

## **Appendix F – Civil Structures and Viaduct Drawings (Plans, Elevations, Typical Sections)**

# DA1 MASTER PLAN

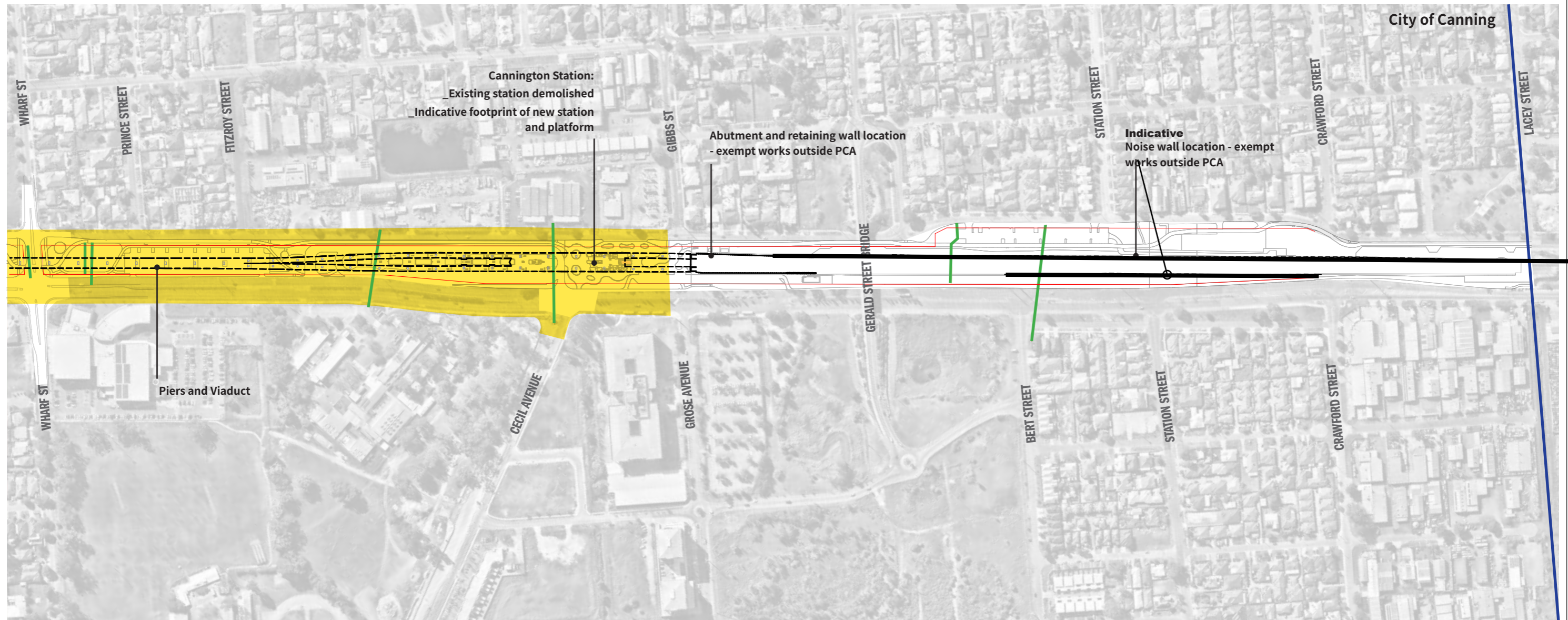
## Wharf Street Package

DEPARTMENT OF PLANNING, LANDS AND HERITAGE	
DATE	FILE
21-Oct-2022	16-50194-1



- Planning Control Area (PCA)
- LGA Boundary
- Rail Corridor Boundary
- Services requiring relocation (indicative only)

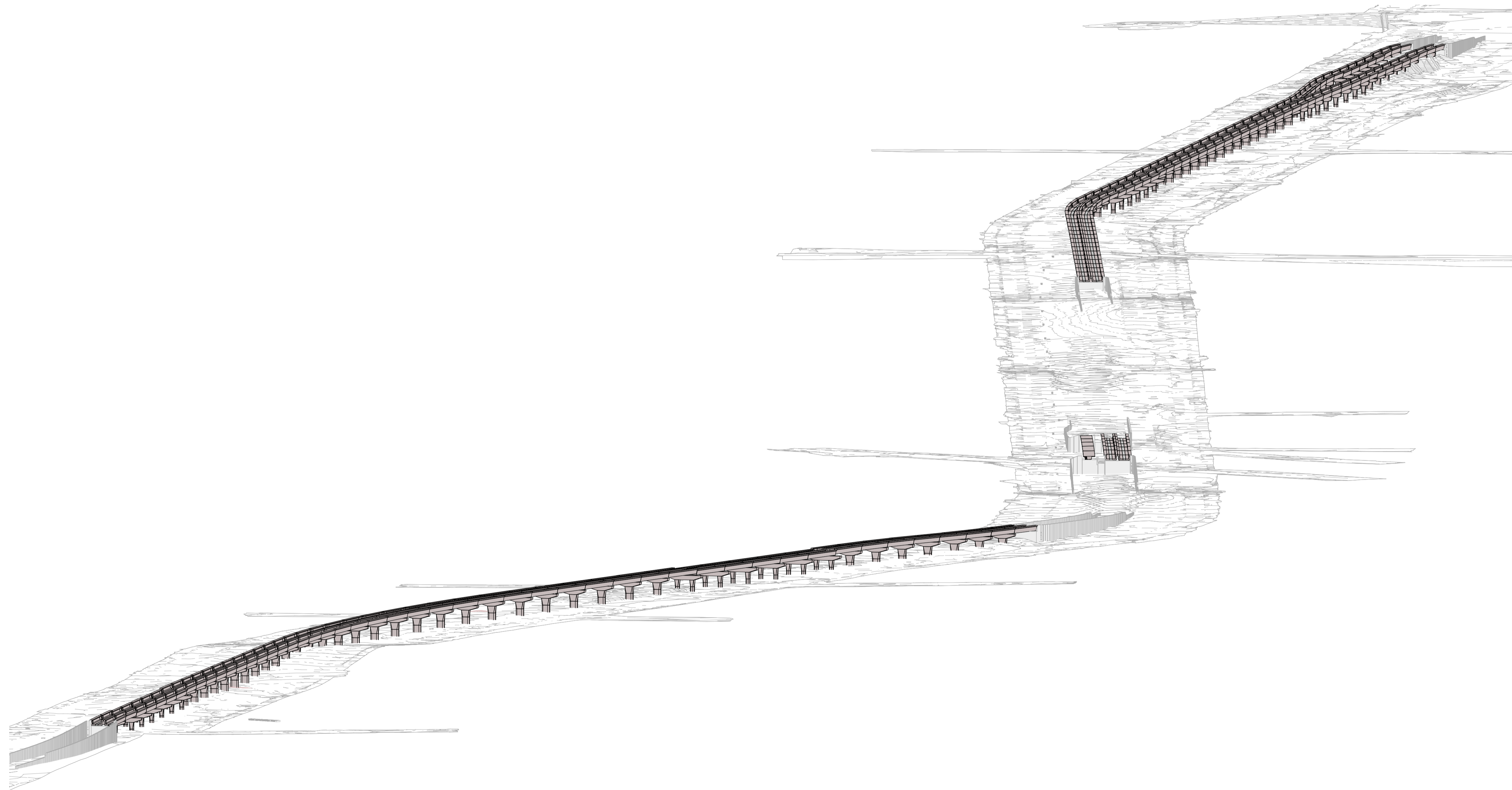






Government of **Western Australia**  
Public Transport Authority

VICTORIA PARK TO CANNING LEVEL CROSSING REMOVAL  
ZONE 0 - CIVIL STRUCTURES  
PROJECT WIDE - VIADUCT



**REFERENCE DESIGN**

REV	DATE	AMENDMENT	CC	LR	RP	WS
A	21.06.22	ISSUED FOR REFERENCE DESIGN				
ORIG SIZE	AT ORIGINAL PLOT SIZE		DSN	DRN	CHK	APP
A1	0 10 20 30 40 50 100mm					

Contractor No: LXR-PW-Z0-GN-ST-CS-DWG-00001

VALIDATION
SIGNATURE
DATE
DATE APPROVED


REFERENCES
------------

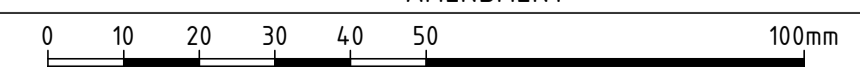
SCALE
DATUM
HORIZONTAL: PCG20
VERTICAL: AHD71

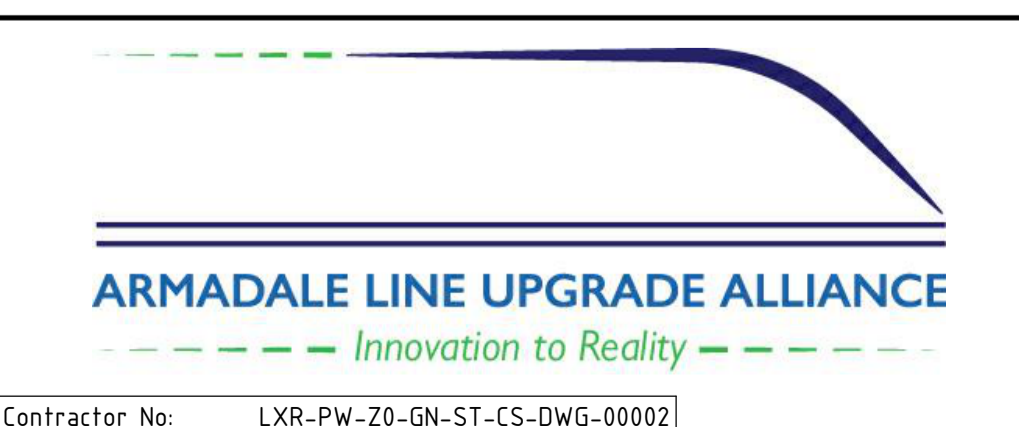
DESIGNED	C.CHANG
DRAWN	L.RADICI
CHECKED	R.PEYILA
APPROVED	W.SCHWARZ
DATE	21.06.2022

	VICTORIA PARK TO CANNING LEVEL CROSSING REMOVAL
ZONE 0 - CIVIL STRUCTURES PROJECT WIDE - VIADUCT COVER SHEET	
PTA Drawing No: 04-S-169-0001	Rev: A

DRAWING LIST			
REV	ALUA DRAWING NUMBER	PTA DRAWING NUMBER	TITLE
A	LXR-PW-Z0-GN-ST-CS-DWG-00001	04-S-169-0001	PROJECT WIDE - VIADUCT - COVER SHEET
A	LXR-PW-Z0-GN-ST-CS-DWG-00002	04-S-169-0002	PROJECT WIDE - VIADUCT - DRAWING INDEX - SHEET 1
A	LXR-PW-Z0-GN-ST-CS-DWG-00005	04-S-169-0004	PROJECT WIDE - VIADUCT - LOCALITY PLAN - SHEET 1
A	LXR-PW-Z0-GN-ST-CS-DWG-00101	04-S-169-0009	PROJECT WIDE - VIADUCT - PLAN AND ELEVATION - SHEET 1
A	LXR-PW-Z0-GN-ST-CS-DWG-00102	04-S-169-0010	PROJECT WIDE - VIADUCT - PLAN AND ELEVATION - SHEET 2
A	LXR-PW-Z0-GN-ST-CS-DWG-00103	04-S-169-0011	PROJECT WIDE - VIADUCT - PLAN AND ELEVATION - SHEET 3
A	LXR-PW-Z0-GN-ST-CS-DWG-00104	04-S-169-0012	PROJECT WIDE - VIADUCT - PLAN AND ELEVATION - SHEET 4
A	LXR-PW-Z0-GN-ST-CS-DWG-00105	04-S-169-0013	PROJECT WIDE - VIADUCT - PLAN AND ELEVATION - SHEET 5
A	LXR-PW-Z0-GN-ST-CS-DWG-00106	04-S-169-0014	PROJECT WIDE - VIADUCT - PLAN AND ELEVATION - SHEET 6
A	LXR-PW-Z0-GN-ST-CS-DWG-00107	04-S-169-0015	PROJECT WIDE - VIADUCT - PLAN AND ELEVATION - SHEET 7
A	LXR-PW-Z0-GN-ST-CS-DWG-00108	04-S-169-0016	PROJECT WIDE - VIADUCT - PLAN AND ELEVATION - SHEET 8
A	LXR-PW-Z0-GN-ST-CS-DWG-00109	04-S-169-0017	PROJECT WIDE - VIADUCT - PLAN AND ELEVATION - SHEET 9
A	LXR-PW-Z0-GN-ST-CS-DWG-00110	04-S-169-0018	PROJECT WIDE - VIADUCT - PLAN AND ELEVATION - SHEET 10
A	LXR-PW-Z0-GN-ST-CS-DWG-00111	04-S-169-0019	PROJECT WIDE - VIADUCT - PLAN AND ELEVATION - SHEET 11
A	LXR-PW-Z0-GN-ST-CS-DWG-00121	04-S-169-0024	PROJECT WIDE - VIADUCT - SECTIONS - SHEET 1
A	LXR-PW-Z0-GN-ST-CS-DWG-00122	04-S-169-0025	PROJECT WIDE - VIADUCT - SECTIONS - SHEET 2
A	LXR-PW-Z0-GN-ST-CS-DWG-00123	04-S-169-0026	PROJECT WIDE - VIADUCT - SECTIONS - SHEET 3
A	LXR-PW-Z0-GN-ST-CS-DWG-00124	04-S-169-0027	PROJECT WIDE - VIADUCT - SECTIONS - SHEET 4
A	LXR-PW-Z0-GN-ST-CS-DWG-00125	04-S-169-0028	PROJECT WIDE - VIADUCT - SECTIONS - SHEET 5
A	LXR-PW-Z0-GN-ST-CS-DWG-00126	04-S-169-0029	PROJECT WIDE - VIADUCT - SECTIONS - SHEET 6
A	LXR-PW-Z0-GN-ST-CS-DWG-00127	04-S-169-0030	PROJECT WIDE - VIADUCT - SECTIONS - SHEET 7

<b>REFERENCE DESIGN</b>	
	<b>VICTORIA PARK TO CANNING LEVEL CROSSING REMOVAL</b>
<b>ZONE 0 - CIVIL STRUCTURES</b> <b>PROJECT WIDE - VIADUCT</b> <b>DRAWING INDEX - SHEET 1</b>	
<b>PTA Drawing No: 04-S-169-0002</b>	<b>Rev: A</b>

REV	DATE	ISSUED FOR REFERENCE DESIGN	CC	LR	RP	WS
A	21.06.22					
AMENDMENT			DSN	DRN	CHK	APP
ORIG SIZE			<small>This document must not be copied without PTA's written permission, and the contents thereof must not be imparted to a third party nor be used for any unauthorised purpose.</small>			
A1	AT ORIGINAL PLOT SIZE		Contractor No: LXR-PW-Z0-GN-ST-CS-DWG-00002			

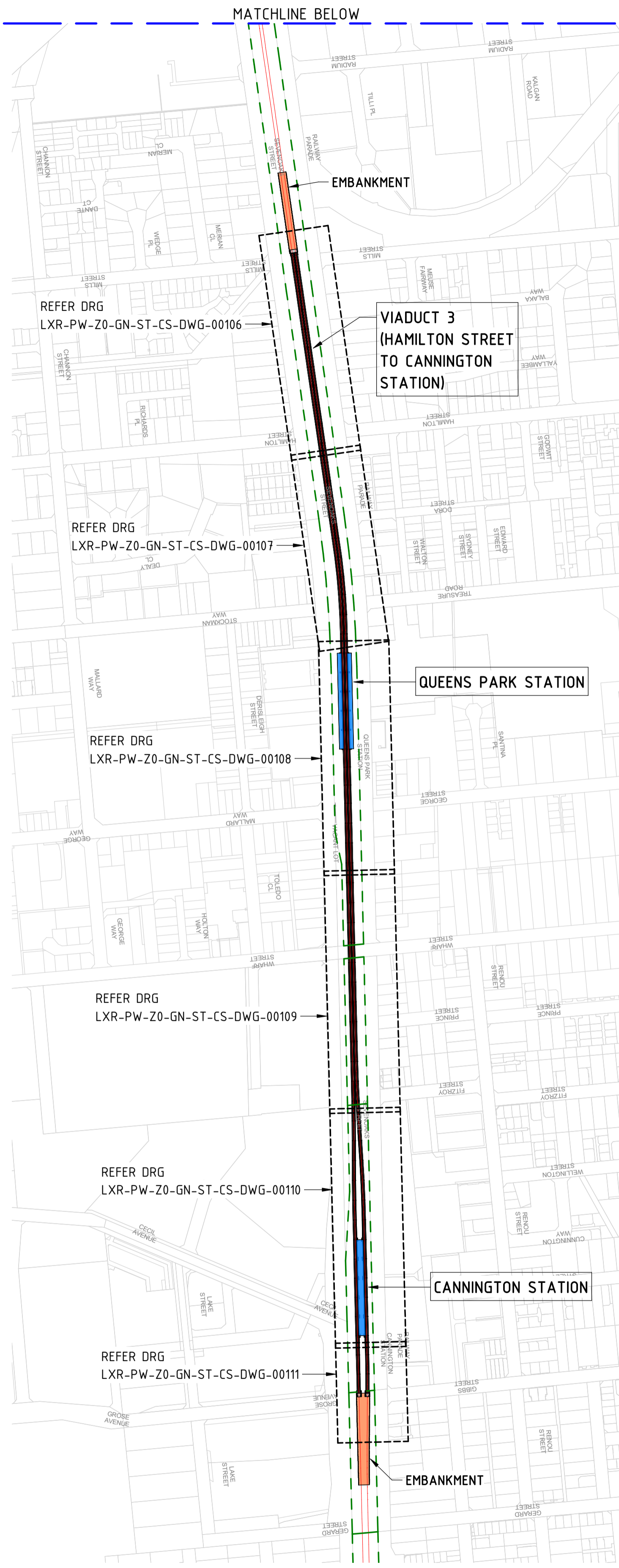


VALIDATION
SIGNATURE
DATE
DATE APPROVED

REFERENCES
SCALE
DATUM
HORIZONTAL: PCG20
VERTICAL: AHD71

DESIGNED	C.CHANG
DRAWN	L.RADICI
CHECKED	R.PEYILA
APPROVED	W.SCHWARZ
DATE	21.06.2022

PERTH

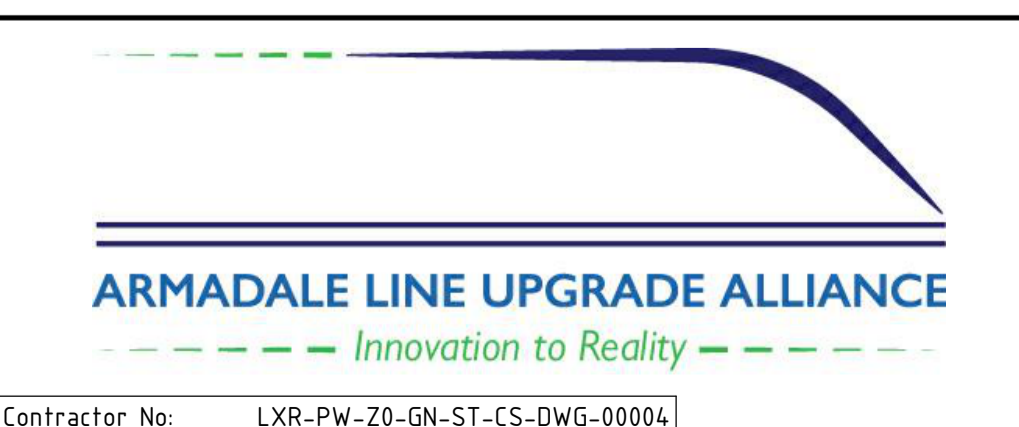


LOCALITY PLAN  
SCALE 1 : 5000

- LEGEND:
- VIADUCT / PSP BRIDGE
  - EMBANKMENT
  - STATION
  - RAIL ALIGNMENT
  - RAIL RESERVE BOUNDARY

<b>REFERENCE DESIGN</b>	
	VICTORIA PARK TO CANNING LEVEL CROSSING REMOVAL
PROJECT WIDE - CIVIL STRUCTURES VIADUCT LOCALITY PLAN PTA Drawing No: 00004	
Rev: A01	

A01	12.05.22	ISSUED FOR 15% INTERNAL REFERENCE DESIGN	CC	LR	RP	WS			
REV	DATE	AMENDMENT	DSN	DRN	CHK	APP			
ORIG SIZE			This document must not be copied without PTA's written permission, and the contents thereof must not be imparted to a third party nor be used for any unauthorised purpose.						
A1	AT ORIGINAL PLOT SIZE		Contractor No: LXR-PW-Z0-GN-ST-CS-DWG-00004						

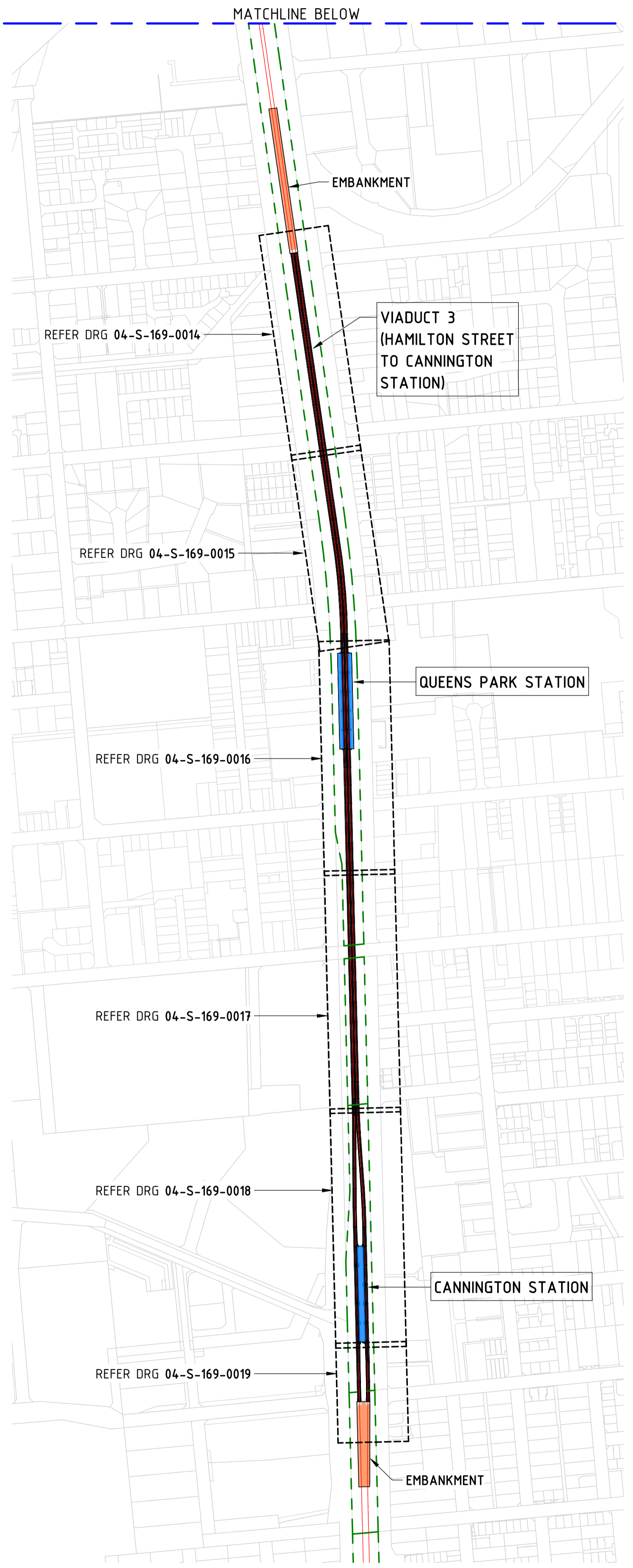
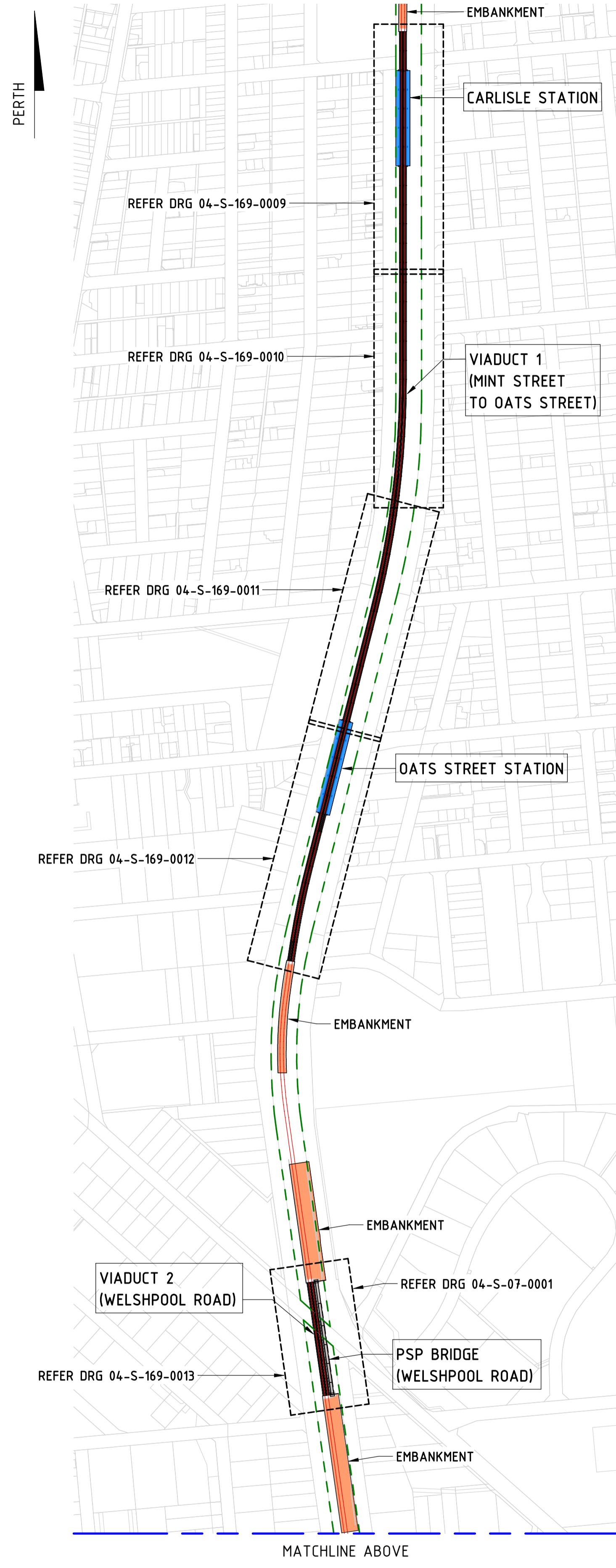


