

# East West Connections – Business Case for Implementation

Detailed Business Case to Proceed from Initiation  
to Implementation – PART A

VOLUME 2 OF 2

23 DECEMBER 2015

FINAL DRAFT

## APPENDICES (Volume 2)

**APPENDIX Q: ONEHUNGA-PENROSE CONNECTIONS – PREFERRED APPROACH TECHNICAL DRAWINGS**

**APPENDIX R: MĀNGERE, ŌTĀHUHU, SYLVIA PARK CONNECTIONS – PREFERRED APPROACH TECHNICAL DRAWINGS**





## **APPENDIX Q**

Onehunga–Penrose Connections –  
Preferred Approach Technical Drawings

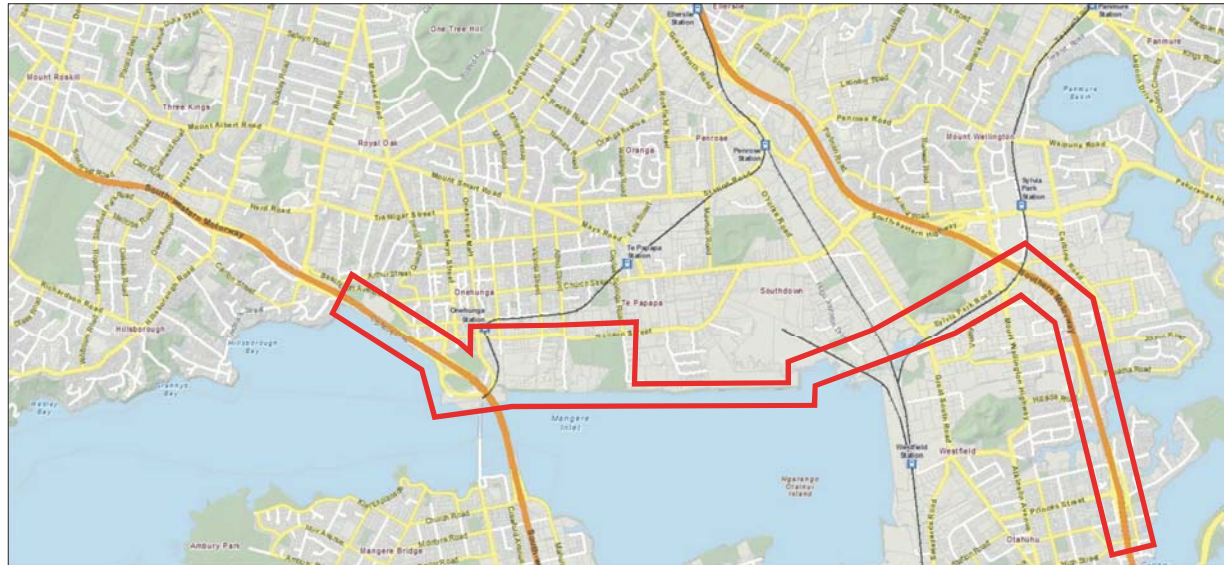


# NZ TRANSPORT AGENCY/ AUCKLAND TRANSPORT

## EAST WEST CONNECTION

### DETAILED BUSINESS CASE

### ONEHUNGA - PENROSE CONNECTION



LOCALITY PLAN

#### DISCLAIMER

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THE ACTUAL FOOTPRINT AND LOCATION IS SUBJECT TO CHANGE AS THE DESIGN IS FURTHER DEVELOPED.

PRELIMINARY

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/15</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date



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Drawn RB	Designer RB
Drafting Check	Design Check
Approved (Project Director)	Date
Scale	NOT TO SCALE

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

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTION</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION COVER SHEET</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-G001</b>
Rev:	<b>B</b>



DRAWING LIST		REV	REV
DRAWING FILE LOCATION: Y:\3818683\CAD\Drawings\05 CONCEPT OPTION			
PROJECT EXTERNAL REFERENCE LOCATION: Y:\3818683\CAD\Xref\05 CONCEPT OPTIONS			
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GENERAL DRAWING			
3818683-G001	COVERSHEET	A	B
3818683-G002	DRAWING LIST	A	B
3818683-G003	GENERAL NOTES AND LEGEND	A	B
3818683-G005	KEY PLAN	A	B
DETAILED BUSINESS CASE - RECOMMENDED OPTION			
3818683-C101	RECOMMENDED OPTION - SHEET 1 OF 29	A	B
3818683-C102	RECOMMENDED OPTION - SHEET 2 OF 29	A	B
3818683-C103	RECOMMENDED OPTION - SHEET 3 OF 29	A	B
3818683-C104	RECOMMENDED OPTION - SHEET 4 OF 29	A	B
3818683-C105	RECOMMENDED OPTION - SHEET 5 OF 29	A	B
3818683-C106	RECOMMENDED OPTION - SHEET 6 OF 29	A	B
3818683-C107	RECOMMENDED OPTION - SHEET 7 OF 29	A	B
3818683-C108	RECOMMENDED OPTION - SHEET 8 OF 29	A	B
3818683-C109	RECOMMENDED OPTION - SHEET 9 OF 29	A	B
3818683-C110	RECOMMENDED OPTION - SHEET 10 OF 29	A	B
3818683-C111	RECOMMENDED OPTION - SHEET 11 OF 29	A	B
3818683-C112	RECOMMENDED OPTION - SHEET 12 OF 29	A	B
3818683-C113	RECOMMENDED OPTION - SHEET 13 OF 29	A	B
3818683-C114	RECOMMENDED OPTION - SHEET 14 OF 29	A	B
3818683-C115	RECOMMENDED OPTION - SHEET 15 OF 29	A	B
3818683-C116	RECOMMENDED OPTION - SHEET 16 OF 29	A	B
3818683-C117	RECOMMENDED OPTION - SHEET 17 OF 29	A	B
3818683-C118	RECOMMENDED OPTION - SHEET 18 OF 29	A	B
3818683-C119	RECOMMENDED OPTION - SHEET 19 OF 29	A	B
3818683-C120	RECOMMENDED OPTION - SHEET 20 OF 29	A	B
3818683-C121	RECOMMENDED OPTION - SHEET 21 OF 29	A	B
3818683-C122	RECOMMENDED OPTION - SHEET 22 OF 29	A	B
3818683-C123	RECOMMENDED OPTION - SHEET 23 OF 29	A	B
3818683-C124	RECOMMENDED OPTION - SHEET 24 OF 29	A	B
3818683-C125	RECOMMENDED OPTION - SHEET 25 OF 29	A	B
3818683-C126	RECOMMENDED OPTION - SHEET 26 OF 29	A	B
3818683-C127	RECOMMENDED OPTION - SHEET 27 OF 29	A	B
3818683-C128	RECOMMENDED OPTION - SHEET 28 OF 29	A	B
3818683-C129	RECOMMENDED OPTION - SHEET 29 OF 29	A	B
WALKING AND CYCLING ROUTE			
3818683-C081	RECOMMENDED OPTION - WALKING AND CYCLING ROUTE - SHEET 1	A	B
3818683-C082	RECOMMENDED OPTION - WALKING AND CYCLING ROUTE - SHEET 2	A	B
3818683-C083	RECOMMENDED OPTION - WALKING AND CYCLING ROUTE - SHEET 3	A	B
3818683-C084	RECOMMENDED OPTION - WALKING AND CYCLING ROUTE - SHEET 4	A	B
3818683-C085	RECOMMENDED OPTION - WALKING AND CYCLING ROUTE - SHEET 5	A	B
STAGED OPTION			
3818683-C200	STAGING PLAN		
3818683-C201	STAGED OPTION - SHEET 1 OF 8	A	B
3818683-C202	STAGED OPTION - SHEET 2 OF 8	A	B
3818683-C203	STAGED OPTION - SHEET 3 OF 8	A	B
3818683-C204	STAGED OPTION - SHEET 4 OF 8	A	B

3818683-C205	STAGED OPTION - SHEET 5 OF 8	A	B
3818683-C206	STAGED OPTION - SHEET 6 OF 8	A	B
3818683-C207	STAGED OPTION - SHEET 7 OF 8	A	B
3818683-C208	STAGED OPTION - SHEET 8 OF 8	A	B
NEILSON STREET INTERCHANGE			
3818683-C400	NEILSON STREET INTERCHANGE - REF STRINGS	A	B
3818683-C401	NEILSON STREET INTERCHANGE - MC00	A	B
3818683-C402	NEILSON STREET INTERCHANGE - MCE0	A	B
3818683-C403	NEILSON STREET INTERCHANGE - MCE0	A	B
3818683-C404	NEILSON STREET INTERCHANGE - MCF0	A	B
3818683-C405	NEILSON STREET INTERCHANGE - MCG0	A	B
3818683-C406	NEILSON STREET INTERCHANGE - MCJ0	A	B
3818683-C407	NEILSON STREET INTERCHANGE - MCJ0	A	B
3818683-C408	NEILSON STREET INTERCHANGE - MCN0	A	B
3818683-C409	NEILSON STREET INTERCHANGE - MCN0	A	B
3818683-C410	NEILSON STREET INTERCHANGE - MCN0	A	B
DETAILED BUSINESS CASE - RECOMMENDED OPTION - LONG SECTION			
3818683-C422	HUGO JOHNSTON DR WESTBOUND RAMP - MC00		
3818683-C423	HUGO JOHNSTON DR WESTBOUND RAMP - MCY0		
3818683-C431	NEILSON STREET INTER TO GREAT SOUTH RD - MC00	A	B
3818683-C432	NEILSON STREET INTER TO GREAT SOUTH RD - MC00	A	B
3818683-C433	NEILSON STREET INTER TO GREAT SOUTH RD - MC00	A	B
3818683-C434	NEILSON STREET INTER TO GREAT SOUTH RD - MC00	A	B
3818683-C435	NEILSON STREET INTER TO GREAT SOUTH RD - MC00	A	B
3818683-C436	NEILSON STREET INTER TO GREAT SOUTH RD - MC00	A	B
3818683-C437	NEILSON STREET INTER TO GREAT SOUTH RD - MC00	A	B
3818683-C438	NEILSON STREET INTER TO GREAT SOUTH RD - MC00	A	B
3818683-C439	NEILSON STREET INTER TO GREAT SOUTH RD - MC00	A	B
3818683-C440	NEILSON STREET INTER TO GREAT SOUTH RD - MC00	A	B
3818683-C441	NEILSON STREET INTER TO GREAT SOUTH RD - MC00	A	B
3818683-C442	NEILSON STREET INTER TO GREAT SOUTH RD - MC00	A	B
3818683-C443	NEILSON STREET INTER TO GREAT SOUTH RD - MC00	A	B
3818683-C444	GREAT SOUTH RD TO MT WELLINGTON ON RAMP - MC20	A	B
3818683-C445	GREAT SOUTH RD TO MT WELLINGTON ON RAMP - MC20	A	B
3818683-C446	GREAT SOUTH RD TO MT WELLINGTON ON RAMP - MC20	A	B
3818683-C447	GREAT SOUTH RD TO MT WELLINGTON ON RAMP - MC20	A	B
3818683-C448	GREAT SOUTH RD TO MT WELLINGTON ON RAMP - MC20	A	B
3818683-C449	MT WELLINGTON TO GREAT SOUTH RD OFF RAMP - MC30	A	B
3818683-C450	MT WELLINGTON TO GREAT SOUTH RD OFF RAMP - MC30	A	B
3818683-C451	MT WELLINGTON TO GREAT SOUTH RD OFF RAMP - MC30	A	B
3818683-C452	MT WELLINGTON TO GREAT SOUTH RD OFF RAMP - MC30	A	B
3818683-C453	MT WELLINGTON TO GREAT SOUTH RD OFF RAMP - MC30	A	B
3818683-C455	CAPTAIN SPRINGS/ EWC STAGED OPTION - LONG SECTION - SHEET 1 OF 2 - MC10	A	B

3818683-C456	CAPTAIN SPRINGS/ EWC STAGED OPTION - LONG SECTION - SHEET 2 OF 2 - MC10	A	B
TYPICAL CROSS SECTIONS			
3818683-C501	TYPICAL CROSS SECTION - SHEET 1 OF 3	A	B
3818683-C502	TYPICAL CROSS SECTION - SHEET 2 OF 3	A	B
3818683-C503	TYPICAL CROSS SECTION - SHEET 3 OF 3	A	B
3818683-C511	SH20 TO GREAT SOUTH RD	A	B
3818683-C512	SH20 TO GREAT SOUTH RD	A	B
3818683-C513	SH20 TO GREAT SOUTH RD	A	B
3818683-C514	SH20 TO GREAT SOUTH RD	A	B
3818683-C515	SH20 TO GREAT SOUTH RD	A	B
3818683-C516	SH20 TO GREAT SOUTH RD	A	B
3818683-C517	GREAT SOUTH RD TO PRINCES ST	A	B
3818683-C518	GREAT SOUTH RD TO PRINCES ST	A	B
3818683-C519	GREAT SOUTH RD TO PRINCES ST		
3818683-C520	GREAT SOUTH RD TO PRINCES ST		
3818683-C521	NEILSON STREET INTERCHANGE - CROSS SECTION - MCN0	A	B
3818683-C522	NEILSON STREET INTERCHANGE - CROSS SECTION - MCN0	A	B
3818683-C523	NEILSON STREET INTERCHANGE - CROSS SECTION - MCN0	A	B
3818683-C524	NEILSON STREET INTERCHANGE - CROSS SECTION - MCN0	A	B
3818683-C525	NEILSON STREET INTERCHANGE - CROSS SECTION - MCN0	A	B
3818683-C526	NEILSON STREET INTERCHANGE - CROSS SECTION - MCN0	A	B
3818683-C527	NEILSON STREET INTERCHANGE - CROSS SECTION - MCN0	A	B
DETAILED BUSINESS CASE - RECOMMENDED OPTION - PROPERTY PLANS			
GIS-3818683-041-1	PROPERTY PLANS	A	B
GIS-3818683-041-2	PROPERTY PLANS	A	B
GIS-3818683-041-3	PROPERTY PLANS	A	B
GIS-3818683-041-4	PROPERTY PLANS	A	B
GIS-3818683-041-5	PROPERTY PLANS	A	B
GIS-3818683-041-6	PROPERTY PLANS	A	B
GIS-3818683-041-7	PROPERTY PLANS	A	B
GIS-3818683-041-8	PROPERTY PLANS	A	B
GIS-3818683-041-9	PROPERTY PLANS	A	B
GIS-3818683-041-10	PROPERTY PLANS	A	B
GIS-3818683-041-11	PROPERTY PLANS	A	B
GIS-3818683-041-12	PROPERTY PLANS	A	B
GIS-3818683-041-13	PROPERTY PLANS	A	B
GIS-3818683-041-14	PROPERTY PLANS	A	B
GIS-3818683-041-15	PROPERTY PLANS	A	B
GIS-3818683-041-16	PROPERTY PLANS	A	B
GIS-3818683-041-17	PROPERTY PLANS	A	B

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B	REVISED DETAILED BUSINESS CASE	AN	11/06/16
A	ISSUED FOR COMMENT	RB	27/03/15
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Date
	Drawn	Job Manager	Project Director



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Drawn RB	Designer RB
Drafting Check	Design Check
Approved (Project Director)	Date
Scale NTS	This Drawing must not be used for Construction unless signed as Approved

Client Project Title

**NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTION**  
**DETAILED BUSINESS CASE - RECOMMENDED OPTION DRAWING LIST**

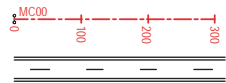
Original Size

**A1 Drawing No: 3818683-G002**

Rev: B

**PRELIMINARY**

**GENERAL LEGEND**



CONTROL LINE AND CHAINAGE



INDICATIVE ROAD ALIGNMENT



CUT SLOPE



FILL SLOPE



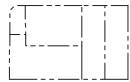
RETAINING WALL



BRIDGE STRUCTURE



EXISTING TRANSPOWER LINE



EXISTING PROPERTY BOUNDARIES



EXISTING WALKING AND CYCLING ROUTE



PROPOSED WALKING AND CYCLING ROUTE



FUTURE WALKING AND CYCLING ROUTE

**NOTES**

1. ALL MEASUREMENTS ARE IN METRES UNLESS OTHERWISE STATED.
2. EXISTING PROPERTY BOUNDARIES SOURCED FROM LINZ, 20 FEBRUARY 2015.
3. FOR DRAWING LIST, REFER TO DRAWING NO. 3818683-G002.
4. FOR OVERVIEW PLAN, REFER TO DRAWING NO. 381683-G005.

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**PRELIMINARY**

<b>B REVISED DETAILED BUSINESS CASE</b>				AN	11/08/16	
<b>A ISSUED FOR COMMENT</b>				RB	27/03/15	
No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date



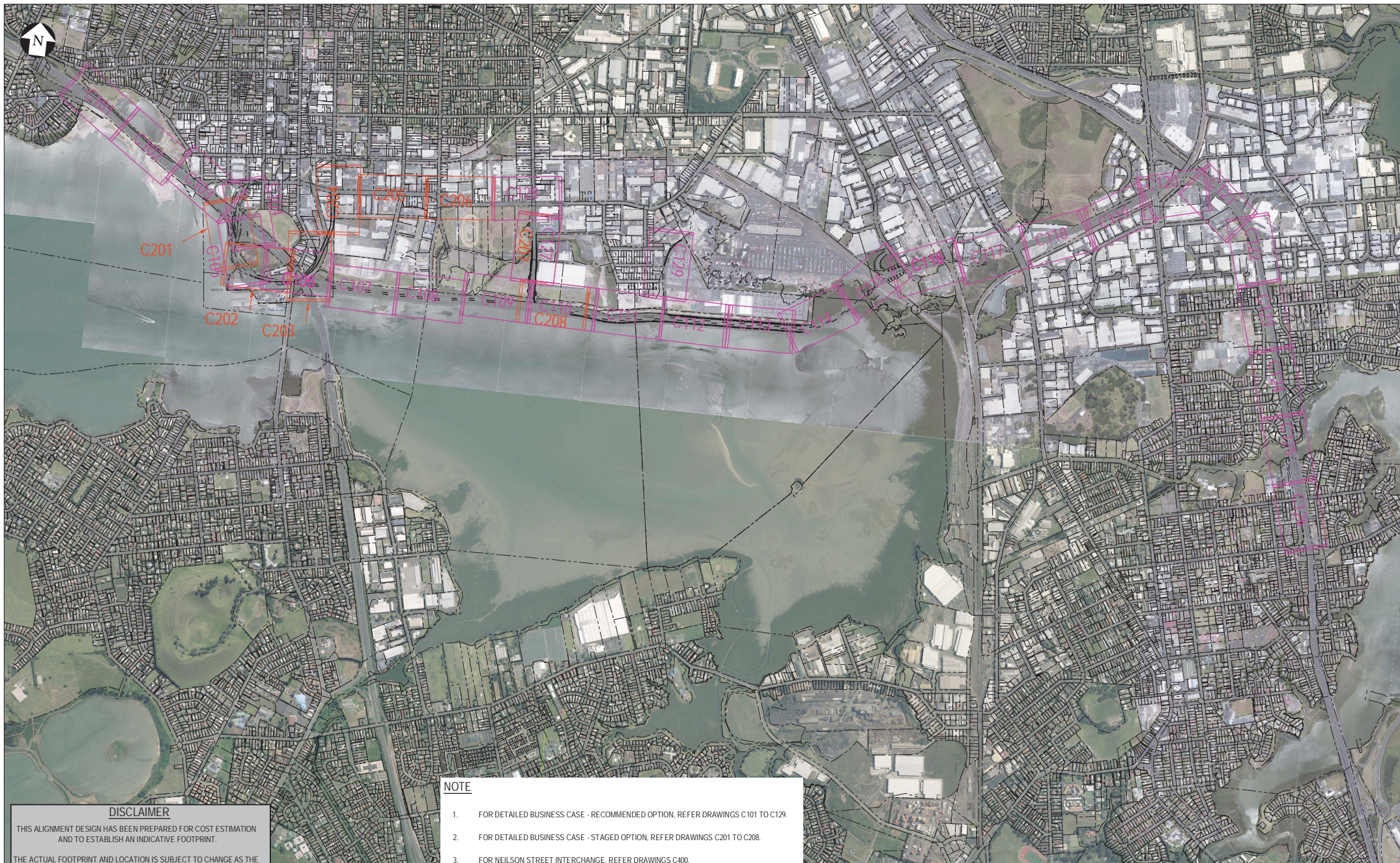
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Drawn	OG	Designer
Drafting Check		Design Check
Approved (Project Director)		
Date		
Scale	NTS	

Client	NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT		
Project	EAST WEST CONNECTION		
Title	DETAILED BUSINESS CASE - RECOMMENDED OPTION		
	GENERAL NOTES AND LEGEND		
Original Size	A1	Drawing No:	3818683-G003
		Rev:	B





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**NOTE**

1. FOR DETAILED BUSINESS CASE - RECOMMENDED OPTION, REFER DRAWINGS C101 TO C129.
2. FOR DETAILED BUSINESS CASE - STAGED OPTION, REFER DRAWINGS C201 TO C208.
3. FOR NELSON STREET INTERCHANGE, REFER DRAWINGS C400.

**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/06/16</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date



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Drafting Check		Design Check	
Approved (Project Director)			
Date			
Scale	N.T.S	This Drawing must not be used for Construction unless signed as Approved	

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTION</b>
Title	<b>DETAILED BUSINESS CASE KEY PLAN</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-G005</b>
Rev:	<b>B</b>





JOIN LINE - C101  
JOIN LINE - C102

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0 5 10 15 20 25m  
SCALE 1:500 AT ORIGINAL SIZE  
**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/06/15</b>	
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>	
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager Project Director Date



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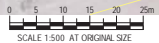
Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION LAYOUT SHEET 1 OF 29</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C101</b>
Rev:	<b>B</b>





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**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/16</b>	
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>	
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager Project Director Date

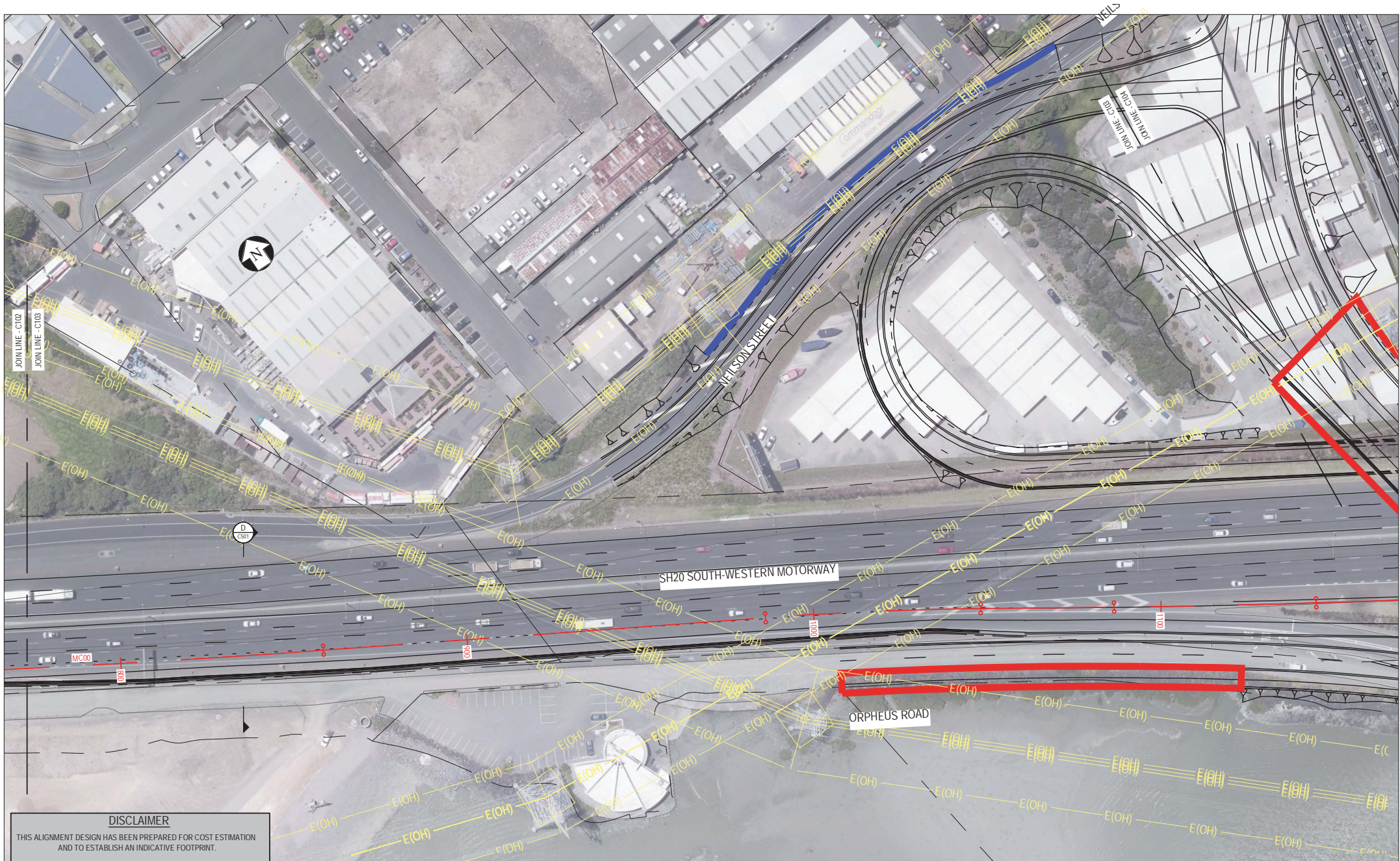


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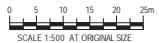
Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION LAYOUT SHEET 2 OF 29</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C102</b>
Rev:	<b>B</b>





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**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/06/16</b>	
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>	
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			Project Director	Date



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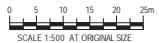
Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION LAYOUT SHEET 3 OF 29</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C103</b>
Rev:	<b>B</b>





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**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/06/15</b>
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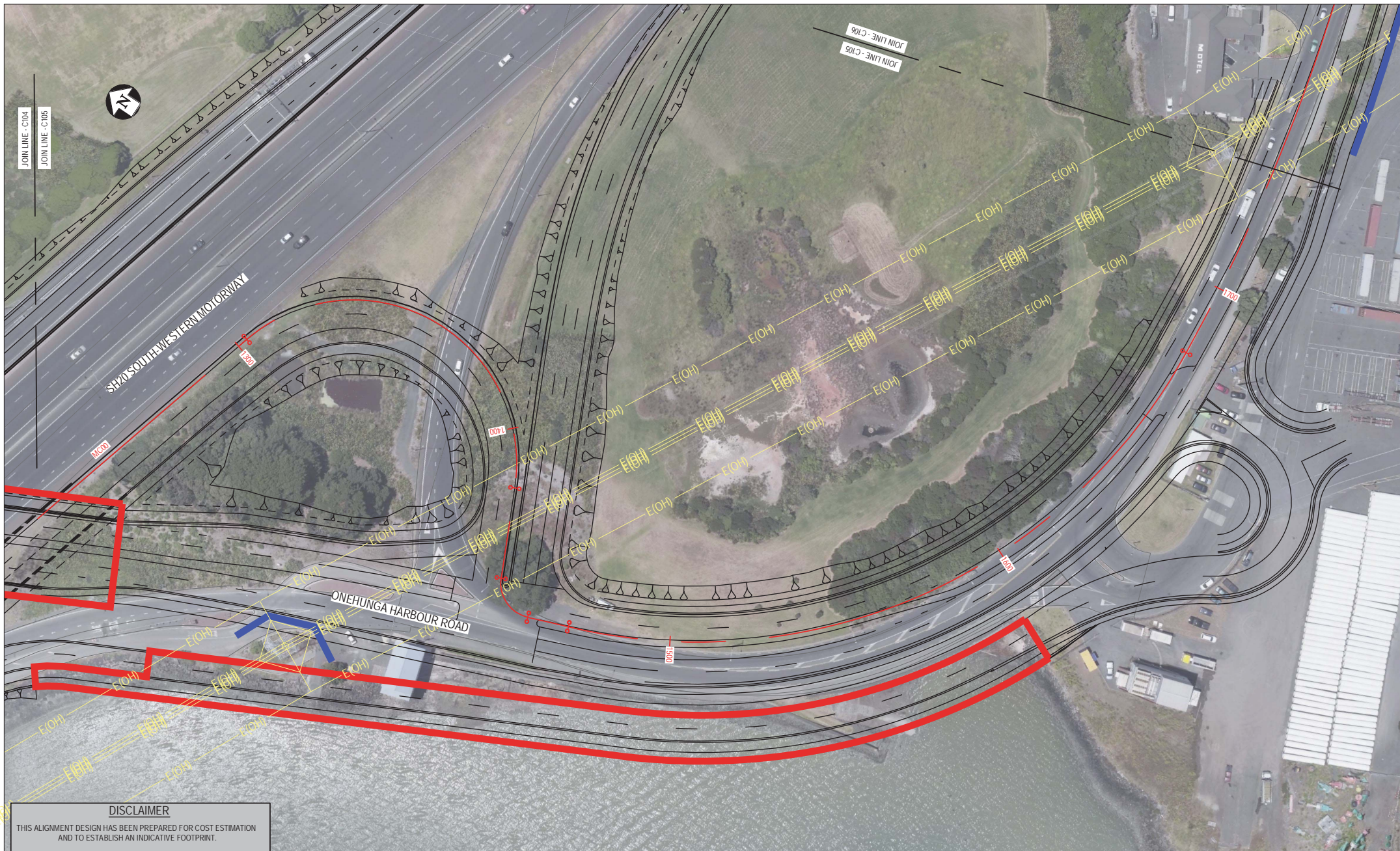


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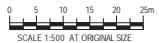
Drawn	RB	Designer	RB
Drafting Check		Design Check	
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Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION LAYOUT SHEET 4 OF 29</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C104</b>
Rev:	<b>B</b>





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**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/15</b>	
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>	
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager Project Director Date



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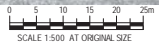
Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION LAYOUT SHEET 5 OF 29</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C105</b>
Rev:	<b>B</b>





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**PRELIMINARY**

<b>B REVISED DETAILED BUSINESS CASE</b>				<b>AN</b>	<b>11/06/15</b>
<b>A ISSUED FOR COMMENT</b>				<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director Date



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Drawn RB	Designer RB
Drafting Check	Design Check
Approved (Project Director)	Date
Scale AS SHOWN	This Drawing must not be used for Construction unless signed as Approved

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION LAYOUT SHEET 6 OF 29</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C106</b>
Rev:	<b>B</b>





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

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/15</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date



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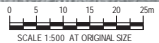
Drawn RB	Designer RB
Drafting Check	Design Check
Approved (Project Director)	Date
Scale AS SHOWN	This Drawing must not be used for Construction unless signed as Approved

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION LAYOUT SHEET 7 OF 29</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C107</b>
Rev:	<b>B</b>





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**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>		<b>11/08/15</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>		<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager
			Project Director	Date



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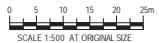
Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)			
Date			
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION LAYOUT SHEET 8 OF 29</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C108</b>
Rev:	<b>B</b>





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**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/15</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date



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Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION LAYOUT SHEET 9 OF 29</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C109</b>
Rev:	<b>B</b>





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**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/15</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date



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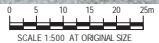
Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION LAYOUT SHEET 10 OF 29</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C110</b>
Rev:	<b>B</b>





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**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/15</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date



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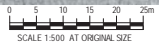
Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION LAYOUT SHEET 11 OF 29</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C111</b>
Rev:	<b>B</b>





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**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/15</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn
			Job Manager
			Project Director
			Date

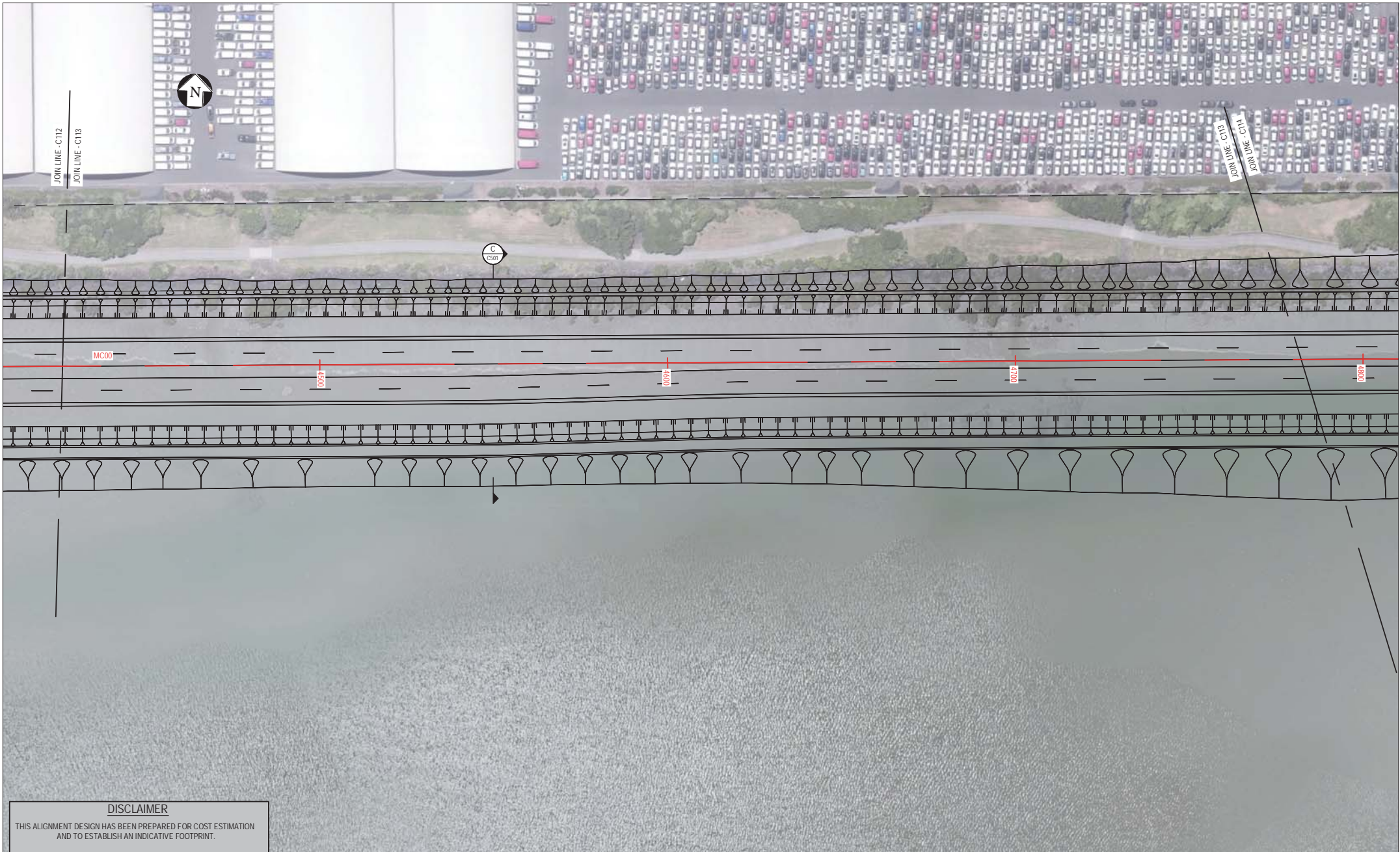


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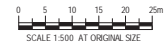
Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION LAYOUT SHEET 12 OF 29</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C112</b>
Rev:	<b>B</b>





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**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>		<b>11/08/16</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>		<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager
				Project Director
				Date

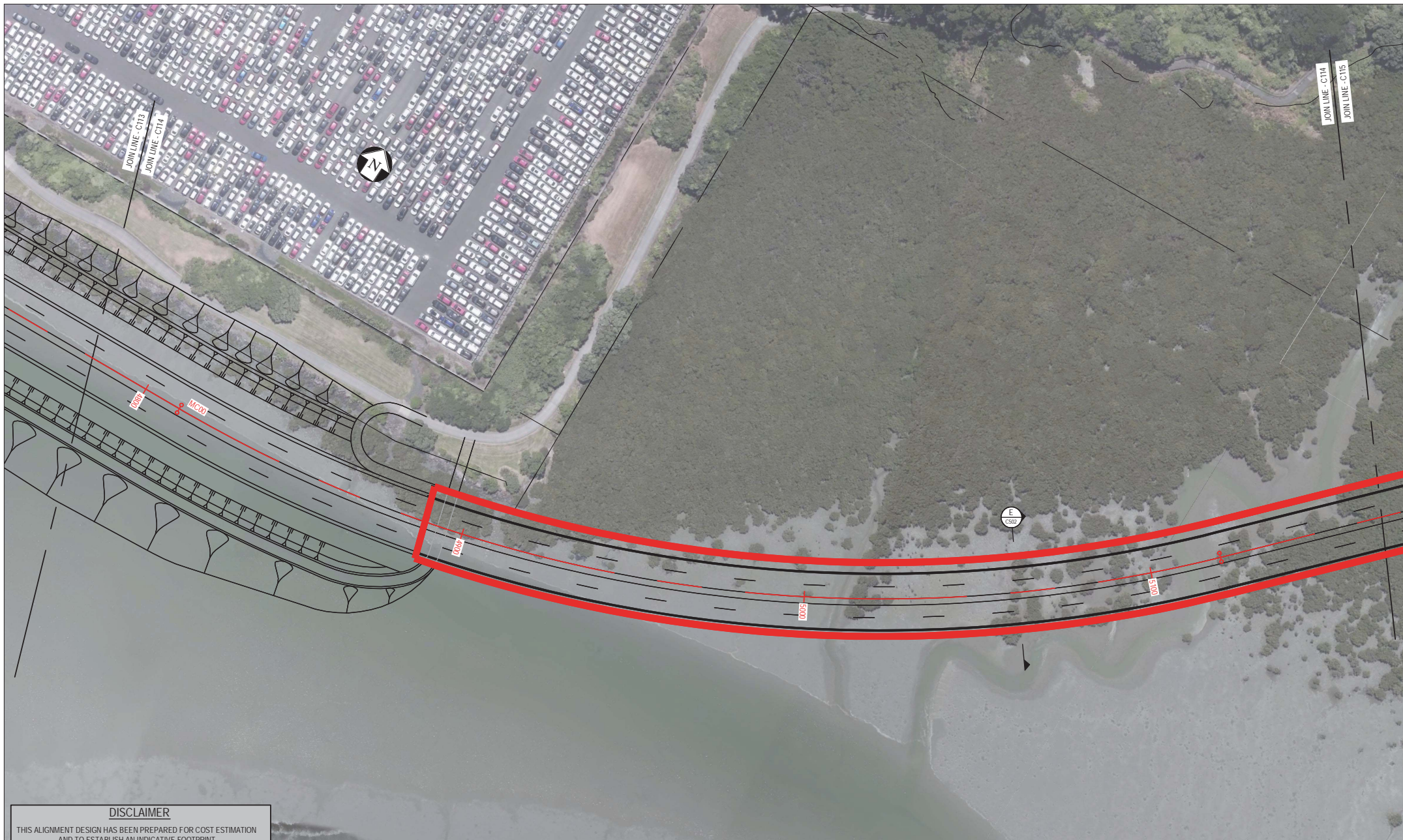


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Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)			
Date			
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION</b>
	<b>LAYOUT SHEET 13 OF 29</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C113</b>
Rev:	<b>B</b>





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<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/16</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn
			Job Manager
			Project Director
			Date

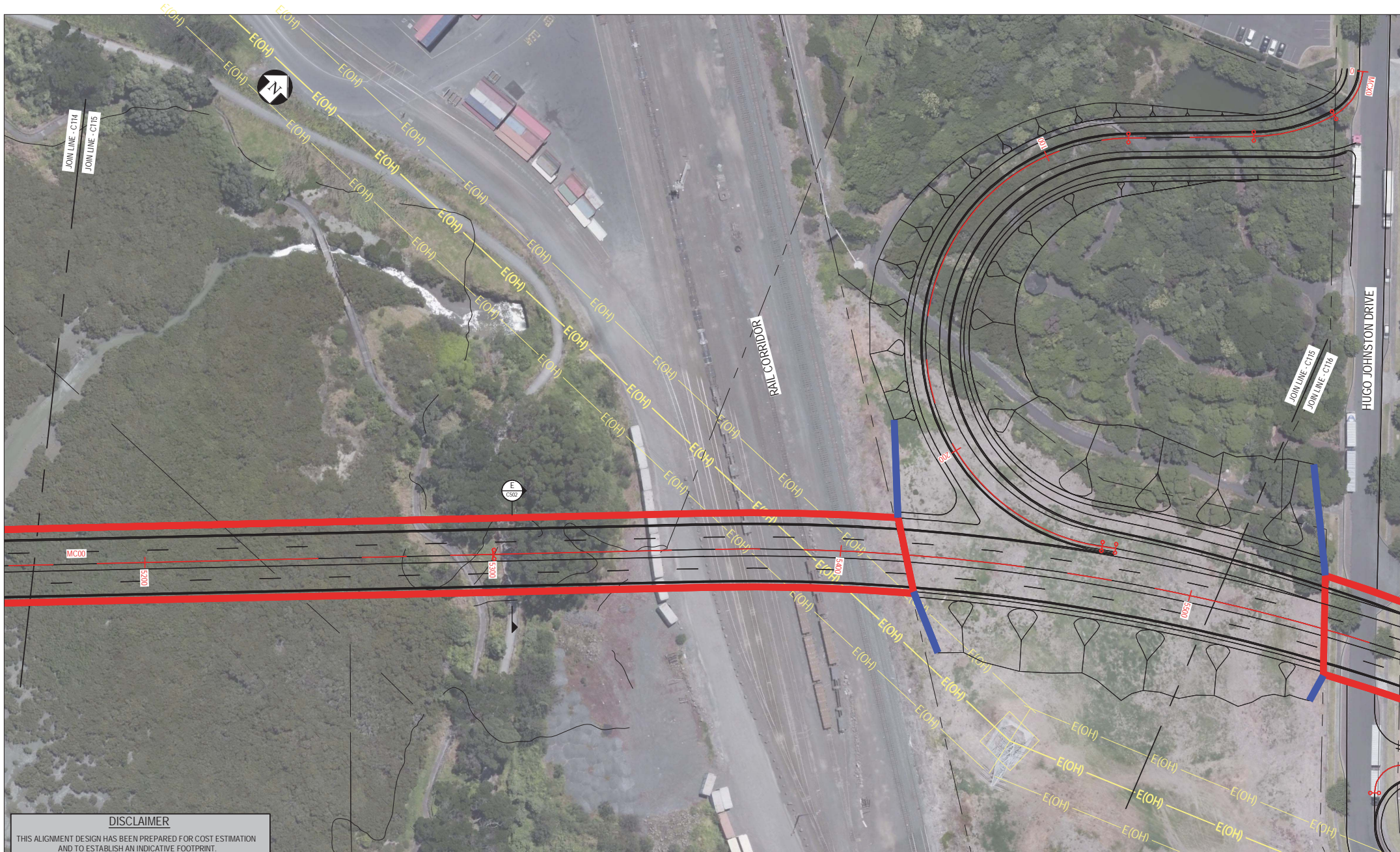


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Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION LAYOUT SHEET 14 OF 29</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C114</b>
Rev:	<b>B</b>





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0 5 10 15 20 25m  
 SCALE 1:500 AT ORIGINAL SIZE

<b>B REVISED DETAILED BUSINESS CASE</b>				AN	11/08/16
<b>A ISSUED FOR COMMENT</b>				RB	27/03/15
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director

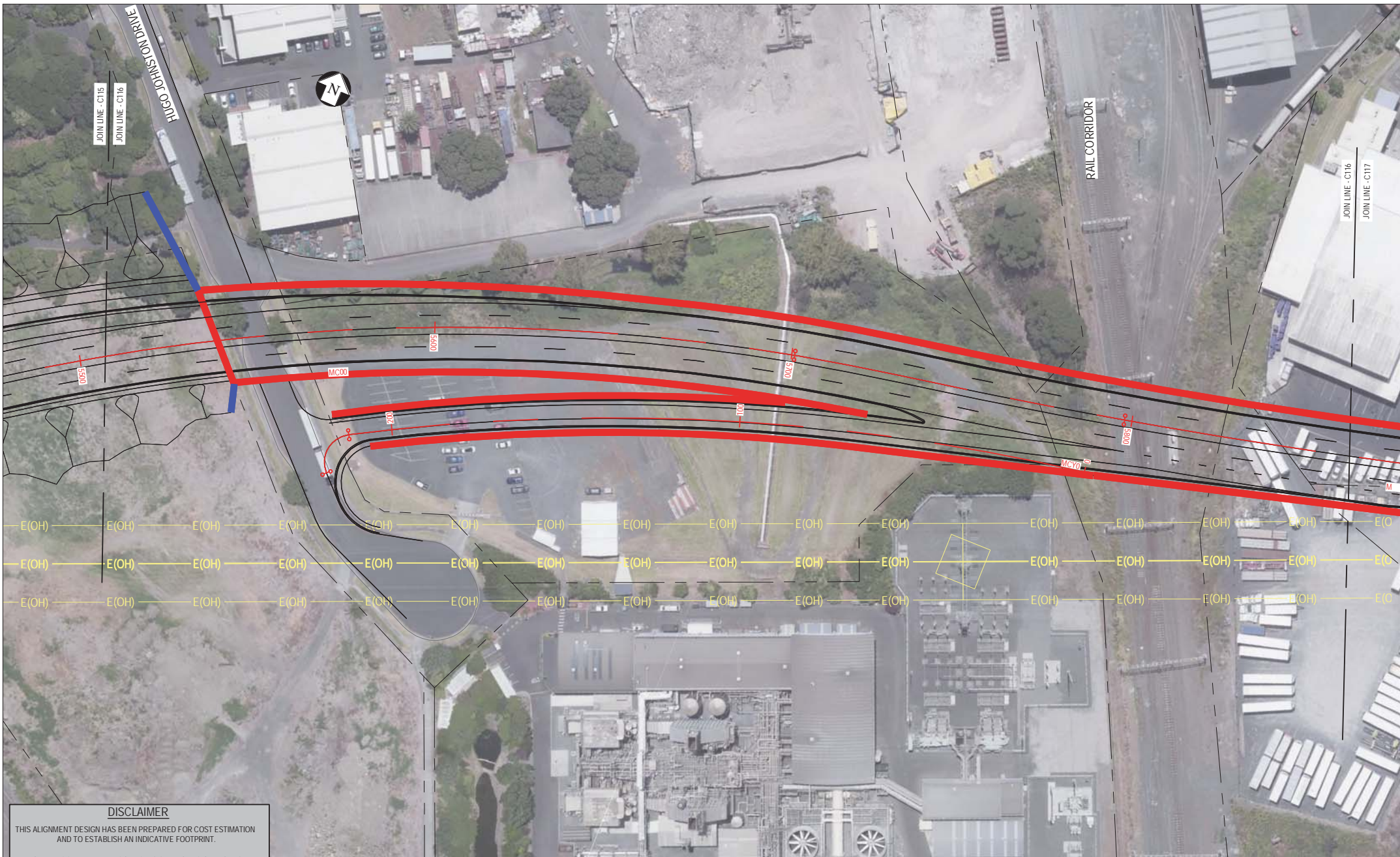


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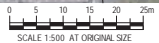
Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>		
Project	<b>EAST WEST CONNECTIONS</b>		
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION</b>		
	<b>LAYOUT SHEET 15 OF 29</b>		
Original Size	<b>A1</b>	Drawing No:	<b>3818683-C115</b>
		Rev:	<b>B</b>





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**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/16</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date

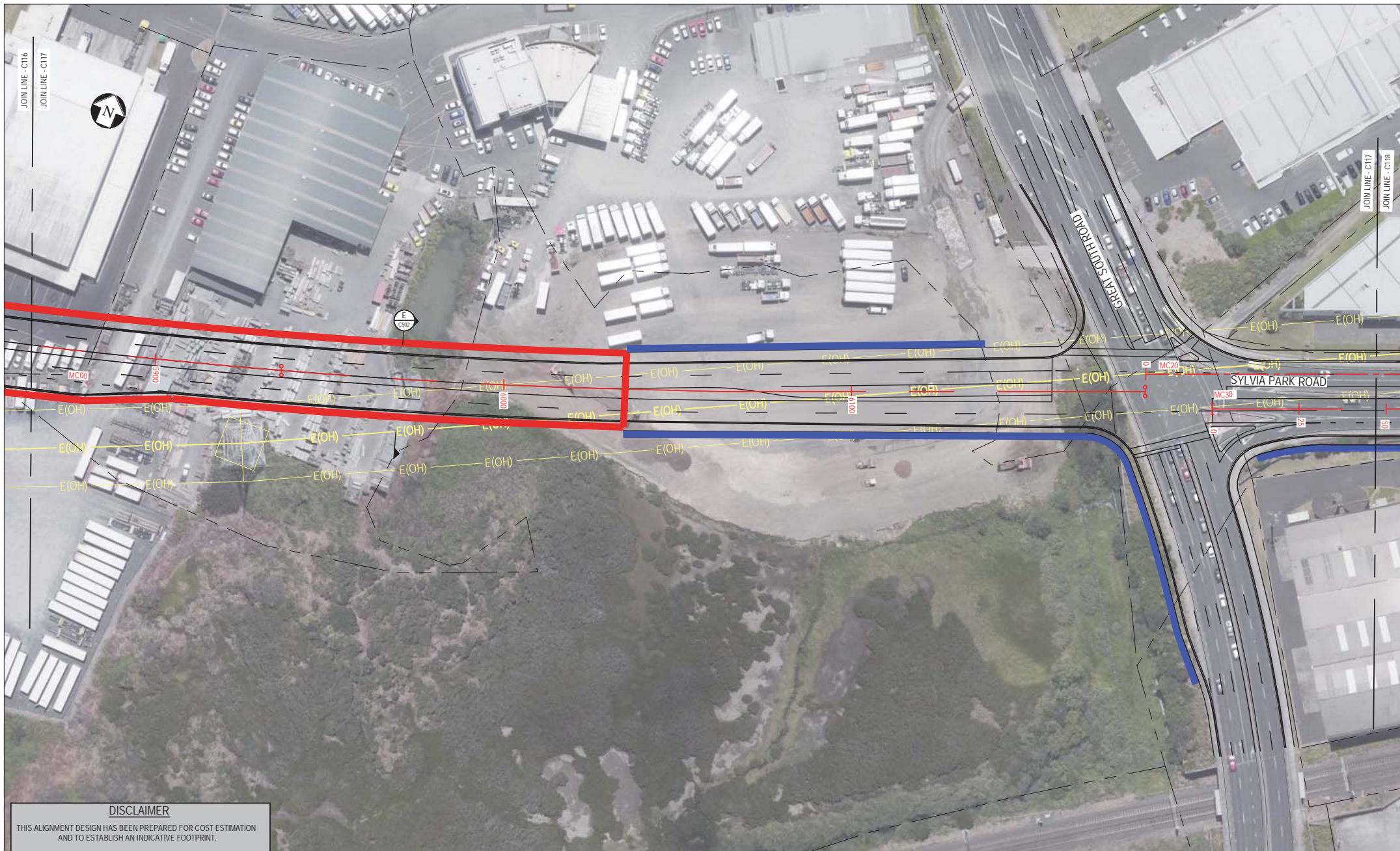


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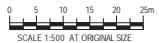
Drawn RB	Designer RB
Drafting Check	Design Check
Approved (Project Director)	Date
Scale AS SHOWN	This Drawing must not be used for Construction unless signed as Approved

