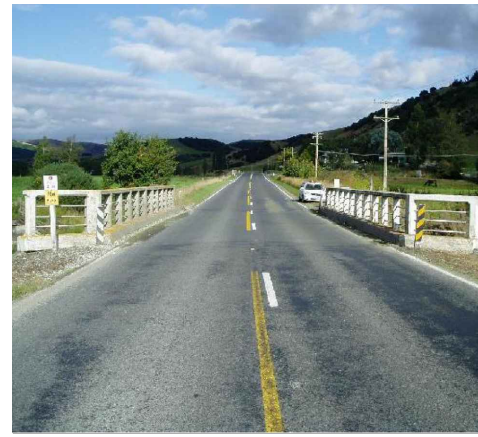


LOCATION PLAN
NOT TO SCALE



BRIDGE ID



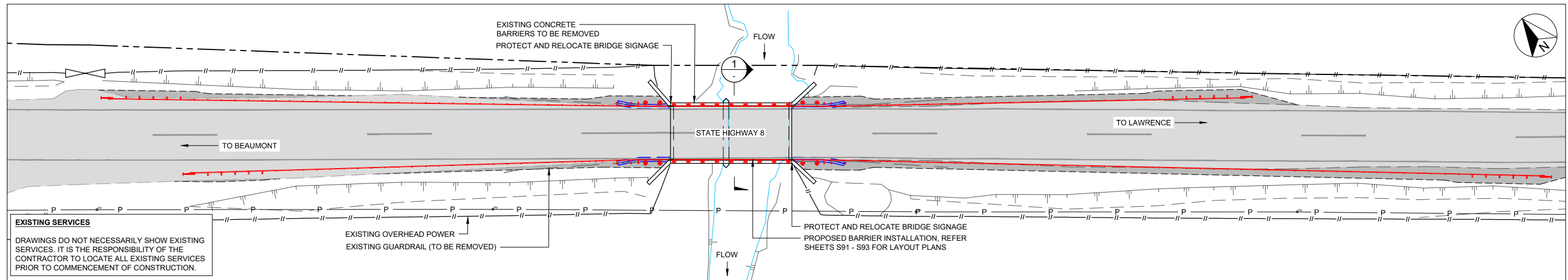
VIEW SOUTH



BRIDGE ELEVATION



BRIDGE ELEVATION



PLAN LAYOUT
SCALE: 1:300

CONSTRUCTION NOTES:

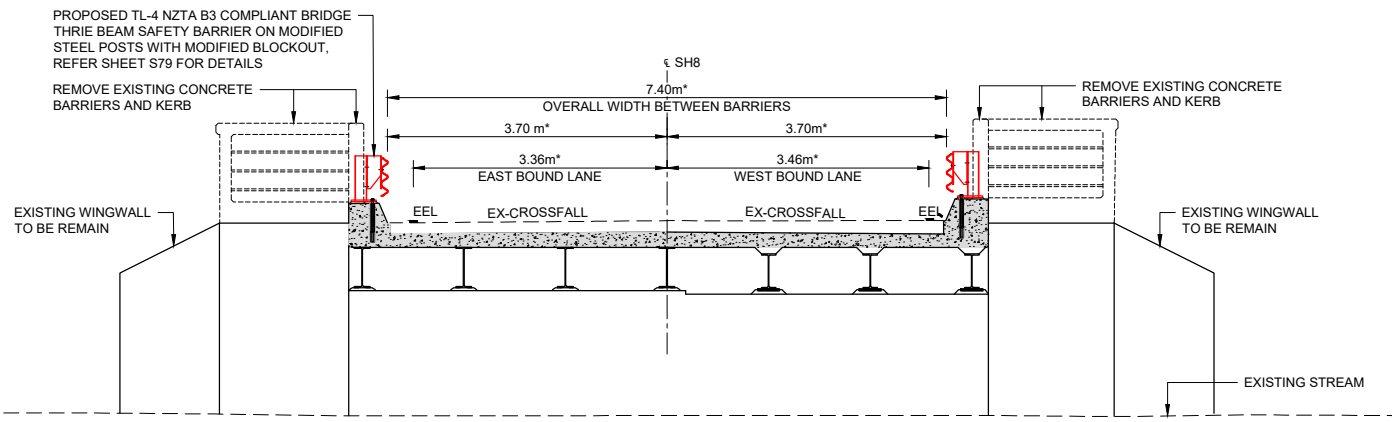
- GENERAL**
- ALL DIMENSIONS MARKED * TO BE CONFIRMED BY CONTRACTOR PRIOR TO CONSTRUCTION. ANY CONFLICTS SHALL BE REFERRED TO THE ENGINEER FOR RESOLUTION.
 - SET OUT IS TO BE CONFIRMED ON SITE BY THE ENGINEER AND CONTRACTOR PRIOR TO COMMENCING WORKS.
 - PRIOR TO COMMENCING EXCAVATION THE CONTRACTOR SHALL SEARCH AND LOCATE ALL SERVICES AND ADVISE THE ENGINEER OF ANY CONFLICT FOR RESOLUTION. SERVICES TO BE PROTECTED AND TEMPORARILY SUPPORTED DURING CONSTRUCTION.