VALIDATION  
SIGNATURE  
DATE  
DATE APPROVED

REFERENCES

SCALE  
As indicated  
DATUM  
HORIZONTAL: PCG20  
VERTICAL: AHD71

DESIGNED C.CHANG  
DRAWN L.RADICI  
CHECKED R.PEYILA  
APPROVED W.SCHWARZ  
DATE 12.05.2022



**LOCALITY PLAN**  
SCALE 1 : 5000

- LEGEND:**
- VIADUCT / PSP BRIDGE
  - EMBANKMENT
  - STATION
  - RAIL ALIGNMENT
  - RAIL RESERVE BOUNDARY

<b>REFERENCE DESIGN</b>	
	VICTORIA PARK TO CANNING LEVEL CROSSING REMOVAL
<b>ZONE 0 - CIVIL STRUCTURES</b> <b>PROJECT WIDE - VIADUCT</b> <b>LOCALITY PLAN - SHEET 1</b>	
PTA Drawing No: <b>04-S-169-0004</b>	Rev: <b>A</b>

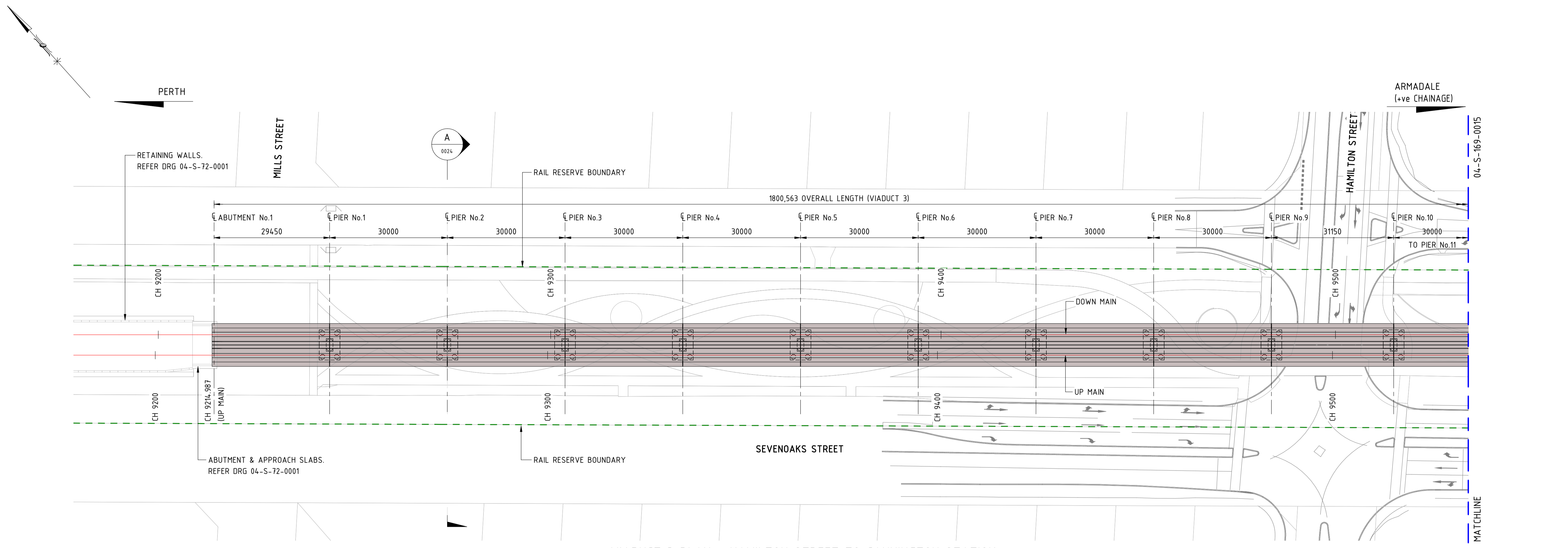
REV	DATE	ISSUED FOR REFERENCE DESIGN	CC	LR	RP	WS	DSN	DRN	CHK	APP
A	21.06.22	ISSUED FOR REFERENCE DESIGN								
ORIG SIZE		AMENDMENT								
A1		AT ORIGINAL PLOT SIZE		This document must not be copied without PTA's written permission, and the contents thereof must not be imparted to a third party nor be used for any unauthorised purpose.						

**ARMADALE LINE UPGRADE ALLIANCE**  
*Innovation to Reality*

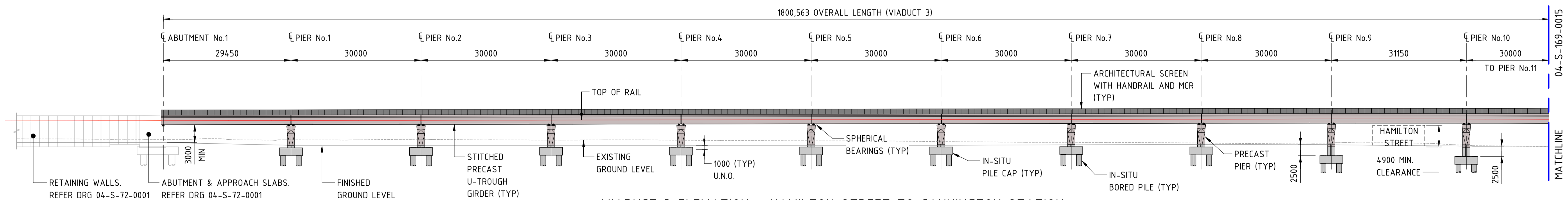
Contractor No: LXR-PW-Z0-GN-ST-CS-DWG-00005

VALIDATION	REFERENCES
SIGNATURE	
DATE	
DATE APPROVED	

SCALE	DESIGNED
As indicated	C.CHANG
DATUM	DRAWN
HORIZONTAL: PCG20	L.RADICI
VERTICAL: AHD71	CHECKED
	R.PEYILA
	APPROVED
	W.SCHWARZ
	DATE
	21.06.2022



**VIADUCT 3 PLAN - HAMILTON STREET TO CANNINGTON STATION**  
SCALE 1 : 500



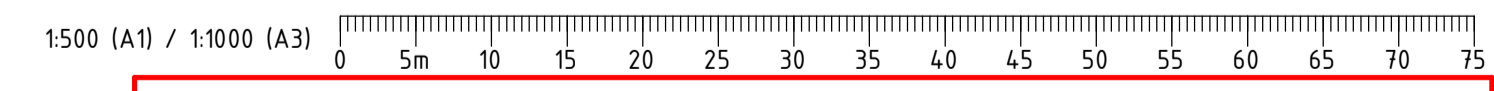
**VIADUCT 3 ELEVATION - HAMILTON STREET TO CANNINGTON STATION**  
SCALE 1 : 500

**NOTES:**

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
2. ALL LEVELS & CHAINAGES ARE IN METERS.
3. REFER TO RAIL TRACK DRAWINGS FOR RAIL ALIGNMENT DETAILS.
4. REFER TO STATION ARCHITECTURE DRAWINGS FOR PLATFORM DETAILS.
5. REFER TO CIVIL DRAWINGS FOR PROPOSED ROAD LAYOUTS & BUS FACILITY DETAILS.
6. ALL SPANS ARE MEASURED ALONG THE UP MAIN CONTROL LINE.

**LEGEND:**

- VIADUCT
- STATION PLATFORM
- RAIL ALIGNMENT
- RAIL RESERVE BOUNDARY



REFERENCE DESIGN

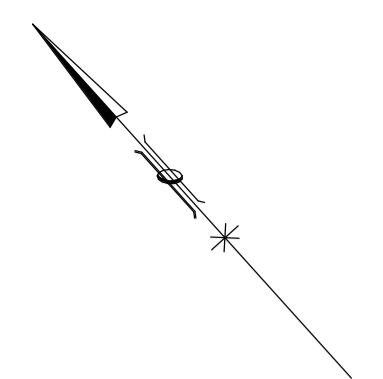
	VICTORIA PARK TO CANNING LEVEL CROSSING REMOVAL
<b>ZONE 0 - CIVIL STRUCTURES</b> PROJECT WIDE - VIADUCT PLAN AND ELEVATION - SHEET 6 PTA Drawing No: <b>04-S-169-0014</b>	
DESIGNED: C.CHANG DRAWN: L.RADICI CHECKED: R.PEYILA APPROVED: W.SCHWARZ DATE: 21.06.2022	Rev: <b>A</b>

REV	DATE	ISSUED FOR REFERENCE DESIGN	CC	LR	RP	WS
A	21.06.22	AMENDMENT	DSN	DRN	CHK	APP
ORIG SIZE						
A1		AT ORIGINAL PLOT SIZE				

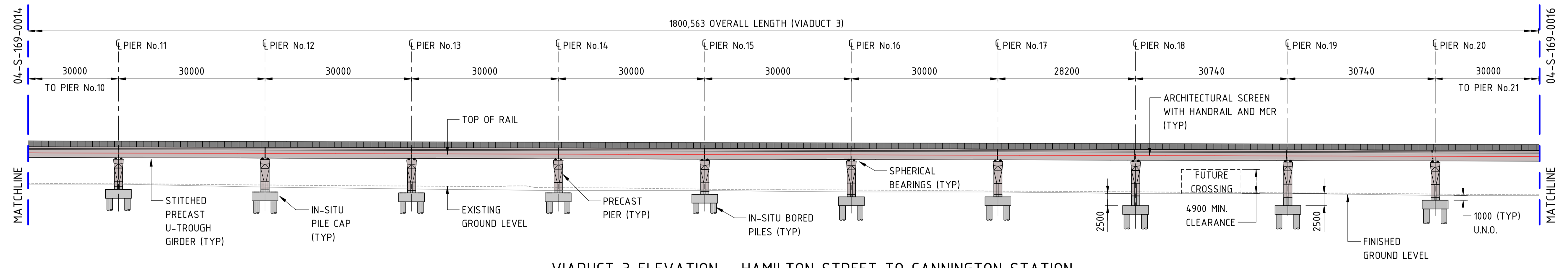
Contractor No: LXR-PW-Z0-GN-ST-CS-DWG-00106

VALIDATION	REFERENCES	SCALE	DESIGNED
SIGNATURE		As indicated	C.CHANG
DATE		DATUM	DRAWN
DATE APPROVED		HORIZONTAL: PCG20	L.RADICI
		VERTICAL: AHD71	CHECKED
			R.PEYILA
			APPROVED
			W.SCHWARZ
			DATE
			21.06.2022





**VIADUCT 3 PLAN - HAMILTON STREET TO CANNINGTON STATION**  
SCALE 1 : 500

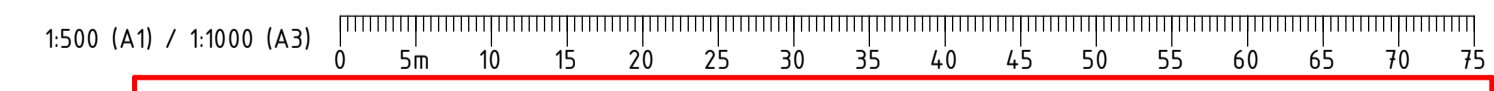


**VIADUCT 3 ELEVATION - HAMILTON STREET TO CANNINGTON STATION**  
SCALE 1 : 500

- NOTES:**
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
  2. ALL LEVELS & CHAINAGES ARE IN METERS.
  3. REFER TO RAIL TRACK DRAWINGS FOR RAIL ALIGNMENT DETAILS.
  4. REFER TO STATION ARCHITECTURE DRAWINGS FOR PLATFORM DETAILS.
  5. REFER TO CIVIL DRAWINGS FOR PROPOSED ROAD LAYOUTS & BUS FACILITY DETAILS.
  6. ALL SPANS ARE MEASURED ALONG THE UP MAIN CONTROL LINE.

**LEGEND:**

	VIADUCT
	STATION PLATFORM
	RAIL ALIGNMENT
	RAIL RESERVE BOUNDARY



**REFERENCE DESIGN**

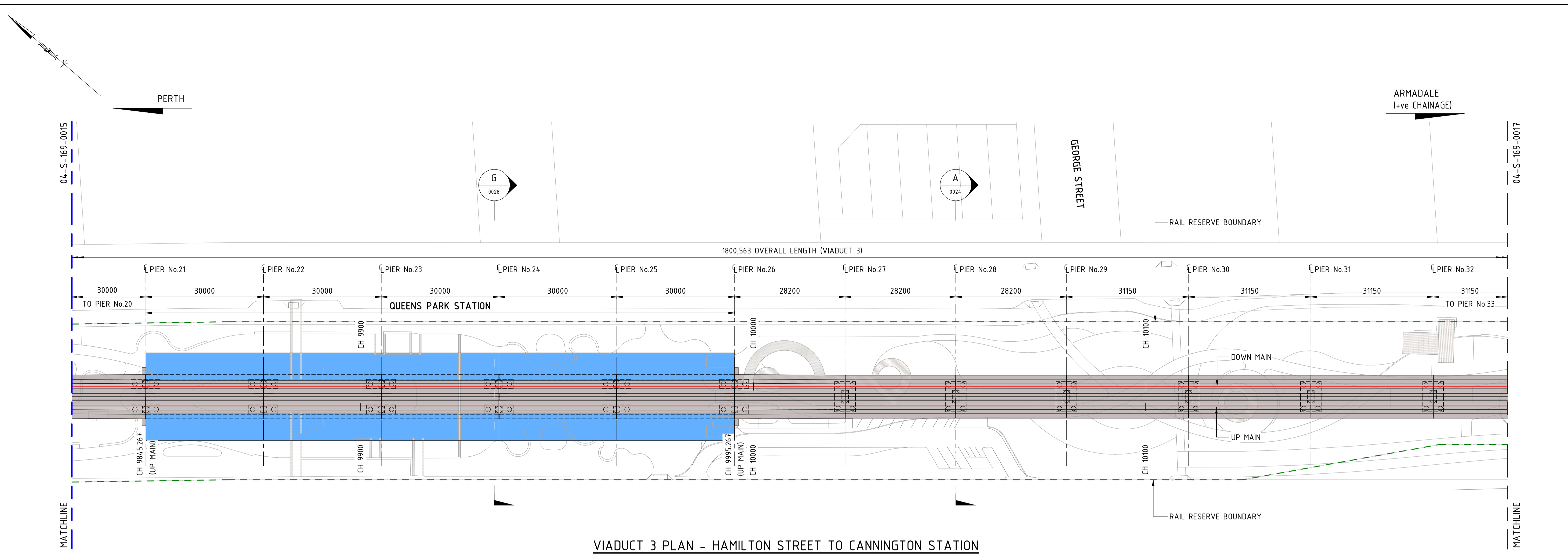
		VICTORIA PARK TO CANNING LEVEL CROSSING REMOVAL
<b>ZONE 0 - CIVIL STRUCTURES</b> <b>PROJECT WIDE - VIADUCT</b> <b>PLAN AND ELEVATION - SHEET 7</b> PTA Drawing No: <b>04-S-169-0015</b>		
DESIGNED	C.CHANG	Rev: <b>A</b>
DRAWN	L.RADICI	
CHECKED	R.PEYILA	
APPROVED	W.SCHWARZ	
DATE	21.06.2022	

REV	DATE	AMENDMENT	CC	LR	RP	WS
DSN	DRN	CHK	APP			
A	21.06.22	ISSUED FOR REFERENCE DESIGN				
ORIG SIZE	AT ORIGINAL PLOT SIZE					
<small>This document must not be copied without PTA's written permission, and the contents thereof must not be imparted to a third party nor be used for any unauthorised purpose.</small>						

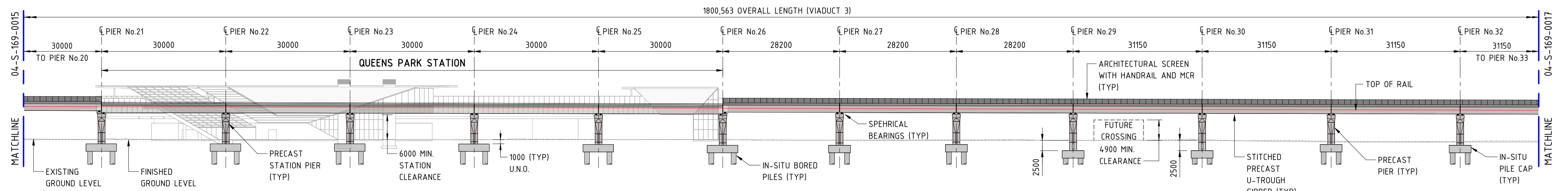
Innovation to Reality

Contractor No: LXR-PW-Z0-GN-ST-CS-DWG-00107

VALIDATION	REFERENCES	SCALE	DESIGNED
SIGNATURE		As indicated	C.CHANG
DATE		DATUM	DRAWN
DATE APPROVED		HORIZONTAL: PCG20	L.RADICI
		VERTICAL: AHD71	CHECKED
			R.PEYILA
			APPROVED
			W.SCHWARZ
			DATE
			21.06.2022



**VIADUCT 3 PLAN - HAMILTON STREET TO CANNINGTON STATION**  
SCALE 1 : 500



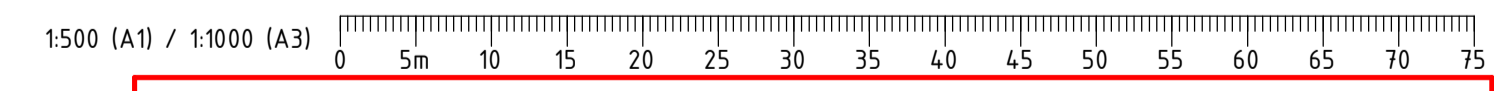
**VIADUCT 3 ELEVATION - HAMILTON STREET TO CANNINGTON STATION**  
SCALE 1 : 500

**NOTES:**

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
2. ALL LEVELS & CHAINAGES ARE IN METERS.
3. REFER TO RAIL TRACK DRAWINGS FOR RAIL ALIGNMENT DETAILS.
4. REFER TO STATION ARCHITECTURE DRAWINGS FOR PLATFORMS DETAILS.
5. REFER TO CIVIL DRAWINGS FOR PROPOSED ROAD LAYOUTS & BUS FACILITY DETAILS.
6. ALL SPANS ARE MEASURED ALONG THE UP MAIN CONTROL LINE.

**LEGEND:**

- VIADUCT
- STATION PLATFORM
- RAIL ALIGNMENT
- RAIL RESERVE BOUNDARY



REFERENCE DESIGN

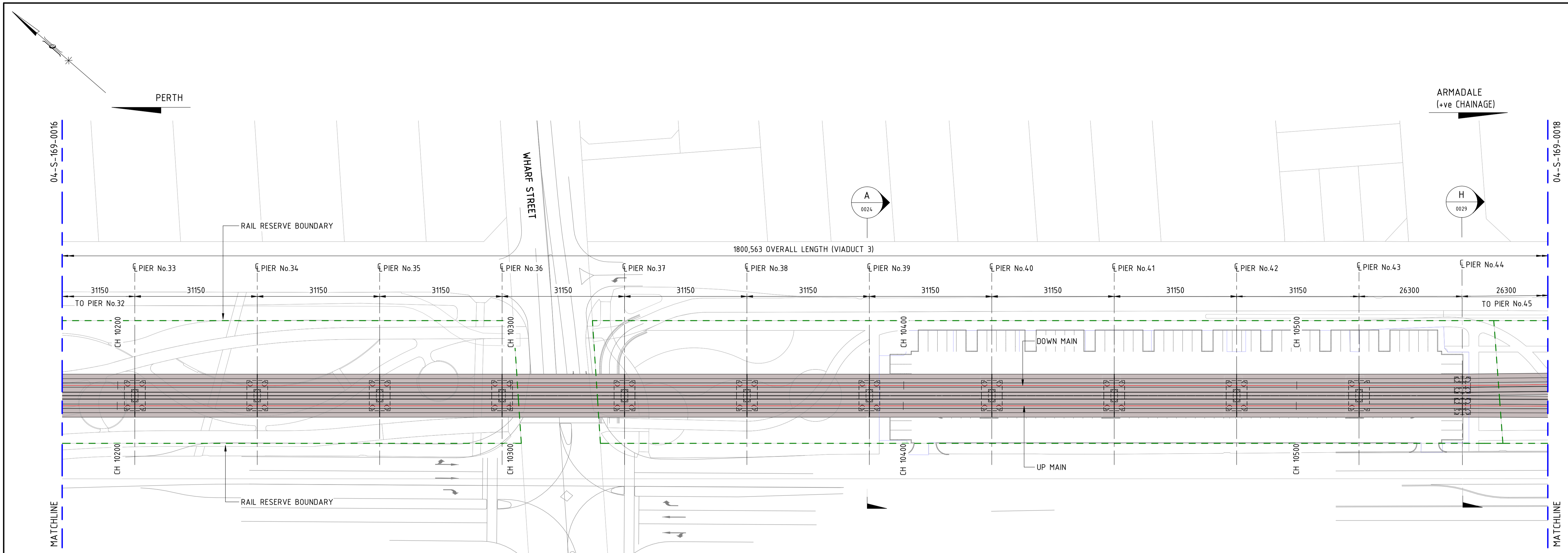
		VICTORIA PARK TO CANNING LEVEL CROSSING REMOVAL
ZONE 0 - CIVIL STRUCTURES PROJECT WIDE - VIADUCT PLAN AND ELEVATION - SHEET 8 PTA Drawing No: <b>04-S-169-0016</b>		
Rev: <b>A</b>		

REV	DATE	ISSUED FOR REFERENCE DESIGN	CC	LR	RP	WS
A	21.06.22	ISSUED FOR REFERENCE DESIGN				
AMENDMENT			DSN	DRN	CHK	APP
ORIG SIZE <b>A1</b>			This document must not be copied without PTA's written permission, and the contents thereof must not be imparted to a third party nor be used for any unauthorised purpose.			

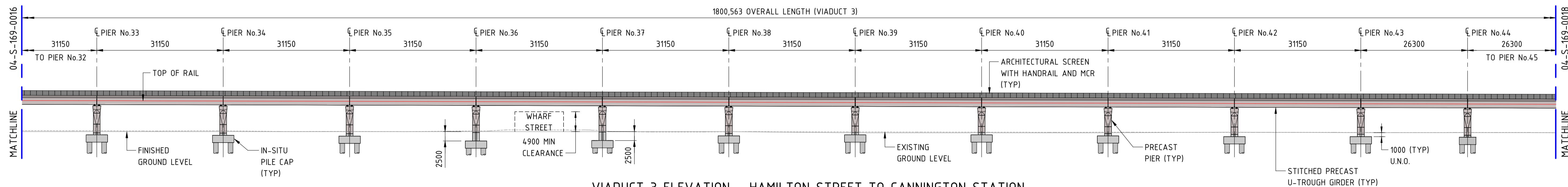
Innovation to Reality

Contractor No: LXR-PW-Z0-GN-ST-CS-DWG-00108

VALIDATION	REFERENCES	SCALE	DESIGNED
SIGNATURE		As indicated	C.CHANG
DATE		DATUM	DRAWN
DATE APPROVED		HORIZONTAL: PCG20	L.RADICI
		VERTICAL: AHD71	CHECKED
			R.PEYILA
			APPROVED
			W.SCHWARZ
			DATE
			21.06.2022



**VIADUCT 3 PLAN - HAMILTON STREET TO CANNINGTON STATION**  
SCALE 1 : 500



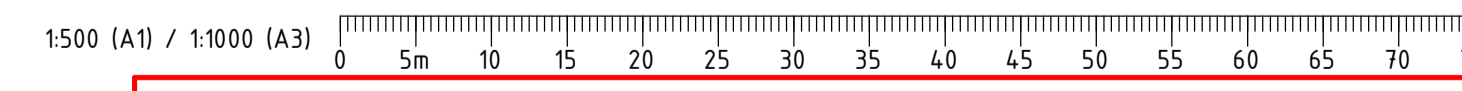
**VIADUCT 3 ELEVATION - HAMILTON STREET TO CANNINGTON STATION**  
SCALE 1 : 500

**NOTES:**

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
2. ALL LEVELS & CHAINAGES ARE IN METERS.
3. REFER TO RAIL TRACK DRAWINGS FOR RAIL ALIGNMENT DETAILS.
4. REFER TO STATION ARCHITECTURE DRAWINGS FOR PLATFORM DETAILS.
5. REFER TO CIVIL DRAWINGS FOR PROPOSED ROAD LAYOUTS & BUS FACILITY DETAILS.
6. ALL SPANS ARE MEASURED ALONG THE UP MAIN CONTROL LINE.