Client Project Title	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTIONS DETAILED BUSINESS CASE - RECOMMENDED OPTION LAYOUT SHEET 16 OF 29</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C116</b>
Rev:	<b>B</b>





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**PRELIMINARY**

<b>B REVISED DETAILED BUSINESS CASE</b>				AN	11/08/16	
<b>A ISSUED FOR COMMENT</b>				RB	27/03/15	
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date



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Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN		

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>		
Project	<b>EAST WEST CONNECTIONS</b>		
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION</b>		
	<b>LAYOUT SHEET 17 OF 29</b>		
Original Size	A1	Drawing No:	3818683-C117
		Rev:	B





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**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/16</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date



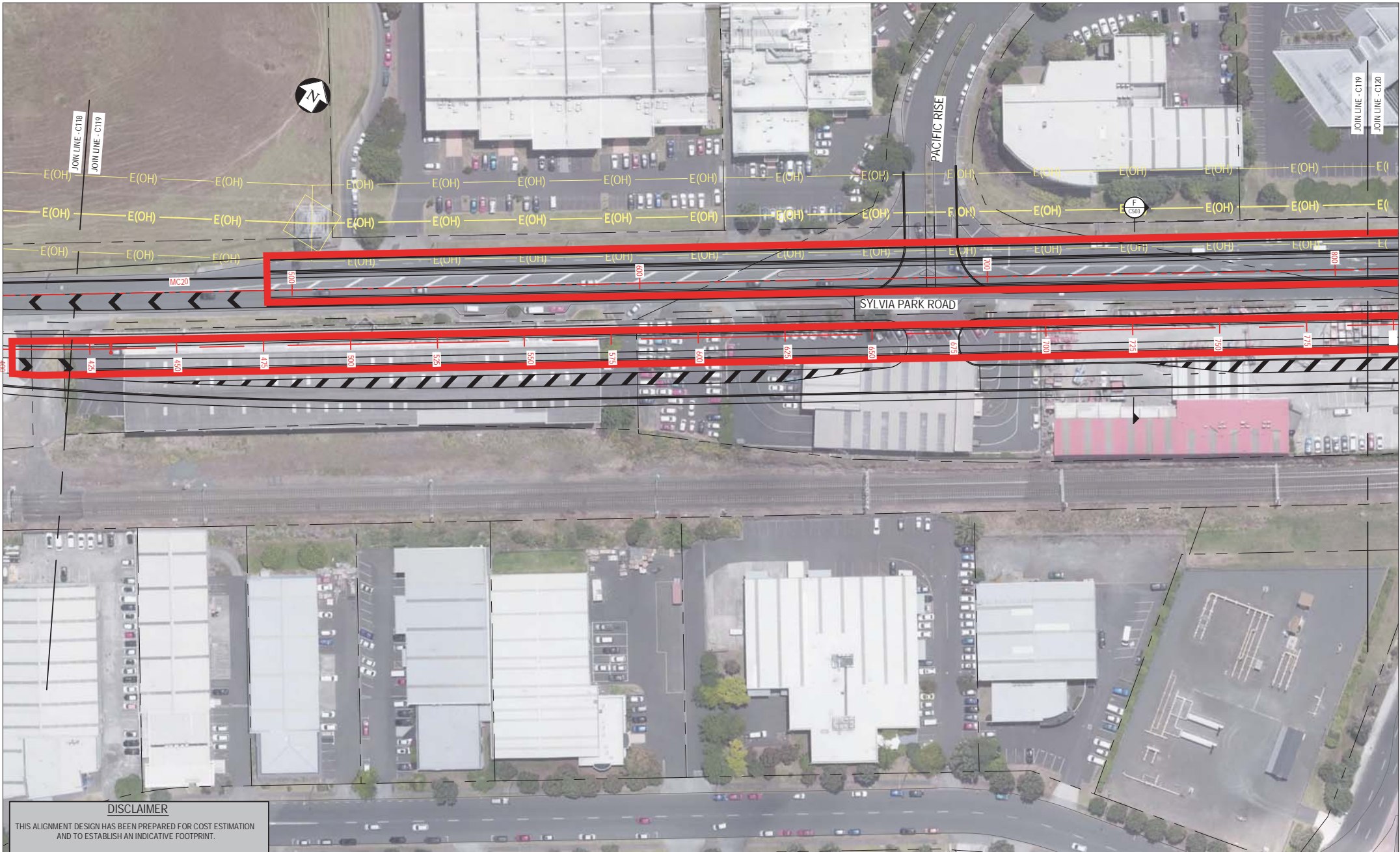
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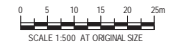
Drawn RB	Designer RB
Drafting Check	Design Check
Approved (Project Director)	Date
Scale AS SHOWN	This Drawing must not be used for Construction unless signed as Approved

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION LAYOUT SHEET 18 OF 29</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C118</b>
Rev:	<b>B</b>





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**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/06/15</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date

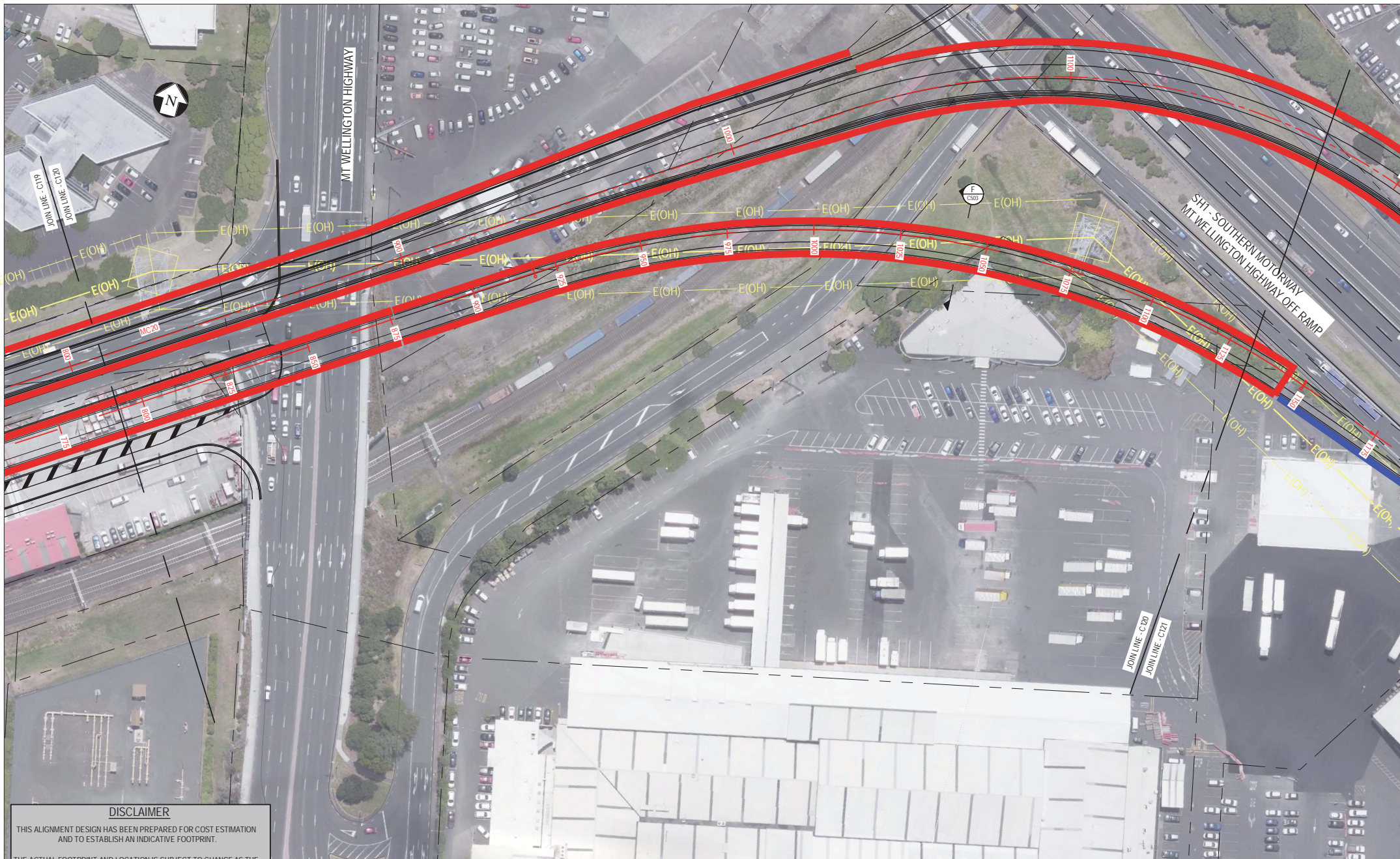


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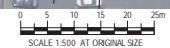
Drawn RB	Designer RB
Drafting Check	Design Check
Approved (Project Director)	Date
Scale AS SHOWN	This Drawing must not be used for Construction unless signed as Approved

Client Project Title	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTIONS DETAILED BUSINESS CASE - RECOMMENDED OPTION LAYOUT SHEET 19 OF 29</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C119</b>
Rev:	<b>B</b>





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**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/16</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date



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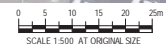
Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)			
Date			
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION LAYOUT SHEET 20 OF 29</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C120</b>
Rev:	<b>B</b>





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**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/15</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date



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Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION LAYOUT SHEET 21 OF 29</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C121</b>
Rev:	<b>B</b>





JOIN LINE - C12  
JOIN LINE - C13

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**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/06/16</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date

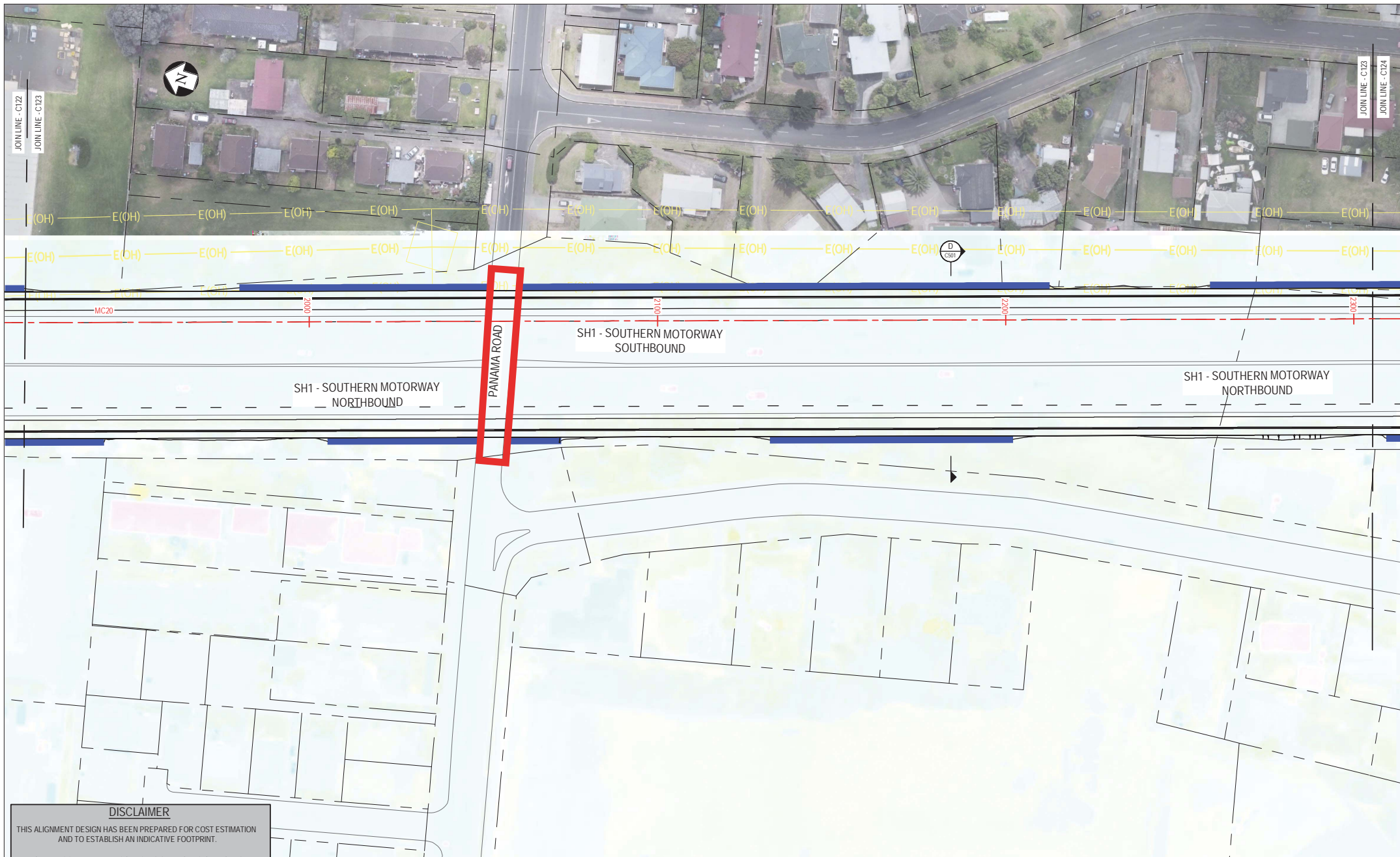


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Drawn RB	Designer RB
Drafting Check	Design Check
Approved (Project Director)	Date
Scale AS SHOWN	This Drawing must not be used for Construction unless signed as Approved

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION LAYOUT SHEET 22 OF 29</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C122</b>
Rev:	<b>B</b>





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

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/15</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date



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Drawn RB	Designer RB
Drafting Check	Design Check
Approved (Project Director)	Date
Scale AS SHOWN	This Drawing must not be used for Construction unless signed as Approved

Client Project	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION LAYOUT SHEET 23 OF 29</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C123</b>
Rev:	<b>B</b>





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

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/06/15</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Date
Drawn	Job Manager	Project Director	Date

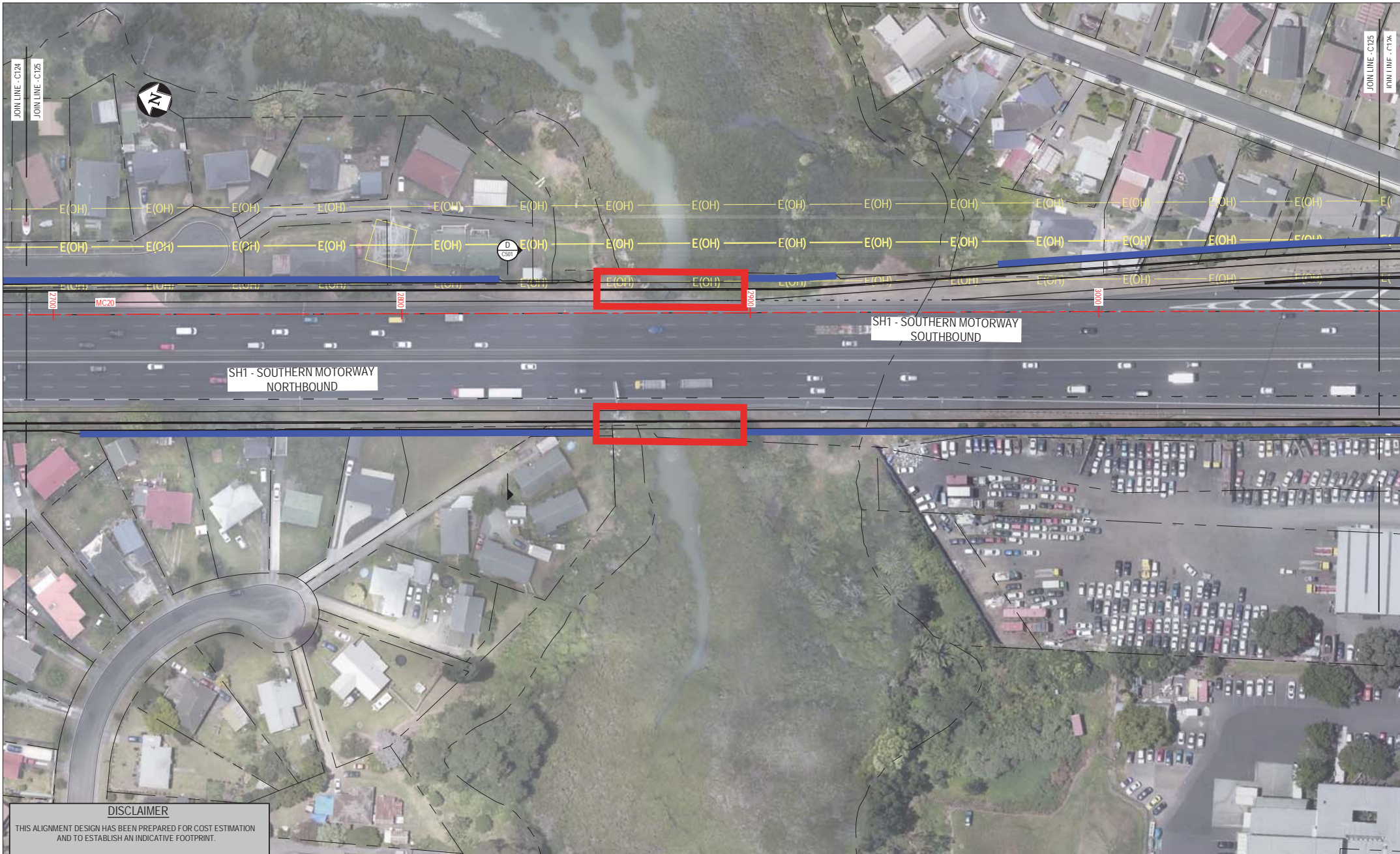


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 Conditions of Use:  
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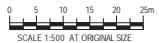
Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION LAYOUT SHEET 24 OF 29</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C124</b>
Rev:	<b>B</b>





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**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/16</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Date
Drawn	Job Manager	Project Director	Date



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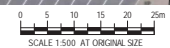
Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)			
Date			
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION LAYOUT SHEET 25 OF 29</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C125</b>
Rev:	<b>B</b>





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**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/06/16</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date



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Drawn RB	Designer RB
Drafting Check	Design Check
Approved (Project Director)	Date
Scale AS SHOWN	This Drawing must not be used for Construction unless signed as Approved

Client Project	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION LAYOUT SHEET 26 OF 29</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C126</b>
Rev:	<b>B</b>





JOIN LINE - C109  
JOIN LINE - C127

JOIN LINE - C128  
JOIN LINE - C127



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SCALE 1:500 AT ORIGINAL SIZE

**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/15</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date

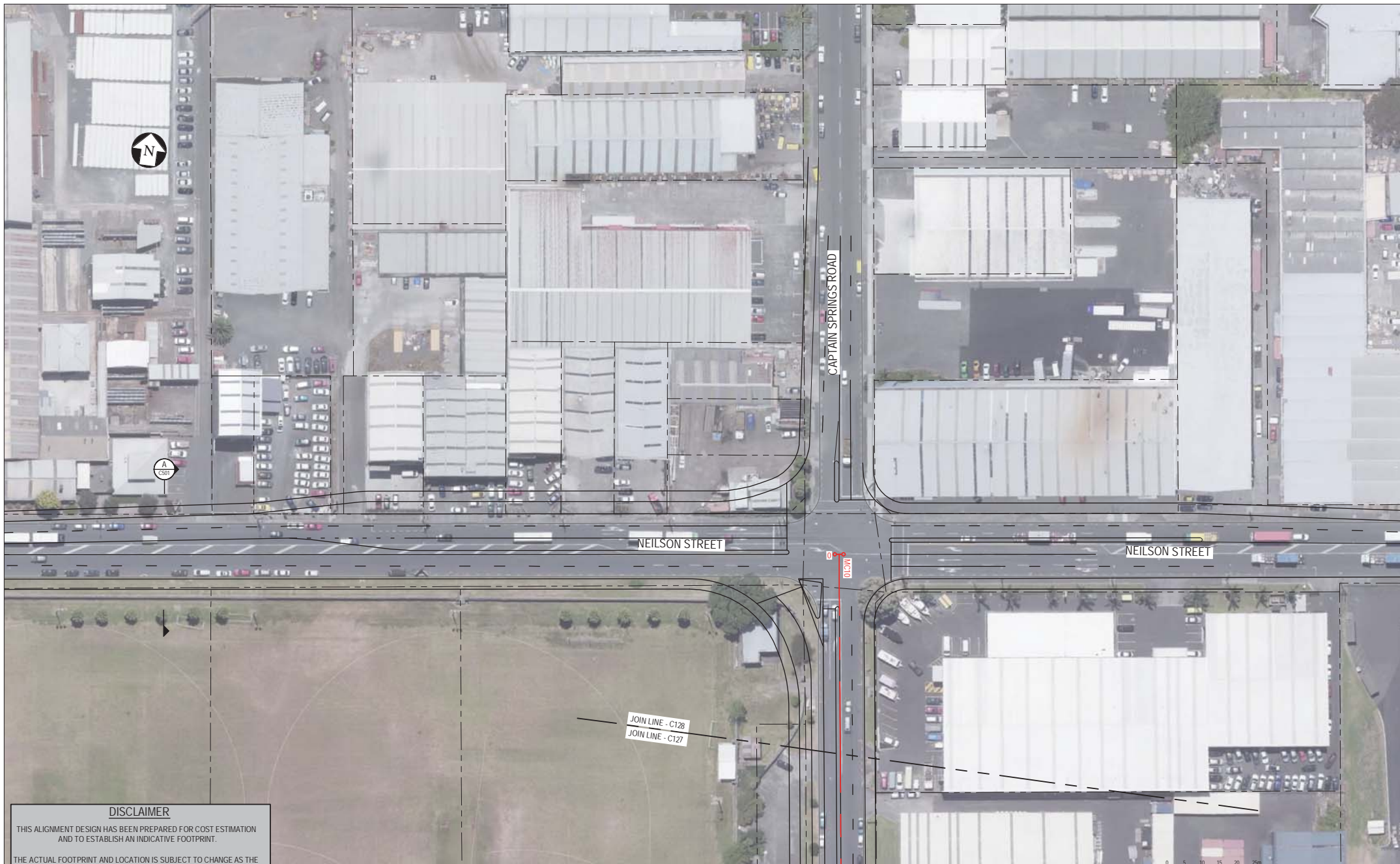


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Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)			
Date			
Scale	1:500 (A1), 1:1000 (A3)	This Drawing must not be used for Construction unless signed as Approved	

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION LAYOUT SHEET 27 OF 29</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C127</b>
Rev:	<b>B</b>





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

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/15</b>	
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>	
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager
			Project Director	Date

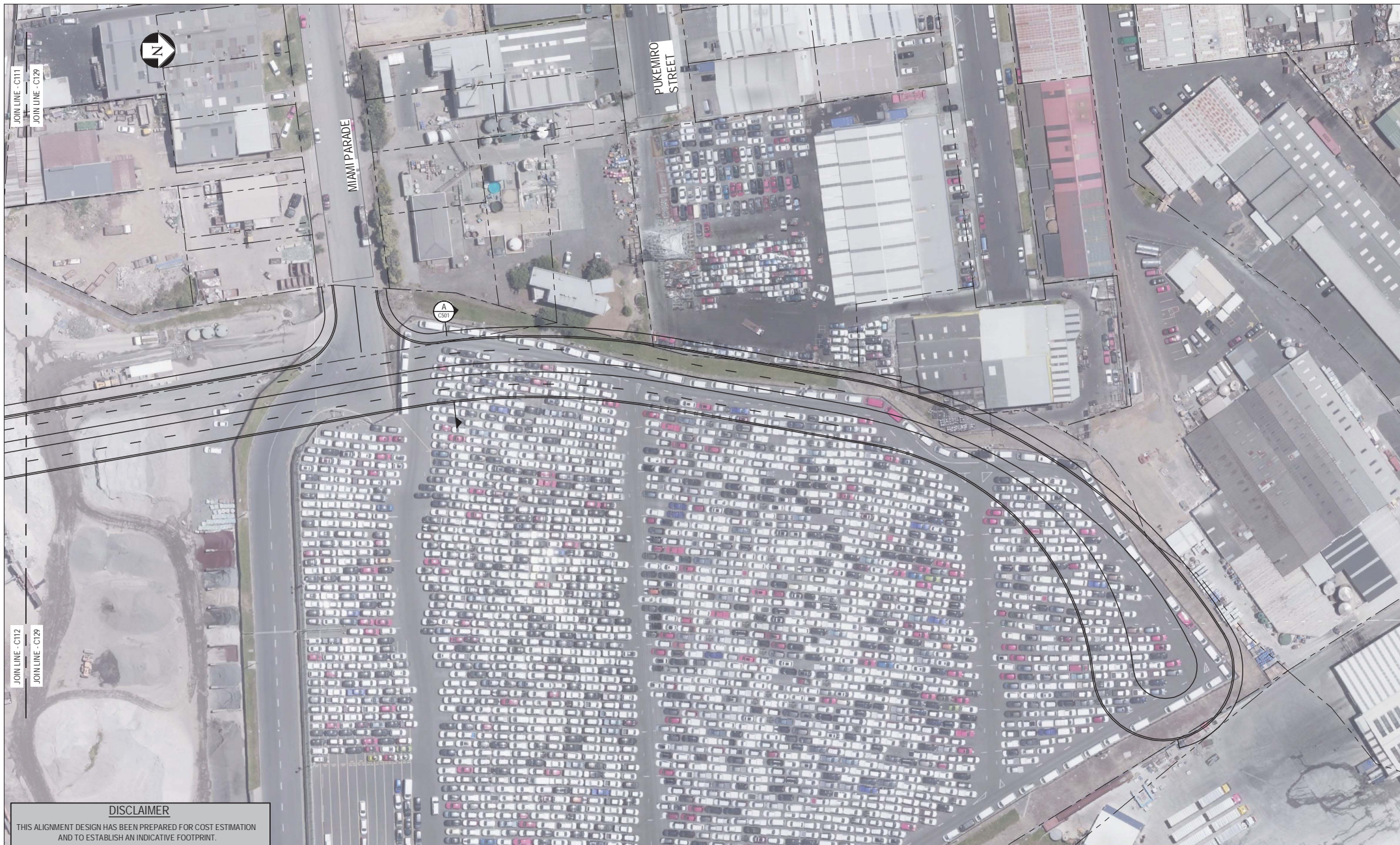


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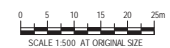
Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)			
Date			
Scale	1:500 (A1), 1:1000 (A3)	This Drawing must not be used for Construction unless signed as Approved	

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION LAYOUT SHEET 28 OF 29</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C128</b>
Rev:	<b>B</b>





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**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/06/16</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date



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Drawn RB	Designer RB
Drafting Check	Design Check
Approved (Project Director)	Date
Scale 1:500 (A1), 1:1000 (A3)	This Drawing must not be used for Construction unless signed as Approved

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION LAYOUT SHEET 29 OF 29</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C129</b>
Rev:	<b>B</b>





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LEGEND	
EXISTING WALKING AND CYCLING ROUTE	--- (Blue dashed line)
PROPOSED WALKING AND CYCLING ROUTE	— (Green solid line)
FUTURE WALKING AND CYCLING ROUTE	- - - (Green dashed line)
BRIDGE STRUCTURE	— (Red solid line)



**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/15</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date



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Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	1:2500 (A1)	This Drawing must not be used for Construction unless signed as Approved	

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION WALKING AND CYCLING ROUTE - SHEET 1 OF 5</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C081</b>
Rev:	<b>B</b>





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LEGEND	
EXISTING WALKING AND CYCLING ROUTE	
PROPOSED WALKING AND CYCLING ROUTE	
FUTURE WALKING AND CYCLING ROUTE	
BRIDGE STRUCTURE	

<b>B REVISED DETAILED BUSINESS CASE</b>		<b>AN</b>	<b>11/08/16</b>
<b>A ISSUED FOR COMMENT</b>		<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn
			Job Manager
			Project Director
			Date



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Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	1:2500 (A1)	This Drawing must not be used for Construction unless signed as Approved	

0 25 50 75 100 125m  
 SCALE 1:2500 AT ORIGINAL SIZE

**PRELIMINARY**

Client **NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT**  
 Project **EAST WEST CONNECTIONS**  
 Title **DETAILED BUSINESS CASE - RECOMMENDED OPTION WALKING AND CYCLING ROUTE - SHEET 2 OF 5**

Original Size **A1** Drawing No: **3818683-C082** Rev: **B**





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LEGEND	
EXISTING WALKING AND CYCLING ROUTE	
PROPOSED WALKING AND CYCLING ROUTE	
FUTURE WALKING AND CYCLING ROUTE	
BRIDGE STRUCTURE	



**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/16</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date

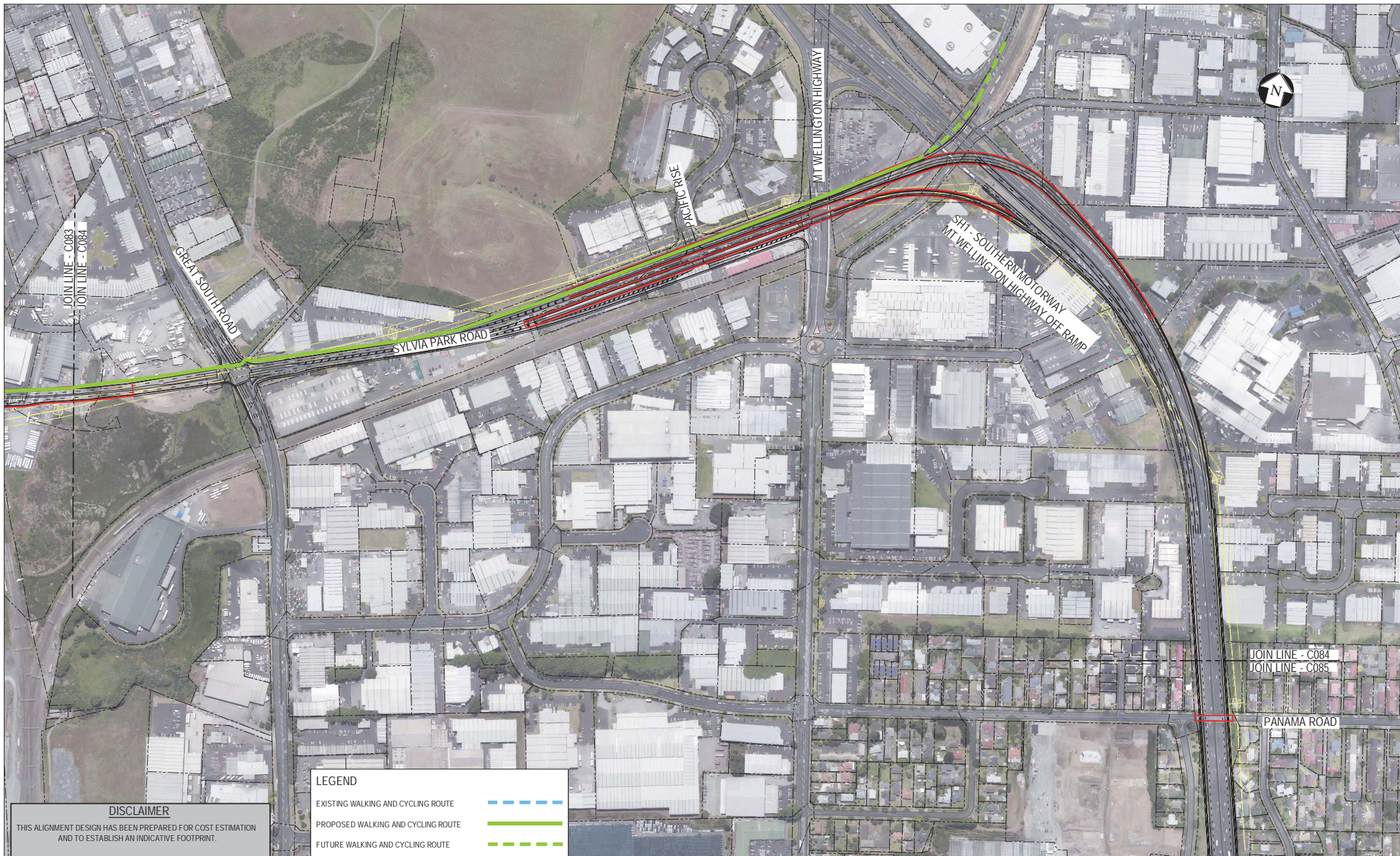


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Drawn RB	Designer RB
Drafting Check	Design Check
Approved (Project Director)	Date
Scale 1:2500 (A1)	This Drawing must not be used for Construction unless signed as Approved

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION WALKING AND CYCLING ROUTE - SHEET 3 OF 5</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C083</b>
Rev:	<b>B</b>





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LEGEND	
EXISTING WALKING AND CYCLING ROUTE	
PROPOSED WALKING AND CYCLING ROUTE	
FUTURE WALKING AND CYCLING ROUTE	
BRIDGE STRUCTURE	



**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/16</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date



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Drawn RB	Designer RB
Drafting Check	Design Check
Approved (Project Director)	Date
Scale 1:2500 (A1)	This Drawing must not be used for Construction unless signed as Approved

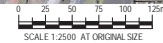
Client Project Title	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTIONS</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C084</b>
Rev:	<b>B</b>





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LEGEND	
EXISTING WALKING AND CYCLING ROUTE	
PROPOSED WALKING AND CYCLING ROUTE	
FUTURE WALKING AND CYCLING ROUTE	
BRIDGE STRUCTURE	



**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/16</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date

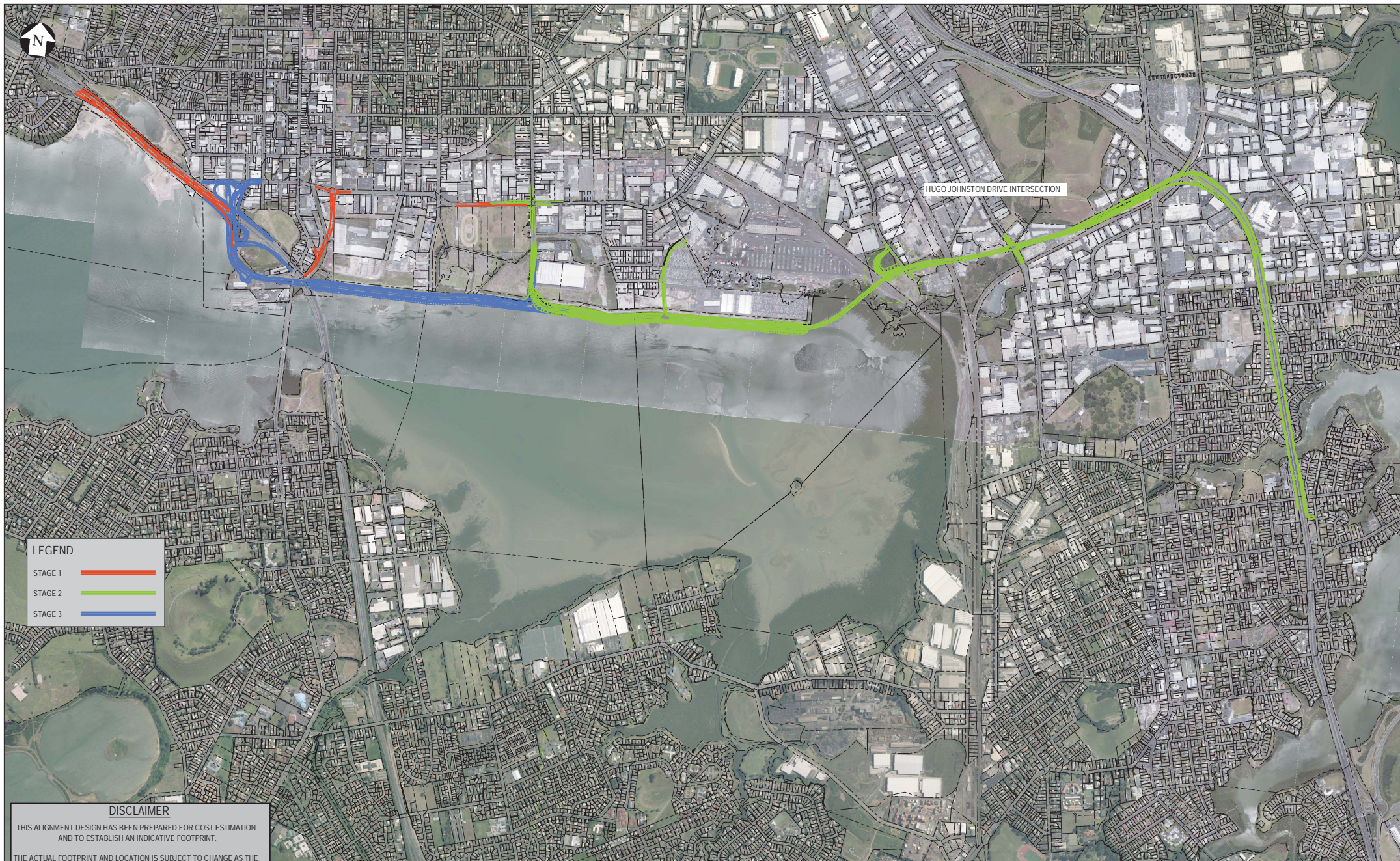


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Drawn RB	Designer RB
Drafting Check	Design Check
Approved (Project Director)	Date
Scale 1:2500 (A1)	This Drawing must not be used for Construction unless signed as Approved

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION WALKING AND CYCLING ROUTE - SHEET 5 OF 5</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C085</b>
Rev:	<b>B</b>





**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/06/16</b>	
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>	
No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager Project Director Date



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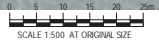
Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)			
Date			
Scale	N.T.S	This Drawing must not be used for Construction unless signed as Approved	

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTION</b>
Title	<b>DETAILED BUSINESS CASE STAGING PLAN (DRAFT)</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C200</b>
Rev:	<b>B</b>





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**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/15</b>	
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>	
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager Project Director Date



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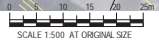
Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE STAGED OPTION - SHEET 1 OF 8</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C201</b>
Rev:	<b>B</b>





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**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>		<b>11/08/16</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>		<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager Project Director Date



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Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)			
Date			
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE STAGED OPTION - SHEET 2 OF 8</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C202</b>
Rev:	<b>B</b>





SPOTSWOOD HIGHWAY

JOIN LINE - C202  
JOIN LINE - C203

ONEHUNGA HARBOUR ROAD

ONEHUNGA MALL ROAD

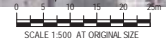
ONEHUNGA HARBOUR ROAD

JOIN LINE - C203  
JOIN LINE - C204

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**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/15</b>	
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>	
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager
			Project Director	Date



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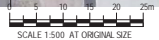
Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE STAGED OPTION - SHEET 3 OF 8</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C203</b>
Rev:	<b>B</b>





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**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/16</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Date
Drawn	Job Manager	Project Director	Date



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Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)			
Date			
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE STAGED OPTION - SHEET 4 OF 8</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C204</b>
Rev:	<b>B</b>

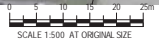




NELSON STREET

VICTORIA STREET

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**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/16</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Date
	Drawn	Job Manager	Project Director



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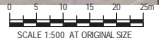
Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE STAGED OPTION - SHEET 5 OF 8</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C205</b>
Rev:	<b>B</b>





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**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>		<b>11/08/15</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>		<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager Project Director Date



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Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE STAGED OPTION - SHEET 6 OF 8</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C206</b>
Rev:	<b>B</b>

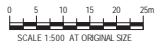




JOIN LINE - C128  
JOIN LINE - C207

JOIN LINE - C207  
JOIN LINE - C208

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**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>		<b>11/08/16</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>		<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager
			Project Director	Date



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Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)			
Date			
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

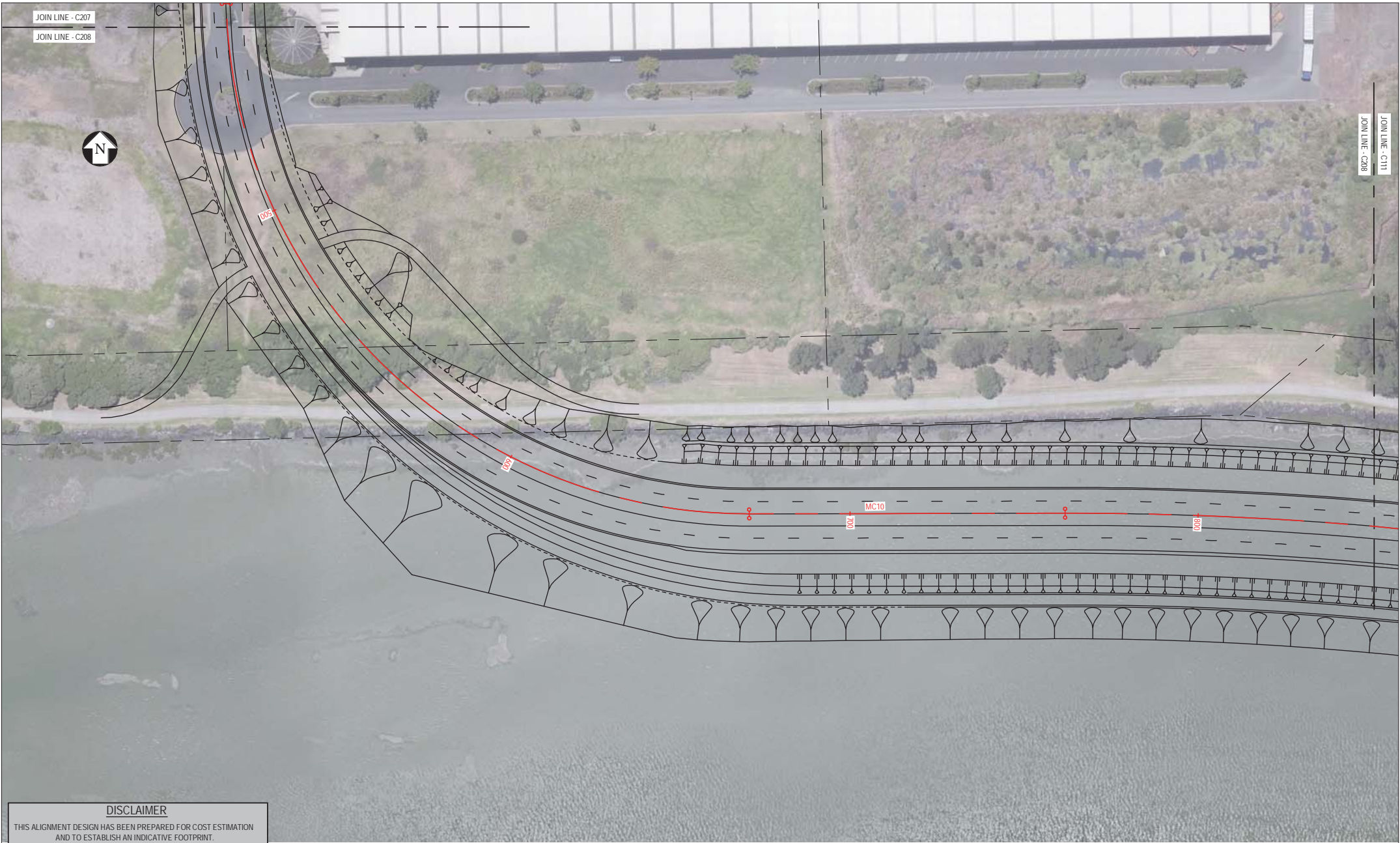
Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE STAGED OPTION - SHEET 7 OF 8</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C207</b>
Rev:	<b>B</b>



JOIN LINE - C207

JOIN LINE - C208

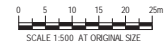
JOIN LINE - C208  
JOIN LINE - C111



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**PRELIMINARY**

<b>B REVISED DETAILED BUSINESS CASE</b>				<b>AN</b>	<b>11/08/16</b>
<b>A ISSUED FOR COMMENT</b>				<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director



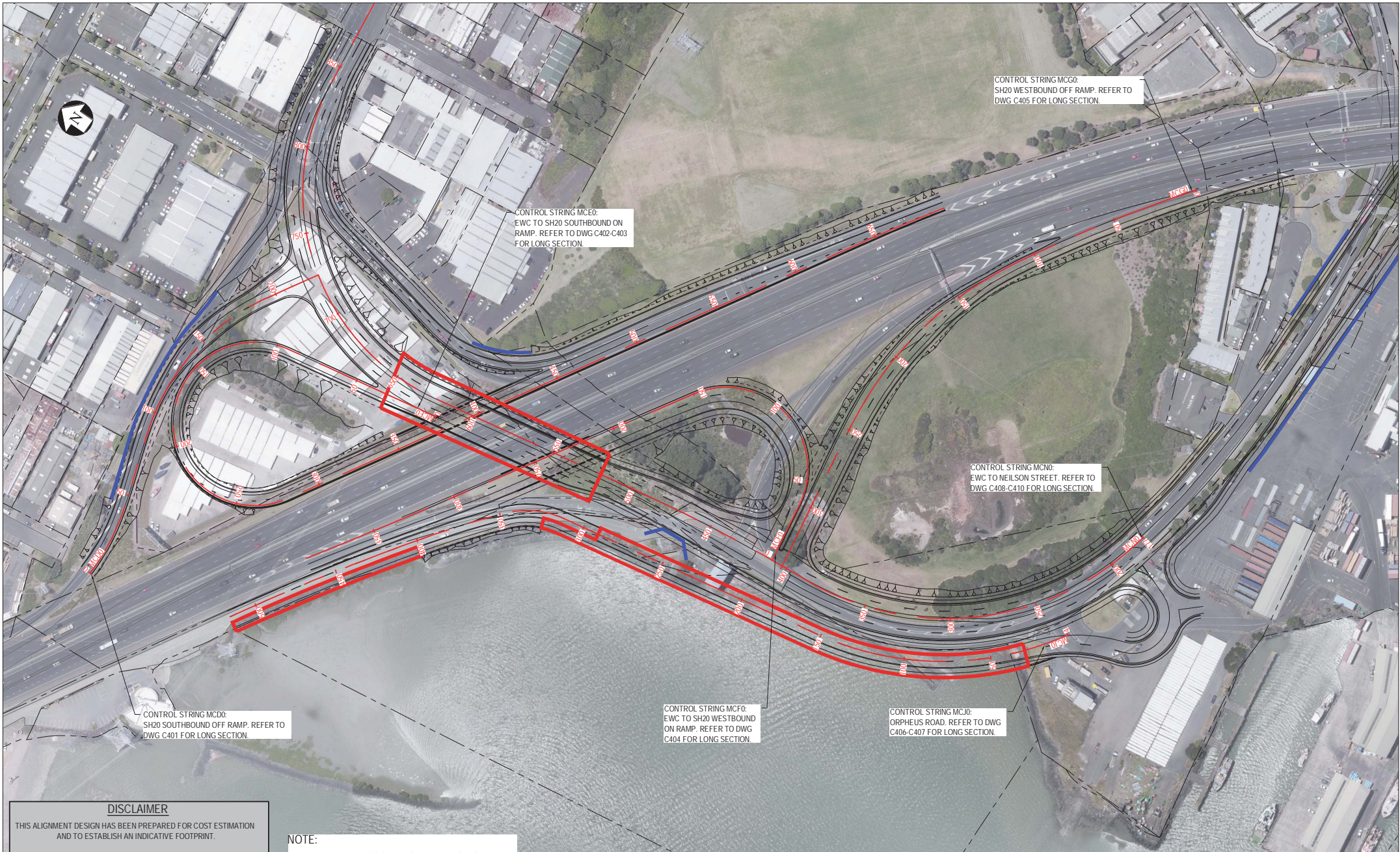
**DO NOT SCALE**

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Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN		

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>		
Project	<b>EAST WEST CONNECTIONS</b>		
Title	<b>DETAILED BUSINESS CASE</b>		
	<b>STAGED OPTION - SHEET 8 OF 8</b>		
Original Size	<b>A1</b>	Drawing No:	<b>3818683-C208</b>
		Rev:	<b>B</b>





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**NOTE:**

1. REFER TO DRAWINGS C431 TO C443 FOR LONG SECTIONS.
2. REFER TO DRAWINGS C521 TO C527 FOR CROSS SECTIONS.



**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/06/16</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Date
	Drawn	Job Manager	Project Director



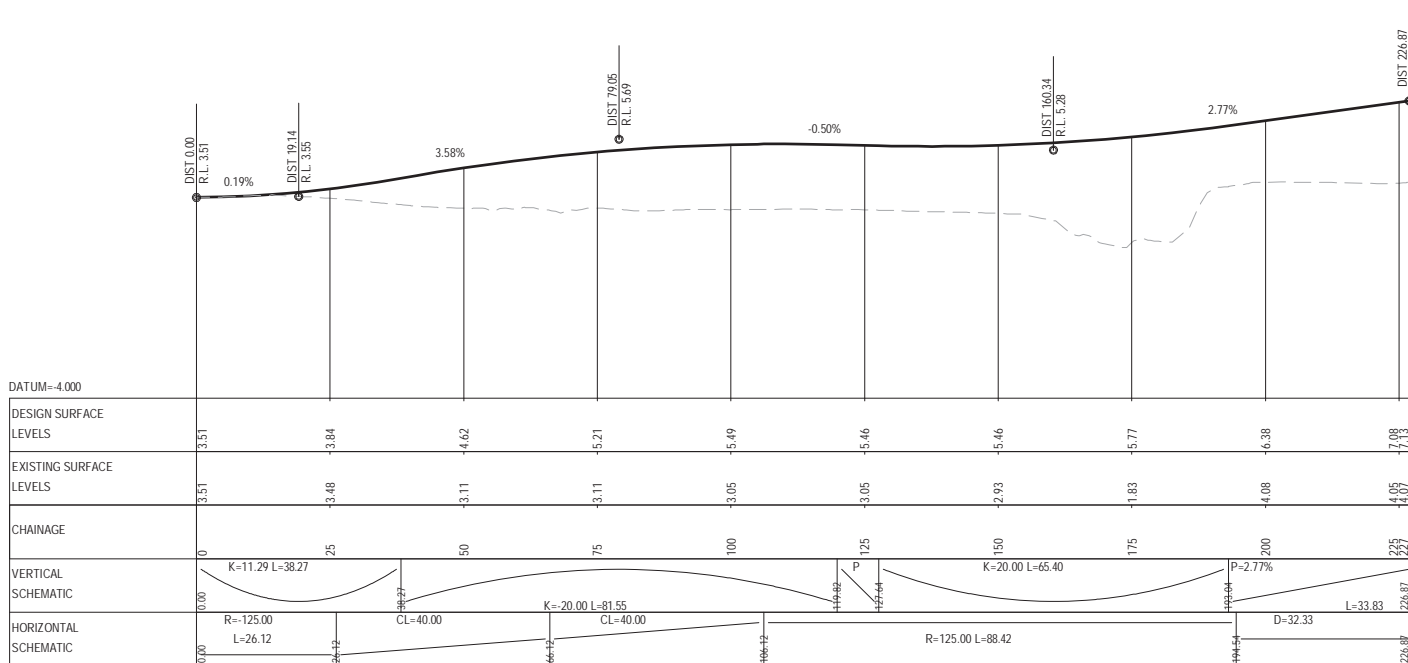
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Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	1:1000 (A1), 1:2000 (A3)	This Drawing must not be used for Construction unless signed as Approved	