- ABBREVIATIONS**
- OSA = OR SIMILAR APPROVED

- STEELWORK**
- ALL PLATES SHALL BE WELDABLE GRADE 250 STEEL COMPLYING WITH NZS/AS 3678 OR APPROVED EQUIVALENT.
 - STEEL POSTS SHALL BE GRADE 350 TO AS 1163
 - ALL ROLLED SECTIONS SHALL BE GRADE 300 COMPLYING WITH AS/NZS 3679.1.
 - ALL FABRICATION SHALL COMPLY WITH NZS 3404: PART 1: 1997. ALL WELDING SHALL BE CLASS GP IN ACCORDANCE WITH AS 1554.1 UNLESS SHOWN OTHERWISE.
 - ALL STEELWORK TO BE HOT DIP GALVANISED AFTER FABRICATION IN ACCORDANCE WITH AS/NZS 4680: 1999.
 - ALL GRADE 4.6 BOLTS SHALL BE TO AS 1111.1 AND NUTS TO PROPERTY CLASS 5 OF AS 1112.3. ALL GRADE 8.8 BOLTS, NUTS, AND WASHERS SHALL BE TO AS/NZS 1252 AND HOT DIP GALVANISED IN ACCORDANCE WITH AS/NZS 1214.
 - ALL EXPOSED SHARP EDGES AND CORNERS TO BE SLIGHTLY ROUNDED BY GRINDING BEFORE GALVANISING.

- CONCRETE DRILLING (GUARDRAIL KERB HOLD DOWN BOLTS)**
- THE LOCATION OF THE DRILLING HOLES SHALL BE MARKED ON SITE AND ADJUSTED TO AVOID CONFLICT WITH THE EXISTING STEEL REINFORCEMENT.
 - ALL CONCRETE DRILLING SHALL UNDERTAKE WITH A PERCUSSIVE DRILL.
 - THE CONTRACTOR SHALL UNDERTAKE A COVER SURVEY WITH A GROUND PENETRATING RADAR (GPR) OR SIMILAR APPROVED TO LOCATE ALL REINFORCING BARS AND ENSURE NO REINFORCEMENT IS CUT OR DAMAGED DURING DRILLING WORKS.
 - IN THE EVENT THAT THE REBAR LOCATOR SURVEY RESULTS ARE AMBIGUOUS IN ANY WAY AT LOCATING THE STEEL REINFORCEMENT, SMALL DIAMETER PILOT HOLES SHALL BE DRILLED
 - ANY HOLES THAT ARE ABANDONED SHALL BE FILLED WITH AN APPROVED CEMENTITIOUS REPAIR MORTAR OR GROUT (SHRINKAGE COMPENSATED WITH COMPRESSIVE STRENGTH OF AT LEAST 20 MPA AFTER 24 HOURS).