**LEGEND:**

- VIADUCT
- STATION PLATFORM
- RAIL ALIGNMENT
- RAIL RESERVE BOUNDARY



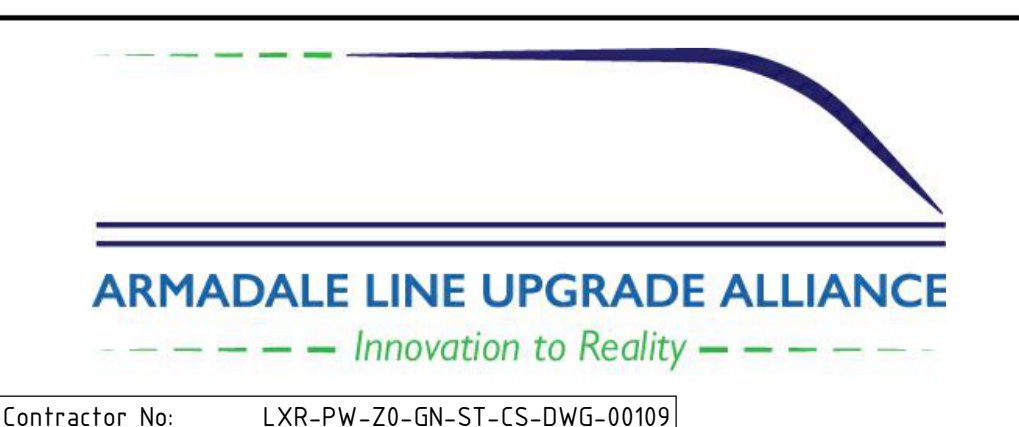
**REFERENCE DESIGN**

Government of Western Australia  
Public Transport Authority

VICTORIA PARK TO CANNING  
LEVEL CROSSING REMOVAL

**ZONE 0 - CIVIL STRUCTURES**  
PROJECT WIDE - VIADUCT  
PLAN AND ELEVATION - SHEET 9  
PTA Drawing No: **04-S-169-0017**

REV	DATE	ISSUED FOR REFERENCE DESIGN	CC	LR	RP	WS	DSN	DRN	CHK	APP
A	21.06.22									
ORIG SIZE		AMENDMENT		This document must not be copied without PTA's written permission, and the contents thereof must not be imparted to a third party nor be used for any unauthorised purpose.						
A1		AT ORIGINAL PLOT SIZE		Contractor No: LXR-PW-Z0-GN-ST-CS-M30-0001rvt						



VALIDATION

SIGNATURE

DATE

DATE APPROVED

REFERENCES

SCALE

As indicated

DATUM

HORIZONTAL: PCG20

VERTICAL: AHD71

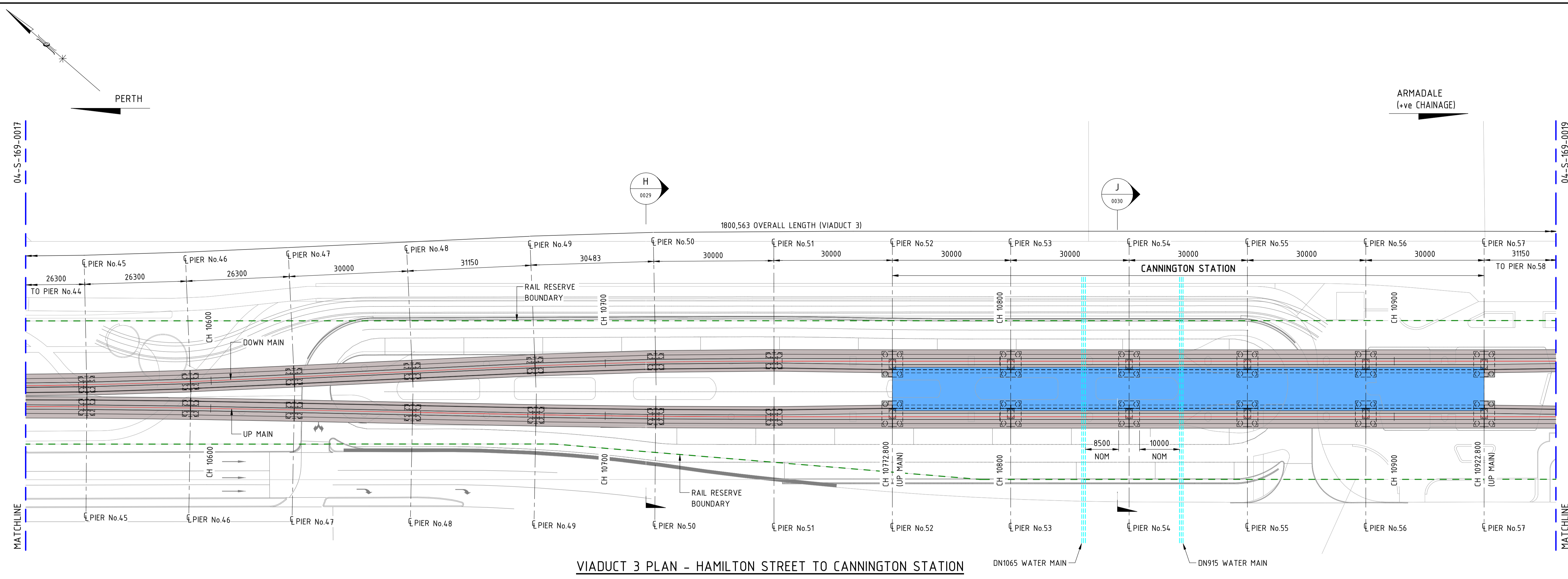
DESIGNED C.CHANG

DRAWN L.RADICI

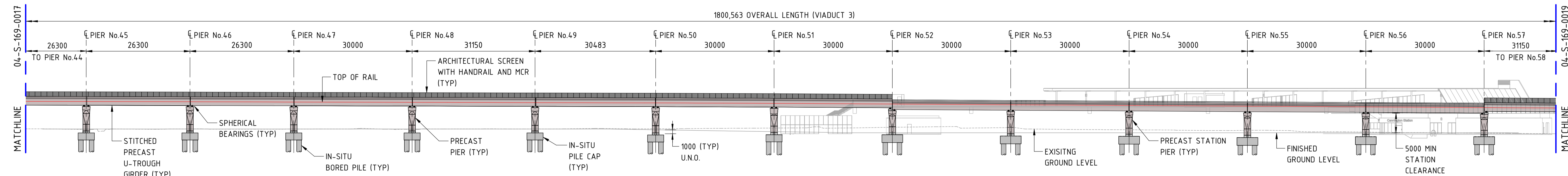
CHECKED R.PEYILA

APPROVED W.SCHWARZ

DATE 21.06.2022



VIADUCT 3 PLAN - HAMILTON STREET TO CANNINGTON STATION  
SCALE 1 : 500



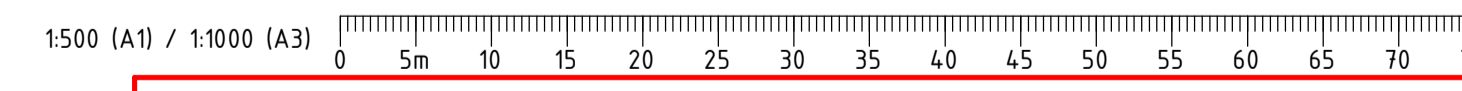
VIADUCT 3 ELEVATION - HAMILTON STREET TO CANNINGTON STATION  
SCALE 1 : 500

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
2. ALL LEVELS & CHAINAGES ARE IN METERS.
3. REFER TO RAIL TRACK DRAWINGS FOR RAIL ALIGNMENT DETAILS.
4. REFER TO STATION ARCHITECTURE DRAWINGS FOR PLATFORM DETAILS.
5. REFER TO CIVIL DRAWINGS FOR PROPOSED ROAD LAYOUTS & BUS FACILITY DETAILS.
6. ALL SPANS ARE MEASURED ALONG THE UP MAIN CONTROL LINE.

LEGEND:

- VIADUCT
- STATION PLATFORM
- RAIL ALIGNMENT
- RAIL RESERVE BOUNDARY



**REFERENCE DESIGN**

Government of Western Australia  
Public Transport Authority

VICTORIA PARK TO CANNING  
LEVEL CROSSING REMOVAL

ZONE 0 - CIVIL STRUCTURES  
PROJECT WIDE - VIADUCT  
PLAN AND ELEVATION - SHEET 10  
PTA Drawing No: 04-S-169-0018

REV	DATE	ISSUED FOR REFERENCE DESIGN	CC	LR	RP	WS	DSN	DRN	CHK	APP
A	21.06.22									
ORIG SIZE		AMENDMENT		This document must not be copied without PTA's written permission, and the contents thereof must not be imparted to a third party nor be used for any unauthorised purpose.						
A1		AT ORIGINAL PLOT SIZE		Contractor No: LXR-PW-Z0-GN-ST-CS-DWG-00110						

ARMADALE LINE UPGRADE ALLIANCE  
Innovation to Reality

VALIDATION

SIGNATURE

DATE APPROVED

REFERENCES

SCALE

As indicated

DATUM

HORIZONTAL: PCG20  
VERTICAL: AHD71

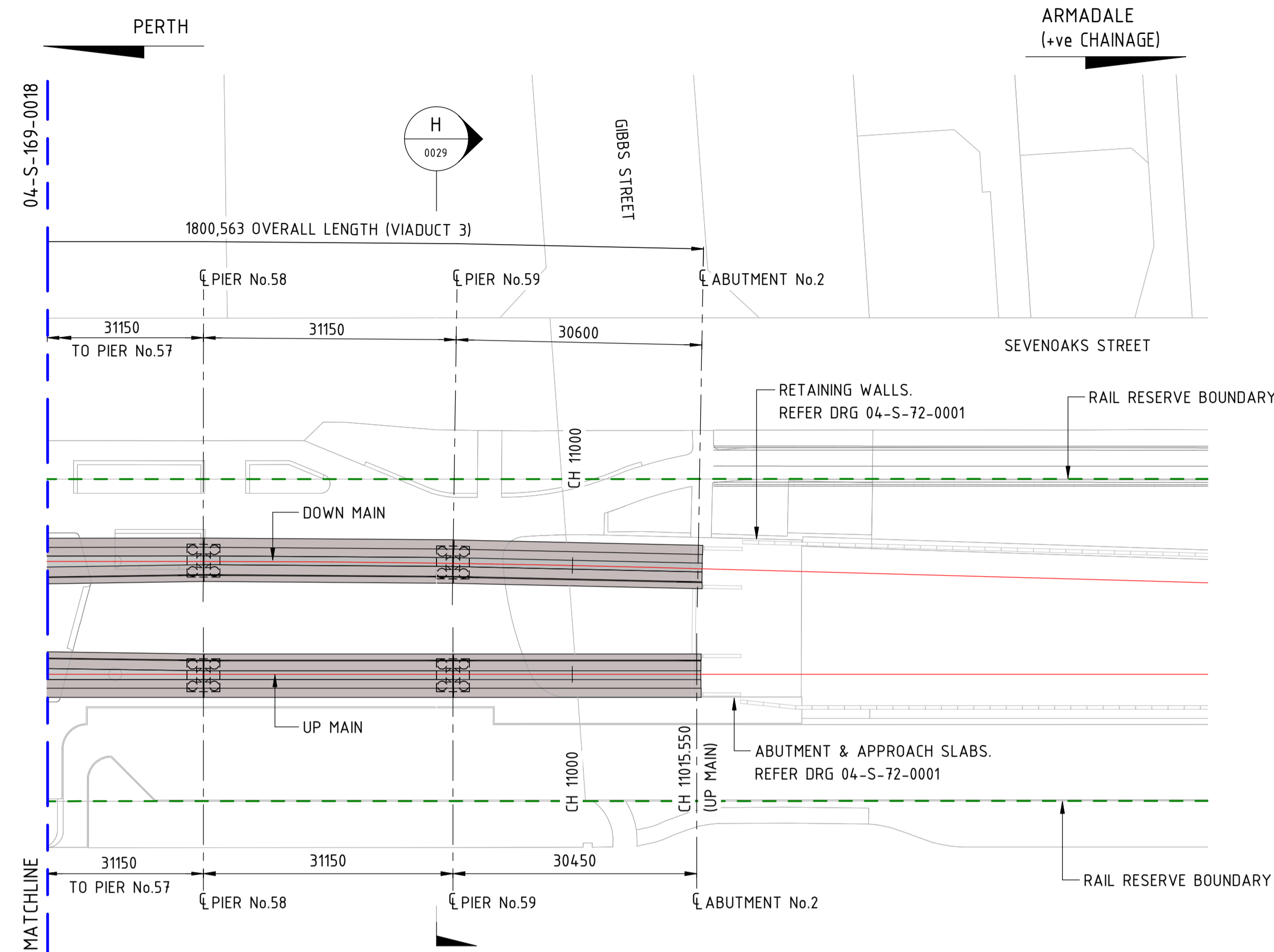
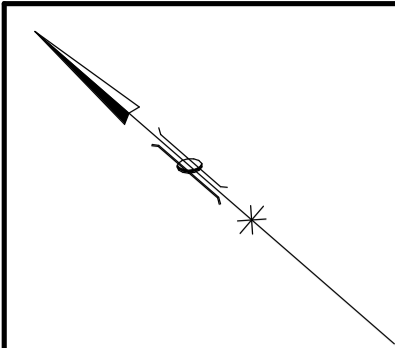
DESIGNED C.CHANG

DRAWN L.RADICI

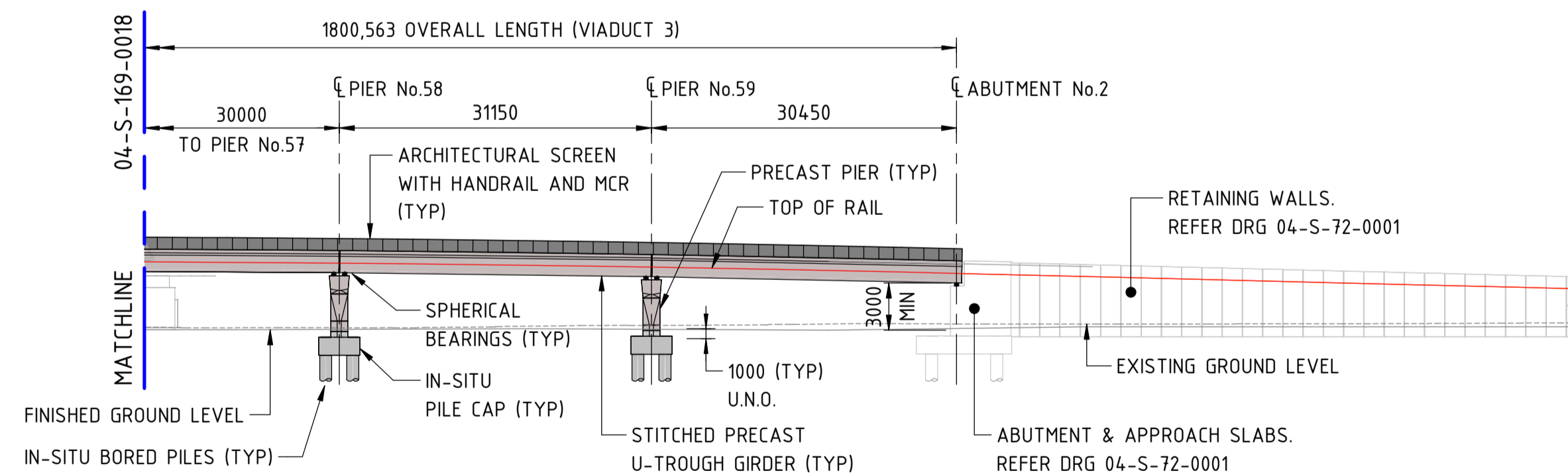
CHECKED R.PEYILA

APPROVED W.SCHWARZ

DATE 21.06.2022



**VIADUCT 3 PLAN - HAMILTON STREET TO CANNINGTON STATION**  
SCALE 1 : 500



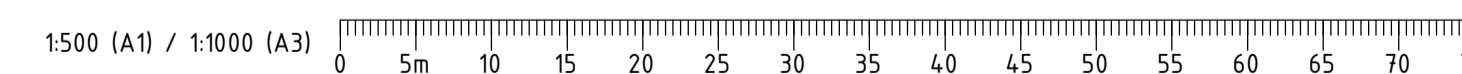
**VIADUCT 3 ELEVATION - HAMILTON STREET TO CANNINGTON STATION**  
SCALE 1 : 500

**NOTES:**

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
2. ALL LEVELS & CHAINAGES ARE IN METERS.
3. REFER TO RAIL TRACK DRAWINGS FOR RAIL ALIGNMENT DETAILS.
4. REFER TO STATION ARCHITECTURE DRAWINGS FOR PLATFORM DETAILS.
5. REFER TO CIVIL DRAWINGS FOR PROPOSED ROAD LAYOUTS & BUS FACILITY DETAILS.
6. ALL SPANS ARE MEASURED ALONG THE UP MAIN CONTROL LINE.

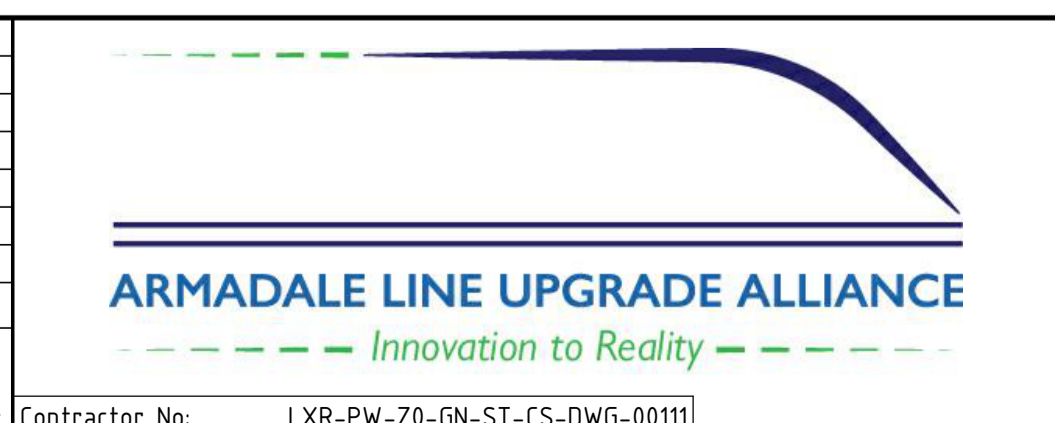
**LEGEND:**

- VIADUCT
- STATION PLATFORM
- RAIL ALIGNMENT
- RAIL RESERVE BOUNDARY



**REFERENCE DESIGN**

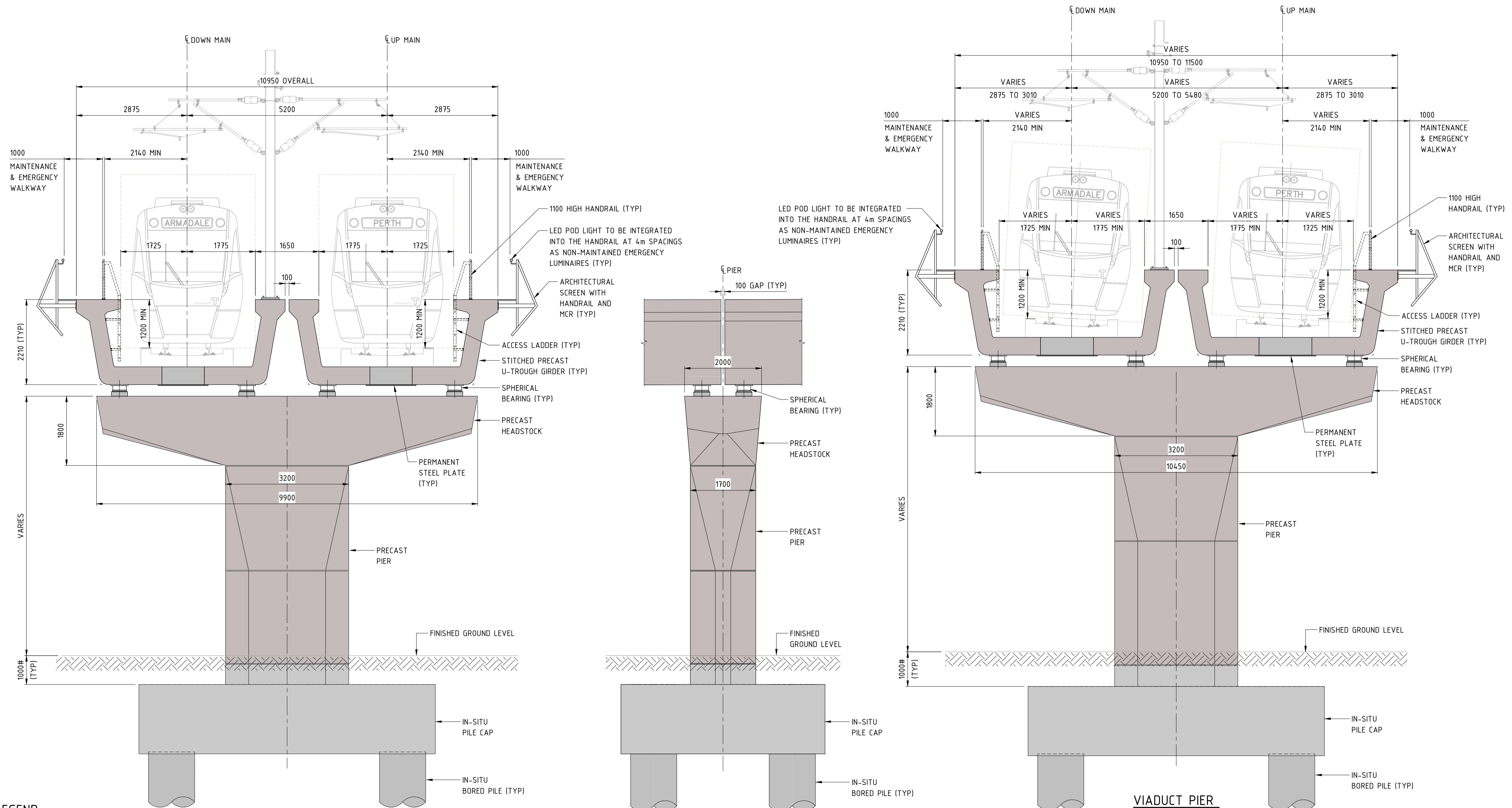
REV	DATE	ISSUED FOR REFERENCE DESIGN	CC	LR	RP	WS
AMENDMENT		DSN	DRN	CHK	APP	
ORIG SIZE	AT ORIGINAL PLOT SIZE		This document must not be copied without PTA's written permission, and the contents thereof must not be imparted to a third party nor be used for any unauthorised purpose.			
A1	0 10 20 30 40 50 100mm		Contractor No: LXR-PW-Z0-GN-ST-CS-DWG-00111			



VALIDATION	REFERENCES
SIGNATURE	
DATE	
DATE APPROVED	

SCALE	DESIGNED C.CHANG
As indicated	DRAWN L.RADICI
DATUM	CHECKED R.PEYILA
HORIZONTAL: PCG20	APPROVED W.SCHWARZ
VERTICAL: AHD71	DATE 21.06.2022

		VICTORIA PARK TO CANNING LEVEL CROSSING REMOVAL
<b>ZONE 0 - CIVIL STRUCTURES</b> PROJECT WIDE - VIADUCT PLAN AND ELEVATION - SHEET 11 PTA Drawing No: <b>04-S-169-0019</b>		
		Rev: <b>A</b>



**LEGEND:**  
 ■ PRECAST CONCRETE  
 ■ IN-SITU CONCRETE  
 # 2500 AT ROAD CROSSINGS

**VIADUCT PIER SECTION A**  
 SCALE 1 : 50  
 0010, 0011, 0012, 0014, 0015, 0016 & 0017

**PIER ELEVATION**  
 SCALE 1 : 50

**VIADUCT PIER ON CURVED ALIGNMENT SECTION B**  
 SCALE 1 : 50  
 0010

- NOTES:**
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
  2. ALL LEVELS & CHAINAGES ARE IN METERS.
  3. REFER TO RAIL TRACK DRAWINGS FOR RAIL ALIGNMENT DETAILS.
  4. REFER TO STATION ARCHITECTURE DRAWINGS FOR PLATFORM DETAILS.
  5. REFER TO CIVIL DRAWINGS FOR PROPOSED ROAD LAYOUTS & BUS FACILITY DETAILS.
  6. ALL SPANS ARE MEASURED ALONG THE UP MAIN CONTROL LINE.

1:50 (A1) / 1:100 (A3) 0 500mm 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 6000 6500 7000 7500

**REFERENCE DESIGN**

REV	DATE	ISSUED FOR REFERENCE DESIGN	CC	LR	RP	WS
A	21.06.22					
AMENDMENT	DSN	DRN	CHK	APP		
ORIG SIZE	0 10 20 30 40 50 100mm		This document must not be copied without PTA's written permission, and the contents thereof must not be imparted to a third party nor be used for any unauthorised purpose.			
A1	AT ORIGINAL PLOT SIZE		Contractor No: LXR-PW-Z0-GN-ST-CS-DWG-00121			



VALIDATION  
 SIGNATURE  
 DATE  
 DATE APPROVED

REFERENCES

SCALE

As indicated

DATUM

HORIZONTAL: PCG20  
 VERTICAL: AHD71

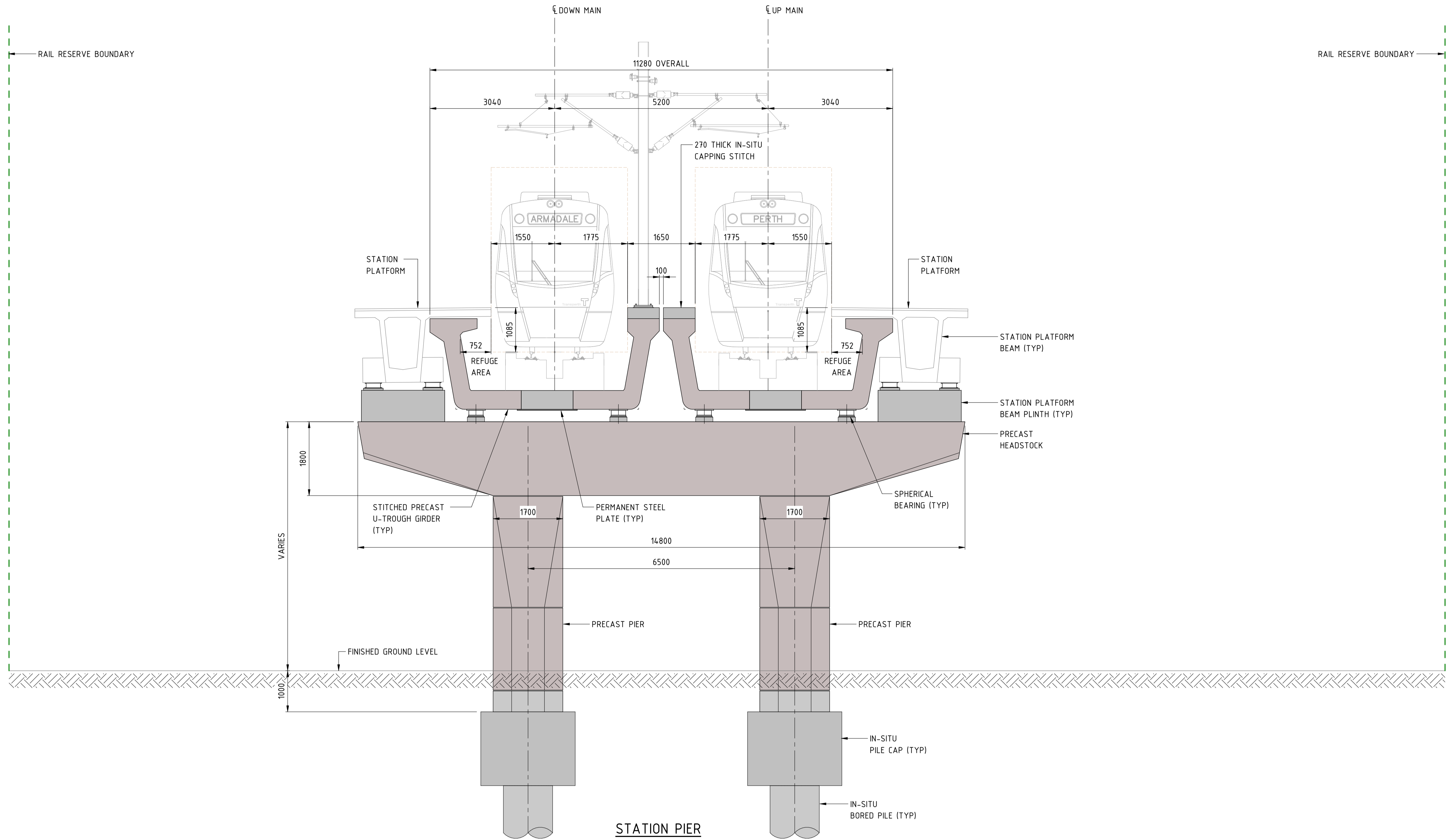
DESIGNED C.CHANG  
 DRAWN L.RADICI  
 CHECKED R.PEYILA  
 APPROVED W.SCHWARZ  
 DATE 21.06.2022

Government of Western Australia  
 Public Transport Authority

VICTORIA PARK TO CANNING  
 LEVEL CROSSING REMOVAL

ZONE 0 - CIVIL STRUCTURES  
 PROJECT WIDE - VIADUCT  
 SECTIONS - SHEET 1  
 PTA Drawing No: 04-S-169-0024

Rev: A



**LEGEND:**

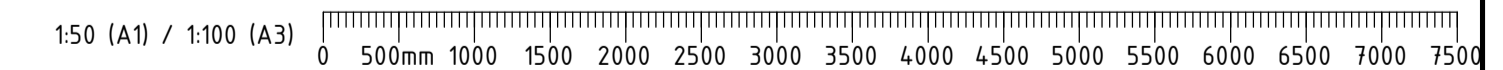
- PRECAST CONCRETE
- IN-SITU CONCRETE

**NOTES:**

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
2. ALL LEVELS & CHAINAGES ARE IN METERS.
3. REFER TO RAIL TRACK DRAWINGS FOR RAIL ALIGNMENT DETAILS.
4. REFER TO STATION ARCHITECTURE DRAWINGS FOR PLATFORM DETAILS.
5. REFER TO CIVIL DRAWINGS FOR PROPOSED ROAD LAYOUTS & BUS FACILITY DETAILS.
6. ALL SPANS ARE MEASURED ALONG THE UP MAIN CONTROL LINE.