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION NEILSON STREET INTERCHANGE - REF STRINGS</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C400</b>
Rev:	<b>B</b>





DATUM=-4.000

DESIGN SURFACE LEVELS	EXISTING SURFACE LEVELS	CHAINAGE	VERTICAL SCHEMATIC	HORIZONTAL SCHEMATIC
3.51	3.51	0	K=11.29 L=38.27	R=125.00 L=26.12
3.84	3.48	25		CL=40.00
4.62	3.11	50		CL=40.00
5.21	3.11	75		CL=40.00
5.49	3.05	100		R=125.00 L=88.42
5.46	3.05	125		
5.46	2.93	150	K=20.00 L=65.40	
5.77	1.83	175		
6.38	4.08	200	P=2.77%	D=32.33
7.83	4.05	226.87		L=33.83

LONGITUDINAL SECTION ON CONTROL STRING MCDO  
 SCALE HORIZ=1:500 VERT=1:100  
 SH20 SOUTH BOUND OFF RAMP

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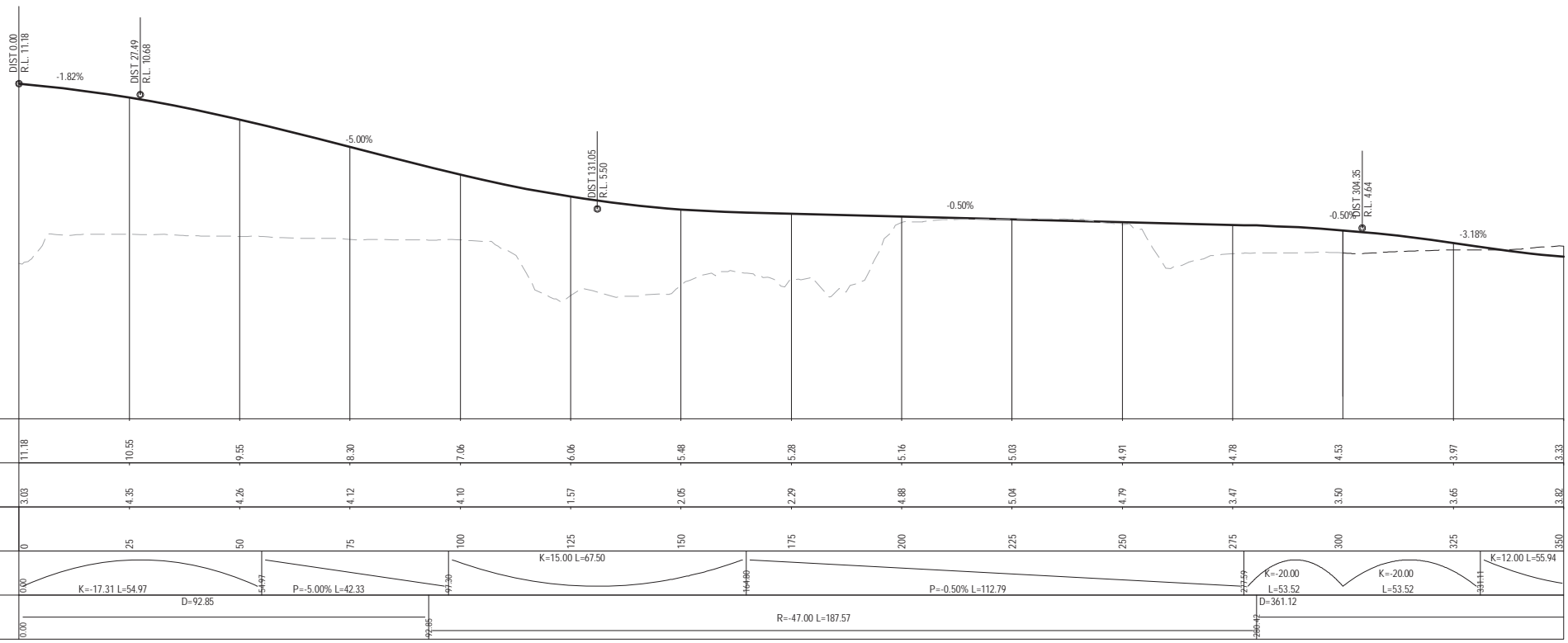
**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/16</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date



<b>DO NOT SCALE</b>	Drawn RB	Designer RB	Client <b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTIONS</b>
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	Approved (Project Director)	Date	Title
	Scale AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	Original Size <b>A1</b>
			<b>Drawing No: 3818683-C401</b>
			<b>Rev: B</b>





DATUM=-4.000

DESIGN SURFACE LEVELS	111.18	10.55	9.55	8.30	7.06	6.06	5.48	5.28	5.16	5.03	4.91	4.78	4.53	3.97	3.33	
EXISTING SURFACE LEVELS	3.03	4.35	4.26	4.12	4.10	1.57	2.05	2.29	4.88	5.04	4.79	3.47	3.50	3.45	3.82	
CHAINAGE	0	25	50	75	100	125	150	175	200	225	250	275	300	325	350	
VERTICAL SCHEMATIC	K=-17.31 L=54.97, D=92.85, P=-5.00% L=42.33, K=15.00 L=67.50, P=-0.50% L=112.79, K=-20.00 L=53.52, K=20.00 L=53.52, K=12.00 L=55.94															
HORIZONTAL SCHEMATIC	R=47.00 L=187.57, D=361.12															

LONGITUDINAL SECTION ON CONTROL STRING MCE0 - SHEET 1 OF 2  
 SCALE HORIZ=1:500 VERT=1:100  
 SOUTH BOUND LOOP ON RAMP

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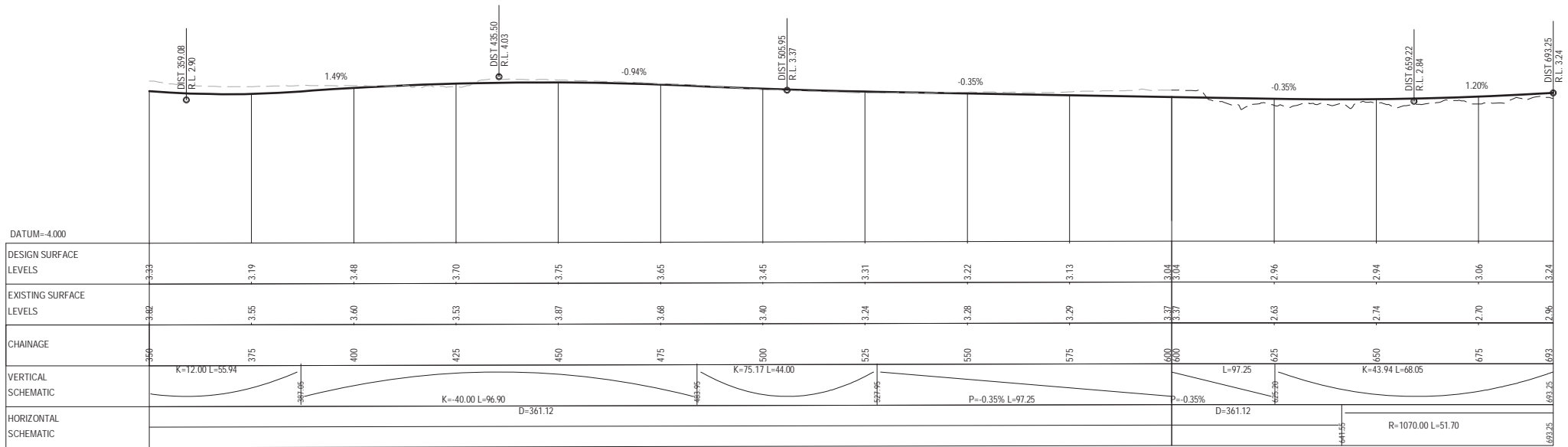
**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/16</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date



<b>DO NOT SCALE</b>	Drawn RB	Designer RB	Client <b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTIONS</b>
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	Approved (Project Director)	Date	Title
Scale AS SHOWN	This Drawing must not be used for Construction unless signed as Approved		Original Size <b>A1</b> Drawing No: <b>3818683-C402</b> Rev: <b>B</b>





LONGITUDINAL SECTION ON CONTROL STRING MCE0 - SHEET 2 OF 2  
 SCALE HORIZ=1:500 VERT=1:100  
 SOUTH BOUND LOOP ON RAMP

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**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/15</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date

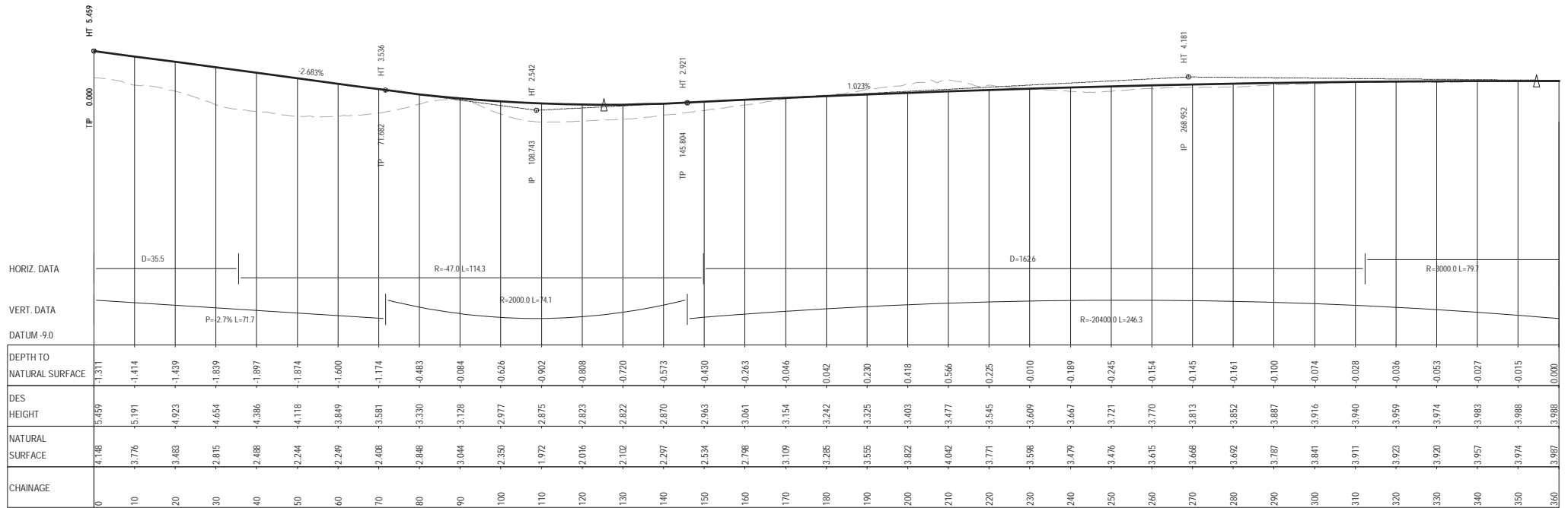


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Drawn RB	Designer RB
Drafting Check	Design Check
Approved (Project Director) Date	
Scale AS SHOWN	This Drawing must not be used for Construction unless signed as Approved

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION NEILSON STREET INTERCHANGE - MCE0</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C403</b>
Rev:	<b>B</b>





LONGITUDINAL SECTION ON CONTROL STRING MCF0

SCALE HORIZ=1:500 VERT=1:100

WEST BOUND ON RAMP

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**PRELIMINARY**

<b>B</b>	REVISED DETAILED BUSINESS CASE	AN	11/08/16
<b>A</b>	ISSUED FOR COMMENT	RB	27/03/15
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date



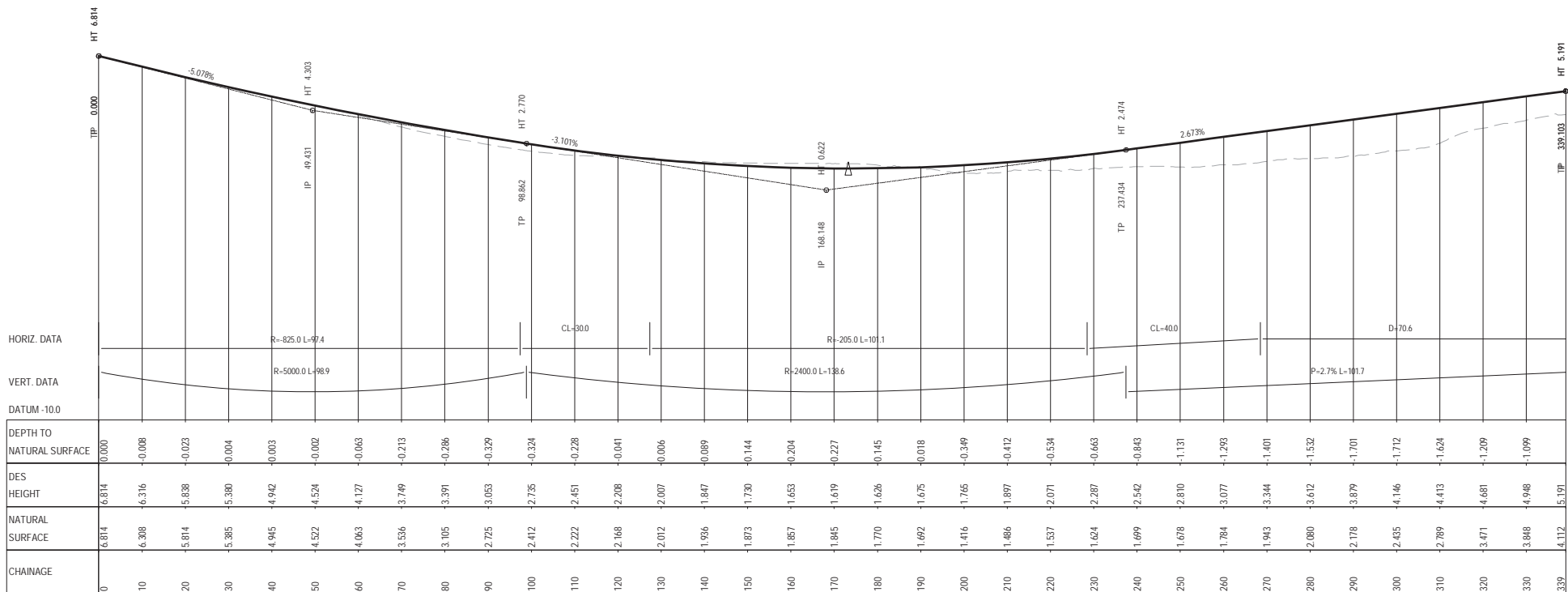
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Drawn RB	Designer RB
Drafting Check	Design Check
Approved (Project Director)	Date
Scale AS SHOWN	This Drawing must not be used for Construction unless signed as Approved

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION NEILSON STREET INTERCHANGE - MCF0</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C404</b>
Rev:	<b>B</b>





LONGITUDINAL SECTION ON CONTROL STRING MCGO  
 SCALE HORIZ=1:500 VERT=1:100  
 WEST BOUND OFF RAMP

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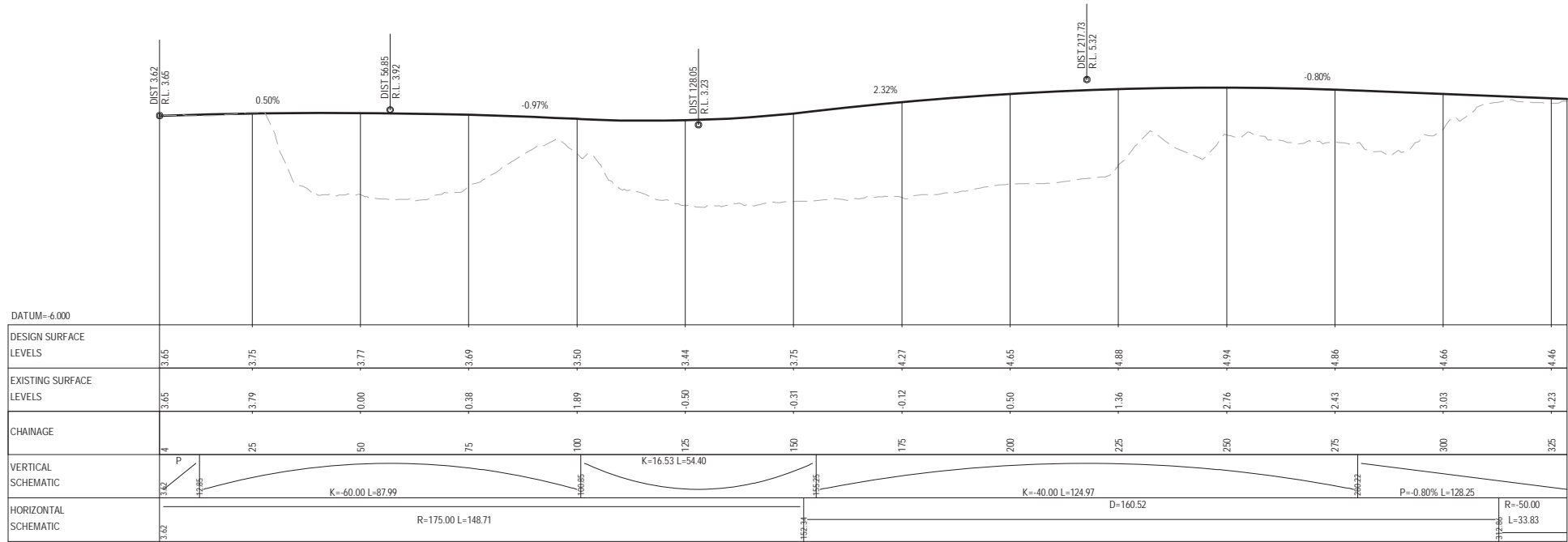
**PRELIMINARY**

<b>B</b>	REVISED DETAILED BUSINESS CASE	AN	11/08/16
<b>A</b>	ISSUED FOR COMMENT	RB	27/03/15
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date



<b>DO NOT SCALE</b>	Drawn RB	Designer RB	Client NZ Transport Agency/Auckland Transport
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	Approved (Project Director)	Date	Title DETAILED BUSINESS CASE - RECOMMENDED OPTION NEILSON STREET INTERCHANGE - MCGO
	Scale AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	Original Size A1 Drawing No: 3818683-C405 Rev: B





LONGITUDINAL SECTION ON CONTROL STRING MCJ0 - SHEET 1 OF 2  
 SCALE HORIZ=1:500 VERT=1:100  
 ORPHEUS DRIVE

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 THE ACTUAL FOOTPRINT AND LOCATION IS SUBJECT TO CHANGE AS THE DESIGN IS FURTHER DEVELOPED.



**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/16</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date

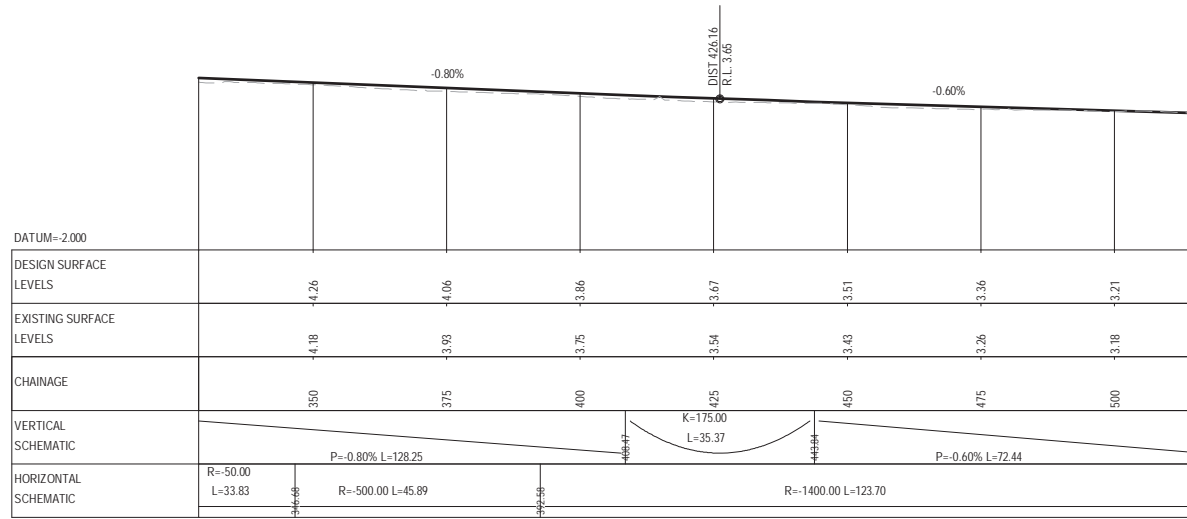


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Drawn RB	Designer RB
Drafting Check	Design Check
Approved (Project Director)	Date
Scale AS SHOWN	This Drawing must not be used for Construction unless signed as Approved

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTIONS</b>
Project	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION NEILSON STREET INTERCHANGE - MCJ0</b>
Title	<b>Drawing No: 3818683-C406</b>
Original Size	<b>A1</b>
Rev:	<b>B</b>



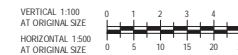


LONGITUDINAL SECTION ON CONTROL STRING MCJ0 - SHEET 2 OF 2  
 SCALE HORIZ=1:500 VERT=1:100  
 ORPHEUS DRIVE

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<b>B</b>	REVISED DETAILED BUSINESS CASE	AN	11/08/16
<b>A</b>	ISSUED FOR COMMENT	RB	27/03/15
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date



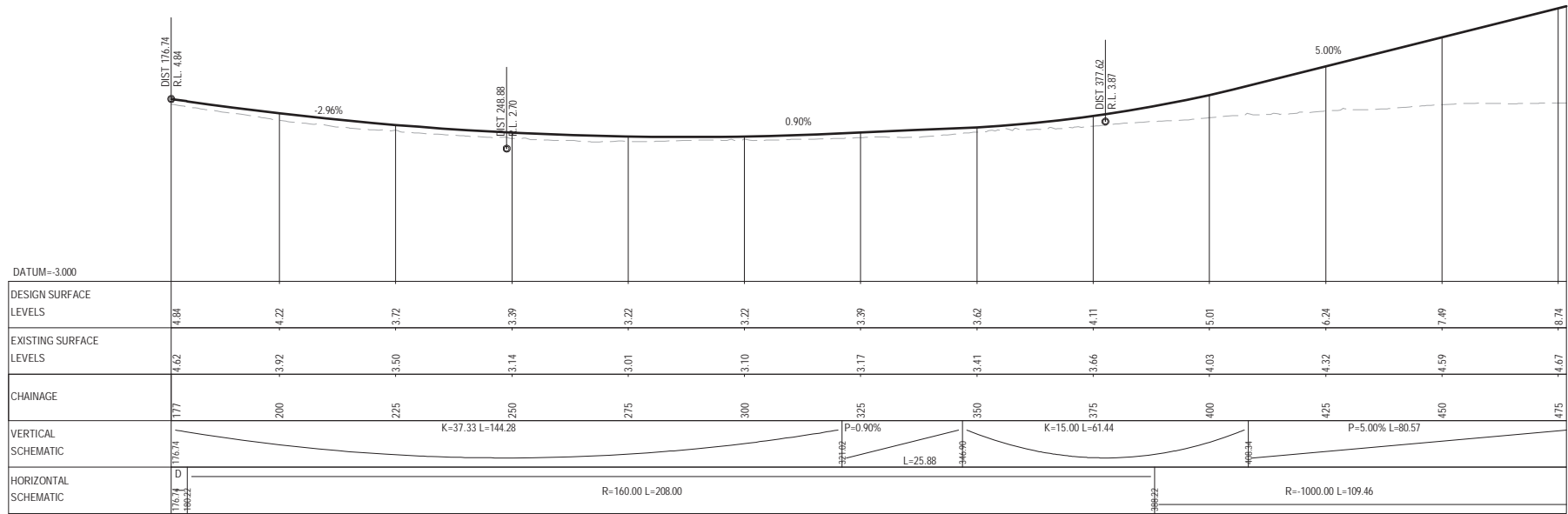
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Drawn RB	Designer RB
Drafting Check	Design Check
Approved (Project Director)	Date
Scale AS SHOWN	This Drawing must not be used for Construction unless signed as Approved

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTIONS</b>
Project	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION NEILSON STREET INTERCHANGE - MCJ0</b>
Title	<b>Drawing No: 3818683-C407</b>
Original Size	<b>A1</b>
Rev:	<b>B</b>

**PRELIMINARY**





LONGITUDINAL SECTION ON CONTROL STRING MCNO - SHEET 1 OF 3  
 SCALE HORIZ-1:500 VERT-1:100  
 ONEHUNGA HARBOUR ROAD TO NELSON STREET

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**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>		<b>11/08/16</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>		<b>27/03/15</b>
No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager
			Project Director	Date



**DO NOT SCALE**

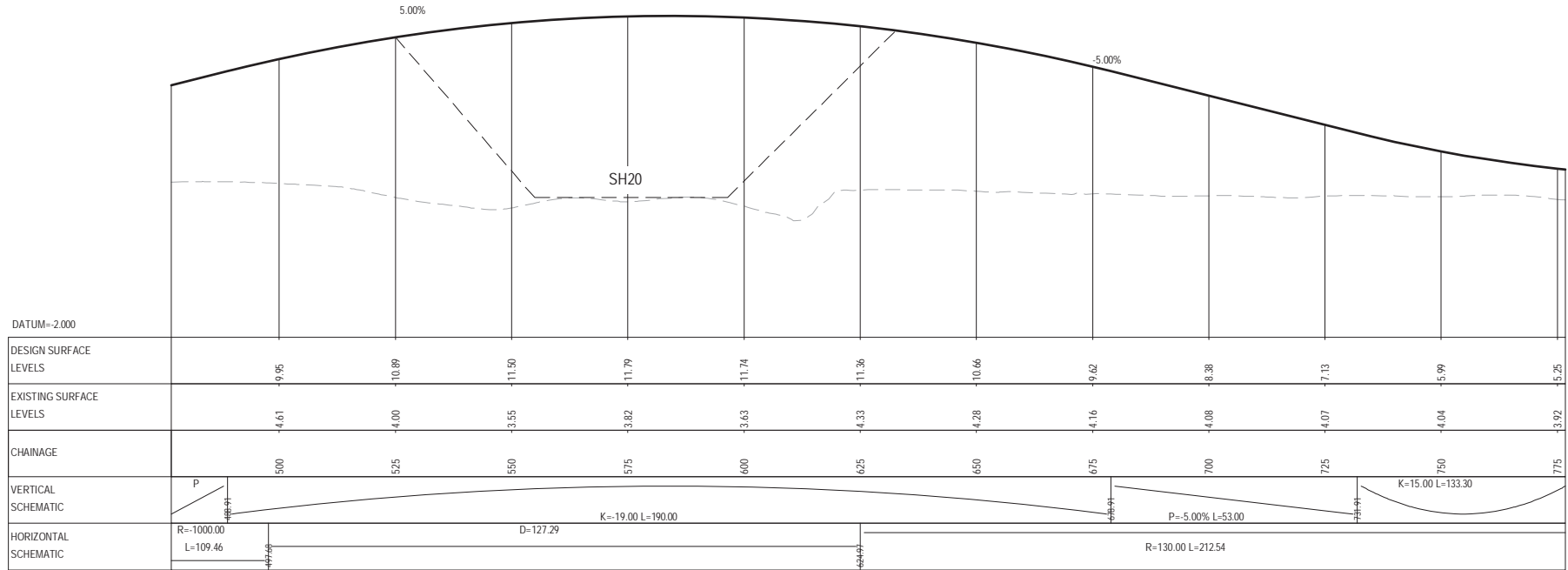
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Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION NELSON STREET INTERCHANGE - MCNO</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C408</b>
Rev:	<b>B</b>



DIST 563.91  
R.L. 14.18



DATUM=-2.000

DESIGN SURFACE LEVELS	-9.95	-10.89	-11.50	-11.79	-11.74	-11.36	-10.66	-9.62	-8.38	-7.13	-5.99	-5.25
EXISTING SURFACE LEVELS	-4.61	-4.00	-3.55	-3.82	-3.63	-4.33	-4.28	-4.16	-4.08	-4.07	-4.04	-3.92
CHAINAGE	500	525	550	575	600	625	650	675	700	725	750	775
VERTICAL SCHEMATIC												
HORIZONTAL SCHEMATIC												

LONGITUDINAL SECTION ON CONTROL STRING MCN0 - SHEET 2 OF 3  
SCALE HORIZ=1:500 VERT=1:100  
ONEHUNGA HARBOUR ROAD TO NEILSON STREET

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**PRELIMINARY**

No	Revision	Note	Drawn	Job Manager	Project Director	Date
B	REVISED DETAILED BUSINESS CASE		AN			11/08/16
A	ISSUED FOR COMMENT		RB			27/03/15



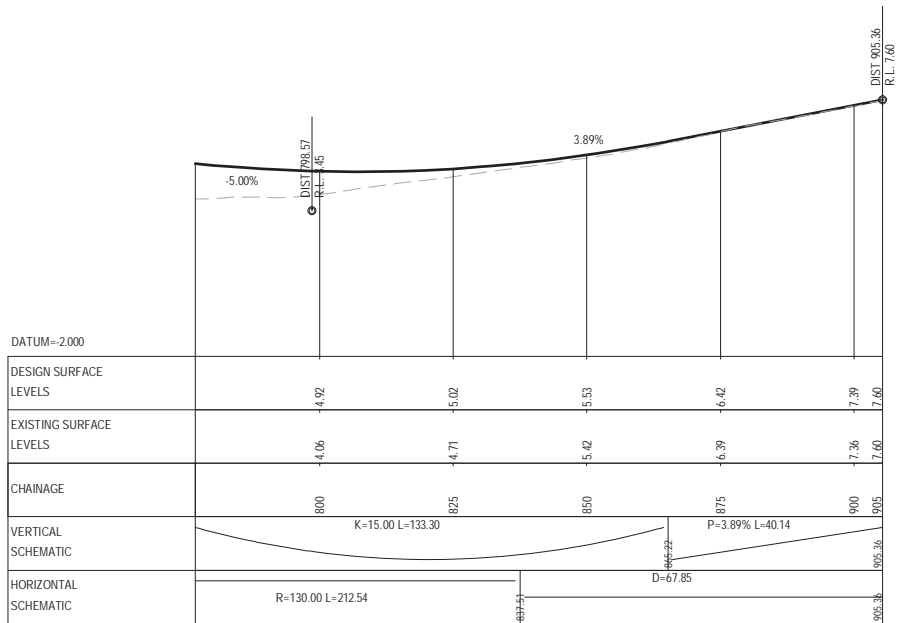
**DO NOT SCALE**

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Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTIONS</b>		
Project	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION NEILSON STREET INTERCHANGE - MCN0</b>		
Title			
Original Size	<b>A1</b>	Drawing No:	<b>3818683-C409</b>
Rev:	<b>B</b>		





LONGITUDINAL SECTION ON CONTROL STRING MCN0 - SHEET 3 OF 3  
 SCALE HORIZ=1:500 VERT=1:100  
 ONEHUNGA HARBOUR ROAD TO NEILSON STREET

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<b>B REVISED DETAILED BUSINESS CASE</b>				AN	11/08/16	
<b>A ISSUED FOR COMMENT</b>				RB	27/03/15	
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date



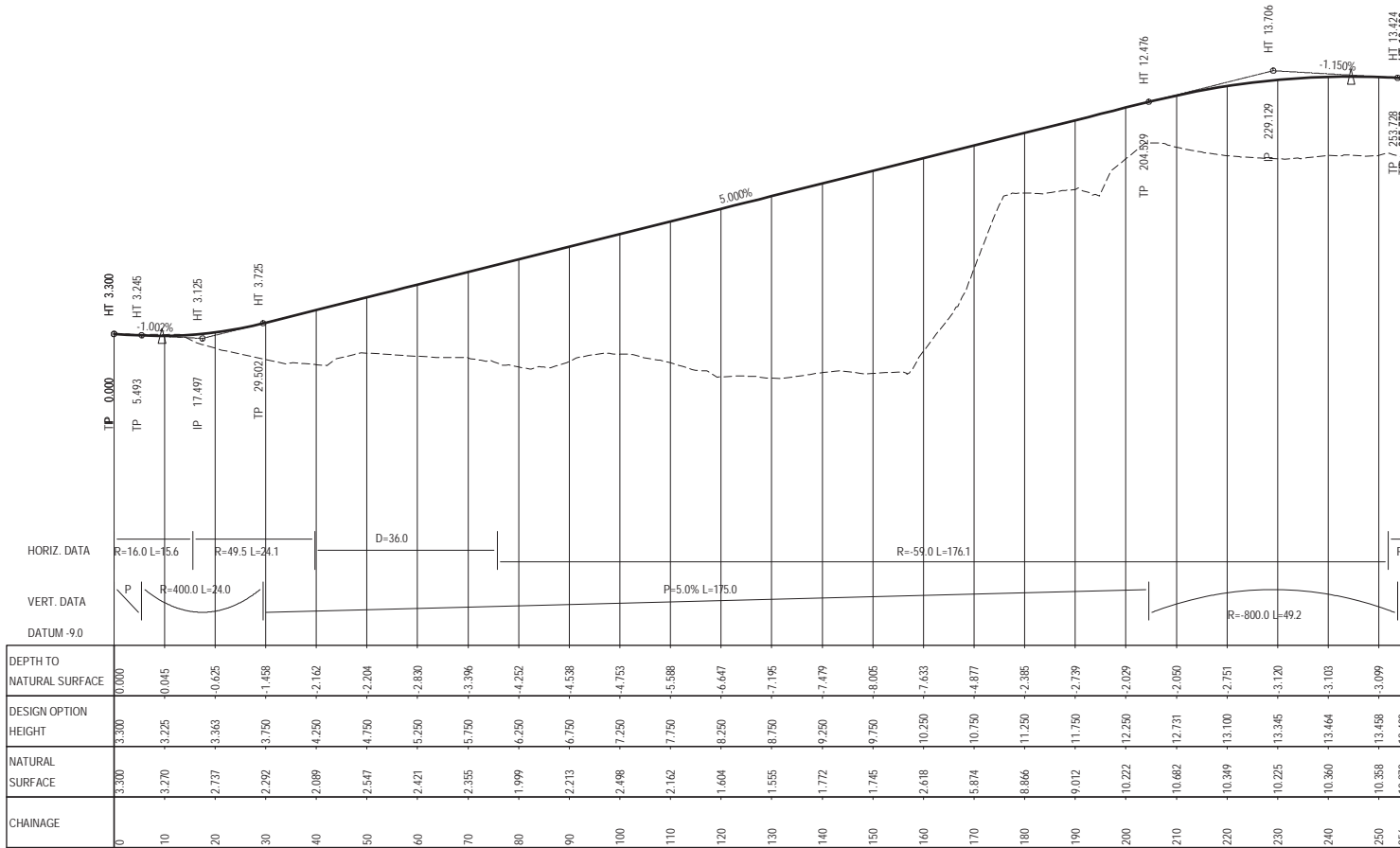
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Drawn RB	Designer RB
Drafting Check	Design Check
Approved (Project Director)	
Date	
Scale AS SHOWN	This Drawing must not be used for Construction unless signed as Approved

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTIONS</b>
Project	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION NEILSON STREET INTERCHANGE - MCN0</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION NEILSON STREET INTERCHANGE - MCN0</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C410</b>
Rev:	<b>B</b>

**PRELIMINARY**





LONG SECTION - HUGO JOHNSTON DRIVE EASTBOUND ON RAMP - MCX0

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**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/16</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date



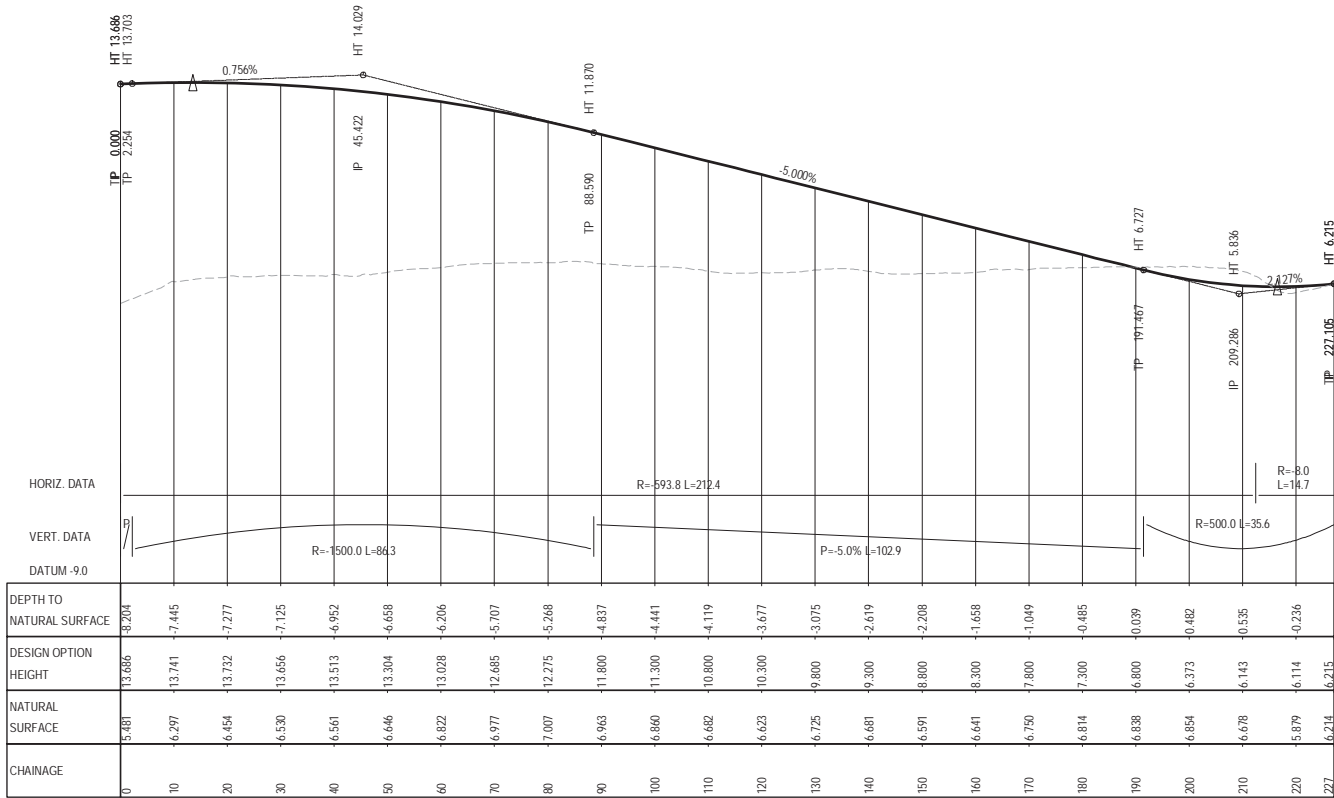
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Drawn RB	Designer RB
Drafting Check	Design Check
Approved (Project Director)	Date
Scale AS SHOWN	This Drawing must not be used for Construction unless signed as Approved

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION HUGO JOHNSTON DR EASTBOUND RAMP - LS</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C422</b>
Rev:	<b>B</b>





LONG SECTION - HUGO JOHNSTON DRIVE WESTBOUND OFF RAMP - MCYO

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**PRELIMINARY**

<b>B REVISED DETAILED BUSINESS CASE</b>				<b>AN</b>	<b>11/08/16</b>
<b>A ISSUED FOR COMMENT</b>				<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director



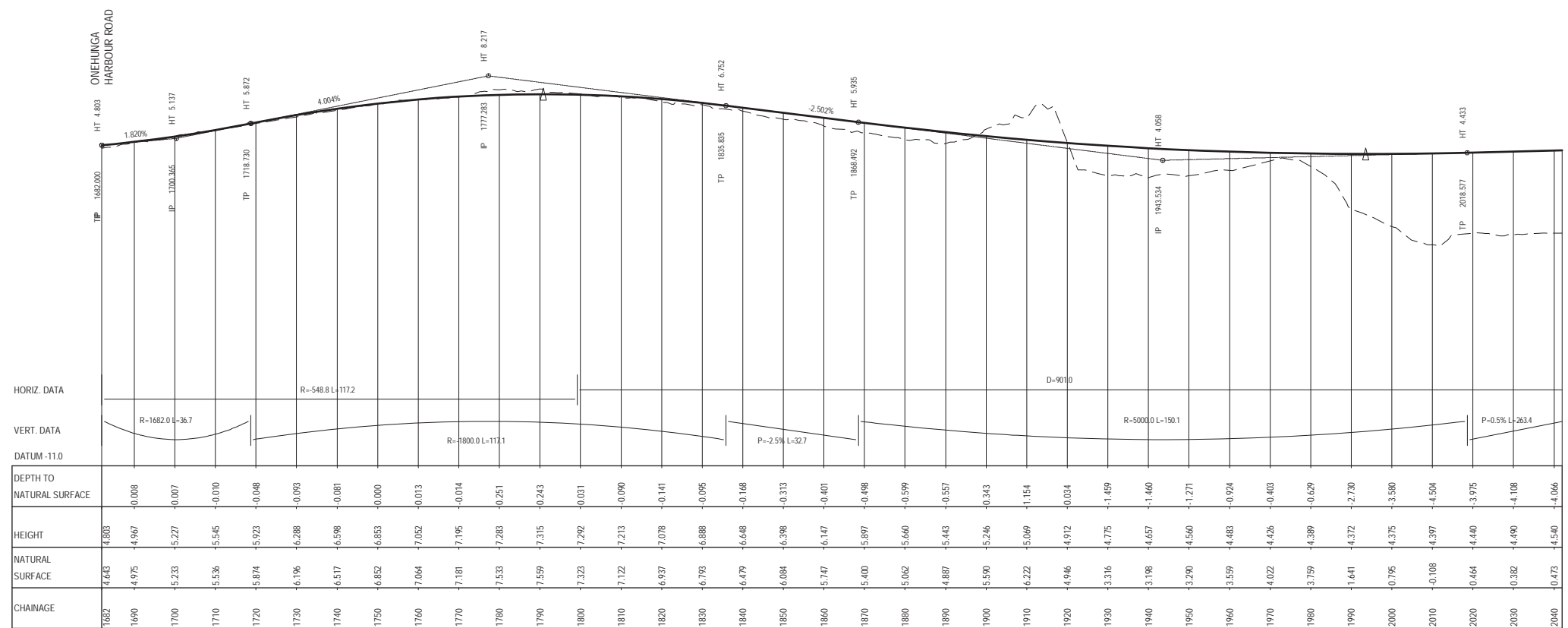
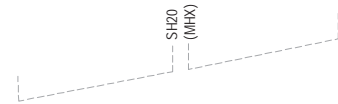
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Drawn RB	Designer RB
Drafting Check	Design Check
Approved (Project Director)	Date
Scale AS SHOWN	This Drawing must not be used for Construction unless signed as Approved

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTIONS</b>		
Project	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION HUGO JOHNSTON DR WESTBOUND RAMP - LS</b>		
Title			
Original Size	<b>A1</b>	<b>Drawing No: 3818683-C423</b>	<b>Rev: B</b>





LONG SECTION - NEILSON STREET INTERCHANGE TO GREAT SOUTH RD - (MC00)

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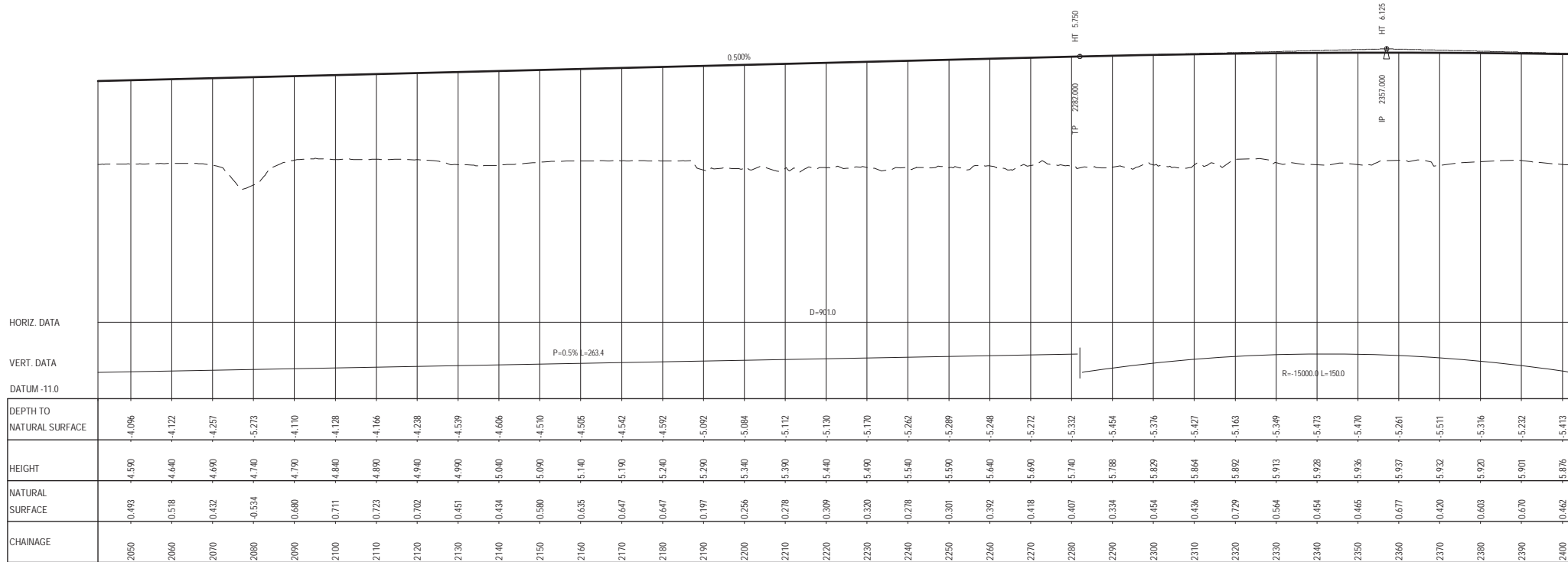
**PRELIMINARY**

<b>B</b>	REVISED DETAILED BUSINESS CASE	AN	11/08/16
<b>A</b>	ISSUED FOR COMMENT	RB	27/03/15
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date



<b>DO NOT SCALE</b>	Drawn RB	Designer RB	Client <b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTIONS</b>
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	Approved (Project Director)	Date	Title
Scale 1:500 (A1), 1:1000 (A3)	This Drawing must not be used for Construction unless signed as Approved		Original Size <b>A1</b> Drawing No: <b>3818683-C431</b> Rev: <b>B</b>





LONG SECTION - NEILSON STREET INTERCHANGE TO GREAT SOUTH RD - (MC00)

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**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/16</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date



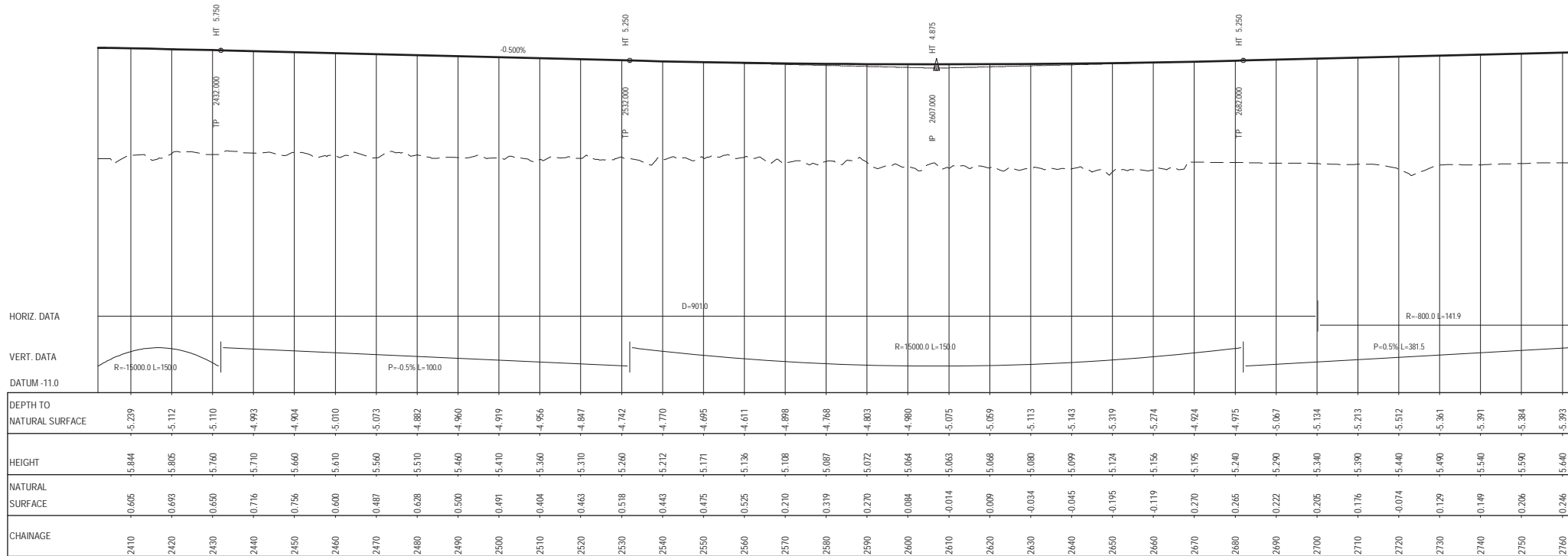
**DO NOT SCALE**

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Drawn RB	Designer RB
Drafting Check	Design Check
Approved (Project Director)	Date
Scale 1:500 (A1), 1:1000 (A3)	This Drawing must not be used for Construction unless signed as Approved

