

A1 in Northumberland: Morpeth to Ellingham

Scheme Number: TR010041

2.8 Structures Engineering Drawings & Sections

Regulations 5(2)(o), 5(2)(p) & 6(2)

Planning Act 2008

Infrastructure Planning (Applications: Prescribed
Forms and Procedure) Regulations 2009

Volume 2

June 2020

Infrastructure Planning

Planning Act 2008

**The Infrastructure Planning
(Applications: Prescribed Forms and
Procedure) Regulations 2009**

The A1 in Northumberland: Morpeth to Ellingham
Development Consent Order 20[xx]

STRUCTURES ENGINEERING DRAWINGS & SECTIONS

Regulation Reference:	Regulations 5(2)(o), 5(2)(p) & 6(2)
Planning Inspectorate Scheme Reference	TR010041
Application Document Reference	TR010041/APP/2.8
Author:	A1 in Northumberland Project Team, Highways England

Version	Date	Status of Version
Rev 0	June 2020	Application Issue

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1 INTRODUCTION

1.1 These Structures Engineering Drawings and Sections (these “Plans”) relate to an application made by Highways England (the “Applicant”) to the Secretary of State for Transport, via the Planning Inspectorate (the “Inspectorate”), under the Planning Act 2008 (the “2008 Act”) for a Development Consent Order (DCO). If made, the DCO would grant consent for the A1 in Northumberland: Morpeth to Ellingham (the “Scheme”).

The Scheme comprises two sections known as Part A: Morpeth to Felton (Part A) and Part B: Alnwick to Ellingham (Part B). A detailed description of the Scheme can be found in Chapter 2: The Scheme of the Environmental Statement (ES) (**Application Document Reference: TR010041/APP/6.1**). Part A and Part B were originally proposed to be the subject of separate applications for DCOs but have now been combined into a single application for a DCO in respect of the Scheme as a whole and these Plans covers the Scheme in its entirety.

1.2 These Plans comprise part of a suite of application documentation and are included in the application in compliance with Regulations 5(2)(o), 5(2)(p) and 6(2) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (the “2009 Regulations”) which requires:

5(2)(o) “any other plans, drawings and sections necessary to describe the proposals for which development consent is sought, showing details of design, external appearance and the preferred layout of buildings or structures, drainage, surface water management, means of vehicular and pedestrian access, any car parking to be provided and means of landscaping”.

5(2)(p) “any of the documents prescribed by Regulation 6 which are relevant to the particular project”

6(2) “if the application is for highway related development or for the construction or alteration of a railway, it must be accompanied by section drawings to suitable horizontal and vertical scales which show, by reference to Ordnance Survey or Chart datum –

(a) The levels of the proposed works, including in particular and where relevant

(i) ground levels;

(ii) the height of every proposed bridge, viaduct, aqueduct, embankment and elevated guideway;

(iii) the depth of every proposed cutting and tunnel;

(iv) the levels of the bed of any tidal waters or inland waterway in which it is proposed that any works should be situated;

(v) the height of every structure or device (including a cable, but not catenary and related equipment) intended to be erected above, on or below the surface of, or on or beneath the bed of tidal water or an inland waterway; and

(vi) drainage outfall details for highways;

(b) a cross section of every intended tunnel and any altered gradient of a carriageway or a way forming part of a guided transport system on either side of every level crossing, bridge, tunnel or underpass which would carry the carriageway or way through which it would pass"

- 1.3** As these Plans are part of the application documentation, they should be read alongside and are informed by the other application documents. In particular, these Plans should be read alongside Schedule 1 of the draft DCO (**Application Document Reference: TR010041/APP/3.1**), the Engineering Section Drawings (**Application Document Reference: TR010041/APP/2.7**) and the Works Plans (**Application Document Reference: TR010041/APP/2.3**).

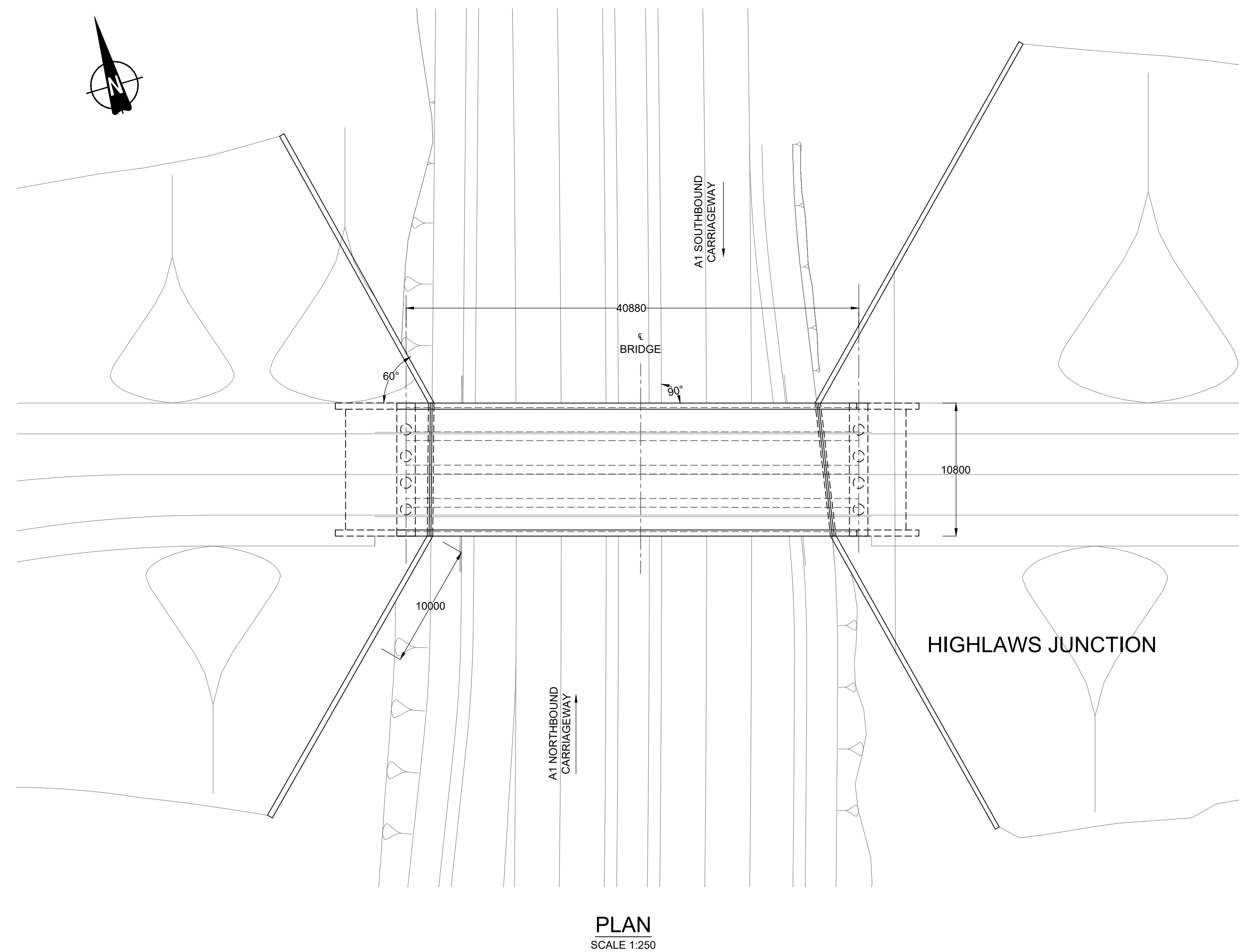
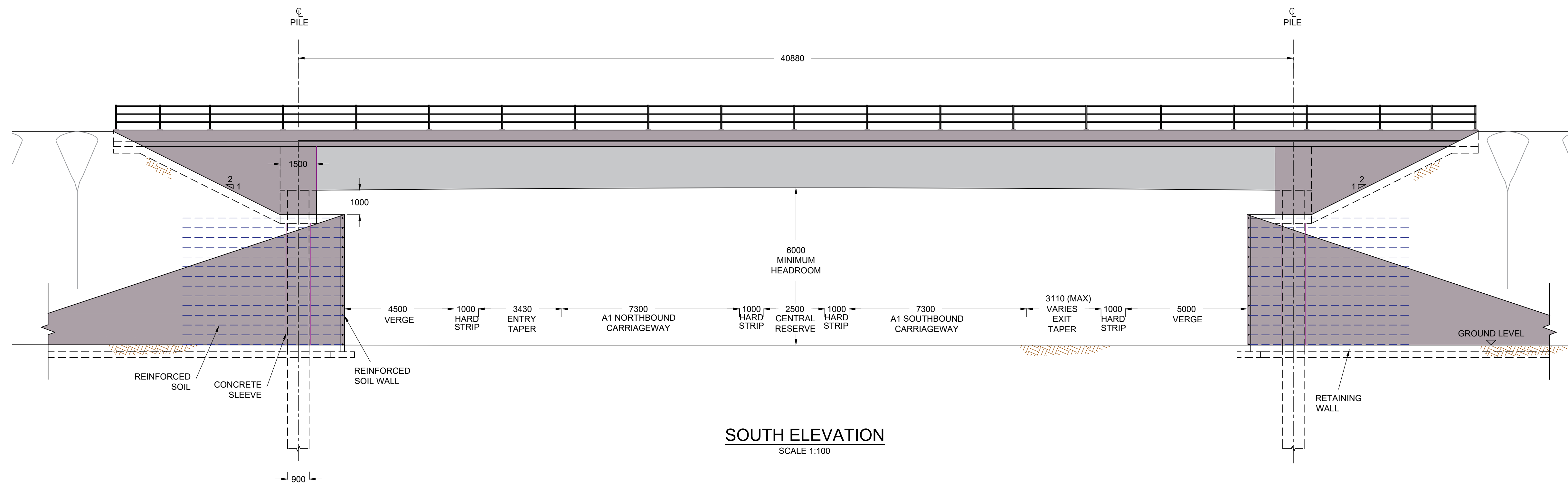
2 SCHEDULE OF PLANS INCLUDED IN THIS APPLICATION DOCUMENT

Drawing Title	Drawing Number	Revision
STRUCTURES ENGINEERING DRAWINGS AND SECTIONS HIGHLAWS JUNCTION – CH.12270 SHEET 1 of 27 REGULATIONS 5(2)(o), 5(2)(p) & 6(2)	HE551459-WSP-HGN-M2F-DR-CH-1992	0
STRUCTURES ENGINEERING DRAWINGS AND SECTIONS FENROTHER JUNCTION – CH.14910 SHEET 2 of 27 REGULATIONS 5(2)(o), 5(2)(p) & 6(2)	HE551459-WSP-HGN-M2F-DR-CH-1993	0
STRUCTURES ENGINEERING DRAWINGS AND SECTIONS CAUSEY PARK OVERBRIDGE – CH 17680 SHEET 3 of 27 REGULATIONS 5(2)(o), 5(2)(p) & 6(2)	HE551459-WSP-HGN-M2F-DR-CH-1994	0
STRUCTURES ENGINEERING DRAWINGS AND SECTIONS BURGHAM UNDERBRIDGE – CH.19500 SHEET 4 of 27 REGULATIONS 5(2)(o), 5(2)(p) & 6(2)	HE551459-WSP-HGN-M2F-DR-CH-1995	0
STRUCTURES ENGINEERING DRAWINGS AND SECTIONS WEST MOOR JUNCTION - CH.21700 SHEET 5 of 27 REGULATIONS 5(2)(o), 5(2)(p) & 6(2)	HE551459-WSP-HGN-M2F-DR-CH-1996	0
STRUCTURES ENGINEERING DRAWINGS AND SECTIONS PARKWOOD SUBWAY – CH23100 SHEET 6 of 2027REGULATIONS 5(2)(o), 5(2)(p) & 6(2)	HE551459-WSP-HGN-M2F-DR-CH-1997	0
STRUCTURES ENGINEERING DRAWINGS & SECTIONS WEST COTTING BURN CULVERT (1.4) – CH.10800 SHEET 07 OF 27 (Regulations 5(2)(o), 5(2)(p) & 6(2)	HE551459-WSP-HGN-M2F-DR-CH-1998	0
STRUCTURES ENGINEERING DRAWINGS & SECTIONS EAST COTTING BURN CULVERT (1.5) – CH.10800 SHEET 08 OF 27 REGULATIONS 5(2)(o), 5(2)(p) & 6(2)	HE551459-WSP-HGN-M2F-DR-CH-1999	0

STRUCTURES ENGINEERING DRAWINGS & SECTIONS PARADISE CULVERT (3) – CH.13660 SHEET 09 OF 27 REGULATIONS 5(2)(o), 5(2)(p) & 6(2)	HE551459-WSP-HGN-M2F-DR-CH-2000	0
STRUCTURES ENGINEERING DRAWINGS & SECTIONS PRIEST'S BRIDGE CULVERT – CH.14050 SHEET 10 OF 27 REGULATIONS 5(2)(o), 5(2)(p) & 6(2)	HE551459-WSP-HGN-M2F-DR-CH-2001	0
STRUCTURES ENGINEERING DRAWINGS & SECTIONS SOUTH FENROTHER BURN CULVERT BURN CULVERT (5.2) – CH.14900 SHEET 11 OF 27 REGULATIONS 5(2)(o), 5(2)(p) & 6(2)	HE551459-WSP-HGN-M2F-DR-CH-2002	0
STRUCTURES ENGINEERING DRAWINGS & SECTIONS NORTH FENROTHER BURN CULVERT BURN CULVERT (5.3) – CH.15000 SHEET 12 OF 27 REGULATIONS 5(2)(o), 5(2)(p) & 6(2)	HE551459-WSP-HGN-M2F-DR-CH-2003	0
STRUCTURES ENGINEERING DRAWINGS & SECTIONS EARS DON BURN CULVERT BURN CULVERT (6.3) – CH.17000 SHEET 13 OF 27 REGULATIONS 5(2)(o), 5(2)(p) & 6(2)	HE551459-WSP-HGN-M2F-DR-CH-2004	0
ENGINEERING DRAWINGS & SECTIONS CAUSEY PARK CULVERT (6.2) – CH.17070 SHEET 14 OF 27 REGULATIONS 5(2)(o), 5(2)(p) & 6(2)	HE551459-WSP-HGN-M2F-DR-CH-2005	0
STRUCTURES ENGINEERING DRAWINGS & SECTIONS NEW HOUSES FARM CULVERT (7.1) – CH.17150 SHEET 15 OF 27 REGULATIONS 5(2)(o), 5(2)(p) & 6(2)	HE551459-WSP-HGN-M2F-DR-CH-2006	0
STRUCTURES ENGINEERING DRAWINGS & SECTIONS WILDLIFE ESHOTT BURN CULVERT (8A) – CH.18300 SHEET 16 OF 27 REGULATIONS 5(2)(o), 5(2)(p) & 6(2)	HE551459-WSP-HGN-M2F-DR-CH-2007	0

STRUCTURES ENGINEERING DRAWINGS & SECTIONS BROCKENFIELD CULVERT (12) – CH.20000 SHEET 17 OF 27 REGULATIONS 5(2)(o), 5(2)(p) & 6(2)	HE551459-WSP-HGN-M2F-DR-CH-2008	0
STRUCTURES ENGINEERING DRAWINGS & SECTIONS GLENSHOTTON CULVERT (14) – CH.21860 SHEET 18 OF 27 REGULATIONS 5(2)(o), 5(2)(p) & 6(2)	HE551459-WSP-HGN-M2F-DR-CH-2009	0
STRUCTURES ENGINEERING DRAWINGS & SECTIONS PARKWOOD CULVERT (14) – CH.23140 SHEET 19 OF 27 REGULATIONS 5(2)(o), 5(2)(p) & 6(2)	HE551459-WSP-HGN-M2F-DR-CH-2010	0
STRUCTURES ENGINEERING DRAWINGS & SECTIONS RIVER COQUET BRIDGE – CH.22483 SHEET 20 OF 27 REGULATIONS 5(2)(o), 5(2)(p) & 6(2)	HE551459-WSP-HGN-M2F-DR-CH-2011	0
STRUCTURES ENGINEERING DRAWINGS AND SECTIONS CHARLTON MIRES JUNCTION TO OVERBRIDGE – CH.55310 SHEET 21 of 27 REGULATIONS 5(2)(o), 5(2)(p) & 6(2)	HE551459-WSP-SBR-A2E-DR-CB-2161	0
STRUCTURES ENGINEERING DRAWINGS AND SECTIONS HECKLEY FENCE JUNCTION OVERBRIDGE– CH.58940 SHEET 22 of 27 REGULATIONS 5(2)(o), 5(2)(p) & 6(2)	HE551459-WSP-SBR-A2E-DR-CB-2162	0
STRUCTURES ENGINEERING DRAWINGS AND SECTIONS WHITEHOUSE BURN CULVERT (23.1)– CH 56920 SHEET 23 of 27 REGULATIONS 5(2)(o), 5(2)(p) & 6(2)	HE551459-WSP-SBR-A2E-DR-CB-2163	0
STRUCTURES ENGINEERING DRAWINGS AND SECTIONS LINKHALL CULVERT (26.1) – CH.59275 SHEET 24 of 27 REGULATIONS 5(2)(o), 5(2)(p) & 6(2)	HE551459-WSP-SBR-A2E-DR-CB-2164	0