**STATION PIER  
QUEENS PARK STATION**

SECTION G  
SCALE 1 : 50



**REFERENCE DESIGN**

REV	DATE	AMENDMENT	CC	LR	RP	WS
A	21.06.22	ISSUED FOR REFERENCE DESIGN				
ORIG SIZE			DSN	DRN	CHK	APP
A1						

**ARMADALE LINE UPGRADE ALLIANCE**  
*Innovation to Reality*

Contractor No: LXR-PW-Z0-GN-ST-CS-M30-00001.rvt

VALIDATION
SIGNATURE
DATE
DATE APPROVED

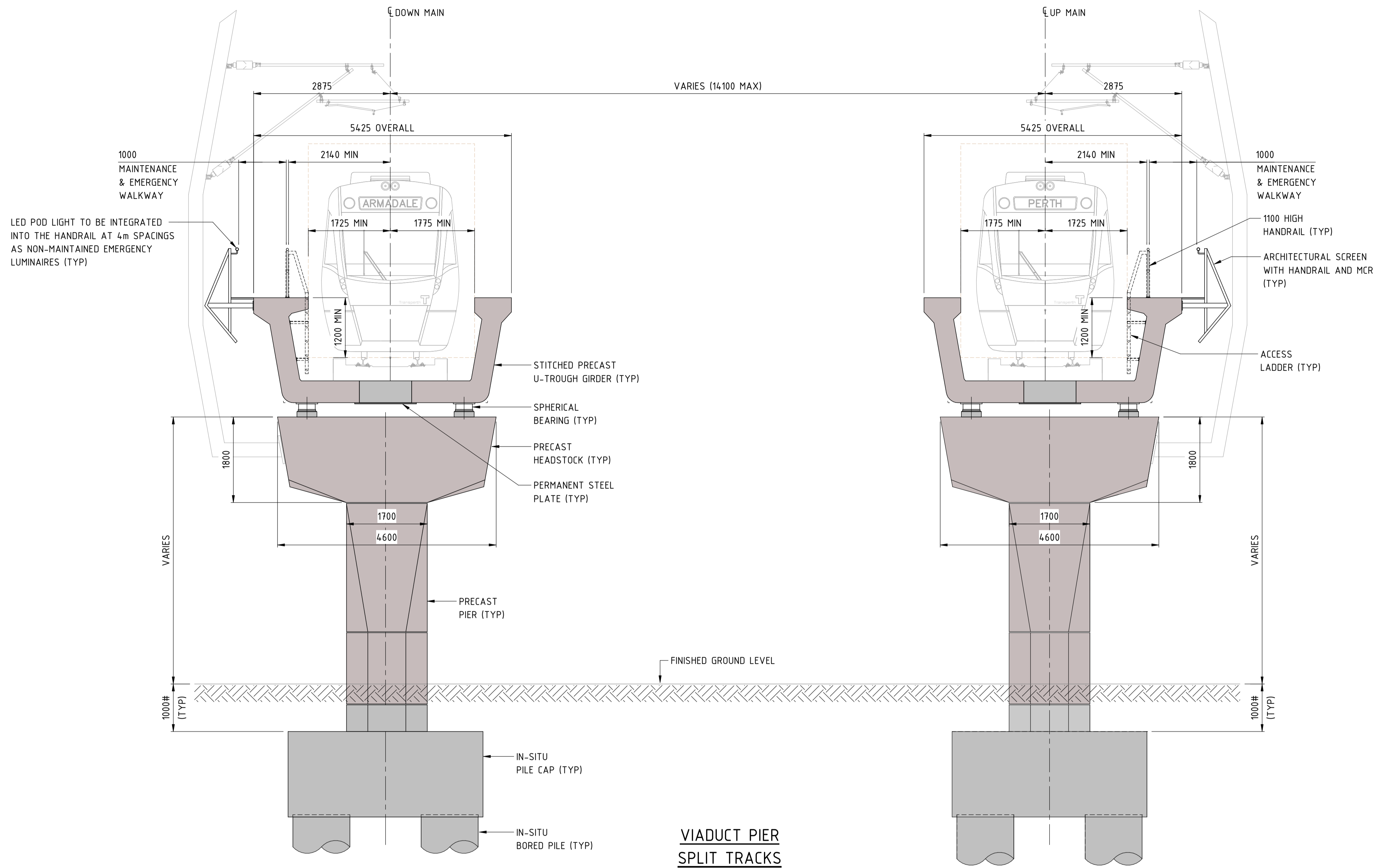
REFERENCES
SCALE
As indicated
DATUM
HORIZONTAL: PCG20
VERTICAL: AHD71

DESIGNED	C.CHANG
DRAWN	L.RADICI
CHECKED	R.PEYILA
APPROVED	W.SCHWARZ
DATE	21.06.2022

VICTORIA PARK TO CANNING  
LEVEL CROSSING REMOVAL

**ZONE 0 - CIVIL STRUCTURES**  
PROJECT WIDE - VIADUCT  
SECTIONS - SHEET 5

PTA Drawing No: **04-S-169-0028**    Rev: **A**

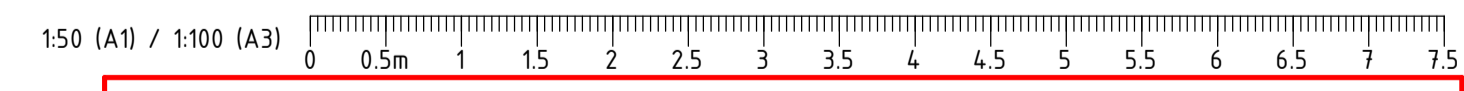


**VIADUCT PIER  
SPLIT TRACKS**

SECTION **H**  
SCALE 1 : 50

- LEGEND:**
- PRECAST CONCRETE
  - IN-SITU CONCRETE
  - # 2500 AT ROAD CROSSINGS

- NOTES:**
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
  2. ALL LEVELS & CHAINAGES ARE IN METERS.
  3. REFER TO RAIL TRACK DRAWINGS FOR RAIL ALIGNMENT DETAILS.
  4. REFER TO STATION ARCHITECTURE DRAWINGS FOR PLATFORM DETAILS.
  5. REFER TO CIVIL DRAWINGS FOR PROPOSED ROAD LAYOUTS & BUS FACILITY DETAILS.
  6. ALL SPANS ARE MEASURED ALONG THE UP MAIN CONTROL LINE.



**REFERENCE DESIGN**

	<b>VICTORIA PARK TO CANNING LEVEL CROSSING REMOVAL</b>
<b>ZONE 0 - CIVIL STRUCTURES PROJECT WIDE - VIADUCT SECTIONS - SHEET 6</b>	
PTA Drawing No: <b>04-S-169-0029</b>	Rev: <b>A</b>

REV	DATE	ISSUED FOR REFERENCE DESIGN	CC	LR	RP	WS
A	21.06.22	ISSUED FOR REFERENCE DESIGN				
AMENDMENT			DSN	DRN	CHK	APP
ORIG SIZE	AT ORIGINAL PLOT SIZE					

Contractor No: LXR-PW-Z0-GN-ST-CS-DWG-00126

VALIDATION

SIGNATURE

DATE

DATE APPROVED

REFERENCES

SCALE

As indicated

DATUM

HORIZONTAL: PCG20

VERTICAL: AHD71

DESIGNED C.CHANG

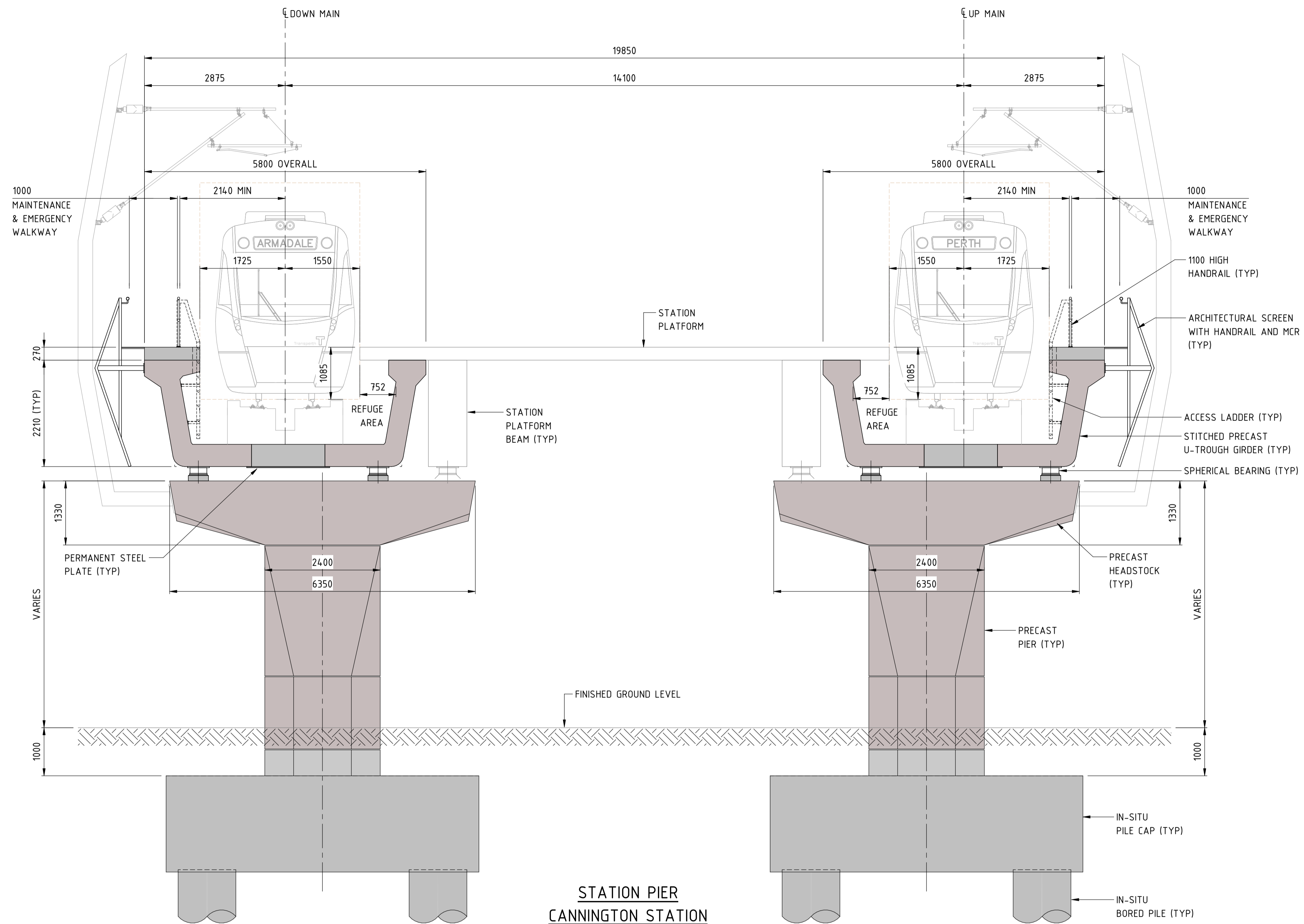
DRAWN L.RADICI

CHECKED R.PEYIYA

APPROVED W.SCHWARZ

DATE 21.06.2022





STATION PIER  
CANNINGTON STATION

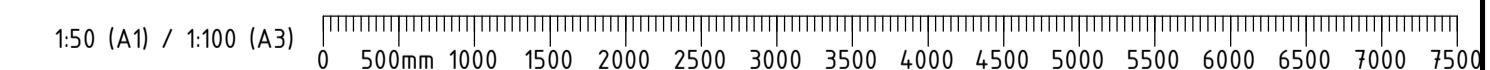
SECTION J  
SCALE 1 : 50

LEGEND:

- PRECAST CONCRETE
- IN-SITU CONCRETE

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
2. ALL LEVELS & CHAINAGES ARE IN METERS.
3. REFER TO RAIL TRACK DRAWINGS FOR RAIL ALIGNMENT DETAILS.
4. REFER TO STATION ARCHITECTURE DRAWINGS FOR PLATFORM DETAILS.
5. REFER TO CIVIL DRAWINGS FOR PROPOSED ROAD LAYOUTS & BUS FACILITY DETAILS.
6. ALL SPANS ARE MEASURED ALONG THE UP MAIN CONTROL LINE.



**REFERENCE DESIGN**

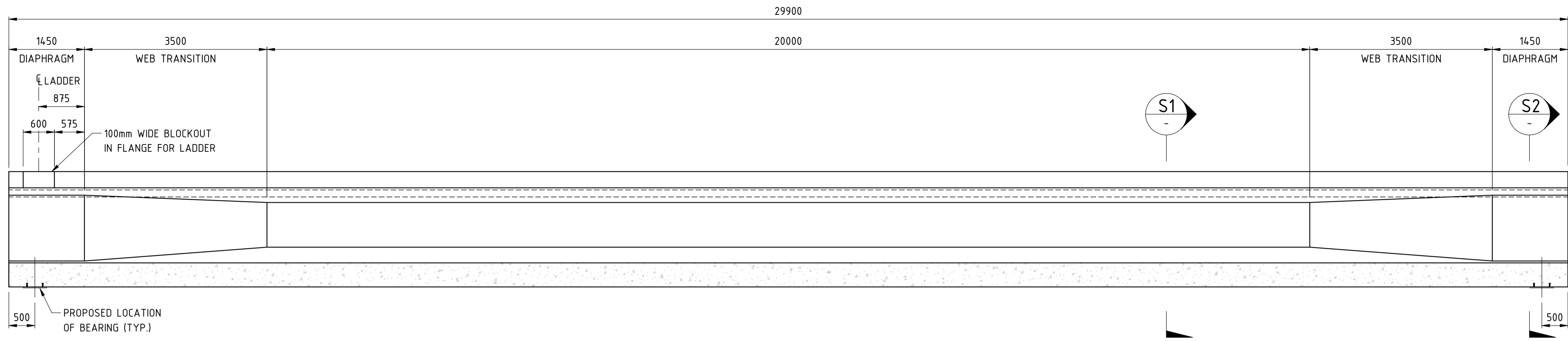
REV	DATE	AMENDMENT	CC	LR	RP	WS
A	21.06.22	ISSUED FOR REFERENCE DESIGN				
ORIG SIZE			DSN	DRN	CHK	APP
A1						

Contractor No: LXR-PW-Z0-GN-ST-CS-DWG-00127

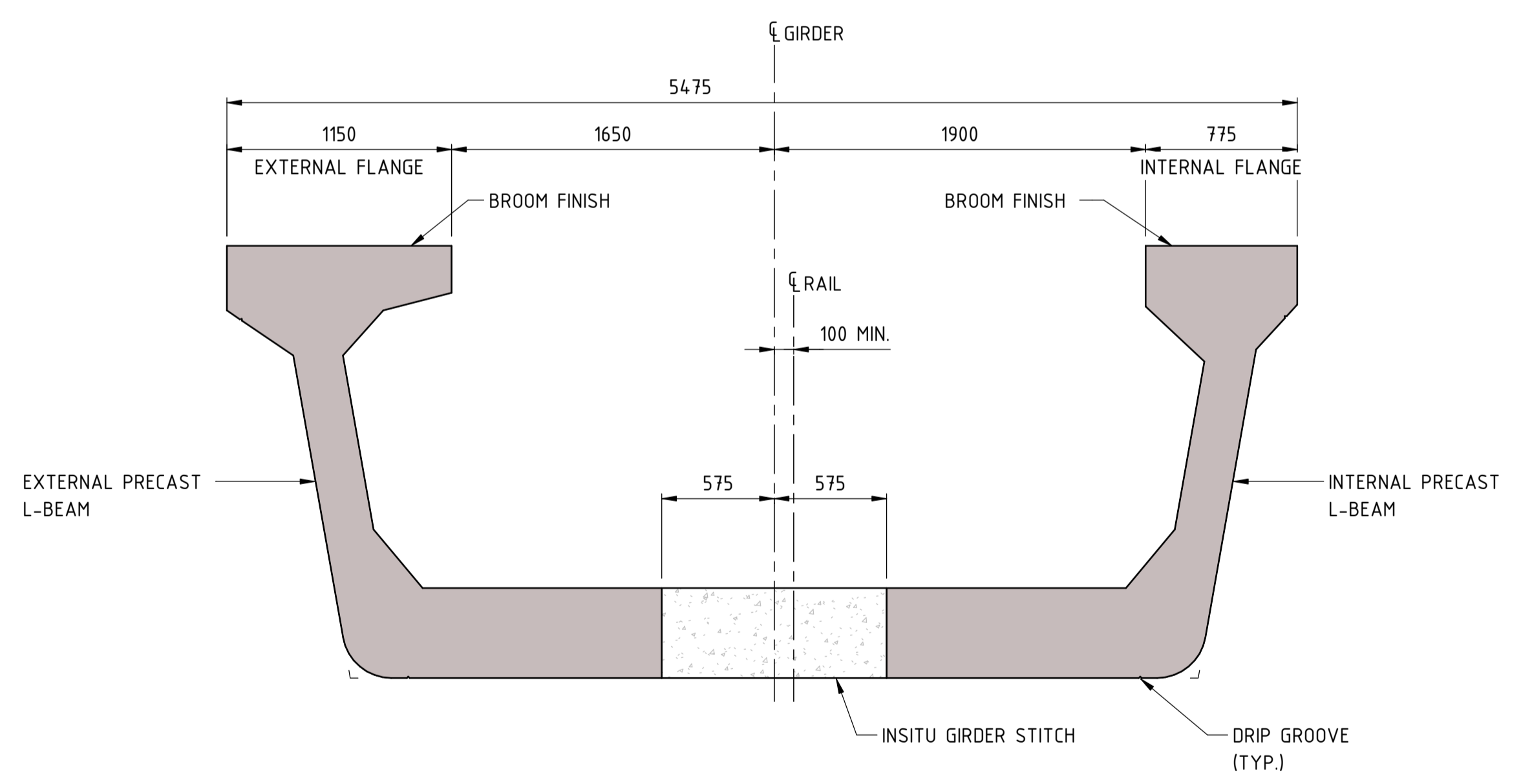
VALIDATION	REFERENCES
SIGNATURE	
DATE	
DATE APPROVED	

SCALE	DESIGNED
As indicated	C.CHANG
DATUM	DRAWN
HORIZONTAL: PCG20	L.RADICI
VERTICAL: AHD71	CHECKED
	R.PEYILA
	APPROVED
	W.SCHWARZ
	DATE
	21.06.2022

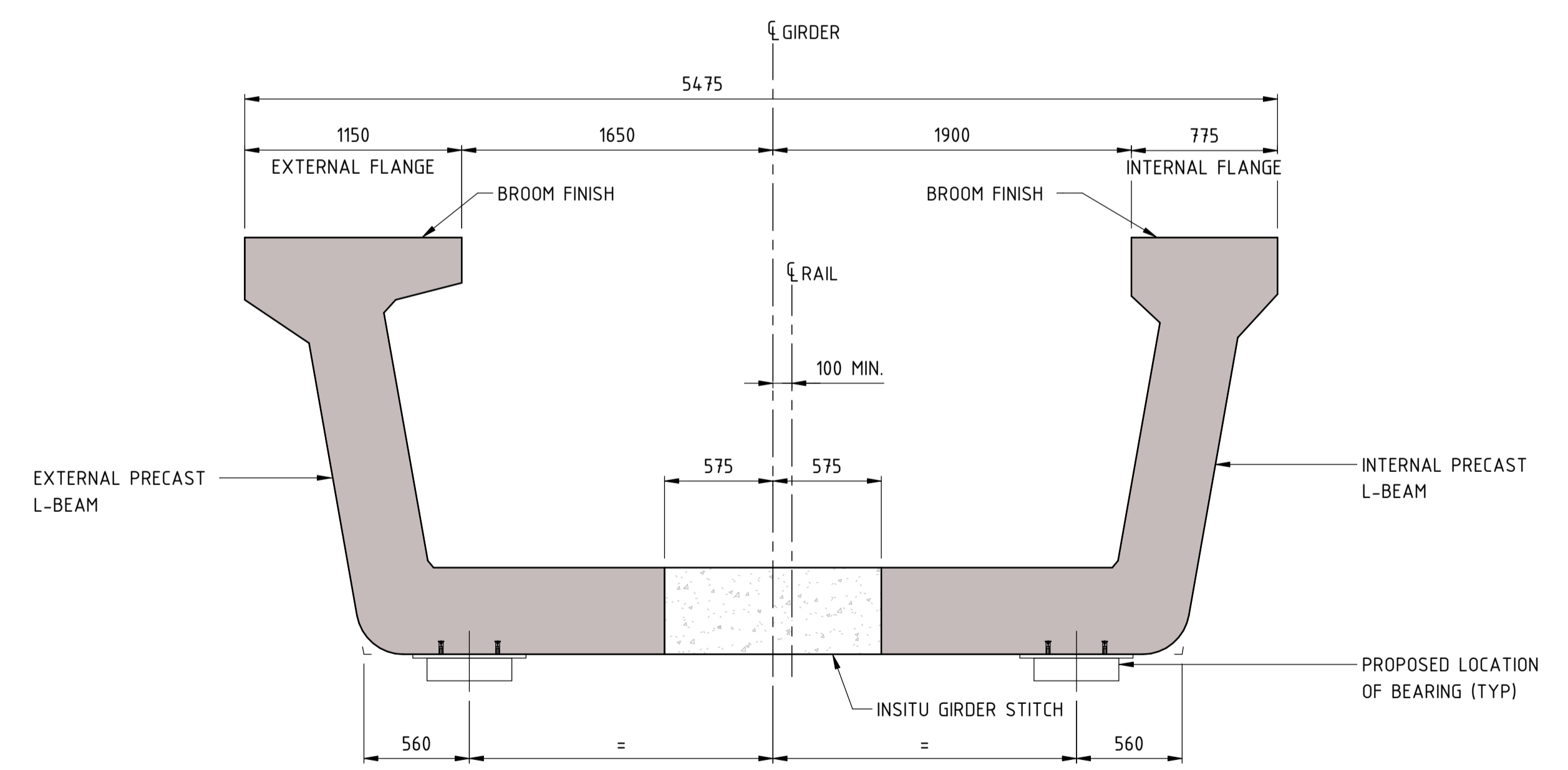
		VICTORIA PARK TO CANNING LEVEL CROSSING REMOVAL
<b>ZONE 0 - CIVIL STRUCTURES</b> <b>PROJECT WIDE - VIADUCT</b> <b>SECTIONS - SHEET 7</b>		
PTA Drawing No: <b>04-S-169-0030</b>		Rev: <b>A</b>



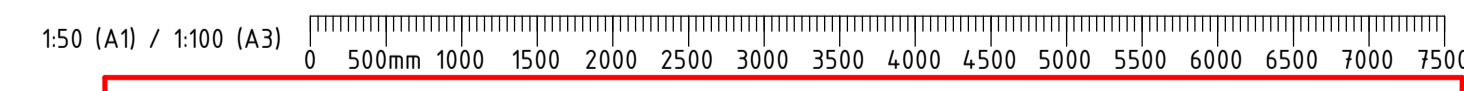
TYPICAL U-TROUGH ELEVATION - 29900  
SCALE 1 : 50



U-TROUGH AT MIDSPAN  
SECTION S1  
SCALE 1:25



U-TROUGH SECTION AT DIAPHRAGMS  
SECTION S2  
SCALE 1:25

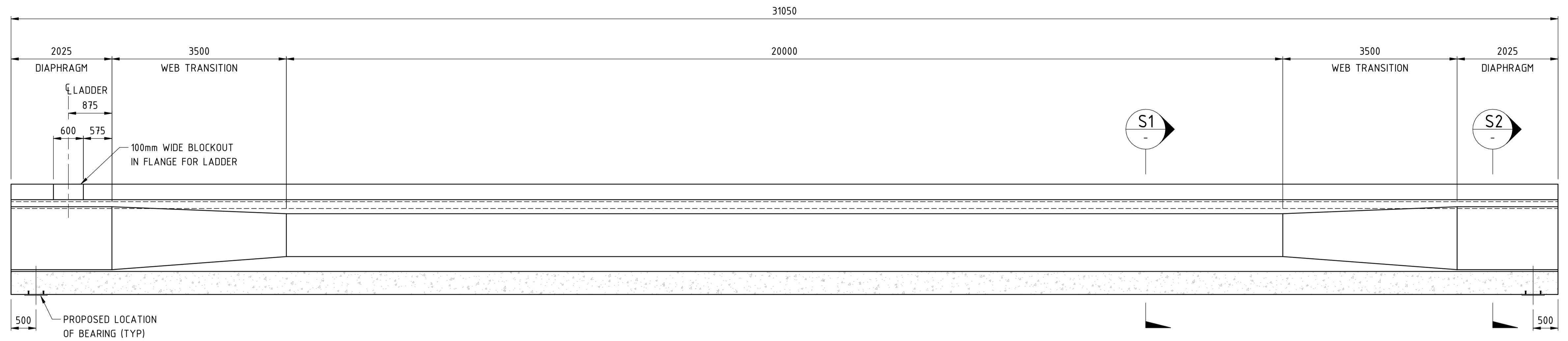


<b>FOR INFORMATION</b>	
	VICTORIA PARK TO CANNING LEVEL CROSSING REMOVAL
PROJECT WIDE - CIVIL STRUCTURES VIADUCT U-TROUGH TYPICAL SECTIONS - SHEET 1 PTA Drawing No: 00475	
DESIGNED C.CHANG DRAWN L.RADICI CHECKED R.PEYILA APPROVED W.SCHWARZ DATE 21.06.22	Rev: A01