Client **NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT**  
 Project **EAST WEST CONNECTIONS**  
 Title **DETAILED BUSINESS CASE - RECOMMENDED OPT - LS NEILSON STREET INTER TO GREAT SOUTH RD**  
 Original Size **A1** Drawing No: **3818683-C432** Rev: **B**





LONG SECTION - NEILSON STREET INTERCHANGE TO GREAT SOUTH RD - (MC00)

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**PRELIMINARY**

<b>B</b>	REVISED DETAILED BUSINESS CASE	AN	11/08/16
<b>A</b>	ISSUED FOR COMMENT	RB	27/03/15
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date

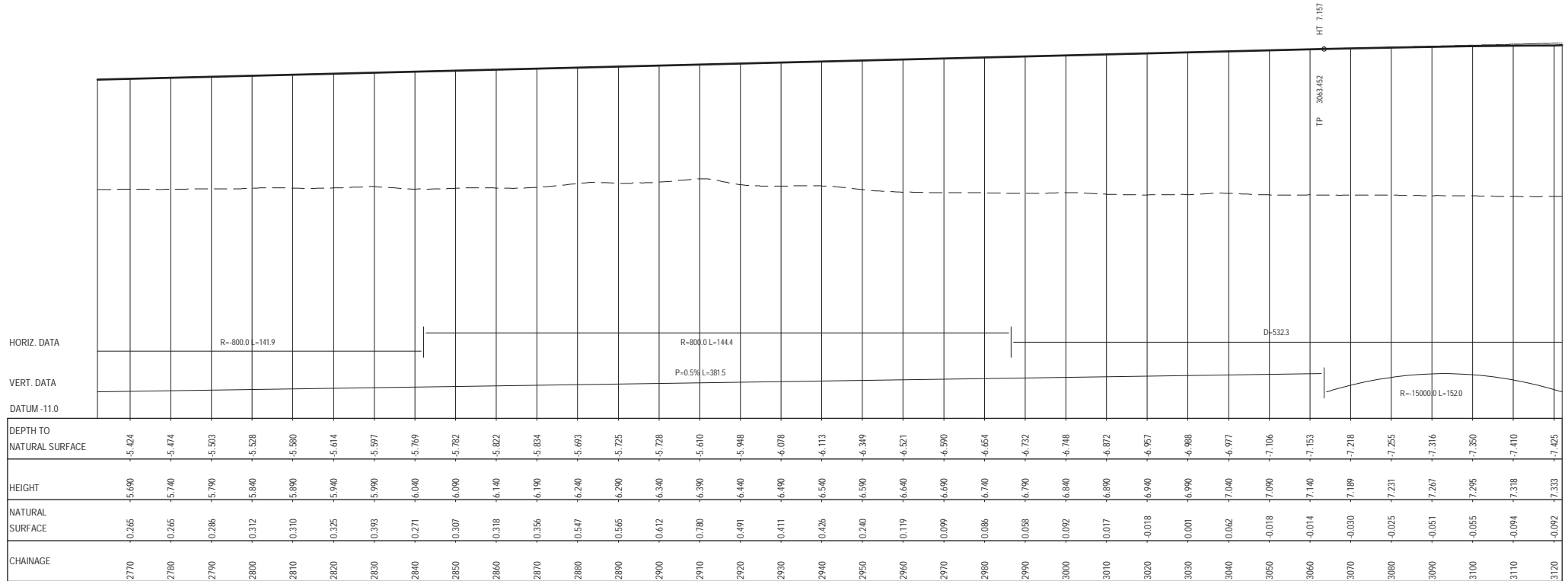


**DO NOT SCALE**

Drawn RB	Designer RB	Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTIONS</b> <b>DETAILED BUSINESS CASE - RECOMMENDED OPT - LS NEILSON STREET INTER TO GREAT SOUTH RD</b> Drawing No: <b>3818683-C433</b>
Drafting Check	Design Check	Project	
Approved (Project Director)	Date	Title	
Scale 1:500 (A1), 1:1000 (A3)	This Drawing must not be used for Construction unless signed as Approved	Original Size <b>A1</b>	

Rev: B





LONG SECTION - NEILSON STREET INTERCHANGE TO GREAT SOUTH RD - (MC00)

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**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/16</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date

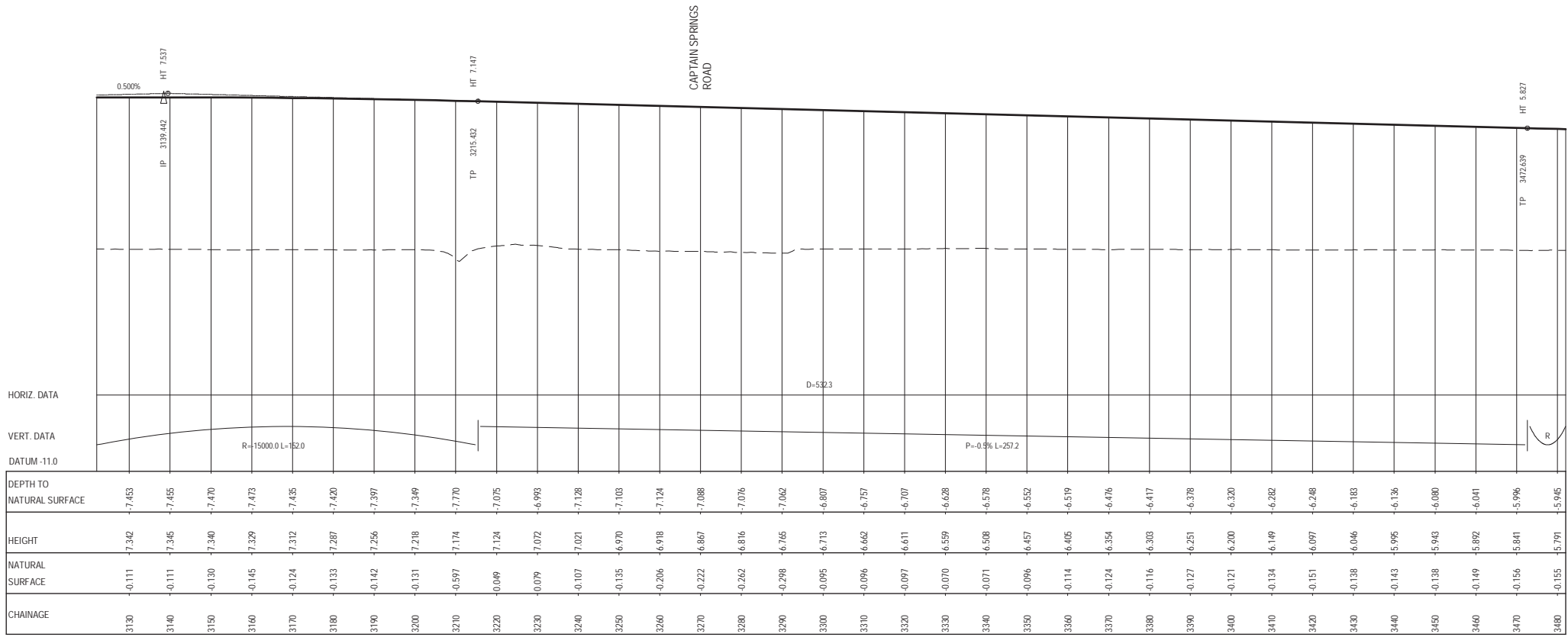


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Drawn RB	Designer RB
Drafting Check	Design Check
Approved (Project Director)	Date
Scale 1:500 (A1), 1:1000 (A3)	This Drawing must not be used for Construction unless signed as Approved

Client Project Title	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTIONS</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C434</b>
Rev:	<b>B</b>





LONG SECTION - NEILSON STREET INTERCHANGE TO GREAT SOUTH RD - (MC00)

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**PRELIMINARY**

<b>B</b>	REVISED DETAILED BUSINESS CASE	AN	11/08/16
<b>A</b>	ISSUED FOR COMMENT	RB	27/03/15
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date

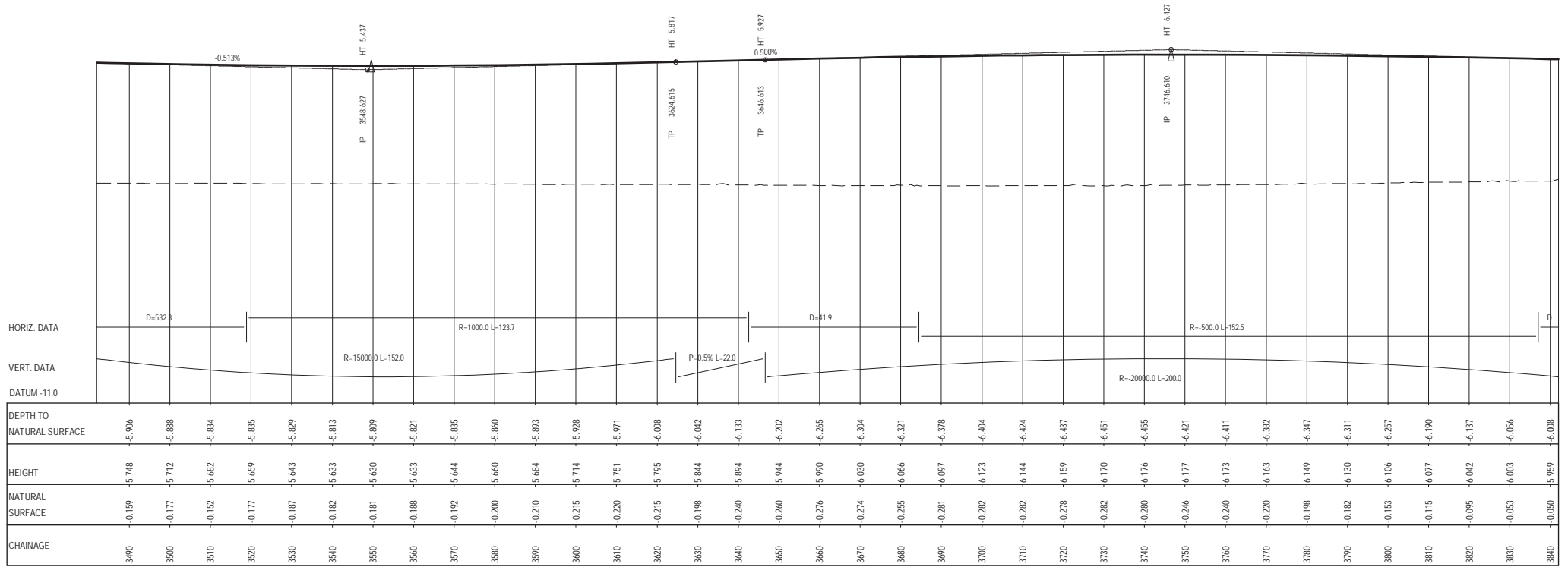


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Drawn RB	Designer RB
Drafting Check	Design Check
Approved (Project Director)	Date
Scale 1:500 (A1), 1:1000 (A3)	This Drawing must not be used for Construction unless signed as Approved

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPT - LS NEILSON STREET INTER TO GREAT SOUTH RD</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C435</b>
Rev:	<b>B</b>





LONG SECTION - NELSON STREET INTERCHANGE TO GREAT SOUTH RD - (MC00)

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**PRELIMINARY**

<b>B</b>	REVISED DETAILED BUSINESS CASE	AN	11/08/16
<b>A</b>	ISSUED FOR COMMENT	RB	27/03/15
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date



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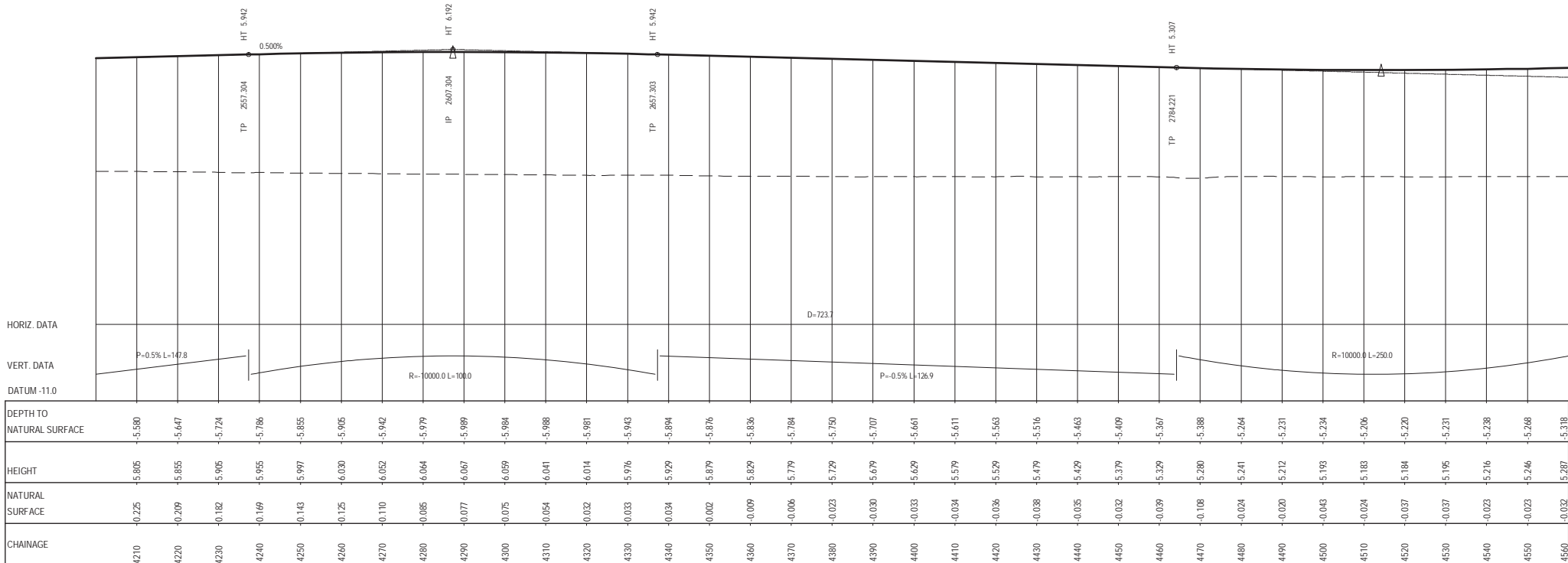
Drawn RB	Designer RB
Drafting Check	Design Check
Approved (Project Director)	Date
Scale 1:500 (A1), 1:1000 (A3)	This Drawing must not be used for Construction unless signed as Approved

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTIONS</b>
Project	<b>DETAILED BUSINESS CASE - RECOMMENDED OPT - LS NELSON STREET INTER TO GREAT SOUTH RD</b>
Title	<b>Detailed Business Case - Recommended Opt - LS Nelson Street Inter to Great South Rd</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C436</b>
Rev:	<b>B</b>



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LONG SECTION - NEILSON STREET INTERCHANGE TO GREAT SOUTH RD - (MC00)

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**PRELIMINARY**

<b>B</b> REVISED DETAILED BUSINESS CASE		AN	11/08/15
<b>A</b> ISSUED FOR COMMENT		RB	27/03/15
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn
			Job Manager
			Project Director
			Date

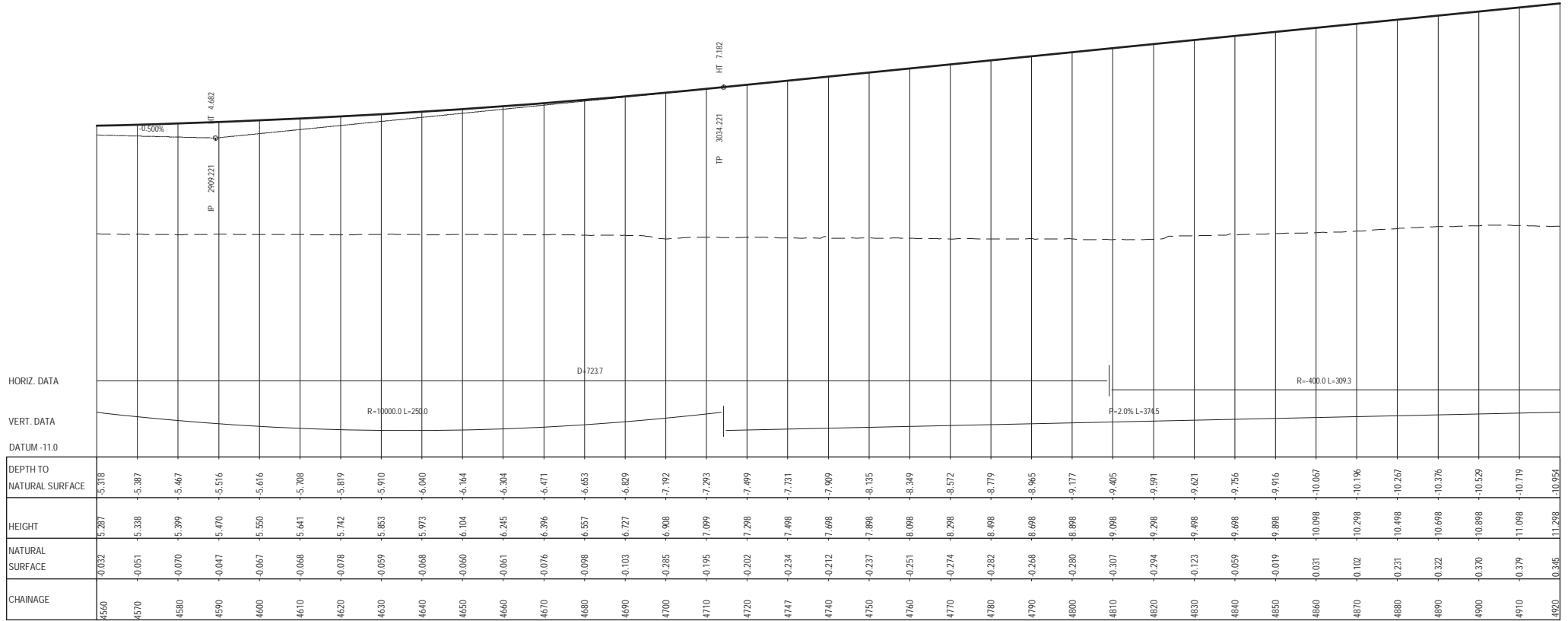


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Drawn RB	Designer RB
Drafting Check	Design Check
Approved (Project Director)	Date
Scale 1:500 (A1), 1:1000 (A3)	This Drawing must not be used for Construction unless signed as Approved

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTIONS</b>
Project	<b>DETAILED BUSINESS CASE - RECOMMENDED OPT - LS NEILSON STREET INTER TO GREAT SOUTH RD</b>
Title	
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C438</b>
Rev:	<b>B</b>





LONG SECTION - NELSON STREET INTERCHANGE TO GREAT SOUTH RD - (MC00)

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**PRELIMINARY**

<b>B</b>	REVISED DETAILED BUSINESS CASE	AN	11/08/16
<b>A</b>	ISSUED FOR COMMENT	RB	27/03/15
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date

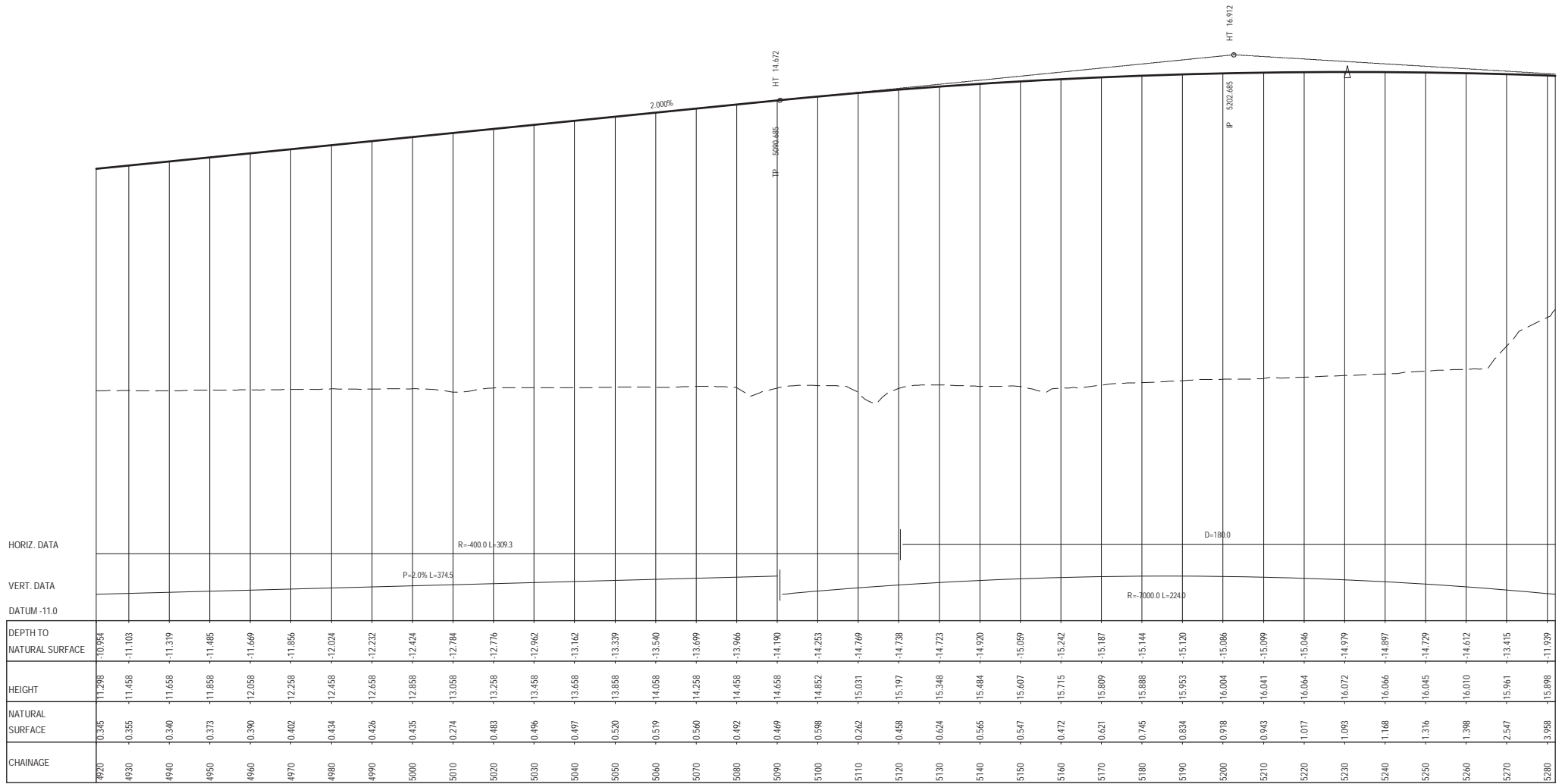


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Drawn RB	Designer RB
Drafting Check	Design Check
Approved (Project Director)	Date
Scale 1:500 (A1), 1:1000 (A3)	This Drawing must not be used for Construction unless signed as Approved

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTIONS</b>
Project	<b>DETAILED BUSINESS CASE - RECOMMENDED OPT - LS NELSON STREET INTER TO GREAT SOUTH RD</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPT - LS NELSON STREET INTER TO GREAT SOUTH RD</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C439</b>
Rev:	<b>B</b>





LONG SECTION - NELSON STREET INTERCHANGE TO GREAT SOUTH RD - (MC00)

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**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/16</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date



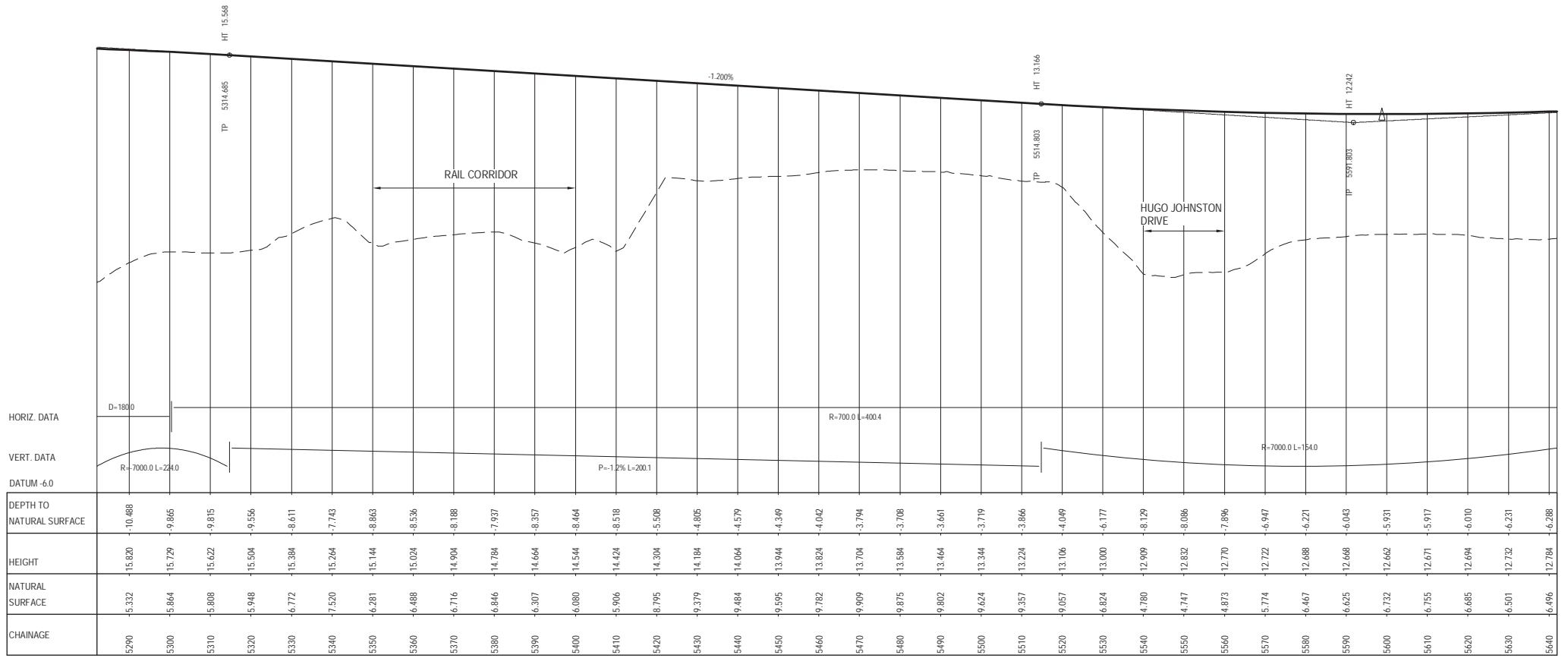
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Drawn RB	Designer RB
Drafting Check	Design Check
Approved (Project Director)	Date
Scale 1:500 (A1), 1:1000 (A3)	This Drawing must not be used for Construction unless signed as Approved

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPT - LS NELSON STREET INTER TO GREAT SOUTH RD</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C440</b>
Rev:	<b>B</b>





LONG SECTION - NEILSON STREET INTERCHANGE TO GREAT SOUTH RD - (MC00)

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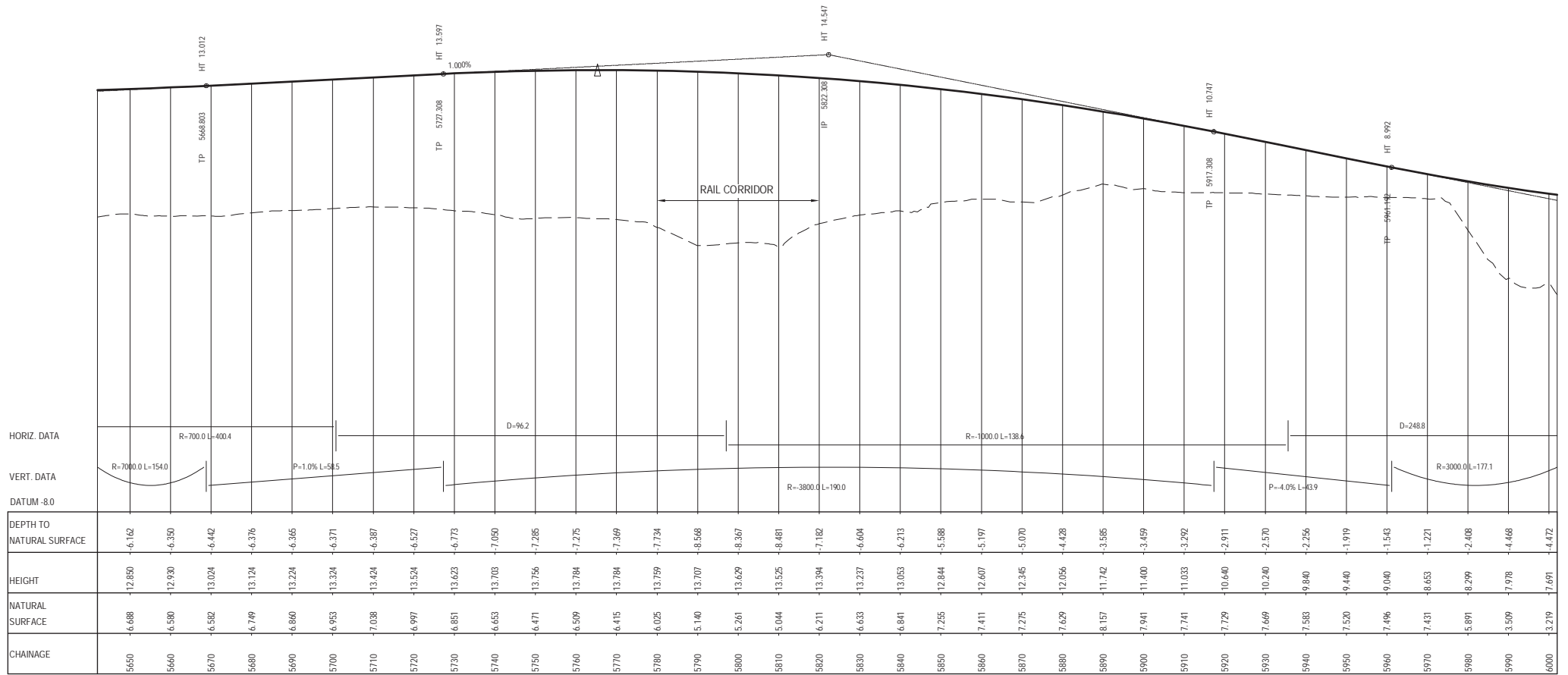
**PRELIMINARY**

<b>B</b>	REVISED DETAILED BUSINESS CASE	AN	11/08/16
<b>A</b>	ISSUED FOR COMMENT	RB	27/03/15
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date



<b>DO NOT SCALE</b>	Drawn RB	Designer RB	Client <b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTIONS</b>
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	Approved (Project Director)	Date	Title
	Scale 1:500 (A1), 1:1000 (A3)	This Drawing must not be used for Construction unless signed as Approved	Original Size <b>A1</b> Drawing No: <b>3818683-C441</b> Rev: <b>B</b>





DEPTH TO NATURAL SURFACE	HEIGHT	NATURAL SURFACE	CHAINAGE
-6.162	12.850	6.688	5650
-6.350	12.930	6.580	5660
-6.442	13.024	6.582	5670
-6.376	13.124	6.749	5680
-6.365	13.224	6.860	5690
-6.371	13.324	6.953	5700
-6.387	13.424	7.038	5710
-6.527	13.524	6.997	5720
-6.773	13.623	6.851	5730
-7.050	13.703	6.653	5740
-7.285	13.756	6.471	5750
-7.275	13.784	6.509	5760
-7.369	13.784	6.415	5770
-7.734	13.759	6.025	5780
-8.568	13.707	5.140	5790
-8.367	13.629	5.261	5800
-8.481	13.525	5.044	5810
-7.182	13.394	6.211	5820
-6.604	13.237	6.633	5830
-6.213	13.053	6.841	5840
-5.588	12.844	7.255	5850
-5.197	12.607	7.411	5860
-5.070	12.345	7.275	5870
-4.428	12.056	7.629	5880
-3.585	11.742	8.157	5890
-3.459	11.400	7.941	5900
-3.292	11.033	7.741	5910
-2.911	10.640	7.729	5920
-2.570	10.240	7.669	5930
-2.256	9.840	7.583	5940
-1.919	9.440	7.520	5950
-1.543	9.040	7.496	5960
-1.221	8.653	7.431	5970
-2.408	8.299	5.891	5980
-4.468	7.978	3.509	5990
-4.472	7.691	3.219	6000

LONG SECTION - NELSON STREET INTERCHANGE TO GREAT SOUTH RD - (MCOO)

**DISCLAIMER**  
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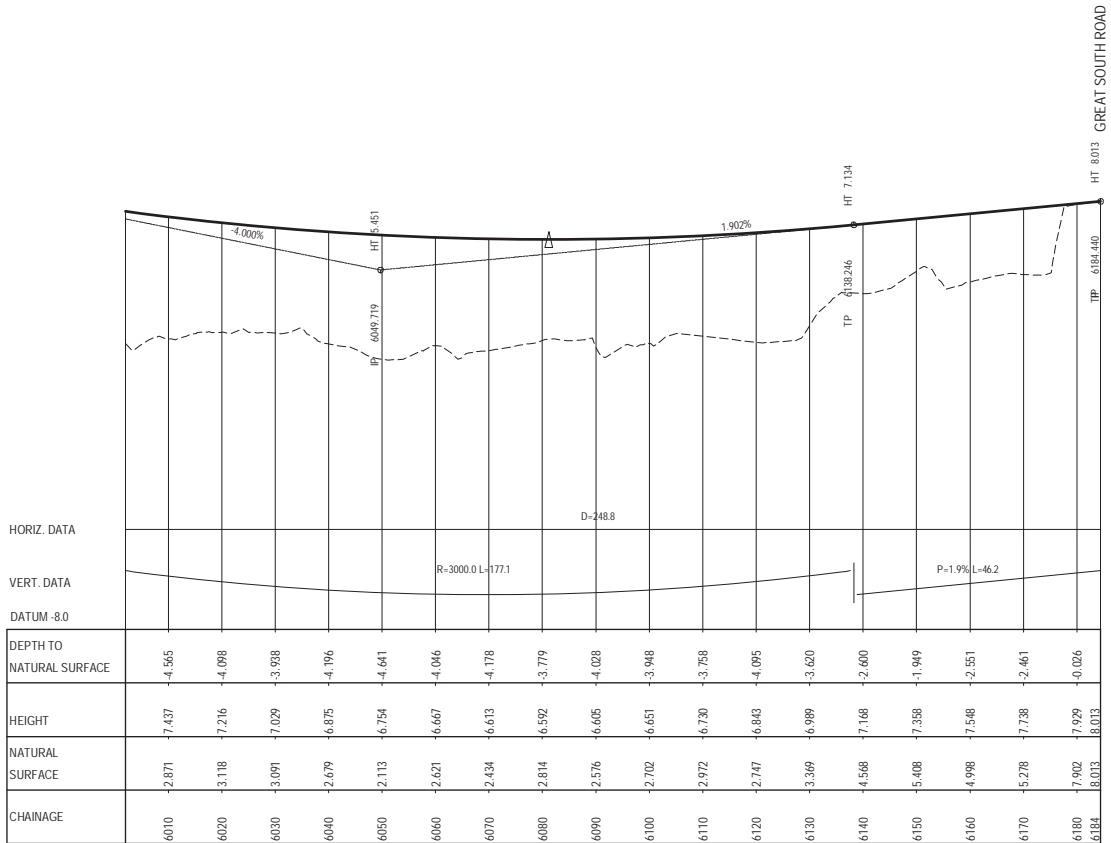
**PRELIMINARY**

<b>B</b>	REVISED DETAILED BUSINESS CASE	AN	11/08/16
<b>A</b>	ISSUED FOR COMMENT	RB	27/03/15
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date



<b>DO NOT SCALE</b>	Drawn RB	Designer RB	Client <b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTIONS</b>
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Approved (Project Director) Date	Scale 1:500 (A1), 1:1000 (A3)	This Drawing must not be used for Construction unless signed as Approved	Title <b>DETAILED BUSINESS CASE - RECOMMENDED OPT - LS NELSON STREET INTER TO GREAT SOUTH RD</b>
			Original Size <b>A1</b> Drawing No: <b>3818683-C442</b> Rev: <b>B</b>





LONG SECTION - NELSON STREET INTERCHANGE TO GREAT SOUTH RD. - (MC00)

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**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/16</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date

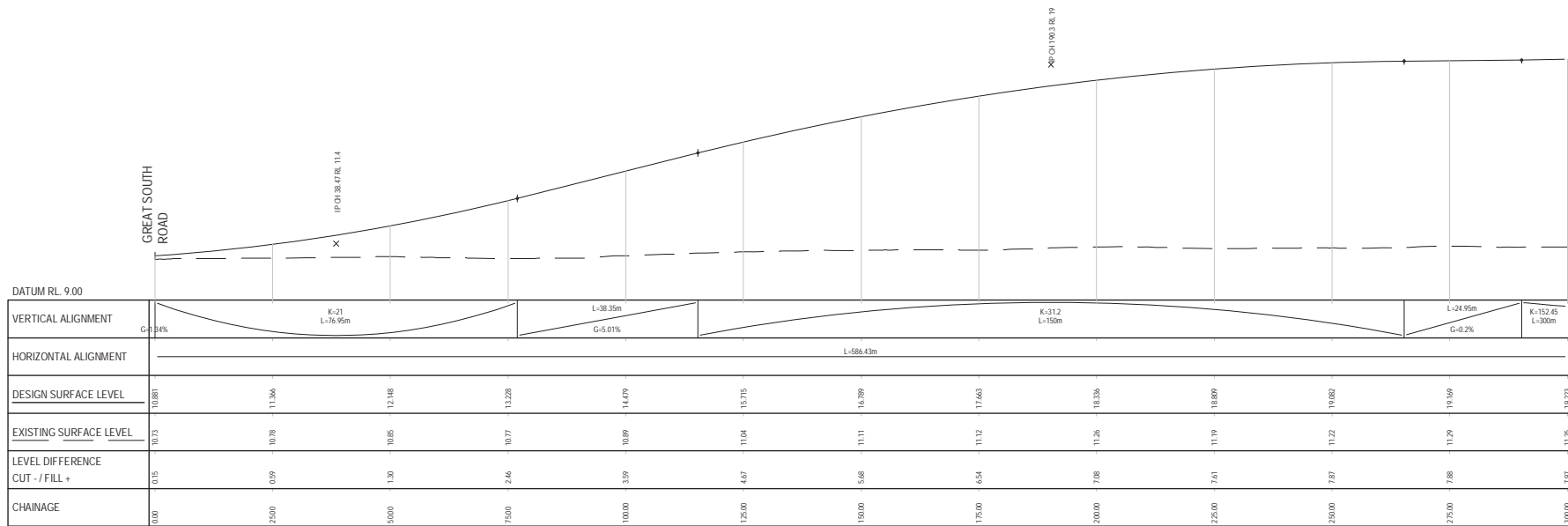


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Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	1:500 (A1), 1:1000 (A3)	This Drawing must not be used for Construction unless signed as Approved	

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTIONS</b>
Project	<b>DETAILED BUSINESS CASE - RECOMMENDED OPT - LS NELSON STREET INTER TO GREAT SOUTH RD</b>
Title	<b>Drawing No: 3818683-C443</b>
Original Size	<b>A1</b>
Rev:	<b>B</b>





LONG SECTION - GREAT SOUTH ROAD TO MT WELLINGTON ON RAMP - (MC20)

HORZ 1:500 VERT 1:100

**DISCLAIMER**  
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**PRELIMINARY**

<b>B REVISED DETAILED BUSINESS CASE</b>				AN	11/08/16
<b>A ISSUED FOR COMMENT</b>				RB	27/03/15
No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director

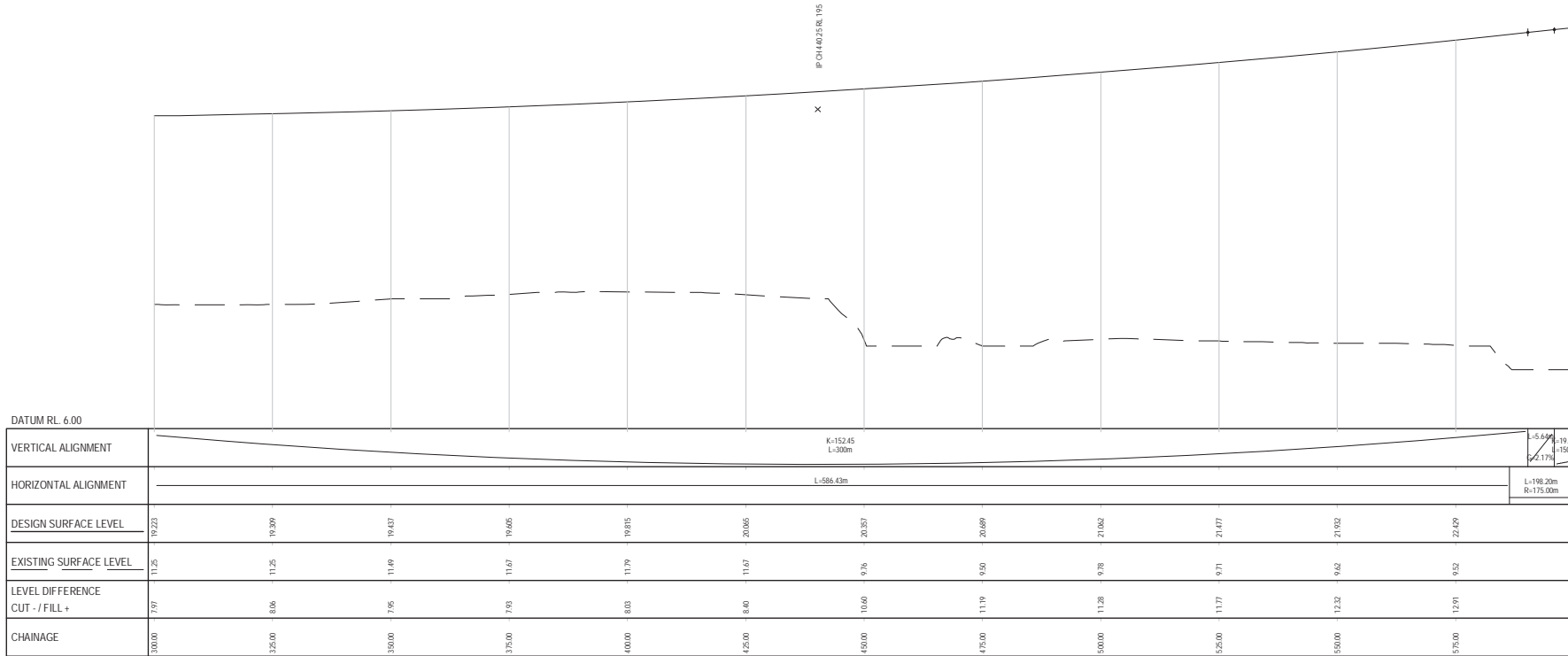


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Drawn RB	Designer RB
Drafting Check	Design Check
Approved (Project Director)	
Date	
Scale 1:500 (A1), 1:1000 (A3)	

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTIONS</b>	
Project	<b>DETAILED BUSINESS CASE - RECOMMENDED OPT - LS GREAT SOUTH RD TO MT WELLINGTON ON RAMP</b>	
Title		
Original Size	<b>A1</b>	<b>Drawing No: 3818683-C444</b>
Scale	<b>Rev: B</b>	





LONG SECTION - GREAT SOUTH ROAD TO MT WELLINGTON ON RAMP - (MC20)  
 HORZ 1:500 VERT 1:100

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**PRELIMINARY**

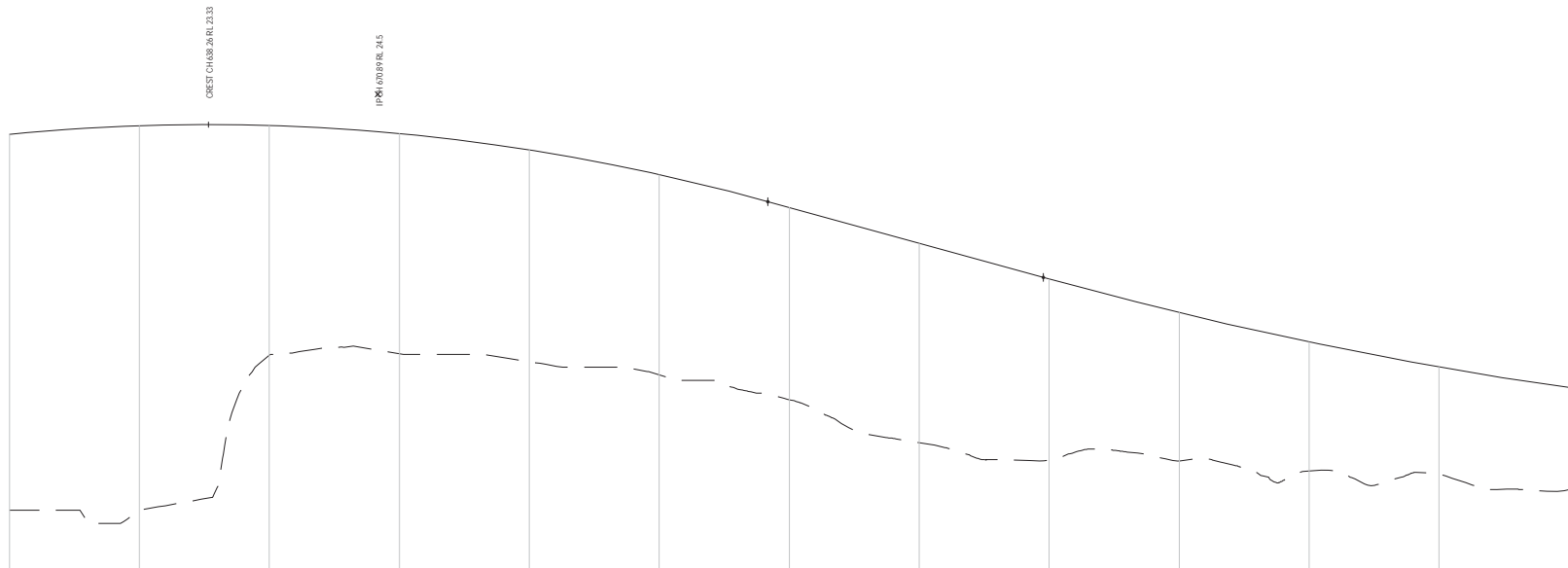
<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/15</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date



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	Approved (Project Director)	Date
	Scale 1:500 (A1), 1:1000 (A3)	This Drawing must not be used for Construction unless signed as Approved

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTIONS</b>
Project	<b>DETAILED BUSINESS CASE - RECOMMENDED OPT - LS GREAT SOUTH RD TO MT WELLINGTON ON RAMP</b>
Title	
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C445</b>
Rev:	<b>B</b>





DATUM RL: 6.00

VERTICAL ALIGNMENT	K=19.55 L=150m										L=52.98m G=-5.51%			K=38.6 L=353.9m		
HORIZONTAL ALIGNMENT	L=198.20m R=175.00m										L=51.43m			L=468.97m R=650.00m		
DESIGN SURFACE LEVEL	22.959	23.288	23.298	22.988	22.858	21.609	20.144	18.967	17.391	16.102	14.976	14.011	13.209			
EXISTING SURFACE LEVEL	8.30	8.48	14.46	14.53	14.21	13.71	12.75	11.08	10.43	10.40	10.01	9.87	9.29			
LEVEL DIFFERENCE CUT - / FILL +	14.66	14.80	8.84	8.46	8.15	7.70	7.39	7.69	6.6	5.71	4.96	4.14	3.92			
CHAINAGE	600.00	625.00	650.00	675.00	700.00	725.00	750.00	775.00	800.00	825.00	850.00	875.00	900.00			

LONG SECTION - GREAT SOUTH ROAD TO MT WELLINGTON ON RAMP - (MC20)  
HORZ 1:500 VERT 1:100

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**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/15</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date

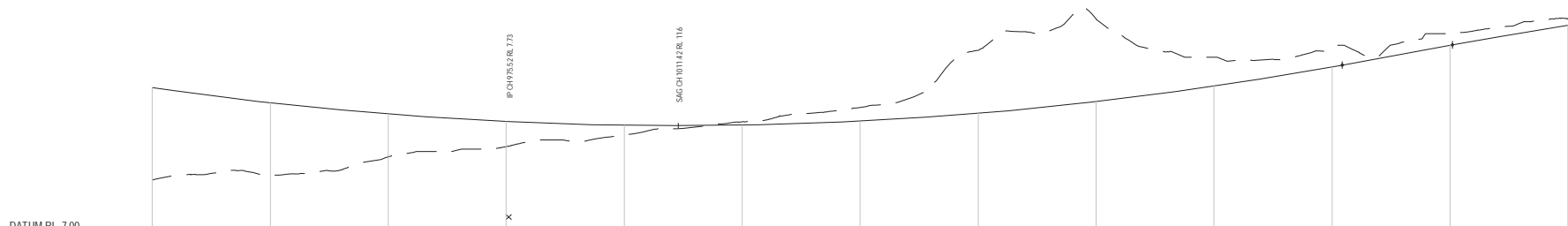


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Drawn RB	Designer RB
Drafting Check	Design Check
Approved (Project Director) Date	
Scale 1:500 (A1), 1:1000 (A3)	This Drawing must not be used for Construction unless signed as Approved

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPT - LS GREAT SOUTH RD TO MT WELLINGTON ON RAMP</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C446</b>
Rev:	<b>B</b>





VERTICAL ALIGNMENT	K=38.4 L=353.3m											L=23.32m G=-3.65%		K=50 L=194.41m	
HORIZONTAL ALIGNMENT	L=468.97m R=650.00m														
DESIGN SURFACE LEVEL	13.209	12.568	12.089	11.773	11.625	11.794	12.124	12.617	13.272	14.088	14.999	15.861			
EXISTING SURFACE LEVEL	9.29	9.48	10.28	10.70	11.20	11.75	12.37	14.80	16.12	14.50	13.52	16.13			
LEVEL DIFFERENCE CUT - / FILL +	3.92	3.09	1.81	1.07	0.42	-0.13	-0.58	-2.68	-3.51	-1.23	-0.87	-0.28			
CHAINAGE	900.00	925.00	950.00	975.00	1000.00	1025.00	1050.00	1075.00	1100.00	1125.00	1150.00	1175.00	1200.00		