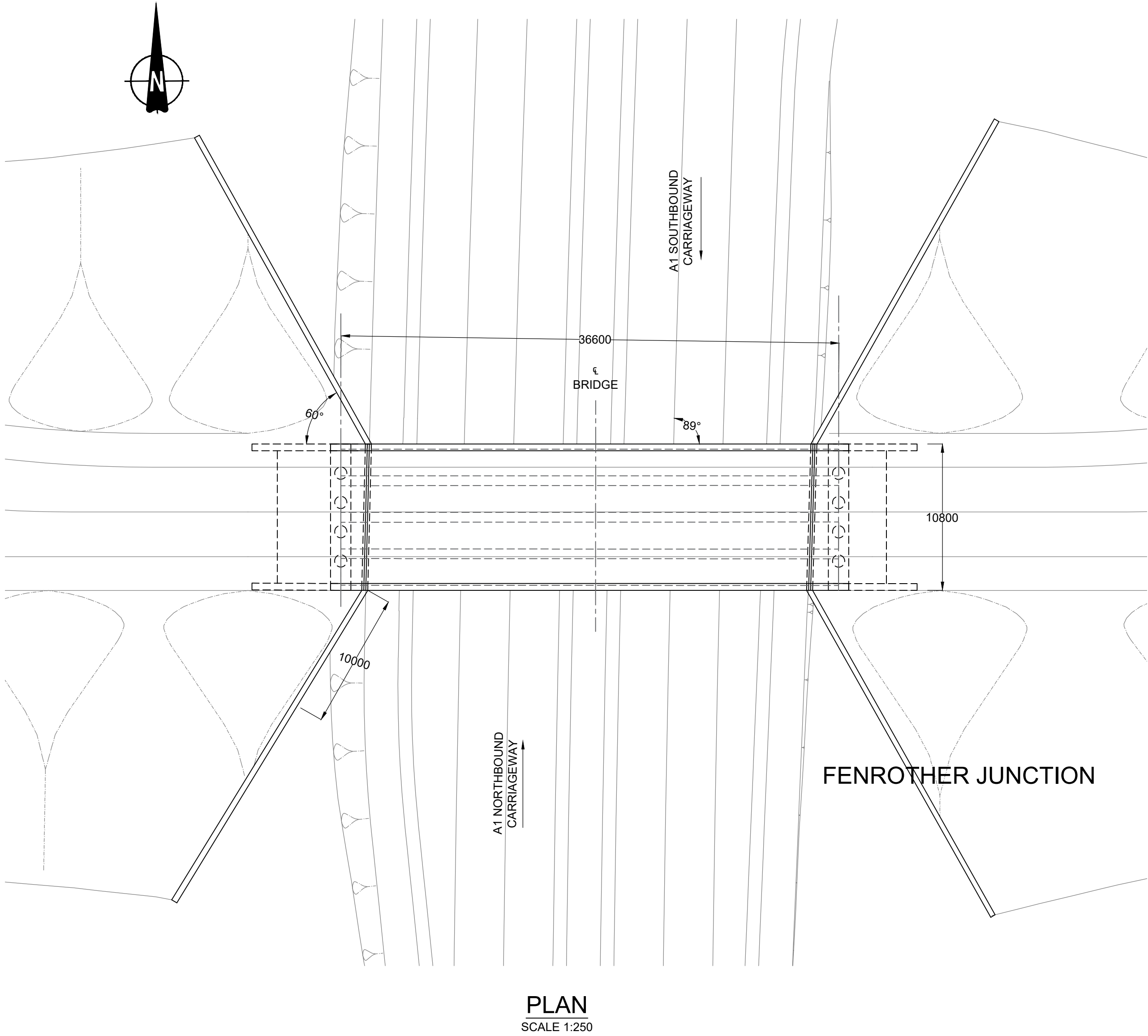
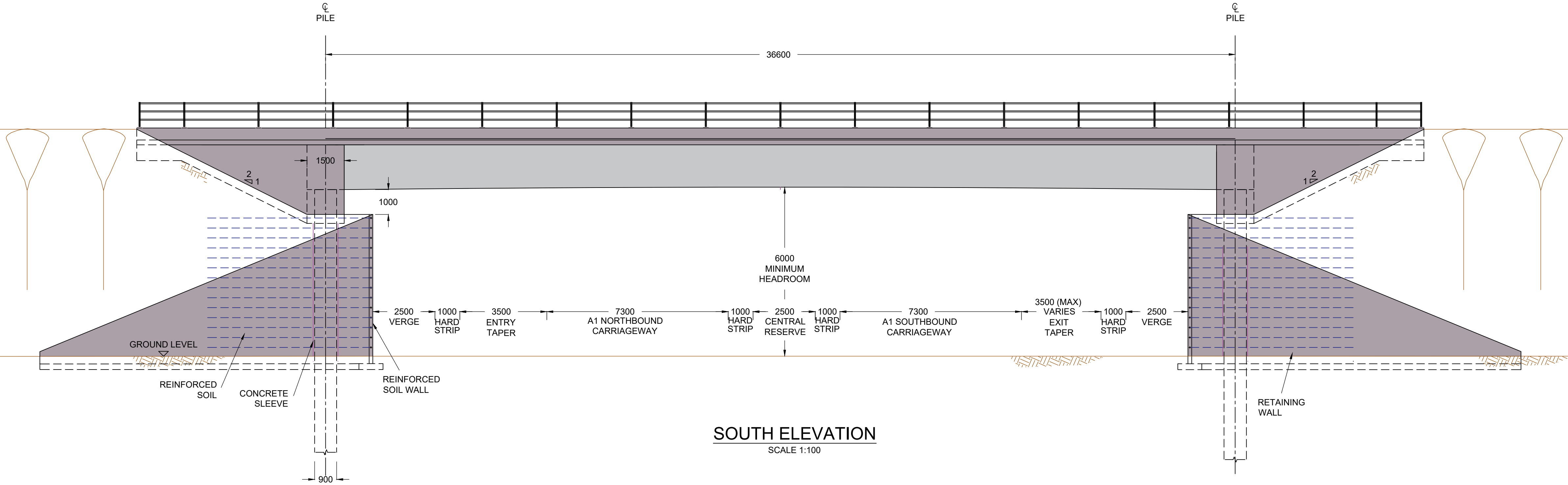
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STRUCTURES ENGINEERING DRAWINGS AND SECTIONS ROCK CULVERT (28.1) – CH.58100 SHEET 26 of 27 REGULATIONS 5(2)(o), 5(2)(p) & 6(2)	HE551459-WSP-SBR-A2E-DR-CB-2166	0
STRUCTURES ENGINEERING DRAWINGS & SECTIONS DENWICK BURN CULVERT (21.1) – CH.54600 SHEET 27 OF 27 (Regulations 5(2)(o), 5(2)(p) & 6(2)	HE551459-WSP-SBR-A2E-DR-CB-2327	0



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NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS STATED OTHERWISE.
2. THE DIMENSIONS OF PROPOSED BRIDGES, EMBANKMENTS, CUTTINGS, TUNNELS, CULVERTS AND SUBWAYS ARE INDICATIVE ONLY.



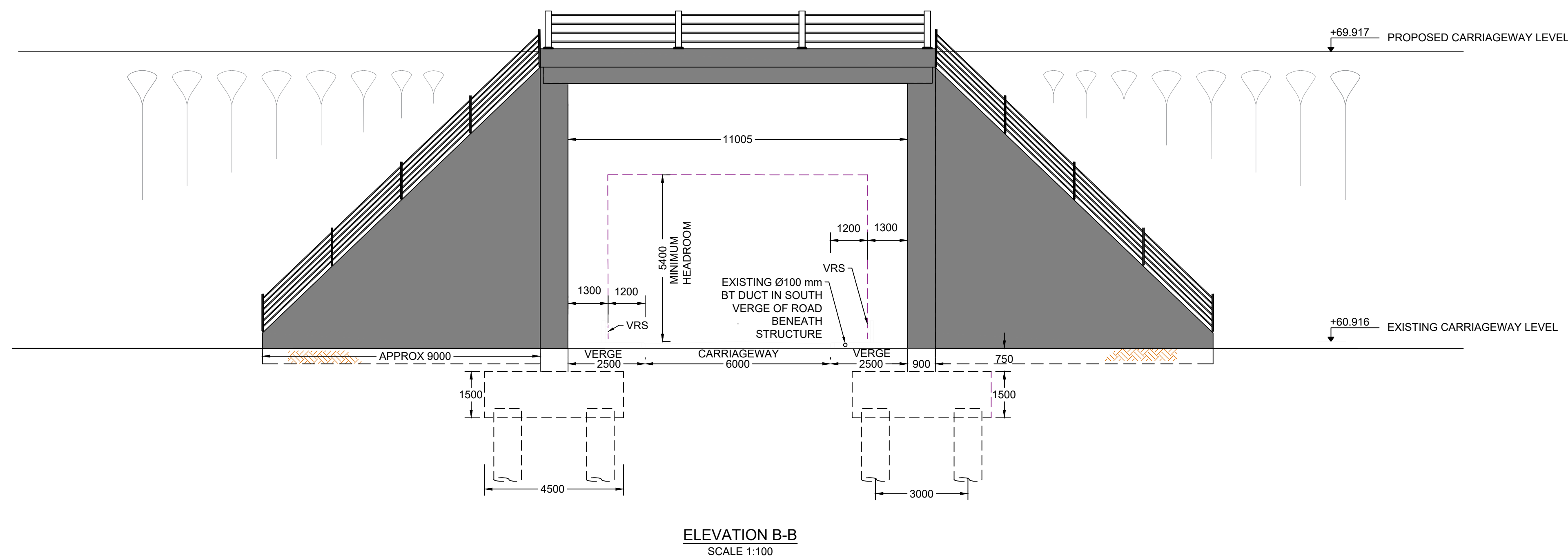
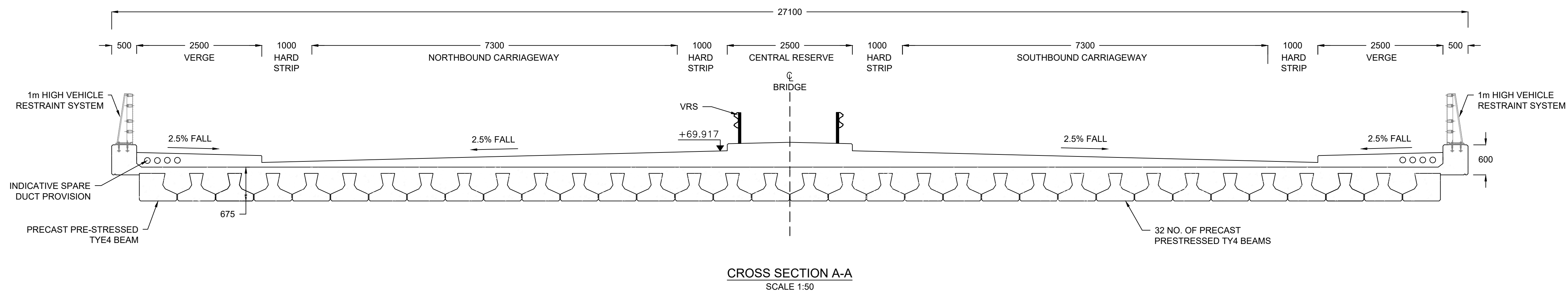
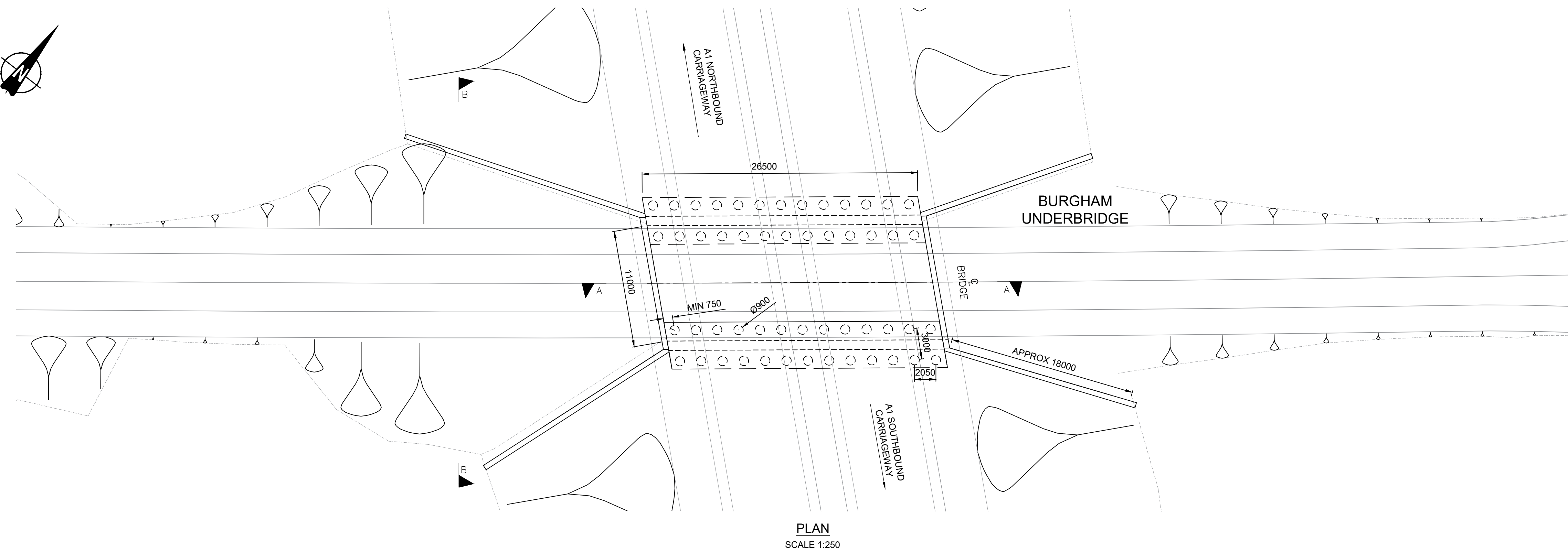
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PLAN
SCALE 1:250

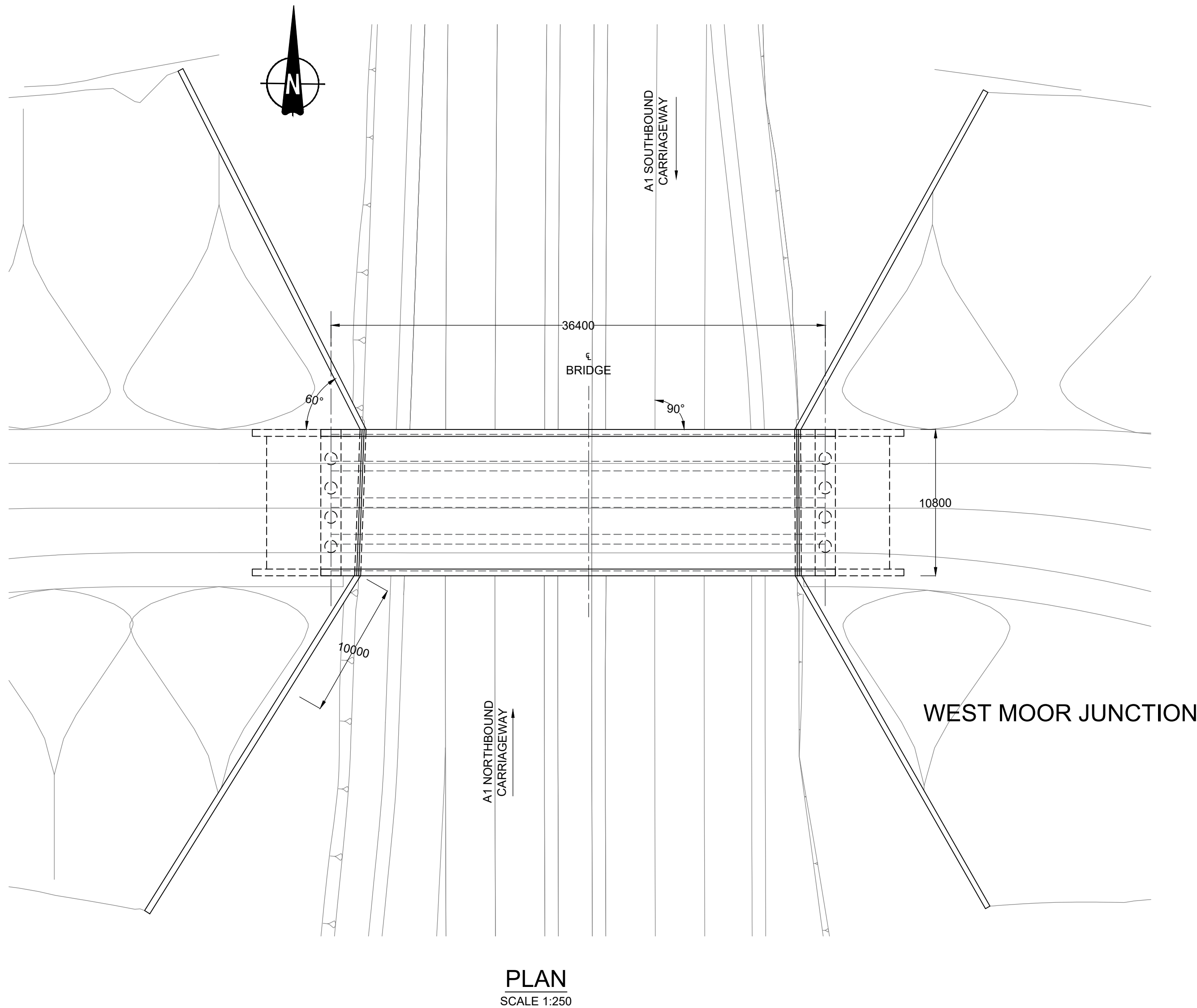
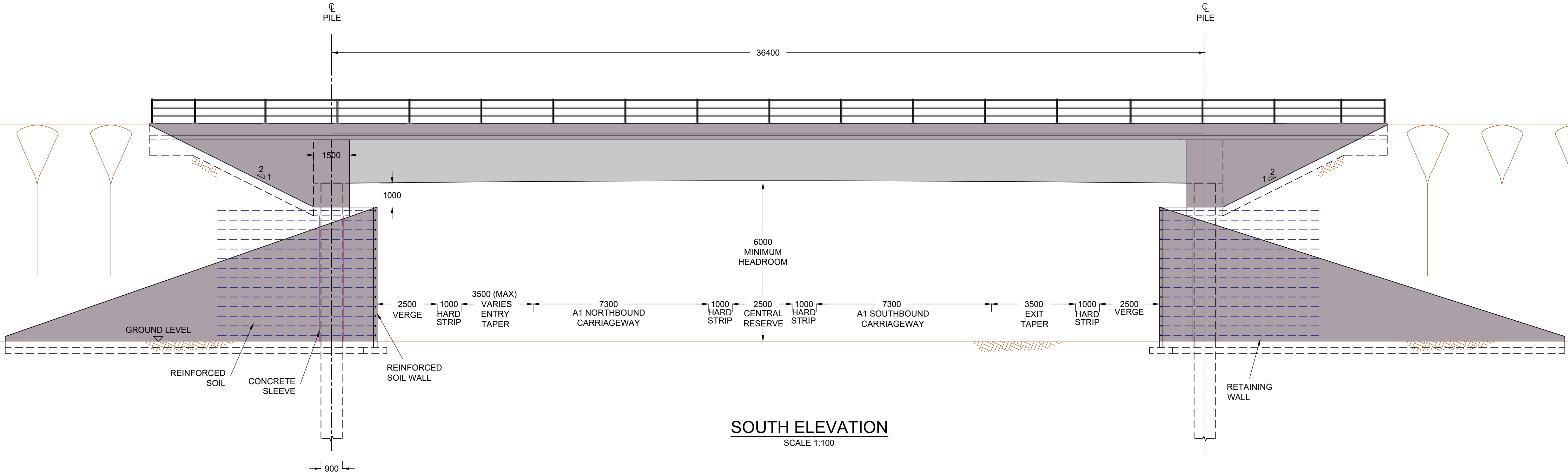
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2. THE DIMENSIONS OF PROPOSED BRIDGES, EMBANKMENTS, CUTTINGS, TUNNELS, CULVERTS AND SUBWAYS ARE INDICATIVE ONLY.