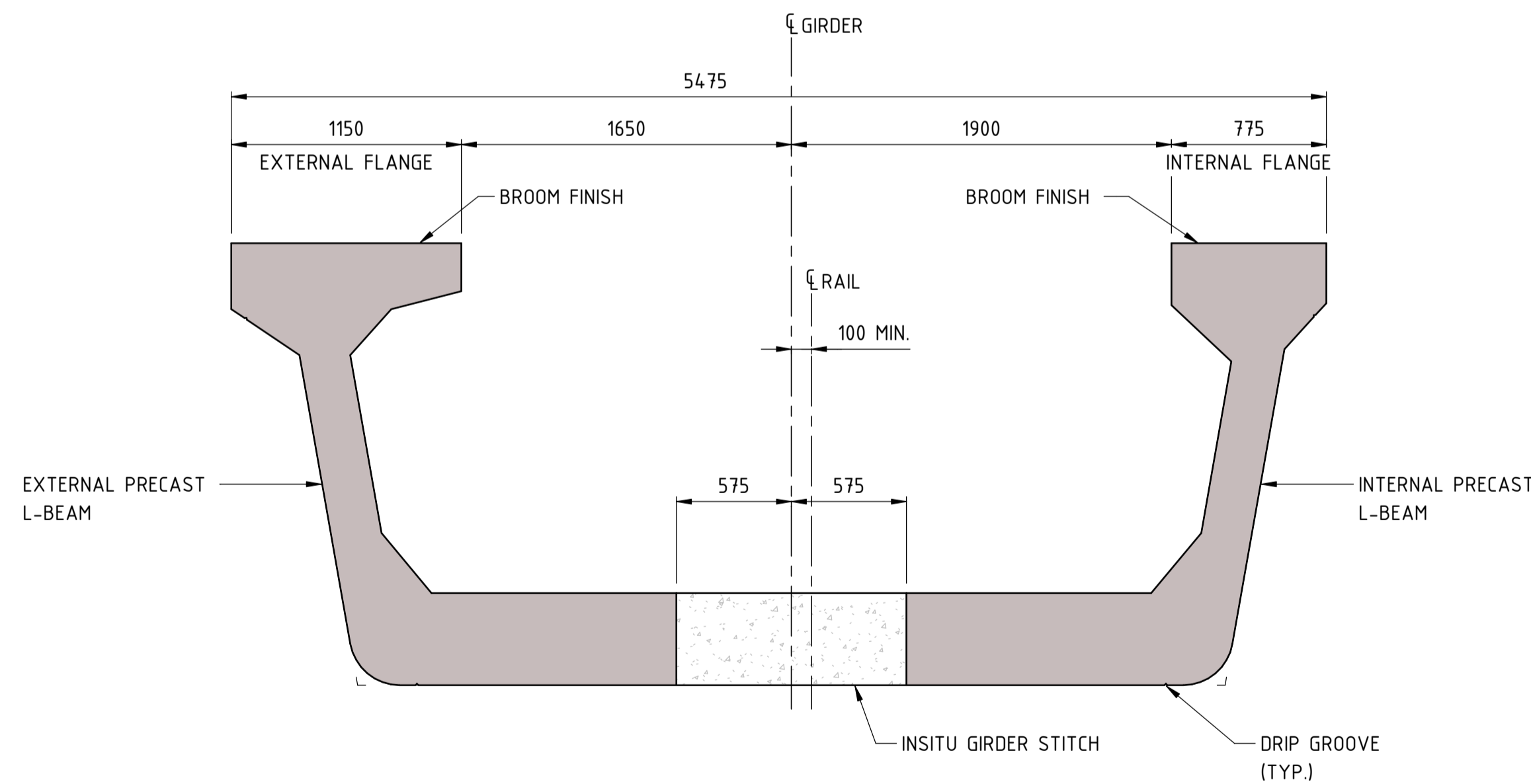
REV	DATE	ISSUED FOR INFORMATION	CC	LR	RP	WS
A01	21.06.22	ISSUED FOR INFORMATION				
AMENDMENT	DSN	DRN	CHK	APP		
ORIG SIZE			This document must not be copied without PTA's written permission, and the contents thereof must not be imparted to a third party nor be used for any unauthorised purpose.			
A1	AT ORIGINAL PLOT SIZE					

Contractor No: LXR-PW-Z0-GN-ST-CS-DWG-00475

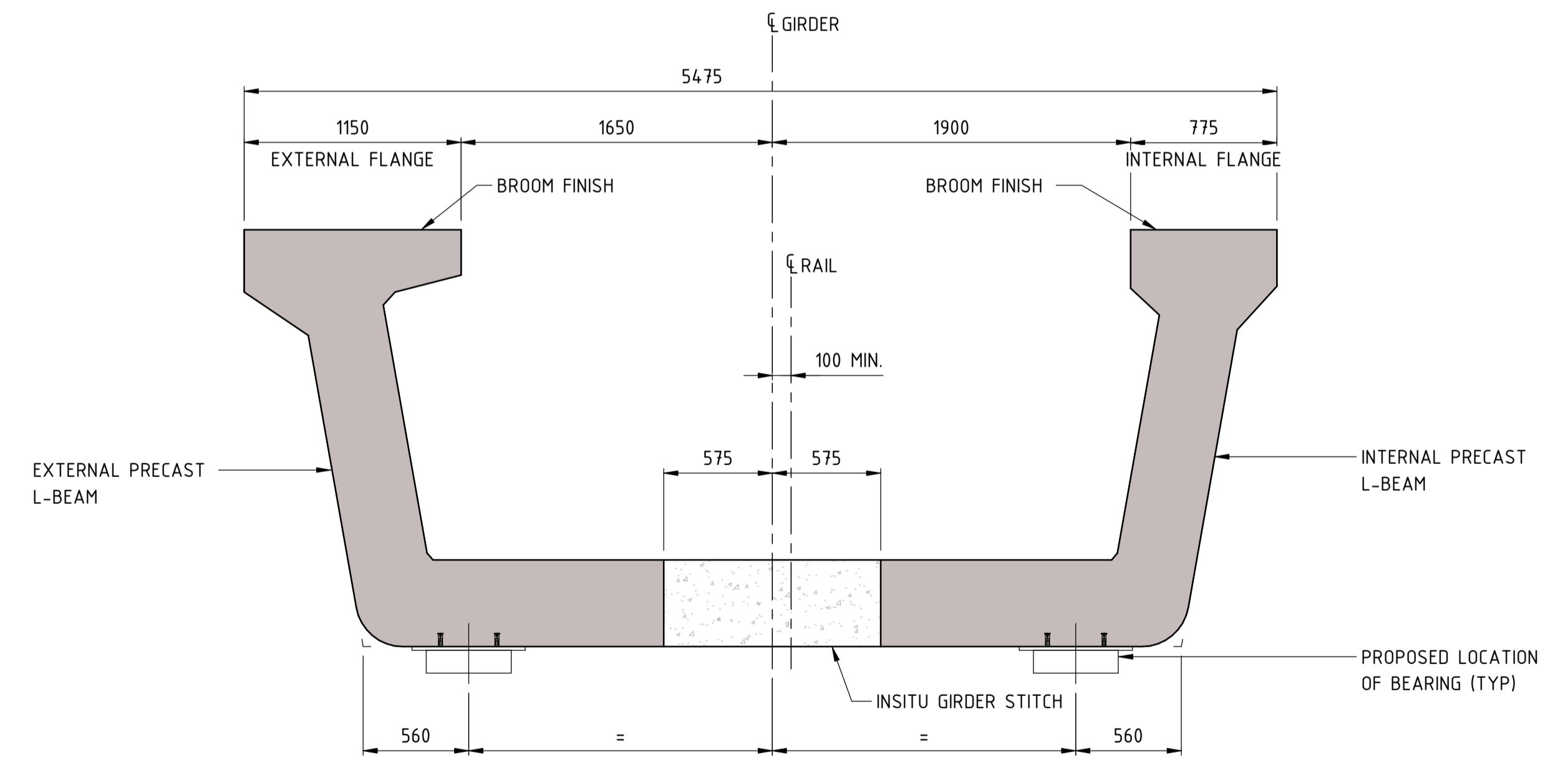
VALIDATION	REFERENCES	SCALE	DESIGNED
SIGNATURE		As indicated	C.CHANG
DATE		DATUM	DRAWN
DATE APPROVED		HORIZONTAL: PCG20	L.RADICI
		VERTICAL: AHD71	CHECKED
			R.PEYILA
			APPROVED
			W.SCHWARZ
			DATE
			21.06.22



TYPICAL U-TROUGH ELEVATION - 31050  
SCALE 1 : 50



U-TROUGH AT MIDSPAN  
SECTION S1  
SCALE 1:25



U-TROUGH SECTION AT DIAPHRAGMS  
SECTION S2  
SCALE 1:25

1:50 (A1) / 1:100 (A3) 0 500mm 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 6000 6500 7000 7500

**FOR INFORMATION**

Government of Western Australia  
Public Transport Authority

VICTORIA PARK TO CANNING  
LEVEL CROSSING REMOVAL

PROJECT WIDE - CIVIL STRUCTURES  
VIADUCT  
U-TROUGH TYPICAL SECTIONS - SHEET 2  
PTA Drawing No: 00476

DESIGNED C.CHANG  
DRAWN L.RADICI  
CHECKED R.PEYILA  
APPROVED W.SCHWARZ  
DATE 21.06.22

Rev: A01

REV	DATE	ISSUED FOR INFORMATION	AMENDMENT	CC	LR	RP	WS
DSN	DRN	CHK	APP				
A01	21.06.22	ISSUED FOR INFORMATION					
ORIG SIZE	AT ORIGINAL PLOT SIZE			This document must not be copied without PTA's written permission, and the contents thereof must not be imparted to a third party nor be used for any unauthorised purpose.			
A1				Contractor No: LXR-PW-Z0-GN-ST-CS-DWG-00476			

ARMADALE LINE UPGRADE ALLIANCE  
Innovation to Reality

VALIDATION

SIGNATURE

DATE

DATE APPROVED

REFERENCES

SCALE

As indicated

DATUM

HORIZONTAL: PCG20

VERTICAL: AHD71

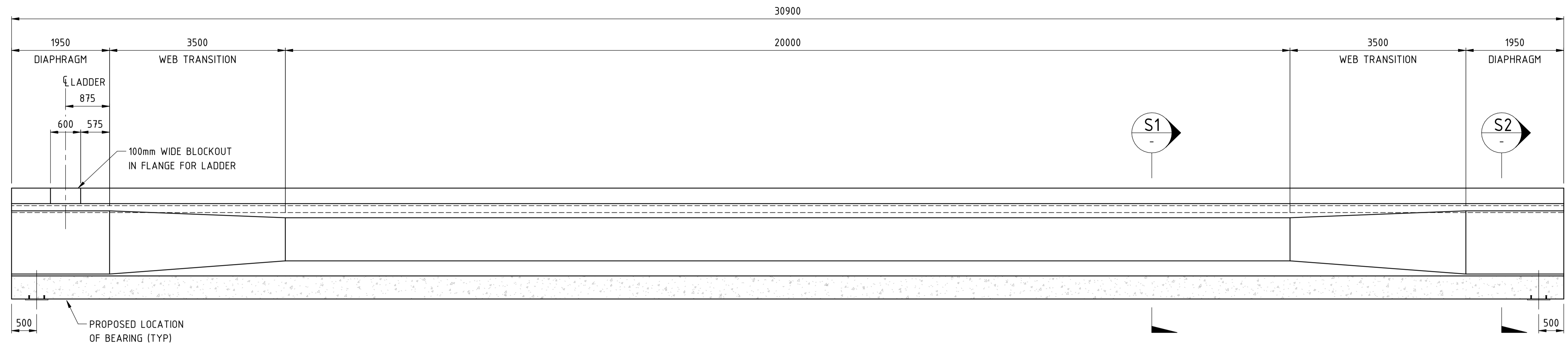
DESIGNED C.CHANG

DRAWN L.RADICI

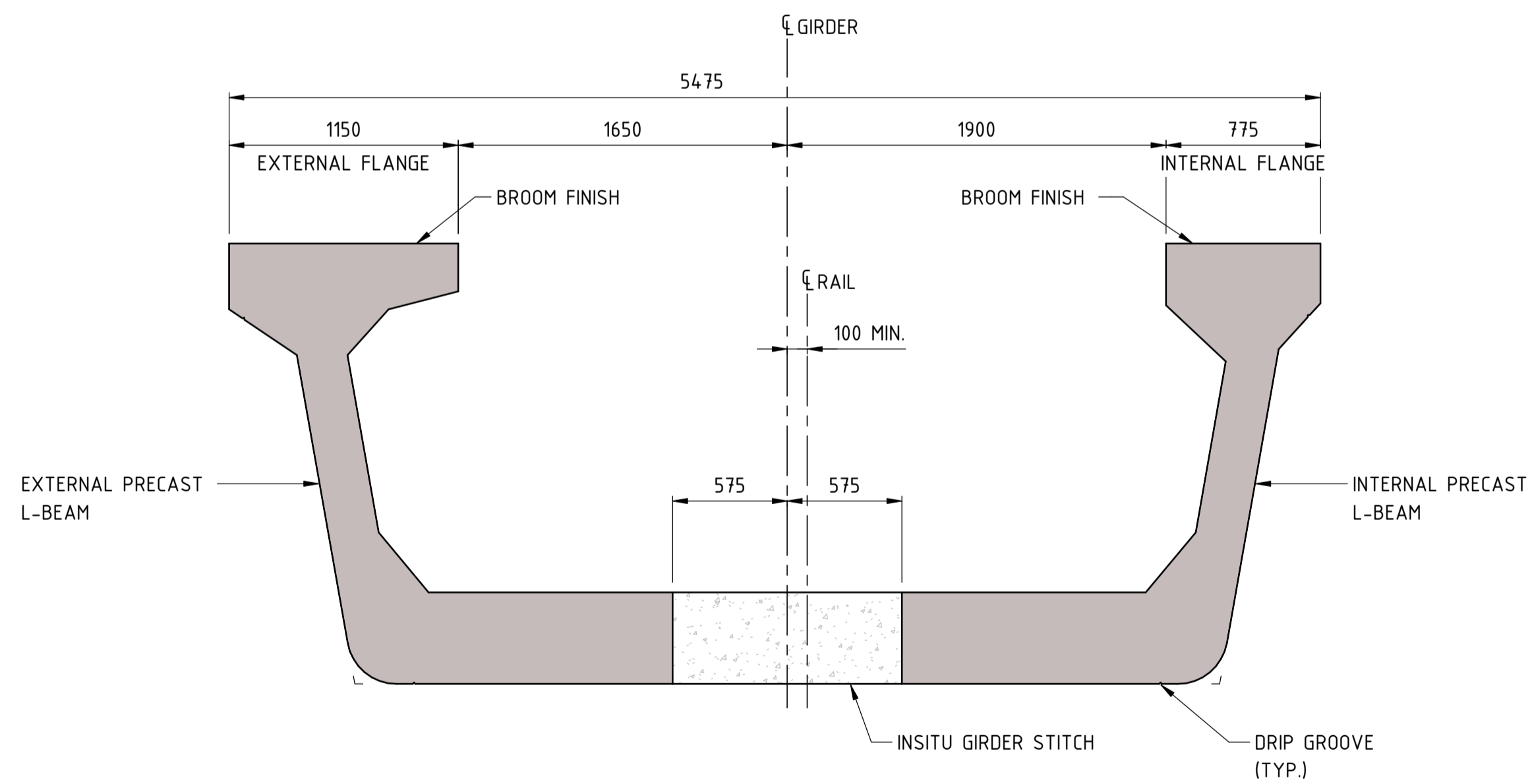
CHECKED R.PEYILA

APPROVED W.SCHWARZ

DATE 21.06.22

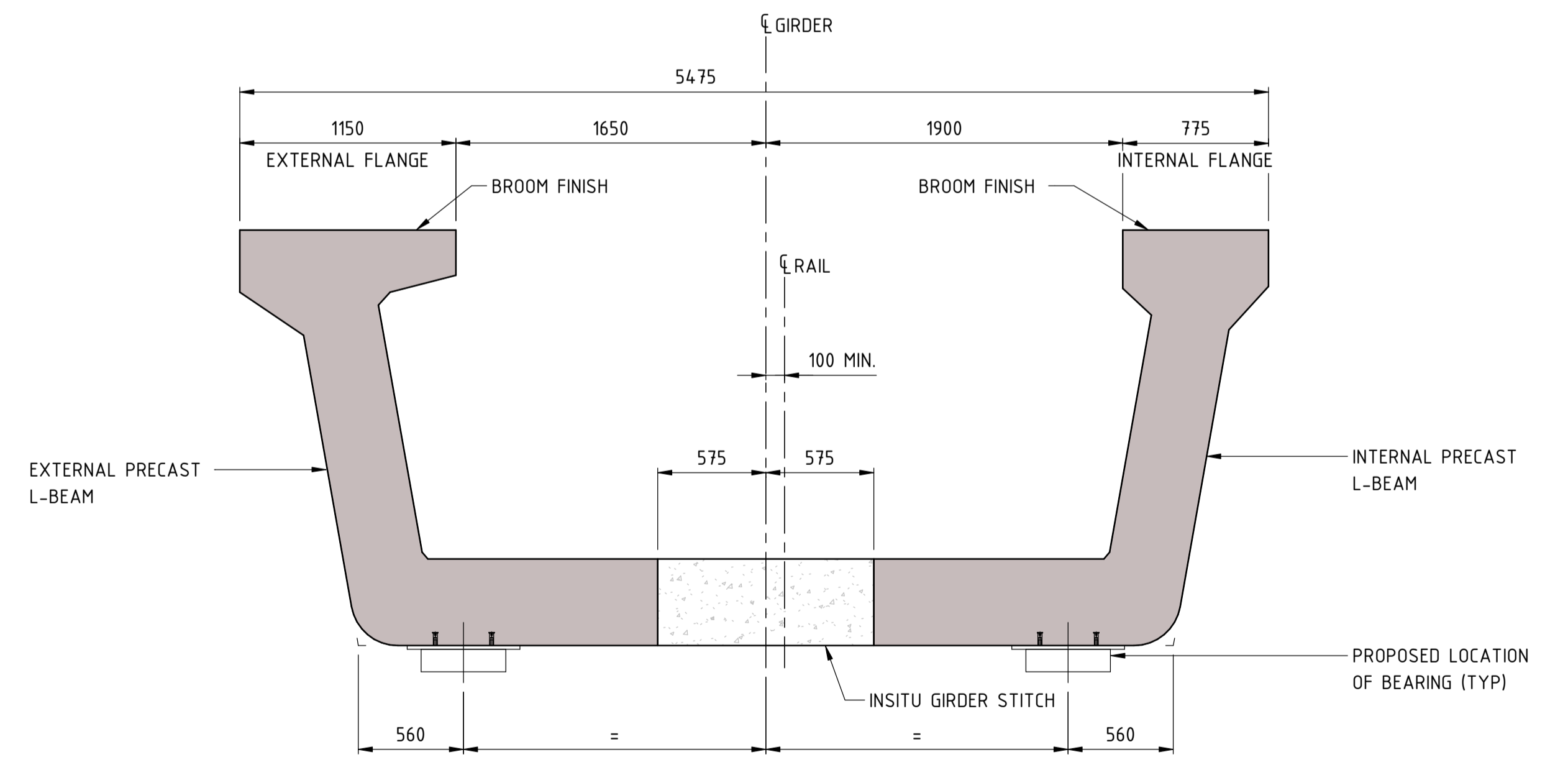


TYPICAL U-TROUGH ELEVATION - 30900  
SCALE 1 : 50



U-TROUGH AT MIDSPAN

SECTION S1  
SCALE 1:25



U-TROUGH SECTION AT DIAPHRAGMS

SECTION S2  
SCALE 1:25

1:50 (A1) / 1:100 (A3) 0 500mm 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 6000 6500 7000 7500

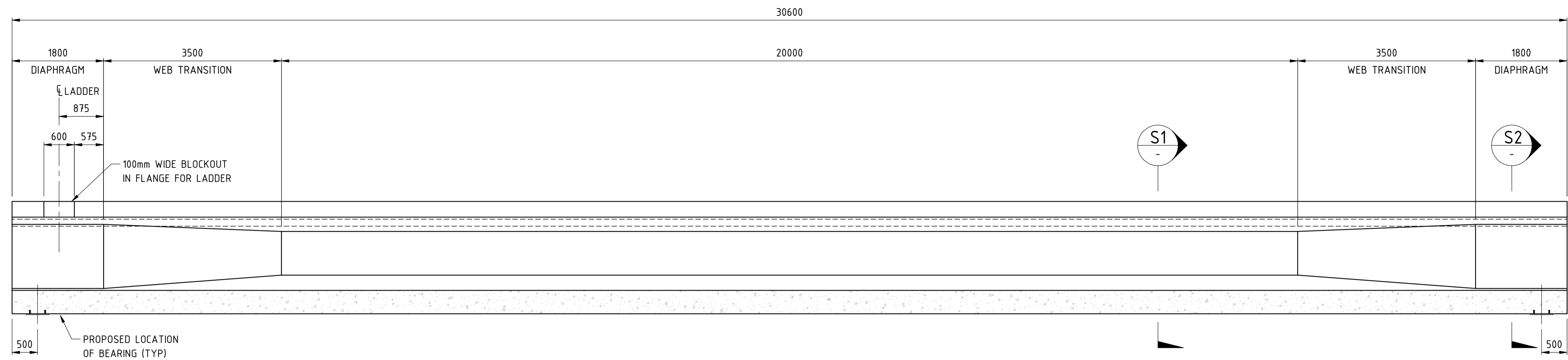
**FOR INFORMATION**

	VICTORIA PARK TO CANNING LEVEL CROSSING REMOVAL
	PROJECT WIDE - CIVIL STRUCTURES VIADUCT
U-TROUGH TYPICAL SECTIONS - SHEET 3	
PTA Drawing No: 00477	Rev: A01

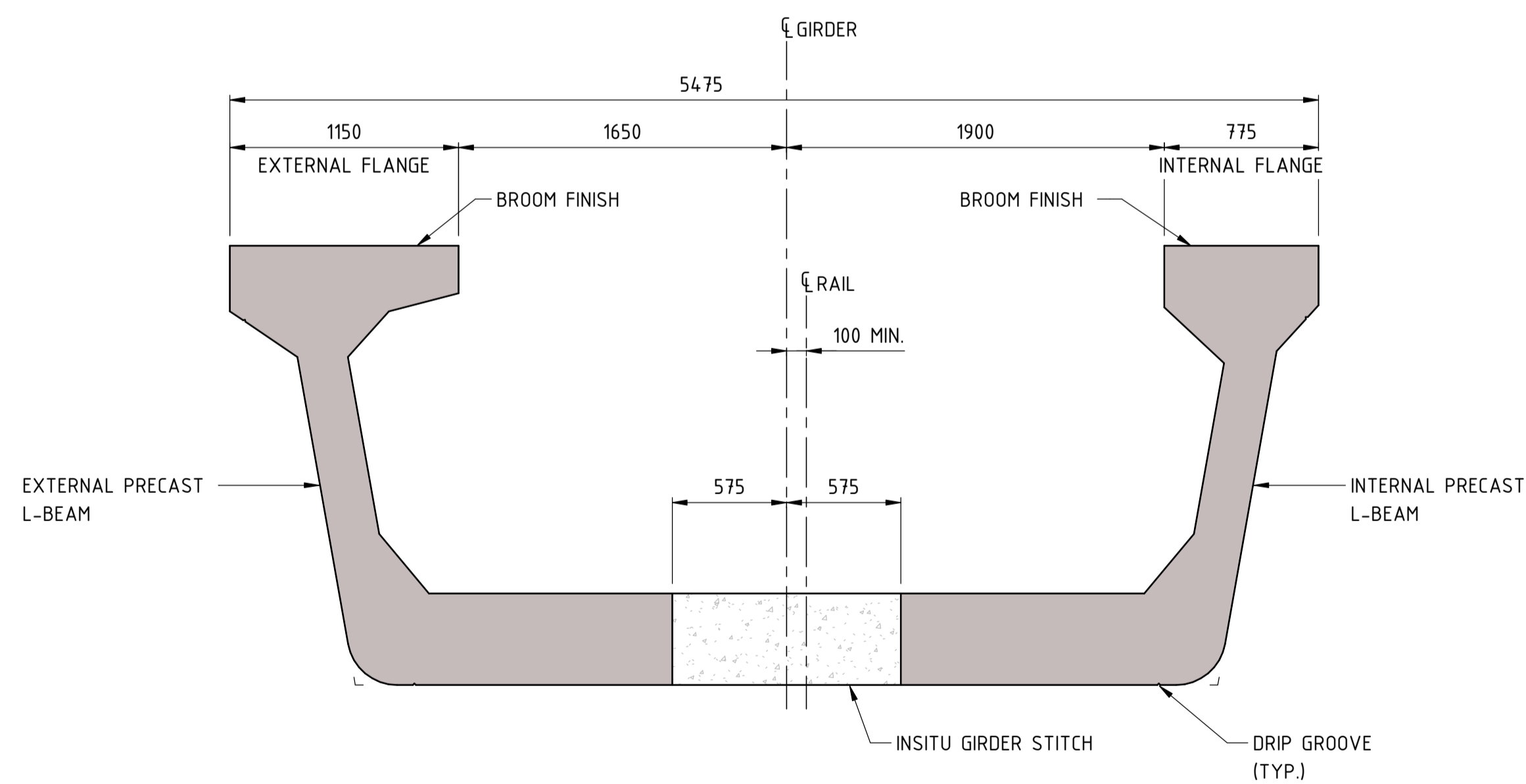
REV	DATE	ISSUED FOR INFORMATION	AMENDMENT	CC	LR	RP	WS
DSN	DRN	CHK	APP				
A01	21.06.22	ISSUED FOR INFORMATION					
				This document must not be copied without PTA's written permission, and the contents thereof must not be imparted to a third party nor be used for any unauthorised purpose.			
AT ORIGINAL PLOT SIZE				Contractor No: LXR-PW-Z0-GN-ST-CS-DWG-00477			

ARMADALE LINE UPGRADE ALLIANCE  
Innovation to Reality

VALIDATION	REFERENCES	SCALE	DESIGNED
SIGNATURE		As indicated	C.CHANG
DATE		DATUM	DRAWN
DATE APPROVED		HORIZONTAL: PCG20	L.RADICI
		VERTICAL: AHD71	CHECKED
			R.PEYILA
			APPROVED
			W.SCHWARZ
			DATE
			21.06.22