LONG SECTION - GREAT SOUTH ROAD TO MT WELLINGTON ON RAMP - (MC20)  
 HORZ 1:500    VERT 1:100

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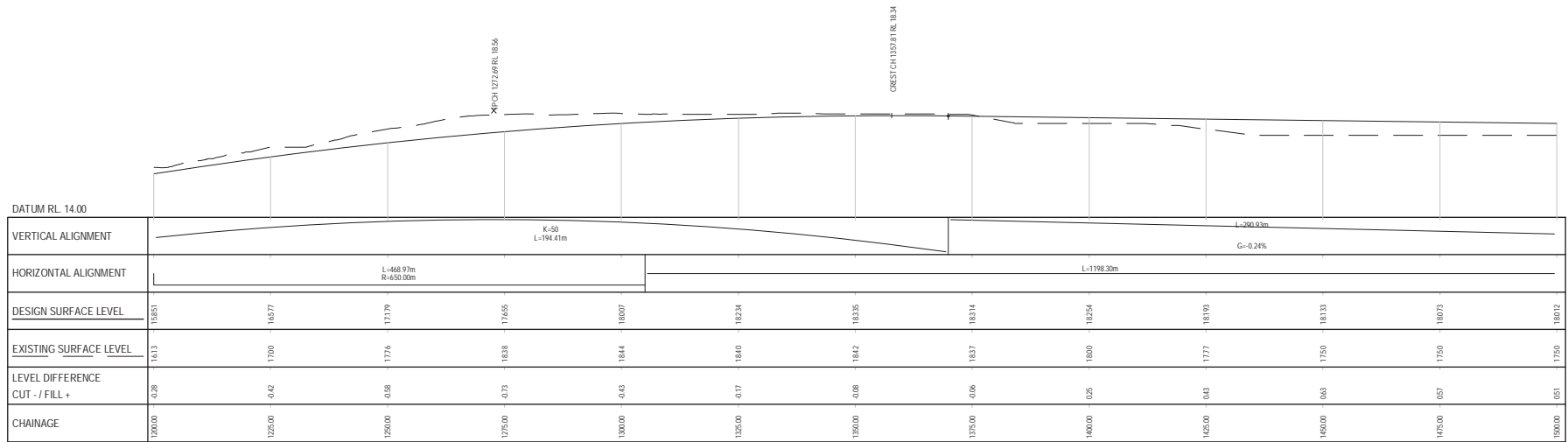
**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/16</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn    Job Manager    Project Director    Date



<b>DO NOT SCALE</b>	Drawn RB	Designer RB	Client <b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTIONS</b>
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	Approved (Project Director)	Date	Title
	Scale 1:500 (A1), 1:1000 (A3)	This Drawing must not be used for Construction unless signed as Approved	Original Size <b>A1</b> Drawing No: <b>3818683-C447</b> Rev: <b>B</b>





LONG SECTION - GREAT SOUTH ROAD TO MT WELLINGTON ON RAMP - (MC20)  
 HORZ 1:500 VERT 1:100

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**PRELIMINARY**

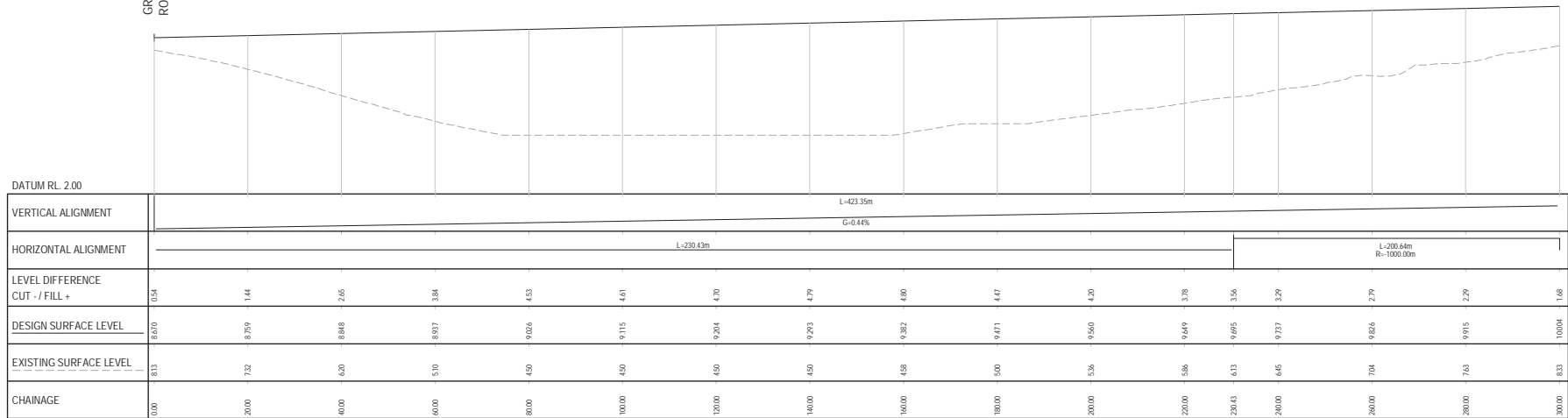
<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/16</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date



<b>DO NOT SCALE</b>	Drawn RB	Designer RB	Client <b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTIONS</b>
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Approved (Project Director) Date	Scale 1:500 (A1), 1:1000 (A3)	This Drawing must not be used for Construction unless signed as Approved	Title <b>Detailed Business Case - Recommended Opt - LS Great South Rd to Mt Wellington on Ramp</b>
			Original Size <b>A1</b> Drawing No: <b>3818683-C448</b> Rev: <b>B</b>



GREAT SOUTH ROAD



DATUM RL: 2.00

VERTICAL ALIGNMENT	L=423.35m G=0.44%															
HORIZONTAL ALIGNMENT	L=230.43m												L=200.64m R=1000.00m			

MT WELLINGTON TO GREAT SOUTH ROAD OFF RAMP - (MC30)

HORIZ 1:500 VERT 1:100

DISCLAIMER

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PRELIMINARY

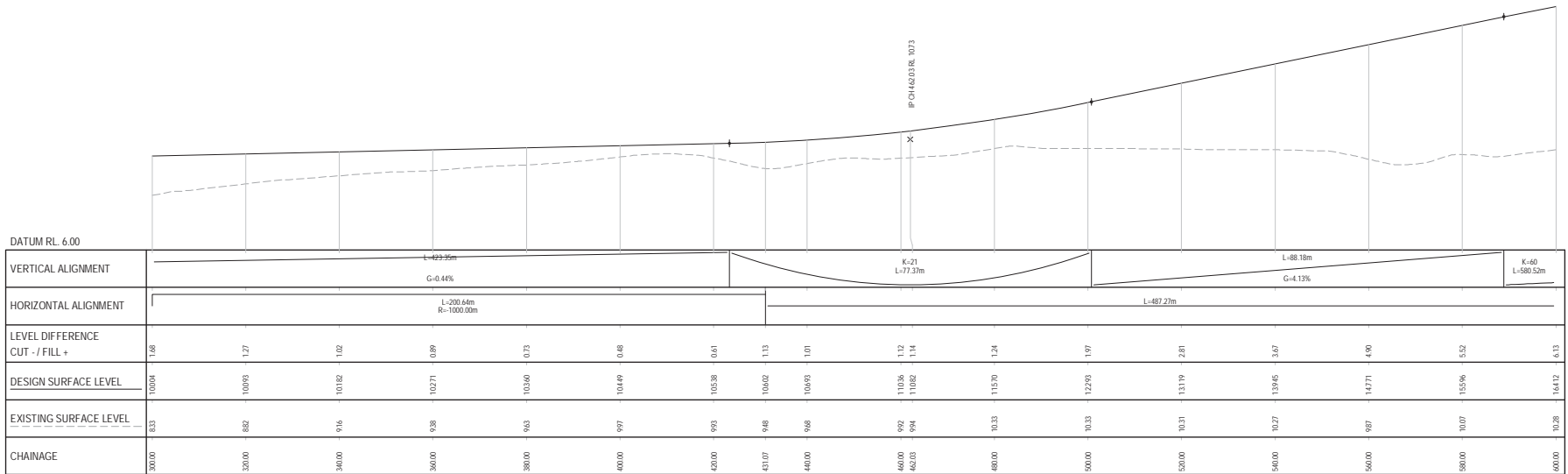
<b>B REVISED DETAILED BUSINESS CASE</b>				AN	11/08/16		
<b>A ISSUED FOR COMMENT</b>				RB	27/03/15		
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing		Drawn	Job Manager	Project Director	Date



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Drawn RB	Designer RB
Drafting Check	Design Check
Approved (Project Director) Date	
Scale 1:500 (A1), 1:1000 (A3)	

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTIONS</b>	
Project	<b>DETAILED BUSINESS CASE - LONG SECTION MT WELLINGTON TO GREAT SOUTH RD OFF RAMP</b>	
Title		
Original Size	<b>A1</b>	<b>Drawing No: 3818683-C449</b>
		<b>Rev: B</b>



VERTICAL ALIGNMENT	L=223.5m G=-0.44%															K=21 L=77.33m					L=88.18m					K=40 L=589.53m									
HORIZONTAL ALIGNMENT	L=200.64m R=1000.06m															L=487.27m																			
LEVEL DIFFERENCE CUT - / FILL +	1.68		1.27		1.02		0.89		0.73		0.48		0.61		1.13		1.01		1.12		1.14		1.24		1.97		2.81		3.67		4.90		5.52		6.13
DESIGN SURFACE LEVEL	10.004		10.093		10.182		10.271		10.360		10.449		10.538		10.627		10.716		10.805		10.894		10.983		11.072		11.161		11.250		11.339		11.428		11.517
EXISTING SURFACE LEVEL	8.33		8.82		9.16		9.58		9.63		9.97		9.93		9.68		9.66		9.92		9.94		10.33		10.33		10.31		10.27		9.87		10.07		10.28
CHAINAGE	300.00		320.00		340.00		360.00		380.00		400.00		420.00		440.00		460.00		480.00		500.00		520.00		540.00		560.00		580.00		600.00				

MT WELLINGTON TO GREAT SOUTH ROAD OFF RAMP - (MC30)  
 HORZ 1:500 VERT 1:100

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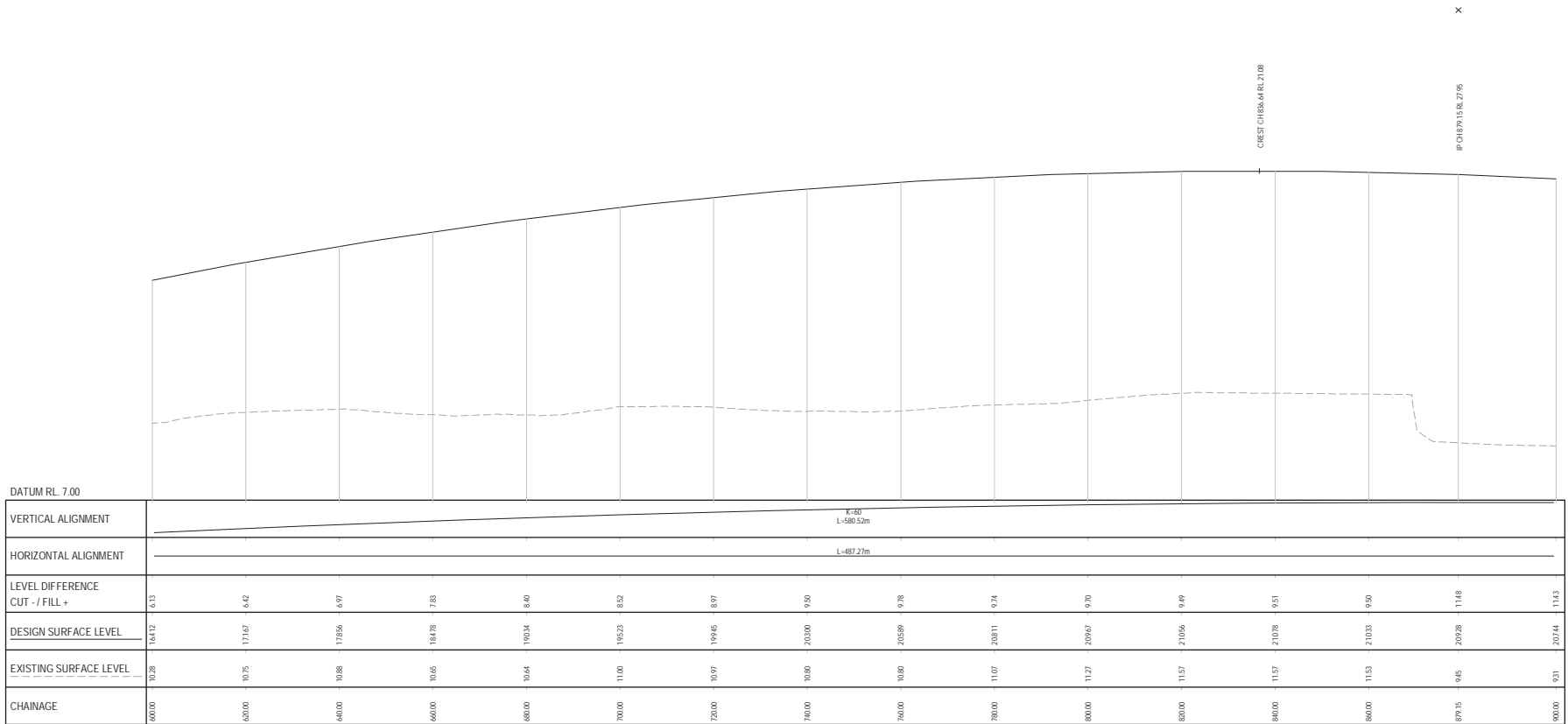
**PRELIMINARY**

<b>B</b>	REVISED DETAILED BUSINESS CASE	AN	11/08/16
<b>A</b>	ISSUED FOR COMMENT	RB	27/03/15
No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date



<b>DO NOT SCALE</b>	Drawn RB	Designer RB	Client NZ Transport Agency/Auckland Transport
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	Approved (Project Director)	Date	Title DETAILED BUSINESS CASE - LONG SECTION MT WELLINGTON TO GREAT SOUTH RD OFF RAMP
	Scale 1:500 (A1), 1:1000 (A3)	This Drawing must not be used for Construction unless signed as Approved	Original Size <b>A1</b> Drawing No: <b>3818683-C450</b> Rev: <b>B</b>





DATUM RL: 7.00	
VERTICAL ALIGNMENT	$K=780$ L=560.52m
HORIZONTAL ALIGNMENT	L=487.27m
LEVEL DIFFERENCE CUT - / FILL +	6.13    6.42    6.97    7.83    8.40    8.52    8.97    9.50    9.78    9.74    9.70    9.49    9.51    9.50    11.48    11.43
DESIGN SURFACE LEVEL	164.12    171.67    178.56    184.78    190.34    195.23    199.46    203.00    205.89    208.11    209.67    210.56    210.78    210.33    209.28    207.44
EXISTING SURFACE LEVEL	10.28    10.75    10.88    10.65    10.64    11.00    10.97    10.80    10.80    11.07    11.27    11.57    11.57    11.53    9.46    9.51
CHAINAGE	600.00    620.00    640.00    660.00    680.00    700.00    720.00    740.00    760.00    780.00    800.00    820.00    840.00    860.00    889.15    900.00

MT WELLINGTON TO GREAT SOUTH ROAD OFF RAMP - (MC30)  
 HORZ 1:500    VERT 1:100

**DISCLAIMER**  
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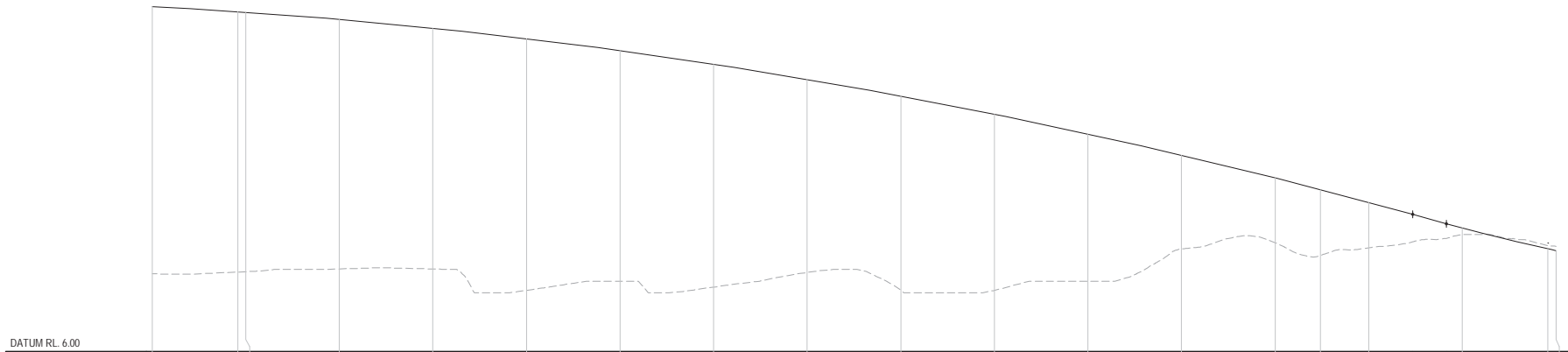


**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/16</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn    Job Manager    Project Director    Date



<b>DO NOT SCALE</b>	Drawn RB    Designer RB	Client <b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTIONS</b>
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Approved (Project Director) Date	Scale 1:500 (A1), 1:1000 (A3)	Title <b>DETAILED BUSINESS CASE - LONG SECTION MT WELLINGTON TO GREAT SOUTH RD OFF RAMP</b>
	This Drawing must not be used for Construction unless signed as Approved	Original Size <b>A1</b> Drawing No: <b>3818683-C451</b> Rev: <b>B</b>



DATUM RL. 6.00

VERTICAL ALIGNMENT																																				
HORIZONTAL ALIGNMENT																																				
LEVEL DIFFERENCE CUT - / FILL +	114.3		111.3	111.0		106.7		102.9		107.6		9.85		9.33		8.26		8.31		7.54		6.30		4.01		2.77		2.81		1.94		0.27		-0.13		-0.18
DESIGN SURFACE LEVEL	20.44		20.523	20.500	20.500	20.188		19.811		19.356		18.855		18.277		17.633		16.921		16.144		15.299		14.388		13.410		12.911		12.365		11.267		10.377		10.302
EXISTING SURFACE LEVEL	9.31		9.29	9.60	9.60	9.52		9.52		8.60		9.00		8.74		9.37		8.61		8.60		9.00		10.38		10.64		10.10		10.43		11.00		10.51		10.48
CHAINAGE	980.00		988.34	990.00	990.00	990.00		990.00		990.00		1000.00		1000.00		1000.00		1000.00		1000.00		1000.00		1100.00		1100.00		1100.00		1100.00		1180.00		1180.00		1180.00

MT WELLINGTON TO GREAT SOUTH ROAD OFF RAMP - (MC30)  
 HORZ 1:500 VERT 1:100

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 THE ACTUAL FOOTPRINT AND LOCATION IS SUBJECT TO CHANGE AS THE DESIGN IS FURTHER DEVELOPED.



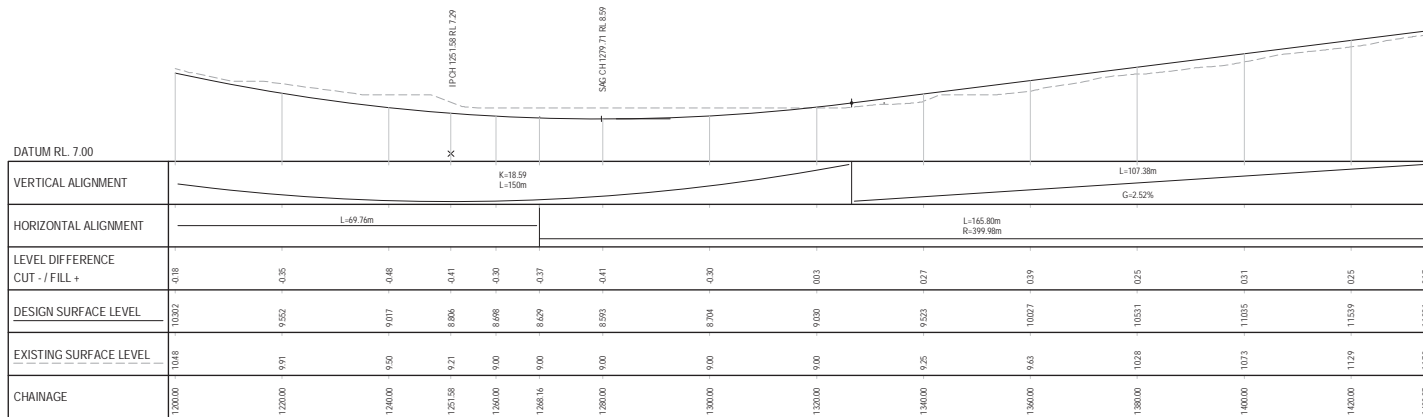
**PRELIMINARY**

No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
B	REVISED DETAILED BUSINESS CASE		AN			11/08/16
A	ISSUED FOR COMMENT		RB			27/03/15



<b>DO NOT SCALE</b>	Drawn RB	Designer RB	Client Project	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTIONS</b>
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	Approved (Project Director)	Date	Original Size	<b>Drawing No: 3818683-C452</b>
	Scale 1:500 (A1), 1:1000 (A3)	This Drawing must not be used for Construction unless signed as Approved	<b>A1</b>	<b>Rev: B</b>





MT WELLINGTON TO GREAT SOUTH ROAD OFF RAMP - (MC30)  
 HORZ 1:500 VERT 1:100

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**PRELIMINARY**

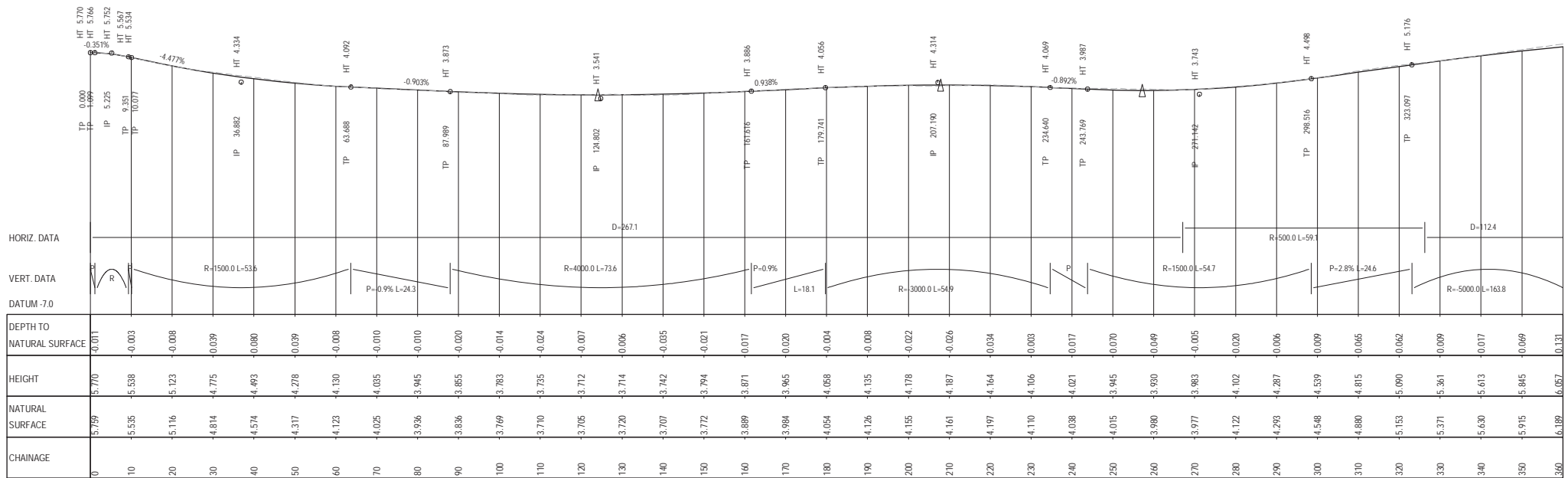
<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/15</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date



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Drawn RB	Designer RB
Drafting Check	Design Check
Approved (Project Director) Date	
Scale 1:500 (A1), 1:1000 (A3)	

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTIONS</b>
Project	<b>DETAILED BUSINESS CASE - LONG SECTION MT WELLINGTON TO GREAT SOUTH RD OFF RAMP</b>
Title	
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C453</b>
Rev:	<b>B</b>



LONG SECTION - CAPTAIN SPRINGS ROAD - MC10

**DISCLAIMER**

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**PRELIMINARY**

<b>B</b> REVISED DETAILED BUSINESS CASE		AN	11/08/15
<b>A</b> ISSUED FOR COMMENT		RB	27/03/15
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn
		Job Manager	Project Director
		Date	



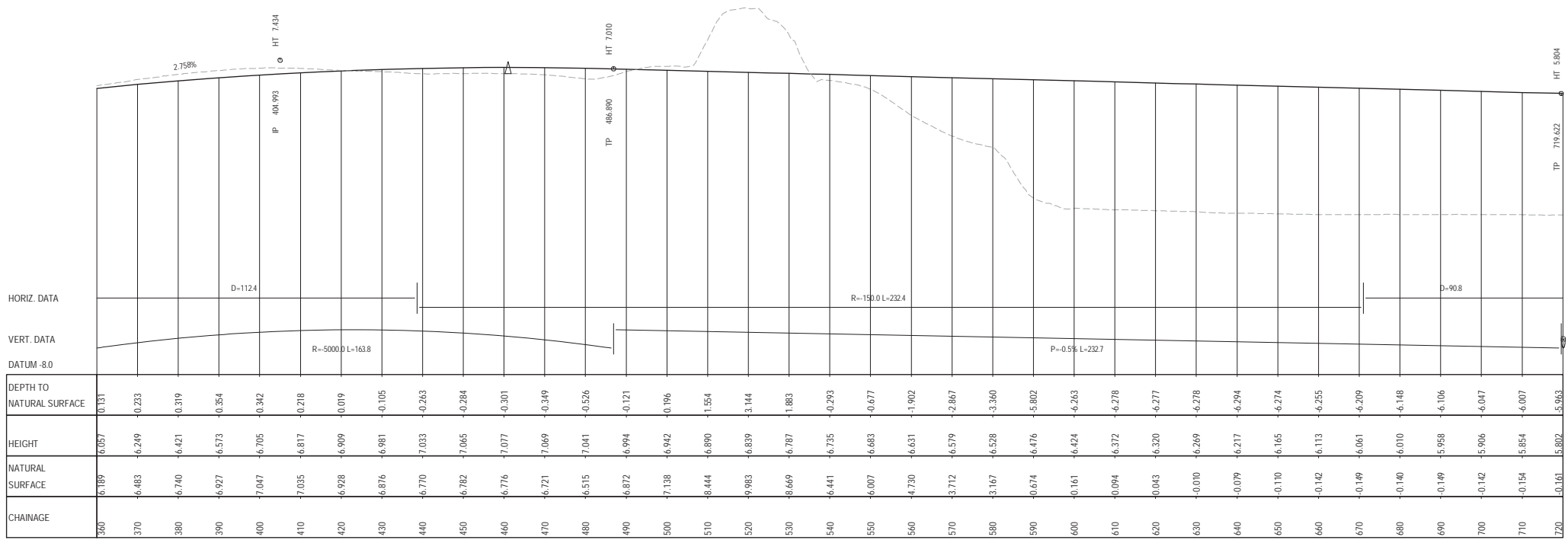
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Drawn RB	Designer RB
Drafting Check	Design Check
Approved (Project Director)	Date
Scale 1:500 (A1), 1:1000 (A3)	This Drawing must not be used for Construction unless signed as Approved

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - STAGED OPTION</b>
	<b>CAPTAIN SPRINGS/ EWC - LONG SECTION - SH 1</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C455</b>
Rev:	<b>B</b>





DEPTH TO NATURAL SURFACE	HEIGHT	NATURAL SURFACE	CHAINAGE
0.151	6.057	-6.189	360
-0.223	-6.249	-6.483	370
-0.319	-6.421	-6.740	380
-0.354	-6.573	-6.927	390
-0.342	-6.705	-7.047	400
-0.218	-6.817	-7.035	410
-0.019	-6.909	-6.928	420
-0.105	-6.981	-6.876	430
-0.263	-7.033	-6.770	440
-0.284	-7.065	-6.782	450
-0.301	-7.077	-6.776	460
-0.349	-7.069	-6.721	470
-0.526	-7.041	-6.515	480
-0.121	-6.994	-6.872	490
-0.196	-6.942	-7.138	500
-1.554	-6.890	-8.444	510
-3.144	-6.839	-9.983	520
-1.883	-6.787	-8.669	530
-0.293	-6.735	-6.441	540
-0.677	-6.683	-6.007	550
-1.902	-6.631	-4.730	560
-2.867	-6.579	-3.712	570
-3.360	-6.528	-3.167	580
-5.802	-6.476	-0.074	590
-4.263	-6.424	-0.161	600
-6.278	-6.372	-0.094	610
-6.277	-6.320	-0.043	620
-6.278	-6.269	-0.010	630
-6.294	-6.217	-0.079	640
-6.274	-6.165	-0.110	650
-6.255	-6.113	-0.142	660
-6.209	-6.061	-0.149	670
-6.148	-6.010	-0.140	680
-6.106	-5.958	-0.149	690
-6.047	-5.906	-0.142	700
-6.007	-5.854	-0.154	710
-5.963	-5.802	-0.161	720

LONG SECTION - CAPTAIN SPRINGS ROAD - MC10

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**PRELIMINARY**

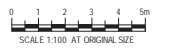
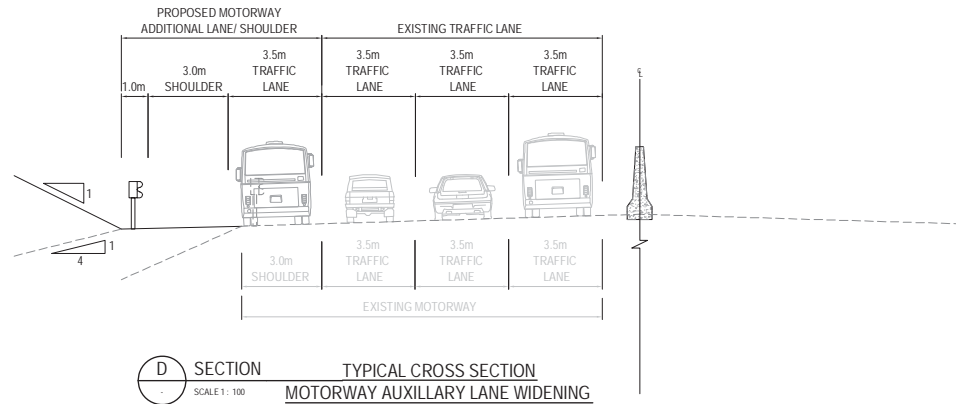
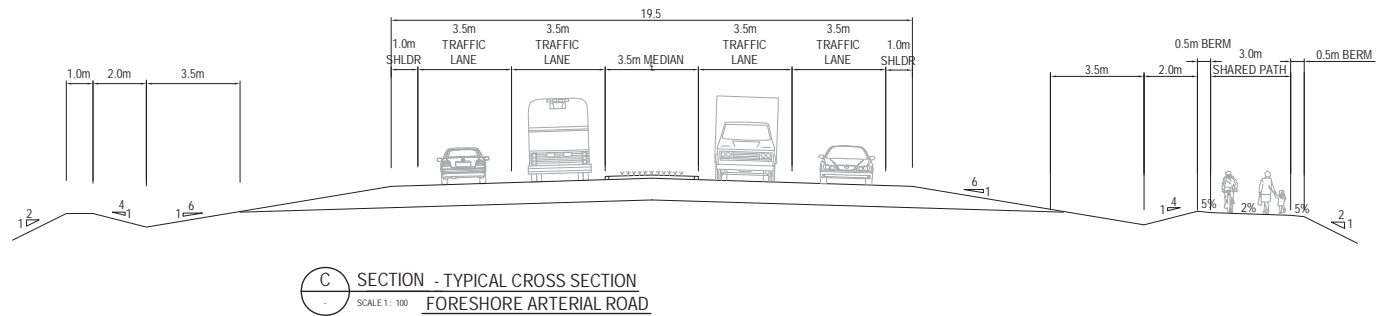
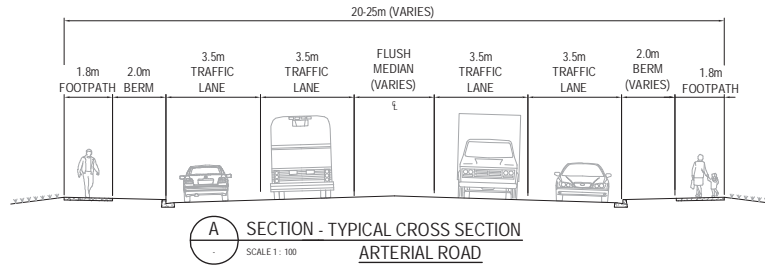
<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/16</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date



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Drawn RB	Designer RB
Drafting Check	Design Check
Approved (Project Director)	Date
Scale 1:500 (A1), 1:1000 (A3)	This Drawing must not be used for Construction unless signed as Approved

Client Project	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - STAGED OPTION CAPTAIN SPRINGS/ EWC - LONG SECTION - SH 2</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C456</b>
Rev:	<b>B</b>



**PRELIMINARY**

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<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>		<b>11/08/16</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>		<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager
			Project Director	Date

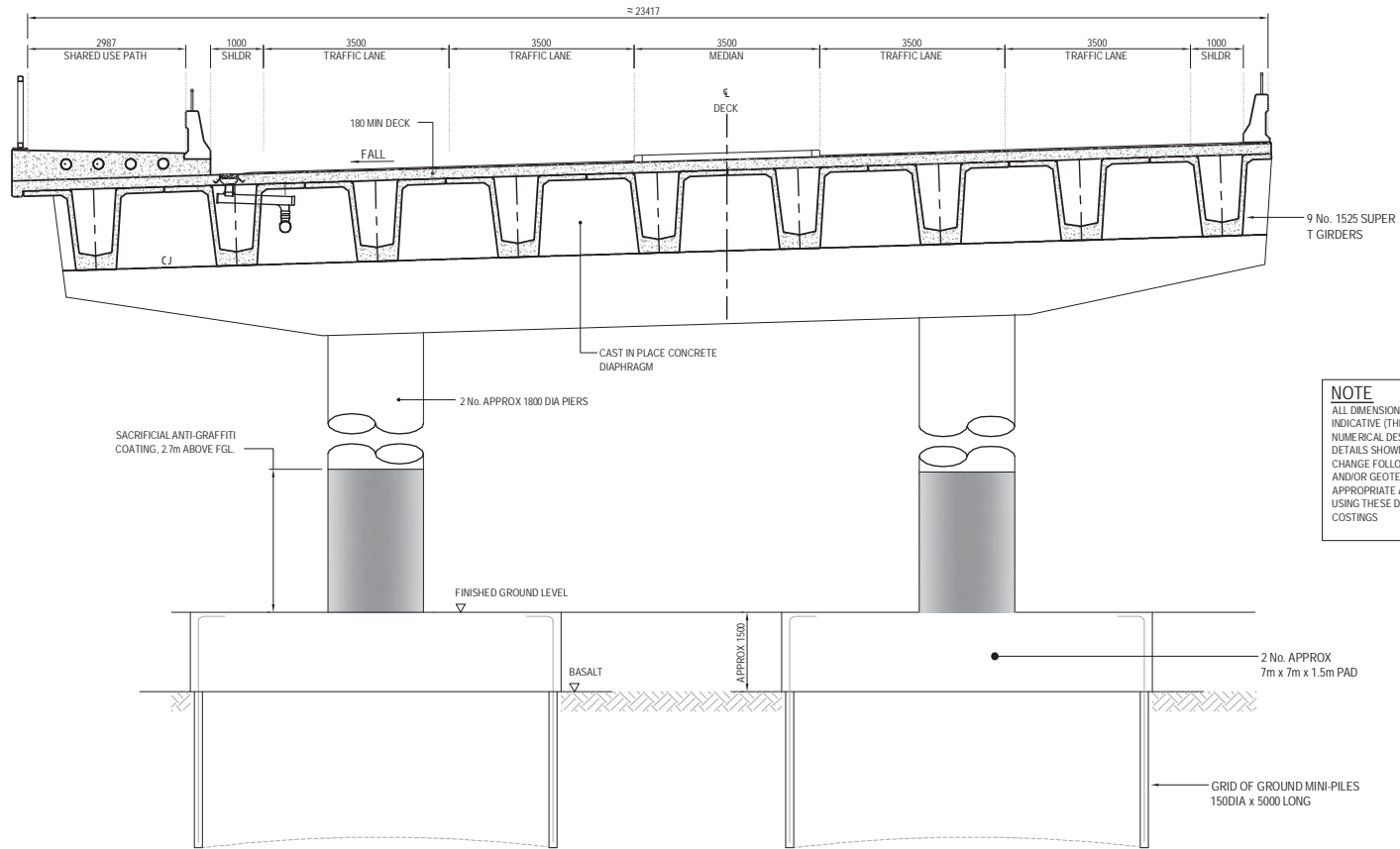


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Drawn	BD	Designer	BD
Drafting Check		Design Check	
Approved (Project Director)			
Date			
Scale	1:100 (A1), 1:200 (A3)	This Drawing must not be used for Construction unless signed as Approved	

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTION</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPTION TYPICAL SECTION</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C501</b>
Rev:	<b>B</b>





**NOTE**  
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**E SECTION - TYPICAL PIER**  
 SCALE 1:50 ANN'S CREEK VIADUCT (OVER BASALT)



**PRELIMINARY**

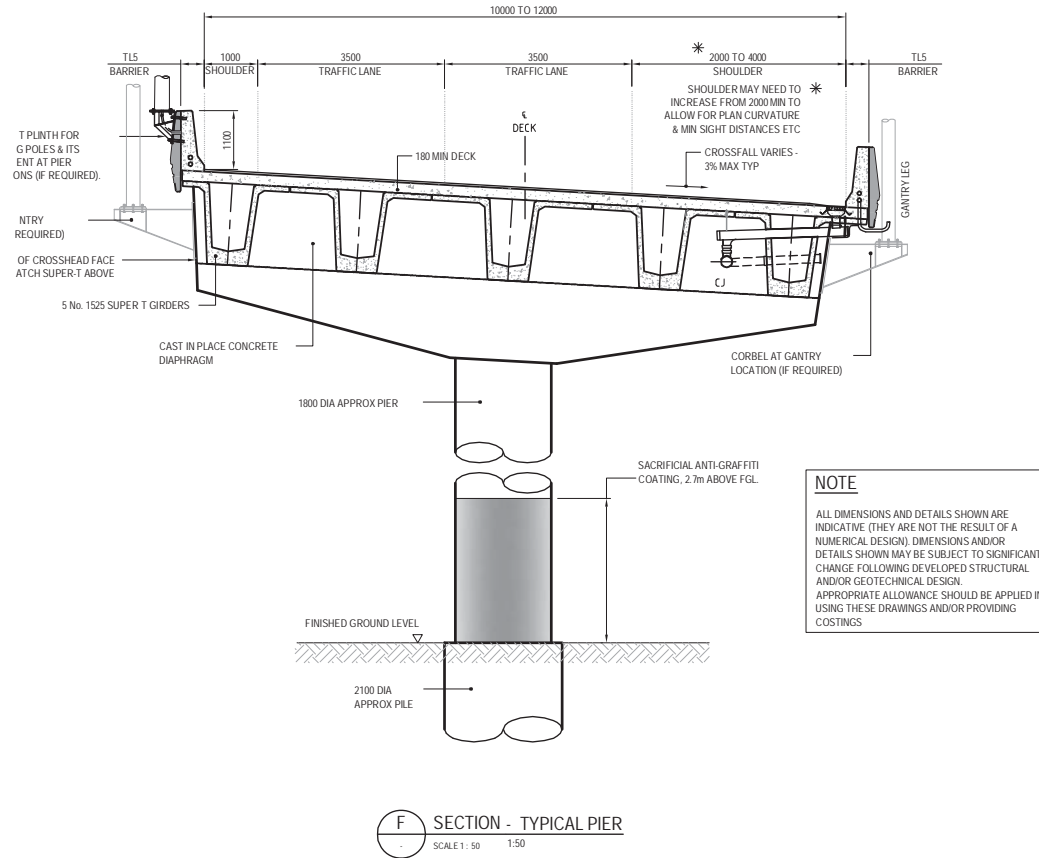
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<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/16</b>	
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>	
No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager Project Director Date



<b>DO NOT SCALE</b>	Drawn PN	Designer DC	Client
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	Approved (Project Director)	Date	Title
	Scale AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	Original Size

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT</b>
Project	<b>EAST WEST CONNECTION</b>
Title	<b>DETAILED BUSINESS CASE - VIADUCT PIER DETAILS</b>
	<b>TYPE 1 - NO PILECAP SUPER T GIRDER</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C502</b>
Rev:	<b>B</b>



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<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>		<b>11/08/16</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>		<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager
			Project Director	Date



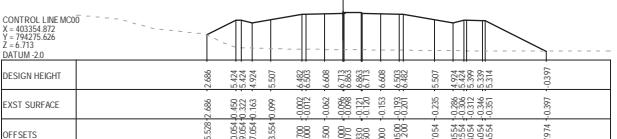
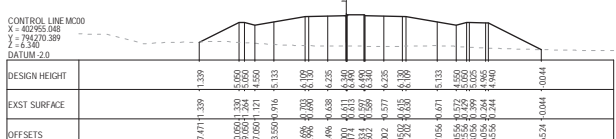
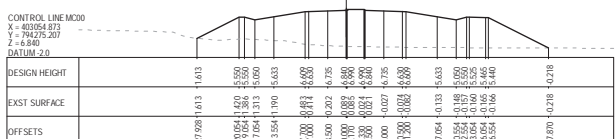
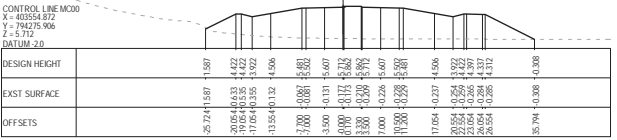
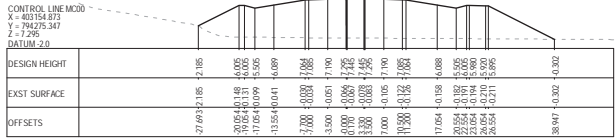
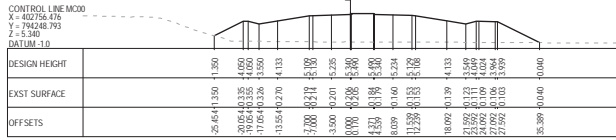
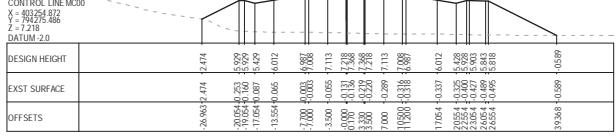
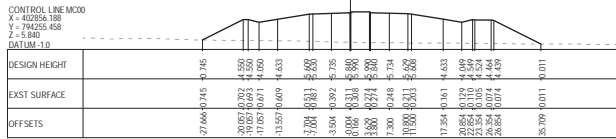
<b>DO NOT SCALE</b>	Drawn PN	Designer DC	Client <b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTION</b>
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	Approved (Project Director)	Date	Title
	Scale AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	Original Size <b>A1</b>
			<b>Drawing No: 3818683-C503</b>
			<b>Rev: B</b>











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No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
B	REVISED DETAILED BUSINESS CASE		AN			11/06/16
A	ISSUED FOR COMMENT		RB			27/03/15



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Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client: **NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTIONS**  
Title: **DETAILED BUSINESS CASE - RECOMMENDED OPT SH20 TO GREAT SOUTH RD - CROSS SECTION**  
Drawing No: **3818683-C513**  
Rev: **B**







CONTROL LINE MCD0  
 X = 426655.330  
 Y = 794552.420  
 Z = 8.013

	11.020	14.07	17.08	19.08	21.07	23.06	25.05	27.04	29.03	31.02
DESIGN HEIGHT										
EXST SURFACE	10.500	7.718	7.938	8.013	8.088	8.163	8.238	8.313	8.388	8.463
OFFSETS	-3.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

CHAINAGE 6184

CONTROL LINE MCD0  
 X = 405977.003  
 Y = 794578.869  
 Z = 6.652

	13.000	16.08	19.17	22.25	25.34	28.42	31.50	34.58	37.66	40.74
DESIGN HEIGHT										
EXST SURFACE	10.500	7.726	7.946	8.021	8.096	8.171	8.246	8.321	8.396	8.471
OFFSETS	3.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

CHAINAGE 6100

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**PRELIMINARY**

No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn	JOB Manager	Project Director	Date
B	REVISED DETAILED BUSINESS CASE		AN			11/08/16
A	ISSUED FOR COMMENT		RB			27/03/15



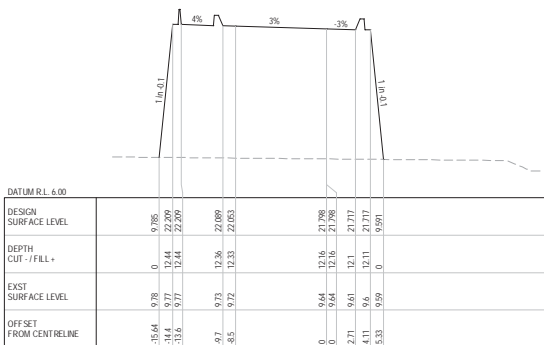
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Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

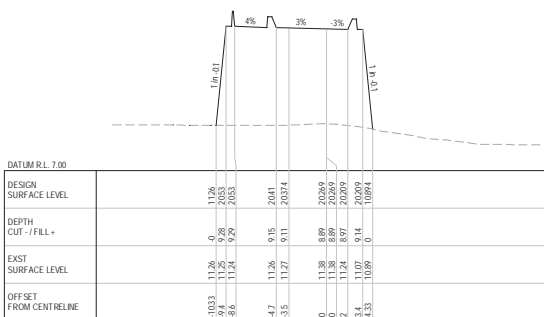
Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTIONS</b>		
Project	<b>DETAILED BUSINESS CASE - RECOMMENDED OPT SH20 TO GREAT SOUTH RD - CROSS SECTION</b>		
Title			
Original Size	<b>A1</b>	<b>Drawing No: 3818683-C516</b>	<b>Rev: B</b>



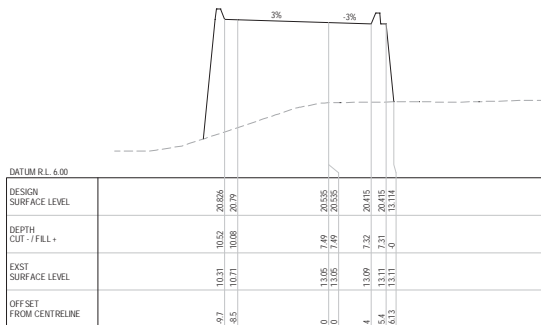




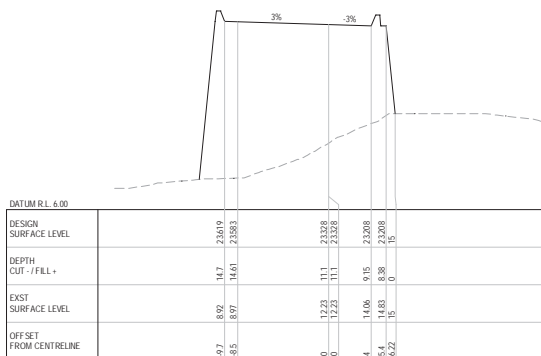
MC20 - CH 1000



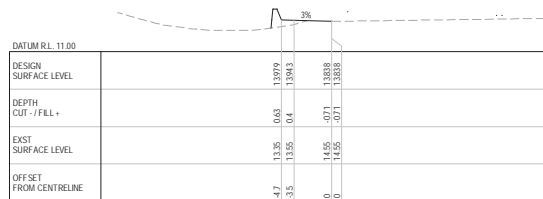
MC20 - CH 900



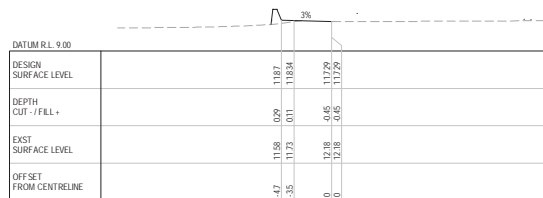
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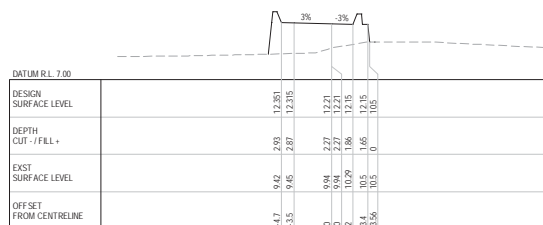
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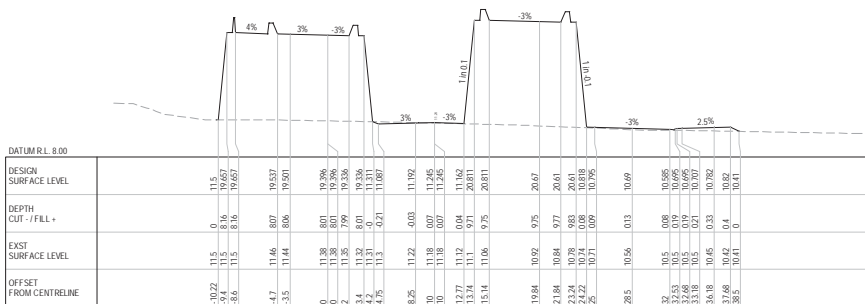
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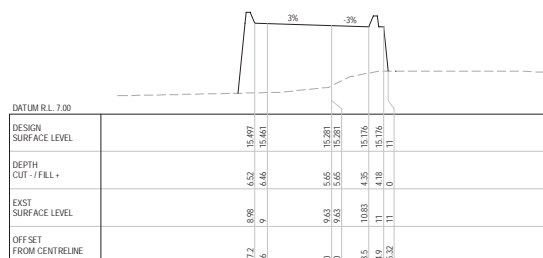
MC20 - CH 1500



MC20 - CH 1400



MC20 - CH 800



MC20 - CH 1300

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**PRELIMINARY**

<b>B</b>	REVISED DETAILED BUSINESS CASE	AN	11/08/16
<b>A</b>	ISSUED FOR COMMENT	RB	27/03/15
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date