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- NOTES:
- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS STATED OTHERWISE.
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Drawing Title								
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Drawing Number							Revision	
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---	EXISTING WINGWALLS
---	HEADROOM ENVELOPE
---	HEIGHT OF EAST WINGWALLS TO BE EXTENDED UP TO THE SOFFIT LEVEL OR DEMOLISH AND REPLACED FOR ANOTHER WALLS.
+47.750	EXISTING/ PROPOSED LEVEL



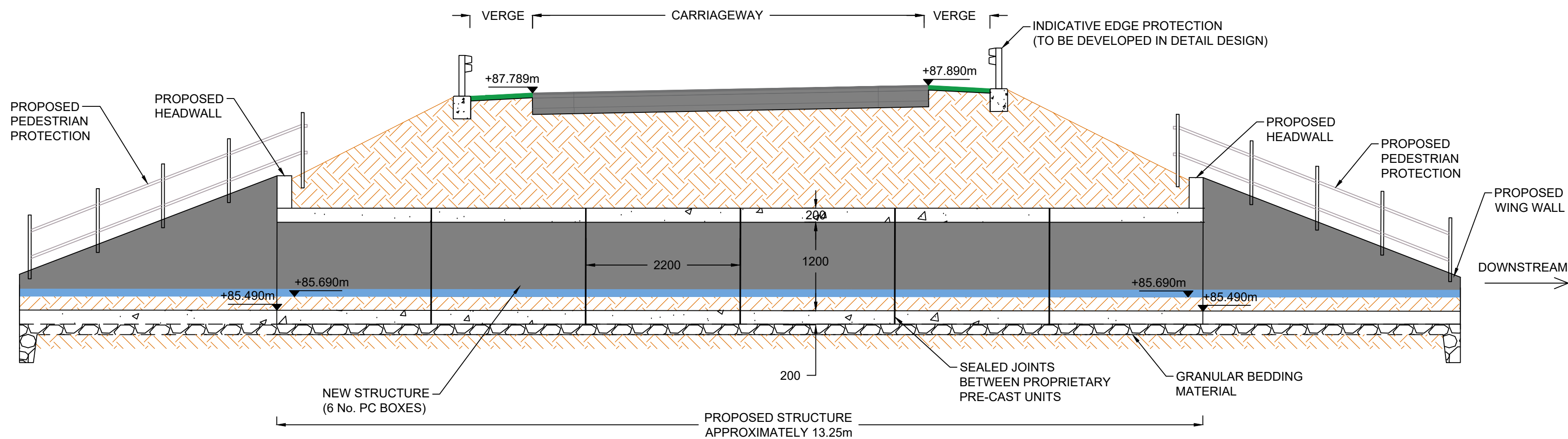
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TR010041/APP/2.8									
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A1 in Northumberland: Morpeth to Ellingham Part A									
Drawing Title									
STRUCTURES ENGINEERING DRAWINGS AND SECTIONS PARKWOOD SUBWAY - CH.23100 SHEET 06 of 27 REGULATIONS 5/2(o), 5/2(p) & 6(2)									
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- KEY:

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A1 in Northumberland: Morpeth to Ellingham Part A									
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WEST ELEVATION A-A
SCALE 1:50



NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS STATED OTHERWISE.
2. THE DIMENSIONS OF PROPOSED BRIDGES, EMBANKMENTS, CUTTINGS, TUNNELS, CULVERTS AND SUBWAYS ARE INDICATIVE ONLY

KEY:

— — — PROPOSED RIVER ALIGNMENT

0	14/04/2020	DCO SUBMISSION					ABR	FCV	GL	HA
Rev.	Date	Description					By	Eng'g C/NK	Discr' C/HK	App'd
Suitability									Status	
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PINS Reference Number										
TR010041/APP/2.8										
Client										
										
Project Title										
A1 in Northumberland: Morpeth to Ellingham Part A										
Drawing Title										
ENGINEERING DRAWINGS & SECTIONS EAST COTTING BURN CULVERT (1.5) - CH. 10800 SHEET 08 OF 27 REGULATIONS 5(2)(o), 5(2)(p) & 6(2)										
Scale	Drawn	Eng. Check		Approved			Authorised			
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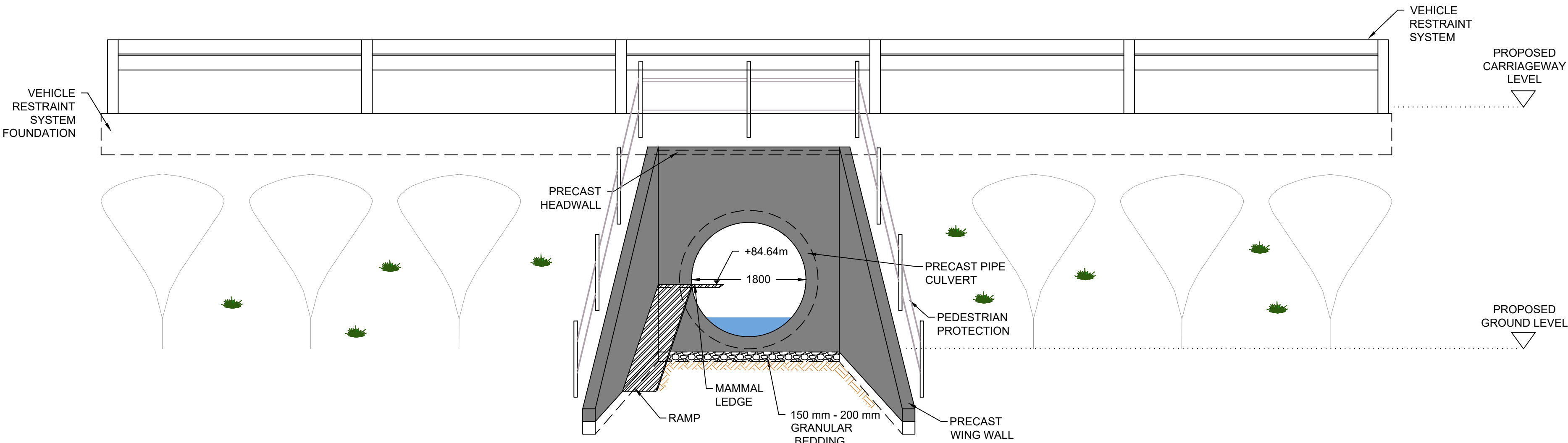
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2. THE DIMENSIONS OF PROPOSED BRIDGES, EMBANKMENTS, CUTTINGS, TUNNELS, CULVERTS AND SUBWAYS ARE INDICATIVE ONLY

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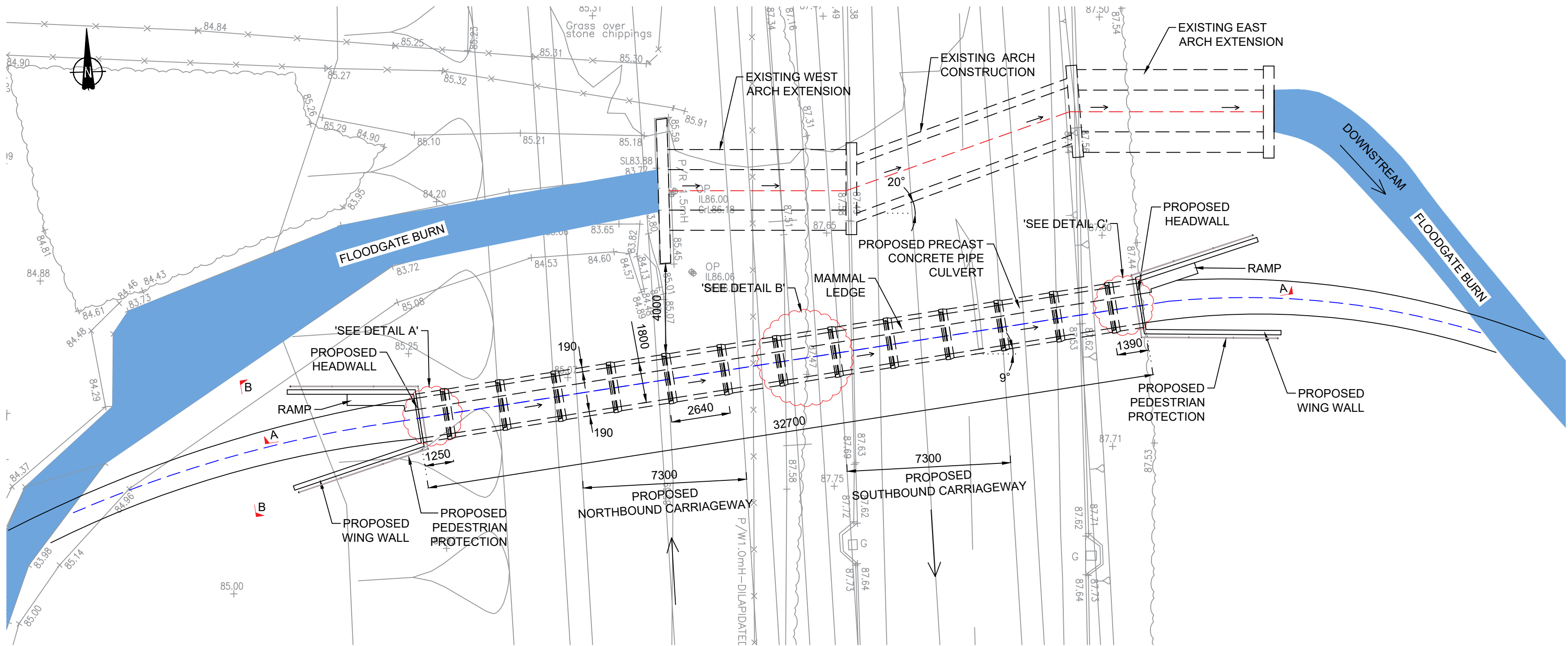
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- EXISTING RIVER ALIGNMENT
- EXISTING GROUND LEVEL



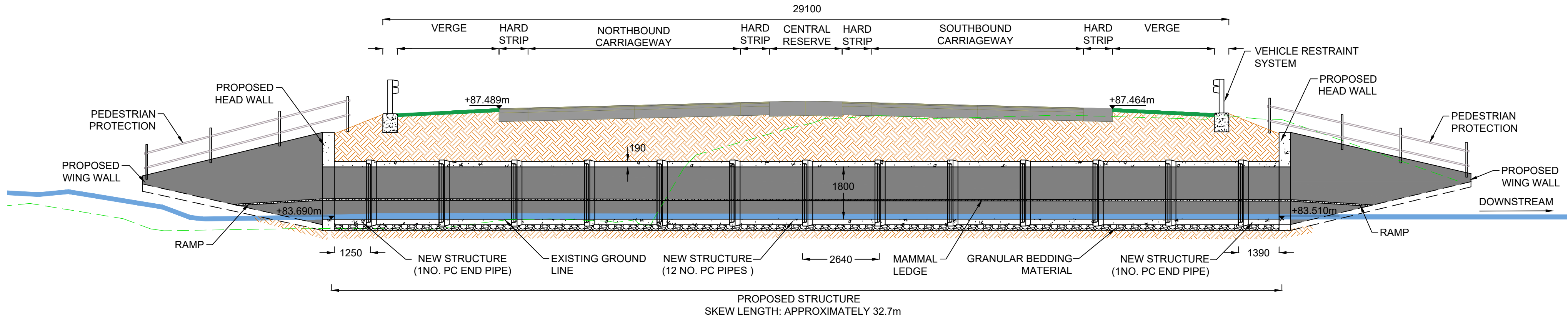
EXAMPLE OF PRECAST CONCRETE PIPE CULVERT



WEST ELEVATION B-B
SCALE 1:50



PLAN
SCALE 1:150



LONGITUDINAL SECTION A - A
SCALE 1:100

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Client								
								
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A1 in Northumberland: Morpeth to Ellingham Part A								
Drawing Title								
STRUCTURES ENGINEERING DRAWINGS & SECTIONS PARADISE CULVERT (3) - CH.13660 SHEET 09 OF 27 REGULATIONS (5)(2)(o), 5(2)(p) & 6(2)								
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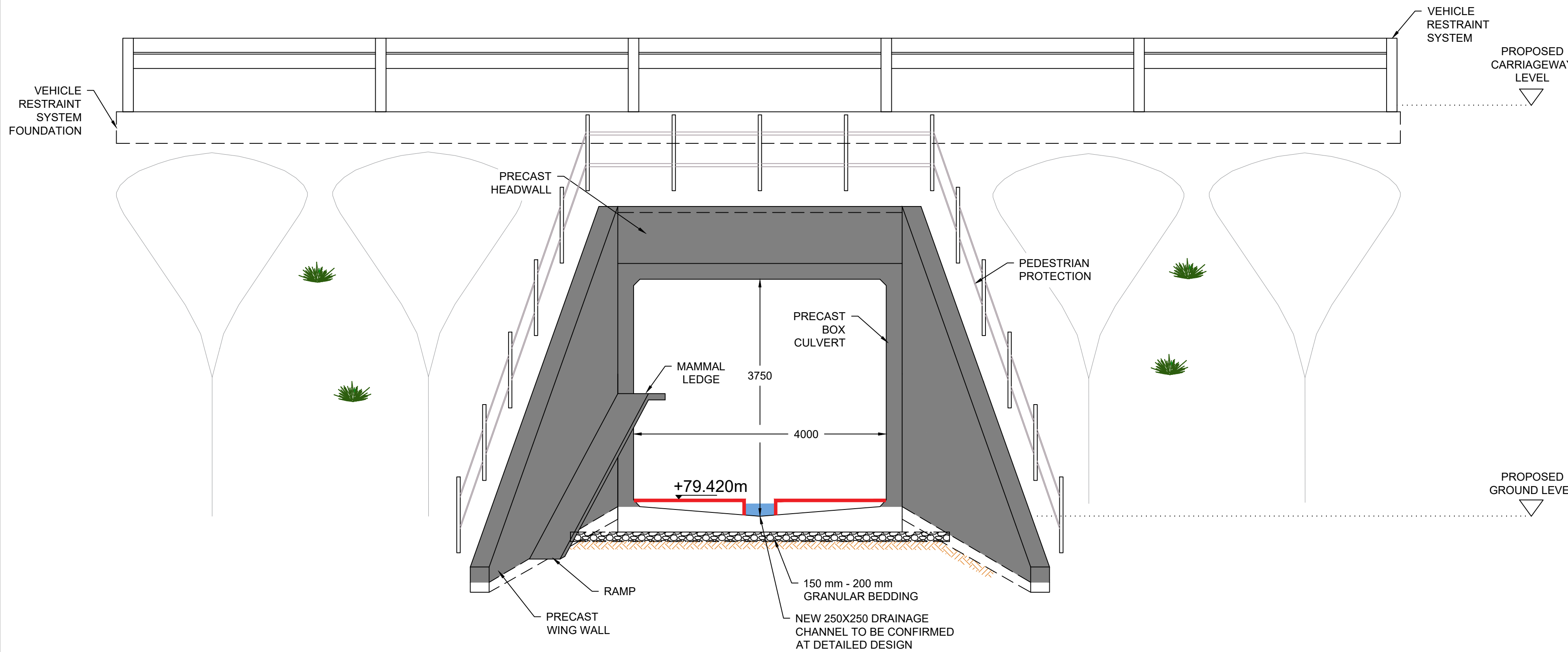
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2. THE DIMENSIONS OF PROPOSED BRIDGES, EMBANKMENTS, CUTTINGS, TUNNELS CULVERTS AND SUBWAYS ARE INDICATIVE ONLY

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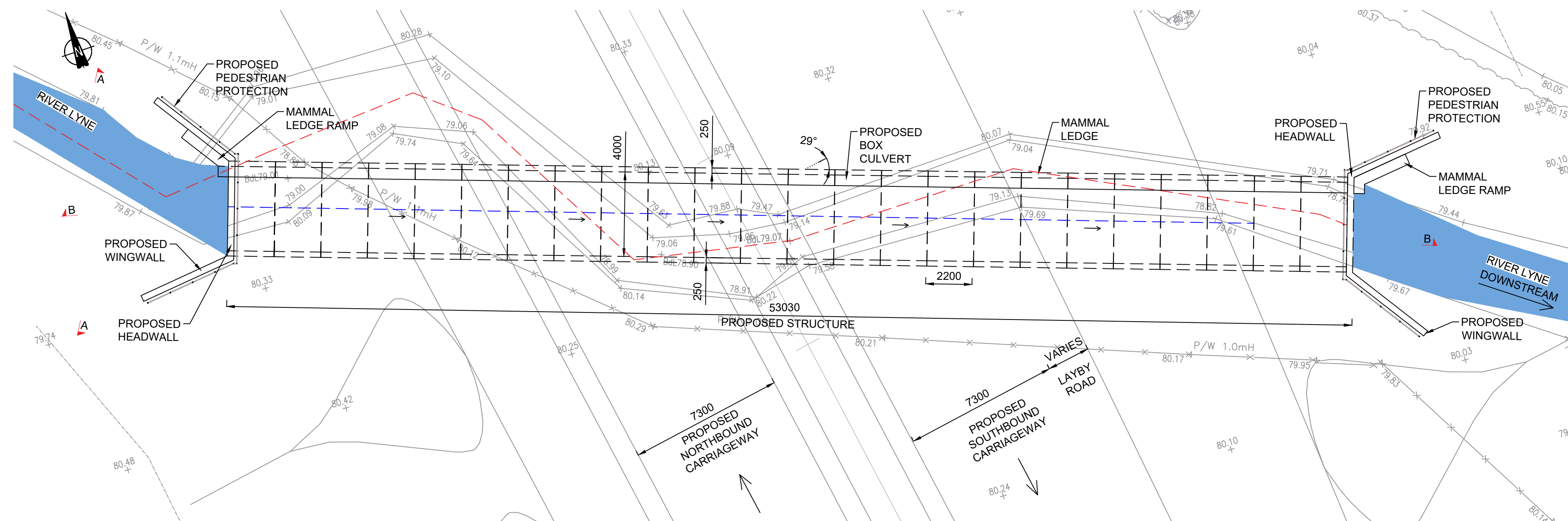
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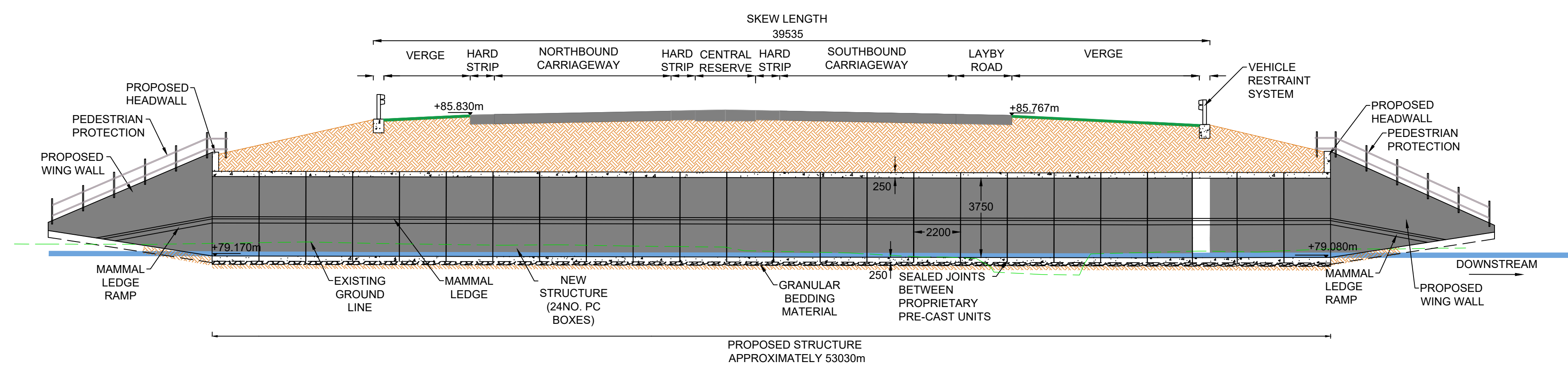
EXAMPLE OF PRECAST CONCRETE BOX CULVERT



WEST ELEVATION A-A
SCALE 1:50



PLAN
SCALE 1:150



LONGITUDINAL SECTION B-B
SCALE 1:150

0	14/04/2020	DCO SUBMISSION	ABR	FCV	GL HA
Rev.	Date	Description	By	Eng' Chk	Disc' Chk App'd
Suitability					Status
DCO SUBMISSION					S2
PINS Reference Number					
TR010041/APP/2.8					
Client					
Project Title					
A1 in Northumberland: Morpeth to Ellingham Part A					
Drawing Title					
STRUCTURES ENGINEERING DRAWINGS & SECTIONS PRIEST BRIDGE CULVERT (4) - CH.14050 SHEET 10 OF 27 REGULATIONS - 5(2)(o), 5(2)(p) & 6(2)					
Scale	Drawn	Eng. Check	Approved	Authorised	
AS SHOWN	ABR	FCV	GL	HA	
Original Size	Date	Date	Date	Date	
A1	14/04/2020	14/04/2020	14/04/2020	14/04/2020	
Drawing Number					Revision
HE551459-WSP-SBR-M2F-DR-CB-2001					0
					PW Stg Code
					0

0	14/04/2020	DCO SUBMISSION						ABR	FCV	GL	HA	
Rev.	Date	Description							By	Eng' C/N	Disc' C/N	App'd
Suitability									Status			
									S2			
PINS Reference Number												
TR010041/APP/2.8												
Clients												
Project Title												
A1 in Northumberland: Morpeth to Ellingham Part A												
Drawing Title												
STRUCTURES ENGINEERING DRAWINGS & SECTIONS SOUTH FENROTHER BURN CULVERT (5.3) - CH.14900 SHEET 11 OF 27 REGULATIONS 5(2)(o), 5(2)(p) & 6(2)												
Scale		Drawn		Eng. Check		Approved		Authorised				
AS SHOWN		ABR		FCV		GL		HA				
Original Size		Date		Date		Date		Date				
A1		14/04/2020		14/04/2020		14/04/2020		14/04/2020				
Drawing Number										Revision:		
HE551459-WSP-SBR-M2F-DR-CB-2002										0		
										PW Stg Code		
										0		

