER DETAILS AND SETOUT REQUIREMENTS.
4. FOR OTHER NOTES, REFER TO DRAWING 61-35637-C202.

**LEGEND:**

- PROPOSED DRAINAGE
- PERMITTED CLEARING EXTENT
- EXISTING CADASTRAL BOUNDARY
- EXISTING DRAINAGE
- EXISTING ELECTRICAL CABLE
- EXISTING FUEL LINE
- EXISTING SEWER LINE
- EXISTING TELCO CABLE
- EXISTING WATER PIPE
- PROPOSED WATER MAIN



ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.



SCALE 1:500 AT ORIGINAL SIZE

**PRELIMINARY**

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
B	REISSUED FOR 90% DESIGN - CLIENT COMMENT		GT	JM*	PS*	20/11/20
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT		JO	JM*	PS*	30/09/20



**Australian Government**  
**Department of Infrastructure, Transport, Regional Development and Communications**



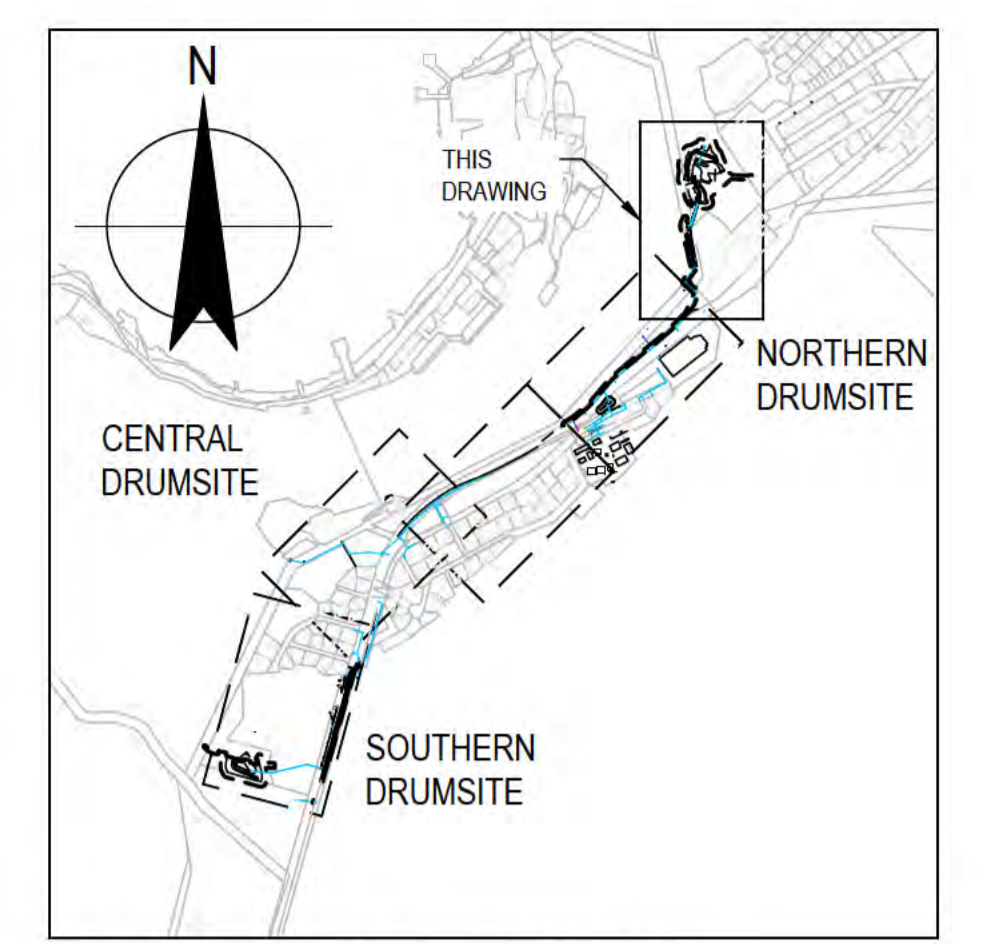
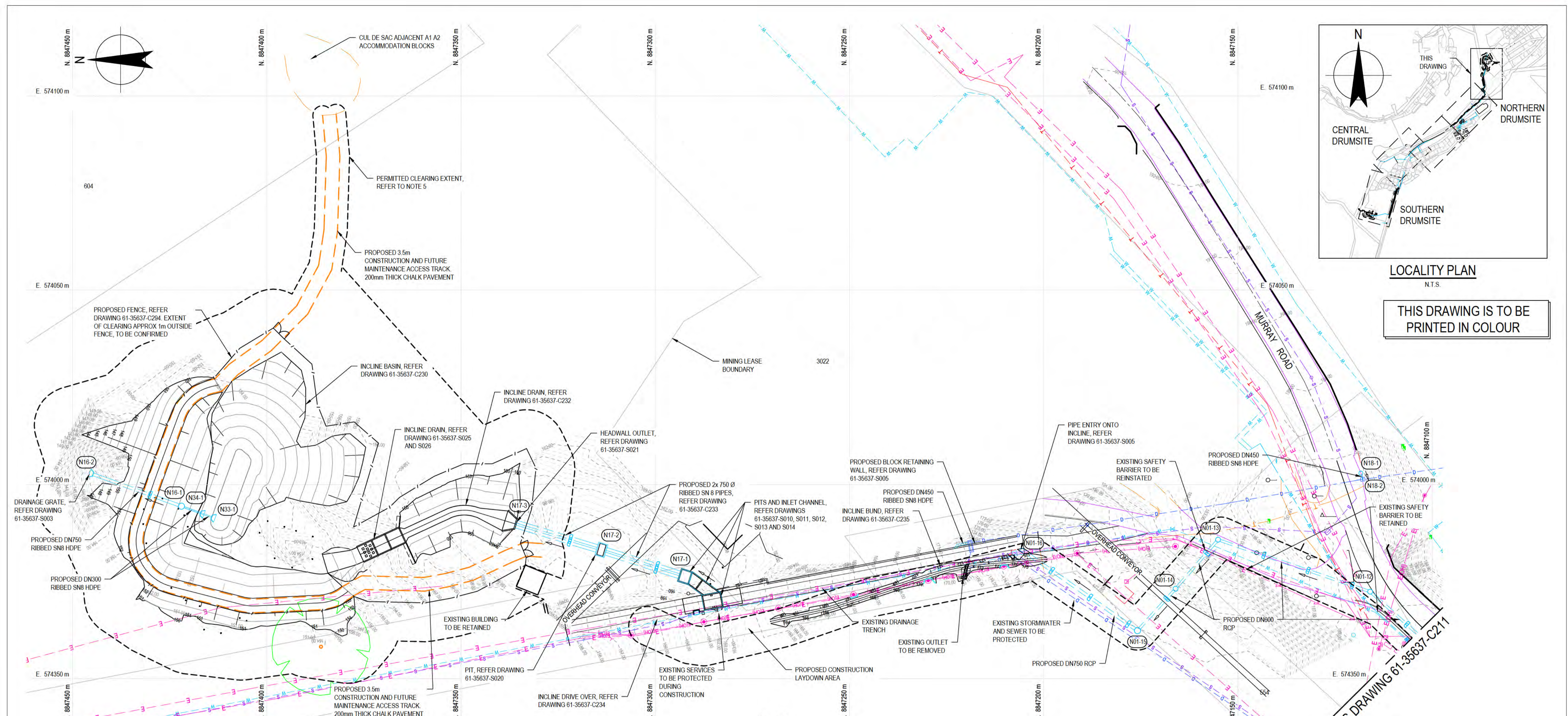
Level 10, 999 Hay Street Perth WA 6000  
PO Box Y3106 Perth WA 6832 Australia  
T 61 8 6222 8222 F 61 8 6222 8555  
E permail@ghd.com.au W www.ghd.com

**DO NOT SCALE**

Conditions of Use.  
This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

Drawn	J.OVERHEU	Designer	J.OVERHEU
Drafting Check	S.HORTON*	Design Check	S.CLEARY*
Approved (Project Director)	Date		
Scale	1:500	This Drawing must not be used for Construction unless signed as Approved	

Client	DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS		
Project	CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS		
Title	SOUTHERN DRUMSITE WORKS		
	EXISTING SERVICES - PLAN - SHEET 6 OF 6		
Original Size	A1	Drawing No:	61-35637-C209
		Rev:	B



LOCALITY PLAN  
N.T.S.

THIS DRAWING IS TO BE  
PRINTED IN COLOUR

PLAN  
SCALE 1:500

LEGEND:

DRAINAGE STRUCTURE SET OUT			
STRUCTURE NUMBER	NORTHING (m)	EASTING (m)	PIT SIZE (mm) & TYPE
N01-12	8847115.95	573972.42	1200 MANHOLE
N01-13	8847155.11	573985.79	1200 MANHOLE
N01-14	8847166.05	573973.17	1200 MANHOLE
N01-15	8847175.86	573962.40	1500 MANHOLE
N01-16	8847206.01	573983.46	REFER DRAWING S005
N16-1	8847421.98	573984.40	1500 HIGH FLOW PIT
N16-2	8847444.83	574002.65	HEADWALL
N17-1	8847292.35	573976.31	REFER DRAWING S010
N17-2	8847313.88	573963.19	REFER DRAWING S020
N17-3	8847336.62	573990.04	REFER DRAWING S021
N18-1	8847117.84	574001.36	1200 COMBINATION PIT
N18-2	8847118.34	574002.92	EXISTING PIT
N33-1	8847414.19	573991.59	HEADWALL
N34-1	8847417.02	573992.61	HEADWALL

- EXISTING DRAINAGE INFRASTRUCTURE
- EXISTING WATER INFRASTRUCTURE
- EXISTING TREE
- EXISTING COMMS INFRASTRUCTURE
- EXISTING OPTICAL FIBRE MARKER
- EXISTING POWER INFRASTRUCTURE
- EXISTING DRAINAGE GULLY/SEPMANHOLE
- EXISTING COMMUNICATIONS MANHOLE
- EXISTING SEWER MANHOLE
- EXISTING WATER SERVICE MANHOLE
- EXISTING BOLLARD
- EXISTING GUIDE POST
- EXISTING SIGN
- PROPOSED DRAINAGE
- EXISTING CADASTRAL BOUNDARY
- EXISTING BUILDING
- EXISTING KERB
- EXISTING RETAINING WALL
- PROPOSED FENCE
- EXISTING FENCE LOW
- EXISTING FENCE HIGH
- SETOUT POINT
- EXISTING TOP OF BANK
- EXISTING BOTTOM OF BANK
- EXISTING CHANGE OF GRADE
- EXISTING EDGE OF CONCRETE
- EXISTING EDGE OF BITUMEN
- EXISTING EDGE OF TRACK
- PROPOSED EDGE OF TRACK
- EXISTING ROCK OUTCROP
- EXISTING FOOTPATH
- EXISTING ROAD SHOULDER
- EXISTING ROAD CENTRELINE
- EXISTING DRAIN CENTRELINE
- EXISTING DRAINAGE PIPE
- EXISTING SEWER LINE
- EXISTING ELECTRICAL SERVICE
- EXISTING OVERHEAD POWER
- EXISTING WATER PIPE
- EXISTING TELECOM
- EXISTING CONTOURS
- PROPOSED CONTOURS
- PROPOSED CONCRETE ENCASUREMENT
- EXISTING BUSHLINE
- EXISTING TREE
- PERMITTED CLEARING EXTENT
- EMBANKMENT CORE
- PAVEMENT REINSTATEMENT EXTENT & DRIVEWAY ACCESS
- ROCK PROTECTION
- CHALK LINER
- FOOTPATH REINSTATED
- ROCK SCOUR PROTECTION
- BIODEGRADABLE MATTING PROTECTION

- NOTES:**
- REFER TO PIPE LONGITUDINAL SECTION DRAWINGS FOR DETAILS OF PIT AND PIPE LEVELS.
  - FOR FURTHER SURVEY INFORMATION, REFER TO DRAWINGS 61-35637-V01 SHEETS 1-3.
  - EXISTING SERVICES LOCATIONS ARE INDICATIVE ONLY. CONTRACTOR TO CONFIRM LOCATION, SIZE AND LEVEL PRIOR TO COMMENCING CONSTRUCTION. SHOULD ANY CLASHES BE IDENTIFIED WITH PROPOSED WORKS THE CONTRACTOR IS TO IMMEDIATELY NOTIFY THE CLIENT'S REPRESENTATIVE.
  - EXISTING COMMUNICATIONS INFORMATION IS INCOMPLETE. VERIFICATION OF PRESENCE THROUGHOUT SITE REQUIRED PRIOR TO COMMENCING CONSTRUCTION.
  - EXTENT OF CLEARING PERMITTED. REFER TO SPECIFICATION FOR FURTHER DETAILS AND SETOUT REQUIREMENTS.
- DIAL BEFORE YOU DIG**  
www.1100.com.au
- ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.
- SCALE 1:500 AT ORIGINAL SIZE

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
B	REISSUED FOR 90% DESIGN - CLIENT COMMENT		GT	JM*	PS*	20/11/20
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT		JO	JM*	PS*	30/09/20



**DO NOT SCALE**

Conditions of Use: This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

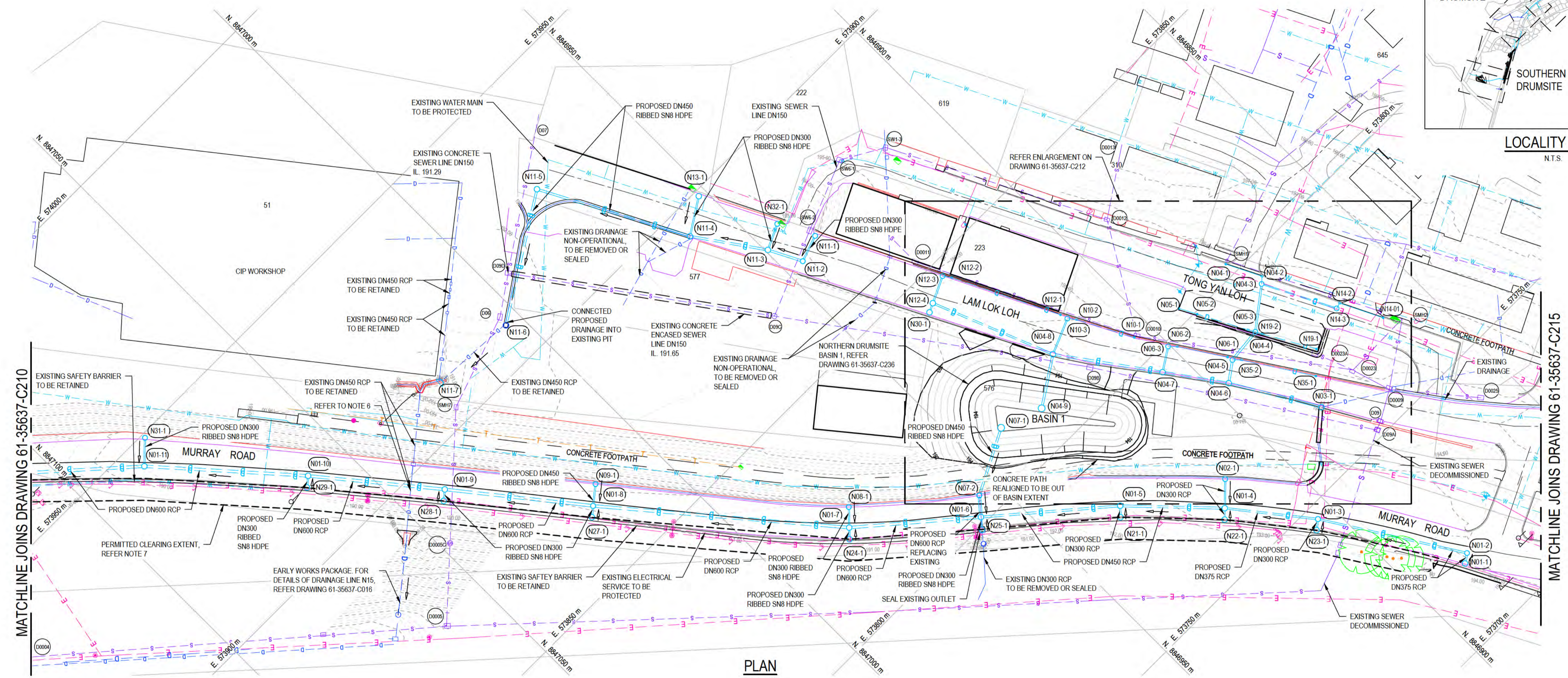
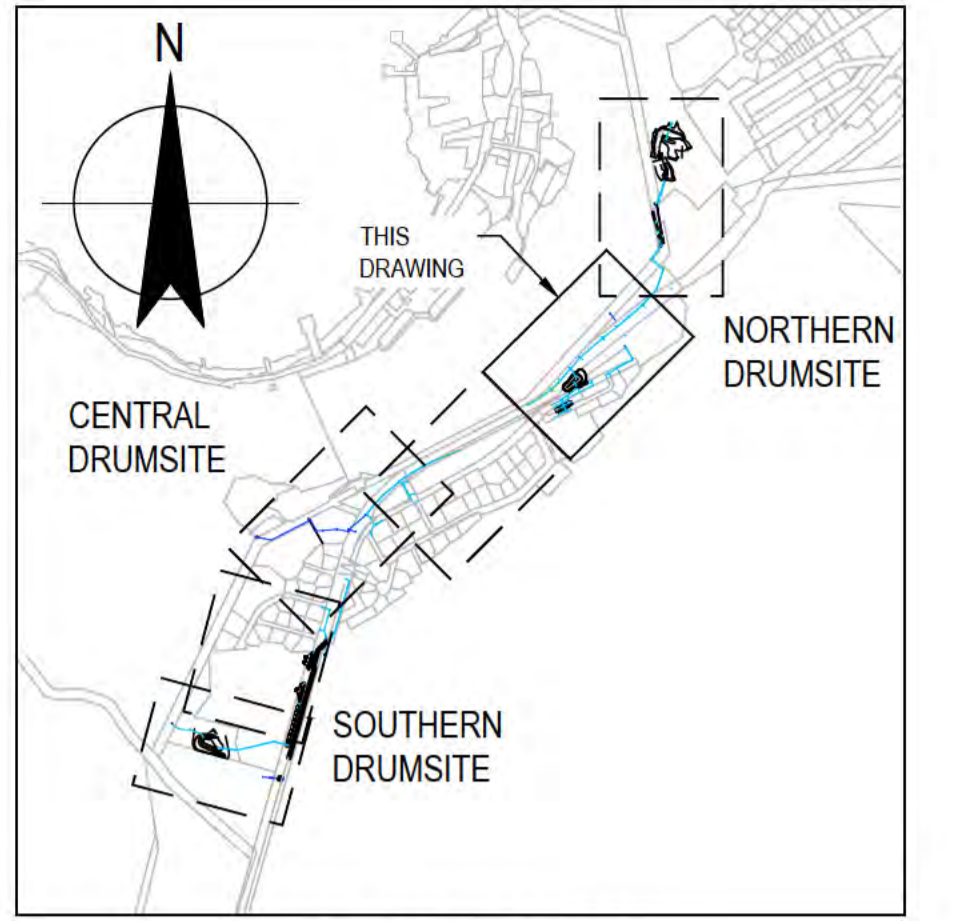
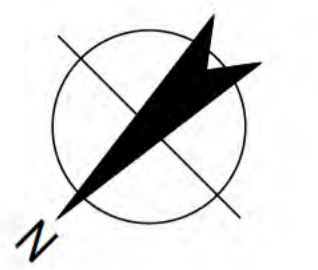
Drawn: J.OVERHEU  
Designer: A.PARAMESWARAN  
Drafting Check: S.HORTON\*  
Design Check: S.CLEARY\*  
Approved (Project Director) Date: \_\_\_\_\_

Client: DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS  
Project: CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS  
Title: NORTHERN DRUMSITE WORKS PLAN - SHEET 1

Scale: 1:500  
This Drawing must not be used for Construction unless signed as Approved

Original Size: A1  
Drawing No: 61-35637-C210  
Rev: B

THIS DRAWING IS TO BE PRINTED IN COLOUR



PLAN SCALE 1:500

DRAINAGE STRUCTURE SET OUT			
STRUCTURE NUMBER	NORTHING (m)	EASTING (m)	PIT SIZE (mm) & TYPE
N01-1	8846887.60	573716.02	1200 COMBINATION PIT
N01-2	8846885.58	573717.37	1050 MANHOLE
N01-3	8846894.13	573746.88	1050 MANHOLE
N01-4	8846917.40	573763.66	1200 MANHOLE
N01-5	8846933.88	573780.90	1050 MANHOLE
N01-6	8846958.13	573801.53	1200 MANHOLE
N01-7	8846981.08	573821.08	1200 MANHOLE
N01-8	8847018.85	573865.86	1200 MANHOLE
N01-9	8847040.11	573892.43	1200 MANHOLE
N01-10	8847059.95	573916.94	1200 MANHOLE
N01-11	8847084.81	573944.59	1200 MANHOLE
N08-1	8846977.83	573824.46	1050 GULLY PIT
N09-1	8847014.94	573868.99	1050 GULLY PIT
N11-1	8846939.54	573873.59	1050 GULLY PIT

DRAINAGE STRUCTURE SET OUT			
STRUCTURE NUMBER	NORTHING (m)	EASTING (m)	PIT SIZE (mm) & TYPE
N11-2	8846945.63	573871.50	1050 GULLY PIT
N11-3	8846949.44	573878.94	1200 GULLY PIT
N11-4	8846959.79	573893.68	1200 GULLY PIT
N11-5	8846976.88	573925.94	1200 GULLY PIT
N11-6*	8847003.81	573909.02	EXISTING PIT
N11-7	8847022.95	573910.40	EXISTING OUTLET
N13-1	8846951.91	573898.73	1050 GULLY PIT
N21-1	8846935.67	573779.07	1200 COMBINATION PIT
N22-1	8846919.27	573761.82	1200 COMBINATION PIT
N23-1	8846906.13	573745.32	1200 COMBINATION PIT
N24-1	8846882.91	573819.12	1200 COMBINATION PIT
N25-1*	8846959.99	573799.35	1200 COMBINATION PIT
N27-1	8847020.88	573864.22	1200 COMBINATION PIT
N28-1	8847042.12	573890.75	1200 COMBINATION PIT

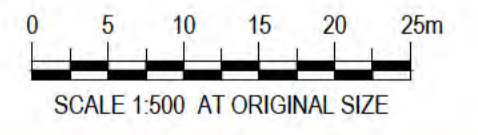
DRAINAGE STRUCTURE SET OUT			
STRUCTURE NUMBER	NORTHING (m)	EASTING (m)	PIT SIZE (mm) & TYPE
N29-1	8847062.02	573914.94	1200 COMBINATION PIT
N31-1	8847080.13	573949.07	1050 GULLY PIT

NOTES:

- REFER TO PIPE LONGITUDINAL SECTION DRAWINGS FOR DETAILS OF PIT AND PIPE LEVELS.
- FOR LEGEND, REFER DRAWING 61-35637-C210.
- EXISTING SERVICES LOCATIONS ARE INDICATIVE ONLY. CONTRACTOR TO CONFIRM LOCATION, SIZE AND LEVEL PRIOR TO COMMENCING CONSTRUCTION. SHOULD ANY CLASHES BE IDENTIFIED WITH PROPOSED WORKS THE CONTRACTOR IS TO IMMEDIATELY NOTIFY THE CLIENT'S REPRESENTATIVE.
- EXISTING COMMUNICATIONS INFORMATION IS INCOMPLETE. VERIFICATION OF PRESENCE THROUGHOUT SITE REQUIRED PRIOR TO COMMENCING CONSTRUCTION.
- \* EXISTING PIT TO BE REPLACED IF REQUIRED.
- PROPOSED CROSSING OF EXISTING MAIN WITHOUT CONNECTION. LEVELS OF EXISTING TO BE CONFIRMED PRIOR TO N1 PIPELINE CONSTRUCTION COMMENCING.
- EXTENT OF CLEARING PERMITTED. REFER TO SPECIFICATION FOR FURTHER DETAILS AND SETOUT REQUIREMENTS.



ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.



PRELIMINARY

B	REISSUED FOR 90% DESIGN - CLIENT COMMENT	GT	JM*	PS*	20/11/20	
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT	JO	JM*	PS*	30/09/20	
No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date

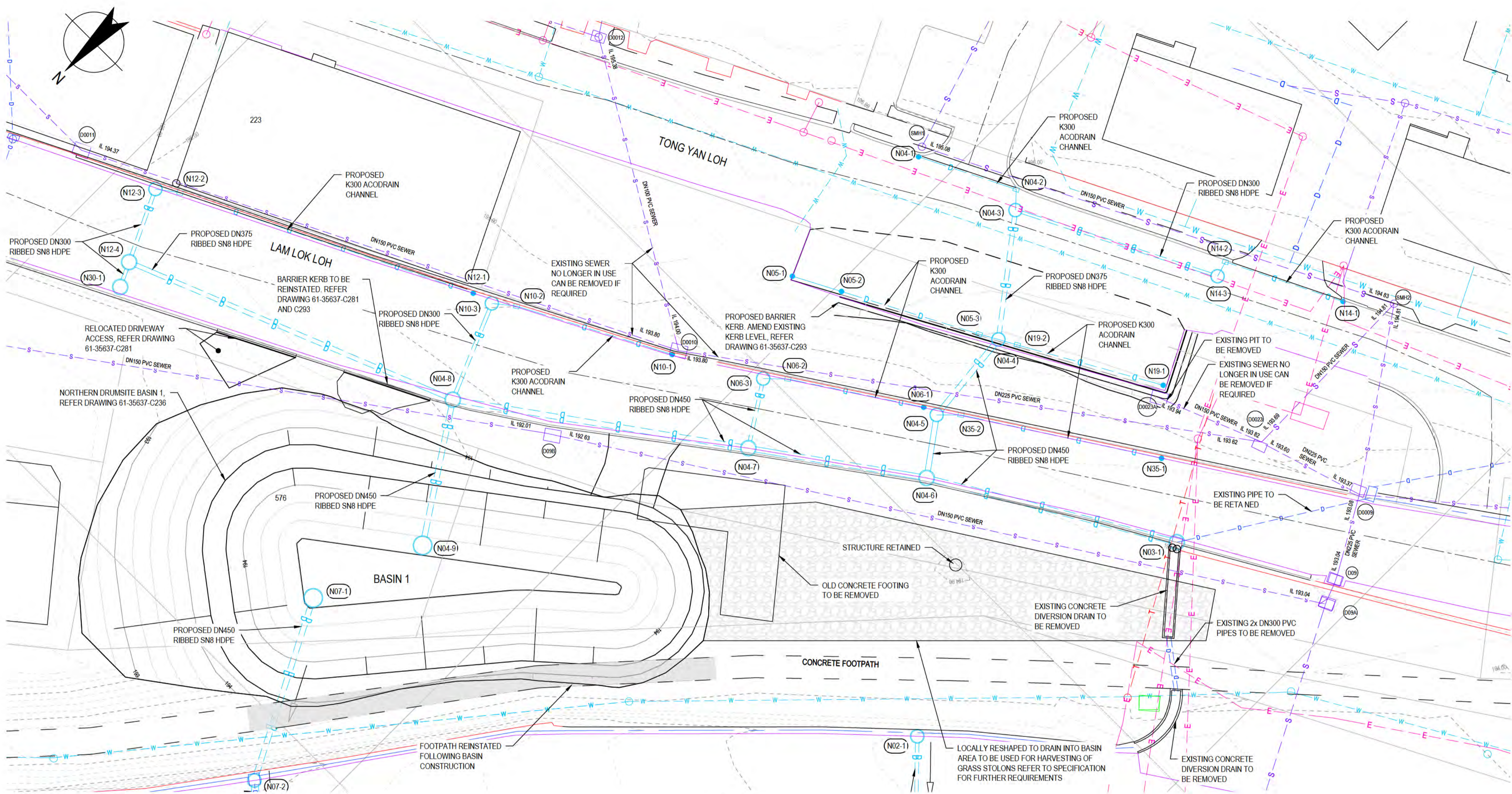
**Australian Government**  
**Department of Infrastructure, Transport, Regional Development and Communications**

**GHD**  
 Level 10, 999 Hay Street Perth WA 6000  
 PO Box Y3106 Perth WA 6832 Australia  
 T 61 8 6222 8222 F 61 8 6222 8555  
 E permail@ghd.com.au W www.ghd.com

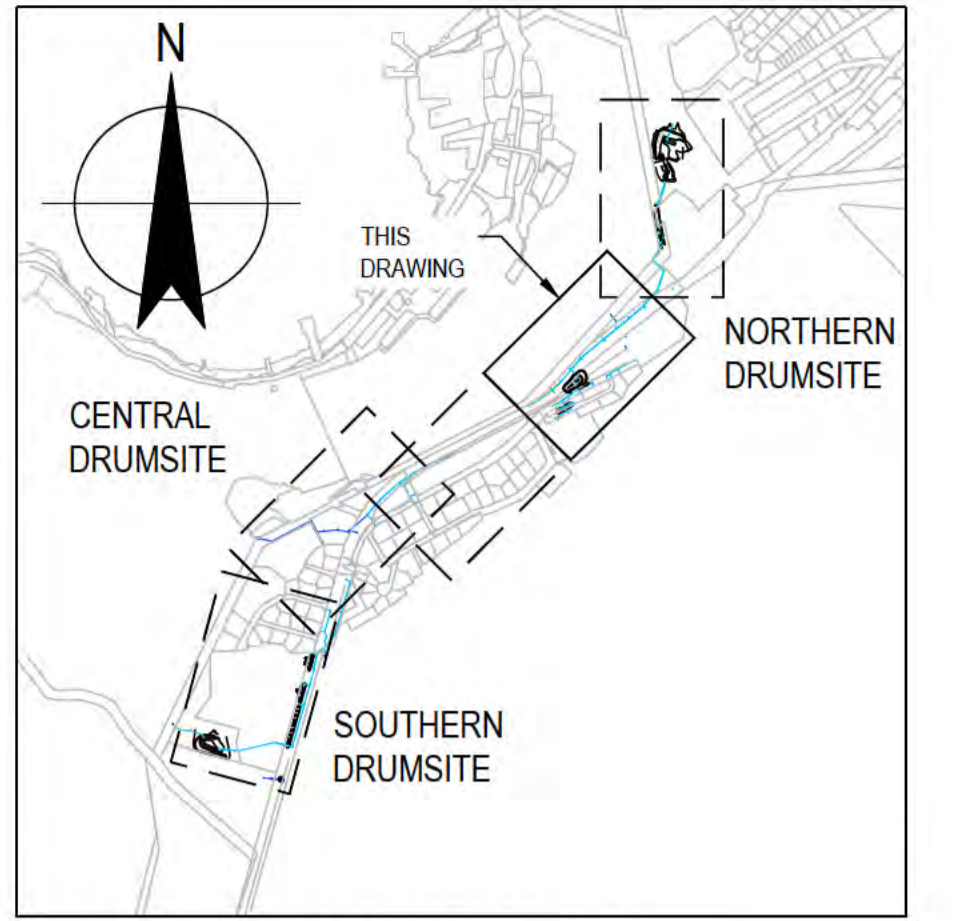
**DO NOT SCALE**  
 Conditions of Use:  
 This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

Drawn	J.OVERHEU	Designer	A.PARAMESWARAN
Drafting Check	S.HORTON*	Design Check	S.CLEARY*
Approved (Project Director)	Date		
Scale	1:500		

Client **DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS**  
 Project **CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS**  
 Title **NORTHERN DRUMSITE WORKS PLAN - SHEET 2**  
 Original Size **A1** Drawing No: **61-35637-C211** Rev: **B**



PLAN  
SCALE 1:200



LOCALITY PLAN  
N.T.S.

THIS DRAWING IS TO BE  
PRINTED IN COLOUR

DRAINAGE STRUCTURE SET OUT			
STRUCTURE NUMBER	NORTHING (m)	EASTING (m)	PIT SIZE (mm) & TYPE
N02-1	88468912.64	573788.28	1050 GULLY PIT
N03-1*	88468885.52	573764.36	1200 COMBINATION PIT
N04-1	8846877.92	573802.85	TRENCH DRAIN END CAP
N04-2	8846874.03	573795.05	TRENCH DRAIN INLINE PIT
N04-3	8846875.32	573793.86	1050 MANHOLE
N04-4	8846883.81	573787.15	1200 COMBINATION PIT
N04-5	8846892.27	573786.33	1050 MANHOLE
N04-6	8846896.63	573783.16	1200 COMBINATION PIT
N04-7	8846905.52	573795.60	1200 COMBINATION PIT
N04-8	8846920.30	573818.18	1200 COMBINATION PIT
N04-9	8846930.81	573809.27	1500 HIGH FLOW PIT
N05-1	8846892.61	573803.25	TRENCH DRAIN END CAP
N05-2	8846890.58	573799.40	SETOUT POINT
N05-3	8846884.90	573788.61	TRENCH DRAIN INLINE PIT

DRAINAGE STRUCTURE SET OUT			
STRUCTURE NUMBER	NORTHING (m)	EASTING (m)	PIT SIZE (mm) & TYPE
N06-1	8846892.58	573787.56	TRENCH DRAIN END CAP
N06-2	8846899.02	573797.38	TRENCH DRAIN INLINE PIT
N06-3	8846900.47	573798.87	1050 GULLY PIT
N07-1	8846940.50	573812.67	1500 HIGH FLOW PIT
N07-2*	8846954.93	573805.28	1050 GULLY PIT
N10-1	8846904.48	573805.76	TRENCH DRAIN END CAP
N10-2	8846910.88	573817.96	TRENCH DRAIN INLINE PIT
N10-3	8846912.21	573819.60	1050 MANHOLE
N12-1	8846912.71	573821.33	TRENCH DRAIN END CAP
N12-2	8846924.30	573844.87	TRENCH DRAIN INLINE PIT
N12-3	8846925.49	573846.55	1050 GULLY PIT
N12-4	8846931.43	573843.76	1200 MANHOLE
N14-1	8846891.18	573788.81	TRENCH DRAIN END CAP
N14-2	8846885.85	573778.21	TRENCH DRAIN INLINE PIT

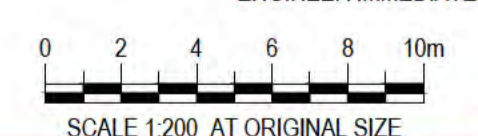
DRAINAGE STRUCTURE SET OUT			
STRUCTURE NUMBER	NORTHING (m)	EASTING (m)	PIT SIZE (mm) & TYPE
N14-3	8846897.18	573777.81	1050 MANHOLE
N19-1	8846876.95	573774.55	TRENCH DRAIN END CAP
N19-2	8846883.26	573785.70	TRENCH DRAIN INLINE PIT
N30-1	8846933.45	573842.81	1200 COMBINATION PIT
N35-1	8846881.41	573770.29	TRENCH DRAIN END CAP
N35-2	8846890.62	573784.87	TRENCH DRAIN INLINE PIT

NOTES:

- REFER TO PIPE LONGITUDINAL SECTION DRAWINGS FOR DETAILS OF PIT AND PIPE LEVELS.
- FOR LEGEND, REFER DRAWING 61-35637-C210.
- EXISTING SERVICES LOCATIONS ARE INDICATIVE ONLY. CONTRACTOR TO CONFIRM LOCATION, SIZE AND LEVEL PRIOR TO COMMENCING CONSTRUCTION. SHOULD ANY CLASHES BE IDENTIFIED WITH PROPOSED WORKS THE CONTRACTOR IS TO IMMEDIATELY NOTIFY THE CLIENT'S REPRESENTATIVE.
- EXISTING COMMUNICATIONS INFORMATION IS INCOMPLETE. VERIFICATION OF PRESENCE THROUGHOUT SITE REQUIRED PRIOR TO COMMENCING CONSTRUCTION.
- \* EXISTING PIT TO BE REPLACE IF REQUIRED.
- LOCATION OF EXISTING ELECTRICAL LINE TO BE CONFIRMED PRIOR TO CONSTRUCTION POSITION SHOWN INDICATIVE ONLY.



ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.



**PRELIMINARY**

B	REISSUED FOR 90% DESIGN - CLIENT COMMENT	GT	JM*	PS*	20/11/20	
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT	JO	JM*	PS*	30/09/20	
No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date

**Australian Government**  
Department of Infrastructure, Transport, Regional Development and Communications

Level 10, 999 Hay Street Perth WA 6000  
PO Box Y3106 Perth WA 6832 Australia  
T 61 8 6222 8222 F 61 8 6222 8555  
E permail@ghd.com.au W www.ghd.com

**DO NOT SCALE**

Conditions of Use:  
This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

Drawn: J.OVERHEU  
Drafting Check: S.HORTON\*  
Approved (Project Director) Date:  
Scale: 1:200

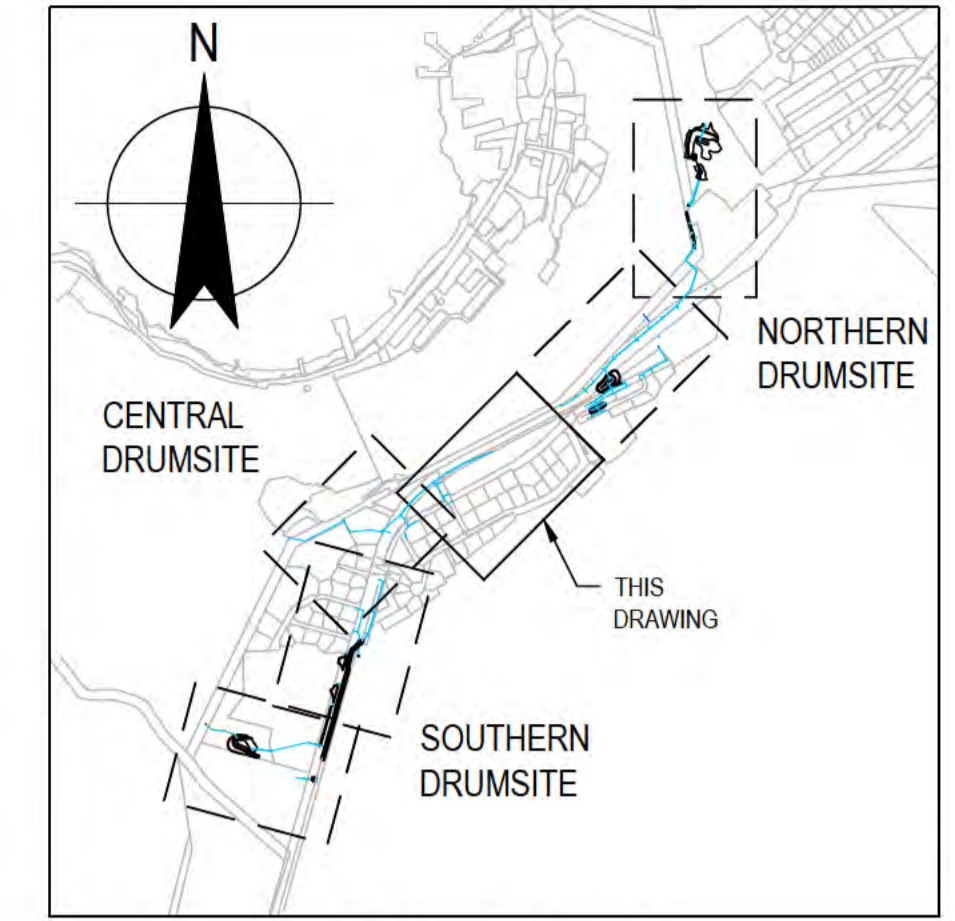
Designer: A.PARAMESWARAN  
Design Check: S.CLEARY\*

This Drawing must not be used for construction unless signed as Approved

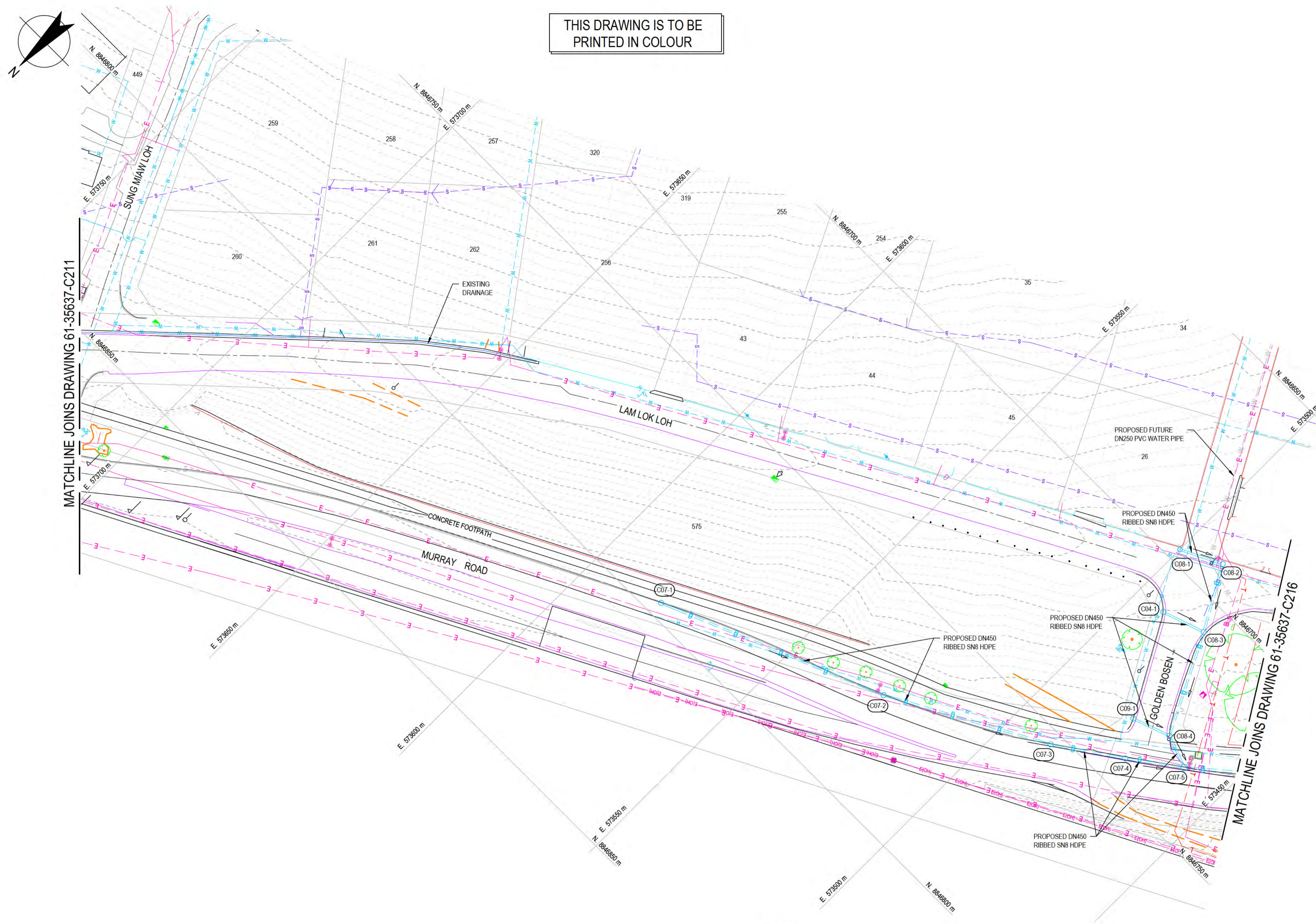
Client: DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS  
Project: CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS  
Title: NORTHERN DRUMSITE WORKS  
PLAN - SHEET 3

Original Size: A1  
Drawing No: **61-35637-C212**  
Rev: B

THIS DRAWING IS TO BE PRINTED IN COLOUR



LOCALITY PLAN  
N.T.S.

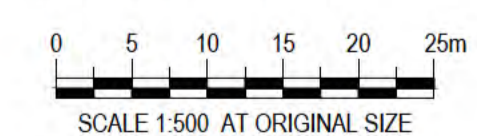


DRAINAGE STRUCTURE SET OUT			
STRUCTURE NUMBER	NORTHING (m)	EASTING (m)	PIT SIZE (mm) & TYPE
C07-1	8846796.37	573580.95	1200 COMBINATION PIT
C07-2	8846773.69	573526.19	1200 COMBINATION PIT
C07-3	8846753.21	573488.52	1200 COMBINATION PIT
C07-4	8846742.69	573473.11	1200 GULLY PIT
C07-5	8846733.99	573461.27	1500 COMBINATION
C08-1	8846696.82	573499.94	1050 GULLY PIT
C08-2	8846691.88	573490.00	1050 GULLY PIT
C08-3	8846707.04	573481.44	1200 COMBINATION PIT
C08-4	8846731.07	573489.37	1200 COMBINATION PIT
C04-1	8846710.58	573491.95	1200 COMBINATION PIT
C09-1	8846734.34	573478.63	1200 COMBINATION PIT

- NOTES:**
- REFER TO PIPE LONGITUDINAL SECTION DRAWINGS FOR DETAILS OF PIT AND PIPE LEVELS.
  - FOR LEGEND, REFER DRAWING 61-35637-C210.
  - EXISTING SERVICES LOCATIONS ARE INDICATIVE ONLY. CONTRACTOR TO CONFIRM LOCATION, SIZE AND LEVEL PRIOR TO COMMENCING CONSTRUCTION. SHOULD ANY CLASHES BE IDENTIFIED WITH PROPOSED WORKS THE CONTRACTOR IS TO IMMEDIATELY NOTIFY THE CLIENT'S REPRESENTATIVE.
  - EXISTING COMMUNICATIONS INFORMATION IS INCOMPLETE. VERIFICATION OF PRESENCE THROUGHOUT SITE REQUIRED PRIOR TO COMMENCING CONSTRUCTION.



ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.



PLAN  
SCALE 1:500

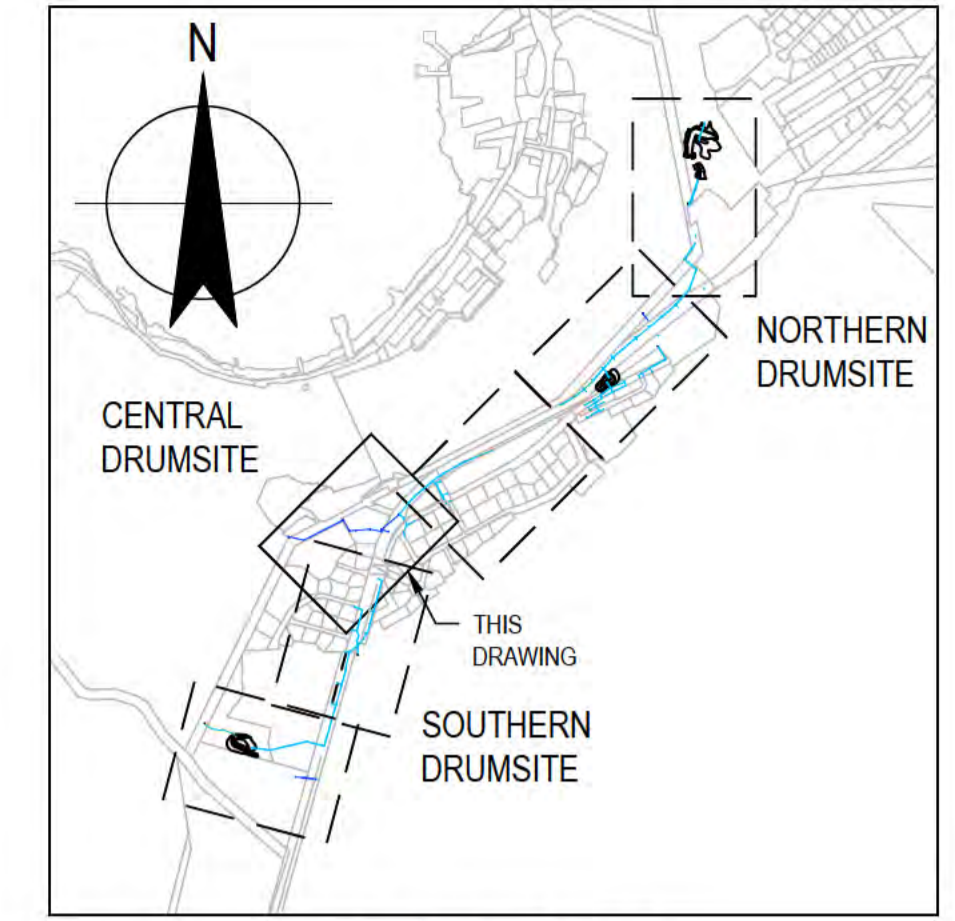
**PRELIMINARY**

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
B	REISSUED FOR 90% DESIGN - CLIENT COMMENT		GT	JM*	PS*	20/11/20
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT		JO	JM*	PS*	30/09/20

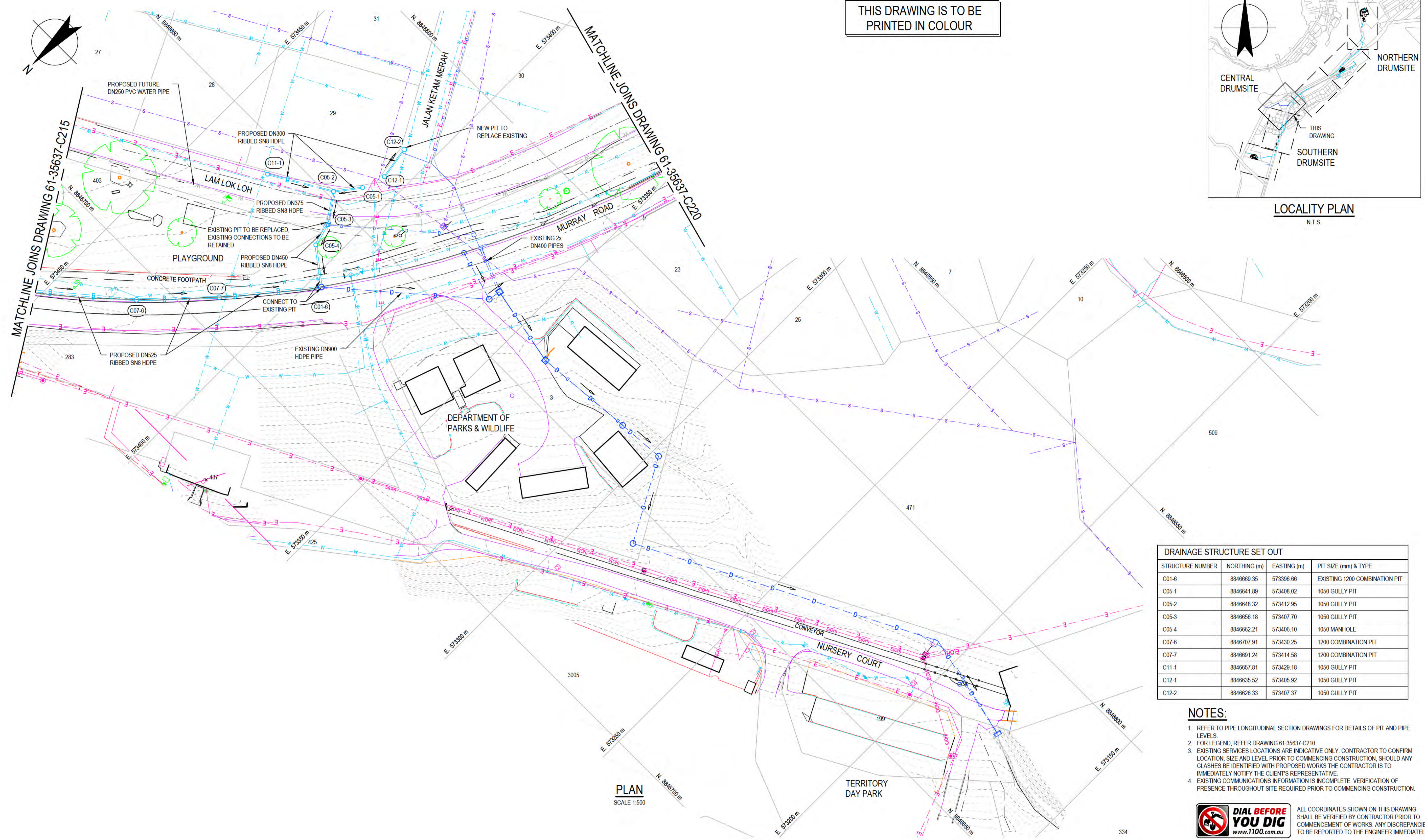


<b>DO NOT SCALE</b>	Drawn J.OVERHEU	Designer A.PARAMESWARAN	Client DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS
Conditions of Use. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.	Drafting Check S.HORTON*	Design Check S.CLEARY*	Project <b>CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS</b>
	Approved (Project Director) Date		Title <b>CENTRAL DRUMSITE WORKS</b>
	Scale 1:500	This Drawing must not be used for construction unless signed as Approved	Original Size <b>A1</b>
			Rev: <b>B</b>

THIS DRAWING IS TO BE PRINTED IN COLOUR



LOCALITY PLAN  
N.T.S.

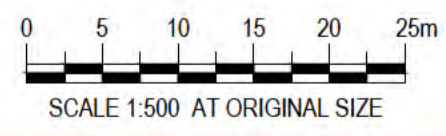


DRAINAGE STRUCTURE SET OUT			
STRUCTURE NUMBER	NORTHING (m)	EASTING (m)	PIT SIZE (mm) & TYPE
C01-8	8846689.35	573396.66	EXISTING 1200 COMBINATION PIT
C05-1	8846641.89	573408.02	1050 GULLY PIT
C05-2	8846648.32	573412.95	1050 GULLY PIT
C05-3	8846656.18	573407.70	1050 GULLY PIT
C05-4	8846662.21	573406.10	1050 MANHOLE
C07-6	8846707.91	573430.25	1200 COMBINATION PIT
C07-7	8846691.24	573414.58	1200 COMBINATION PIT
C11-1	8846657.81	573429.18	1050 GULLY PIT
C12-1	8846635.52	573405.92	1050 GULLY PIT
C12-2	8846626.33	573407.37	1050 GULLY PIT

- NOTES:**
- REFER TO PIPE LONGITUDINAL SECTION DRAWINGS FOR DETAILS OF PIT AND PIPE LEVELS.
  - FOR LEGEND, REFER DRAWING 61-35637-C210.
  - EXISTING SERVICES LOCATIONS ARE INDICATIVE ONLY. CONTRACTOR TO CONFIRM LOCATION, SIZE AND LEVEL PRIOR TO COMMENCING CONSTRUCTION. SHOULD ANY CLASHES BE IDENTIFIED WITH PROPOSED WORKS THE CONTRACTOR IS TO IMMEDIATELY NOTIFY THE CLIENT'S REPRESENTATIVE.
  - EXISTING COMMUNICATIONS INFORMATION IS INCOMPLETE. VERIFICATION OF PRESENCE THROUGHOUT SITE REQUIRED PRIOR TO COMMENCING CONSTRUCTION.

**DIAL BEFORE YOU DIG**  
www.1100.com.au

ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.



SCALE 1:500 AT ORIGINAL SIZE **PRELIMINARY**

PLAN  
SCALE 1:500

No	Revision	Note	Drawn	Job Manager	Project Director	Date
B		REISSUED FOR 90% DESIGN - CLIENT COMMENT	GT	JM*	PS*	20/11/20
A		ISSUED FOR 90% DESIGN - CLIENT COMMENT	JO	JM*	PS*	30/09/20

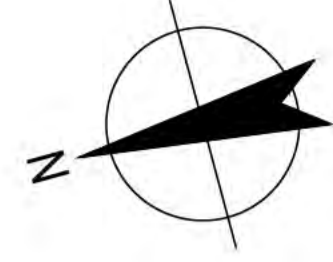
**Australian Government**  
**Department of Infrastructure, Transport, Regional Development and Communications**

**GHD**  
Level 10, 999 Hay Street Perth WA 6000  
PO Box Y3106 Perth WA 6832 Australia  
T 61 8 6222 8222 F 61 8 6222 8555  
E permail@ghd.com.au W www.ghd.com

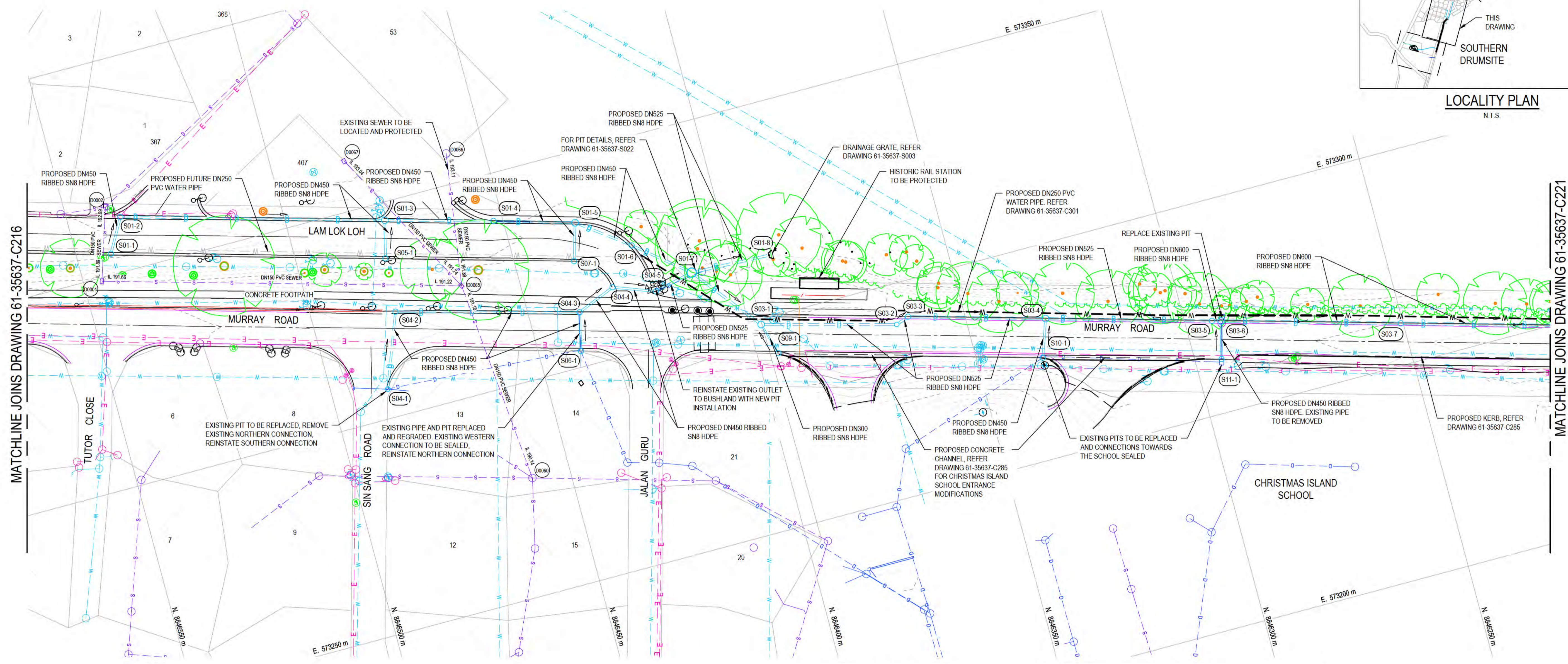
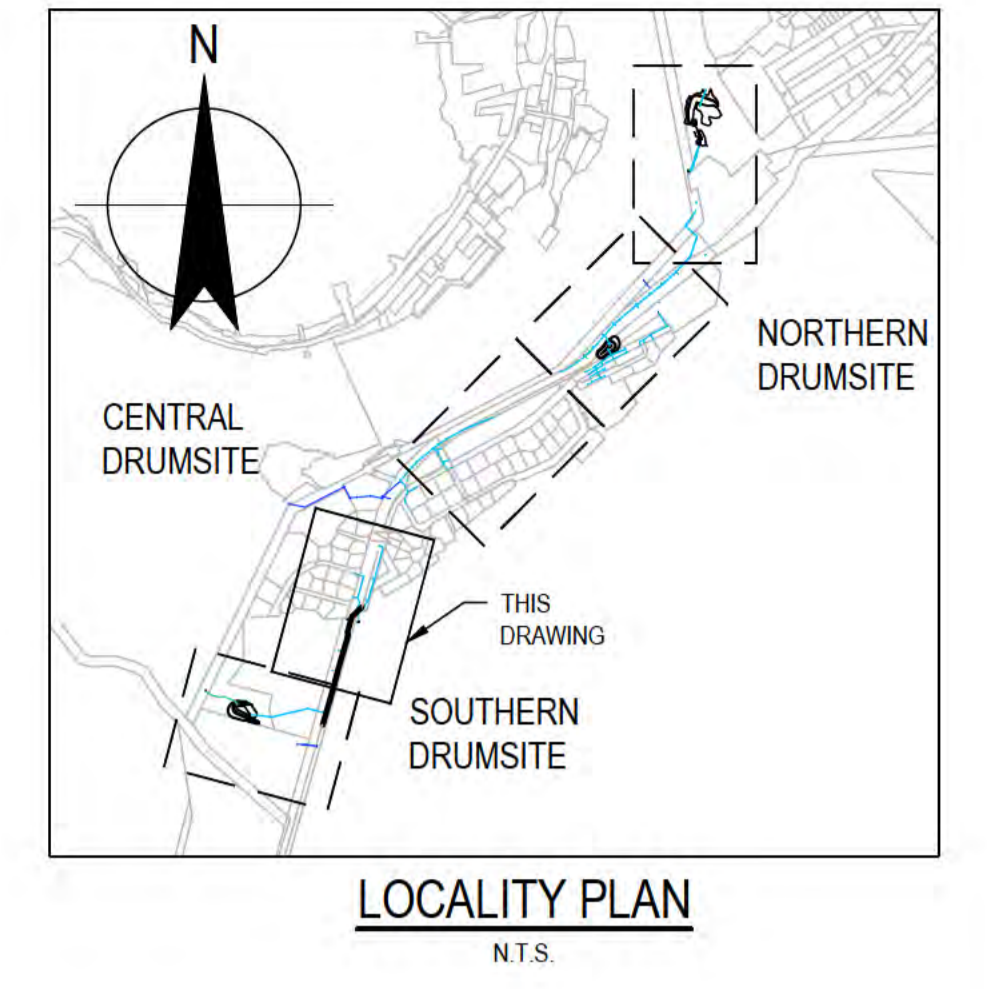
**DO NOT SCALE**  
Conditions of Use:  
This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

Drawn J.OVERHEU Designer A.PARAMESWARAN  
Drafting Check S.HORTON\* Design Check S.CLEARY\*  
Approved (Project Director) Date  
Scale 1:500  
This Drawing must not be used for Construction unless signed as Approved

Client **DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS**  
Project **CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS**  
Title **CENTRAL DRUMSITE WORKS PLAN - SHEET 2**  
Original Size **A1** Drawing No: **61-35637-C216** Rev: **B**



THIS DRAWING IS TO BE PRINTED IN COLOUR



PLAN  
SCALE 1:500

DRAINAGE STRUCTURE SET OUT			
STRUCTURE NUMBER	NORTHING (m)	EASTING (m)	PIT SIZE (mm) & TYPE
S01-1	8846541.95	573354.89	1200 COMBINATION PIT
S01-2	8846537.50	573362.78	1200 COMBINATION PIT
S01-3	8846475.90	573345.41	1500 GULLY PIT
S01-4	8846452.22	573338.93	1200 COMBINATION PIT
S01-5	8846433.64	573333.52	1500 COMBINATION PIT
S01-6	8846422.07	573324.84	1200 COMBINATION PIT
S01-7	8846409.97	573314.92	2100 MANHOLE
S01-8	8846391.15	573314.15	HEADWALL
S03-1	8846397.23	573298.75	1500 MANHOLE
S03-2	8846366.13	573290.44	1050 MANHOLE
S03-3	8846363.08	573291.53	1200 COMBINATION PIT
S03-4	8846331.68	573282.65	1500 COMBINATION PIT
S03-5	8846293.70	573271.91	1200 COMBINATION PIT

DRAINAGE STRUCTURE SET OUT			
STRUCTURE NUMBER	NORTHING (m)	EASTING (m)	PIT SIZE (mm) & TYPE
S03-6	8846291.57	573271.35	1200 COMBINATION PIT
S03-7	8846250.56	573259.77	1500 COMBINATION PIT
S04-1	8846486.72	573306.91	1050 GULLY PIT
S04-2	8846480.27	573324.16	1200 COMBINATION PIT
S04-3	8846438.11	573312.72	1200 COMBINATION PIT
S04-4	8846429.00	573316.43	1200 GULLY PIT
S04-5	8846419.33	573312.84	1200 GULLY PIT
S05-1	8846478.84	573336.82	1200 COMBINATION PIT
S06-1	8846440.17	573303.76	1200 COMBINATION PIT
S07-1	8846436.21	573324.78	1200 COMBINATION PIT
S09-1	8846395.04	573291.16	1200 COMBINATION PIT
S10-1	8846334.70	573273.88	1200 COMBINATION PIT
S11-1	8846293.82	573262.59	1200 COMBINATION PIT

- NOTES:**
- REFER TO PIPE LONGITUDINAL SECTION DRAWINGS FOR DETAILS OF PIT AND PIPE LEVELS.
  - FOR LEGEND, REFER DRAWING 61-35637-C210.
  - EXISTING SERVICES LOCATIONS ARE INDICATIVE ONLY. CONTRACTOR TO CONFIRM LOCATION, SIZE AND LEVEL PRIOR TO COMMENCING CONSTRUCTION. SHOULD ANY CLASHES BE IDENTIFIED WITH PROPOSED WORKS THE CONTRACTOR IS TO IMMEDIATELY NOTIFY THE PRINCIPAL'S REPRESENTATIVE.
  - EXISTING COMMUNICATIONS INFORMATION IS INCOMPLETE. VERIFICATION OF PRESENCE THROUGHOUT SITE REQUIRED PRIOR TO COMMENCING CONSTRUCTION.

**DIAL BEFORE YOU DIG**  
www.1100.com.au

ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.



**PRELIMINARY**

No	Revision	Note	Drawn	Job Manager	Project Director	Date
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT		JO	JM*	PS*	30/09/20

**Australian Government**  
Department of Infrastructure, Transport, Regional Development and Communications

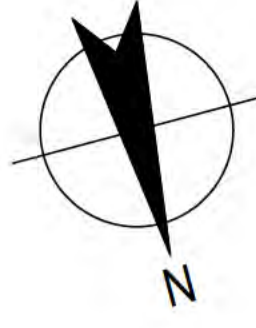
**GHD**  
Level 10, 999 Hay Street Perth WA 6000  
PO Box Y3106 Perth WA 6832 Australia  
T 61 8 6222 8222 F 61 8 6222 8555  
E permail@ghd.com.au W www.ghd.com

**DO NOT SCALE**

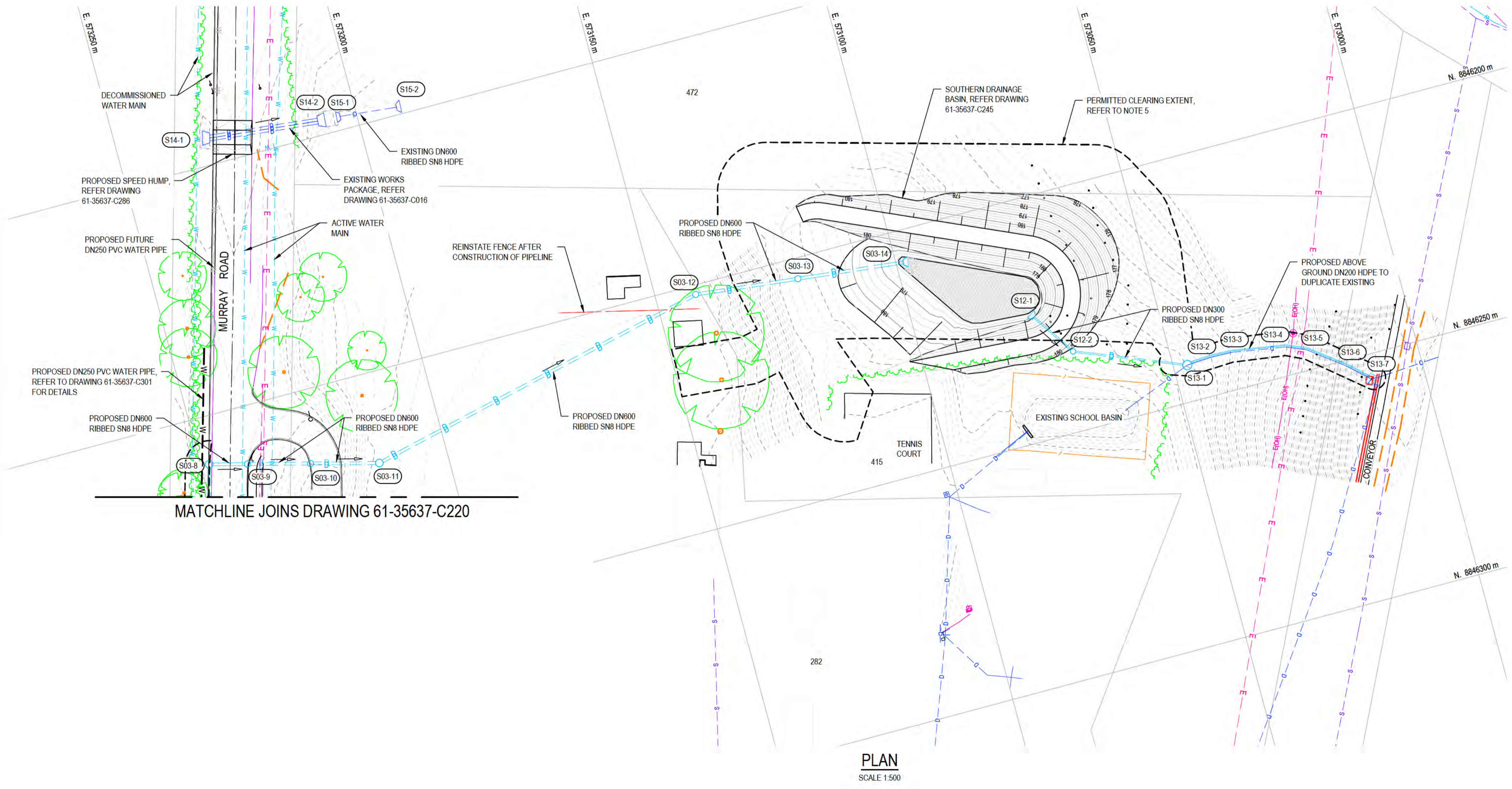
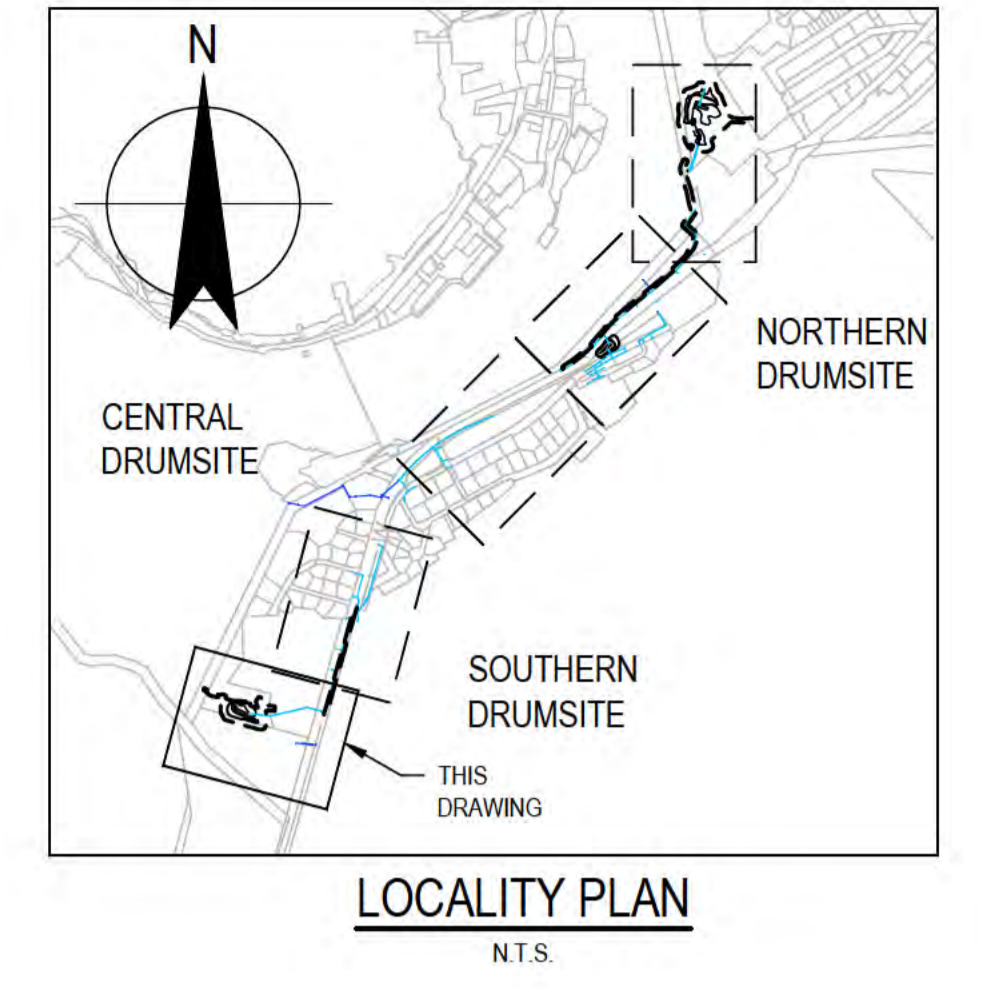
Conditions of Use.  
This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

Drawn J.OVERHEU Designer A.PARAMESWARAN  
Drafting Check S.HORTON\* Design Check S.CLEARY\*  
Approved (Project Director) Date  
Scale 1:500

Client **DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS**  
Project **CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS**  
Title **SOUTHERN DRUMSITE WORKS PLAN - SHEET 1**  
Original Size **A1** Drawing No: **61-35637-C220** Rev: **A**

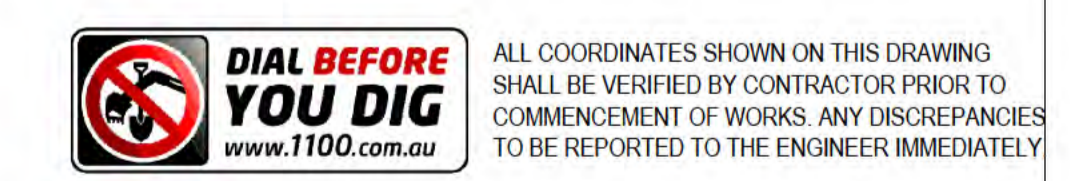


THIS DRAWING IS TO BE PRINTED IN COLOUR



- NOTES:**
1. REFER TO PIPE LONGITUDINAL SECTION DRAWINGS FOR DETAILS OF PIT AND PIPE LEVELS.
  2. FOR LEGEND, REFER DRAWING 61-35637-C210.
  3. EXISTING SERVICES LOCATIONS ARE INDICATIVE ONLY. CONTRACTOR TO CONFIRM LOCATION, SIZE AND LEVEL PRIOR TO COMMENCING CONSTRUCTION. SHOULD ANY CLASHES BE IDENTIFIED WITH PROPOSED WORKS THE CONTRACTOR IS TO IMMEDIATELY NOTIFY THE CLIENT'S REPRESENTATIVE.
  4. EXISTING COMMUNICATIONS INFORMATION IS INCOMPLETE. VERIFICATION OF PRESENCE THROUGHOUT SITE REQUIRED PRIOR TO COMMENCING CONSTRUCTION.
  5. EXTENT OF CLEARING PERMITTED. REFER TO SPECIFICATION FOR FURTHER DETAILS AND SETOUT REQUIREMENTS.

DRAINAGE STRUCTURE SET OUT			
STRUCTURE NUMBER	NORTHING (m)	EASTING (m)	PIT SIZE (mm) & TYPE
S03-8	8846209.85	573248.25	1500 COMBINATION PIT
S03-9	8846211.84	573240.57	1200 COMBINATION PIT
S03-10	8846215.10	573227.93	1200 COMBINATION PIT
S03-11	8846218.70	573214.12	1500 MANHOLE
S03-12	8846201.94	573141.73	1200 MANHOLE
S03-13	8846204.27	573120.45	1200 MANHOLE
S03-14	8846206.67	573098.42	HEADWALL
S12-1	8846224.61	573075.28	HEADWALL
S12-2	8846233.58	573069.27	1050 MANHOLE
S13-1	8846242.44	573047.12	1800 MANHOLE
S13-2	8846242.12	573041.88	DEFLECTION
S13-3	8846242.26	573037.65	DEFLECTION
S13-4	8846244.08	573028.41	DEFLECTION
S13-5	8846245.74	573022.49	DEFLECTION
S13-6	8846251.04	573015.48	DEFLECTION
S13-7	8846255.10	573011.03	EXISTING PIT
S15-1	8846147.29	573204.01	PROPOSED PIT
S15-2	8846148.41	573191.14	PROPOSED PIT



**PRELIMINARY**

No	Revision	Note	Drawn	Job Manager	Project Director	Date
B		REISSUED FOR 90% DESIGN - CLIENT COMMENT	GT	JM*	PS*	20/11/20
A		ISSUED FOR 90% DESIGN - CLIENT COMMENT	JO	JM*	PS*	30/09/20

**Australian Government**  
 Department of Infrastructure, Transport, Regional Development and Communications

Level 10, 999 Hay Street Perth WA 6000  
 PO Box Y3106 Perth WA 6832 Australia  
 T 61 8 6222 8222 F 61 8 6222 8555  
 E permail@ghd.com.au W www.ghd.com

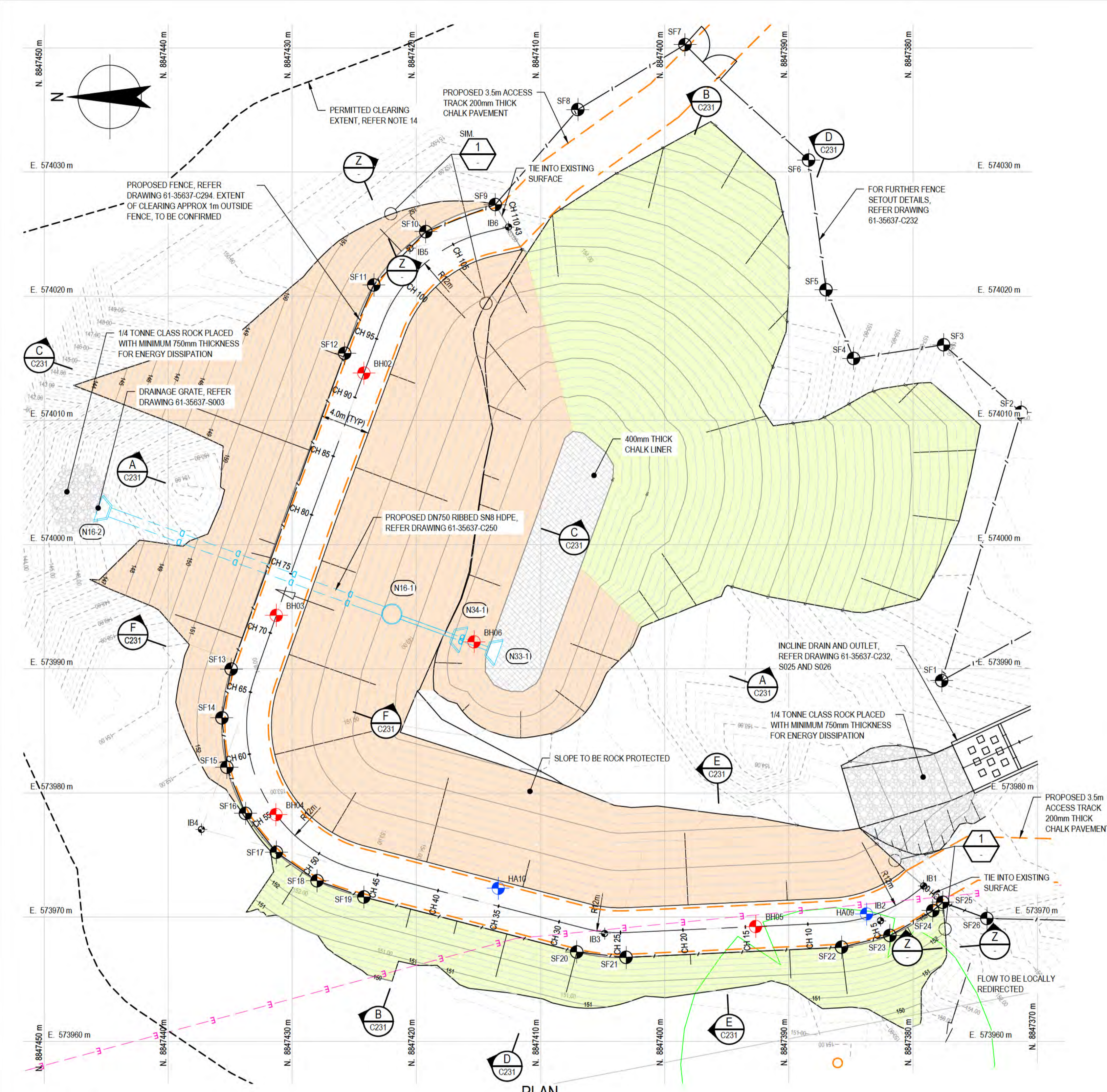
**DO NOT SCALE**

Conditions of Use:  
 This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

Drawn: J.OVERHEU  
 Designer: A.PARAMESWARAN  
 Drafting Check: S.HORTON\*  
 Design Check: S.CLEARY\*  
 Approved (Project Director) Date: \_\_\_\_\_  
 Scale: 1:500

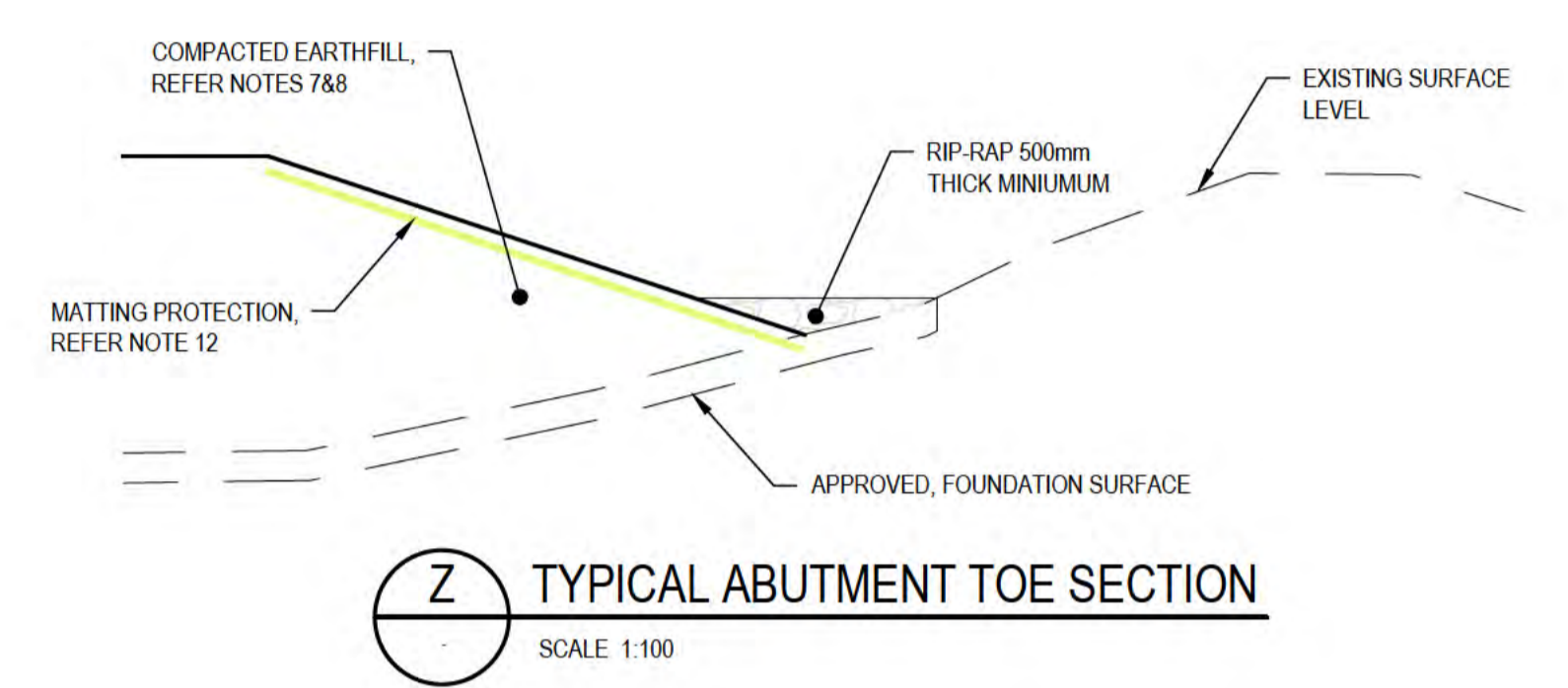
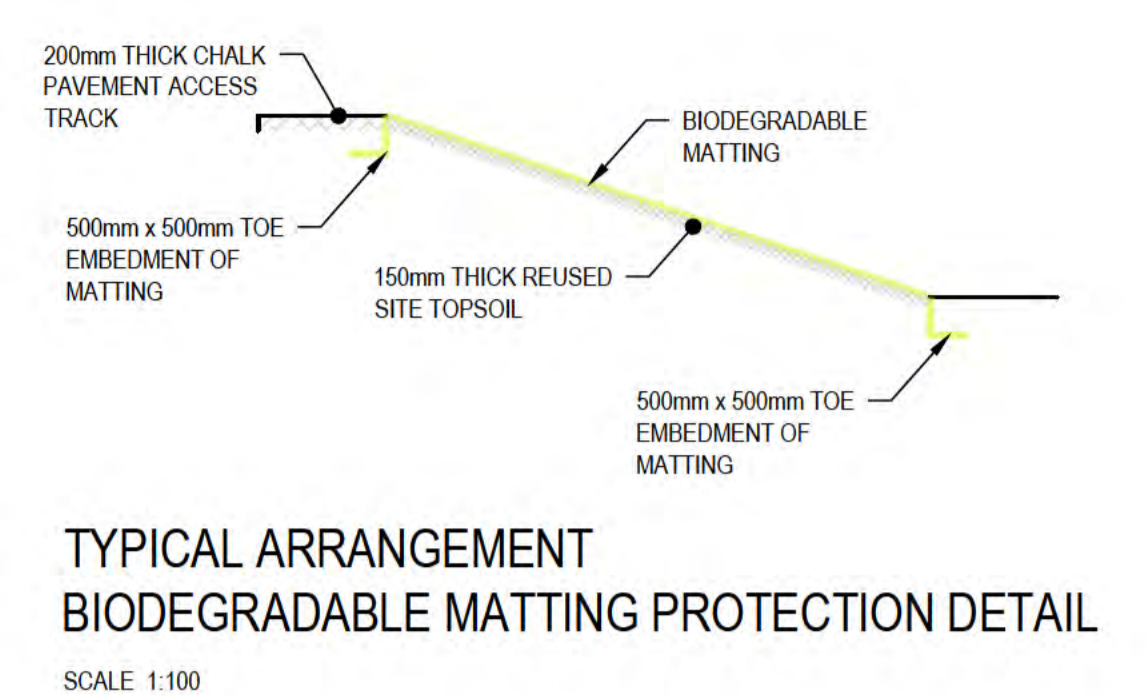
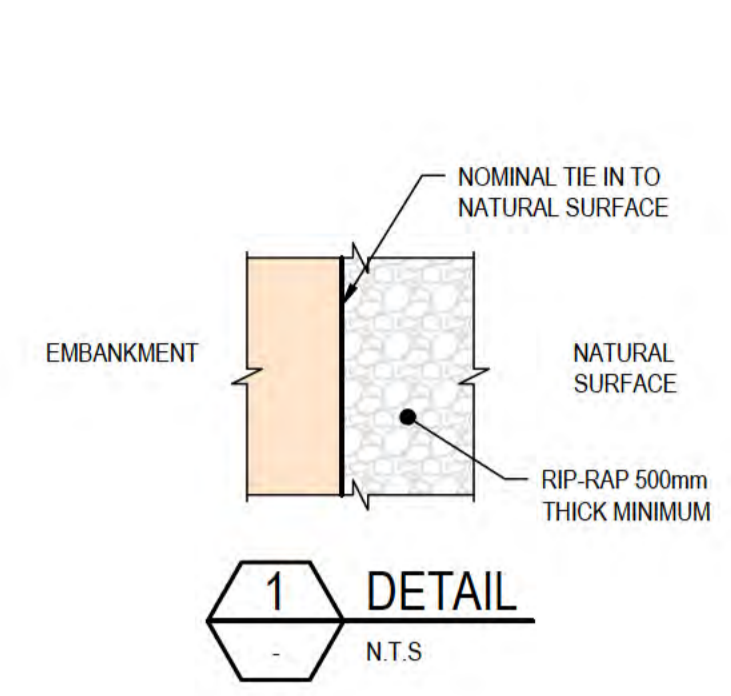
This Drawing must not be used for Construction unless signed as Approved

Client: DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS  
 Project: CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS  
 Title: SOUTHERN DRUMSITE WORKS PLAN - SHEET 2  
 Original Size: A1  
 Drawing No: **61-35637-C221**  
 Rev: B



**LEGEND:**

- ROCK SCOUR PROTECTION, REFER NOTE 11
- BIODEGRADABLE MATTING PROTECTION, REFER NOTE 12
- CHALK LINER
- ROCK PROTECTION
- PREVIOUS SITE INVESTIGATION LOCATION (APPROX.)
- PROPOSED ADDITIONAL BOREHOLES



**THIS DRAWING IS TO BE PRINTED IN COLOUR**

**GEOTECHNICAL TEST LOCATIONS**

SETOUT POINT	NORTHING (m)	EASTING (m)
BH02	8847424.23	574013.82
BH03	8847431.29	573994.30
BH04	8847431.31	573978.26
BH05	8847392.68	573969.25
BH06	8847415.36	573992.17
HA09	8847383.75	573970.26
HA10	8847413.41	573972.33

**SECURITY FENCE SET OUT**

SETOUT POINT	NORTHING (m)	EASTING (m)
SF1	8847377.68	573989.04
SF2	8847371.29	574010.66
SF3	8847377.53	574016.09
SF4	8847384.79	574014.99
SF5	8847387.00	574020.52
SF6	8847388.41	574030.96
SF7	8847398.36	574040.26
SF8	8847407.00	574035.04
SF9	8847413.65	574027.38
SF10	8847419.24	574025.20
SF11	8847423.43	574020.91
SF12	8847425.78	574015.41
SF13	8847434.92	573989.97
SF14	8847435.67	573986.05
SF15	8847435.27	573982.07
SF16	8847433.77	573978.36
SF17	8847431.28	573975.23
SF18	8847428.01	573972.93
SF19	8847424.23	573971.62
SF20	8847407.09	573967.20
SF21	8847403.11	573966.76
SF22	8847385.75	573967.58
SF23	8847381.86	573968.53
SF24	8847378.40	573970.53
SF25	8847377.60	573971.20
SF26	8847374.05	573969.90

- NOTES:**
- SETOUT POINTS ARE FOR REFERENCE ONLY, REFER TO 12D MODEL.
  - FOR LEGEND, REFER DRAWING 61-35637-C210.
  - ALL DIMENSIONS ARE IN METRES (m) UNO.
  - ALL RLs ARE IN METRES TO CHRISTMAS ISLAND HEIGHT DATUM (m CHID)
  - ALL WORKS SHALL BE UNDERTAKEN IN ACCORDANCE WITH THE LATEST EDITION OF CURRENT STANDARDS, SPECIFICATIONS AND DRAWINGS.
  - DRAWINGS SHALL NOT BE SCALED.
  - EARTHFILL COMPACTED TO MIN 95% SMDD, VERIFIED BY NUCLEAR DENSIMETER (NDM) OR SAND REPLACEMENT TEST.
  - EARTHFILL TO COMPRISE EXCAVATED MATERIAL FROM BASIN, AND/OR IMPORTED MATERIALS (REFER SPECIFICATION).
  - BASE OF EXCAVATION COMPACTED TO MINIMUM 95% SMDD, VERIFIED BY NDM OR SAND REPLACEMENT TEST.
  - FOR LOCATION OF BASIN, REFER DRAWING 61-35637-C210.
  - ROCK PROTECTION NOMINAL STONE SIZE 200-300mm WITH GEOFABRIC BIOM A44 OR EQUIVALENT UNDERLAY.
  - BIODEGRADABLE MATTING PROTECTION PLACED ON EXCAVATED SLOPE AFTER PLACEMENT OF 150mm OF TOPSOIL.
  - ADDITIONAL GEOTECHNICAL INVESTIGATION REQUIRED TO BE COMPLETED PRIOR TO CONSTRUCTION COMMENCING. REFER SPECIFICATIONS FOR DETAILS.
  - EXTENT OF CLEARING PERMITTED. REFER TO SPECIFICATION FOR FURTHER DETAILS AND SETOUT REQUIREMENTS.

**DIAL BEFORE YOU DIG**  
www.1100.com.au

ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.

**DRAINAGE STRUCTURE SET OUT**

SETOUT POINT	NORTHING (m)	EASTING (m)
IB1	8847379.14	573972.52
IB2	8847382.62	573969.71
IB3	8847404.84	573968.68
IB4	8847437.32	573977.07
IB5	8847420.52	574023.86
IB6	8847412.58	574025.58

0 2 4 6 8 10m  
SCALE 1:200 AT ORIGINAL SIZE

**PRELIMINARY**

No	Revision	Note	Drawn	Job Manager	Project Director	Date
B	REISSUED FOR 90% DESIGN - CLIENT COMMENT		GT	JM*	PS*	20/11/20
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT		JO	JM*	PS*	30/09/20

**Australian Government**  
Department of Infrastructure, Transport, Regional Development and Communications

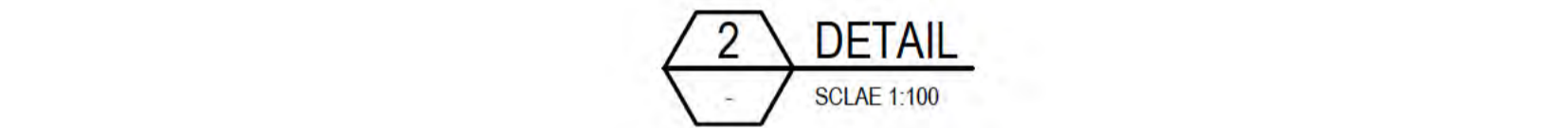
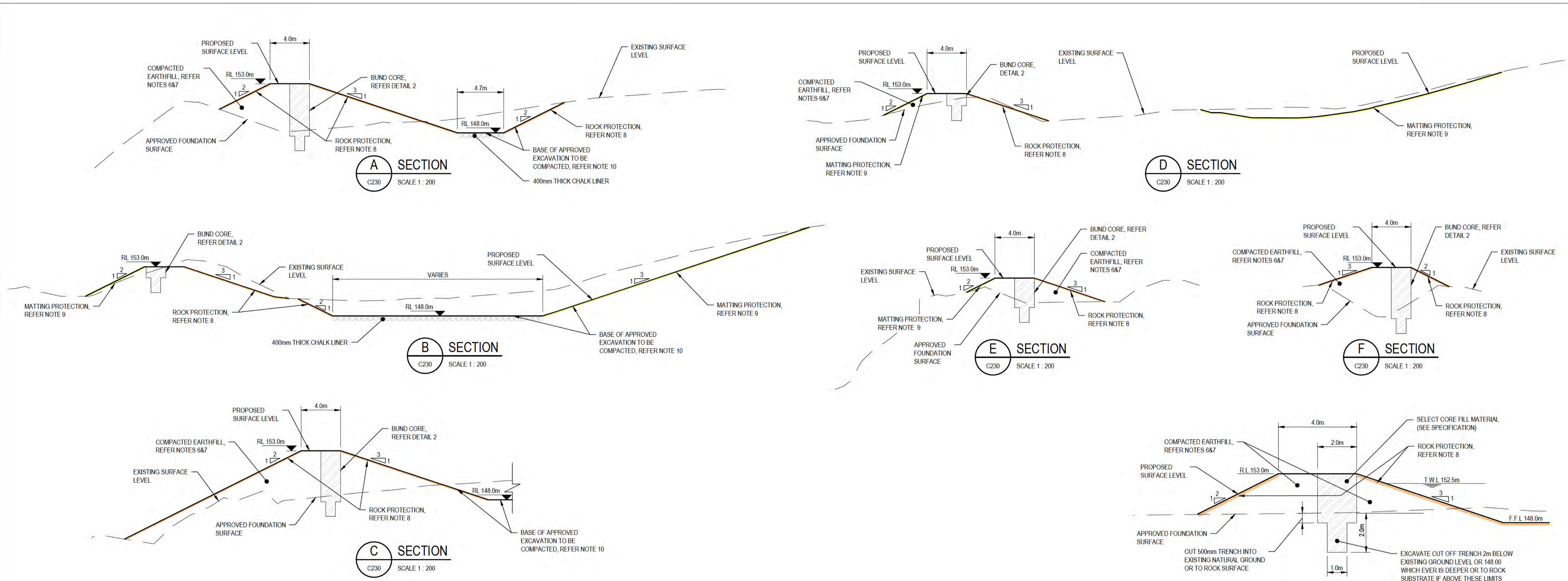
**GHD**  
Level 10, 999 Hay Street Perth WA 6000  
PO Box Y3106 Perth WA 6832 Australia  
T 61 8 6222 8222 F 61 8 6222 8555  
E permail@ghd.com.au W www.ghd.com

**DO NOT SCALE**

Conditions of Use. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

Drawn J.OVERHEU Designer J.VALE  
Drafting Check S.HORTON\* Design Check S. CLEARY\*  
Approved (Project Director) Date  
Scale 1:200 This Drawing must not be used for construction unless signed as Approved

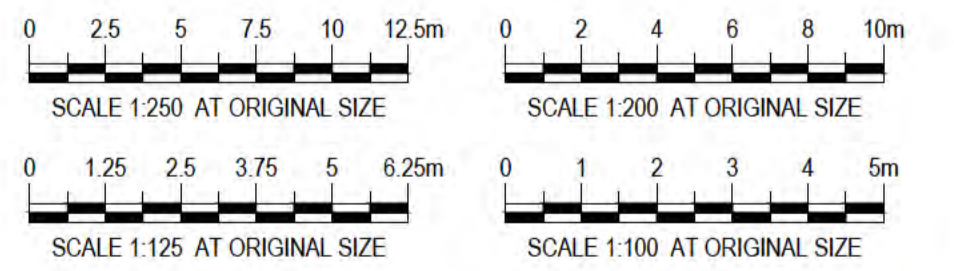
Client **DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS**  
Project **CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS**  
Title **NORTHERN DRUMSITE WORKS - IN-LINE BASIN PLAN AND TYPICAL SECTIONS**  
Original Size **A1** Drawing No: **61-35637-C230** Rev: **B**



THIS DRAWING IS TO BE PRINTED IN COLOUR

**NOTES:**

- FOR LAYOUT OF INCLINE BASIN BUND, REFER DRAWING 61-35637-C230.
- ALL DIMENSIONS ARE IN METRES (m) UNO.
- ALL RLs ARE IN METRES TO CHRISTMAS ISLAND HEIGHT DATUM (m CHID).
- ALL WORKS SHALL BE UNDERTAKEN IN ACCORDANCE WITH THE LATEST EDITION OF CURRENT STANDARDS, SPECIFICATIONS AND DRAWINGS.
- DRAWINGS SHALL NOT BE SCALED.
- EARTHFILL COMPACTED TO MIN 95% SMDD, VERIFIED BY NUCLEAR DENSIMETER (NDM) OR SAND REPLACEMENT TEST.
- EARTHFILL TO COMPRISE EXCAVATED MATERIAL FROM BASIN, AND/OR IMPORTED MATERIALS (REFER SPECIFICATION).
- ROCK PROTECTION NOMINAL STONE SIZE 200-300mm WITH GEOFABRIC BIDIM A44 OR EQUIVALENT UNDERLAY.
- BIODEGRADABLE MATTING PROTECTION PLACED ON EXCAVATED SLOPE AFTER PLACEMENT OF 150mm OF TOPSOIL.
- BASE OF EXCAVATION COMPACTED TO MINIMUM 95% SMDD, VERIFIED BY NDM OR SAND REPLACEMENT TEST.



DATUM RL. 145.0m

VERTICAL ALIGNMENT																															
HORIZONTAL ALIGNMENT	L=0.29m	L=8.30m R=12.00m	L=16.53m				L=3.59m R=12.00m	L=18.68m				L=14.00m				L=16.06m		L=11.95m R=12.00m		L=1.64m											
INCLINE BASIN																															
EXISTING SURFACE LEVEL	153.42	151.12	150.63	150.56	150.44	152.19	152.45	152.25	152.26	152.30	152.67	153.05	152.81	152.84	152.94	151.25	149.11	148.24	147.68	147.86	148.16	148.30	149.01	150.02	150.50	150.97	151.80	152.66	153.00	153.00	153.00
CHAINAGE	0.00	5.00	8.89	10.00	15.00	20.00	25.00	28.72	30.00	35.00	40.00	45.00	47.40	50.00	55.00	60.00	65.00	67.26	70.00	75.00	80.00	85.00	90.00	95.00	97.32	100.00	105.00	109.28	110.00	110.43	113.00

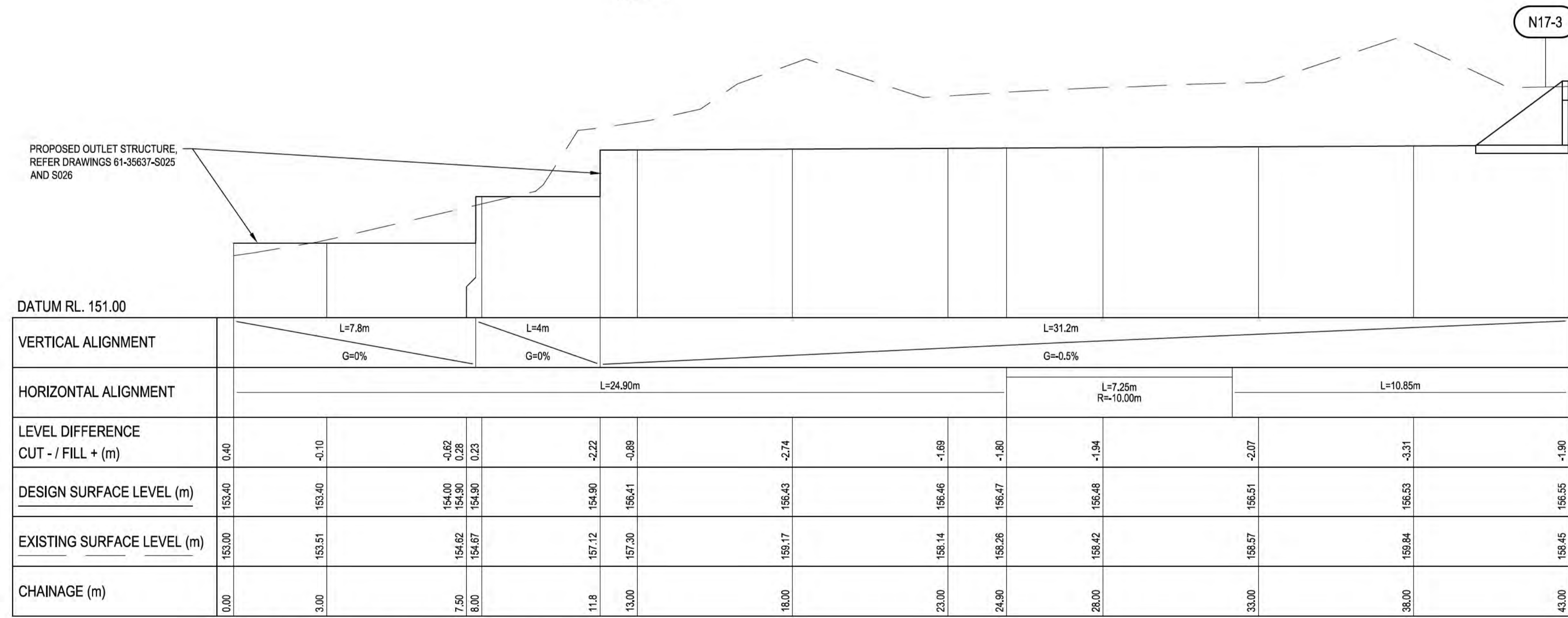
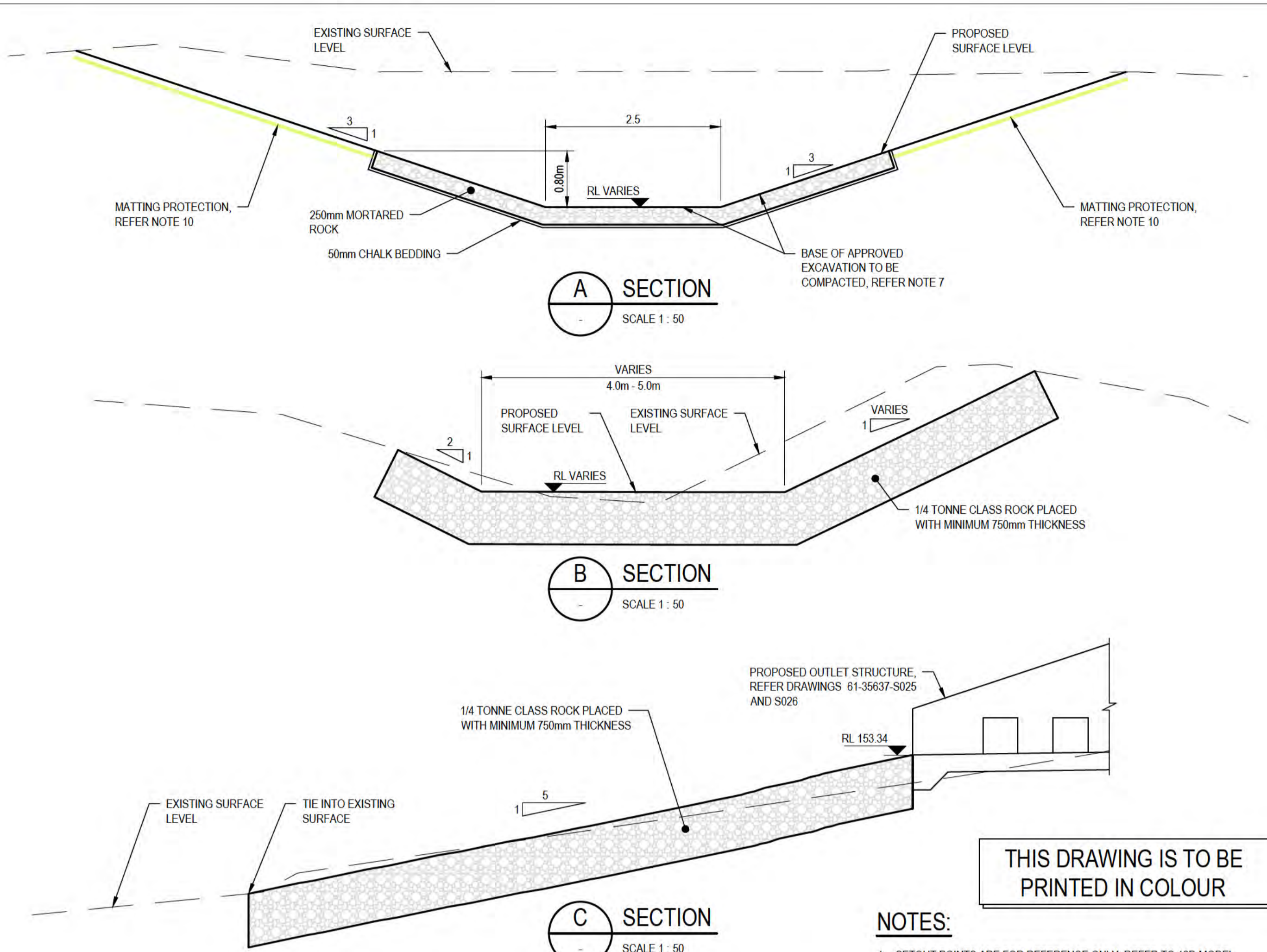
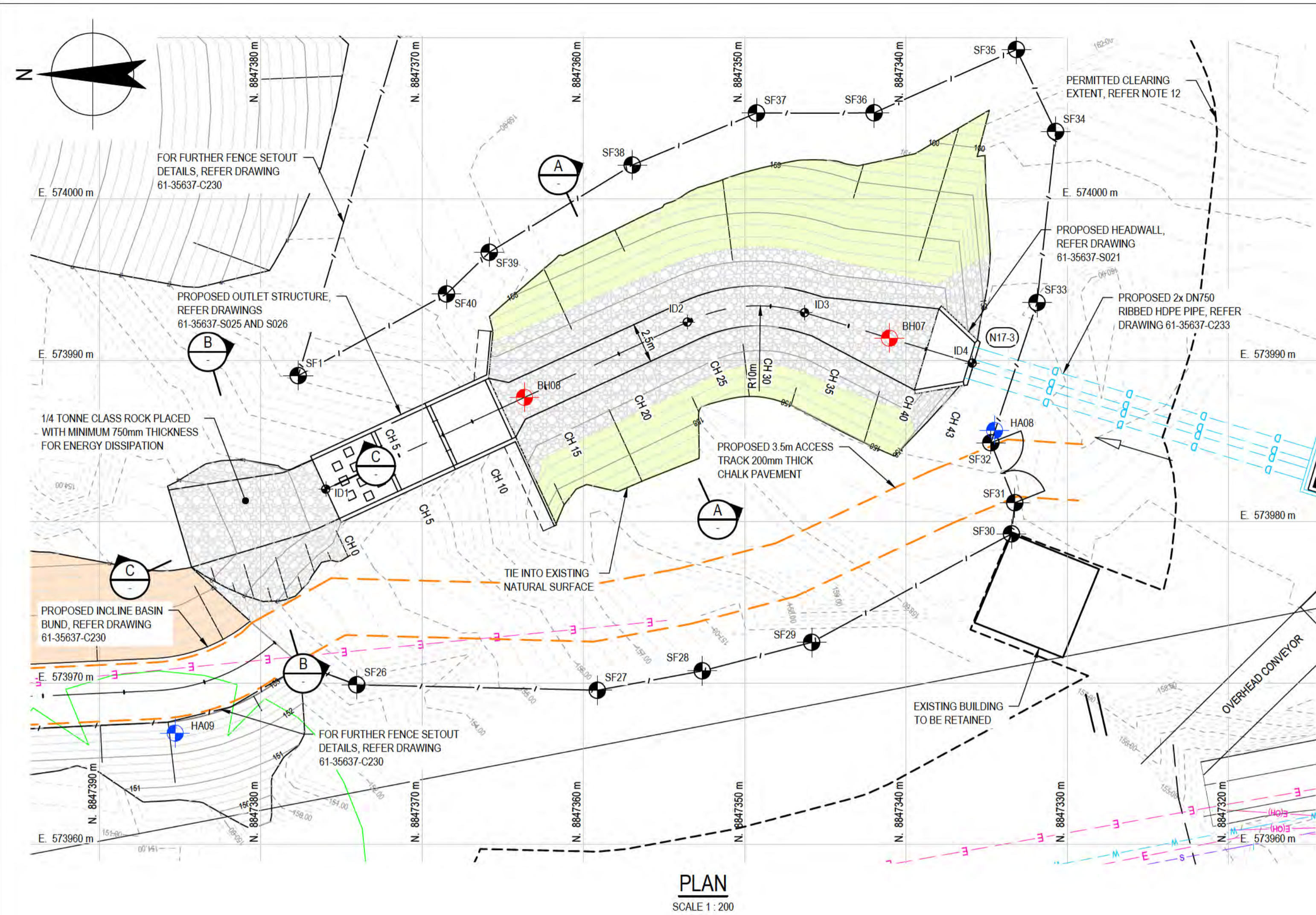
**INCLINE BASIN BUND - LONGITUDINAL SECTION**

HORIZONTAL SCALE 1:250  
VERTICAL SCALE 1:125

B	REISSUED FOR 90% DESIGN - CLIENT COMMENT	GT	JM*	PS*	20/11/20	
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT	JO	JM*	PS*	30/09/20	
No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date



<b>DO NOT SCALE</b>	Drawn J.OVERHEU	Designer J.VALE	Client DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS
Conditions of Use. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.	Drafting Check S.HORTON*	Design Check S.CLEARY*	Project CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS
	Approved (Project Director) Date		Title NORTHERN DRUMSITE WORKS LONGITUDINAL SECTION, TYPICAL SECTIONS & DETAILS
	Scale AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	Original Size A1 Drawing No: 61-35637-C231 Rev: B



**INCLINE DRAIN - LONGITUDINAL SECTION**  
HORIZONTAL SCALE 1:100  
VERTICAL SCALE 1:100

**GEOTECHNICAL TEST LOCATIONS**

SETOUT POINT	NORTHING (m)	EASTING (m)
BH07	8847341.03	573981.37
BH08	8847363.65	573987.70
HA08	8847334.51	573985.66
HA09	8847385.30	573966.90

**SECURITY FENCE SET OUT**

SETOUT POINT	NORTHING (m)	EASTING (m)
SF1	8847377.68	573989.04
SF26	8847374.05	573969.90
SF27	8847359.13	573969.56
SF28	8847352.63	573970.75
SF29	8847345.85	573972.53
SF30	8847333.46	573979.25
SF31	8847333.26	573981.17
SF32	8847334.73	573984.89
SF33	8847331.87	573993.57
SF34	8847330.72	574004.17
SF35	8847333.16	574009.25
SF36	8847341.98	574005.33
SF37	8847349.26	574005.33
SF38	8847356.97	574002.10
SF39	8847385.83	573996.69
SF40	8847368.48	573994.11

**DRAINAGE STRUCTURE SET OUT**

SETOUT POINT	NORTHING (m)	EASTING (m)
ID1	8847375.97	573982.01
ID2	8847353.56	573992.37
ID3	8847346.29	573992.95
ID4	8847335.90	573989.82

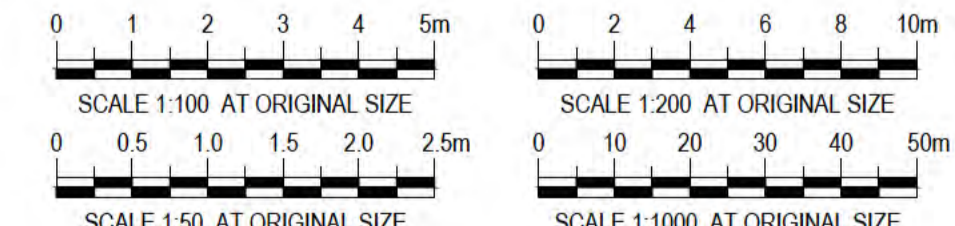
**THIS DRAWING IS TO BE PRINTED IN COLOUR**

- NOTES:**
- SETOUT POINTS ARE FOR REFERENCE ONLY, REFER TO 12D MODEL.
  - FOR LEGEND, REFER DRAWING 61-35637-C210.
  - ALL DIMENSIONS ARE IN METRES (m) UNO.
  - ALL RLs ARE IN METRES TO CHRISTMAS ISLAND HEIGHT DATUM (m CHD)
  - ALL WORKS SHALL BE UNDERTAKEN IN ACCORDANCE WITH THE LATEST EDITION OF CURRENT STANDARDS, SPECIFICATIONS AND DRAWINGS.
  - DRAWINGS SHALL NOT BE SCALED.
  - BASE OF EXCAVATION COMPACTED TO MINIMUM 95% SMDD, VERIFIED BY NDM OR SAND REPLACEMENT TEST.
  - FOR LOCATION OF DRAIN, REFER DRAWING 61-35637-C210.
  - ROCK PROTECTION NOMINAL STONE SIZE 200-300mm WITH GEOFABRIC BIDIM A44 OR EQUIVALENT UNDERLAY.
  - BIODEGRADABLE MATTING PROTECTION PLACED ON EXCAVATED SLOPE AFTER PLACEMENT OF 150mm OF TOPSOIL.
  - ADDITIONAL GEOTECHNICAL INVESTIGATION REQUIRED TO BE COMPLETED PRIOR TO CONSTRUCTION COMMENCING REFER (SPECS) FOR DETAILS.
  - EXTENT OF CLEARING PERMITTED. REFER TO SPECIFICATION FOR FURTHER DETAILS AND SETOUT REQUIREMENTS.

- LEGEND:**
- ROCK SCOUR PROTECTION, REFER NOTE 9
  - BIODEGRADABLE MATTING PROTECTION, REFER NOTE 10
  - PREVIOUS SITE INVESTIGATION LOCATION (APPROX.)
  - PROPOSED ADDITIONAL BOREHOLES



ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.



**PRELIMINARY**

B	REISSUED FOR 90% DESIGN - CLIENT COMMENT	GT	JM*	PS*	20/11/20	
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT	JO	JM*	PS*	30/09/20	
No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date

**Australian Government**  
Department of Infrastructure, Transport, Regional Development and Communications

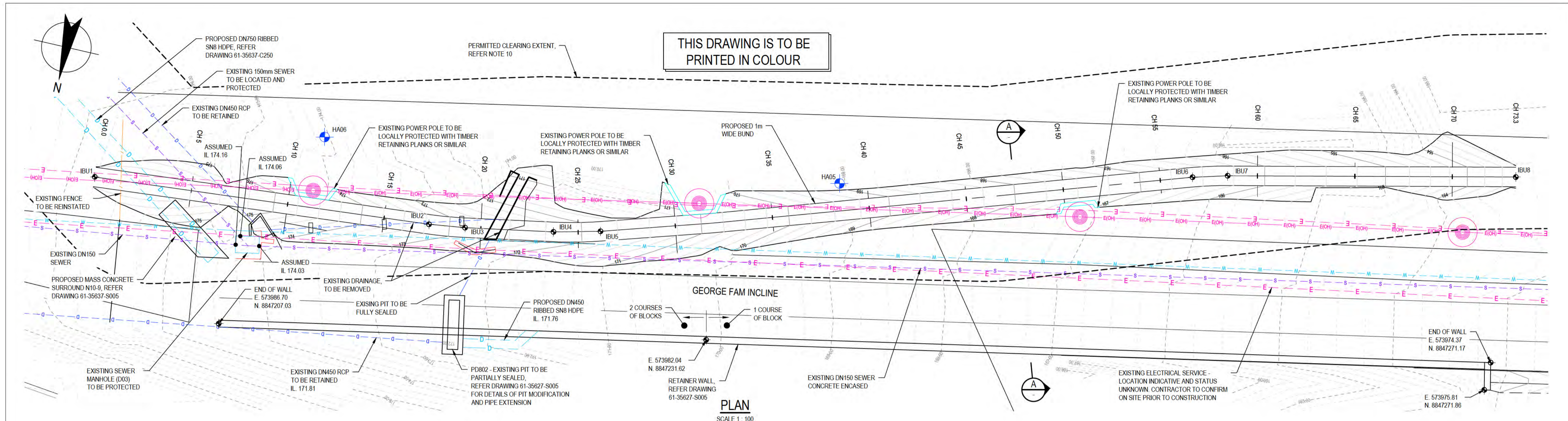
**GHD**  
Level 10, 999 Hay Street Perth WA 6000  
PO Box Y3106 Perth WA 6832 Australia  
T 61 8 6222 8222 F 61 8 6222 8555  
E permail@ghd.com.au W www.ghd.com

**DO NOT SCALE**  
Conditions of Use. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

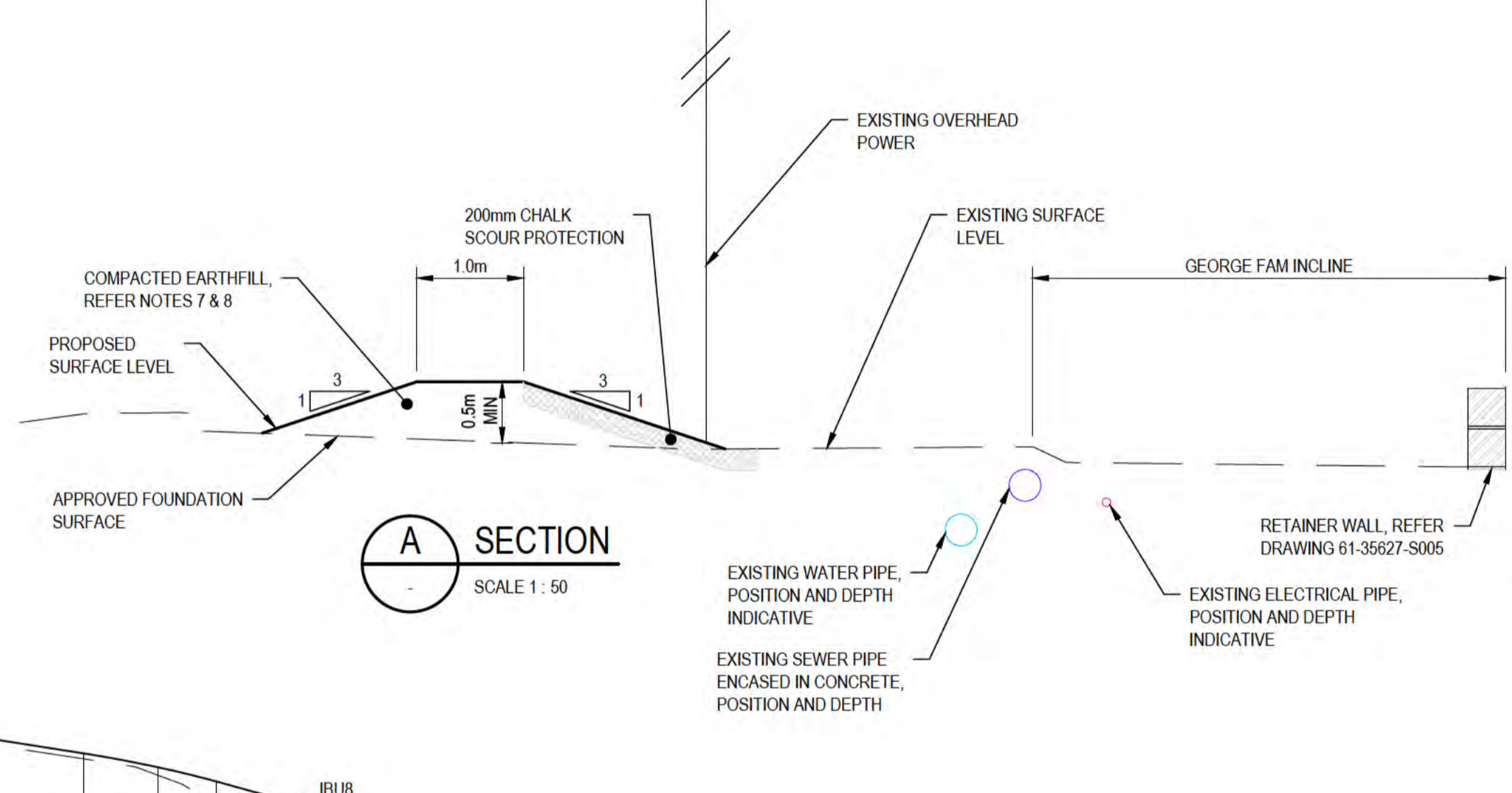
Drawn	J.OVERHEU	Designer	J.VALE
Drafting Check	S.HORTON*	Design Check	S.CLEARY*
Approved (Project Director)	Date	Scale	AS SHOWN

Client **DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS**  
Project **CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS**  
Title **NORTHERN DRUMSITE WORKS - INCLINE DRAIN PLAN, LONGITUDINAL SECTIONS & TYPICAL SECTIONS**  
Original Size **A1** Drawing No: **61-35637-C232** Rev: **B**





PLAN  
SCALE 1:100



A SECTION  
SCALE 1:50

- NOTES:**
- SETOUT POINTS ARE FOR REFERENCE ONLY. REFER TO 12D MODEL.
  - FOR LEGEND, REFER DRAWING 61-35637-C210.
  - ALL DIMENSIONS ARE IN METRES (m) UNO.
  - ALL RLs ARE IN METRES TO CHRISTMAS ISLAND HEIGHT DATUM (m CIHD).
  - ALL WORKS SHALL BE UNDERTAKEN IN ACCORDANCE WITH THE LATEST EDITION OF CURRENT STANDARDS, SPECIFICATIONS AND DRAWINGS.
  - DRAWINGS SHALL NOT BE SCALED.
  - EARTHFILL COMPACTED TO MIN 95% SMD, VERIFIED BY NUCLEAR DENSIMETER (NDM) OR SAND REPLACEMENT TEST.
  - EARTHFILL TO COMPRISE EXCAVATED MATERIAL FROM BASIN, AND/OR IMPORTED MATERIALS (REFER SPECIFICATION).
  - FOR LOCATION OF BUND, REFER DRAWING 61-35637-C210.
  - EXTENT OF CLEARING PERMITTED. REFER TO SPECIFICATION FOR FURTHER DETAILS AND SETOUT REQUIREMENTS.
  - PRIOR TO CONSTRUCTION OF PIT COMMENCES, EXISTING SERVICES TO BE LOCATED. IF A CLASH WITH THE PROPOSED EXCAVATION IS FOUND, THE CONTRACTOR IS TO DEVELOP A SUITABLE CONSTRUCTION APPROACH FOR APPROVAL OF THE RELEVANT AUTHORITY AND THE CLIENT'S REPRESENTATIVE.