- GUARDRAIL**
- SETOUT OF GUARDRAIL TO BE CONFIRMED BY THE ENGINEER AND CONTRACTOR PRIOR TO COMMENCEMENT OF WORK ON SITE.
 - ALL SAFETY BARRIER SYSTEMS SHALL BE IN ACCORDANCE WITH NZTA M23 SPECIFICATION FOR ROAD SAFETY BARRIER SYSTEMS.
 - GUARDRAIL SHALL BE MASH TL-3 PROPRIETARY W-BEAM GUARDRAIL. LEADING TERMINALS SHALL BE MASH TL-3 AND (WHERE PRACTICAL) GRADING AT THE TERMINAL LOCATION SHALL BE AS PER NZTA STANDARD DRAWING RSB-3.
 - THE CONTRACTOR SHALL RETAIN AS PART OF THE QUALITY ASSURANCE DOCUMENTATION COMPLETED MANUFACTURERS CHECKLISTS FOR ALL GUARDRAIL AND TERMINAL INSTALLATIONS AND SHALL PROVIDE A COPY OF THESE TO THE ENGINEER.
 - OFFSETS SHOWN FOR POSITIONING GUARDRAIL ARE TO THE TRAFFIC FACE OF THE GUARDRAIL. GUARDRAIL SHALL BE INSTALLED TO PRESENT A SMOOTH ALIGNMENT FREE OF ANY KINKS OR SHARP DEVIATIONS.
 - ALL GUARDRAIL SHALL BE SET OUT AND INSTALLED FROM THE FIXED END IF THIS EXISTS (I.E. BRIDGE OR CONCRETE BARRIER). THERE SHALL BE NO CUTTING OR MODIFYING ANY GUARDRAIL SECTIONS AND NO DRILLING OF NEW OR EXISTING HOLES TO GUARDRAIL, POSTS AND OTHER PROPRIETARY COMPONENTS.
 - AFTER ASSEMBLY, ANY AREAS OF THE GALVANISED COATING THAT HAVE BEEN DAMAGED OR SHOW SIGNS OF DETERIORATION SHALL BE WIRE BRUSHED AND WASHED TO THOROUGHLY CLEAN DOWN TO FRESH ZINC OR PARENT METAL. THEY SHALL THEN BE SPOT PAINTED WITH TWO BRUSH COATS OF UN-THINNED APPROVED ZINC RICH PAINT (E.G. CONFORMING TO PASS-C/29/16) THE FIRST COAT BEING APPLIED TO A DRY SURFACE IMMEDIATELY AFTER CLEANING.
 - HAZARD MARKERS SHALL BE INSTALLED TO ALL END TERMINALS. EDGE MARKER POSTS SHALL BE INSTALLED IN FRONT OF GUARDRAIL IN ACCORDANCE WITH NZTA TM-2014 AND MOTSAM OR NZTA APPROVED CLIP-ON EDGE MARKERS INSTALLED.
 - GUARDRAIL POSTS SHALL BE INSTALLED INTO WELL COMPACTED FREE DRAINING MATERIAL (E.G. NZTA M4 AP40) MEETING THE REQUIREMENTS OF AS/NZS 3845:1999 AND SHALL BE ABLE TO SUSTAIN A 20KG FORCE WITHIN THE TOP 200MM OF THE POST IN ANY DIRECTION WITH A RESULTANT DEFLECTION OF LESS THAN OR EQUAL TO 5MM AT GROUND LEVEL.
 - ALL STEELWORK EXCEPT THRIE-BEAM GUARDRAIL, POST & BRACKET TO BE GRADE 250 STEEL COMPLYING WITH NZS/AS 3678 OR APPROVED EQUIVALENT.
 - OFFSETS SHOWN FOR POSITIONING GUARDRAIL ARE FROM EXISTING EDGELINE OF ROADWAY TO THE TRAFFIC FACE OF THE GUARDRAIL.
 - LAP GUARDRAIL IN DIRECTION OF TRAFFIC.
 - MOUNTING HEIGHTS FOR STANDARD W-SECTION HIGHWAY GUARDRAIL ON DUCTILE STEEL POSTS SUBJECT TO COMPLYING NZTA GUARDRAIL PRODUCT 710, 730 & 790mm, ALL GUARDRAIL TO BE AS SHOWN WITH A TOLERANCE OF +20MM/-20MM
 - THE COMPACTION OF FREE DRAINING MATERIAL AROUND GROUND MOUNTED POST SHALL BE INSTALLED IN SOIL CONDITIONS THAT MEET THE REQUIREMENTS OF AS/NZS 3845:1999 AND NZTA SPECIFICATION AP40 AND SHALL BE ABLE TO SUSTAIN A 20KG FORCE WITHIN THE TOP 200mm OF THE POST IN ANY DIRECTION WITH THE RESULTANT DEFLECTION OF LESS THAN OR EQUAL TO 5mm AT GROUND LEVEL.
 - FOR FURTHER DETAILS OF FABRICATION, SURFACE TREATMENT AND ASSEMBLY, SEE MANUFACTURER'S SPECIFICATION.