PLAN
SCALE 1:100

0	14/04/2020	DCO SUBMISSION				ABR	FCV	GL	HA
Rev.	Date	Description				By	Eng' Chk	Disc' Chk	App'd
Suitability								Status	
DCO SUBMISSION								S2	
PINS Reference Number									
TR010041/APP/2.8									
Client									
									
Project Title									
A1 in Northumberland: Morpeth to Ellingham Part A									
Drawing Title									
STRUCTURES ENGINEERING DRAWINGS & SECTIONS# NORTH FENROTHER BURN CULVERT (5,2) - CH.15000 SHEET 12 OF 27 REGULATIONS 5(2)(o),5(2)(p) & 6(2)									
Scale	Drawn		Eng. Check		Approved		Authorised		
AS SHOWN	ABR		FCV		GL		HA		
Original Size	Date	Date	Date	Date	Date	Date	Date		
A1	14/04/2020	14/04/2020	14/04/2020	14/04/2020	14/04/2020	14/04/2020	14/04/2020		
Drawing Number							Revision		
HE551459-WSP-SBR-M2F-DR-CB-2003							0		
							PW Stg Code		
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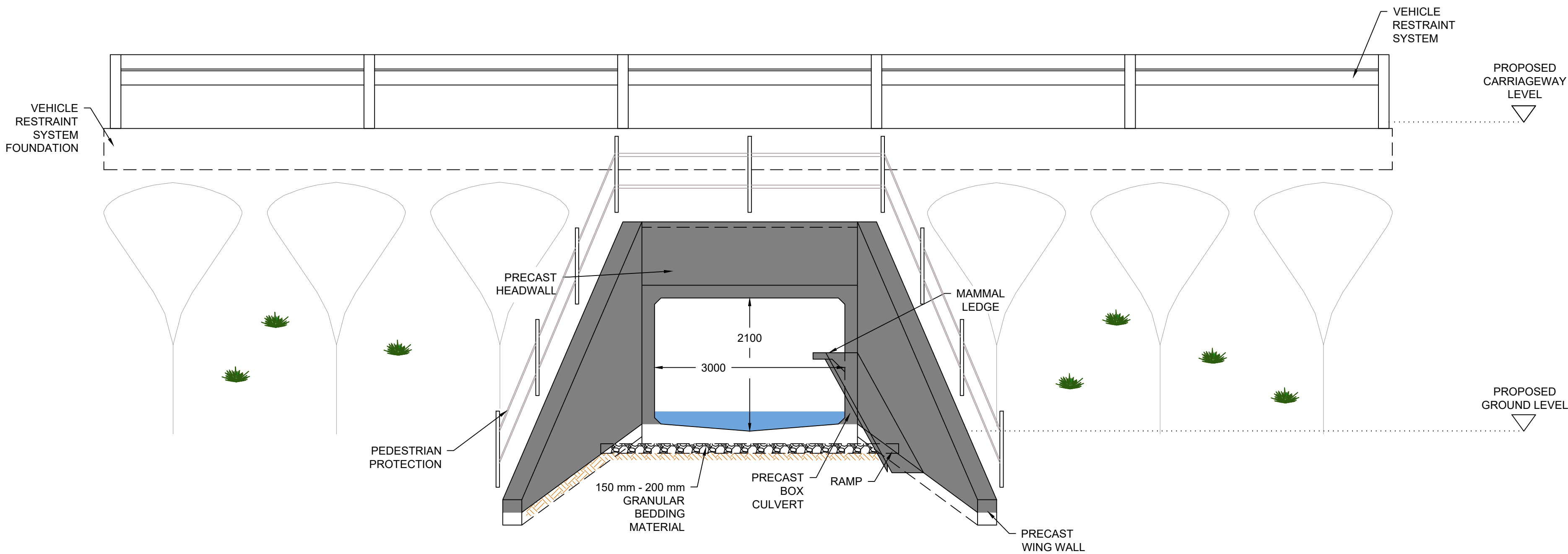
— — — PROPOSED RIVER ALIGNMENT

PLAN
SCALE 1:50

PLAN
SCALE 1:50



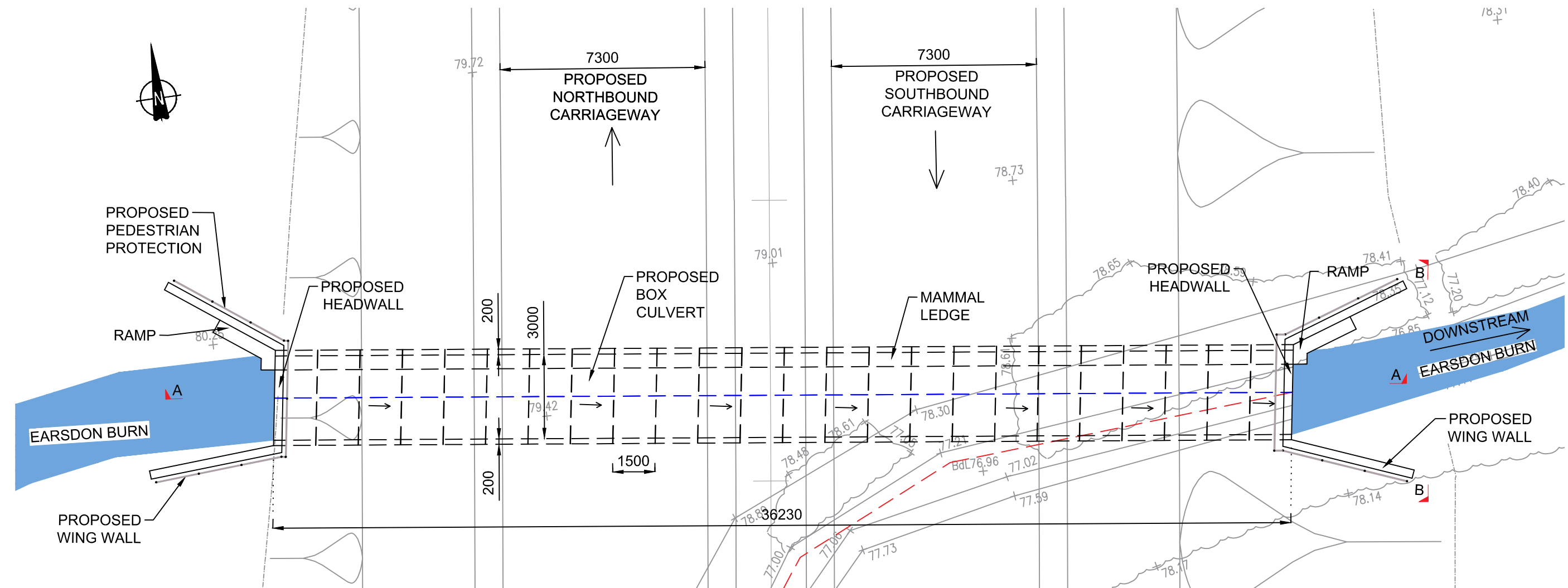
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Rev.	Date	Description				By	Eng' Chk	Disc' Chk	App'd
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PINS Reference Number									
TR010041/APP/2.8									
Client									
									
Project Title									
A1 in Northumberland: Morpeth to Ellingham Part A									
Drawing Title									
STRUCTURES ENGINEERING DRAWINGS & SECTIONS EARDSON BURN CULVERT (6.3) - CH.17000 SHEET 13 OF 27 REGULATIONS 5(2)(a), 5(2)(p) & 6(2)									
Scale	Drawn		Eng. Check		Approved		Authorised		
AS SHOWN	ABR		FCV		GL		HA		
Original Size	Date	Date	Date	Date	Date	Date	Date		
A1	14/04/2020	14/04/2020	14/04/2020	14/04/2020	14/04/2020	14/04/2020	14/04/2020		
Drawing Number							Revision		
HE551459-WSP-SBR-M2F-DR-CB-2004							0		
							PW Stg Code		
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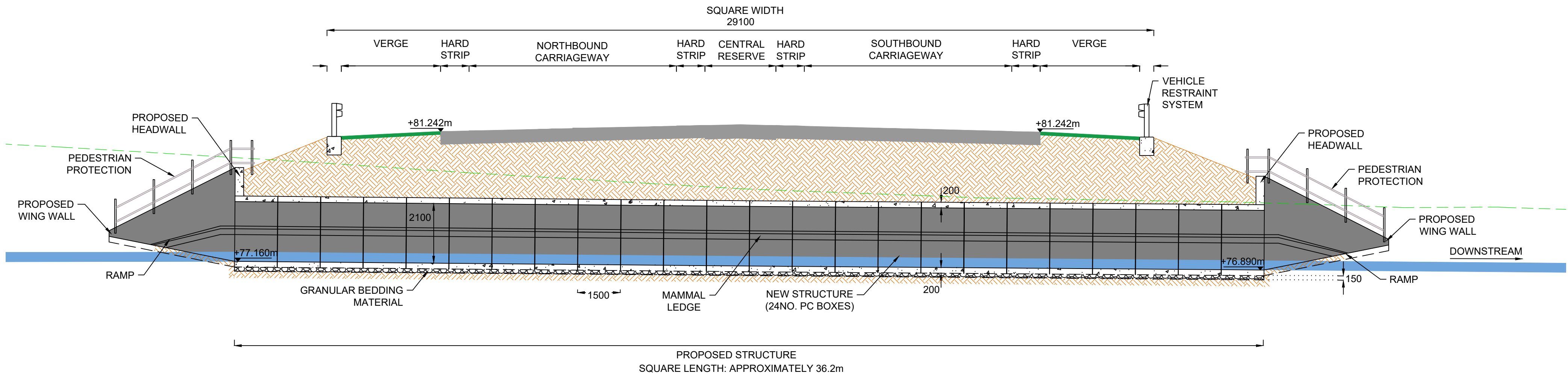
EAST ELEVATION B-B
SCALE 1:50



EXAMPLE OF PRECAST CONCRETE
BOX CULVERT



PLAN
SCALE 1:150



LONGITUDINAL SECTION A-A
SCALE 1:100

NOTES:

- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS STATED OTHERWISE.
- THE DIMENSIONS OF PROPOSED BRIDGES, EMBANKMENTS, CUTTINGS, TUNNELS CULVERTS AND SUBWAYS ARE INDICATIVE ONLY

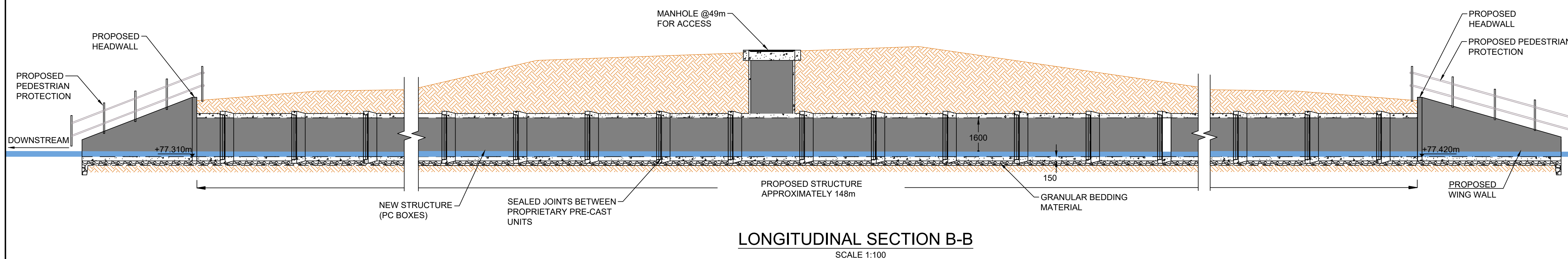
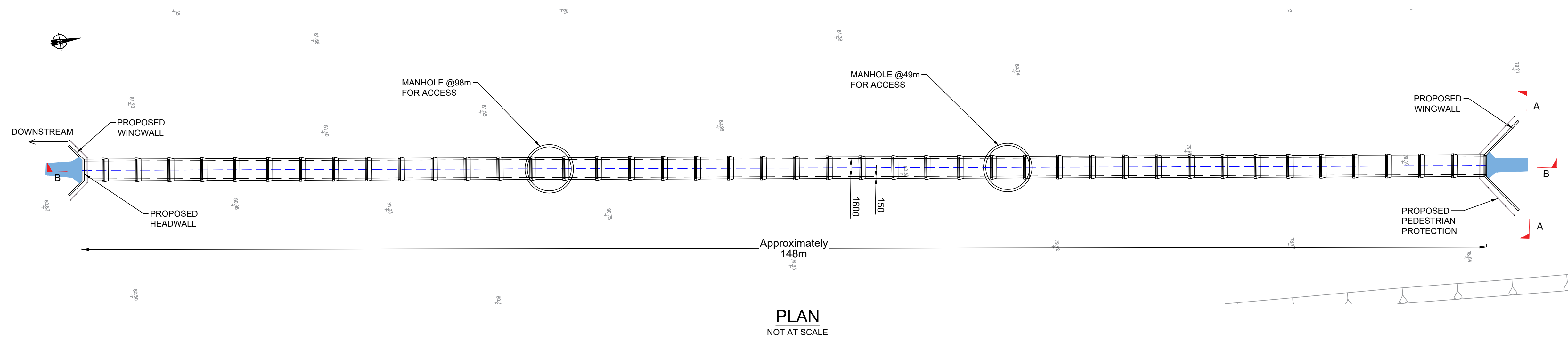
KEY:

- PROPOSED RIVER ALIGNMENT
- EXISTING RIVER ALIGNMENT
- EXISTING GROUND LEVEL

0	14/04/2020	DCO SUBMISSION				ABR	FCV	GL	HA
Rev.	Date	Description				By	Eng' Chk	Disc' Chk	App'd
Suitability								Status	
DCO SUBMISSION								S2	
PINS Reference Number									
TR010041/APP/2.8									
Client									
									
Project Title									
A1 in Northumberland: Morpeth to Ellingham Part A									
Drawing Title									
STRUCTURES ENGINEERING DRAWINGS & SECTIONS CAUSEY PARK CULVERT (6.2) - CH.17070 SHEET 14 OF 27 REGULATIONS 5(2)(o), 5(2)(p) & 6(2)									
Scale	Drawn		Eng. Check		Approved		Authorised		
AS SHOWN	ABR		FCV		GL		HA		
Original Size	Date		Date		Date		Date		
A1	14/04/2020		14/04/2020		14/04/2020		14/04/2020		
Drawing Number								Revision	
HE551459-WSP-SBR-M2F-DR-CB-2005								0	
								PW Stg Code	
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WEST ELEVATION A-A
SCALE 1:50

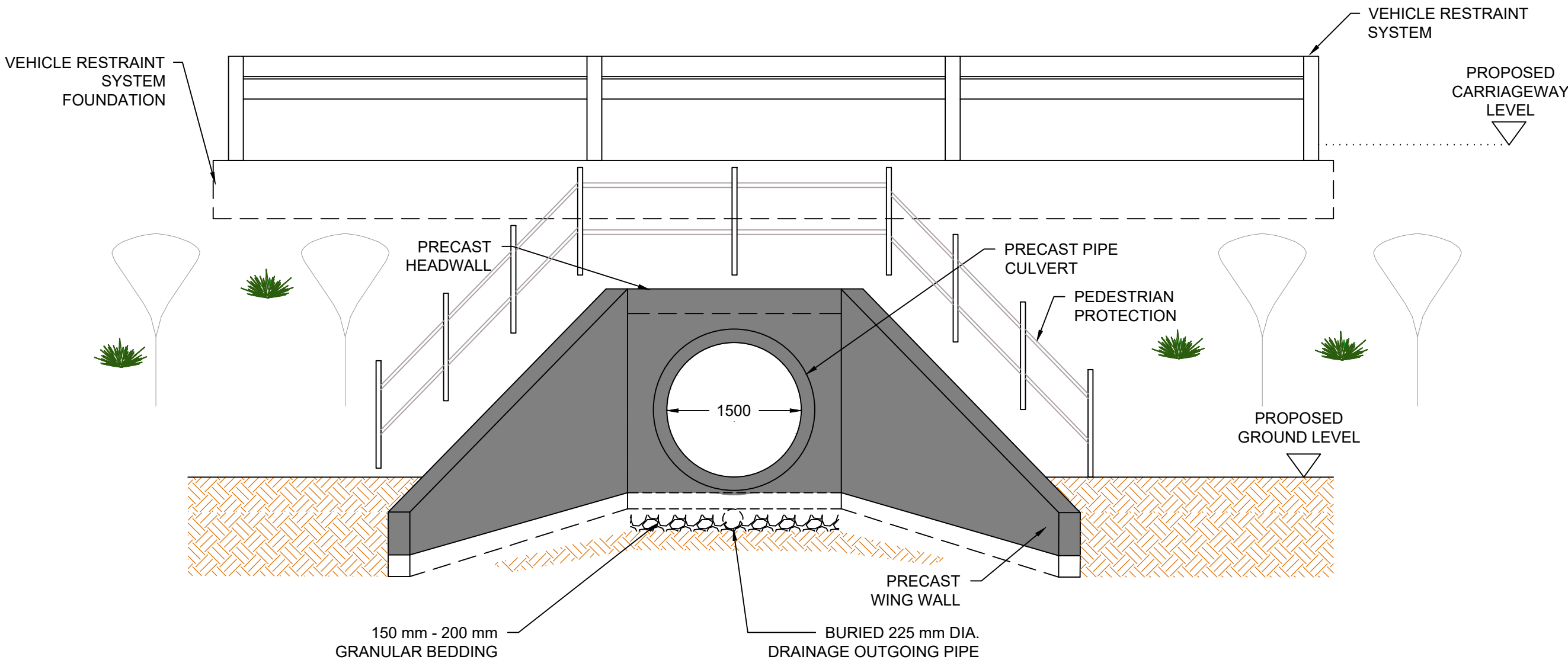
EXAMPLE OF PRECAST CONCRETE PIPE CULVERT