DATUM RL. 160.0m

VERTICAL ALIGNMENT	L=0.15m K=0.17 L=5m G=-13.82%		L=1.49m K=0.76 L=5m G=-16.32%		L=4.69m G=-22.87%		L=1.89m K=0.54 L=5m R=20.00m		L=4.55m R=20.00m		L=2.41m K=0.57 L=5m R=20.00m		L=5.57m R=20.00m		L=4.28m K=0.74 L=5m G=-22.25%		L=14.15m G=-15.47%		L=4.92m K=14.65 L=5m R=20.00m		L=14.81m G=-15.81%		L=2.96m K=0.42 L=5m G=-27.78%			
HORIZONTAL ALIGNMENT	L=17.33m										L=24.28m		L=14.81m													
LEVEL DIFFERENCE CUT - / FILL + (m)	0.00	0.57	0.74	0.62	0.76	0.72	0.69	0.88	0.70	0.69	0.43	0.07	0.28	0.56	0.38	0.36	0.38	0.42	0.43	0.29	0.23	0.23	0.20	0.30	0.73	0.00
DESIGN SURFACE LEVEL (m)	175.766	175.944	175.748	175.032	173.733	172.210	172.921	172.717	172.195	172.025	171.869	171.367	170.917	170.188	169.398	169.171	168.387	167.613	166.840	166.614	166.391	166.069	165.288	164.750	164.213	163.308
EXISTING SURFACE LEVEL (m)	175.77	175.38	175.01	174.41	172.98	172.49	172.23	171.84	171.49	171.33	171.44	171.29	170.84	169.62	169.02	168.81	168.01	167.20	166.41	166.16	165.83	165.07	164.45	163.48	163.31	
CHAINAGE (m)	0.00	2.65	5.00	9.14	15.00	17.33	18.80	20.00	23.74	25.00	26.15	29.46	31.72	35.00	38.74	40.00	45.00	50.00	55.00	56.46	57.89	60.00	65.00	67.81	70.00	73.26

**INCLINE BUND - LONGITUDINAL SECTION**

HORIZONTAL SCALE 1:200  
VERTICAL SCALE 1:200

**GEOTECHNICAL TEST LOCATIONS**

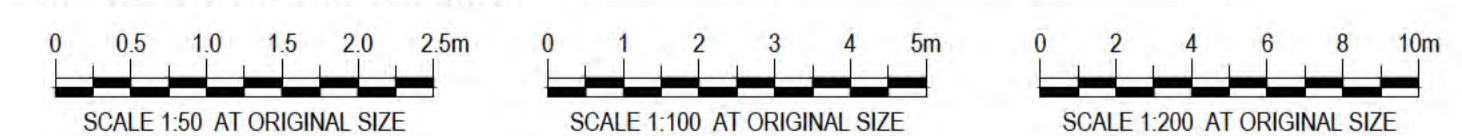
SETOUT POINT	NORTHING (m)	EASTING (m)
HA05	8847236.55	573972.71
HA06	8847210.23	573976.16

**DRAINAGE STRUCTURE SET OUT**

SETOUT POINT	NORTHING (m)	EASTING (m)
IBU1	8847199.17	573980.74
IBU2	8847216.44	573979.36
IBU3	8847218.29	573979.13
IBU4	8847222.77	573978.35
IBU5	8847225.11	573977.79
IBU6	8847254.16	573968.43
IBU7	8847255.90	573967.96
IBU8	8847270.35	573964.78



ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.



**PRELIMINARY**

No	Revision	Note	Drawn	Job Manager	Project Director	Date
B		REISSUED FOR 90% DESIGN - CLIENT COMMENT	GT	JM*	PS*	20/11/20
A		ISSUED FOR 90% DESIGN - CLIENT COMMENT	JO	JM*	PS*	30/09/20



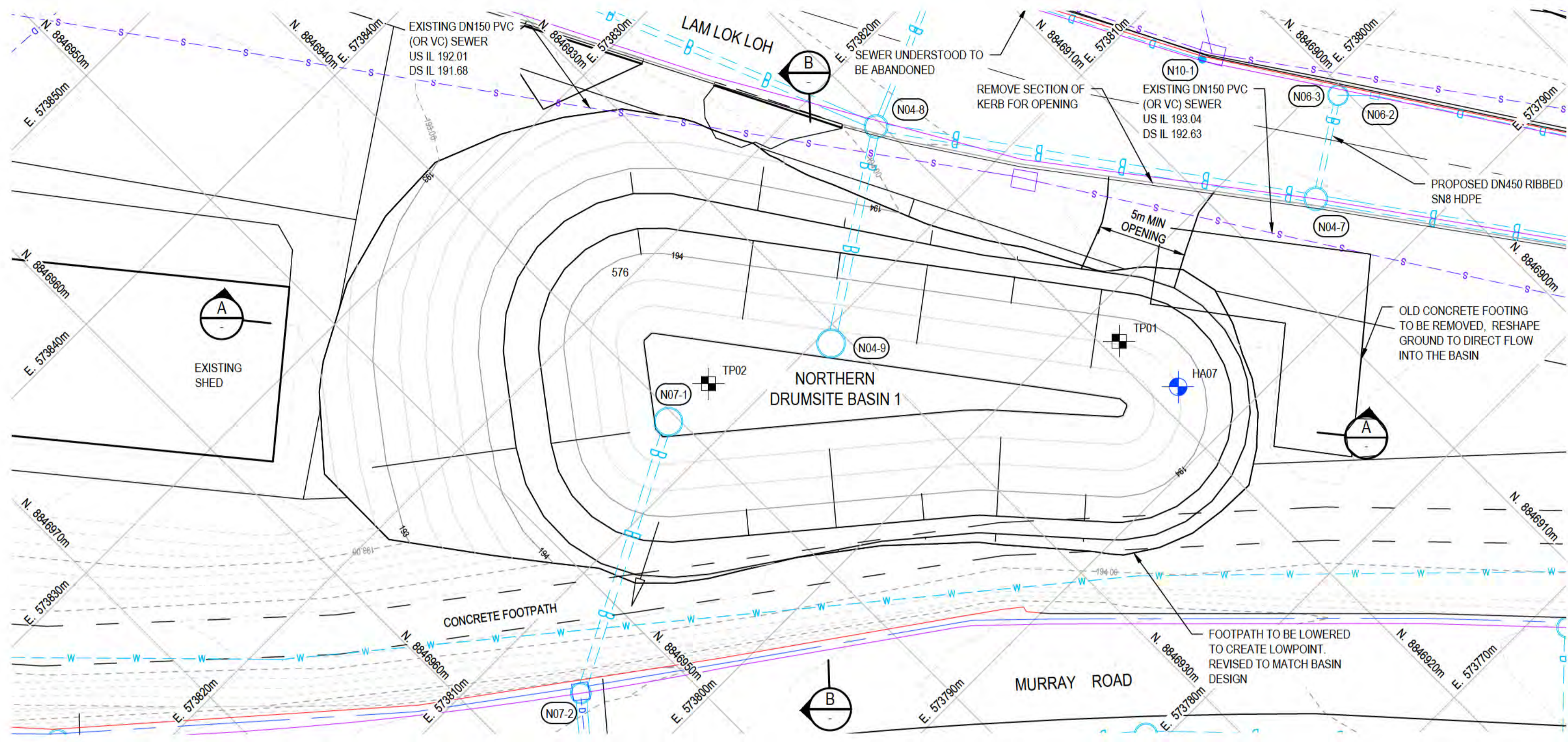
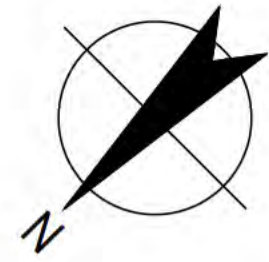
**DO NOT SCALE**

Conditions of Use:  
This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

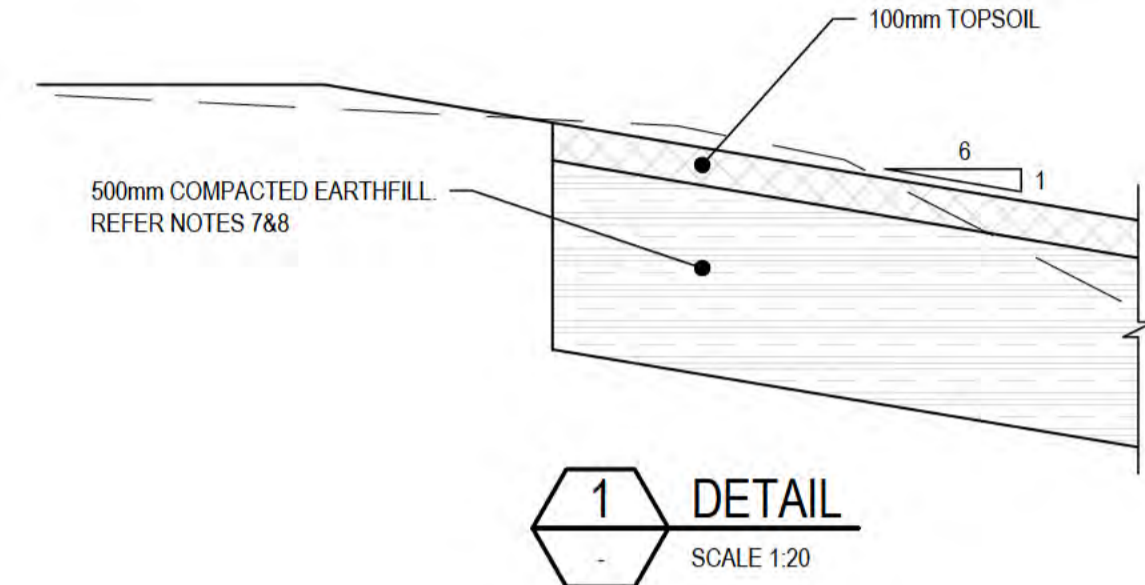
Drawn	J.OVERHEU	Designer	J.VALE
Drafting Check	S.HORTON*	Design Check	S.CLEARY*
Approved (Project Director)	Date	This Drawing must not be used for construction unless signed as Approved	
Scale	AS SHOWN		

Client	DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS		
Project	CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS		
Title	NORTHERN DRUMSITE WORKS - INCLINE BUND LONGITUDINAL SECTION & TYPICAL SECTIONS		
Original Size	A1	Drawing No:	61-35637-C235
Rev:	B		

THIS DRAWING IS TO BE PRINTED IN COLOUR

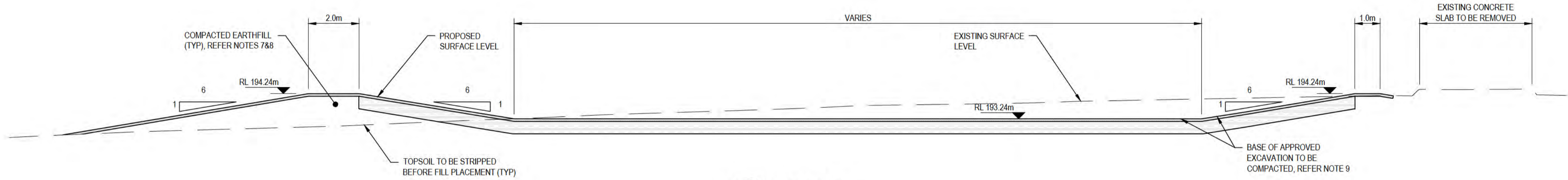


PLAN  
SCALE 1:200

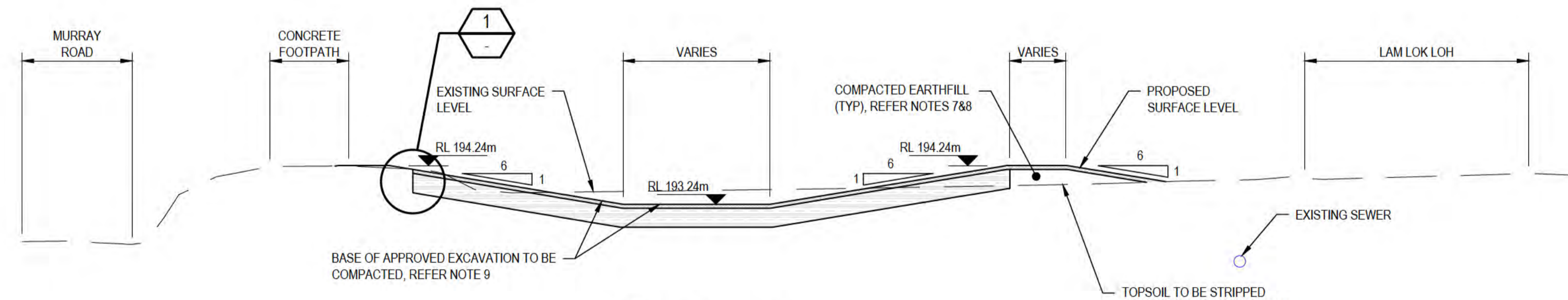


1 DETAIL  
SCALE 1:20

GEOTECHNICAL TEST LOCATIONS		
SETOUT POINT	NORTHING (m)	EASTING (m)
HA07	8846918.61	573793.59
TP01	8846919.15	573797.78
TP02	8846937.36	573812.60



A SECTION  
SCALE 1:100

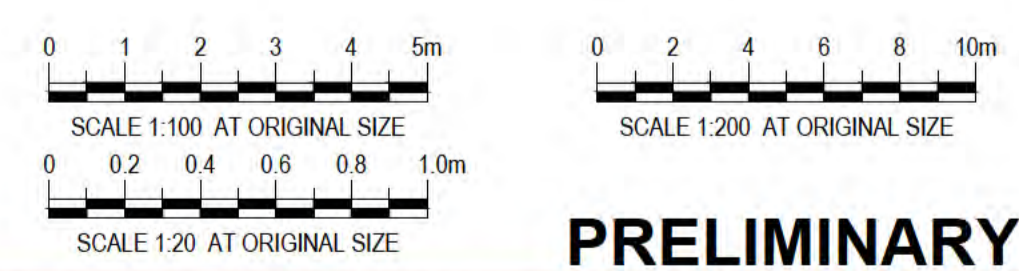


B SECTION  
SCALE 1:100

- NOTES:**
- SETOUT POINTS ARE FOR REFERENCE ONLY, REFER TO 12D MODEL.
  - FOR LEGEND, REFER DRAWING 61-35637-C210.
  - ALL DIMENSIONS ARE IN METRES (m) UNO.
  - ALL RLs ARE IN METRES TO CHRISTMAS ISLAND HEIGHT DATUM (m AHD).
  - ALL WORKS SHALL BE UNDERTAKEN IN ACCORDANCE WITH THE LATEST EDITION OF CURRENT STANDARDS, SPECIFICATIONS AND DRAWINGS.
  - DRAWINGS SHALL NOT BE SCALED.
  - EARTHFILL COMPACTED TO MIN 95% SMDD, VERIFIED BY NUCLEAR DENSIMETER (NDM) OR SAND REPLACEMENT TEST.
  - EARTHFILL TO COMPRISE EXCAVATED MATERIAL FROM BASIN, AND/OR IMPORTED MATERIALS (REFER SPECIFICATION).
  - BASE OF EXCAVATION COMPACTED TO MINIMUM OF 95% SMDD, VERIFIED BY NUCLEAR DENSIMETER (NDM) OR SAND REPLACEMENT TEST.
  - CONTRACTOR IS RESPONSIBLE FOR FIELD IDENTIFICATION AND PROTECTION OF ALL EXISTING SERVICES.
  - EXISTING SERVICE ALIGNMENTS SHOWN ARE INDICATIVE ONLY.
  - FOR LOCATION OF DRAIN, REFER DRAWING 61-35637-C011.
  - BASIN SETOUT POINTS ARE FOR REFERENCE ONLY, REFER TO 12D MODEL.
  - ALL FINISH SURFACES OF BASIN TO BE SEADED WITH SUITABLE EROSION PREVENTING GRASSES.



ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.

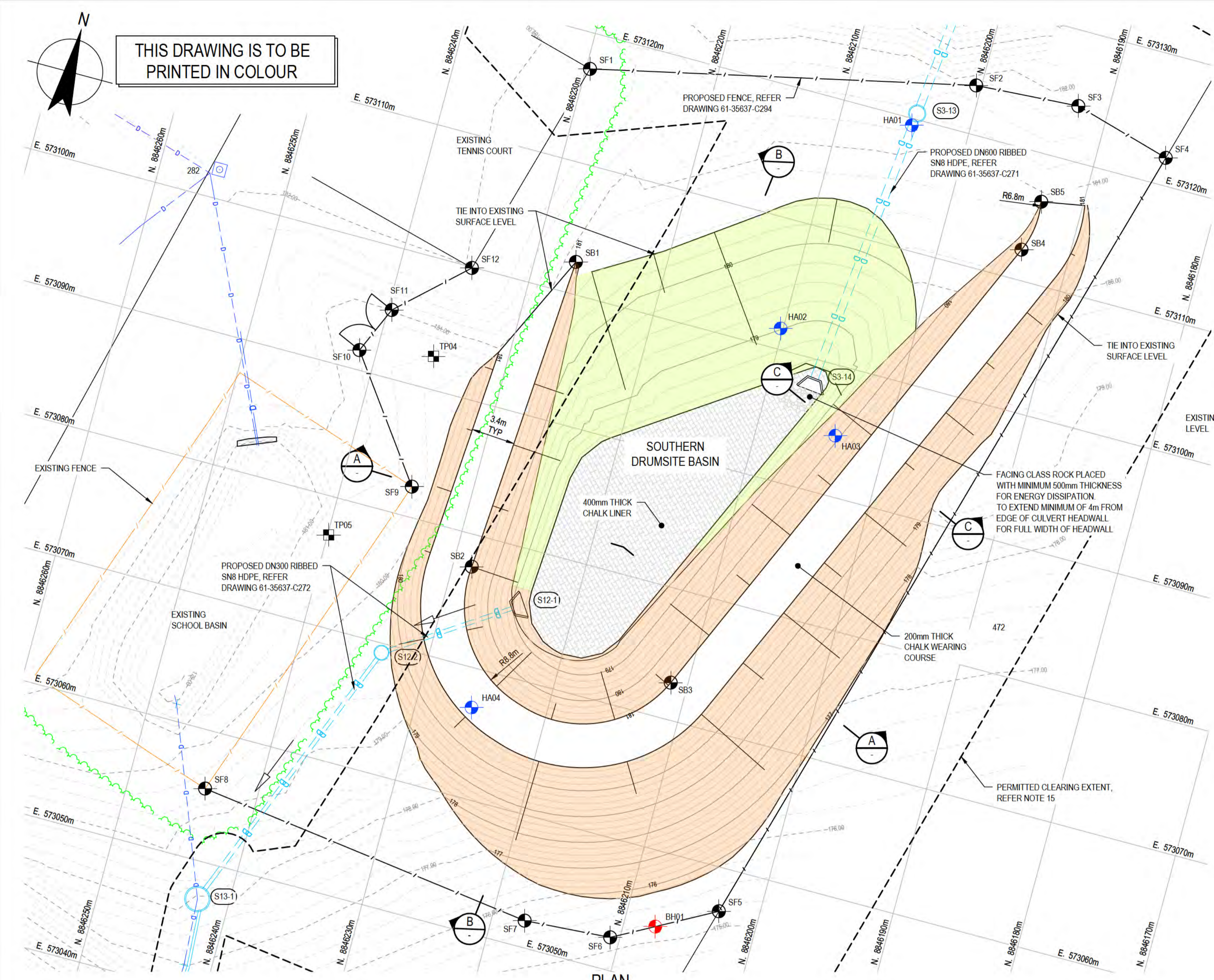


**PRELIMINARY**

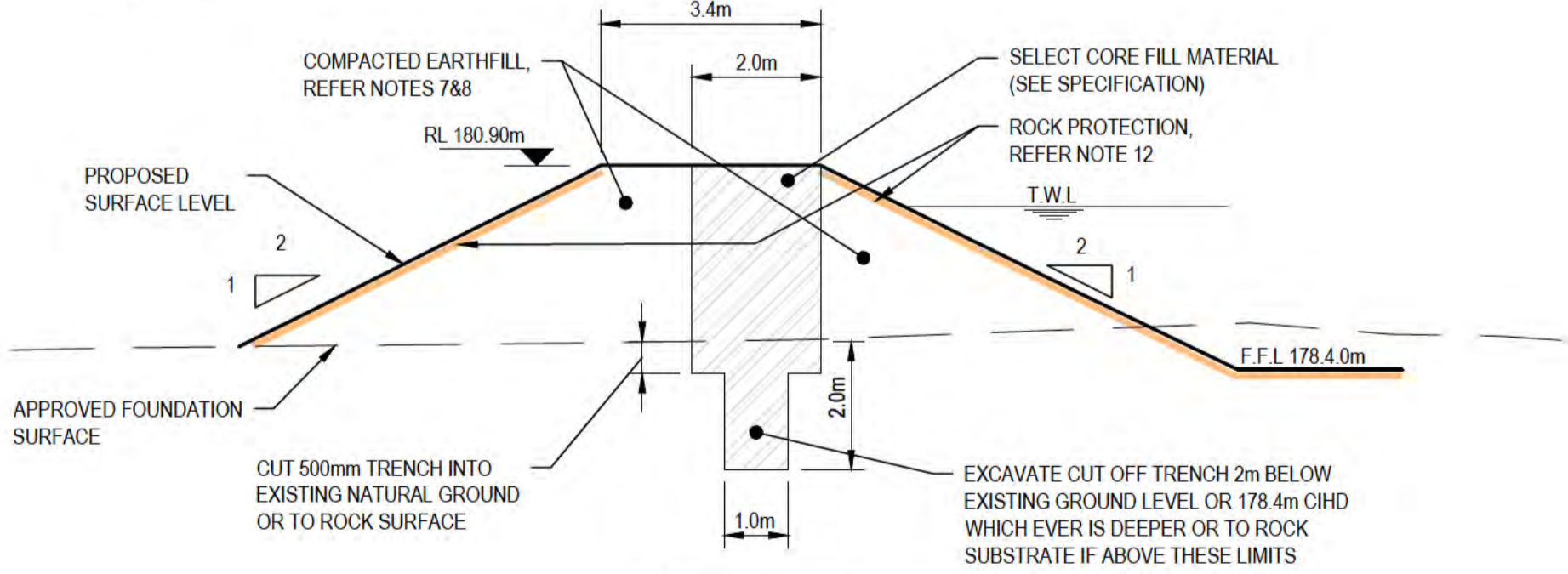
No	Revision	Note	Drawn	Job Manager	Project Director	Date
B		REISSUED FOR 90% DESIGN - CLIENT COMMENT	GT	JM*	PS*	20/11/20
A		ISSUED FOR 90% DESIGN - CLIENT COMMENT	JO	JM*	PS*	30/09/20



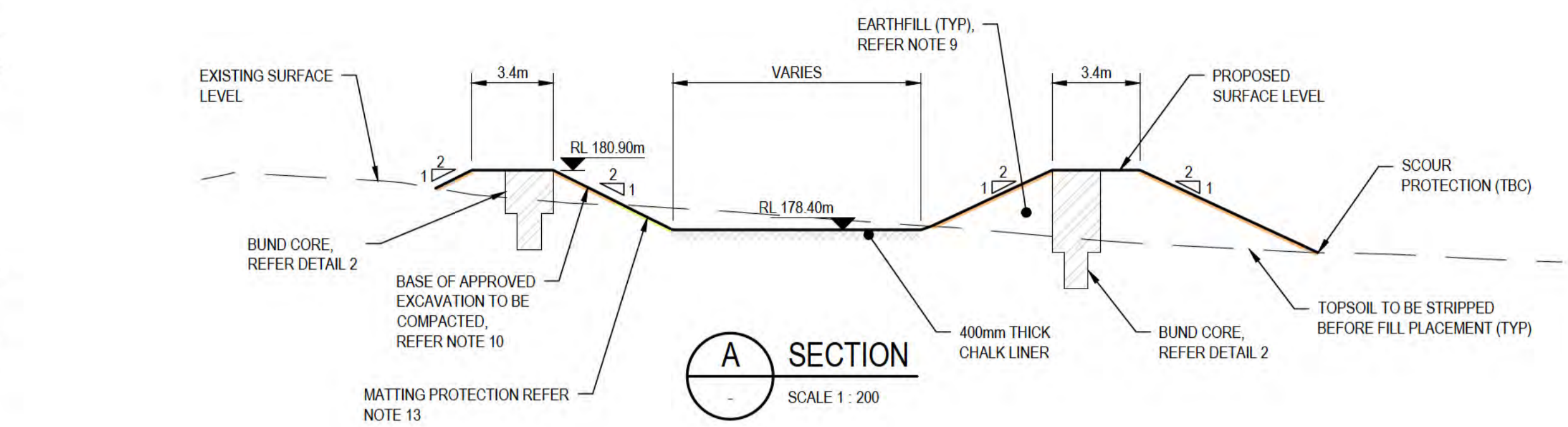
<p><b>DO NOT SCALE</b></p> <p>Conditions of Use. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.</p>	Drawn	J.OVERHEU	Designer	J.VALE	<p>Client <b>DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT &amp; COMMUNICATIONS</b></p> <p>Project <b>CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS</b></p> <p>Title <b>NORTHERN DRUMSITE WORKS - BASIN 1 PLAN AND TYPICAL SECTIONS</b></p> <p>Original Size <b>A1</b></p> <p>Drawing No: <b>61-35637-C236</b></p> <p>Rev: <b>B</b></p>
	Drafting Check	S.HORTON*	Design Check	S.CLEARY*	
	Approved (Project Director)		Date		
	Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved		



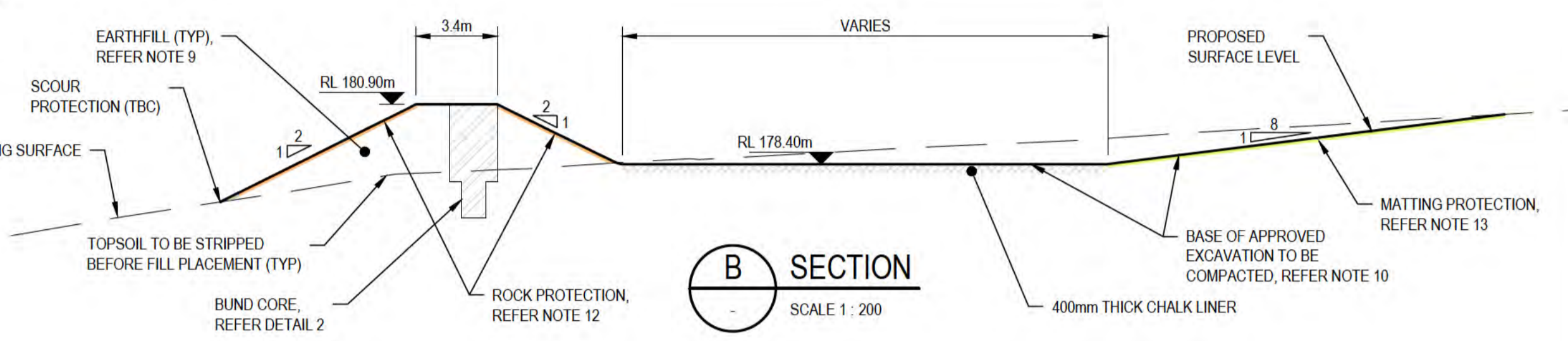
PLAN SCALE 1: 200



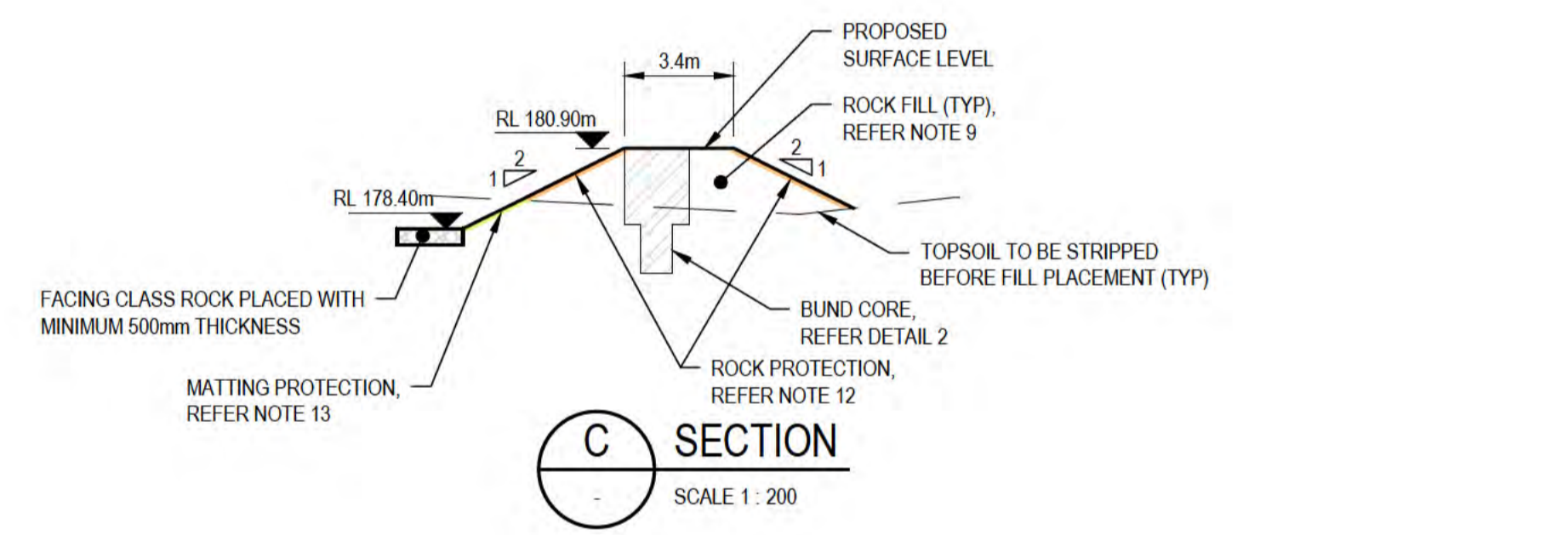
2 DETAIL SCALE 1:100



A SECTION SCALE 1: 200



B SECTION SCALE 1: 200



C SECTION SCALE 1: 200

SECURITY FENCE SET OUT

SETOUT POINT	NORTHING (m)	EASTING (m)
SF1	8846229.69	573117.24
SF2	8846200.41	573123.75
SF3	8846192.33	573124.26
SF4	8846184.74	573122.13
SF5	8846203.10	573056.66
SF6	8846210.73	573052.53
SF7	8846217.47	573052.06
SF8	8846244.08	573055.55
SF9	8846244.06	573055.60
SF10	8846234.64	573082.33
SF11	8846241.32	573091.52
SF12	8846239.70	573095.18

GEOTECHNICAL TEST LOCATIONS

SETOUT POINT	NORTHING (m)	EASTING (m)
BH01	8846207.57	573054.24
HA01	8846204.44	573119.47
HA02	8846210.19	573101.61
HA03	8846203.94	573094.66
HA04	8846225.74	573066.98
TP04	8846235.64	573092.54
TP05	8846239.91	573077.04

LEGEND:

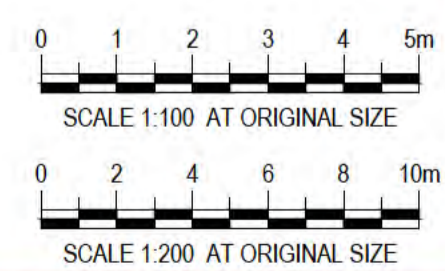
- ROCK SCOUR PROTECTION, REFER NOTE 12
- BIODEGRADABLE MATTING PROTECTION, REFER NOTE 13
- PREVIOUS SITE INVESTIGATION LOCATION (APPROX.)
- PROPOSED ADDITIONAL BOREHOLES
- PREVIOUS TEST PITS (APPROX.)

NOTES:

1. SETOUT POINTS ARE FOR REFERENCE ONLY. REFER TO 12D MODEL.
2. FOR LEGEND, REFER DRAWING 61-35637-C210.
3. ALL DIMENSIONS ARE IN METRES (m) UNO.
4. ALL RLS ARE IN METRES TO CHRISTMAS ISLAND HEIGHT DATUM (m CHID).
5. ALL WORKS SHALL BE UNDERTAKEN IN ACCORDANCE WITH THE LATEST EDITION OF CURRENT STANDARDS, SPECIFICATIONS AND DRAWINGS.
6. DRAWINGS SHALL NOT BE SCALED.
7. EARTHFILL COMPACTED TO MIN 95% SMDD, VERIFIED BY NUCLEAR DENSIMETER (NDM) OR SAND REPLACEMENT TEST.
8. EARTHFILL TO COMPRISE EXCAVATED MATERIAL FROM BASIN, AND/OR IMPORTED MATERIALS (REFER SPECIFICATION).
9. EARTHFILL TO COMPLY WITH GRADING AND PLACEMENT REQUIREMENTS FOR SPECIFICATION.
10. BASE OF EXCAVATION COMPACTED TO MINIMUM OF 95% SMDD, VERIFIED BY NUCLEAR DENSIMETER (NDM) OR SAND REPLACEMENT TEST.
11. FOR LOCATION OF BASIN, REFER DRAWING 61-35637-C221.
12. ROCK PROTECTION NOMINAL STONE SIZE 200-300mm WITH GEOFABRIC BIDIM A44 OR EQUIVALENT UNDERLAY.
13. BIODEGRADABLE MATTING PROTECTION PLACED ON EXCAVATED SLOPE AFTER PLACEMENT OF 150mm OF TOPSOIL.
14. ADDITIONAL GEOTECHNICAL INVESTIGATION REQUIRED TO BE COMPLETED PRIOR TO CONSTRUCTION COMMENCING REFER SPECIFICATIONS FOR DETAILS.
15. EXTENT OF CLEARING PERMITTED. REFER TO SPECIFICATION FOR FURTHER DETAILS AND SETOUT REQUIREMENTS.

DRAINAGE STRUCTURE SET OUT

SETOUT POINT	NORTHING (m)	EASTING (m)
SB1	8846226.86	573102.48
SB2	8846228.55	573077.54
SB3	8846211.29	573072.88
SB4	8846193.71	573112.35
SB5	8846193.20	573116.34



ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.

PRELIMINARY

No	Revision	Note	Drawn	Job Manager	Project Director	Date
B	REISSUED FOR 90% DESIGN - CLIENT COMMENT		GT	JM*	PS*	20/11/20
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT		JO	JM*	PS*	30/09/20

**Australian Government**  
**Department of Infrastructure, Transport, Regional Development and Communications**

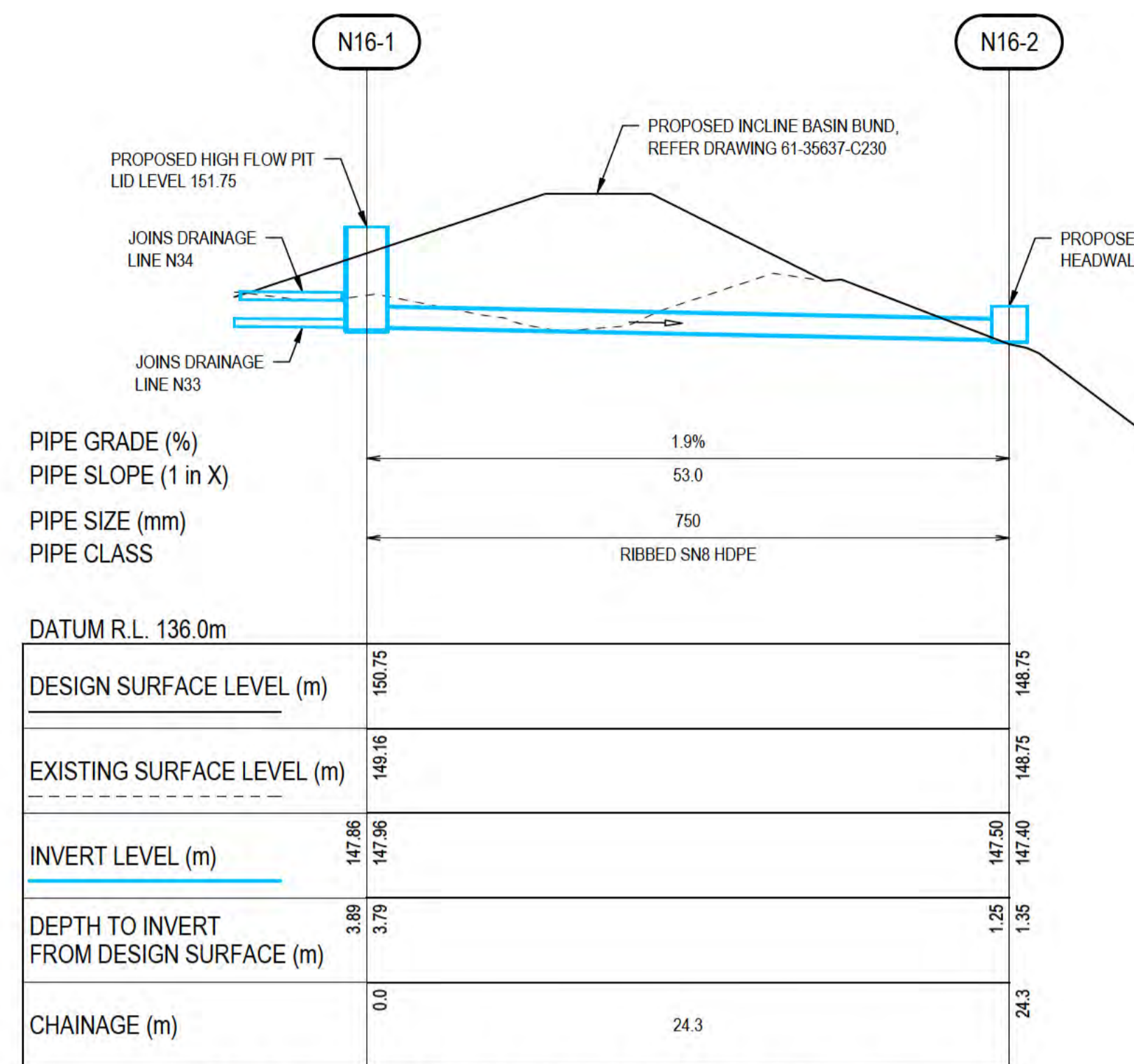


DO NOT SCALE

Conditions of Use. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

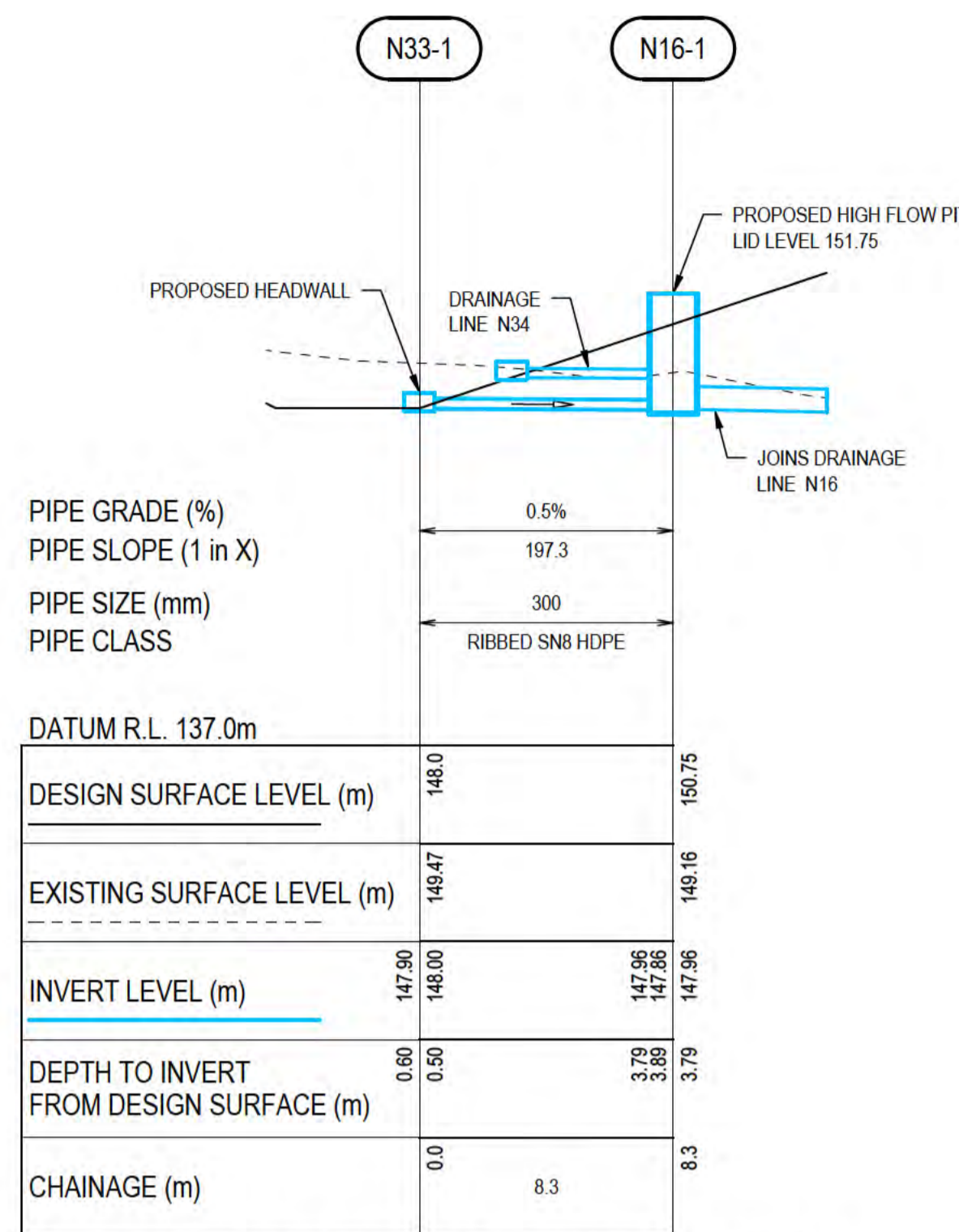
Drawn	J.OVERHEU	Designer	J.VALE
Drafting Check	S.HORTON*	Design Check	S.CLEARY*
Approved (Project Director)		Date	
Scale	1:200	This Drawing must not be used for Construction unless signed as Approved	

Client **DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS**  
 Project **CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS**  
 Title **SOUTHERN DRUMSITE WORKS - BASIN PLAN AND TYPICAL SECTIONS**  
 Original Size **A1** Drawing No: **61-35637-C245** Rev: **B**



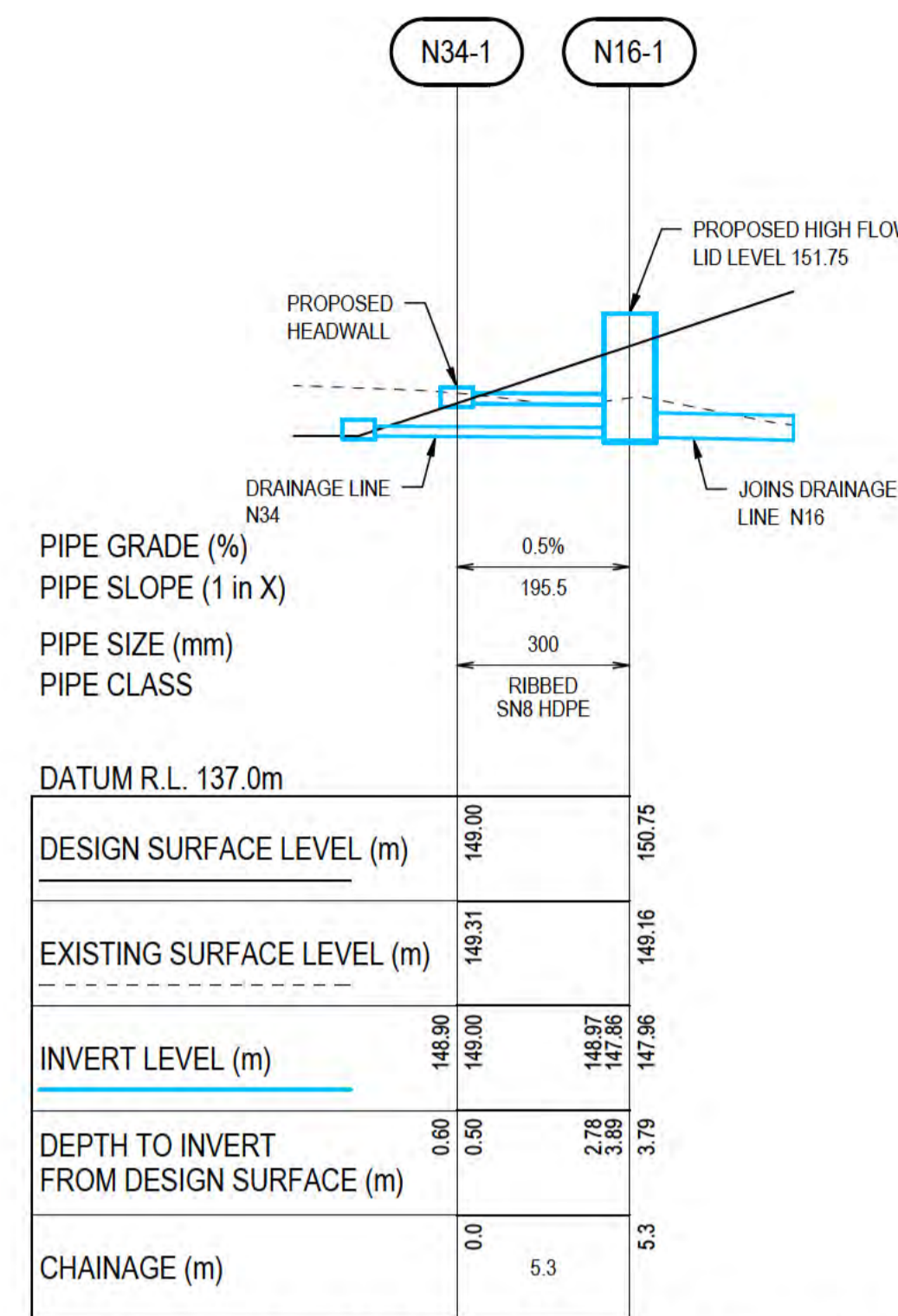
**DRAINAGE LINE N16 - LONGITUDINAL SECTION**  
**NORTHERN DRUMSITE**

HORIZONTAL SCALE 1:200  
 VERTICAL SCALE 1:200



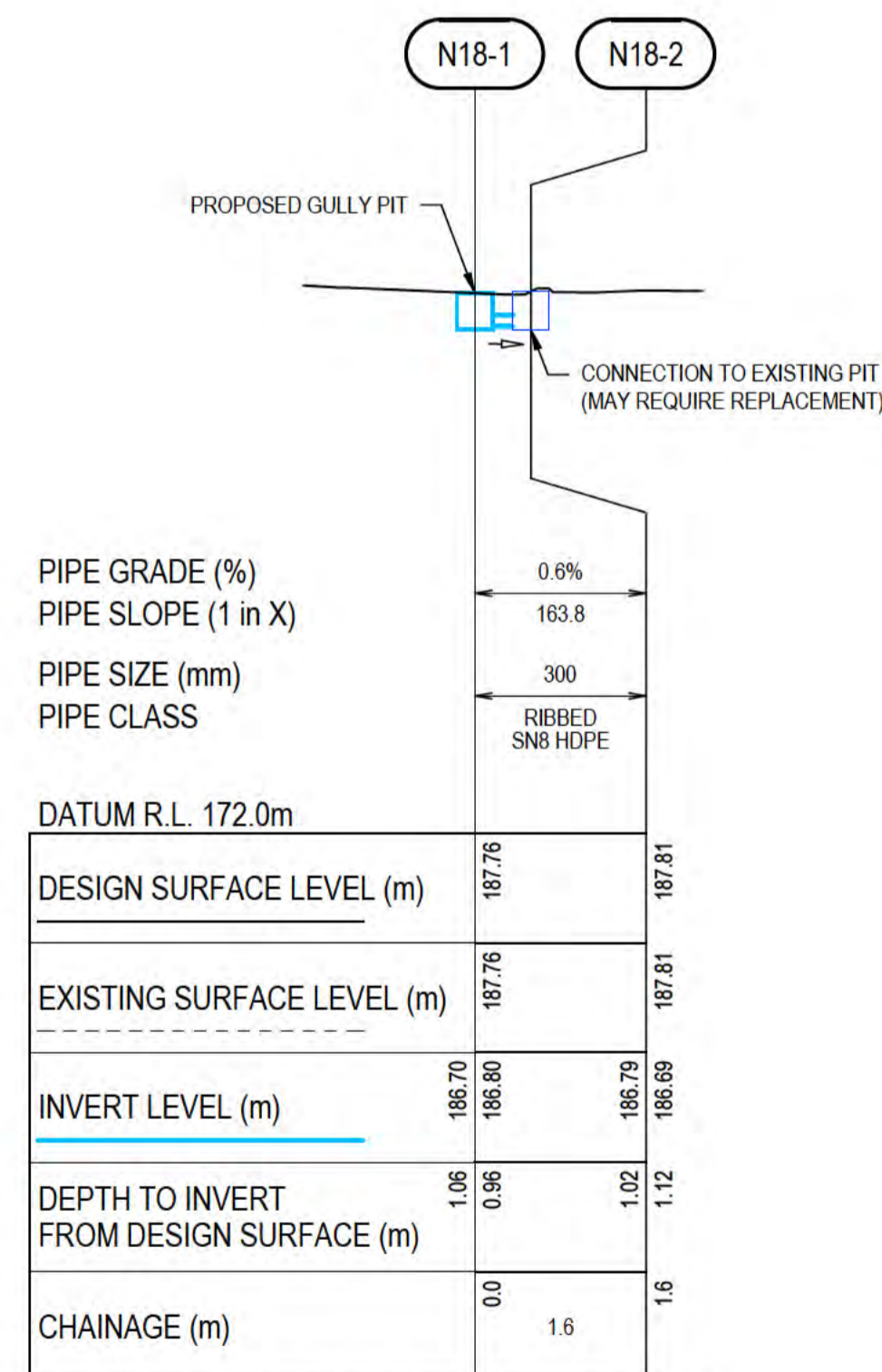
**DRAINAGE LINE N33 - LONGITUDINAL SECTION**  
**NORTHERN DRUMSITE**

HORIZONTAL SCALE 1:200  
 VERTICAL SCALE 1:200



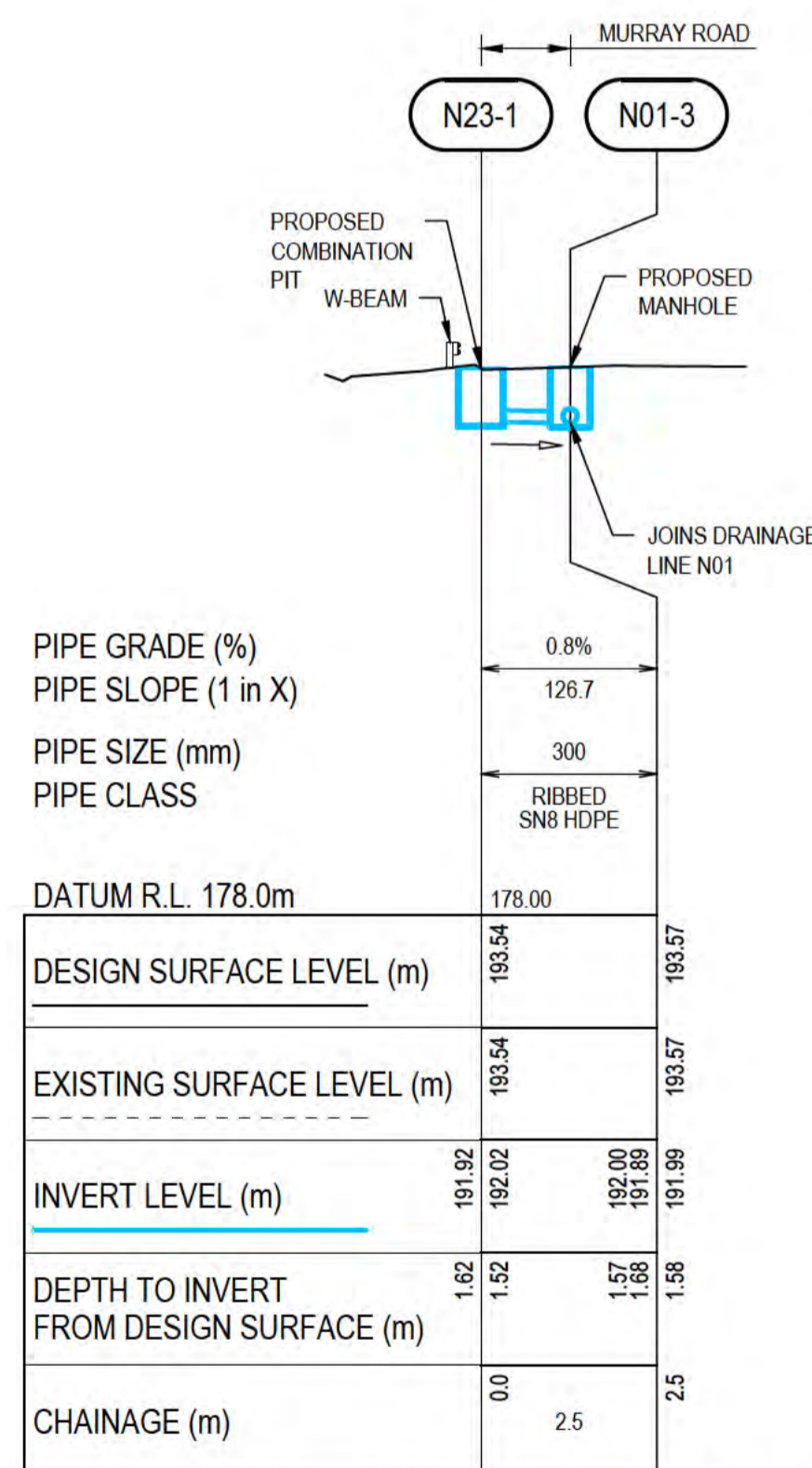
**DRAINAGE LINE N34 - LONGITUDINAL SECTION**  
**NORTHERN DRUMSITE**

HORIZONTAL SCALE 1:200  
 VERTICAL SCALE 1:200



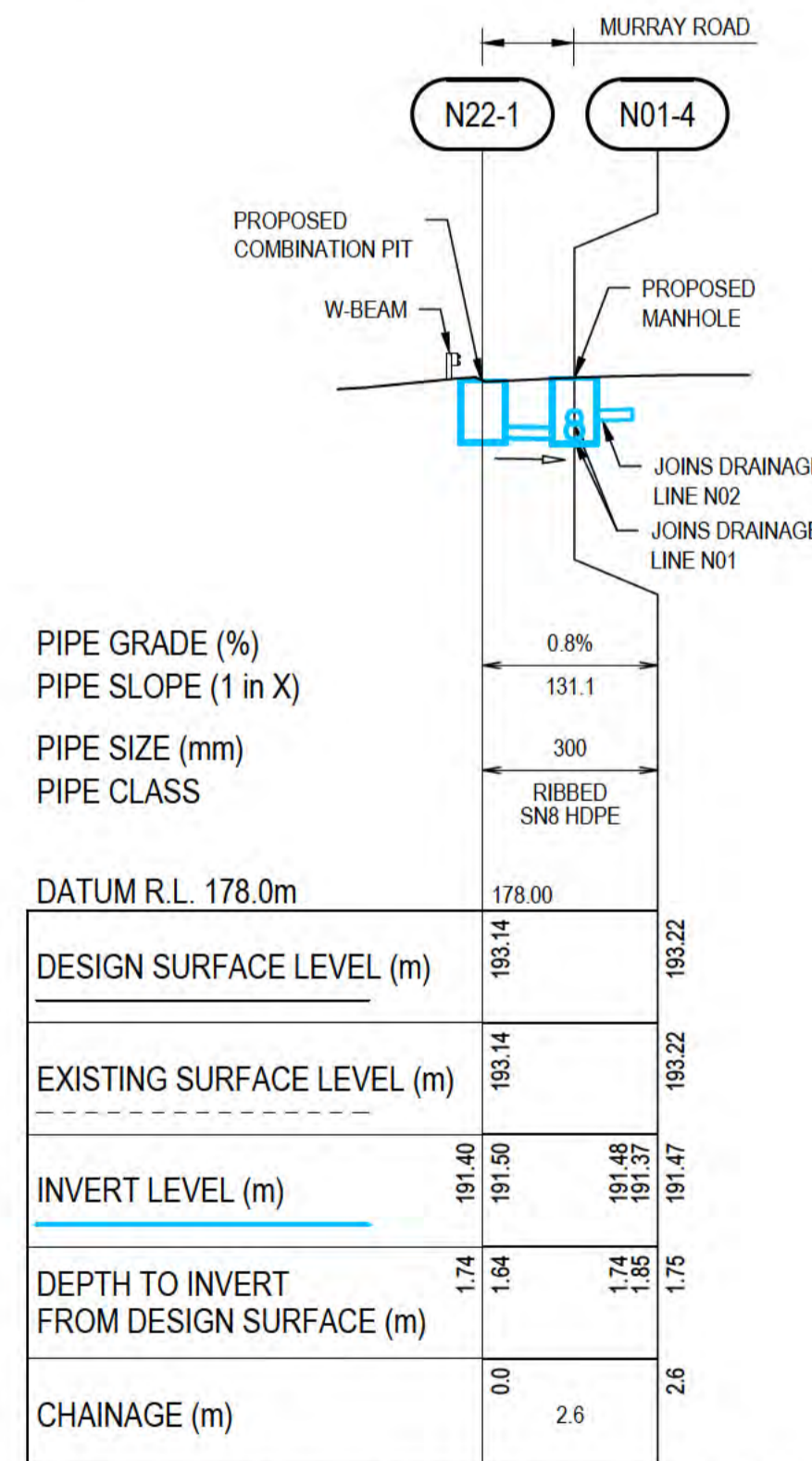
**DRAINAGE LINE N18 - LONGITUDINAL SECTION**  
**NORTHERN DRUMSITE**

HORIZONTAL SCALE 1:200  
 VERTICAL SCALE 1:200



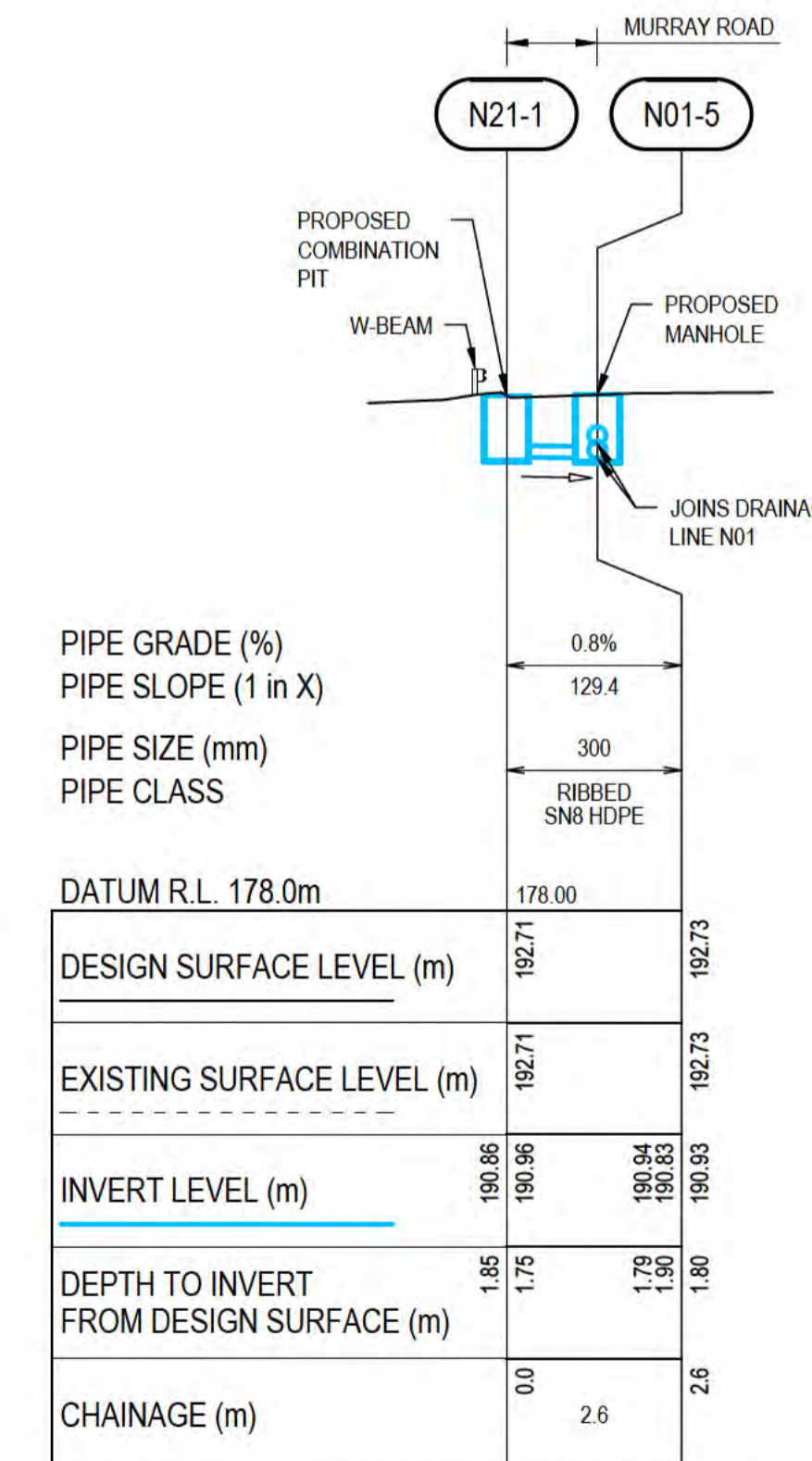
**DRAINAGE LINE N23 - LONGITUDINAL SECTION**  
**NORTHERN DRUMSITE**

HORIZONTAL SCALE 1:200  
 VERTICAL SCALE 1:200



**DRAINAGE LINE N22 - LONGITUDINAL SECTION**  
**NORTHERN DRUMSITE**

HORIZONTAL SCALE 1:200  
 VERTICAL SCALE 1:200



**DRAINAGE LINE N21 - LONGITUDINAL SECTION**  
**NORTHERN DRUMSITE**

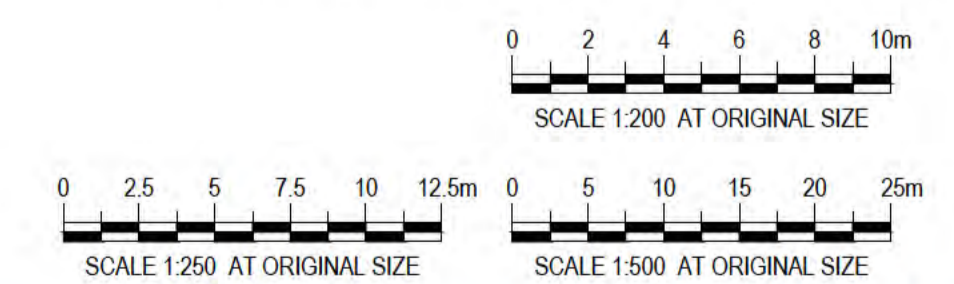
HORIZONTAL SCALE 1:200  
 VERTICAL SCALE 1:200

- NOTES:**
- FOR PIPELINE ALIGNMENTS, REFER DRAWINGS 61-35637-C210 AND C211.
  - FOR LEGEND, REFER DRAWING 61-35637-C210.
  - FOR OTHER NOTES, REFER DRAWING 61-35637-C202.

**THIS DRAWING IS TO BE PRINTED IN COLOUR**



ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.

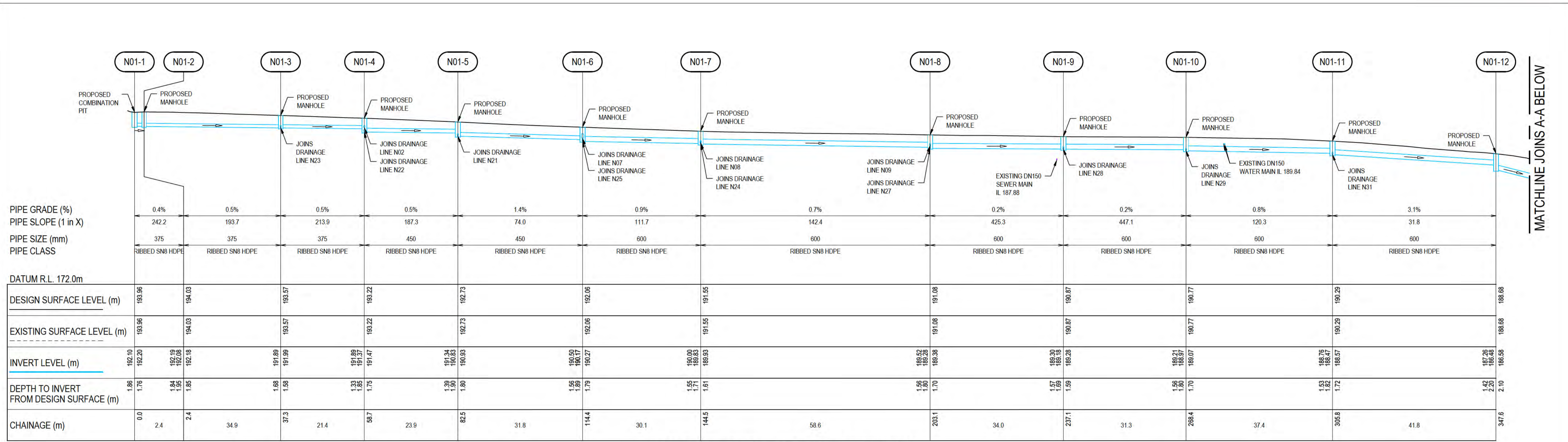


**PRELIMINARY**

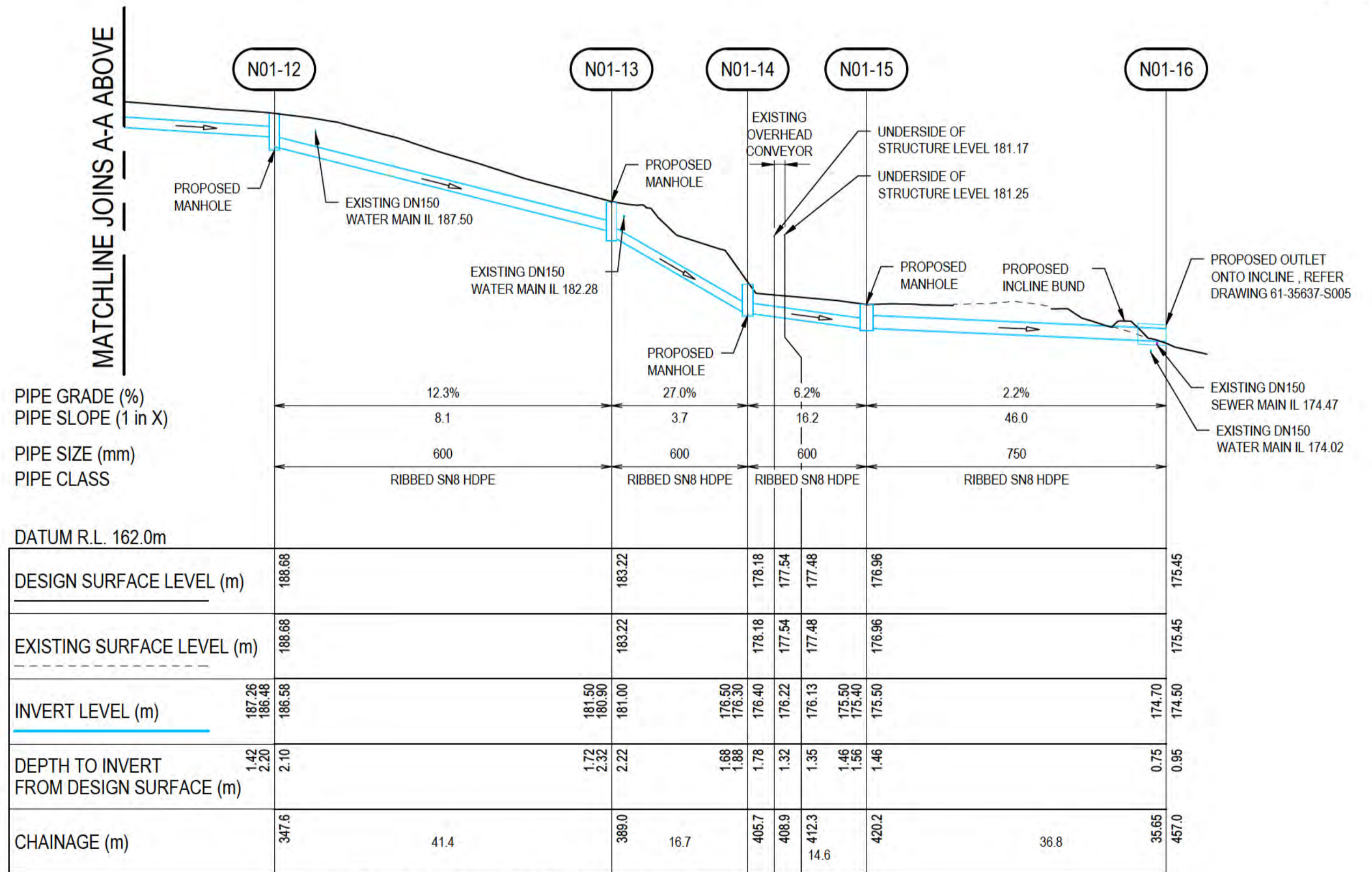
B	REISSUED FOR 90% DESIGN - CLIENT COMMENT	GT	JM*	PS*	20/11/20
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT	GT	JM*	PS*	30/09/20
No	Revision	Note:	Drawn	Job Manager	Project Director
* indicates signatures on original issue of drawing or last revision of drawing					



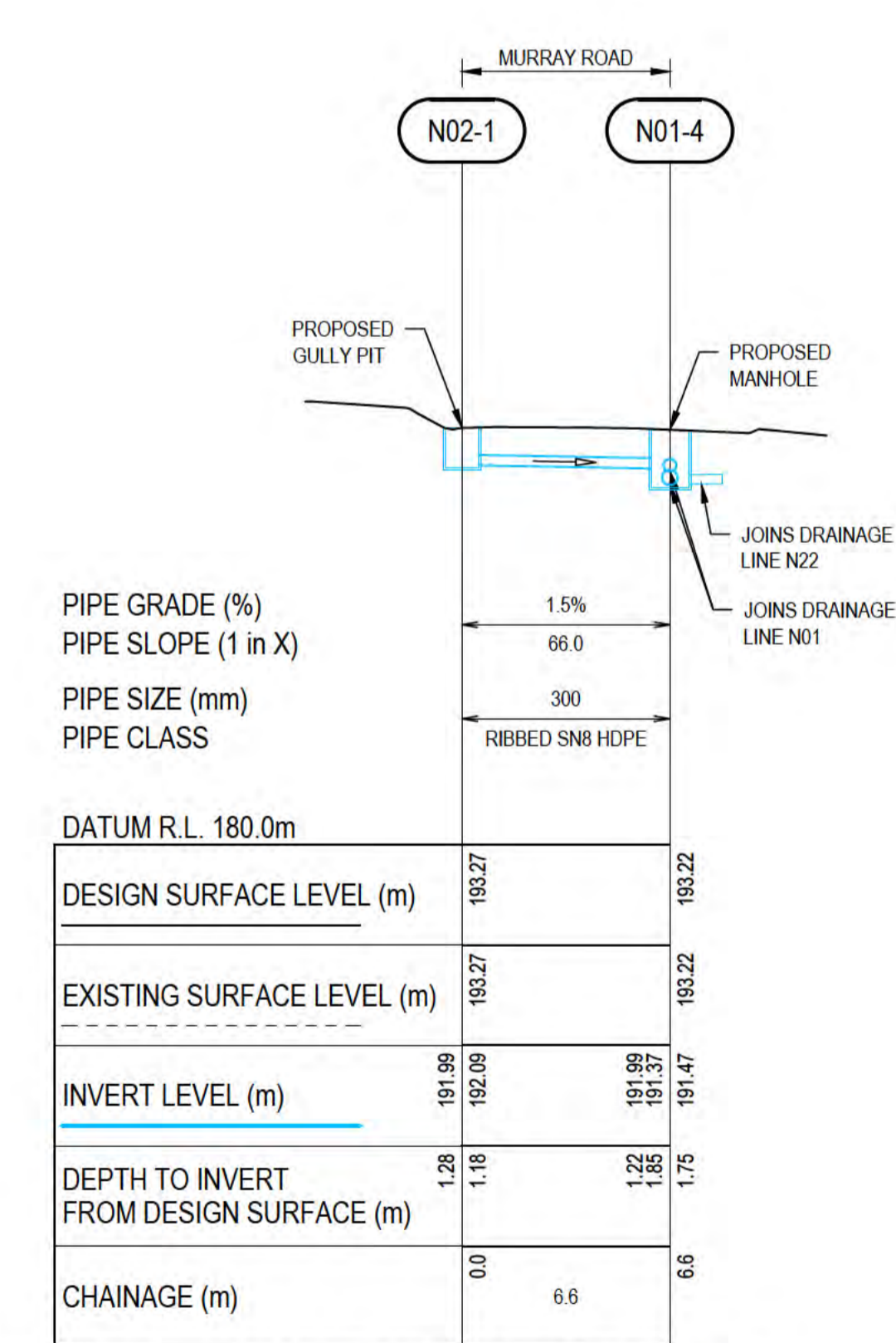
<b>DO NOT SCALE</b>	Drawn G.TAYAM	Designer D.DOMINGO	Client DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS
Conditions of Use. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.	Drafting Check S.HORTON*	Design Check S.CLEARY*	Project CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS
	Approved (Project Director) Date		Title NORTHERN DRUMSITE WORKS
	Scale AS SHOWN	This Drawing must not be used for construction unless signed as Approved	Original Size Drawing No: <b>61-35637-C250</b>
			Rev: <b>B</b>



**DRAINAGE LINE N01 - LONGITUDINAL SECTION**  
**NORTHERN DRUMSITE**  
 HORIZONTAL SCALE 1:500  
 VERTICAL SCALE 1:250



**DRAINAGE LINE N01 - LONGITUDINAL SECTION**  
**NORTHERN DRUMSITE**  
 HORIZONTAL SCALE 1:500  
 VERTICAL SCALE 1:250



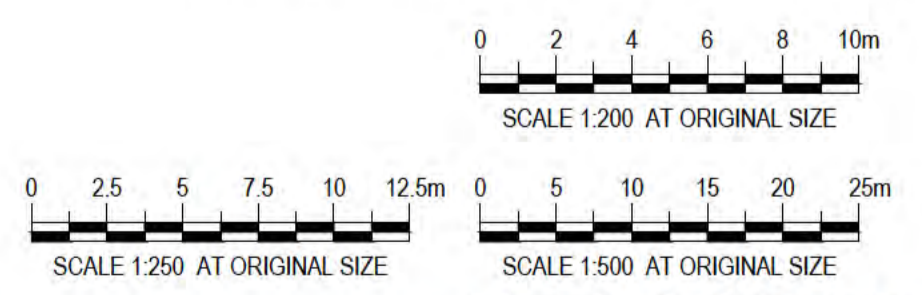
**DRAINAGE LINE N02 - LONGITUDINAL SECTION**  
**NORTHERN DRUMSITE**  
 HORIZONTAL SCALE 1:200  
 VERTICAL SCALE 1:200

- NOTES:**
- FOR PIPELINE ALIGNMENTS, REFER DRAWINGS 61-35637-C210 AND C211.
  - FOR LEGEND, REFER DRAWING 61-35637-C210.
  - FOR OTHER NOTES, REFER DRAWING 61-35637-C202.

**THIS DRAWING IS TO BE PRINTED IN COLOUR**



ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.



**PRELIMINARY**

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT		GT	JM*	PS*	30/09/20

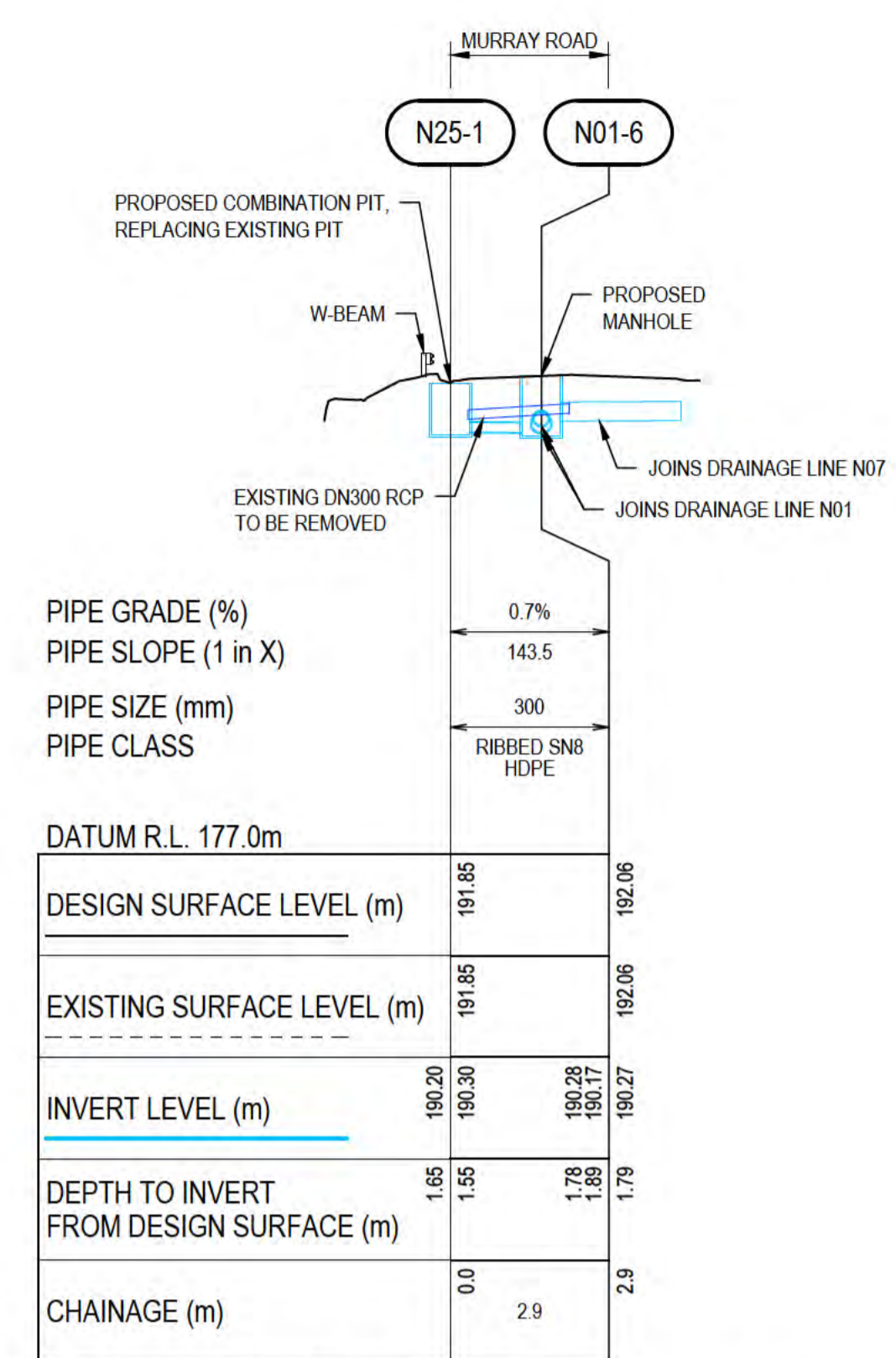


<b>DO NOT SCALE</b>	Drawn G.TAYAM	Designer D.DOMINGO
Conditions of Use. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.	Drafting Check S.HORTON*	Design Check S.CLEARY*
	Approved (Project Director) Date	
	Scale AS SHOWN	This Drawing must not be used for Construction unless signed as Approved

Client	DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS
Project	CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS
Title	NORTHERN DRUMSITE WORKS LONGITUDINAL SECTIONS - SHEET 2
Original Size	A1
Drawing No:	61-35637-C251
Rev:	A

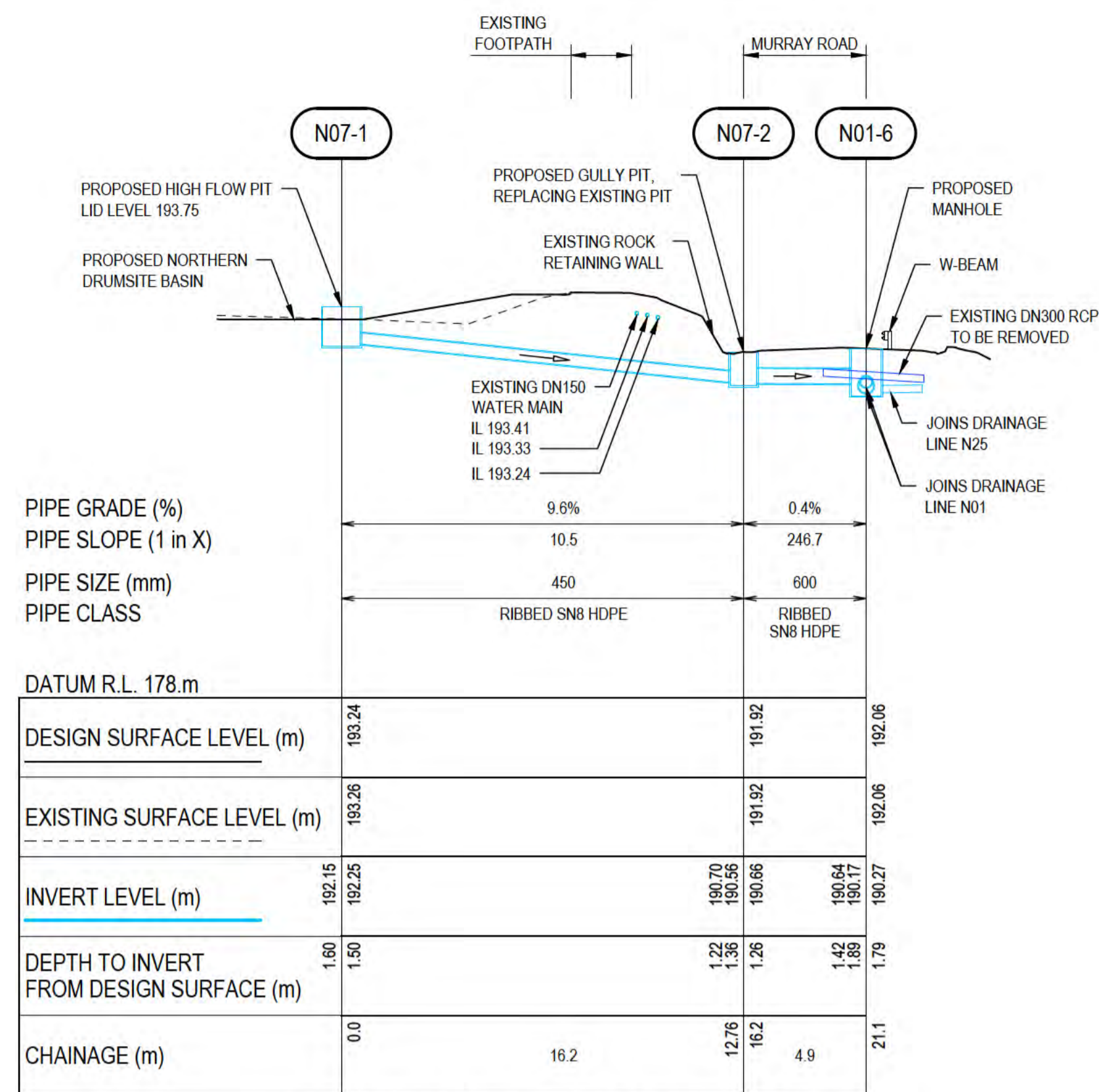
THIS DRAWING IS TO BE PRINTED IN COLOUR

- NOTES:**
- FOR PIPELINE ALIGNMENTS, REFER DRAWINGS 61-35637-C211 AND C212
  - FOR LEGEND, REFER DRAWING 61-35637-C210
  - FOR OTHER NOTES, REFER DRAWING 61-35637-C202



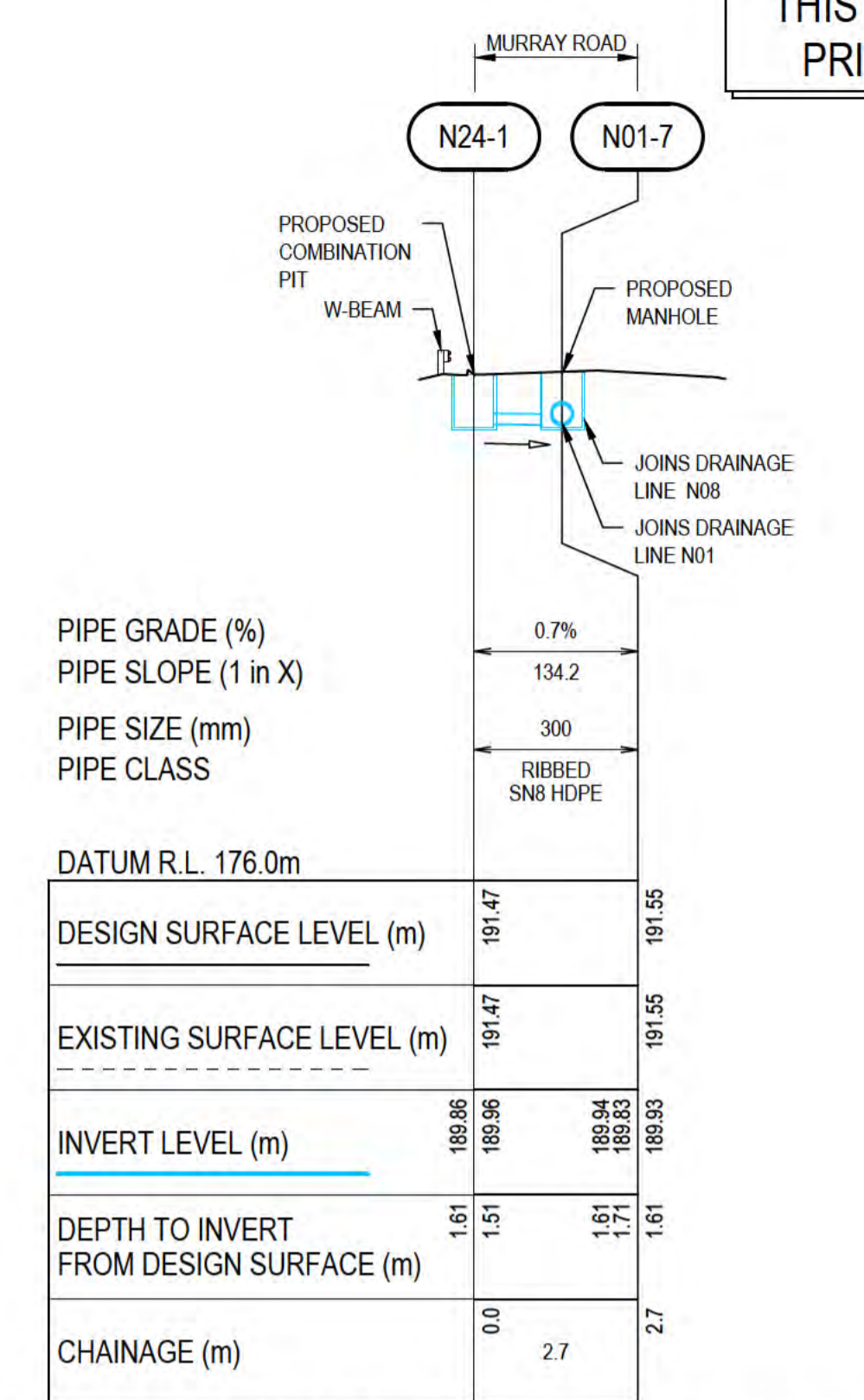
**DRAINAGE LINE N25- LONGITUDINAL SECTION  
NORTHERN DRUMSITE**

HORIZONTAL SCALE 1:200  
VERTICAL SCALE 1:200



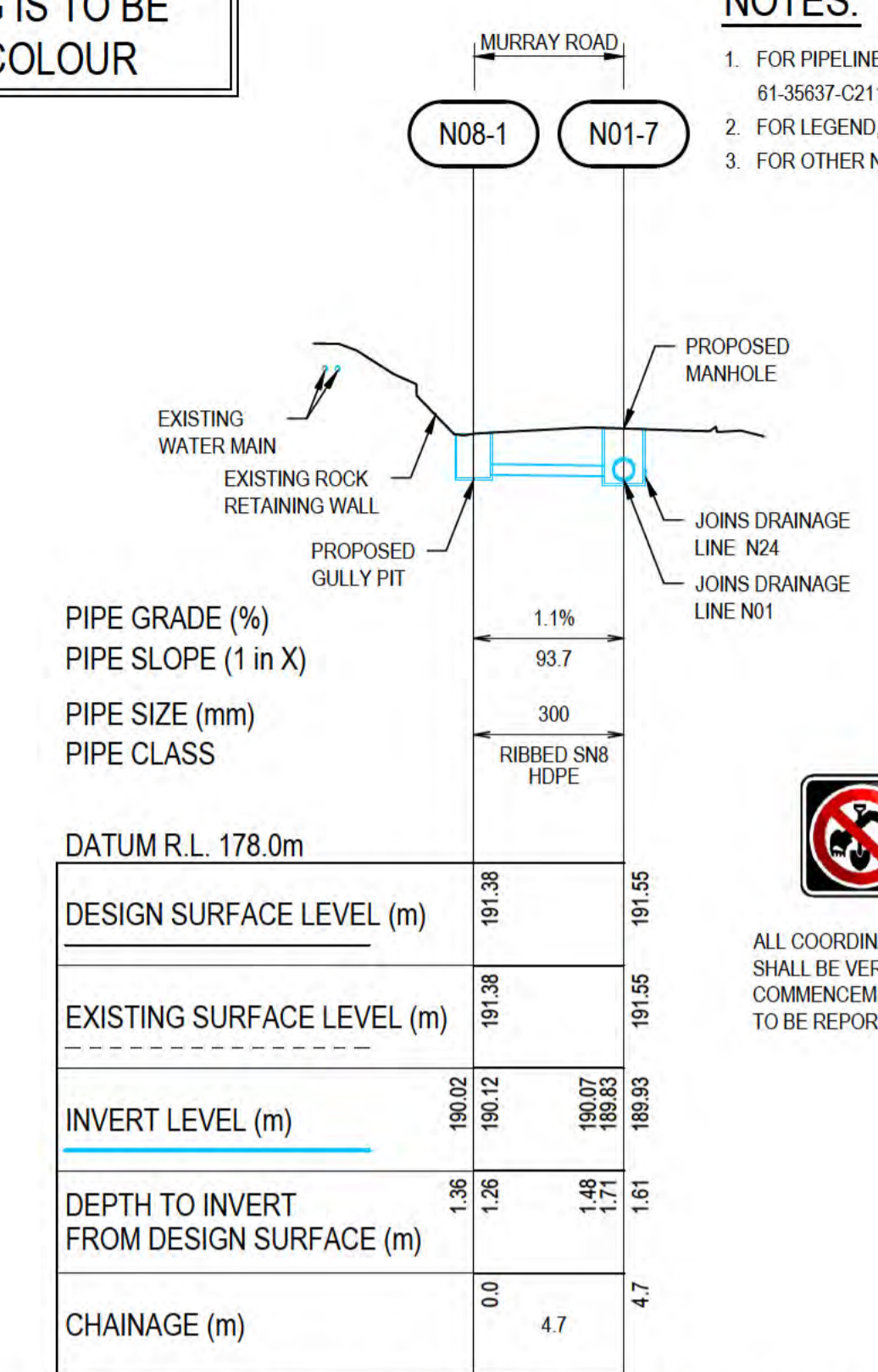
**DRAINAGE LINE N07 - LONGITUDINAL SECTION  
NORTHERN DRUMSITE**

HORIZONTAL SCALE 1:200  
VERTICAL SCALE 1:200



**DRAINAGE LINE N24 - LONGITUDINAL SECTION  
NORTHERN DRUMSITE**

HORIZONTAL SCALE 1:200  
VERTICAL SCALE 1:200

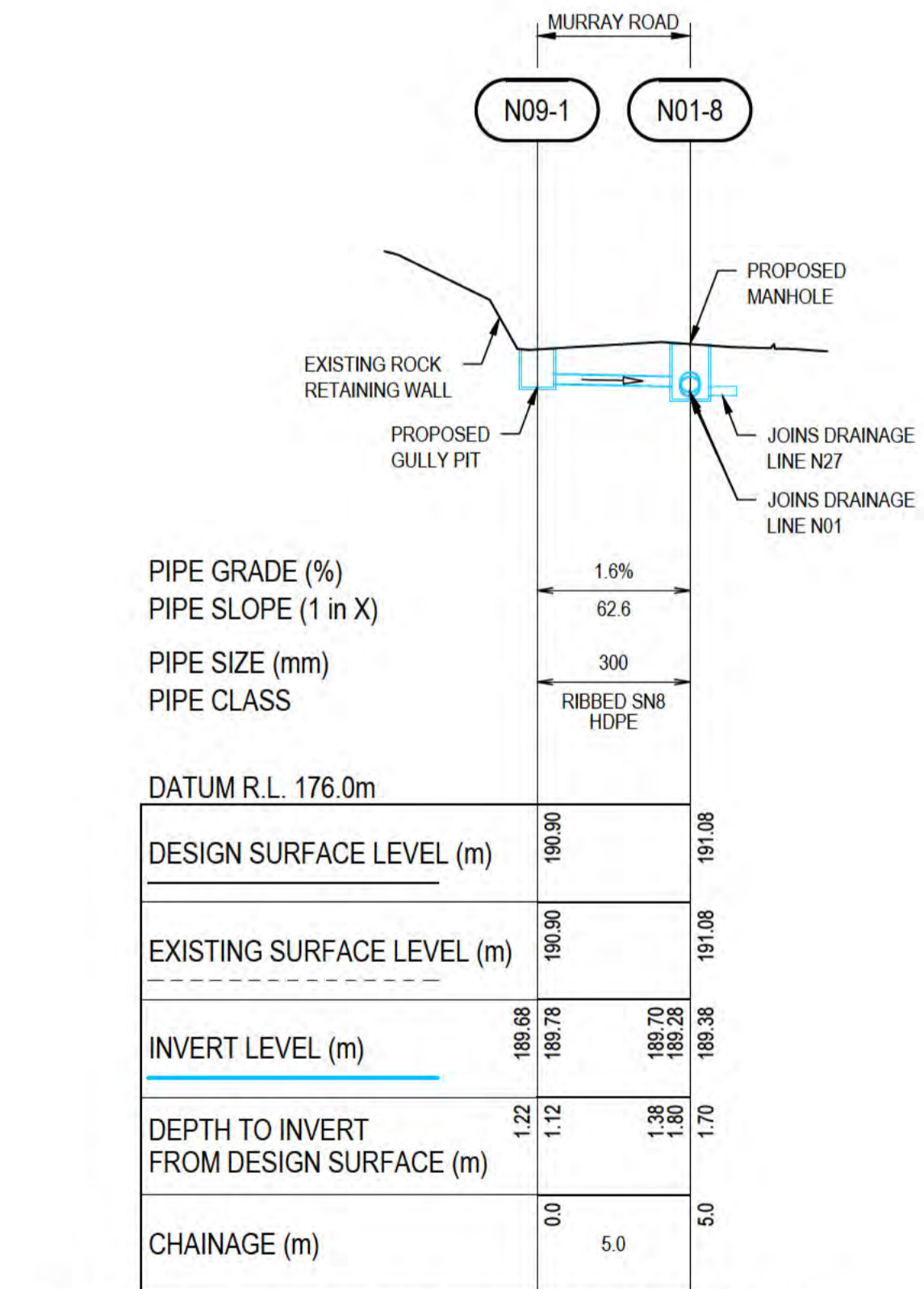


**DRAINAGE LINE N08 - LONGITUDINAL SECTION  
NORTHERN DRUMSITE**

HORIZONTAL SCALE 1:200  
VERTICAL SCALE 1:200

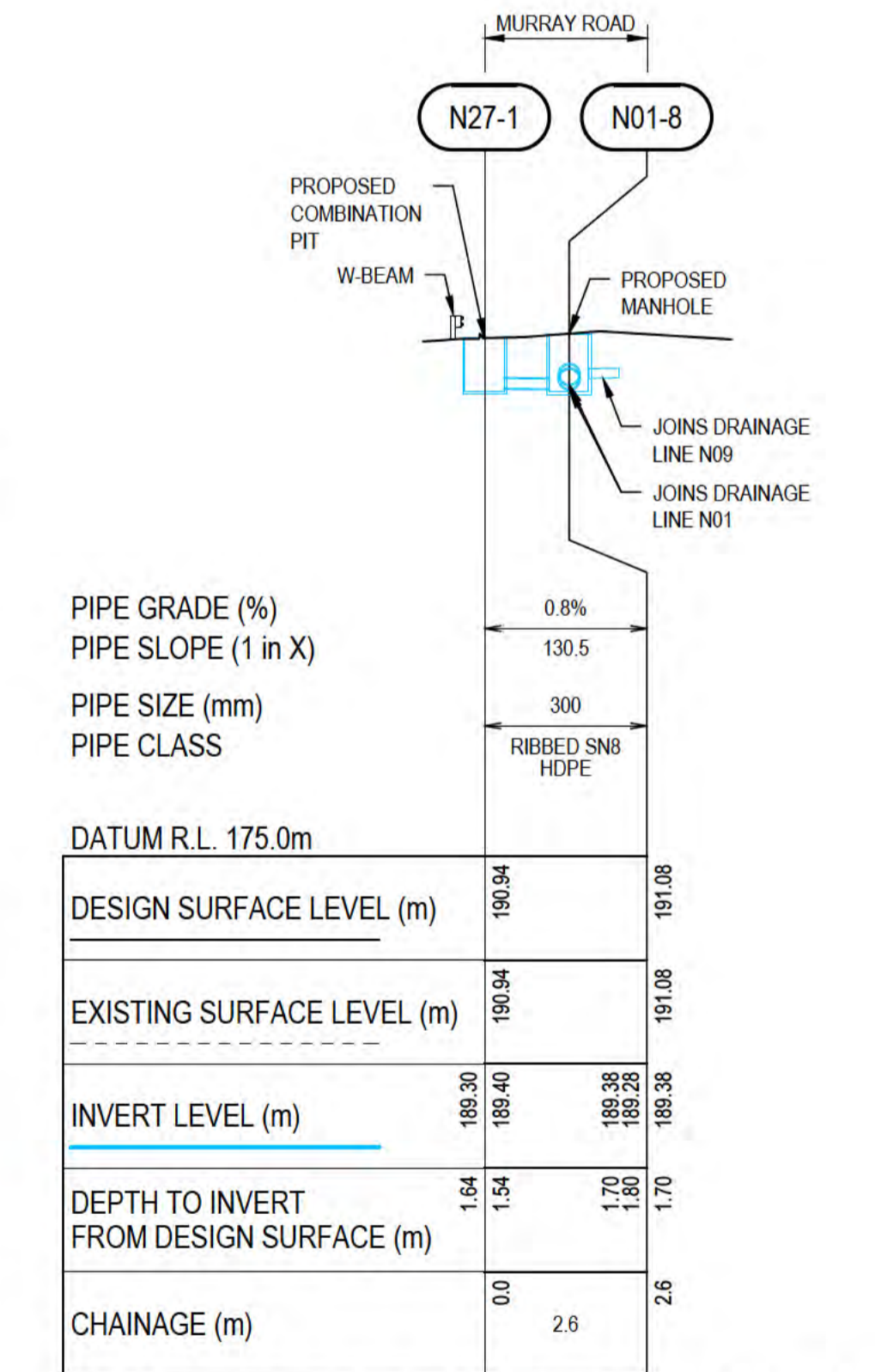


ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.



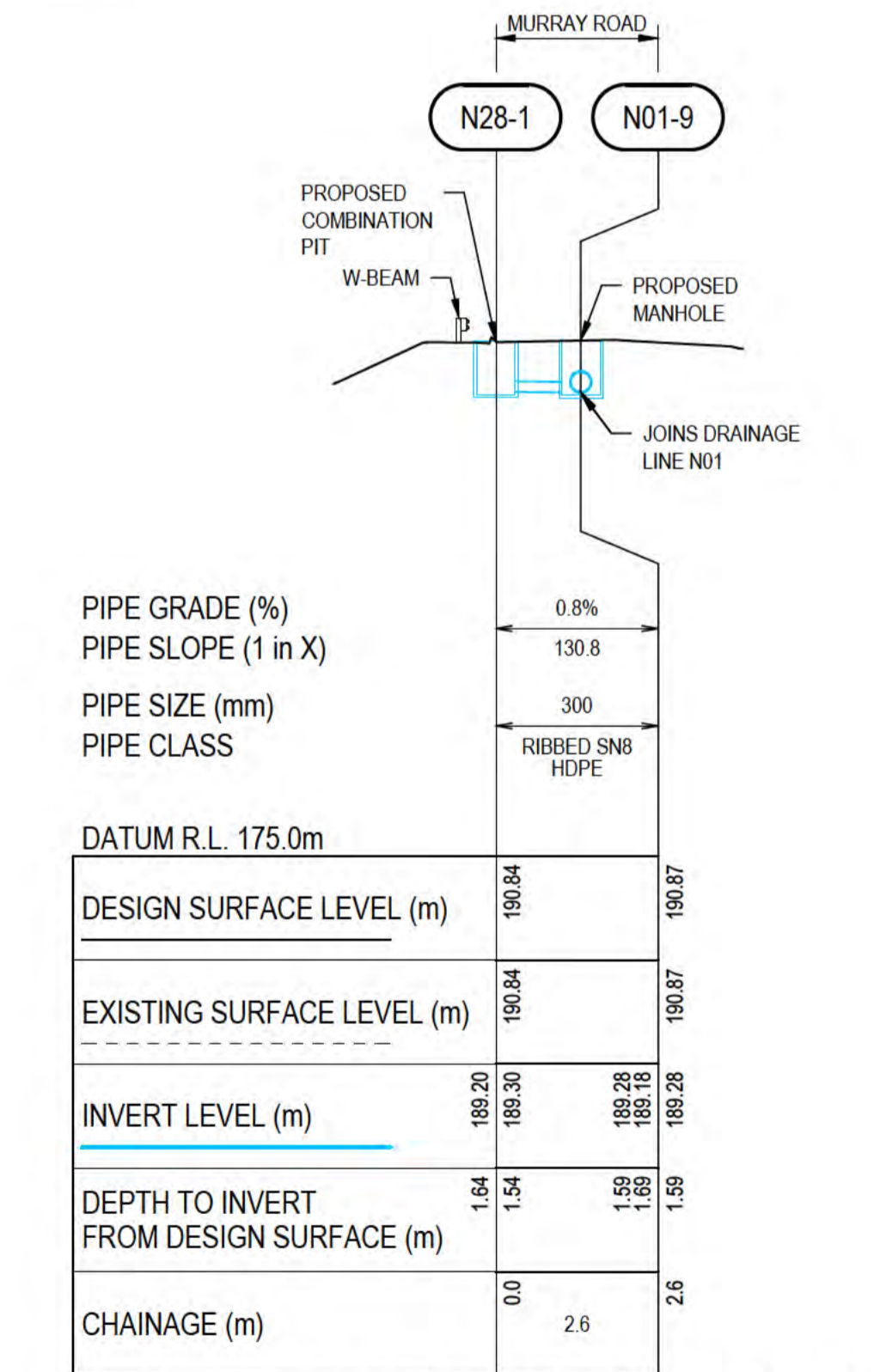
**DRAINAGE LINE N09 - LONGITUDINAL SECTION  
NORTHERN DRUMSITE**

HORIZONTAL SCALE 1:200  
VERTICAL SCALE 1:200



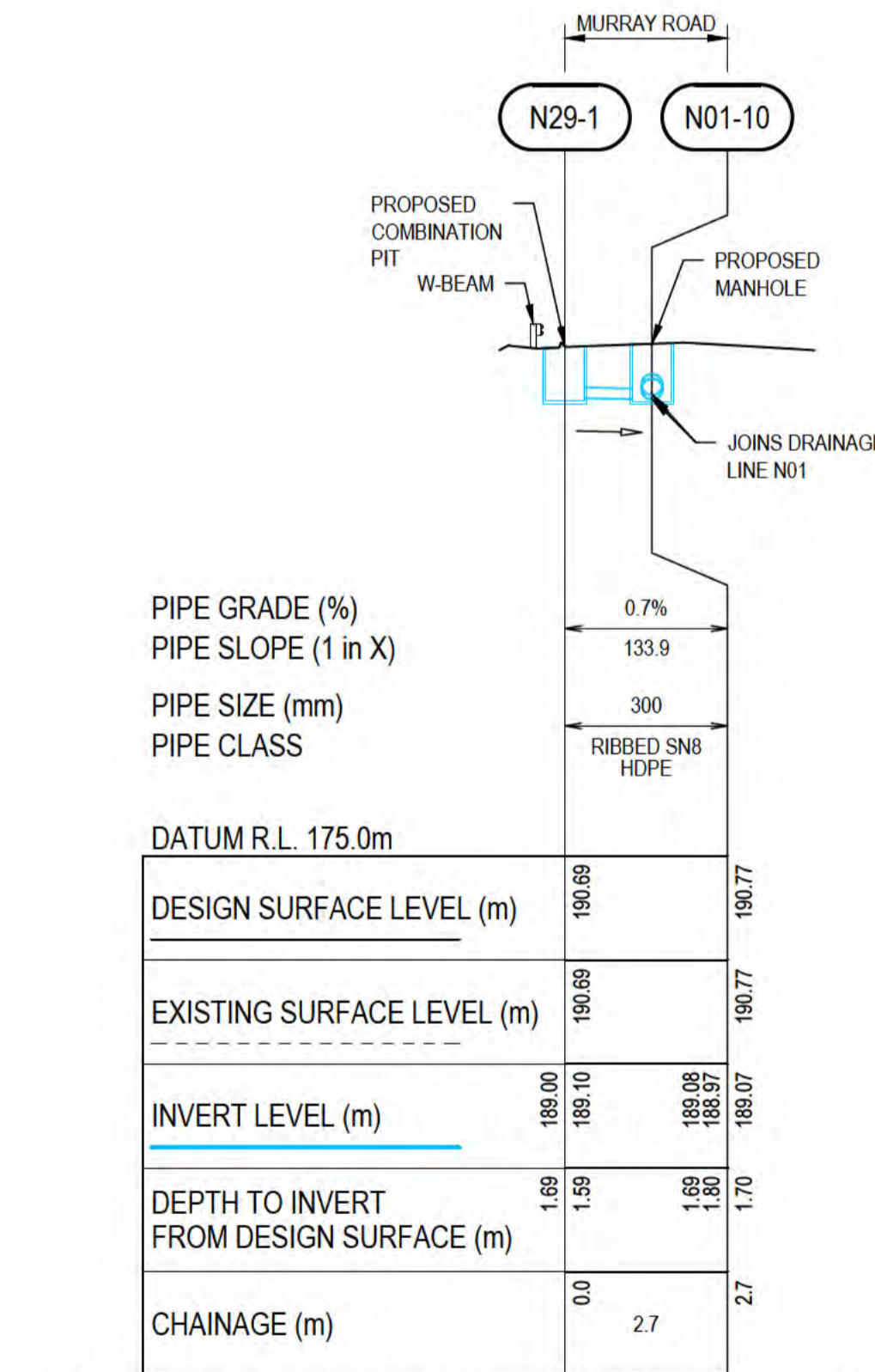
**DRAINAGE LINE N27- LONGITUDINAL SECTION  
NORTHERN DRUMSITE**

HORIZONTAL SCALE 1:200  
VERTICAL SCALE 1:200



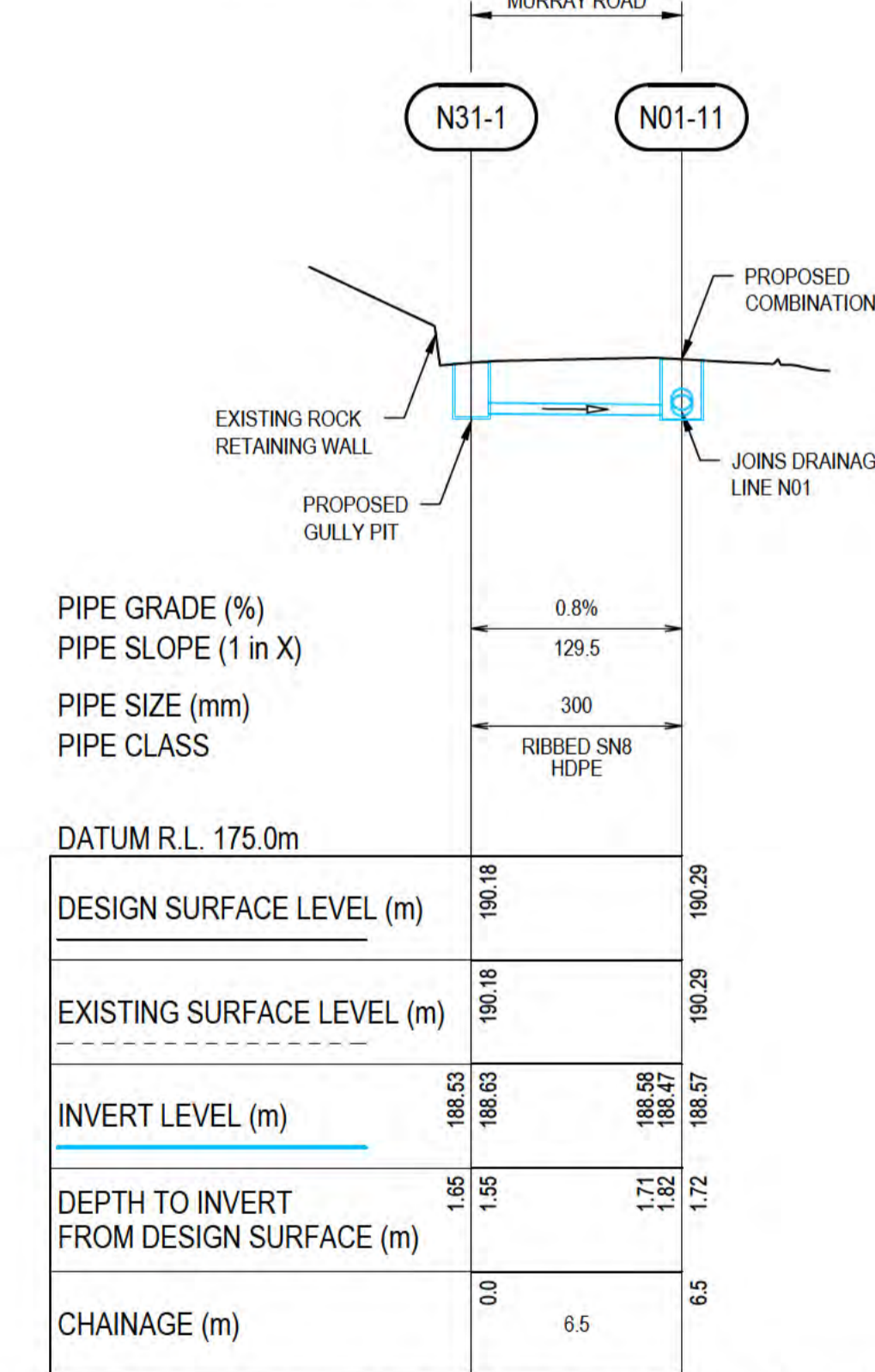
**DRAINAGE LINE N28 - LONGITUDINAL SECTION  
NORTHERN DRUMSITE**

HORIZONTAL SCALE 1:200  
VERTICAL SCALE 1:200



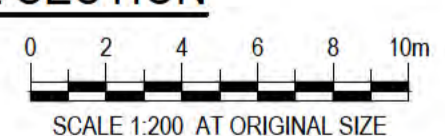
**DRAINAGE LINE N29 - LONGITUDINAL SECTION  
NORTHERN DRUMSITE**

HORIZONTAL SCALE 1:200  
VERTICAL SCALE 1:200



**DRAINAGE LINE N31- LONGITUDINAL SECTION  
NORTHERN DRUMSITE**

HORIZONTAL SCALE 1:200  
VERTICAL SCALE 1:200



**PRELIMINARY**

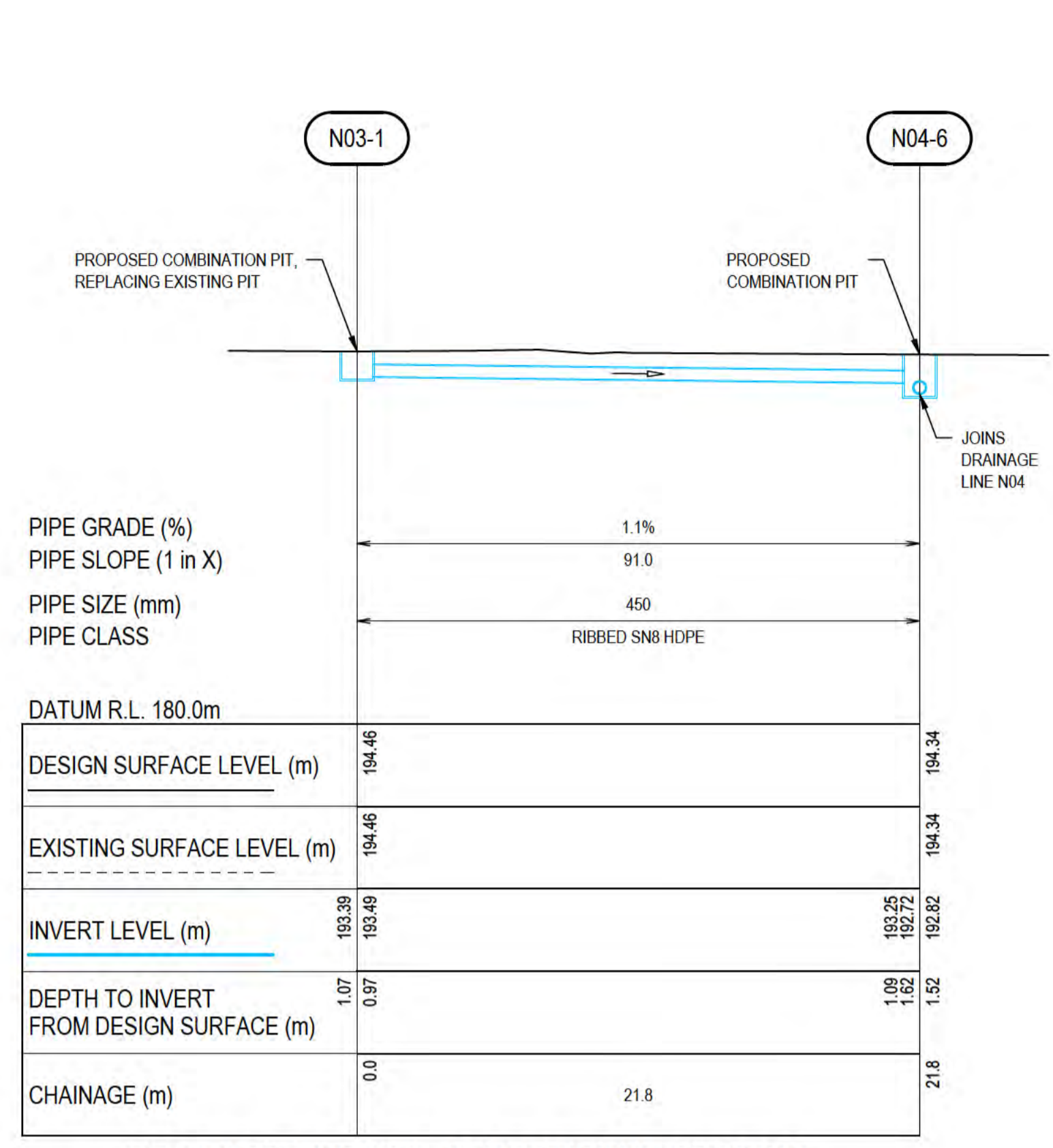
No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
B		REISSUED FOR 90% DESIGN - CLIENT COMMENT	GT	JM*	PS*	20/11/20
A		ISSUED FOR 90% DESIGN - CLIENT COMMENT	GT	JM*	PS*	30/09/20

**Australian Government**  
**Department of Infrastructure, Transport, Regional Development and Communications**

**GHD**  
Level 10, 999 Hay Street Perth WA 6000  
PO Box Y3106 Perth WA 6832 Australia  
T 61 8 6222 8222 F 61 8 6222 8555  
E permail@ghd.com.au W www.ghd.com

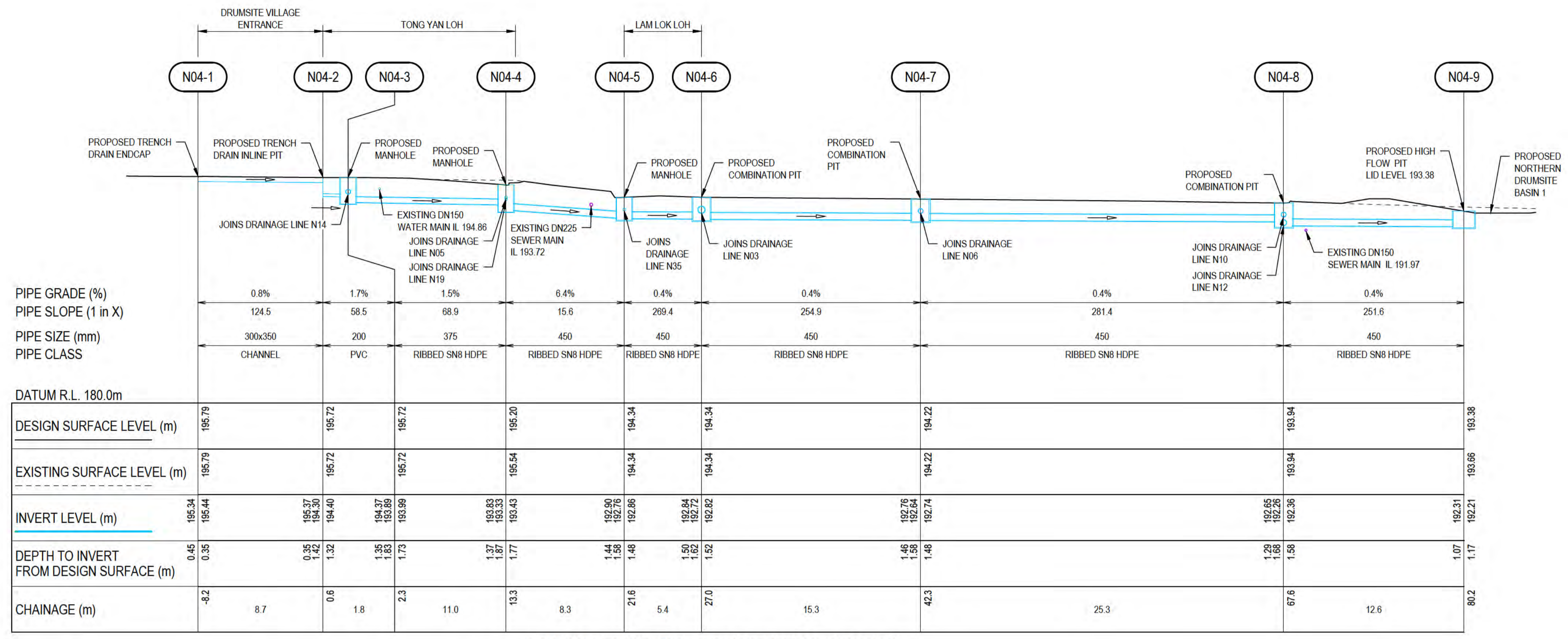
<b>DO NOT SCALE</b>	Drawn G.TAYAM	Designer D.DOMINGO
Conditions of Use. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.	Drafting Check S.HORTON*	Design Check S.CLEARY*
	Approved (Project Director) Date	
	Scale AS SHOWN	This Drawing must not be used for construction unless signed as Approved

Client **DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS**  
Project **CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS**  
Title **NORTHERN DRUMSITE WORKS LONGITUDINAL SECTIONS - SHEET 3**  
Original Size **A1** Drawing No: **61-35637-C252** Rev: **B**



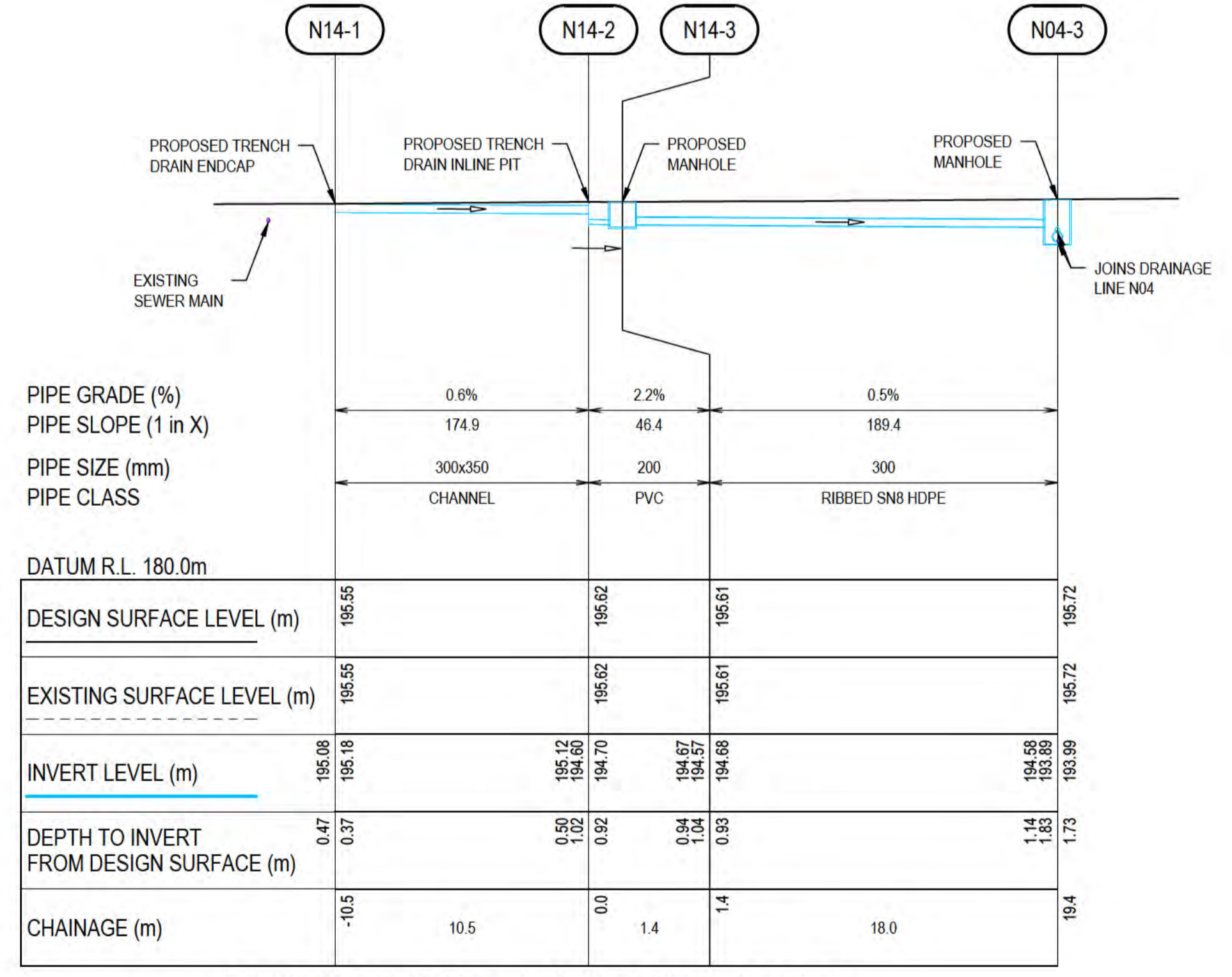
**DRAINAGE LINE N03 - LONGITUDINAL SECTION**  
**NORTHERN DRUMSITE**

HORIZONTAL SCALE 1:200  
VERTICAL SCALE 1:200



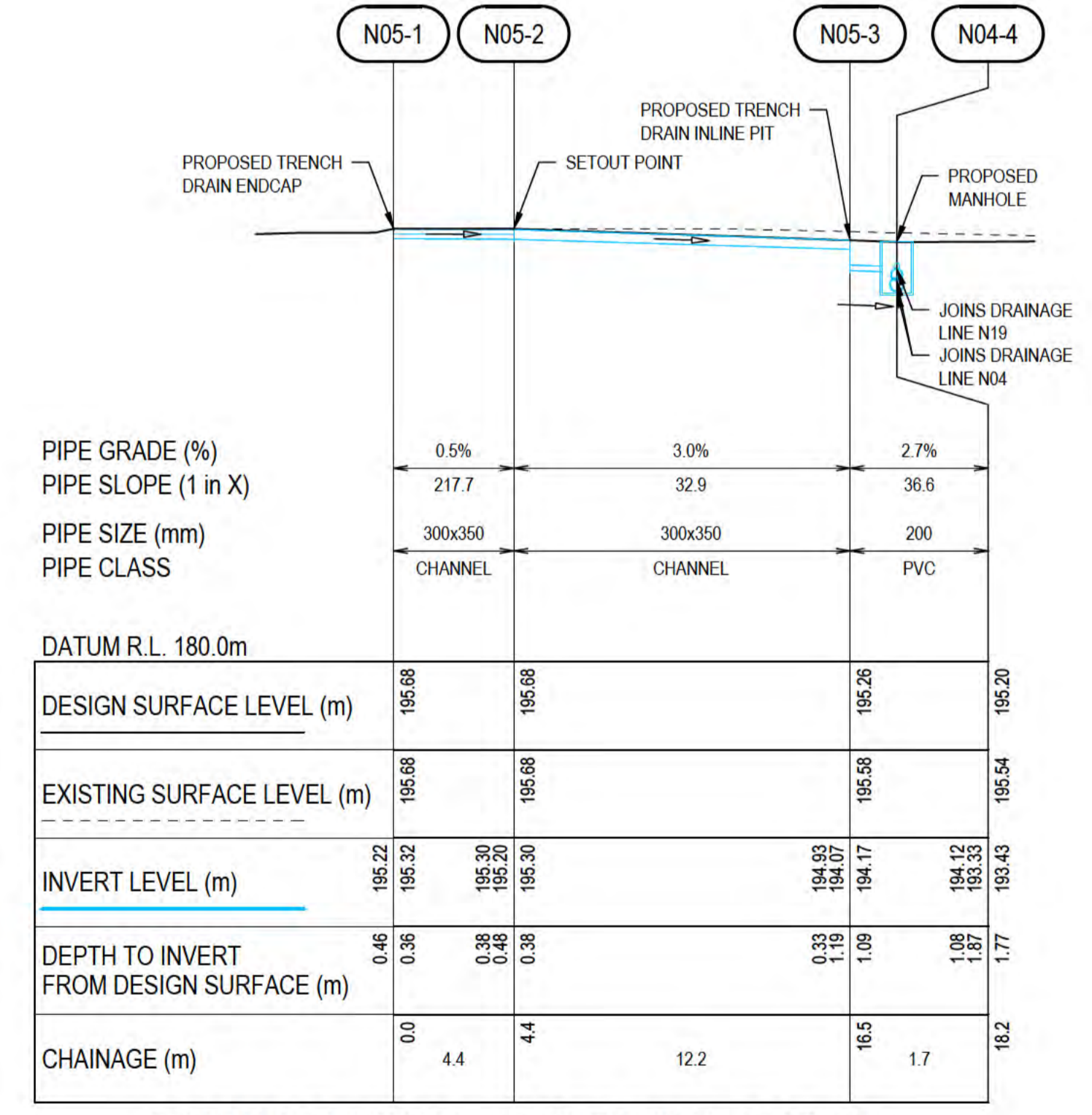
**DRAINAGE LINE N04 - LONGITUDINAL SECTION**  
**NORTHERN DRUMSITE**

HORIZONTAL SCALE 1:200  
VERTICAL SCALE 1:200



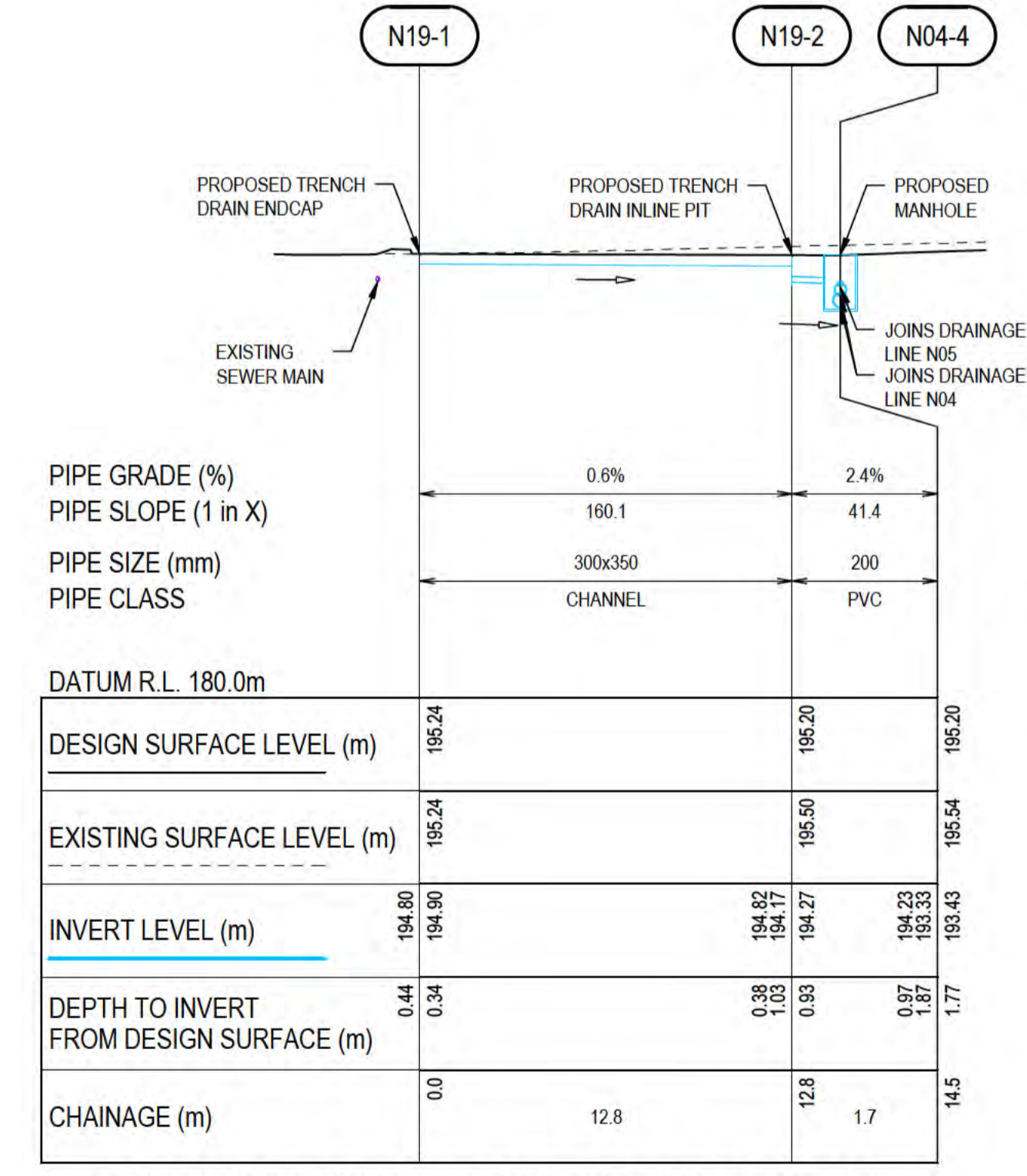
**DRAINAGE LINE N14 - LONGITUDINAL SECTION**  
**NORTHERN DRUMSITE**

HORIZONTAL SCALE 1:200  
VERTICAL SCALE 1:200



**DRAINAGE LINE N05 - LONGITUDINAL SECTION**  
**NORTHERN DRUMSITE**

HORIZONTAL SCALE 1:200  
VERTICAL SCALE 1:200



**DRAINAGE LINE N19 - LONGITUDINAL SECTION**  
**NORTHERN DRUMSITE**

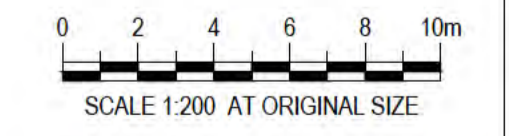
HORIZONTAL SCALE 1:200  
VERTICAL SCALE 1:200

- NOTES:**
- FOR PIPELINE ALIGNMENTS, REFER DRAWING 61-35637-C212.
  - FOR LEGEND, REFER DRAWING 61-35637-C210.
  - FOR OTHER NOTES, REFER DRAWING 61-35637-C202.