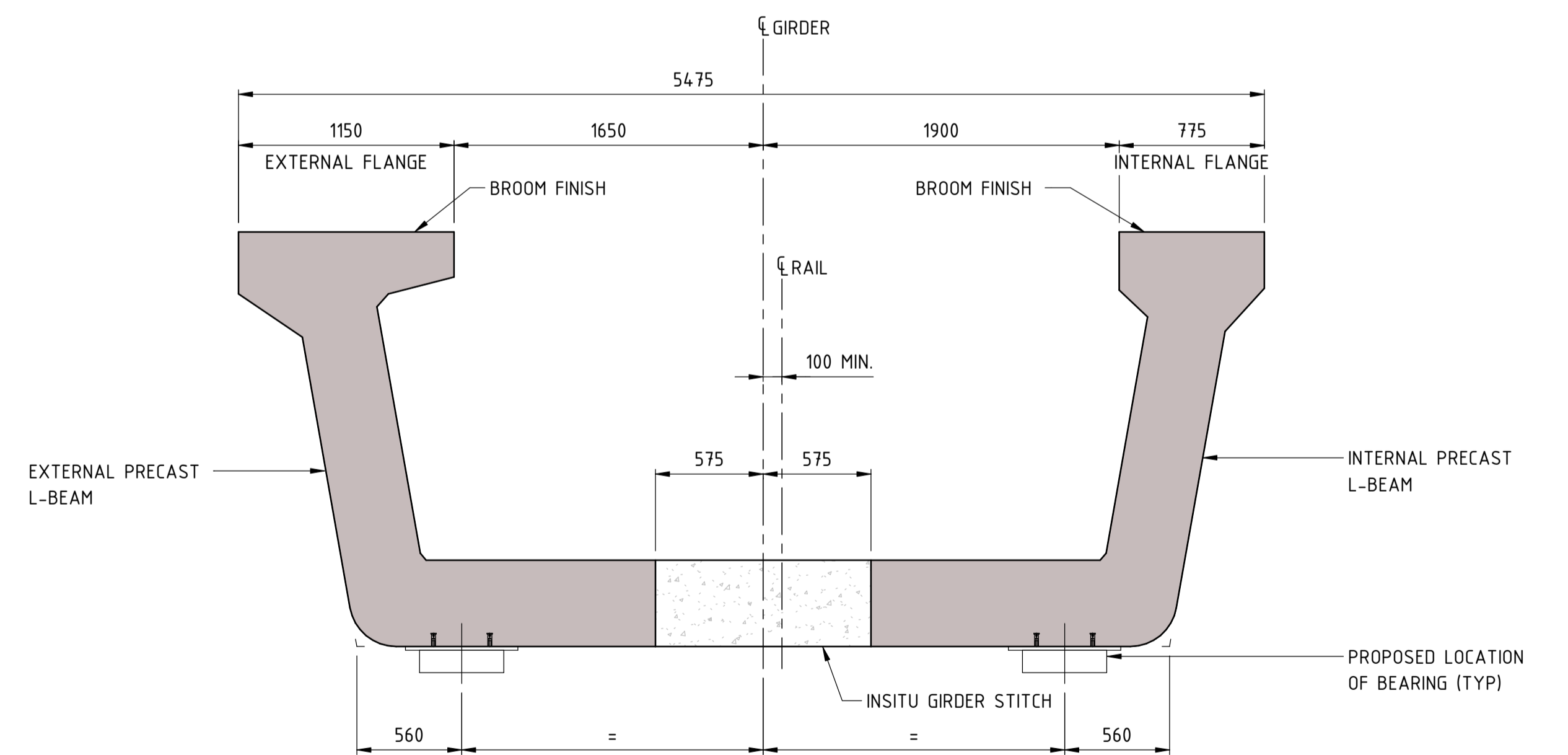


**TYPICAL U-TROUGH ELEVATION - 30600**  
SCALE 1 : 50



**U-TROUGH AT MIDSPAN**

SECTION S1  
SCALE 1:25



**U-TROUGH SECTION AT DIAPHRAGMS**

SECTION S2  
SCALE 1:25

1:50 (A1) / 1:100 (A3) 0 500mm 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 6000 6500 7000 7500

**FOR INFORMATION**

	<b>VICTORIA PARK TO CANNING LEVEL CROSSING REMOVAL</b>
<b>PROJECT WIDE - CIVIL STRUCTURES VIADUCT</b>	
<b>U-TROUGH TYPICAL SECTIONS - SHEET 4</b>	
<b>PTA Drawing No: 00478</b>	<b>Rev: A01</b>

REV	DATE	ISSUED FOR INFORMATION	CC	LR	RP	WS
		AMENDMENT	DSN	DRN	CHK	APP
ORIG SIZE <b>A1</b>			<small>This document must not be copied without PTA's written permission, and the contents thereof must not be imparted to a third party nor be used for any unauthorised purpose.</small>			
AT ORIGINAL PLOT SIZE						

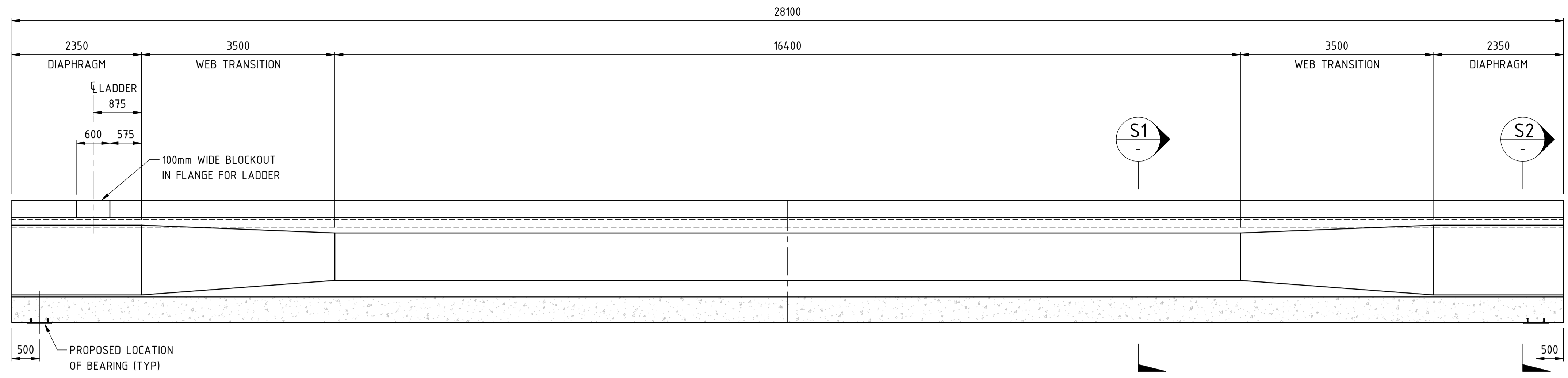
**ARMADALE LINE UPGRADE ALLIANCE**  
*Innovation to Reality*

Contractor No: LXR-PW-Z0-GN-ST-CS-DWG-00478

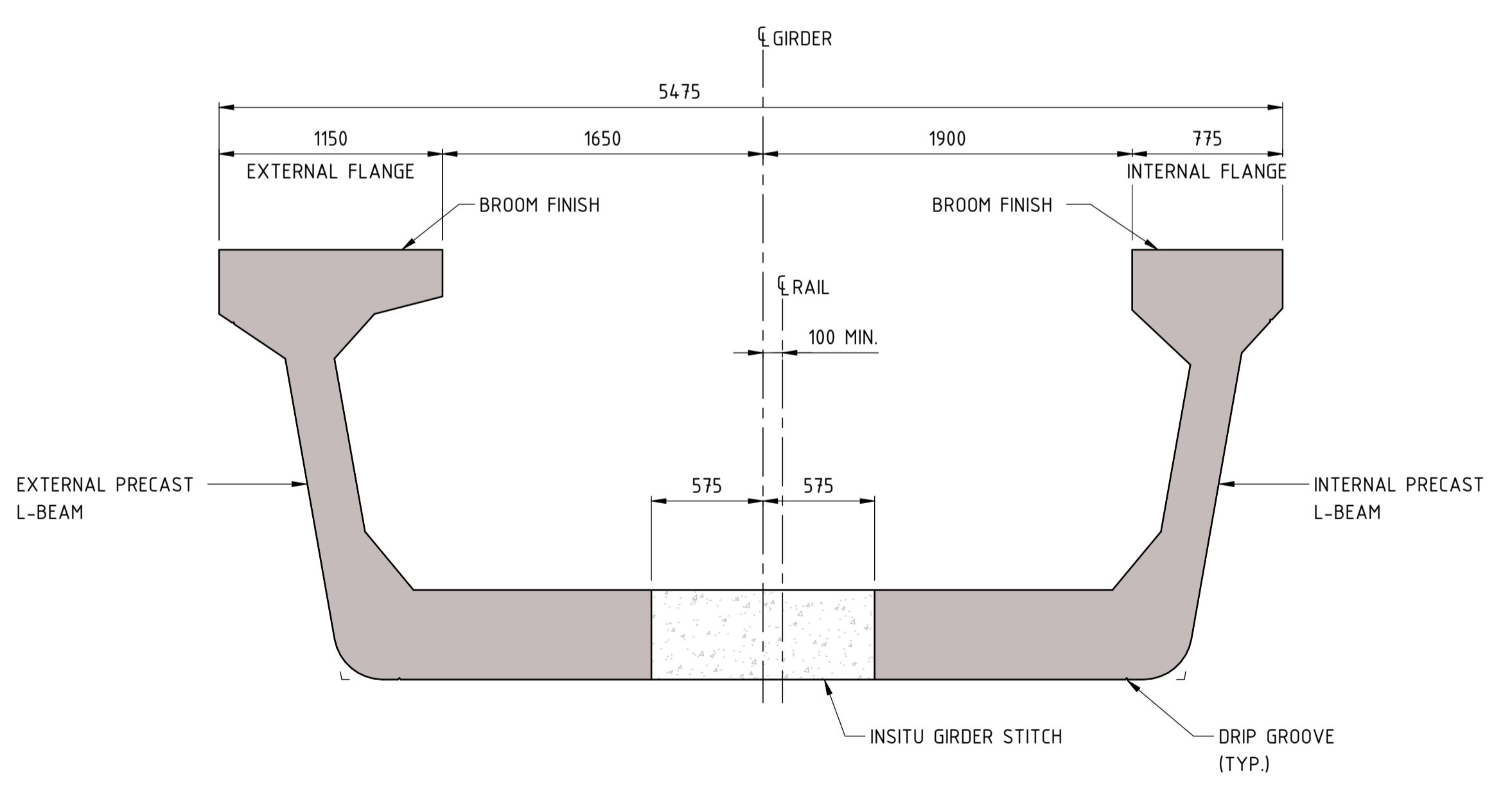
VALIDATION
SIGNATURE
DATE
DATE APPROVED

REFERENCES
SCALE
As indicated
DATUM
HORIZONTAL: PCG20
VERTICAL: AHD71

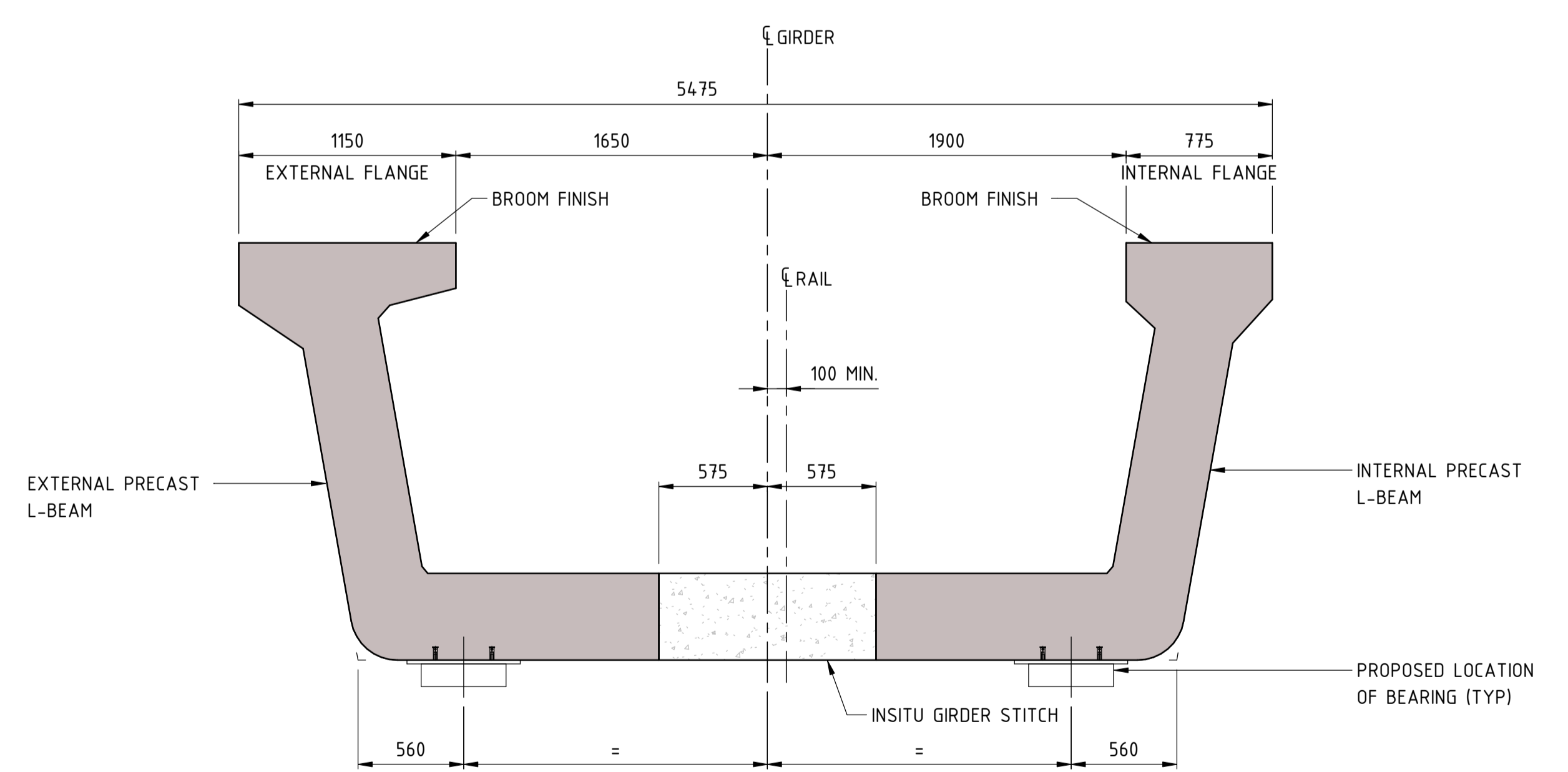
DESIGNED	C.CHANG
DRAWN	L.RADICI
CHECKED	R.PEYILA
APPROVED	W.SCHWARZ
DATE	21.06.22



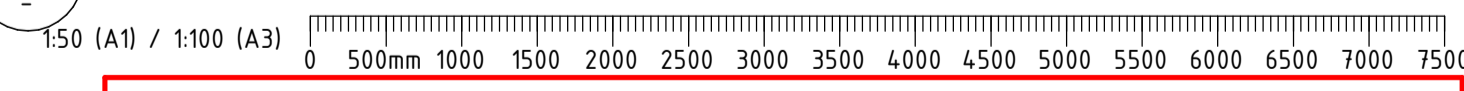
TYPICAL VIADUCT ELEVATION - 28100  
SCALE 1 : 50



U-TROUGH AT MIDSPAN  
SECTION S1  
SCALE 1:25



U-TROUGH SECTION AT DIAPHRAGMS  
SECTION S2  
SCALE 1:25



**FOR INFORMATION**

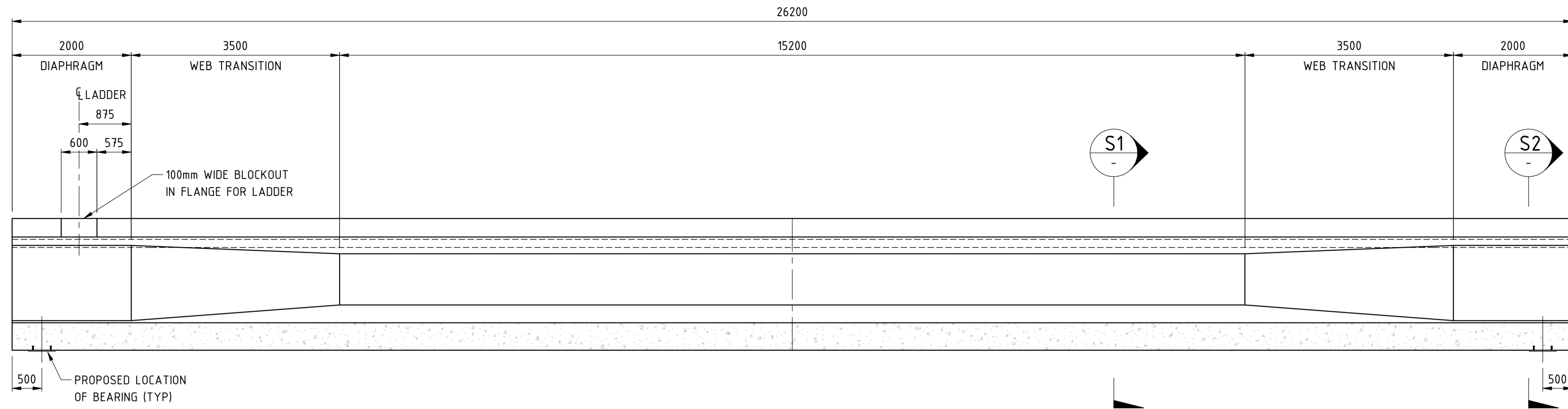
		VICTORIA PARK TO CANNING LEVEL CROSSING REMOVAL	
PROJECT WIDE - CIVIL STRUCTURES VIADUCT			
U-TROUGH TYPICAL SECTIONS - SHEET 5			
PTA Drawing No: 00479		Rev: A01	

REV	DATE	ISSUED FOR INFORMATION	AMENDMENT	CC	LR	RP	WS
ORIG SIZE	A1	AT ORIGINAL PLOT SIZE		DSN	DRN	CHK	APP
A01	21.06.22	ISSUED FOR INFORMATION					

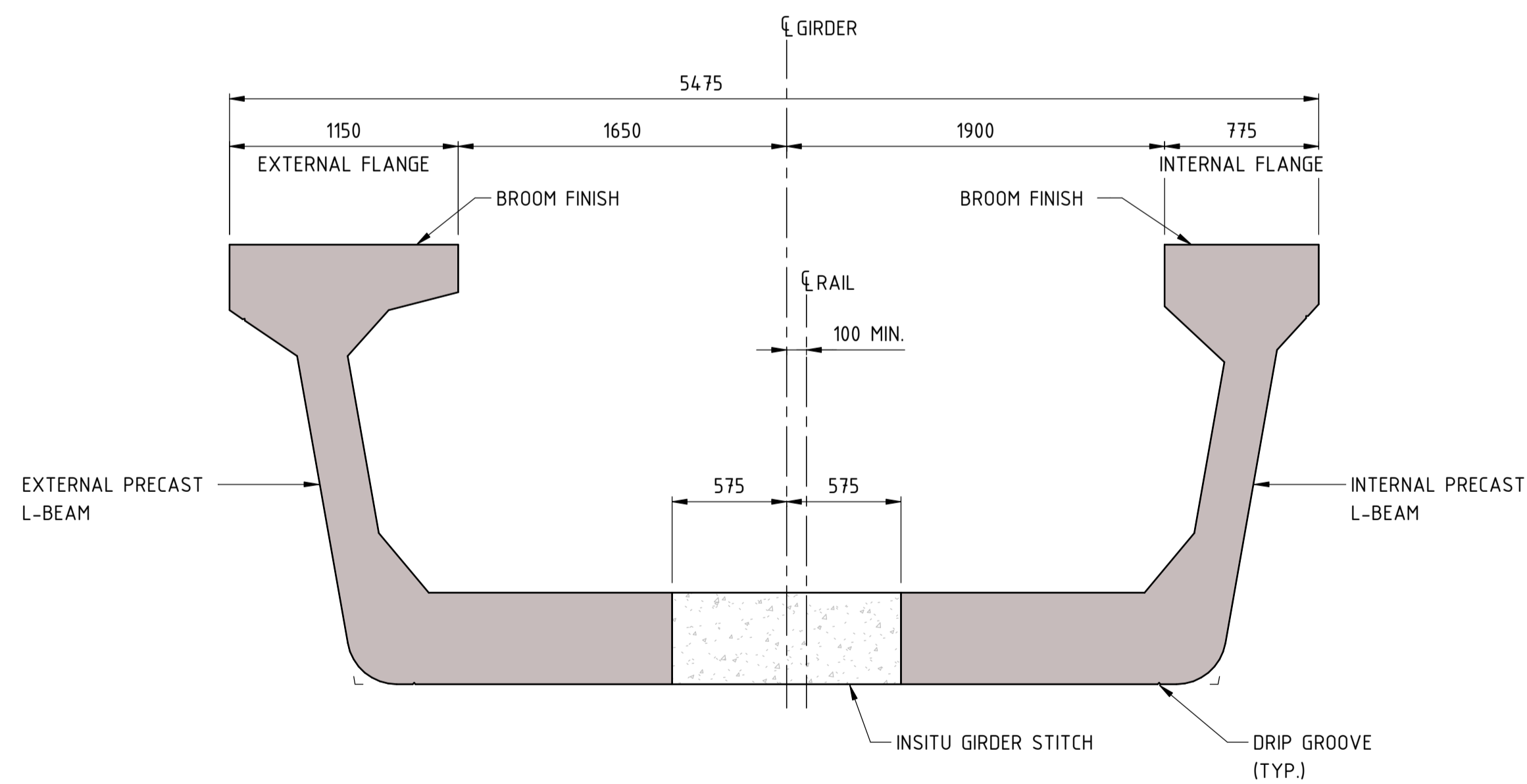
This document must not be copied without PTA's written permission, and the contents thereof must not be imparted to a third party nor be used for any unauthorised purpose.

Contractor No: LXR-PW-Z0-GN-ST-CS-DWG-00479

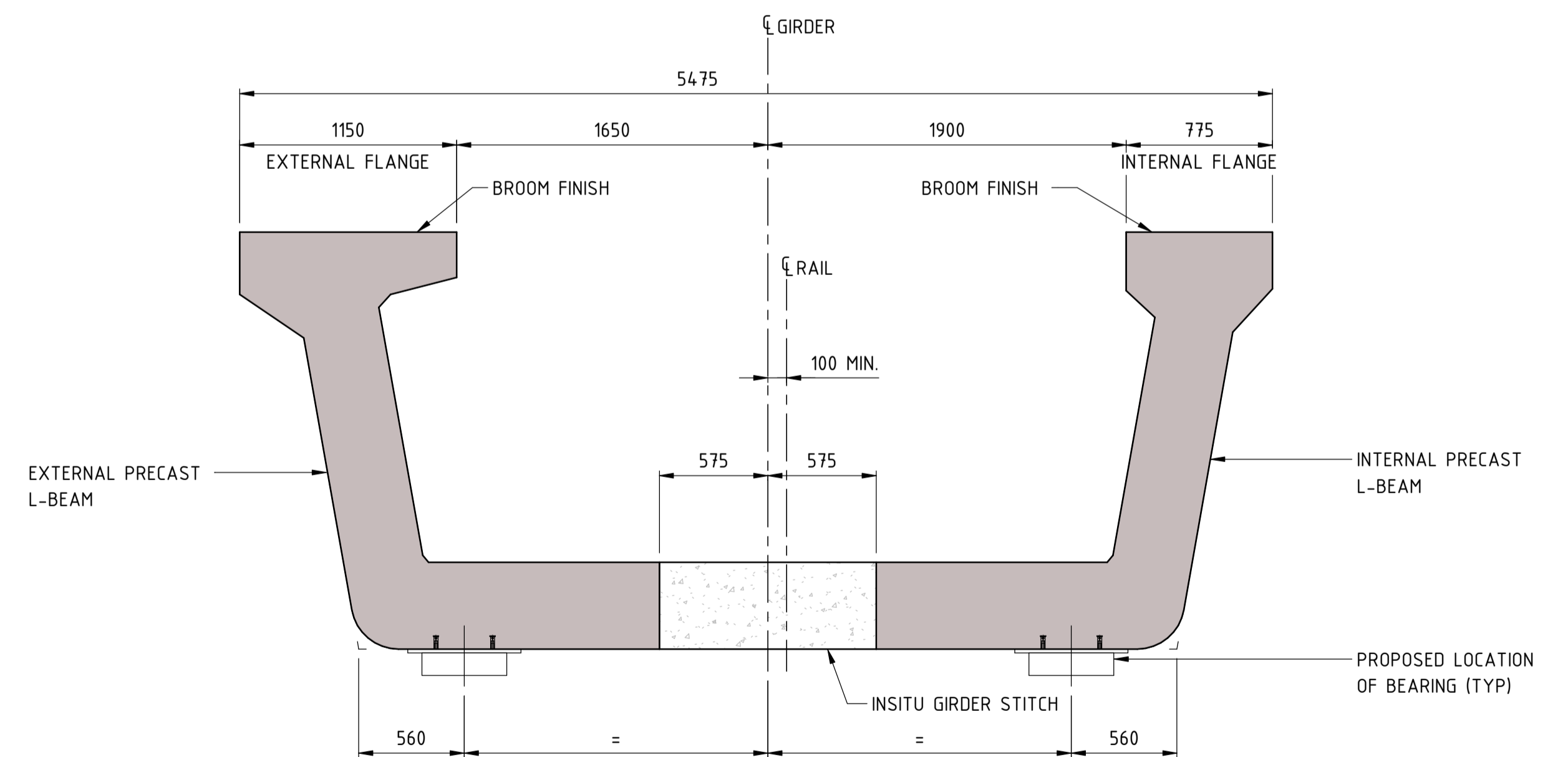
VALIDATION	REFERENCES	SCALE	DESIGNED
SIGNATURE		As indicated	C.CHANG
DATE		DATUM	DRAWN
DATE APPROVED		HORIZONTAL: PCG20	L.RADICI
		VERTICAL: AHD71	CHECKED
			R.PEYILA
			APPROVED
			W.SCHWARZ
			DATE
			21.06.22



TYPICAL U-TROUGH ELEVATION - 26200  
SCALE 1 : 50



U-TROUGH AT MIDSPAN  
SECTION S1  
SCALE 1:25



U-TROUGH SECTION AT DIAPHRAGMS  
SECTION S2  
SCALE 1:25

1:50 (A1) / 1:100 (A3) 0 500mm 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 6000 6500 7000 7500

**FOR INFORMATION**

Government of Western Australia  
Public Transport Authority


VICTORIA PARK TO CANNING  
LEVEL CROSSING REMOVAL

PROJECT WIDE - CIVIL STRUCTURES  
VIADUCT  
U-TROUGH TYPICAL SECTIONS - SHEET 6  
PTA Drawing No: 00480

Rev: A01

REV	DATE	ISSUED FOR INFORMATION	AMENDMENT	CC	LR	RP	WS
DSN	DRN	CHK	APP				
A01	21.06.22	ISSUED FOR INFORMATION					
ORIG SIZE A1				AT ORIGINAL PLOT SIZE			

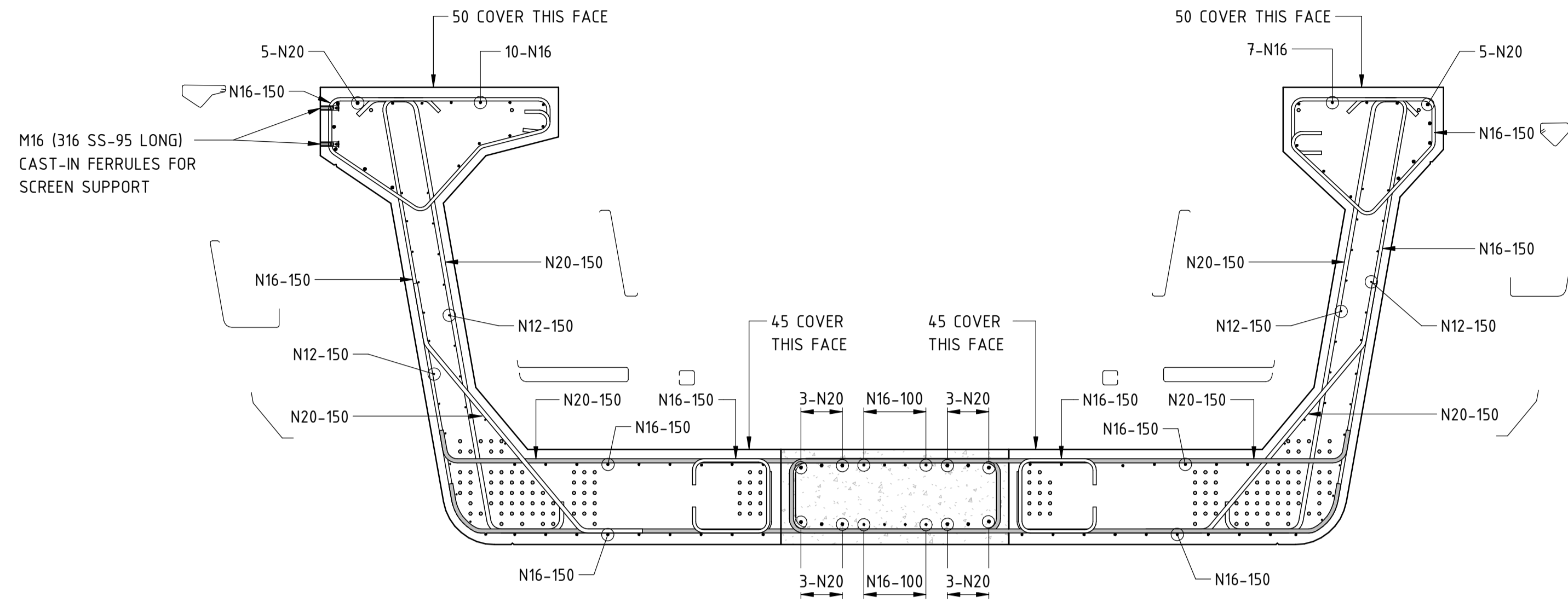
This document must not be copied without PTA's written permission, and the contents thereof must not be imparted to a third party nor be used for any unauthorised purpose.