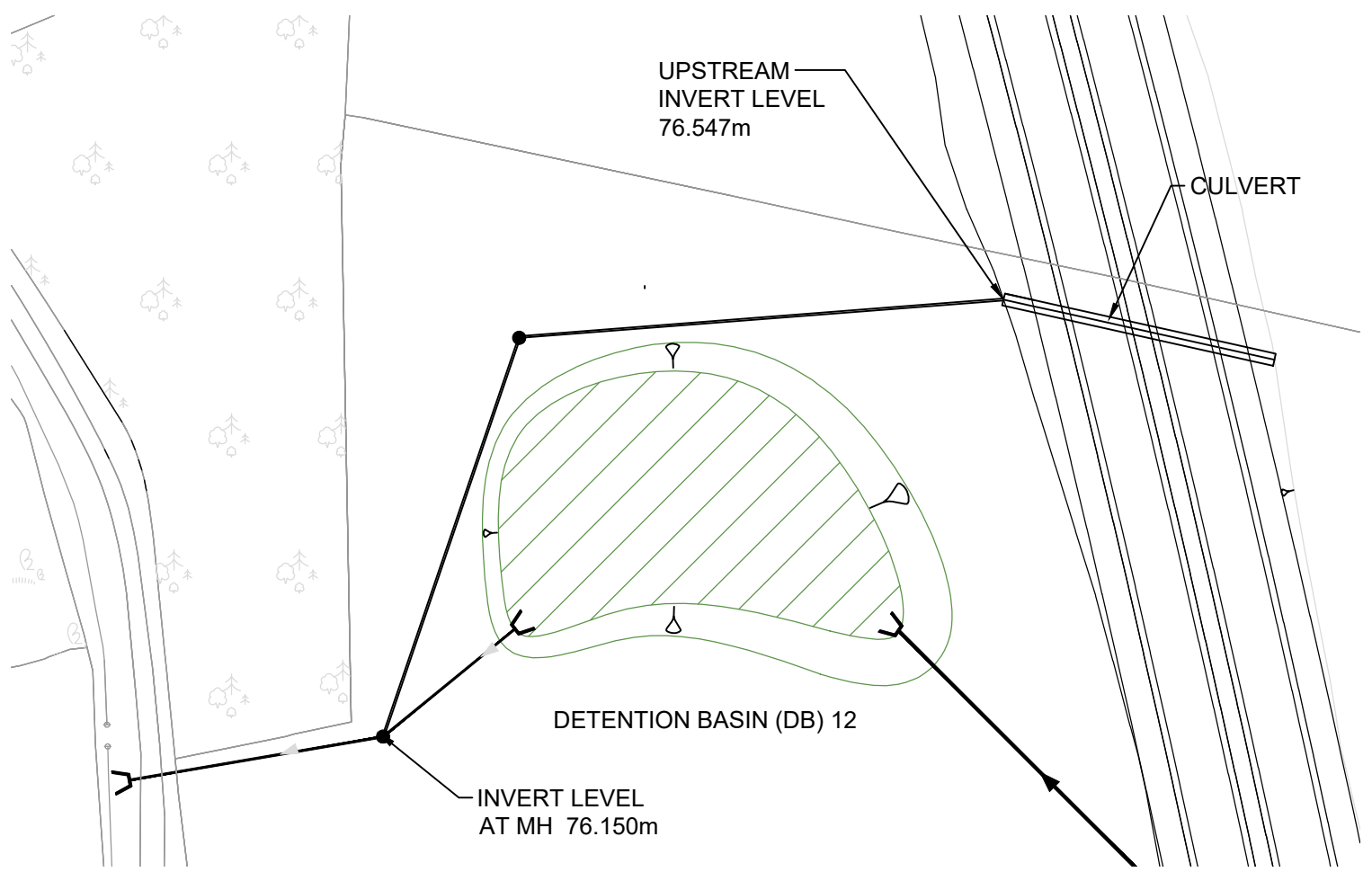
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Rev.	Date	Description				By	Eng'g Chk	Disc'g Chk	App'd
Suitability								Status	
DCO SUBMISSION								S2	
PINS Reference Number									
TR010041/APP/2.8									
Client									
									
Project Title									
A1 in Northumberland: Morpeth to Ellingham Part A									
Drawing Title									
STRUCTURES ENGINEERING DRAWINGS & SECTIONS NEW HOUSES FARM CULVERT (7.1) - CH.17150 SHEET 15 OF 27 REGULATIONS 5(2)(c), 5(2)(p) & 6(2)									
Scale	Drawn		Eng. Check		Approved		Authorised		
AS SHOWN	ABR		FCV		GL		HA		
Original Size	Date	Date		Date		Date		Date	
A1	14/04/2020	14/04/2020		14/04/2020		14/04/2020		14/04/2020	
Drawing Number								Revision	
HE551459-WSP-SBR-M2F-DR-CB-2006								0	
								PW Stg Code	
								0	

- NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS STATED OTHERWISE.
 2. THE DIMENSIONS OF PROPOSED BRIDGES, EMBANKMENTS, CUTTINGS, TUNNELS CULVERTS AND SUBWAYS ARE INDICATIVE ONLY

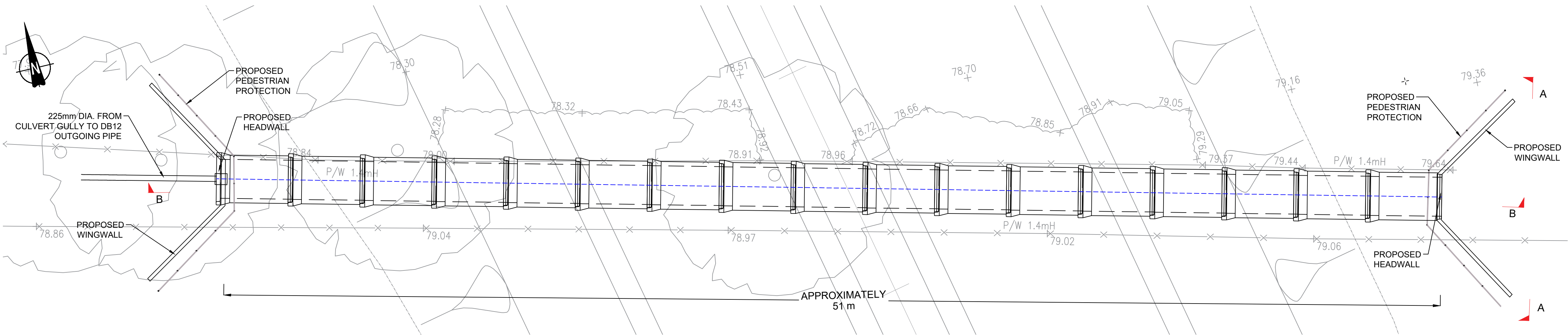
KEY:
- - - PROPOSED RIVER ALIGNMENT



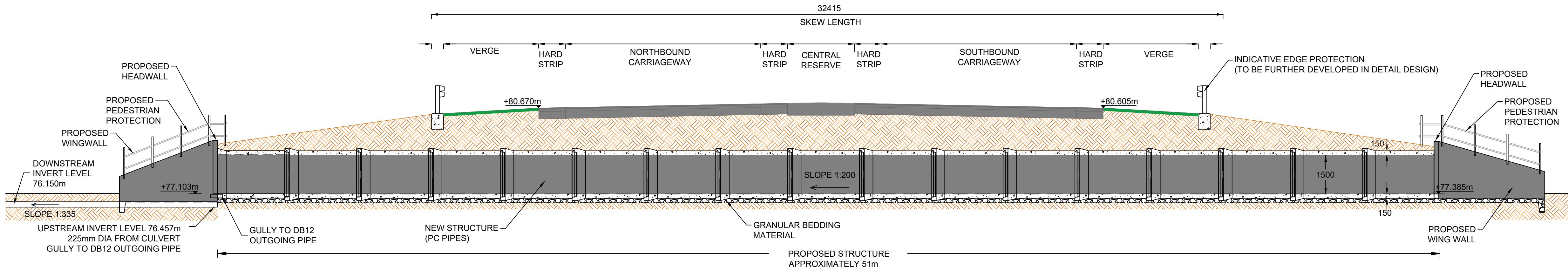
WEST ELEVATION A-A
SCALE 1:50



LOCATION PLAN
SCALE 1:1000



PLAN
SCALE 1:100



LONGITUDINAL SECTION B-B
SCALE 1:100

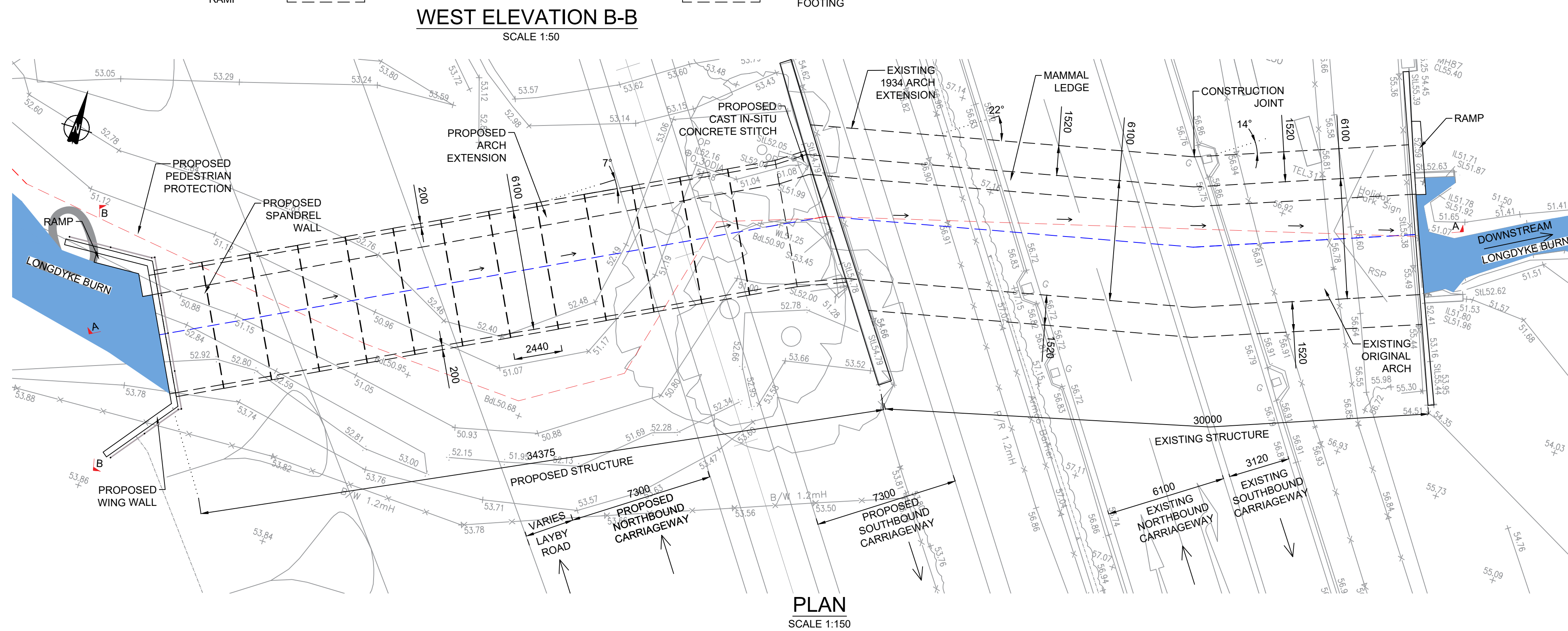
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Rev.	Date	Description	By	Eng' Chk	Disc' Chk	App'd			
Suitability							Status		
DCO SUBMISSION							S2		
PINS Reference Number							TR010041/APP/2.8		
Client									
Project Title							A1 in Northumberland: Morpeth to Ellingham Part A		
Drawing Title							STRUCTURES ENGINEERING DRAWINGS & SECTIONS WILDLIFE ESHOTT BURN CULVERT (8A) - CH 18300 SHEET 16 OF 27 REGULATIONS 5(2)(o), 5(2)(p) & 6(2)		
Scale	AS SHOWN	Drawn	ABR	Eng. Check	FCV	Approved	GL	Authorised	HA
Original Size	A1	Date	14/04/2020	Date	14/04/2020	Date	14/04/2020	Date	14/04/2020
Drawing Number							Revision		
HE551459-WSP-SBR-M2F-DR-CB-2007							0		
							PW Stg Code		
							0		



EXAMPLE OF PRECAST CONCRETE ARCH CULVERT

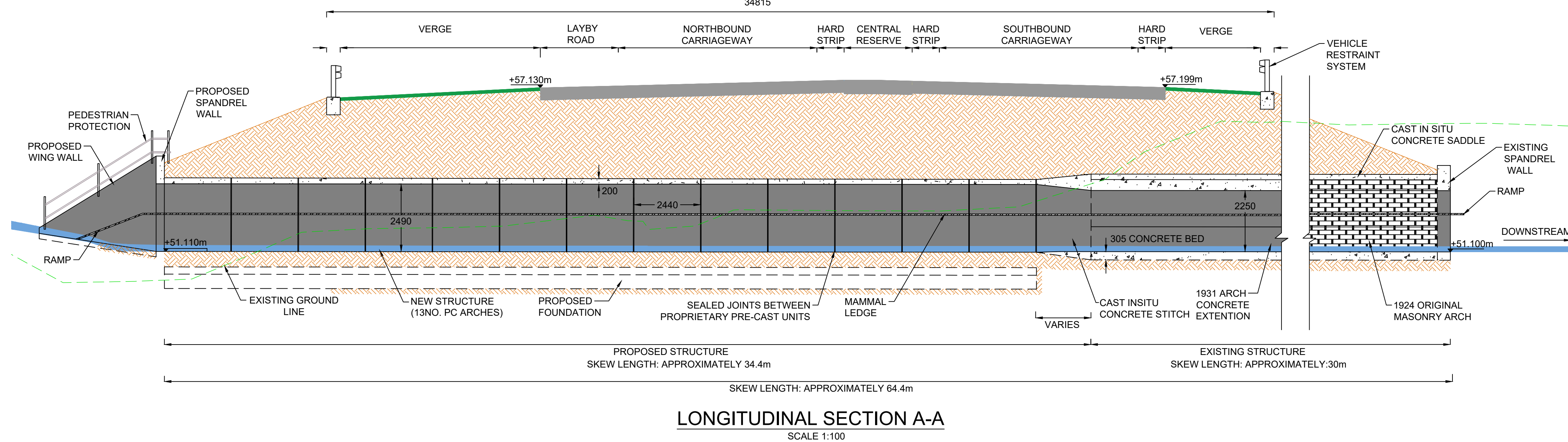
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS STATED OTHERWISE.
2. THE DIMENSIONS OF PROPOSED BRIDGES, EMBANKMENTS, CUTTINGS, TUNNELS CULVERTS AND SUBWAYS ARE INDICATIVE ONLY

 PROPOSED RIVER ALIGNMENT
 EXISTING RIVER ALIGNMENT
 EXISTING GROUND LEVEL



PLAN
SCALE 1:150

SQUARE WIDTH



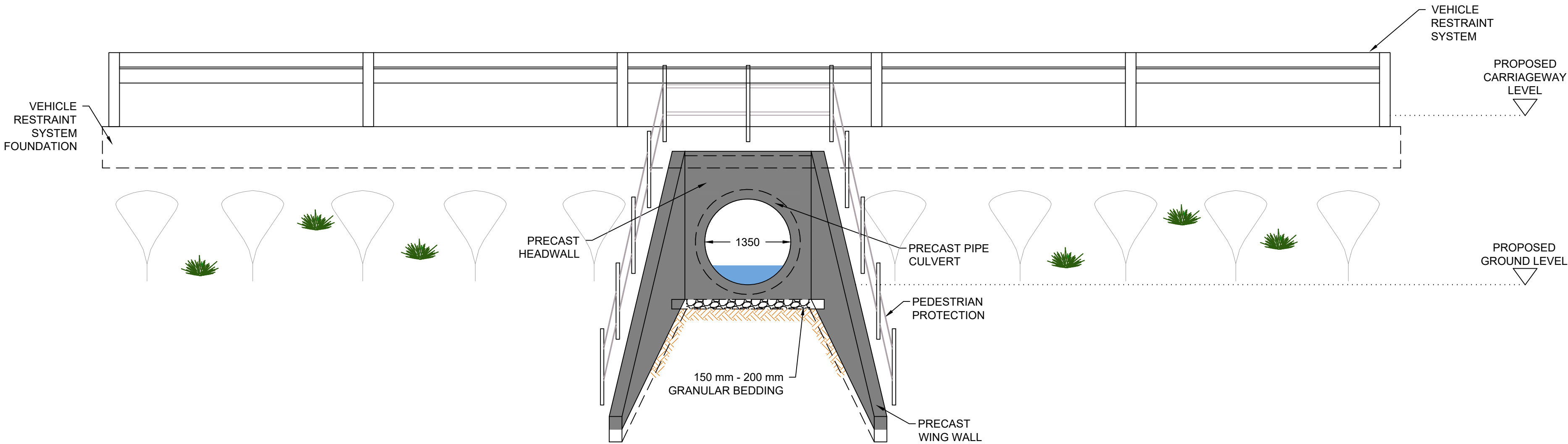
- NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS STATED OTHERWISE.
 2. THE DIMENSIONS OF PROPOSED BRIDGES, EMBANKMENTS, CUTTINGS, TUNNELS CULVERTS AND SUBWAYS ARE INDICATIVE ONLY

KEY:

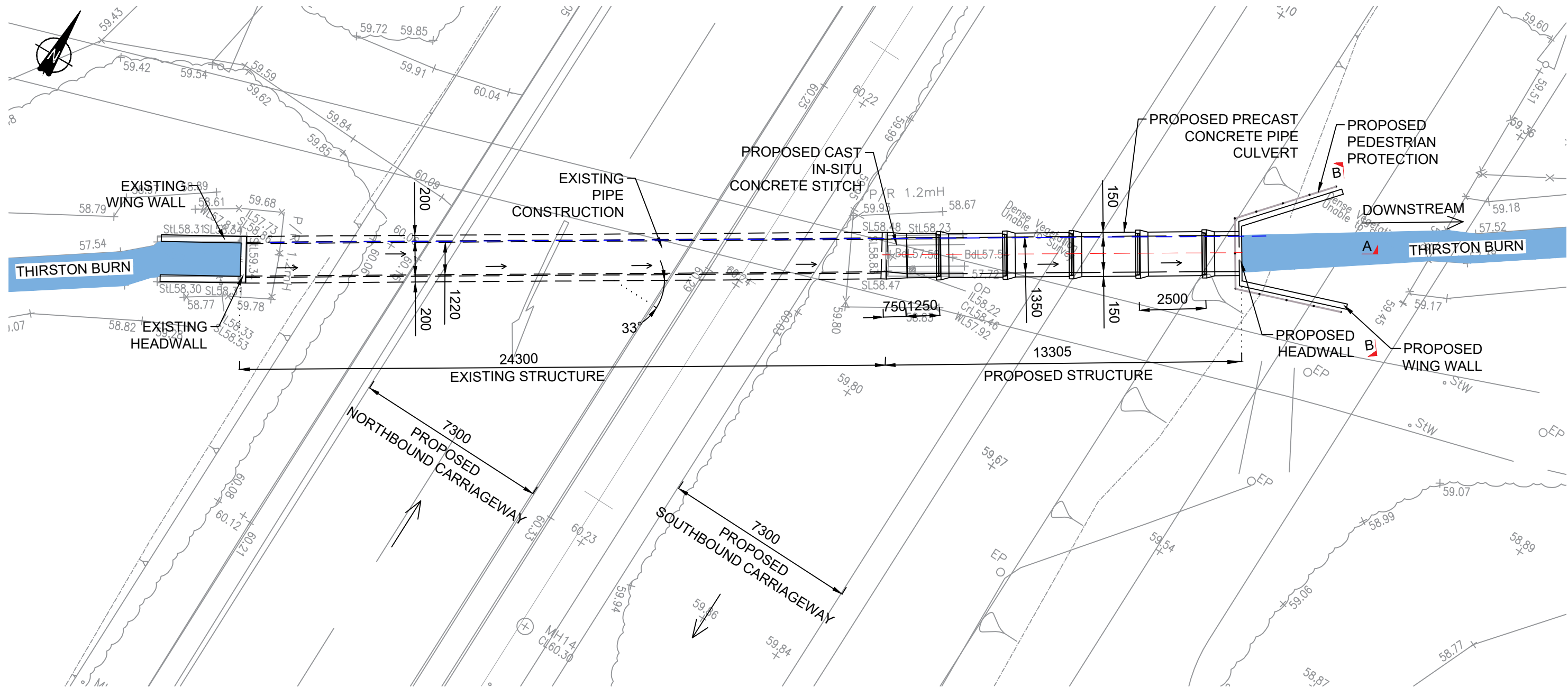
--- EXISTING RIVER ALIGNMENT



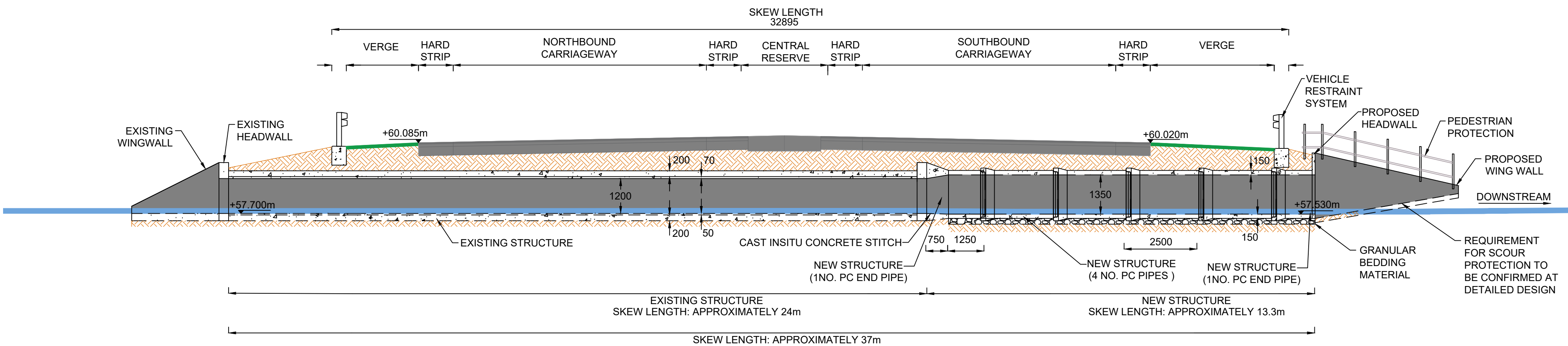
EXAMPLE OF PRECAST CONCRETE PIPE CULVERT