**THIS DRAWING IS TO BE PRINTED IN COLOUR**



ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.

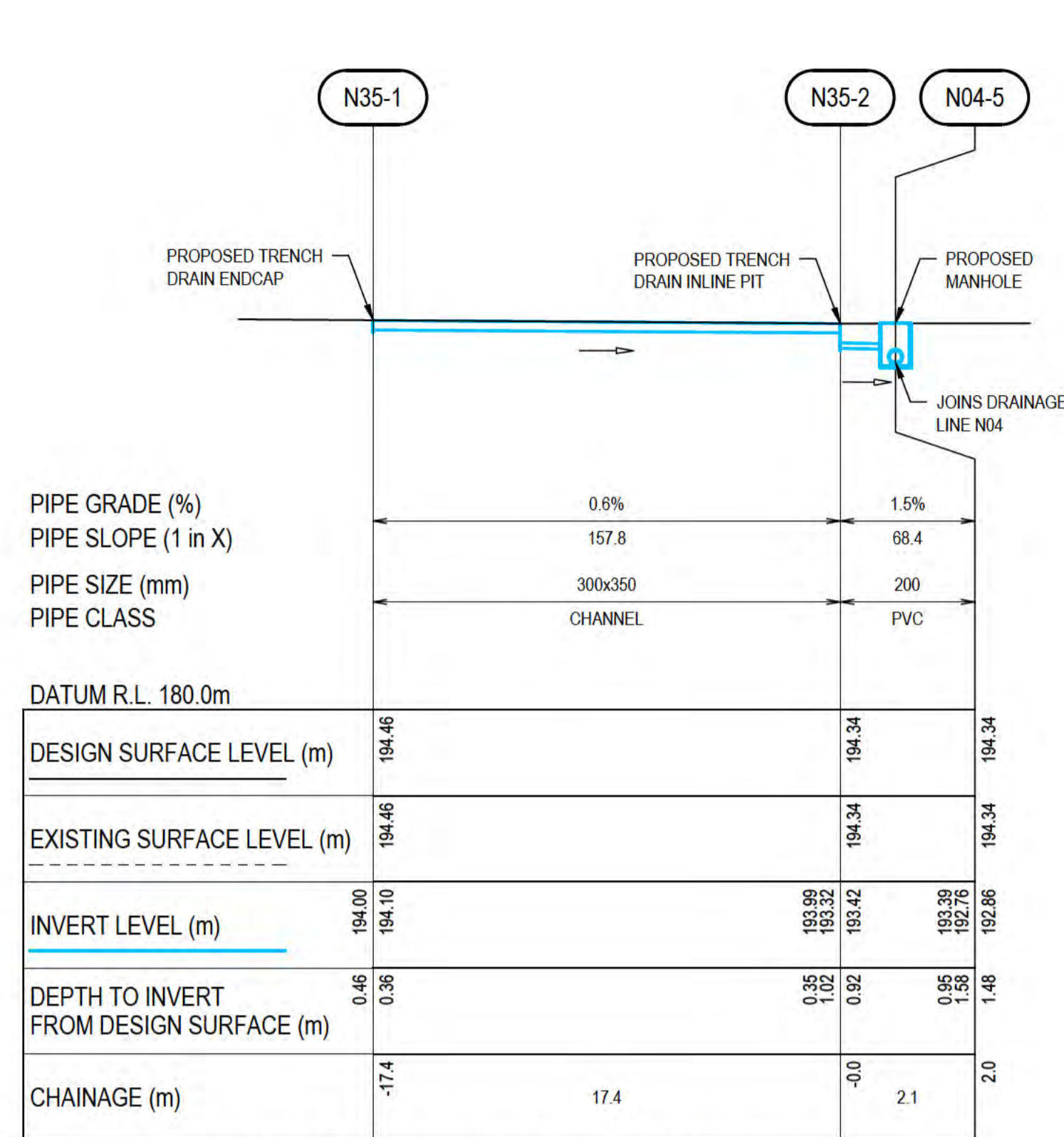


**PRELIMINARY**

No	Revision	Note	Drawn	Job Manager	Project Director	Date
B		REISSUED FOR 90% DESIGN - CLIENT COMMENT	GT	JM*	PS*	20/11/20
A		ISSUED FOR 90% DESIGN - CLIENT COMMENT	GT	JM*	PS*	30/09/20

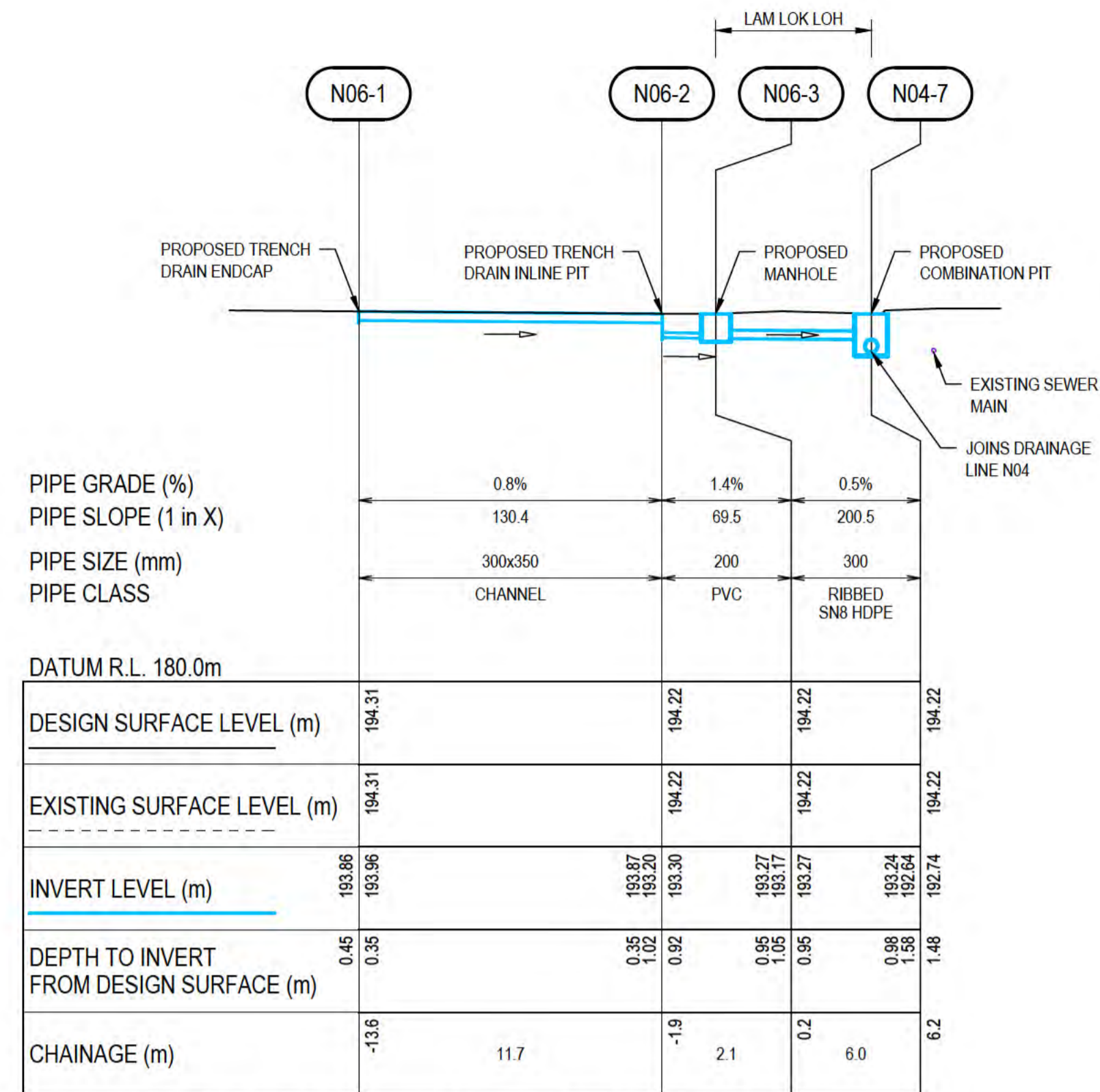


DO NOT SCALE		Drawn	Designer	Client
Conditions of Use. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.		G.TAYAM	D.DOMINGO	DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS
Approved (Project Director) Date		S.HORTON*	S.CLEARY*	CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS
Scale AS SHOWN		This Drawing must not be used for construction unless signed as Approved		NORTHERN DRUMSITE WORKS
				<b>LONGITUDINAL SECTIONS - SHEET 4</b>
		Original Size		Drawing No: <b>61-35637-C253</b>
				Rev: <b>B</b>



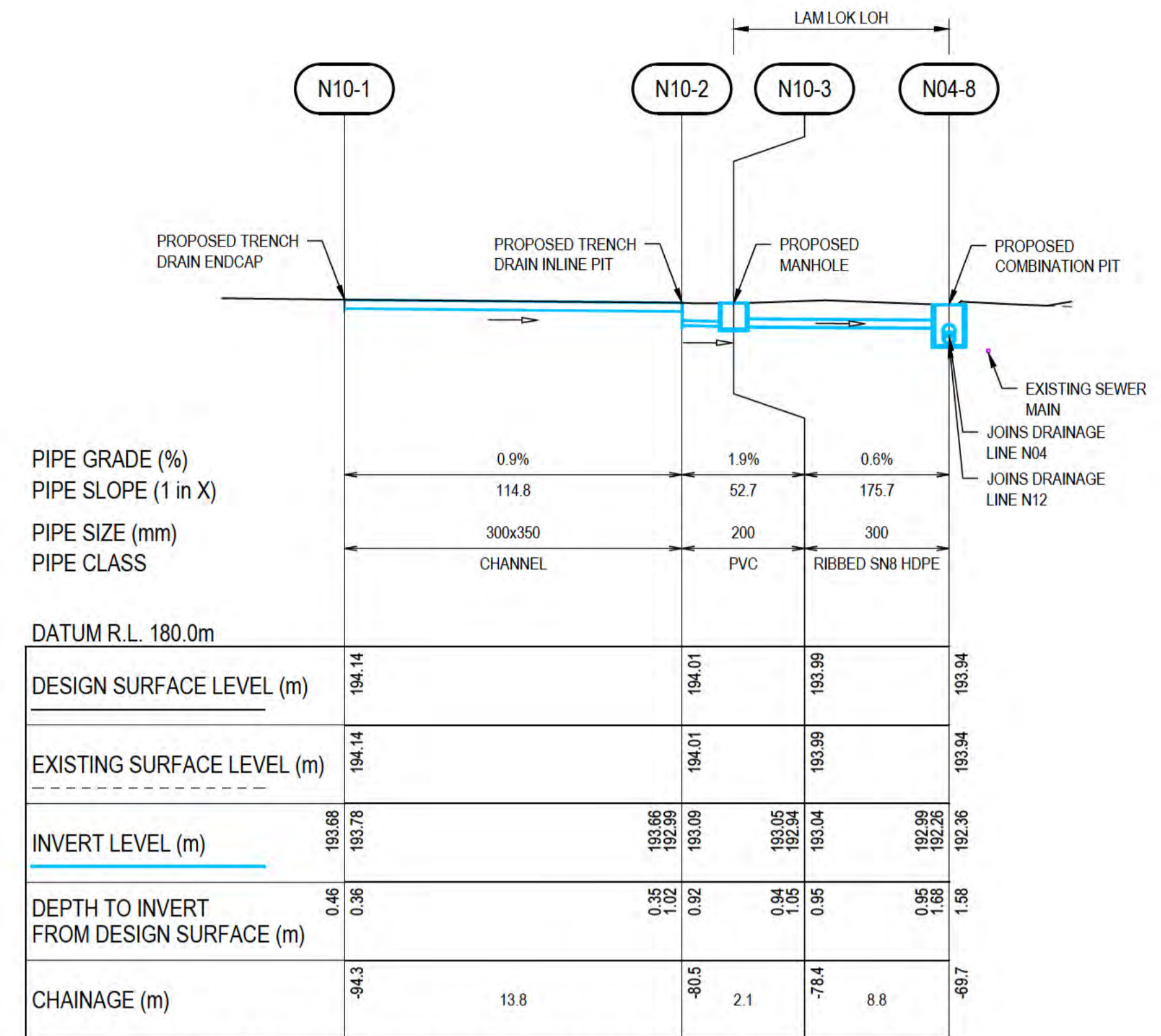
**DRAINAGE LINE N35 - LONGITUDINAL SECTION**  
**NORTHERN DRUMSITE**

HORIZONTAL SCALE 1:200  
 VERTICAL SCALE 1:200



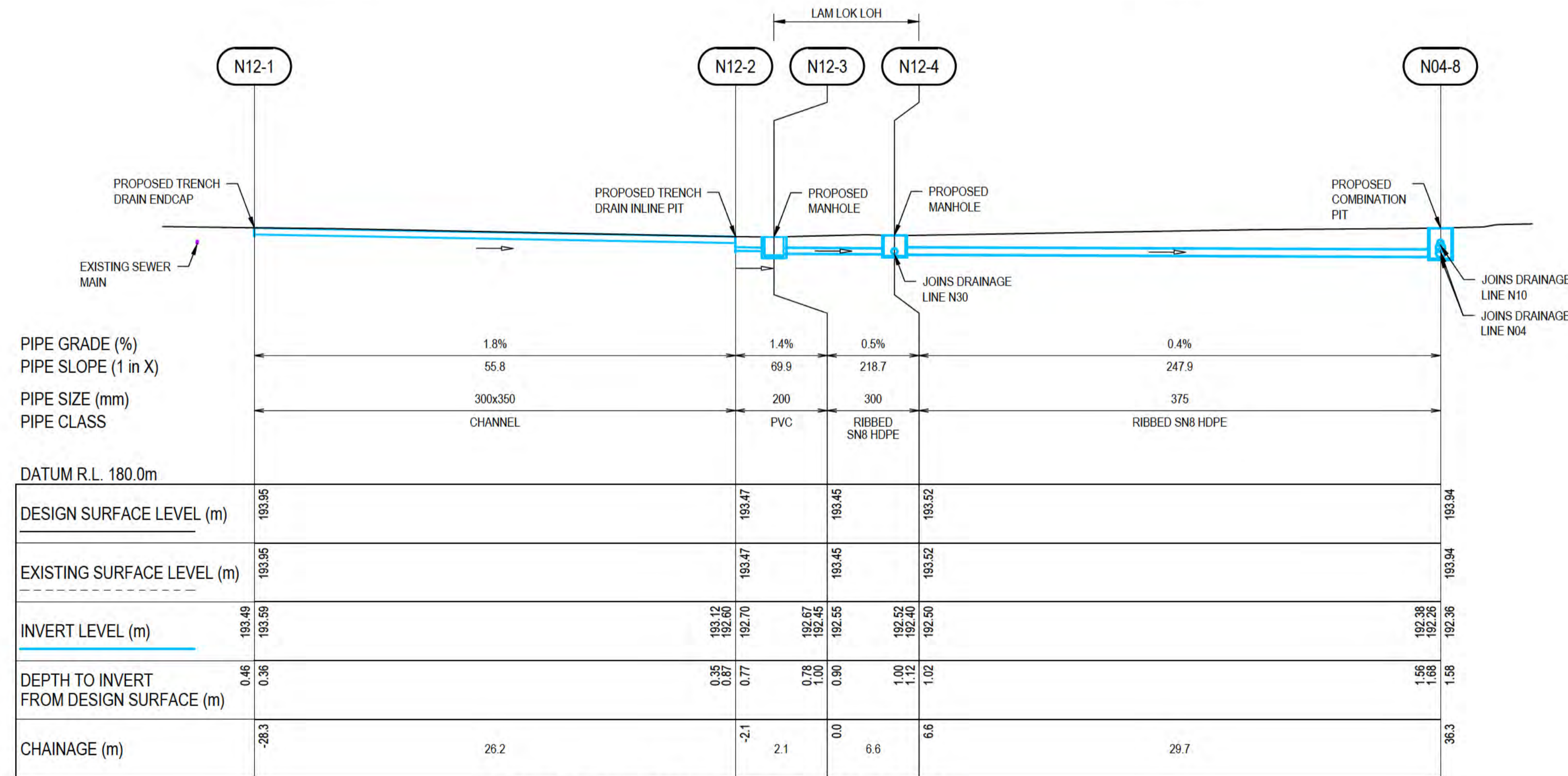
**DRAINAGE LINE N06 - LONGITUDINAL SECTION**  
**NORTHERN DRUMSITE**

HORIZONTAL SCALE 1:200  
 VERTICAL SCALE 1:200



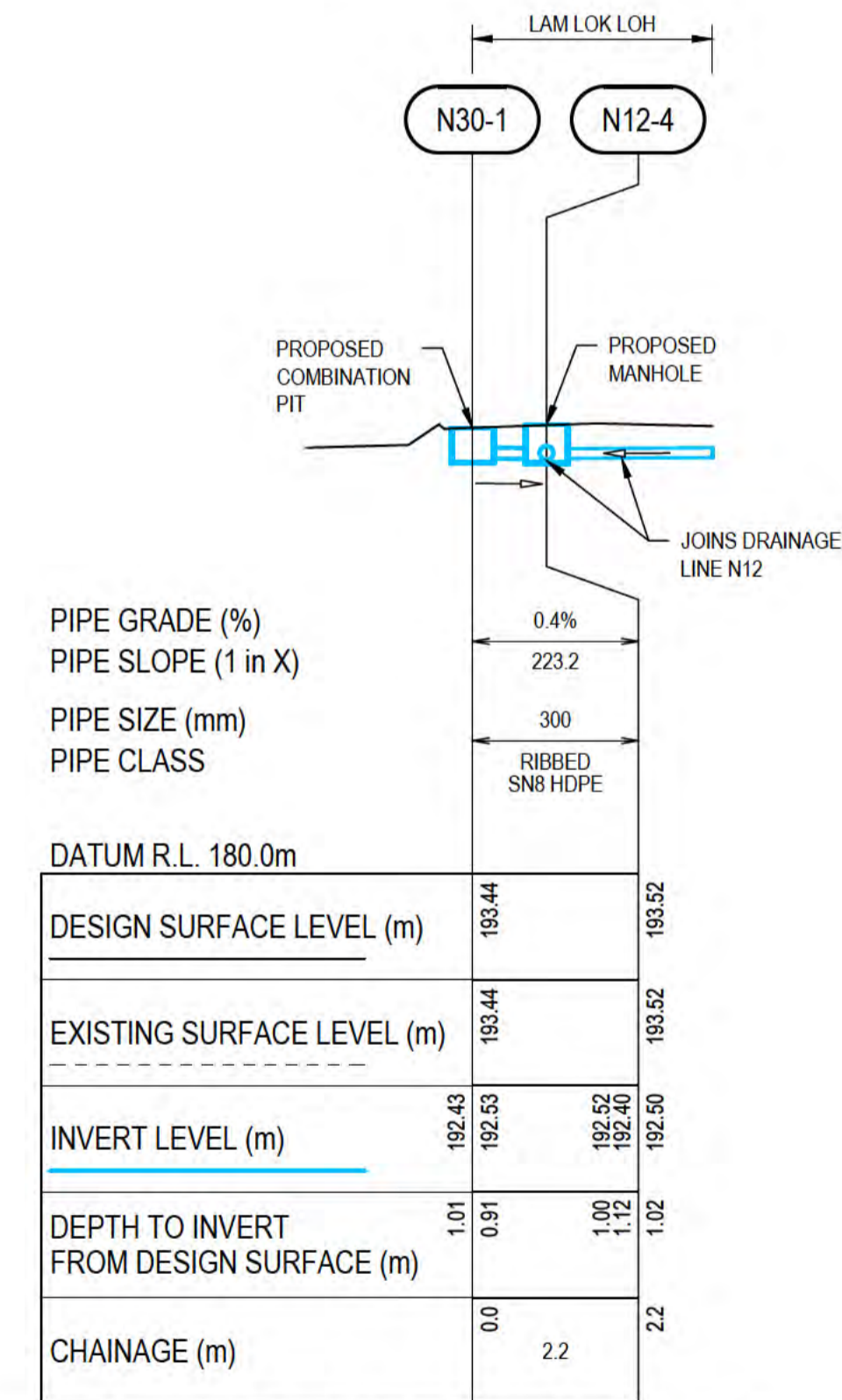
**DRAINAGE LINE N10 - LONGITUDINAL SECTION**  
**NORTHERN DRUMSITE**

HORIZONTAL SCALE 1:200  
 VERTICAL SCALE 1:200



**DRAINAGE LINE N12 - LONGITUDINAL SECTION**  
**NORTHERN DRUMSITE**

HORIZONTAL SCALE 1:200  
 VERTICAL SCALE 1:200



**DRAINAGE LINE N30 - LONGITUDINAL SECTION**  
**NORTHERN DRUMSITE**

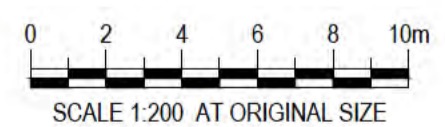
HORIZONTAL SCALE 1:200  
 VERTICAL SCALE 1:200

- NOTES:**
- FOR PIPELINE ALIGNMENTS, REFER DRAWING 61-35637-C212.
  - FOR LEGEND, REFER DRAWING 61-35637-C210.
  - FOR OTHER NOTES, REFER DRAWING 61-35637-C202.

**THIS DRAWING IS TO BE PRINTED IN COLOUR**



ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.

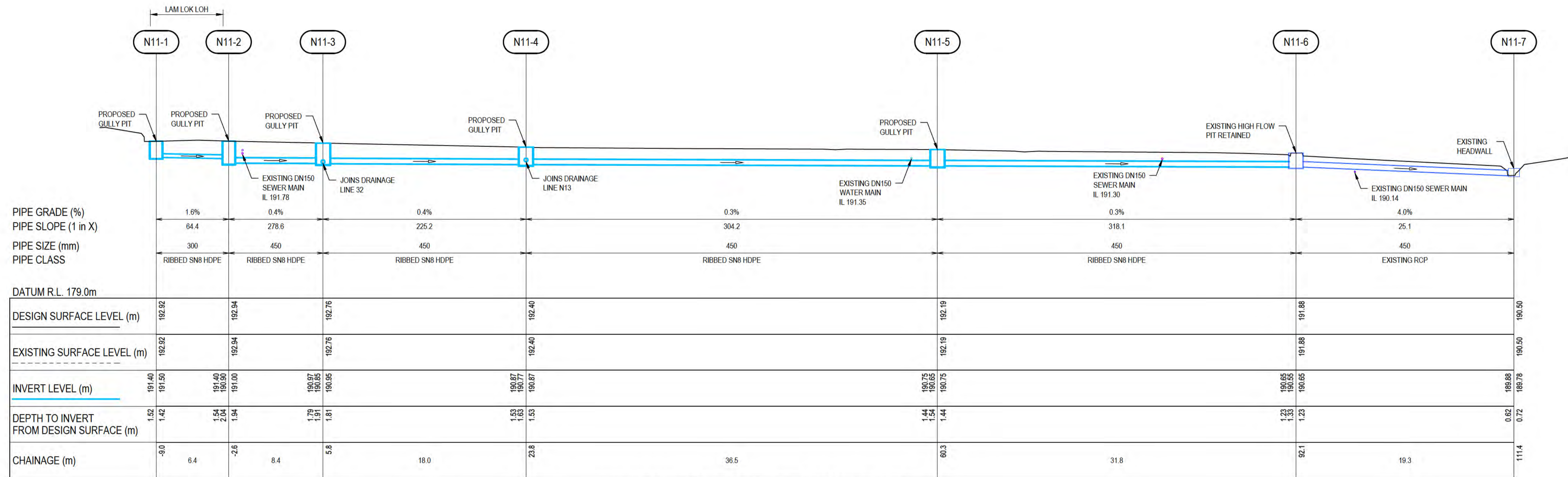


**PRELIMINARY**

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT		GT	JM*	PS*	30/09/20

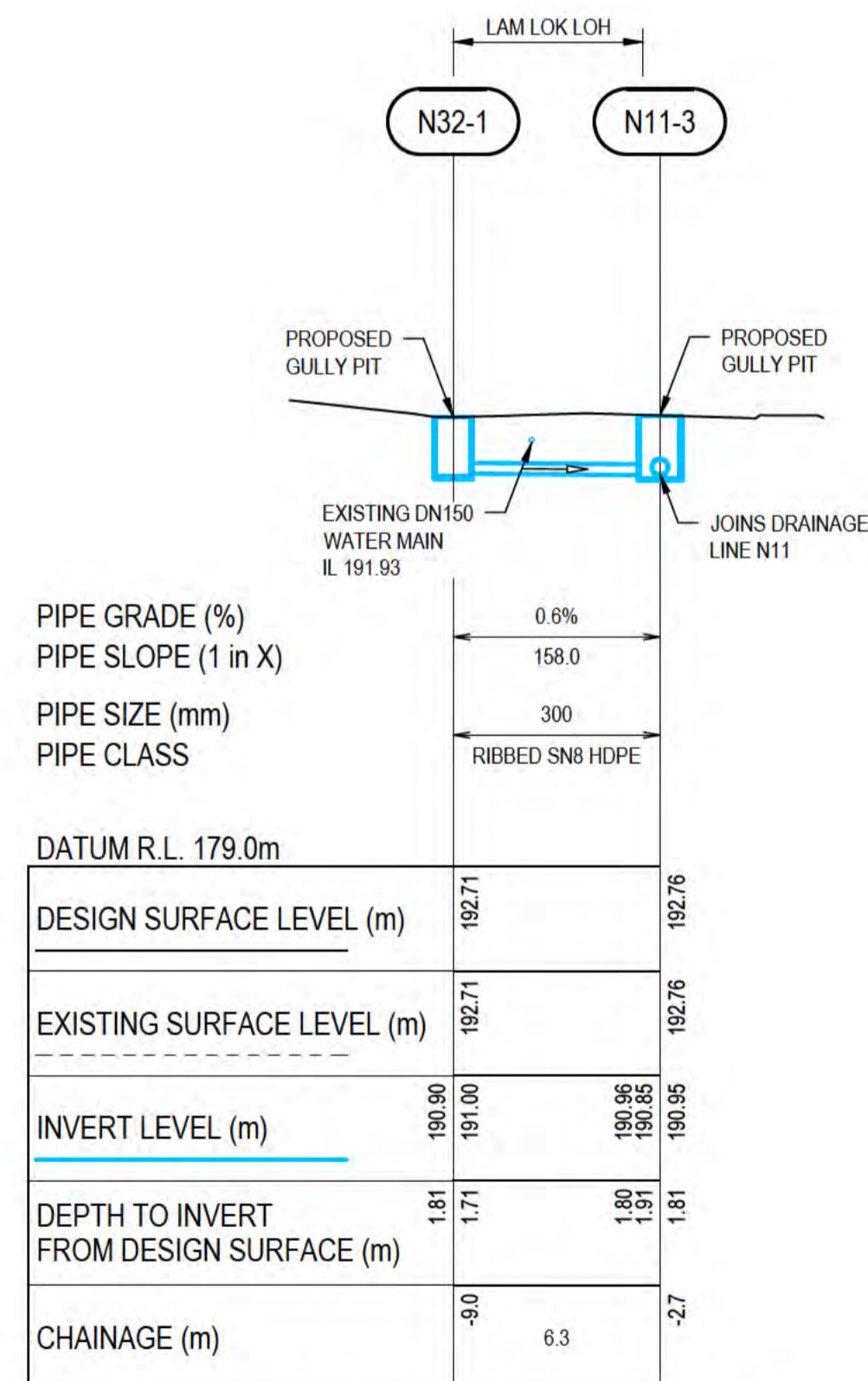


<b>DO NOT SCALE</b>	Drawn G.TAYAM	Designer D.DOMINGO	Client DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS
Conditions of Use. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.	Drafting Check S.HORTON*	Design Check S.CLEARY*	Project CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS
	Approved (Project Director) Date		Title NORTHERN DRUMSITE WORKS LONGITUDINAL SECTIONS - SHEET 5
	Scale AS SHOWN	This Drawing must not be used for construction unless signed as Approved	Original Size A1 Drawing No: <b>61-35637-C254</b> Rev: A



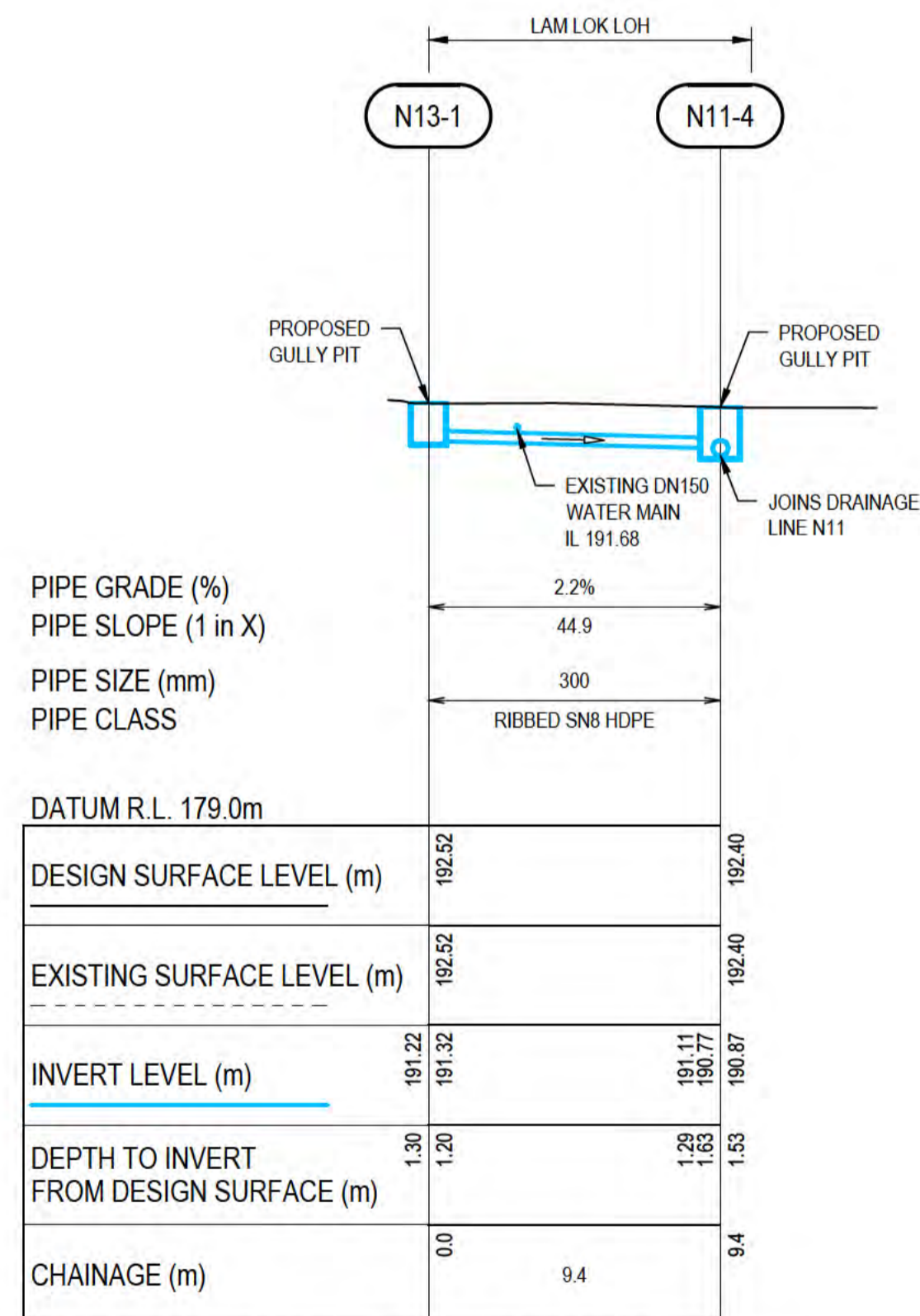
**DRAINAGE LINE N11 - LONGITUDINAL SECTION**  
**NORTHERN DRUMSITE**

HORIZONTAL SCALE 1:200  
VERTICAL SCALE 1:200



**DRAINAGE LINE N32 - LONGITUDINAL SECTION**  
**NORTHERN DRUMSITE**

HORIZONTAL SCALE 1:200  
VERTICAL SCALE 1:200



**DRAINAGE LINE N13 - LONGITUDINAL SECTION**  
**NORTHERN DRUMSITE**

HORIZONTAL SCALE 1:200  
VERTICAL SCALE 1:200

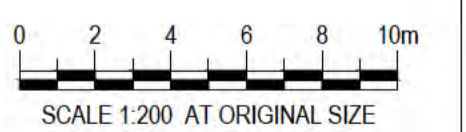
**NOTES:**

- FOR PIPELINE ALIGNMENTS, REFER DRAWING 61-35637-C211.
- FOR LEGEND, REFER DRAWING 61-35637-C210.
- FOR OTHER NOTES, REFER DRAWING 61-35637-C202.

**THIS DRAWING IS TO BE PRINTED IN COLOUR**



ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.



**PRELIMINARY**

No	Revision	Note	Drawn	Job Manager	Project Director	Date
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT		GT	JM*	PS*	30/09/20

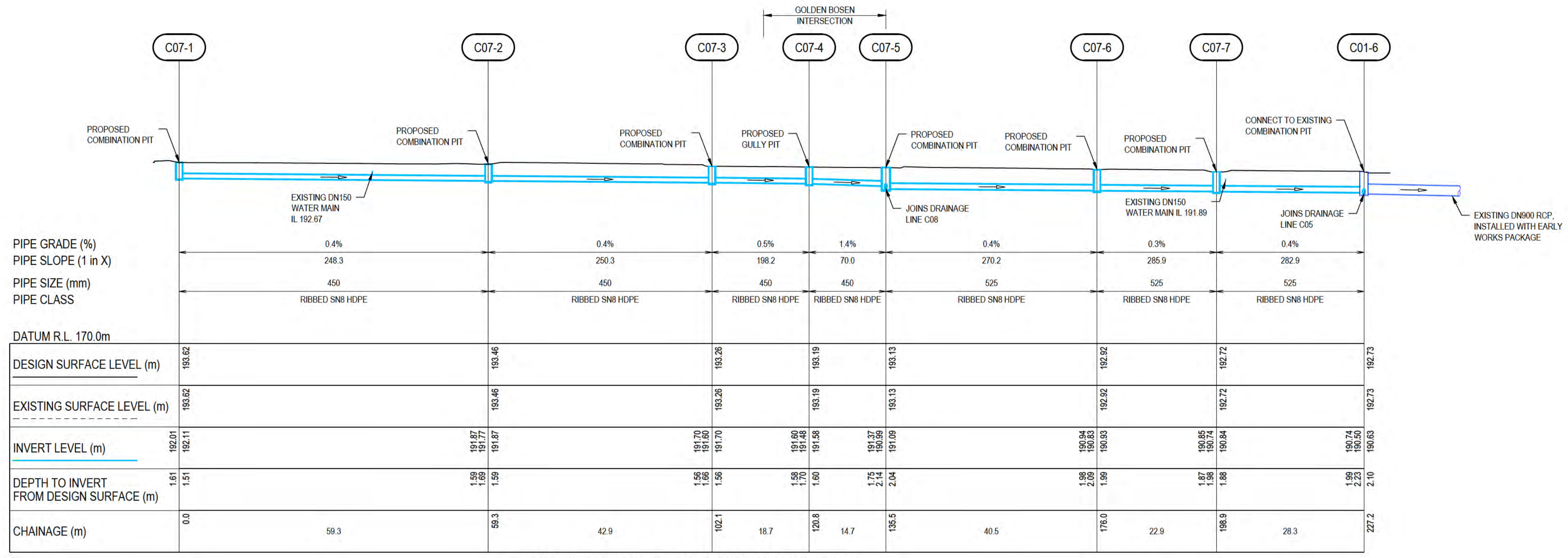


**DO NOT SCALE**

Conditions of Use. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

Drawn	G.TAYAM	Designer	D.DOMINGO
Drafting Check	S.HORTON*	Design Check	S.CLEARY*
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client	DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS		
Project	CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS		
Title	NORTHERN DRUMSITE WORKS		
	LONGITUDINAL SECTIONS - SHEET 6		
Original Size	A1	Drawing No:	61-35637-C255
Rev:	A		

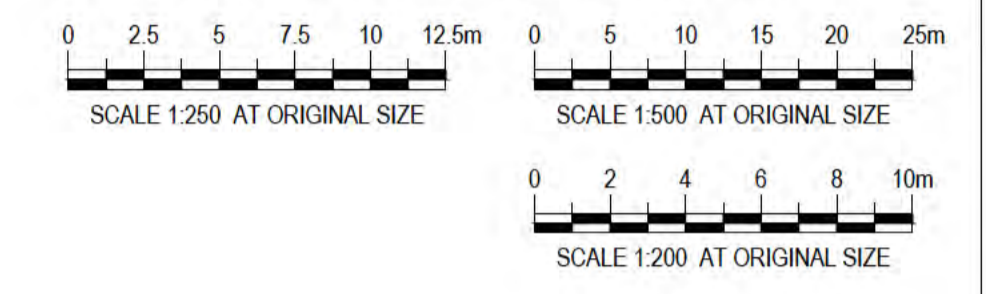


**NOTES:**  
 1. FOR PIPELINE ALIGNMENTS, REFER DRAWINGS 61-35637-C215 AND C216.  
 2. FOR LEGEND, REFER DRAWING 61-35637-C210.  
 3. FOR OTHER NOTES, REFER DRAWING 61-35637-C202.

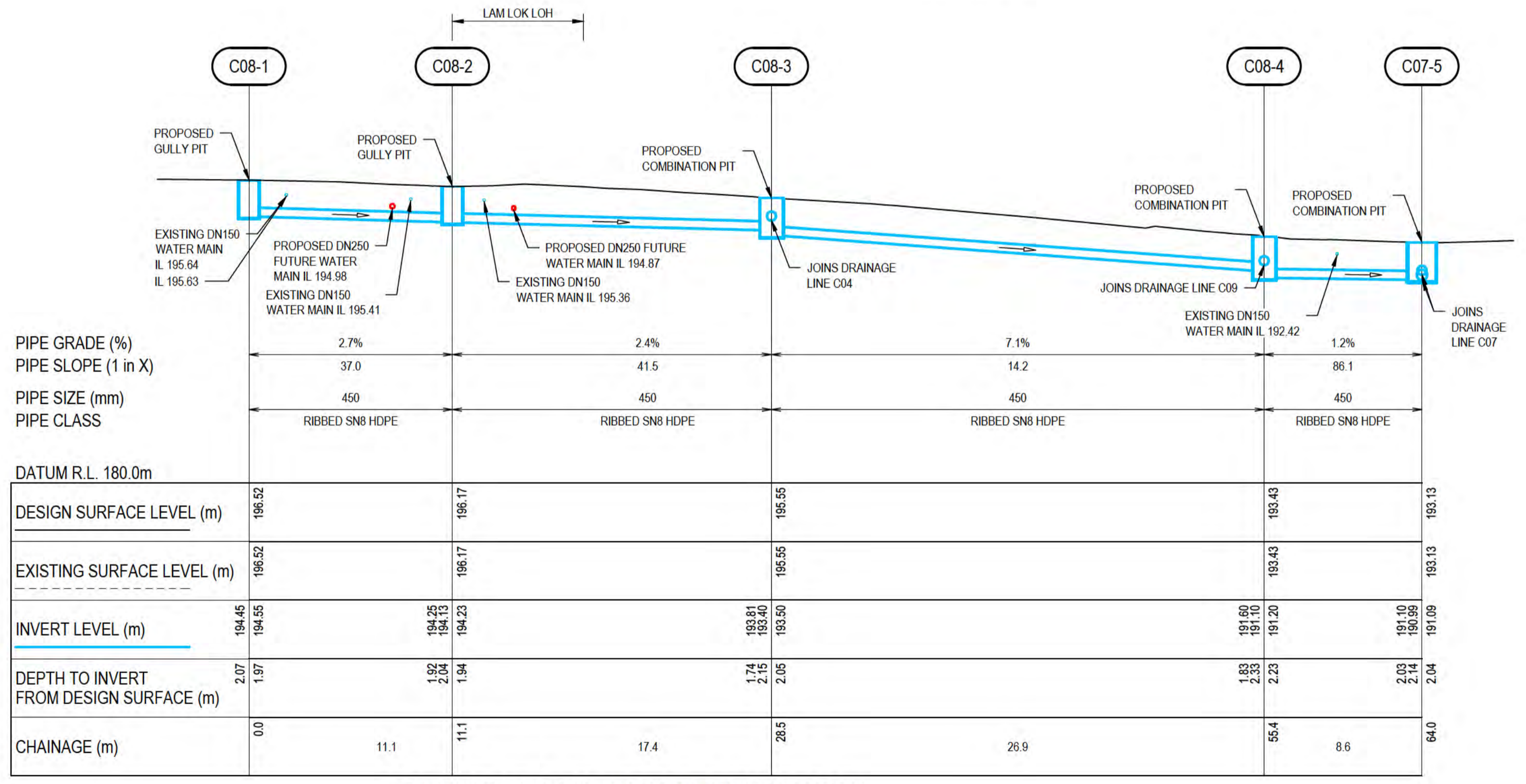
**THIS DRAWING IS TO BE PRINTED IN COLOUR**



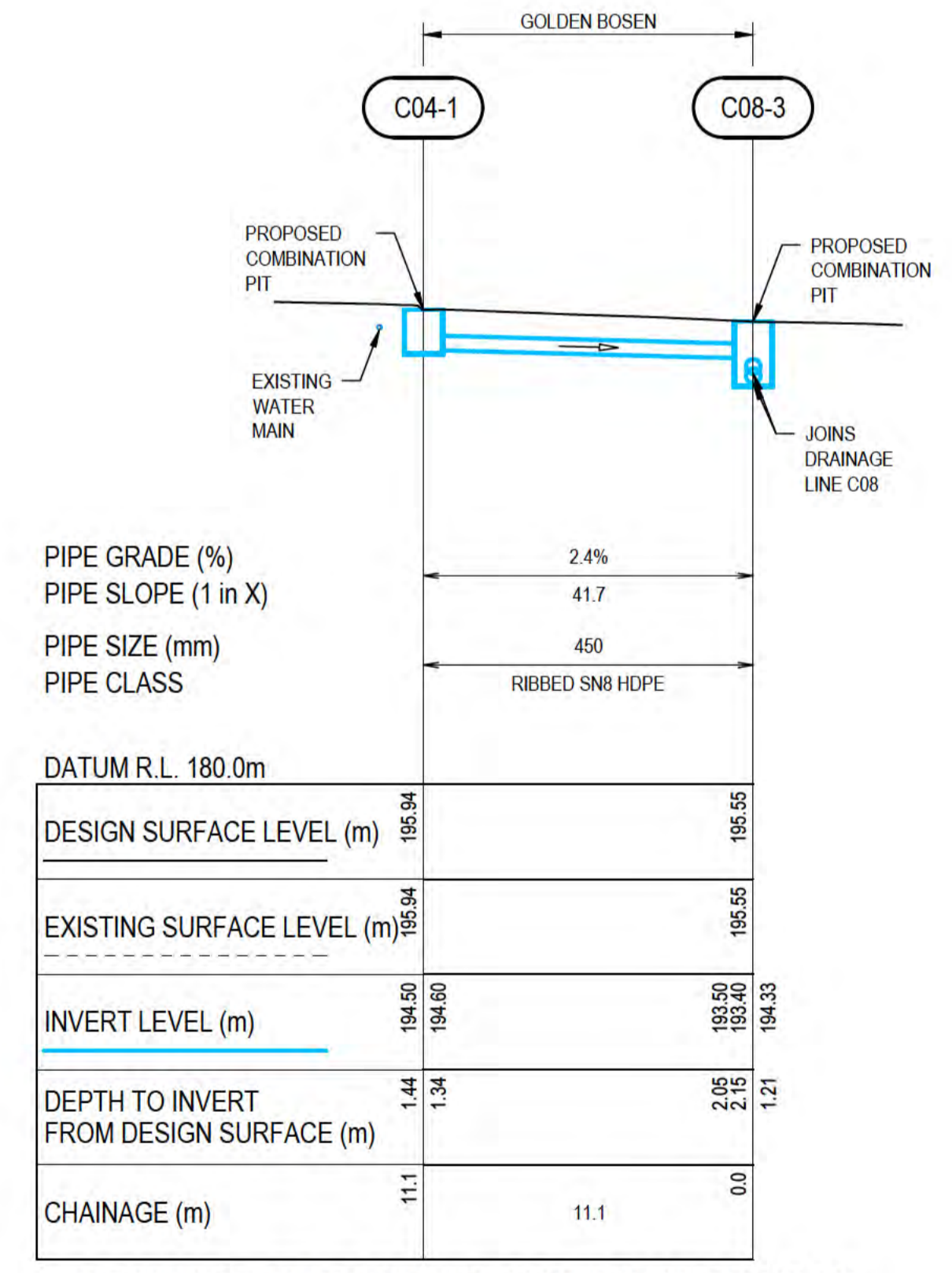
ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.



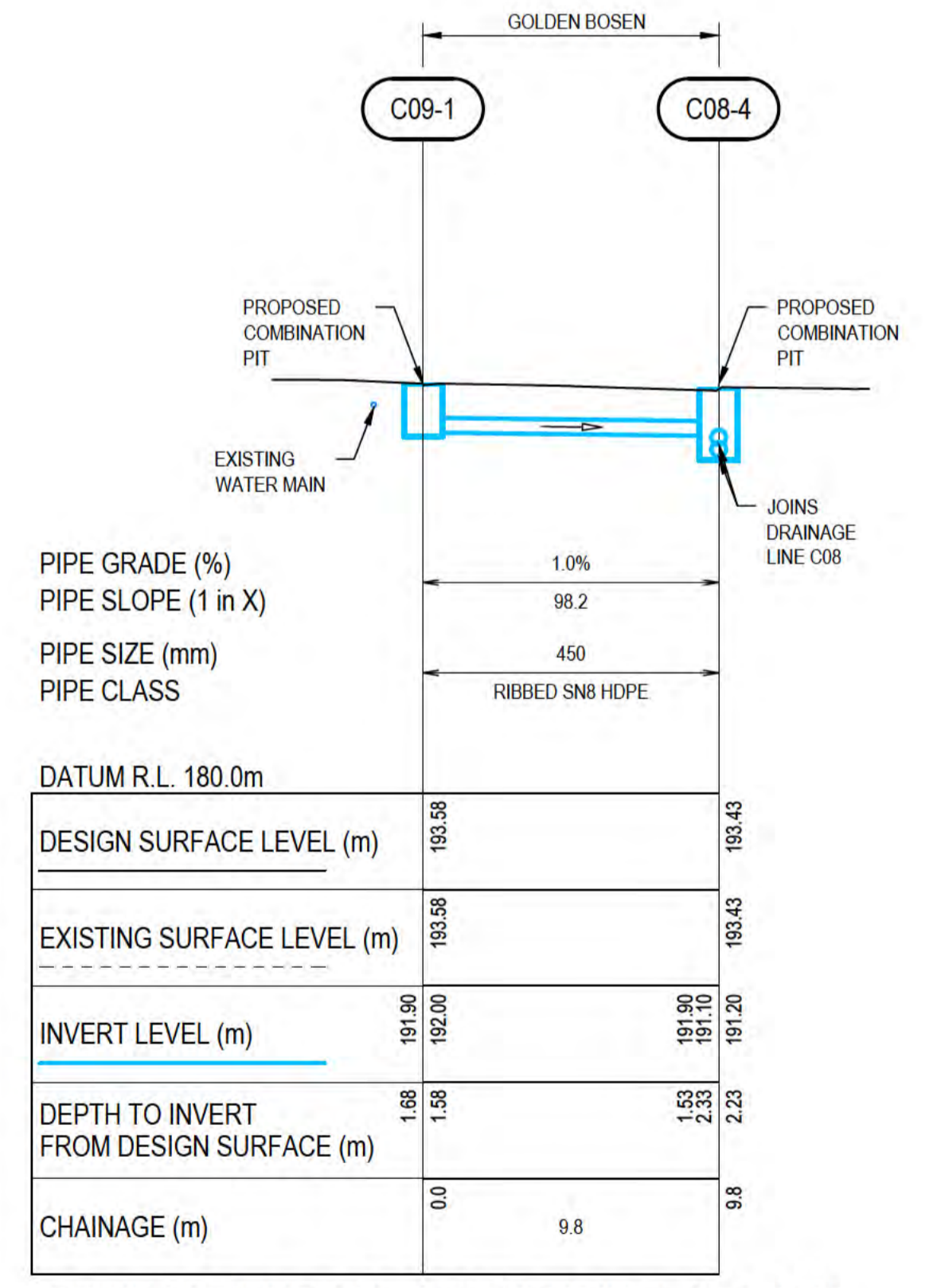
**DRAINAGE LINE C07 - LONGITUDINAL SECTION  
 CENTRAL DRUMSITE**  
 HORIZONTAL SCALE 1:500  
 VERTICAL SCALE 1:250



**DRAINAGE LINE C08 - LONGITUDINAL SECTION  
 CENTRAL DRUMSITE**  
 HORIZONTAL SCALE 1:200  
 VERTICAL SCALE 1:200



**DRAINAGE LINE C04 - LONGITUDINAL SECTION  
 CENTRAL DRUMSITE**  
 HORIZONTAL SCALE 1:200  
 VERTICAL SCALE 1:200



**DRAINAGE LINE C09 - LONGITUDINAL SECTION  
 CENTRAL DRUMSITE**  
 HORIZONTAL SCALE 1:200  
 VERTICAL SCALE 1:200

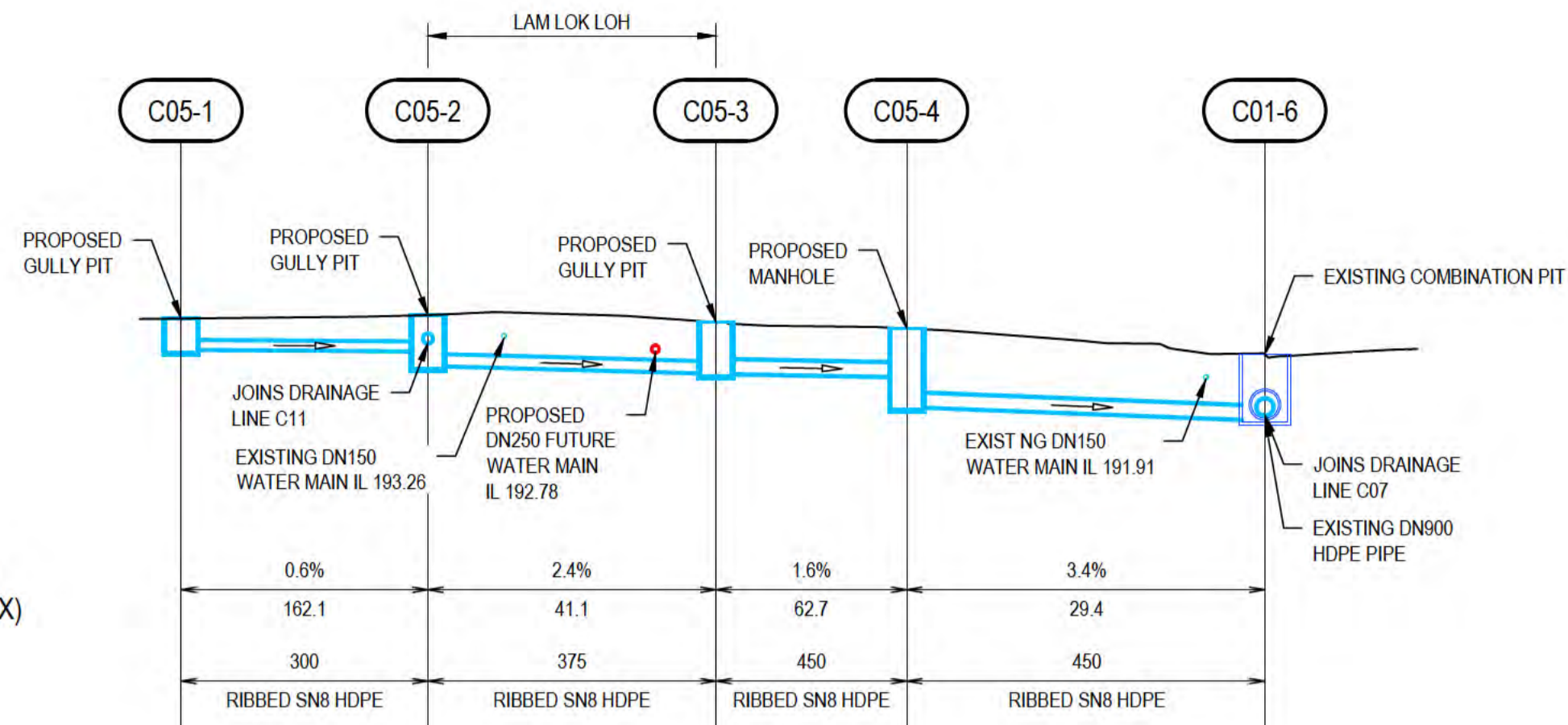
**PRELIMINARY**

No	Revision	Note	Drawn	Job Manager	Project Director	Date
A		ISSUED FOR 90% DESIGN - CLIENT COMMENT	GT	JM*	PS*	30/09/20



DO NOT SCALE		Drawn	Designer
Conditions of Use. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.		G.TAYAM	D.DOMINGO
Approved (Project Director) Date		S.HORTON*	S.CLEARY*
Scale		AS SHOWN	This Drawing must not be used for construction unless signed as Approved

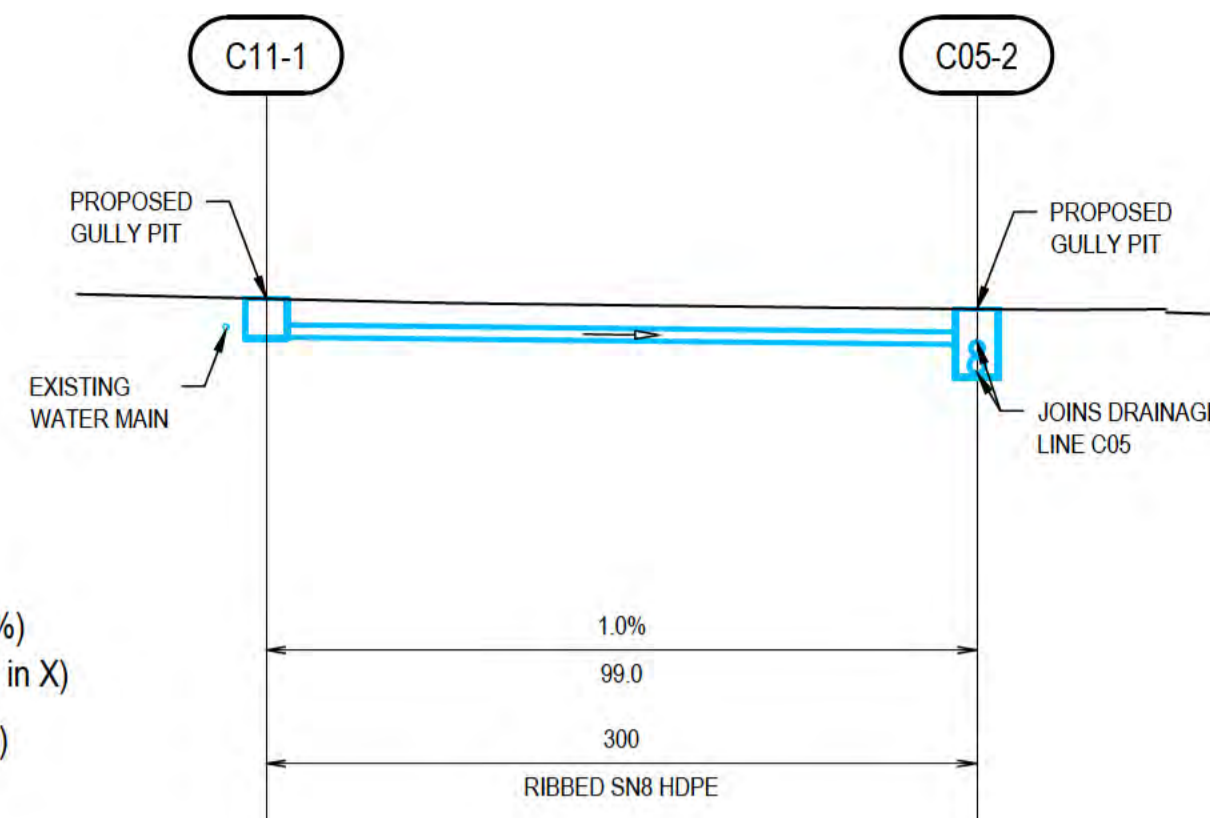
Client	Project	Title	Original Size	Drawing No:	Rev:
DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS	CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS	CENTRAL DRUMSITE WORKS LONGITUDINAL SECTIONS - SHEET 1	A1	61-35637-C260	A



PIPE GRADE (%)	0.6%		2.4%		1.6%		3.4%	
PIPE SLOPE (1 in X)	162.1		41.1		62.7		29.4	
PIPE SIZE (mm)	300		375		450		450	
PIPE CLASS	RIBBED SN8 HDPE		RIBBED SN8 HDPE		RIBBED SN8 HDPE		RIBBED SN8 HDPE	
DATUM R.L. 178.0m								
DESIGN SURFACE LEVEL (m)	193.91	194.02	193.79	193.79	193.58	192.73	192.73	192.73
EXISTING SURFACE LEVEL (m)	193.91	194.02	193.79	193.79	193.58	192.73	192.73	192.73
INVERT LEVEL (m)	192.79 192.68	192.04 192.25 192.35	192.12 192.10	192.00 190.90	191.00	190.60 190.50	190.50	190.50
DEPTH TO INVERT FROM DESIGN SURFACE (m)	1.12 1.02	1.16 1.77 1.67	1.67 1.79	1.68 2.68	2.88	2.13 2.23	2.13	2.13
CHAINAGE (m)	-23.1	8.1	-15.0	9.5	-5.6	8.3	0.7	11.8
							12.4	2.10

**DRAINAGE LINE C05 - LONGITUDINAL SECTION**  
**CENTRAL DRUMSITE**

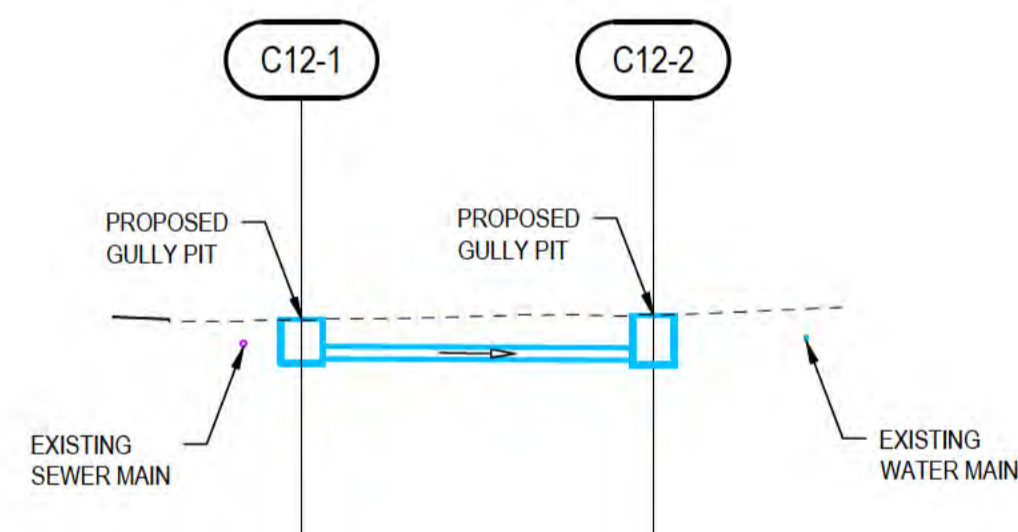
HORIZONTAL SCALE 1:200  
VERTICAL SCALE 1:200



PIPE GRADE (%)	1.0%	
PIPE SLOPE (1 in X)	99.0	
PIPE SIZE (mm)	300	
PIPE CLASS	RIBBED SN8 HDPE	
DATUM R.L. 178.0m		
DESIGN SURFACE LEVEL (m)	194.30	184.02
EXISTING SURFACE LEVEL (m)	194.30	184.02
INVERT LEVEL (m)	193.29	182.25
DEPTH TO INVERT FROM DESIGN SURFACE (m)	1.01	0.92 1.77
CHAINAGE (m)	-46.2	18.8
		-27.4

**DRAINAGE LINE C11 - LONGITUDINAL SECTION**  
**CENTRAL DRUMSITE**

HORIZONTAL SCALE 1:200  
VERTICAL SCALE 1:200



PIPE GRADE (%)	0.4%	
PIPE SLOPE (1 in X)	250.0	
PIPE SIZE (mm)	300	
PIPE CLASS	RIBBED SN8 HDPE	
DATUM R.L. 178.0m		
DESIGN SURFACE LEVEL (m)	193.87	193.96
EXISTING SURFACE LEVEL (m)	193.87	193.96
INVERT LEVEL (m)	192.74 192.84	192.81 192.71
DEPTH TO INVERT FROM DESIGN SURFACE (m)	1.12 1.02	1.17 1.27
CHAINAGE (m)	0.0	9.3

**DRAINAGE LINE C12 - LONGITUDINAL SECTION**  
**CENTRAL DRUMSITE**

HORIZONTAL SCALE 1:200  
VERTICAL SCALE 1:200

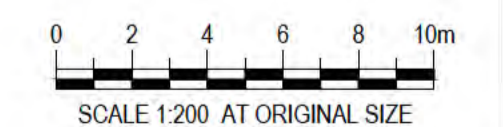
**NOTES:**

1. FOR PIPELINE ALIGNMENTS, REFER DRAWINGS 61-35637-C216.
2. FOR LEGEND, REFER DRAWING 61-35637-C210.
3. FOR OTHER NOTES, REFER DRAWING 61-35637-C202.

**THIS DRAWING IS TO BE PRINTED IN COLOUR**



ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.

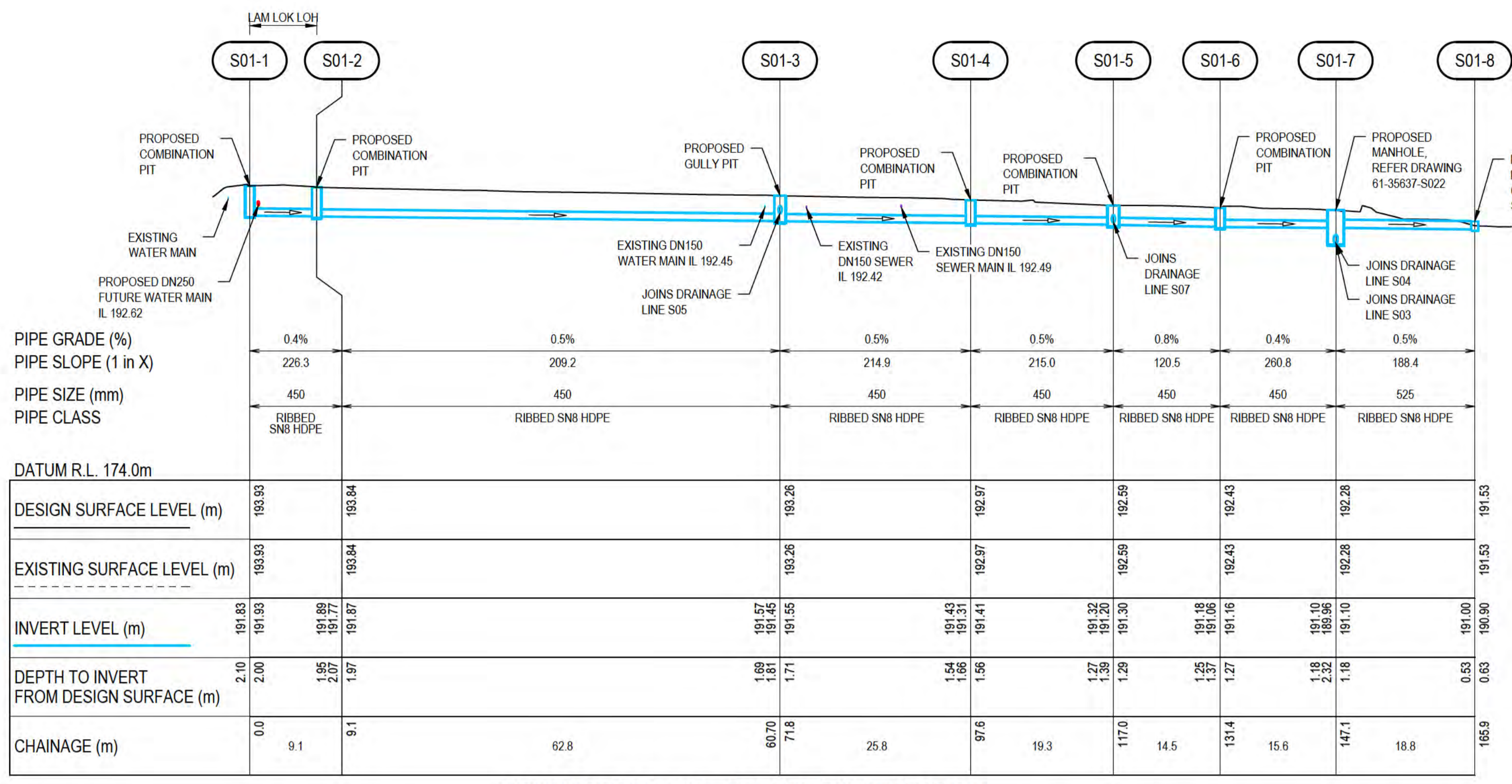


**PRELIMINARY**

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT		GT	JM*	PS*	30/09/20

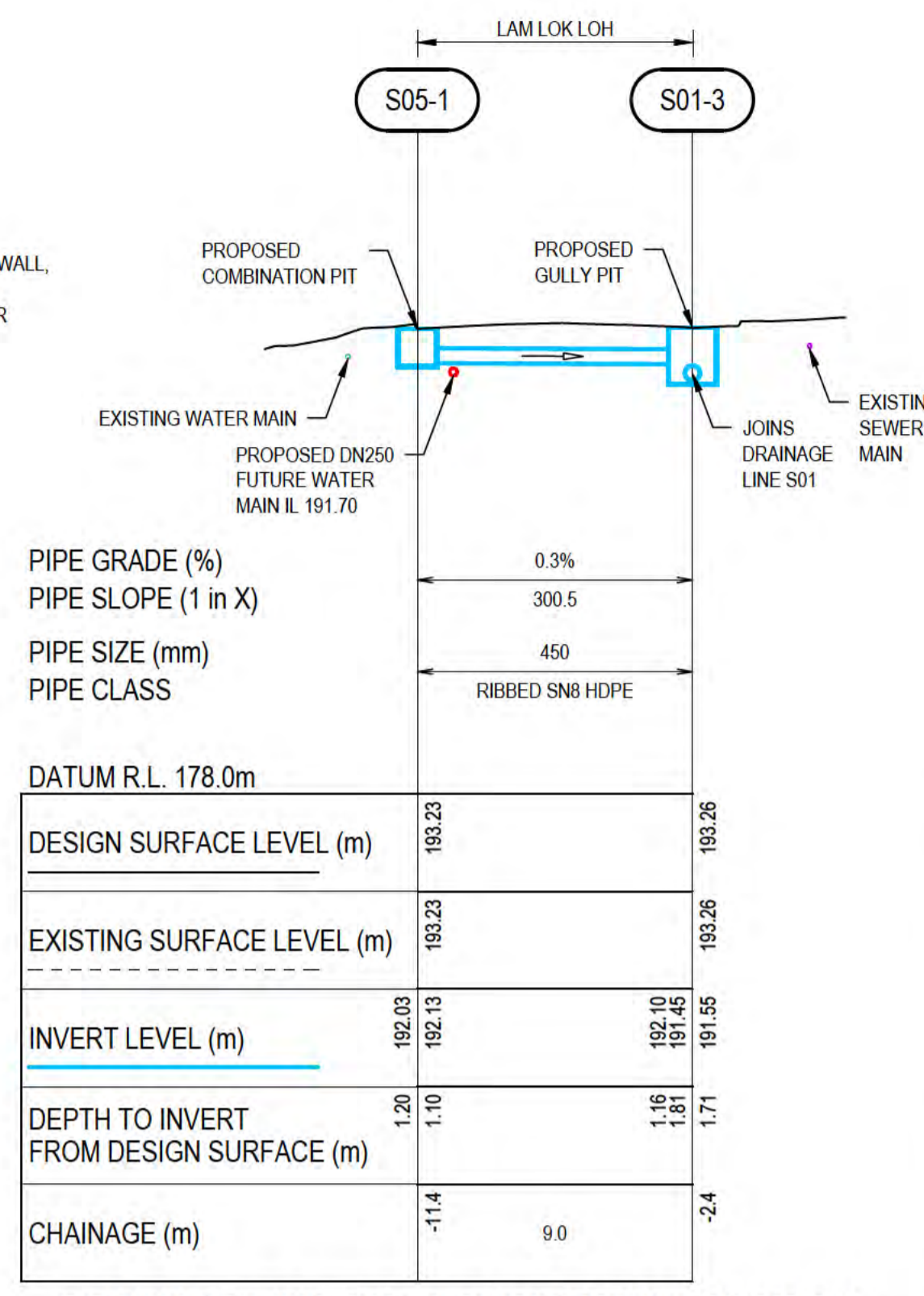


<b>DO NOT SCALE</b>	Drawn G.TAYAM	Designer D.DOMINGO	Client DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS
Conditions of Use. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.	Drafting Check S.HORTON*	Design Check S.CLEARY*	Project CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS
	Approved (Project Director) Date		Title CENTRAL DRUMSITE WORKS LONGITUDINAL SECTIONS - SHEET 2
	Scale AS SHOWN	This Drawing must not be used for construction unless signed as Approved	Original Size A1 Drawing No: 61-35637-C261
			Rev: A



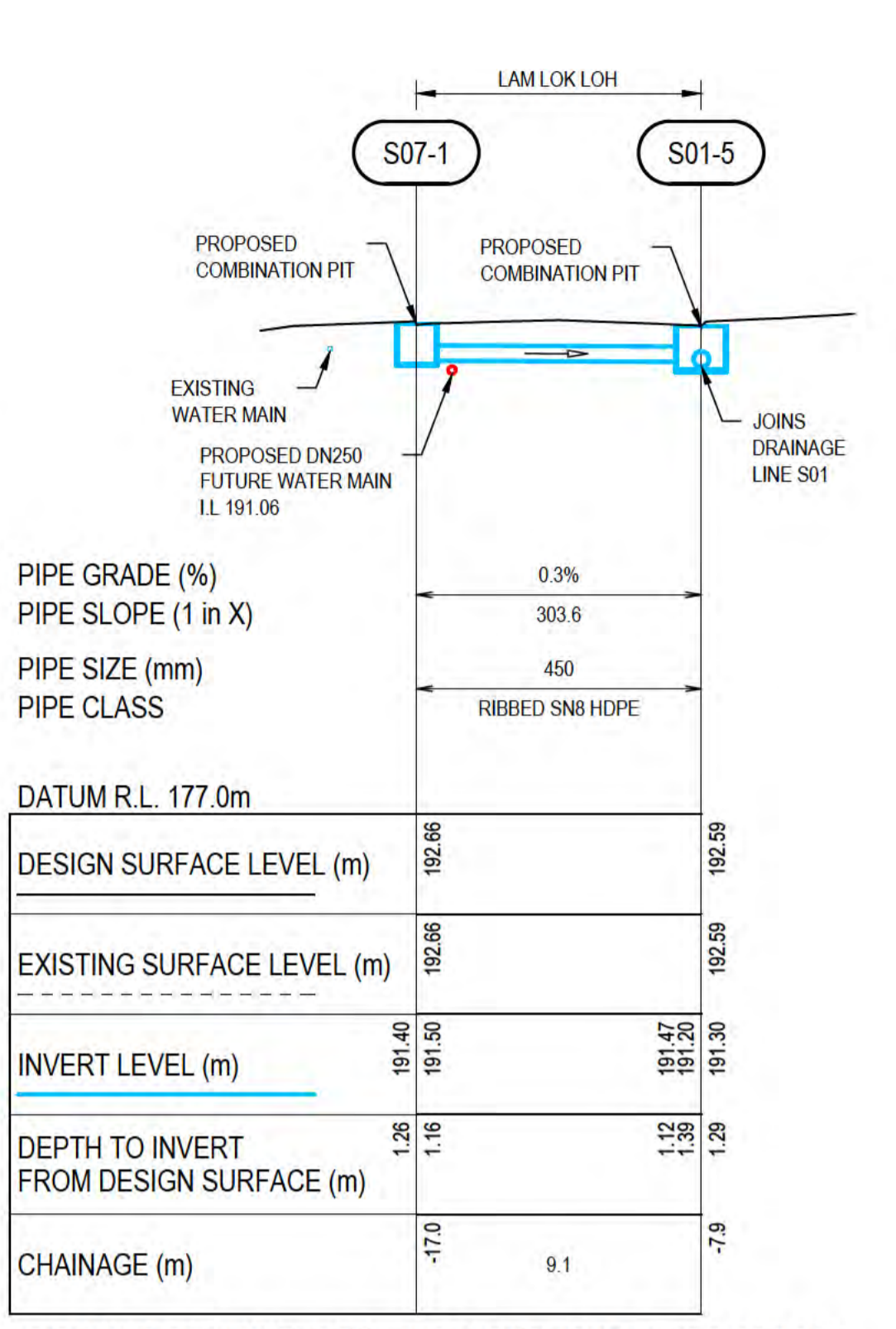
**DRAINAGE LINE S01 - LONGITUDINAL SECTION**  
SOUTHERN DRUMSITE

HORIZONTAL SCALE 1:500  
VERTICAL SCALE 1:250



**DRAINAGE LINE S05 - LONGITUDINAL SECTION**  
SOUTHERN DRUMSITE

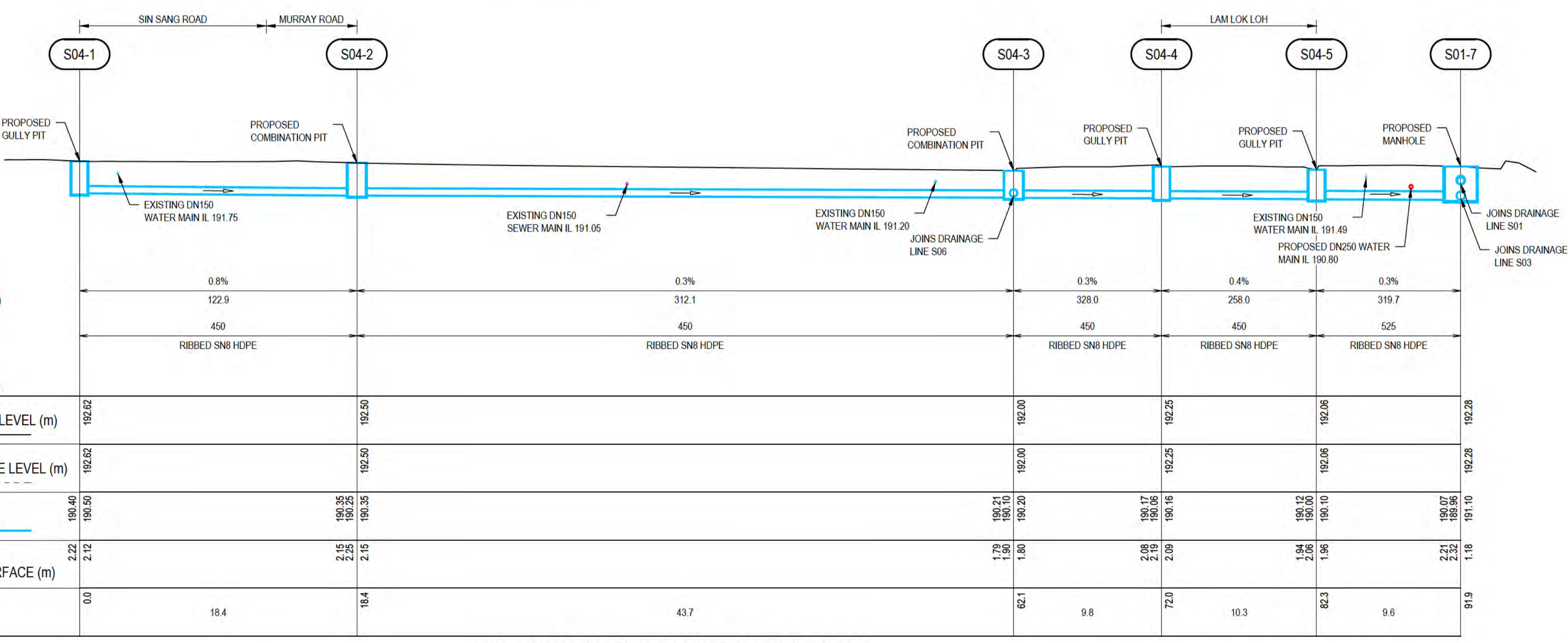
HORIZONTAL SCALE 1:200  
VERTICAL SCALE 1:200



**DRAINAGE LINE S07 - LONGITUDINAL SECTION**  
SOUTHERN DRUMSITE

HORIZONTAL SCALE 1:200  
VERTICAL SCALE 1:200

THIS DRAWING IS TO BE PRINTED IN COLOUR



**DRAINAGE LINE S04 - LONGITUDINAL SECTION**  
SOUTHERN DRUMSITE

HORIZONTAL SCALE 1:200  
VERTICAL SCALE 1:200

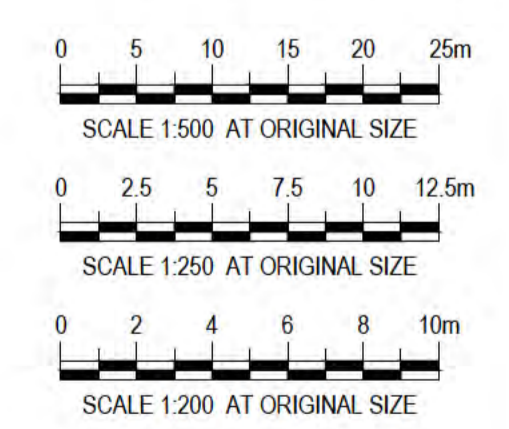
**DRAINAGE LINE S06 - LONGITUDINAL SECTION**  
SOUTHERN DRUMSITE

HORIZONTAL SCALE 1:200  
VERTICAL SCALE 1:200

- NOTES:**
- FOR PIPELINE ALIGNMENTS, REFER DRAWING 61-35637-C220.
  - FOR LEGEND, REFER DRAWING 61-35637-C210.
  - FOR OTHER NOTES, REFER DRAWING 61-35637-C202.



ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.

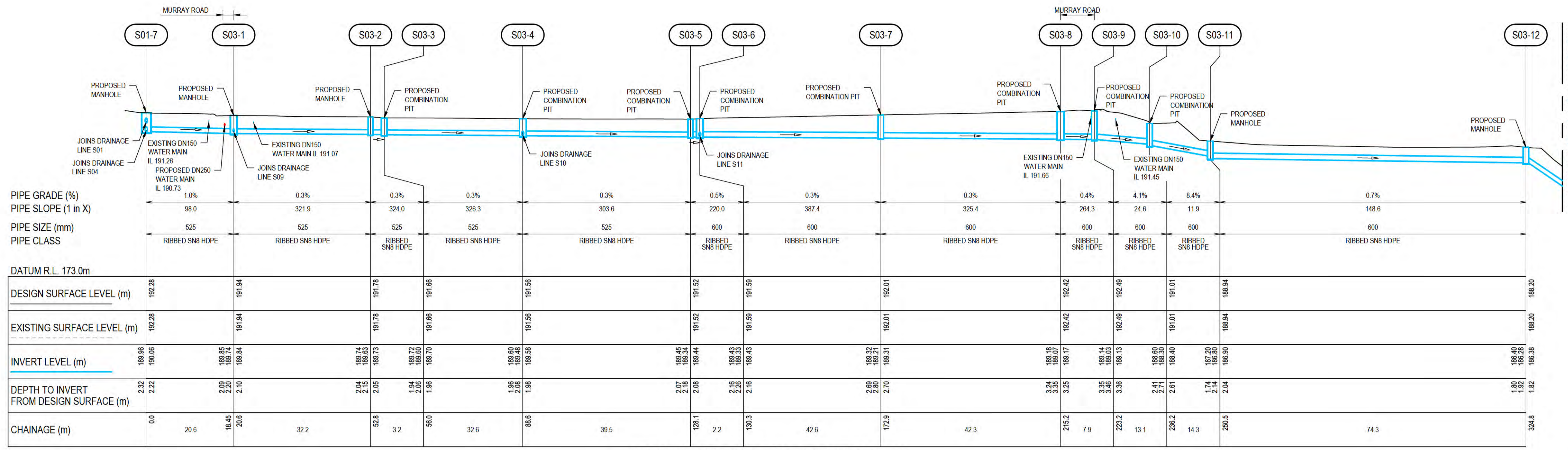


**PRELIMINARY**

No	Revision	Note	Drawn	Job Manager	Project Director	Date
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT		GT	JM*	PS*	30/09/20

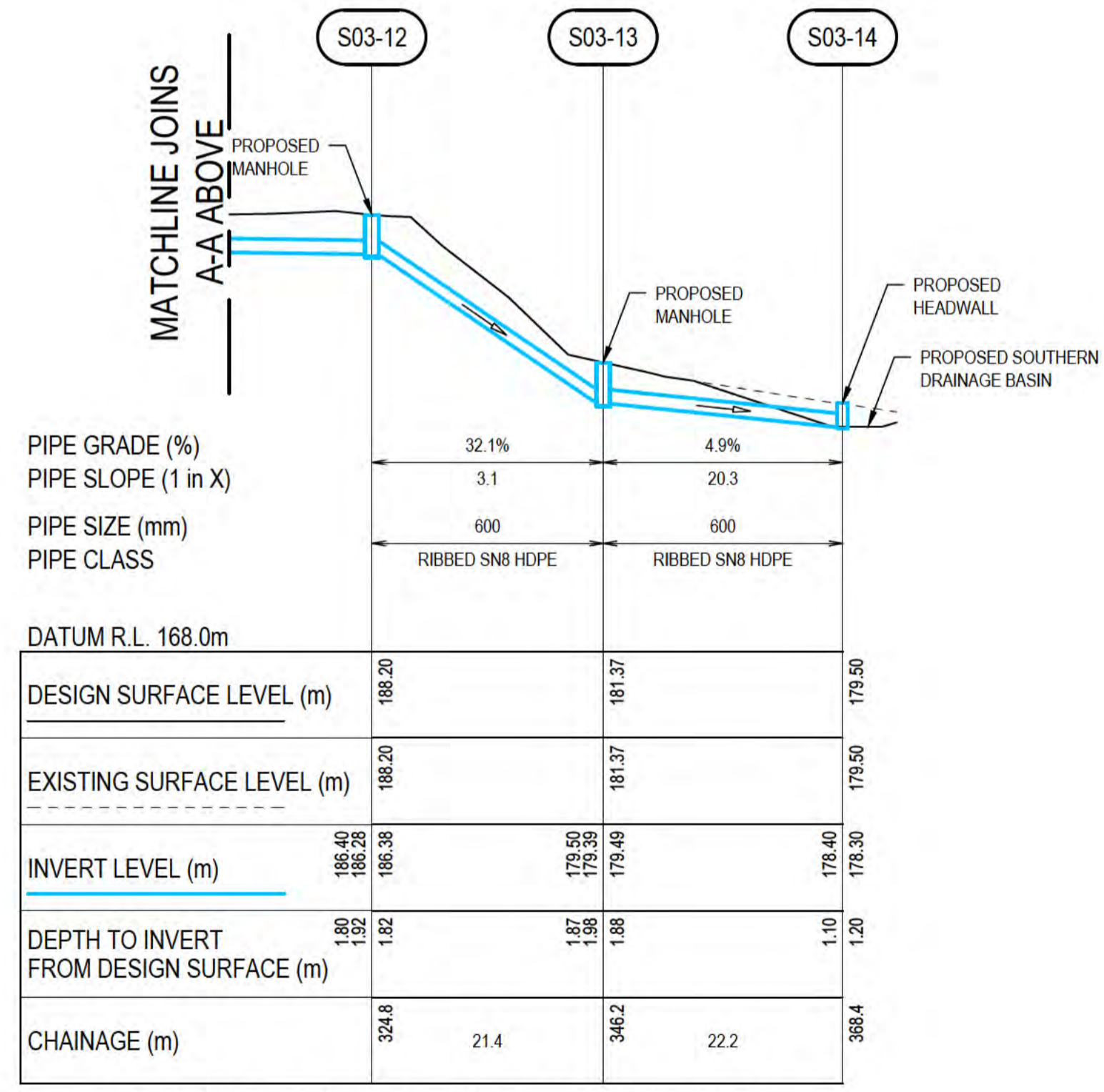


DO NOT SCALE			Client	Project		Title	Original Size	Rev:
Drawn	G.TAYAM	Designer	D.DOMINGO	DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS		CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS SOUTHERN DRUMSITE WORKS LONGITUDINAL SECTIONS - SHEET 1	A1	A
Drafting Check	S.HORTON*	Design Check	S.CLEARY*	CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS				
Approved (Project Director)	Date	Scale	AS SHOWN	Drawing No: 61-35637-C270				

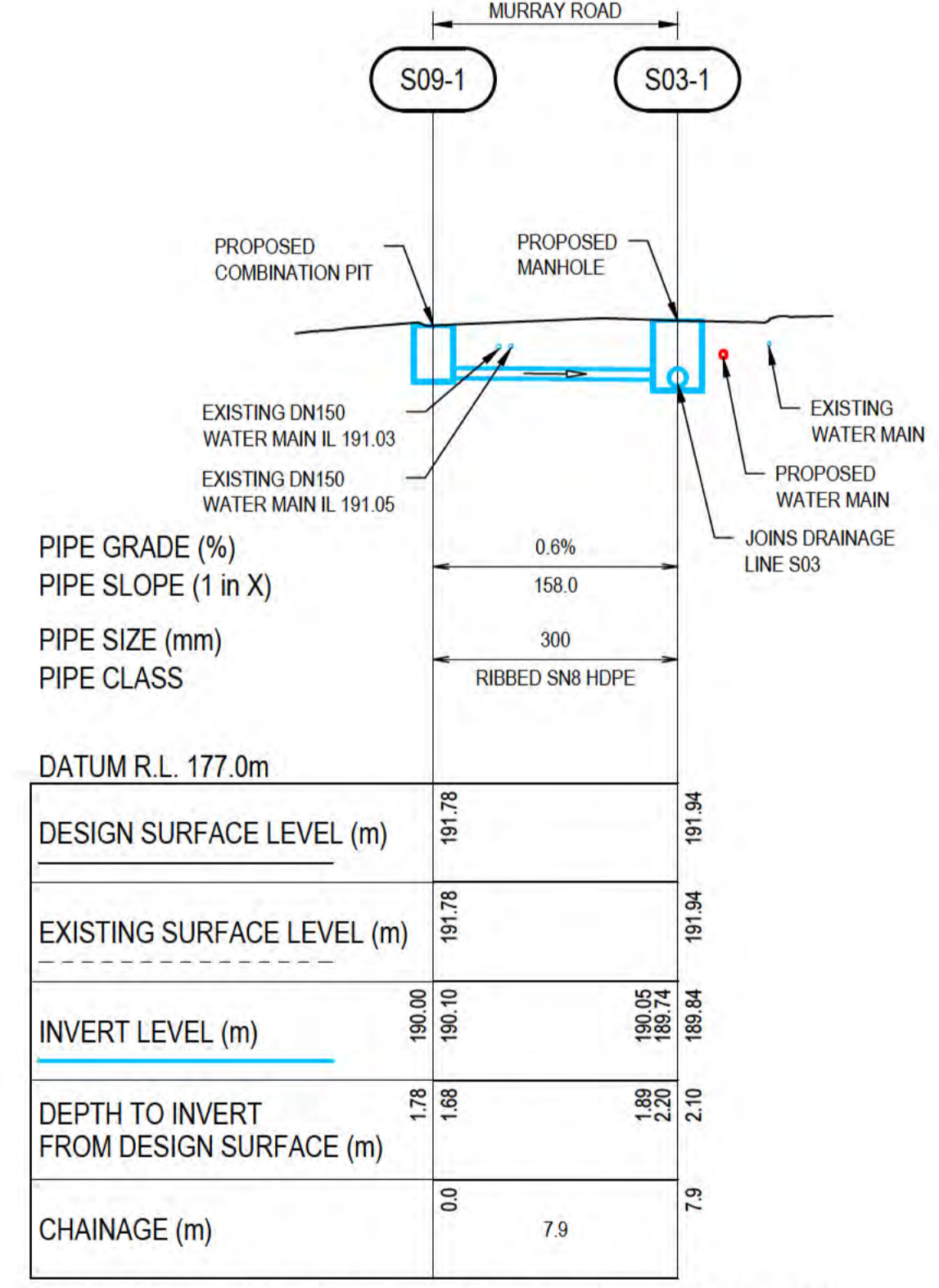


**DRAINAGE LINE S03 - LONGITUDINAL SECTION**  
**SOUTHERN DRUMSITE**  
 HORIZONTAL SCALE 1:500  
 VERTICAL SCALE 1:250

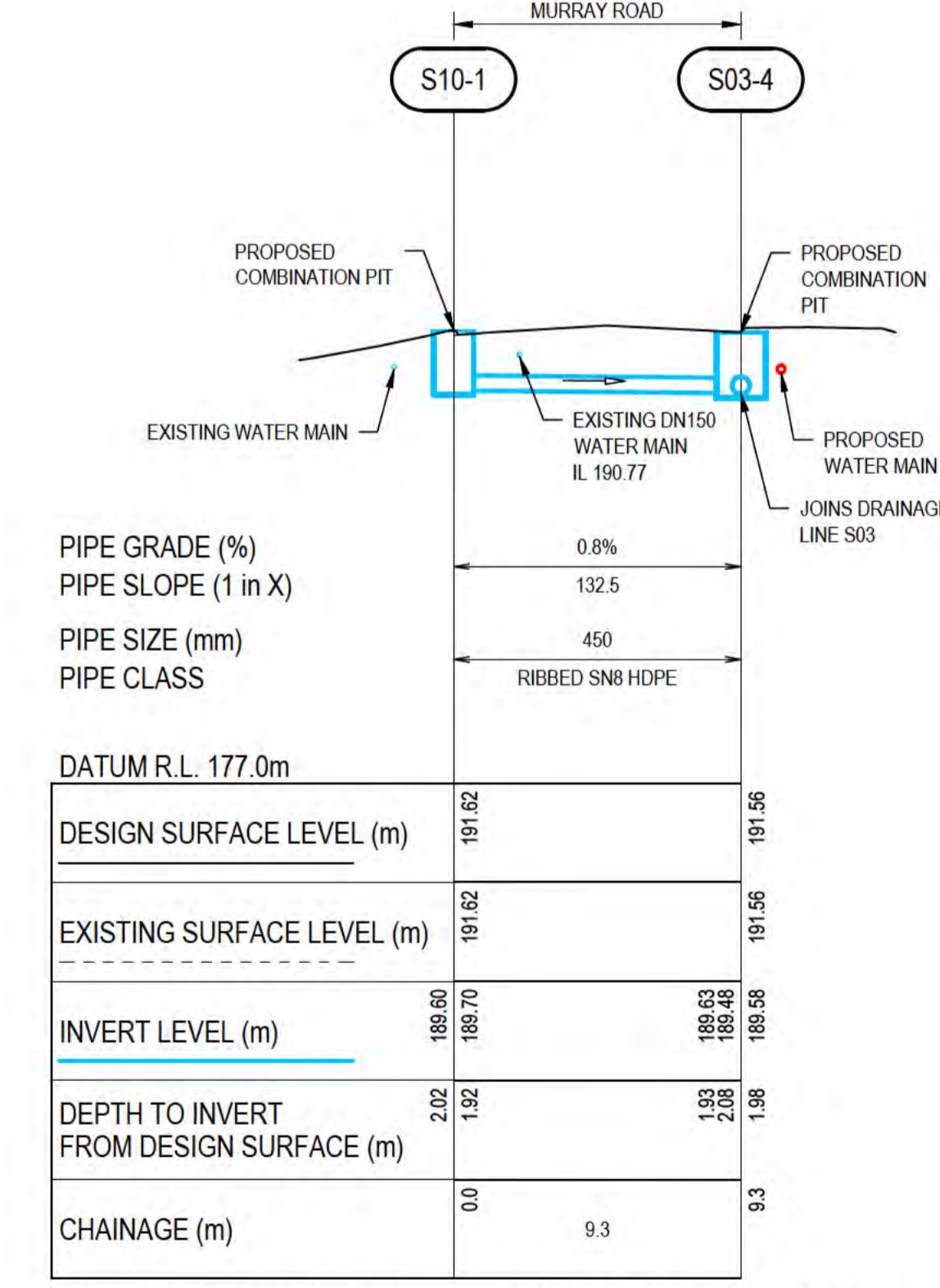
THIS DRAWING IS TO BE PRINTED IN COLOUR



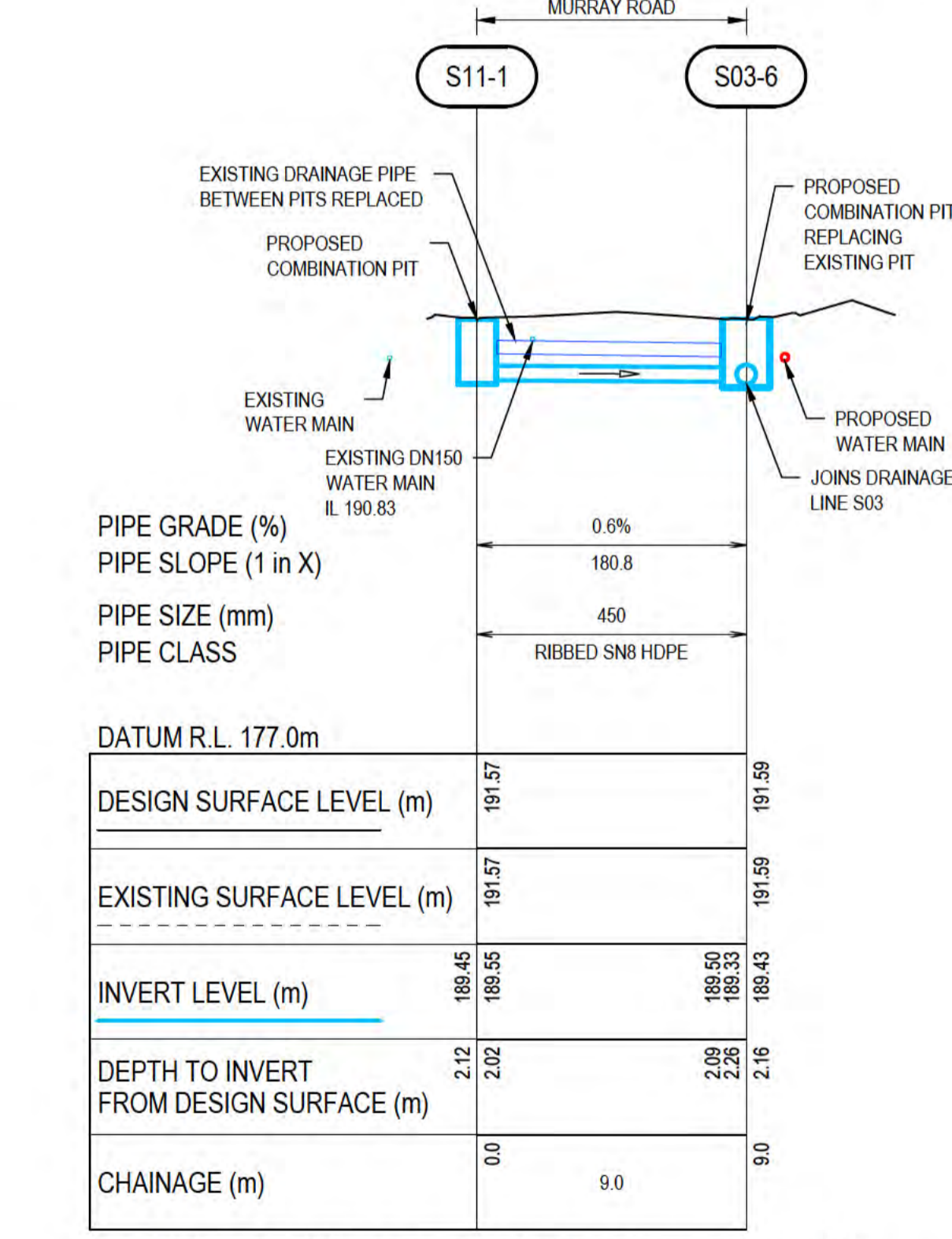
**DRAINAGE LINE S03 - LONGITUDINAL SECTION**  
**SOUTHERN DRUMSITE**  
 HORIZONTAL SCALE 1:500  
 VERTICAL SCALE 1:250



**DRAINAGE LINE S09 - LONGITUDINAL SECTION**  
**SOUTHERN DRUMSITE**  
 HORIZONTAL SCALE 1:200  
 VERTICAL SCALE 1:200



**DRAINAGE LINE S10 - LONGITUDINAL SECTION**  
**SOUTHERN DRUMSITE**  
 HORIZONTAL SCALE 1:200  
 VERTICAL SCALE 1:200

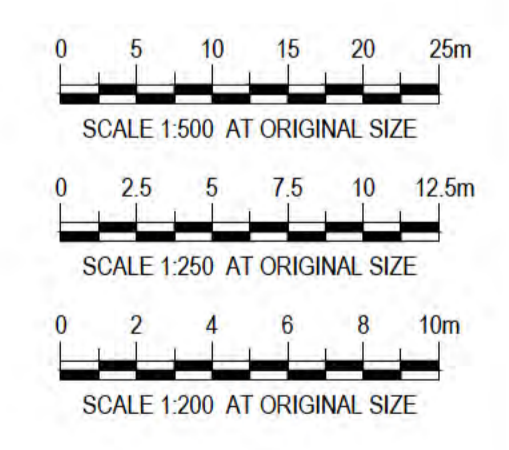


**DRAINAGE LINE S11 - LONGITUDINAL SECTION**  
**SOUTHERN DRUMSITE**  
 HORIZONTAL SCALE 1:200  
 VERTICAL SCALE 1:200

- NOTES:**
- FOR PIPELINE ALIGNMENTS, REFER DRAWINGS 61-35637-C220 AND C221.
  - FOR LEGEND, REFER DRAWING 61-35637-C210.
  - FOR OTHER NOTES, REFER DRAWING 61-35637-C202.



ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.