1 TYPICAL CROSS SECTION
SCALE: 1:50

NOTES:

- * INDICATES SITE DIMENSION (DIMENSION TO BE CONFIRMED AS PART OF FIRST WORKS)

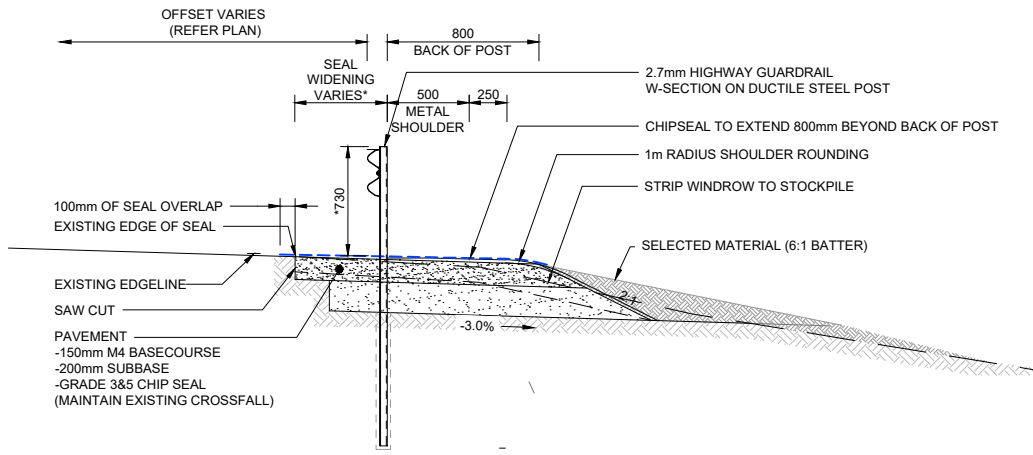
ISSUED FOR REVIEW AND COMMENT - NOT FOR CONSTRUCTION

Revision	Amendment	Approved	Revision Date
A	ISSUED FOR REVIEW AND COMMENT	MD	09-04-2020