EAST ELEVATION B-B
SCALE 1:50



PLAN
SCALE 1:150

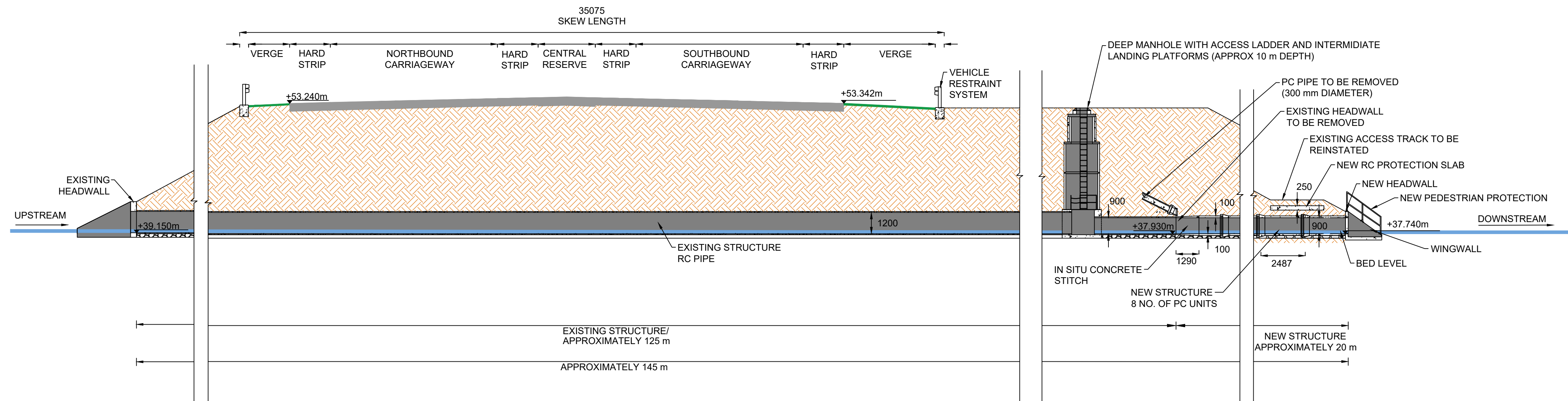


LONGITUDINAL SECTION A-A
SCALE 1:100

0	14/04/2020	DCO SUBMISSION	ABR	FCV	GL HA
Rev.	Date	Description	By	Eng' Chk	Disc' Chk App'd
Suitability					Status
DCO SUBMISSION					S2
PINS Reference Number					
TR010041/APP/2.8					
Client					
Project Title					
A1 in Northumberland: Morpeth to Ellingham Part A					
Drawing Title					
STRUCTURES ENGINEERING DRAWINGS & SECTIONS GLENSHOTTEN CULVERT (14) - CH.21860 SHEET 18 OF 27 REGULATIONS 5(2)(o), 5(2)(p) & 6(2)					
Scale	Drawn	Eng. Check	Approved	Authorised	
AS SHOWN	ABR	FCV	GL	HA	
Original Size	Date	Date	Date	Date	
A1	14/04/2020	14/04/2020	14/04/2020	14/04/2020	
Drawing Number					Revision
HE551459-WSP-SBR-M2F-DR-CB-2009					0
					PW Stg Code
					0



EXAMPLE OF PRECAST CONCRETE PIPE CULVERT

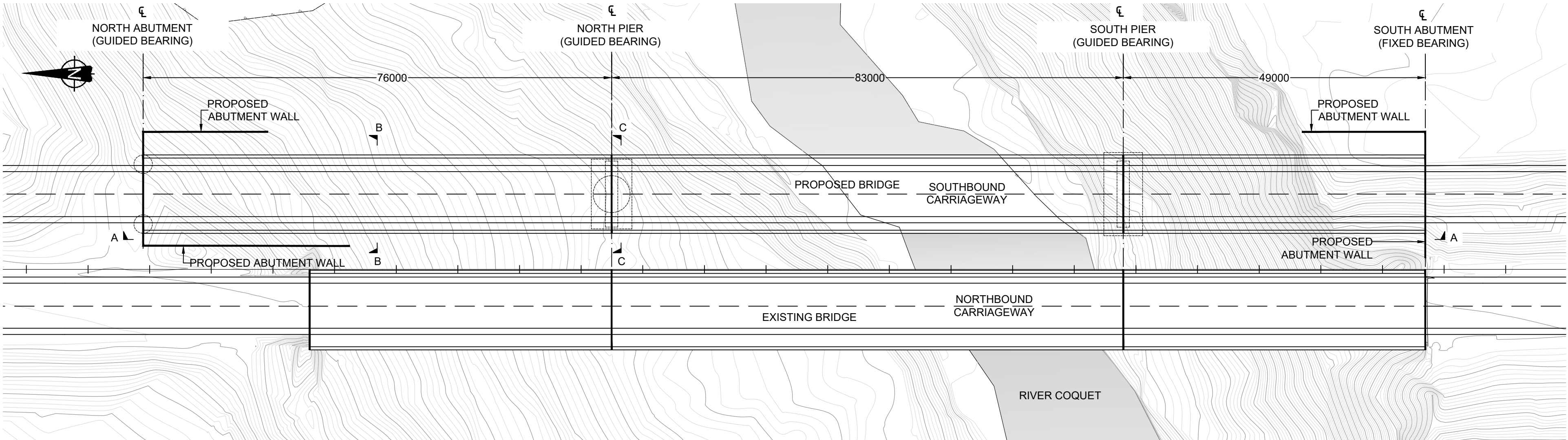


LONGITUDINAL SECTION A-A
SCALE 1:150

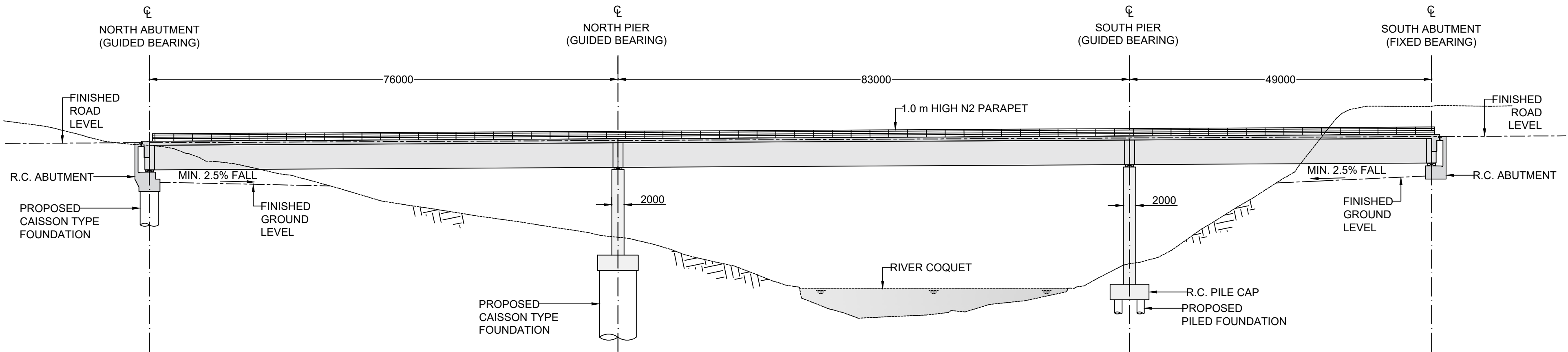
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Rev.	Date	Description				By	Eng' Chk	Disc' Chk	App'd
Suitability								Status	
DCO SUBMISSION								S2	
PINS Reference Number									
TR010041/APP/2.8									
Client									
									
Project Title									
A1 in Northumberland: Morpeth to Ellingham Part A									
Drawing Title									
STRUCTURES ENGINEERING DRAWINGS & SECTIONS PARKWOOD CULVERT (16) - CH.23140 SHEET 19 OF 27 REGULATIONS 5(2)(o), 5(2)(p) & 6(2)									
Scale	Drawn		Eng. Check		Approved		Authorised		
AS SHOWN	ABR		FCV		GL		HA		
Original Size	Date	Date	Date	Date	Date	Date	Date		
A1	14/04/2020	14/04/2020	14/04/2020	14/04/2020	14/04/2020	14/04/2020	14/04/2020		
Drawing Number								Revision	
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NOTES:

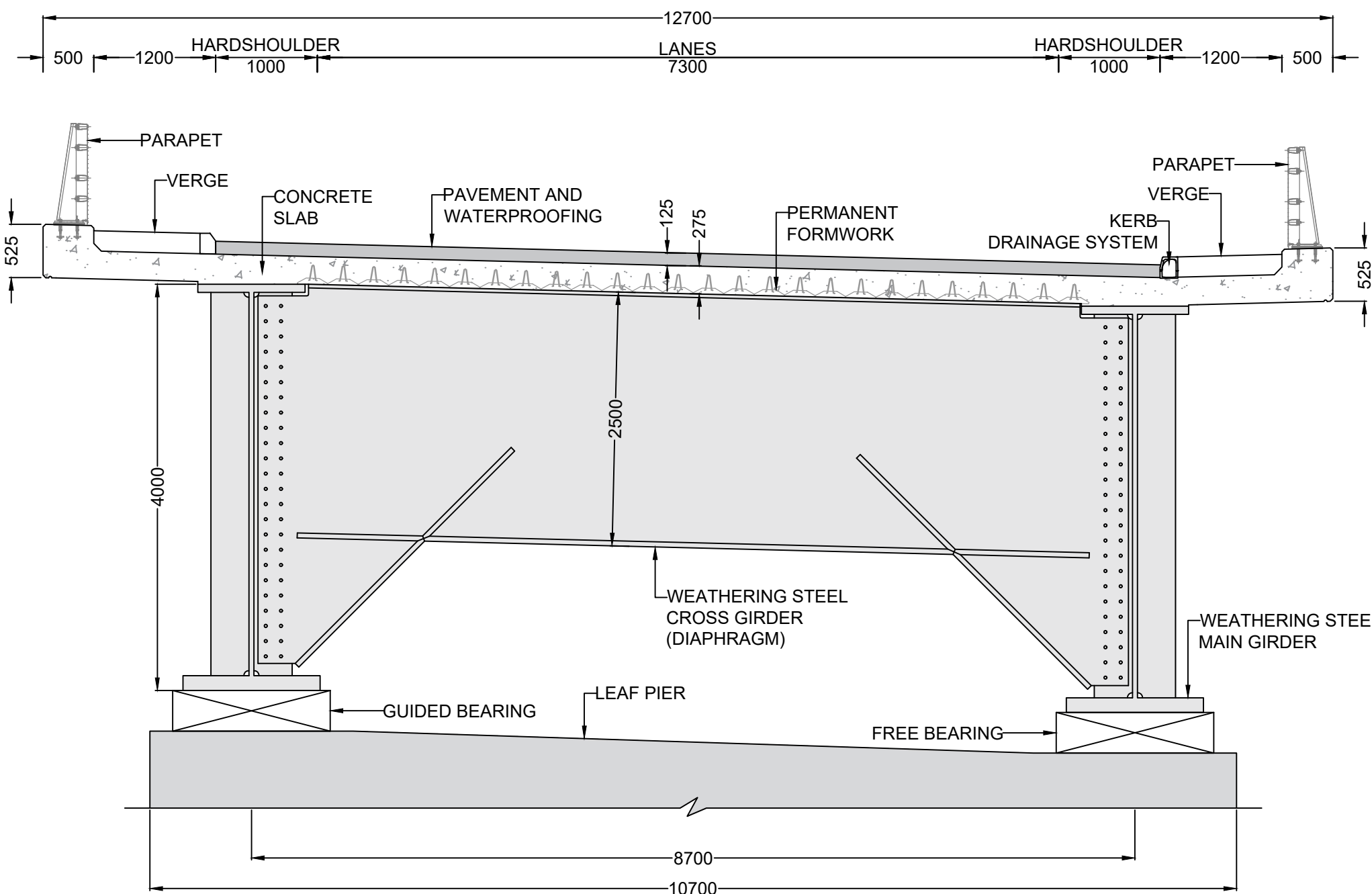
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS STATED OTHERWISE.
2. THE DIMENSIONS OF PROPOSED BRIDGES, EMBANKMENTS, CUTTINGS, TUNNELS CULVERTS AND SUBWAYS ARE INDICATIVE ONLY



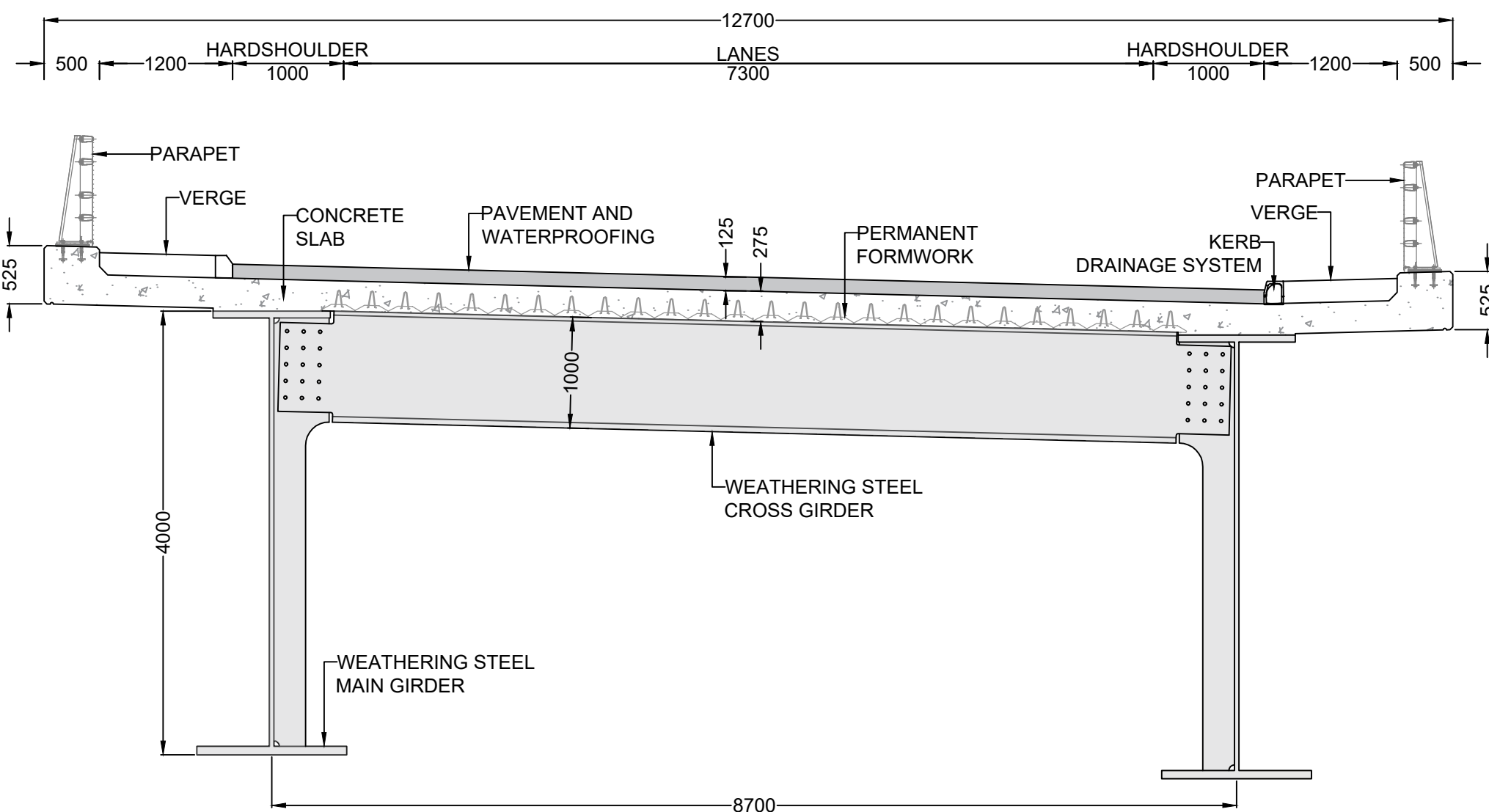
LOCATION PLAN
SCALE 1:500



ELEVATION A - A
SCALE 1:500



CROSS SECTION C-C
SCALE 1:50



CROSS SECTION B-B
SCALE 1:50

0	14/04/2020	DCO SUBMISSION				ABR	FCV	GL	HA
Rev.	Date	Description				By	Eng' Chk	Disc' Chk	App'd
Suitability								Status	
DCO SUBMISSION								S2	
PINS Reference Number									
TR010041/APP/2.8									
Client									
									