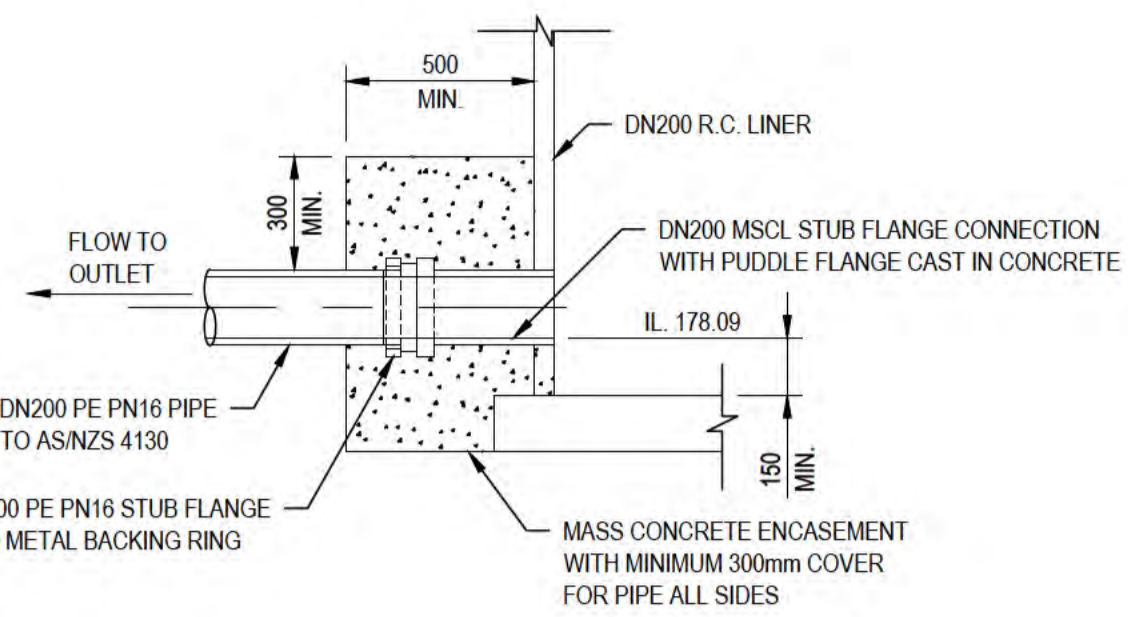


**PRELIMINARY**

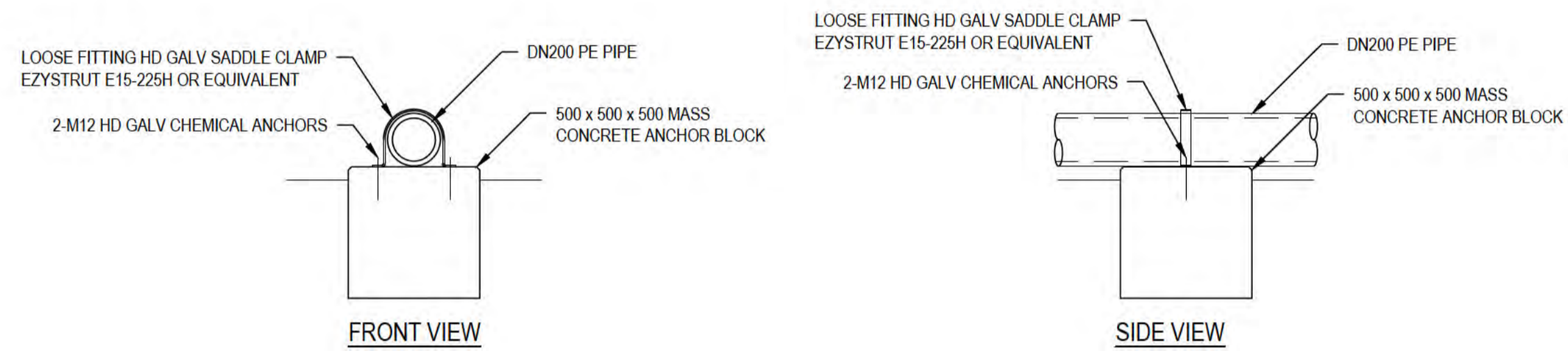
No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	PS*	Project Director	Date
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT		GT	JM*	PS*		30/09/20



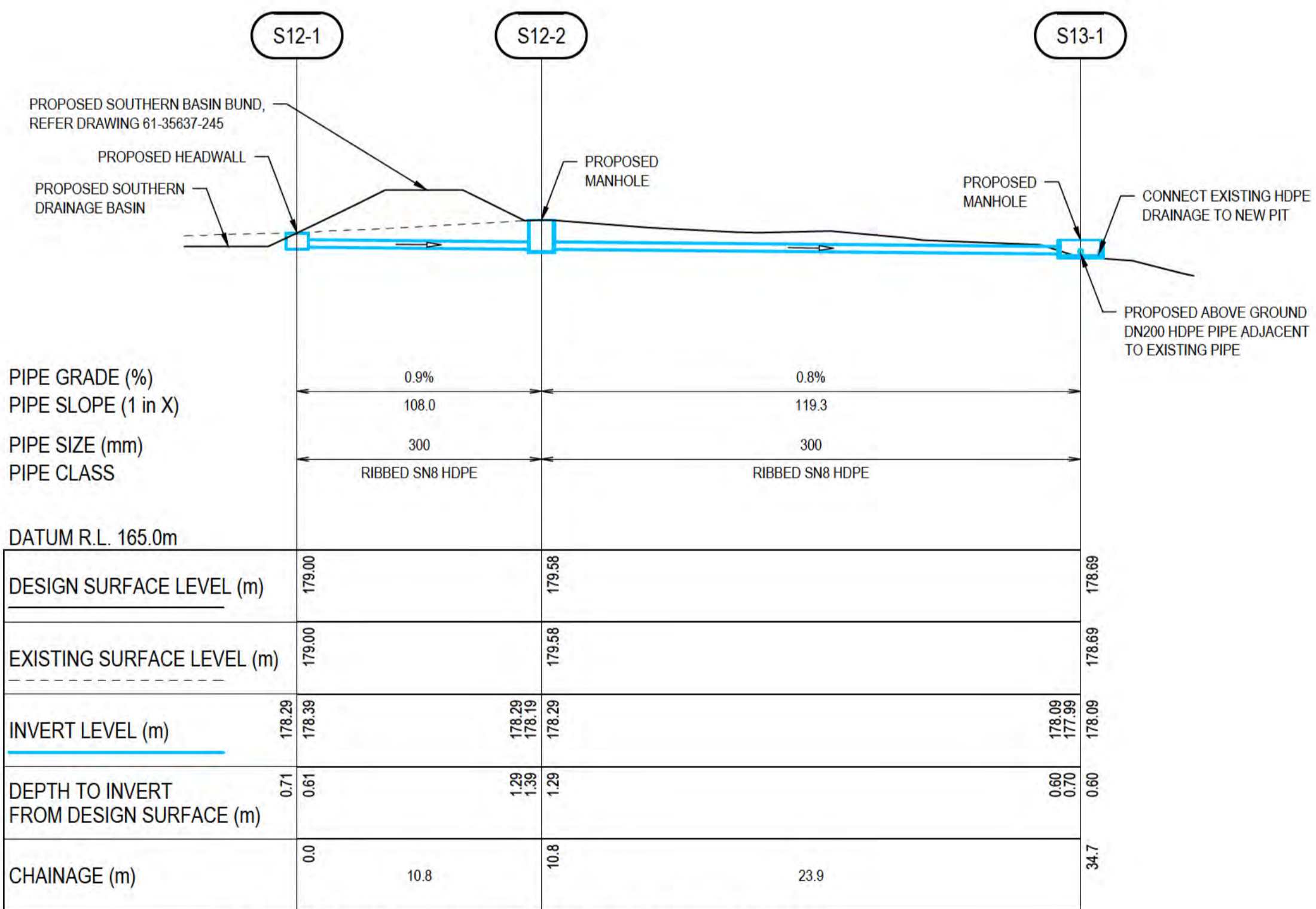
<b>DO NOT SCALE</b>	Drawn G.TAYAM	Designer D.DOMINGO	Client <b>DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT &amp; COMMUNICATIONS</b> Project <b>CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS</b> Title <b>SOUTHERN DRUMSITE WORKS</b> <b>LONGITUDINAL SECTIONS - SHEET 2</b>	
Conditions of Use. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.	Drafting Check S.HORTON*	Design Check S.CLEARY*		
	Approved (Project Director) Date			
	Scale AS SHOWN	This Drawing must not be used for construction unless signed as Approved		
	Original Size	<b>A1</b>	Drawing No: <b>61-35637-C271</b>	Rev: <b>A</b>



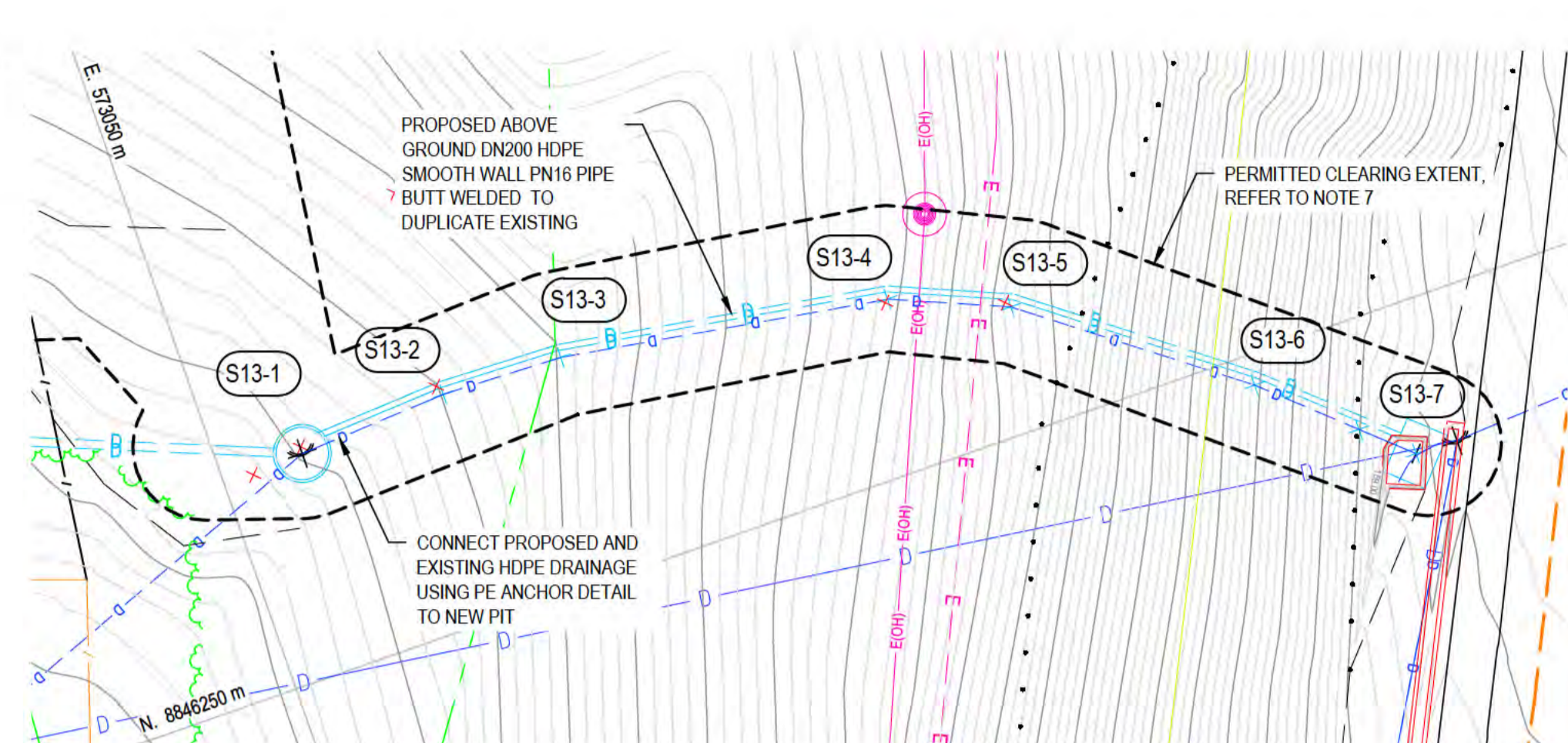
**DN200 PE ANCHOR DETAIL**  
SCALE 1:20



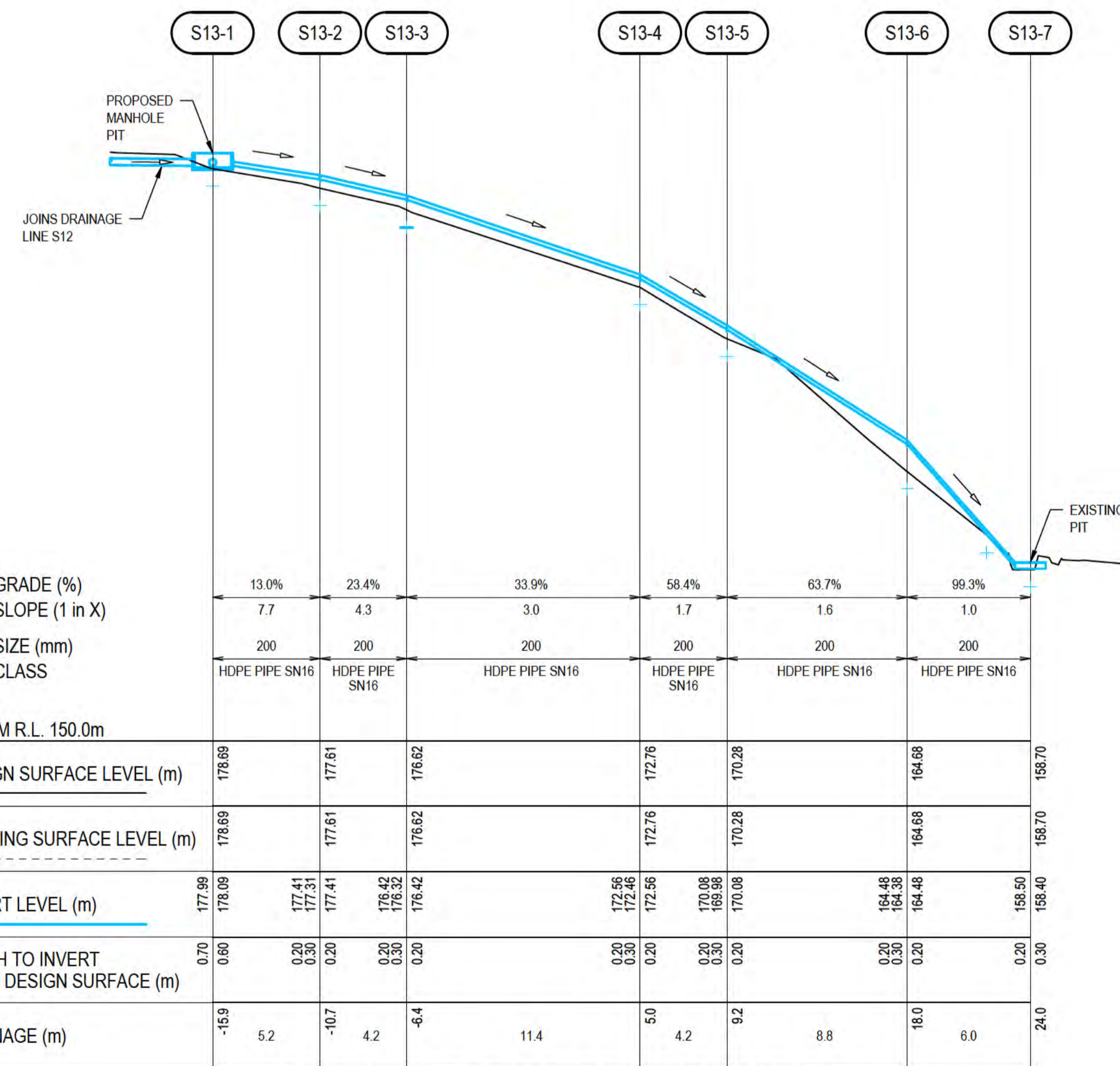
**DN200 PE GUIDE SUPPORT TYPICAL DETAIL**  
SCALE 1:20



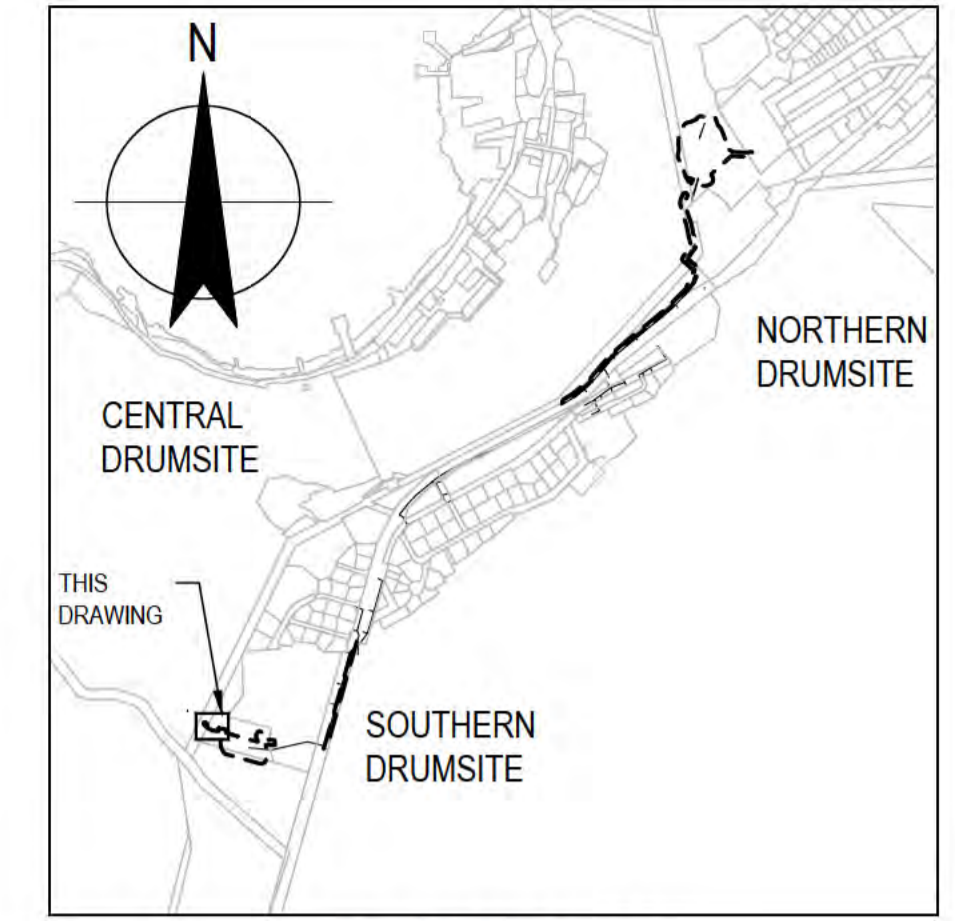
**DRAINAGE LINE S12 - LONGITUDINAL SECTION**  
**SOUTHERN DRUMSITE**  
HORIZONTAL SCALE 1:200  
VERTICAL SCALE 1:200



**DRAINAGE LINE S13 - PLAN**  
SCALE 1:200



**DRAINAGE LINE S13 - LONGITUDINAL SECTION**  
**SOUTHERN DRUMSITE**  
HORIZONTAL SCALE 1:200  
VERTICAL SCALE 1:200



**LOCALITY PLAN**  
N.T.S.

**NOTES:**

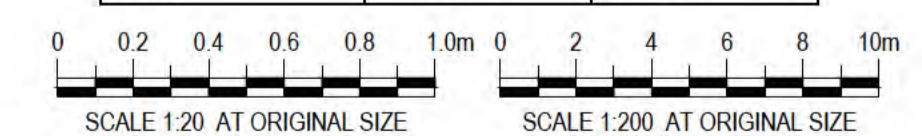
- FOR PIPELINE ALIGNMENTS, REFER DRAWING 61-35637-C221.
- FOR LEGEND, REFER DRAWING 61-35637-C210.
- FOR OTHER NOTES, REFER DRAWING 61-35637-C202.
- CLEARING OF TREES TO BE MINIMISED AT ALL TIMES.
- DN200 PE ANCHOR TO BE INSTALLED ON BOTH NEW AND EXISTING PIPE ON EXIT OF PIT S13-1.
- PE GUIDE SUPPORTS TO BE INSTALLED AT MAXIMUM OF 12m INTERVALS AND BE LOCATED TO NOT BE COLOCATED WITH PIPE WELDED JOINT AND OFFSET A MINIMUM OF 2m.
- EXTENT OF CLEARING PERMITTED. REFER TO SPECIFICATION FOR FURTHER DETAILS AND SETOUT REQUIREMENTS.

**THIS DRAWING IS TO BE PRINTED IN COLOUR**



ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.

DRAINAGE STRUCTURE SET OUT		
STRUCTURE NUMBER	NORTHING (m)	EASTING (m)
S13-1	8846242.44	573047.12
S13-2	8846242.12	573041.88
S13-3	8846242.26	573037.65
S13-4	8846244.08	573026.41
S13-5	8846245.74	573022.49
S13-6	8846251.04	573015.48
S13-7	8846255.10	573011.03

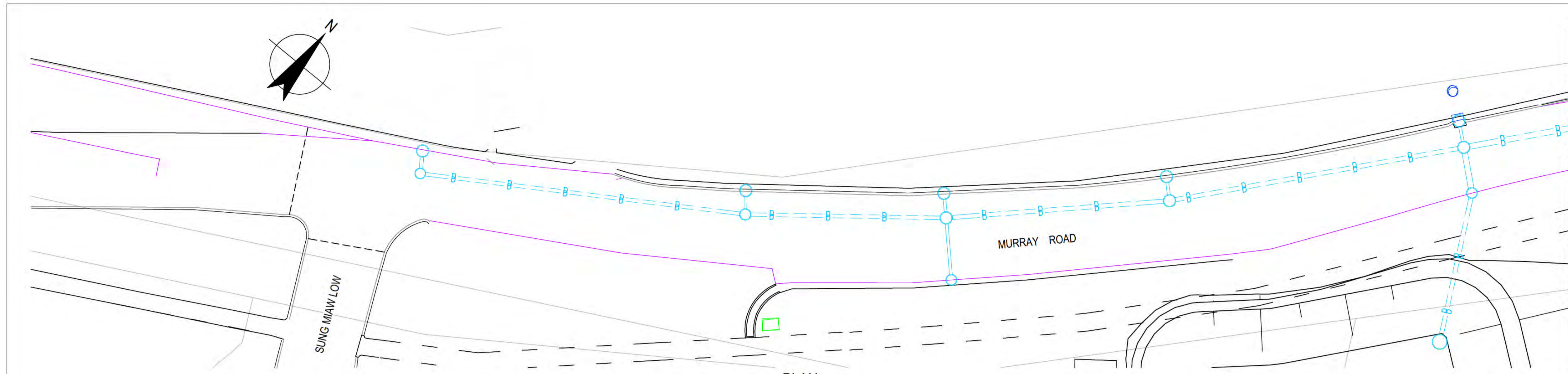


**PRELIMINARY**

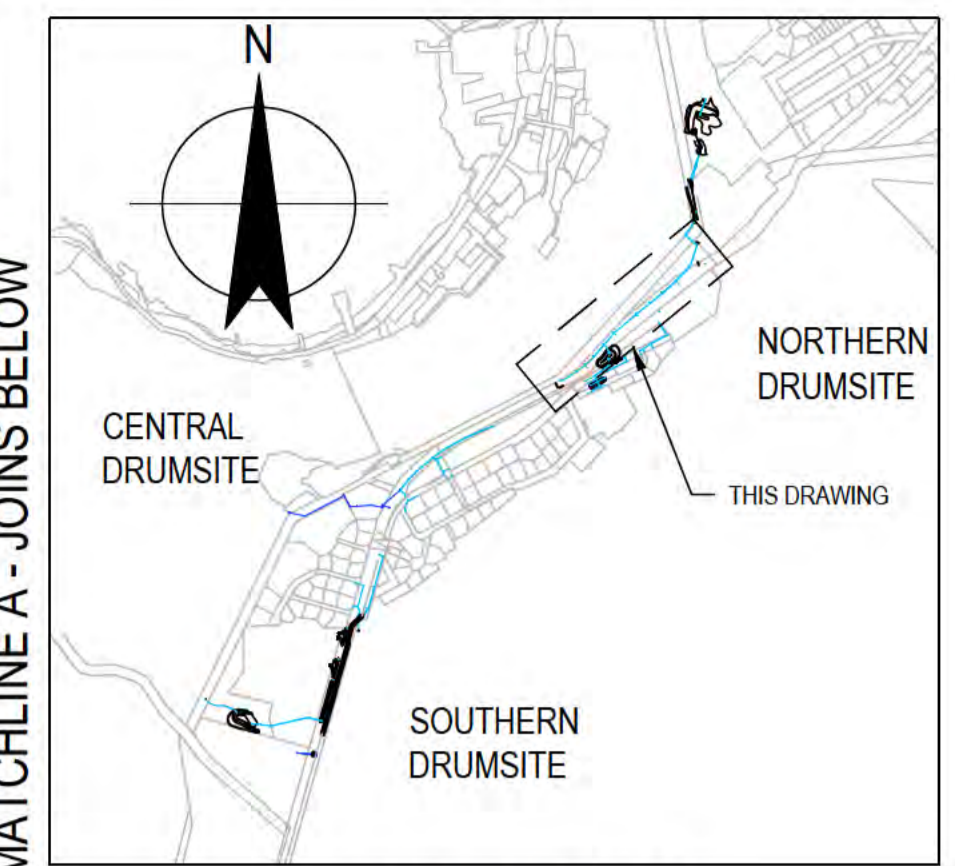
No	Revision	Note	Drawn	Job Manager	Project Director	Date
B		REISSUED FOR 90% DESIGN - CLIENT COMMENT	GT	JM*	PS*	20/11/20
A		ISSUED FOR 90% DESIGN - CLIENT COMMENT	GT	JM*	PS*	30/09/20



DO NOT SCALE		Drawn	Designer	Client
Conditions of Use. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.		G.TAYAM	D.DOMINGO	DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS
		Drafting Check	Design Check	Project
		S.HORTON*	S.CLEARY*	CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS
		Approved (Project Director)		SOUTHERN DRUMSITE WORKS
		Date		LONGITUDINAL SECTIONS - SHEET 3
		Scale	AS SHOWN	Original Size
		This Drawing must not be used for Construction unless signed as Approved		A1 Drawing No: <b>61-35637-C272</b>
				Rev: <b>B</b>

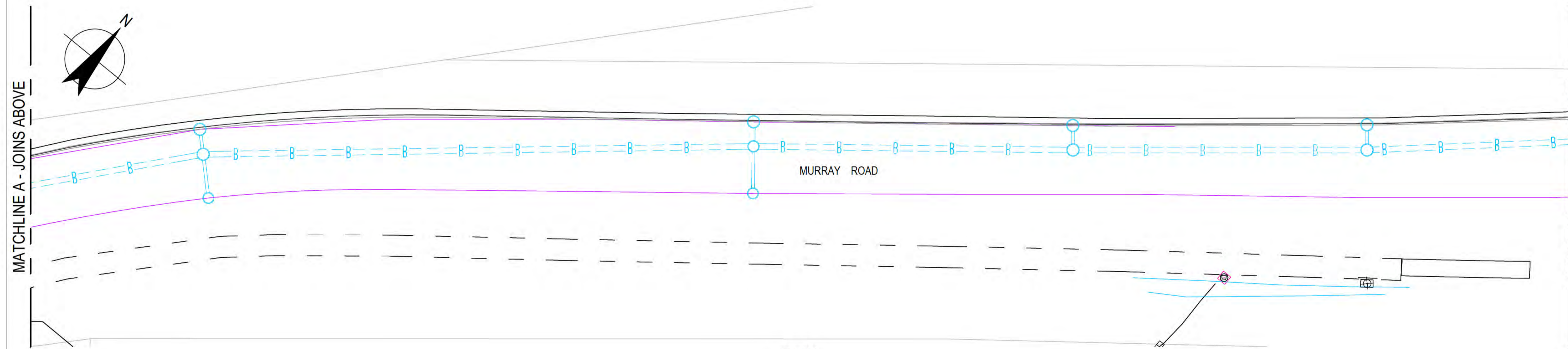


PLAN  
SCALE 1:250



LOCALITY PLAN  
N.T.S.

THIS DRAWING IS TO BE PRINTED IN COLOUR



PLAN  
SCALE 1:250



PLAN  
SCALE 1:250

LEGEND:

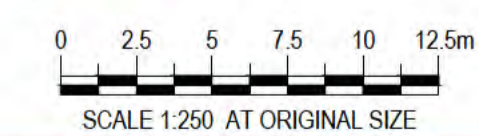
EXTENT OF PAVEMENT RESURFACING

NOTES:

- FOR LEGEND, REFER DRAWING 61-35637-C210.
- PAVEMENT MARKING TO BE REINSTATED AS PER EXISTING FOLLOWING PAVEMENT RESURFACING.
- FOR TYPICAL DETAIL OF THE PAVEMENT RECONSTRUCTION AND RESEAL, REFER DETAIL 1 ON DRAWING 61-35637-C296.



ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.



**PRELIMINARY**

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT		SDC	JM*	PS*	30/09/20

**Australian Government**  
Department of Infrastructure, Transport, Regional Development and Communications

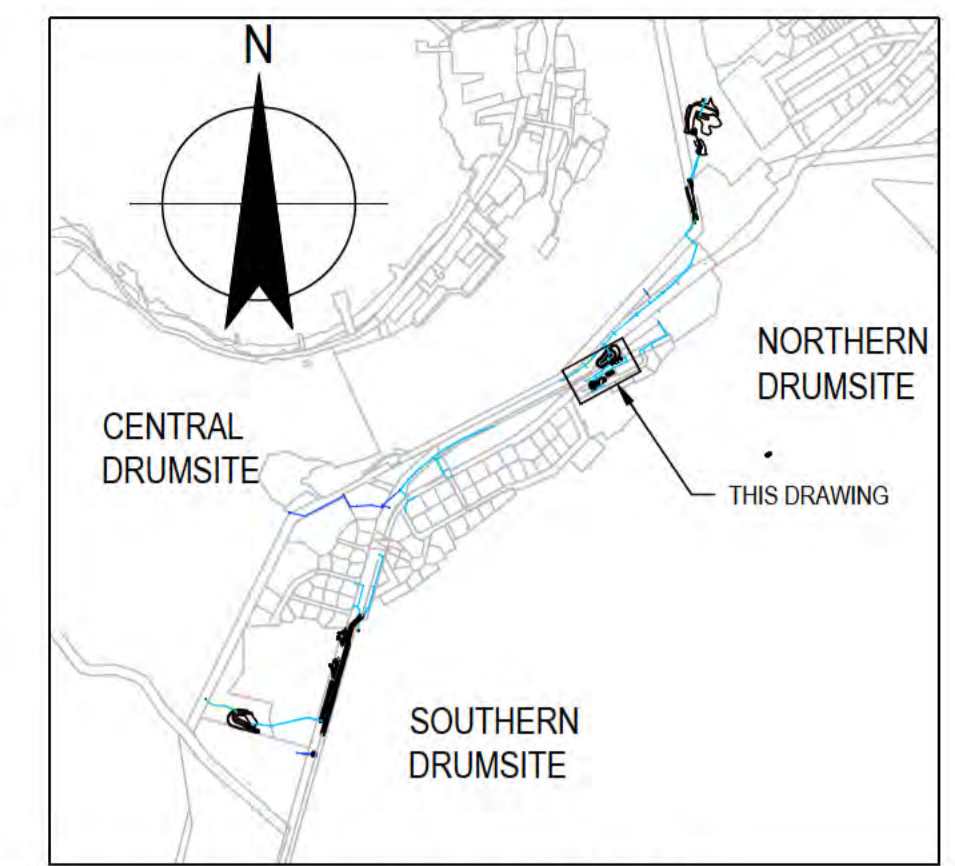
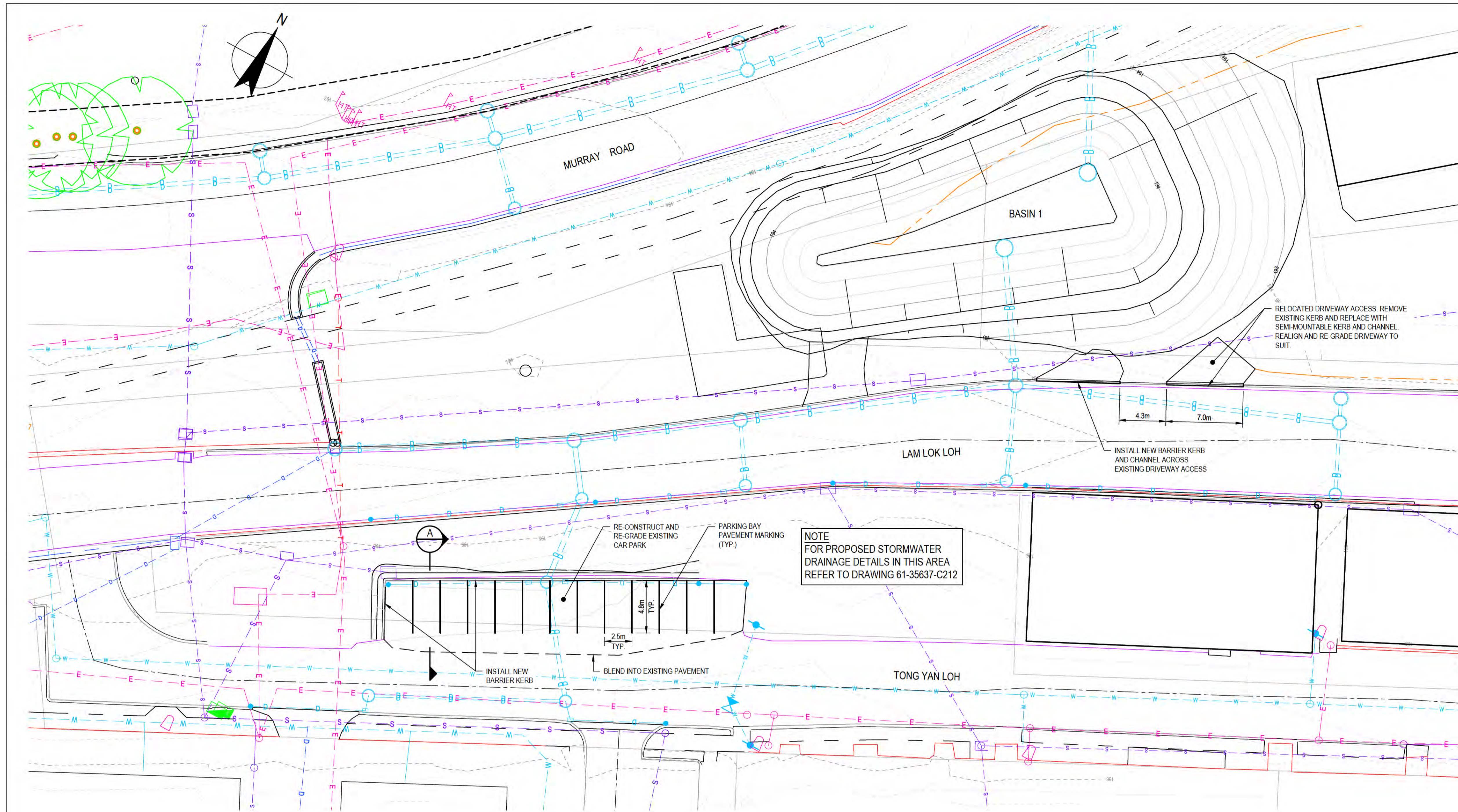
Level 10, 999 Hay Street Perth WA 6000  
PO Box Y3106 Perth WA 6832 Australia  
T 61 8 6222 8222 F 61 8 6222 8555  
E permail@ghd.com.au W www.ghd.com

**DO NOT SCALE**

Conditions of Use.  
This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

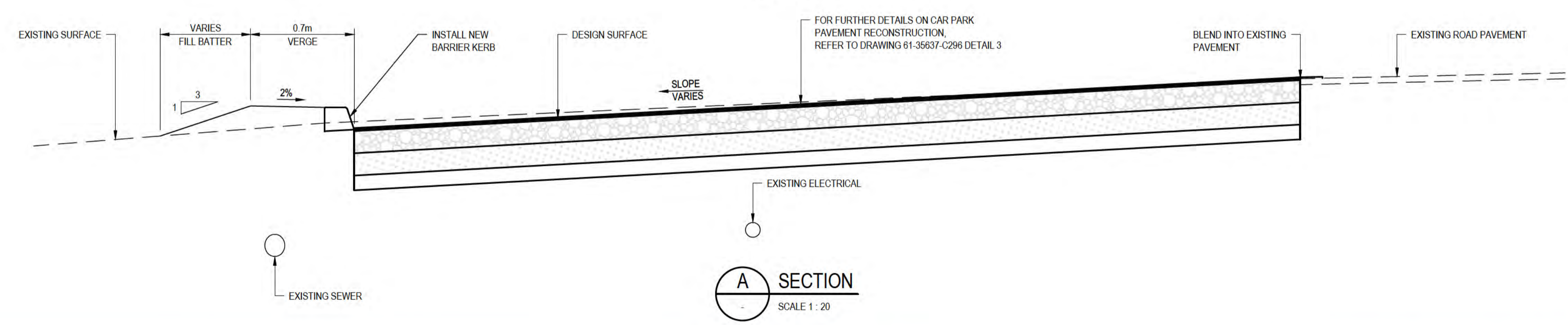
Drawn	S.DE CEGLIE	Designer	S.DE CEGLIE
Drafting Check	S.HORTON*	Design Check	S.CLEARY*
Approved (Project Director)		Date	
Scale	1:250	This Drawing must not be used for Construction unless signed as Approved	

Client	DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS		
Project	CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS		
Title	NORTHERN DRUMSITE - ROAD AND PAVEMENT DESIGN PAVEMENT REINSTATEMENT WORKS		
Original Size	A1	Drawing No:	61-35637-C280
Rev:	A		



THIS DRAWING IS TO BE PRINTED IN COLOUR

PLAN  
SCALE 1:200

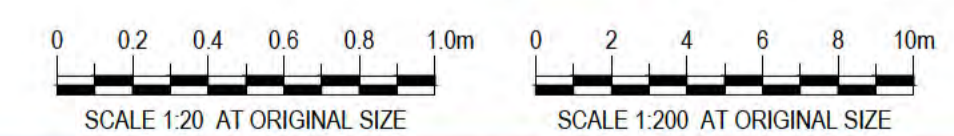


A SECTION  
SCALE 1:20

- NOTES:**
- FOR LEGEND, REFER DRAWING 61-35637-C210.
  - EXISTING SERVICES LOCATIONS ARE INDICATIVE ONLY. CONTRACTOR TO CONFIRM LOCATION, SIZE AND LEVEL PRIOR TO COMMENCING CONSTRUCTION. SHOULD ANY CLASHES BE IDENTIFIED WITH PROPOSED WORKS THE CONTRACTOR IS TO IMMEDIATELY NOTIFY THE CLIENT'S REPRESENTATIVE.
  - EXISTING COMMUNICATIONS INFORMATION IS INCOMPLETE. VERIFICATION OF PRESENCE THROUGHOUT SITE REQUIRED PRIOR TO COMMENCING CONSTRUCTION.
  - FOR KERB DETAILS, REFER TO DRAWING 61-35637-C293.
  - FOR CAR PARK SETOUT AND DESIGN LEVELS REFER TO 12D MODEL.

**DIAL BEFORE YOU DIG**  
www.1100.com.au

ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.



**PRELIMINARY**

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
B	REISSUED FOR 90% DESIGN - CLIENT COMMENT		GT	JM*	PS*	20/11/20
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT		SDC	JM*	PS*	30/09/20

**Australian Government**  
Department of Infrastructure, Transport, Regional Development and Communications

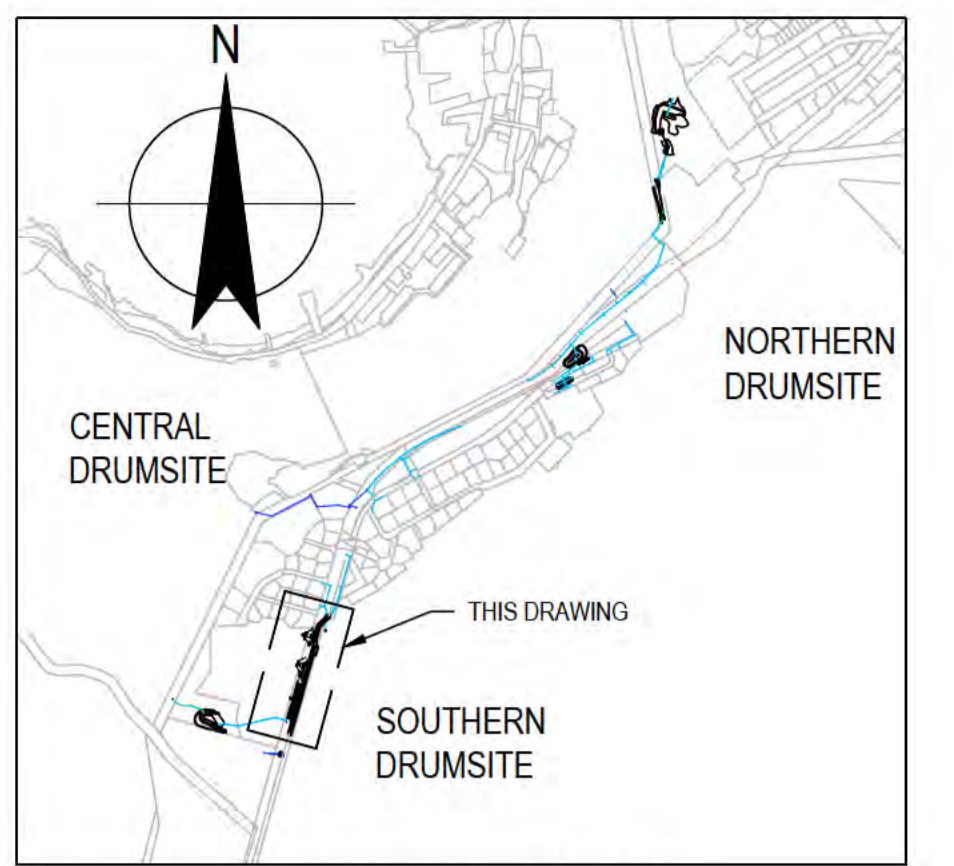
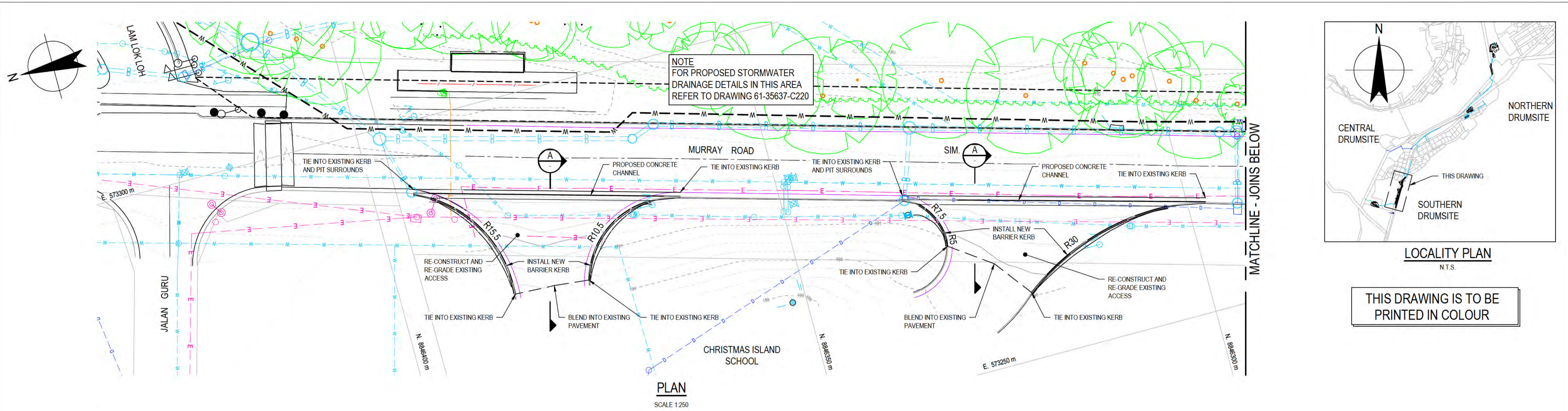
**GHD**  
Level 10, 999 Hay Street Perth WA 6000  
PO Box Y3106 Perth WA 6832 Australia  
T 61 8 6222 8222 F 61 8 6222 8555  
E permail@ghd.com.au W www.ghd.com

**DO NOT SCALE**

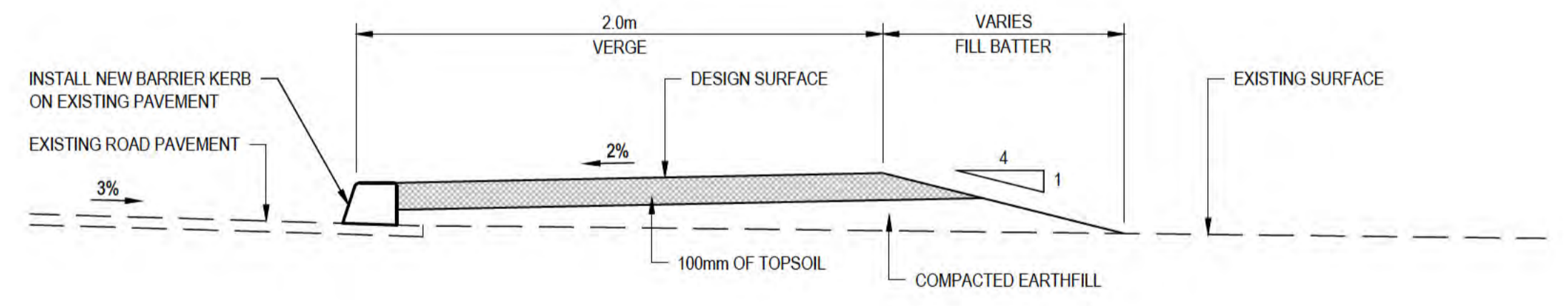
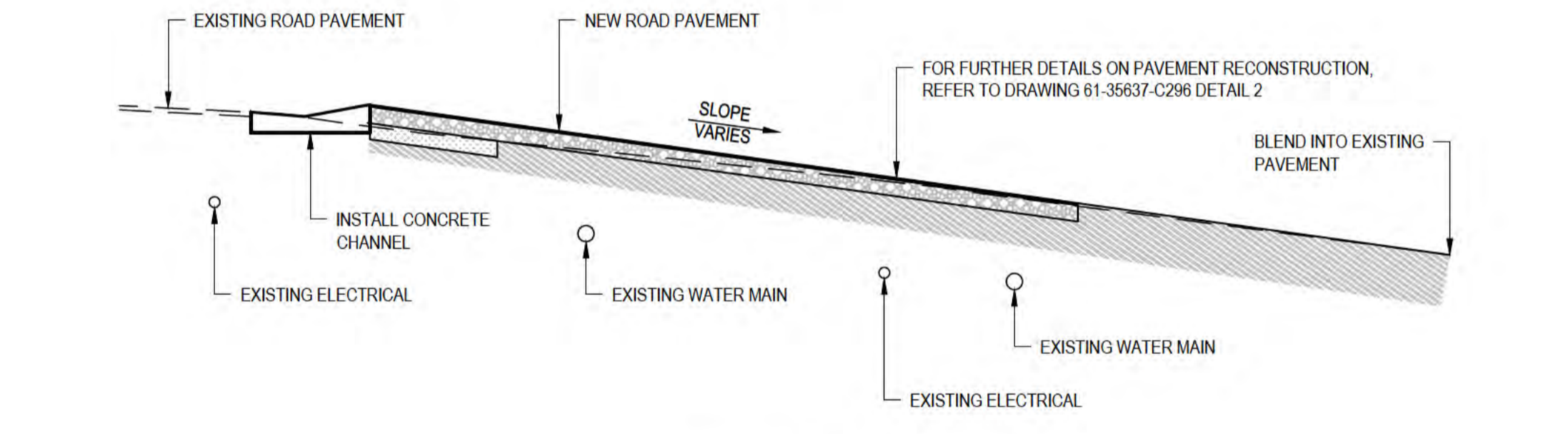
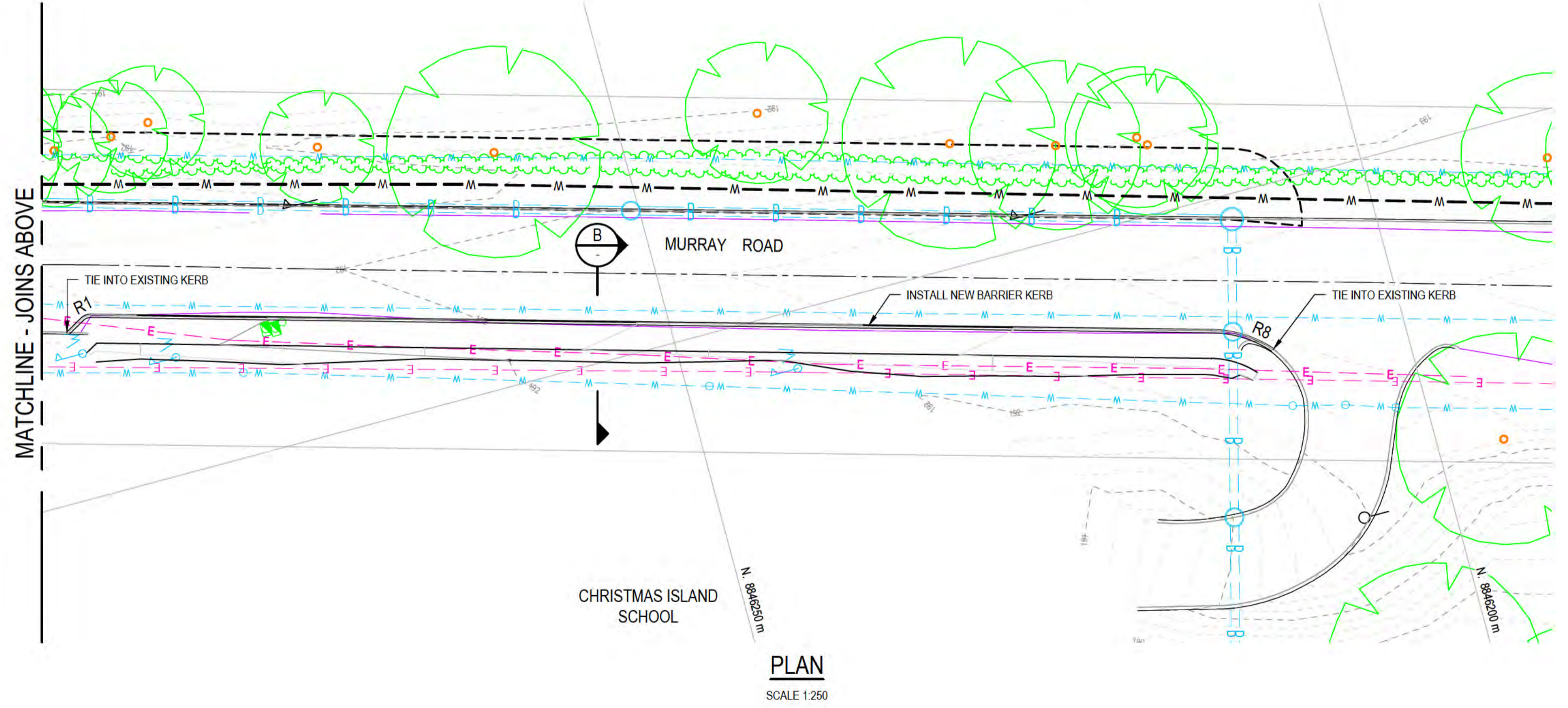
Conditions of Use:  
This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

Drawn	S.DE CEGLIE	Designer	S.DE CEGLIE
Drafting Check	S.HORTON*	Design Check	S.CLEARY*
Approved (Project Director)	Date	This Drawing must not be used for construction unless signed as Approved	
Scale	AS SHOWN	Original Size	A1

Client: DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS  
Project: CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS  
Title: NORTHERN DRUMSITE - ROAD AND PAVEMENT DESIGN TONG YAN LOH CAR PARK MODIFICATIONS  
Drawing No: **61-35637-C281**  
Rev: B



THIS DRAWING IS TO BE PRINTED IN COLOUR



- NOTES:**
- FOR LEGEND, REFER DRAWING 61-35637-C210.
  - EXISTING SERVICES LOCATIONS AND DEPTHS ARE INDICATIVE ONLY. CONTRACTOR TO CONFIRM LOCATION, SIZE AND LEVEL PRIOR TO COMMENCING CONSTRUCTION. SHOULD ANY CLASHES BE IDENTIFIED WITH PROPOSED WORKS THE CONTRACTOR IS TO IMMEDIATELY NOTIFY THE CLIENT'S REPRESENTATIVE.
  - EXISTING COMMUNICATIONS INFORMATION IS INCOMPLETE. VERIFICATION OF PRESENCE THROUGHOUT SITE REQUIRED PRIOR TO COMMENCING CONSTRUCTION.
  - FOR KERB AND CONCRETE CHANNEL DETAILS, REFER TO DRAWING 61-35637-C293.
  - FOR ROADWORKS AND KERB SETOUT AND DESIGN LEVELS REFER TO 12D MODEL.

**DIAL BEFORE YOU DIG**  
www.1100.com.au

ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.

B	REISSUED FOR 90% DESIGN - CLIENT COMMENT	GT	JM*	PS*	20/11/20	
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT	SDC	JM*	PS*	30/09/20	
No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date

**Australian Government**  
Department of Infrastructure, Transport, Regional Development and Communications

**GHD**  
Level 10, 999 Hay Street Perth WA 6000  
PO Box Y3106 Perth WA 6832 Australia  
T 61 8 6222 8222 F 61 8 6222 8555  
E permail@ghd.com.au W www.ghd.com

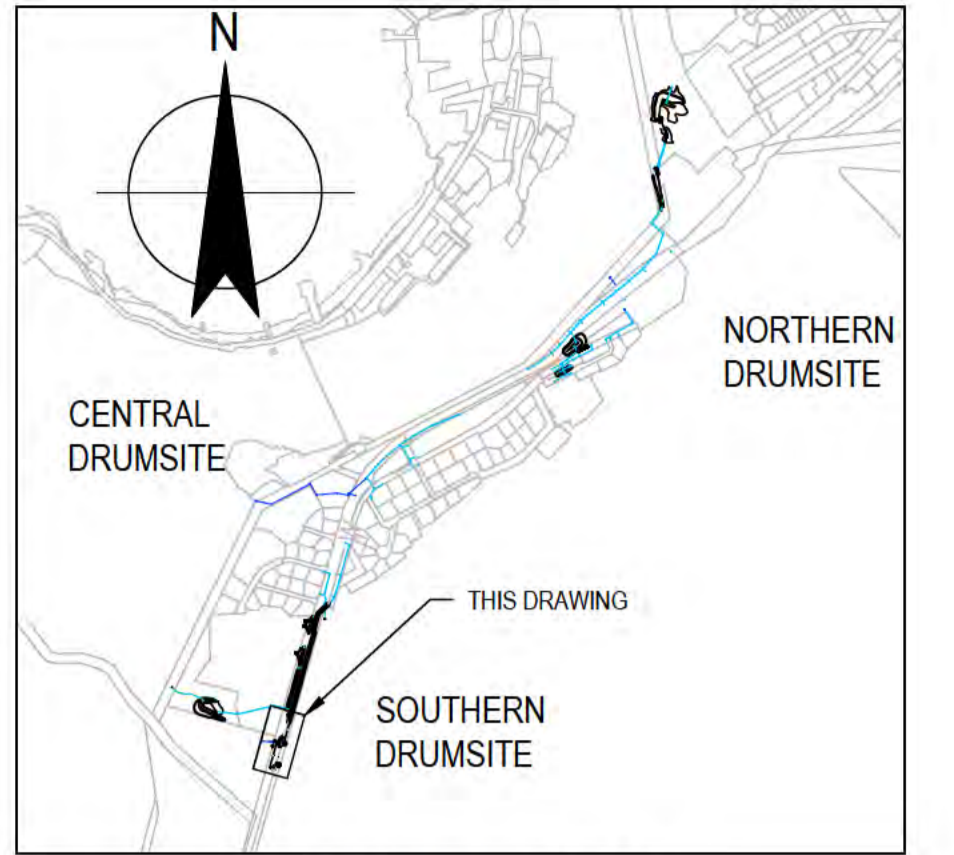
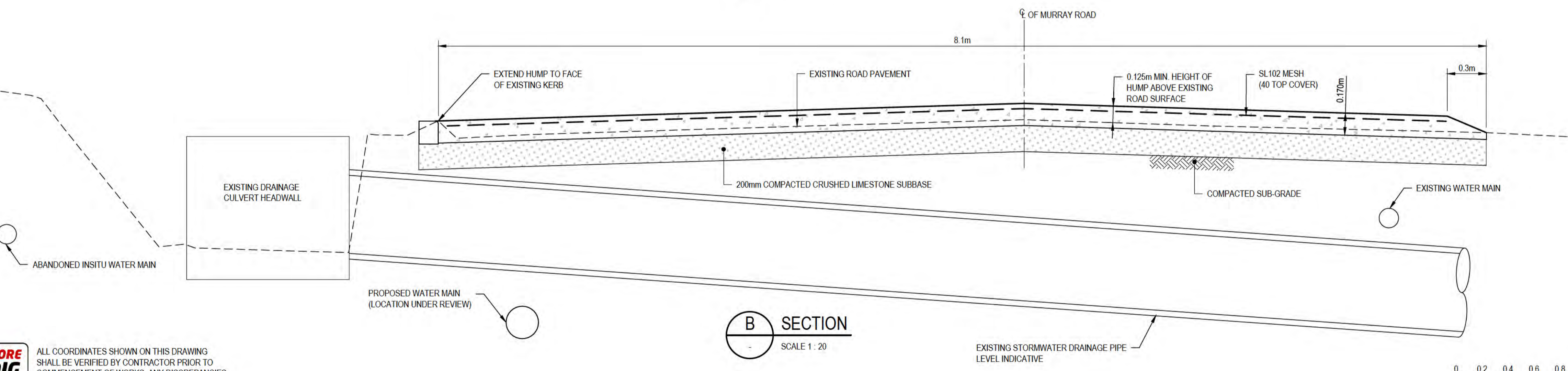
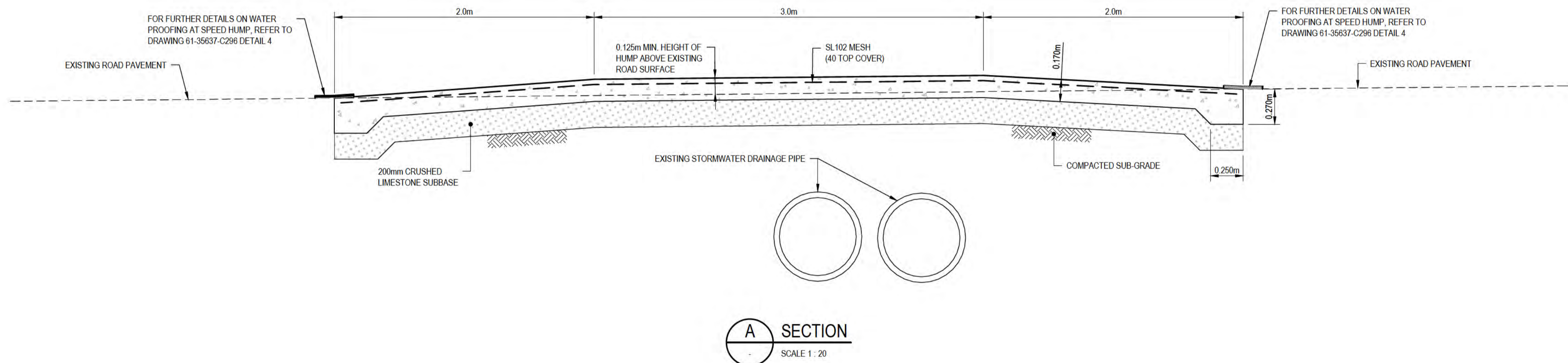
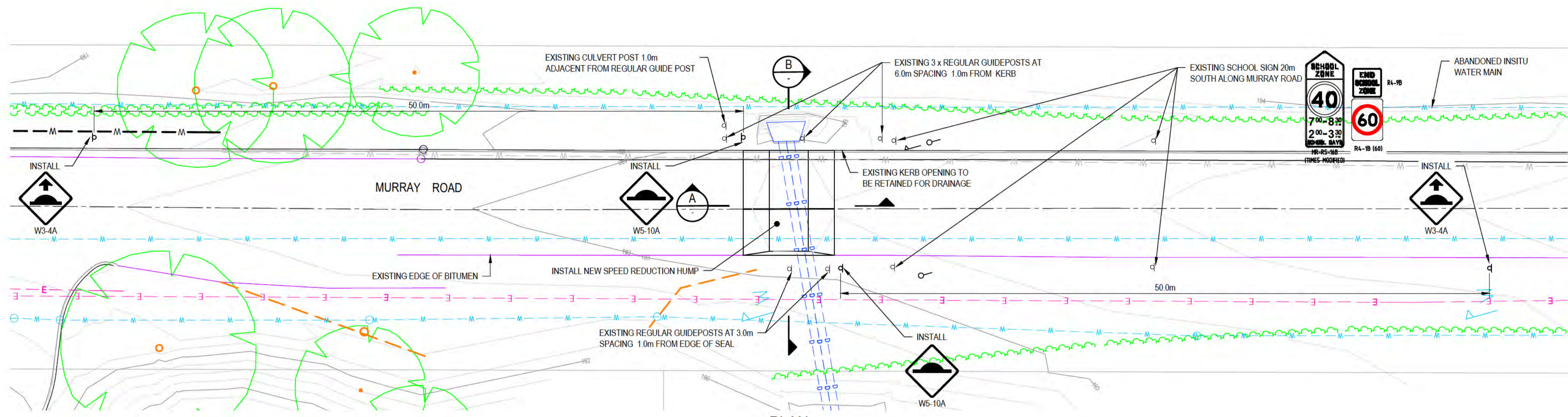
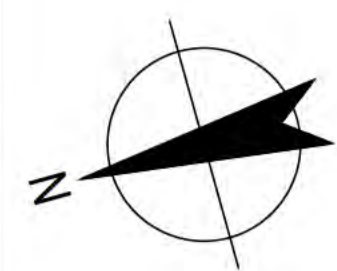
**DO NOT SCALE**

Conditions of Use:  
This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

Drawn: S.DE CEGLIE  
Designer: S.DE CEGLIE  
Drafting Check: S.HORTON\*  
Design Check: S.CLEARY\*  
Approved (Project Director):  
Date:  
Scale: AS SHOWN

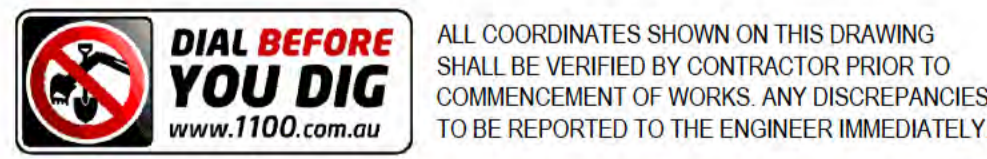
Client: DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS  
Project: CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS  
Title: SOUTHERN DRUMSITE - ROAD AND PAVEMENT DESIGN CHRISTMAS ISLAND SCHOOL ENTRANCE MODIFICATIONS

Original Size: A1  
Drawing No: 61-35637-C285  
Rev: B



THIS DRAWING IS TO BE PRINTED IN COLOUR

- NOTES:**
- FOR LEGEND, REFER DRAWING 61-35637-C210
  - EXISTING SERVICES LOCATIONS AND LEVELS ARE INDICATIVE ONLY. CONTRACTOR TO CONFIRM LOCATION, SIZE AND LEVEL PRIOR TO COMMENCING CONSTRUCTION. SHOULD ANY CLASHES BE IDENTIFIED WITH PROPOSED WORKS THE CONTRACTOR IS TO IMMEDIATELY NOTIFY THE CLIENT'S REPRESENTATIVE.
  - EXISTING COMMUNICATIONS INFORMATION IS INCOMPLETE. VERIFICATION OF PRESENCE THROUGHOUT SITE REQUIRED PRIOR TO COMMENCING CONSTRUCTION
  - FOR HUMP SETOUT AND DESIGN LEVELS REFER TO 1:20 MODEL
  - DRAWING TO BE READ IN CONJUNCTION WITH STRUCTURAL DRAWING NOTES ON DRAWING 61-35637-S002



ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.

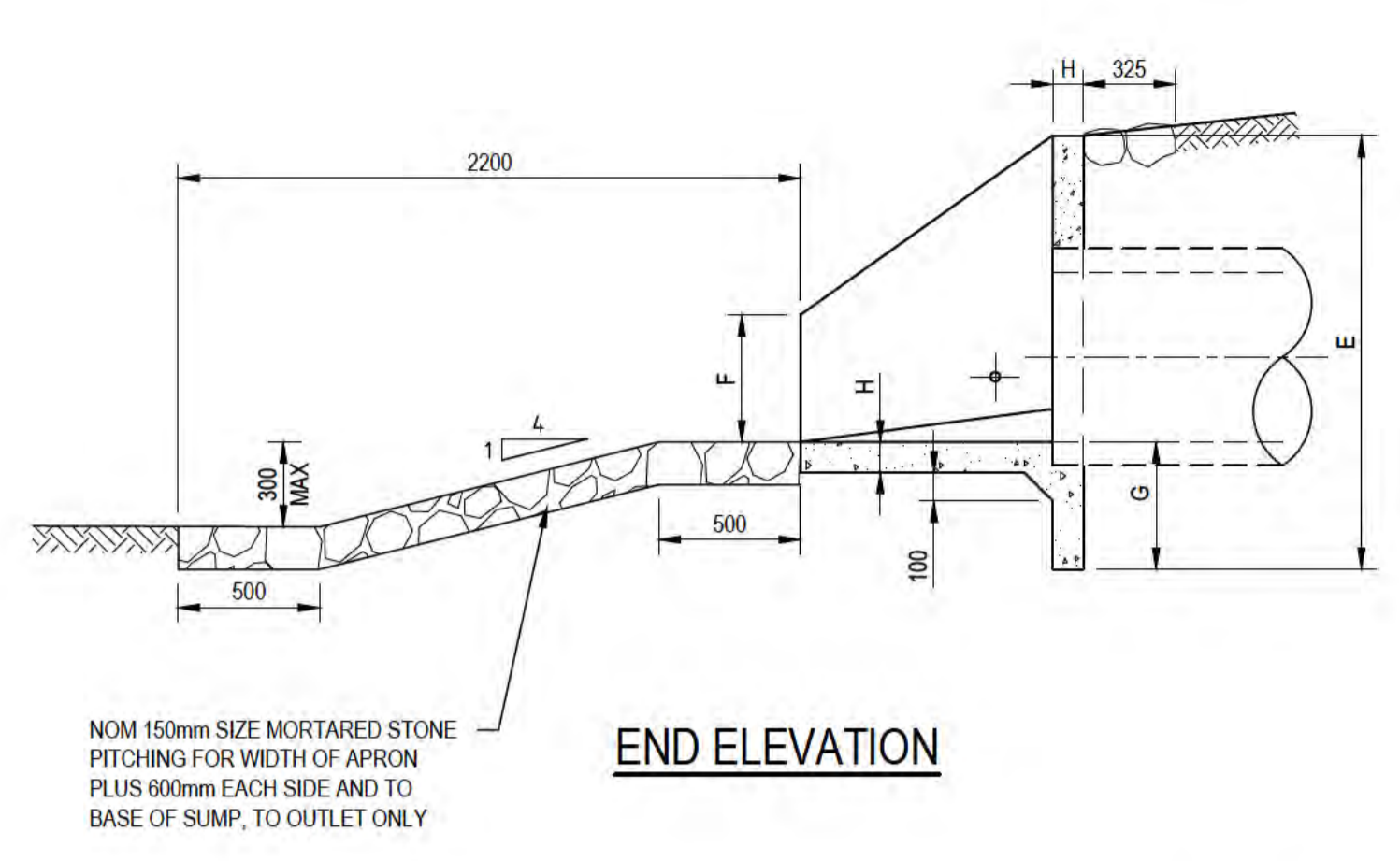
No	Revision	Note	Drawn	Job Manager	Project Director	Date
B		REISSUED FOR 90% DESIGN - CLIENT COMMENT	GT	JM*	PS*	20/11/20
A		ISSUED FOR 90% DESIGN - CLIENT COMMENT	SDC	JM*	PS*	30/09/20



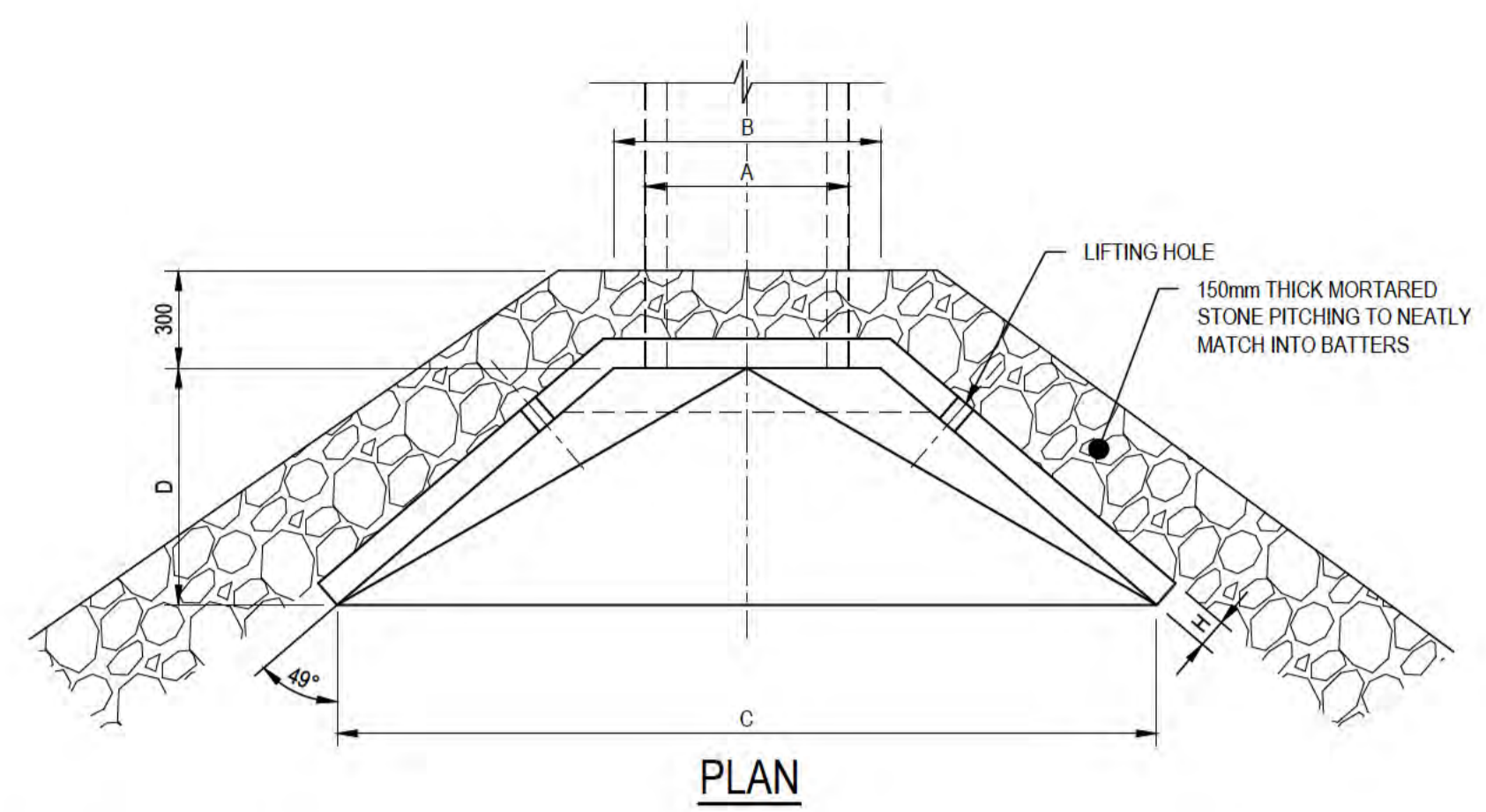
**DO NOT SCALE**  
Conditions of Use. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

Drawn	S.DE CEGLIE	Designer	S.DE CEGLIE
Drafting Check	S.HORTON*	Design Check	S.CLEARY*
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

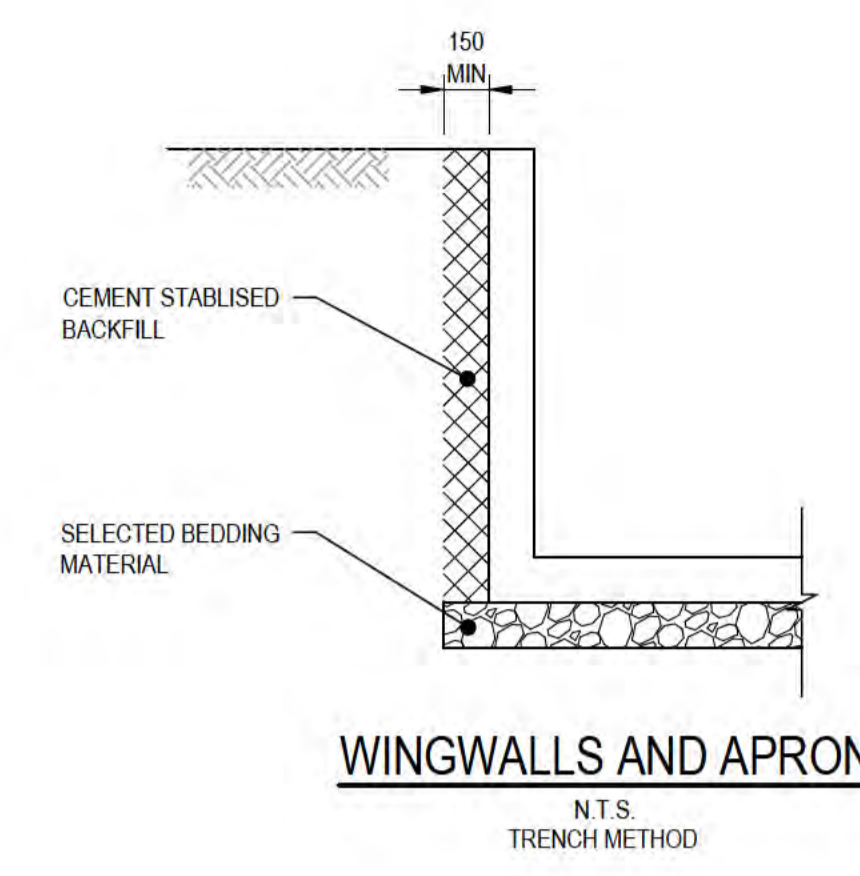
Client	DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS		
Project	CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS		
Title	SOUTHERN DRUMSITE - ROAD AND PAVEMENT DESIGN MURRAY ROAD SPEED REDUCTION HUMP		
Original Size	A1	Drawing No:	61-35637-C286
Rev:	B		



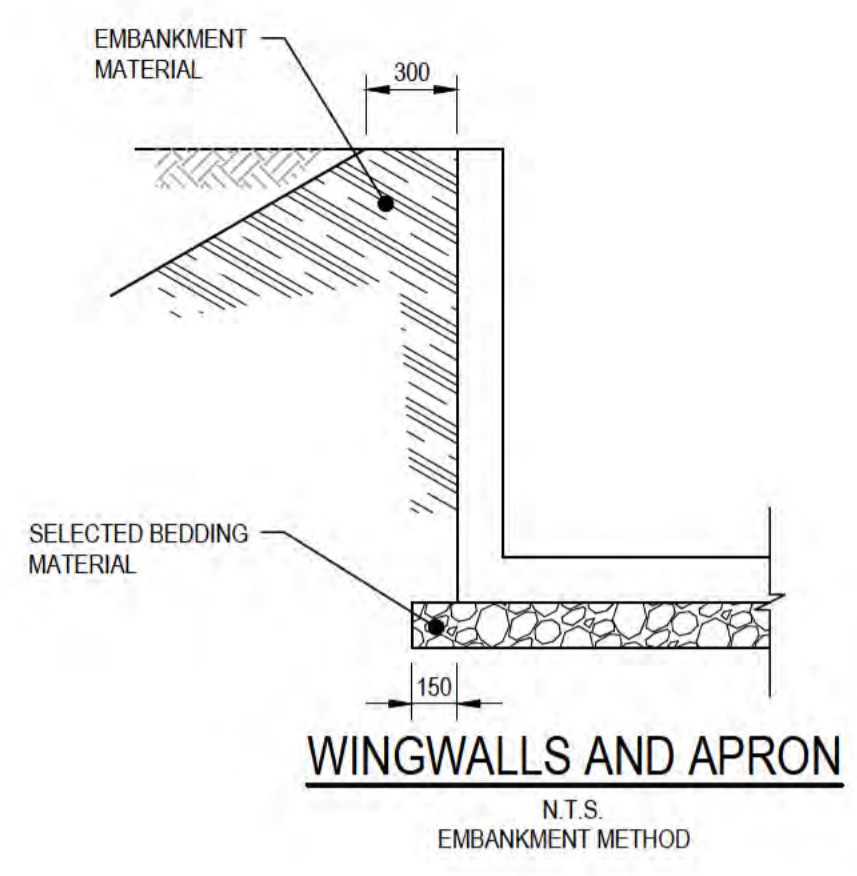
END ELEVATION



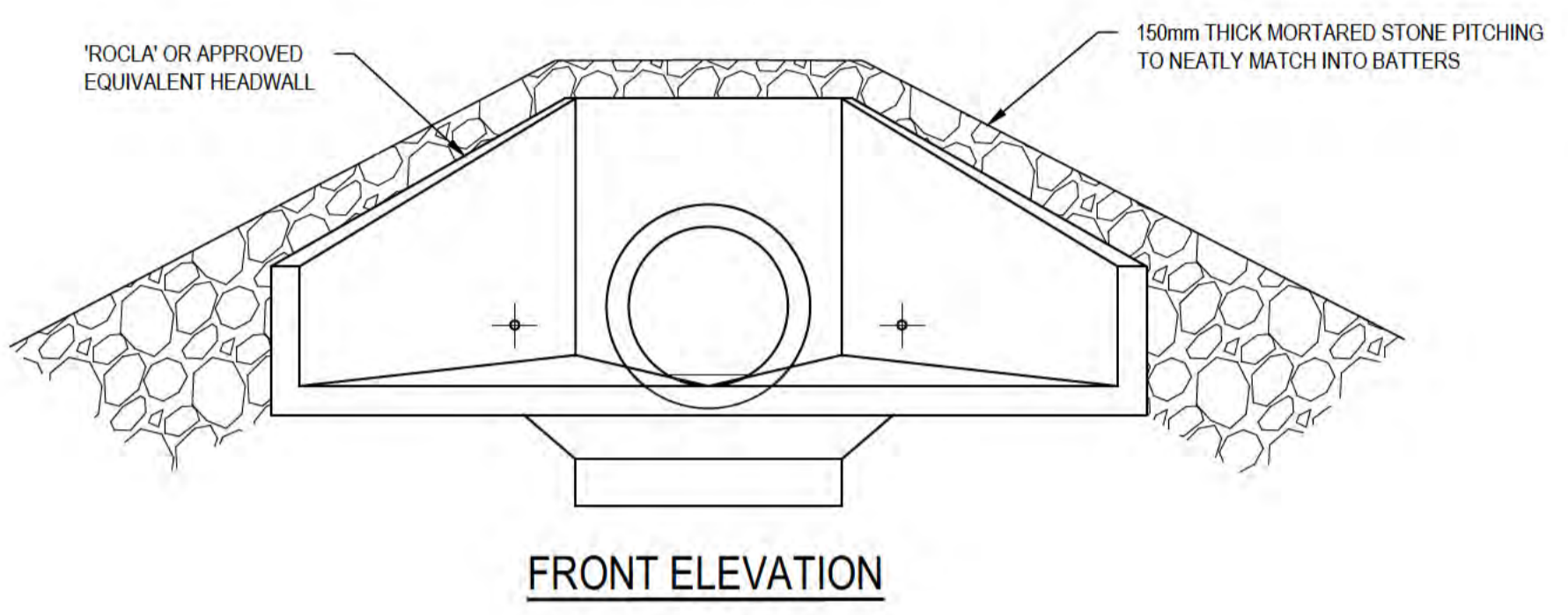
PLAN



WINGWALLS AND APRON  
N.T.S.  
TRENCH METHOD



WINGWALLS AND APRON  
N.T.S.  
EMBANKMENT METHOD

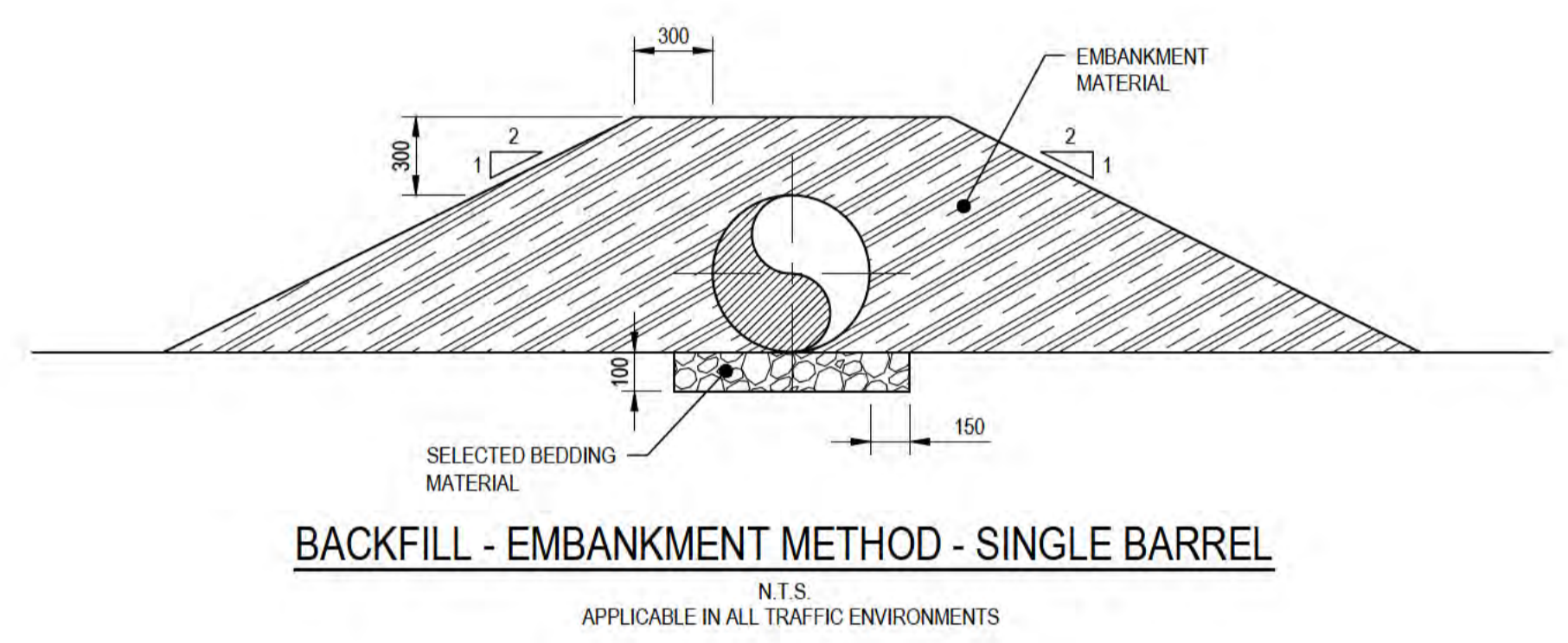


FRONT ELEVATION

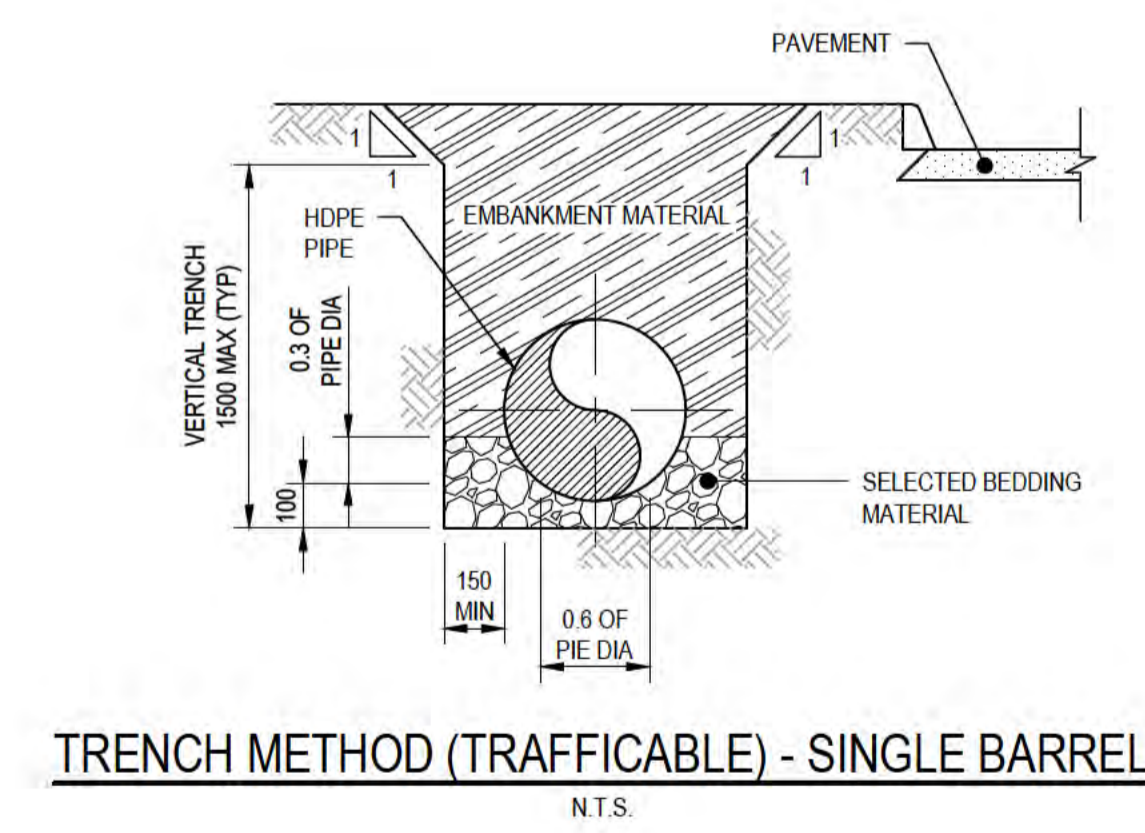
		HEADWALL SCHEDULE							
NOM PIPE SIZE	MASS kg	DIMENSION IN (mm)							
		A	B	C	D	E	F	G	H
300	415	367	850	1850	600	920	270	250	85
375	400	450	850	1850	600	920	270	250	85
450	395	538	850	1850	600	920	270	250	85
525	690	620	800	2300	750	1070	320	250	75
600	680	702	800	2300	750	1070	320	250	75
675	1050	786	1000	3000	1000	1320	320	300	75
750	1030	870	1000	3000	1000	1320	320	300	75
900	940	1050	1060	2040	850	1340	570	360	100
1050	1325	1215	1225	2370	1005	1500	640	360	100

\* FOR 825mm PIPE, USE 900 NOM PIPE SIZE HEADWALL

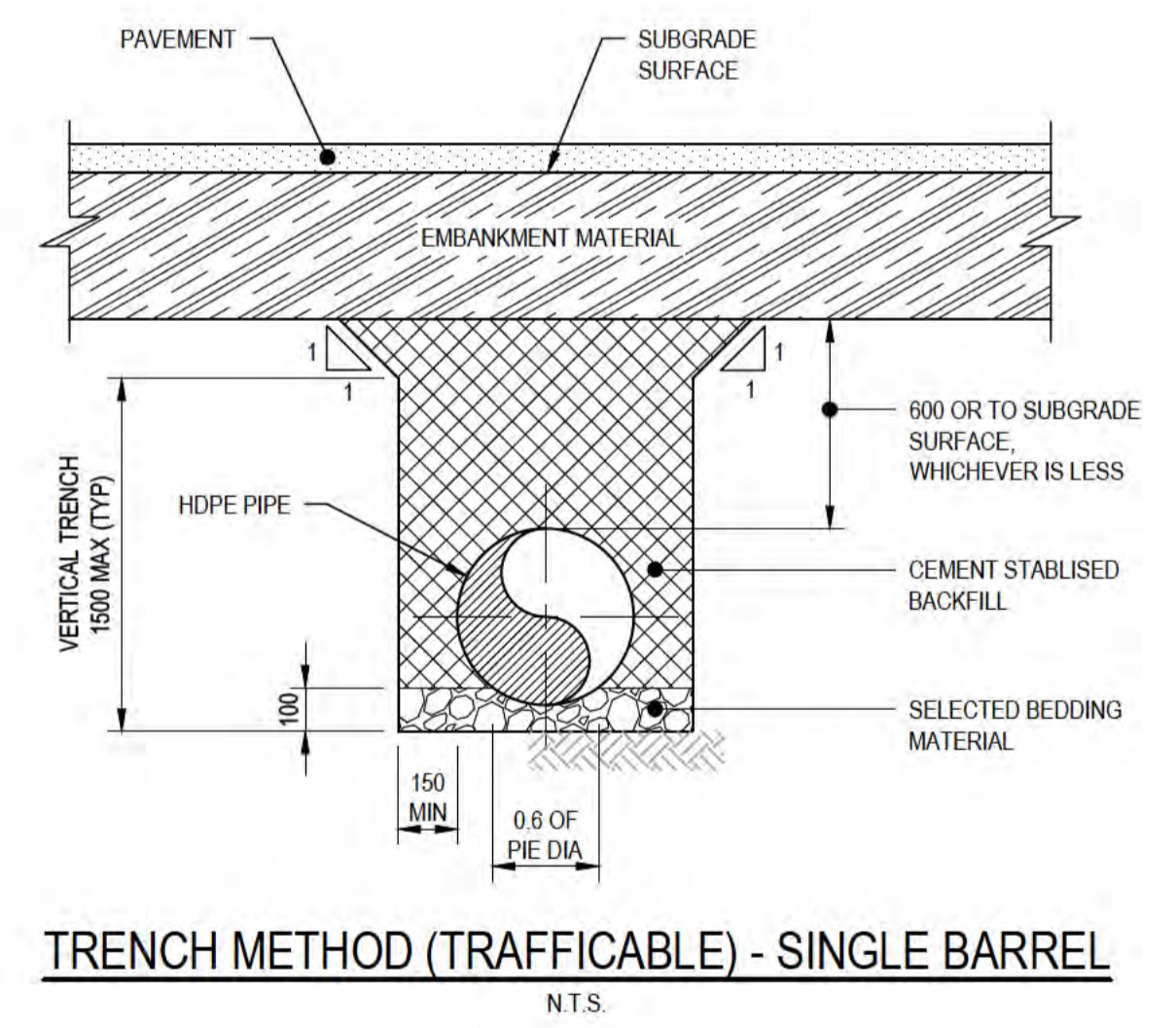
TYPICAL HEADWALL DETAILS  
SCALE 1:25



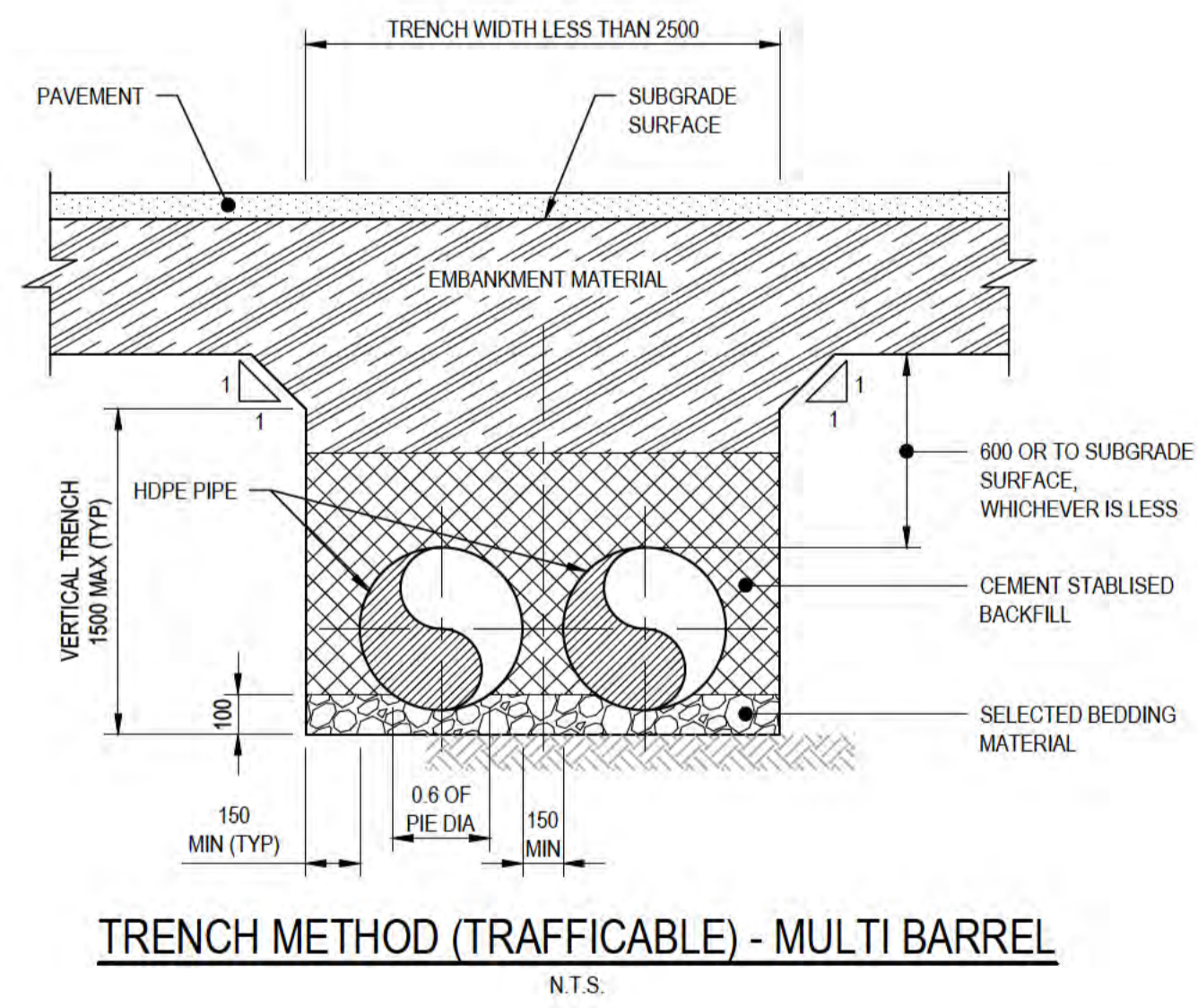
BACKFILL - EMBANKMENT METHOD - SINGLE BARREL  
N.T.S.  
APPLICABLE IN ALL TRAFFIC ENVIRONMENTS



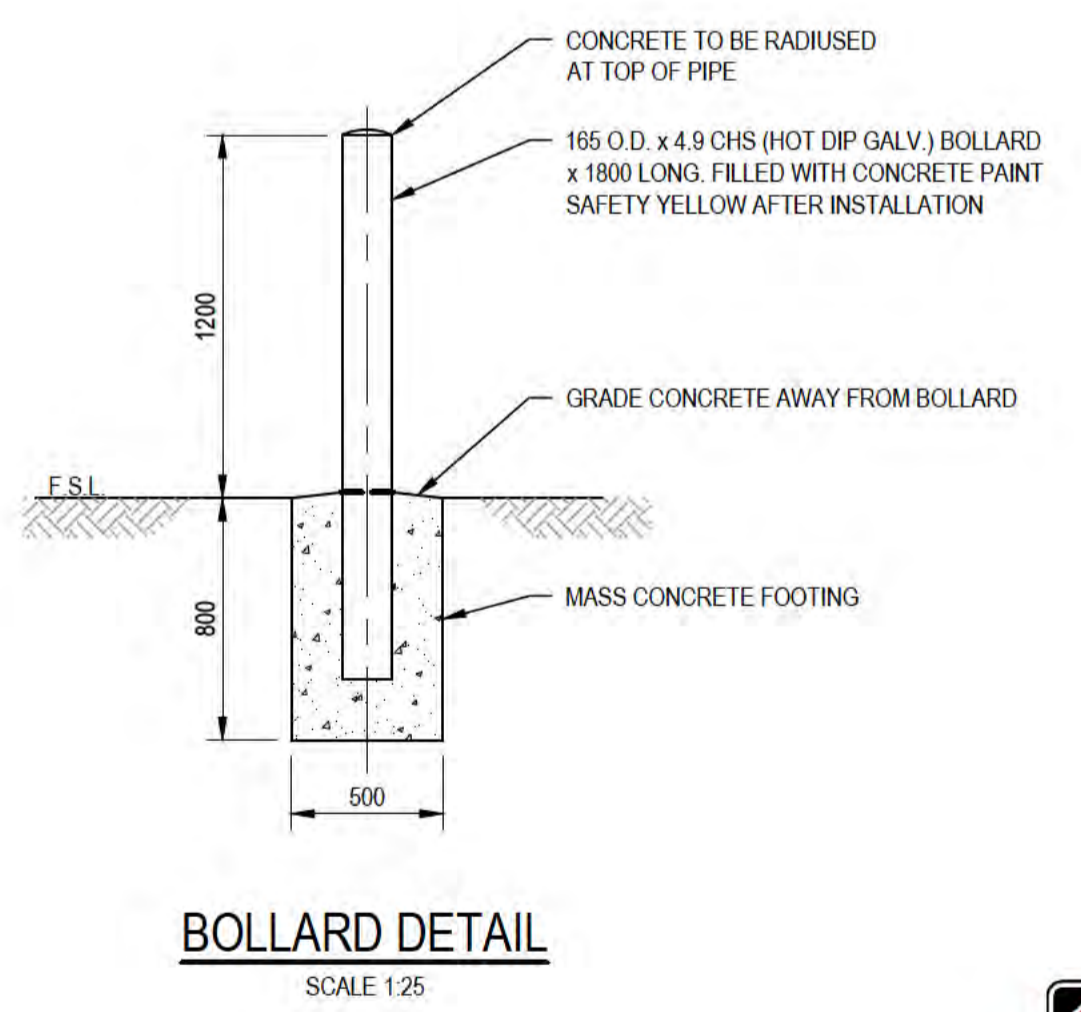
TRENCH METHOD (TRAFFICABLE) - SINGLE BARREL  
N.T.S.



TRENCH METHOD (TRAFFICABLE) - SINGLE BARREL  
N.T.S.



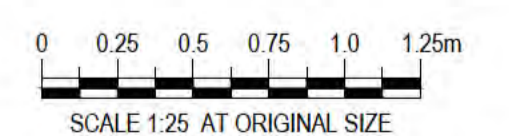
TRENCH METHOD (TRAFFICABLE) - MULTI BARREL  
N.T.S.



BOLLARD DETAIL  
SCALE 1:25



ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.



PRELIMINARY

No	Revision	Note	Drawn	Job Manager	Project Director	Date
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT		JO	JM*	PS*	30/09/20

Australian Government  
Department of Infrastructure, Transport, Regional Development and Communications

GHD  
Level 10, 999 Hay Street Perth WA 6000  
PO Box Y3106 Perth WA 6832 Australia  
T 61 8 6222 8222 F 61 8 6222 8555  
E permail@ghd.com.au W www.ghd.com

**DO NOT SCALE**

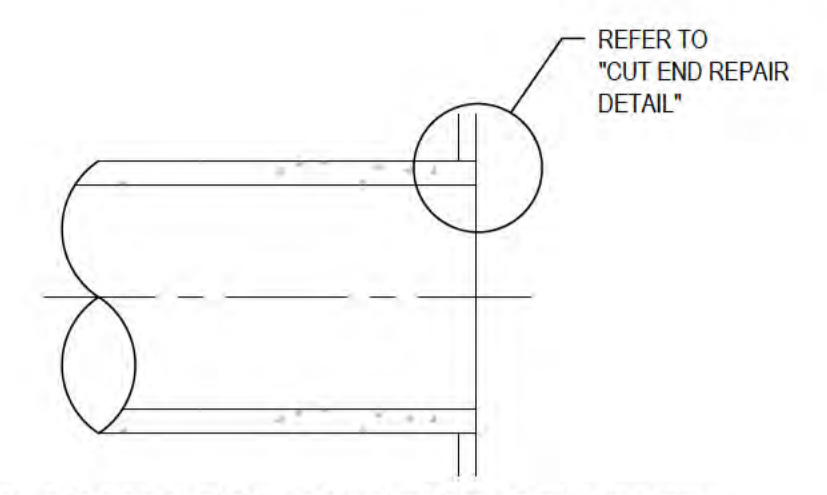
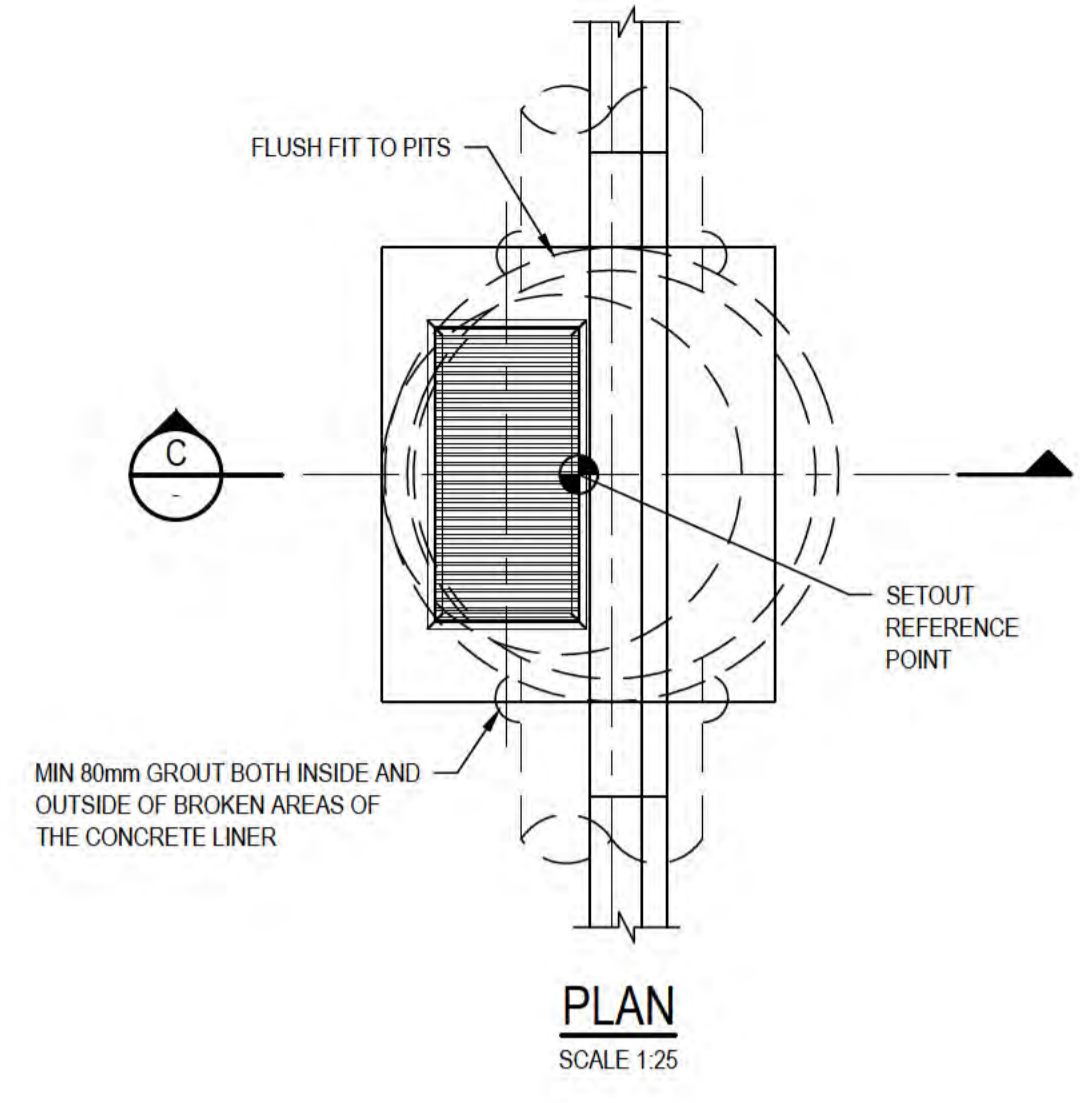
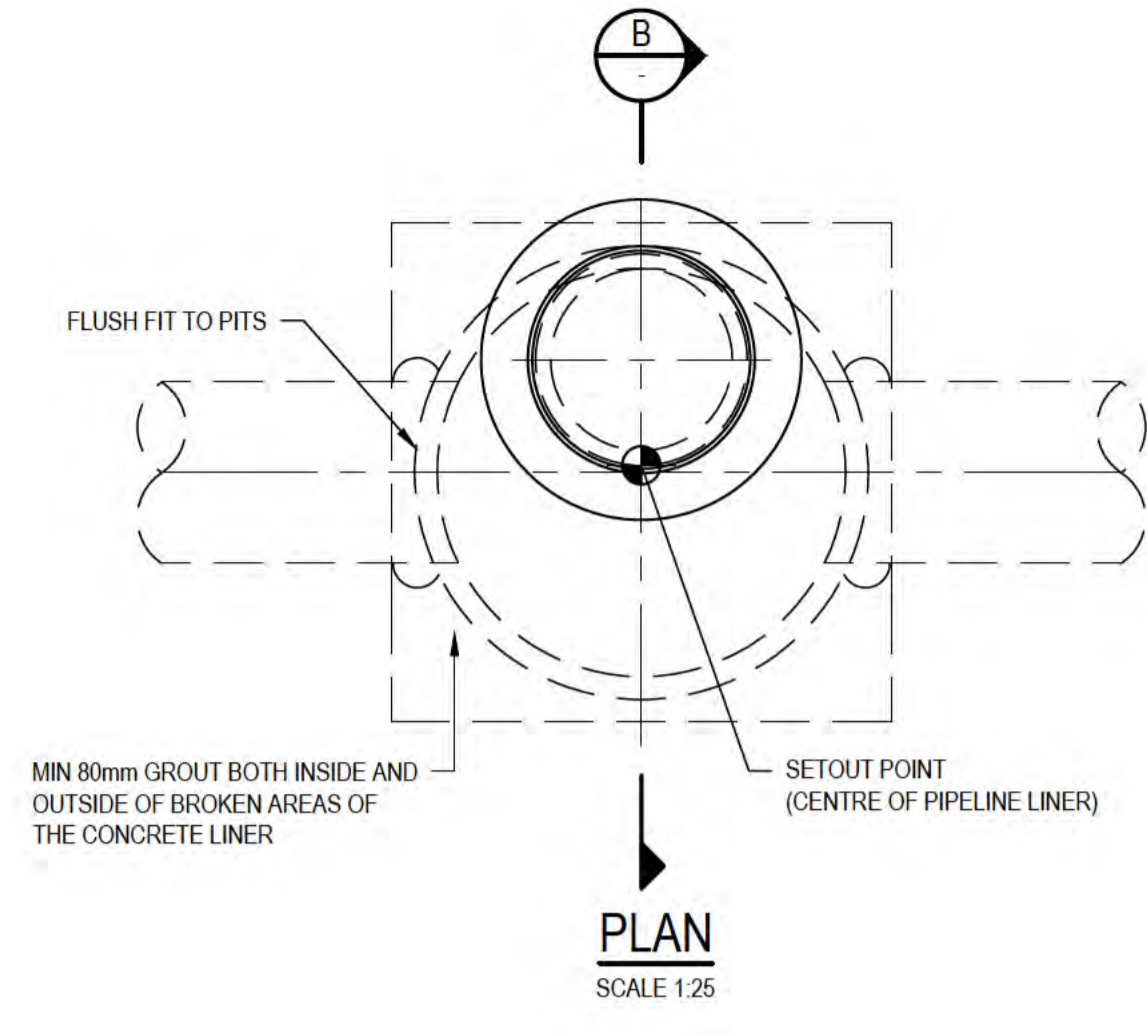
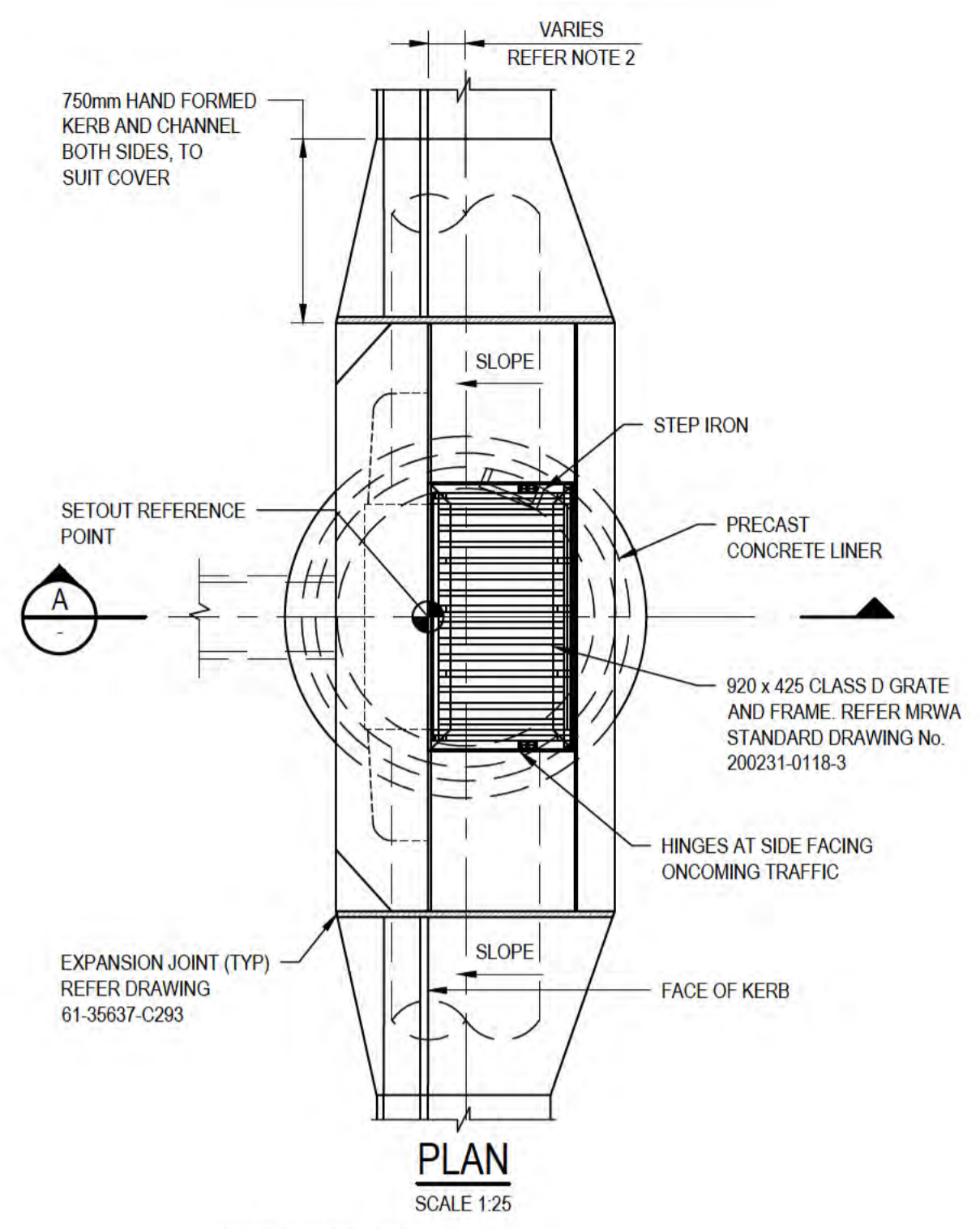
Conditions of Use:  
This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

Drawn: J.OVERHEU  
Drafting Check: S.HORTON\*  
Approved (Project Director):  
Date:  
Scale: AS SHOWN

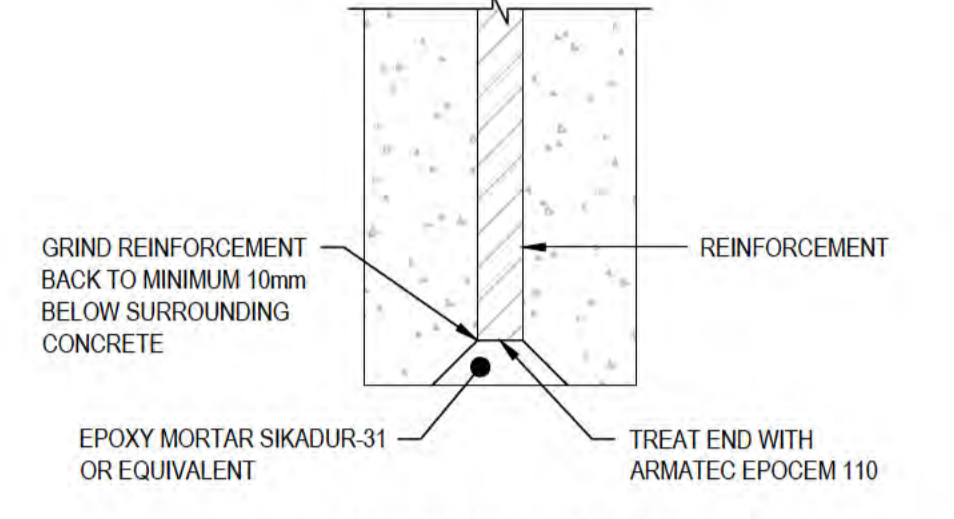
Designer: J.OVERHEU  
Design Check: S.CLEARY\*  
This Drawing must not be used for construction unless signed as Approved

Client: DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS  
Project: CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS  
Title: DRAINAGE STRUCTURES  
DRAINAGE DETAILS - SHEET 1

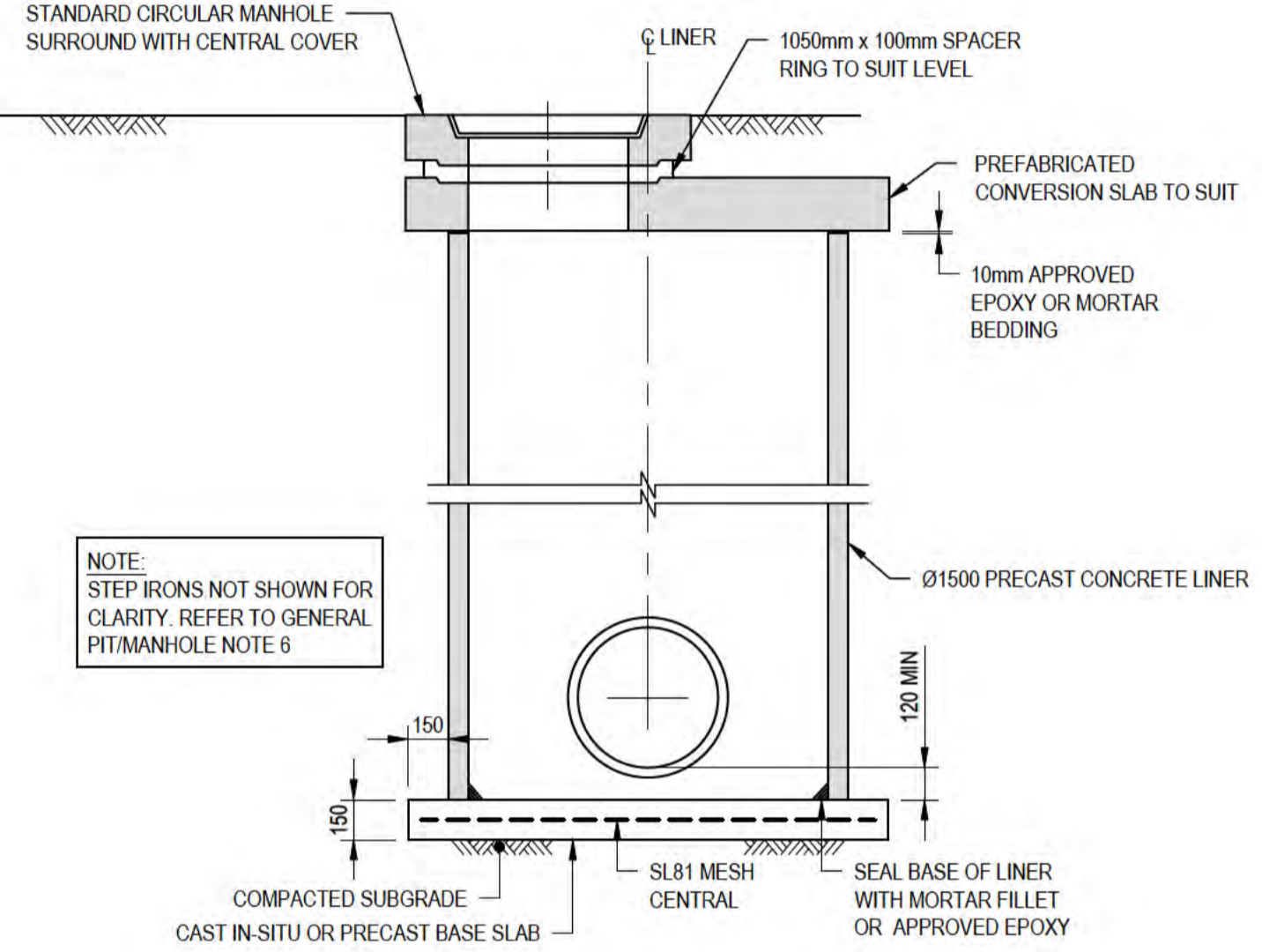
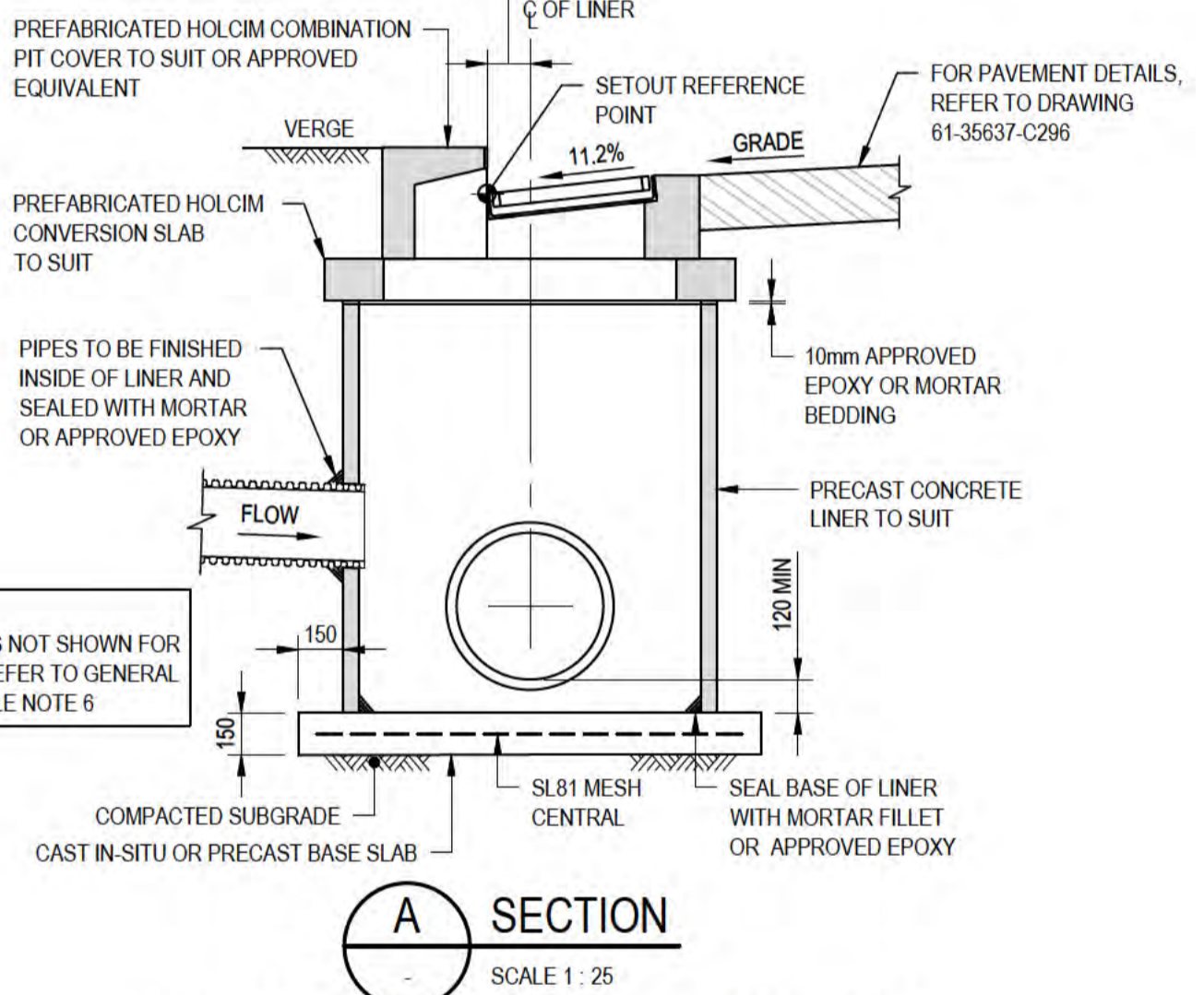
Original Size: A1  
Drawing No: 61-35637-C290  
Rev: A



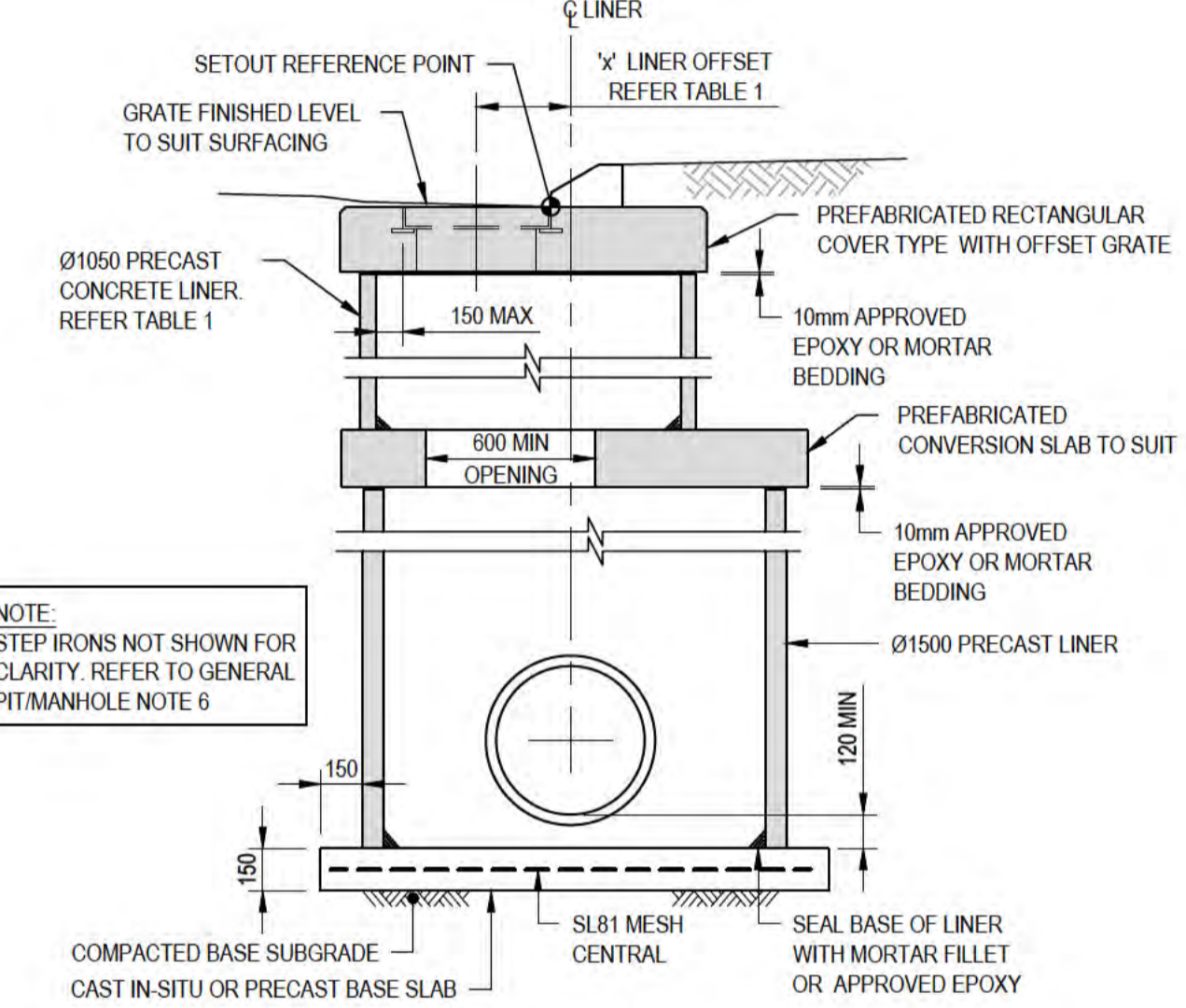
TYPICAL CONCRETE CUT PIPE OR LINER



CUT END REPAIR



MANHOLE DETAIL TYPE 1500 DIA.



TYPICAL GULLY PIT DETAIL TYPE 1500 DIA.

**GENERAL PIT/MANHOLE NOTES:**

- FOR PIT SIZES SMALLER THAN 1500 A STANDARD CONTINUOUS MANHOLE AS PER MRWA STANDARD DRAWINGS ARE TO BE USED.
- WHERE POSSIBLE THE COVER FOR ALL MANHOLES SHOULD BE POSITIONED TO AVOID BEING PLACED IN THE NORMAL WHEEL PATH OF VEHICLES.
- PITS, INCLUDING COVERS, LINERS AND CONVERSION SLABS, LOCATED WITHIN THE ROAD RESERVE OR OTHER TRAFFICABLE AREAS SHALL BE RATED FOR CLASS D LOADING. OTHERWISE THEY SHALL BE RATED FOR CLASS B LOADS.
- REFER TO COMBINATION PIT NOTES FOR OTHER REQUIREMENTS.
- REFER TO DRAWING 61-35637-S002 FOR GENERAL STRUCTURAL NOTES.
- STEP IRONS SHALL BE PROVIDED WHEN THE DEPTH FROM THE FINISHED PAVEMENT LEVEL TO THE BASE OF THE PIT IS GREATER THAN 1m. STEP IRONS TO COMPLY WITH AS1657.

**COMBINATION PIT NOTES:**

- CONCRETE SURROUNDS AND GRATE TO BE HUMES 2400 ROAD GULLY UNIT EITHER RIGHT, CENTRAL OR LEFT TO SUIT. CENTRAL SHOWN IN DETAIL ONLY. REFER TO HUMES STANDARD DRAWINGS PP-GN-2400RGU-RWLP-WA-P (RIGHT), PP-GN-2400RGU-LWLP-WA-P (LEFT) AND PP-GN-2400RGU-CWLP-WA-P (CENTRAL) FOR FULL DETAILS.
- THE CENTRE OF THE PIT LINER VARIES DEPENDING ON SIZE OF LINER, 152.5mm FOR 1200 LINER AND 160mm LINER, OFFSET FROM THE FACE OF KERB.
- ALL PIPE JOINTS WITHIN 1000mm OF THE PIT ARE TO BE SEALED.
- THE SUBGRADE AT THE BASE OF THE PIT IS TO BE COMPACTED TO 95% SMDD PRIOR TO PLACING OF THE BASE, OR AS DETAILED IN THE SPECIFICATION.
- ALL BACKFILL SURROUNDING THE PIT IS TO BE COMPACTED TO 95% SMDD, OR AS DETAILED IN THE SPECIFICATION.
- ALL PITS ARE TO HAVE A CENTRALLY LOCATED 150mm WEEP HOLE IN THE BASE FILLED WITH 20mm AGGREGATE EXCEPT IN AREAS OF HIGH GROUND WATER OR EXCESSIVELY HEAVY CLAY SOILS. WHERE PREDICTED MAXIMUM GROUNDWATER LEVEL IS LESS THAN 150mm BELOW PIT NO WEEP HOLE IS TO BE INSTALLED.
- ALL KERBS TO BE TREATED BY CONSTRUCTING A HAND FORMED SECTION AND GRADED TO COVER TOP OF FRAME LEVEL.
- PIPES ARE TO BE FINISHED INSIDE OF LINER AND SEALED WITH MORTAR OR APPROVED EPOXY.

**GRATED GULLY NOTES:**

- REFER TO SPECIFICATION FOR FURTHER TECHNICAL DETAILS.
- COVER TYPE EDGE MAY NOT QUITE COVER WALL EDGE OF LINERS GREATER THAN 1050. GROUT GAP IF NECESSARY.
- ALL GRATES ON PITS TO BE MAIN ROADS STANDARD OR SIMILAR.
- REFER TO COMBINATION PIT NOTES FOR OTHER GENERAL REQUIREMENTS.