  
 ARMADALE LINE UPGRADE ALLIANCE  
 Innovation to Reality

Contractor No: LXR-PW-Z0-GN-ST-CS-DWG-00480

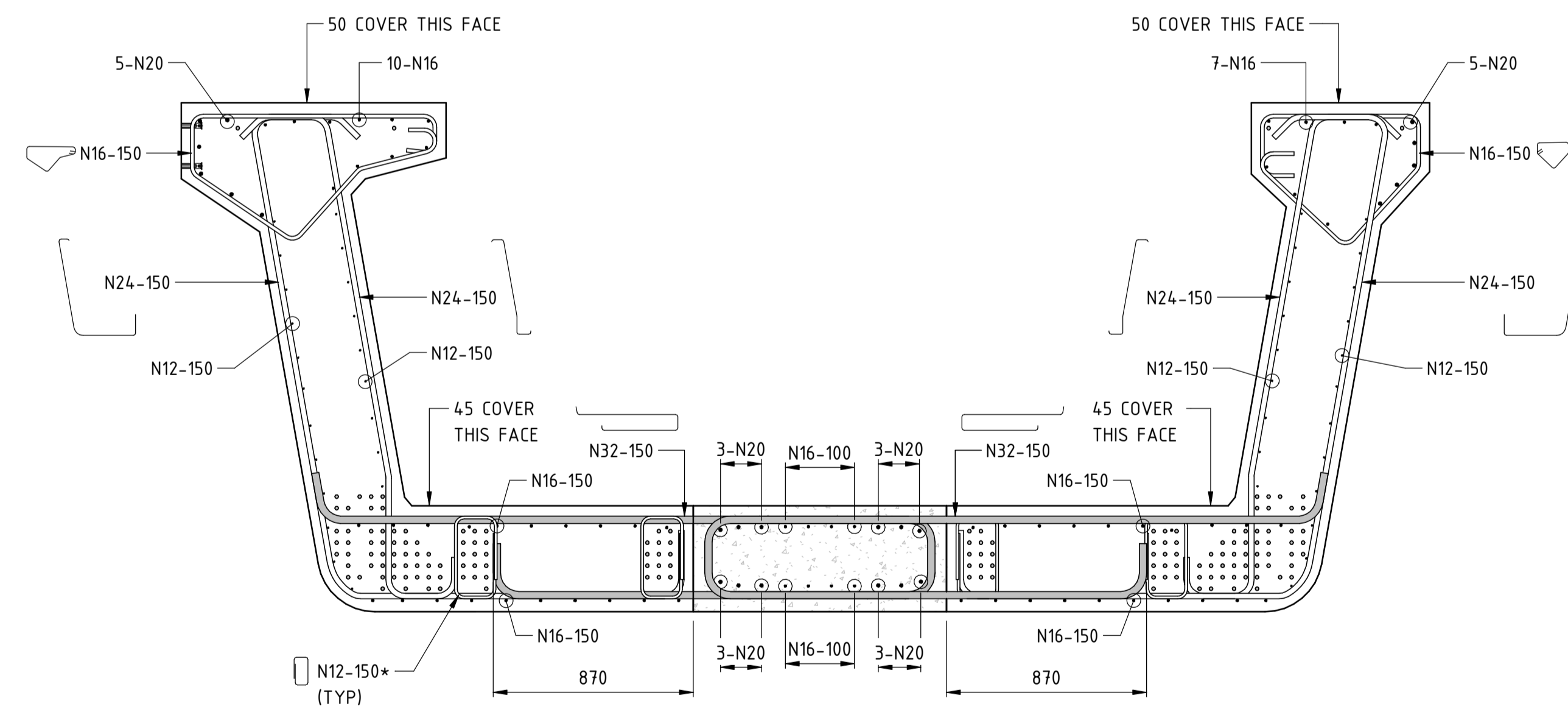
VALIDATION	REFERENCES
SIGNATURE	
DATE	
DATE APPROVED	

SCALE	DESIGNED
As indicated	C.CHANG
DATUM	DRAWN
HORIZONTAL: PCG20	L.RADICI
VERTICAL: AHD71	CHECKED
	R.PEYILA
	APPROVED
	W.SCHWARZ
	DATE
	21.06.22

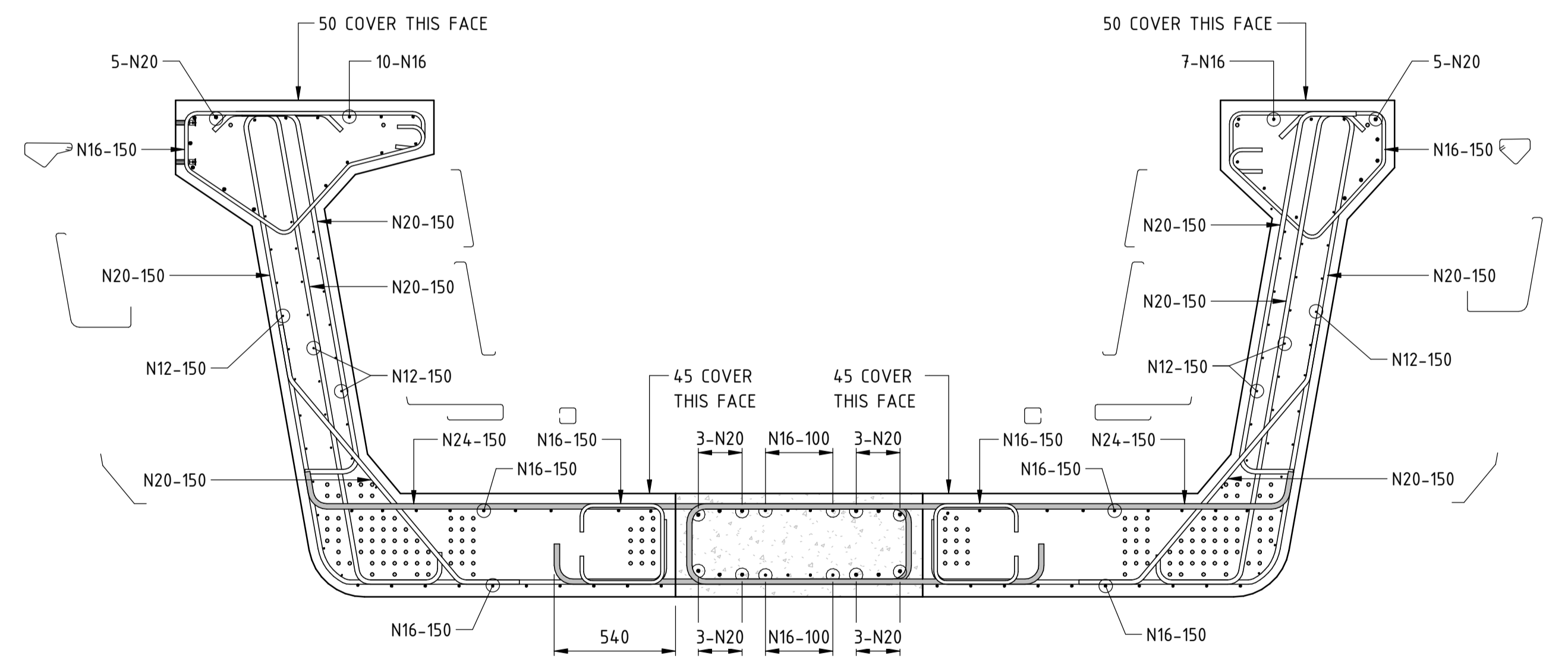


**U-TROUGH REINFORCEMENT STANDARD SECTION**  
SCALE 1:20

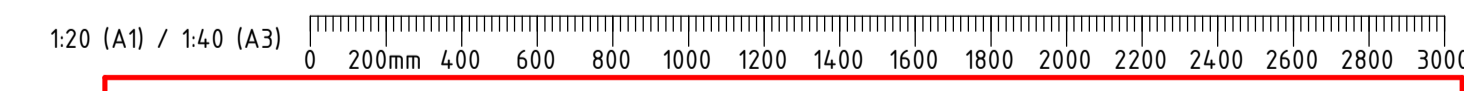
NOTE: 40mm COVER TO REINFORCEMENT UNO



**U-TROUGH REINFORCEMENT DIAPHRAGM SECTION**  
SCALE 1:20  
NOTE: \* NOT REQUIRED FOR 26.2m AND 28.1m SPAN GIRDERS



**U-TROUGH REINFORCEMENT TRANSITION SECTION**  
SCALE 1:20



**FOR INFORMATION**

	<b>VICTORIA PARK TO CANNING LEVEL CROSSING REMOVAL</b>
<b>PROJECT WIDE - CIVIL STRUCTURES VIADUCT</b>	
<b>U-TROUGH REINFORCEMENT SECTIONS</b>	
<b>PTA Drawing No: 00498</b>	<b>Rev: A01</b>

REV	DATE	ISSUED FOR INFORMATION	CC	LR	RP	WS
A01	21.06.22					
		AMENDMENT	DSN	DRN	CHK	APP
ORIG SIZE						
A1		AT ORIGINAL PLOT SIZE				

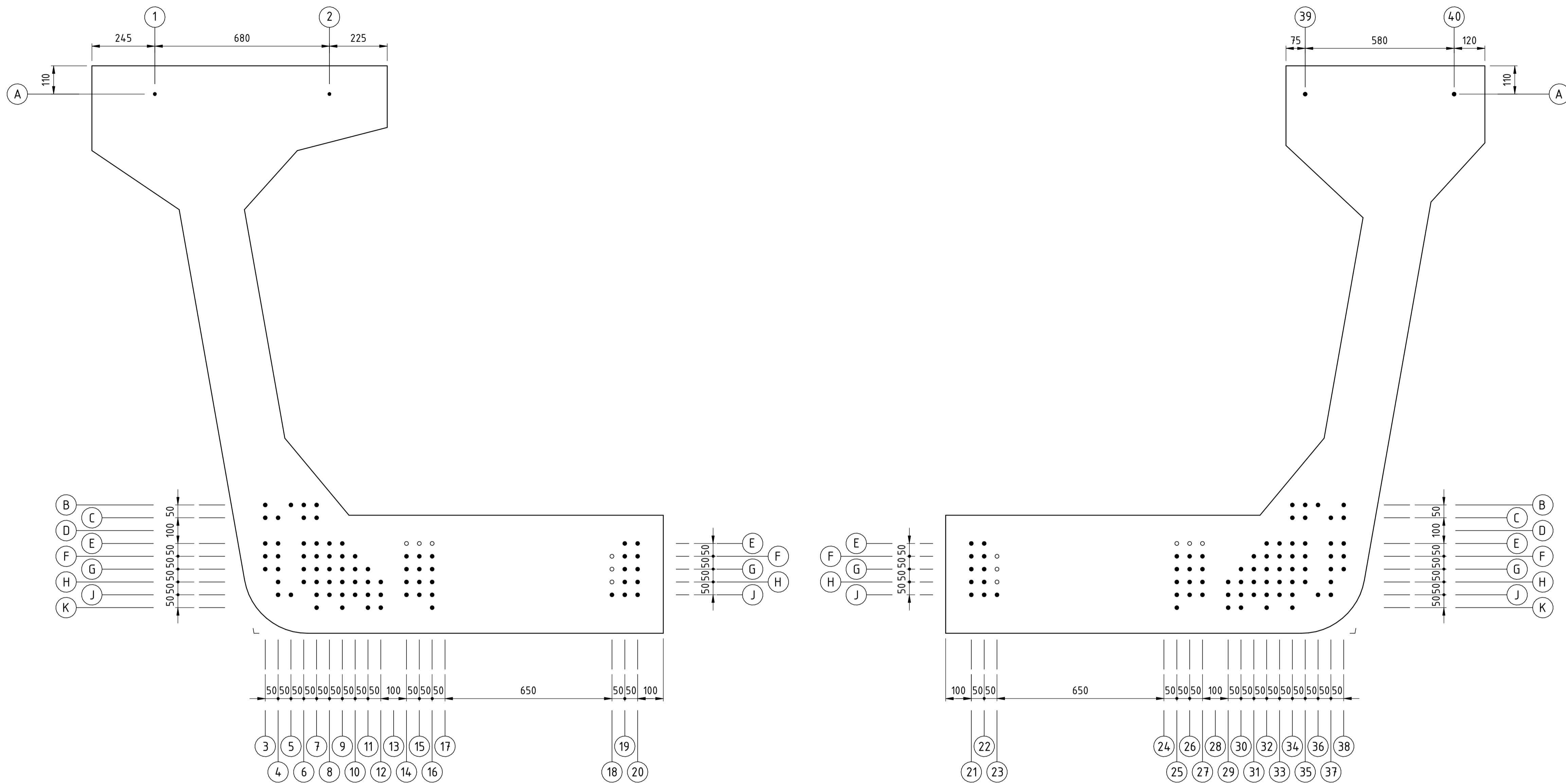
This document must not be copied without PTA's written permission, and the contents thereof must not be imparted to a third party nor be used for any unauthorised purpose.

**ARMADALE LINE UPGRADE ALLIANCE**  
*Innovation to Reality*

Contractor No: LXR-PW-Z0-GN-ST-CS-DWG-00498

VALIDATION	REFERENCES	SCALE	DESIGNED
SIGNATURE		1 : 20	C.CHANG
DATE		DATUM	DRAWN
DATE APPROVED		HORIZONTAL: PCG20	L.RADICI
		VERTICAL: AHD71	CHECKED
			R.PEYILA
			APPROVED
			W.SCHWARZ
			DATE
			21.06.22





**EXTERNAL L-BEAM**  
SCALE 1:10

**INTERNAL L-BEAM**  
SCALE 1:10

**PRE-STRESSING STRAND ARRANGEMENT  
(TYPICAL 29.9m BEAM) AT STATION**

**LEGEND:**

- - STRAND WITH NO DEBONDING
- - STRAND WITH DEBONDING LENGTH 'L'
- - NO STRAND
- ⊗ - PROVISIONAL STRANDS FOR ANCHOR BED (TBC - IDD PHASE)

STRAND No.	EXTERNAL L-BEAM (29.9m BEAM)																				STRANDS PER ROW
	DEBONDING LENGTH FROM EACH END (mm)																				
ROW A	0	0																			2
ROW B			0		4500	0	4500														4
ROW C			4500	0		4500	0														4
ROW D																					-
ROW E			0	4500		0	4500	0	4500											0	8
ROW F			4500	0		4500	0	4500	0	4500				4500	0	4500				0	12
ROW G			0	4500		0	4500	0	4500	0	4500			0	4500	0				0	13
ROW H				0		4500	0	4500	0	4500	0	4500			4500	0	4500			0	13
ROW J				4500	0		4500	0	4500	0	4500			0	4500	0				0	14
ROW K																4500					5
TOTAL																				75	

STRANDS PER ROW	INTERNAL L-BEAM (29.9m BEAM)																				STRAND No.						
	DEBONDING LENGTH FROM EACH END (mm)																										
2																					0	0	ROW A				
4																					4500	0	4500	0	0	ROW B	
4																					0	4500		0	4500	ROW C	
-																										ROW D	
8	0	0																			4500	0	4500	0	4500	0	ROW E
12	0	0																			0	4500	0	4500	0	4500	ROW F
13	0	0																			0	4500	0	4500	0	4500	ROW G
13	0	0																			4500	0	4500	0	4500	0	ROW H
14	0	0	0																		0	4500	0	4500	0	4500	ROW J
5																					0	4500	0	4500	0	4500	ROW K
75	TOTAL																										

**PRESTRESSING NOTES:**

1. MINIMUM COMPRESSIVE STRENGTH OF CONCRETE AT TRANSFER OF PRESTRESS SHALL BE 35MPa.
2. ALL STRANDS SHALL BE A 7 WIRE, STRESS-RELIEVED, LOW RELAXATION (RELAX 2) COMPLYING WITH AS 4672.
3. STRANDS SHALL BE 15.2mm NOMINAL DIAMETER WITH MINIMUM TENSILE STRENGTH OF 1830 MPa AND MINIMUM BREAKING LOAD OF 261 kN.
4. TOTAL INITIAL FORCE IN EACH STRAND AFTER ALLOWANCES HAVE BEEN MADE FOR ALL LOSSES IN GRIPS AND JACKS SHALL BE 209 kN.
5. AFTER TRANSFER OF PRESTRESS, STRANDS SHALL BE CUT FLUSH WITH THE CONCRETE SURFACE AND EXPOSED STRANDS SHALL BE SEALED AGAINST CORROSION BY THE APPLICATION OF AN APPROVED EXPOXY RESIN.
6. DIMENSIONED LENGTH OF THE GIRDERS IS REQUIRED LENGTH OF THE FINISHED PRODUCT
7. STRANDS SHALL BE RELEASED IN SUCH A MANNER TO MINIMISE ECCENTRIC FORCES IN THE MEMBER.
8. ALL L-BEAMS SHALL BE MINIMUM 90 DAYS OLD BEFORE CARRYING OUT IN-SITU STITCH POUR.

1:10 (A1) / 1:20 (A3) 0 100mm 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500

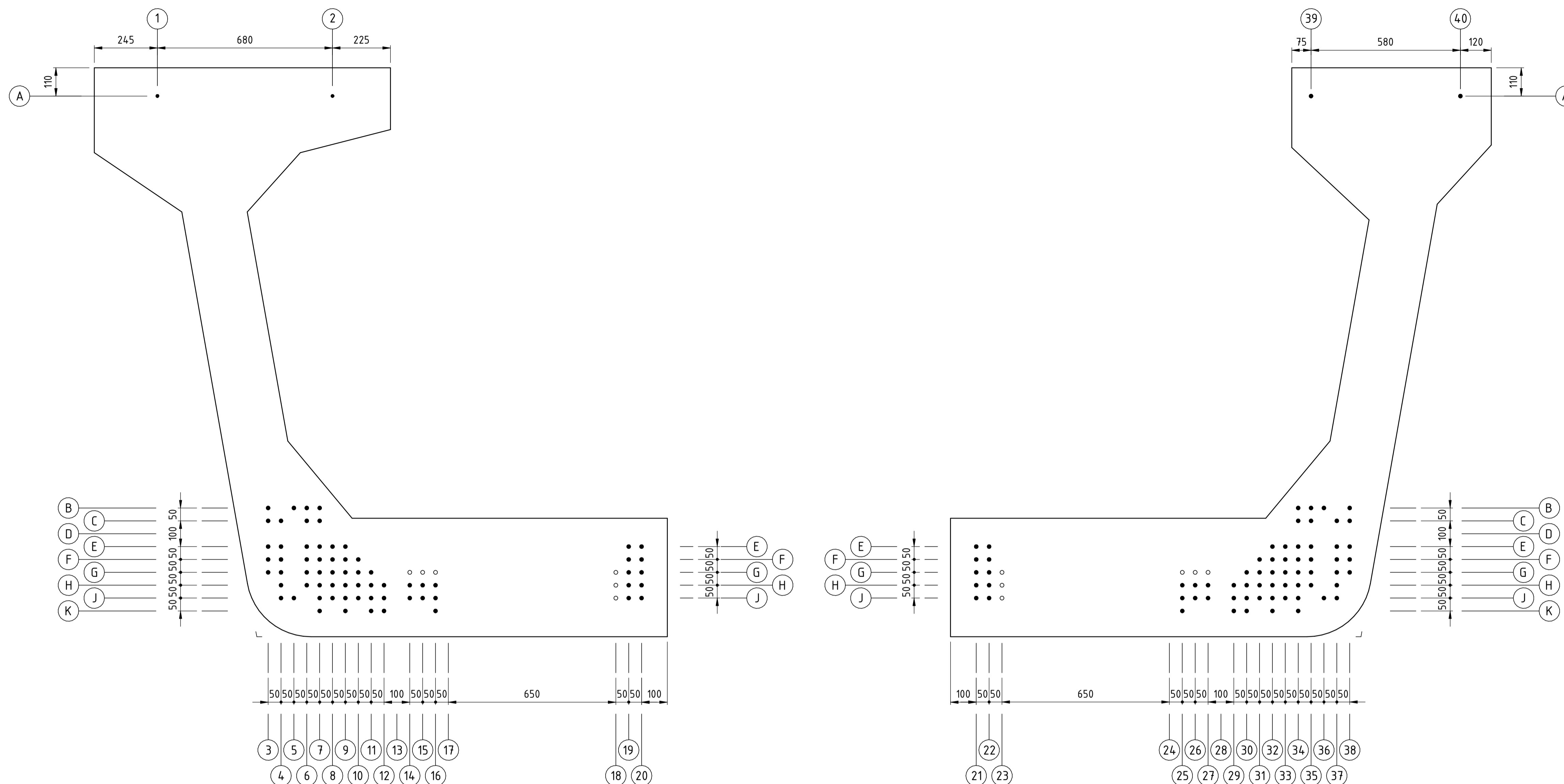
**FOR INFORMATION**

	<p>VICTORIA PARK TO CANNING LEVEL CROSSING REMOVAL</p>
<p>PROJECT WIDE - CIVIL STRUCTURES VIADUCT</p>	
<p>L-BEAM - PRE-STRESSING DETAILS - SHEET 1</p>	
<p>PTA Drawing No: 00518</p>	<p>Rev: A01</p>

A01	21.06.22	ISSUED FOR INFORMATION	CC	LR	RP	WS			
REV	DATE	AMENDMENT	DSN	DRN	CHK	APP			
ORIG SIZE			<p>This document must not be copied without PTA's written permission, and the contents thereof must not be imparted to a third party nor be used for any unauthorised purpose.</p>						
A1	AT ORIGINAL PLOT SIZE		Contractor No: LXR-PW-Z0-GN-ST-CS-M3D-00002.rvt						

**ARMADALE LINE UPGRADE ALLIANCE**  
*Innovation to Reality*

VALIDATION	REFERENCES	SCALE	DESIGNED
SIGNATURE		1 : 10	C.CHANG
DATE		DATUM	DRAWN
DATE APPROVED		HORIZONTAL: PCG20	L.RADICI
		VERTICAL: AHD71	CHECKED
			R.PEYILA
			APPROVED
			W.SCHWARZ
			DATE
			21.06.22



**EXTERNAL L-BEAM**  
SCALE 1:10

**INTERNAL L-BEAM**  
SCALE 1:10

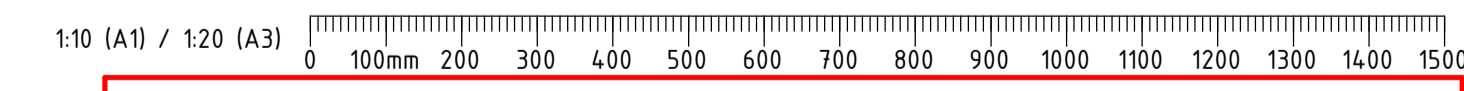
**PRE-STRESSING STRAND ARRANGEMENT**  
(TYPICAL 29.9m-30.05m BEAM) ON VIADUCT

**LEGEND:**

- - STRAND WITH NO DEBONDING
- 4500 - STRAND WITH DEBONDING LENGTH 'L'
- - NO STRAND
- ⊗ - PROVISIONAL STRANDS FOR ANCHOR BED (TBC - IDD PHASE)