Project Title									
A1 in Northumberland: Morpeth to Ellingham Part A									
Drawing Title									
STRUCTURES ENGINEERING DRAWINGS AND SECTIONS RIVER COQUET BRIDGE - CH 22483 SHEET 20 OF 27 REGULATIONS 5(2)(o), 5(2)(p) & 6(2)									
Scale	Drawn	Eng. Check	Approved	Authorised					
AS SHOWN	ABR	FCV	GL	HA					
Original Size	Date	Date	Date	Date					
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Drawing Number								Revision	
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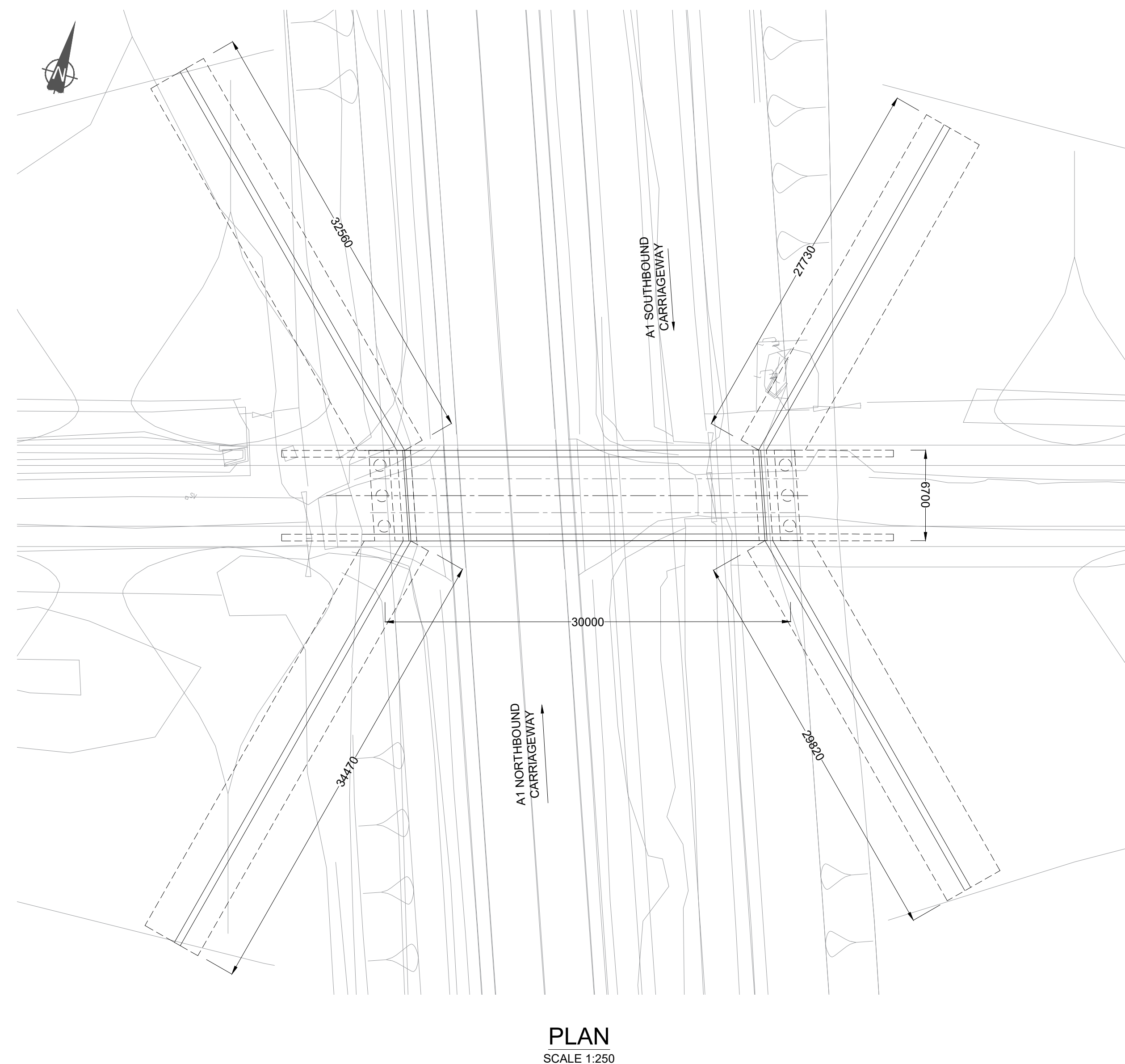
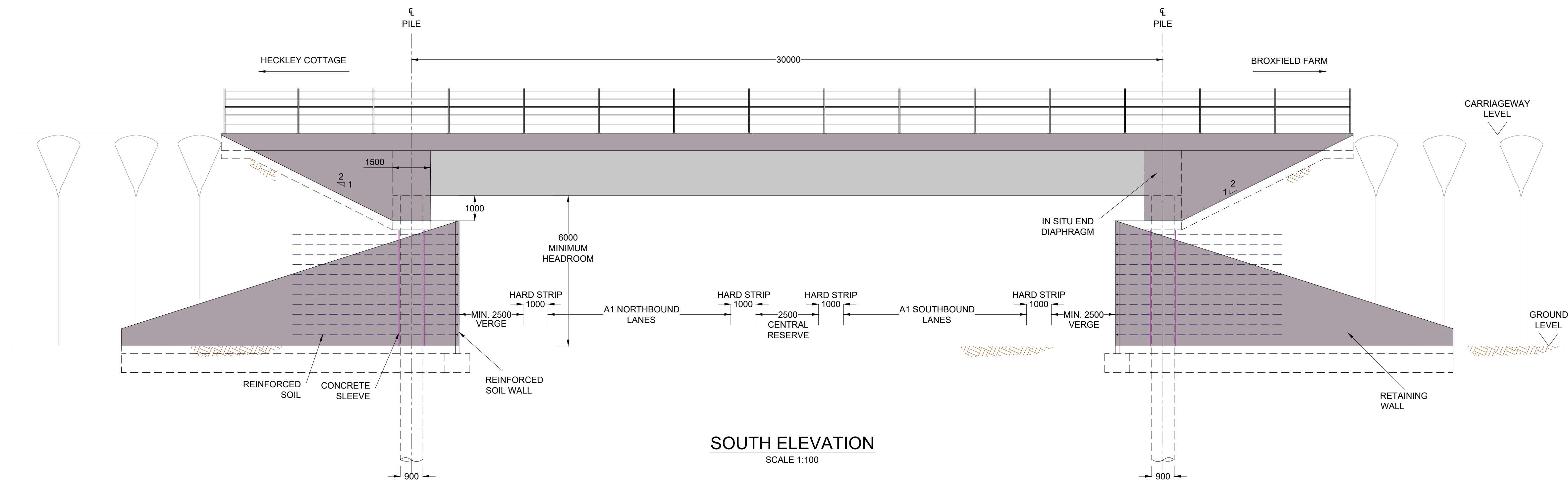
-
- Technical drawing of the South Elevation of the A1 Motorway Bridge, showing structural details, dimensions, and labels.
- Labels and Dimensions:**
- Orientation:** SOUTH CHARLTON (left), CHRISTON BANK (right).
 - Dimensions:**
 - Overall length: 37200
 - Span length: 1500
 - Minimum headroom: 6000
 - Minimum verge: 2500
 - Hard strip width: 1000
 - Central reserve width: 1000
 - Reinforced soil wall thickness: 900
 - Structural Details:**
 - PILE
 - PILE SLEEVE
 - REINFORCED SOIL
 - REINFORCED SOIL WALL
 - IN SITU END DIAPHRAGM
 - RETAINING WALL
 - HARD STRIP
 - CENTRAL RESERVE
 - A1 NORTHBOUND LANES
 - A1 SOUTHBOUND LANES
 - MIN. 2500 VERGE
 - 2/1 slope
 - Ground Levels:** CARRIAGEWAY LEVEL, GROUND LEVEL
- SOUTH ELEVATION**
SCALE 1:100

PLAN
SCALE 1:250

0	14/04/2020	DCO SUBMISSION				ABR	FCV	GL	HA
Rev.	Date	Description				By	Eng' Chk	Disc' Chk	App'd
Suitability								Status	
DCO SUBMISSION								S2	
PINS Reference Number TR010041/APP/2.8									
Client 									
Project Title A1 in Northumberland: Morpeth to Ellingham Part B									
Drawing Title STRUCTURES ENGINEERING DRAWINGS & SECTIONS CHARLTON MIRES JUNCTION TO OVERBRIDGE - CH.55310 SHEET 21 of 27 REGULATIONS 5(2)(o), 5(2)(p) and 6(2)									
Scale AS SHOWN	Drawn SJW	Eng. Check SC	Approved GL	Aurithored DM					
Original Size A1	Date 14/04/2020	Date 14/04/2020	Date 14/04/2020	Date 14/04/2020					
Drawing Number HE551459-WSP-SBR-A2E-DR-CB-2161								Revision 0 PW Stg Code 0	

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. THE DIMENSIONS OF PROPOSED BRIDGES, EMBANKMENTS, CUTTINGS, TUNNELS, CULVERTS AND SUBWAYS ARE INDICATIVE ONLY.

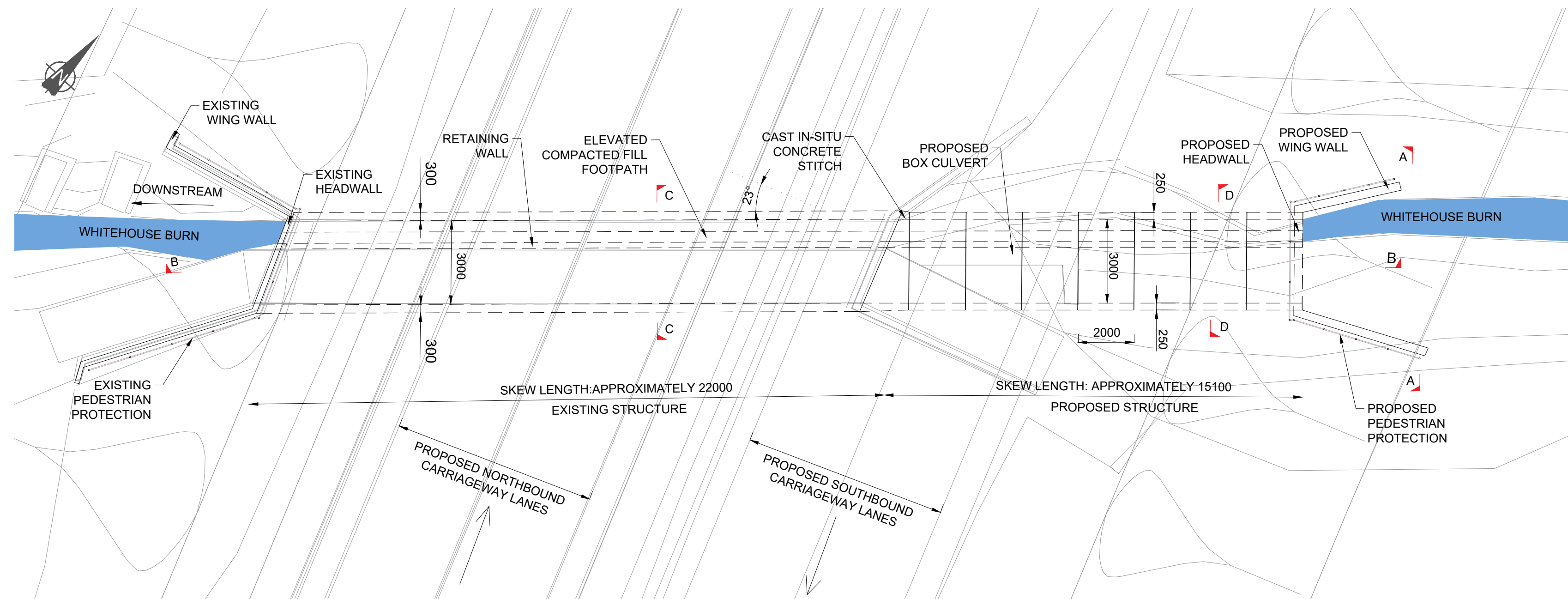


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Rev.	Date	Description								By	Eng' Chk'	Disc' Chk'	App'd		
Suitability												Status			
DCO SUBMISSION												S2			
PINS Reference Number															
TR010041/APP/2.8															
Client															
															
Project Title															
A1 in Northumberland: Morpeth to Ellingham Part B															
Drawing Title															
STRUCTURES ENGINEERING DRAWINGS & SECTIONS HECKLEY FENCE OVERBRIDGE - CH.58940 SHEET 22 of 27 REGULATIONS 5(2)(o), 5(2)(p) and 6(2)															
Scale	Drawn		Eng. Check		Approved		Authorised								
AS SHOWN	SJW		SC		GL		DM								
Original Size	Date	Date		Date		Date		Date							
A1	14/04/2020	14/04/2020		14/04/2020		14/04/2020		14/04/2020							
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HE551459-WSP-SBR-A2E-DR-CB-2162												0			
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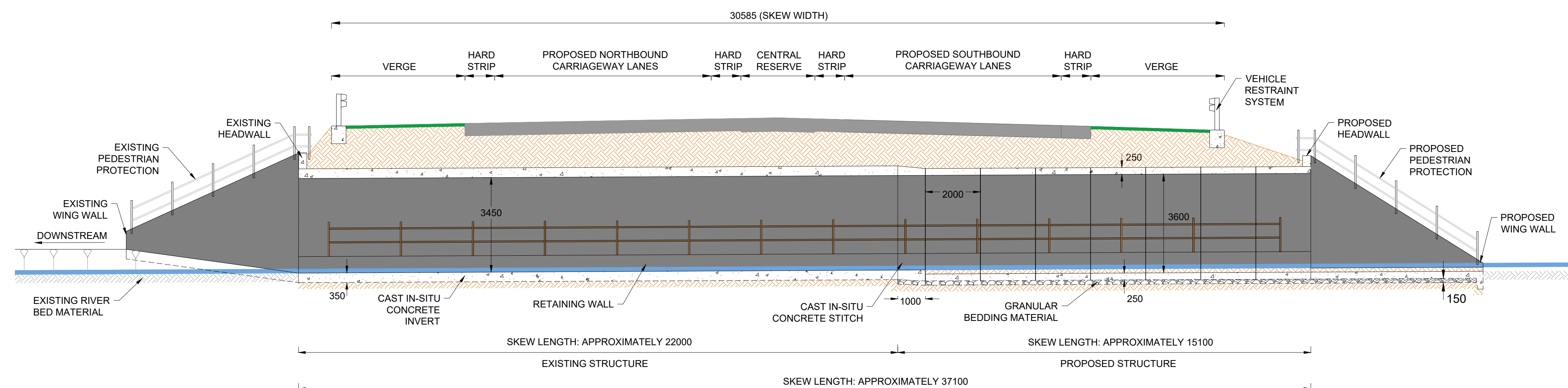
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Rev.	Date	Description									By	Eng' Chk'	App'd						
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PINS Reference Number													TR010041/APP/2.8						
Client																			
Project Title													A1 in Northumberland: Morpeth to Ellingham Part B						
Drawing Title													STRUCTURES ENGINEERING DRAWINGS & SECTIONS HECKLEY FENCE OVERBRIDGE - CH.58940 SHEET 22 of 27 REGULATIONS 5(2)(o), 5(2)(p) and 6(2)						
Scale	Drawn			Eng. Check			Approved			Authorised									
AS SHOWN	SJW			SC			GL			DM									
Original Size	Date	Date			Date			Date			Date								
A1	14/04/2020	14/04/2020			14/04/2020			14/04/2020			14/04/2020								
Drawing Number													Revision						
HE551459-WSP-SBR-A2E-DR-CB-2162													0						
													PW Stg Code						
													0						

-
- VEHICLE RESTRAINT SYSTEM FOUNDATION
- VEHICLE RESTRAINT SYSTEM
- PROPOSED CARRIAGEWAY LEVEL
- PRECAST BOX CULVERT
- 3000
- 3600
- ELEVATED FOOTPATH
- 150 mm-200 mm GRANULAR BEDDING MATERIAL
- PRECAST RETAINING WALL
- 150mm NATURALISED BEDDING MATERIAL
- PEDESTRIAN PROTECTION
- PROPOSED GROUND LEVEL
- PRECAST WING WALL

SCALE 1:50



PLAN
SCALE 1:125



SCALE 1:100

0	14/04/2020	DCO SUBMISSION			ABR	FCV	GL	HA	
Rev.	Date	Description			By	Eng' Chk'	Disc' Chk'	App'd	
Suitability								Status	
DCO SUBMISSION								S2	
PINS Reference Number	TR010041/APP/2.8								
Client									
Project Title	A1 in Northumberland: Morpeth to Ellingham Part B								
Drawing Title	STRUCTURES ENGINEERING DRAWINGS & SECTIONS WHITEHOUSE BURN CULVERT - CH.56920 SHEET 23 of 27 REGULATIONS 5(2)(o), 5(2)(p) and 6(2)								
Scale	Drawn	Eng. Check	Approved	Authorised					
AS SHOWN	SJW	SC	GL	DM					
Original Size	Date	Date	Date	Date					
A1	14/04/2020	14/04/2020	14/04/2020	14/04/2020					
Drawing Number	HE551459-WSP-SBR-A2E-DR-CB-2163							Revision	
								0	
								PW Stg Code	
								0	

-
- Technical cross-section diagram of a proposed road layout. The diagram illustrates the following components and dimensions:
- VEHICLE RESTRAINT SYSTEM FOUNDATION**: Located on the left side of the road.
 - VEHICLE RESTRAINT SYSTEM**: A guardrail system along the top edge of the road.
 - PROPOSED CARRIAGEWAY LEVEL**: Indicated by a dashed line at the top right.
 - PROPOSED GROUND LEVEL**: Indicated by a dashed line at the bottom right.
 - PRECAST BOX CULVERT**: The main structure, with an internal width of **2000** and a height of **2250**.
 - 150mm NATURALISED BEDDING MATERIAL**: Located around the culvert structure.
 - 150 mm - 200 mm GRANULAR BEDDING MATERIAL**: Located at the base of the culvert.
 - PRECAST RETAINING WALL**: Located on the right side of the culvert.
 - PRECAST WING WALL**: Located at the bottom right of the culvert.
 - ELEVATED FOOTPATH**: Located on the left side of the culvert.
 - PEDESTRIAN PROTECTION**: Located on the right side of the culvert.

[illegible]

The diagram illustrates the cross-section of a proposed bridge structure. It is divided into two main spans: a left span with a center line length of approximately 20500 units and a right span with a center line length of approximately 50200 units, totaling a center line length of approximately 71300 units.