TABLE 1 - UPPER PIT DETAIL

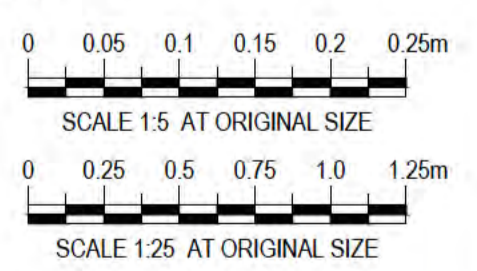
LINER NOM. Ø	LINER OUTSIDE Ø	MAX. Ø PIPE CONNECTING TO LINER	"X" LINER OFFSET
NOM. 1050Ø	1190Ø	NOM. 525Ø	397.5
NOM. 1200Ø	*1360Ø	NOM. 600Ø	482.5

**NOTES:**

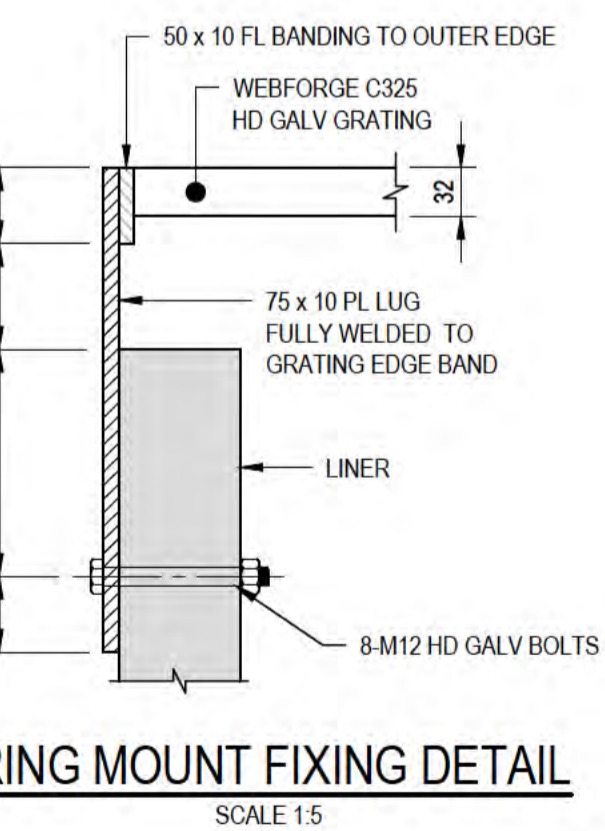
- BEDDING MATERIAL, FOUNDATION COMPACTION AND BACKFILL COMPACTION TO BE AS PER SPECIFICATION.
- CEMENT STABILISED BACKFILL MIX TO BE AS PER SPECIFICATION.
- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
- COVER AND TOP OF PIPE MATERIAL DEPENDENT. REFER TO MANUFACTURER'S REQUIREMENTS.



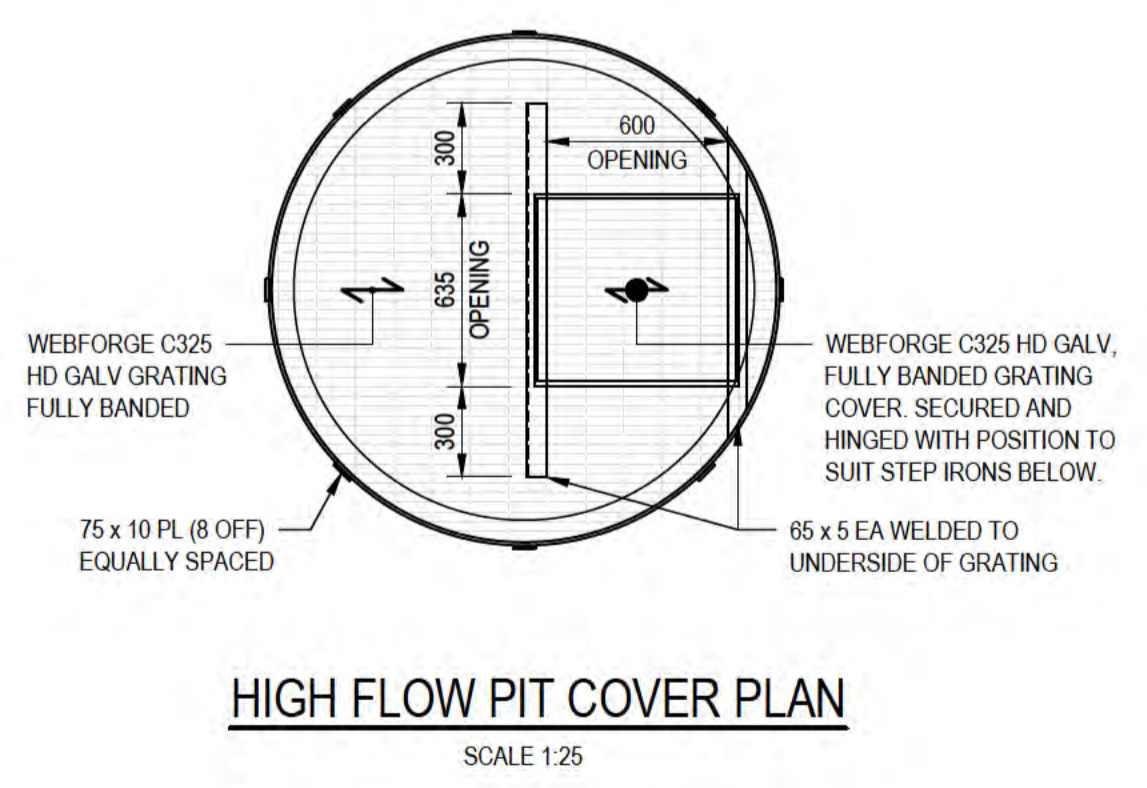
ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.



**PRELIMINARY**

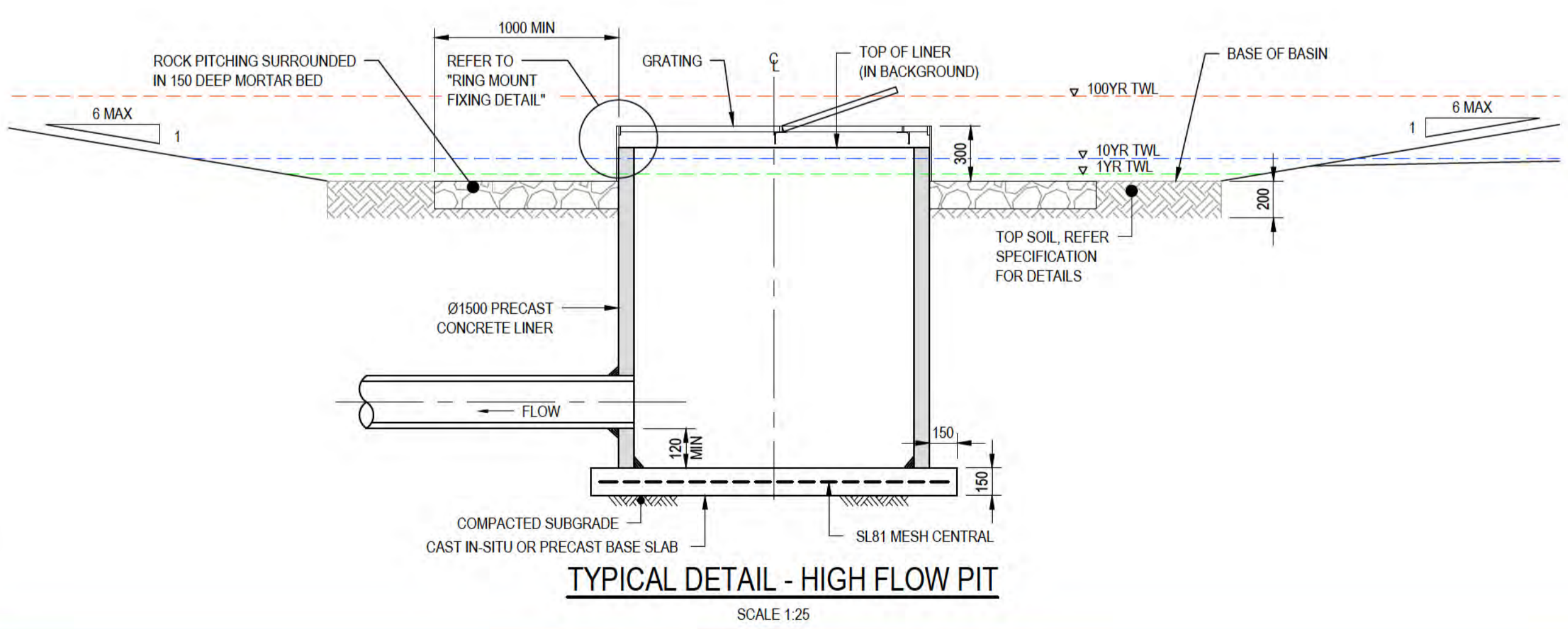


RING MOUNT FIXING DETAIL



HIGH FLOW PIT COVER PLAN

**THIS DRAWING IS TO BE PRINTED IN COLOUR**



TYPICAL DETAIL - HIGH FLOW PIT

No	Revision	Note	Drawn	Job Manager	Project Director	Date
B		REISSUED FOR 90% DESIGN - CLIENT COMMENT	GT	JM*	PS*	20/11/20
A		ISSUED FOR 90% DESIGN - CLIENT COMMENT	JO	JM*	PS*	30/09/20

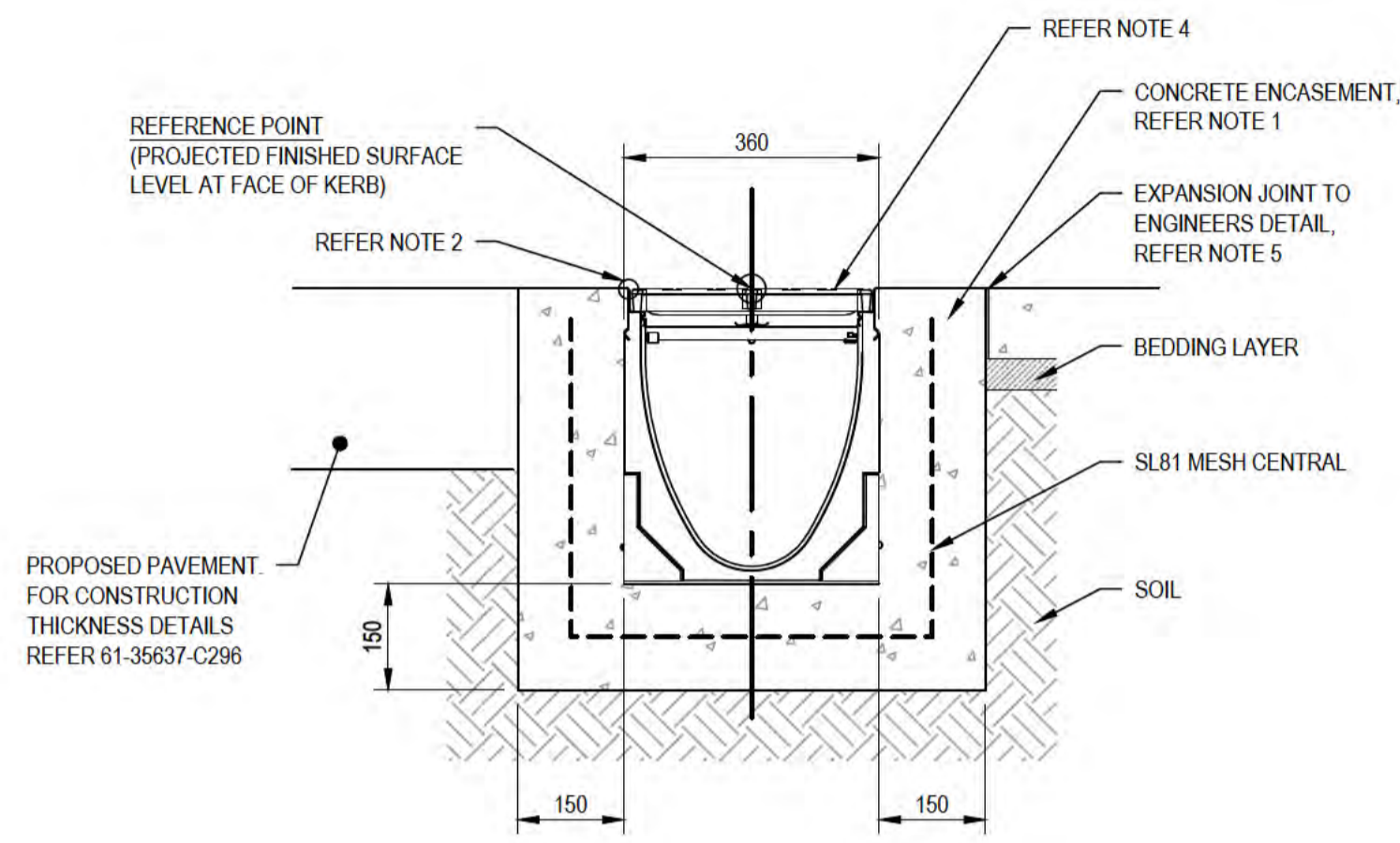


<b>DO NOT SCALE</b>	Drawn J.OVERHEU	Designer J.OVERHEU
Conditions of Use. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.	Drafting Check S.SHORTON*	Design Check S.CLEARY*
	Approved (Project Director) Date	
	Scale AS SHOWN	This Drawing must not be used for construction unless signed as Approved

Client	DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS
Project	CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS
Title	DRAINAGE STRUCTURES TYPICAL DETAILS - SHEET 2
Original Size	A1
Drawing No:	61-35637-C291
Rev:	B

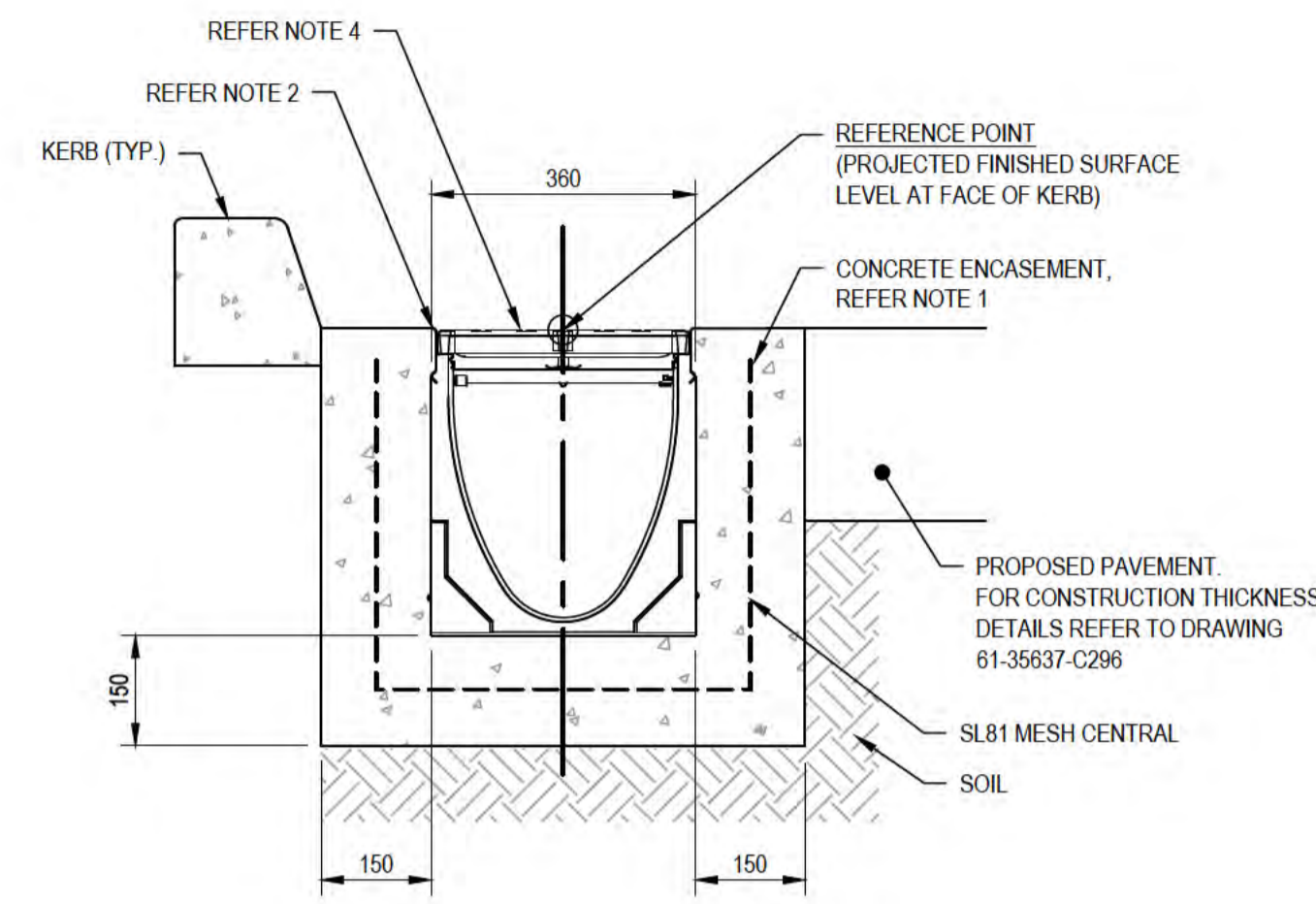
**NOTES:**

1. A MINIMUM CONCRETE STRENGTH, REFER TO DRAWING 61-35637-S002.
2. THE FINISHED LEVEL OF THE CONCRETE ENCASEMENT MUST BE APPROXIMATELY 3mm ABOVE THE TOP OF THE CHANNEL EDGE.
3. THE FINISHED LEVEL OF THE PAVEMENT MUST BE APPROXIMATELY 3mm ABOVE THE TOP OF THE CHANNEL EDGE.
4. ALL TRENCH GRATE COVERS ARE TO BE THE INTERLOCKING BOLTLESS SYSTEM WITH CLASS D COVER TYPE 860D UNLESS OTHERWISE NOTED.
5. EXPANSION AND CRACK CONTROL JOINTS ARE REQUIRED TO BE INSTALLED AS PER THE REQUIREMENTS OF MRWA SPECIFICATION 407-KERBING.
6. ALL DRAINAGE STRUCTURES BOTH IN-SITU AND PRE-FABRICATED ARE TO BE SUPPLIED IN ACCORDANCE WITH CIVIL SPECIFICATION. THE CONCRETE SHOULD BE VIBRATED TO ELIMINATE AIR POCKETS AND THE IN SITU GROUND WELL COMPACTED (95% SMDD OR EQUIVALENT AS DETAILED IN THE SPECIFICATION) PRIOR TO CONCRETE ENCASEMENT BEING POURED.
7. ALL OUTLET PITS TO BE K3-903G TO SUIT DRAIN.
8. DN200 KNOCKOUT (BOTTOM OF DRAIN) CONNECTS VIA PVC PIPE AND ELBOW TO DRAINAGE PIT UNLESS OTHERWISE DETAILED.
9. ALL TRENCH GRATE COVERS ARE TO BE THE INTERLOCKING BOLTLESS SYSTEM WITH CLASS D COVER TYPE 860D UNLESS OTHERWISE NOTED.



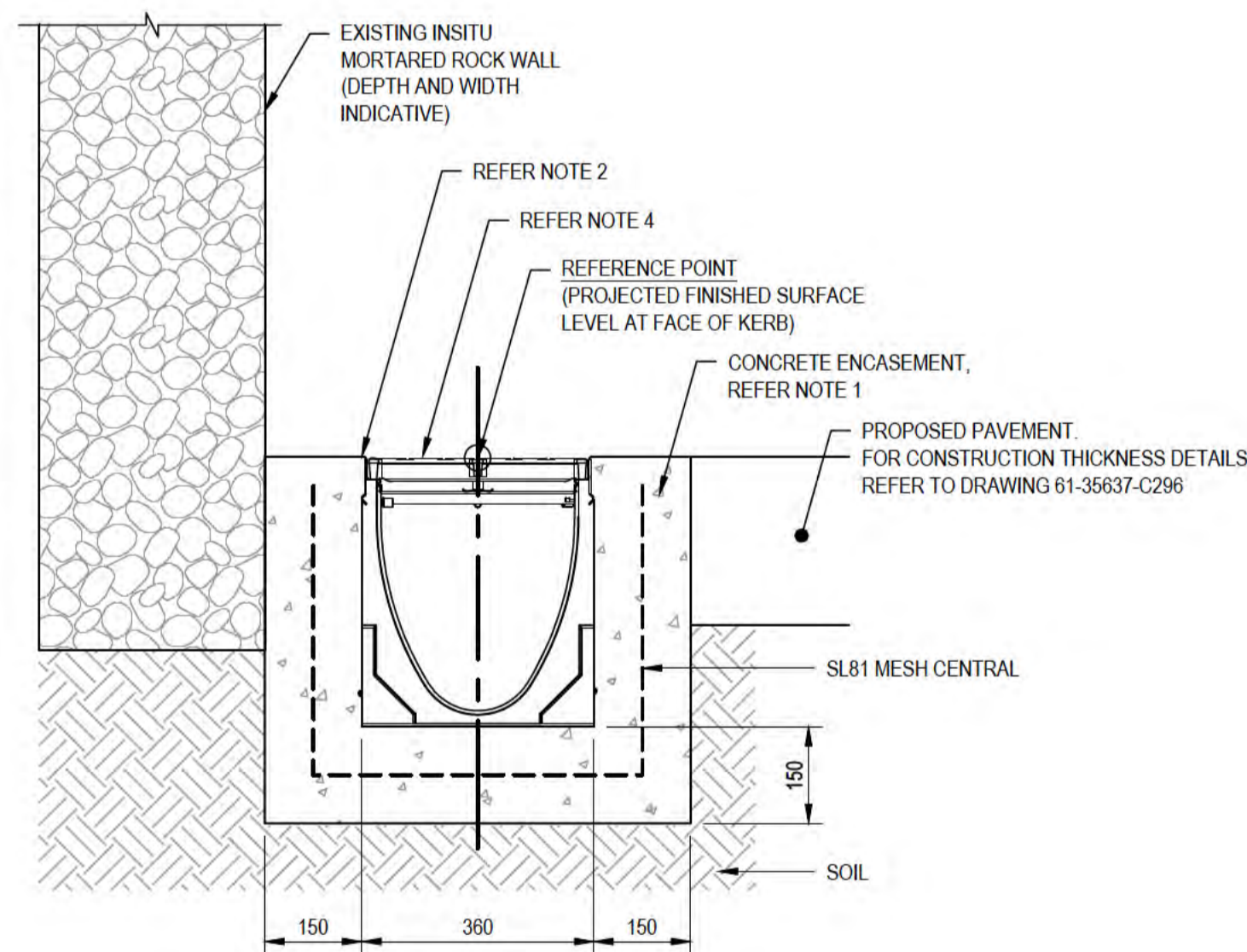
**TRENCH DRAIN DETAIL IN CONCRETE SLAB**

SCALE 1:10



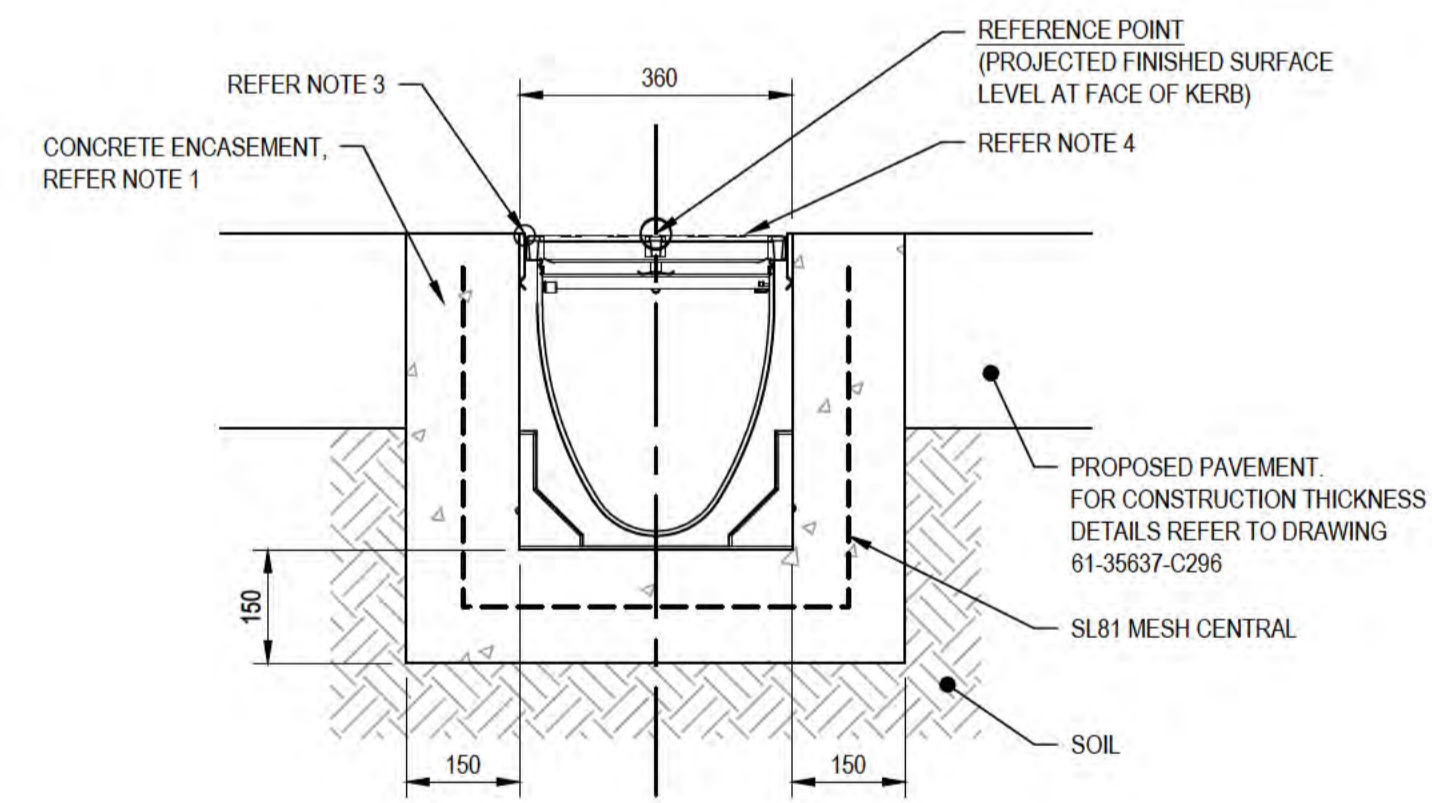
**TRENCH DRAIN DETAIL ADJACENT KERB**

SCALE 1:10



**TRENCH DRAIN DETAIL ADJACENT EXISTING RETAINING WALL**

SCALE 1:10

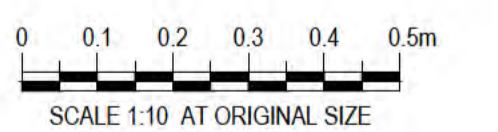


**TRENCH DRAIN DETAIL IN PAVEMENT**

SCALE 1:10



ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.



**PRELIMINARY**

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
B		REISSUED FOR 90% DESIGN - CLIENT COMMENT	GT	JM*	PS*	20/11/20
A		ISSUED FOR 90% DESIGN - CLIENT COMMENT	GT	JM*	PS*	30/09/20



**Australian Government**  
**Department of Infrastructure, Transport, Regional Development and Communications**



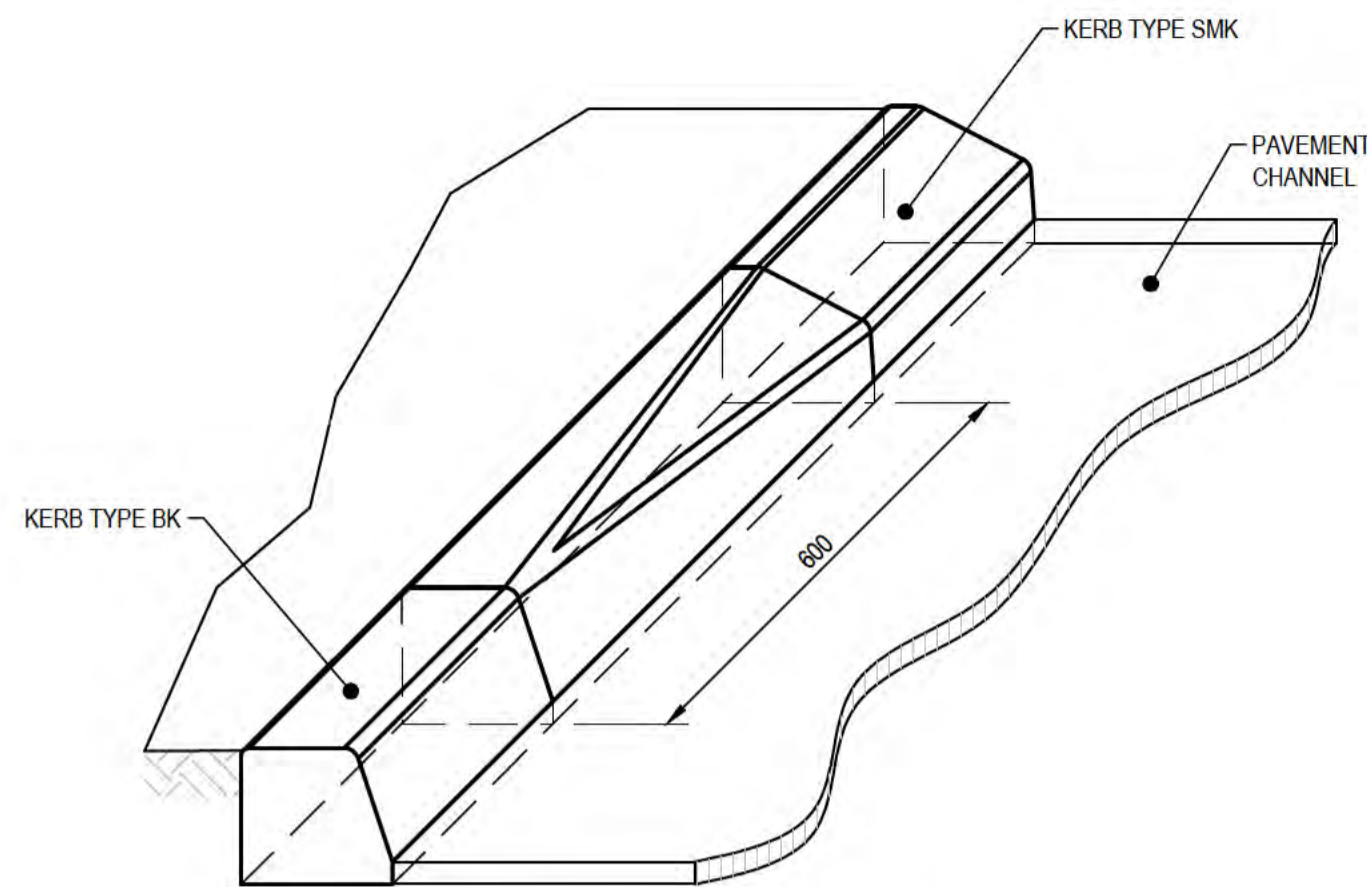
Level 10, 999 Hay Street Perth WA 6000  
 PO Box Y3106 Perth WA 6832 Australia  
 T 61 8 6222 8222 F 61 8 6222 8555  
 E permail@ghd.com.au W www.ghd.com

**DO NOT SCALE**

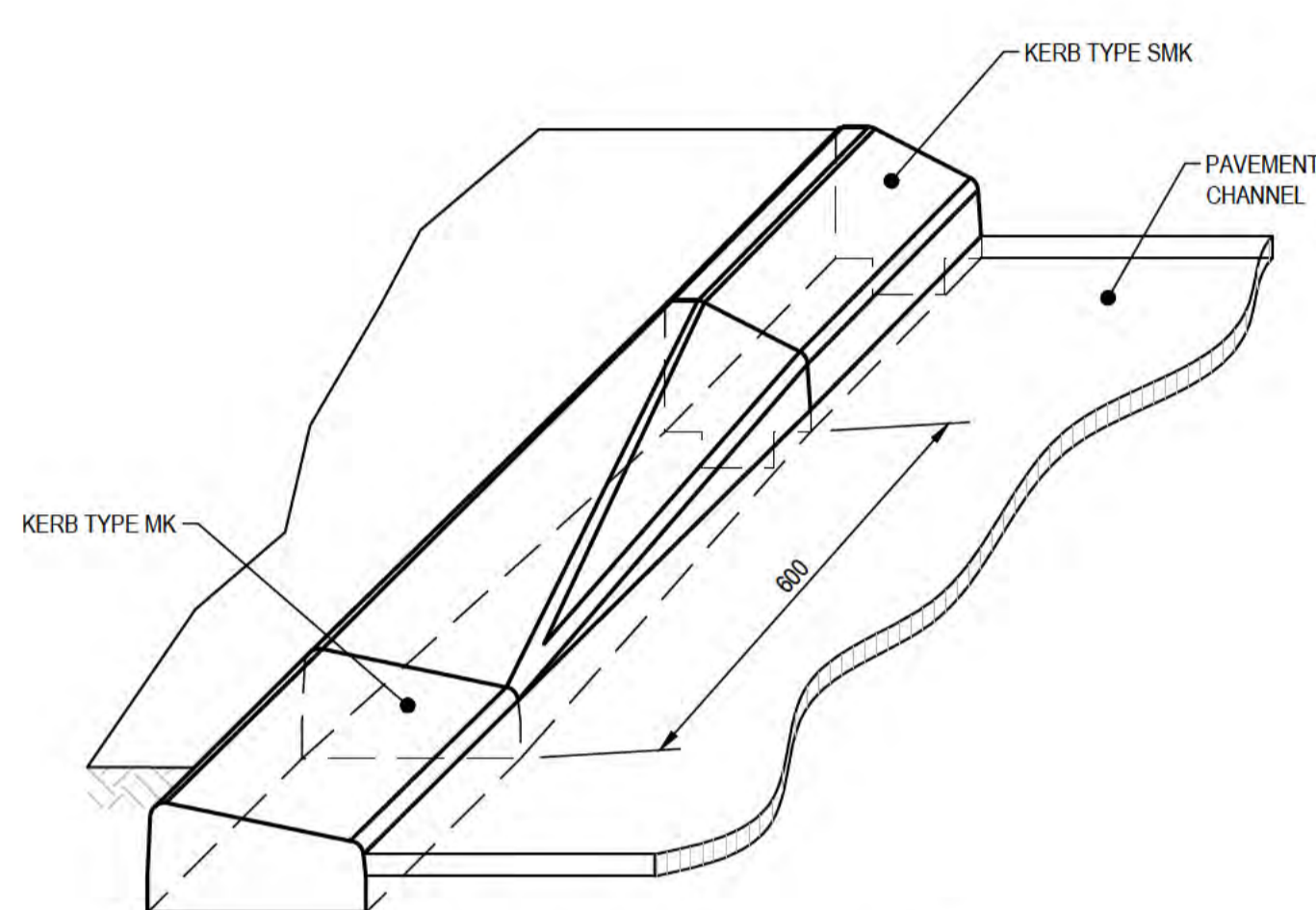
Conditions of Use.  
 This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

Drawn	G.TAYAM	Designer	D.DOMINGO
Drafting Check	S.HORTON*	Design Check	S.CLEARY*
Approved (Project Director)	Date		
Scale	1:10	This Drawing must not be used for Construction unless signed as Approved	

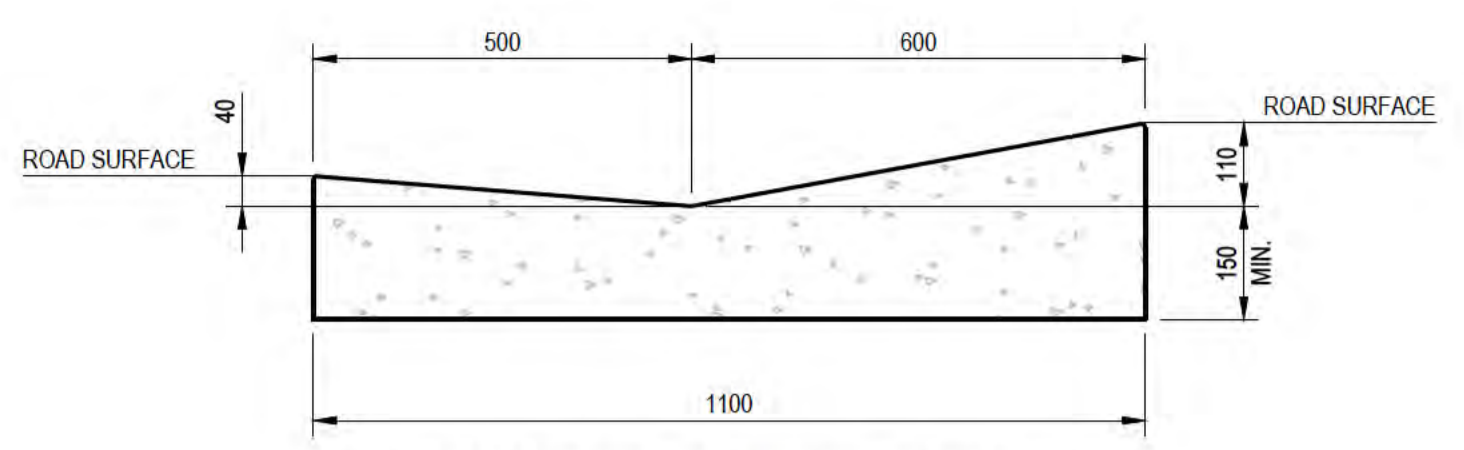
Client	DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS		
Project	CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS		
Title	DRAINAGE STRUCTURES TYPICAL DETAILS - SHEET 3		
Original Size	A1	Drawing No:	61-35637-C292
Rev:	B		



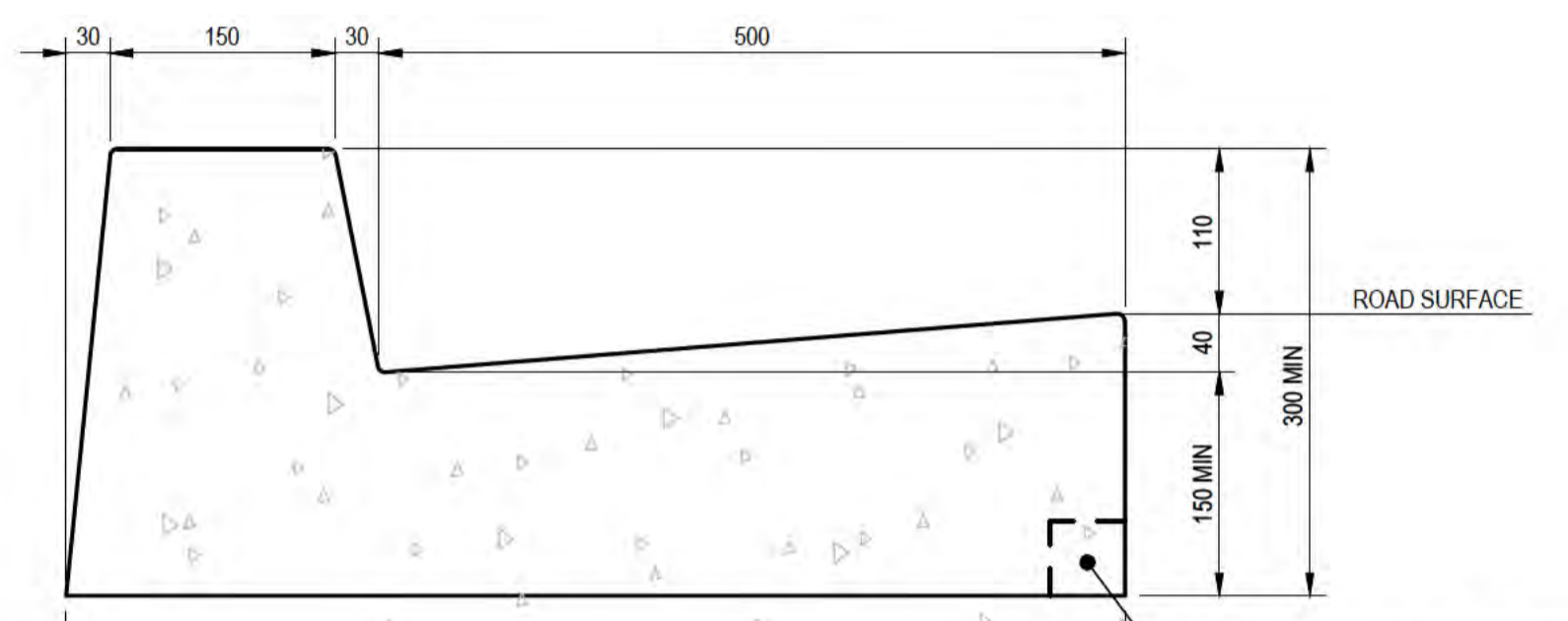
KERB TYPE BK TO SMK TRANSITION  
SCALE 1:10



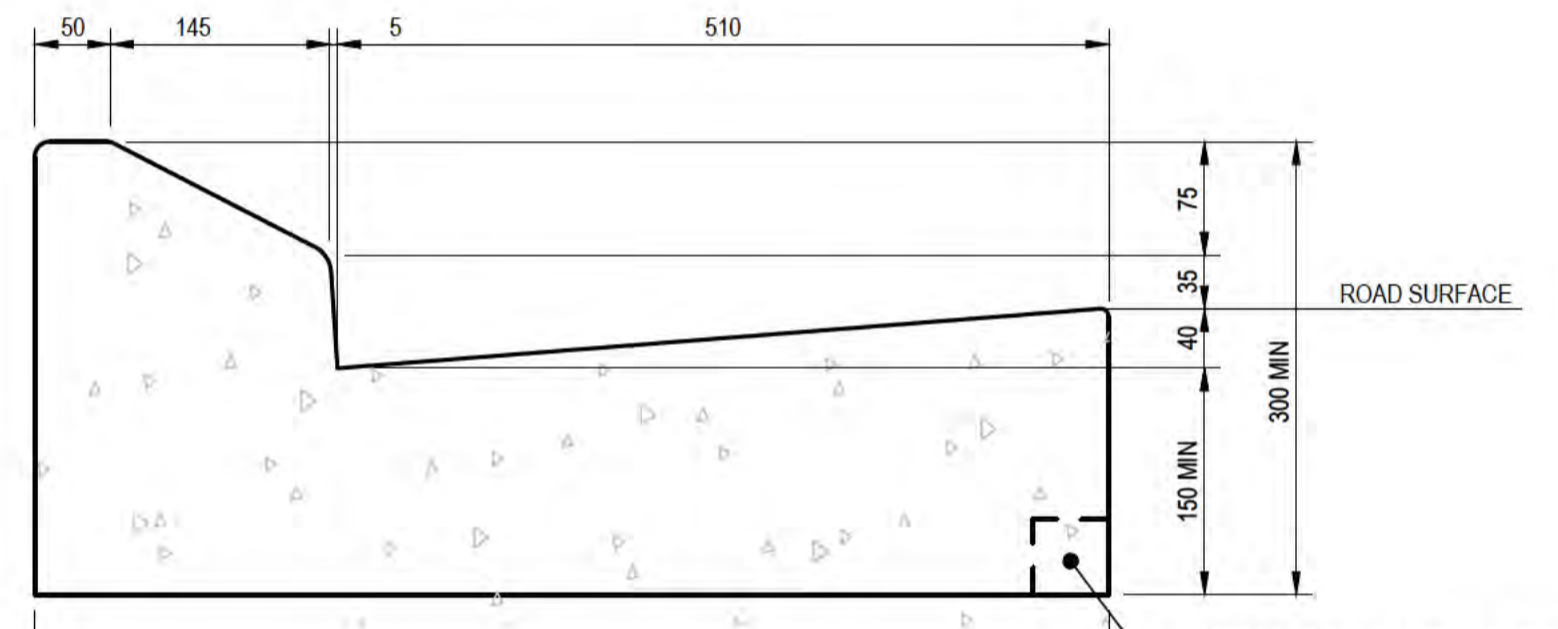
KERB TYPE MK TO SMK TRANSITION  
SCALE 1:10



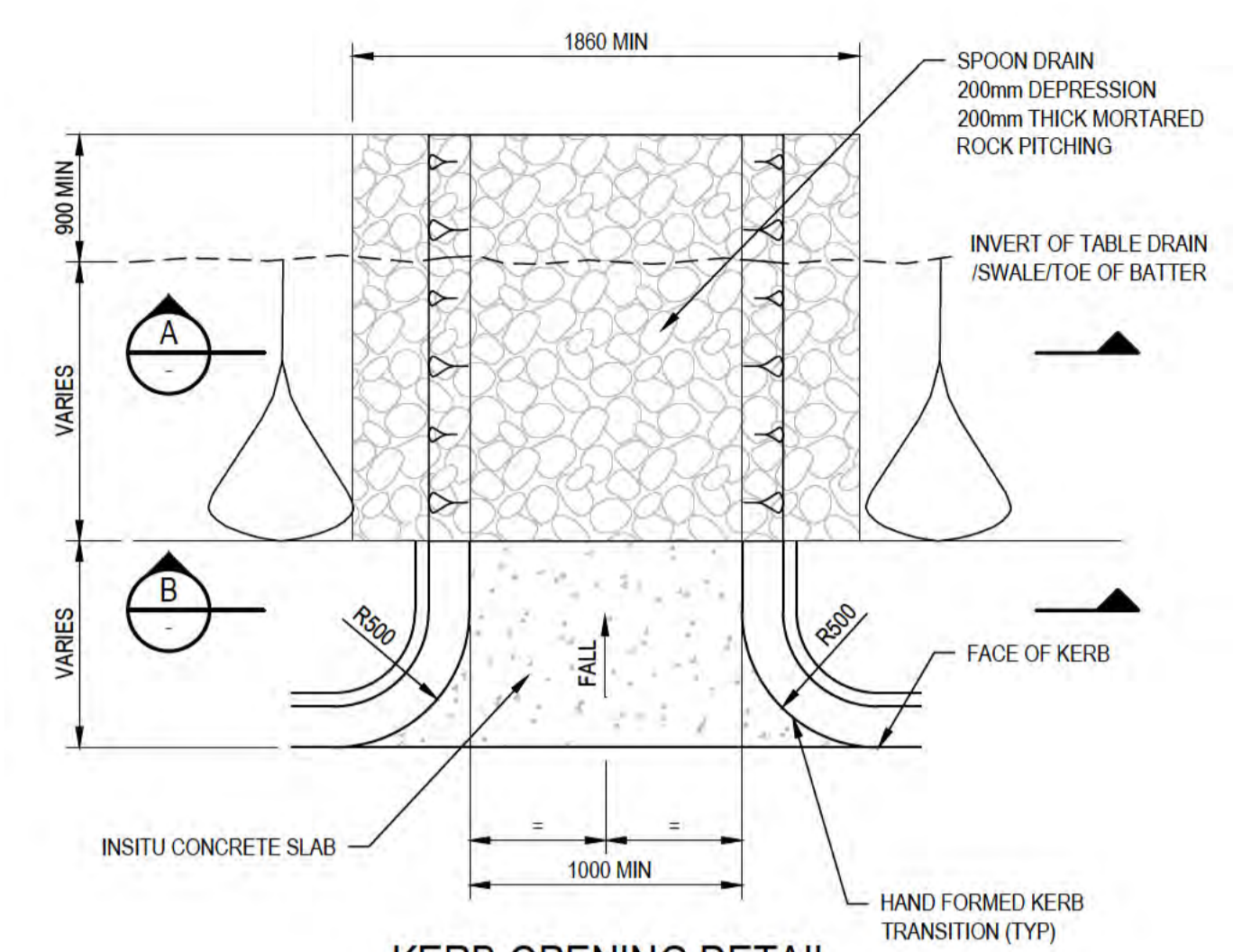
CONCRETE CHANNEL DETAIL  
SCALE 1:10



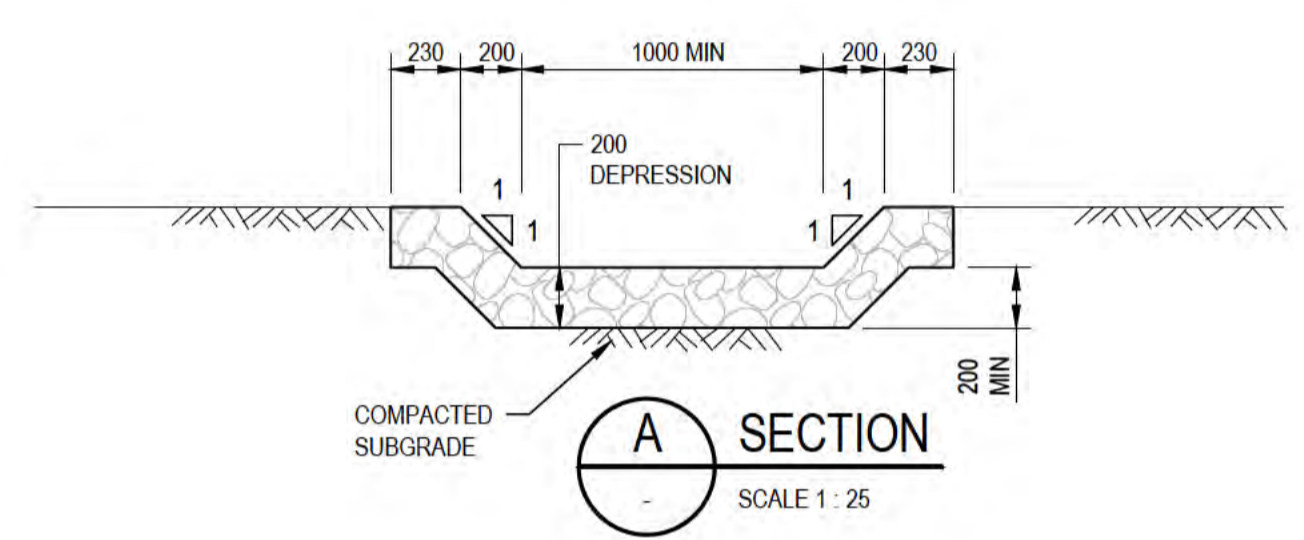
KERB AND CHANNEL DETAIL (KC)  
SCALE 1:5



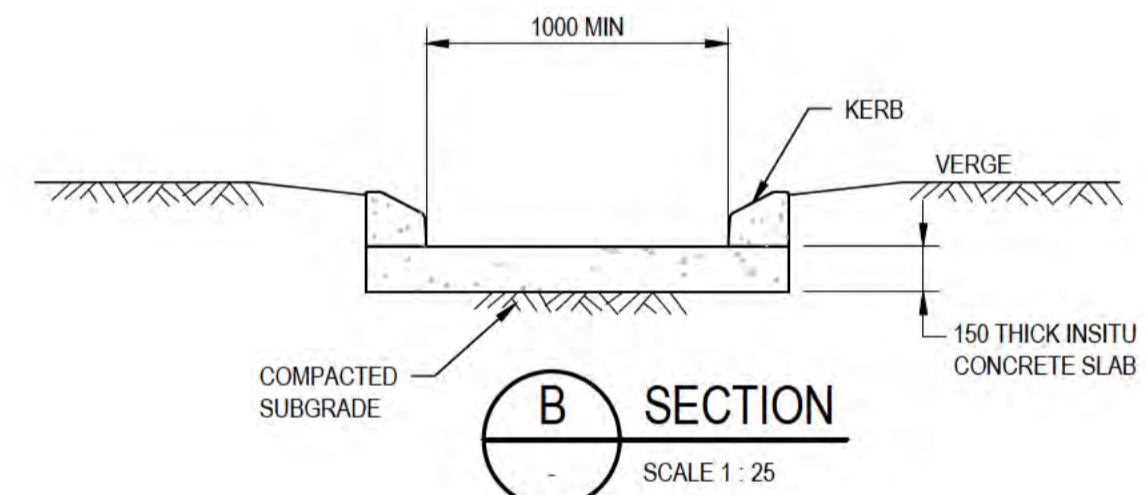
SEMI-MOUNTABLE KERB AND CHANNEL DETAIL (SMKC)  
SCALE 1:5



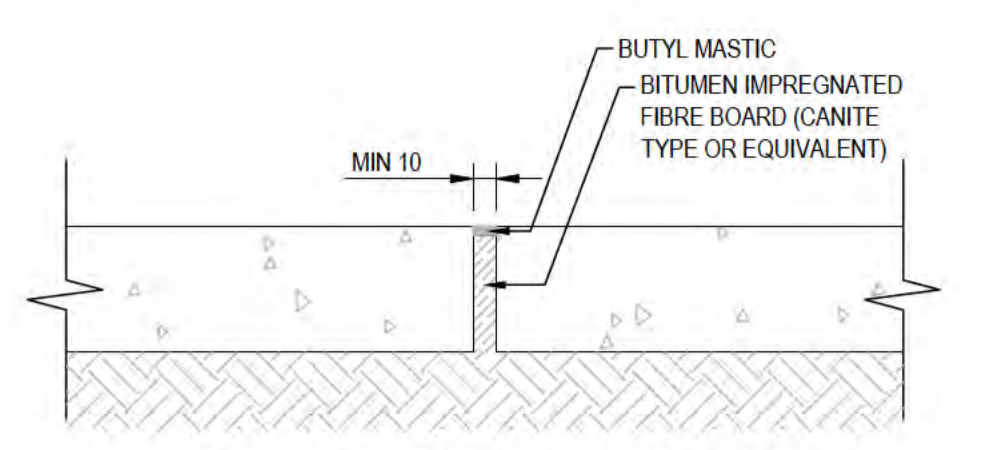
KERB OPENING DETAIL  
SCALE 1:25



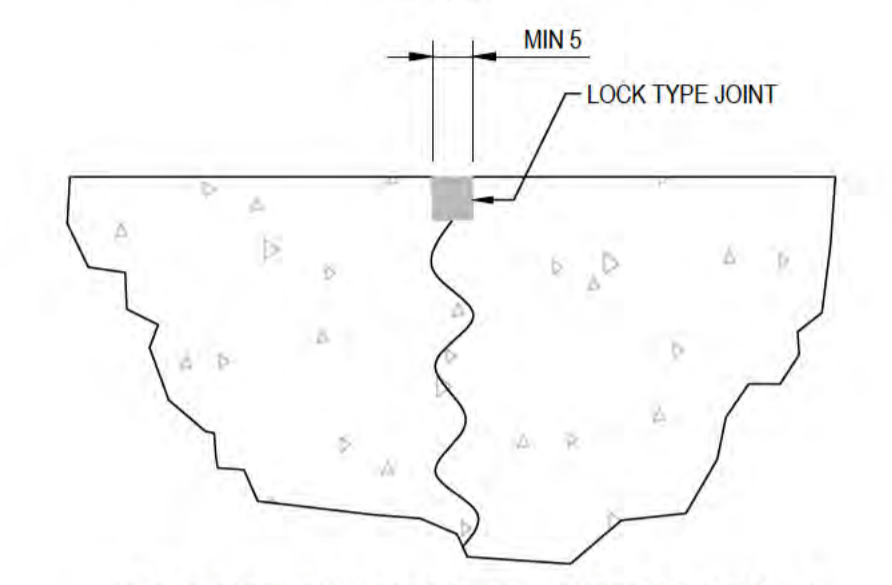
SECTION A  
SCALE 1:25



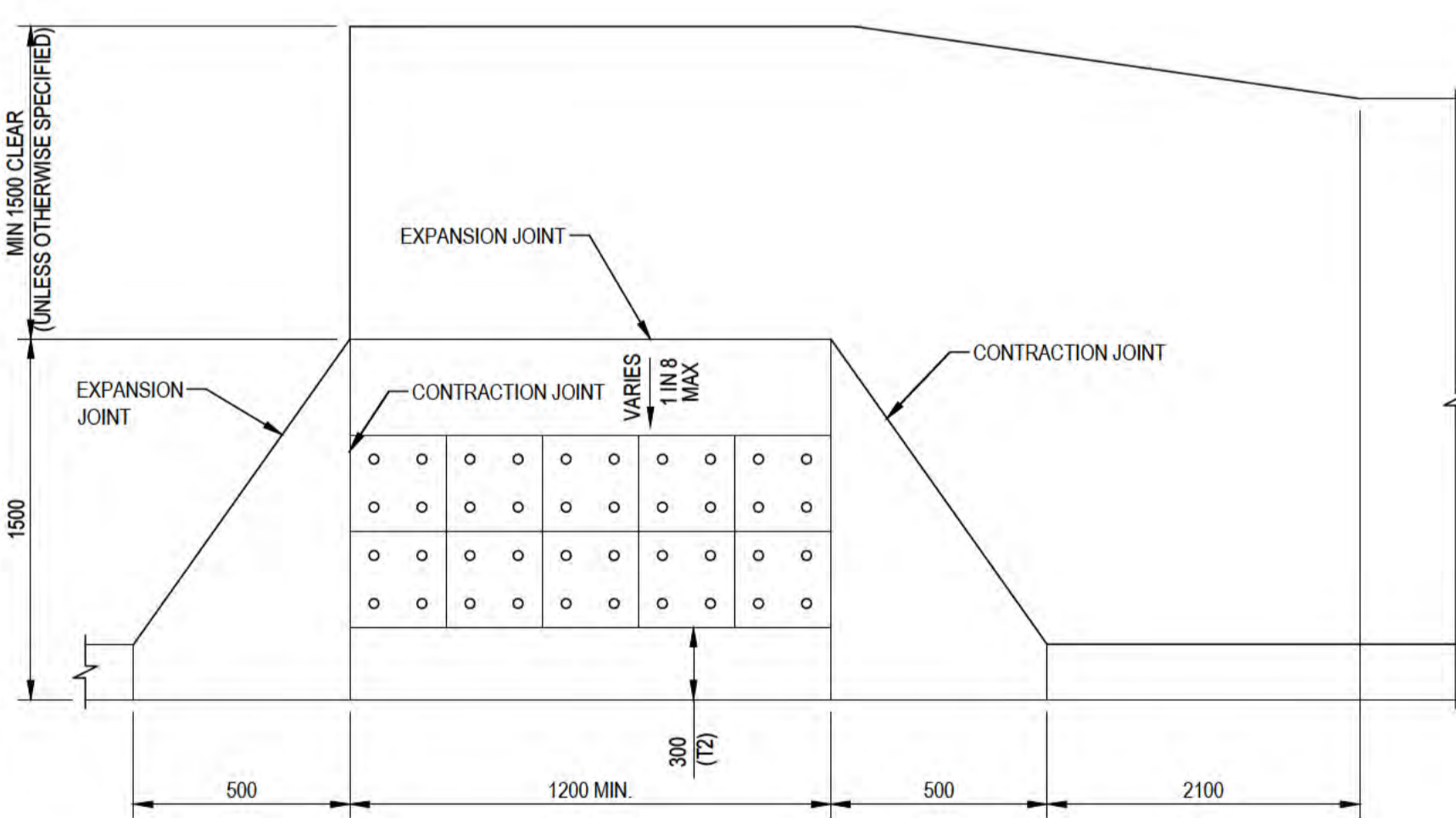
SECTION B  
SCALE 1:25



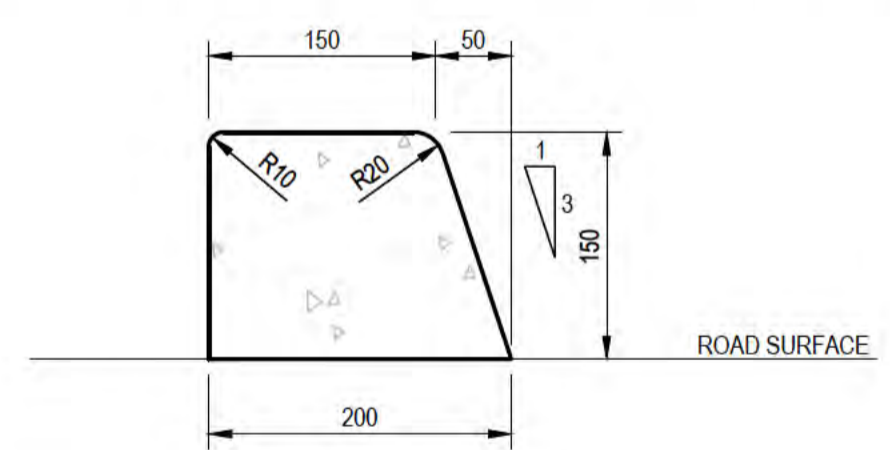
FOOTPATH EXPANSION JOINT  
N.T.S.



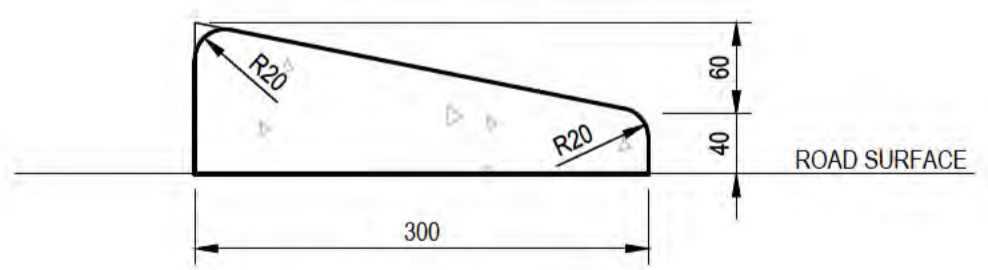
FOOTPATH CONTRACTION JOINT  
N.T.S.



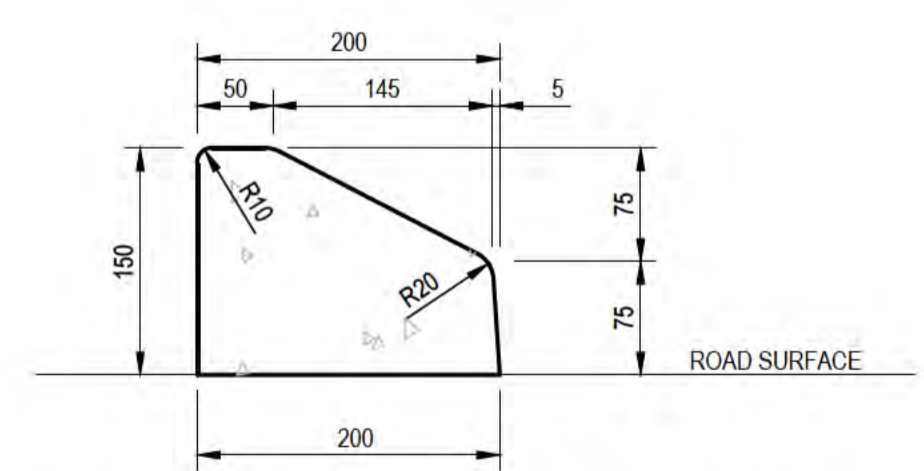
TYPICAL RAMP APRON DETAIL  
N.T.S.



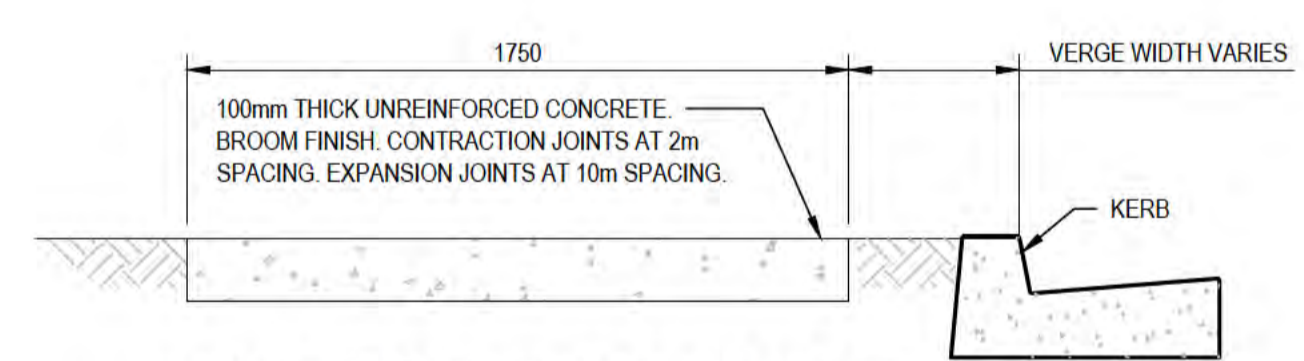
BARRIER KERB DETAIL (BK)  
SCALE 1:5



MOUNTABLE KERB DETAIL (MK)  
SCALE 1:5



SEMI-MOUNTABLE KERB DETAIL (SMK)  
SCALE 1:5



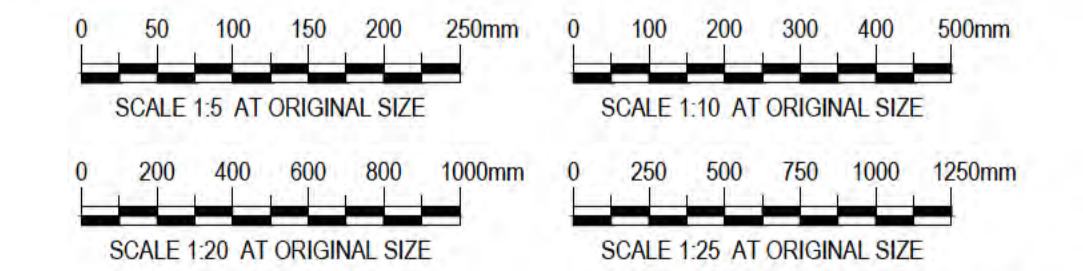
TYPICAL CONCRETE FOOTPATH DETAILS  
SCALE 1:20

NOTES:

- ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE SHOWN.
- PAVEMENT WIDENING TO BLEND SMOOTHLY TO EXISTING.
- SURFACE OVERLAP TO BE CONFIRMED ON SITE BASED ON CONDITIONS OF EXISTING SOIL.
- EDGE OF RAMP SHALL BE FLUSH WITH ROAD PAVEMENT (ASPHALT OR SEAL).
- ALL CONCRETE SHALL CONTAIN WASHED AGGREGATE AND BE BROOMED FINISHED ACROSS THE DIRECTION OF PEDESTRIAN TRAFFIC TO PROVIDE A NON-SLIP SURFACE. CONCRETE CLASS SHALL BE 32 MPa. NOMINAL THICKNESS 100mm MIN THICKNESS ON EDGES TO BE 150mm FOR PEDESTRIAN ACCESS AREAS.
- ALL VERGE AREAS SURROUNDING PRAM RAMP (EG FOOTPATH, PAVING, GRASS) TO BE REINSTATED TO NEW LEVELS FLUSH WITH RAMP EDGES.
- WINGS TO APRON TO BE A MAX SLOPE OF 1 IN 10. IF 1 IN 10 SLOPE NOT POSSIBLE DUE TO OBSTRUCTION, SLOPE CAN BE INCREASED WITH APPROVAL.
- RAMP (INCLUDING WINGS) CONCRETE COLOUR SHOULD CONTRAST WITH SURROUNDING SURFACES.
- ALL EXPOSED EDGES TO BE ROUNDED TO 5mm RADIUS MAXIMUM UNLESS NOTED OTHERWISE.
- REFER TO SPECIFICATION FOR MATERIAL AND CONSTRUCTION DETAILS.
- KERBS (INCLUDING THE CONCRETE CHANNEL) SHALL BE INSTALLED IN ACCORDANCE WITH MRWA SPECIFICATION 407 - KERBS. FOR KERB TRANSITIONS FROM KC TO SMKC, THE SAME APPROACH AS DETAILED FOR BK TO SMK TRANSITIONS IS TO BE ADOPTED REGARDING THE TRANSITION DISTANCES.



ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.

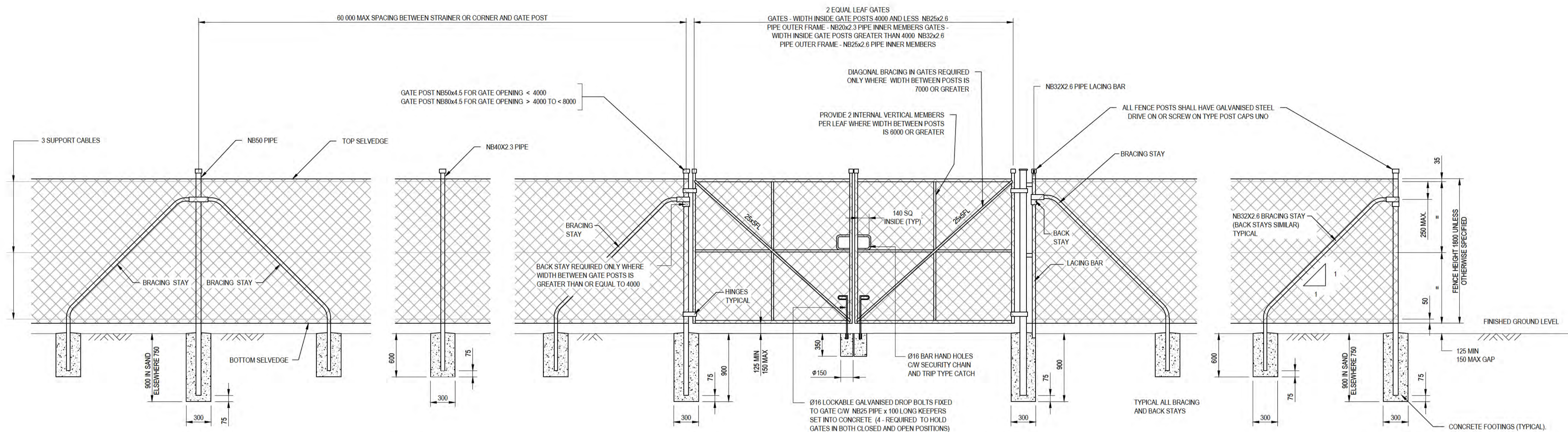


PRELIMINARY

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
B	REISSUED FOR 90% DESIGN - CLIENT COMMENT		GT	JM*	PS*	20/11/20
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT		JO	JM*	PS*	30/09/20



<b>DO NOT SCALE</b>		Drawn J.OVERHEU	Designer J.OVERHEU	Client DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS
Conditions of Use. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.	Drafting Check S.HORTON*	Design Check S.CLEARY*	Project CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS	Title KERBING AND FOOTPATH TYPICAL DETAILS
Approved (Project Director) Date	Scale AS SHOWN	This Drawing must not be used for construction unless signed as Approved	Original Size A1	
			Drawing No: 61-35637-C293	Rev: B



**STRAINER POST**  
REQUIRED AT EACH CHANGE OF DIRECTION OR GRADE GREATER THAN 10° OR 60 000 MAX SPACING SHALL NOT BE USED IMMEDIATELY ADJACENT TO ROADS

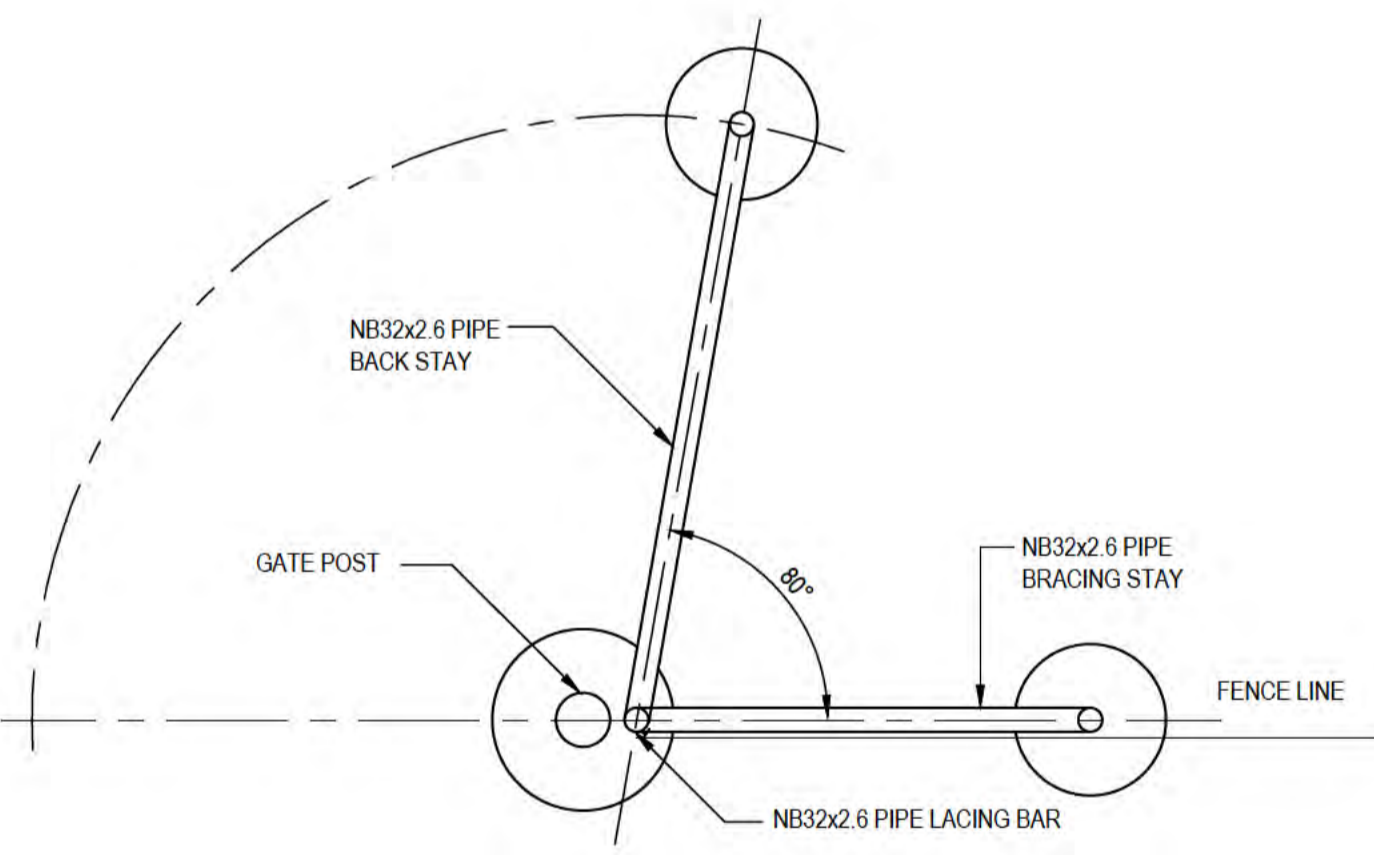
**INTERMEDIATE POST**  
4000 MAX SPACING BETWEEN POSTS EVENLY SPACED

**GATE POST**  
TYPICAL ARRANGEMENT FOR OTHER THAN DN50 GATE POST

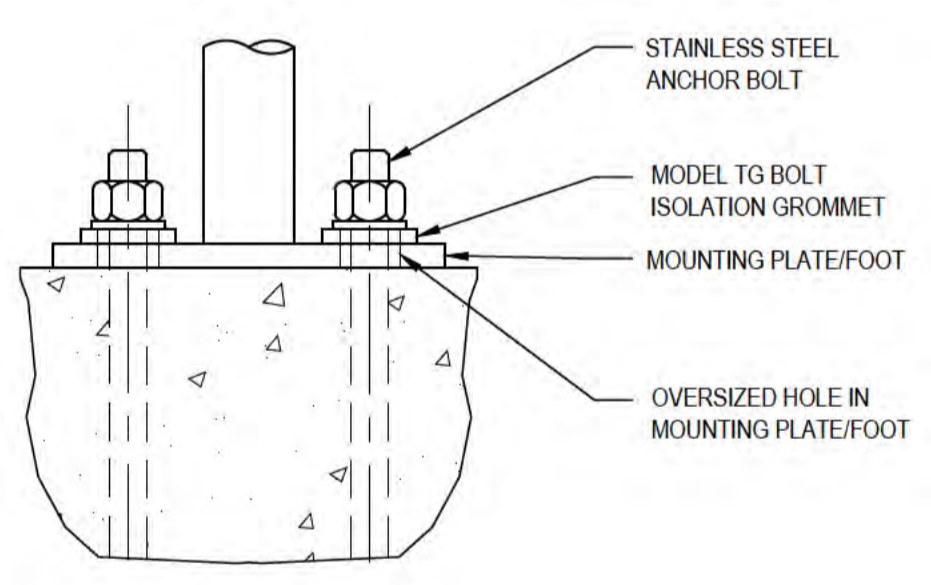
**DOUBLE GATES**  
FOR VEHICLE ACCESS

**GATE POST**  
TYPICAL ARRANGEMENT FOR DN80 GATE POST

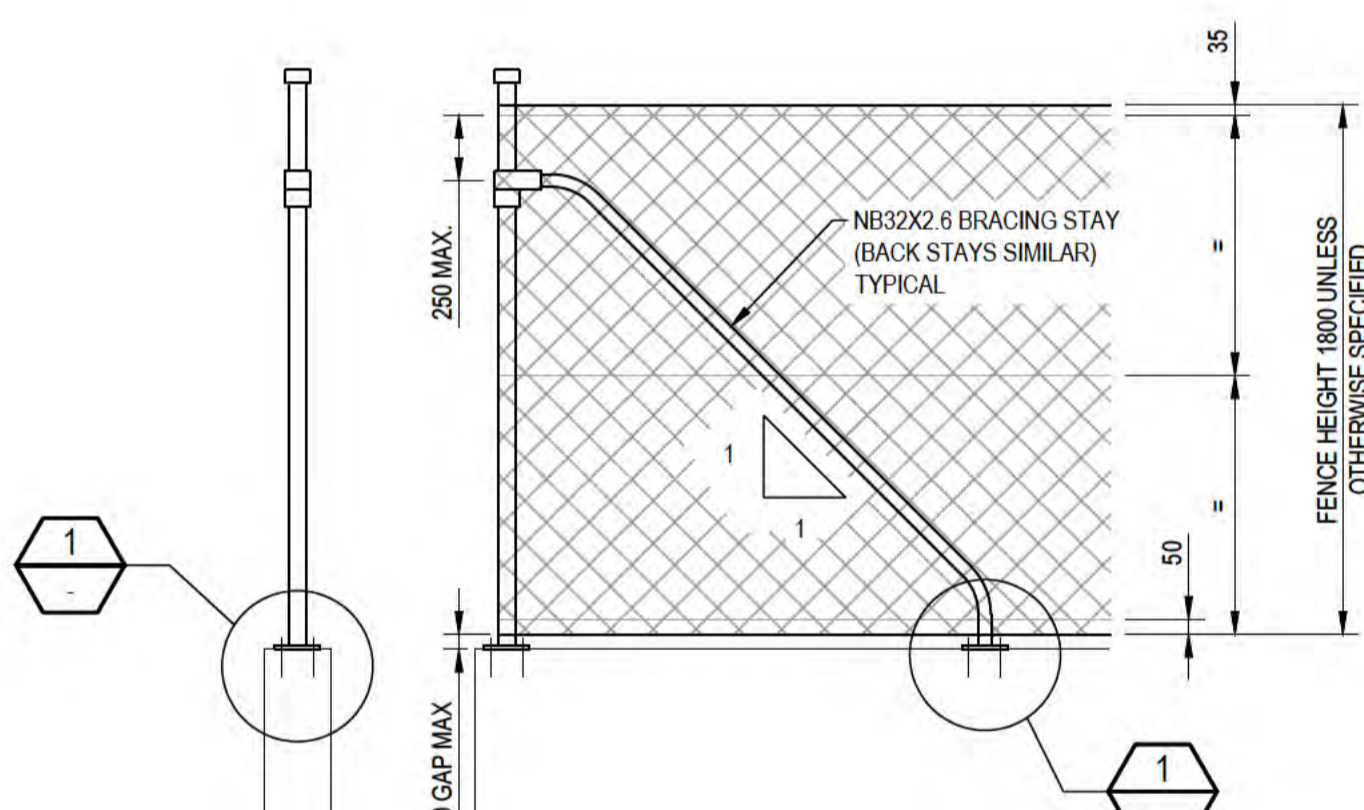
**CORNER POST**



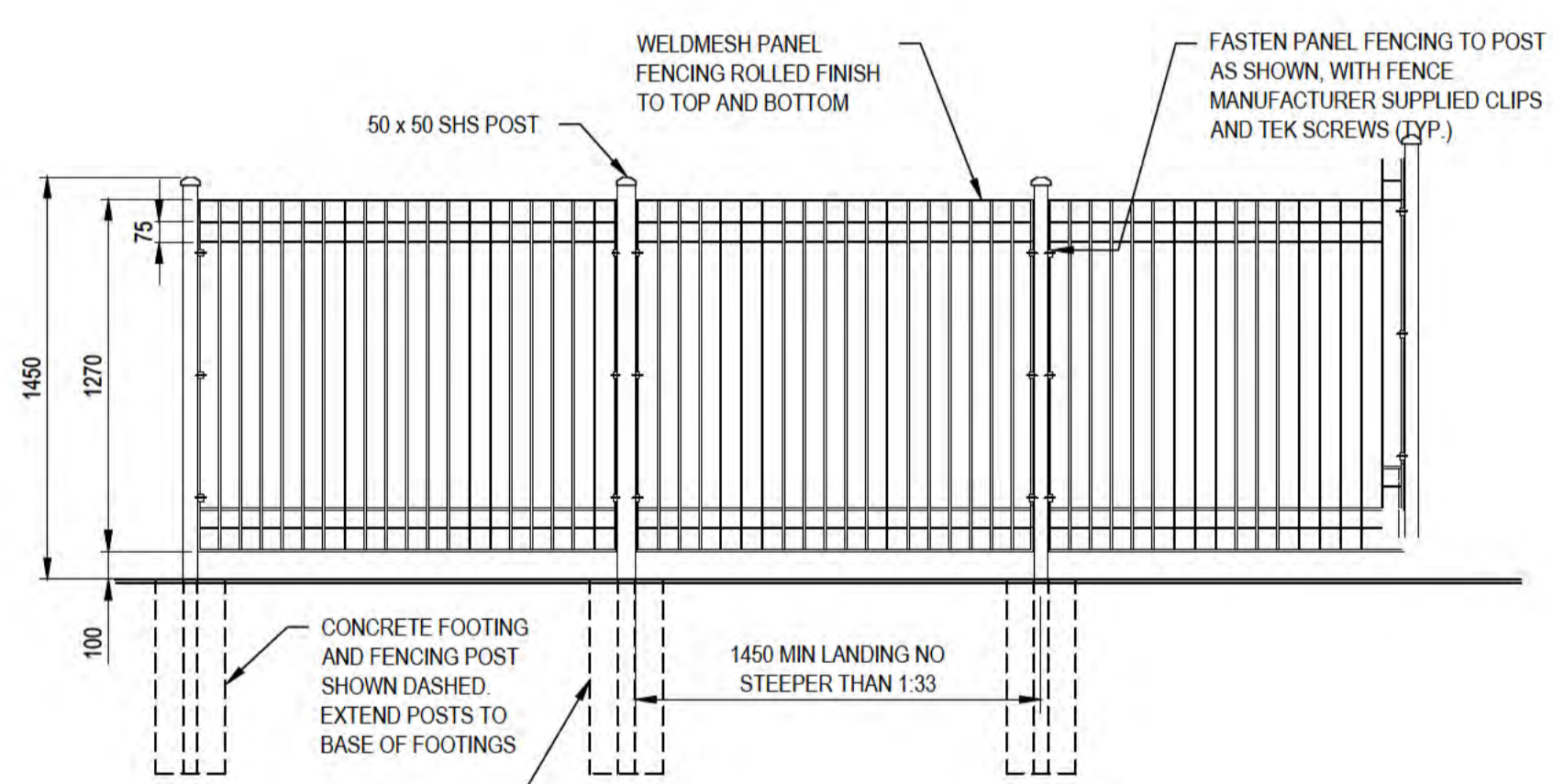
**PLAN OF GATE POST**  
NTS



**DETAIL**  
NTS



**FENCE ATTACHED TO DIVE STRUCTURE WALL**

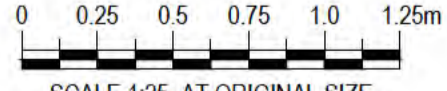


**FENCE TYPE 2**

- NOTES**
- FENCING MESH TO BE BLACK PLASTIC COATED AND POSTS TO BE BLACK POWDERCOATED.
  - FENCING AND GATES TO BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH AS1728.1
  - TOP OF ALL FOOTINGS TO HAVE A FALL AWAY FROM PIPE OF 10mm
  - ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.
  - CONTRACTOR TO PHYSICALLY CONFIRM THE LOCATION OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY WORKS ON SITE.
  - ALL GALVANISED STEELWORK FENCING AND CONCRETE TO BE IN ACCORDANCE WITH SPECIFICATION.
  - ALL FENCES AROUND BASINS ARE TO MAINTAIN THE REQUIRED MINIMUM GROUND CLEARANCE AT ALL TIMES TO PROVIDE EGRESS FOR MIGRATORY CRABS.



ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.



SCALE 1:25 AT ORIGINAL SIZE

**PRELIMINARY**

No	Revision	Note	Drawn	Job Manager	Project Director	Date
B		REISSUED FOR 90% DESIGN - CLIENT COMMENT	GT	JM*	PS*	20/11/20
A		ISSUED FOR 90% DESIGN - CLIENT COMMENT	JO	JM*	PS*	30/09/20

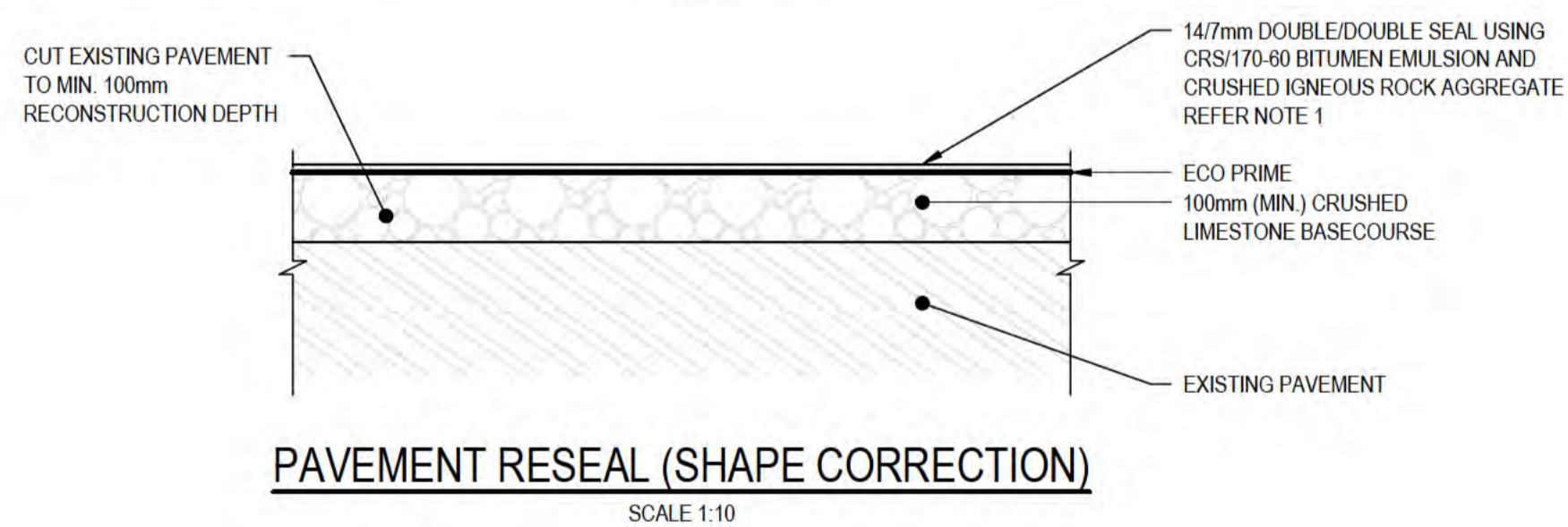
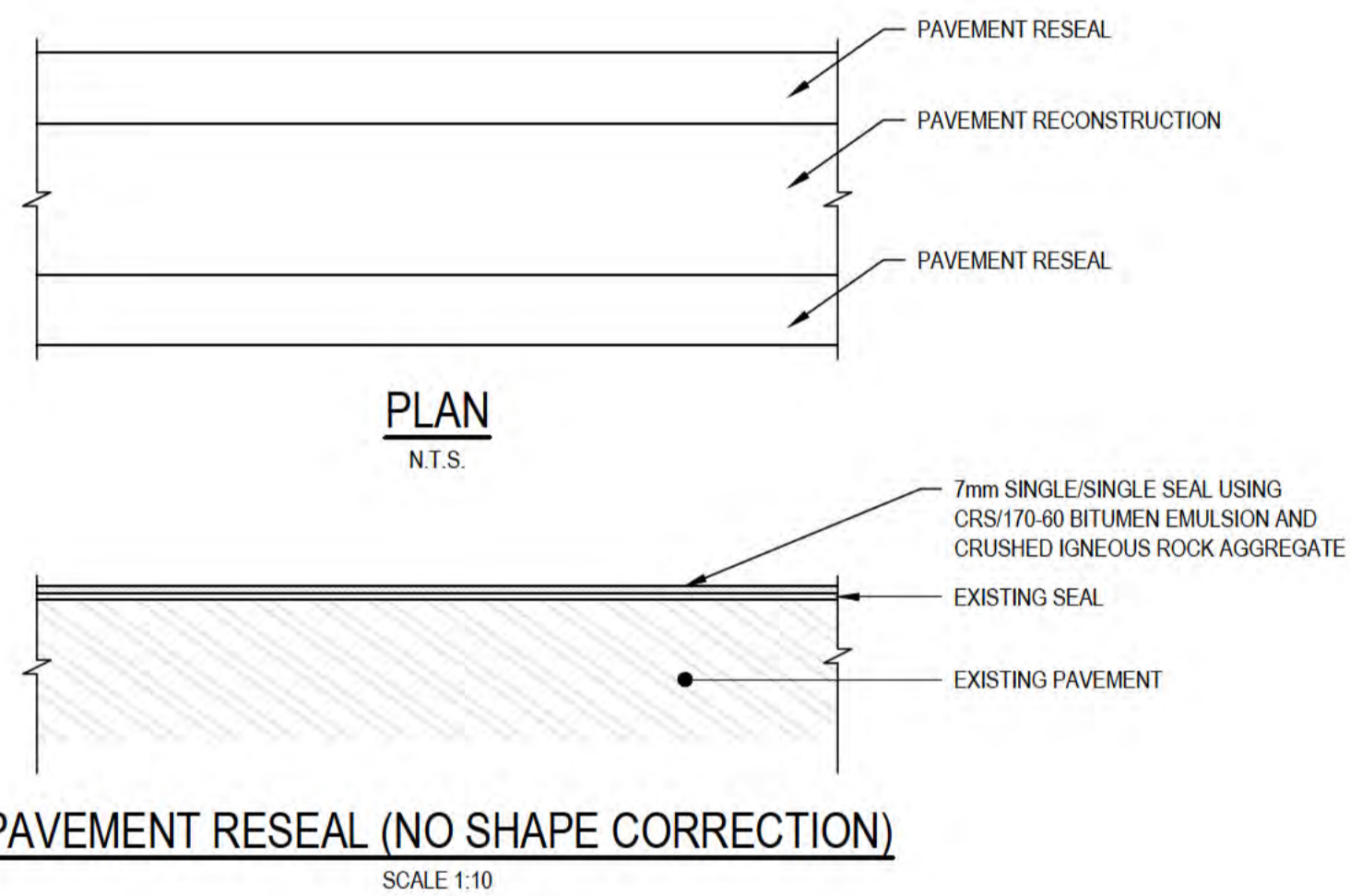
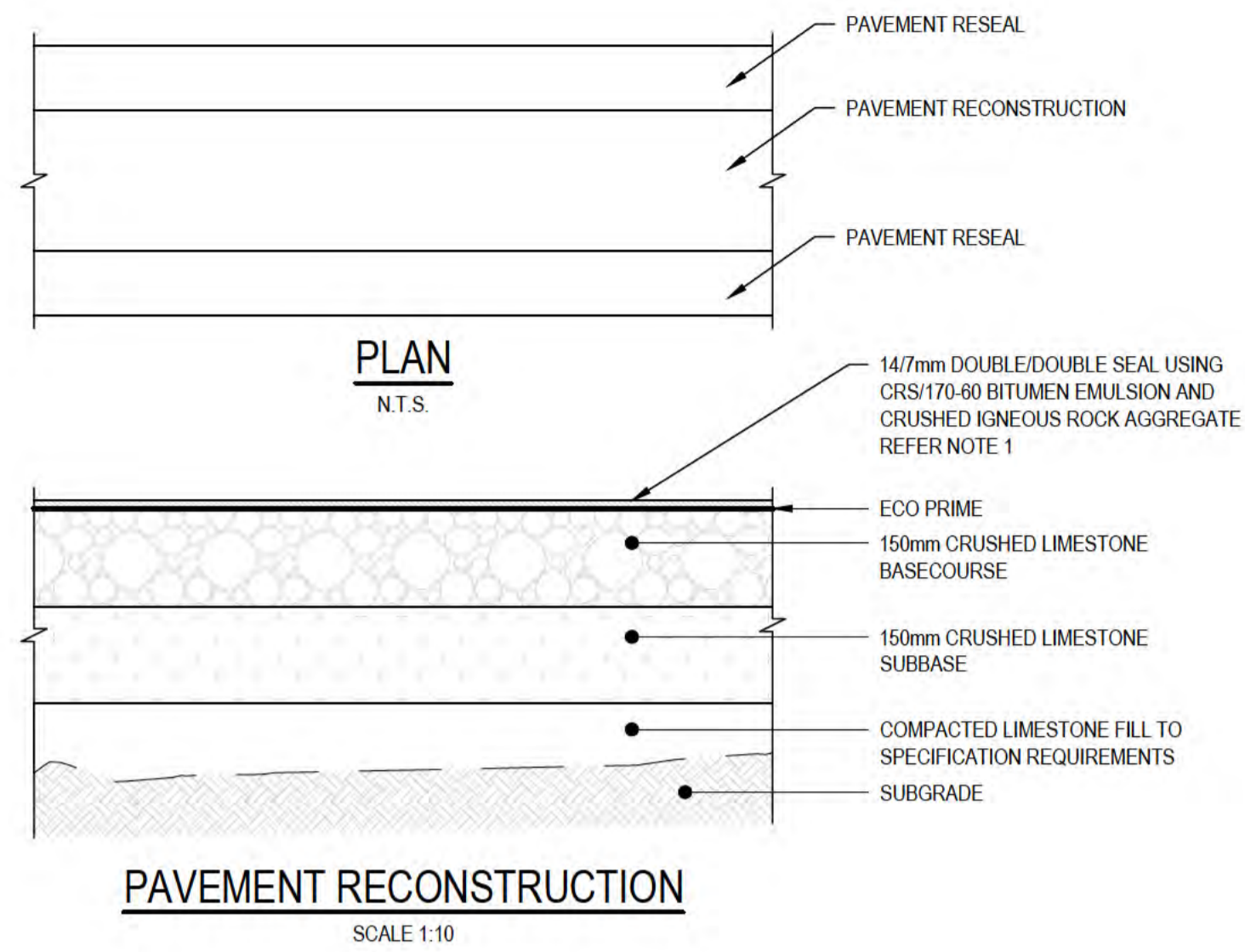


**DO NOT SCALE**

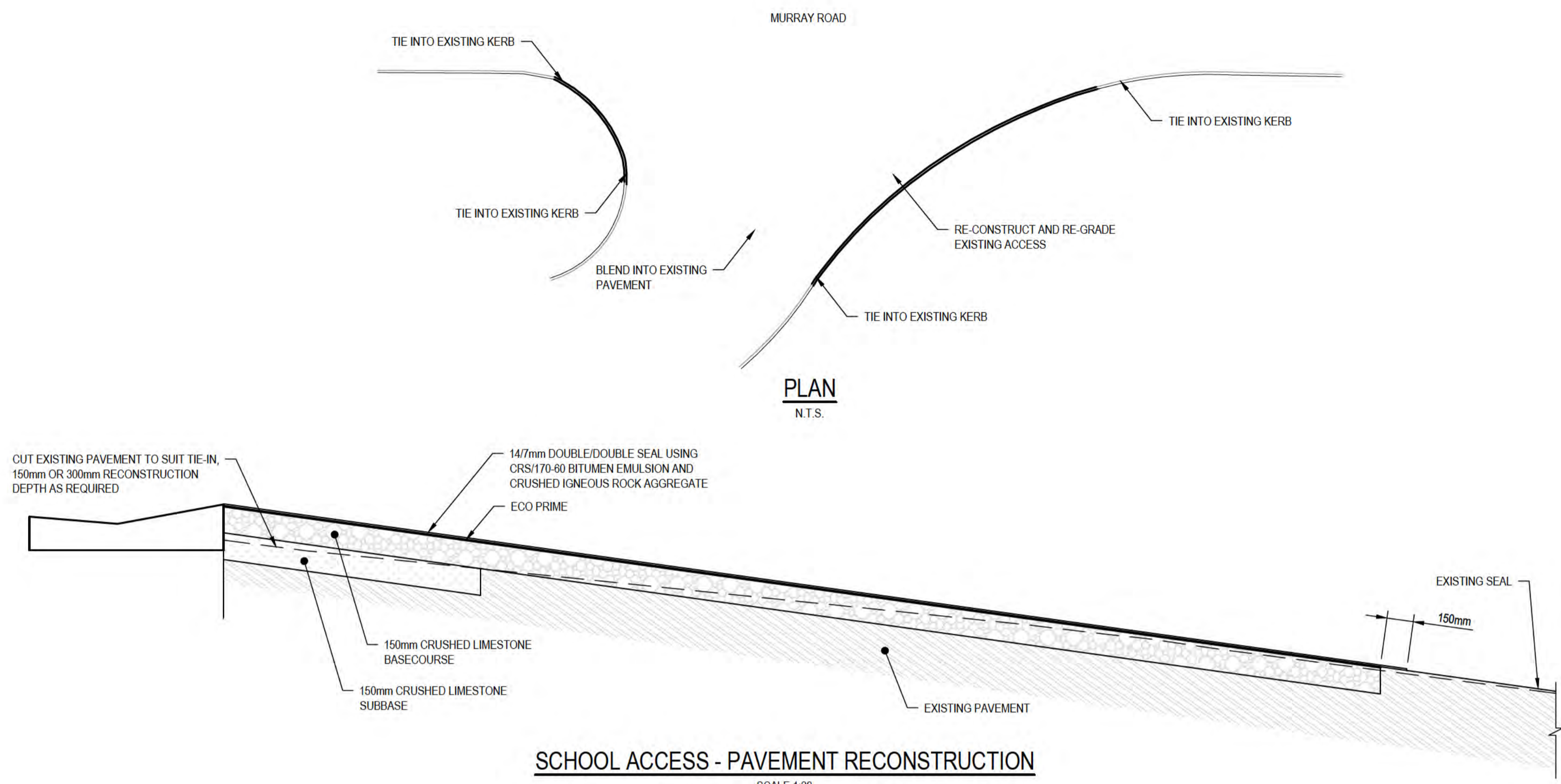
Conditions of Use.  
This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

Drawn	J.OVERHEU	Designer	J.OVERHEU
Drafting Check	S.HORTON*	Design Check	S.CLEARY*
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for construction unless signed as Approved	

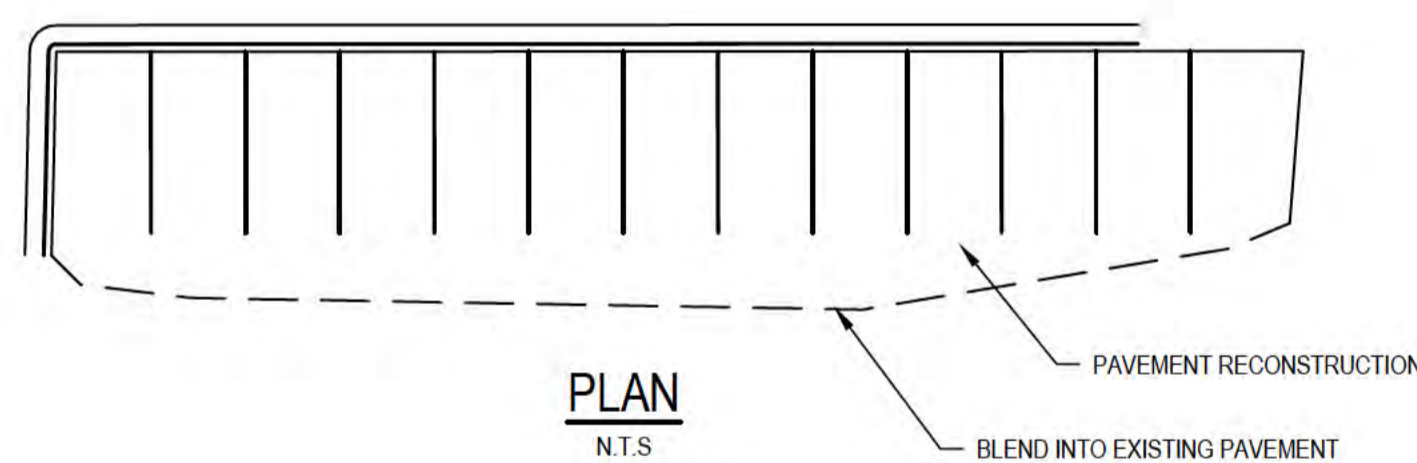
Client	DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS		
Project	CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS		
Title	FENCING TYPICAL DETAILS		
Original Size	A1	Drawing No:	61-35637-C294
Rev:	B		



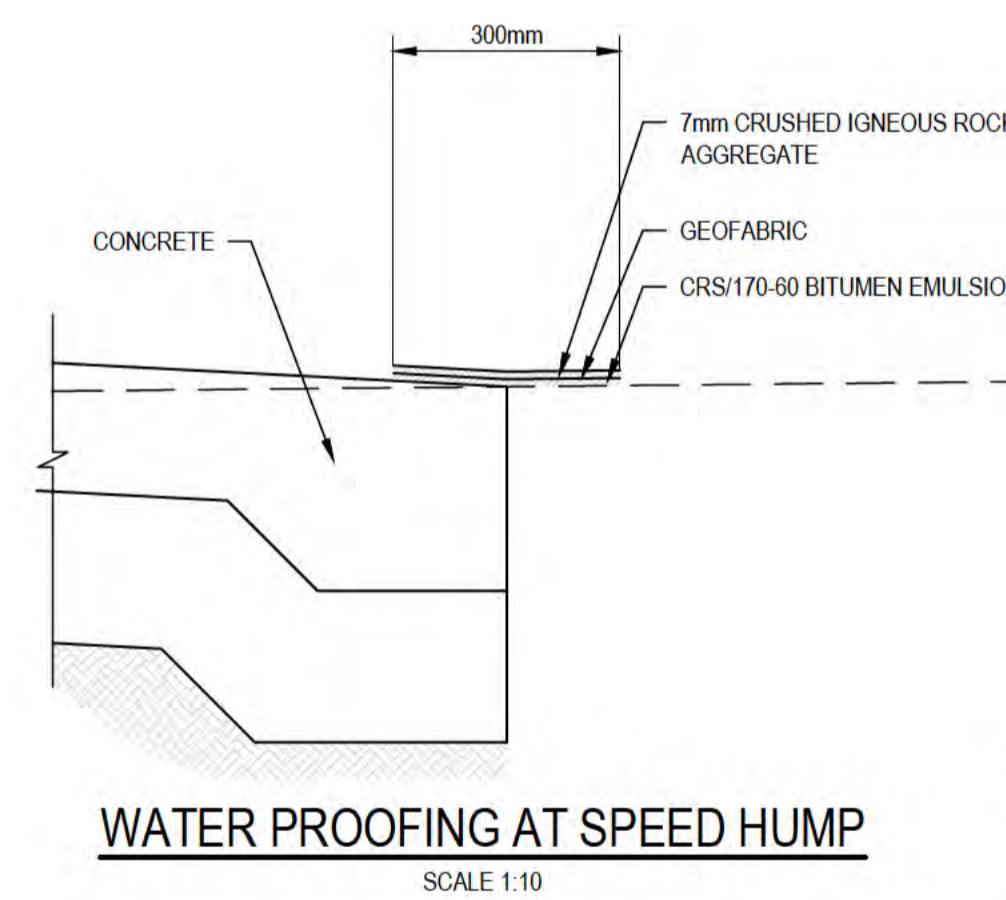
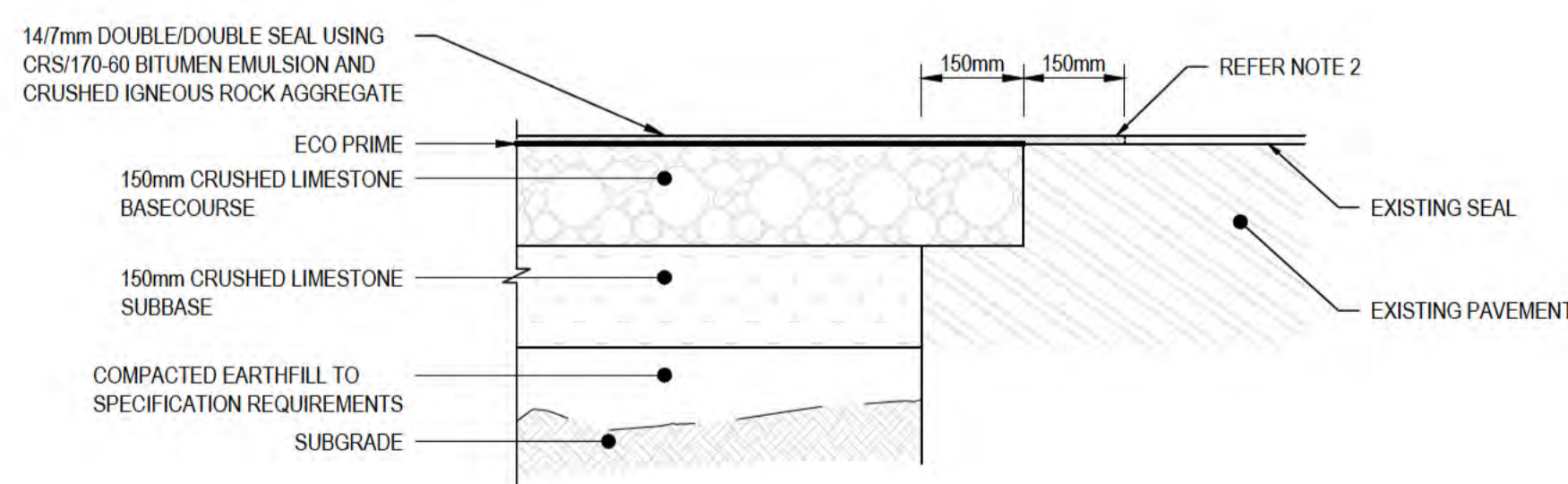
**DETAIL 1**



**DETAIL 2**



**DETAIL 3**



**DETAIL 4**

- NOTES:**
- WHERE PAVEMENT RESEAL (NO SHAPE CORRECTION) OPTION IS USED, APPLICATION OF 7mm TO BE DELAYED AND 7mm TO BE PLACED AS A SINGLE APPLICATION ACROSS ALL PAVEMENT AREAS (PAVEMENT RECONSTRUCTION AND PAVEMENT RESEAL).
  - SEAL AND BASECOURSE JOINT LOCATION SHOULD BE ADJUSTED WHERE NECESSARY TO AVOID WHEELPATH.
  - FOR OTHER NOTES, REFER DRAWING 61-35637-C202.



ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.



**PRELIMINARY**

No	Revision	Note	Drawn	Job Manager	Project Director	Date
B		REISSUED FOR 90% DESIGN - CLIENT COMMENT	GT	JM*	PS*	20/11/20
A		ISSUED FOR 90% DESIGN - CLIENT COMMENT	GT	JM*	PS*	30/09/20



**DO NOT SCALE**

Conditions of Use. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

Drawn	G.TAYAM	Designer	C.MAEKIVI
Drafting Check	S.HORTON*	Design Check	S.CLEARY*
Approved (Project Director)	Date		
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client	DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS		
Project	CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS		
Title	ROAD AND PAVEMENT DESIGN		
Original Size	A1	Drawing No:	61-35637-C296
Rev:	B		

**GENERAL:**

1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATIONS.
2. CLEARANCE TO WORK PERMIT REQUIRED PRIOR TO START OF WORKS. ISOLATION PERMIT REQUIRED FOR CUT-INS.
3. UNDERGROUND FEATURES ARE ESTIMATED ONLY AND NOT EXPOSED DURING SURVEY. THE IDENTITY AND LOCATION OF CRITICAL UNDERGROUND FEATURES NEED TO BE CONFIRMED, PRIOR TO COMMENCING WORK.
4. ALL PRODUCTS USED TO BE APPROVED OR ACCEPTED FOR USE WITHIN THE WATER CORPORATION'S STRATEGIC PRODUCTS REGISTER.
5. THE CONTRACTOR SHALL VERIFY ON SITE LEVELS AND DIMENSIONS BEFORE COMMENCING WORK.
6. FOR PROPOSED DRAINAGE DESIGN INFORMATION REFER TO DRAWINGS 61-35637-C220 AND C221 FOR FURTHER INFORMATION.
7. FOR OVERALL DESIGN INFORMATION OF FULL PROPOSED PIPELINE REFER TO DRAWINGS WITHIN THE MHS9 DRAFTING SET.
8. DESIGN AS DETAILED FOR THE PIPELINE ASSUMES PREVIOUS DESIGN BY ENGINEERING AND CONSTRUCTION CONTRACT CONSULTING SERVICES HAS BEEN PREPARED TO MEET WATER CORPORATION REQUIREMENTS.
9. DESIGN MODIFICATIONS UNDERTAKEN HAVE BEEN TO ADJUST ALIGNMENT AND LEVELS THROUGH DRAINAGE WORKS AREA ONLY. FURTHER DESIGN DEVELOPMENT MAY BE REQUIRED BY WATER CORPORATION.
10. ALL PIPEWORK IS TO BE PRESSURE TESTED ONLY NO DISINFECTION IS TO BE UNDERTAKEN UNLESS DIRECTED BY WATER CORPORATION REPRESENTATIVE.

**DESIGN CRITERIA:**

1. THE PIPEWORK HAS BEEN DESIGNED FOR AN ALLOWABLE OPERATING PRESSURE (AOP) OF 120m HEAD.
2. THRUST SUPPORTS ARE INTENDED TO RESIST AN ASSUMED 1200 kPa MAXIMUM THRUST AGAINST COMPACT UNDISTURBED SOIL OR WELL COMPACTED FILL MATERIAL.
3. THE PIPELINE HAS BEEN DESIGNED FOR FATIGUE ASSUMING 100,000 CYCLES OVER A 100 YEAR LIFE.
4. THE TIME WEIGHTED 12 MONTH AVERAGE TEMPERATURE HAS BEEN ASSUMED TO BE 25°C

**GENERAL PIPEWORK:**

1. THE PIPEWORK SHALL BE SET OUT FROM CADASTRAL BOUNDARIES, FENCE LINES AND EXISTING STRUCTURES AS APPROPRIATE.
2. PIPEWORK 'AS CONSTRUCTED' INFORMATION IS TO BE RECORDED PRIOR TO BACKFILL.
3. TOPSOIL TO BE STOCKPILED AND REPLACED AFTER PIPELINE CONNECTION WHERE APPLICABLE.
4. DUCTILE IRON FITTINGS SHALL BE IN ACCORDANCE WITH AS2280 AND SPS106.
5. PIPELINE SYSTEMS SHALL BE LOADED, TRANSPORTED, UNLOADED, STACKED AND HANDLED USING THE METHODS, MATERIALS, TOOLS AND EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S AND/OR SUPPLIERS INSTRUCTIONS AND RECOMMENDATIONS, AND TO THE RELEVANT AUSTRALIAN STANDARDS UNLESS SPECIFIED OTHERWISE.

**PVC PIPE:**

1. PVC PIPE TO BE SERIES 2 MPVC PIPE PN16 TO AS4765 AND SPS116.
2. PVC PIPE TO BE PALE BLUE COLOUR.
3. DUCTILE IRON FITTINGS SHALL BE SERIES 2 AND IN ACCORDANCE WITH AS2281 AND SPS106.

**PRESSURE TESTING:**

1. PIPELINE SHALL BE SUBJECT TO A PRESSURE TEST TO 1200kPa
2. PVC PIPEWORK SHALL BE PRESSURE TESTED IN ACCORDANCE WITH AS/NZS 2566.2. THE TEST SHALL BE IN ACCORDANCE WITH APPENDIX M M4, BASED UPON THE CONSTANT PRESSURE (WATER LOSS) TEST METHOD.
3. PIPELINE TO BE TESTED SHALL BE PHYSICALLY ISOLATED FROM THE 'LIVE' SYSTEM.
4. PRESSURE TESTING SHALL BE WITNESSED BY THE WATER CORPORATION.
5. THE WATER CORPORATION SHALL BE NOTIFIED AT LEAST 5 WORKING DAYS IN ADVANCE OF ALL OFFICIAL PRESSURE TESTS. WHEREVER POSSIBLE, PRIOR NOTICE OF THE CANCELLATION OF A TEST SHALL BE GIVEN. IF NO NOTICE OF CANCELLATION IS GIVEN IT WILL BE TREATED AS A FAILED TEST.
6. ANY VISIBLE OR DETECTED LEAK SHALL BE RECTIFIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION AND TO THE APPROVAL OF THE WATER CORPORATION.
7. THE USE OF SEALANT OR SIMILAR PRODUCTS TO CORRECT LEAKAGE AS A RESULT OF MATERIAL OR CONSTRUCTION FAULT IS NOT PERMITTED.

**PIPE FOUNDATION MATERIAL SPECIAL NOTE:**  
CHRISTMAS ISLAND GEOLOGICAL FEATURES INCLUDE LIMESTONE LAYERS. LIMESTONE MATERIALS CAN BE AFFECTED BY KARSTIFICATION PROCESSES WHEREBY AQUEOUS SOLUTIONS DISSOLVE CALCITE RESULTING IN THE FORMATION OF CAVES, SINKHOLES AND OTHER VOIDS.

PIPE TRENCH FOUNDATION SHALL BE MONITORED FOR SIGNS OF KARSTIFICATION. WHERE KARSTIFICATION IS OBSERVED THE CONTRACTOR SHALL NOTIFY THE CLIENT'S REPRESENTATIVE FOR FURTHER DIRECTION.

**BEDDING AND BACKFILL NOTES FOR PIPELINES:**

1. UNDERLAY, SIDE SUPPORT AND OVERLAY TO BE A CLEAN GRADED SAND FREE FROM ANY HARD OR SHARP OBJECTS.
2. COMPACTION TESTING SHALL BE CARRIED OUT IN ACCORDANCE WITH AS1289. THE FREQUENCY OF COMPACTION TESTING SHALL BE:
  - FOR TRAFFICABLE AREAS: 1 TEST PER 20m OF TRENCH PLUS 1 TEST FOR EACH CARRIAGE WAY OVER THE FULL DEPTH OF BACKFILL.
  - FOR NON-TRAFFICABLE AREAS: 1 TEST PER 30m OF TRENCH PLUS 1 TEST ADJACENT TO EACH VALVE INSTALLATION.
3. COVER, BEDDING AND BACKFILL SHALL BE IN ACCORDANCE WITH THE EMBEDMENT/TRENCH FILL DETAIL AND SPECIFICATIONS. CONTRACTOR TO VERIFY EXISTING PIPE DEPTH FOR TIE IN OF EXISTING WATER MAIN TO PROPOSED WATER MAIN.

**BACKFILL AND EARTHWORKS TESTING:**

1. IN SITU DENSITY OF BACKFILL AND EARTHWORKS SHALL BE MEASURED USING A CLEGG IMPACT HAMMER IN ACCORDANCE WITH AS1289.6.9.1.
2. BOTH BACKFILL AND EARTHWORKS COMPACTION SHALL BE TESTED TO DETERMINE THE SOIL STIFFNESS IN ACCORDANCE WITH AS1289.6.9.1. THE VALIDITY OF THE ASSIGNED SOIL STIFFNESS AND OPTIMUM MOISTURE CONTENT SHALL BE VERIFIED FOR CONFORMANCE WITH THE STANDARD ON A CONTINUAL BASIS.

**USE OF CLEGG IMPACT HAMMER:**

1. WHEN THE CLEGG IMPACT HAMMER CAN BE CALIBRATED AND IS SUITABLE FOR THE PARTICULAR SOILS ON THE SITE, IT SHALL BE USED AS THE TEST FOR THE PURPOSE OF CONFORMANCE JUDGEMENT OF EMBEDMENT MATERIAL, SUBGRADE AND TRENCH BACKFILL.
2. THE METHOD USED TO DETERMINE THE STIFFNESS OF THE SOIL USING A CLEGG IMPACT HAMMER SHALL BE IN ACCORDANCE WITH AS1289.6.9.1.
3. THE CONTRACTOR SHALL PERFORM AN OPERATIONAL CHECK IN ACCORDANCE WITH AS1289.6.9.1. THE OPERATIONAL CHECK SHALL BE UNDERTAKEN DAILY, PRIOR TO USE OR IF RESULTS ARE SUSPECT.

**THRUST BLOCK NOTES:**

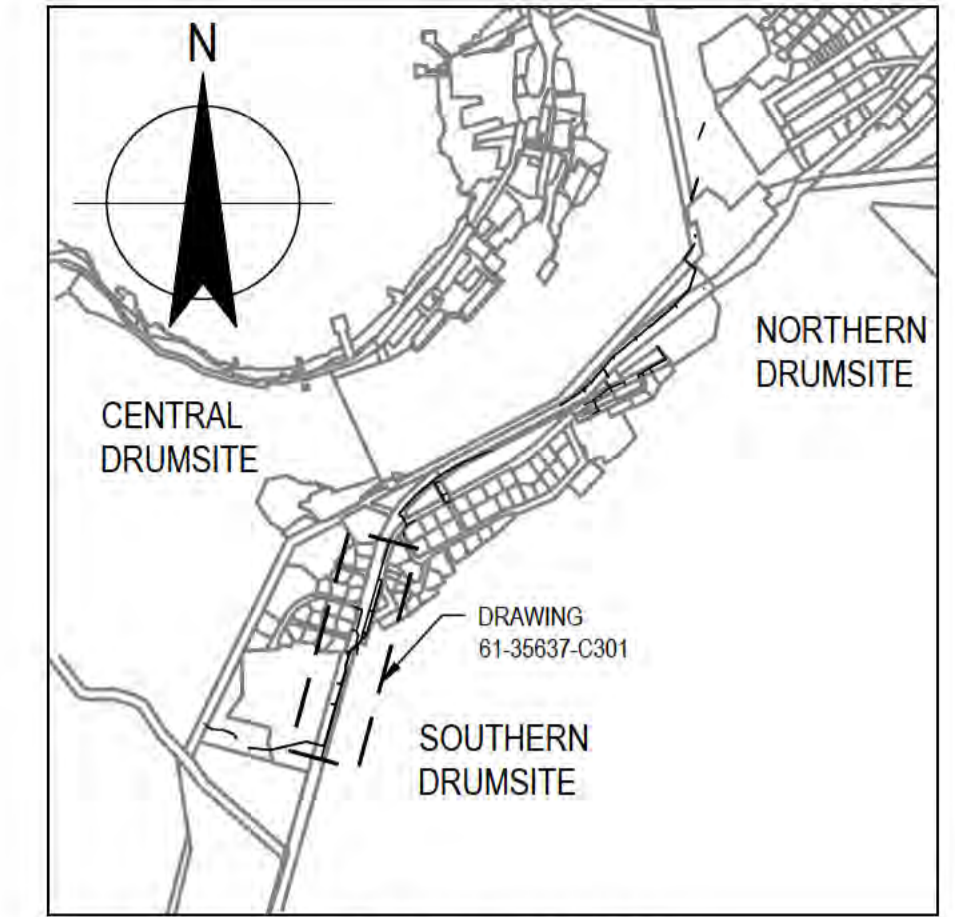
1. WELL COMPACTED FILL SHALL PROVIDE A MINIMUM CLEGG IMPACT VALUE (CIV) OF 40 WHEN TESTED IN ACCORDANCE WITH AS1289.6.9.1.
2. PIPELINE FITTINGS TO BE PROVIDED WITH CONCRETE THRUST SUPPORT SHALL BE OVER-WRAPPED WITH A BOND-BREAKING MEMBRANE OF ACCEPTABLE DESIGN PRIOR TO CONCRETING.
3. PIPELINE JOINTS SHALL NOT BE WHOLLY OR PARTIALLY ENCASED IN CONCRETE.
4. CONCRETE SHALL BE GRADE N25.
5. BEARING CAPACITY CALCULATIONS OF SOIL TAKEN AS:
  - $Q_{allowable} = 61kPa$  (AFTER APPLICATION OF SAFETY FACTOR)

**CONCRETE:**

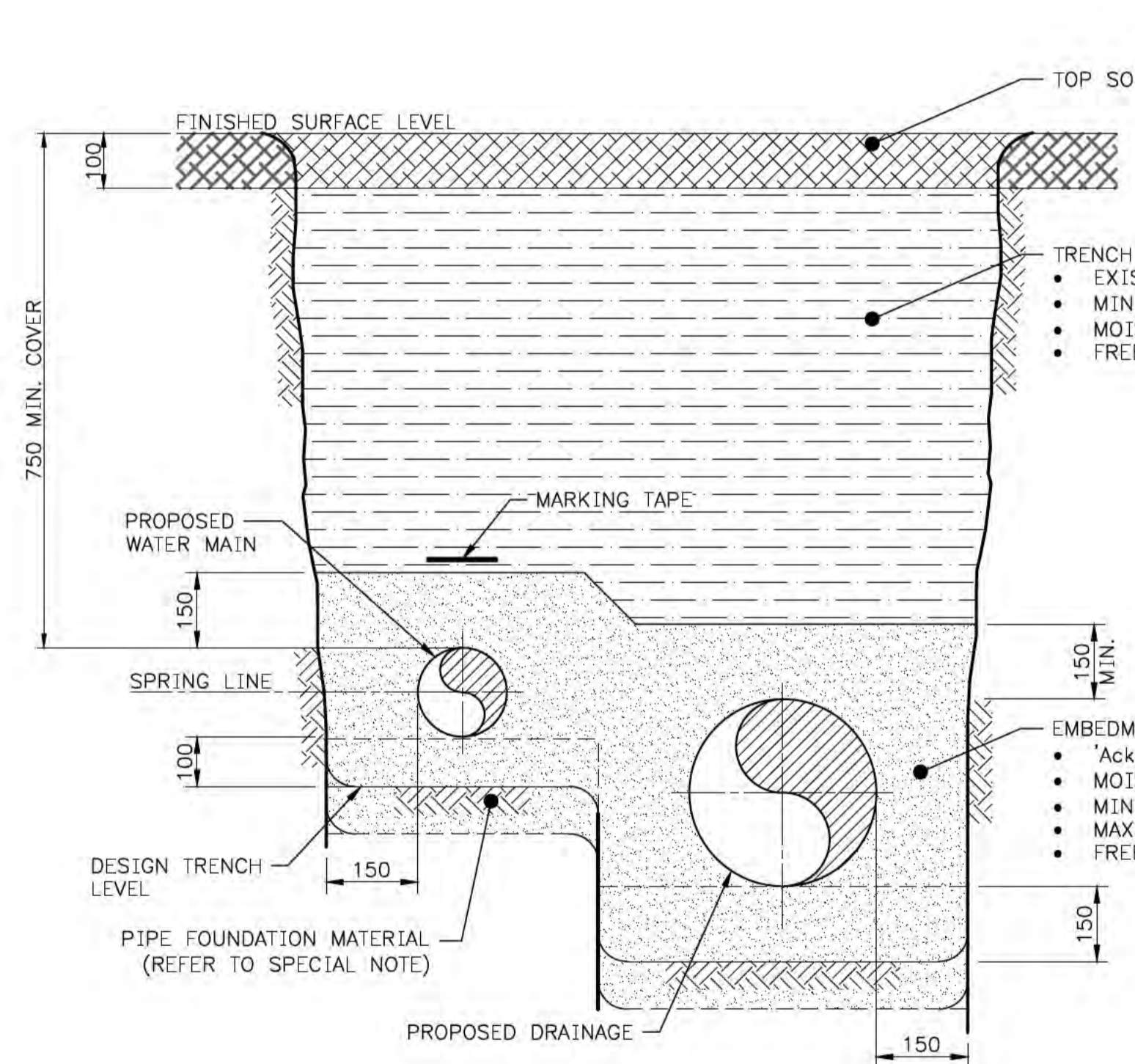
1. ALL CONCRETE SHALL COMPLY WITH AS3600, AS1379, AS1478, AS3972 AND THE SPECIFICATION.
2. CEMENT USED IN ALL CONCRETE SHALL BE NORMAL PORTLAND CEMENT (TYPE GP).
3. CONCRETE QUALITY:
  - GRADE - N32 MPa
  - MAXIMUM AGGREGATE SIZE - 20mm
  - SLUMP - 80mm
  - MINIMUM CEMENT CONTENT - 380kg/m<sup>3</sup>
4. NOTIFY CLIENT'S REPRESENTATIVE BEFORE PLACING CONCRETE.
5. COMPACT CONCRETE BY USING APPROVED IMMERSION VIBRATORS.
6. CURE ALL CONCRETE BY KEEPING MOIST FOR 7 DAYS IN ACCORDANCE WITH THE SPECIFICATION.