EXTERNAL L-BEAM (29.9m-30.05m BEAM)																					
STRAND No.	DEBONDING LENGTH FROM EACH END (mm)																				STRANDS PER ROW
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
ROW A	0	0																			2
ROW B			0		4500	0	4500														4
ROW C			4500	0		4500	0														4
ROW D																					-
ROW E			0	4500	0	4500	0	4500	0	4500									0	0	8
ROW F			4500	0		4500	0	4500	0	4500	0	4500							0	0	9
ROW G			0	4500	0	4500	0	4500	0	4500	0	4500							0	0	10
ROW H				0		4500	0	4500	0	4500	0	4500		4500	0	4500			0	0	13
ROW J				4500	0		4500	0	4500	0	4500	0			0	4500	0		0	0	13
ROW K																4500					5
																					TOTAL
																					68

INTERNAL L-BEAM (29.9m-30.05m BEAM)																					
STRANDS PER ROW	DEBONDING LENGTH FROM EACH END (mm)																				STRAND No.
	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
ROW A	2																				ROW A
ROW B	4													4500	0	4500			0	0	ROW B
ROW C	4													0	4500		0	4500			ROW C
ROW D	-																				ROW D
ROW E	8	0	0										4500	0	4500	0		4500	0		ROW E
ROW F	9	0	0										4500	0	4500	0	4500	0	4500		ROW F
ROW G	11	0	0										4500	0	4500	0	4500	0	4500	0	ROW G
ROW H	13	0	0										4500	0	4500	0	4500	0	4500	0	ROW H
ROW J	13	0	0										0	4500	0	4500	0	4500	0		ROW J
ROW K	5																				ROW K
	68																				TOTAL



FOR INFORMATION

VICTORIA PARK TO CANNING  
LEVEL CROSSING REMOVAL

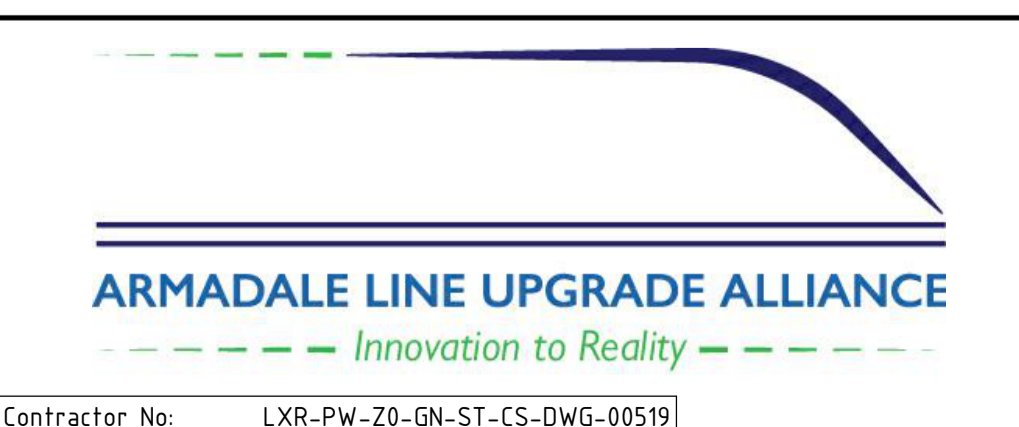
PROJECT WIDE - CIVIL STRUCTURES

VIADUCT

L-BEAM - PRE-STRESSING DETAILS - SHEET 2

PTA Drawing No: **00519** Rev: **A01**

A01	21.06.22	ISSUED FOR INFORMATION	CC	LR	RP	WS			
REV	DATE	AMENDMENT	DSN	DRN	CHK	APP			
ORIG SIZE			<small>This document must not be copied without PTA's written permission, and the contents thereof must not be imparted to a third party nor be used for any unauthorised purpose.</small>						
<b>A1</b>	AT ORIGINAL PLOT SIZE		Contractor No: LXR-PW-Z0-GN-ST-CS-M3D-00002.rvt						



VALIDATION

SIGNATURE

DATE

DATE APPROVED

REFERENCES

SCALE

1 : 10

DATUM

HORIZONTAL: PCG20

VERTICAL: AHD71

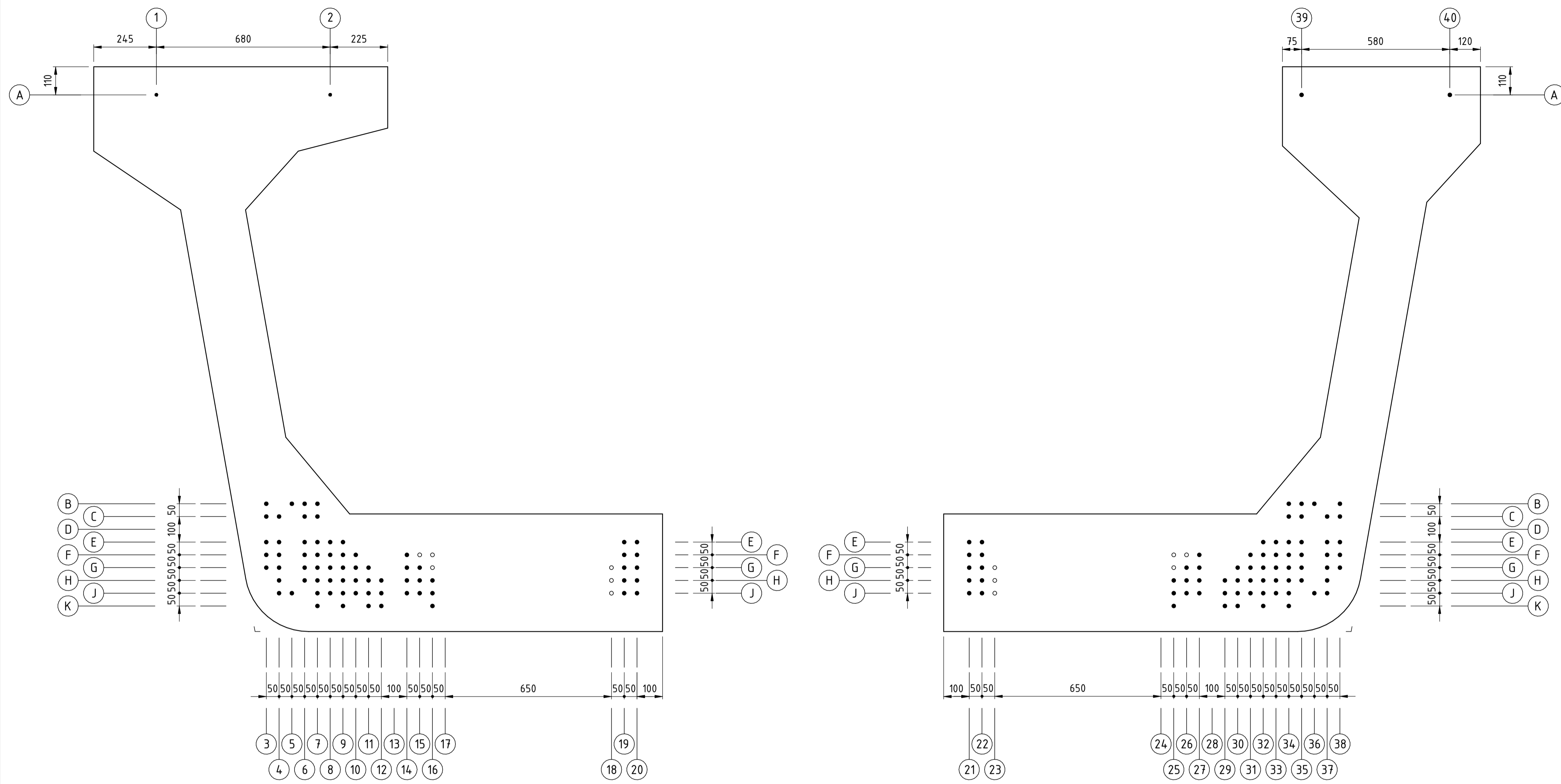
DESIGNED C.CHANG

DRAWN L.RADICI

CHECKED R.PEYILA

APPROVED W.SCHWARZ

DATE 21.06.22



**EXTERNAL L-BEAM**  
SCALE 1:10

**INTERNAL L-BEAM**  
SCALE 1:10

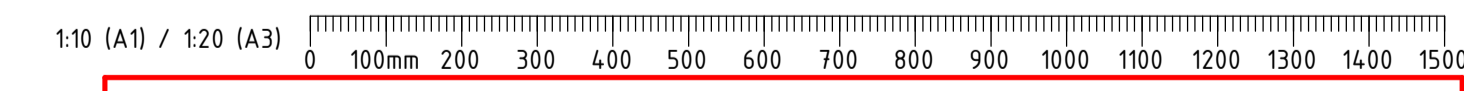
**PRE-STRESSING STRAND ARRANGEMENT  
(TYPICAL 30.6m-31.05m BEAM) ON VIADUCT**

**LEGEND:**

- 0 - STRAND WITH NO DEBONDING
- 4500 - STRAND WITH DEBONDING LENGTH 'L'
- - NO STRAND
- ⊗ - PROVISIONAL STRANDS FOR ANCHOR BED (TBC - IDD PHASE)

EXTERNAL L-BEAM (30.6m-31.05m BEAM)																					STRANDS PER ROW
DEBONDING LENGTH FROM EACH END (mm)																					
STRAND No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
ROW A	0	0																			2
ROW B			0		4500	0	4500														4
ROW C			4500	0		4500	0														4
ROW D																					-
ROW E			0	4500		0	4500	0	4500										0	0	8
ROW F			4500	0		4500	0	4500	0	4500				4500	⊗	⊗			0	0	10
ROW G			0	4500	0		4500	0	4500	0	4500				⊗	⊗			0	0	12
ROW H			0		4500	0	4500	0	4500	0	4500			4500	0	4500		⊗	⊗	0	13
ROW J				4500	0		4500	0	4500	0	4500				0	4500	0		0	0	13
ROW K							0		0		0	4500				4500					5
																					TOTAL
																					71

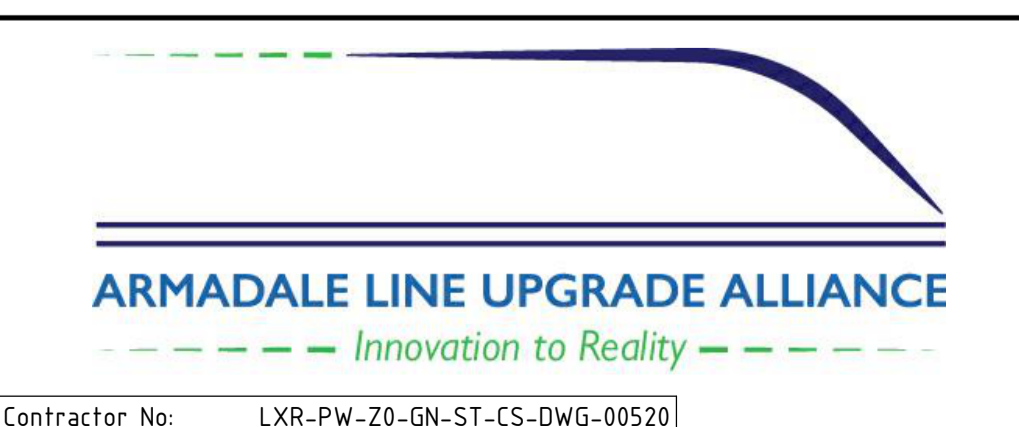
INTERNAL L-BEAM (30.6m-31.05m BEAM)																					STRANDS PER ROW
DEBONDING LENGTH FROM EACH END (mm)																					
STRANDS PER ROW	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	STRAND No.
ROW A	2																				2
ROW B	4													4500	0	4500			0	0	4
ROW C	4													0	4500			0	4500		4
ROW D	-																				-
ROW E	8	0	0											4500	0	4500	0		4500	0	8
ROW F	9	0	0							4500			4500	0	4500	0		4500	0	4500	10
ROW G	11	0	0								4500	0	4500	0	4500	0		4500	0	4500	12
ROW H	13	0	0							4500	0	4500	0	4500	0	4500	0		4500	0	13
ROW J	13	0	0							0	4500	0		0	4500	0	4500	0	4500	0	13
ROW K	5																				5
	71																				TOTAL



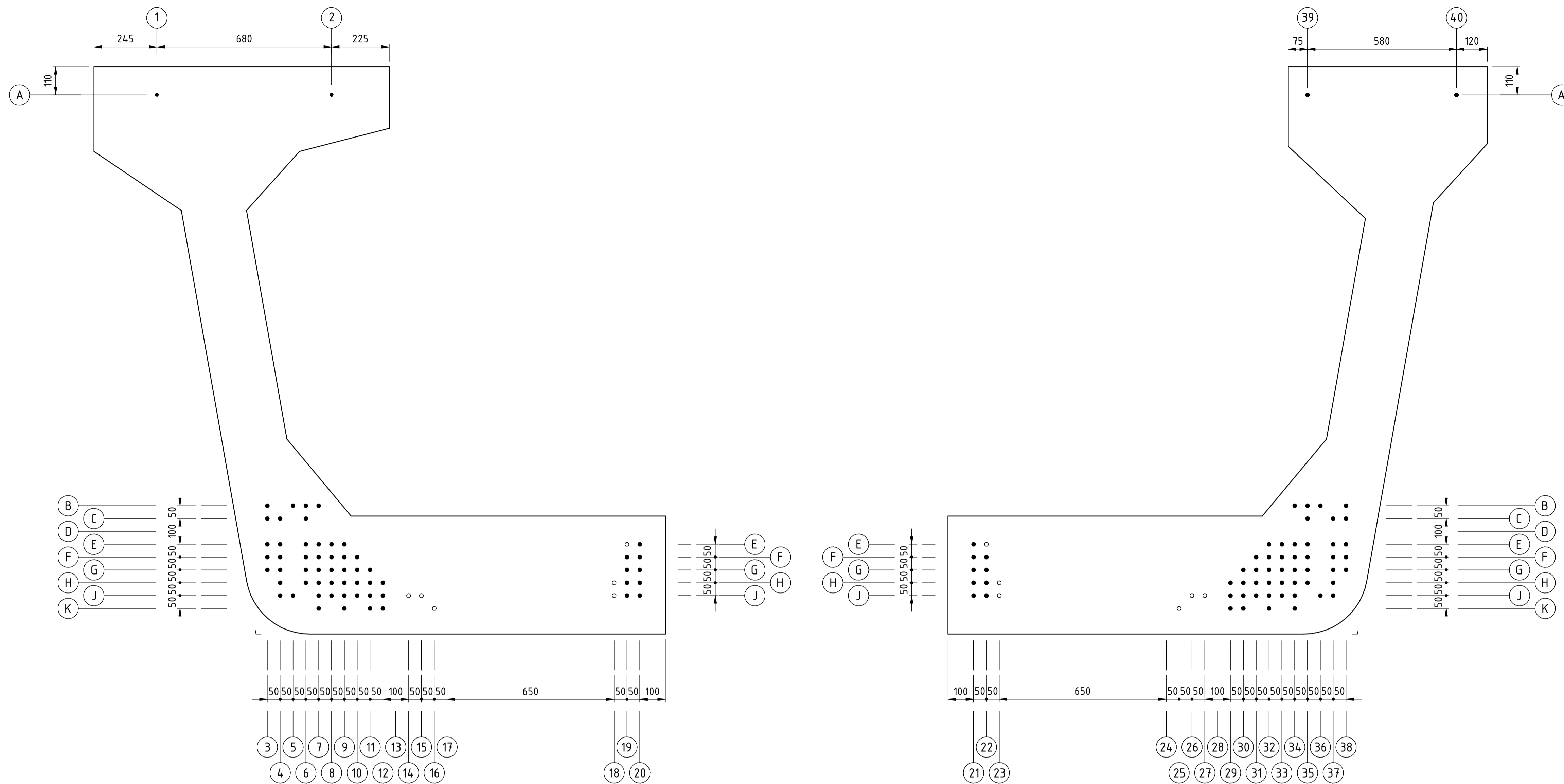
**FOR INFORMATION**

	VICTORIA PARK TO CANNING LEVEL CROSSING REMOVAL
PROJECT WIDE - CIVIL STRUCTURES VIADUCT	
L-BEAM - PRE-STRESSING DETAILS - SHEET 3	
PTA Drawing No: 00520	Rev: A01

A01	21.06.22	ISSUED FOR INFORMATION	CC	LR	RP
REV	DATE	AMENDMENT	DSN	DRN	CHK
ORIG SIZE			This document must not be copied without PTA's written permission, and the contents thereof must not be imparted to a third party nor be used for any unauthorised purpose.		
A1	AT ORIGINAL PLOT SIZE		Contractor No: LXR-PW-Z0-GN-ST-CS-DWG-00520		



VALIDATION	REFERENCES	SCALE	
SIGNATURE		1 : 10	DESIGNED C.CHANG
DATE		DATUM	DRAWN L.RADICI
DATE APPROVED		HORIZONTAL: PCG20	CHECKED R.PEYILA
		VERTICAL: AHD71	APPROVED W.SCHWARZ
			DATE 21.06.22



**EXTERNAL L-BEAM**  
SCALE 1:10

**INTERNAL L-BEAM**  
SCALE 1:10

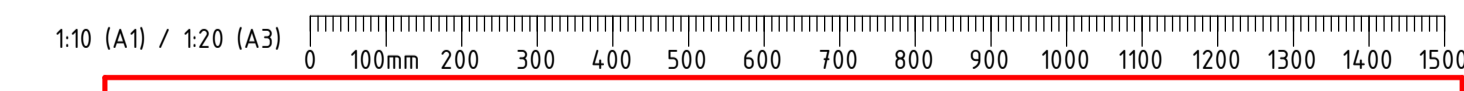
**PRE-STRESSING STRAND ARRANGEMENT  
(TYPICAL 28.1m BEAM) ON VIADUCT**

**LEGEND:**

- - STRAND WITH NO DEBONDING
- ◻(L) - STRAND WITH DEBONDING LENGTH 'L'
- ◻ - NO STRAND
- ◻(X) - PROVISIONAL STRANDS FOR ANCHOR BED (TBC - IDD PHASE)

STRAND No.	EXTERNAL L-BEAM (28.1m BEAM)																				STRANDS PER ROW
	DEBONDING LENGTH FROM EACH END (mm)																				
ROW A	0	0																			2
ROW B			0		4500	0	4500														4
ROW C			4500	0		4500															3
ROW D																					-
ROW E		0	4500		0	4500	0	4500	0	4500										0	7
ROW F		4500	0		4500	0	4500	0	4500	0	4500									0	9
ROW G			0	4500		0	4500	0	4500	0	4500	0	4500							0	10
ROW H				4500	0		4500	0	4500	0	4500	0	4500							0	10
ROW J				4500	0		4500	0	4500	0	4500	0	4500							0	10
ROW K													4500								4
TOTAL																				59	

STRANDS PER ROW	INTERNAL L-BEAM (28.1m BEAM)																				STRAND No.	
	DEBONDING LENGTH FROM EACH END (mm)																					
2																					ROW A	
4																					0	ROW B
3																					4500	ROW C
-																					0	ROW D
7	0	0																			4500	ROW E
9	0	0																			4500	ROW F
10	0	0																			4500	ROW G
10	0	0																			4500	ROW H
10	0	0																			4500	ROW J
4																					0	ROW K
59	TOTAL																					



**FOR INFORMATION**

Government of Western Australia  
Public Transport Authority

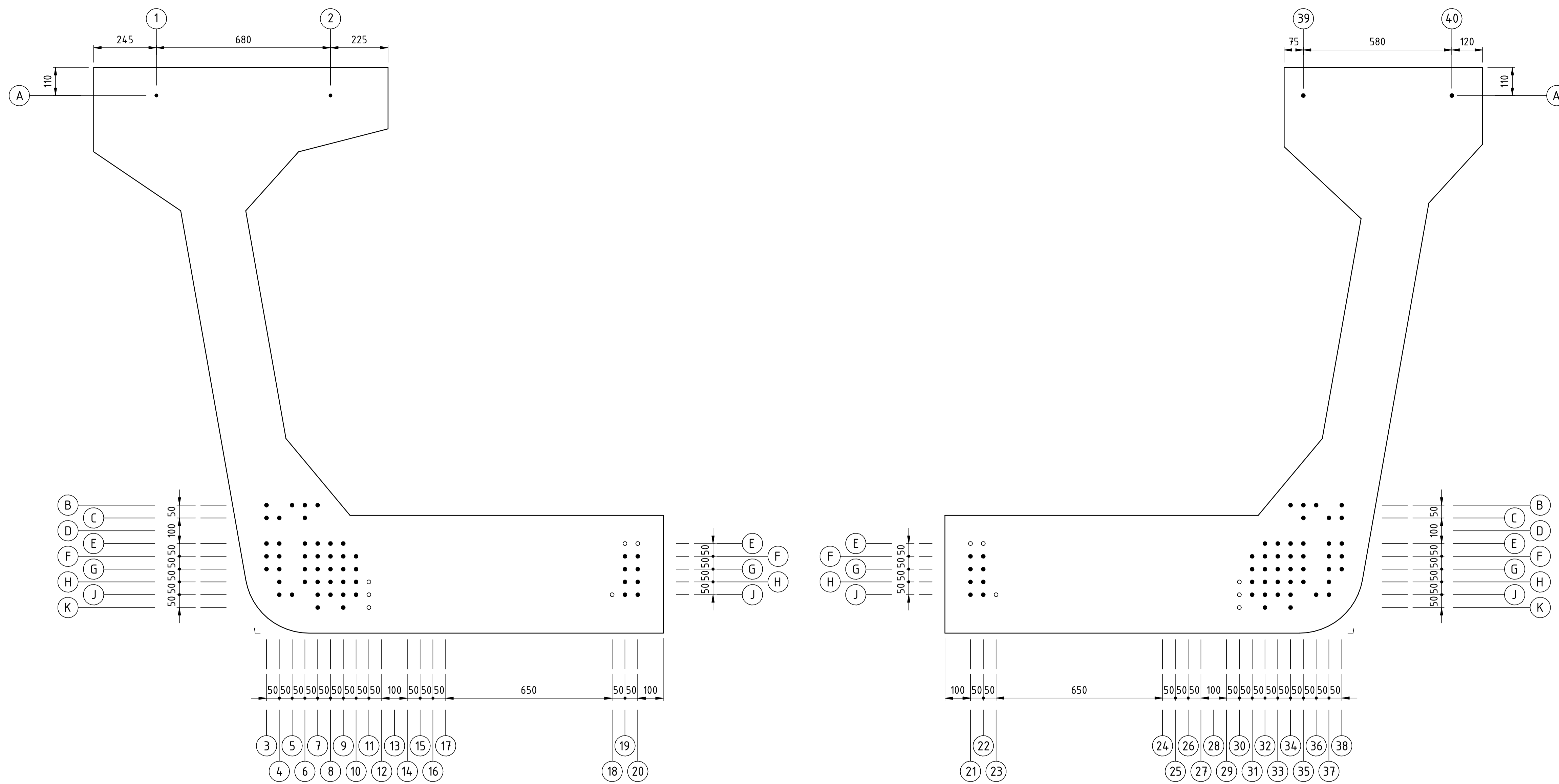
VICTORIA PARK TO CANNING  
LEVEL CROSSING REMOVAL

PROJECT WIDE - CIVIL STRUCTURES  
VIADUCT  
L-BEAM - PRE-STRESSING DETAILS - SHEET 4  
PTA Drawing No: 00521

REV	DATE	ISSUED FOR INFORMATION	CC	LR	RP	WS
A01	21.06.22	AMENDMENT	DSN	DRN	CHK	APP
ORIG SIZE		AT ORIGINAL PLOT SIZE		This document must not be copied without PTA's written permission, and the contents thereof must not be imparted to a third party nor be used for any unauthorised purpose.		

Contractor No: LXR-PW-Z0-GN-ST-CS-M3D-00002.rvt

VALIDATION	REFERENCES	SCALE	DESIGNED
SIGNATURE		1 : 10	C.CHANG
DATE		DATUM	DRAWN
DATE APPROVED		HORIZONTAL: PCG20	L.RADICI
		VERTICAL: AHD71	CHECKED
			R.PEYILA
			APPROVED
			W.SCHWARZ
			DATE
			21.06.22



**EXTERNAL L-BEAM**  
SCALE 1:10

**INTERNAL L-BEAM**  
SCALE 1:10

**PRE-STRESSING STRAND ARRANGEMENT  
(TYPICAL 26.2m BEAM) ON VIADUCT**

**LEGEND:**

- - STRAND WITH NO DEBONDING
- 4500 - STRAND WITH DEBONDING LENGTH 'L'
- - NO STRAND
- ⊠ - PROVISIONAL STRANDS FOR ANCHOR BED (TBC - IDD PHASE)

STRAND No.	EXTERNAL L-BEAM (26.2m BEAM)																				STRANDS PER ROW
	DEBONDING LENGTH FROM EACH END (mm)																				
ROW A	0	0																			2
ROW B			0		4500	0	4500														4
ROW C			4500	0		4500															3
ROW D																					-
ROW E			0	4500		0	4500	0	4500												6
ROW F			4500	0		4500	0	4500	0	4500											9
ROW G			0	4500		0	4500	0	4500	0											9
ROW H			0		4500	0	4500	0	4500	0											8
ROW J			4500	0		4500	0	4500	0												8
ROW K																					2
TOTAL																				51	

STRANDS PER ROW	INTERNAL L-BEAM (26.2m BEAM)																				STRAND No.
	DEBONDING LENGTH FROM EACH END (mm)																				
2																					ROW A
4																					ROW B
3																					ROW C
-																					ROW D
6																					ROW E
9																					ROW F
9																					ROW G
8																					ROW H
8																					ROW J
2																					ROW K
51	TOTAL																				

1:10 (A1) / 1:20 (A3) 0 100mm 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500

**FOR INFORMATION**

Government of Western Australia  
Public Transport Authority

VICTORIA PARK TO CANNING  
LEVEL CROSSING REMOVAL

PROJECT WIDE - CIVIL STRUCTURES  
VIADUCT  
L-BEAM - PRE-STRESSING DETAILS - SHEET 5  
PTA Drawing No: 00522

REV	DATE	AMENDMENT	DSN	DRN	CHK	APP
A01	21.06.22	ISSUED FOR INFORMATION				

ORIG SIZE: A1  
AT ORIGINAL PLOT SIZE

This document must not be copied without PTA's written permission, and the contents thereof must not be imparted to a third party nor be used for any unauthorised purpose.

**ARMADALE LINE UPGRADE ALLIANCE**  
Innovation to Reality

Contractor No: LXR-PW-Z0-GN-ST-CS-DWG-00522

VALIDATION

SIGNATURE

DATE APPROVED

REFERENCES

SCALE: 1:10

DATUM

HORIZONTAL: PCG20  
VERTICAL: AHD71

DESIGNED: C.CHANG  
DRAWN: L.RADICI  
CHECKED: R.PEYILA  
APPROVED: W.SCHWARZ  
DATE: 21.06.22