Left Span Components (from left to right):

- EXISTING RIVER BED MATERIAL
- EXISTING WING WALL
- EXISTING PEDESTRIAN PROTECTION
- EXISTING HEADWALL
- VERGE
- ACCESS ROAD LANE
- VERGE
- EXISTING STRUCTURE (360 units high)
- 152 mm DIAMETER WEEPHOLES AT @ 1828 mm
- CAST IN-SITU CONCRETE STITCH
- RETAINING WALL

Right Span Components (from left to right):

- HARD STRIP
- PROPOSED NORTHBOUND CARRIAGEWAY LANES
- HARD STRIP
- MEDIAN STRIP
- HARD STRIP
- PROPOSED SOUTHBOUND CARRIAGEWAY LANES
- HARD STRIP
- VERGE
- SLIP ROAD
- VERGE
- PROPOSED HEADWALL
- PROPOSED PEDESTRIAN PROTECTION
- PROPOSED WING WALL
- EXISTING RIVER BED MATERIAL

Structural Details and Materials:

- 2170 units (height)
- 300 units (height)
- 2250 units (height)
- 1200 units (height)
- 200 units (height)
- 2000 units (width)
- NEW STRUCTURE (25 NO. PC BOXES)
- 150mm NATURALISED BEDDING MATERIAL
- 150 units (width)

Dimensions and Layout:

- 11450 (SKEW WIDTH)
- 50240 (SKEW WIDTH)
- CENTRE LINE LENGTH: APPROXIMATELY 20500
- CENTRE LINE LENGTH: APPROXIMATELY 50200
- CENTRE LINE LENGTH: APPROXIMATELY 71300
- DIRECTION: DOWNSTREAM

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- Technical cross-section diagram of a precast box culvert installation. The diagram shows a central precast box culvert with a width of 2000mm and a height of 1500mm. It is surrounded by 150mm naturalised bedding material. The culvert is supported by a 150mm-200mm granular bedding material. The structure is flanked by precast wing walls and includes pedestrian protection. The diagram also shows the vehicle restraint system foundation and the proposed carriage level and ground level.
- Labels and dimensions:
- VEHICLE RESTRAINT SYSTEM
 - VEHICLE RESTRAINT SYSTEM FOUNDATION
 - PROPOSED CARRIAGEWAY LEVEL
 - PEDESTRIAN PROTECTION
 - 150MM NATURALISED BEDDING MATERIAL
 - PRECAST BOX CULVERT
 - 1500
 - 2000
 - 150mm-200mm GRANULAR BEDDING MATERIAL
 - PRECAST WING WALL
 - PROPOSED GROUND LEVEL

Plan view of the proposed bridge structure. The diagram shows the existing structure on the left and the proposed structure on the right. Key features include:

- EXISTING STRUCTURE:**
 - EXISTING WINGWALL
 - SKUEW LENGTH: APPROXIMATELY 19500
 - PROPOSED NORTHBOUND CARRIAGEWAY LANES (7300)
 - PROPOSED SOUTHBOUND CARRIAGEWAY LANES (7300)
 - CAST IN-SITU CONCRETE STITCH
 - PROPOSED BOX CULVERT
- PROPOSED STRUCTURE:**
 - SKUEW LENGTH: APPROXIMATELY 27600
 - PROPOSED WING WALL
 - PROPOSED HEADWALL
 - PROPOSED PEDESTRIAN PROTECTION
 - DOWNSTREAM
- Dimensions:**
 - 22° angle at the existing wingwall.
 - 2000, 450, 200, 2000 dimensions for the proposed structure.
 - 7300 dimensions for the proposed northbound and southbound carriageway lanes.
- Other Labels:**
 - A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, AA, AB, AC, AD, AE, AF, AG, AH, AI, AJ, AK, AL, AM, AN, AO, AP, AQ, AR, AS, AT, AU, AV, AW, AX, AY, AZ, BA, BB, BC, BD, BE, BF, BG, BH, BI, BJ, BK, BL, BM, BN, BO, BP, BQ, BR, BS, BT, BU, BV, BW, BX, BY, BZ, CA, CB, CC, CD, CE, CF, CG, CH, CI, CJ, CK, CL, CM, CN, CO, CP, CQ, CR, CS, CT, CU, CV, CW, CX, CY, CZ, DA, DB, DC, DD, DE, DF, DG, DH, DI, DJ, DK, DL, DM, DN, DO, DP, DQ, DR, DS, DT, DU, DV, DW, DX, DY, DZ, EA, EB, EC, ED, EE, EF, EG, EH, EI, EJ, EK, EL, EM, EN, EO, EP, EQ, ER, ES, ET, EU, EV, EW, EX, EY, EZ, FA, FB, FC, FD, FE, FF, FG, FH, FI, FJ, FK, FL, FM, FN, FO, FP, FQ, FR, FS, FT, FU, FV, FW, FX, FY, FZ, GA, GB, GC, GD, GE, GF, GG, GH, GI, GJ, GK, GL, GM, GN, GO, GP, GQ, GR, GS, GT, GU, GV, GW, GX, GY, GZ, HA, HB, HC, HD, HE, HF, HG, HH, HI, HJ, HK, HL, HM, HN, HO, HP, HQ, HR, HS, HT, HU, HV, HW, HX, HY, HZ, IA, IB, IC, ID, IE, IF, IG, IH, II, IJ, IK, IL, IM, IN, IO, IP, IQ, IR, IS, IT, IU, IV, IW, IX, IY, IZ, JA, JB, JC, JD, JE, JF, JG, JH, JI, JJ, JK, JL, JM, JN, JO, JP, JQ, JR, JS, JT, JU, JV, JW, JX, JY, JZ, KA, KB, KC, KD, KE, KF, KG, KH, KI, KJ, KK, KL, KM, KN, KO, KP, KQ, KR, KS, KT, KU, KV, KW, KX, KY, KZ, LA, LB, LC, LD, LE, LF, LG, LH, LI, LJ, LK, LL, LM, LN, LO, LP, LQ, LR, LS, LT, LU, LV, LW, LX, LY, LZ, MA, MB, MC, MD, ME, MF, MG, MH, MI, MJ, MK, ML, MM, MN, MO, MP, MQ, MR, MS, MT, MU, MV, MW, MX, MY, MZ, NA, NB, NC, ND, NE, NF, NG, NH, NI, NJ, NK, NL, NM, NN, NO, NP, NQ, NR, NS, NT, NU, NV, NW, NX, NY, NZ, OA, OB, OC, OD, OE, OF, OG, OH, OI, OJ, OK, OL, OM, ON, OO, OP, OQ, OR, OS, OT, OU, OV, OW, OX, OY, OZ, PA, PB, PC, PD, PE, PF, PG, PH, PI, PJ, PK, PL, PM, PN, PO, PP, PQ, PR, PS, PT, PU, PV, PW, PX, PY, PZ, QA, QB, QC, QD, QE, QF, QG, QH, QI, QJ, QK, QL, QM, QN, QO, QP, QQ, QR, QS, QT, QU, QV, QW, QX, QY, QZ, RA, RB, RC, RD, RE, RF, RG, RH, RI, RJ, RK, RL, RM, RN, RO, RP, RQ, RR, RS, RT, RU, RV, RW, RX, RY, RZ, SA, SB, SC, SD, SE, SF, SG, SH, SI, SJ, SK, SL, SM, SN, SO, SP, SQ, SR, SS, ST, SU, SV, SW, SX, SY, SZ, TA, TB, TC, TD, TE, TF, TG, TH, TI, TJ, TK, TL, TM, TN, TO, TP, TQ, TR, TS, TT, TU, TV, TW, TX, TY, TZ, UA, UB, UC, UD, UE, UF, UG, UH, UI, UJ, UK, UL, UM, UN, UO, UP, UQ, UR, US, UT, UY, UZ, VA, VB, VC, VD, VE, VF, VG, VH, VI, VJ, VK, VL, VM, VN, VO, VP, VQ, VR, VS, VT, VU, VV, VW, VX, VY, VZ, WA, WB, WC, WD, WE, WF, WG, WH, WI, WJ, WK, WL, WM, WN, WO, WP, WQ, WR, WS, WT, WU, WV, WW, WX, WY, WZ, XA, XB, XC, XD, XE, XF, XG, XH, XI, XJ, XK, XL, XM, XN, XO, XP, XQ, XR, XS, XT, XU, XV, XW, XX, XY, XZ, YA, YB, YC, YD, YE, YF, YG, YH, YI, YJ, YK, YL, YM, YN, YO, YP, YQ, YR, YS, YT, YU, YV, YW, YX, YY, YZ, ZA, ZB, ZC, ZD, ZE, ZF, ZG, ZH, ZI, ZJ, ZK, ZL, ZM, ZN, ZO, ZP, ZQ, ZR, ZS, ZT, ZU, ZV, ZW, ZX, ZY, ZZ.

The diagram illustrates the cross-section of a bridge structure, divided into an existing structure and a proposed structure. The total skew length is approximately 47,000 units, with the existing structure being approximately 19,500 units and the proposed structure being approximately 27,500 units. The total skew width is 41,950 units.

Existing Structure (Approx. 19,500 units length):

- VERGE:** The outermost section on the left.
- HARD STRIP:** A narrow section adjacent to the verge.
- PROPOSED NORTHBOUND CARRIAGEWAY LANES:** The main road lanes on the left side of the central reserve.
- HARD STRIP:** A narrow section adjacent to the northbound lanes.
- CENTRAL RESERVE:** The central area between the northbound and southbound lanes.
- HARD STRIP:** A narrow section adjacent to the central reserve.
- PROPOSED SOUTHBOUND CARRIAGEWAY LANES:** The main road lanes on the right side of the central reserve.
- HARD STRIP:** A narrow section adjacent to the southbound lanes.
- VERGE:** The outermost section on the right.

Proposed Structure (Approx. 27,500 units length):

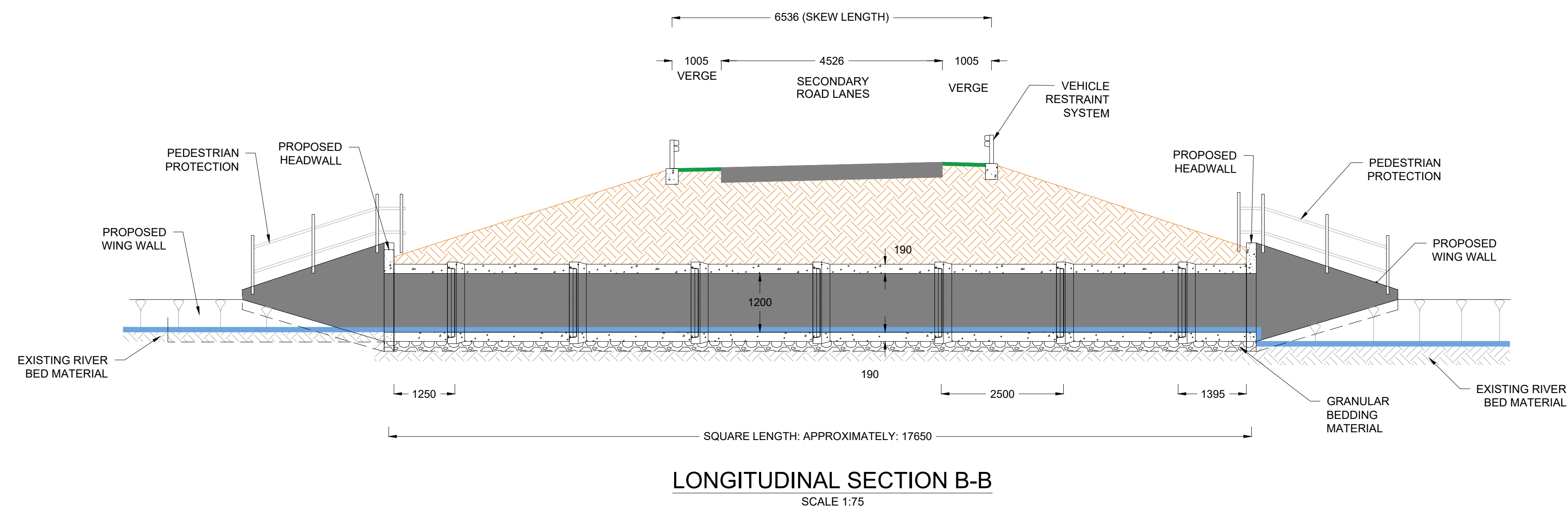
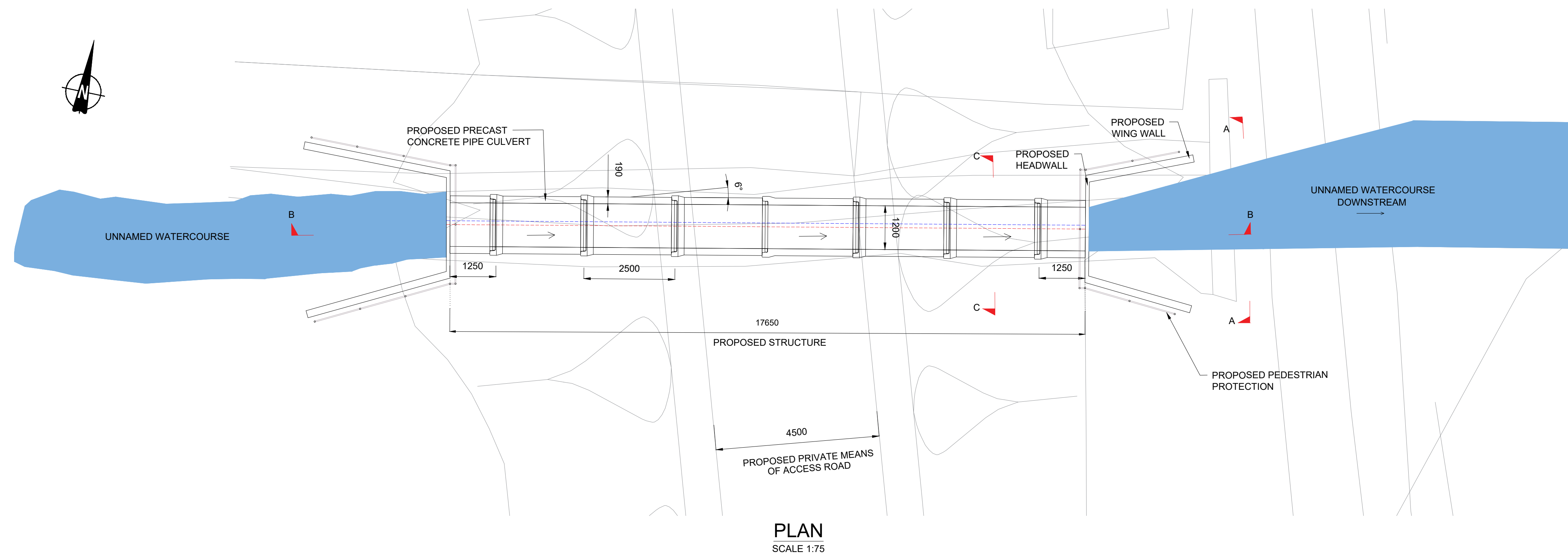
- EXISTING PEDESTRIAN PROTECTION:** Located on the left side of the existing structure.
- EXISTING WING WALL:** A wall structure on the left side of the existing structure.
- EXISTING HEADWALL:** A wall structure at the end of the existing structure.
- EXISTING RIVER BED MATERIAL:** The material at the base of the existing structure.
- CAST-IN-SITU CONCRETE STITCH:** A structural element connecting the existing and proposed structures.
- GRANULAR BEDDING MATERIAL:** The material supporting the proposed structure.
- 150mm NATURALISED BEDDING MATERIAL:** A layer of bedding material under the proposed structure.
- EXISTING RIVER BED MATERIAL:** The material at the base of the proposed structure.
- EXISTING WING WALL:** A wall structure on the right side of the existing structure.
- EXISTING HEADWALL:** A wall structure at the end of the existing structure.
- EXISTING PEDESTRIAN PROTECTION:** Located on the right side of the existing structure.
- VEHICLE RESTRAINT SYSTEM:** A system for restraining vehicles on the proposed structure.
- PROPOSED PEDESTRIAN PROTECTION:** A new protection system for the proposed structure.
- PROPOSED WING WALL:** A new wall structure on the right side of the proposed structure.
- PROPOSED HEADWALL:** A new wall structure at the end of the proposed structure.
- PROPOSED SOUTHBOUND CARRIAGEWAY LANES:** The main road lanes on the right side of the central reserve.
- PROPOSED NORTHBOUND CARRIAGEWAY LANES:** The main road lanes on the left side of the central reserve.
- PROPOSED VERGE:** The outermost section on the right.

Dimensions and Materials:

- Dimensions:** 41950 (SKIEW WIDTH), 47000 (SKIEW LENGTH), 19500 (EXISTING STRUCTURE), 27500 (PROPOSED STRUCTURE).
- Materials:** CAST-IN-SITU CONCRETE STITCH, GRANULAR BEDDING MATERIAL, 150mm NATURALISED BEDDING MATERIAL.

[illegible]

-
- VEHICLE RESTRAINT SYSTEM FOUNDATION
- VEHICLE RESTRAINT SYSTEM
- PROPOSED CARRIAGEWAY LEVEL
- PROPOSED HEADWALL
- PROPOSED PRECAST PIPE
- 1200
- PROPOSED WING WALL
- PROPOSED PEDESTRIAN PROTECTION
- PROPOSED GROUND LEVEL
- 150MM-200MM GRANULAR BEDDING
- INDICATIVE WING WALL FOUNDATION



0	14/04/2020	DCO SUBMISSION					ABR	FCV	GL	HA
Rev.	Date	Description					By	Eng' Chk'	Disc' Chk'	App'd
Suitability								Status		
DCO SUBMISSION								S2		
PINS Reference Number										
TR010041/APP/2.8										
Client										
										
Project Title										
A1 in Northumberland: Morpeth to Ellingham Part B										
Drawing Title										
STRUCTURES ENGINEERING DRAWINGS & SECTIONS ROCK CULVERT - CH.58100 SHEET 26 of 27 REGULATIONS 5(2)(o), 5(2)(p) and 6(2)										
Scale	Drawn	Eng. Check	Approved	Authorised						
AS SHOWN	SJW	SC	GL	DM						
Original Size	Date	Date	Date	Date						
A1	14/04/2020	14/04/2020	14/04/2020	14/04/2020						
Drawing Number								Revision		
HE551459-WSP-SBR-A2E-DR-CB-2166								0		
								PW Stg Code		
								0		

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- VEHICLE RESTRAINT SYSTEM FOUNDATION
- VEHICLE RESTRAINT SYSTEM
- PROPOSED GROUND LEVEL
- PROPOSED PRECAST PIPE
- PROPOSED HEADWALL
- PROPOSED WING WALL
- PROPOSED PEDESTRIAN PROTECTION
- 1200
- 150 mm - 200 mm GRANULAR BEDDING MATERIAL
- INDICATIVE WING WALL FOUNDATION

DENWICK BURN
 EXISTING HEADWALL
 EXISTING PIPE CONSTRUCTION
 1200
 24°
 71900
 EXISTING STRUCTURE
 PROPOSED CAST IN-SITU CONCRETE STITCH
 EXISTING HEADWALL
 DETAIL A
 DETAIL B
 134
 1200
 C
 C
 38500
 PROPOSED STRUCTURE
 PROPOSED PRECAST PIPE CONSTRUCTION
 DETAIL C
 2500
 4200
 3500
 7500
 DENWICK BURN
 INDICATIVE DIVERSION OF DENWICK BURN
 OUTLET
 PROPOSED HEADWALL
 PROPOSED WINGWALL
 PROPOSED PEDESTRIAN PROTECTION
 7300
 PROPOSED NORTHBOUND CARRIAGEWAY LANES
 7300
 PROPOSED SOUTHBOUND CARRIAGEWAY LANES

The diagram illustrates a cross-section of a bridge structure with the following components and dimensions:

- Overall Dimensions:**
 - SKREW LENGTH:** 74223
 - SKREW LENGTH: APPROXIMATELY 110.30 m** (Total length)
 - SKREW LENGTH: APPROXIMATELY 71.85 m** (Existing structure length)
 - SKREW LENGTH: APPROXIMATELY 38.30 m** (New structure length)
- Structural Components and Materials:**
 - EXISTING STRUCTURE (UNKNOWN CONSTRUCTION):** The base structure on the left.
 - NEW STRUCTURE (1NO. PC END PIPE):** The main bridge structure.
 - NEW STRUCTURE (14 NO. PC PIPES):** The section on the right.
 - GRANULAR BEDDING MATERIAL:** The material supporting the new structure.
 - CAST INSITU CONCRETE STITCH:** The connection between the existing and new structures.
 - INDICATIVE WING WALL FOUNDATION:** The foundation for the proposed wing wall.
- Dimensions and Elevation:**
 - Elevations:** +84.24m, +87.87m, +86.86m, +81.31m.
 - Distances:** 500, 10771, 2450, 17880, 2450, 6120, 2450, 17880, 2450, 10772, 500.
 - Vertical Distances:** 2000, 2479, 2828, 134, 1200, 1390.
- Other Labels:**
 - VEHICLE RESTRAINT SYSTEM** (Two locations)
 - EXISTING WINGWALL**
 - EXISTING HEADWALL**
 - PARAPET**
 - VERGE**
 - HARD STRIP**
 - NORTHBOUND CARRIAGEWAY**
 - CENTRAL RESERVE**
 - SOUTHBOUND CARRIAGEWAY**
 - PROPOSED HEADWALL**
 - PROPOSED PEDESTRIAN PROTECTION**
 - PROPOSED WING WALL**
 - DOWNSTREAM**

0	14/04/2020	DCO SUBMISSION				ABR	FCV	GL	HA
Rev.	Date	Description				By	Eng' Chk	Disc' Chk	App'd
Suitability								Status	
DCO SUBMISSION								S2	
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A1 in Northumberland: Morpeth to Ellingham Part B									
Drawing Title									
STRUCTURES ENGINEERING DRAWINGS & SECTIONS DENWICK BURN CULVERT - CH.54600 SHEET 27 of 27 REGULATIONS 5(2)(o), 5(2)(p) and 6(2)									
Scale	Drawn	Eng. Check	Approved	Authorised					
AS SHOWN	EE	FCV	GL	DM					
Original Size	Date	Date	Date	Date					
A1	14/04/2020	14/04/2020	14/04/2020	14/04/2020					
Drawing Number								Revision	
HE551459-WSP-SBR-A2E-DR-CB-2327								0	
								PW Stg Code	
								0	