**REINFORCEMENT:**

1. SYMBOLS:
  - 'L' DENOTES HARD DRAWN WIRE REINFORCING FABRIC TO AS/NZS4671.
  - MINIMUM LAP LENGTHS (UNLESS NOTED OTHERWISE):
    - FABRIC - 250mm.
2. SPLICES TO BE PLAIN LAPPED THROUGHOUT AND STAGGERED WHERE POSSIBLE.
3. CLEAR COVER TO REINFORCEMENT TO BE 50mm.

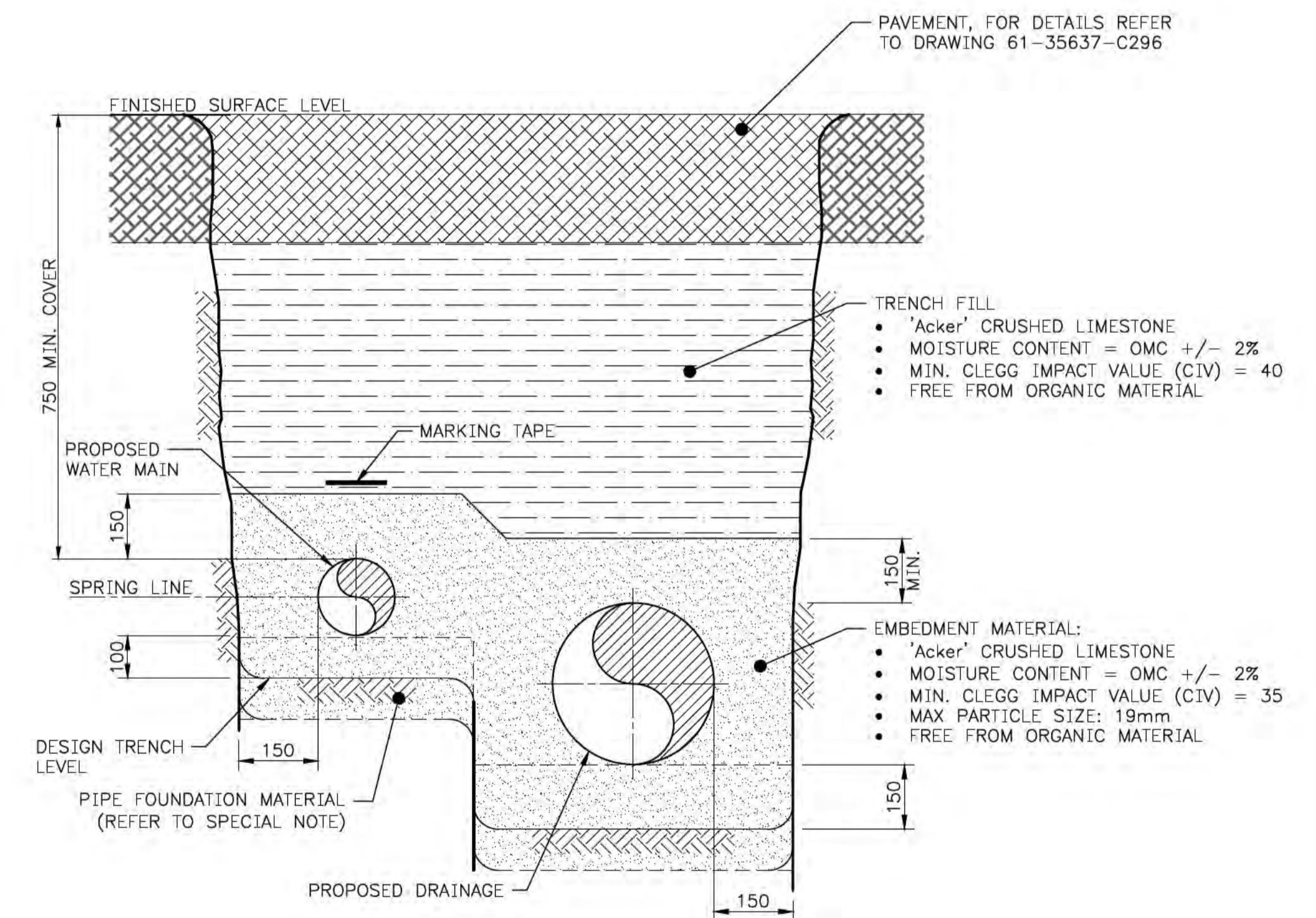


**LOCALITY PLAN**  
N.T.S.



**EMBEDMENT/TRENCH FILL DETAIL (NON-TRAFFICABLE)**

SCALE: DIAGRAMMATIC



**EMBEDMENT/TRENCH FILL DETAIL (TRAFFICABLE)**

SCALE: DIAGRAMMATIC

**PRELIMINARY**

No	Revision	Note	Drawn	Job Manager	Project Director	Date
B		REISSUED FOR 90% DESIGN - CLIENT COMMENT	GT	JM*	PS*	20/11/20
A		ISSUED FOR 90% DESIGN - CLIENT COMMENT	GT	JM*	PS*	30/09/20



**Australian Government**  
**Department of Infrastructure, Transport, Regional Development and Communications**



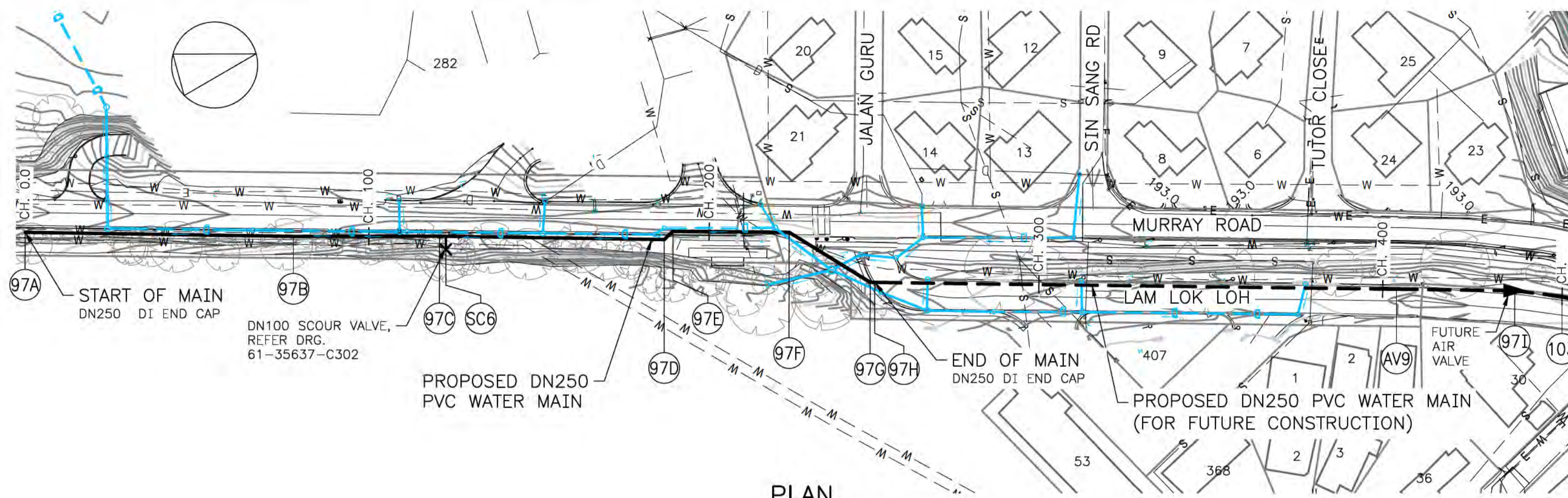
Level 10, 999 Hay Street Perth WA 6000  
PO Box Y3106 Perth WA 6832 Australia  
T 61 8 6222 8222 F 61 8 6222 8555  
E permail@ghd.com.au W www.ghd.com

**DO NOT SCALE**

Conditions of Use.  
This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

Drawn	G.TAYAM	Designer	D.DOMINGO
Drafting Check	C. BAGSHAW*	Design Check	OTHERS
Approved (Project Director)			
Date			
Scale	AS SHOWN	This Drawing must not be used for construction unless signed as Approved	

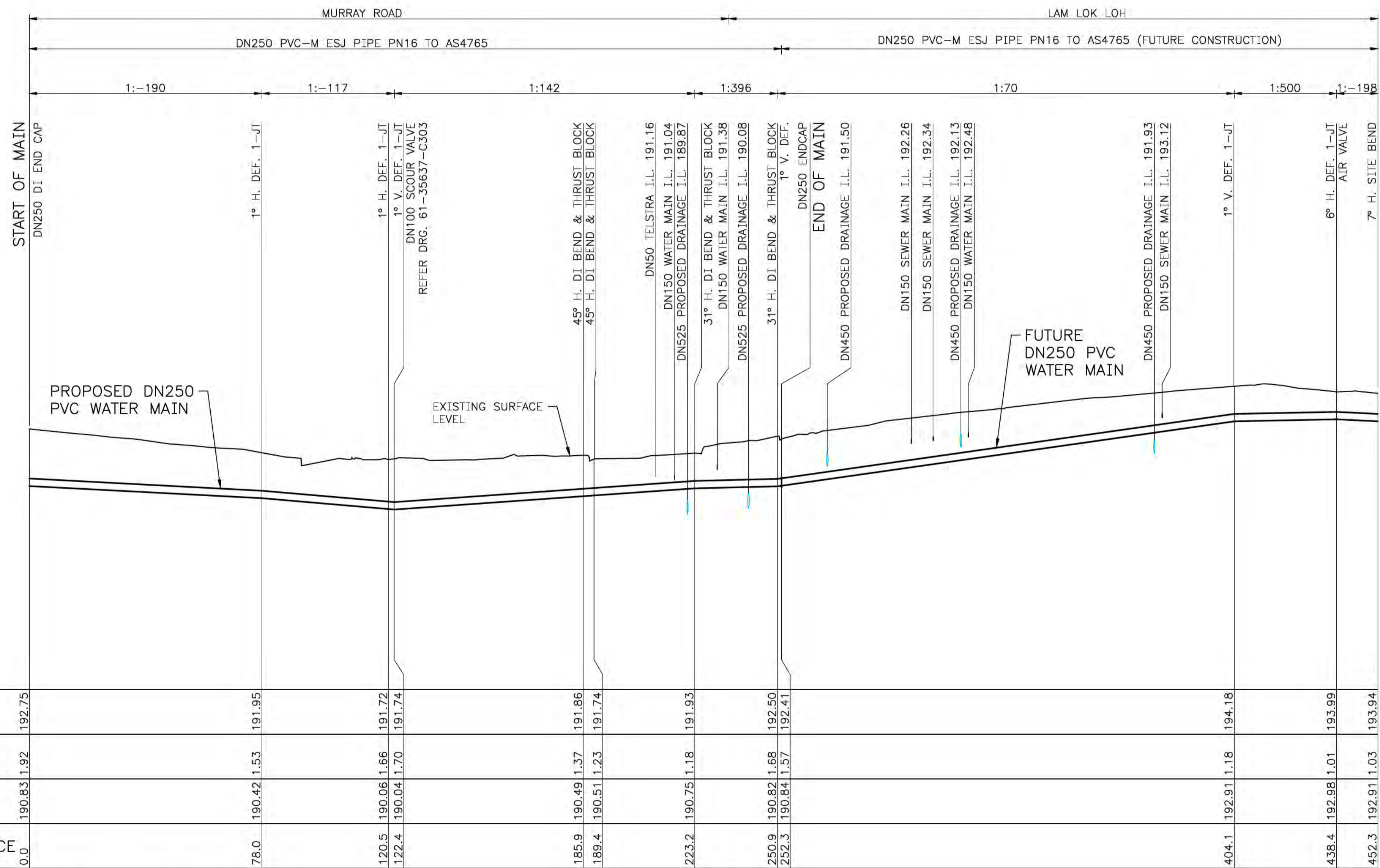
Client	DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS		
Project	CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS		
Title	DN250 PVC WATER MAIN CONSTRUCTION NOTES		
Original Size	A1	Drawing No:	61-35637-C300
Rev:	B		



PLAN  
SCALE 1:1000

LEGEND:

	EXISTING DRAINAGE INFRASTRUCTURE		EXISTING TOP OF BANK
	EXISTING WATER INFRASTRUCTURE		EXISTING BOTTOM OF BANK
	EXISTING TREE		EXISTING CHANGE OF GRADE
	EXISTING COMMS INFRASTRUCTURE		EXISTING EDGE OF CONCRETE
	EXISTING OPTICAL FIBRE MARKER		EXISTING EDGE OF BITUMEN
	EXISTING POWER INFRASTRUCTURE		EXISTING EDGE OF TRACK
	EXISTING DRAINAGE GULLY/SEP/MANHOLE		PROPOSED EDGE OF TRACK
	EXISTING COMMUNICATIONS MANHOLE		EXISTING ROCK OUTCROP
	EXISTING SEWER MANHOLE		EXISTING FOOTPATH
	EXISTING WATER SERVICE MANHOLE		EXISTING ROAD SHOULDER
	EXISTING BOLLARD		EXISTING ROAD CENTRELINE
	EXISTING GUIDE POST		EXISTING DRAIN CENTRELINE
	EXISTING SIGN		EXISTING DRAINAGE PIPE
	PROPOSED WATER MAIN		EXISTING SEWER LINE
	PROPOSED FUTURE WATER MAIN		EXISTING CONDUIT
	PROPOSED DRAINAGE		EXISTING OVERHEAD POWER
	EXISTING CADASTRAL BOUNDARY		EXISTING WATER PIPE
	EXISTING BUILDING		EXISTING TELECOM
	EXISTING KERB		EXISTING CONTOURS
	EXISTING RETAINING WALL		PROPOSED CONTOURS
	PROPOSED FENCE		EXISTING BUSHLINE
	EXISTING FENCE LOW		EXISTING TREE
	EXISTING FENCE HIGH		



DATUM RL. 184.0

	0.0	78.0	120.5	122.4	185.9	189.4	223.2	250.9	252.3	404.1	438.4	452.3
EXISTING SURFACE	192.75	191.95	191.72	191.74	191.86	191.74	191.93	192.50	192.41	194.18	193.99	193.94
DEPTH TO INVERT	1.92	1.53	1.66	1.70	1.37	1.23	1.18	1.68	1.57	1.18	1.01	1.03
PIPE INVERT LEVEL	190.83	190.42	190.06	190.04	190.49	190.51	190.75	190.82	190.84	192.91	192.98	192.91
HORIZONTAL DISTANCE	0.0	78.0	120.5	122.4	185.9	189.4	223.2	250.9	252.3	404.1	438.4	452.3

LONGITUDINAL SECTION  
HORIZONTAL SCALE 1:1000  
VERTICAL SCALE 1:100

POINT	CHAINAGE (m)	EASTING	NORTHING	COMMENTS
97A	0	573243.068	8846186.403	1° HORIZONTAL DEFLECTION
97B	78.0	573264.589	8846261.366	1° HORIZONTAL DEFLECTION
97C	120.5	573275.611	8846302.447	1° HORIZONTAL DEFLECTION
SC6	122.4	573276.122	8846304.233	1° HORIZONTAL DEFLECTION
97D	185.9	573293.646	8846365.271	45° H. DI BEND & THRUST BLOCK
97E	189.4	573291.930	8846368.372	45° H. DI BEND & THRUST BLOCK
97F	223.2	573301.086	8846400.888	31° H. 22.5 & 11.25 FL-FL DI BEND & THRUST BLOCK
97G	250.9	573321.315	8846419.855	31° H. 22.5 & 11.25 FL-FL DI BEND & THRUST BLOCK
97H	252.3	573321.684	8846421.153	DN250 ENDCAP - END OF MAIN
AV9	404.1	573363.229	8846567.117	DN250 DI PN16 SOC-SOC
97I	438.4	573372.645	8846600.198	DN250 DI PN16 SOC-SOC 6° BEND
103	452.3	573377.838	8846613.040	DN250 DI PN16 SOC-SOC 7° BEND

NOTES:

- EXISTING SERVICES LOCATIONS ARE INDICATIVE ONLY. CONTRACTOR TO CONFIRM LOCATION, SIZE AND LEVEL PRIOR TO COMMENCING CONSTRUCTION, SHOULD ANY CLASHES BE IDENTIFIED WITH PROPOSED WORKS THE CONTRACTOR IS TO IMMEDIATELY NOTIFY THE CLIENT'S REPRESENTATIVE.
- EXISTING COMMUNICATIONS INFORMATION IS INCOMPLETE. VERIFICATION OF PRESENCE THROUGHOUT SITE REQUIRED PRIOR TO COMMENCING CONSTRUCTION.
- FOR CONSTRUCTION NOTES, REFER TO DRAWING 61-35637-C300.
- FOR DETAILS OF PROPOSED DRAINAGE PIPEWORK, REFER TO DRAWING 61-35637-C221.



ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.



**PRELIMINARY**

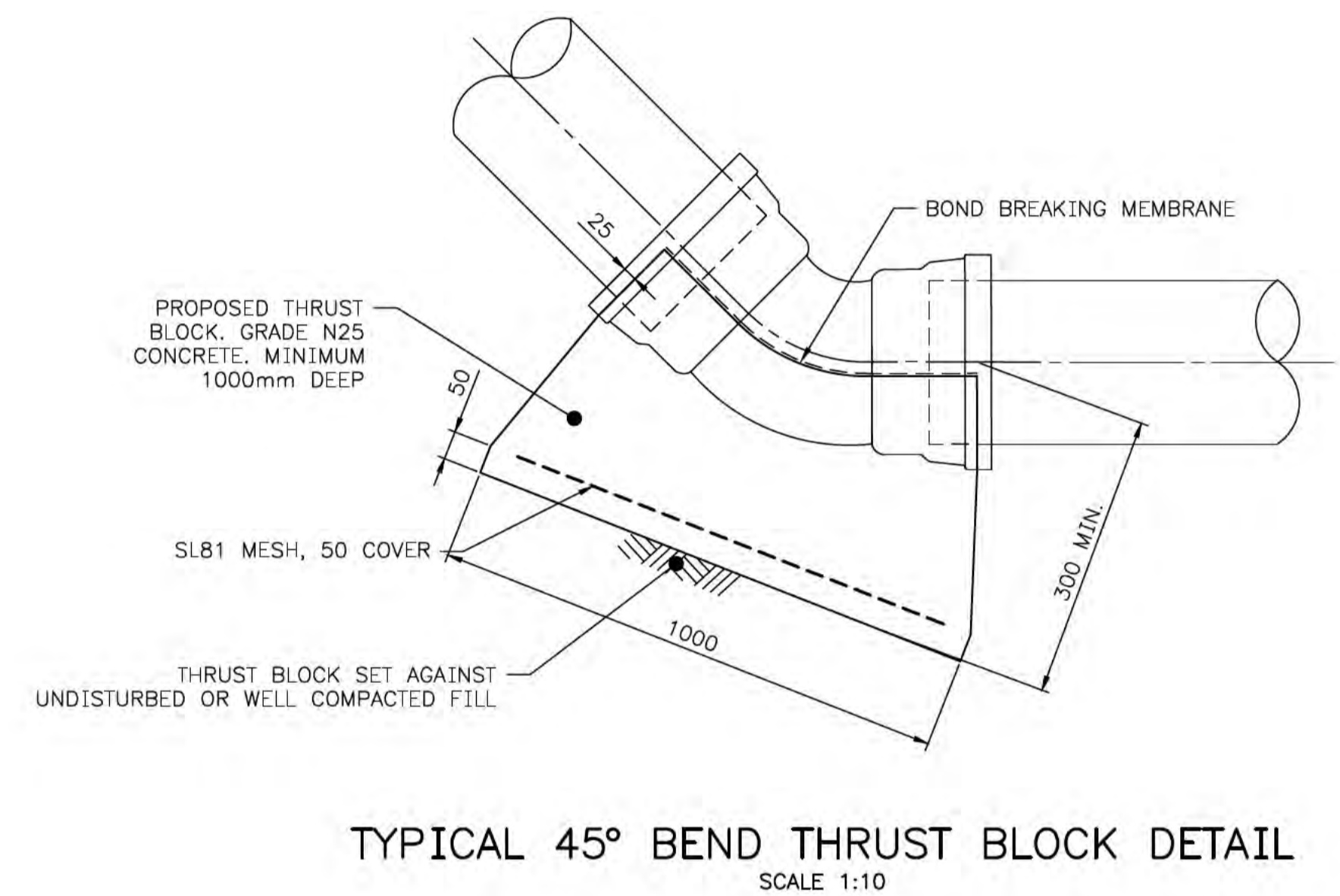
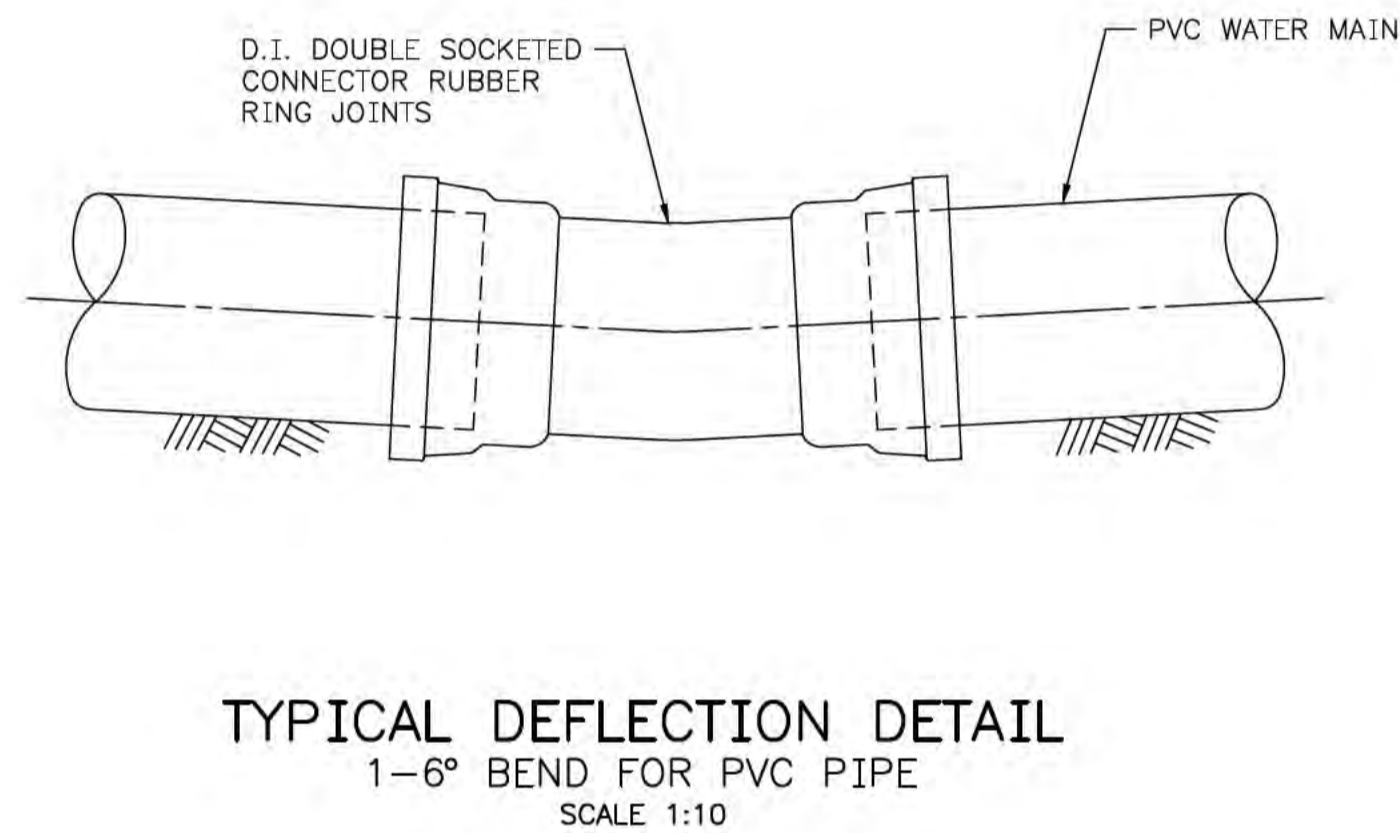
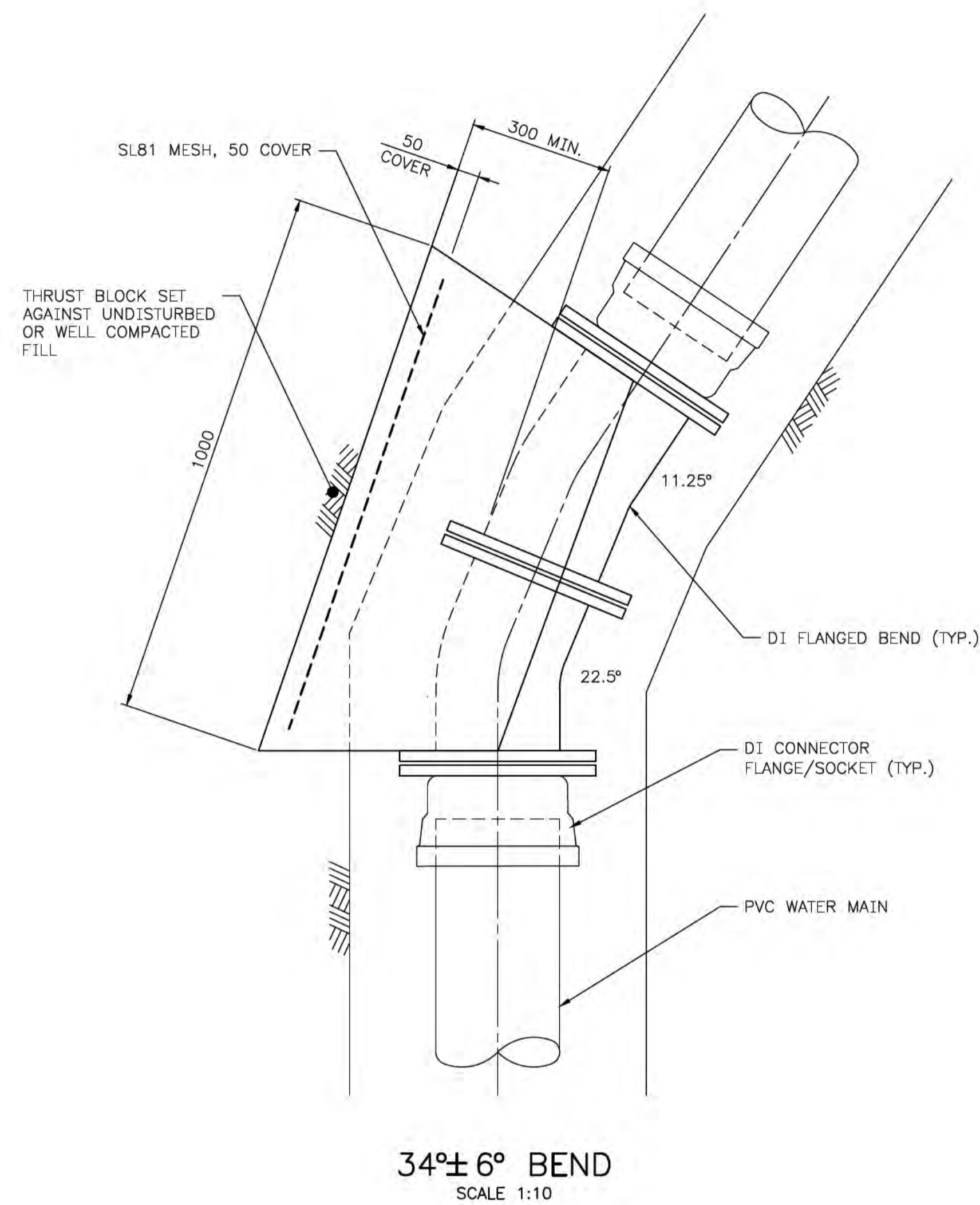
No	Revision	Note	Drawn	Job Manager	Project Director	Date
B	REISSUED FOR 90% DESIGN - CLIENT COMMENT		GT	JM*	PS*	20/11/20
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT		GT	JM*	PS*	30/09/20



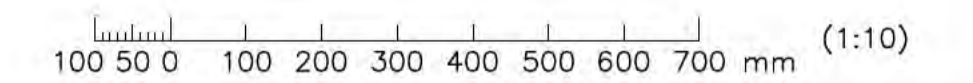
**DO NOT SCALE**  
Conditions of Use. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

Drawn	G.TAYAM	Designer	D.DOMINGO
Drafting Check	C.BAGSHAW*	Design Check	OTHERS
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for construction unless signed as Approved	

Client	DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS		
Project	CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS		
Title	DN250 PVC WATER MAIN PLAN AND LONGITUDINAL SECTION		
Original Size	A1	Drawing No:	61-35637-C301
Rev:	B		



- NOTES:**
1. ALL DIMENSIONS IN MILLIMETRES UNLESS SHOWN OTHERWISE.
  2. FOR CONSTRUCTION NOTES, REFER TO DRAWING 61-35637-C300.
  3. FOR GENERAL LOCATION OF THRUST BLOCKS AND BEND DETAILS, REFER TO LONGITUDINAL SECTION ON DRAWING 61-35637-C301.



**PRELIMINARY**

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
A		ISSUED FOR 90% DESIGN - CLIENT COMMENT	GT	JM*	PS*	30/09/20



**Australian Government**  
Department of Infrastructure, Transport,  
Regional Development and Communications



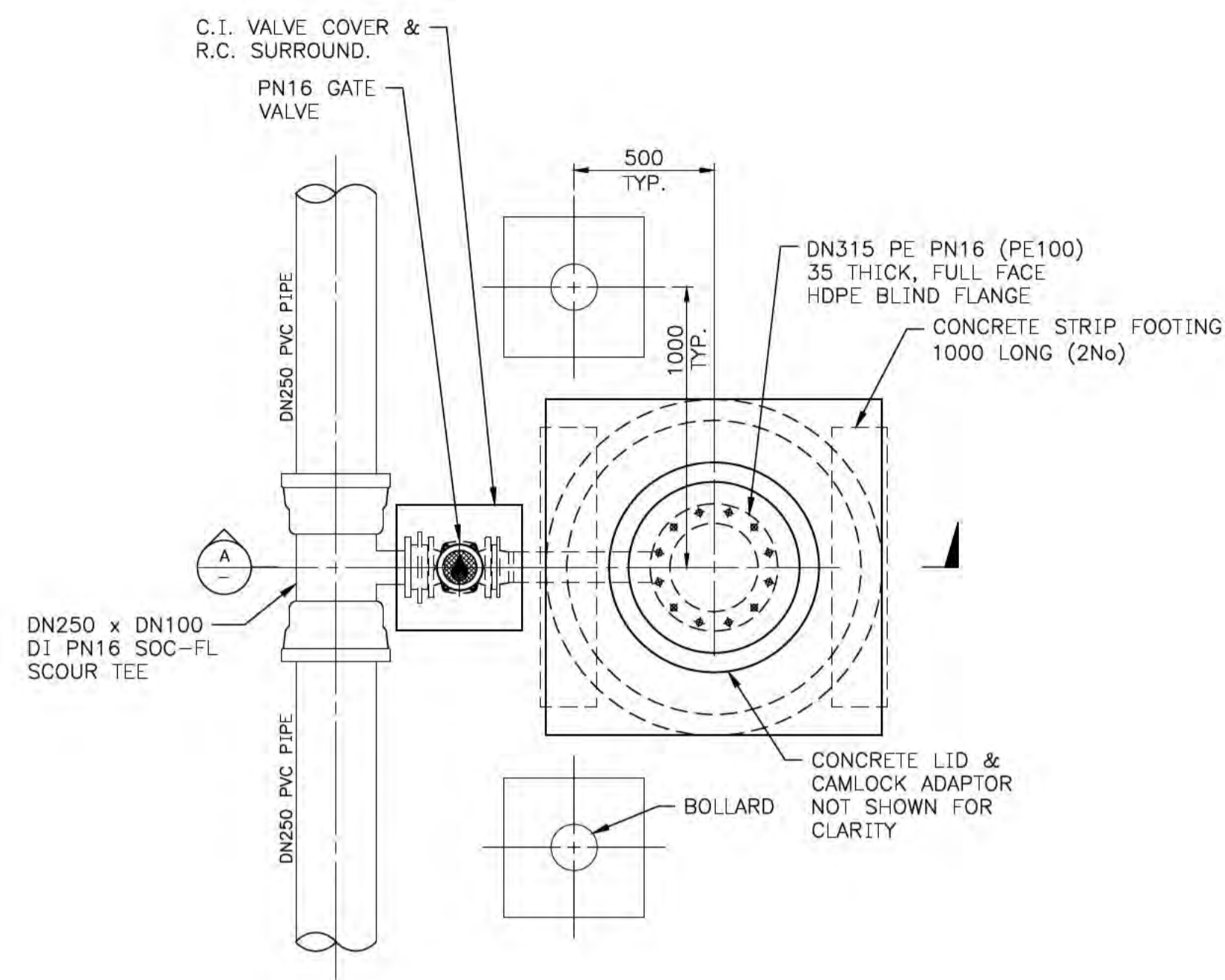
Level 10, 999 Hay Street Perth WA 6000  
PO Box Y3106 Perth WA 6832 Australia  
T 61 8 6222 8222 F 61 8 6222 8555  
E permail@ghd.com.au W www.ghd.com

**DO NOT SCALE**

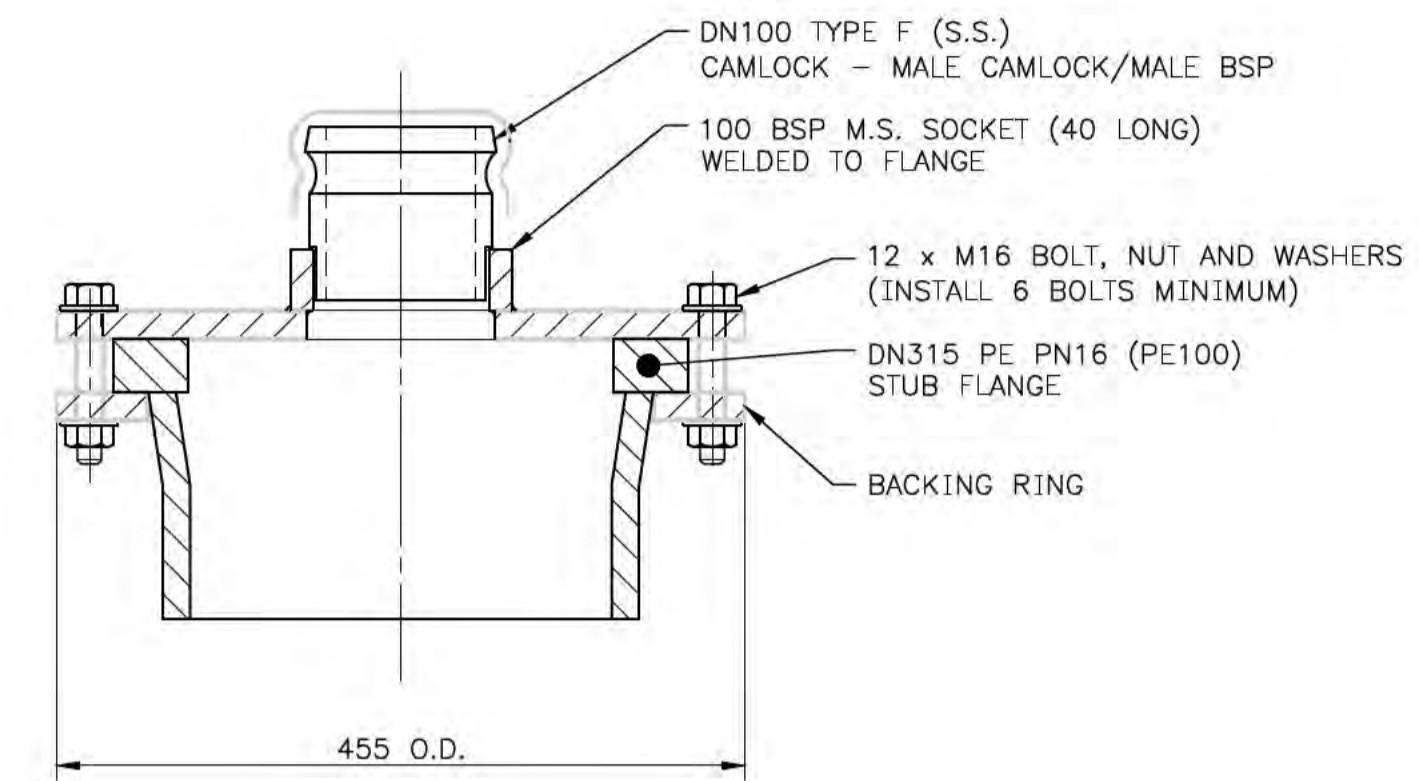
Conditions of Use.  
This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

Drawn	G.TAYAM	Designer	D.DOMINGO
Drafting Check	C.BAGSHAW*	Design Check	S.CLEARY*
Approved (Project Director)	Date		
Scale	1:10	This Drawing must not be used for Construction unless signed as Approved	

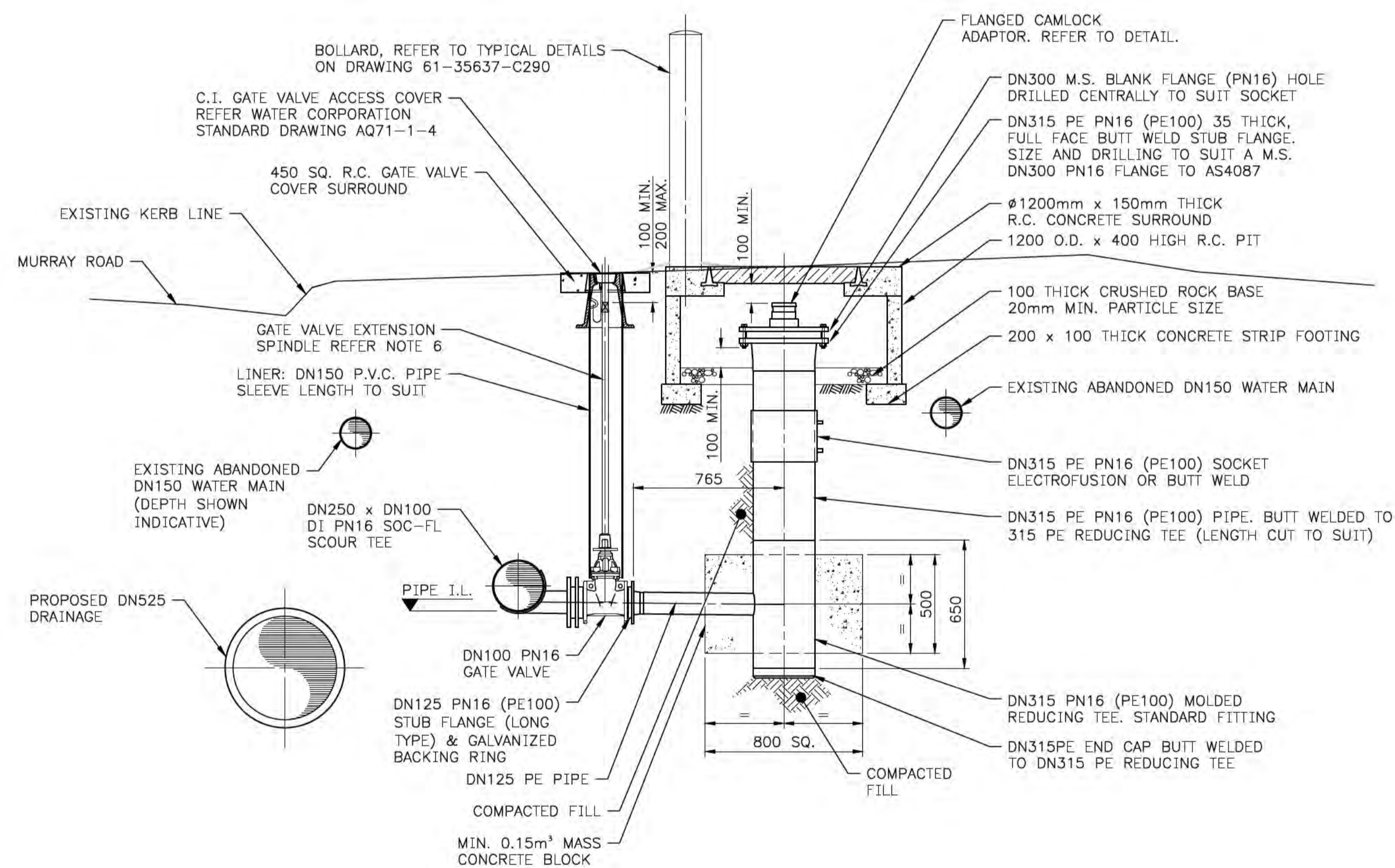
Client	DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS		
Project	CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS		
Title	DN250 PVC WATER MAIN THRUST BLOCK AND BEND DETAILS		
Original Size	A1	Drawing No:	61-35637-C302
Rev:	A		



SCOUR VALVE DETAIL - PLAN VIEW  
SCALE 1:20



CAMLOCK ADAPTOR  
DETAIL 1  
SCALE 1:5

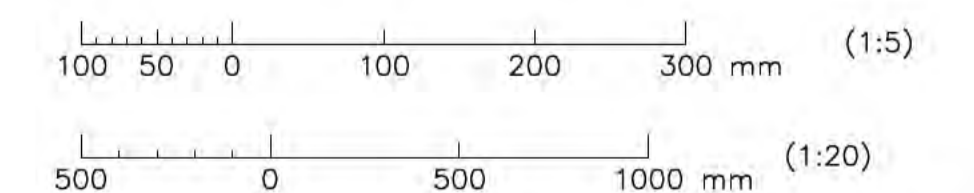


SECTION A  
SCALE 1:20

SCOUR VALVE LOCATIONS	
ITEM	CHAINAGE
SC6	122.4

NOTES:

- ALL DIMENSIONS IN MILLIMETRES UNLESS SHOWN OTHERWISE.
- FOR GENERAL LOCATION OF SCOUR VALVES SEE PLAN AND LONGITUDINAL SECTION DRAWING 61-35637-300 (EXACT LOCATION OF VALVES TO DETERMINED ON SITE).
- ALL CONCRETE TO BE GRADE N32 AND IN ACCORDANCE WITH AS3600.
- ALL STUB FLANGES TO HAVE GALVANISED STEEL BACKING FLANGES DRILLED TO BE COMPATIBLE WITH AS4087 CLASS 16 FLANGES.
- RESILIENT SEATED GATE VALVES SHALL BE TO WATER CORPORATION SPECIFICATION SPS 272.
- SPINDLE EXTENSIONS TO COMPLY WITH WATER CORPORATION STANDARD DRAWING AQ71-3-1 (LENGTH TO SUIT) AND FIXED WITH M12 SET SCREW TO VALVE SPINDLE.
- REFER TO DRAWING 61-35637-C300 FOR FURTHER NOTES.



PRELIMINARY

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
B	REISSUED FOR 90% DESIGN - CLIENT COMMENT		GT	JM*	PS*	20/11/20
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT		GT	JM*	PS*	30/09/20



Australian Government  
Department of Infrastructure, Transport,  
Regional Development and Communications



Level 10, 999 Hay Street Perth WA 6000  
PO Box Y3106 Perth WA 6832 Australia  
T 61 8 6222 8222 F 61 8 6222 8555  
E permail@ghd.com.au W www.ghd.com

DO NOT SCALE

Conditions of Use.  
This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

Drawn	G.TAYAM	Designer	D.DOMINGO
Drafting Check	C.BAGSHAW*	Design Check	OTHERS
Approved (Project Director)			
Date			
Scale	AS SHOWN		

Client	DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS		
Project	CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS		
Title	DN250 PVC WATER MAIN SCOUR VALVE DETAILS		
Original Size	A1		
Drawing No:	61-35637-C303		Rev: B

**GENERAL**

- G1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL OTHER DRAWINGS, THE SPECIFICATIONS AND WITH OTHER SUCH WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE WORKS BY THE CLIENT'S REPRESENTATIVE. ANY DISCREPANCIES OR VARIATIONS SHALL BE REFERRED TO THE CLIENT'S REPRESENTATIVE FOR RESOLUTION BEFORE PROCEEDING WITH THE AFFECTED WORK.
- G2. ALL DIMENSIONS RELEVANT TO SETTING OUT AND OFF-SITE WORK SHALL BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION AND FABRICATION IS COMMENCED.
- G3. DIMENSIONS SHALL NOT BE DETERMINED FROM THE DRAWINGS BY SCALING.
- G4. ALL DIMENSIONS ARE IN MILLIMETRES AND ALL LEVELS, CHAINAGES AND CO-ORDINATES ARE EXPRESSED IN METRES, UNLESS STATED OTHERWISE.
- G5. DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE STRUCTURES IN A STABLE CONDITION AND ENSURING NO PART SHALL BE OVER STRESSED UNDER CONSTRUCTION ACTIVITIES. TEMPORARY BRACING, PROPPING OR OTHER TEMPORARY WORKS SHALL BE PROVIDED BY THE CONTRACTOR AS REQUIRED. WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE RELEVANT CODES.
- G6. PROVIDE ADEQUATE TEMPORARY PROPPING AND/OR BRACING TO ALL PARTS OF THE WORK, WHETHER SHOWN ON THE DRAWINGS OR NOT, DURING ALL STAGES OF CONSTRUCTION AS REQUIRED. CHECK WITH THE SUPERINTENDENT IF THERE ARE ANY QUERIES REGARDING WORK THAT MAY REQUIRE TEMPORARY PROPPING/BRACING/ SHORING ETC.
- G7. THE LEVEL DATUM REFERRED TO IN THESE DRAWINGS IS THE CHRISTMAS ISLAND HEIGHT DATUM (CIHD).
- G8. THE SETOUT LOCATIONS REFERRED TO IN THESE DRAWINGS ARE BASED ON A MGA ZONE 48 COORDINATE SYSTEM.
- G9. STRUCTURAL NOTES TO BE READ IN CONJUNCTION WITH CIVIL NOTES. REFER TO DRAWING 61-35637-002 FOR FURTHER INFORMATION.

**FOUNDATIONS**

- F1. SITE CONSTRUCTION WORKS TO BE PRECEDED BY APPROPRIATE PREPARATION OF THE GROUND SURFACE IN THE AREAS PROPOSED FOR DEVELOPMENT. PREPARATION TO INCLUDE THE FOLLOWING AS APPLICABLE:
  - IDENTIFICATION OF AND DIVERSION/PROTECTION OF ANY BURIED SERVICES WITHIN WORK AREAS.
  - INITIAL CLEARING INCLUDING BUILDING DEBRIS, OLD STRUCTURES, FOOTINGS, SLABS AND REFUSE.
  - GRUBBING OF ANY TREES ROOTS TO A MINIMUM DEPTH OF 1m BELOW FINAL FINISHED GRADE.
  - REMOVAL OF TOPSOIL (IF ENCOUNTERED) CONTAINING SIGNIFICANT QUANTITIES OF ORGANIC MATERIAL (E.G. PLANT ROOTS).
  - EXCAVATION AND REMOVAL OF ANY REFUSE, AND/OR LOCALISED SOFTENED ZONES IDENTIFIED BY VISUAL EXAMINATION OF THE STRIPPED GROUND SURFACE.
  - CONTOURING/SHAPING OF GROUND SURFACE TO ENSURE ANY SURFACE RUNOFF DRAINS FROM THE SITE.
- F2. ALL SOIL BELOW FOOTINGS AND SLABS ON GRADE SHALL BE COMPACTED AS DETAILED IN THE SPECIFICATION OR AS AGREED WITH THE CLIENT'S REPRESENTATIVE.
- F3. FOUNDATION MATERIALS/FILL SHALL BE COMPACTED TO A MINIMUM DENSITY OF 95% OF THE STANDARD MAXIMUM DRY DENSITY (SMDD) WHEN TESTED IN ACCORDANCE WITH AS1289 TO A MINIMUM DEPTH OF 300mm.
- F4. TEST ALL COMPACTION AND ARRANGE CERTIFICATION OF ALL EARTHWORKS UNDER STRUCTURES.
- F5. KEEP EXCAVATIONS FREE OF WATER. PROVIDE ADEQUATE DRAINAGE TO ENSURE FORMATION IS NOT AFFECTED BY MOISTURE. PREVENT FOUNDATION DRYING OUT DUE TO EXPOSURE. PLACE BLINDING, FOOTINGS, PILES AND BACKFILL AS SOON AS PRACTICABLE AFTER EXCAVATION.
- F6. USE SUITABLE CONSTRUCTION TECHNIQUES AND EQUIPMENT FOR BACKFILLING ADJACENT TO STRUCTURES TO PREVENT OVERSTRESS AND DAMAGE. BACKFILL EVENLY TO AVOID DIFFERENTIAL SOIL PRESSURES ON STRUCTURES. BACKFILL AGAINST RETAINING WALLS. ONLY AFTER SPECIFIED CONCRETE STRENGTH IS ACHIEVED, AND PERMANENT SUPPORT INSTALLED WHERE APPLICABLE.

**CONCRETE**

- C1. ALL CONCRETE WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3600 CONCRETE STRUCTURES CODE AND CONCRETE SPECIFICATION (SOME DETAILS GIVEN BELOW).
- C2. CONCRETE CHARACTERISTICS BELOW WITH FULL DETAILS IN CONCRETE SPECIFICATION

ELEMENT	CONCRETE GRADE (MPa)	MAX AGGREGATE SIZE (mm)	CEMENT TYPE	SLUMP
INCLINE DIVERSION PIT, PIT N17-2, HEADWALL N17-3, INCLINE TANK HEADWALL, PRECAST CONCRETE AND PRECAST CONCRETE FOR STANDARD DRAINAGE STRUCTURES.	S40	20	GP	100±20 150±30 FOR WALLS IN-SITU
MURRAY ROAD SPEED REDUCTION HUMP (WITH XYPEX C5000 AT 0.5-0.6% BY WEIGHT OF TOTAL CEMENT CONTENT).	S40	20	GP	100±20
UNREINFORCED (MASS) CONCRETE, FOOTPATHS, PIPE ENCASEMENTS, IN-SITU CONCRETE FOR STANDARD DRAINAGE STRUCTURES AND OTHER ELEMENTS NOT LISTED IN THIS TABLE.	S32	20	GP	100±20
INCLINE TANK HEADWALL MASS CONCRETE (WITH DRAMIX STEEL FIBRES 3D 65/60 AT 30 kg/m <sup>3</sup> AND XYPEX C5000 AT 0.5-0.6% BY WEIGHT TOTAL CEMENT CONTENT)	S40	20	LH	100±20
KERBING (REFER MRWA SPECIFICATION 407)	S32	10	GP	50 MAX
BLINDING	S15	20	GP	100±20
LEAN MIX CONCRETE	S5	20	GP	100±20

- C3. CHECK WITH OTHER DISCIPLINE DRAWINGS AND REPORT ANY DISCREPANCIES. CONFIRM LOCATIONS OF ANY CAST-IN ITEMS SUCH AS BOLTS, ANGLES, TIES FLASHING, PLUMBING AND ELECTRICAL FITTINGS ETC.
- C4. NOTIFY THE CLIENT'S REPRESENTATIVE AT LEAST 48 HOURS BEFORE PLACING CONCRETE.
- C5. PROVIDE 0.2mm POLYTHENE SHEET UNDER ALL SLABS ON GROUND.
- C6. ALL FORMWORK TO COMPLY WITH AS3610 WITH SURFACE FINISH CLASS AS FROM TABLE 3.3.1. FOR VISUALLY IMPORTANT SURFACES OF CLASS 1, 2 OR 3, SET OUT FORMWORK TO GIVE A REGULAR ARRANGEMENT OF PANELS, JOINTS, BOLT HOLES AND SIMILAR VISIBLE ELEMENTS IN THE FORMED SURFACE.
- C7. FINISHES TO CONCRETE MEMBERS: UNLESS OTHERWISE NOTED ON DRAWINGS ALL FORMED CONCRETE FINISHES SHALL BE IN ACCORDANCE WITH AS3610 AND THE SPECIFICATION.
- C8. ABBREVIATIONS USED:
 

No	✓	No
FORMED FINISH	UNFORMED FINISH	

- C9. ALL EXPOSED CORNERS AND EDGES TO HAVE 12x12 CHAMFERS UNLESS NOTED OTHERWISE.
- C10. NO HOLES OR CHASES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT THE PRIOR WRITTEN APPROVAL OF THE CLIENT'S REPRESENTATIVE.
- C11. CONSTRUCTION JOINTS SHALL BE MADE WHERE SHOWN ON THE DRAWINGS OR AT LOCATIONS APPROVED BY THE CLIENT'S REPRESENTATIVE PRIOR TO CONCRETE WORKS. THE SURFACE ONTO WHICH A CONSTRUCTION JOINT IS CAST SHALL BE DELIBERATELY ROUGHENED AND WETTED WITH POTABLE WATER TO ACHIEVE A SATURATED SURFACE DRY CONDITION BEFORE PLACING CONCRETE.
- C12. REINFORCEMENT, ANCHOR BOLTS AND CAST-IN ITEMS SHALL BE RIGIDLY CONSTRAINED TO PREVENT MOVEMENT DURING THE CONCRETE PLACEMENT. ANCHOR BOLTS TO BE TACK WELDED TO REINFORCEMENT AT LOWER END. BOLTS TO BE GREASED AND TAPED UP BEFORE CONCRETE POUR.
- C13. CUT OR BEND BARS AROUND OPENINGS. REINFORCEMENT AND EXPOSED CAST-IN METAL ITEMS MUST NOT BE IN CONTACT WITH PIPE FITTINGS.
- C14. REMOVAL OF FORMWORK SHALL BE IN ACCORDANCE WITH THE CONCRETE SPECIFICATION, EXCEPT FOR LH CEMENT MIXES WHERE FORMWORK SHALL BE RETAINED FOR A MINIMUM OF 7 DAYS.
- C15. CONCRETE SHALL NOT BE PLACED IF THE SLUMP IS NOT WITHIN THE ACCEPTANCE CRITERIA. WATER SHALL NOT BE ADDED AT THE SITE UNLESS IN ACCORDANCE WITH THE CONCRETE SPECIFICATION.
- C16. COMPACT CONCRETE USING APPROVED IMMERSION VIBRATORS (REFER COMPACTION GUIDANCE IN CIA Z7-04).
- C17. CURE CONCRETE BY KEEPING MOIST FOR 7 DAYS FOR GP CEMENT OR 14 DAYS FOR TYPE GB OF LH CEMENT. CURING MATERIALS AND METHOD TO BE IN ACCORDANCE WITH THE SPECIFICATION. USE EVAPORATION RETARDANT ON SLAB TOP SURFACES AND RE-APPLY AS HOT WEATHER CONDITIONS JUSTIFY. CURING MEMBRANES SHALL COMPLY WITH AS3799 AND SHALL TAKE ACCOUNT OF ALL POSSIBLE FINISHES TO THE CONCRETE SURFACE.
- C18. PROGRESSIVELY BACKPROP SUSPENDED SLABS IMMEDIATELY AFTER STRIPPING AT TYPICALLY THIRD POINTS OF BEAM SPANS AND AT 2400mm CENTRES FOR SUSPENDED SLABS.
- C19. WHERE CONCRETE IS DAMAGED AND/OR INADEQUATELY COMPACTED, NOTIFY THE CLIENT'S REPRESENTATIVE FOR REMEDIAL MEASURES, WITH ALL INSPECTION FOR DEFECTS AND REPAIR IN ACCORDANCE WITH THE CONCRETE SPECIFICATION.
- C20. STEELWORK CAST IN THE CONCRETE THAT IS SURFACE EXPOSED SHALL BE STAINLESS STEEL GRADE 316, INCLUDING FERRULES, INSERTS, DOWEL BARS, ANGLE CLEATS, BOLTS, NUTS, WASHERS AND PACKERS ETC.
- C21. ALL GROUT NAMED ON DRAWINGS SHALL BE A PROPRIETARY CEMENTITIOUS SHRINKAGE COMPENSATING GROUT OF STRENGTH AND DURABILITY AT LEAST EQUIVALENT TO THE ADJACENT CONCRETE TO BE APPROVED BY THE CLIENT'S REPRESENTATIVE INCLUDING ACCEPTABLE THICKNESS AND CONSISTENCY (I.E. STIFF, PLASTIC, FLOWABLE, FLUID TO GROUT MANUFACTURER'S RECOMMENDATIONS) SO GAP BETWEEN ELEMENTS IS COMPLETELY FILLED. ⇨

**PRECAST CONCRETE**

- P1. PRECAST CONCRETE UNITS HAVE BEEN DESIGNED FOR INSTALLED CONDITIONS ONLY.
- P2. PRECAST UNITS AND CONNECTIONS HAVE NOT BEEN DESIGNED FOR VEHICLE IMPACT.
- P3. PRECAST UNITS TO BE SUPPLIED BY A SPECIALIST SUB-CONTRACTOR.
- P4. SUPPLIER TO DESIGN PRECAST CONCRETE UNITS, CONNECTIONS, FIXING DETAILS AND JOINTS ETC TO PROVIDE SATISFACTORY PERFORMANCE FOR STABILITY, FIRE RESISTANCE (WHERE REQUIRED AS NOTED IN DRAWINGS), SERVICEABILITY AND STRENGTH REQUIREMENTS DURING MANUFACTURE, HANDLING, LIFTING, TRANSPORT, ERECTION AND INSTALLATION OPERATIONS.
- P5. USE CAST IN FERRULES FOR STRUCTURAL FIXINGS, NOT MECHANICAL OR CHEMICAL ANCHORS.
- P6. SUBMIT WORKSHOP DRAWINGS SHOWING PROPOSED DETAILS FOR DESIGN, MANUFACTURE, ASSEMBLY, TRANSPORT AND INSTALLATION OF PRECAST CONCRETE ELEMENTS, INCLUDING FOLLOWING:
  - INFORMATION SPECIFIED IN AS3850 CLAUSE 3.10
  - CAST IN ITEMS INCLUDING LOCATIONS, SIZES, DETAILS, MATERIALS, CORROSION PROTECTION AND GRADE OF FERRULES, PLATES, CUT-OUTS AND OPENINGS, ANCHORS, LIFTING DEVICES, PLUGS FOR SEALING RECESSES ETC.
  - EQUIPMENT AND METHODS OF HANDLING, LIFTING, TRANSPORT INCLUDING LOCATION OF LIFTING POINTS, MAXIMUM LOADS ON LIFTING AND BRACING POINTS
  - EVIDENCE OF LOAD CAPACITY OF LIFTING AND BRACING INSERTS AND ATTACHMENTS IN FORM OF TEST REPORTS OR CALCULATIONS
  - CONCRETE MIX DESIGN
  - FORMWORK TYPE
  - SURFACE FINISH CLASS AND SURFACE TREATMENT
  - EQUIPMENT AND METHODS FOR HANDLING, TRANSPORT AND INSTALLATION.
- P7. SUBMIT DESIGN CALCULATIONS OF DESIGN FOR MANUFACTURE, HANDLING, LIFTING, TRANSPORT, ERECTION AND INSTALLATION CONDITIONS. SUBMIT EVIDENCE OF LOAD CAPACITY OF LIFTING AND BRACING INSERTS AND ATTACHMENTS (TEST REPORTS OR CALCULATIONS).
- P8. HOT DIP GALVANIZE CAST IN STEELWORK INCLUDING FERRULES, INSERTS, DOWEL BARS, ANGLE CLEATS, BOLTS, NUTS WASHERS AND PACKERS ETC.
- P9. PRECAST UNIT TOLERANCES TO BE TO AS3600 AND AS3850 EXCEPT WHERE VARIED BY SPECIFICATION.
- P10. CAST UNITS WITH OUTER FACE OFF FORM.
- P11. PROVIDE 12x12 CHAMFERS OR FILLETS AT EDGES AND CORNERS OF PRECAST UNITS.
- P12. WHERE PRECAST UNITS ARE TO BE SUPPORTED BY CONCRETE MEMBERS, DO NOT ERECT UNITS UNTIL 28 DAY STRENGTH HAS BEEN ACHIEVED.
- P13. USE PVC OR FIBROUS CEMENT SHEET LEVELLING PADS.

**REINFORCEMENT**

- R1. REINFORCEMENT SHALL COMPLY WITH ASINZS4671
- R2. ALL REINFORCEMENT TO BE FREE OF SCALE, RUST AND OTHER FOREIGN MATTER.
- R3. STEEL REINFORCEMENT IS DESIGNATED AS FOLLOWS:
  - N - DENOTES NORMAL DUCTILITY GRADE 500N DEFORMED BARS TO ASINZS4671
  - R - DENOTES GRADE 230R HOT ROLLED PLAIN BARS TO ASINZS4671
  - L - DENOTES HARD DRAWN WIRE REINFORCEMENT FABRIC TO ASINZS4671
  - W - DENOTES HARD DRAWN PLAIN WIRE TO ASINZS4671
- R4. ABBREVIATIONS USED ON DRAWINGS:
 

T	= TOP	ES	= EQUALLY SPACED	UT	= UPPER TOP
LT	= LOWER TOP	NF	= NEAR FACE	LB	= LOWER BOTTOM
B	= BOTTOM	FF	= FAR FACE	LV	= LENGTH VARIES
UB	= UPPER BOTTOM	EF	= EACH FACE		
CP	= CENTRALLY PLACED	EW	= EACH WAY		
- R5. SPLICE REINFORCEMENT ONLY AT LOCATIONS SHOWN ON DRAWINGS OR AS APPROVED BY THE CLIENT'S REPRESENTATIVE. STAGGER LAPS WHERE POSSIBLE. LAPPED SPLICE LENGTHS TO COMPLY WITH AS 3600. CLEAR SPACING BETWEEN LAPPED SPLICE BARS TO BE LESS THAN THREE (3) TIMES BAR DIAMETER.
- R6. COVER TO REINFORCEMENT SHALL BE 50mm UNLESS NOTED OTHERWISE

- R7. LAPPED SPLICE LENGTHS FOR HORIZONTAL BARS WITH MORE THAN 300mm CONCRETE CAST BELOW THE BAR AND SPACED AT ≥125mm CENTRES TO COMPLY WITH THE FOLLOWING UNO.

COVER	f <sub>c</sub>	N12	N16	N20	N24	N28	N32
≥ 25	≥ 20	770	1150	1570	-	-	-
≥ 30	≥ 25	630	980	1350	-	-	-
≥ 40	≥ 32	510	770	1100	1440	1810	2220
≥ 50	≥ 40	460	630	890	1200	1540	1920

DO NOT INTERPOLATE INTERMEDIATE VALUES FOR SPLICE LENGTHS. LAPPED SPLICE LENGTHS FOR BARS IN COLUMNS - REFER TO AS3600 OR THE CLIENT'S REPRESENTATIVE. EPOXY COATED BARS, BARS IN LIGHTWEIGHT CONCRETE AND SLIP FORMED CONCRETE WILL REQUIRE LONGER SPLICE LENGTHS - REFER TO AS3600 OR THE SUPERINTENDENT.

- R8. LAPPED SPLICE LENGTHS FOR VERTICAL BARS (AND HORIZONTAL BARS WITH LESS THAN 300mm CONCRETE CAST BELOW THE BAR) SPACED AT ≥125mm CENTRES TO COMPLY WITH THE FOLLOWING UNO.

COVER	f <sub>c</sub>	N12	N16	N20	N24	N28	N32
≥ 25	≥ 20	590	890	1210	-	-	-
≥ 30	≥ 25	490	750	1040	1340	-	-
≥ 40	≥ 32	390	600	840	1110	1400	1710
≥ 50	≥ 40	350	480	690	920	1190	1480

NOT APPLICABLE FOR BARS IN COLUMNS. DO NOT INTERPOLATE INTERMEDIATE VALUES FOR SPLICE LENGTHS. LAPPED SPLICE LENGTHS FOR BARS IN COLUMNS - REFER TO AS3600 OR THE CLIENT'S REPRESENTATIVE. EPOXY COATED BARS, BARS IN LIGHTWEIGHT CONCRETE AND SLIP CONCRETE WILL REQUIRE LONGER SPLICE LENGTHS - REFER TO AS3600 OR THE SUPERINTENDENT.

- R9. LAY MESH REINFORCEMENT SO THAT MINIMUM COVER IS TO MAIN WIRES UNO.
- R10. PROVIDE MINIMUM MESH LAPS TO CROSS WIRES OF REINFORCING MESH, SO THAT TWO OUTERMOST WIRES OF ONE SHEET OVERLAP TWO OUTERMOST WIRES OF ADJACENT SHEET BY AT LEAST 25 MM, THUS:

	END LAP	SIDE LAP
RECTANGULAR MESHES	225	125
SQUARE MESHES SL102 TO SL42	225	225
SL81	125	125
TRENCH MESH	500	N/A

- R11. DO NOT LAP MORE THAN THREE SHEETS AT ANY ONE POINT.
- R12. ALL HOOKS AND COGS SHALL BE IN ACCORDANCE WITH AS3600. WRAPPING, CUTTING AND BENDING OF REINFORCEMENT SHALL BE IN ACCORDANCE WITH AS3600.
- R13. ALL REINFORCEMENT, INCLUDING FABRIC REINFORCEMENT, SHALL BE FIRMLY SUPPORTED ON APPROVED BAR SPACERS.
- R14. SUPPORT ALL REINFORCEMENT ADEQUATELY AND ACCURATELY ON APPROVED CHAIRS.
- R15. REINFORCING TO BE ISOLATED FROM CAST-IN METAL ITEMS.
- R16. UNLESS SHOWN ON DRAWINGS, REPOSITION REINFORCEMENT PASSING THROUGH SMALL PENETRATIONS EITHER SIDE OF THE OPENING WITH APPROPRIATE COVER AND LAP.

**STRUCTURAL STEELWORK**

- S1. WORKMANSHIP AND MATERIALS TO COMPLY WITH AS4100, ASINZS4600, ASINZS1554 AND AS4673 FOR STAINLESS STEEL.
- S2. STEEL SHALL BE THE FOLLOWING GRADE UNLESS NOTED OTHERWISE:
  - PLATE TO AS3678..... C250
  - UNIVERSAL BEAMS, COLUMNS, PARALLEL FLANGE CHANNELS AND ANGLES TO AS3679.1..... GRADE 300 or BHP GRADE 300 Plus
  - SQUARE AND RECTANGULAR HOLLOW SECTIONS TO AS1163..... C350/C450
  - CIRCULAR HOLLOW SECTIONS TO AS1163..... C350/C250
  - PURLINS AND GIRTS TO AS1367..... GRADE G450
- S3. STAINLESS STEEL SHALL BE GRADE 316L FOR HOT ROLLED PLATE AND SECTIONS OR GRADE 316 OTHERWISE.
- S4. STRUCTURAL STEEL WORK WELDS TO BE MINIMUM 6mm, FULLY SEALED, CONTINUOUS FILLET, STRUCTURAL PURPOSE TO AS1564.1.
- S5. STAINLESS STEEL WORK WELDS TO BE MINIMUM 6mm, FULLY SEALED, CONTINUOUS FILLET, STRUCTURAL PURPOSE TO AS1564.6 CLASS 2.
- S6. BUTT WELDS TO BE FULL (COMPLETE) PENETRATION UNO.
- S7. BOLT TYPES AND DESIGNATIONS SHALL BE AS FOLLOWS:-
  - 4.8S - COMMERCIAL BOLTS TO AS1111, SNUG TIGHTENED
  - 8.8S - HIGH STRENGTH STRUCTURAL BOLTS, NUTS AND HARDENED WASHERS TO AS1252, SNUG TIGHTENED
  - 8.8/TS - HIGH STRENGTH STRUCTURAL BOLTS AS ABOVE, FULLY TENSIONED TO AS4100 IN A BEARING TYPE JOINT.
  - 8.8/TF - HIGH STRENGTH STRUCTURAL BOLTS AS ABOVE, FULLY TENSIONED TO AS4100 IN A FRICTION TYPE JOINT.
- S8. STAINLESS STEEL FASTENERS SHALL COMPRISE OF BOLTS PRODUCT GRADE A TO AS1110.1 AND ISO3506.1 AND NUTS PRODUCT GRADE A TO AS1112.1 AND ISO3506.2. BOLT AND NUT STAINLESS STEEL GRADE AND PROPERTY CLASS SHALL BE A4 AND A8 RESPECTIVELY. WASHERS SHALL BE PRODUCT GRADE A TO AS1237.1 AND GRADE 316 STAINLESS STEEL.
- S9. WHERE 8.8 BOLTS ARE SHOWN AS TORQUED (TB or TF) THEY SHALL BE ASSEMBLED IN ACCORDANCE WITH AS4100 USING "CORONET" LOAD INDICATING WASHERS.
- S10. M16 AND LARGER BOLTS TO BE HIGH STRENGTH SNUG TIGHTENED (8.8S) UNLESS NOTED OTHERWISE.
- S11. USE BOLT LENGTHS SO THAT PROJECTION BEYOND NUT IS AT LEAST TWO THREADS, AND NOT MORE THAN 10mm.
- S12. PROVIDE DOCUMENTARY EVIDENCE (INCLUDING TEST RESULTS) OF COMPLIANCE WITH RELEVANT AUSTRALIAN STANDARD FOR EACH BATCH OF FASTENERS USED.
- S13. HOT DIP GALVANISE BOLTS, SCREWS, NUTS AND WASHERS TO AS1214. TAP GALVANISED NUTS 0.4 mm OVERSIZE TO SUIT GALVANISED THREADS TO AS1214 AND OIL FOR PROTECTION. INSTALL WASHERS UNDER BOLT HEAD AND NUT. USE TAPERED WASHERS AS REQUIRED.


- S14. ALL HOLDING DOWN BOLTS SHALL BE COMMERCIAL BOLTS OR TO BE FABRICATED FROM GRADE 250 ROD WITH THREADS TO AS1275 UNLESS NOTED OTHERWISE. SUPPLY HOLDING DOWN BOLTS WITH TWO CLASS 5 HEXAGONAL HEAD NUTS AND TWO EXTRA LARGE FLAT WASHERS. HOT DIP GALVANISE HOLDING DOWN BOLTS, NUTS AND WASHERS TO AS1214. THE HOLDING DOWN BOLT GROUPS RIGIDLY TOGETHER PRIOR TO INSTALLATION (eg. TACK WELD WITH 10mm DIAMETER REINFORCING BAR TO FORM A RIGID CAGE) TO ENSURE CORRECT BOLT LOCATIONS.
- S15. HOLES IN PURLINS AND OTHER COLD FORMED SECTIONS TO BE ONLY IN MIDDLE THIRD OF WEB. DO NOT MAKE HOLES IN FLANGES OF PURLINS OR OTHER COLD FORMED SECTIONS.
- S16. DRILL BOLT HOLES FULL SIZE OR REAM TO FULL SIZE AFTER SUB-DRILLING OR SUB-PUNCHING. FLAME CUTTING OF HOLES IS NOT PERMITTED. BOLT HOLE SIZE TO BE:
  - BOLT DIAMETER PLUS 2mm FOR STEEL TO STEEL CONNECTIONS.
  - BOLT DIAMETER PLUS 4mm FOR STEEL TO CONCRETE CONNECTIONS.
  - BOLT DIAMETER PLUS 6mm FOR HOLDING DOWN BOLTS.
- S17. SLOTTED HOLES TO BE 2.5xBOLT DIAMETER LONG UNO. BOLTS TO BE SET CENTRAL IN SLOT. USE OVERSIZED WASHERS AT SLOTTED HOLES.
- S18. GROUT BASE PLATES, HOLDING-DOWN BOLTS BEFORE COLUMNS ARE LOADED. USE AN APPROVED HIGH-STRENGTH SHRINKAGE COMPENSATED PRE-MIXED GROUT.
- S19. PROVIDE STEEL MEMBERS MADE FROM WHOLE LENGTHS WHEREVER POSSIBLE. IF NECESSARY, MAKE LENGTHS UP OF SECTIONS JOINED BY COMPLETE PENETRATION FULL STRENGTH BUTT WELDS GROUND FLUSH. WHERE PROPOSED, SHOW JOINTS ON SHOP DRAWINGS.
- S20. CROP INTERNAL CORNERS OF CLEATS AND STIFFENERS, ETC. TO FACILITATE DRAINAGE.
- S21. PROVIDE 3mm CAP PLATES SEAL WELDED TO HOLLOW SECTIONS UNO. PROVIDE DRILLED VENT/DRAIN HOLES AT TOP AND BOTTOM EXTREMITIES FOR HOLLOW SECTIONS TO BE HOT DIPPED GALVANISED. PROVIDE RUBBER SEALS OR PLUG WELD VENT/DRAIN HOLES THAT REMAIN EXPOSED. PROVIDE DRILLED SUSPENSION HOLES IN END PLATES, ETC FOR ITEMS TO BE HOT DIPPED GALVANISED.
- S22. IN ALL CASES WHERE THE WALL THICKNESS OF RECTANGULAR AND SQUARE HOLLOW SECTIONS IS LESS THAN 8mm AND TO WHICH A FIN PLATE IS WELDED, PROVIDE A 10mm PLATE STIFFENER, WIDTH TO BE 15mm LESS THAN FACE OF SECTION, WELDED ALL ROUND.
- S23. INSTALL BEAMS WITH NATURAL CAMBER UPWARD.
- S24. MAKE BOLTED STRUCTURAL CONNECTIONS WITH 10mm THICK CLEAT PLATES AND 2 M16 8.8/S BOLTS UNO.
- S25. PREPARE WORKSHOP DRAWINGS TO SHOW RELEVANT DETAILS OF EACH ASSEMBLY, COMPONENT AND CONNECTION, TOGETHER WITH INFORMATION RELATIVE TO FABRICATION, SURFACE TREATMENT AND ERECTION, INCLUDING IDENTIFICATION, STEEL TYPE AND GRADE, DIMENSIONS OF ITEMS, REQUIRED CAMBER (WHERE APPLICABLE), LOCATION, TYPE AND SIZE OF WELDS OR BOLTS, WELD CATEGORIES AND BOLTING CATEGORIES, SURFACE PREPARATION METHODS AND COATING SYSTEM, VENT/DRAIN HOLES FOR HOT DIP GALVANISING, PROPOSED JOINTS IN STEEL MEMBERS, etc.
- S26. SHOP DRAWINGS SHALL BE REVIEWED BY THE CLIENT'S REPRESENTATIVE. ALLOW 14 DAYS FOR REVIEW. REVIEW DOES NOT INCLUDE CHECKING OF DIMENSIONS, AND DOES NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY FOR COMPLIANCE WITH DRAWINGS AND SPECIFICATIONS.
- S27. USE IDENTIFICATION MARKS COMPATIBLE WITH AND VISIBLE THROUGH PAINT SYSTEM.
- S28. AFTER COMPLETION OF FABRICATION, PREPARATION FOR SURFACE TREATMENT TO BE: ROUND OFF ROUGH WELDS, SHARP EDGES; BURRS, ARRISSES, WELD SPLATTER AND SLAG, etc. REMOVE GREASE, OIL AND OTHER CONTAMINANTS TO AS1627.1. REMOVE RUST, MILLSALE, OXIDE DEPOSITS, OLD PAINT FILMS, etc. BY ABRASIVE BLAST CLEANING TO AS1627.4. REMOVE ALL DUST BY BRUSHING OR VACUUM CLEANING.
- S29. ALL STEELWORK, FLOOR GRATING AND GUARDRAILS SHALL BE HOT DIP GALVANISED IN ACCORDANCE WITH AS4680 AFTER FABRICATION.
- S30. HOT-DIP GALVANISED COATING SHALL BE REINSTATED IN ACCORDANCE WITH ASINZS 4680 AND ASINZS 2312.2. THE REPAIRED SURFACES SHALL THEN BE OVERSPRAYED WITH AN ALUMINIUM PIGMENTED (SILVER) TOPCOAT.
- S31. INORGANIC ZINC SILICATE COATING SHALL BE REINSTATED TO A MINIMUM DRY FILM THICKNESS OF 100 MICRONS BY THE APPLICATION OF AN AUSTRALIAN PAINT APPROVAL SCHEME APPROVED ORGANIC ZINC RICH COATING OVER A CLEAN SURFACE APPLIED IN ACCORDANCE WITH THE COATING MANUFACTURER'S RECOMMENDATIONS.
- S32. IN ADDITION TO THE FINISH SPECIFIED, GALVANISED STEELWORK IN CONTACT WITH THE GROUND SHOULD BE PAINTED USING A 2-PACK ZINC PHOSPHATE PRIMER TO 50 MICRONS AND 2-PACK EPOXY TOP COAT(S) TO 250 MICRONS IN ACCORDANCE WITH REQUIREMENTS OF ASINZS 4680.
- S33. FLOOR GRATING TO HAVE EDGE TRIMMING BARS ALL ROUND UNO. SECURE GRATINGS TO STEELWORK WITH PROPRIETARY CLAMPING SYSTEM INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- S34. ENSURE METAL DECKING, FLOOR PLATE AND FLOOR GRATING IS SECURELY FIXED IN POSITION BEFORE ALLOWING GENERAL CONSTRUCTION ACCESS.
- S35. PURLINS AND GIRTS TO BE CONNECTED USING AN 8PL CLEAT WITH 2-M12 BOLTS U.N.O.
- S36. ALL GUARDRAILS ARE TO BE FITTED WITH TOE BOARDS (100x6FL OR EQUIVALENT) U.N.O.
- S37. GUARDRAIL BALL JOINTS SHALL BE FULLY SEAL WELDED ALL ROUND.
- S38. GUARDRAILS SHALL BE CONTINUOUS UNLESS SHOWN OTHERWISE ON THE DESIGN DRAWINGS, MODULAR UNITS ARE NOT TO BE INSTALLED UNLESS APPROVED BY THE CLIENT'S REPRESENTATIVE.
- S39. DISSIMILAR METALS (ie MILD STEEL AND STAINLESS STEEL) SHALL BE ELECTRICALLY ISOLATED USING SUITABLE PLASTIC SLEEVES AND/OR WASHERS.

**MASONRY**

- M1. BRICKWORK TO COMPLY WITH AS 3700 MASONRY CODE.
- M2. BRICKWORK TO BE LAID IN M4 MORTAR UNLESS NOTED OTHERWISE.
- M3. BRICKS ARE TO BE CUT USING A MASONRY SAW.
- M4. CHASING OF WALLS IS NOT PERMITTED WITHOUT THE PRIOR APPROVAL OF THE CLIENT'S REPRESENTATIVE.
- M5. BRICKWORK SHALL BE 230x110x75 NOMINAL SIZE, SOUND, HARD, WELL BURNED AND TRUE TO SHAPE AND DIMENSIONS AND SHALL BE OF 'EXPOSURE' DURABILITY CLASS IN ACCORDANCE WITH AS4455.
- M6. BRICKWORK SHALL BE SOLID AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 20 MPa IN ACCORDANCE WITH AS4455.

**PRELIMINARY**

B	RE-ISSUED FOR 90% DESIGN - CLIENT COMMENT	LR	JM*	PS*	20/11/20	
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT	LR	JM*	PS*	30/09/20	
No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date



**Australian Government**

**Department of Infrastructure, Transport, Regional Development and Communications**



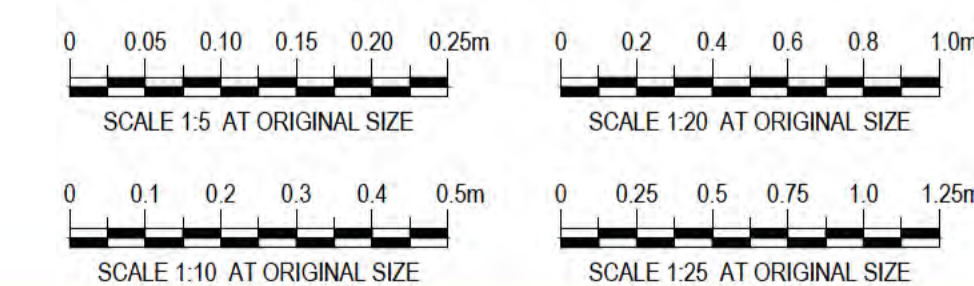
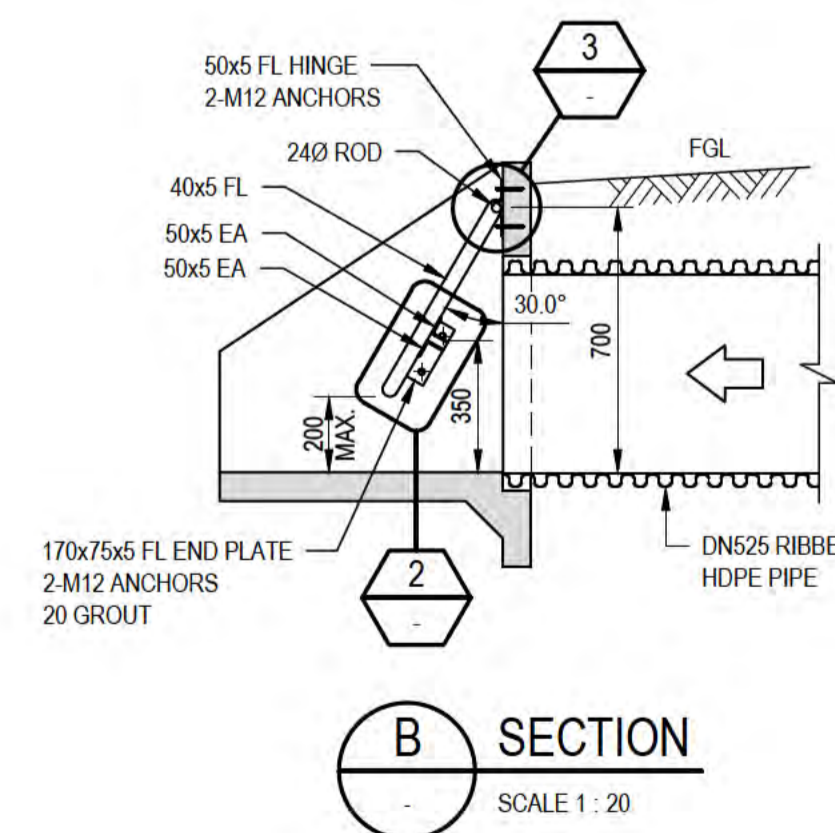
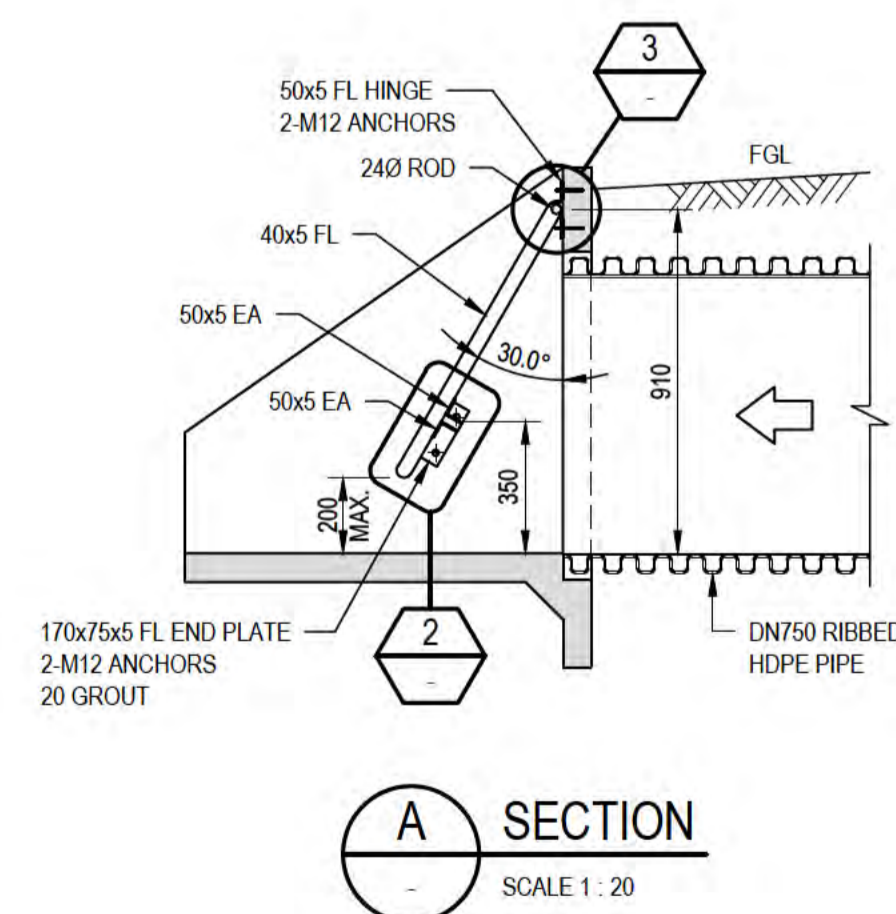
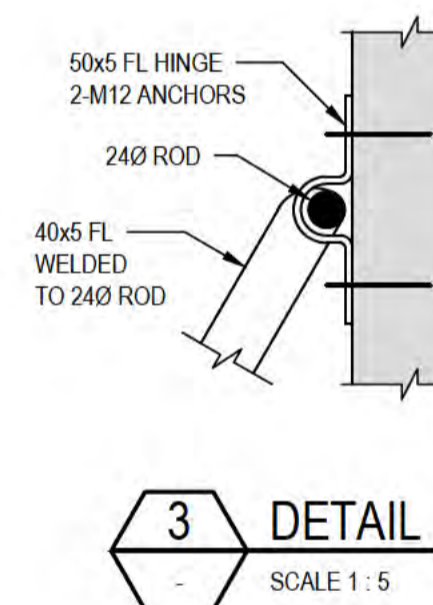
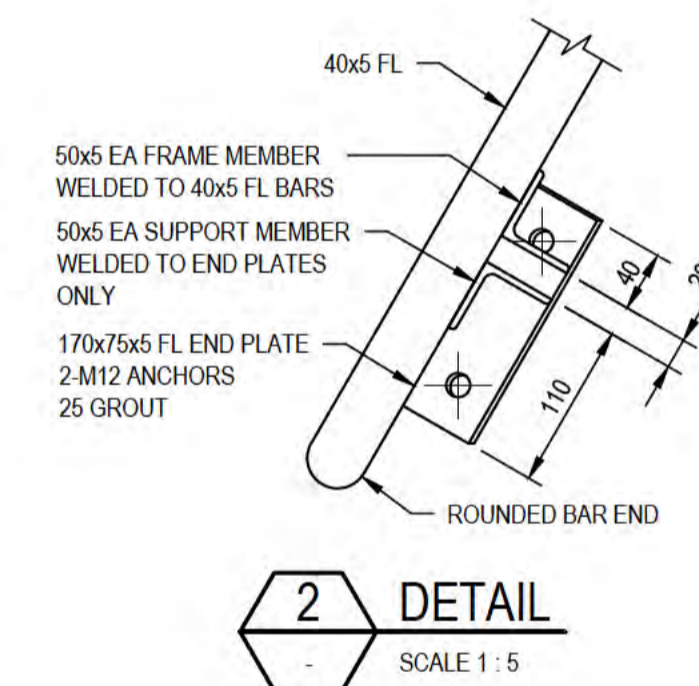
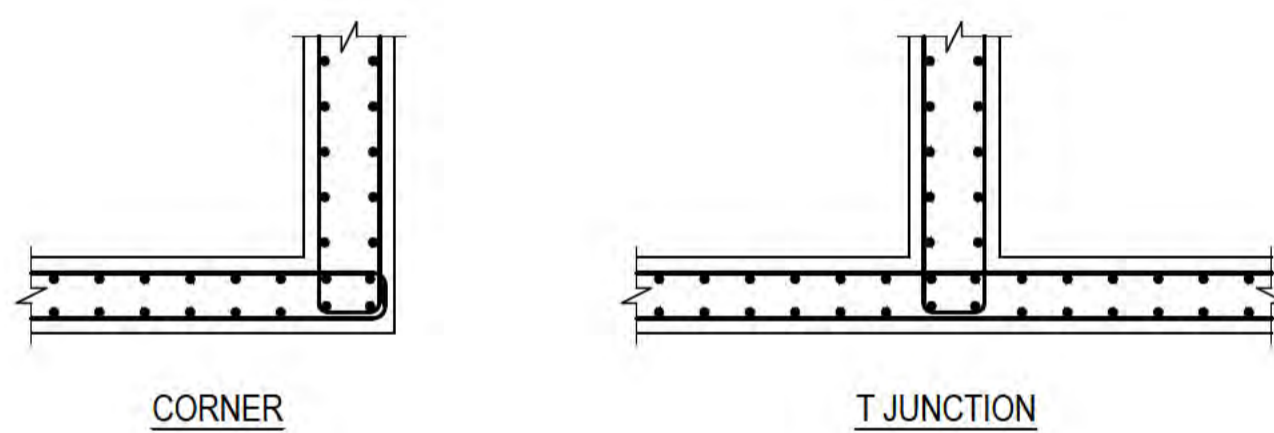
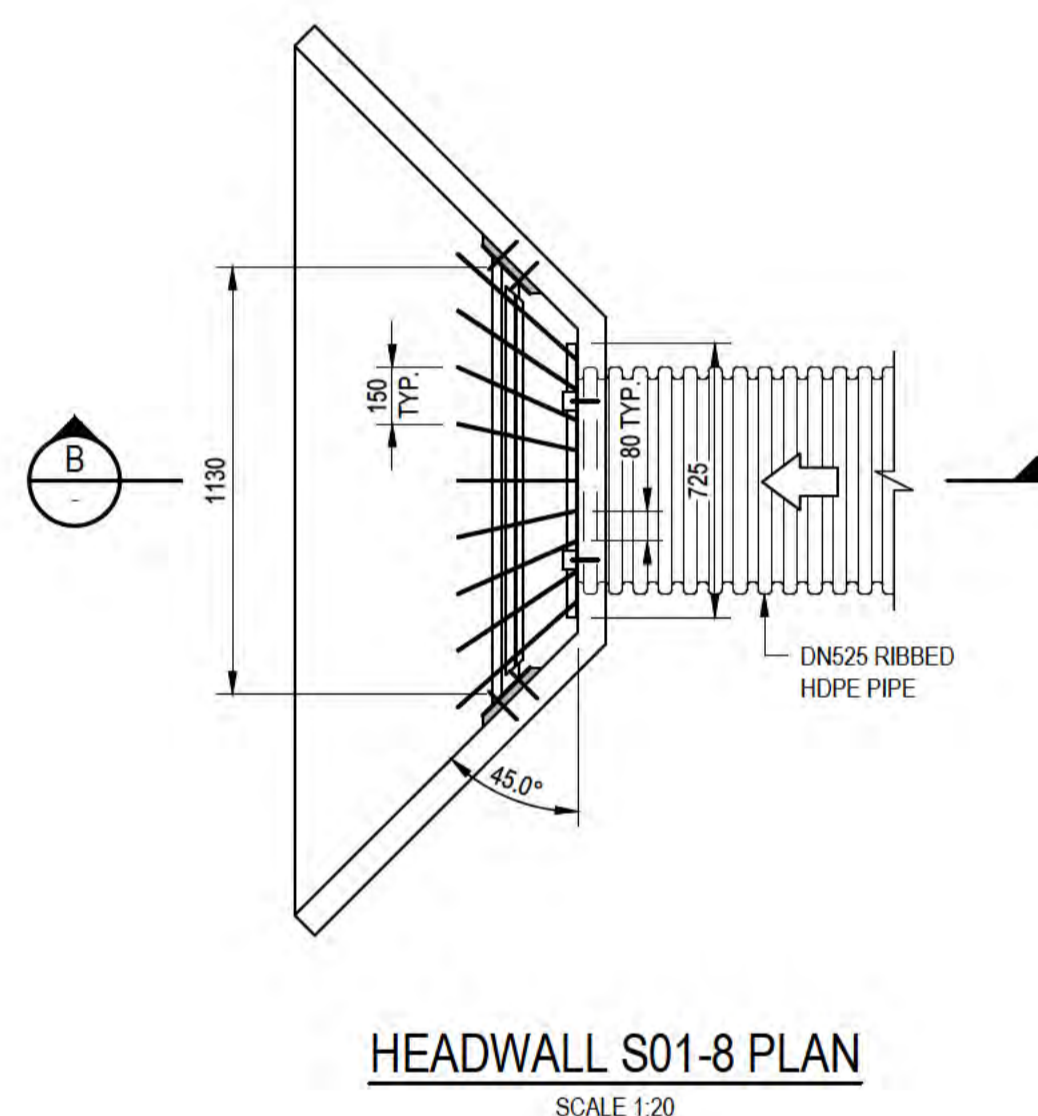
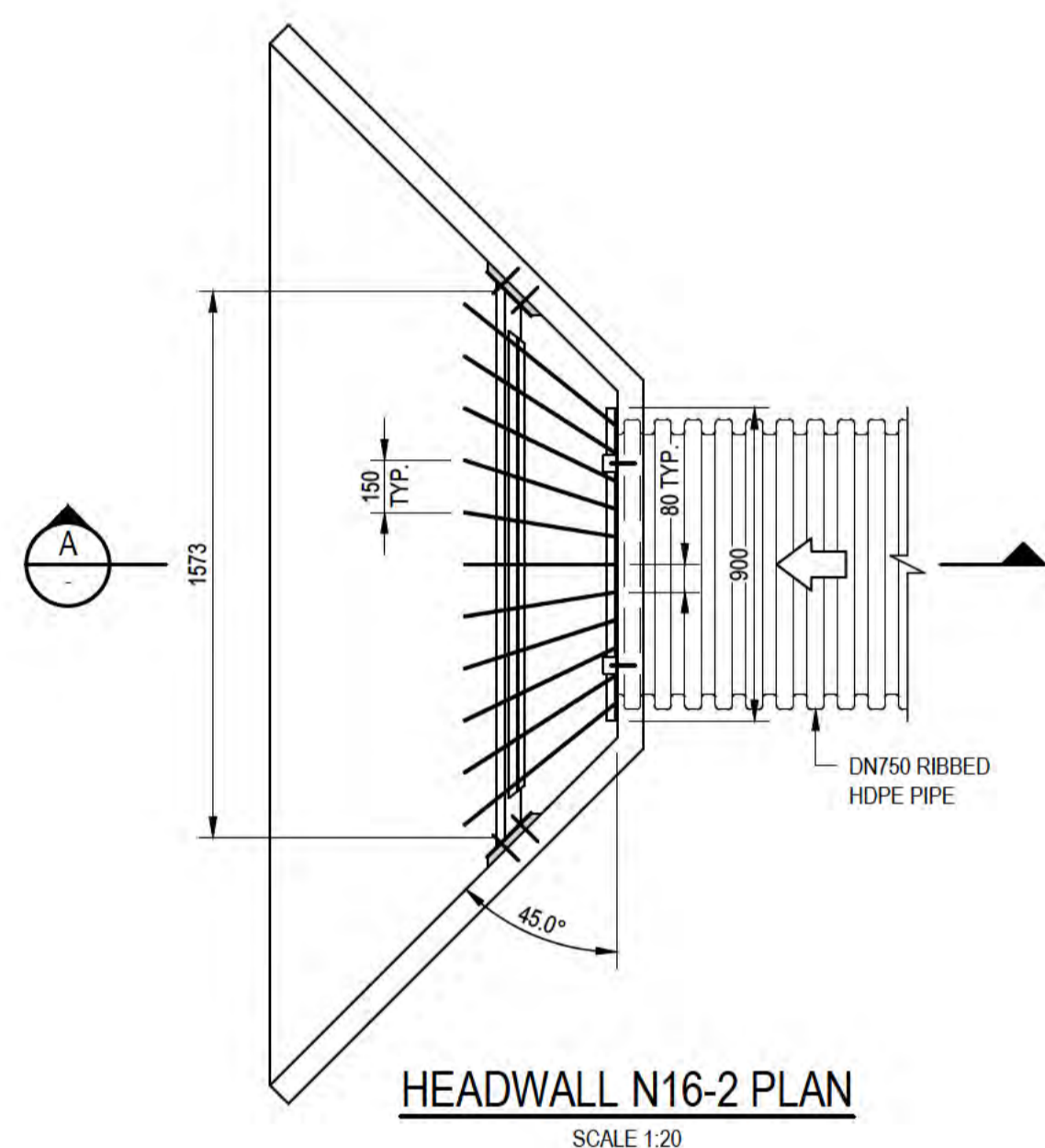
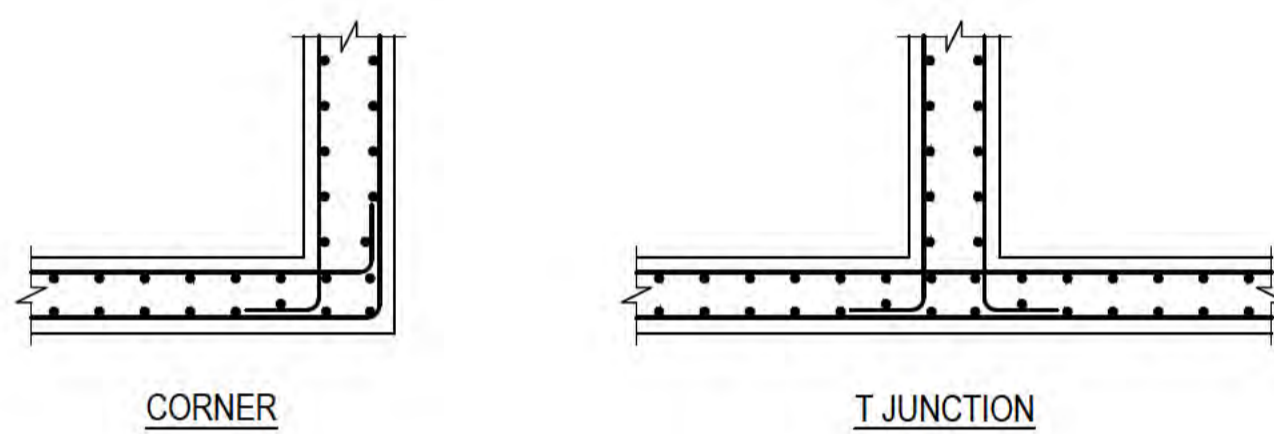
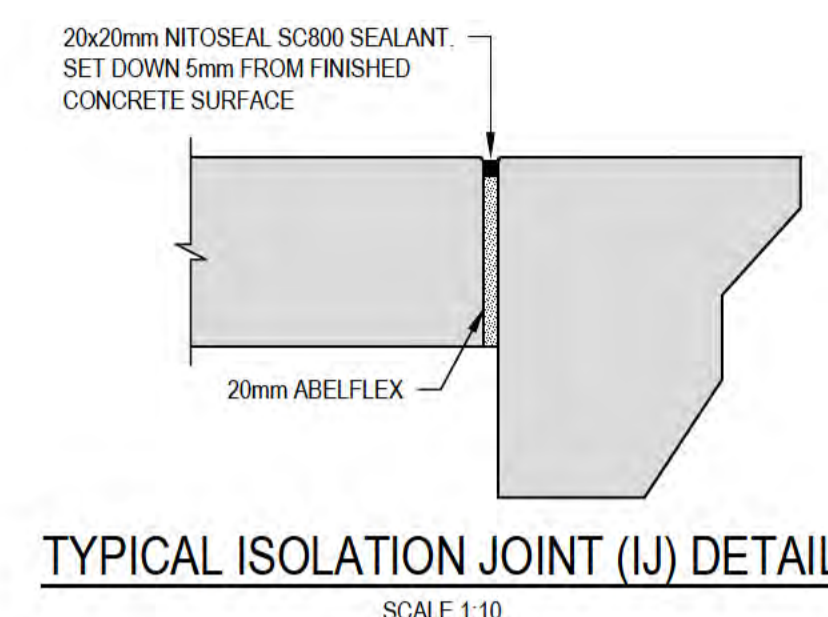
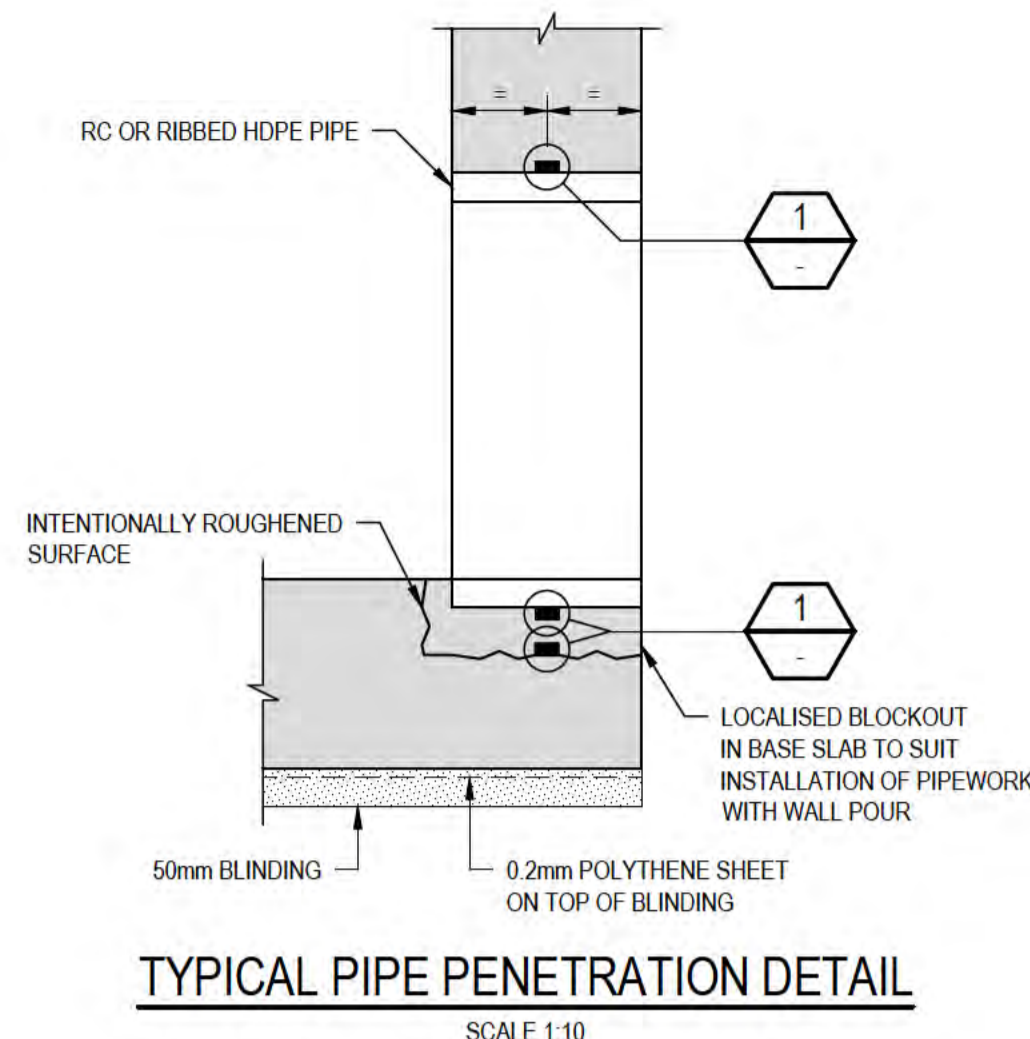
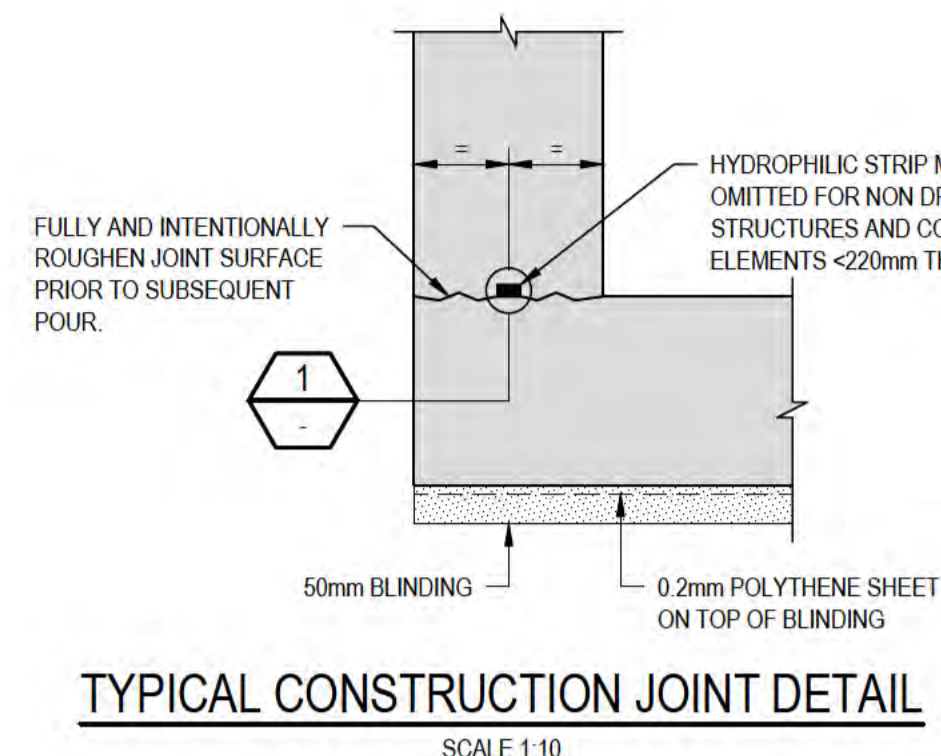
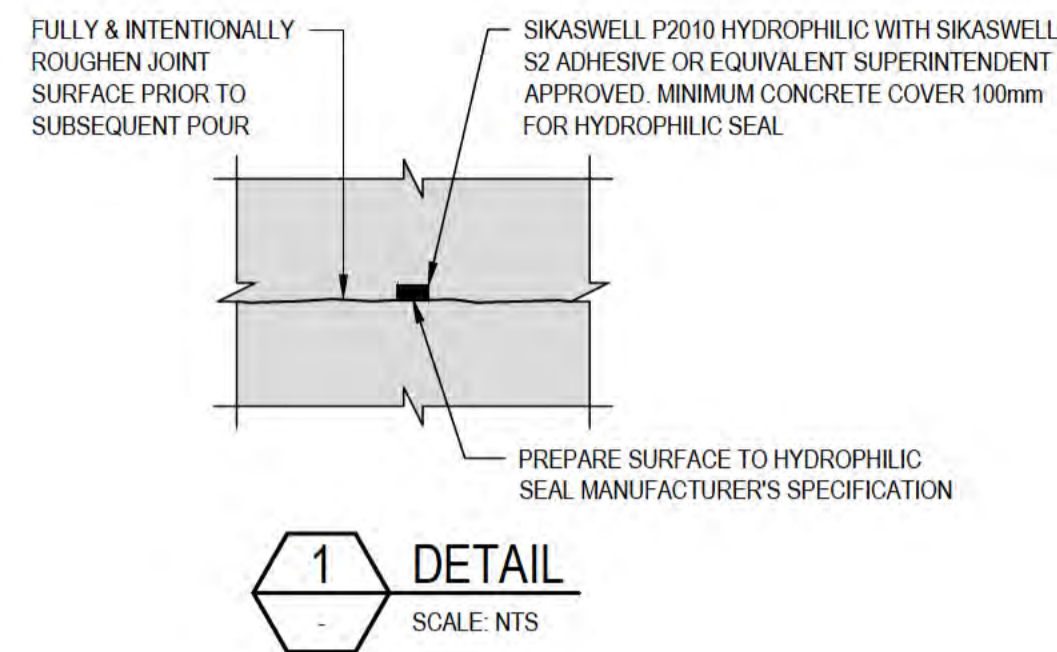
Level 10, 999 Hay Street Perth WA 6000  
 PO Box Y3106 Perth WA 6832 Australia  
 T 61 8 6222 8222 F 61 8 6222 8555  
 E permail@ghd.com.au W www.ghd.com

DO NOT SCALE		Drawn	L.RADICI	Designer	P.HULCUP
GHD Pty Ltd Conditions of Use. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.		Drafting Check	L.ORREAL*	Design Check	E.BOSUSTOW*
		Approved (Project Director)	Date		
Scale	N/A	This Drawing must not be used for construction unless signed as Approved			

Client	<b>DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT &amp; COMMUNICATIONS</b>		
Project	<b>CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS</b>		
Title	<b>STRUCTURAL NOTES</b>		
Original Size	<b>A1</b>	Drawing No:	<b>61-35637-S002</b>
		Rev:	<b>B</b>

**NOTES:**

1. REFER DRG 61-35637-S002 FOR GENERAL STRUCTURAL NOTES.
2. REFER DRGs 61-35637-C210 AND C220 FOR HEADWALL LOCATIONS.
3. REFER DRG 61-35637-C290 FOR HEADWALL DIMENSIONS.
4. EACH GRATE IS TO BE SUPPLIED WITH 2 x 0.5m LONG GALVANISED 8mm CHAINS WITH MASTER LOCK 1174D PRO SERIES COMBINATION OR EQUIVALENT TO SECURE THE GRATE TO THE SUPPORT MEMBER TO PREVENT ACCESS BY THE PUBLIC.