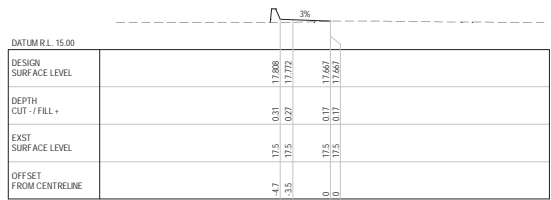


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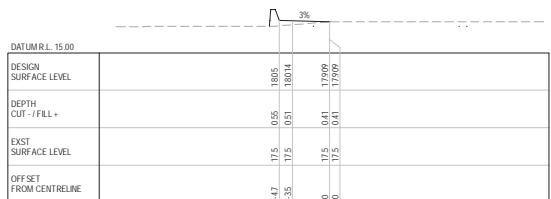
Drawn RB	Designer RB
Drafting Check	Design Check
Approved (Project Director)	Date
Scale AS SHOWN	This Drawing must not be used for Construction unless signed as Approved

Client Project Title	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTIONS</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C518</b>
Rev:	<b>B</b>

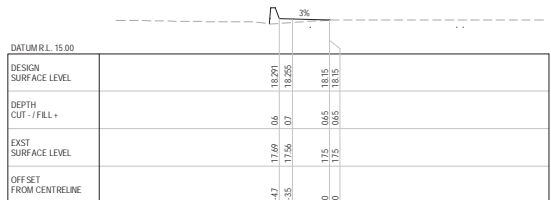




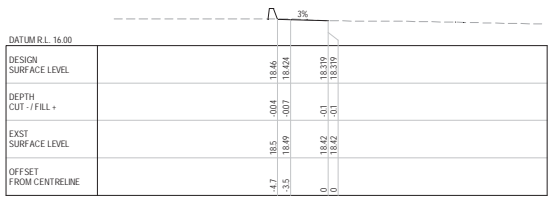
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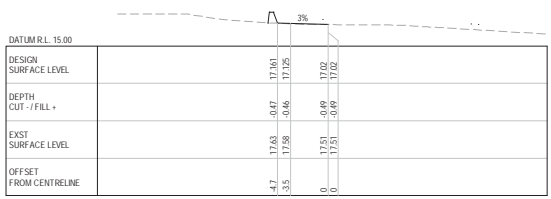
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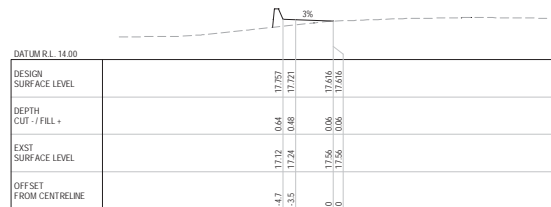
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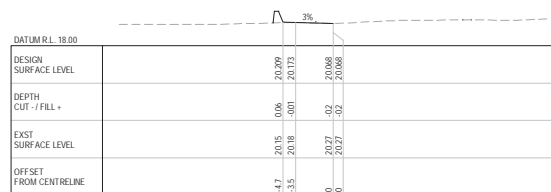
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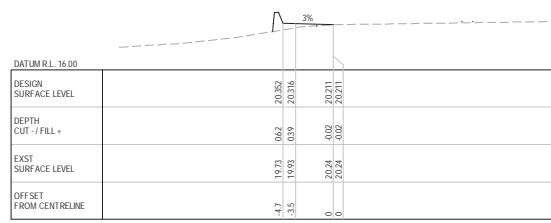
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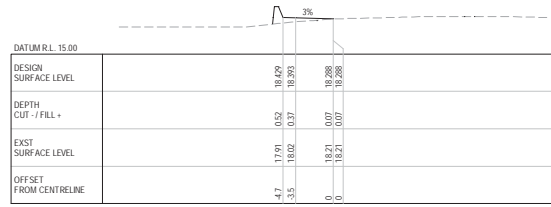
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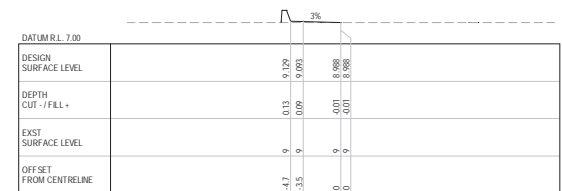
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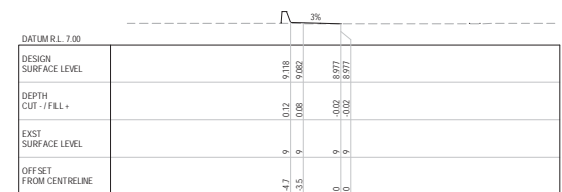
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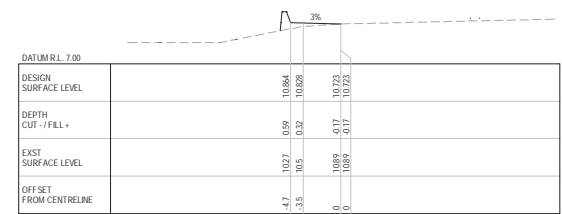
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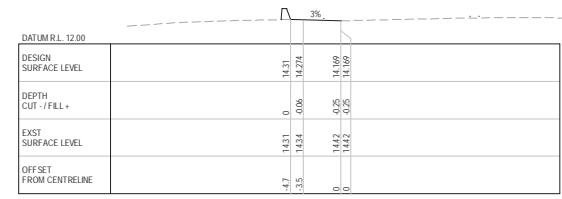
MC20 - CH 2900



MC20 - CH 2800

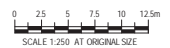


MC20 - CH 2700



MC20 - CH 2600

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**PRELIMINARY**

<b>B</b> REVISED DETAILED BUSINESS CASE	AN	11/08/15
<b>A</b> ISSUED FOR COMMENT	RB	27/03/15
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing
Drawn	Job Manager	Project Director
		Date



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Drawn RB	Designer RB
Drafting Check	Design Check
Approved (Project Director)	Date
Scale AS SHOWN	This Drawing must not be used for Construction unless signed as Approved

Client Project	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTIONS</b>
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPT GREAT SOUTH RD TO PRINCES ST- CROSS SECTION</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C519</b>
Rev:	<b>B</b>

X = 407918.487  
Y = 793610.266  
Z = 7.212

DATUM 5.0	
DESIGN HEIGHT	-6.590 -6.559 -6.566 -6.892 -8.800 -6.920 -7.137 -7.017 -7.107 7.212
EXST SURFACE	-6.507 -6.547 -6.561 -6.892 -8.800 -6.920 -6.982 -7.107 7.213
OFFSETS	-19.882 -18.045 -17.568 -9.403 -8.800 -6.500 -3.500 0.000

MC20 - CH 3300

X = 407888.905  
Y = 793705.791  
Z = 6.738

DATUM 4.0	
DESIGN HEIGHT	-6.807 -6.833 -6.795 -6.853 -6.967 -6.543 -6.677 -6.633 -6.738
EXST SURFACE	-6.801 -6.797 -6.692 -6.635 -6.665 -6.677 -6.667 -6.738
OFFSETS	-16.314 -16.212 -13.903 -11.903 -8.103 -6.500 -6.483 -3.500 0.000

MC20 - CH 3200

X = 407859.323  
Y = 793801.315  
Z = 6.185

DATUM 4.0	
DESIGN HEIGHT	-6.350 -6.256 -6.136 -6.196 -6.316 -6.286 -6.110 -5.990 -6.080 -6.185
EXST SURFACE	-7.171 -7.103 -7.078 -6.887 -6.174 -6.199 -6.149 -6.137 -6.090 -6.178 -6.185
OFFSETS	-19.277 -17.397 -16.977 -14.977 -10.977 -9.357 -6.920 -6.500 -3.500 0.000

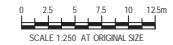
MC20 - CH 3100

X = 407829.740  
Y = 793896.539  
Z = 5.754

DATUM 4.0	
DESIGN HEIGHT	-5.646 -5.646 -5.551 -5.431 -5.490 -5.608 -5.649 -5.754
EXST SURFACE	-6.486 -6.388 -6.360 -6.116 -5.431 -5.672 -5.638 -5.754
OFFSETS	-14.630 -12.746 -12.325 -10.321 -6.312 -3.500 0.000

MC20 - CH 3000

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**PRELIMINARY**

<b>B</b>	<b>REVISED DETAILED BUSINESS CASE</b>	<b>AN</b>	<b>11/08/16</b>
<b>A</b>	<b>ISSUED FOR COMMENT</b>	<b>RB</b>	<b>27/03/15</b>
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager Project Director Date



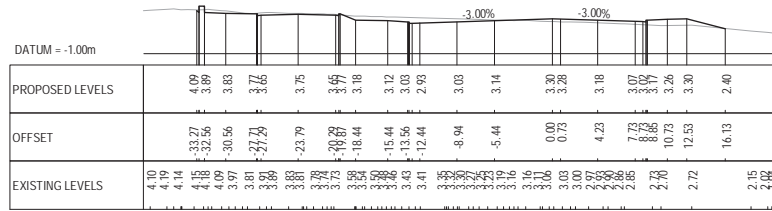
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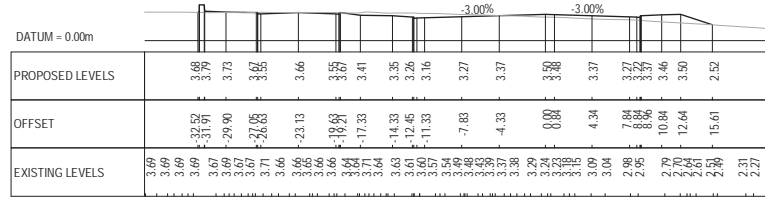
Drawn RB	Designer RB
Drafting Check	Design Check
Approved (Project Director) Date	
Scale AS SHOWN	This Drawing must not be used for Construction unless signed as Approved

Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTIONS</b>
Project	
Title	<b>DETAILED BUSINESS CASE - RECOMMENDED OPT GREAT SOUTH RD TO PRINCES ST- CROSS SECTION</b>
Original Size	<b>A1</b>
Drawing No:	<b>3818683-C520</b>
Rev:	<b>B</b>

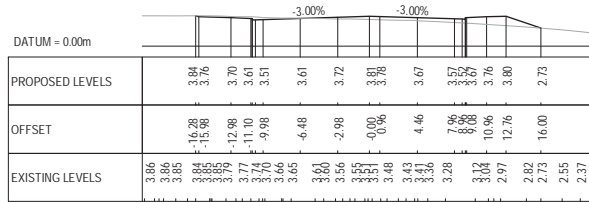




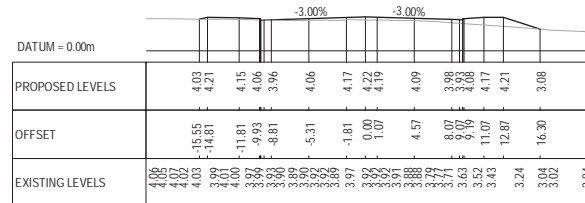
MCNO - CHAINAGE 260.00



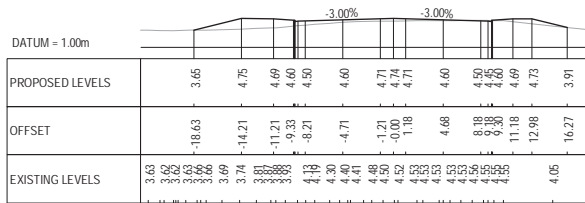
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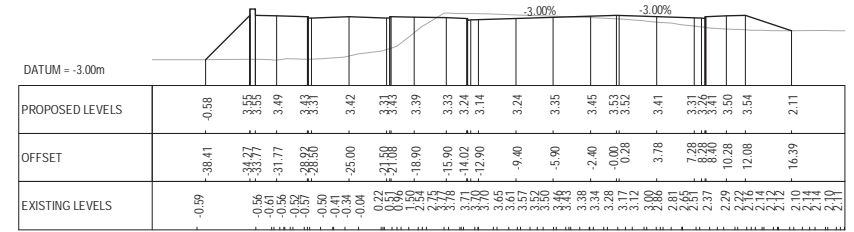
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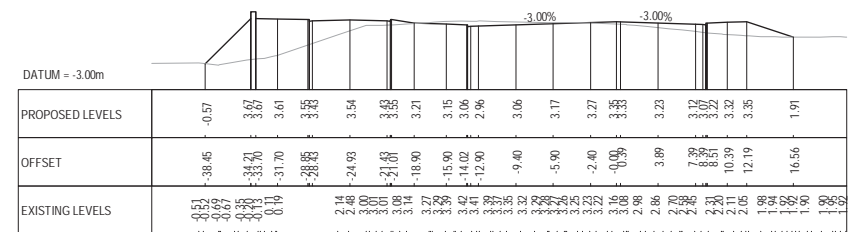
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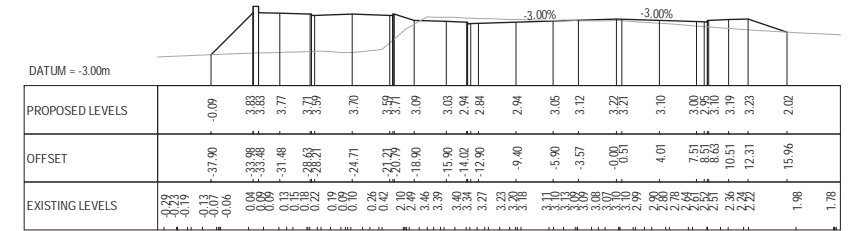
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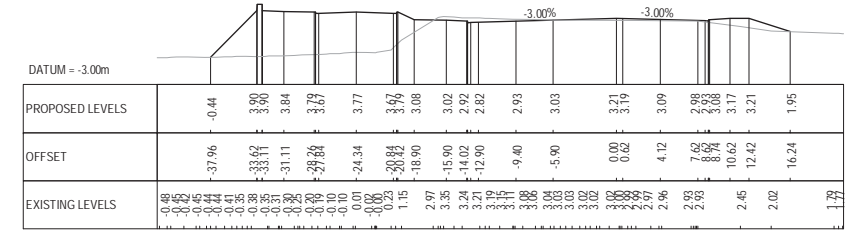
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MCNO - CHAINAGE 320.00



MCNO - CHAINAGE 300.00



MCNO - CHAINAGE 280.00



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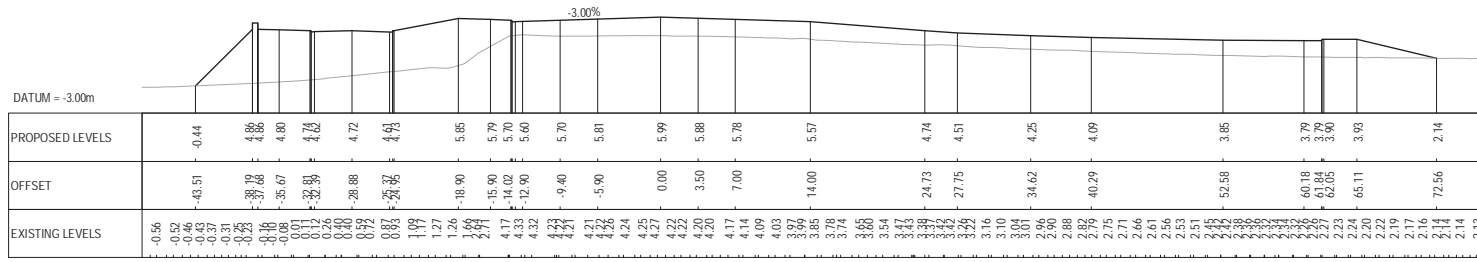
<b>B</b>	REVISED DETAILED BUSINESS CASE	AN	11/08/16
<b>A</b>	ISSUED FOR COMMENT	RB	27/03/15
No	Revision	Note:	Indicates signatures on original issue of drawing or last revision of drawing
Drawn	Job Manager	Project Director	Date



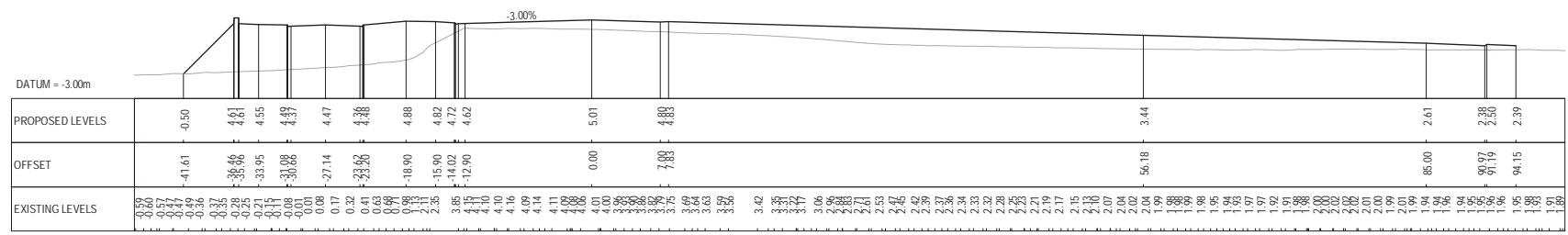
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Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

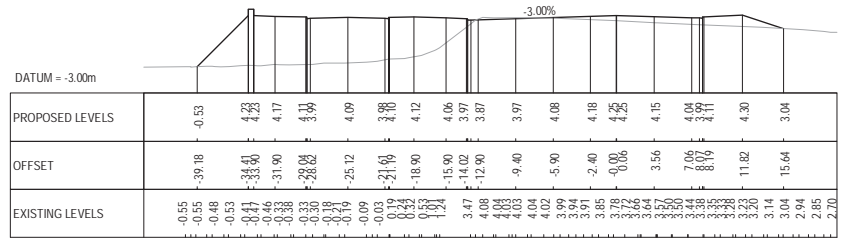
Client  
**NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTIONS**  
 Title  
**DETAILED BUSINESS CASE - RECOMMENDED OPTION GLOUCESTER PARK INTERCHANGE - CRS SEC - SH1**  
 Original Size  
**A1**  
 Drawing No: **3818683-C521**  
 Rev: **B**



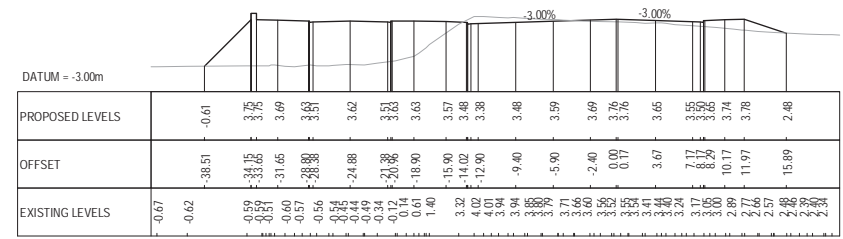
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MCNO - CHAINAGE 400.00



MCNO - CHAINAGE 380.00



MCNO - CHAINAGE 360.00



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<b>B</b>	REVISED DETAILED BUSINESS CASE	AN	11/08/16
<b>A</b>	ISSUED FOR COMMENT	RB	27/03/15
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Date
Drawn	Job Manager	Project Director	Date

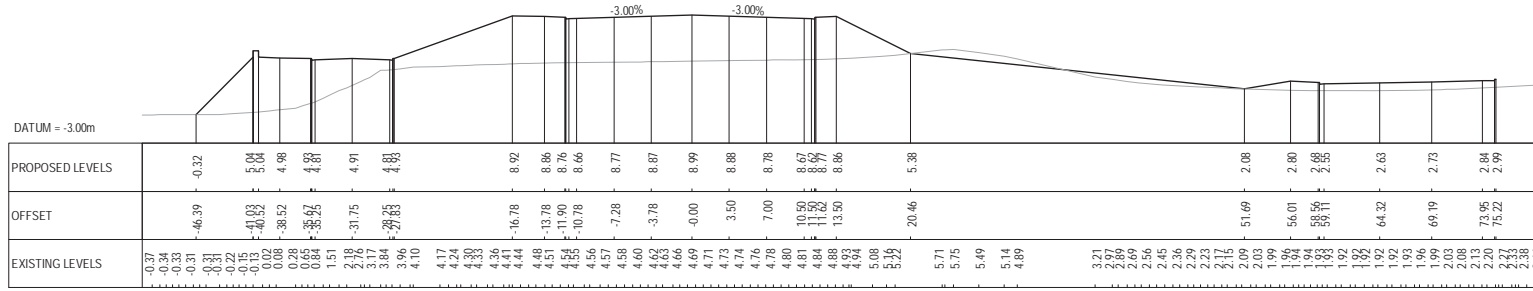


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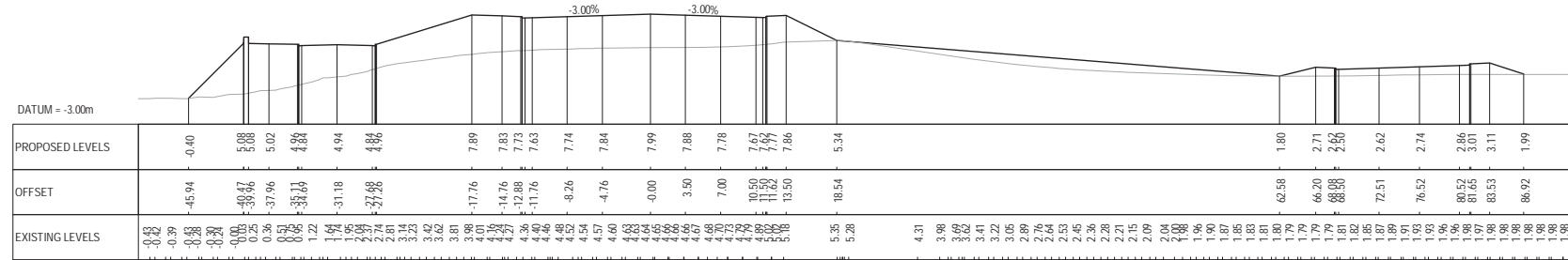
Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

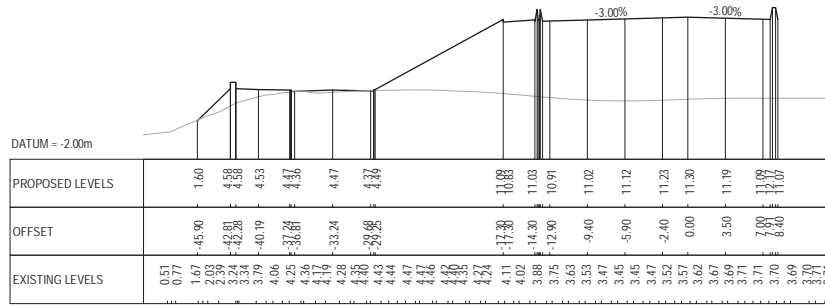
**PRELIMINARY**  
 Client: NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT  
 Project: EAST WEST CONNECTIONS  
 Title: DETAILED BUSINESS CASE - RECOMMENDED OPTION GLOUCESTER PARK INTERCHANGE - CRS SEC - SH2  
 Original Size: A1  
 Drawing No: 3818683-C522  
 Rev: B



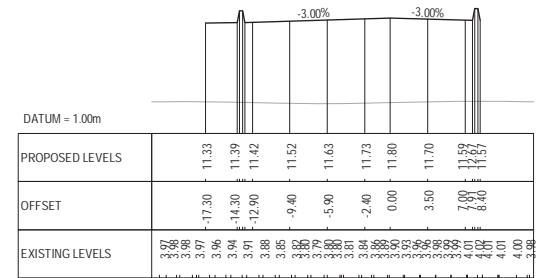


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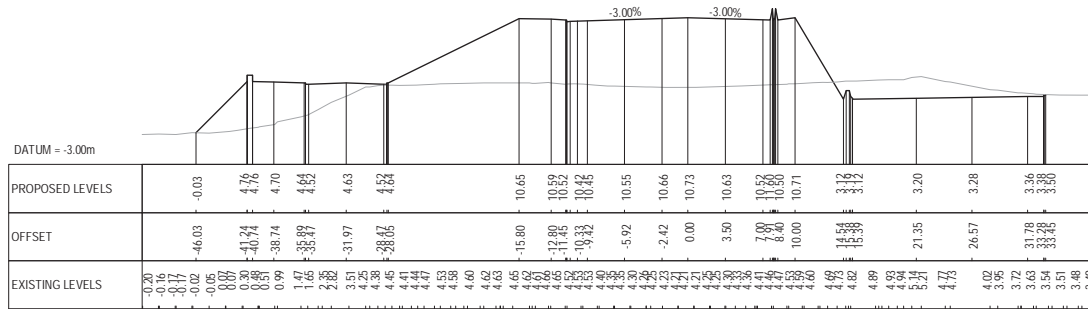




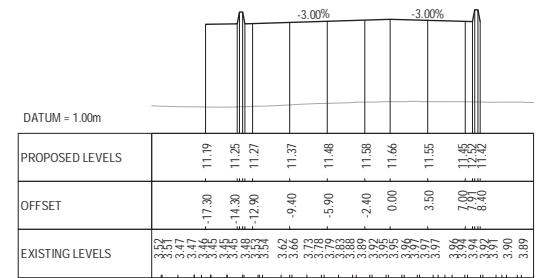
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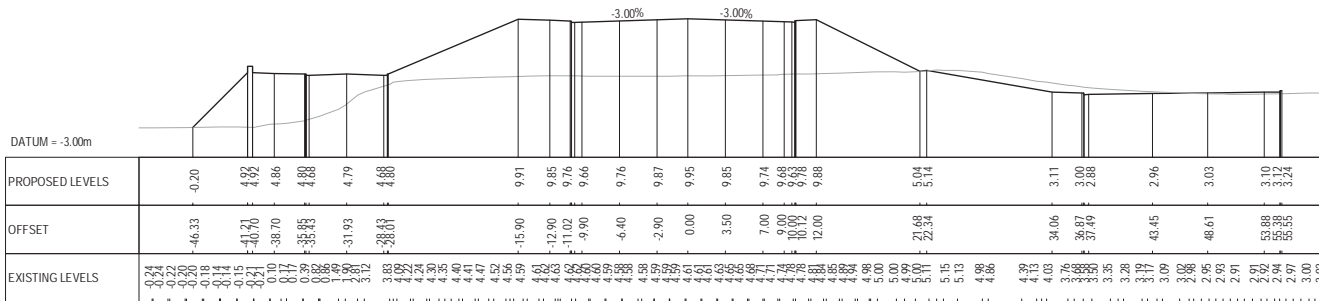
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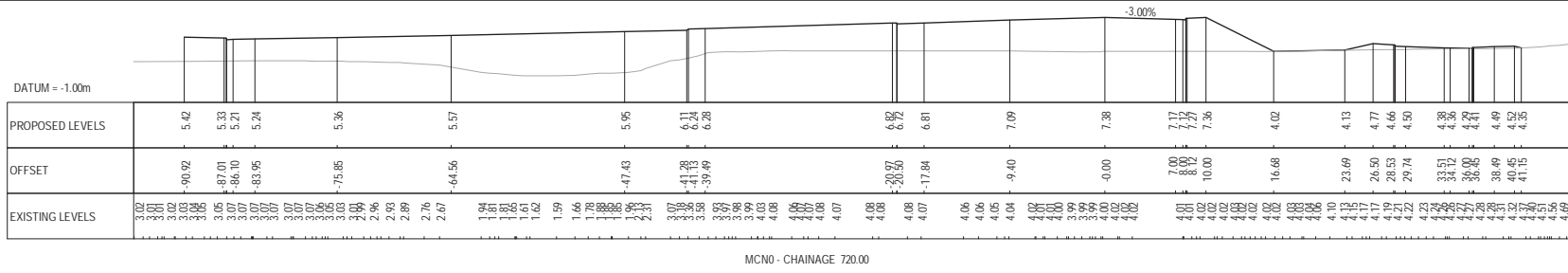


<b>B</b>	REVISED DETAILED BUSINESS CASE	AN	11/08/16
<b>A</b>	ISSUED FOR COMMENT	RB	27/03/15
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn
		Job Manager	Project Director
		Date	

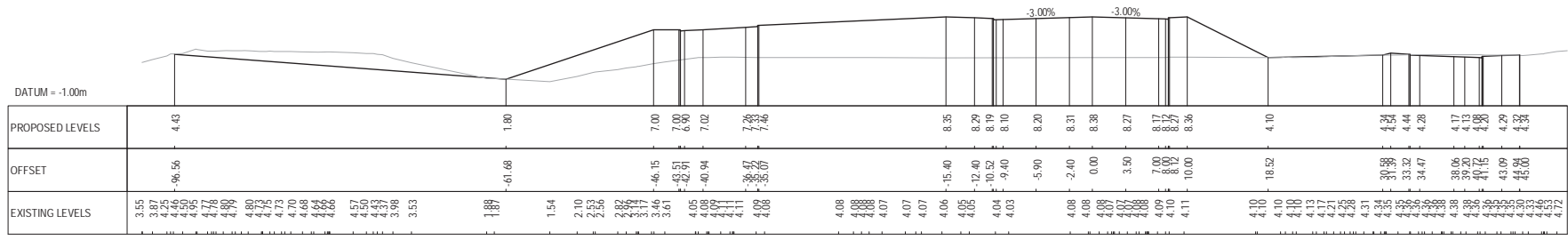


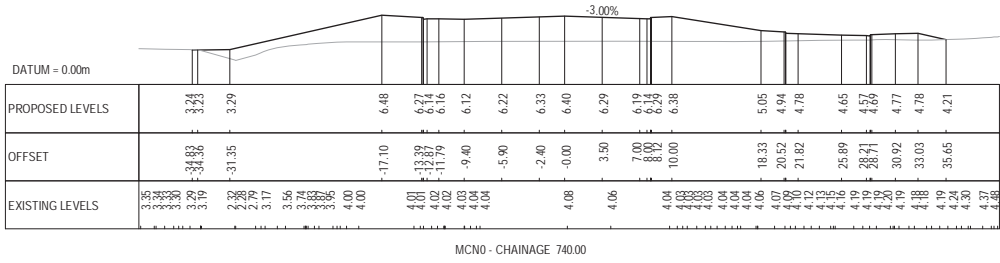
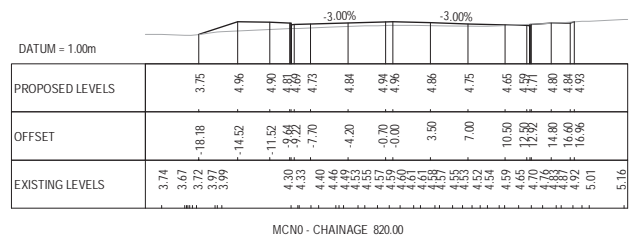
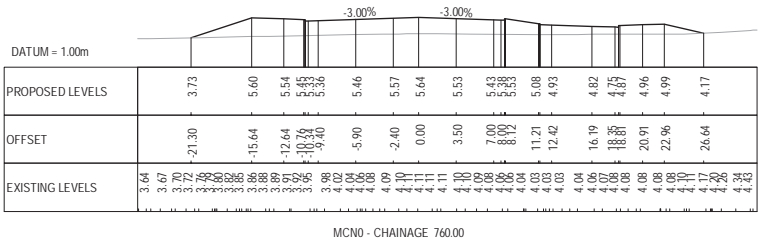
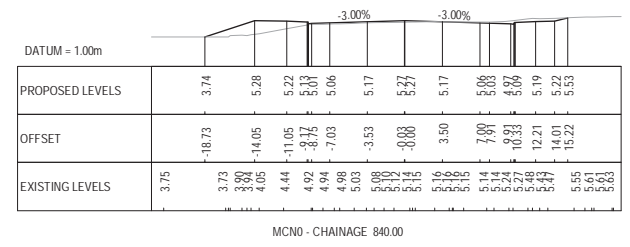
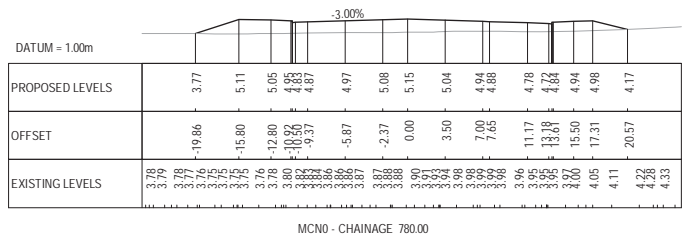
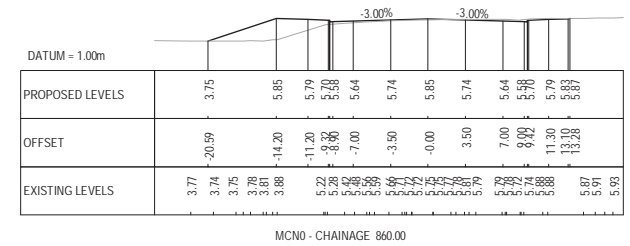
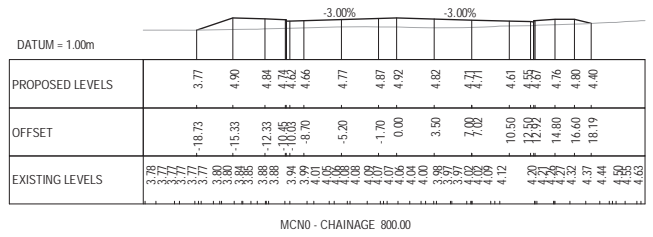
<b>DO NOT SCALE</b>		Drawn RB	Designer RB	Client	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTIONS</b>
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Approved (Project Director) Date		Scale AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	Original Size	<b>A1</b>
				Drawing No:	<b>3818683-C524</b>
				Rev:	<b>B</b>





MCNO - CHAINAGE 720.00





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<b>B</b> REVISED DETAILED BUSINESS CASE	AN	11/08/16
<b>A</b> ISSUED FOR COMMENT	RB	27/03/15
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing
Drawn	Job Manager	Project Director
Date		

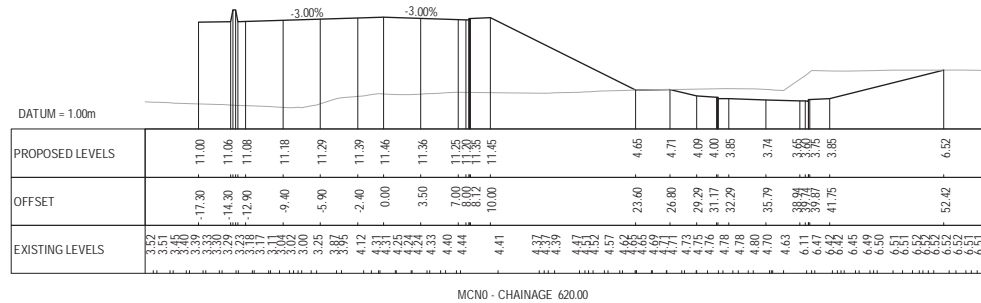
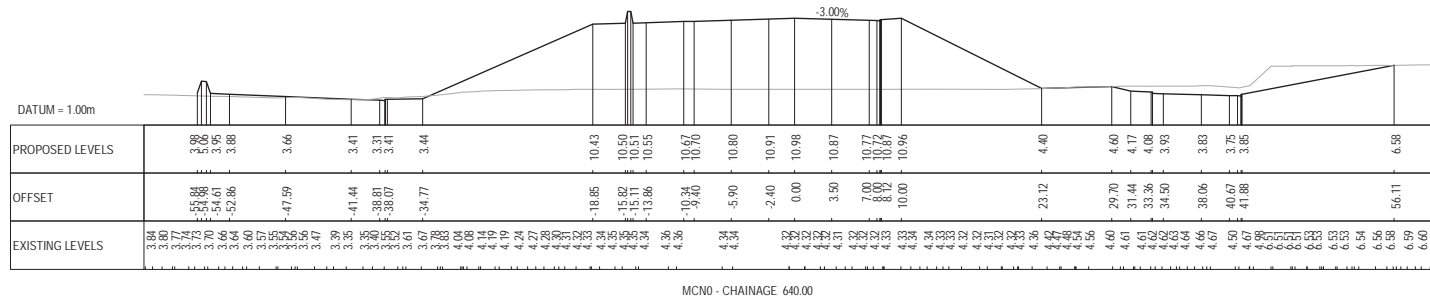


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Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client: **NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTIONS**  
 Project Title: **DETAILED BUSINESS CASE - RECOMMENDED OPTION GLOUCESTER PARK INTERCHANGE - CRS SEC - SH7**  
 Drawing No: **3818683-C527**  
 Scale: **A1**  
 Revision: **Rev: B**







## **APPENDIX R**

Māngere, Ōtāhuhu, Sylvia Park  
Connections – Preferred Approach  
Technical Drawings



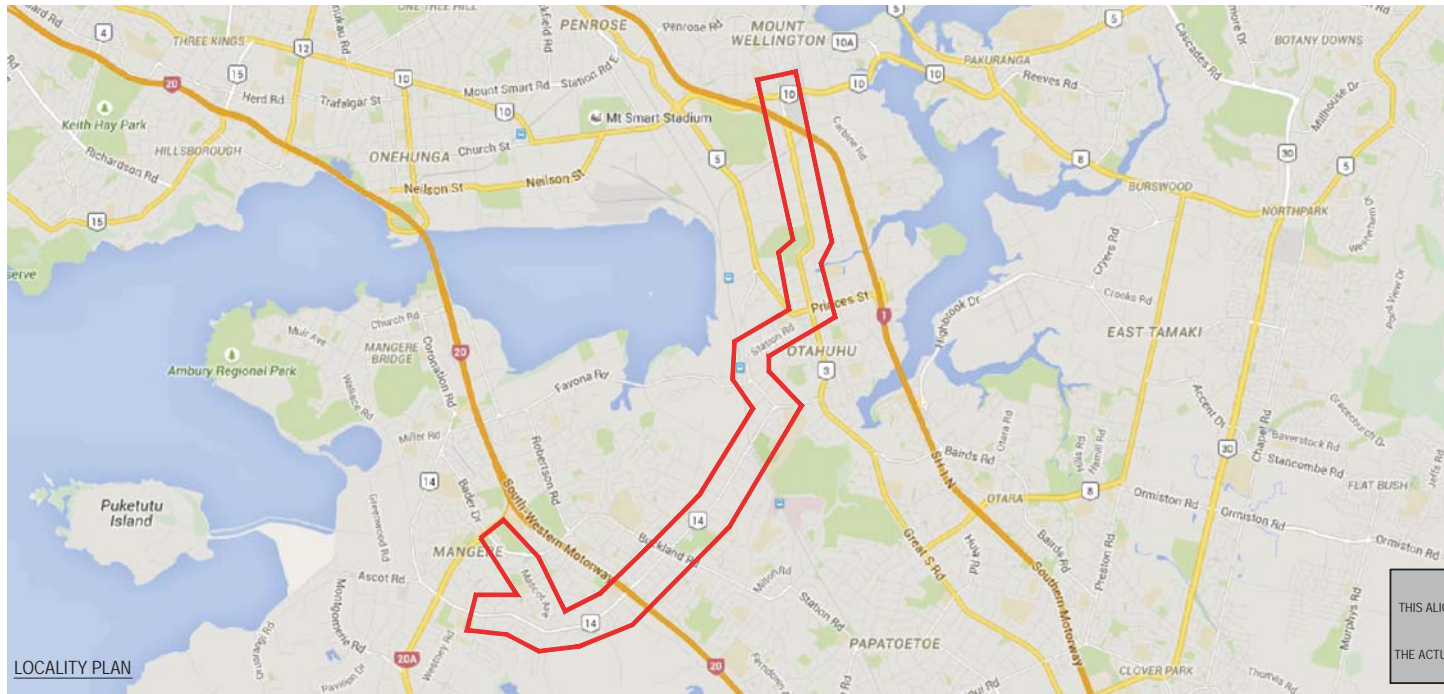
# NZ TRANSPORT AGENCY / AUCKLAND TRANSPORT

## EAST WEST CONNECTION

### DETAILED BUSINESS CASE

### BUS PRIORITY

## MANGERE - OTAHUHU - SYLVIA PARK



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 THE ACTUAL FOOTPRINT AND LOCATION IS SUBJECT TO CHANGE AS THE DESIGN IS FURTHER DEVELOPED.

**PRELIMINARY**

A	ISSUED FOR COMMENT	RB		19/06/15
No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager
			Project Director	Date



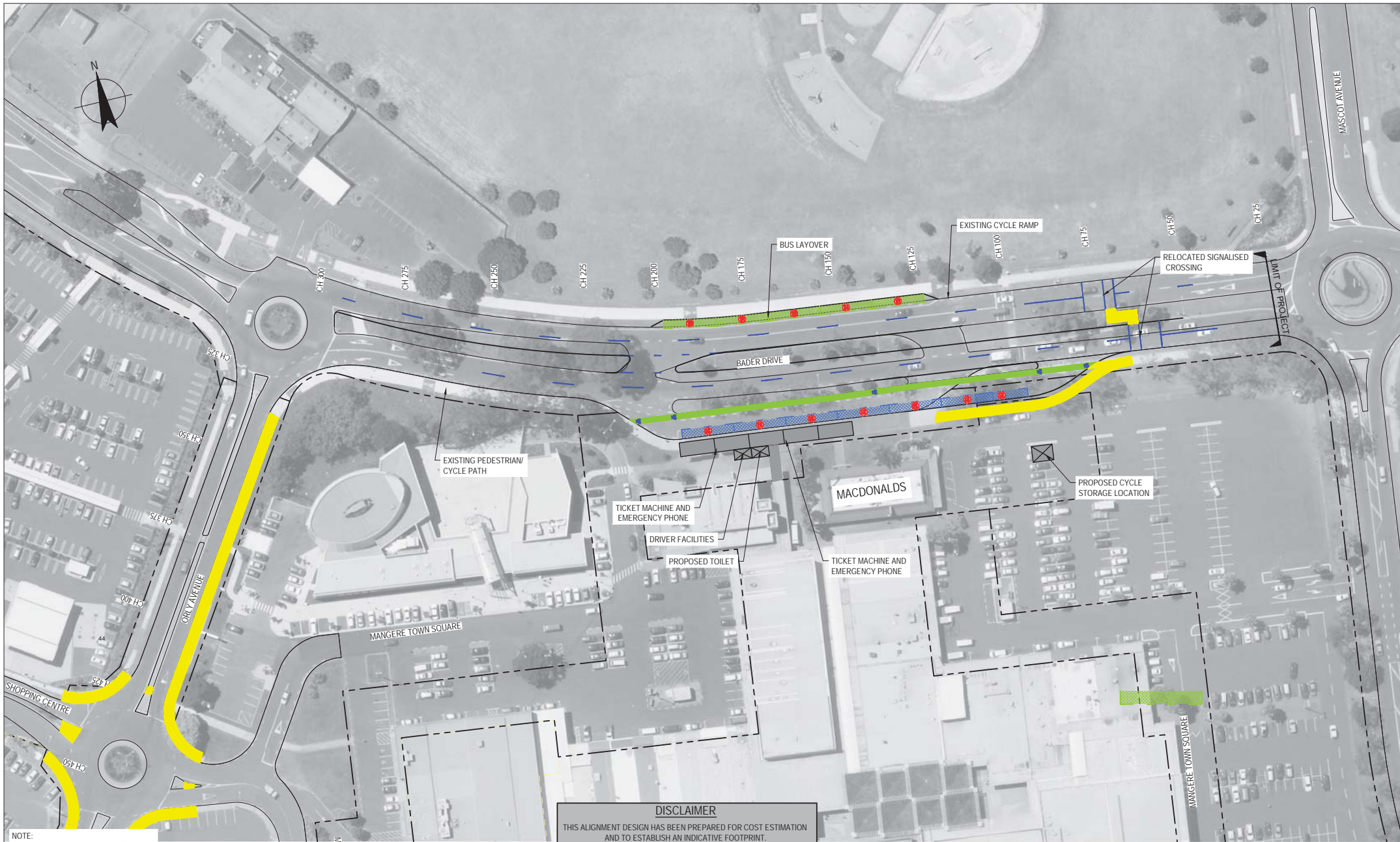
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Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)			
Date			

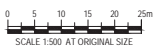
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Client	NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT
Project	EAST WEST CONNECTION
Title	DETAILED BUSINESS CASE - RECOMMENDED OPTION COVER SHEET
Original Size	A1
Drawing No:	51-32651-B01-G001
Rev:	A



NOTE:  
 1. \* SEE TYPICAL DETAILS ON DRAWING No:51-32651-B01-C003  
 2. ALL CROSS SECTION DIMENSIONS ARE APPROXIMATE.

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**FOR DISCUSSION PURPOSES ONLY PRELIMINARY**

B	DESIGN AMENDMENT	RB	18/06/15
A	ORIGINAL ISSUE	RB	05/03/15
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Date
Drawn	Job Manager	Project Director	Date

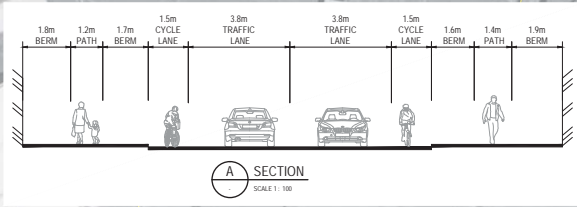
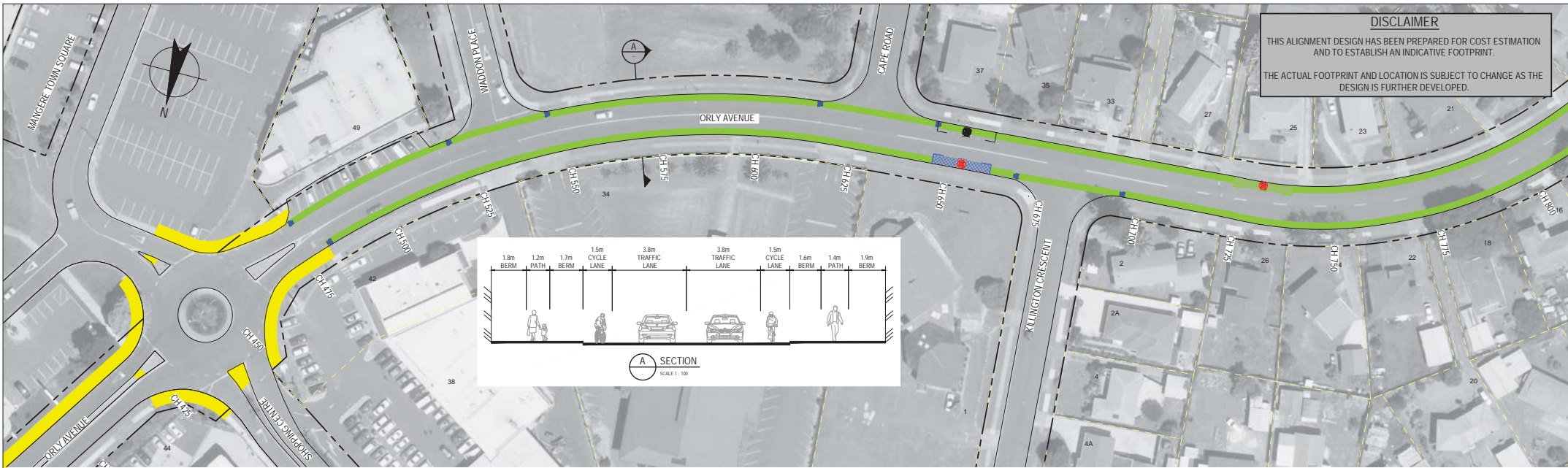


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Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client  
**NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT**  
 Project  
**EAST WEST CONNECTION**  
 Title  
**ROUTE 32 DESIGN**  
**MANGERE BUS INTERCHANGE**  
 Original Size  
**A1** Drawing No: **51-32651-B01-C200** Rev: **B**





**NOTE:**  
 1. SEE SHEET C200 FOR KEY  
 2. ALL CROSS SECTION DIMENSIONS ARE APPROXIMATE.



**FOR DISCUSSION PURPOSES ONLY PRELIMINARY**

C	CROSS SECTIONS ADDED	RB		10/03/15
B	REVIEW AMENDMENTS	RB	AL	17/10/14
A	ORIGINAL ISSUE	RB	AL	01/10/14
No	Revision	Note:	Indicates signatures on original issue of drawing or last revision of drawing	
	Drawn	Job Manager	Project Director	Date



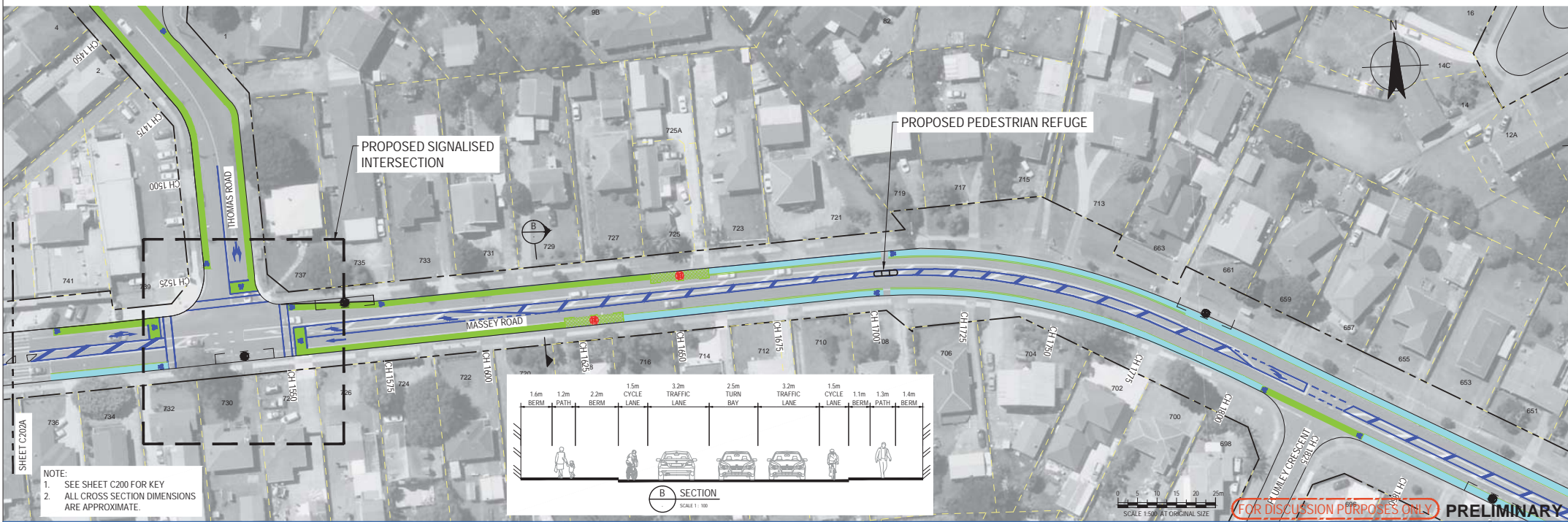
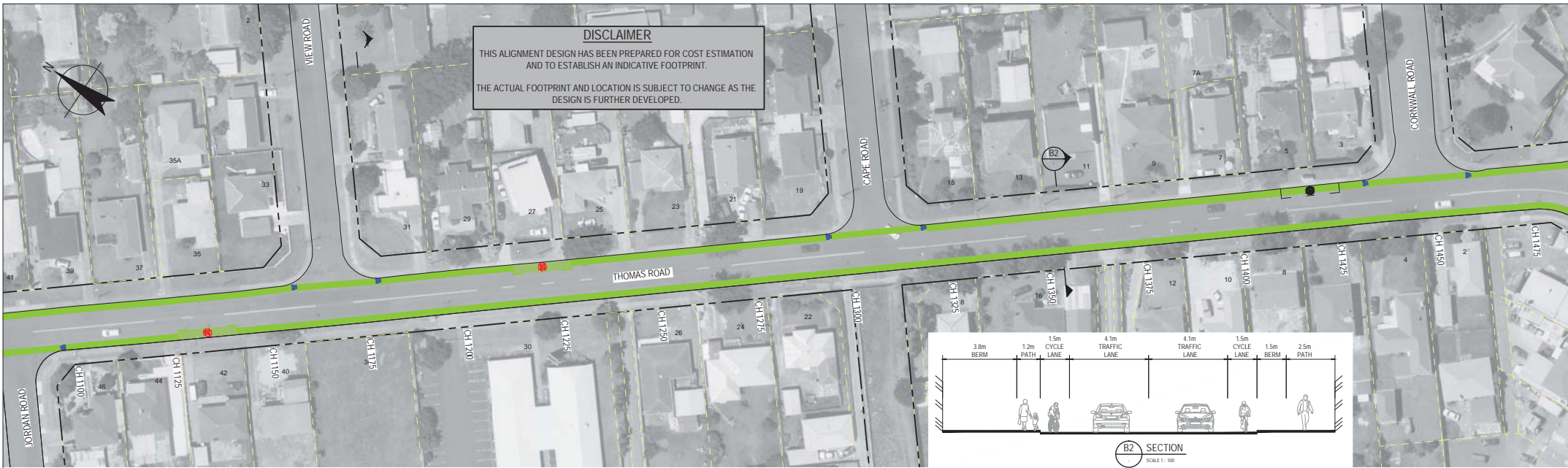
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Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client  
 Project  
 Title  
 Original Size  
**NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTION**  
**ROUTE 32 DESIGN**  
**LAYOUT SHEET 1**  
 Drawing No: **51-32651-B01-C201** Rev: C





NOTE:  
 1. SEE SHEET C200 FOR KEY  
 2. ALL CROSS SECTION DIMENSIONS ARE APPROXIMATE.