**PRELIMINARY**

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
B	RE-ISSUED FOR 90% DESIGN - CLIENT COMMENT		LR	JM*	PS*	20/11/20
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT		LR	JM*	PS*	30/09/20

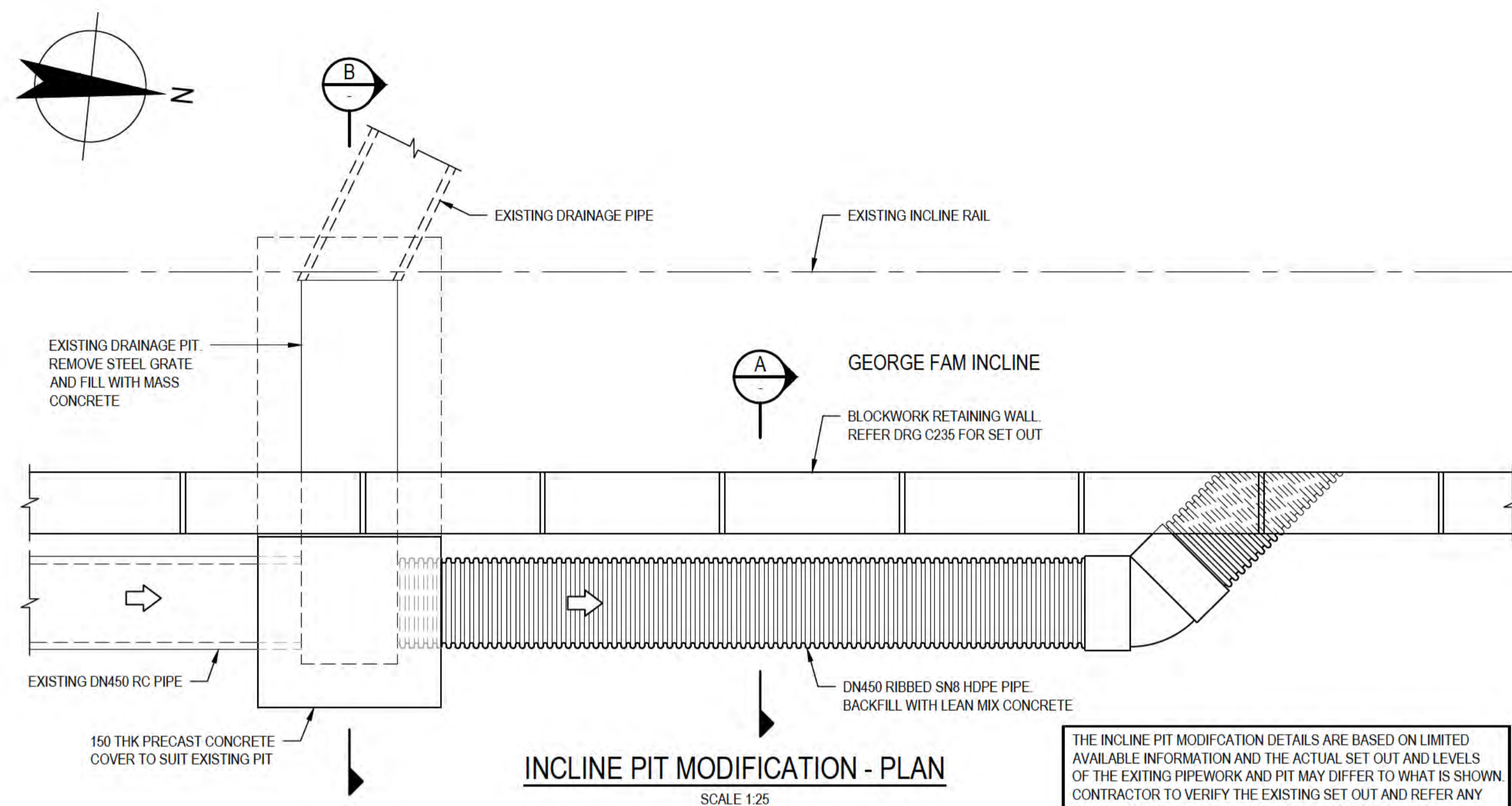


<b>DO NOT SCALE</b>	Drawn L.RADICI	Designer P.HULCUP
GHD Pty Ltd Conditions of Use. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.	Drafting Check L.ORREAL*	Design Check E.BOSUSTOW*
	Approved (Project Director) Date	
Scale AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

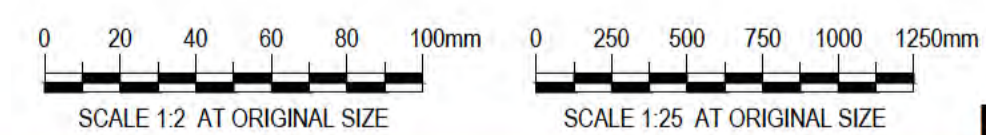
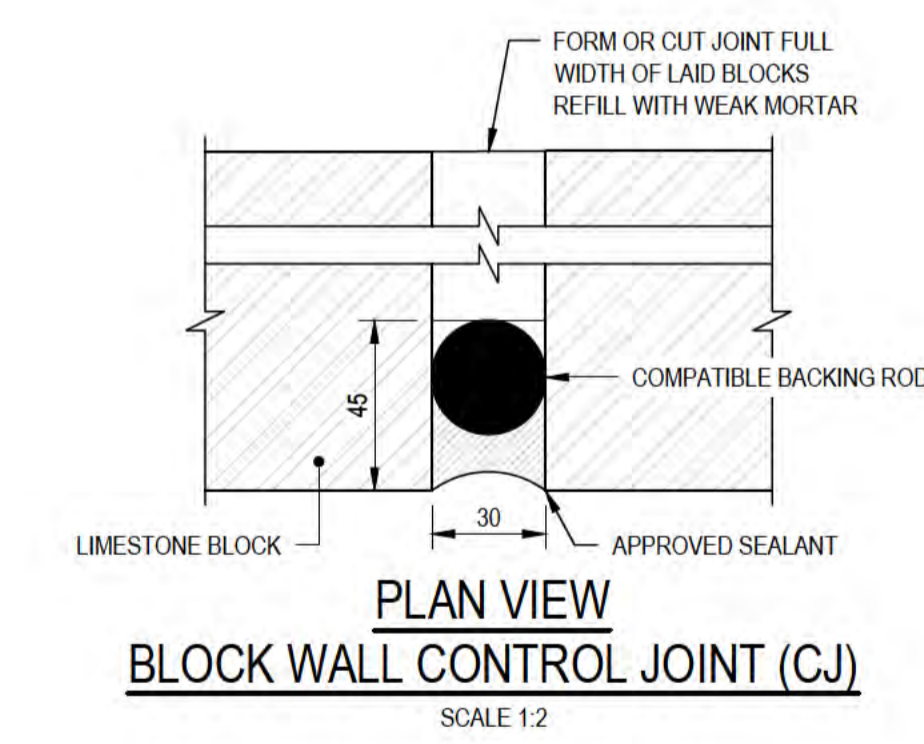
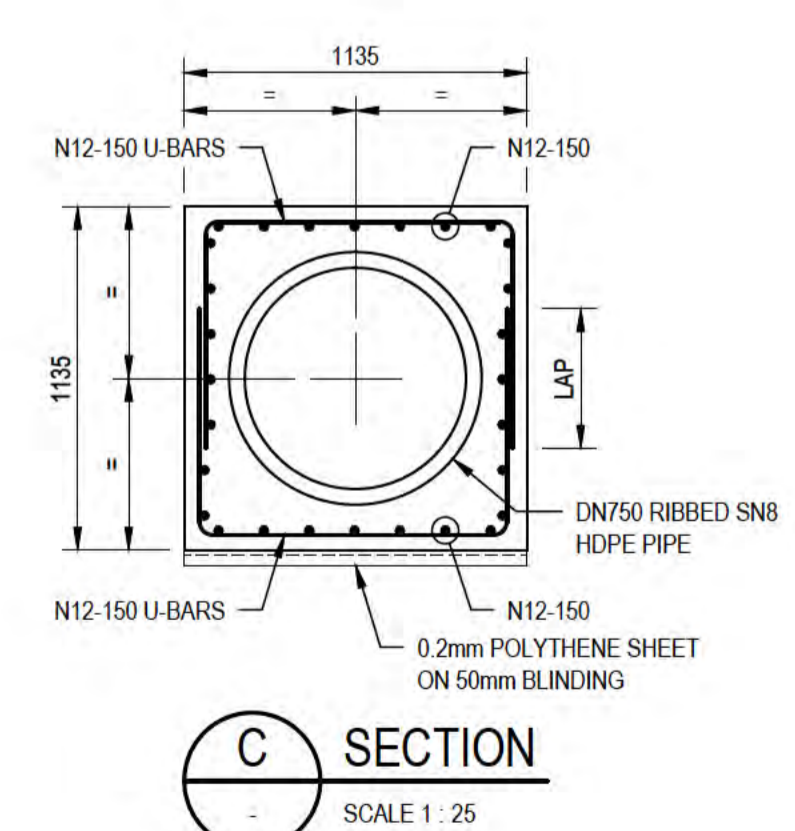
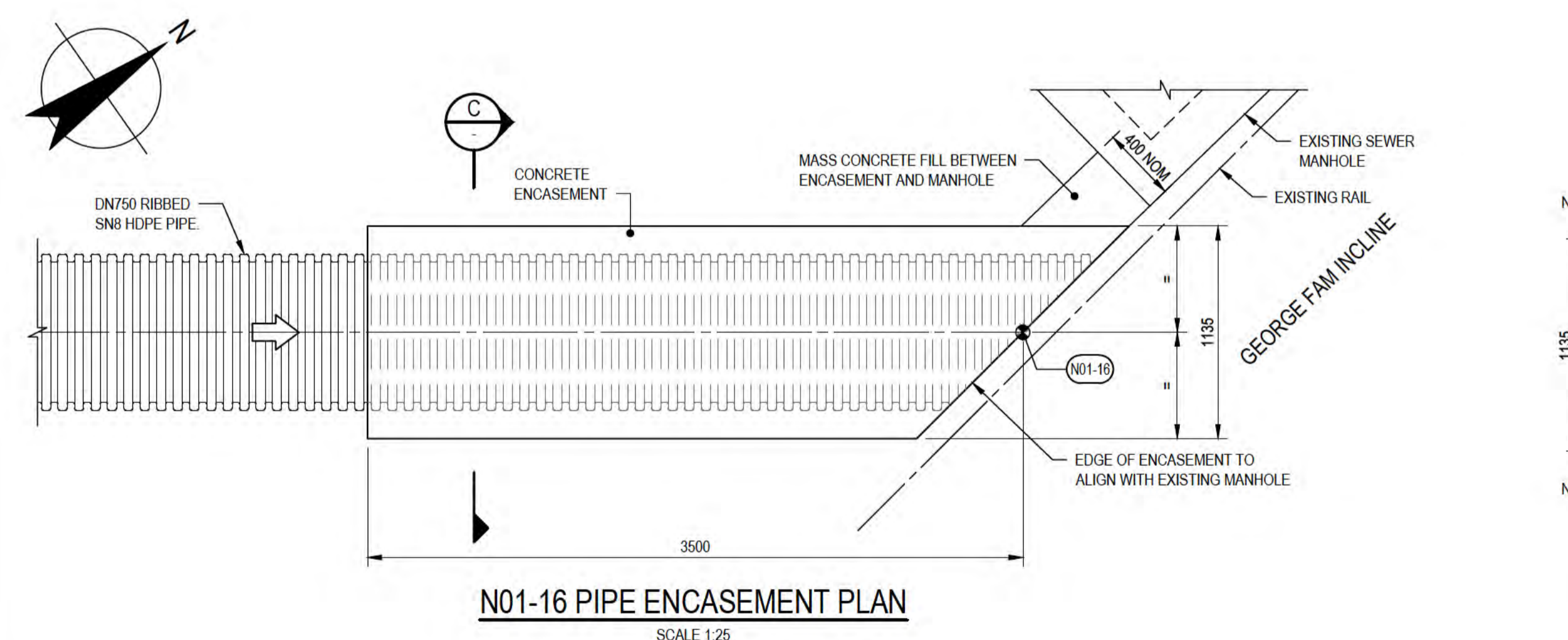
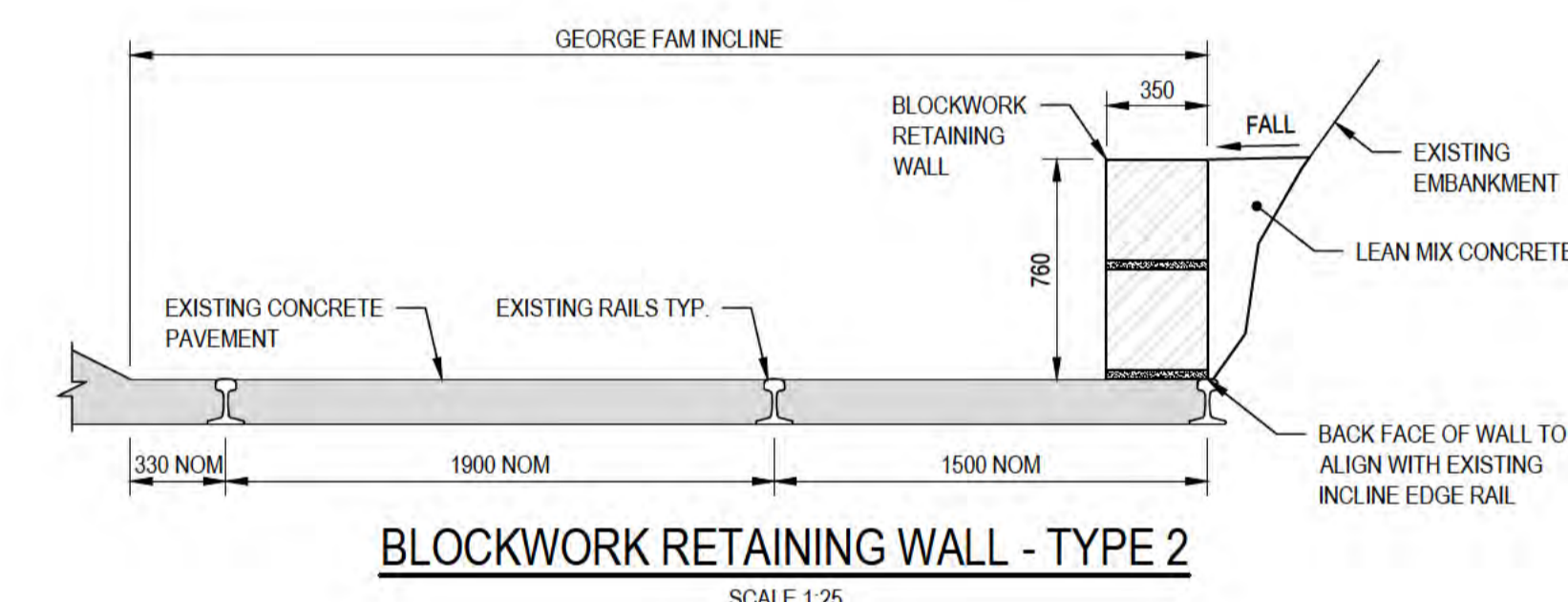
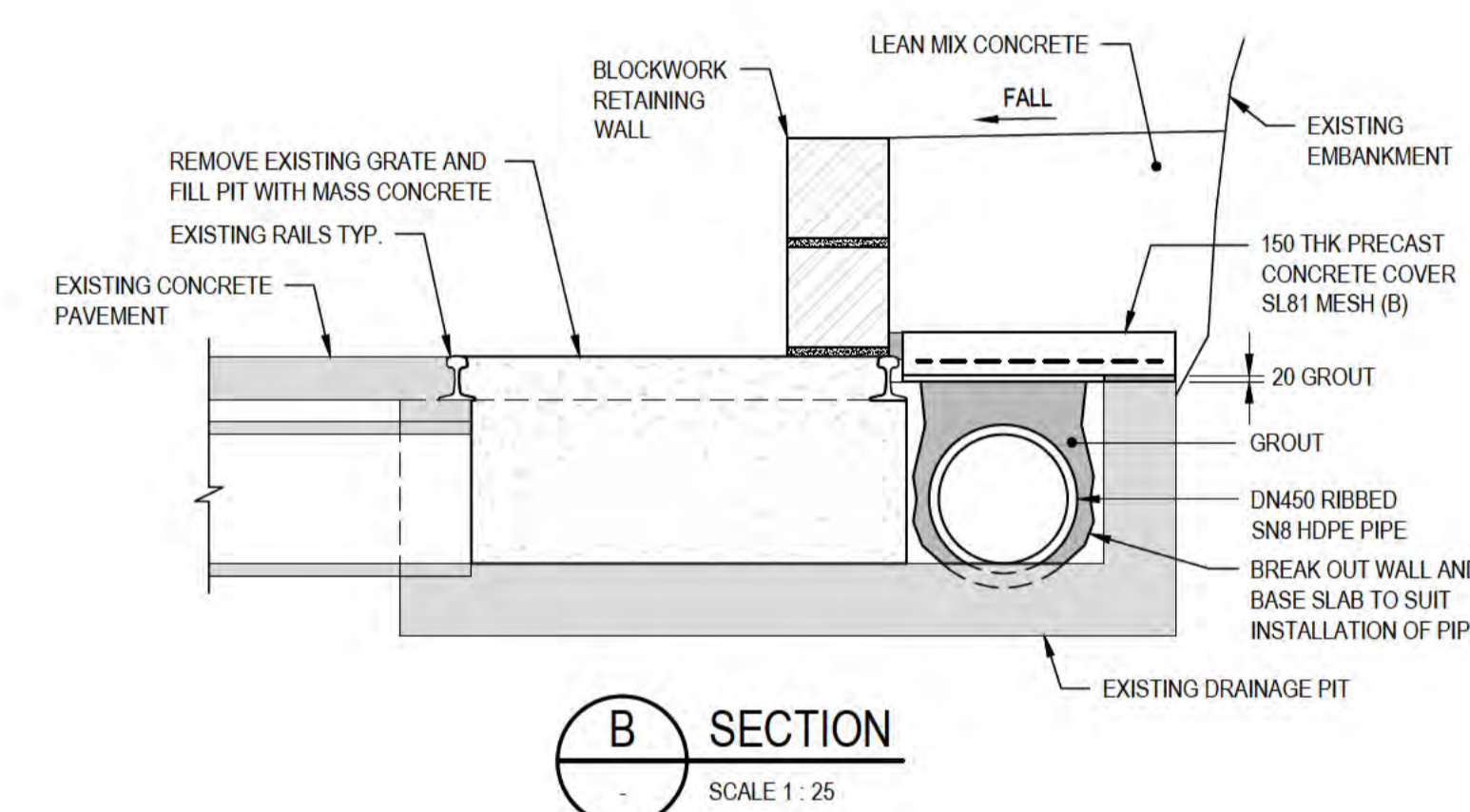
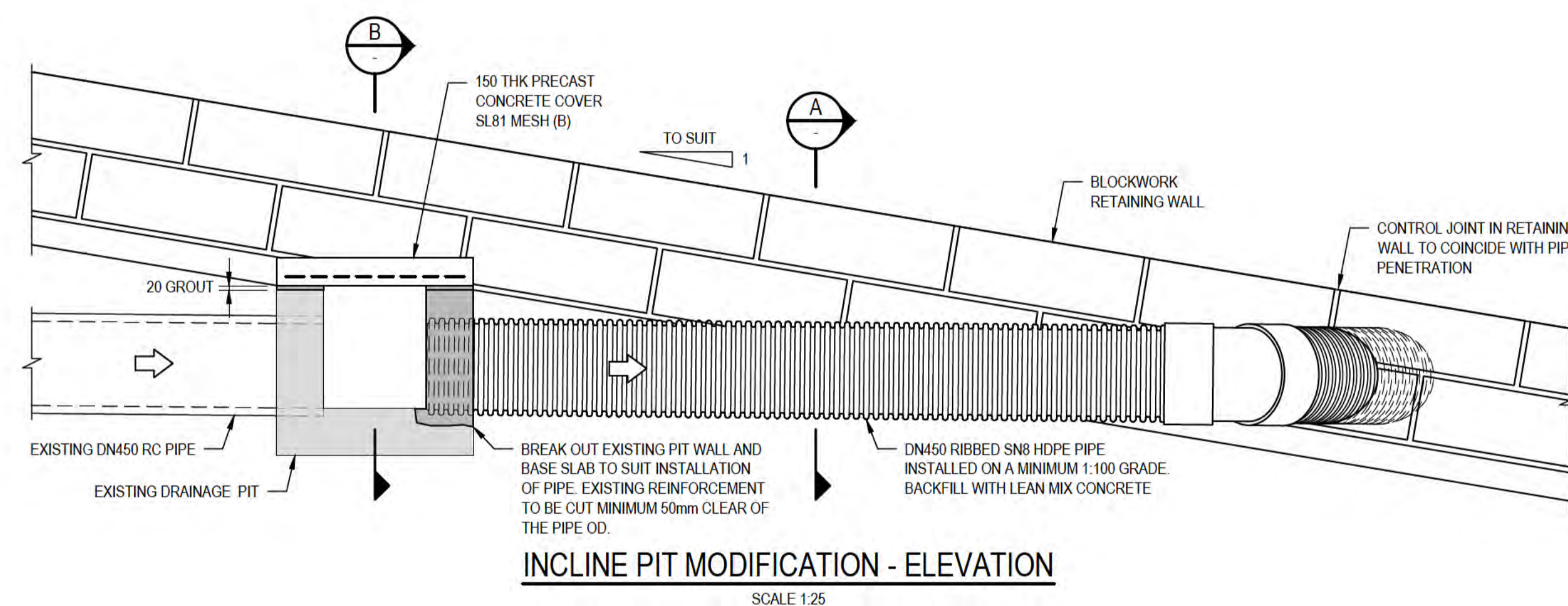
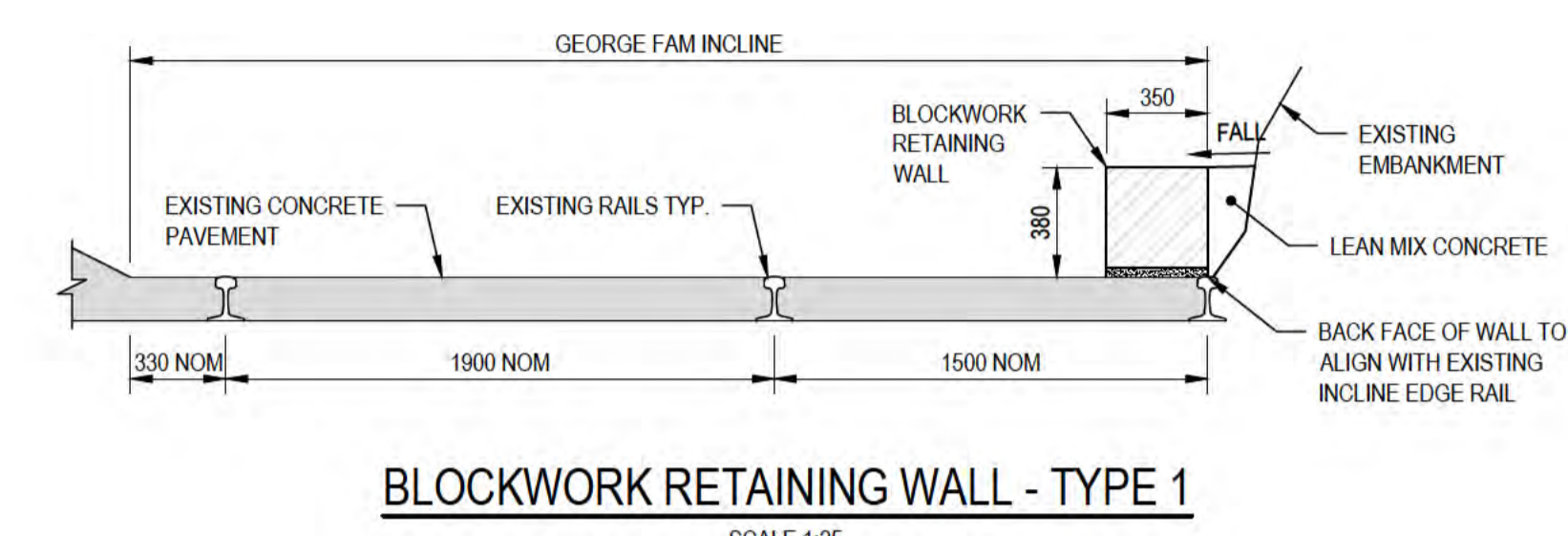
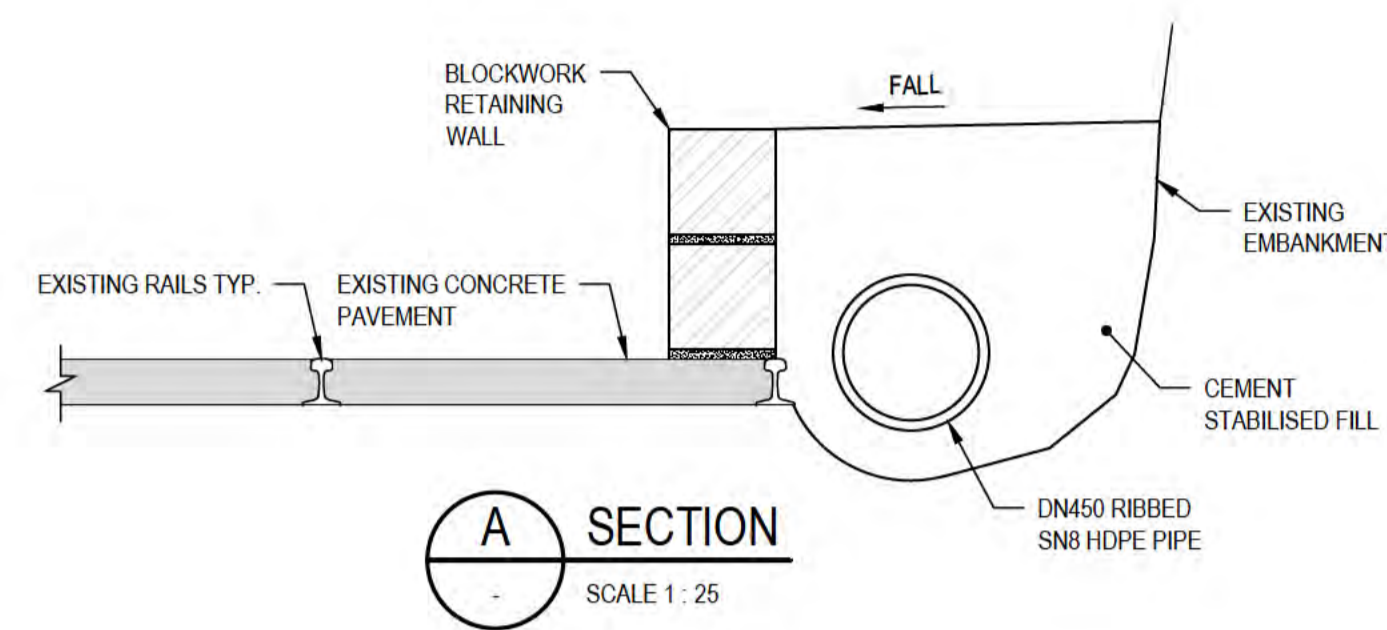
Client	DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS		
Project	CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS		
Title	TYPICAL STRUCTURAL & HEADWALL GRATE DETAILS		
Original Size	Drawing No:	61-35637-S003	
	Rev:	B	

**NOTES:**

1. REFER DRG 61-35637-S002 FOR GENERAL STRUCTURAL NOTES.
2. REFER DRG 61-35637-S003 FOR TYPICAL STRUCTURAL DETAILS.
3. REFER DRG 61-35637-C210 AND C235 FOR LOCATION AND SET OUT.
4. BLOCKWORK RETAINING WALLS TO BE CONSTRUCTED FROM NOMINAL 350mm x 350mm x 1000mm LIMESTONE BLOCKS.
5. BLOCKS TO HAVE A MINIMUM DENSITY OF 1800kg/m<sup>3</sup> (DRY).
6. BLOCKWORK TO BE LAID IN M3 MORTAR WITH A MAXIMUM JOINT THICKNESS OF 30mm.
7. PROVIDE CONTROL JOINTS IN THE BLOCKWORK WALL AT MAXIMUM 20m SPACING AND AT CHANGES OF WALL HEIGHT/CROSS SECTION (ie PIPE PENETRATION)

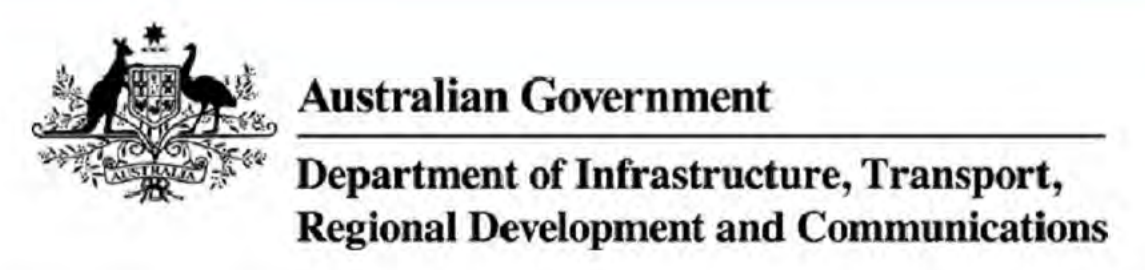


THE INCLINE PIT MODIFICATION DETAILS ARE BASED ON LIMITED AVAILABLE INFORMATION AND THE ACTUAL SET OUT AND LEVELS OF THE EXISTING PIPEWORK AND PIT MAY DIFFER TO WHAT IS SHOWN. CONTRACTOR TO VERIFY THE EXISTING SET OUT AND REFER ANY DISCREPANCIES TO THE CLIENT'S REPRESENTATIVE FOR RESOLUTION BEFORE PROCEEDING WITH THE AFFECTED WORK.

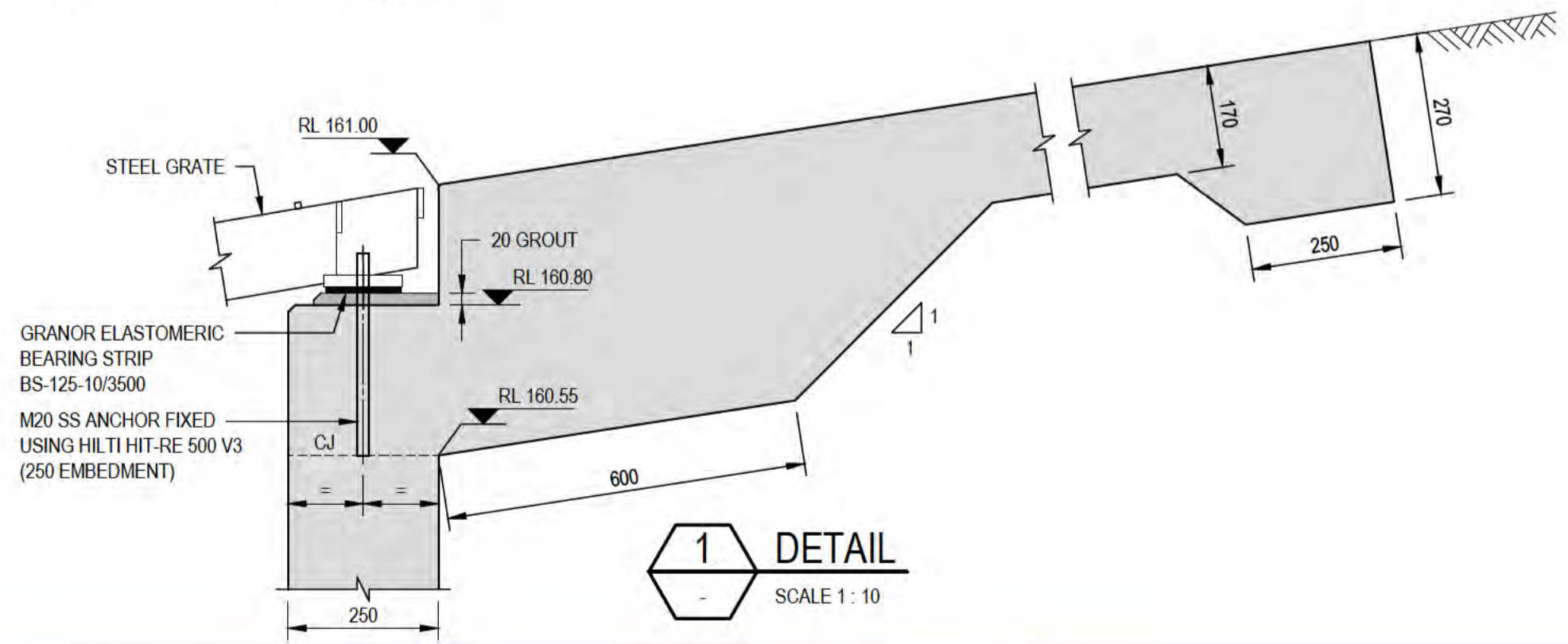
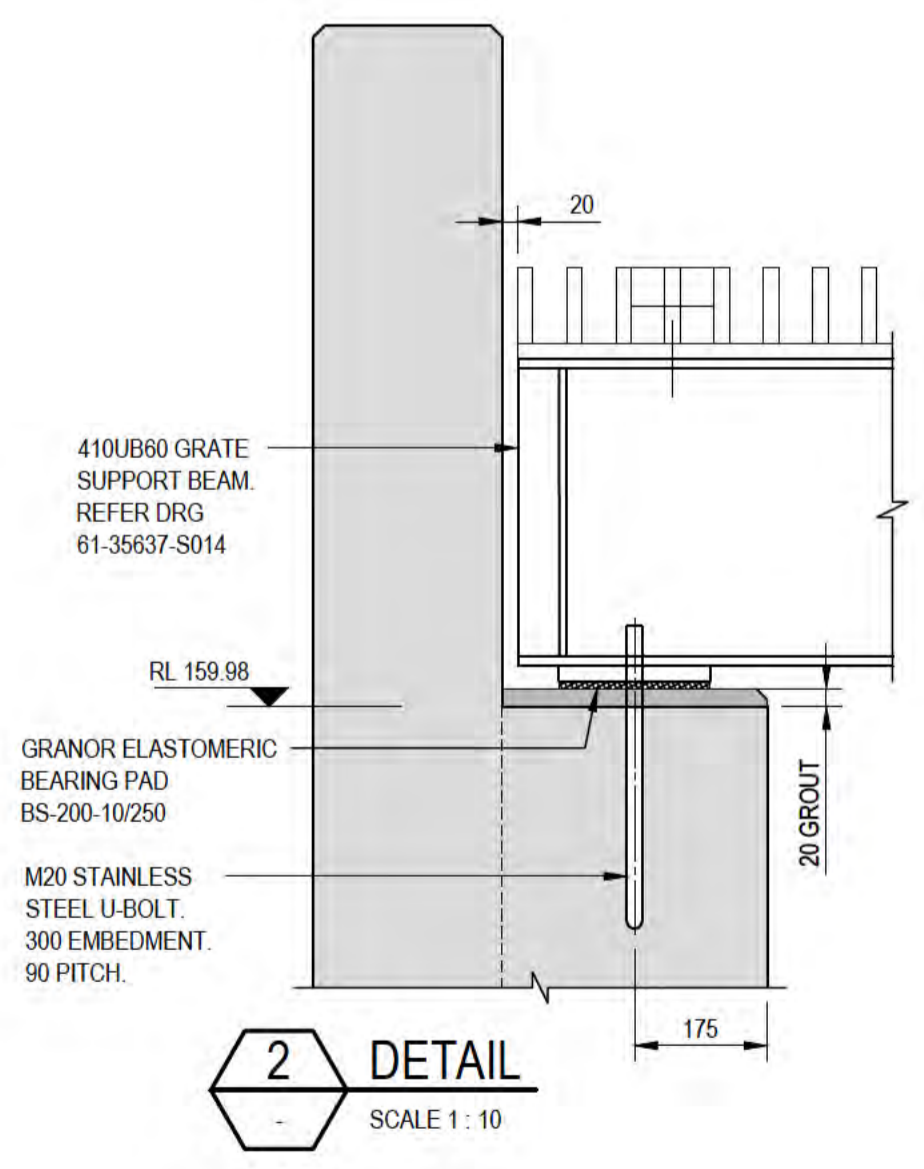
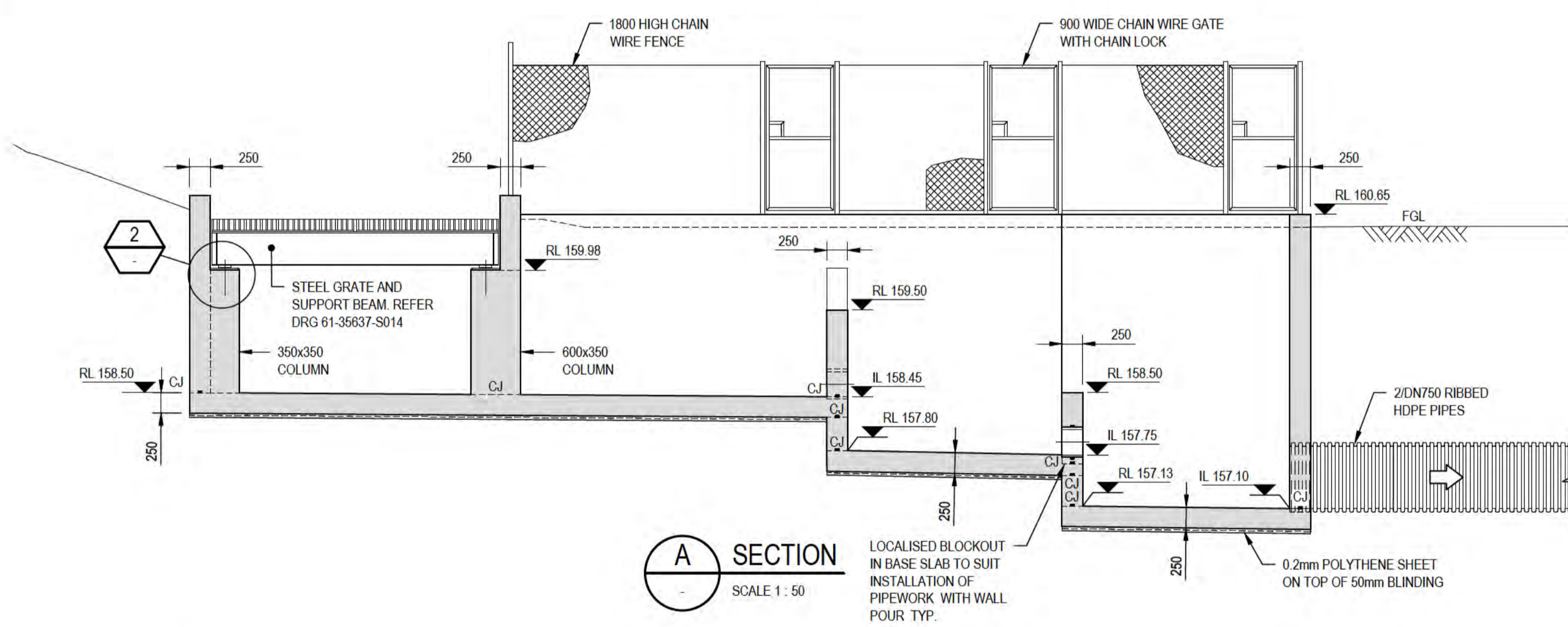
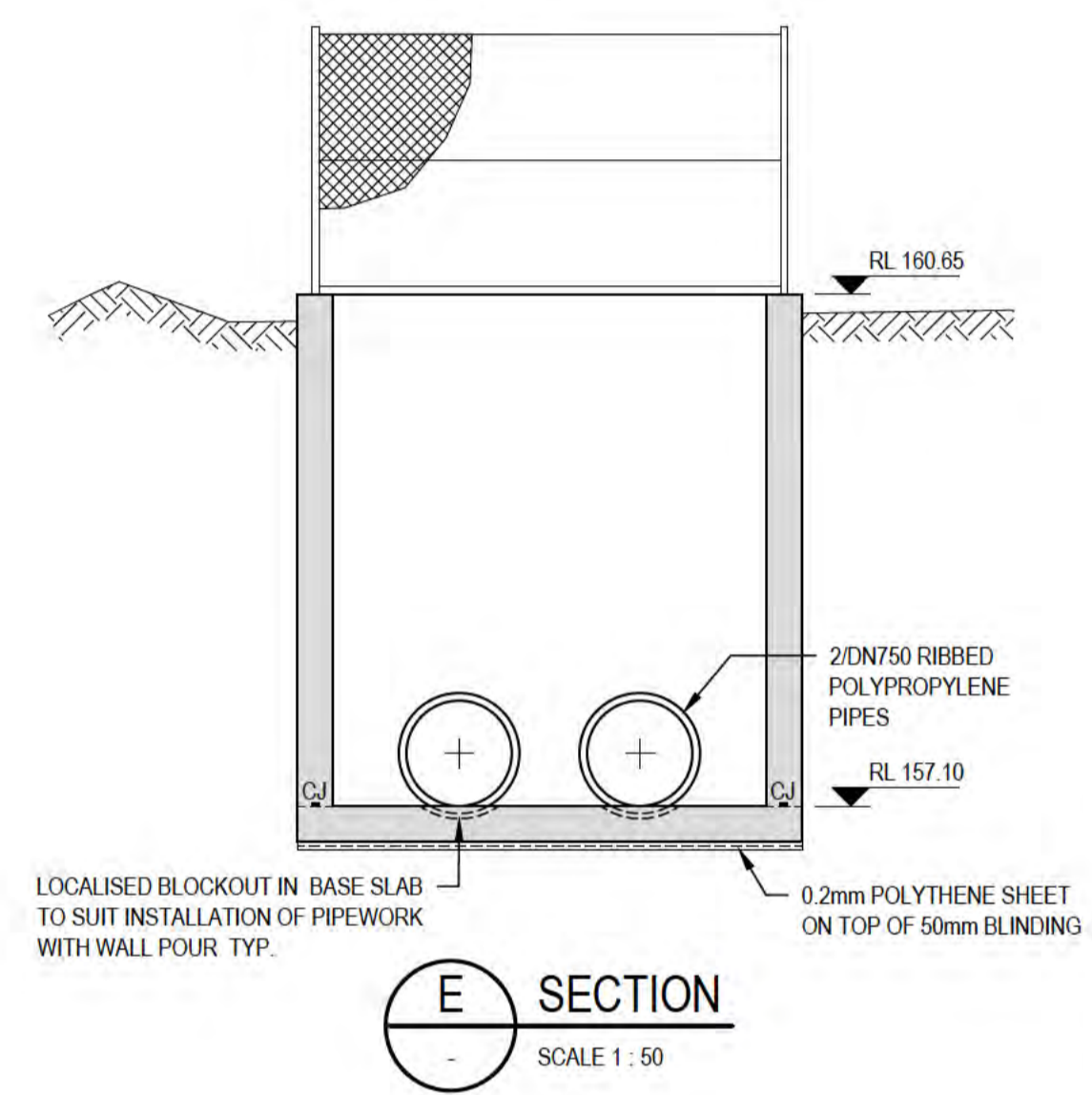
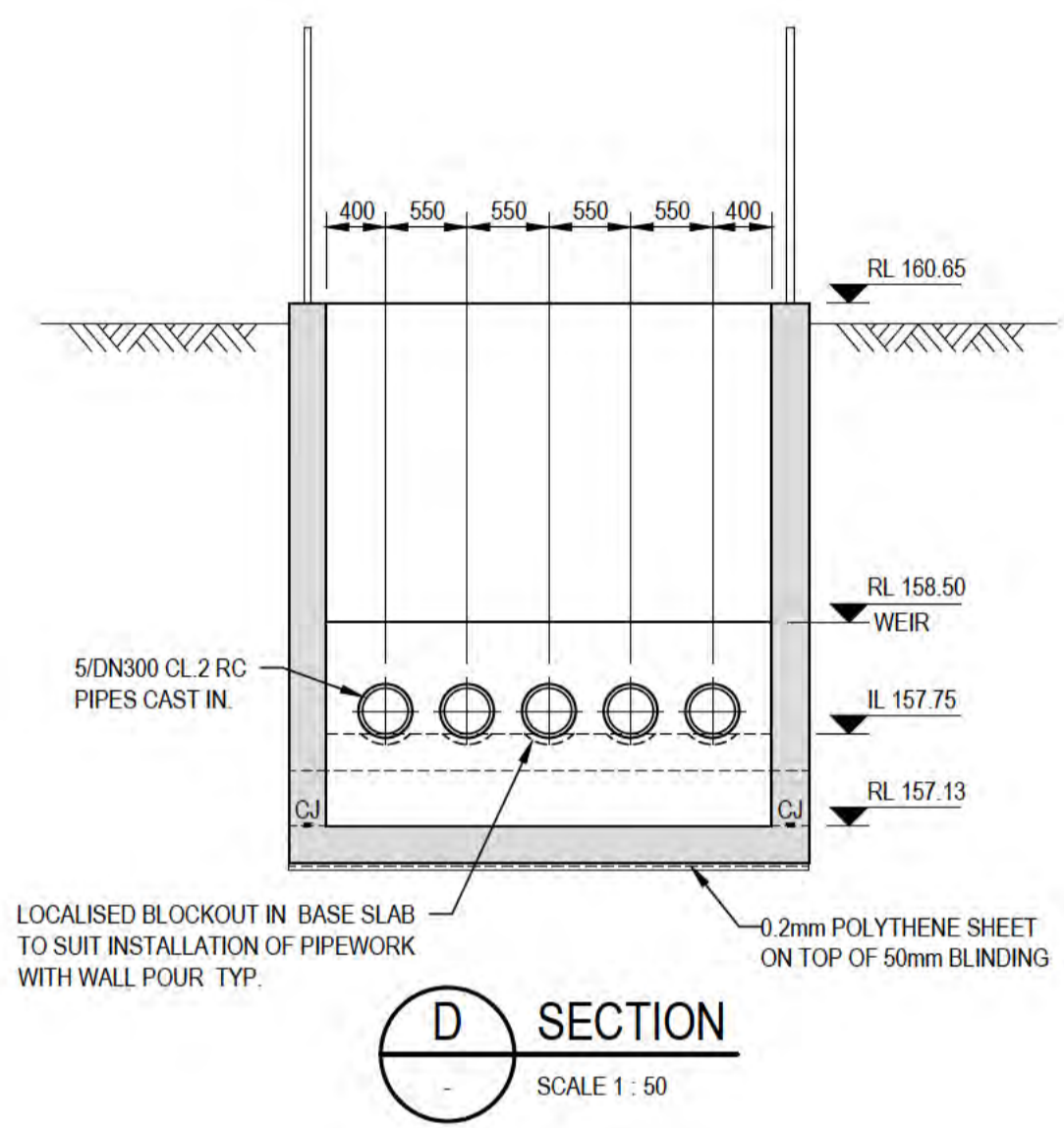
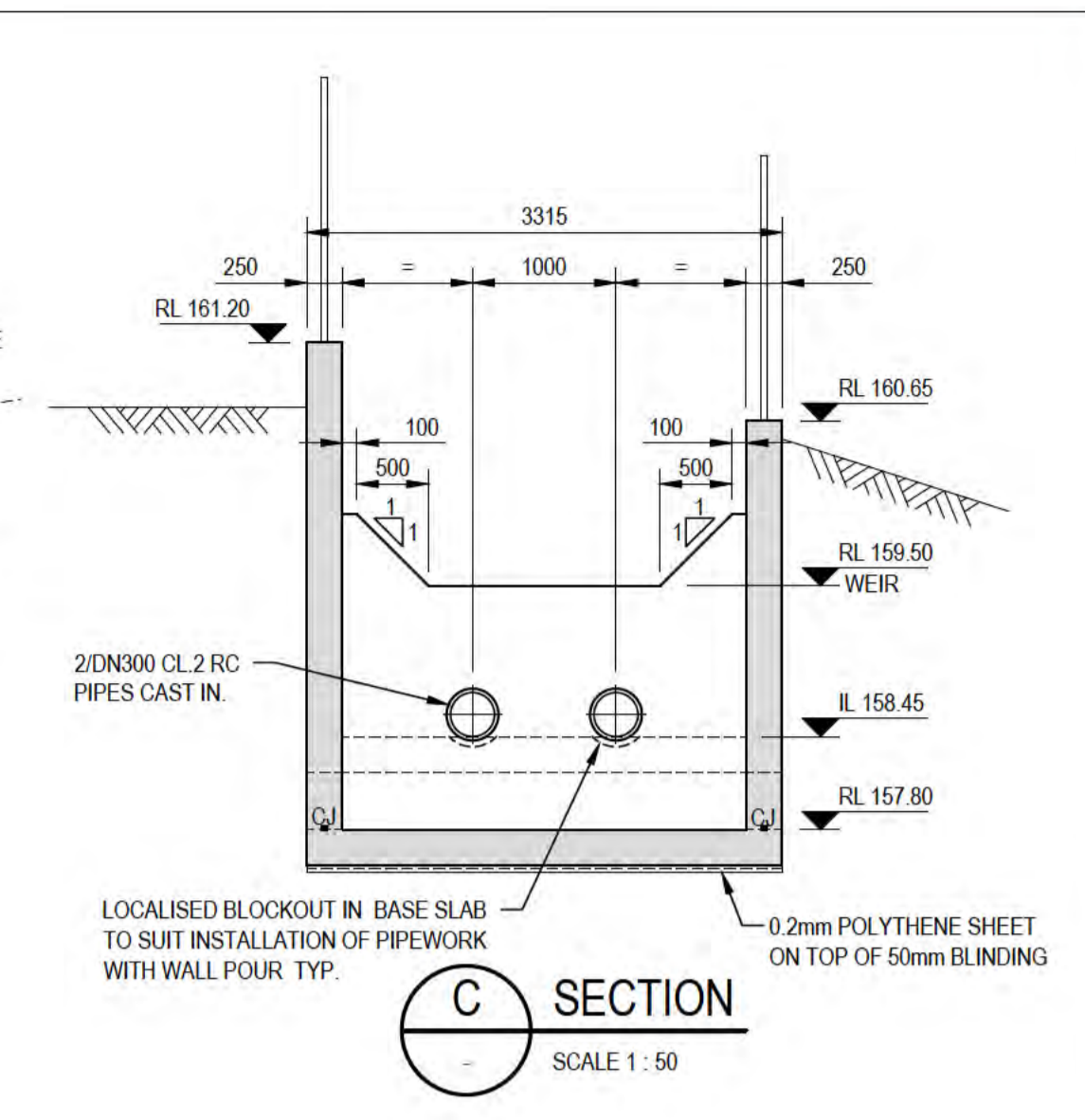
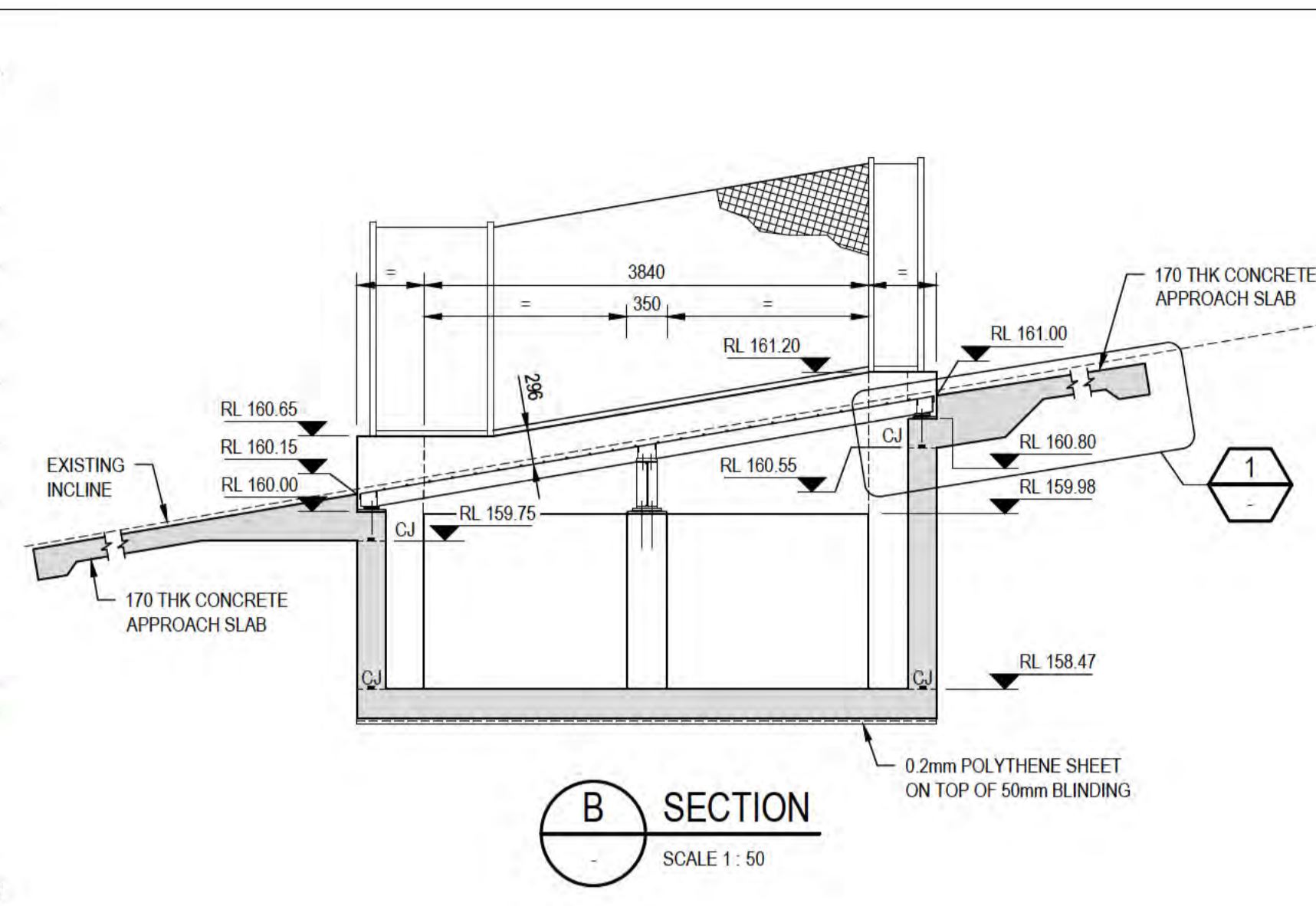
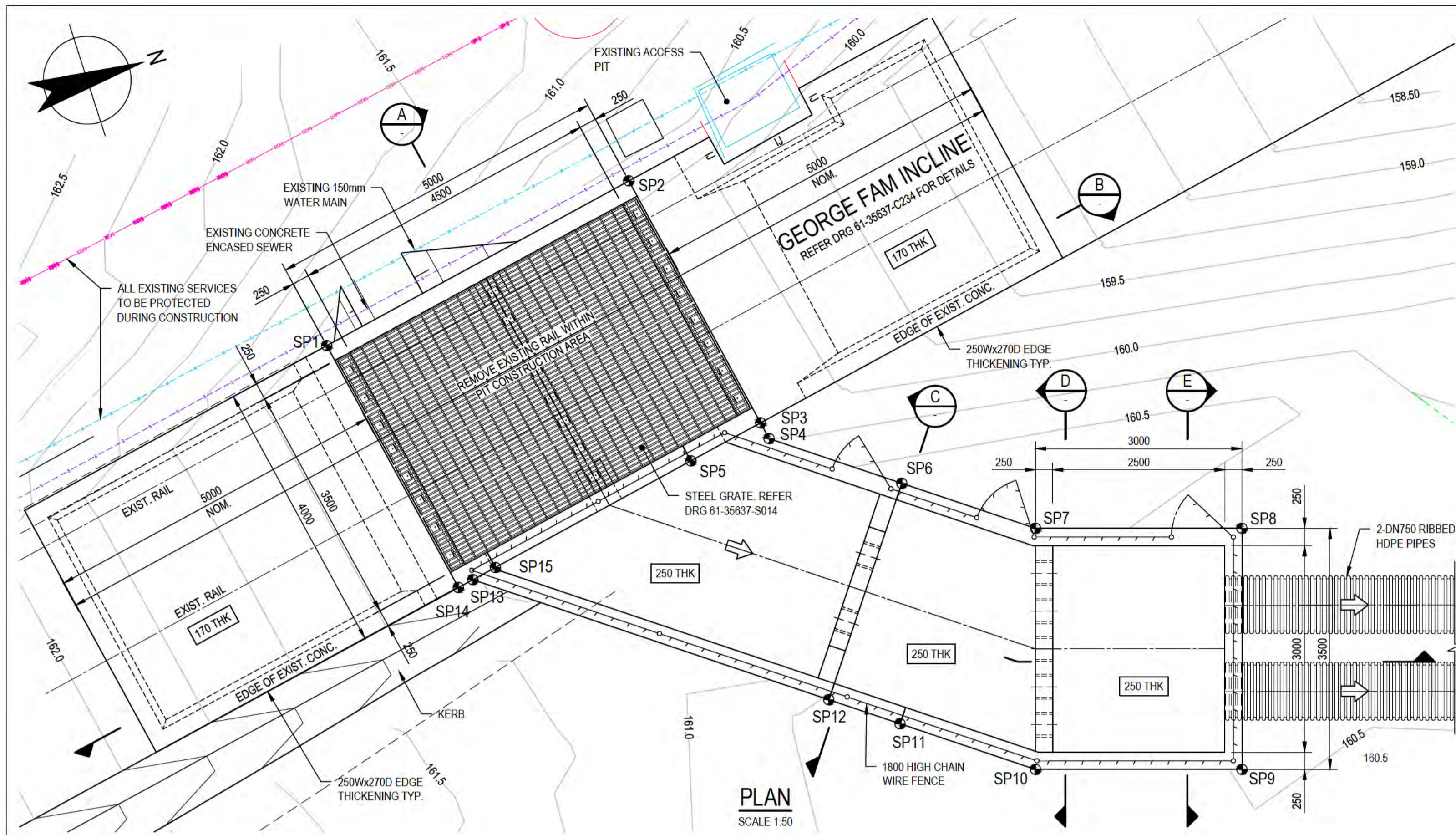


**PRELIMINARY**

No	Revision	Note	Drawn	Job Manager	Project Director	Date
B		RE-ISSUED FOR 90% DESIGN - CLIENT COMMENT	LR	JM*	PS*	20/11/20
A		ISSUED FOR 90% DESIGN - CLIENT COMMENT	LR	JM*	PS*	30/09/20



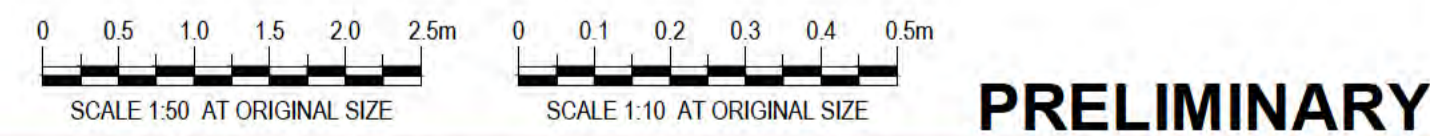
<b>DO NOT SCALE</b>	Drawn L.RADICI	Designer P.HULCUP	Client <b>DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT &amp; COMMUNICATIONS</b> Project <b>CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS</b> Title <b>NORTHERN DRUMSITE WORKS</b> <b>INCLINE MISCELLANEOUS STRUCTURES - PLANS &amp; DETAILS</b>	
GHD Pty Ltd Conditions of Use. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.	Drafting Check L.ORREAL*	Design Check E.BOSUSTOW*		
	Approved (Project Director) Date			
	Scale AS SHOWN	This Drawing must not be used for Construction unless signed as Approved		
	Original Size	A1	Drawing No: <b>61-35637-S005</b>	Rev: <b>B</b>



**THIS DRAWING IS TO BE PRINTED IN COLOUR**

- NOTES:**
- REFER DRGs 61-35637-C210, C233 AND C234 FOR PIT LOCATION AND LEGEND
  - EXISTING SERVICES LOCATIONS ARE INDICATIVE ONLY. CONTRACTOR TO CONFIRM LOCATION, SIZE AND LEVEL PRIOR TO COMMENCING CONSTRUCTION. SHOULD ANY CLASHES BE IDENTIFIED WITH PROPOSED WORKS THE CONTRACTOR IS TO IMMEDIATELY NOTIFY THE CLIENT'S REPRESENTATIVE.
  - EXISTING COMMUNICATIONS INFORMATION IS INCOMPLETE. VERIFICATION OF PRESENCE THROUGHOUT SITE REQUIRED PRIOR TO COMMENCING CONSTRUCTION
  - REFER DRG 61-35637-S002 FOR GENERAL STRUCTURAL NOTES.
  - REFER DRG 61-35637-S003 FOR TYPICAL STRUCTURAL DETAILS.
  - REFER DRGs 61-35637-S011, S012 AND S013 FOR REINFORCEMENT DETAILS.
  - REFER DRG 61-35637-S014 FOR STEELWORK DETAILS.
  - BEDDING MATERIAL, FOUNDATION COMPACTION AND BACKFILL COMPACTION TO BE AS PER SPECIFICATION.
  - THE DRAINAGE GRATE IS TRAFFICABLE AND HAS BEEN DESIGNED FOR W80 WHEEL LOAD, A180 AXLE LOAD AND M1800 MOVING TRAFFIC LOAD IN ACCORDANCE WITH AS 5100.2
  - THE PIT WALLS HAVE BEEN DESIGNED FOR VEHICLE SURCHARGE LOADING IN ACCORDANCE WITH CL14.2 OF AS 5100.2. HIGHWAY TRAFFIC VEHICLES MAY BE OPERATED UP TO THE BACK OF THE WALLS.

SETOUT			
POINT	EASTING (m)	NORTHING (m)	RL TOP OF WALL
SP1	573968.511	8847282.466	161.30
SP2	573967.577	8847287.378	160.45
SP3	573971.507	8847288.125	160.65
SP4	573971.763	8847288.174	160.65
SP5	573971.722	8847286.992	160.65
SP6	573972.970	8847289.810	160.65
SP7	573974.188	8847291.459	160.65
SP8	573975.105	8847294.316	160.65
SP9	573978.438	8847293.245	160.65
SP10	573977.520	8847290.389	160.65
SP11	573976.287	8847288.718	160.65
SP12	573975.639	8847287.840	161.20
SP13	573972.396	8847283.447	161.20
SP14	573972.441	8847283.213	161.20
SP15	573972.328	8847283.814	161.20



**PRELIMINARY**

No	Revision	Note	Drawn	Job Manager	Project Director	Date
B		RE-ISSUED FOR 90% DESIGN - CLIENT COMMENT	LR	JM*	PS*	20/11/20
A		ISSUED FOR 90% DESIGN - CLIENT COMMENT	LR	JM*	PS*	30/09/20

**Australian Government**  
**Department of Infrastructure, Transport, Regional Development and Communications**

**GHD**  
 Level 10, 999 Hay Street Perth WA 6000  
 PO Box Y3106 Perth WA 6832 Australia  
 T 61 8 6222 8222 F 61 8 6222 8555  
 E permail@ghd.com.au W www.ghd.com

**DO NOT SCALE**

Conditions of Use:  
 This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

Drawn: L.RADICI  
 Designer: P.HULCUP  
 Drafting Check: L.LORREAL\*  
 Design Check: E.BOSUSTOW\*  
 Approved (Project Director) Date:  
 Scale: AS SHOWN

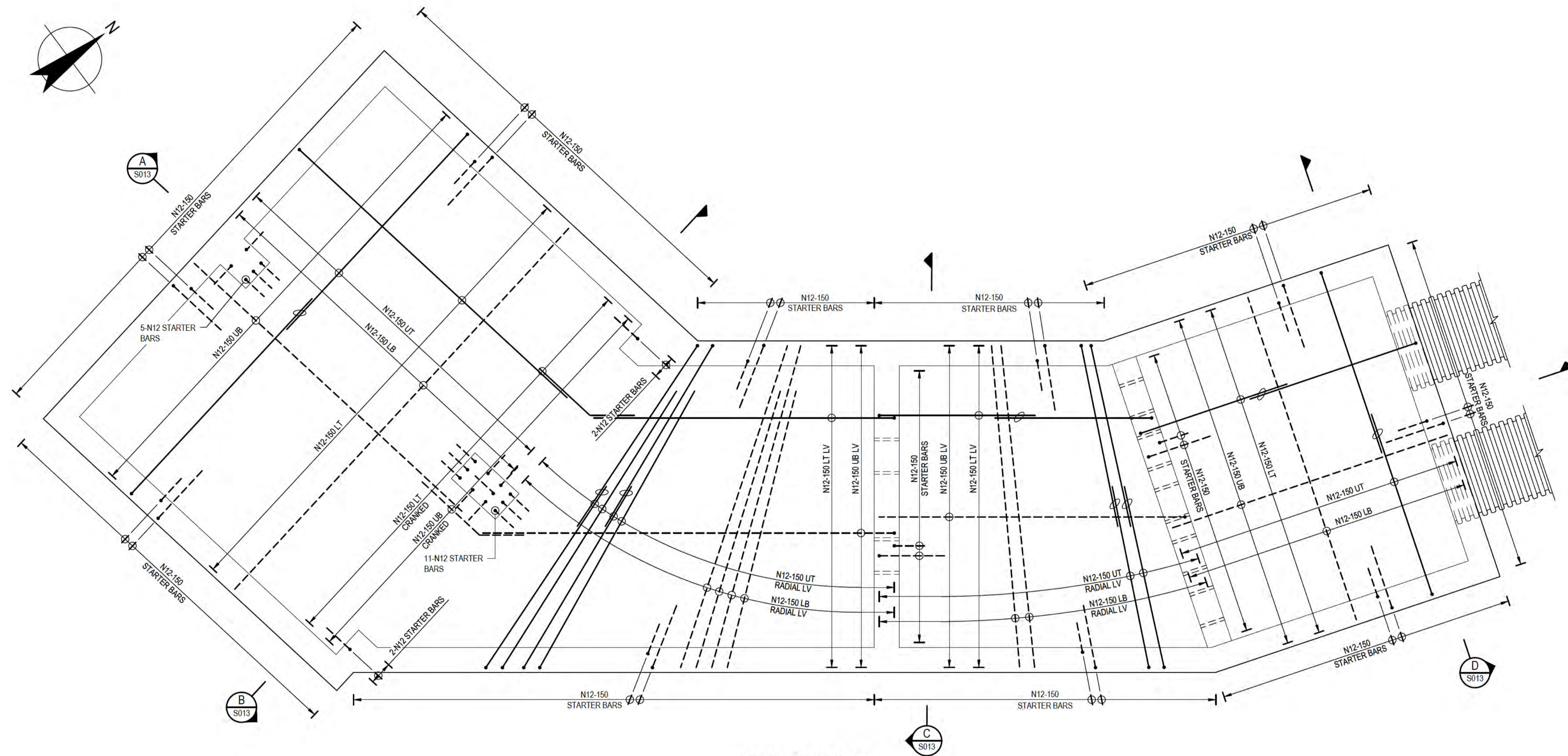
This Drawing must not be used for Construction unless signed as Approved

Client: **DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS**  
 Project: **CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS**  
 Title: **NORTHERN DRUMSITE WORKS INCLINE DIVERSION PIT & CHANNEL - GENERAL ARRANGEMENT**

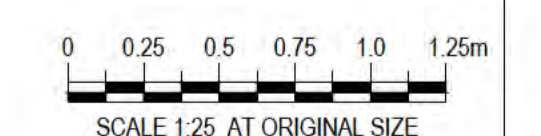
Original Size: **A1**  
 Drawing No: **61-35637-S010**  
 Rev: **B**

**NOTES:**

1. REFER DRG# 61-35637-C210, C233 AND C234 FOR PIT LOCATION.
2. REFER DRG 61-35637-S002 FOR GENERAL STRUCTURAL NOTES.
3. REFER DRG 61-35637-S003 FOR TYPICAL STRUCTURAL DETAILS.
4. REFER DRG 61-35637-S010 FOR GENERAL ARRANGEMENT.
5. REFER DRG 61-35637-S012 FOR REINFORCEMENT DETAILS SHEET 2 OF 3.
6. REFER DRG 61-35637-S013 FOR REINFORCEMENT DETAILS SHEET 3 OF 3.
7. REFER DRG 61-35637-S014 FOR STEELWORK DETAILS.



**PLAN - BASE SLAB**  
SCALE 1:25



**PRELIMINARY**

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT		LR	JM*	PS*	30/09/20



**DO NOT SCALE**

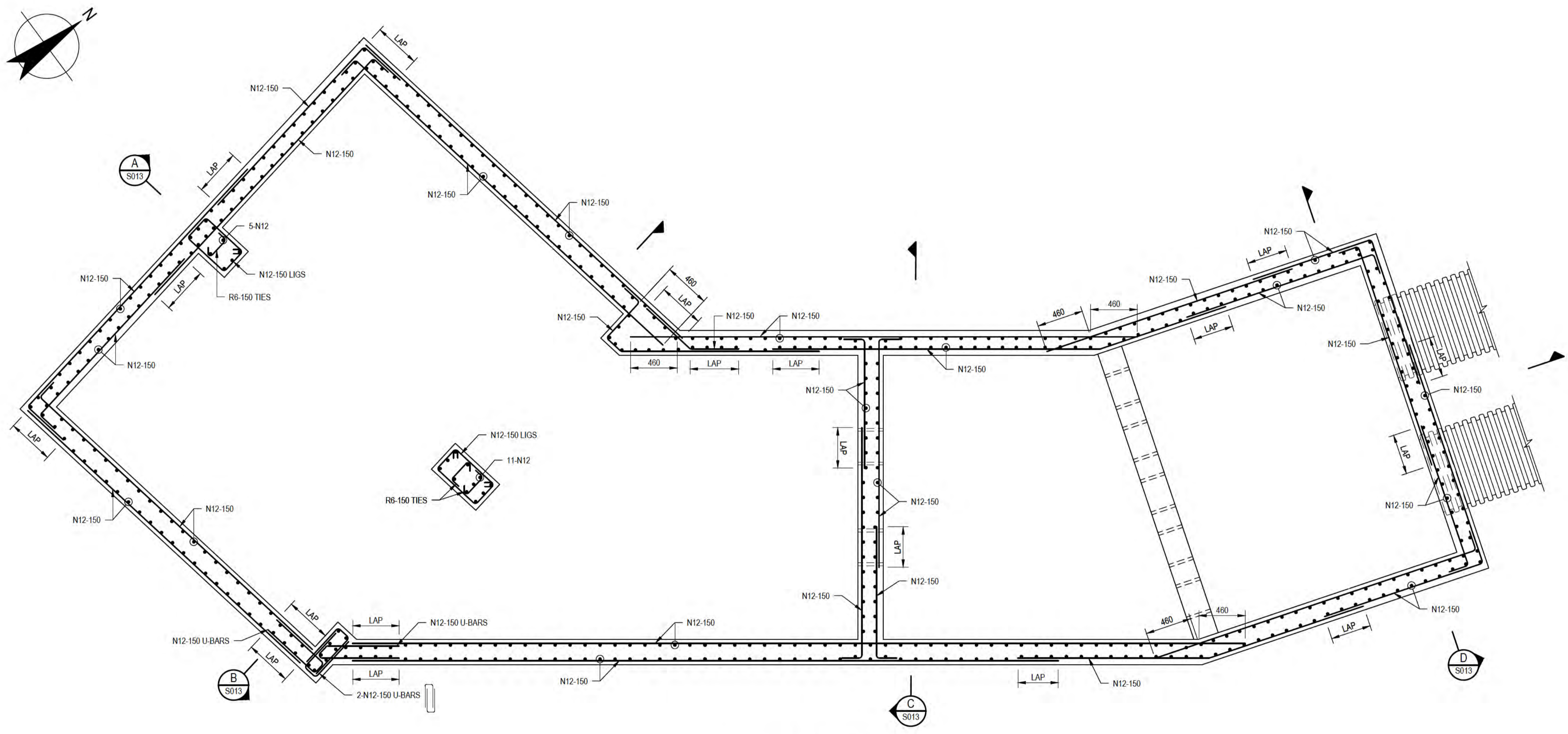
Conditions of Use.  
This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

Drawn	L.RADICI	Designer	P.HULCUP
Drafting Check	L.LORREAL*	Design Check	E.BOSUSTOW*
Approved (Project Director)			
Date			
Scale	1:25		

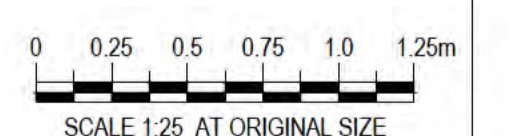
Client	DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS		
Project	CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS		
Title	NORTHERN DRUMSITE WORKS INCLINE DIVERSION PIT & CHANNEL - REINF. DETAILS SHEET 1 OF 3		
Original Size	A1	Drawing No:	61-35637-S011
Rev:	A		

**NOTES:**

1. REFER DRG 61-35637-C210, C233 AND C234 FOR PIT LOCATION.
2. REFER DRG 61-35637-S002 FOR GENERAL STRUCTURAL NOTES.
3. REFER DRG 61-35637-S003 FOR TYPICAL STRUCTURAL DETAILS.
4. REFER DRG 61-35637-S010 FOR GENERAL ARRANGEMENT.
5. REFER DRG 61-35637-S011 FOR REINFORCEMENT DETAILS SHEET 1 OF 3.
6. REFER DRG 61-35637-S013 FOR REINFORCEMENT DETAILS SHEET 3 OF 3.
7. REFER DRG 61-35637-S014 FOR STEELWORK DETAILS.



**PLAN - WALLS AT RL 159.00**  
SCALE 1:25



**PRELIMINARY**

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT		LR	JM*	PS*	30/09/20

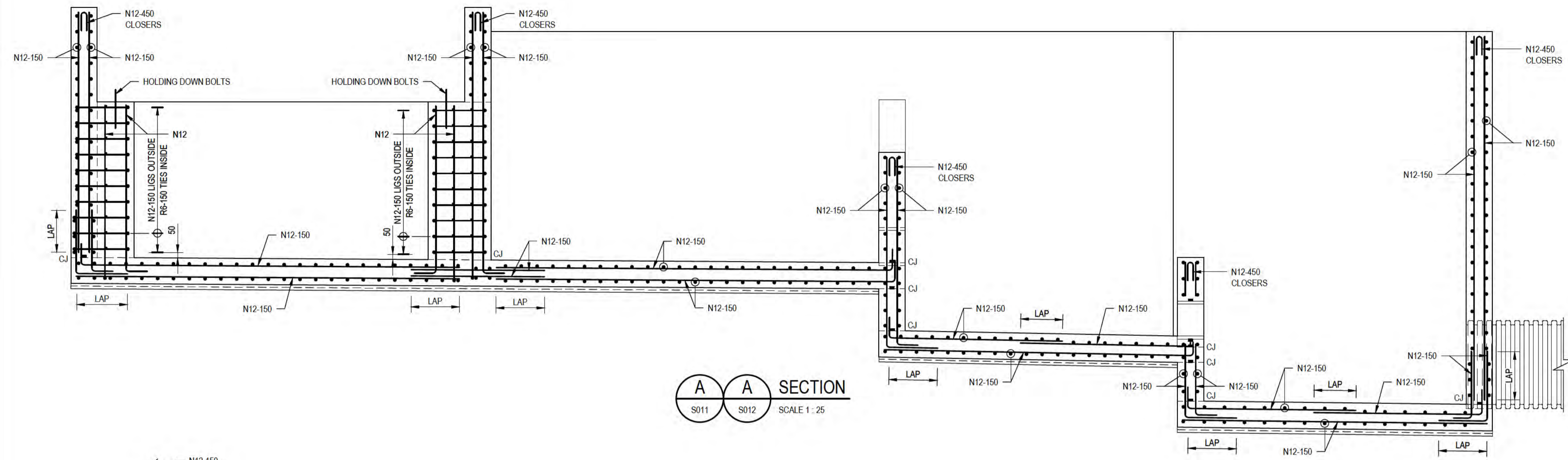


<b>DO NOT SCALE</b> <small>Conditions of Use. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.</small>	Drawn	L.RADICI	Designer	P.HULCUP
	Drafting Check	L.ORREAL*	Design Check	E.BOSUSTOW*
	Approved (Project Director)	Date		
	Scale	1:25		

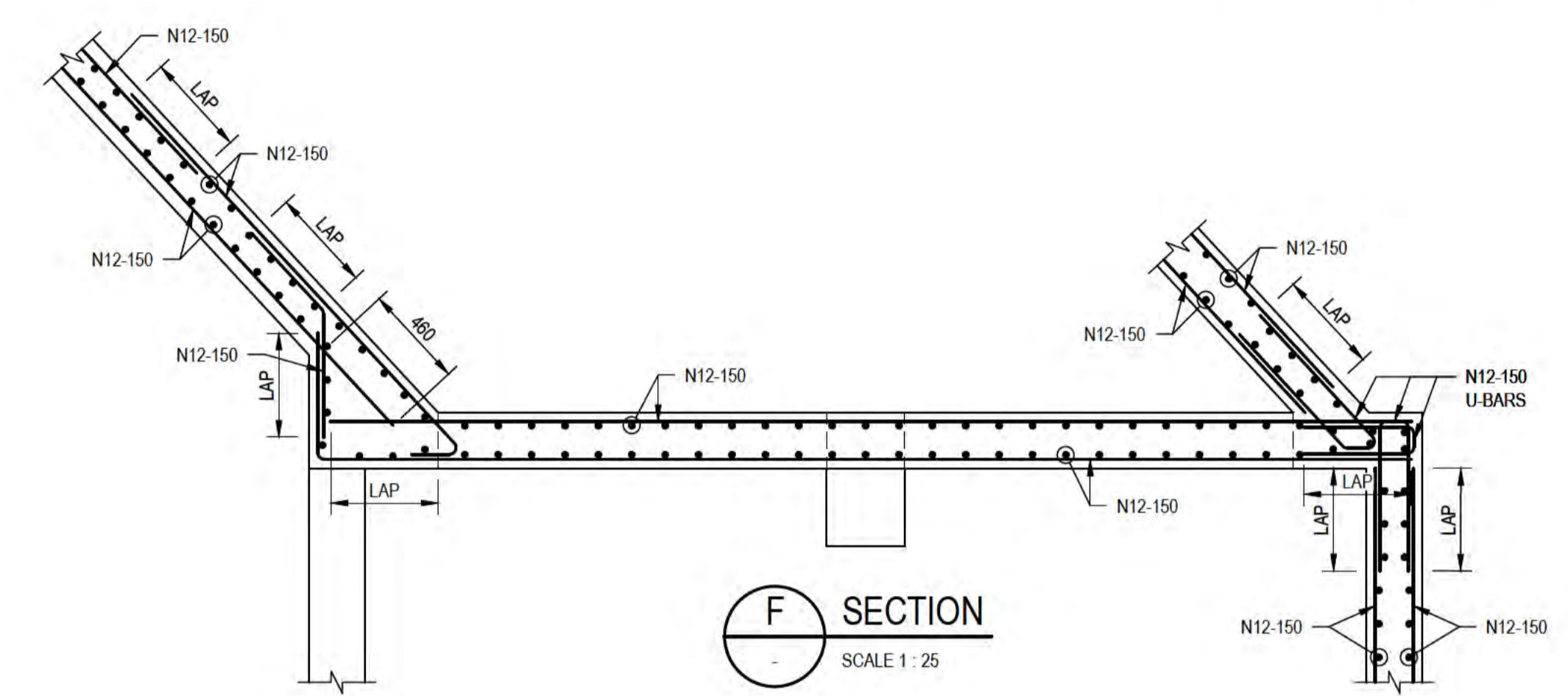
Client	DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS		
Project	CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS		
Title	NORTHERN DRUMSITE WORKS INCLINE DIVERSION PIT & CHANNEL - REINF. DETAILS SHEET 2 OF 3		
Original Size	A1	Drawing No:	61-35637-S012
		Rev:	A

**NOTES:**

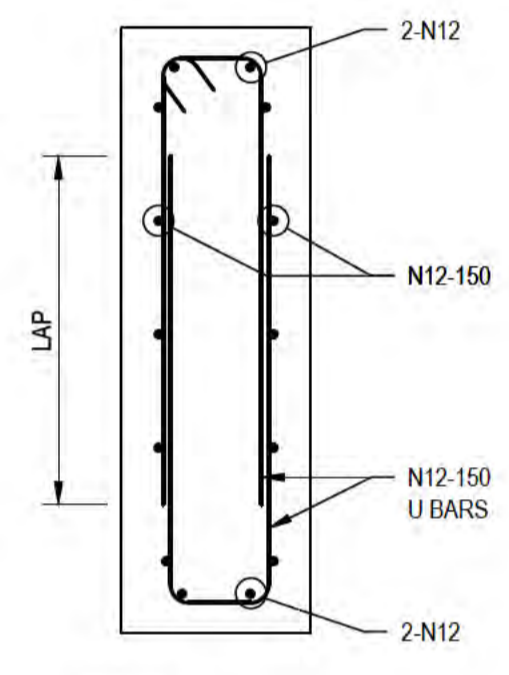
1. REFER DRGs 61-35637-C210, C233 AND C234 FOR PIT LOCATION.
2. REFER DRG 61-35637-S002 FOR GENERAL STRUCTURAL NOTES.
3. REFER DRG 61-35637-S003 FOR TYPICAL STRUCTURAL DETAILS.
4. REFER DRG 61-35637-S010 FOR GENERAL ARRANGEMENT.
5. REFER DRG 61-35637-S011 FOR REINFORCEMENT DETAILS SHEET 1 OF 3.
6. REFER DRG 61-35637-S012 FOR REINFORCEMENT DETAILS SHEET 2 OF 3.
7. REFER DRG 61-35637-S014 FOR STEELWORK DETAILS.



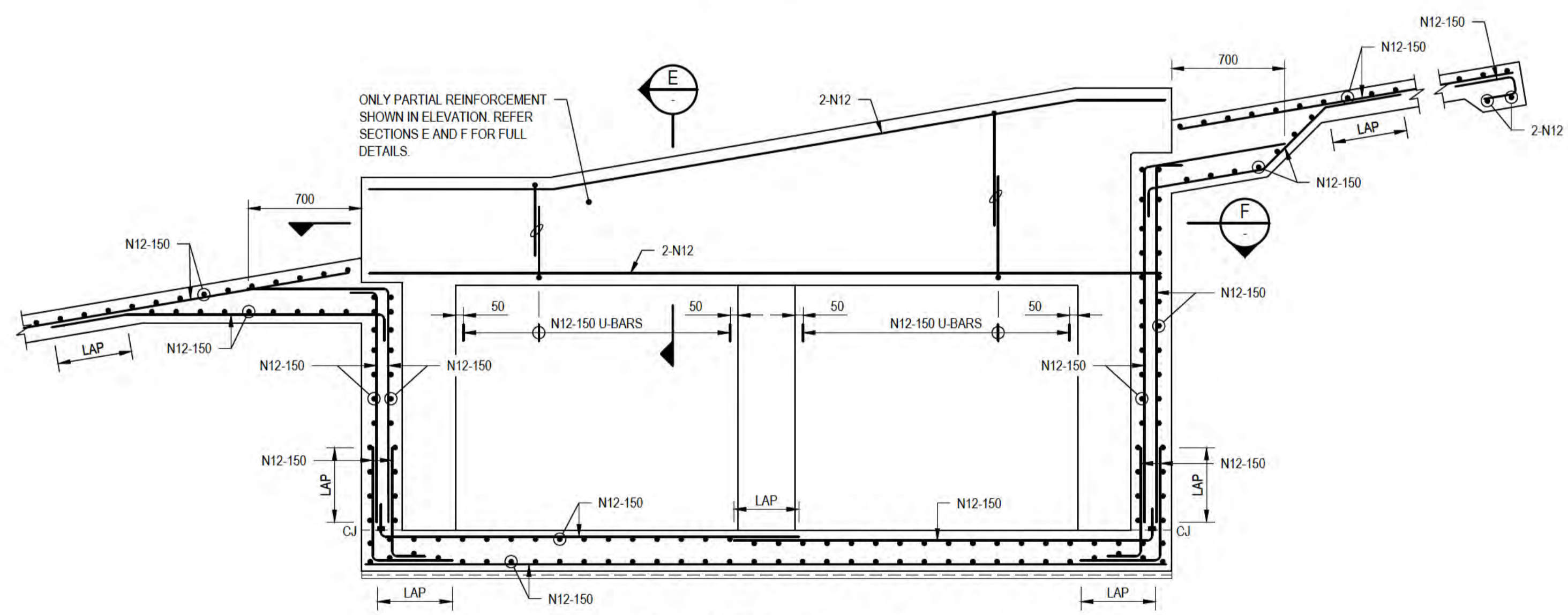
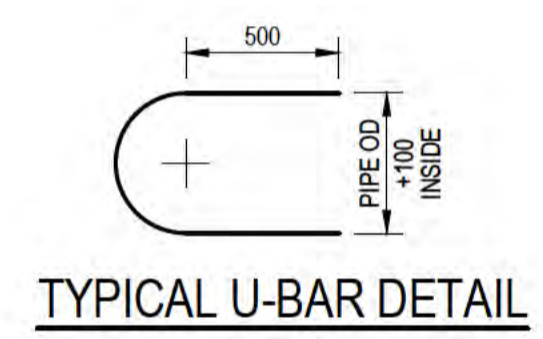
**A A SECTION**  
S011 S012 SCALE 1 : 25



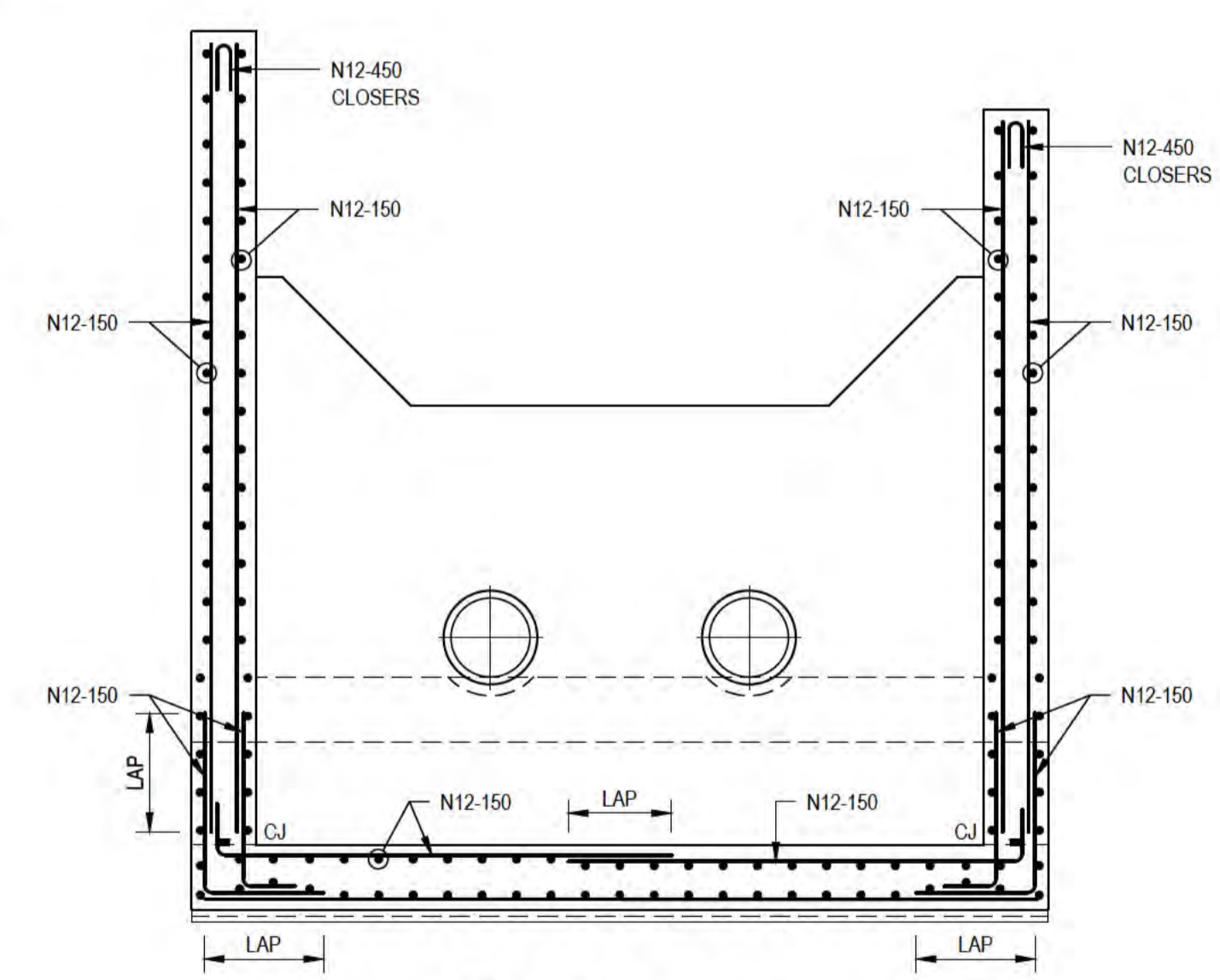
**F SECTION**  
SCALE 1 : 25



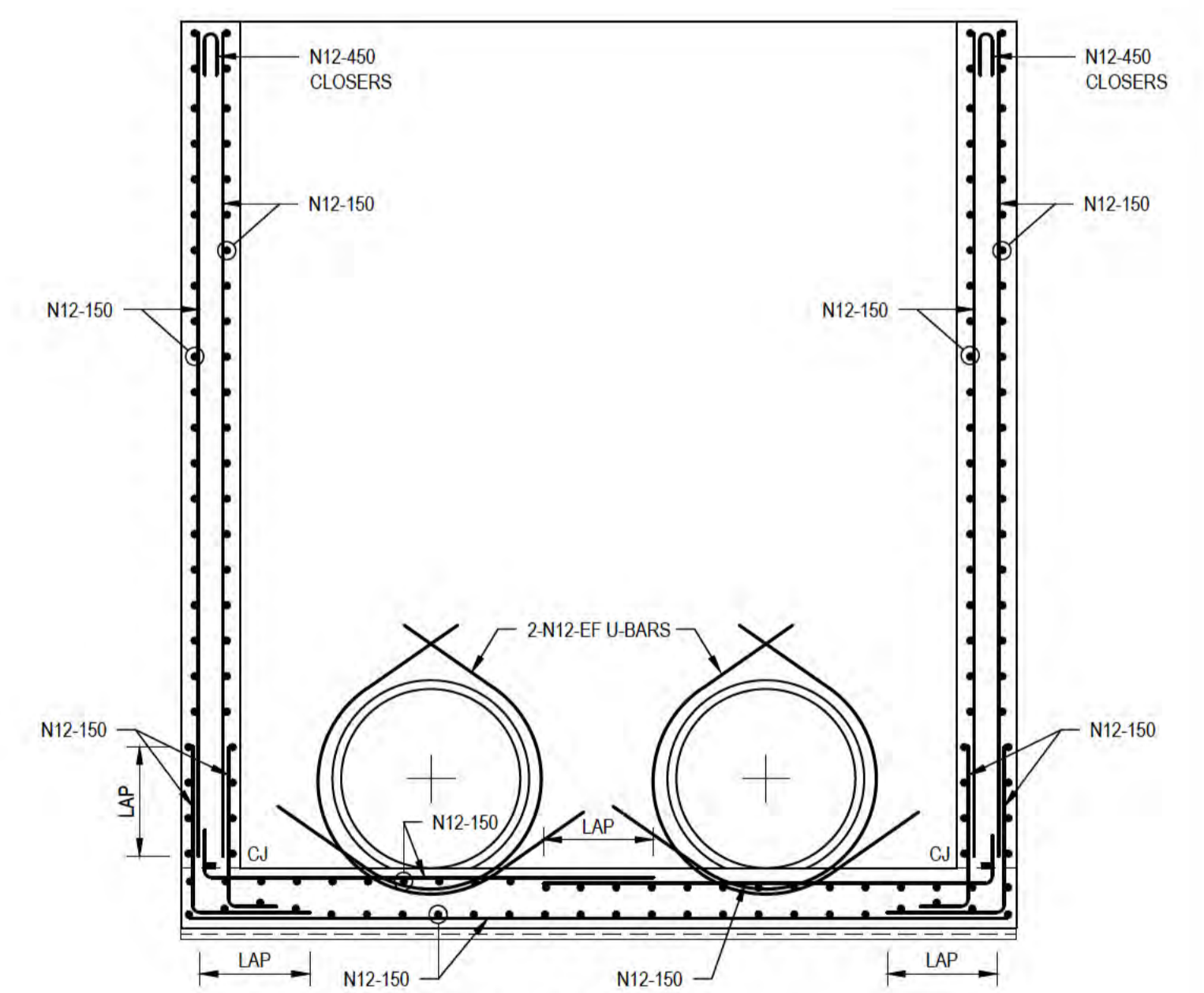
**E SECTION**  
SCALE 1 : 10



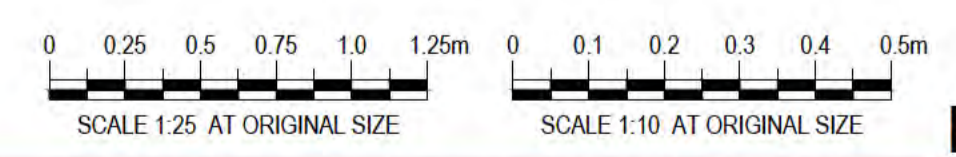
**B B SECTION**  
S011 S012 SCALE 1 : 25



**C C SECTION**  
S011 S012 SCALE 1 : 25



**D D SECTION**  
S011 S012 SCALE 1 : 25



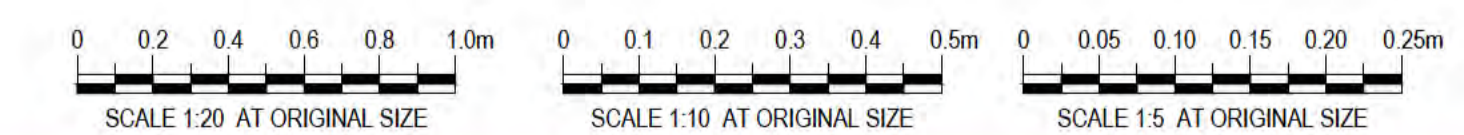
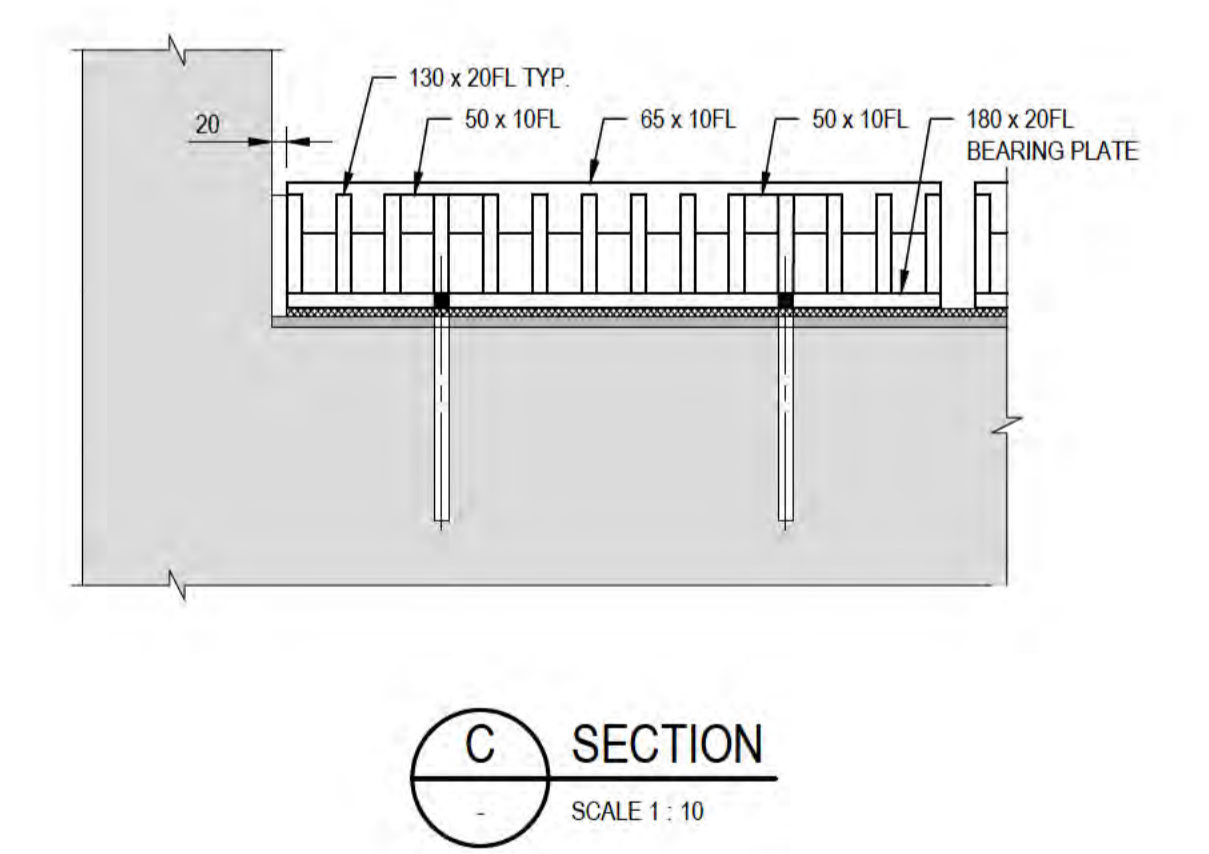
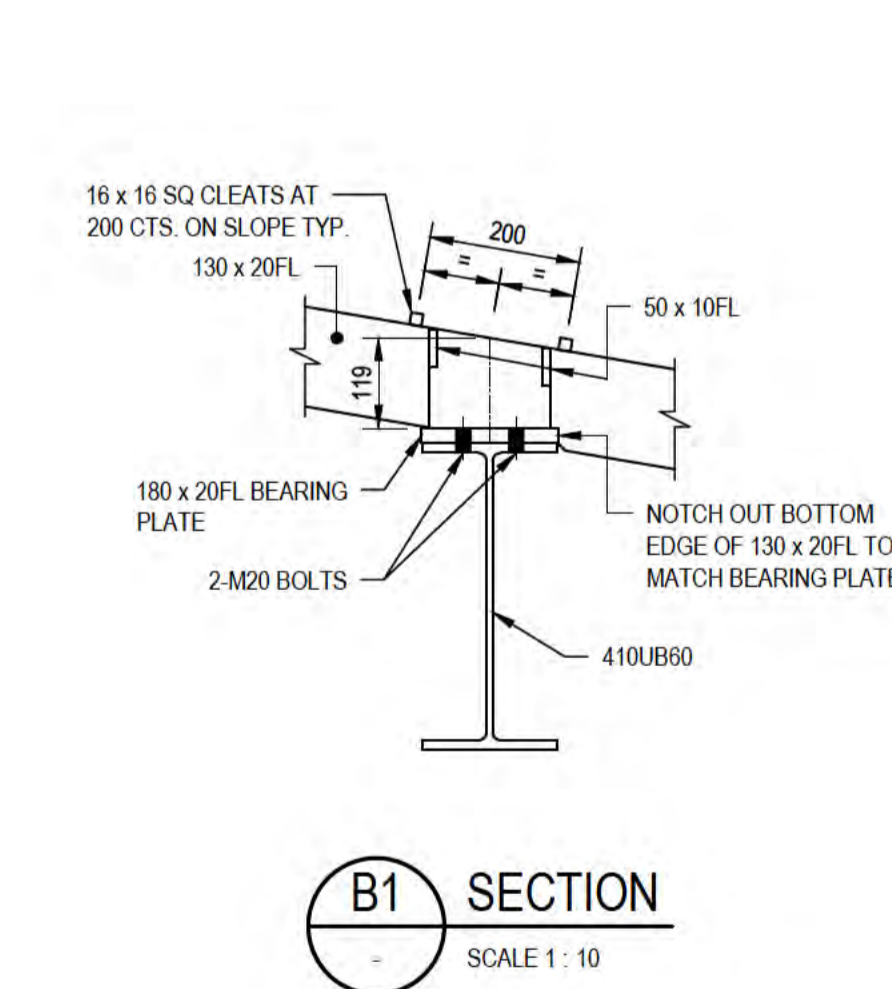
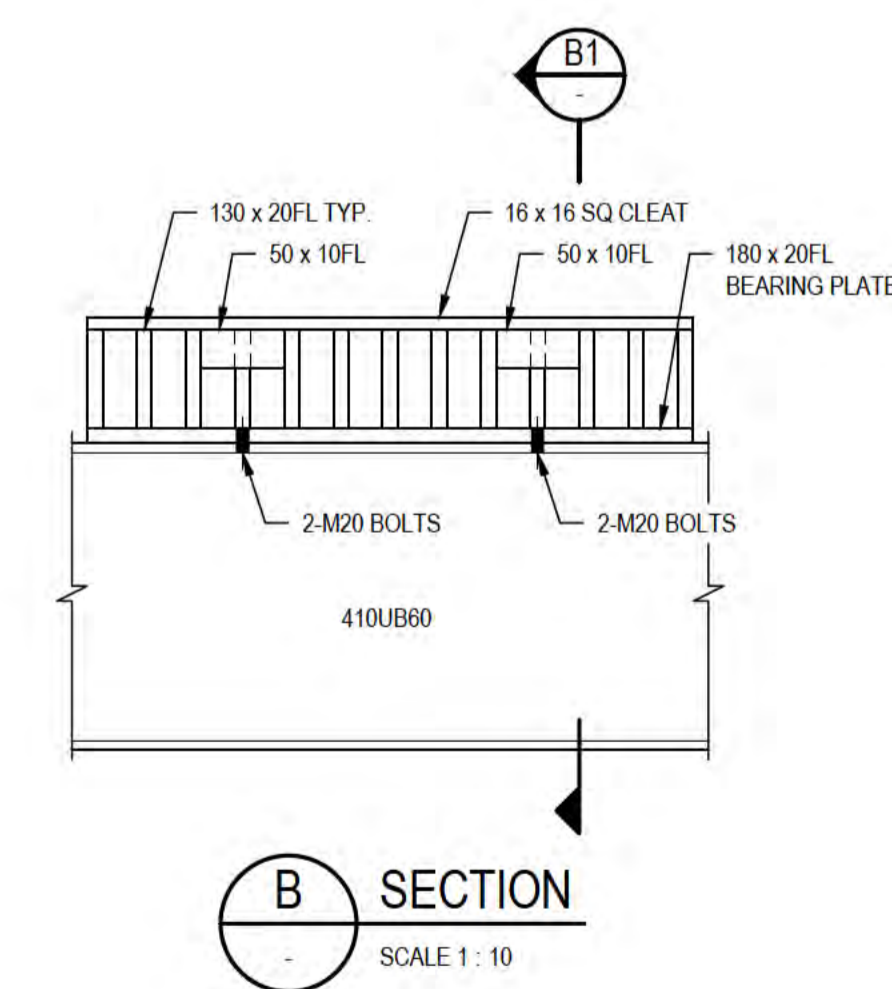
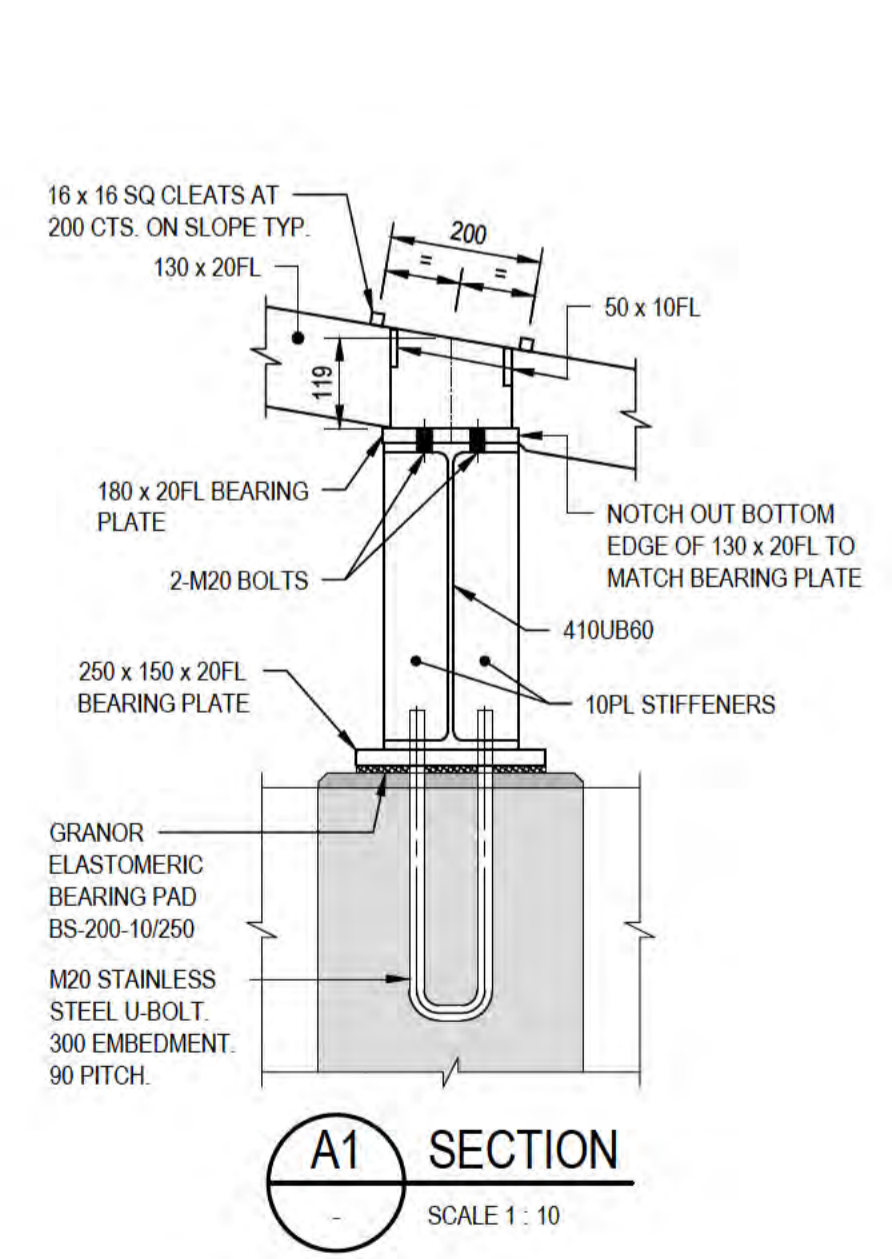
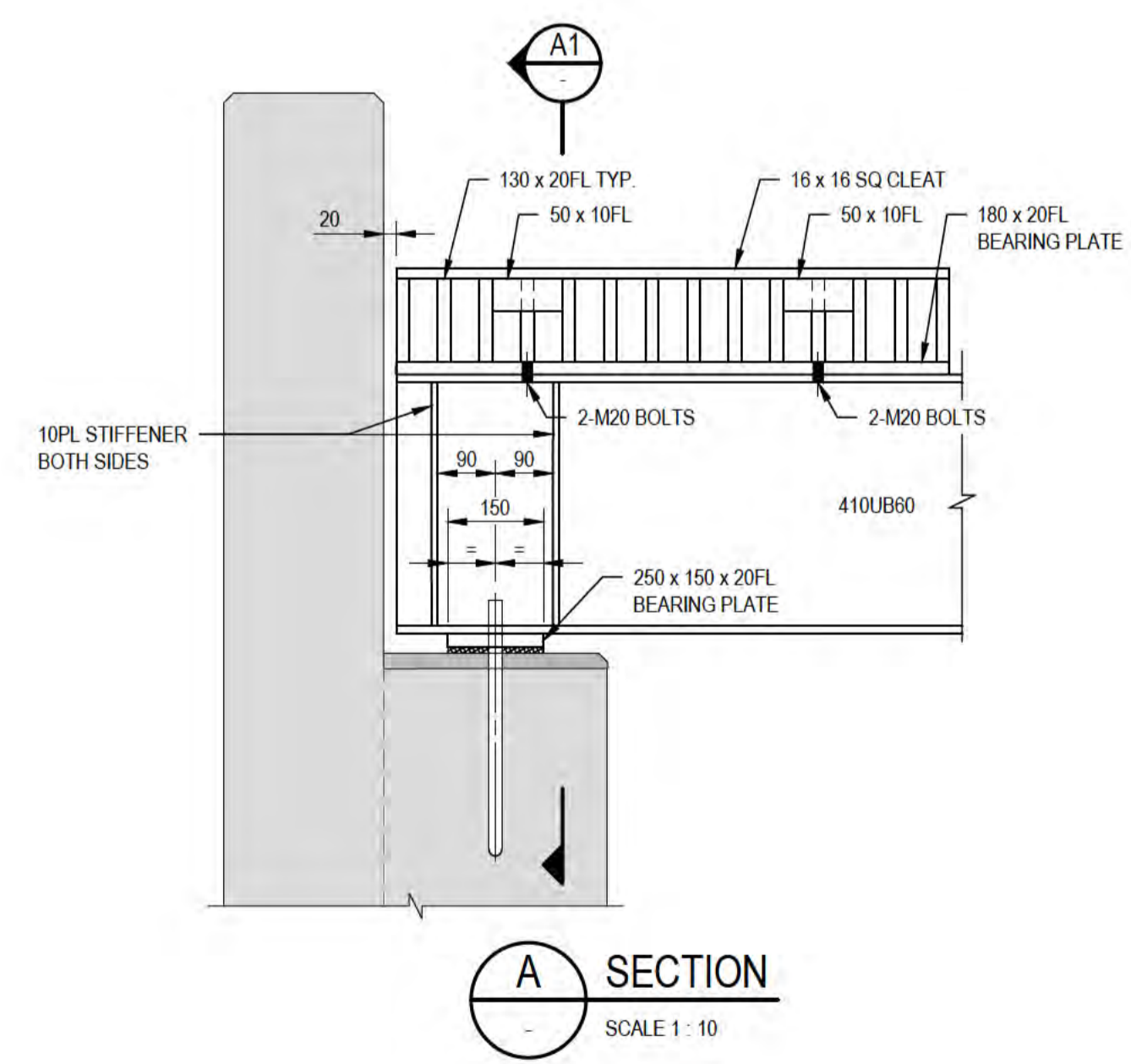
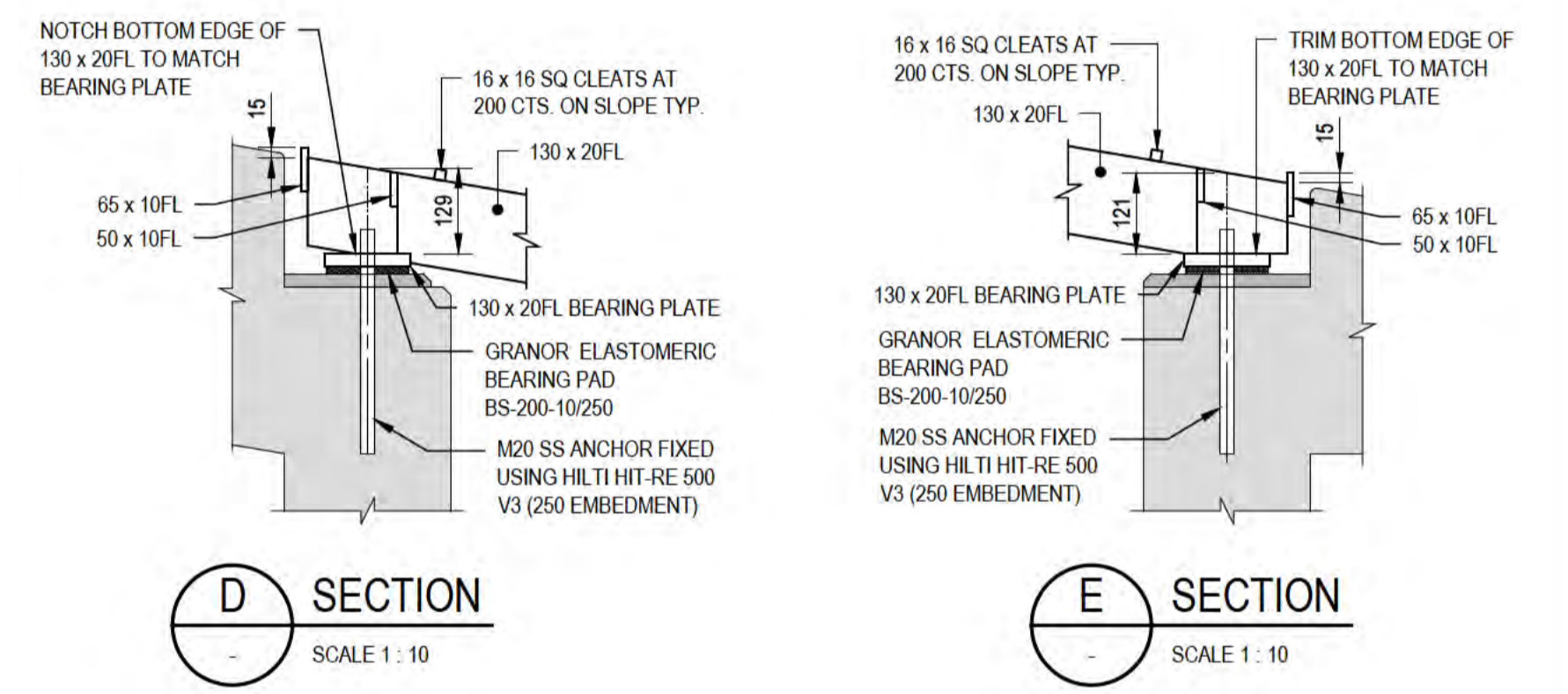
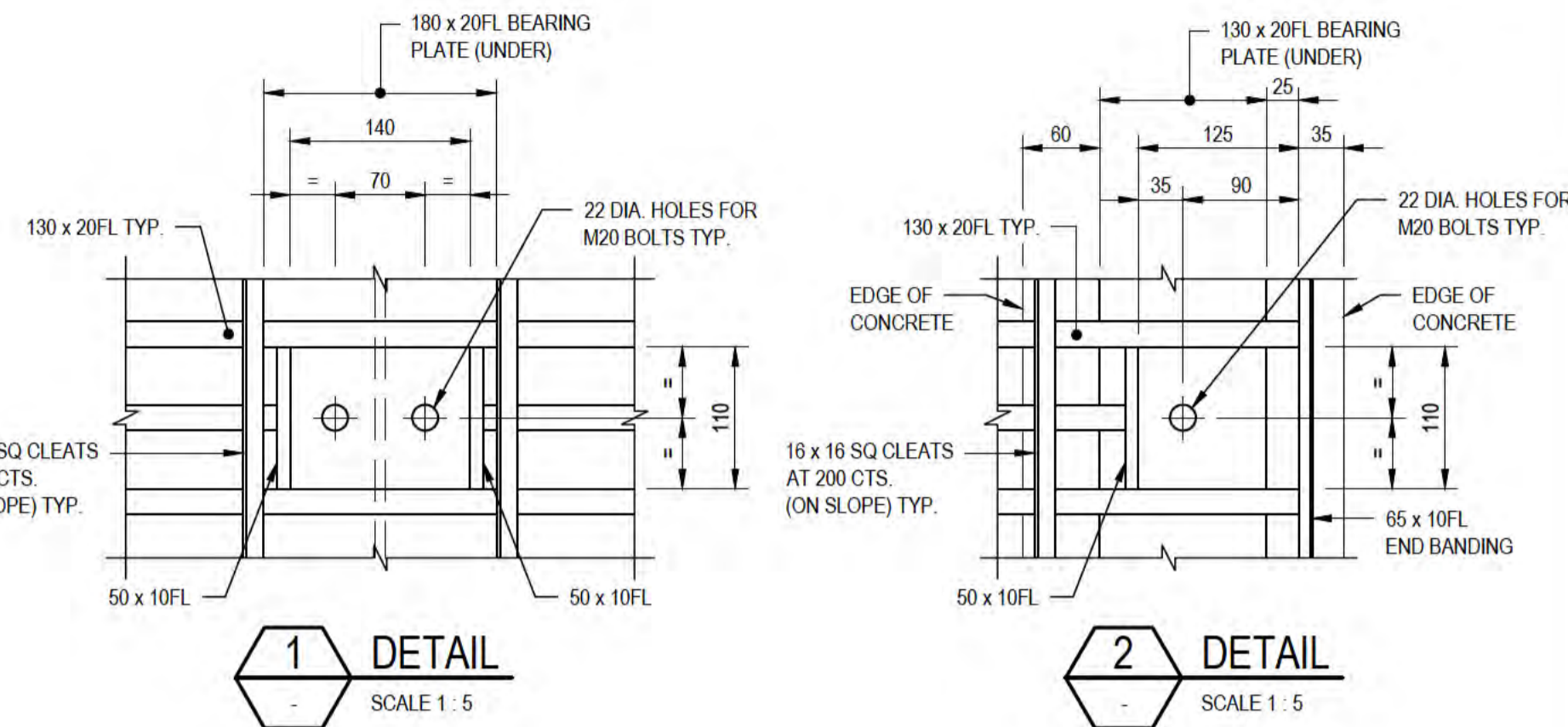
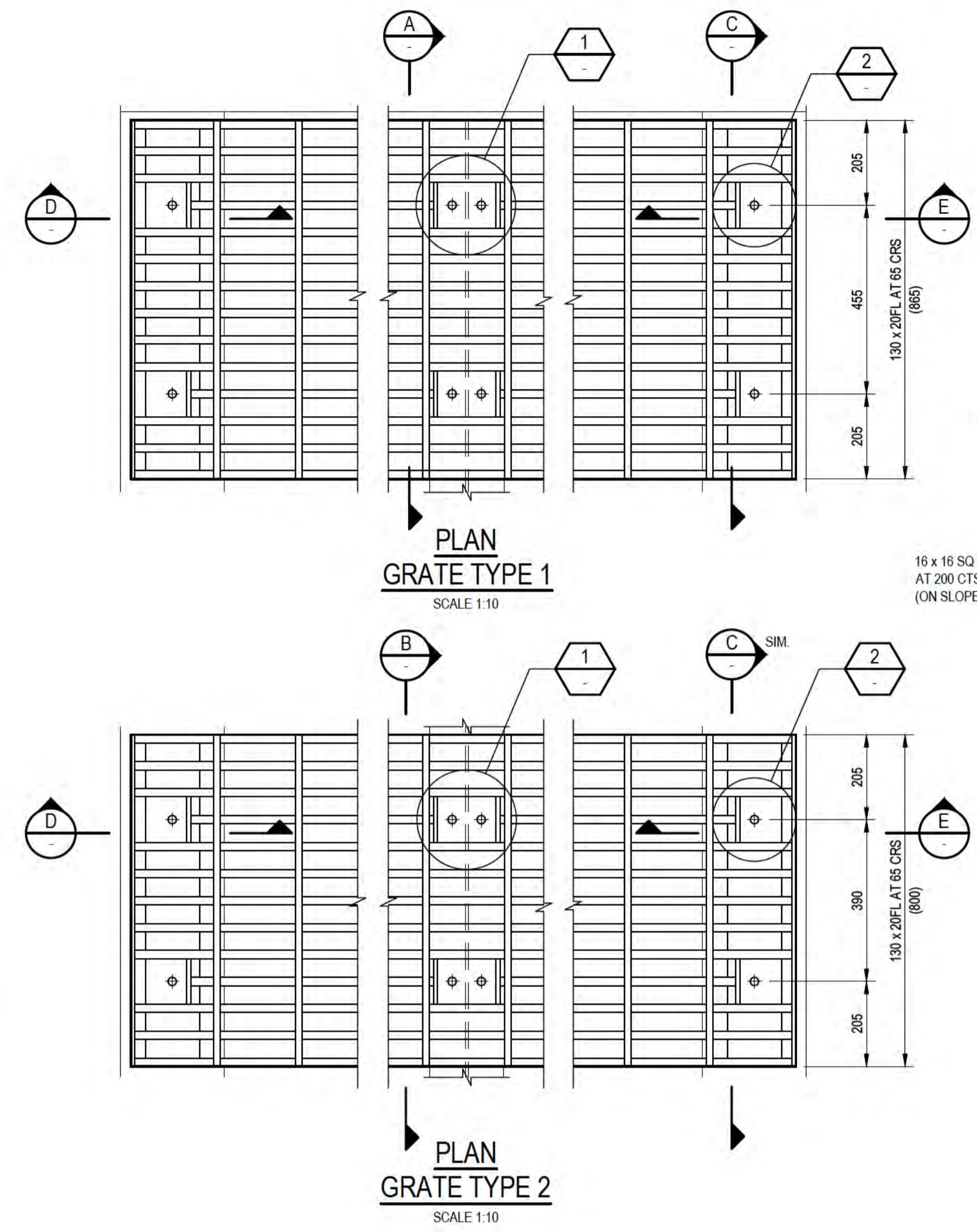
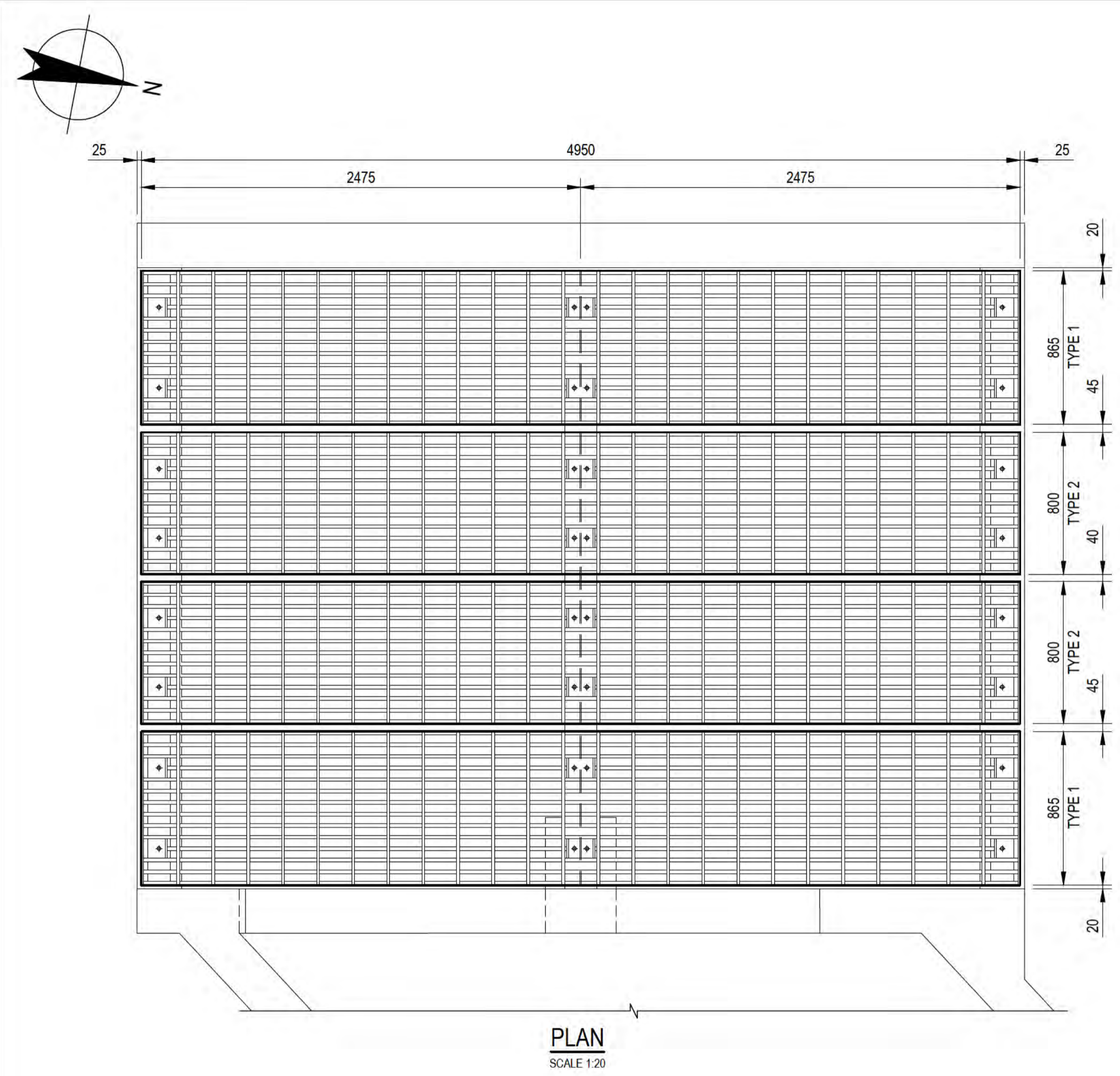
**PRELIMINARY**

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT		LR	JM*	PS*	30/09/20



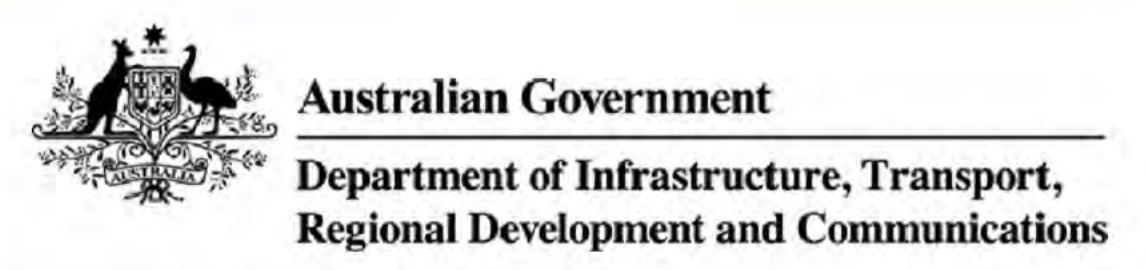
<b>DO NOT SCALE</b>	Drawn L.RADICI	Designer P.HULCUP
Conditions of Use. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.	Drafting Check L.ORREAL*	Design Check E.BOSUSTOW*
	Approved (Project Director) Date	
	Scale AS SHOWN	This Drawing must not be used for construction unless signed as Approved

Client	DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS
Project	CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS
Title	NORTHERN DRUMSITE WORKS INCLINE DIVERSION PIT & CHANNEL - REINF. DETAILS SHEET 3 OF 3
Original Size	A1
Drawing No:	61-35637-S013
Rev:	A

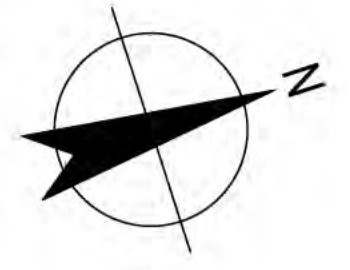


- NOTES:**
- REFER DRGS 61-35637-C210, C233 AND C234 FOR PIT LOCATION.
  - REFER DRG 61-35637-S002 FOR GENERAL STRUCTURAL NOTES.
  - REFER DRG 61-35637-S003 FOR TYPICAL STRUCTURAL DETAILS.
  - REFER DRG 61-35637-S010 FOR GENERAL ARRANGEMENT.
  - REFER DRG 61-35637-S011 FOR REINFORCEMENT DETAILS SHEET 1 OF 3.
  - REFER DRG 61-35637-S012 FOR REINFORCEMENT DETAILS SHEET 2 OF 3.
  - REFER DRG 61-35637-S013 FOR REINFORCEMENT DETAILS SHEET 3 OF 3.
  - FLAT BAR SHALL BE GRADE 300 TO AS3679.1.
  - DISSIMILAR METALS (ie MILD STEEL AND STAINLESS STEEL) SHALL BE ELECTRICALLY ISOLATED USING SUITABLE PLASTIC SLEEVES AND/OR WASHERS.

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT		LR	JM*	PS*	30/09/20

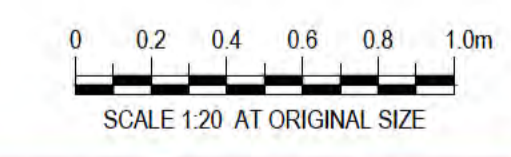
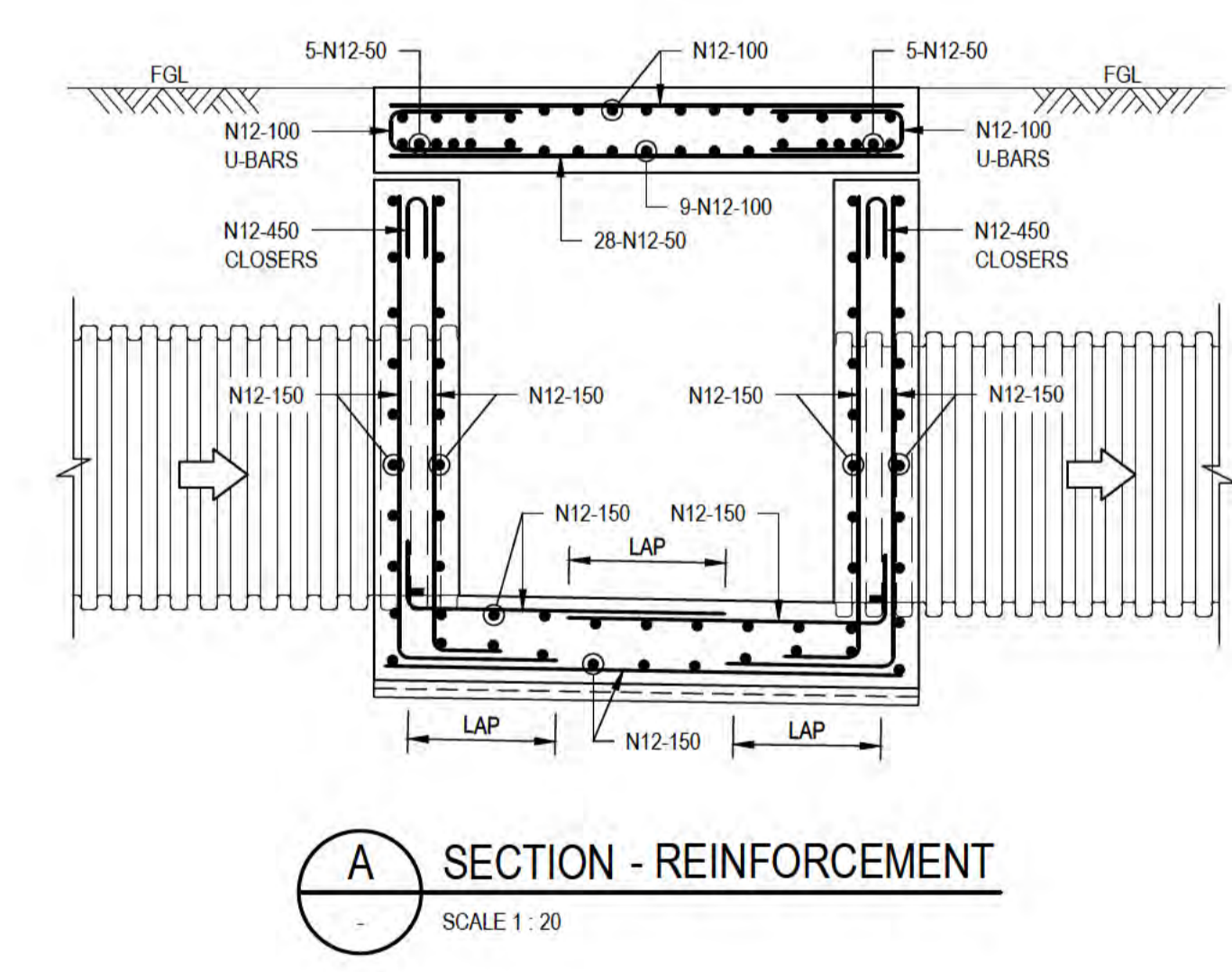
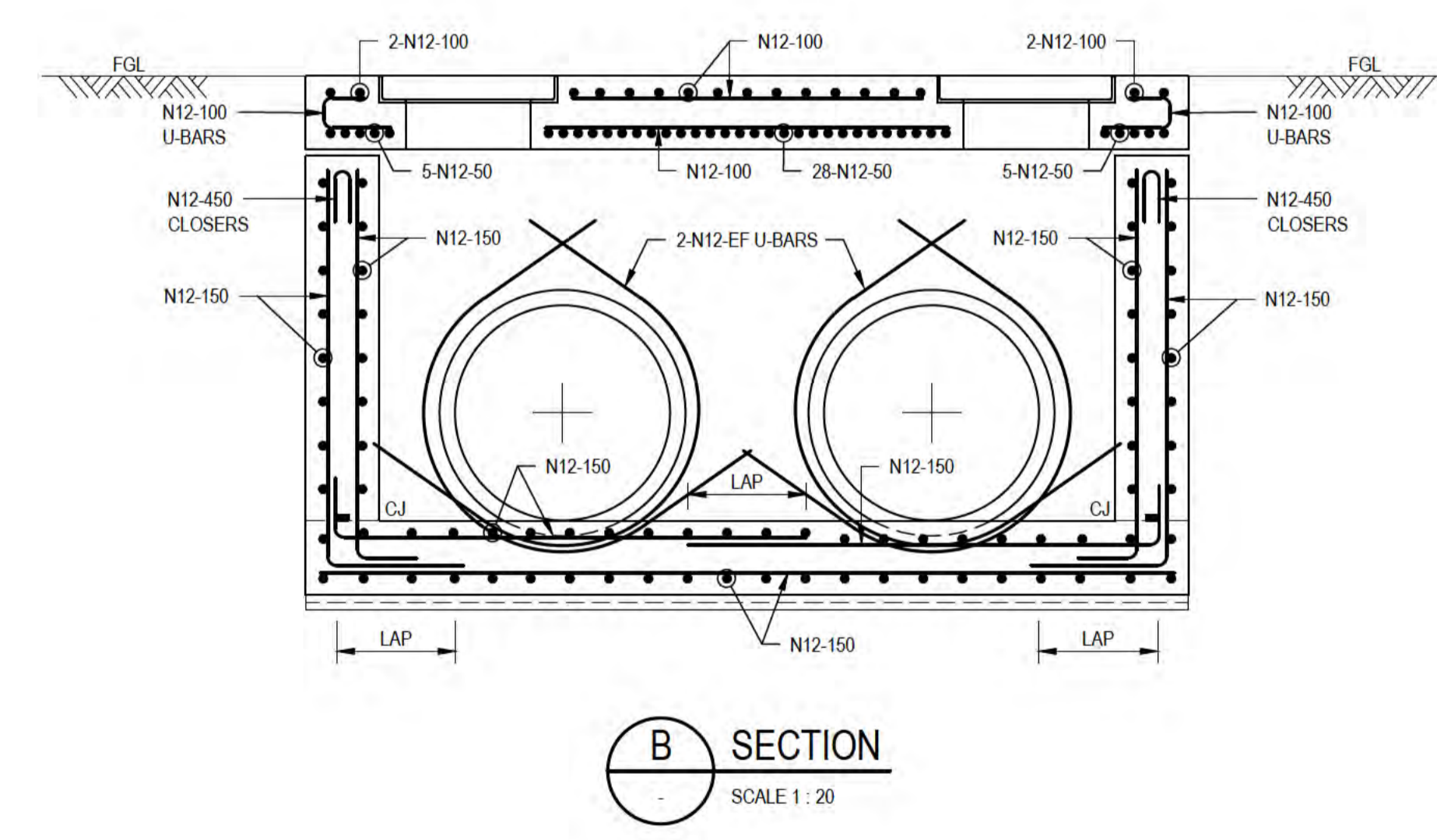
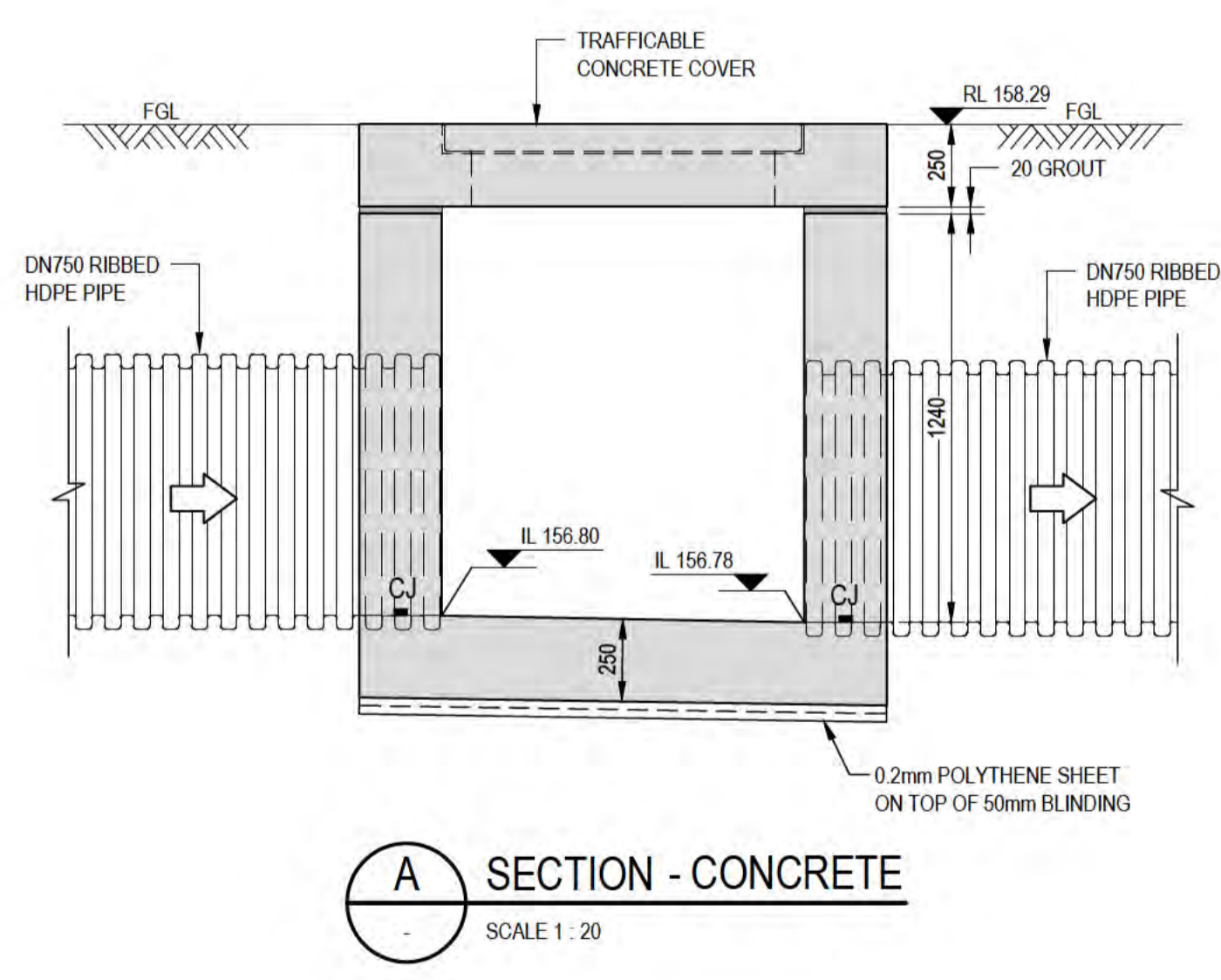
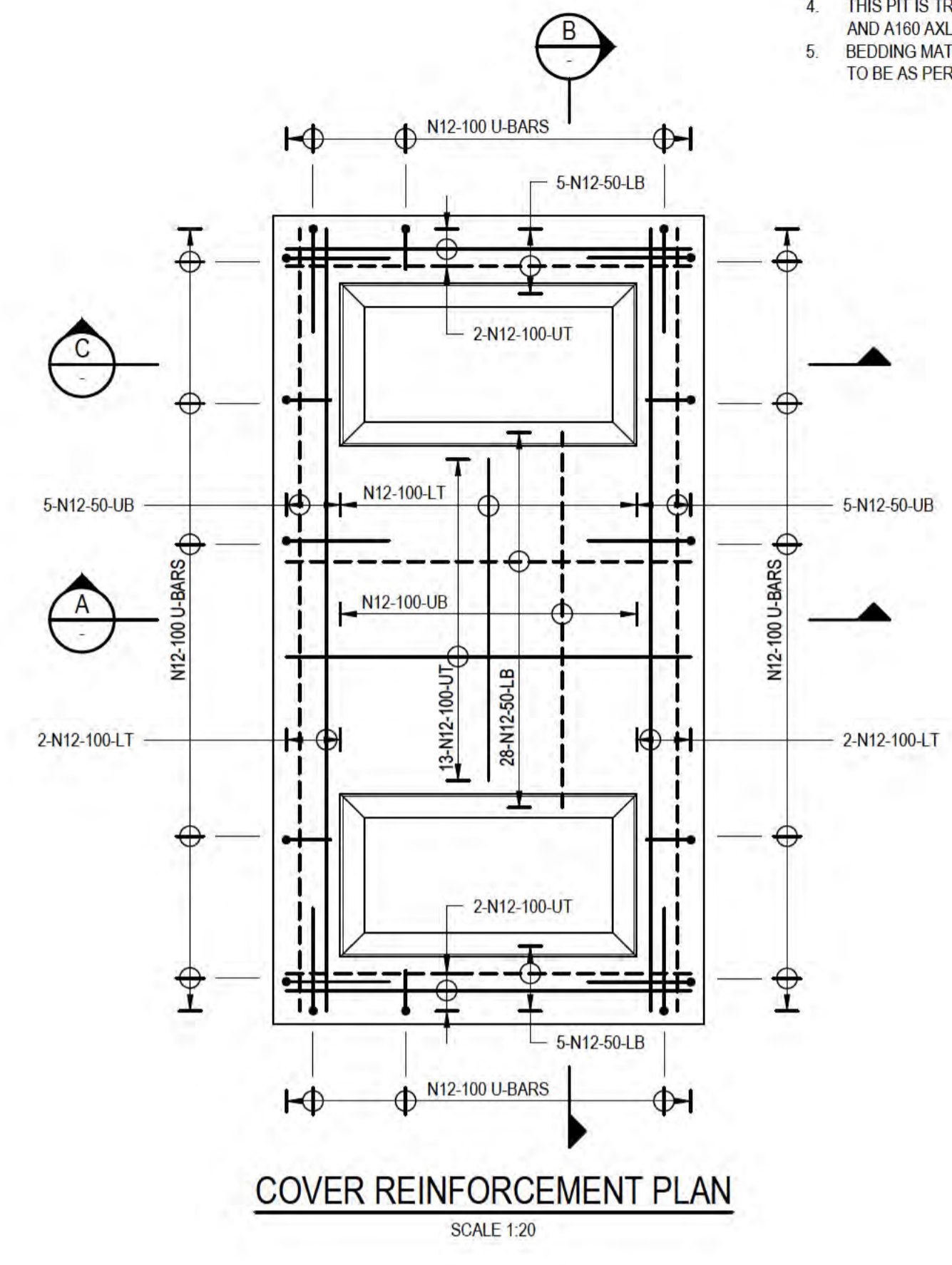
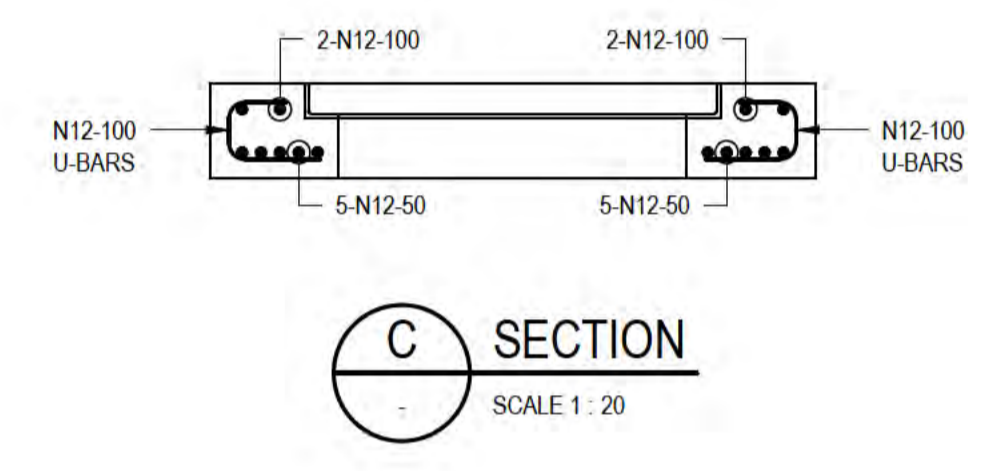
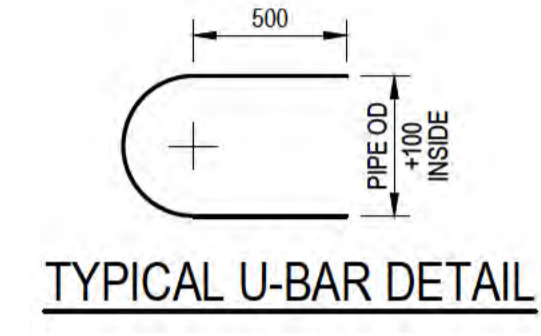
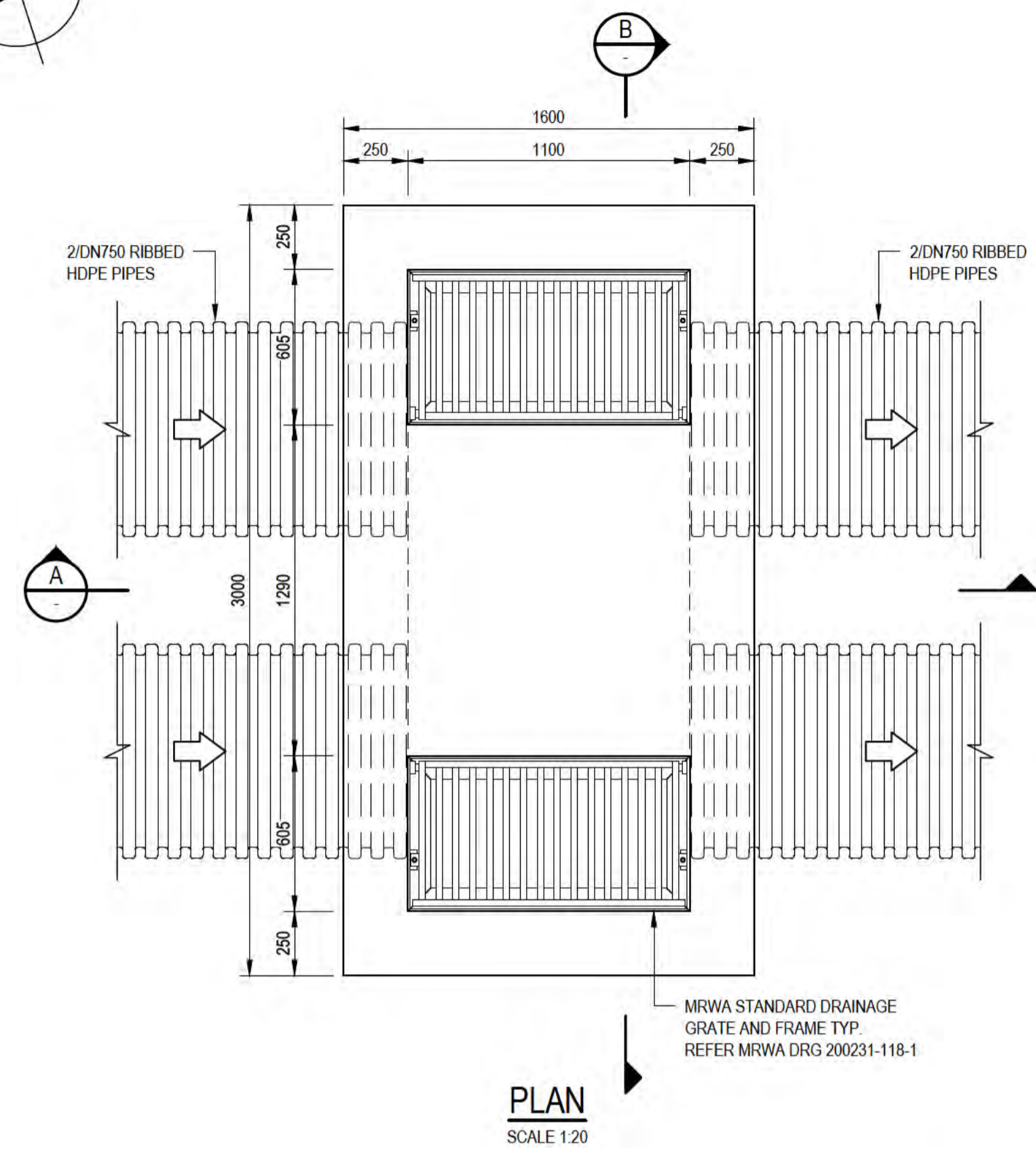


<b>DO NOT SCALE</b>	Drawn L.RADICI	Designer P.HULCUP	Client DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS
Conditions of Use. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.	Drafting Check L.LORREAL*	Design Check E.BOSUSTOW*	Project CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS
	Approved (Project Director) Date		Title NORTHERN DRUMSITE WORKS INLINE DIVERSION PIT & CHANNEL - STEELWORK SETOUT & DETAILS
	Scale AS SHOWN	This Drawing must not be used for construction unless signed as Approved	Original Size A1 Drawing No: 61-35637-S014 Rev: A



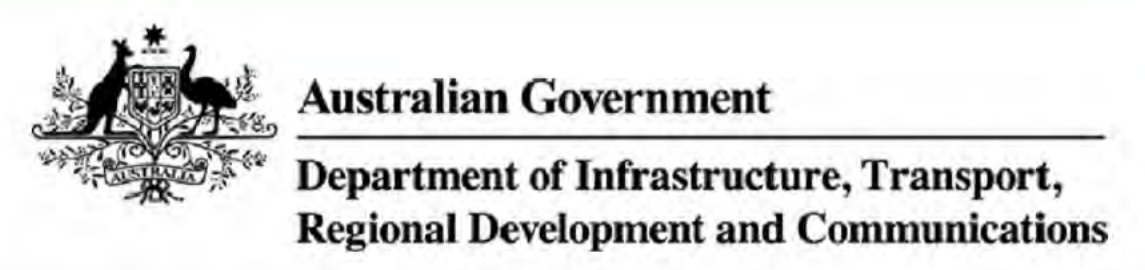
**NOTES:**

1. REFER DRG# 61-35637-C210 AND C233 FOR DRAINAGE SET OUT INFORMATION.
2. REFER DRG 61-35637-S002 FOR GENERAL STRUCTURAL NOTES.
3. REFER DRG 61-35637-S003 FOR TYPICAL STRUCTURAL DETAILS.
4. THIS PIT IS TRAFFICABLE AND HAS BEEN DESIGNED FOR W80 WHEEL LOAD AND A180 AXLE LOAD IN ACCORDANCE WITH AS5100.2.
5. BEDDING MATERIAL FOUNDATION COMPACTION AND BACKFILL COMPACTION TO BE AS PER SPECIFICATION.



**PRELIMINARY**

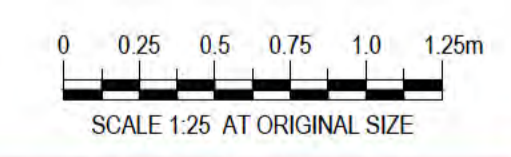
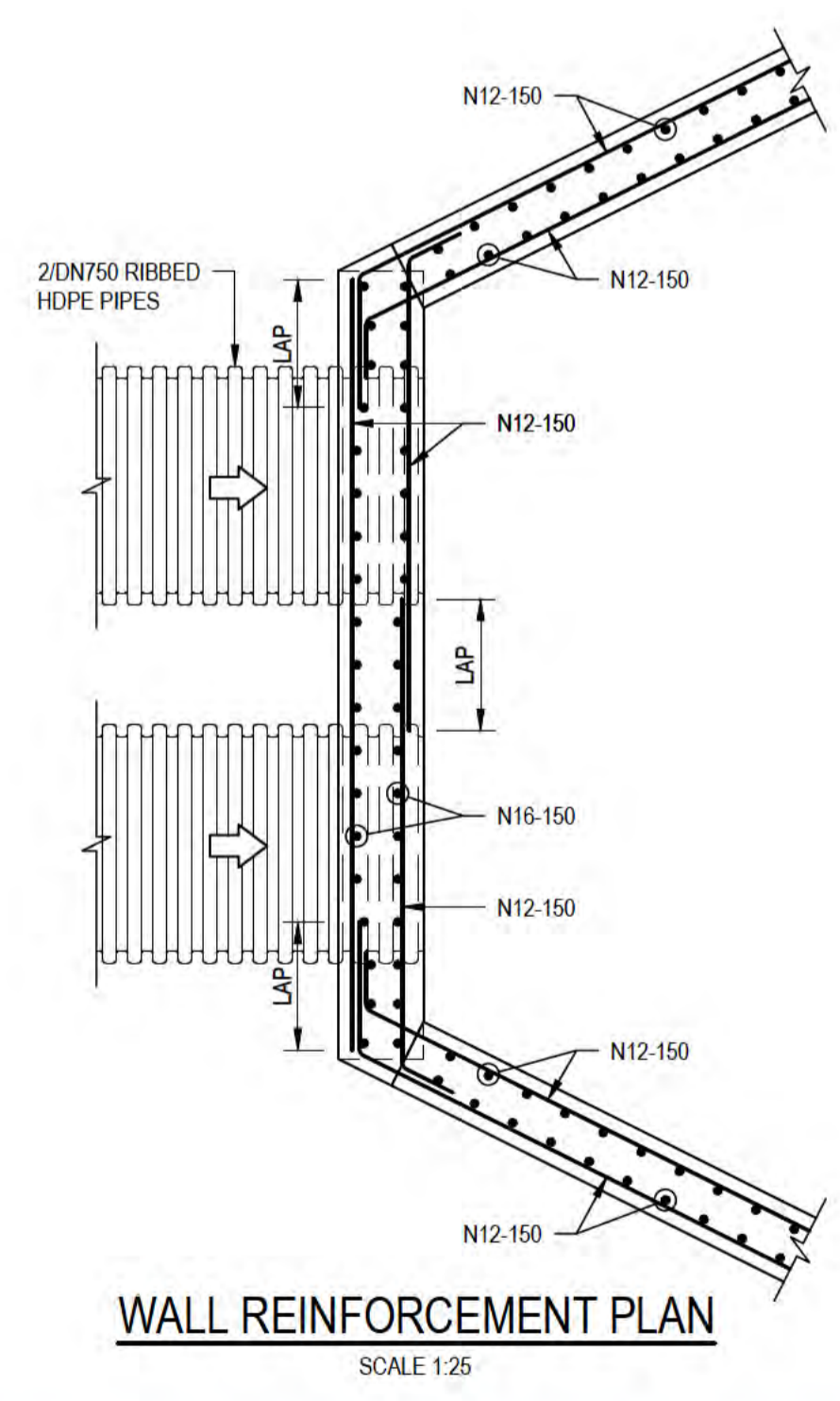
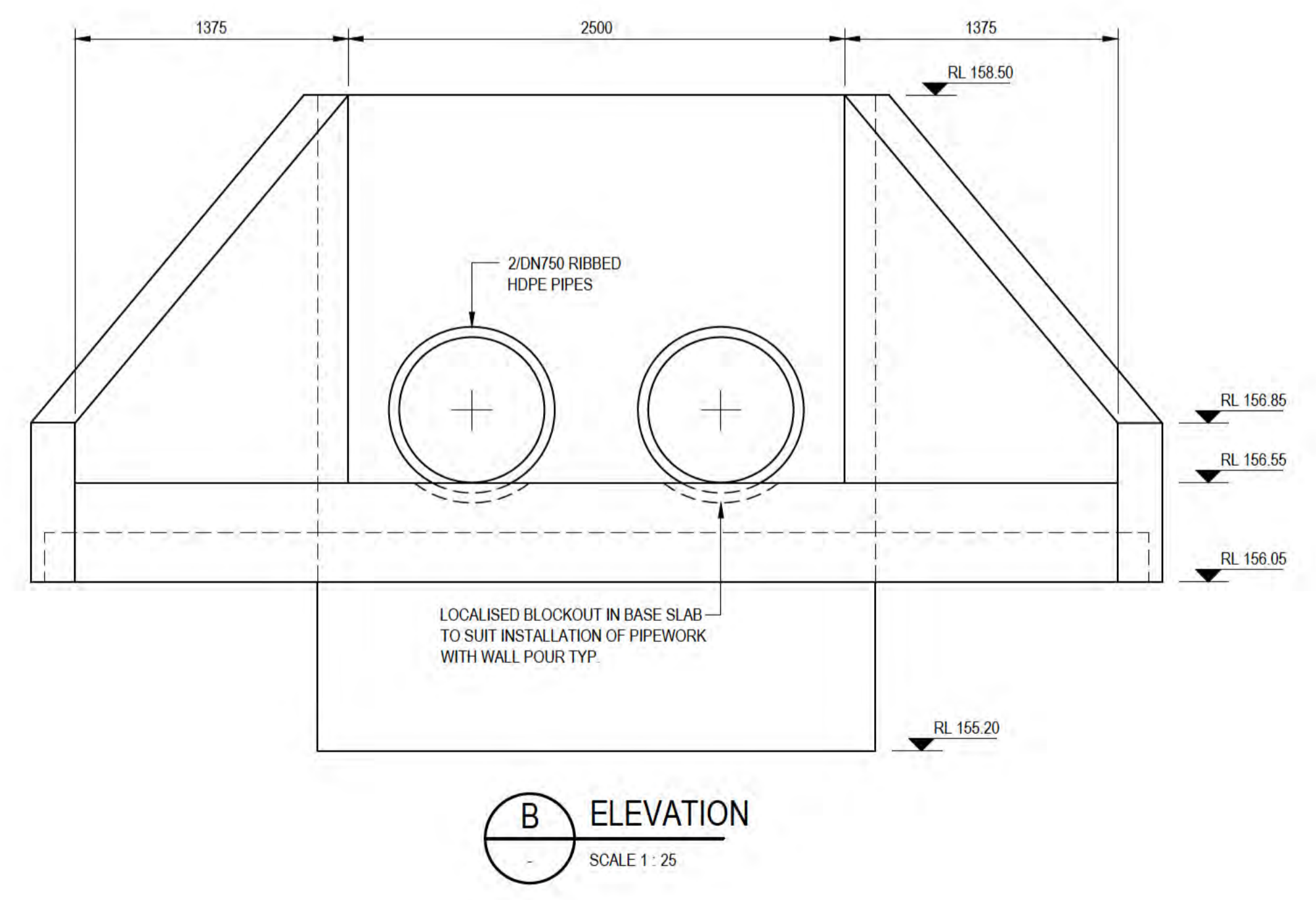
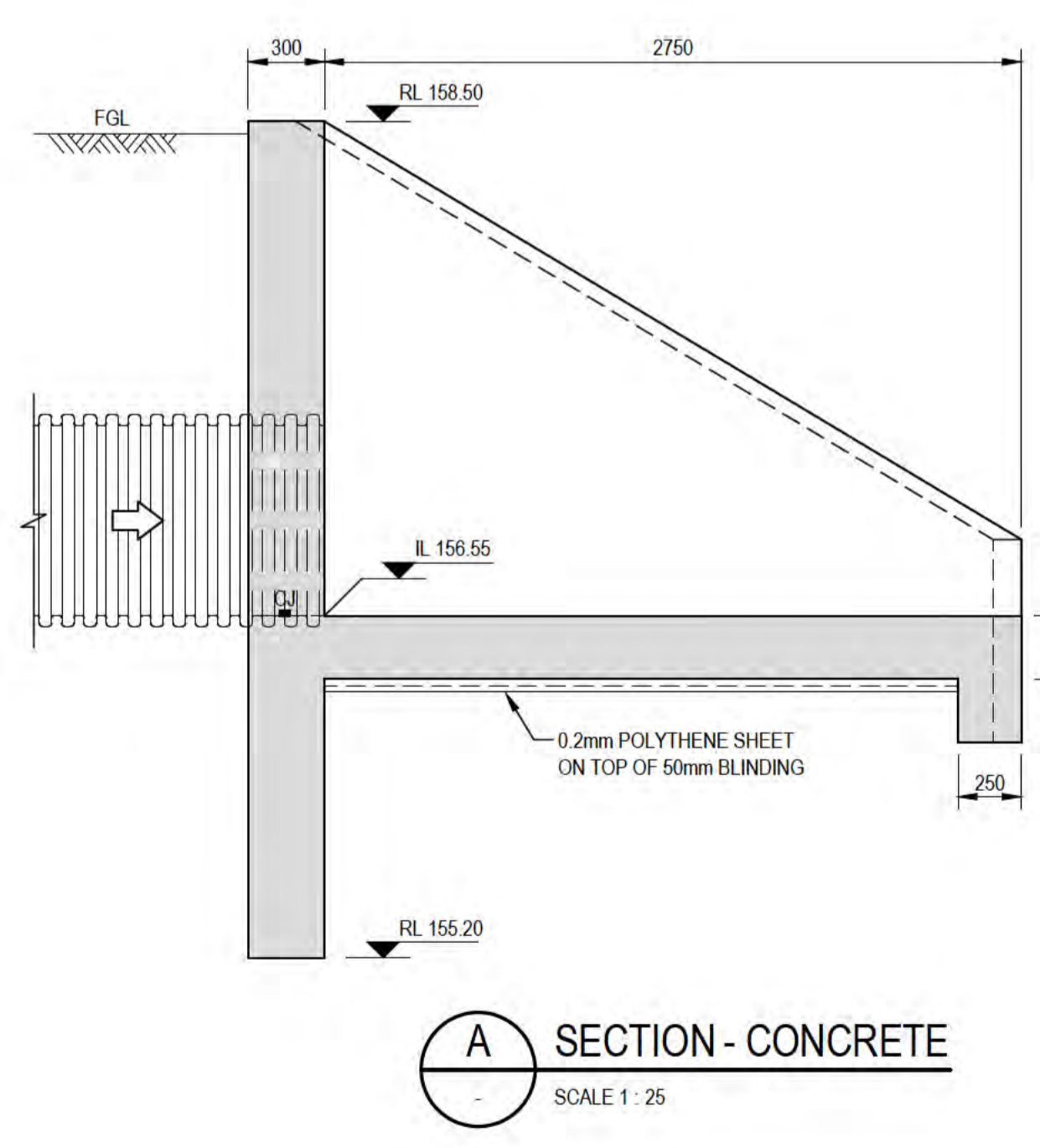
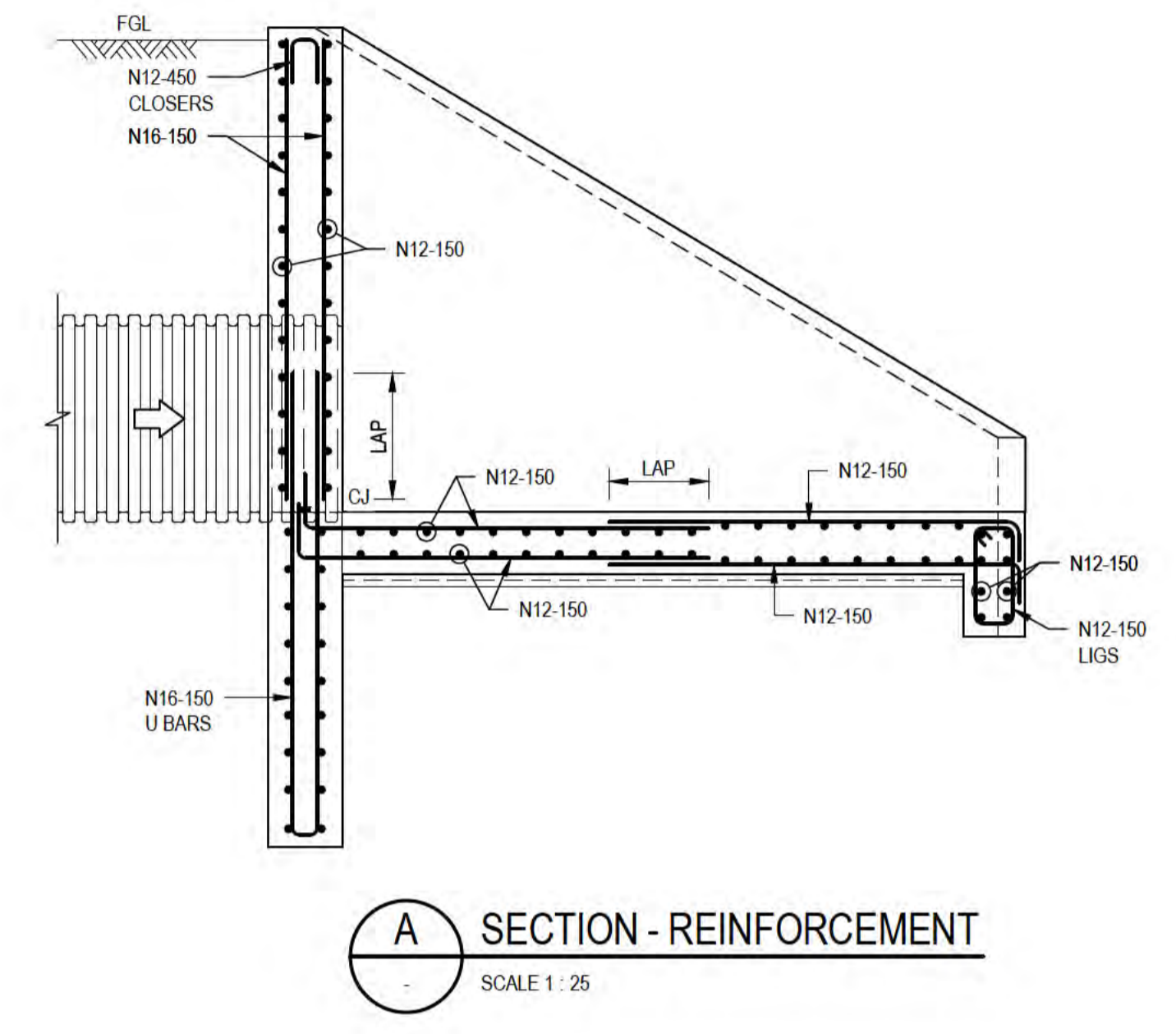
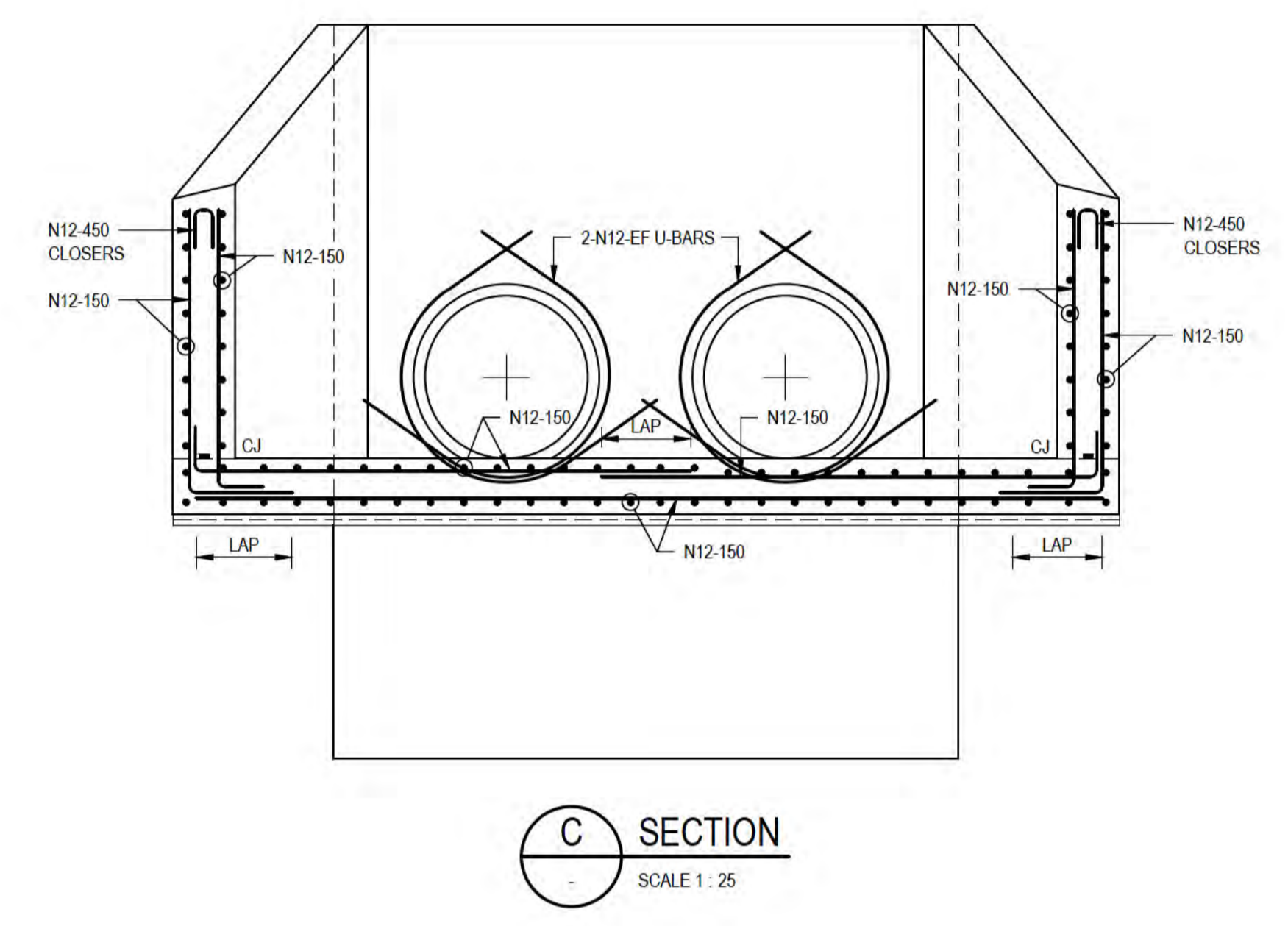
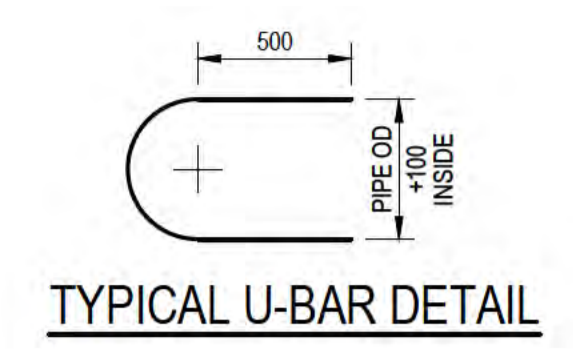
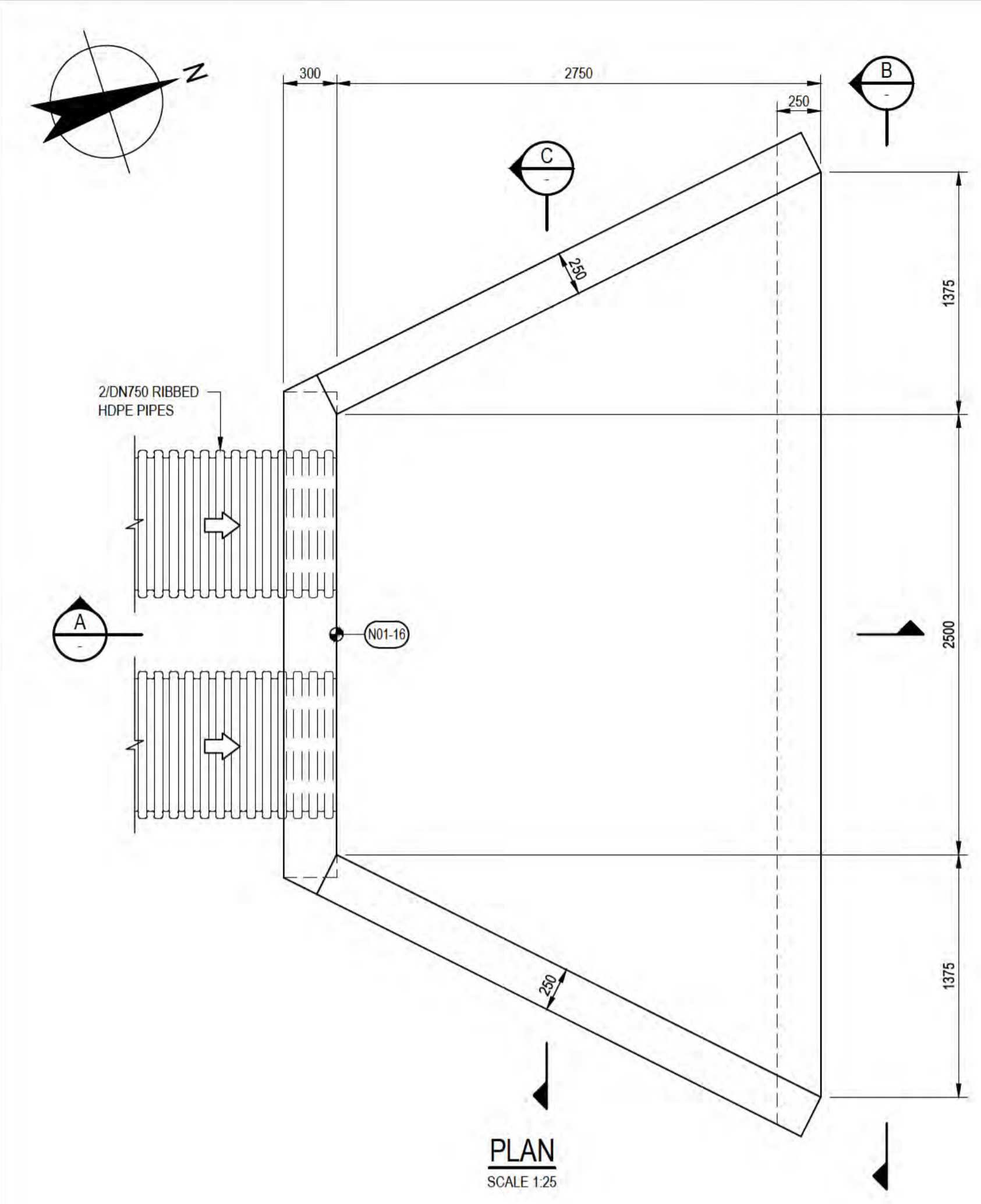
No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT		LR	JM*	PS*	30/09/20



<b>DO NOT SCALE</b>	Drawn L.RADICI	Designer P.HULCUP	Client DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS
Conditions of Use. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.	Drafting Check L.LORREAL*	Design Check E.BOSUSTOW*	Project CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS
	Approved (Project Director) Date		Title NORTHERN DRUMSITE WORKS PIT N17-2 - SECTIONS & DETAILS
	Scale 1:20	This Drawing must not be used for construction unless signed as Approved	Original Size A1 Drawing No: 61-35637-S020
			Rev: A

**NOTES:**

1. REFER DRGS 61-35637-C210, C232 AND C233 FOR LOCATION AND SET OUT.
2. REFER DRG 61-35637-S002 FOR GENERAL STRUCTURAL NOTES.
3. REFER DRG 61-35637-S003 FOR TYPICAL STRUCTURAL DETAILS.
4. THE HEADWALL HAS BEEN DESIGNED FOR VEHICLE SURCHARGE LOADING IN ACCORDANCE WITH CL14.2 OF AS 5100.2. HIGHWAY TRAFFIC VEHICLES MAY BE OPERATED UP TO THE BACK OF THE WALL.
5. BEDDING MATERIAL FOUNDATION COMPACTION AND BACKFILL COMPACTION TO BE AS PER SPECIFICATION.



**PRELIMINARY**

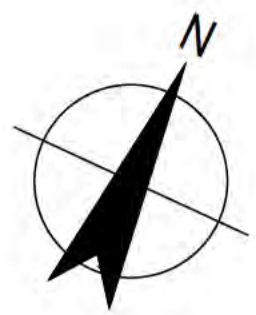
No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT		LR	JM*	PS*	30/09/20



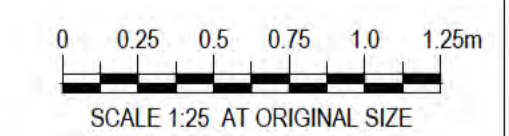
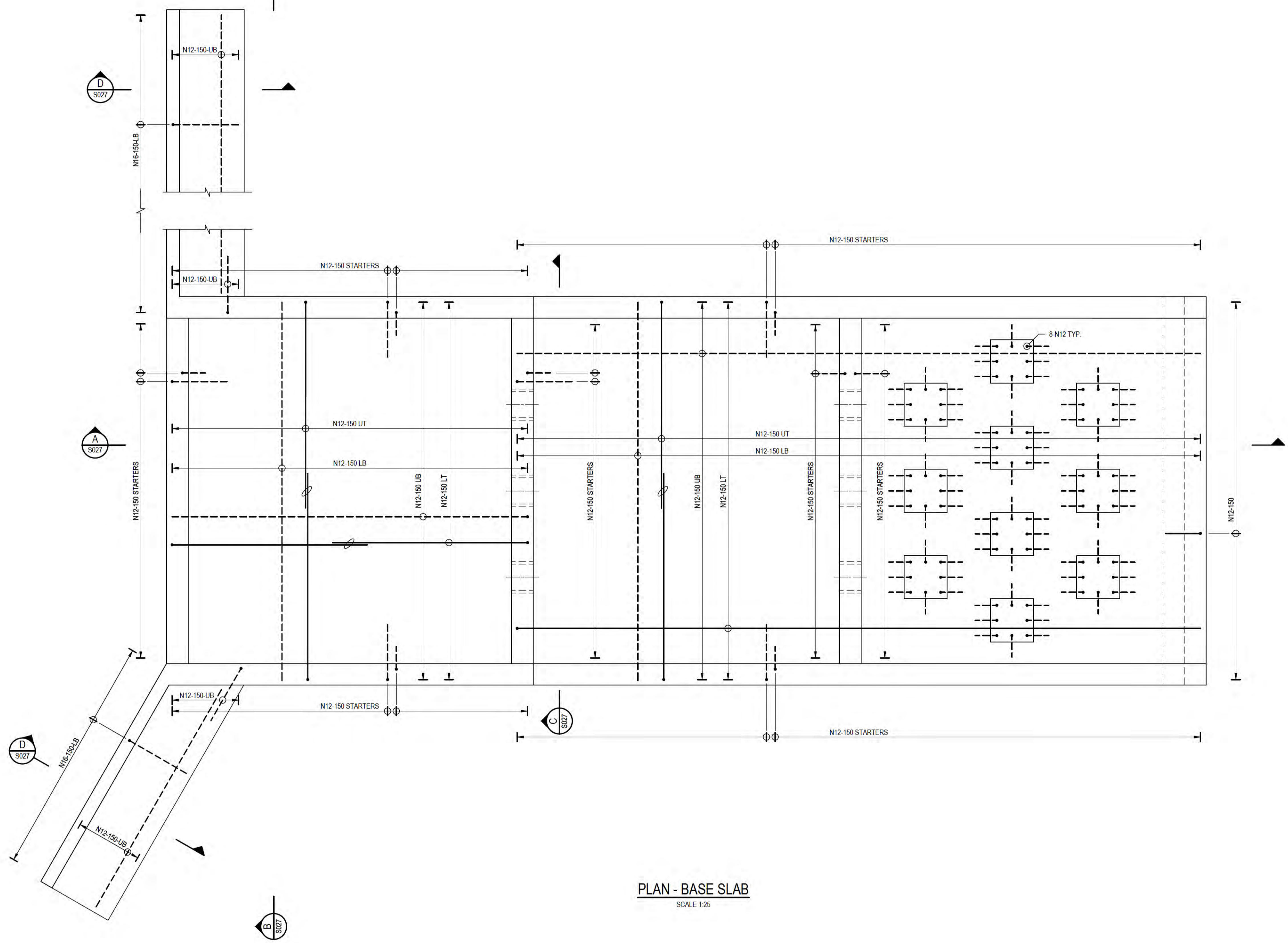
<b>DO NOT SCALE</b>	Drawn L.RADICI	Designer P.HULCUP
Conditions of Use. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.	Drafting Check L.ORREAL*	Design Check E.BOSUSTOW*
	Approved (Project Director) Date	
	Scale 1:25	This Drawing must not be used for construction unless signed as Approved

Client	DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS
Project	CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS
Title	NORTHERN DRUMS SITE WORKS HEADWALL N17-3 - SECTIONS & DETAILS
Original Size	A1 Drawing No: 61-35637-S021
Rev:	A





- NOTES:**
1. REFER DRG 61-35637-C210 AND C232 FOR OUTLET LOCATION.
  2. REFER DRG 61-35637-S002 FOR GENERAL STRUCTURAL NOTES.
  3. REFER DRG 61-35637-S003 FOR TYPICAL STRUCTURAL DETAILS.
  4. REFER DRG 61-35637-S025 FOR GENERAL ARRANGEMENT.
  5. REFER DRG 61-35637-S027 FOR REINFORCEMENT DETAILS SHEET 2 OF 2.
  6. BEDDING MATERIAL, FOUNDATION COMPACTION AND BACKFILL COMPACTION TO BE AS PER SPECIFICATION.



**PRELIMINARY**

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT		LR	JM*	PS*	30/09/20

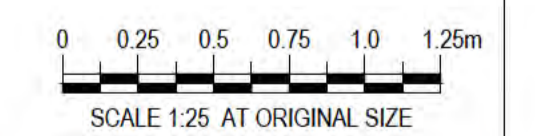
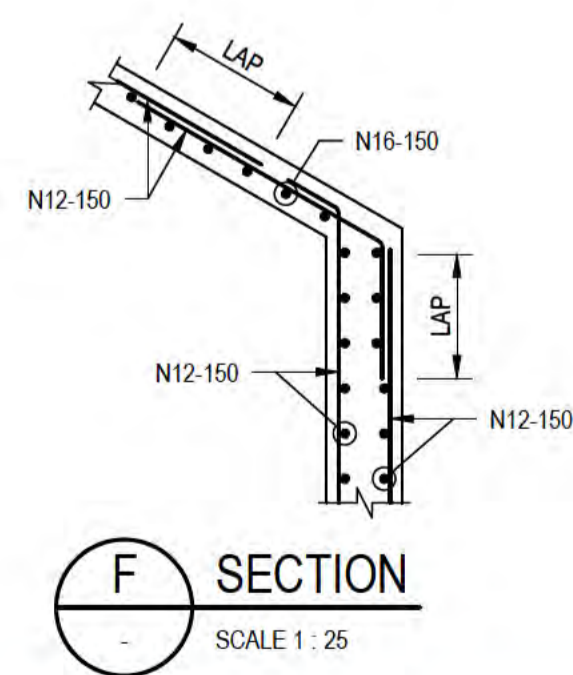
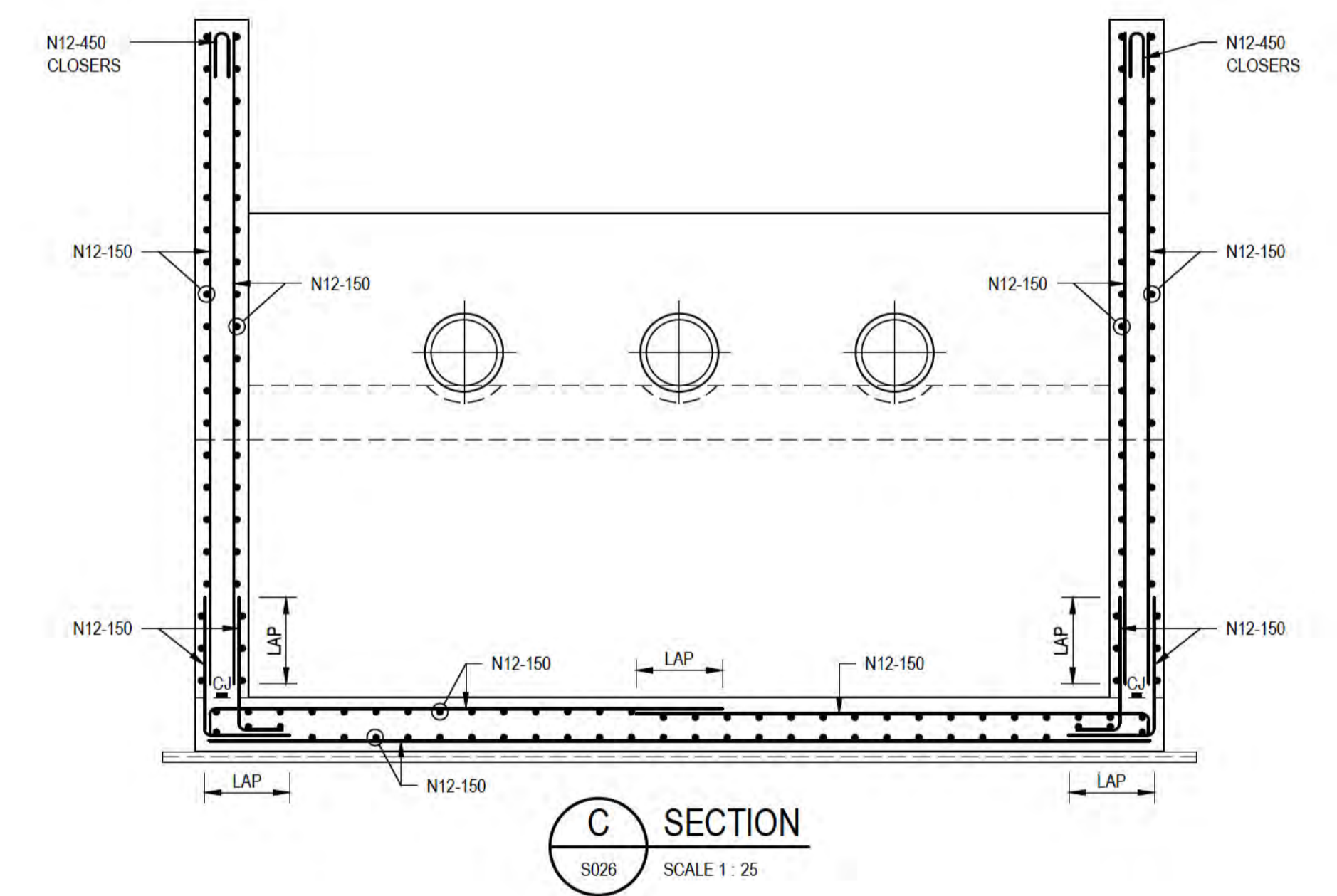
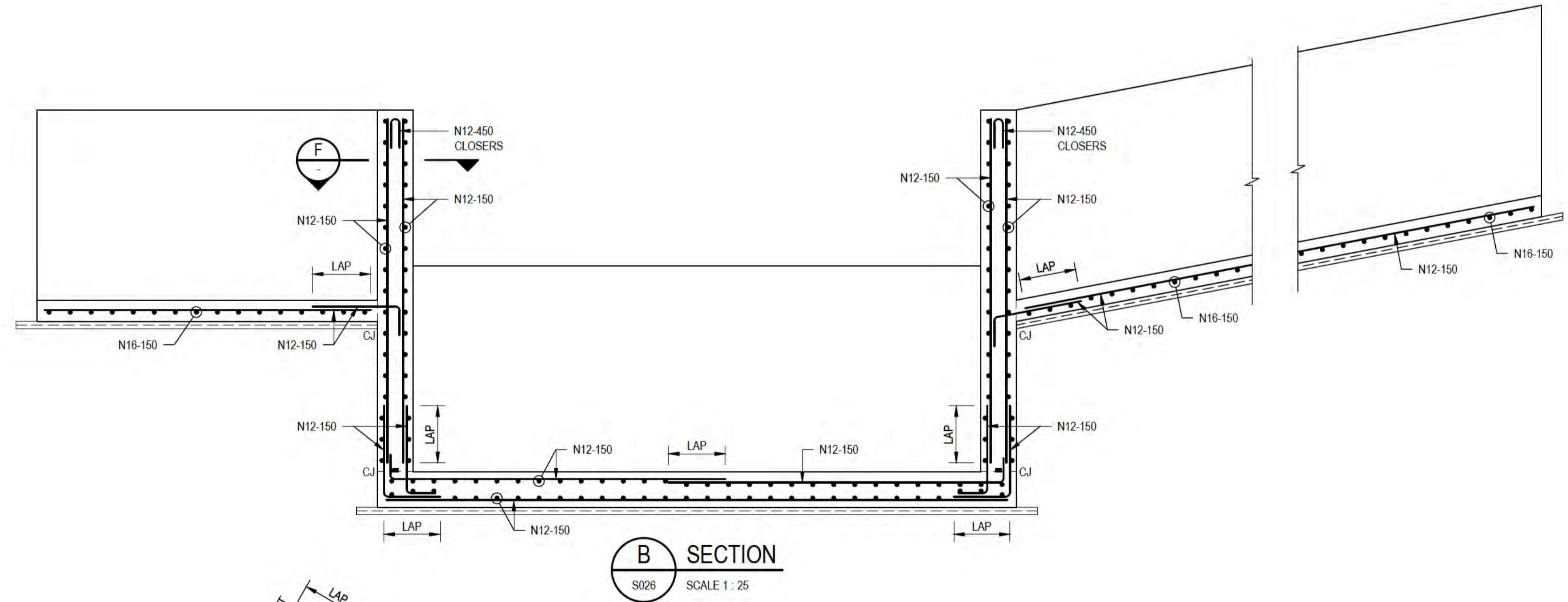
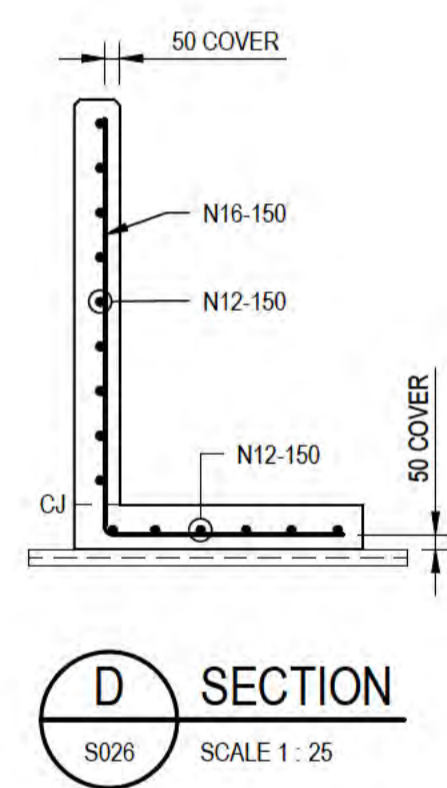
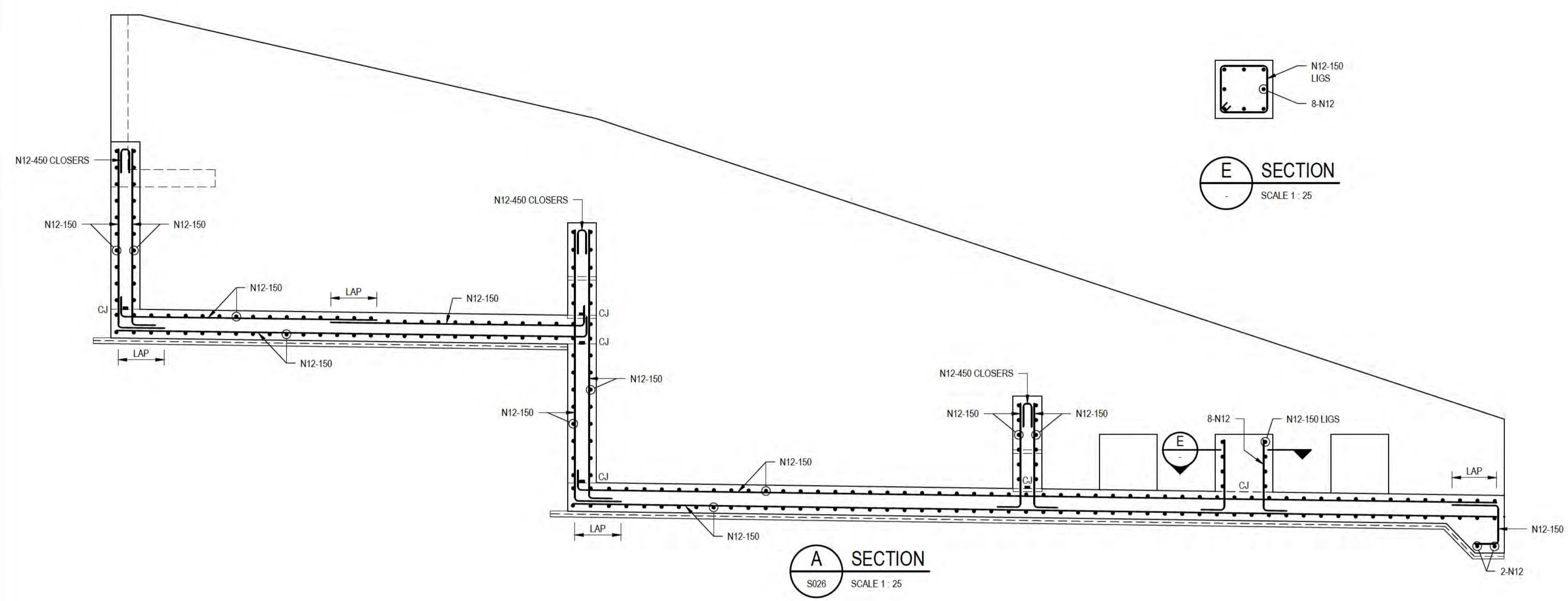


<b>DO NOT SCALE</b>	Drawn	L.RADICI	Designer	P.HULCUP
	Drafting Check	L.ORREAL*	Design Check	E.BOSUSTOW*
	Approved (Project Director)	Date		
	Scale	1:25	This Drawing must not be used for Construction unless signed as Approved	

Client	DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS		
Project	CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS		
Title	NORTHERN DRUMSITE WORKS INCLINE DRAIN OUTLET STRUCTURE - REINF. DETAILS SHEET 1 OF 2		
Original Size	A1	Drawing No:	61-35637-S026
Rev:	A		

**NOTES:**

1. REFER DRGs 61-35637-C210 AND C232 FOR OUTLET LOCATION.
2. REFER DRG 61-35637-S002 FOR GENERAL STRUCTURAL NOTES.
3. REFER DRG 61-35637-S003 FOR TYPICAL STRUCTURAL DETAILS.
4. REFER DRG 61-35637-S026 FOR GENERAL ARRANGEMENT.
5. REFER DRG 61-35637-S026 FOR REINFORCEMENT DETAILS SHEET 1 OF 2.
6. BEDDING MATERIAL, FOUNDATION COMPACTION AND BACKFILL COMPACTION TO BE AS PER SPECIFICATION.



**PRELIMINARY**

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT		LR	JM*	PS*	30/09/20

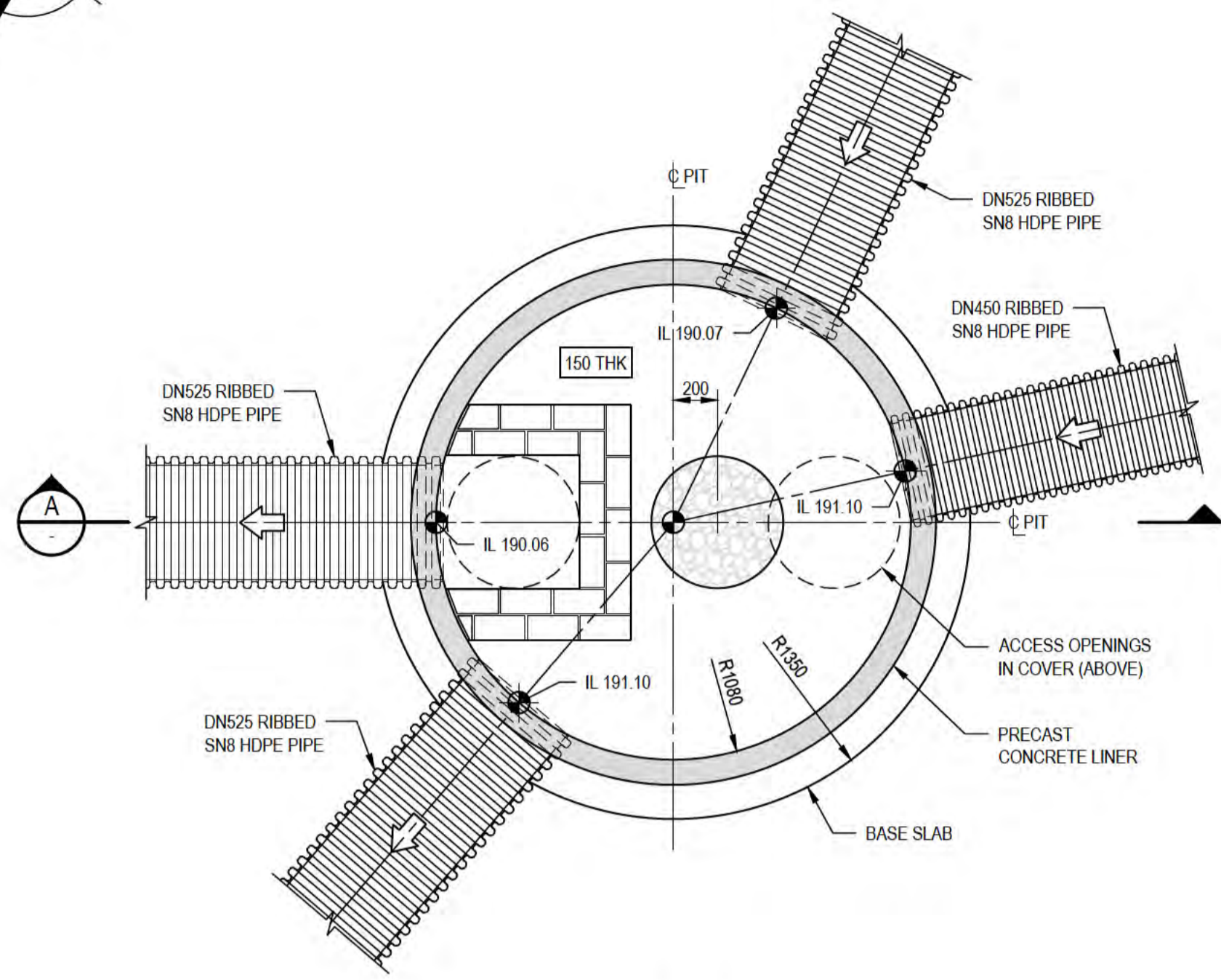


<b>DO NOT SCALE</b>	Drawn L.RADICI	Designer P.HULCUP
Conditions of Use. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.	Drafting Check L.LORREAL*	Design Check E.BOSUSTOW*
	Approved (Project Director) Date	
	Scale 1:25	This Drawing must not be used for Construction unless signed as Approved

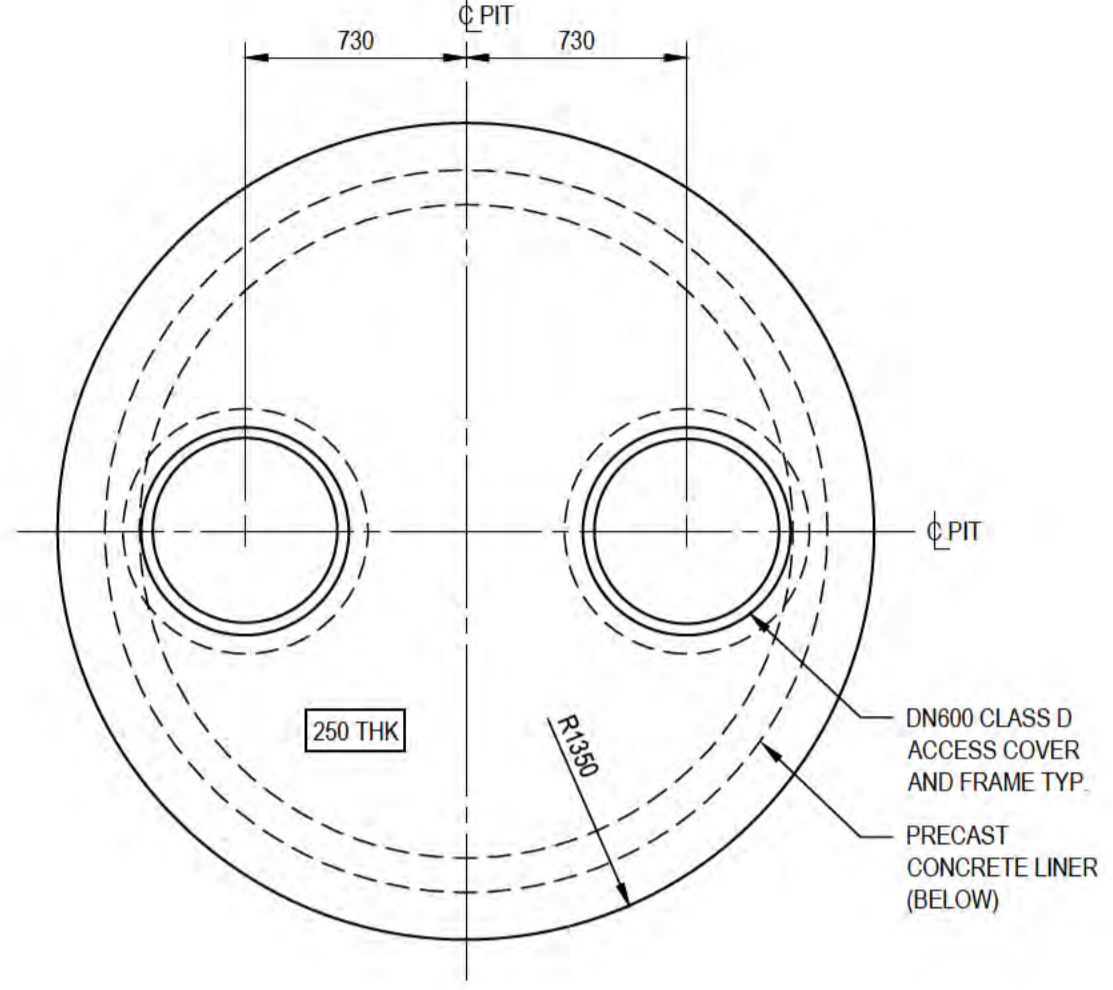
Client	DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS
Project	CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS
Title	NORTHERN DRUMSITE WORKS INLINE DRAIN OUTLET STRUCTURE - REINF. DETAILS SHEET 2 OF 2
Original Size	A1
Drawing No:	61-35637-S027
Rev:	A



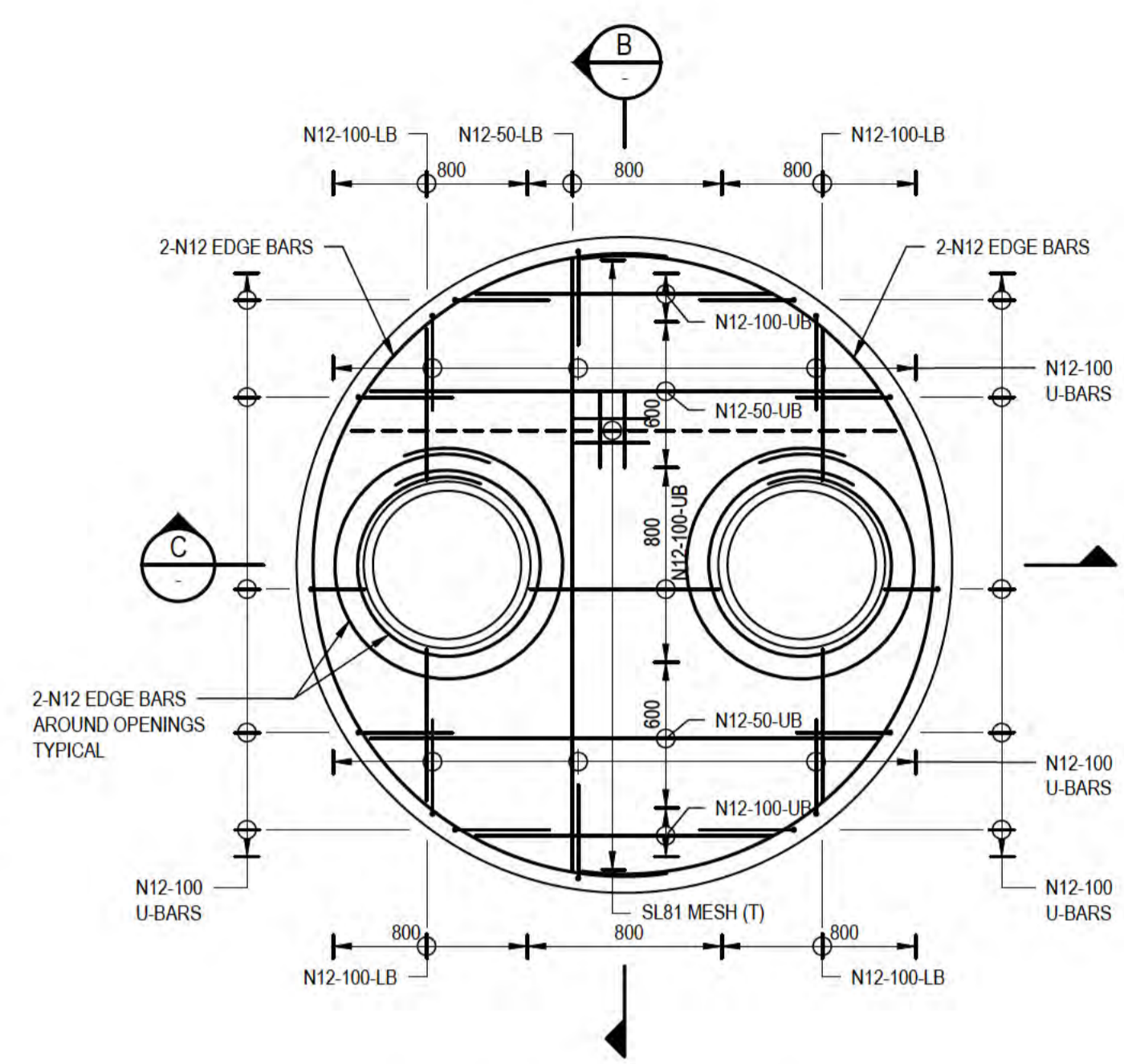
- NOTES:**
- REFER DRG 61-35637-C220 FOR LOCATION AND SET OUT.
  - REFER DRG 61-35637-S002 FOR GENERAL STRUCTURAL NOTES.
  - REFER DRG 61-35637-S003 FOR TYPICAL STRUCTURAL DETAILS.
  - MORTAR TO BE CLASS M4.
  - THIS PIT IS TRAFFICABLE AND HAS BEEN DESIGNED FOR W80 WHEEL LOAD AND A160 AXLE LOAD IN ACCORDANCE WITH AS5100.2.



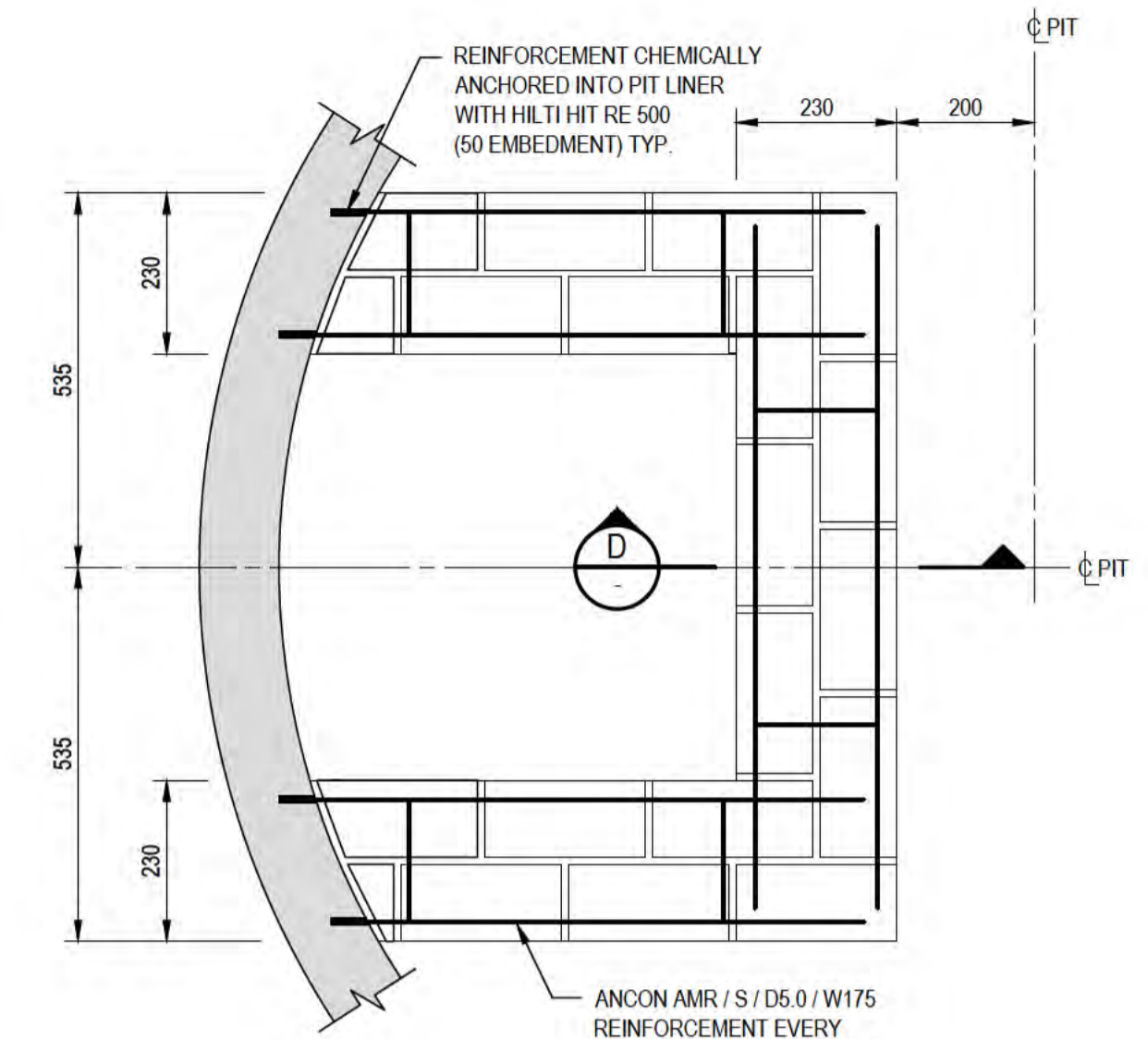
**PLAN**  
SCALE 1:25



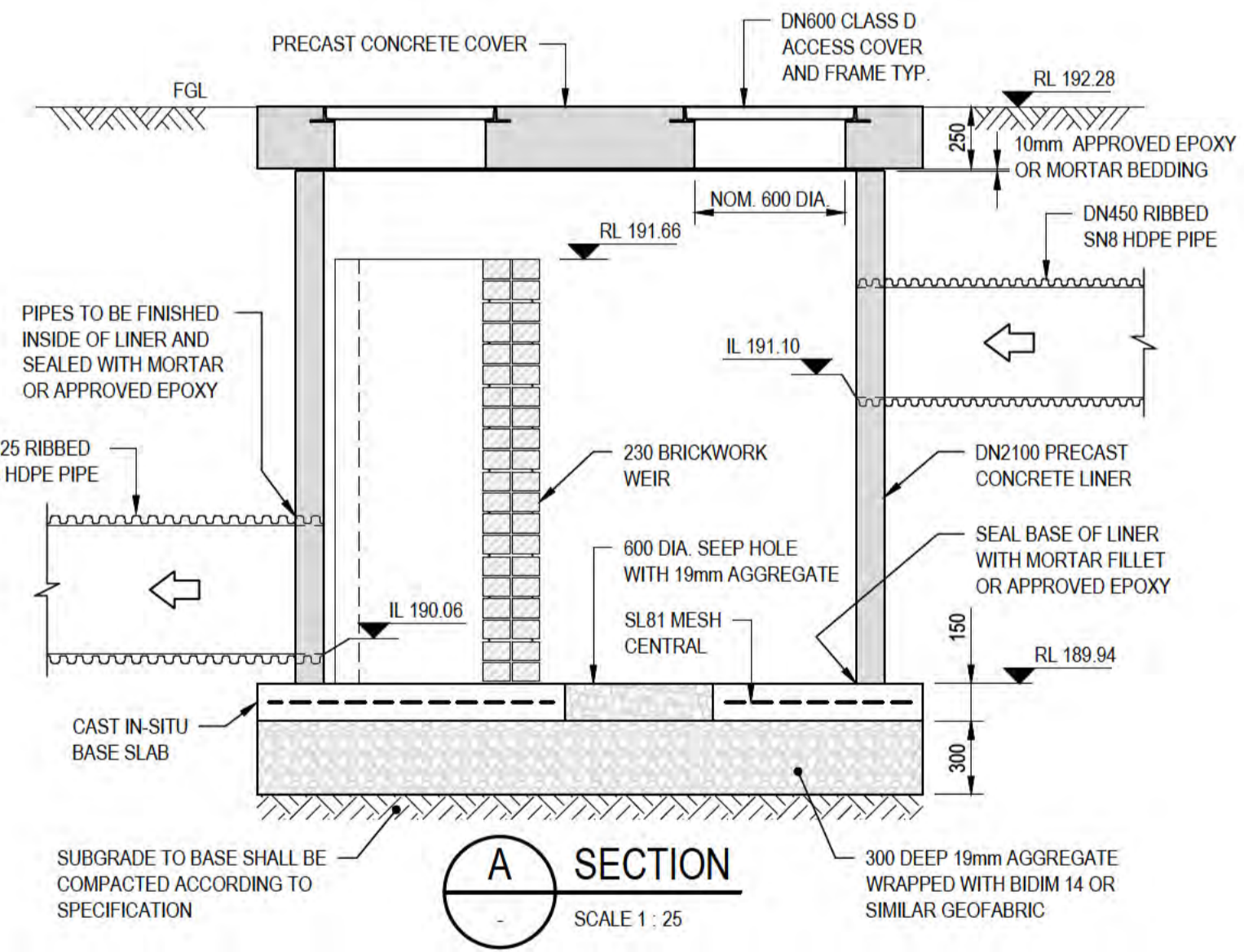
**COVER PLAN**  
SCALE 1:25



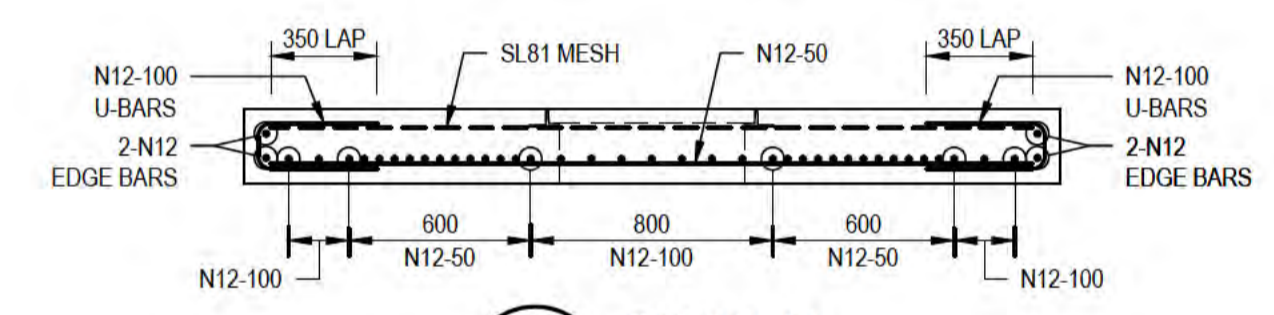
**COVER REINFORCEMENT PLAN**  
SCALE 1:25



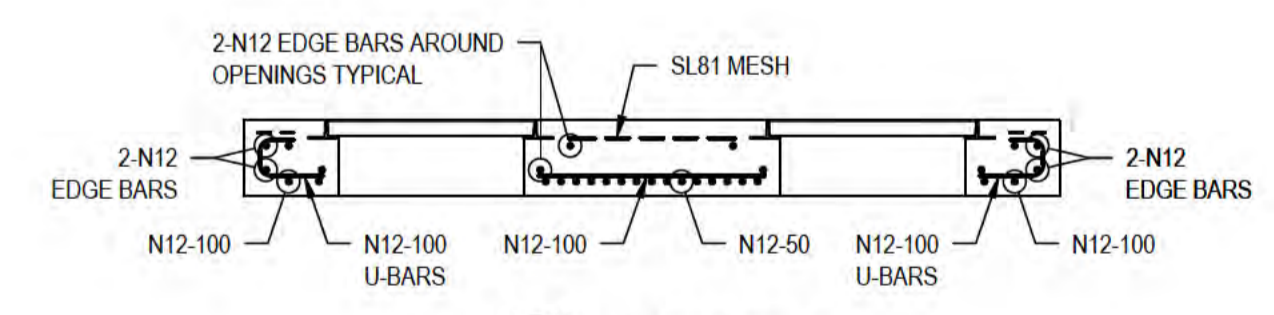
**BRICKWORK REINFORCEMENT PLAN**  
SCALE 1:10



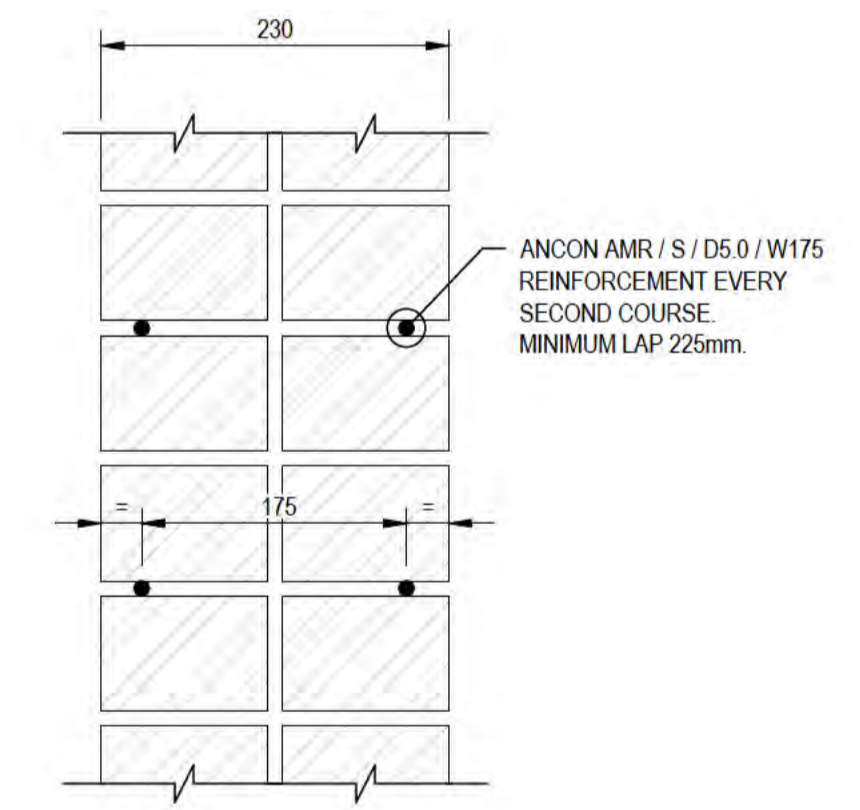
**A SECTION**  
SCALE 1:25



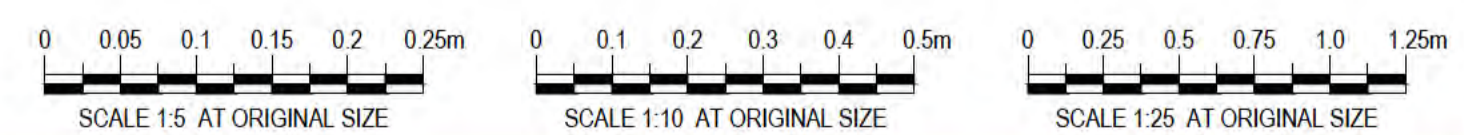
**B SECTION**  
SCALE 1:25



**C SECTION**  
SCALE 1:25



**D SECTION**  
SCALE 1:5



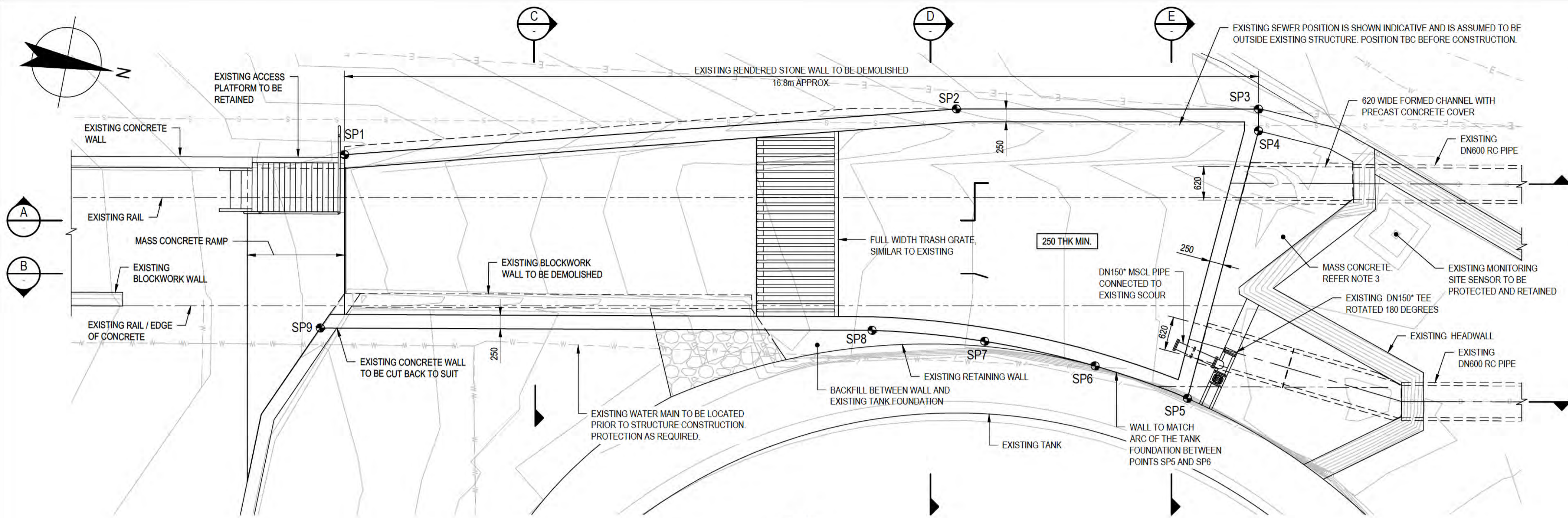
**PRELIMINARY**

No	Revision	Note	Drawn	Job Manager	Project Director	Date
B		RE-ISSUED FOR 90% DESIGN - CLIENT COMMENT	LR	JM*	PS*	20/11/20
A		ISSUED FOR 90% DESIGN - CLIENT COMMENT	LR	JM*	PS*	30/09/20



<b>DO NOT SCALE</b> GHD Pty Ltd Conditions of Use: This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.	Drawn	L.RADICI	Designer	P.HULCUP
	Drafting Check	L.LORREAL*	Design Check	E.BOSUSTOW*
	Approved (Project Director)	Date		
	Scale	AS SHOWN		This Drawing must not be used for Construction unless signed as Approved

Client	DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS		
Project	CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS		
Title	SOUTHERN DRUMSITE WORKS PIT S01-7 - SECTIONS & DETAILS		
Original Size	A1	Drawing No:	61-35637-S030
Rev:	B		



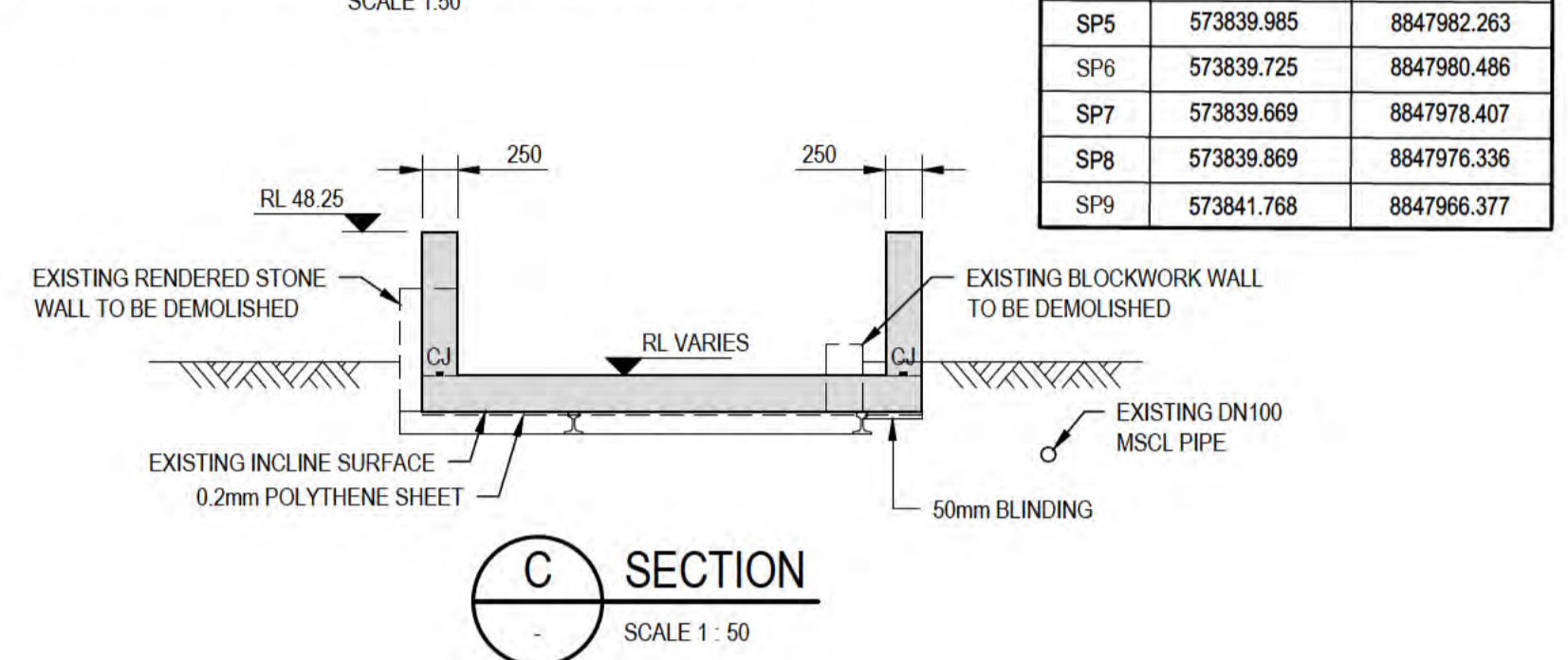
PLAN SCALE 1:50

**NOTES:**

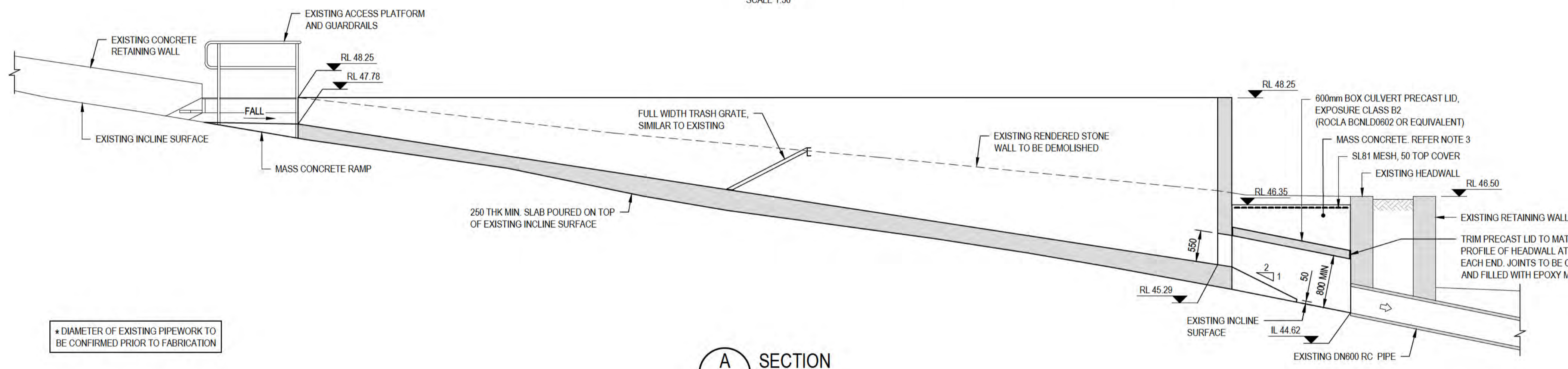
- REFER DRG 61-35637-S002 FOR GENERAL STRUCTURAL NOTES
- REFER DRG 61-35637-S003 FOR TYPICAL STRUCTURAL DETAILS
- MASS CONCRETE TO INCLUDE STEEL FIBRES AND XYPEX. REFER CONCRETE CHARACTERISTICS TABLE ON DRG 61-35637-S002
- EXISTING MONITORING SITE SENSORS AND CONDUITS TO BE REMOVED AND REINSTATED BY SUITABILITY QUALIFIED INSTALLER. THE SETOUT POINTS DETAILED ARE INDICATIVE AND BASED UPON AVAILABLE INFORMATION. THE FINAL SETOUT OF THE STRUCTURE IS TO BE UNDERTAKEN TO MATCH WITH EXISTING STRUCTURE EXTENT UNLESS SHOWN OTHERWISE

SETOUT		
POINT	EASTING (m)	NORTHING (m)
SP1	573838.559	8847966.207
SP2	573835.582	8847977.078
SP3	573834.521	8847982.528
SP4	573834.913	8847982.604
SP5	573839.985	8847982.263
SP6	573839.725	8847980.486
SP7	573839.669	8847978.407
SP8	573839.869	8847976.336
SP9	573841.768	8847966.377

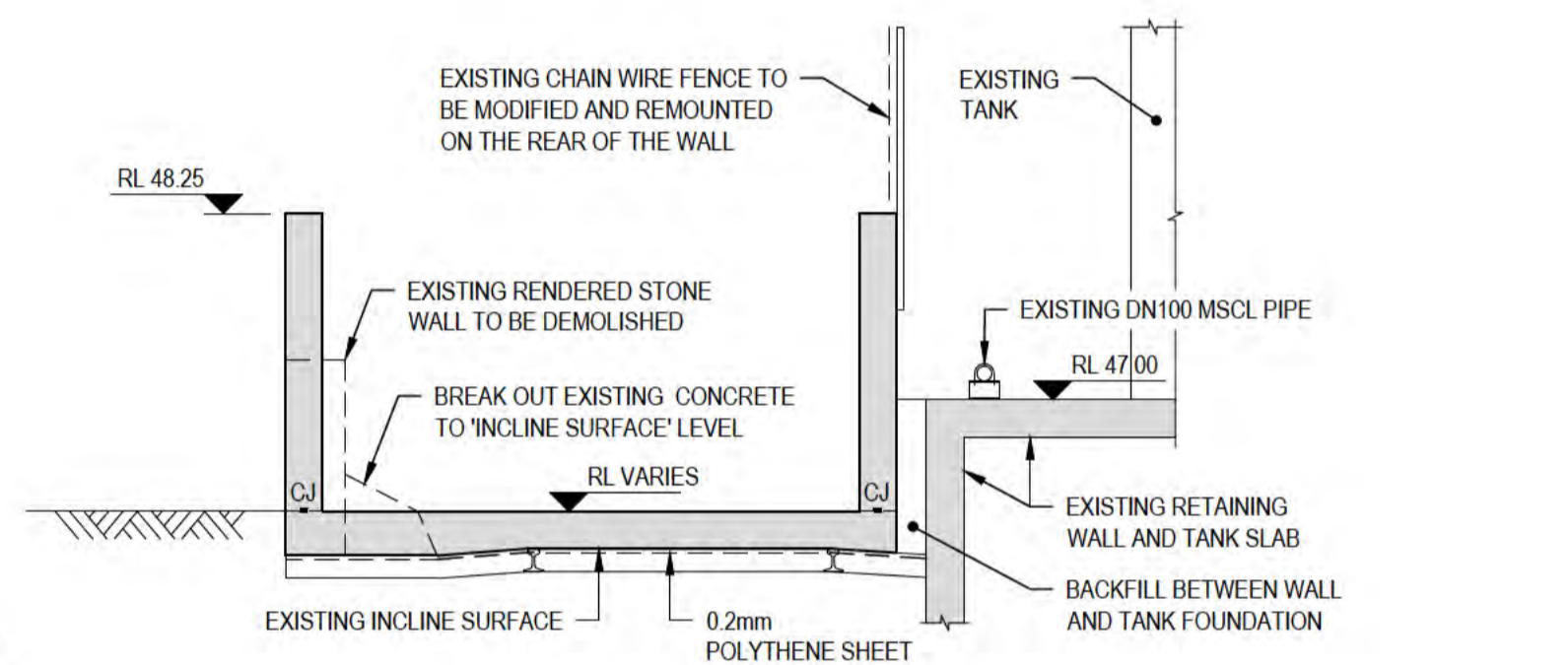
FORMED CHANNEL TYPICAL SECTION SCALE 1:50



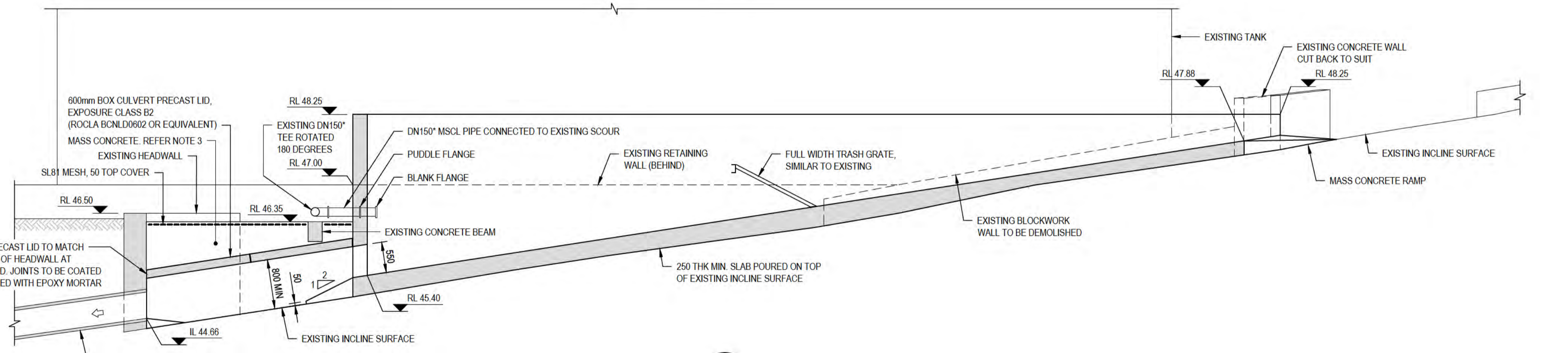
SECTION C SCALE 1:50



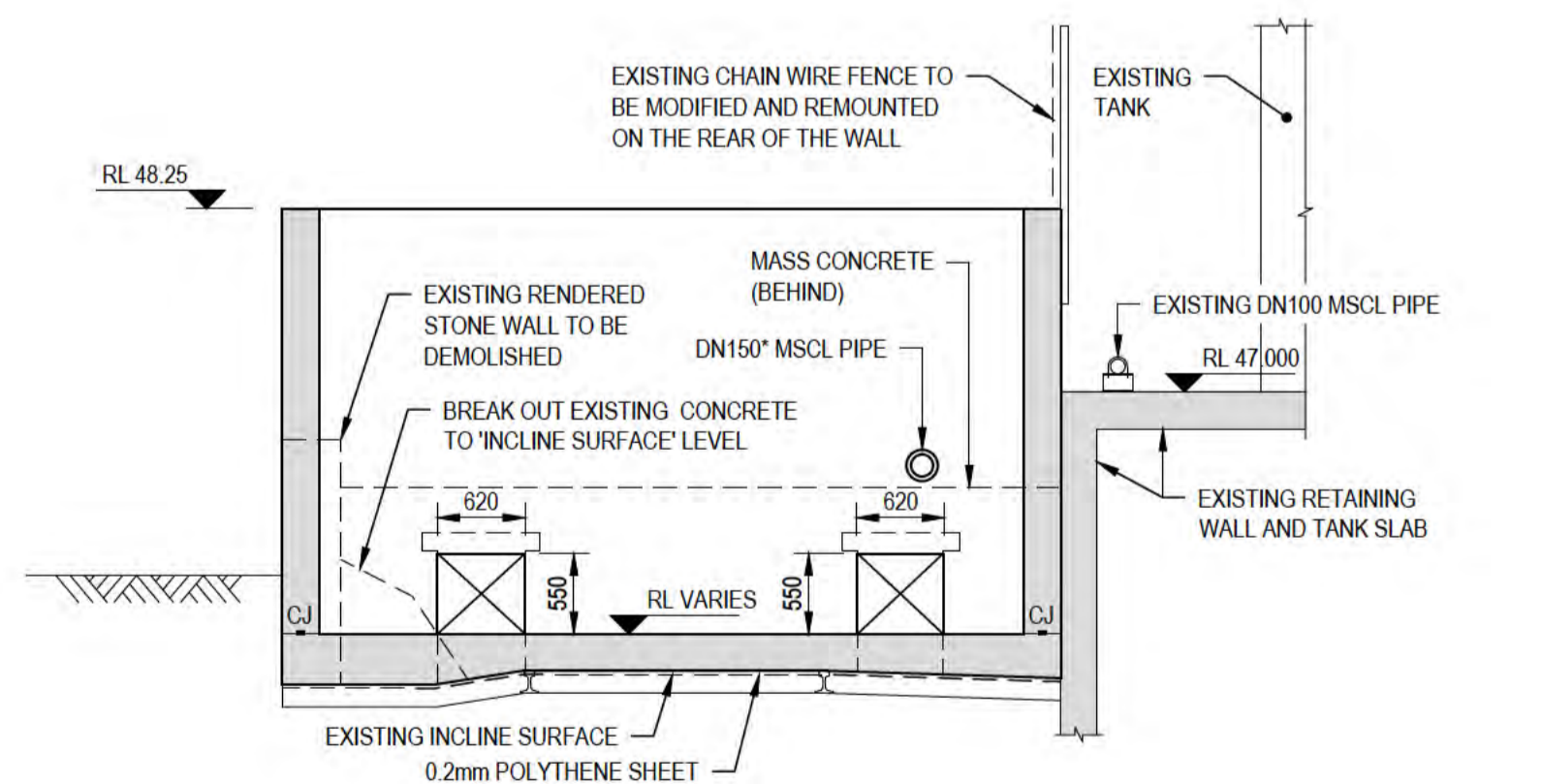
SECTION A SCALE 1:50



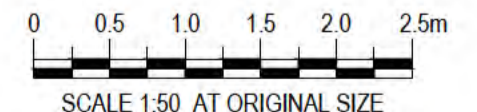
SECTION D SCALE 1:50



SECTION B SCALE 1:50

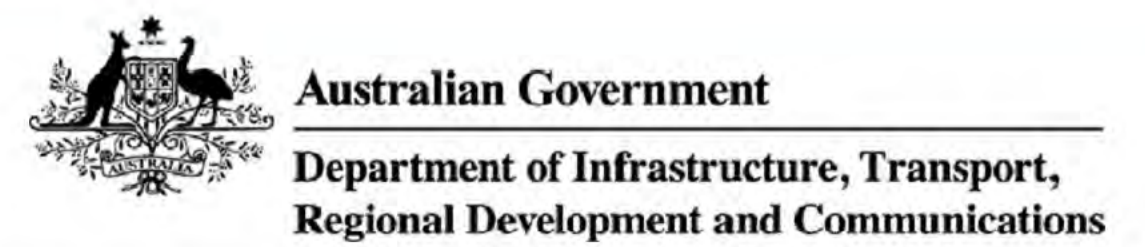


SECTION E SCALE 1:50



**PRELIMINARY**

No	Revision	Note	Drawn	Job Manager	Project Director	Date
B	RE-ISSUED FOR 90% DESIGN - CLIENT COMMENT		LR	JM*	PS*	20/11/20
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT		LR	JM*	PS*	30/09/20

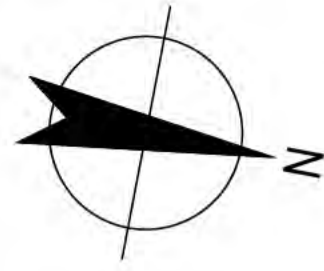


**DO NOT SCALE**

GHD Pty Ltd  
Conditions of Use.  
This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

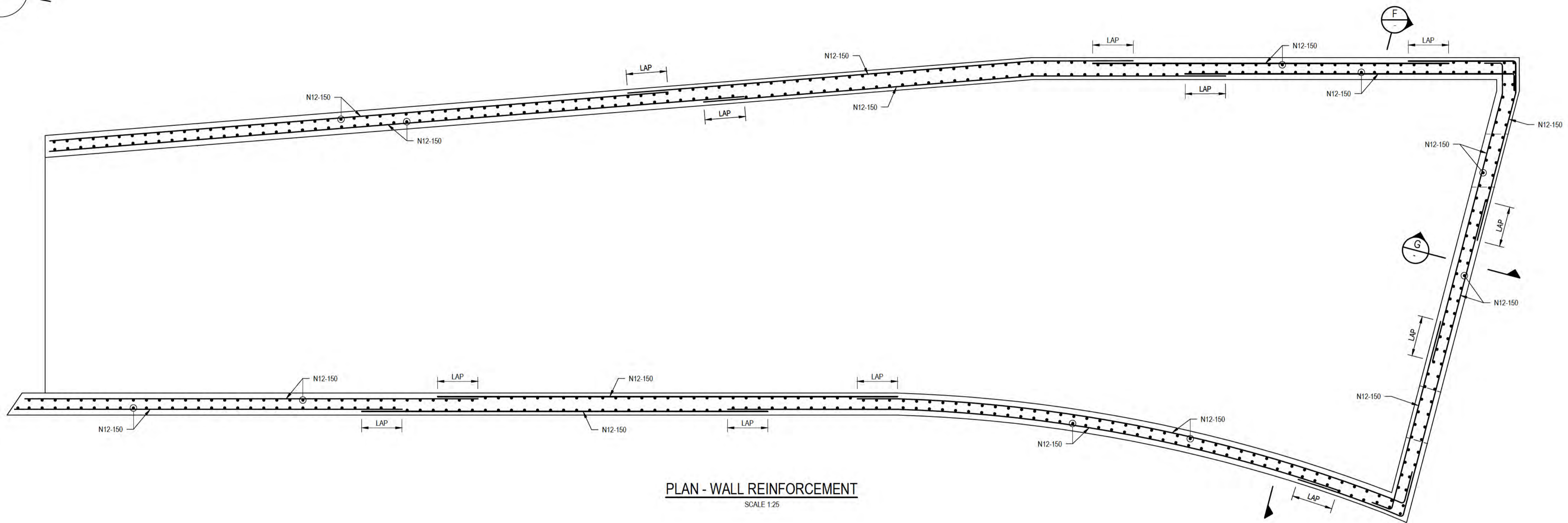
Drawn L.RADICI  
Designer P.HULCUP  
Drafting Check L.LORREAL\*  
Design Check E.BOSUSTOW\*  
Approved (Project Director)  
Date  
Scale 1:50

Client DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS  
Project CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS  
Title NORTHERN DRUMSITE WORKS - INCLINE TANK DRAIN HEADWALL MODIFICATIONS - GENERAL ARRANGEMENT  
Original Size A1  
Drawing No: 61-35637-S035  
Rev: B

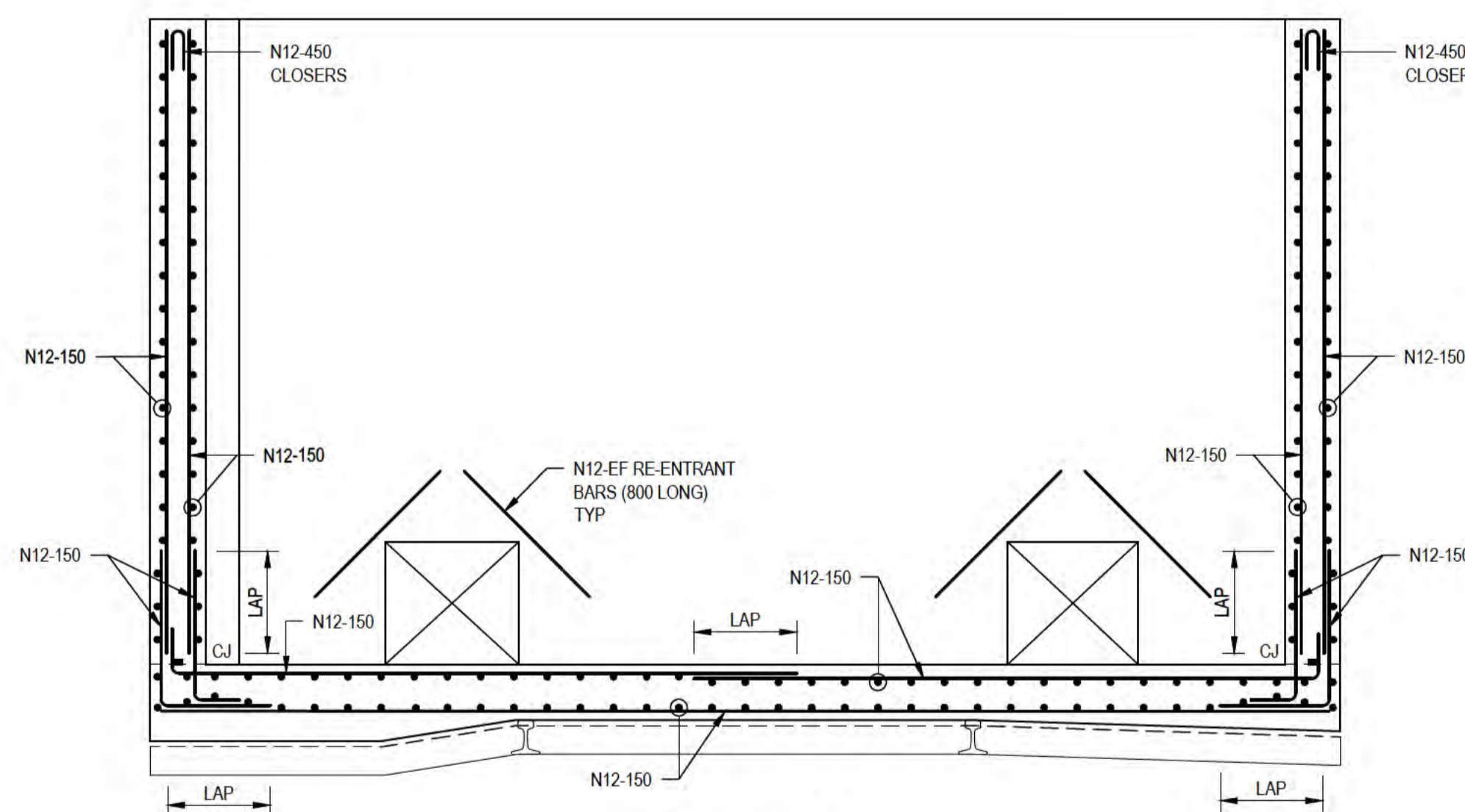


**NOTES:**

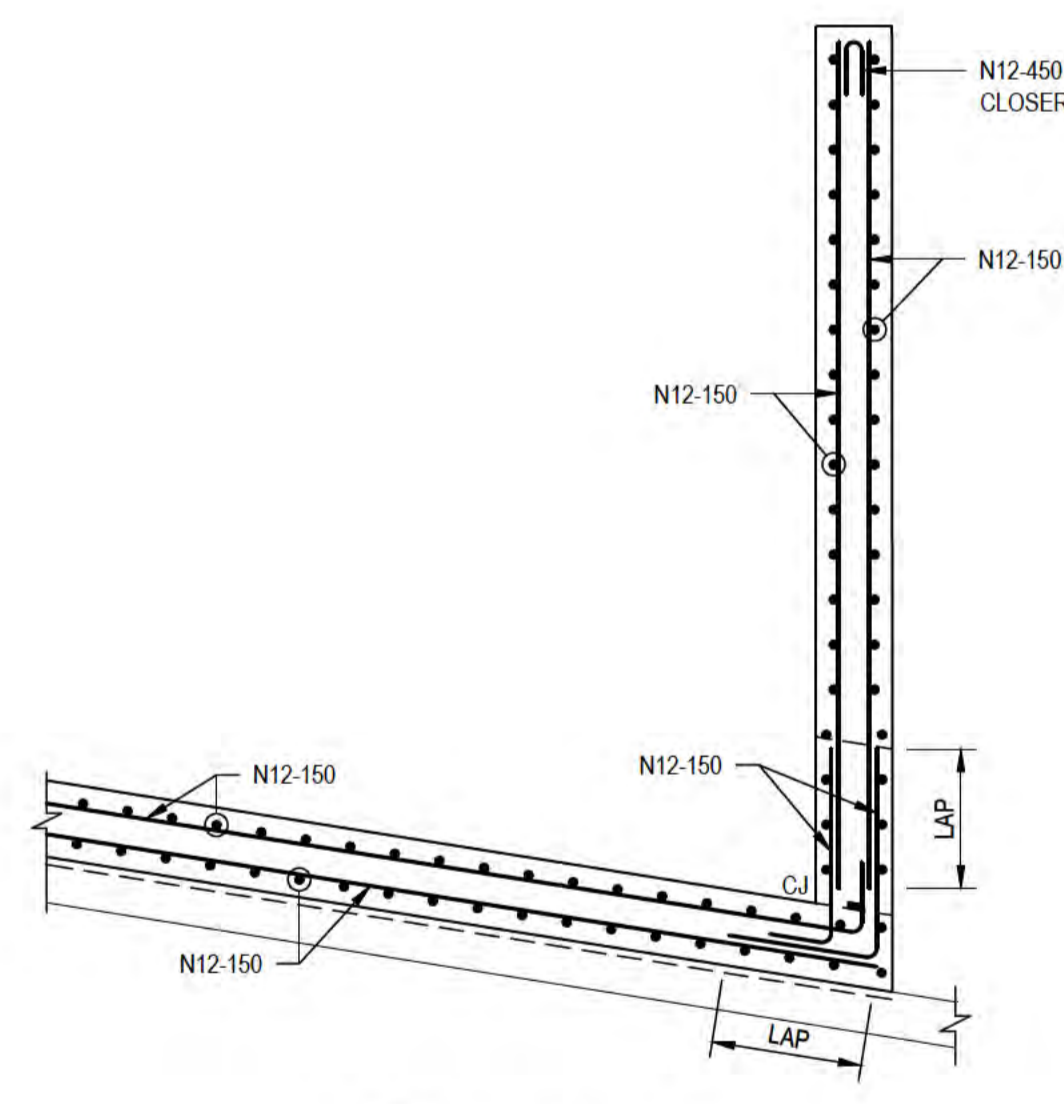
1. REFER DRG 61-35637-S002 FOR GENERAL STRUCTURAL NOTES
2. REFER DRG 61-35637-S003 FOR TYPICAL STRUCTURAL DETAILS



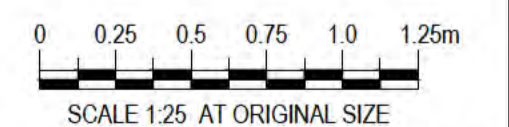
**PLAN - WALL REINFORCEMENT**  
SCALE 1:25



**F SECTION**  
SCALE 1:25



**G SECTION**  
SCALE 1:25



**PRELIMINARY**

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
B	RE-ISSUED FOR 90% DESIGN - CLIENT COMMENT		LR	JM*	PS*	20/11/20
A	ISSUED FOR 90% DESIGN - CLIENT COMMENT		LR	JM*	PS*	30/09/20



**Australian Government**  
**Department of Infrastructure, Transport, Regional Development and Communications**



Level 10, 999 Hay Street Perth WA 6000  
PO Box Y3106 Perth WA 6832 Australia  
T 61 8 6222 8222 F 61 8 6222 8555  
E permail@ghd.com.au W www.ghd.com

**DO NOT SCALE**

GHD Pty Ltd  
Conditions of Use.  
This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

Drawn	L.RADICI	Designer	P.HULCUP
Drafting Check	L.ORREAL*	Design Check	E.BOSUSTOW*
Approved (Project Director)	Date		
Scale	1:25	This Drawing must not be used for Construction unless signed as Approved	

Client	DEPT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT & COMMUNICATIONS		
Project	CHRISTMAS ISLAND STORMWATER REMEDIAL WORKS		
Title	NORTHERN DRUMSITE WORKS - INCLINE TANK DRAIN HEADWALL MODIFICATIONS - REINFORCEMENT DETAILS		
Original Size	A1	Drawing No:	<b>61-35637-S036</b>
Rev:	B		