**FOR DISCUSSION PURPOSES ONLY PRELIMINARY**

C	CROSS SECTIONS ADDED	RB		10/03/15
B	REVIEW AMENDMENTS	RB	AL	17/10/14
A	ORIGINAL ISSUE	RB	AL	01/10/14
No	Revision	Note:	Indicates signatures on original issue of drawing or last revision of drawing	
	Drawn	Job Manager	Project Director	Date



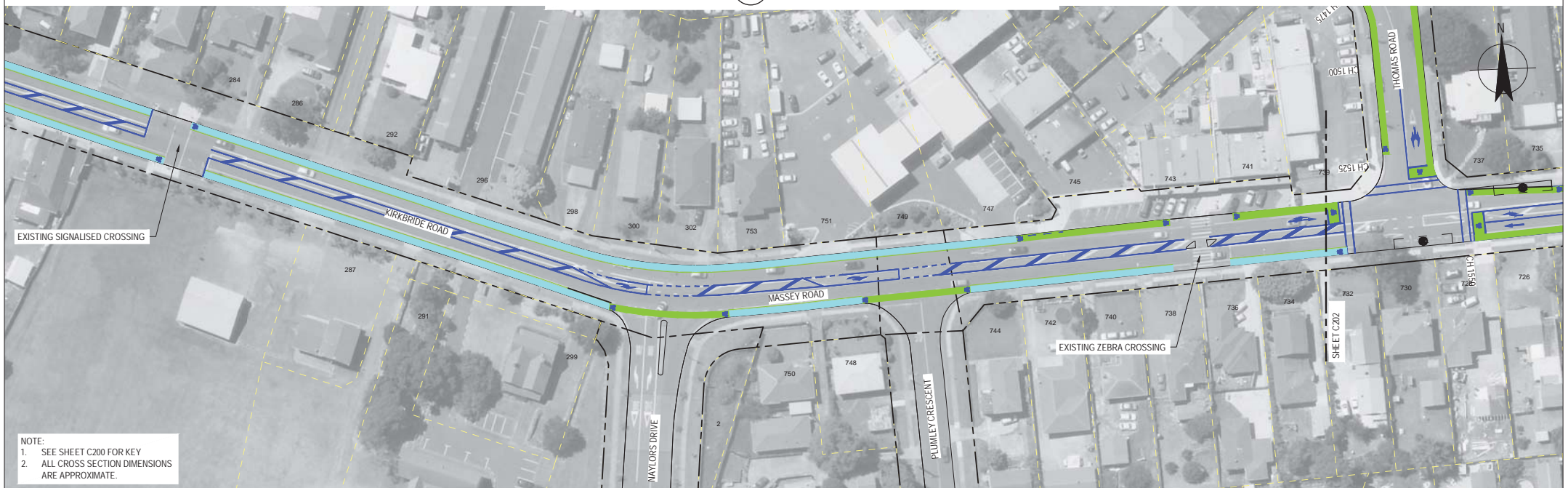
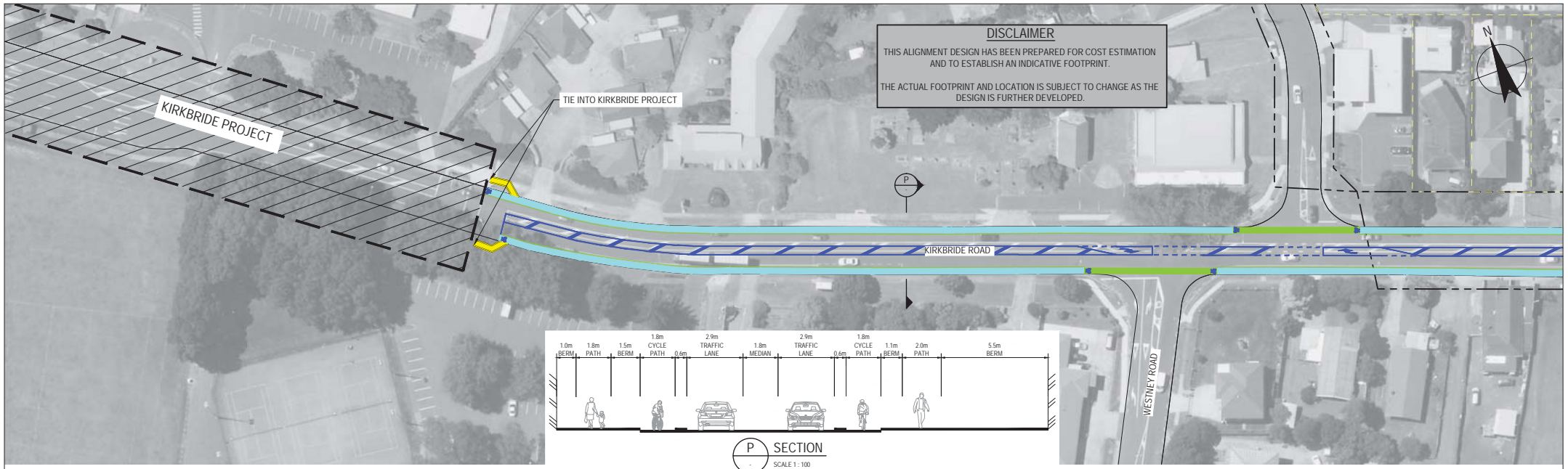
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Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client	NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT		
Project	EAST WEST CONNECTION		
Title	ROUTE 32 DESIGN		
	LAYOUT SHEET 2		
Original Size	A1	Drawing No:	51-32651-B01-C202
		Rev:	C





NOTE:  
 1. SEE SHEET C200 FOR KEY  
 2. ALL CROSS SECTION DIMENSIONS ARE APPROXIMATE.

0 5 10 15 20 25m  
 SCALE 1:500 AT ORIGINAL SIZE

**FOR DISCUSSION PURPOSES ONLY PRELIMINARY**

No	Revision	Note	Drawn	Job Manager	Project Director	Date
A	ORIGINAL ISSUE		RB	AL		20/03/15



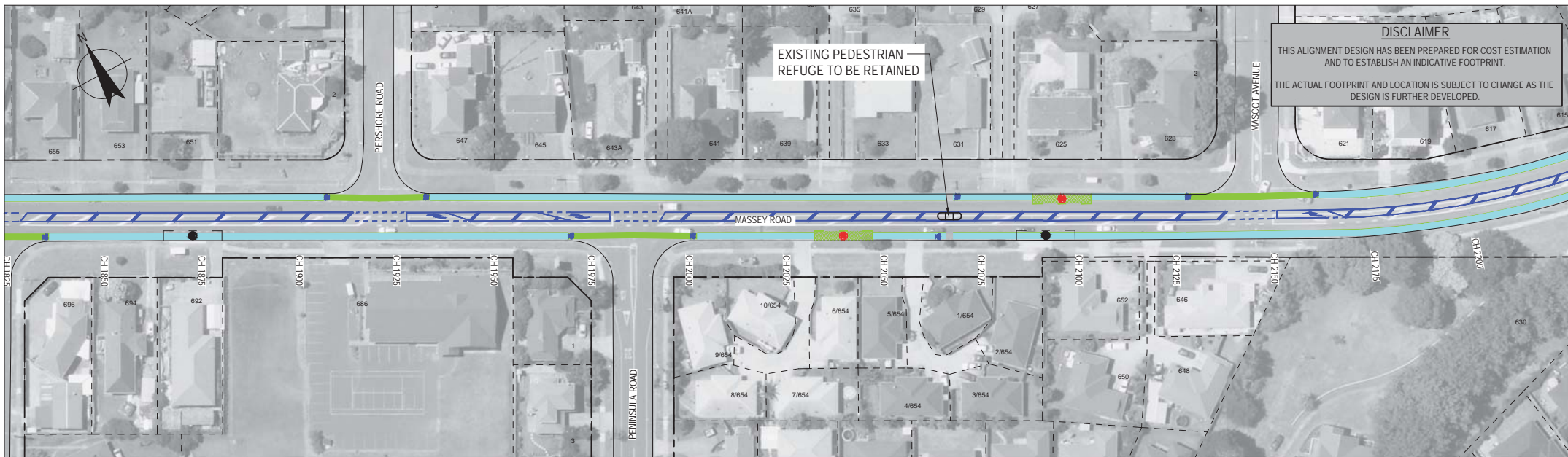
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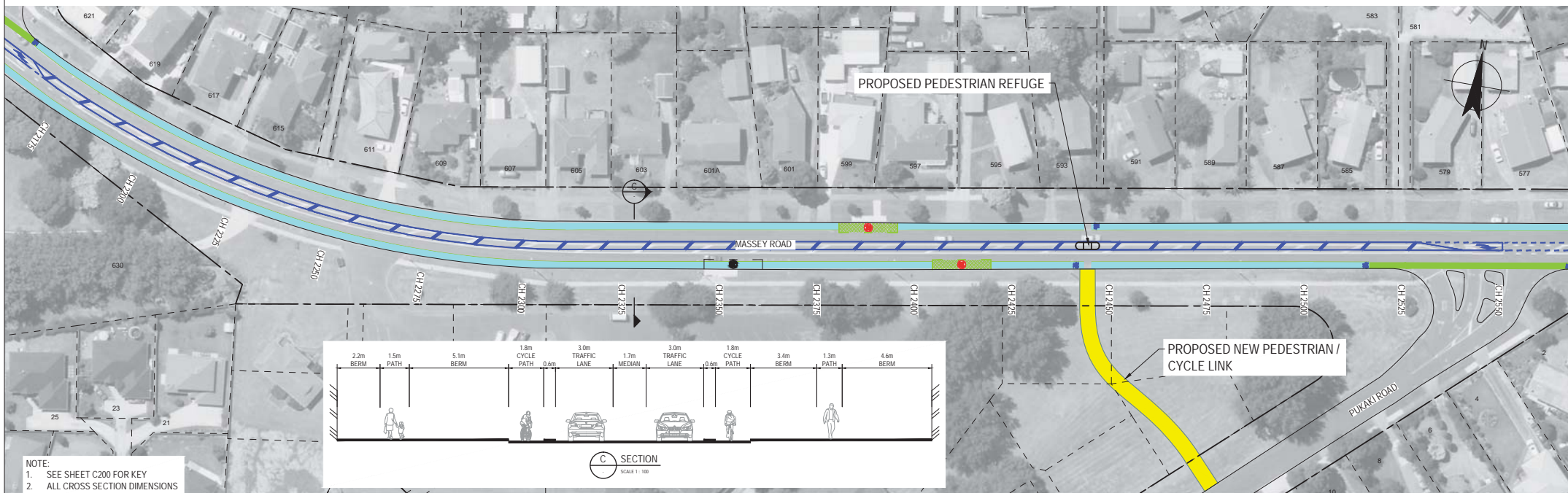
Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client  
 Project  
 Title  
 Original Size  
 Drawing No: **51-32651-B01-C202A** Rev: A





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**NOTE:**  
 1. SEE SHEET C200 FOR KEY  
 2. ALL CROSS SECTION DIMENSIONS ARE APPROXIMATE.

C	CROSS SECTIONS ADDED	RB		10/03/15
B	REVIEW AMENDMENTS	RB	AL	17/10/14
A	ORIGINAL ISSUE	RB	AL	01/10/14
No	Revision	Note:	Indicates signatures on original issue of drawing or last revision of drawing	
	Drawn	Job Manager	Project Director	Date



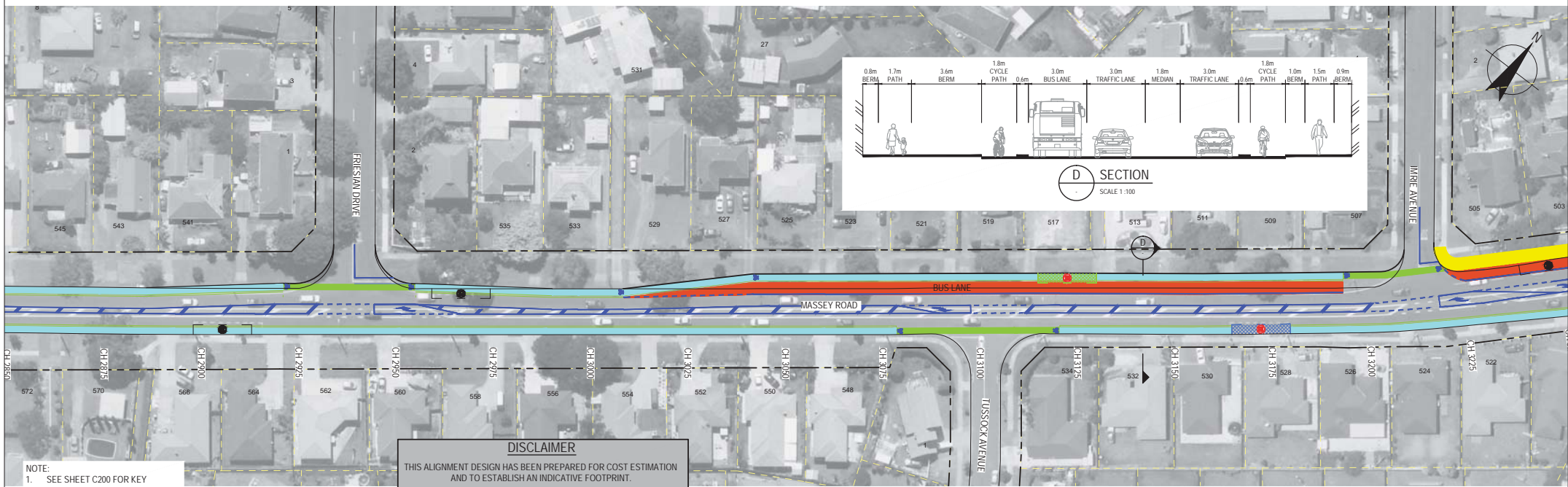
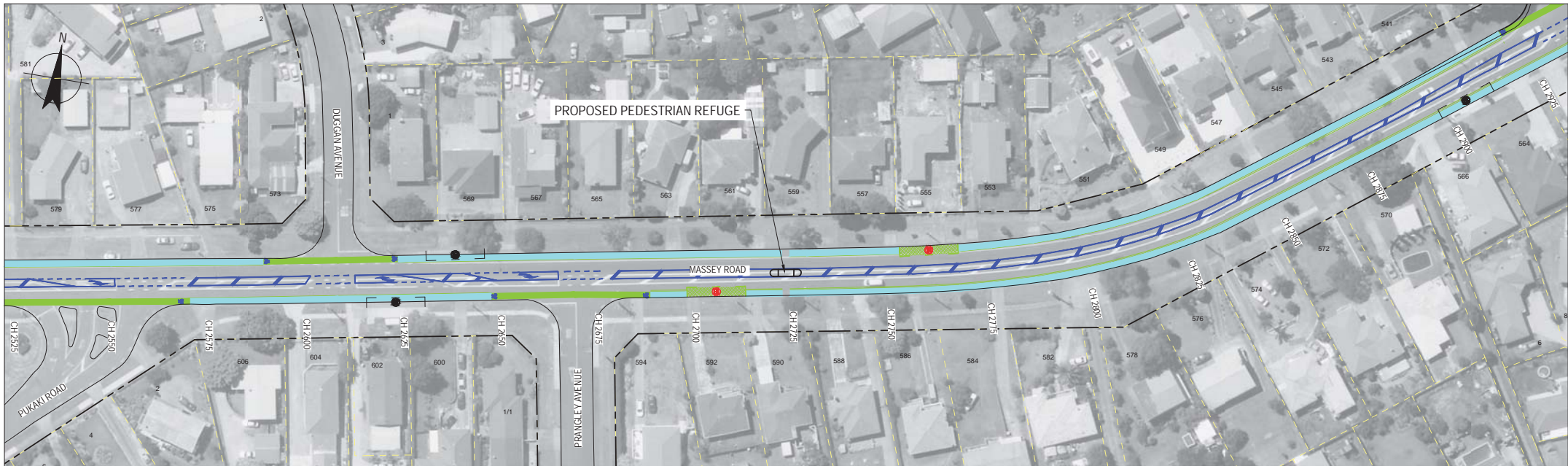
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Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

**FOR DISCUSSION PURPOSES ONLY PRELIMINARY**

Client: **NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT**  
 Project: **EAST WEST CONNECTION**  
 Title: **ROUTE 32 DESIGN LAYOUT SHEET 3**  
 Original Size: **A1** Drawing No: **51-32651-B01-C203** Rev: **C**





NOTE:  
 1. SEE SHEET C200 FOR KEY  
 2. ALL CROSS SECTION DIMENSIONS ARE APPROXIMATE.

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**FOR DISCUSSION PURPOSES ONLY PRELIMINARY**

C	CROSS SECTIONS ADDED	RB		10/03/15	
B	REVIEW AMENDMENTS	RB	AL	17/10/14	
A	ORIGINAL ISSUE	RB	AL	01/10/14	
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager	Project Director	Date

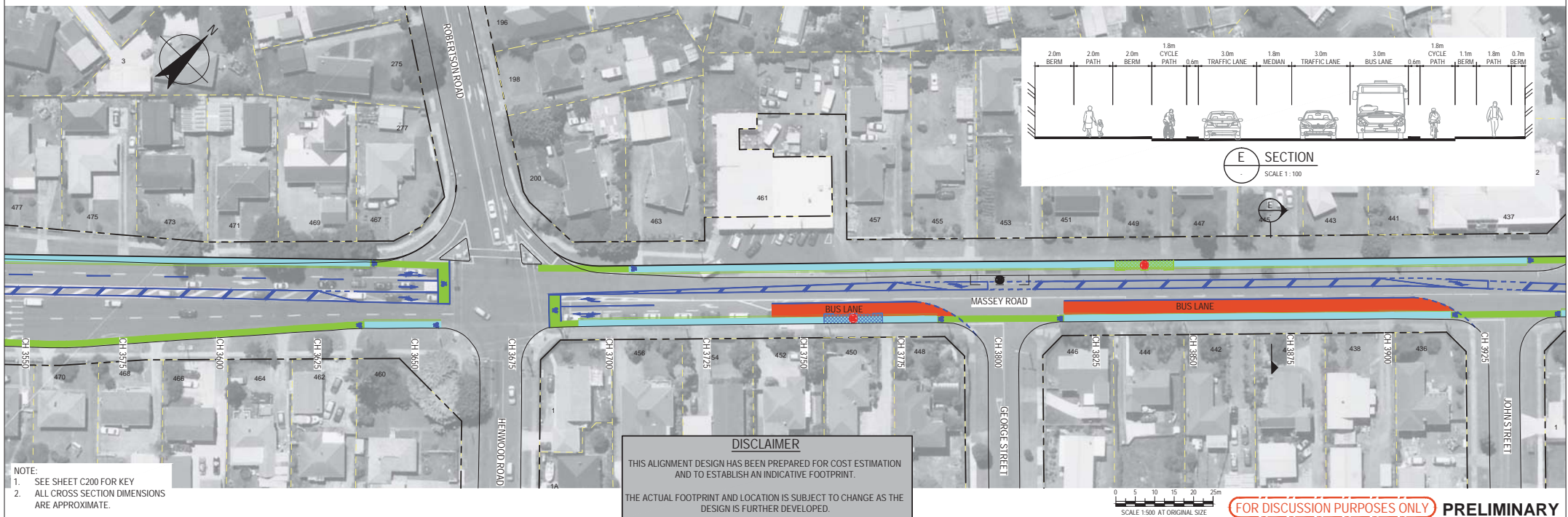
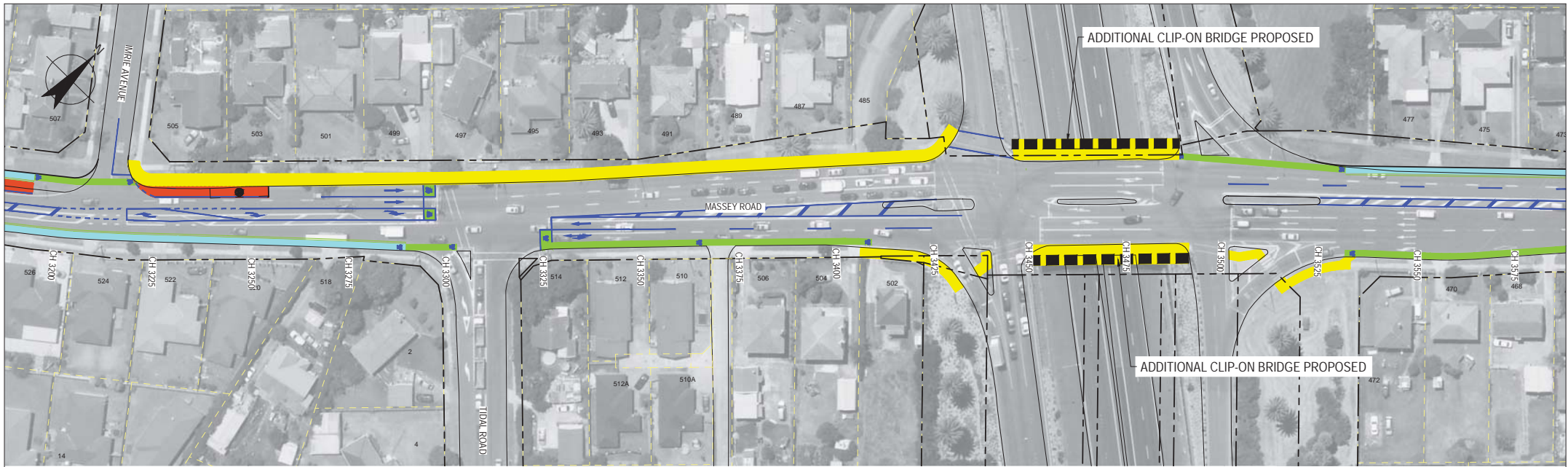


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Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client  
 Project  
 Title  
 Original Size  
 Drawing No: **51-32651-B01-C204** Rev: C





D	BRIDGE CLIP-ON DETAILED	RB	AL	14/05/15			
C	CROSS SECTIONS ADDED	RB	AL	10/03/15			
B	REVIEW AMENDMENTS	RB	AL	17/10/14			
A	ORIGINAL ISSUE	RB	AL	01/10/14			
No	Revision	Note	Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager	Job Director	Project Director	Date



**DO NOT SCALE**

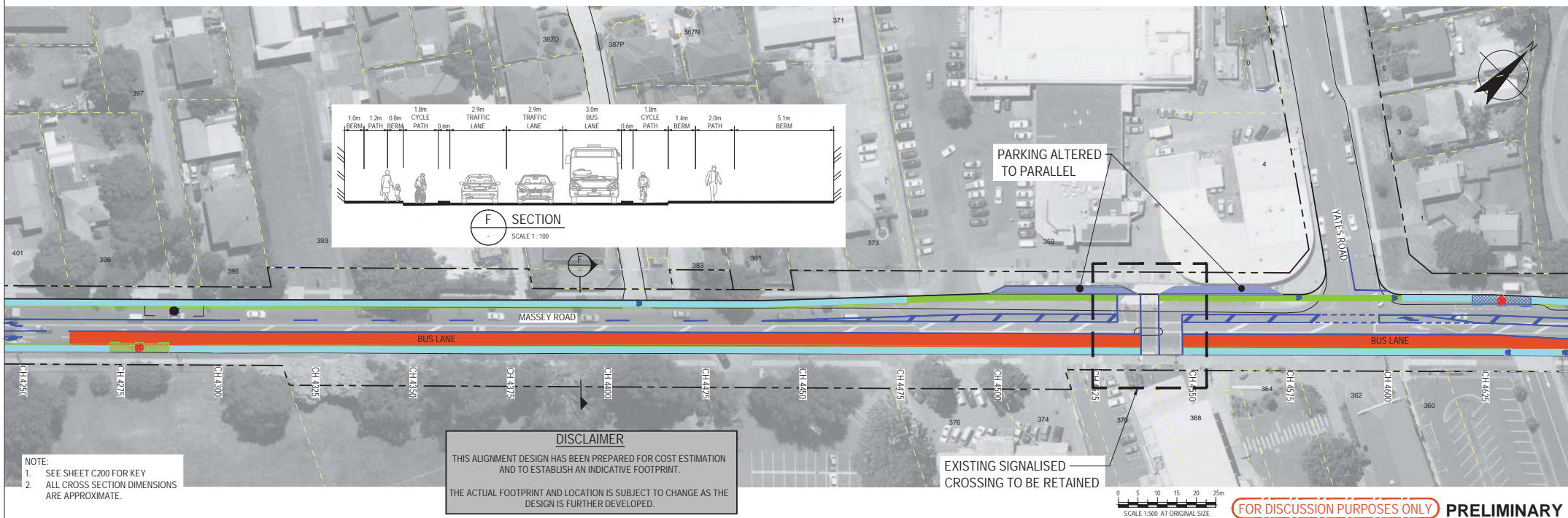
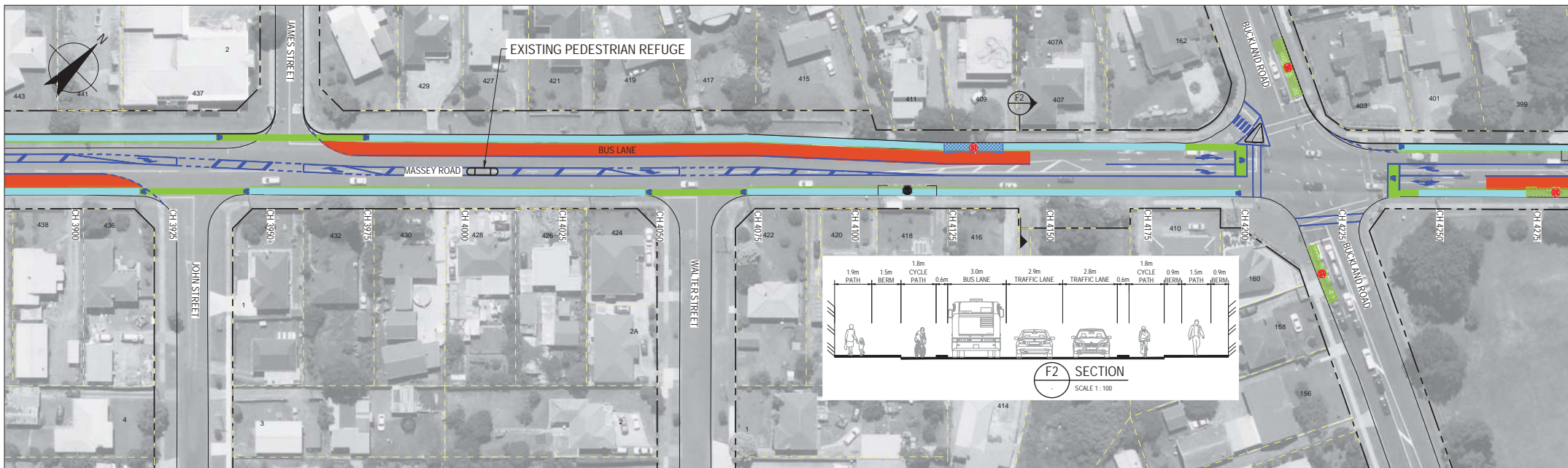
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Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

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Client: NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT  
 Project: EAST WEST CONNECTION  
 Title: ROUTE 32 DESIGN LAYOUT SHEET 5  
 Original Size: A1  
 Drawing No: 51-32651-B01-C205  
 Rev: D





NOTE:  
 1. SEE SHEET C200 FOR KEY  
 2. ALL CROSS SECTION DIMENSIONS ARE APPROXIMATE.

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EXISTING SIGNALISED CROSSING TO BE RETAINED

**FOR DISCUSSION PURPOSES ONLY PRELIMINARY**

C	CROSS SECTIONS ADDED	RB		10/03/15
B	REVIEW AMENDMENTS	RB	AL	17/10/14
A	ORIGINAL ISSUE	RB	AL	01/10/14
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager	Project Director Date

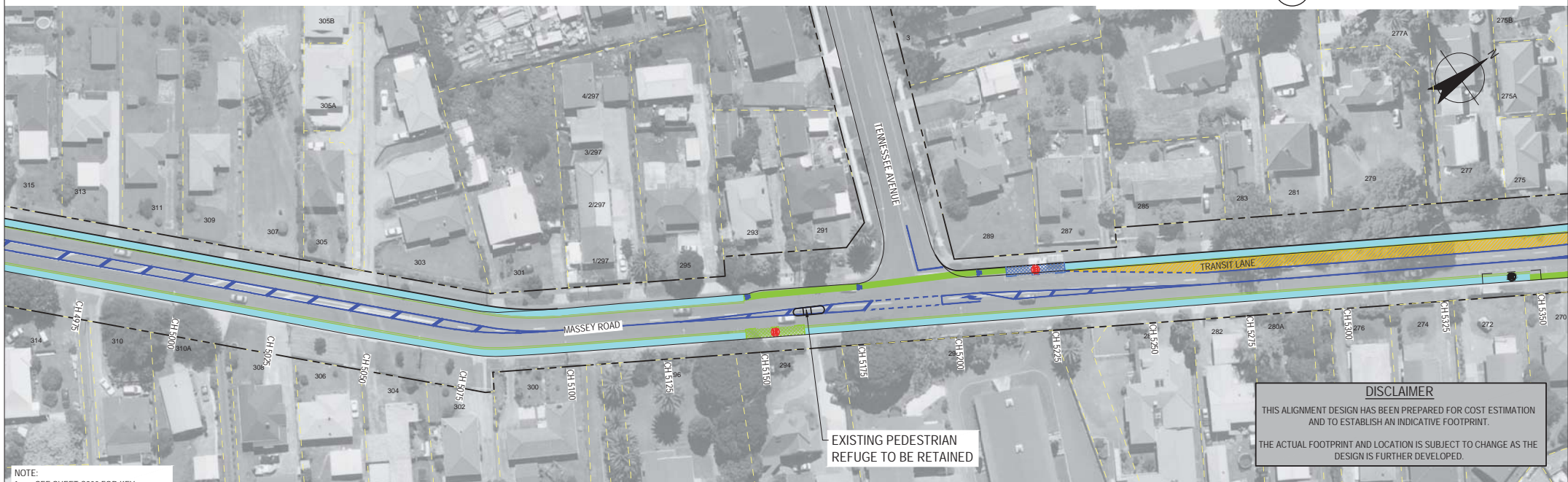
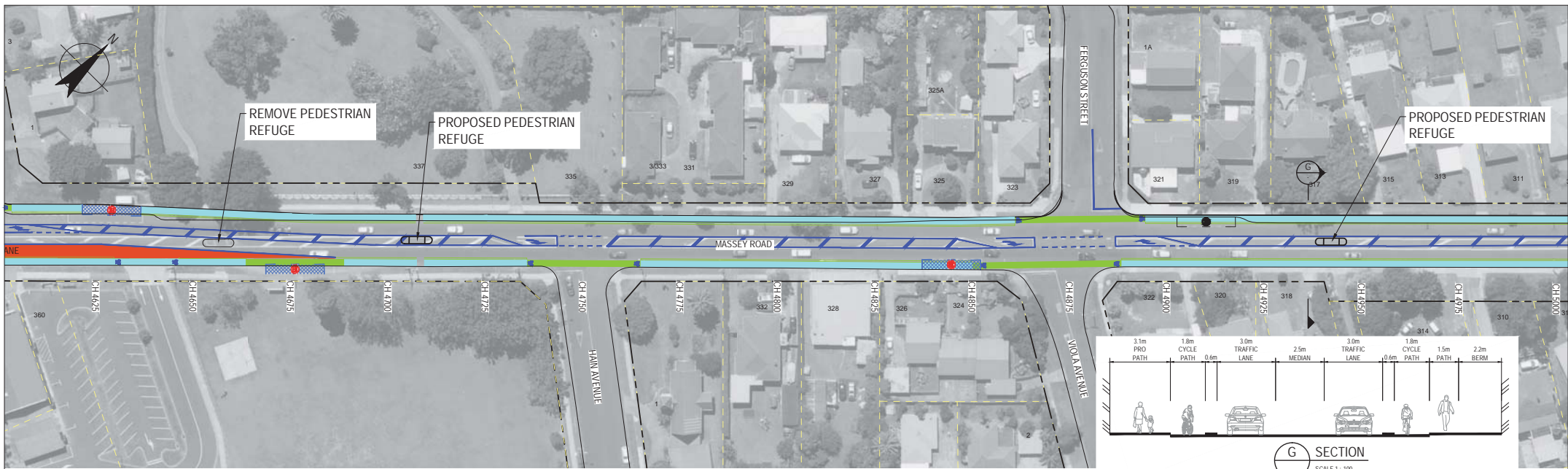


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Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client  
 Project  
 Title  
 Original Size  
 Drawing No: **51-32651-B01-C206** Rev: C





NOTE:  
 1. SEE SHEET C200 FOR KEY  
 2. ALL CROSS SECTION DIMENSIONS ARE APPROXIMATE.

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C	CROSS SECTIONS ADDED	RB		10/03/15	
B	REVIEW AMENDMENTS	RB	AL	17/10/14	
A	ORIGINAL ISSUE	RB	AL	01/10/14	
No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager	Project Director	Date

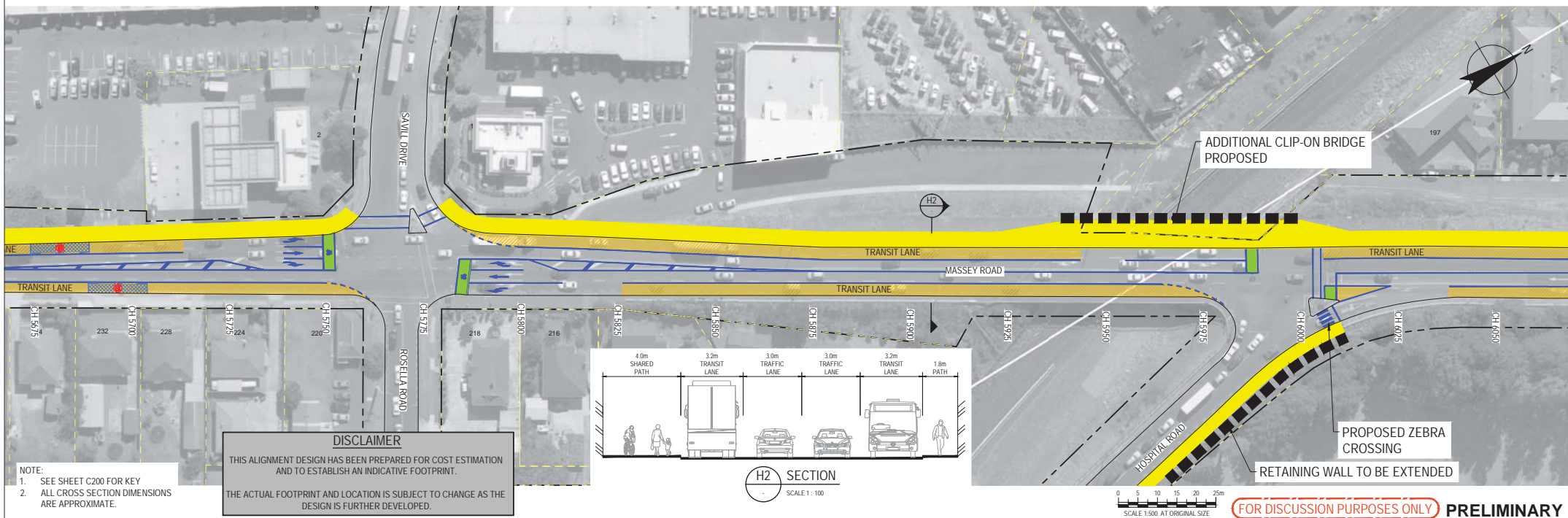
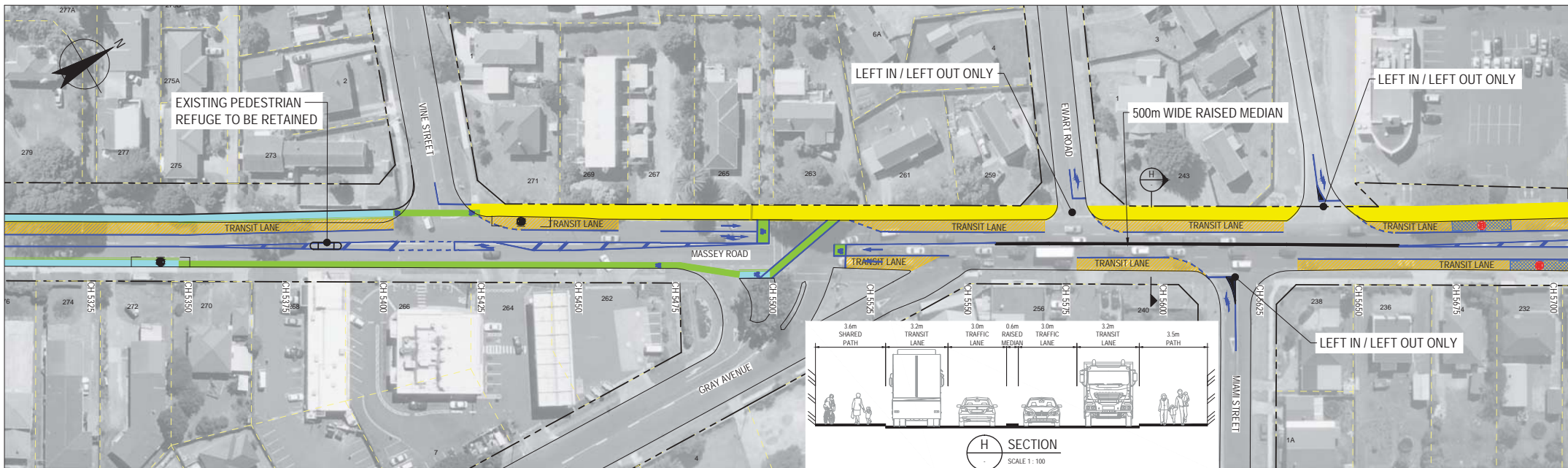


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Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client  
 Project  
 Title  
**NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTION**  
**ROUTE 32 STREET**  
**LAYOUT SHEET 7**  
 Drawing No: **51-32651-B01-C207** Rev: **C**





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**NOTE:**

- SEE SHEET C200 FOR KEY
- ALL CROSS SECTION DIMENSIONS ARE APPROXIMATE.

D	CLIP-ON BRIDGE DETAILED	RB	AL	14/05/15	
C	CROSS SECTIONS ADDED	RB	AL	10/03/15	
B	REVIEW AMENDMENTS	RB	AL	17/10/14	
A	ORIGINAL ISSUE	RB	AL	01/10/14	
No	Revision	Note: Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager	Project Director	Date



**DO NOT SCALE**

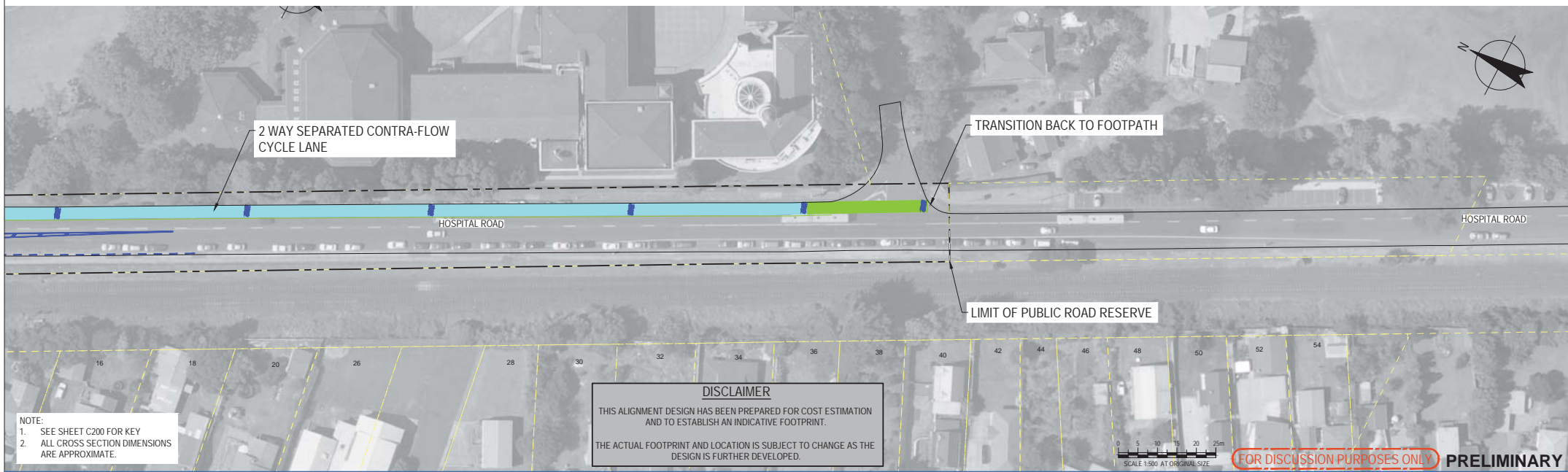
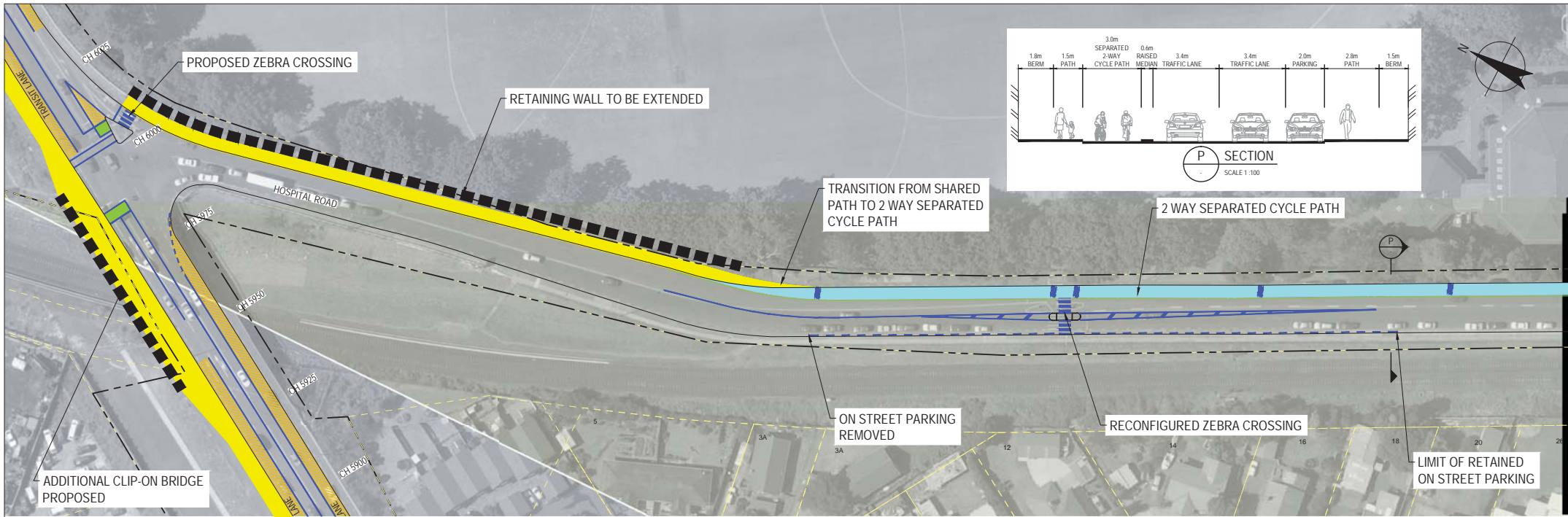
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Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

**FOR DISCUSSION PURPOSES ONLY PRELIMINARY**

Client: **NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT**  
 Project: **EAST WEST CONNECTION**  
 Title: **ROUTE 32 DESIGN LAYOUT SHEET 8**  
 Original Size: **A1** Drawing No: **51-32651-B01-C208** Rev: **D**





NOTE:  
 1. SEE SHEET C200 FOR KEY  
 2. ALL CROSS SECTION DIMENSIONS ARE APPROXIMATE.

**DISCLAIMER**  
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 THE ACTUAL FOOTPRINT AND LOCATION IS SUBJECT TO CHANGE AS THE DESIGN IS FURTHER DEVELOPED.

**FOR DISCUSSION PURPOSES ONLY PRELIMINARY**

A	ORIGINAL ISSUE	RB	AL	05/05/15	
No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager	Project Director	Date

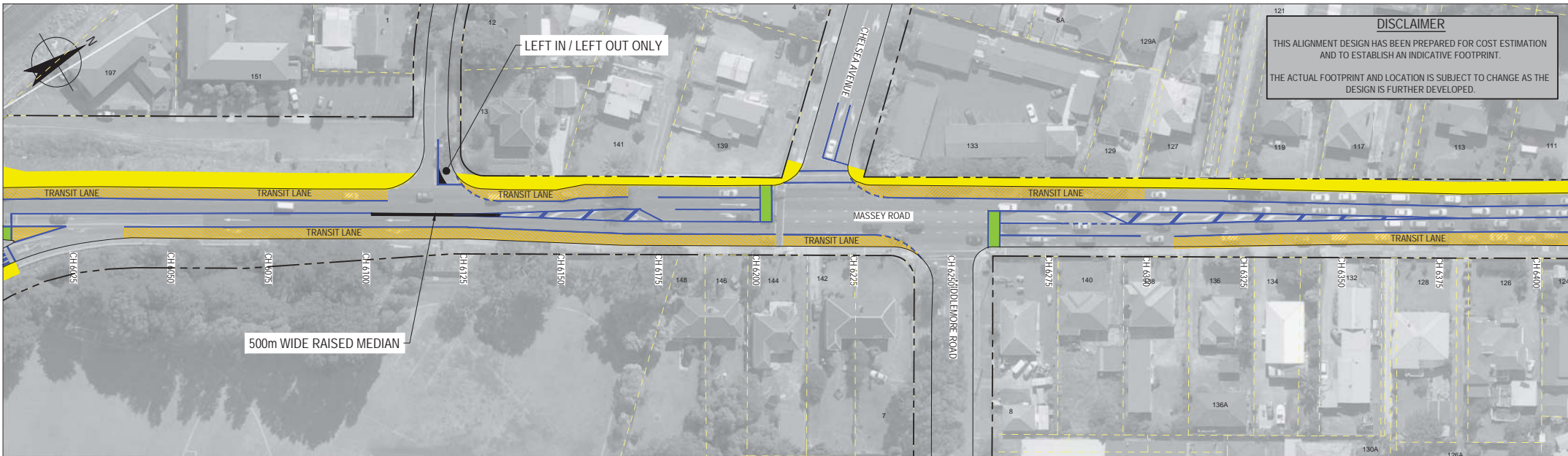


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Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN		

Client: **NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT**  
 Project: **EAST WEST CONNECTION**  
 Title: **ROUTE 32 DESIGN LAYOUT SHEET 8a**  
 Original Size: **A1** Drawing No: **51-32651-B01-C208A** Rev: **A**





NOTE:  
 1. SEE SHEET C200 FOR KEY  
 2. ALL CROSS SECTION DIMENSIONS ARE APPROXIMATE.

C	CROSS SECTIONS ADDED	RB		10/03/15		
B	REVIEW AMENDMENTS	RB	AL	17/10/14		
A	ORIGINAL ISSUE	RB	AL	01/10/14		
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date



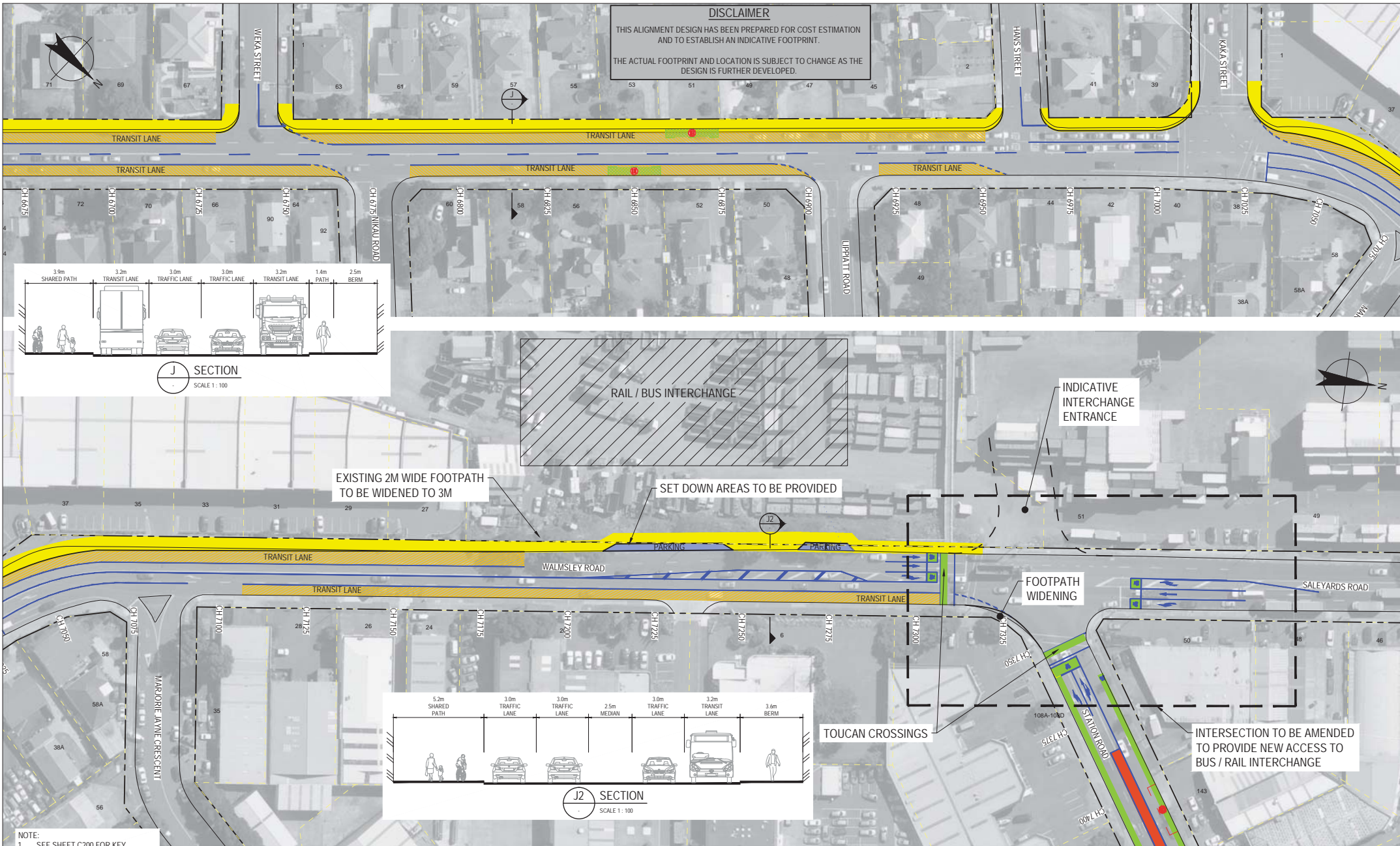
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Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

**FOR DISCUSSION PURPOSES ONLY PRELIMINARY**

Client: **NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT**  
 Project: **EAST WEST CONNECTION**  
 Title: **ROUTE 32 DESIGN LAYOUT SHEET 9**  
 Drawing No: **51-32651-B01-C209** Rev: **C**





D	DESIGN AMENDED	RB	AL	19/05/15		
C	CROSS SECTIONS ADDED	RB	AL	10/03/15		
B	REVIEW AMENDMENTS	RB	AL	17/10/14		
A	ORIGINAL ISSUE	RB	AL	01/10/14		
No	Revision	Note: *Indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date

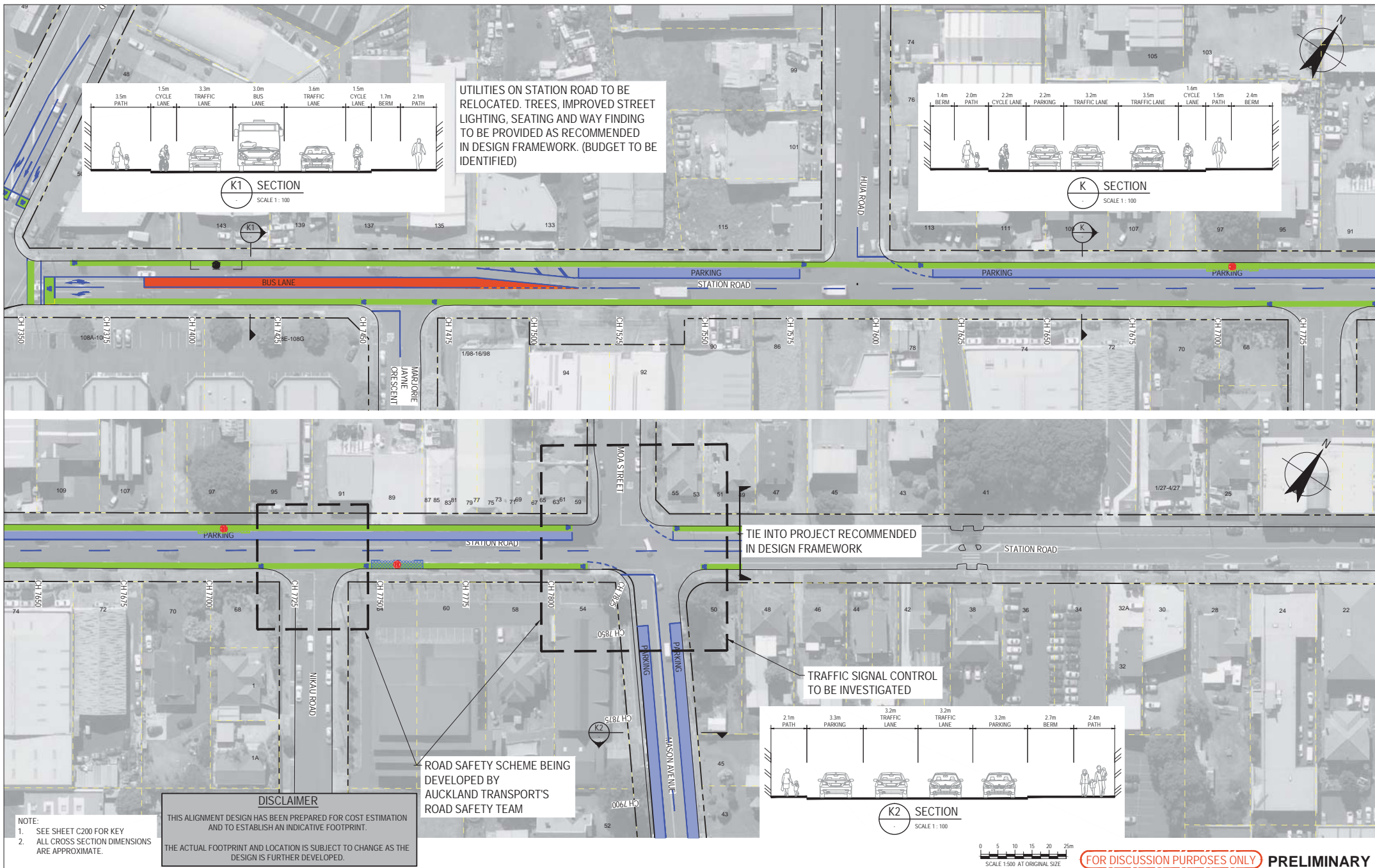


**DO NOT SCALE**  
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Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client  
Project  
Title  
Original Size  
Drawing No: 51-32651-B01-C210 Rev: D





D	DESIGN AMENDMENT	RB	AL	14/05/15	
C	CROSS SECTIONS ADDED	RB	AL	10/03/15	
B	REVIEW AMENDMENTS	RB	AL	17/10/14	
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No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager	Project Director	Date



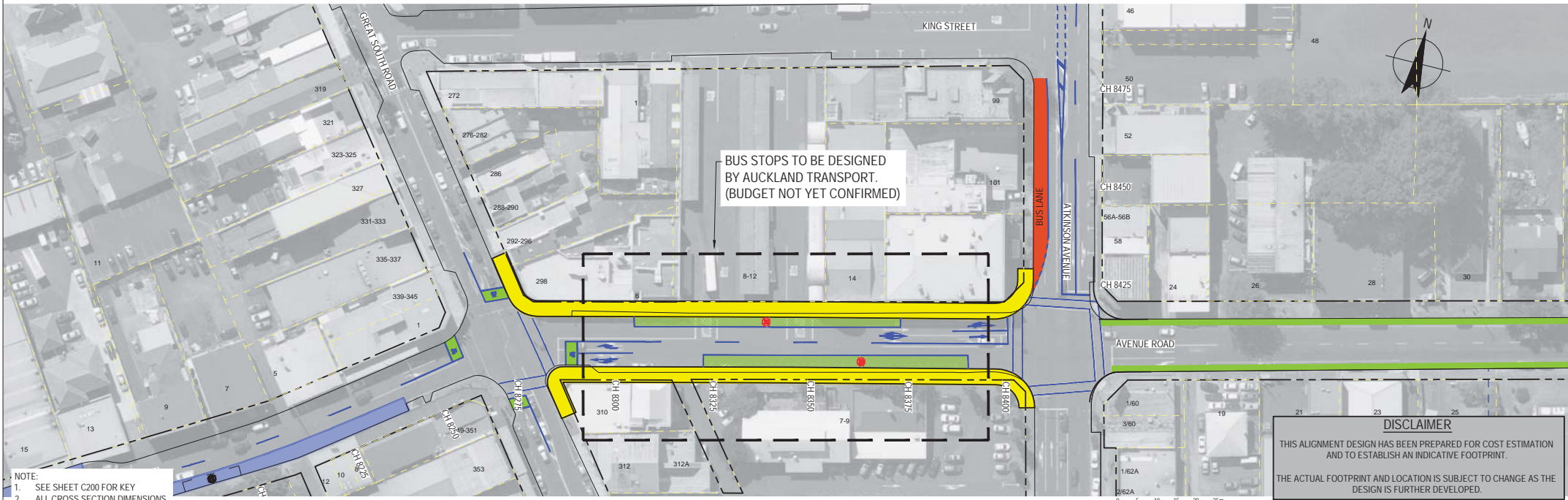
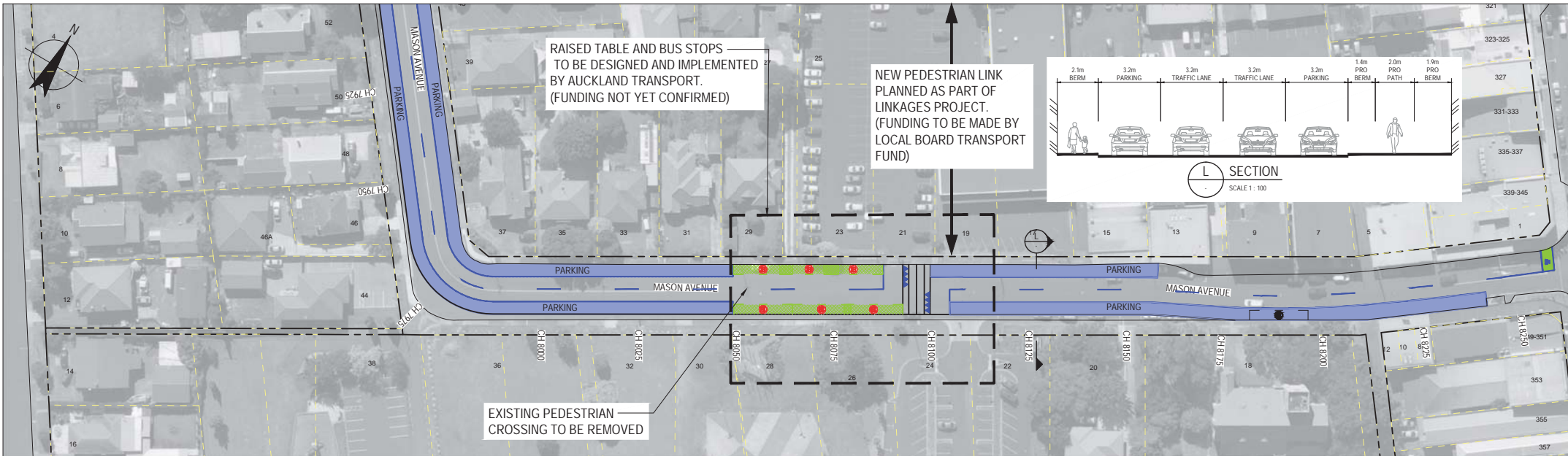
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Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client  
Project  
Title  
Original Size  
Drawing No: **51-32651-B01-C211** Rev: D

**NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT**  
**ROUTE 32 DESIGN**  
**LAYOUT SHEET 11**



NOTE:  
 1. SEE SHEET C200 FOR KEY  
 2. ALL CROSS SECTION DIMENSIONS ARE APPROXIMATE.

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**FOR DISCUSSION PURPOSES ONLY PRELIMINARY**

D	DESIGN AMENDED	RB	AL	14/05/15		
C	CROSS SECTIONS ADDED	RB	AL	10/03/15		
B	REVIEW AMENDMENTS	RB	AL	17/10/14		
A	ORIGINAL ISSUE	RB	AL	01/10/14		
No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date



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Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client  
 Project  
 Title  
 Original Size  
 Drawing No: **51-32651-B01-C212** Rev: D





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**FOR DISCUSSION PURPOSES ONLY PRELIMINARY**

No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
A	ORIGINAL ISSUE		RB	AL		06/05/15

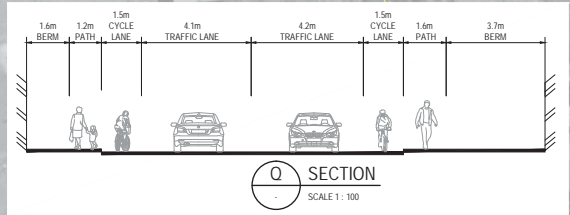
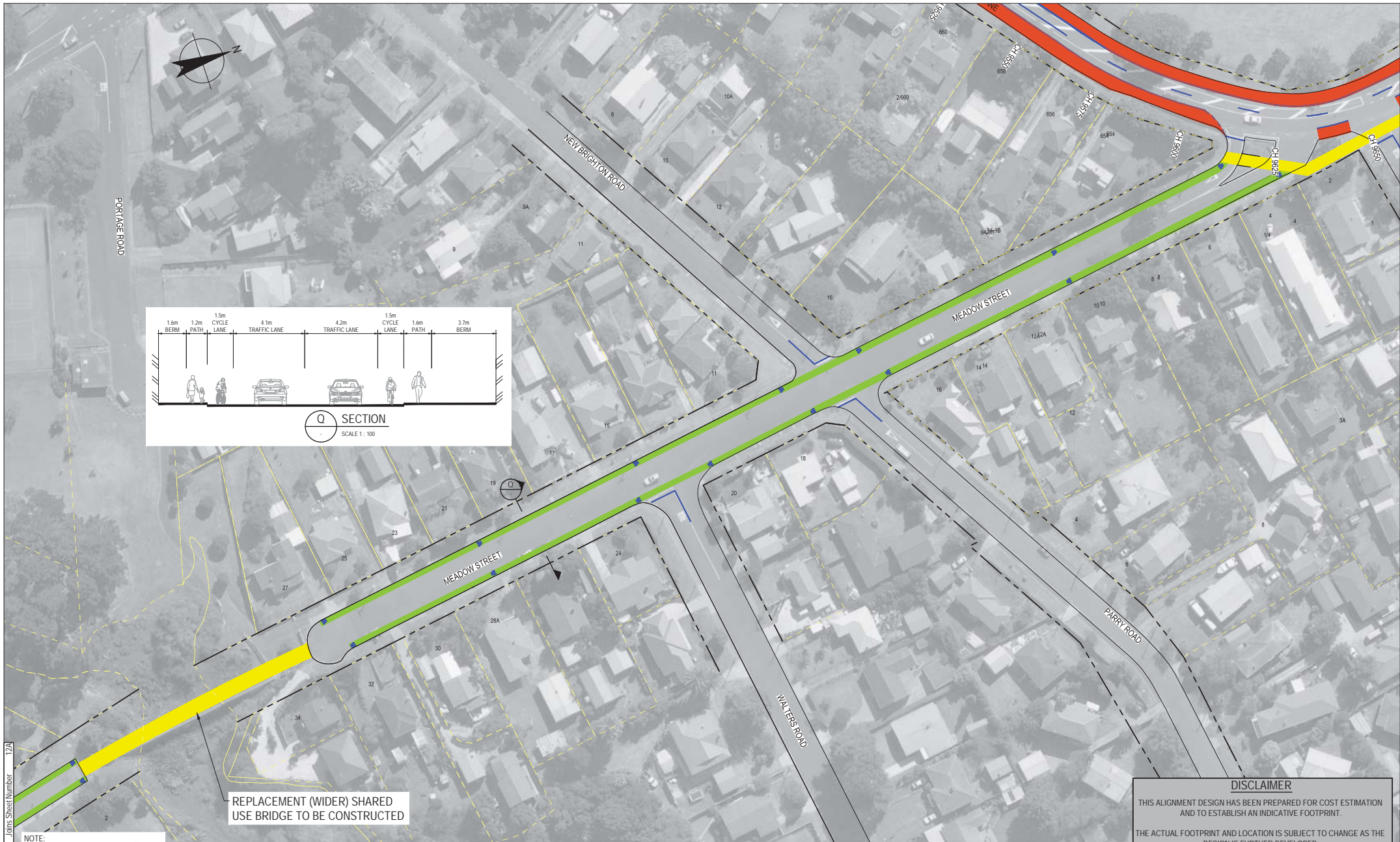


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Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client: **NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT**  
 Project: **EAST WEST CONNECTION**  
 Title: **ROUTE 32 DESIGN LAYOUT SHEET 12A**  
 Original Size: **A1** Drawing No: **51-32651-B01-C212A** Rev: **A**





REPLACEMENT (WIDER) SHARED USE BRIDGE TO BE CONSTRUCTED

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- NOTE:**
- SEE SHEET C200 FOR KEY
  - ALL CROSS SECTION DIMENSIONS ARE APPROXIMATE.



**FOR DISCUSSION PURPOSES ONLY PRELIMINARY**

A ORIGINAL ISSUE		RB	AL	06/05/15
No	Revision	Note	Job Manager	Project Director
Drawn		Job Manager		Date

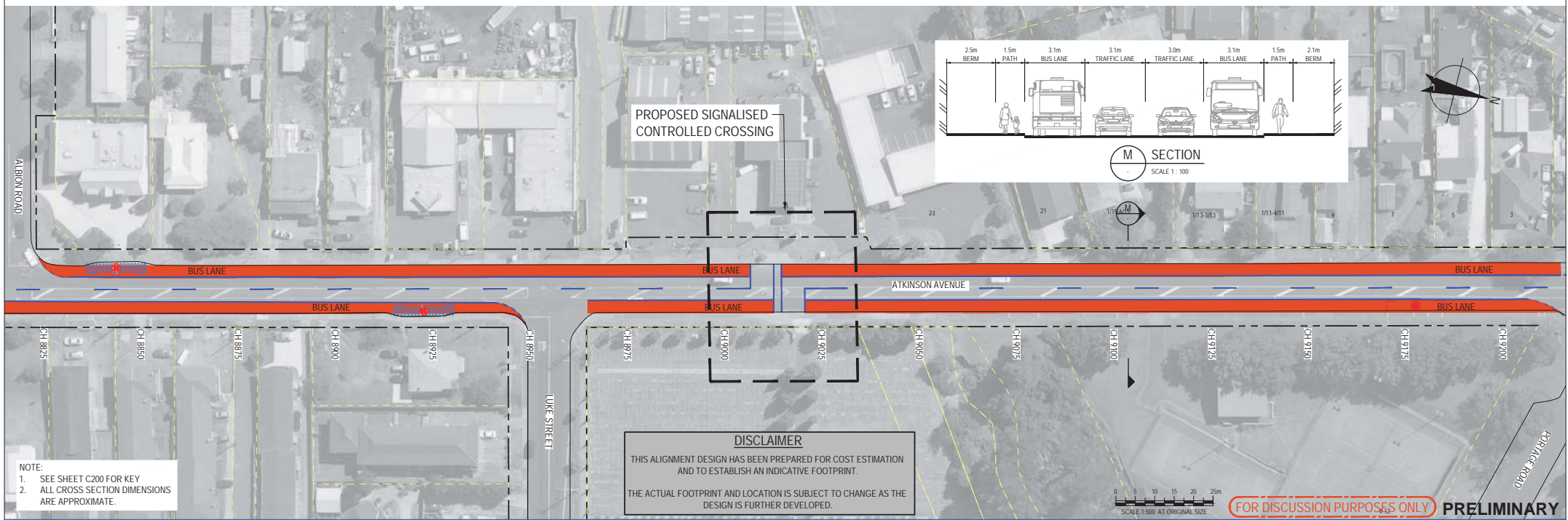
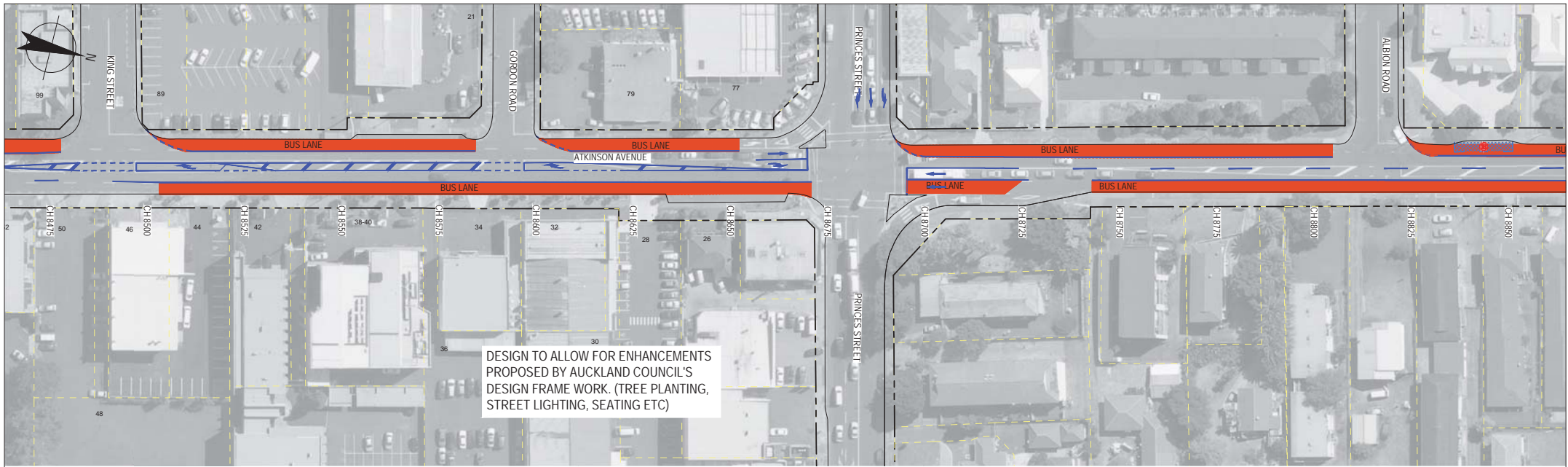


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Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN		

Client	NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT		
Project	EAST WEST CONNECTION		
Title	ROUTE 32 DESIGN LAYOUT SHEET 12B		
Original Size	A1	Drawing No:	51-32651-B01-C212B
		Rev:	A





NOTE:  
 1. SEE SHEET C200 FOR KEY  
 2. ALL CROSS SECTION DIMENSIONS ARE APPROXIMATE.

C	CROSS SECTIONS ADDED	RB		10/03/15		
B	REVIEW AMENDMENTS	RB	AL	17/10/14		
A	ORIGINAL ISSUE	RB	AL	01/10/14		
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date

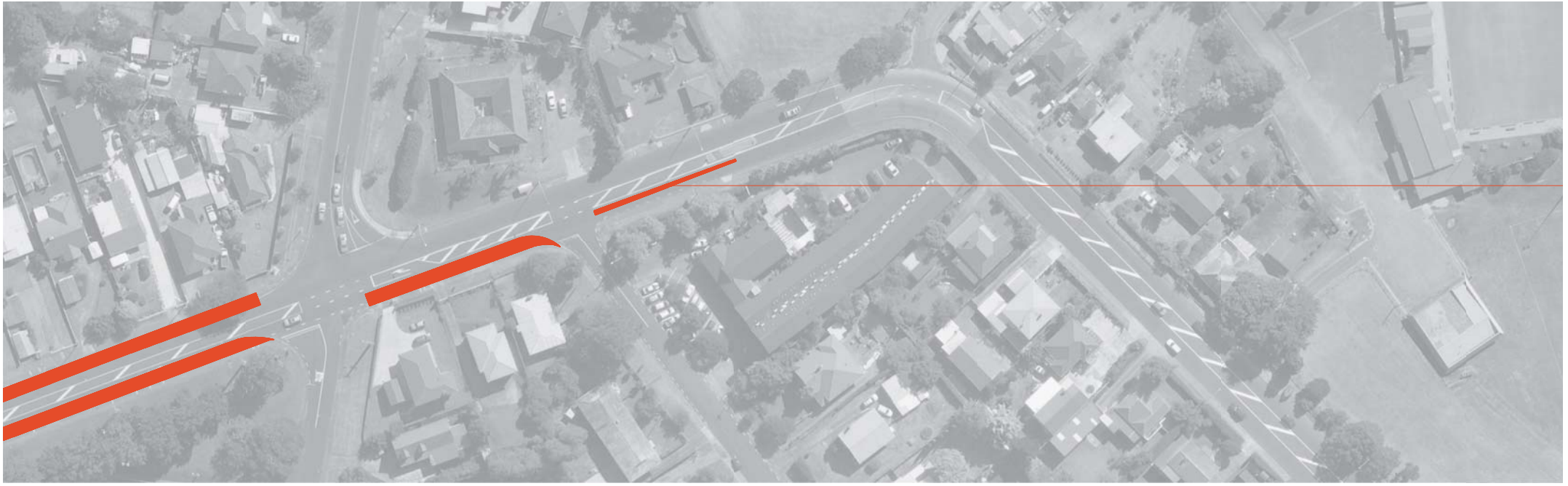


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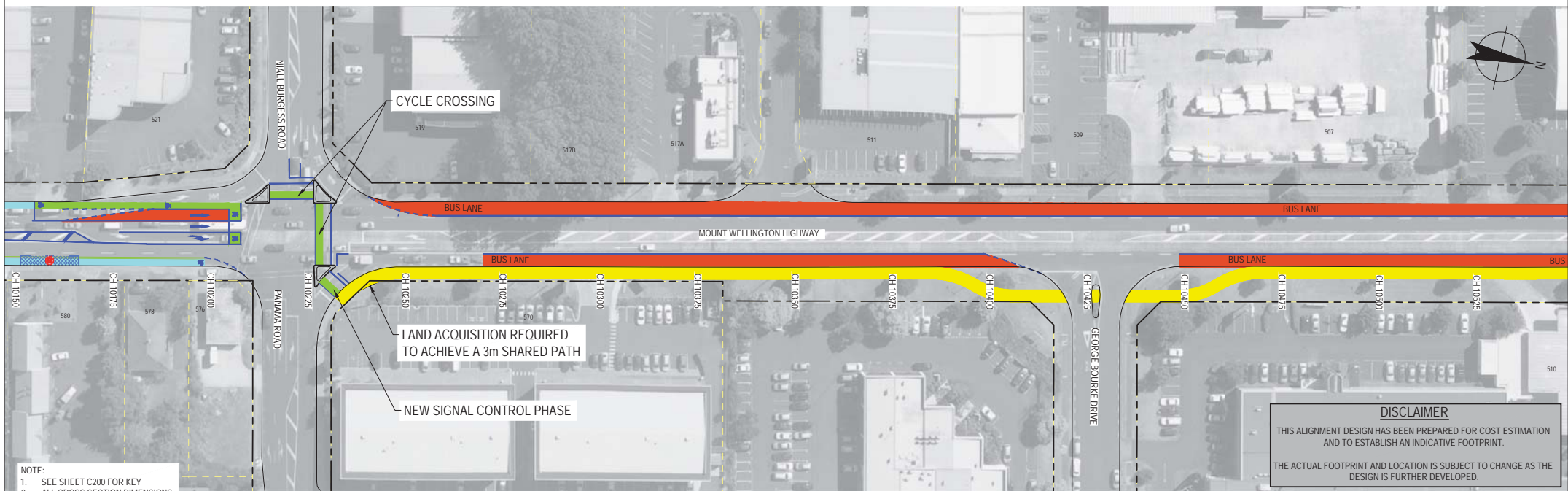
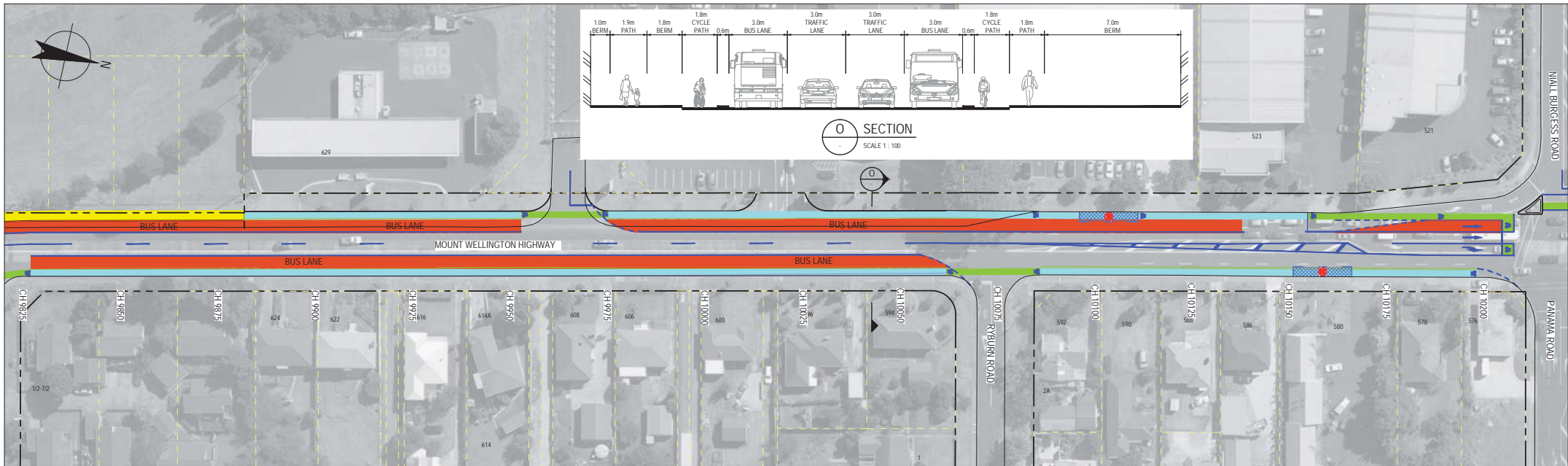
Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

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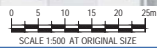
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 Project **EAST WEST CONNECTION**  
 Title **ROUTE 32 DESIGN LAYOUT SHEET 13**  
 Drawing No: **51-32651-B01-C213** Rev: **C**







NOTE:  
 1. SEE SHEET C200 FOR KEY  
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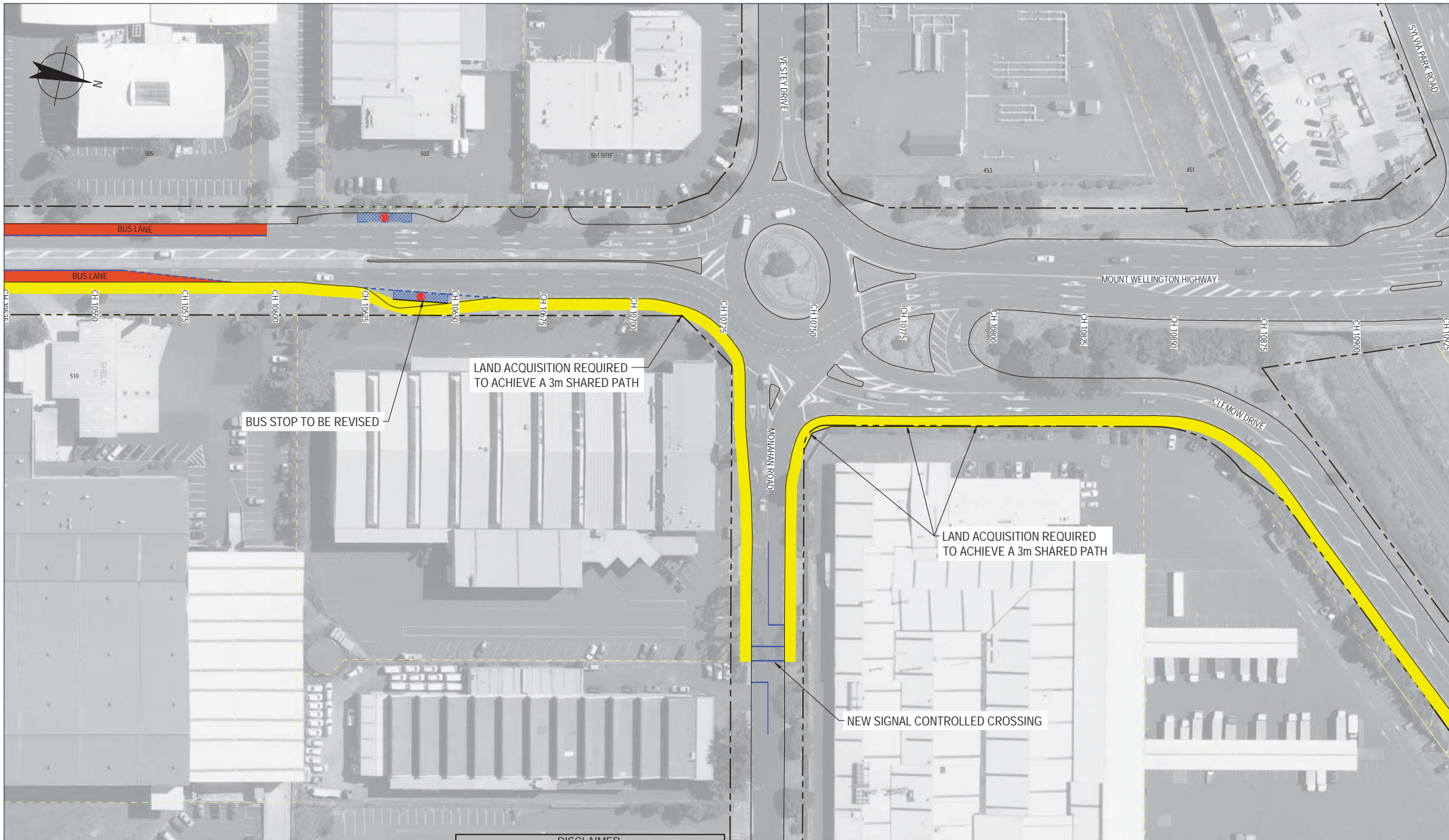
D	DESIGN AMENDED	RB	AL	15/05/15
C	CROSS SECTIONS ADDED	RB	AL	10/03/15
B	REVIEW AMENDMENTS	RB	AL	17/10/14
A	ORIGINAL ISSUE	RB	AL	01/10/14
No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager	Project Director Date



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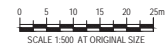
Drawn RB	Designer RB
Drafting Check	Design Check
Approved (Project Director)	Date
Scale AS SHOWN	This Drawing must not be used for Construction unless signed as Approved

Client Project Title	<b>NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT EAST WEST CONNECTION</b>
Original Size	<b>A1</b>
Drawing No:	<b>51-32651-B01-C215</b>
Rev:	<b>D</b>



NOTE:  
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D	DESIGN AMENDED	RB	AL	15/05/15	
C	CROSS SECTIONS ADDED	RB	AL	10/03/15	
B	REVIEW AMENDMENTS	RB	AL	17/10/14	
A	ORIGINAL ISSUE	RB	AL	01/10/14	
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager	Project Director	Date

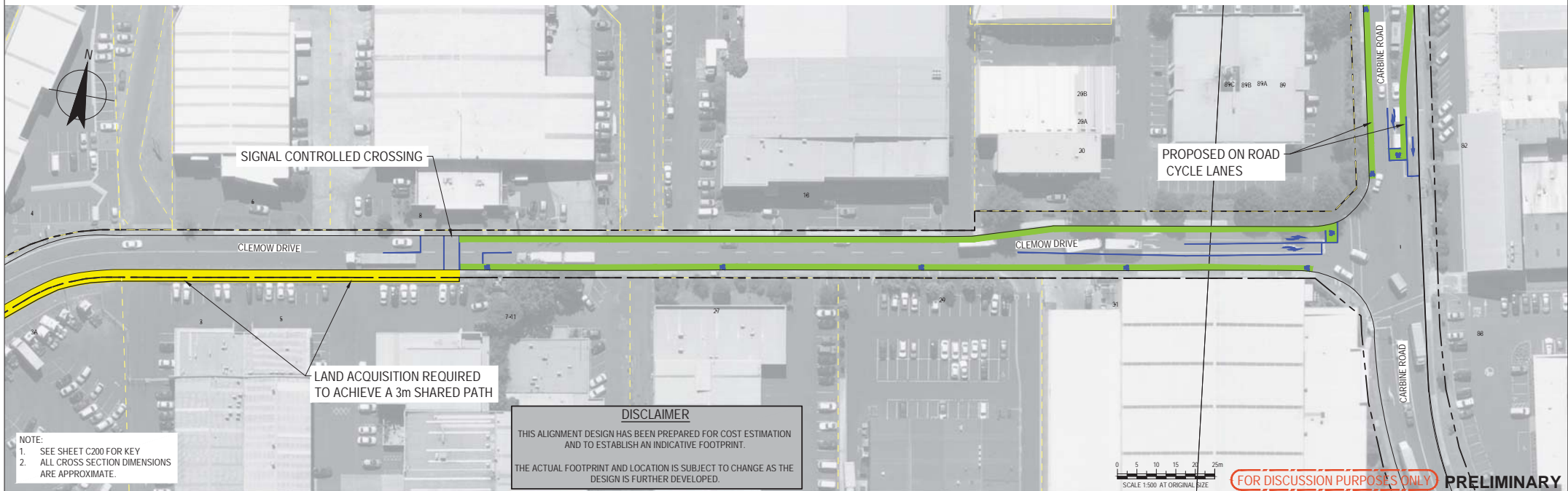
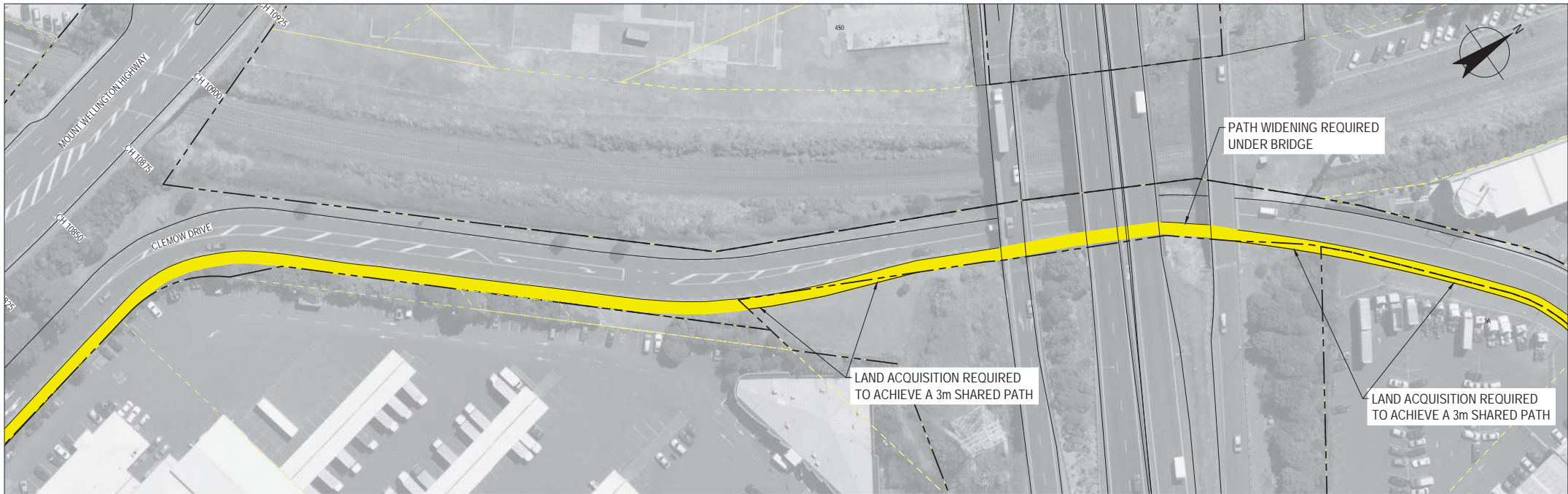


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Drafting Check		Design Check	
Approved (Project Director)		Date	
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Client	NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT
Project	EAST WEST CONNECTION
Title	ROUTE 32 DESIGN LAYOUT SHEET 16
Original Size	A1
Drawing No:	51-32651-B01-C216
Rev:	D





NOTE:  
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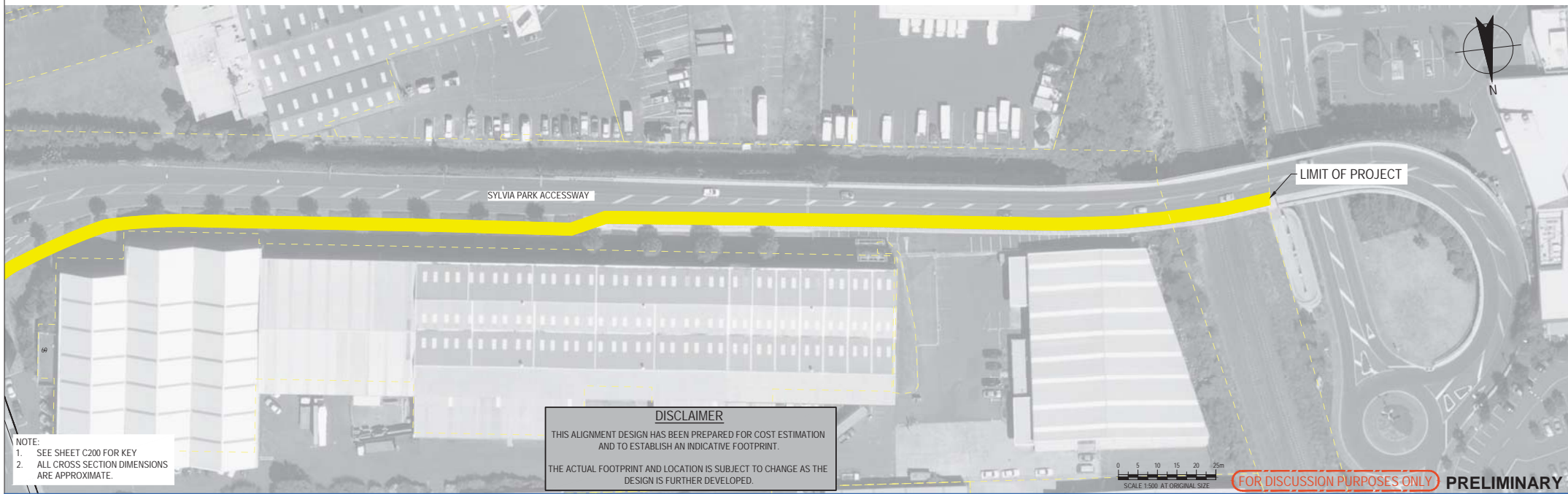
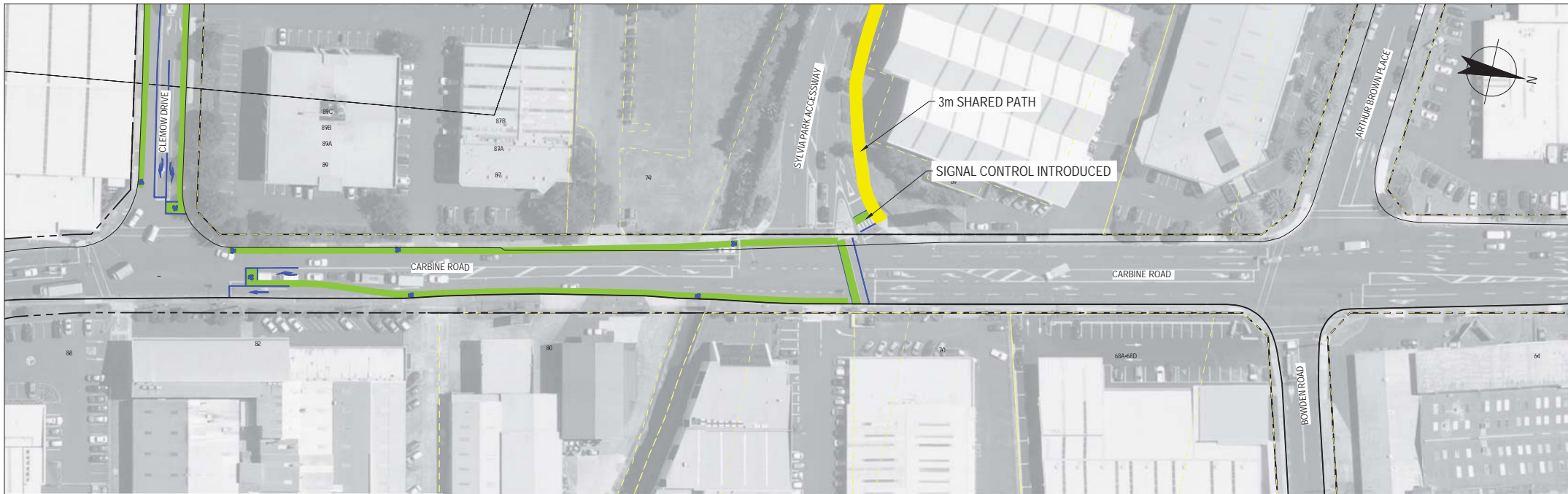
A	ORIGINAL ISSUE	RB	AL	06/05/15
No	Revision	Note: * Indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager	Project Director Date



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Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN		

Client	NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT		
Project	EAST WEST CONNECTION		
Title	ROUTE 32 DESIGN LAYOUT SHEET 17		
Original Size	A1	Drawing No:	51-32651-B01-C217
		Rev:	A



NOTE:  
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A	ORIGINAL ISSUE	RB	AL	06/05/15	
No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn Job Manager	Project Director	Date

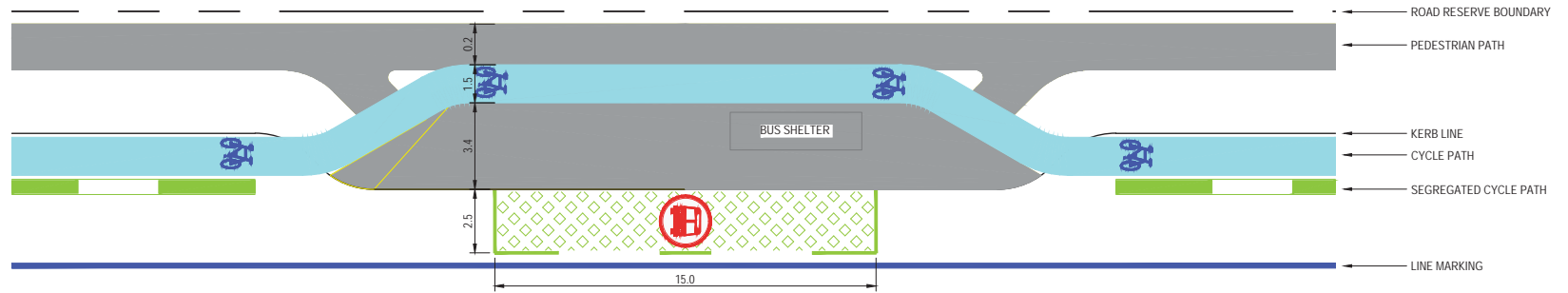


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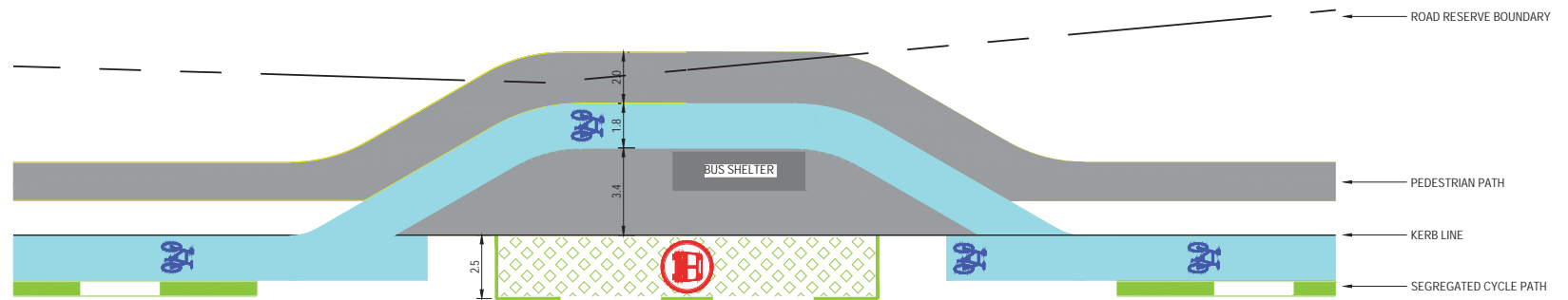
Drawn	RB	Designer	RB
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client  
Project  
Title  
Original Size  
**NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT**  
**EAST WEST CONNECTION**  
**ROUTE 32 DESIGN**  
**LAYOUT SHEET 18**  
 Drawing No: **51-32651-B01-C218** Rev: **A**





OPTION 1: LAYOUT 9.5-12.5m ROAD CENTRELINE TO BOUNDARY



OPTION 2: LAYOUT GREATER THAN 12.5m ROAD CENTRELINE TO BOUNDARY

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No	Revision	Note	Drawn	Job Manager	Project Director	Date
A	ORIGINAL ISSUE		RB			



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Drawn	RB	Designer	AL
Drafting Check		Design Check	
Approved (Project Director)		Date	
Scale	AS SHOWN	This Drawing must not be used for Construction unless signed as Approved	

Client	NZ TRANSPORT AGENCY/AUCKLAND TRANSPORT		
Project	EAST WEST CONNECTION		
Title	ROUTE 32 DESIGN		
	BUS STOP OPTIONS		
Original Size	A1	Drawing No:	51-32651-B01-C003
		Rev:	A