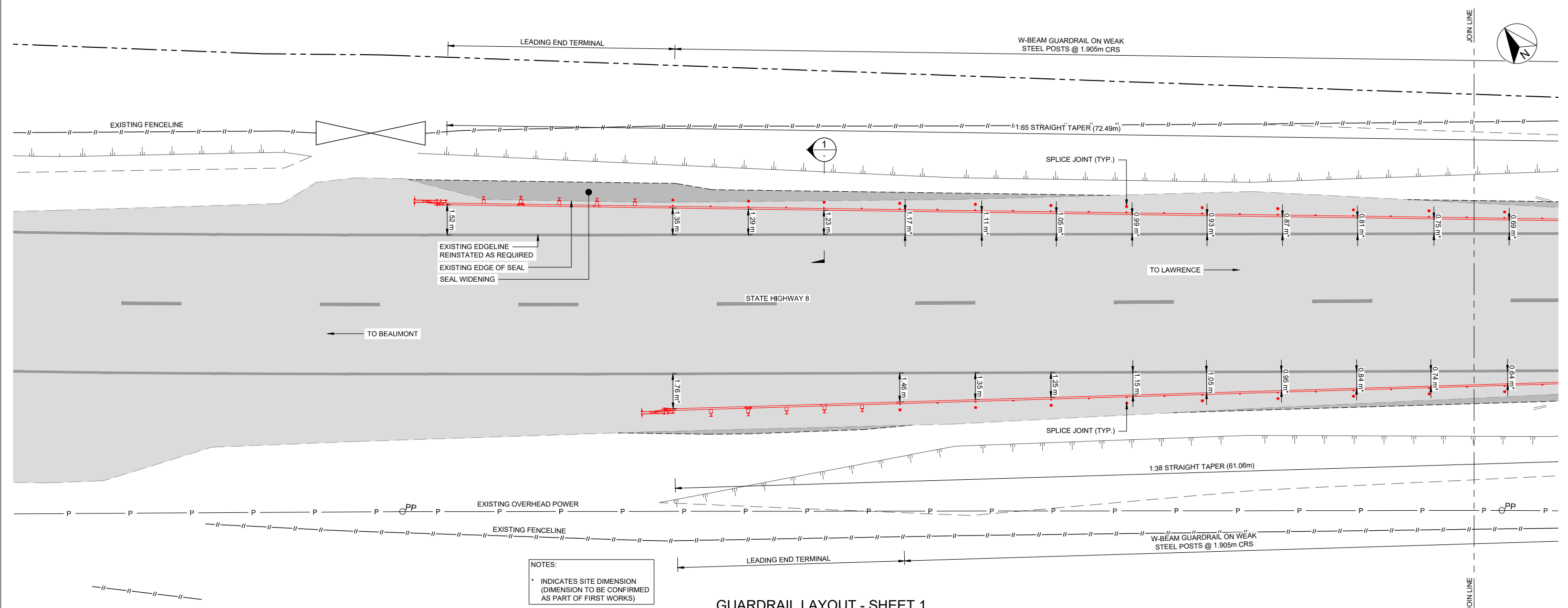
<p>Christchurch Office +64 3 363 5400</p>			<p>PO Box 1482 Christchurch 8140 New Zealand</p>		
Designed	M. RINGROSE	Approved	M. DAVIES	Approved Date	09-04-2020
Drawn	K. HEWSON	Scales	AS SHOWN @ A1	Project No.	6-CT012.00

<p>Project WAKA KOTAHI NZ TRANSPORT AGENCY SH8 BEAUMONT OTAGO RS 401 / 6300 NEW BEAUMONT BRIDGE</p>					
<p>Sheet LOW BURN BRIDGE BARRIER UPGRADE LOCATION, LAYOUT PLAN, SECTION AND NOTES</p>					
Project No.	6-CT012.00	Sheet No.	S90	Revision	A



1 TYPICAL GUARDRAIL SECTION
Scale: 1:25

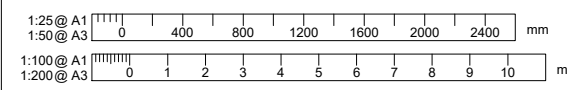
300 mm
200
100
50
10 mm
0



NOTES:
* INDICATES SITE DIMENSION (DIMENSION TO BE CONFIRMED AS PART OF FIRST WORKS)

GUARDRAIL LAYOUT - SHEET 1
SCALE: 1:100

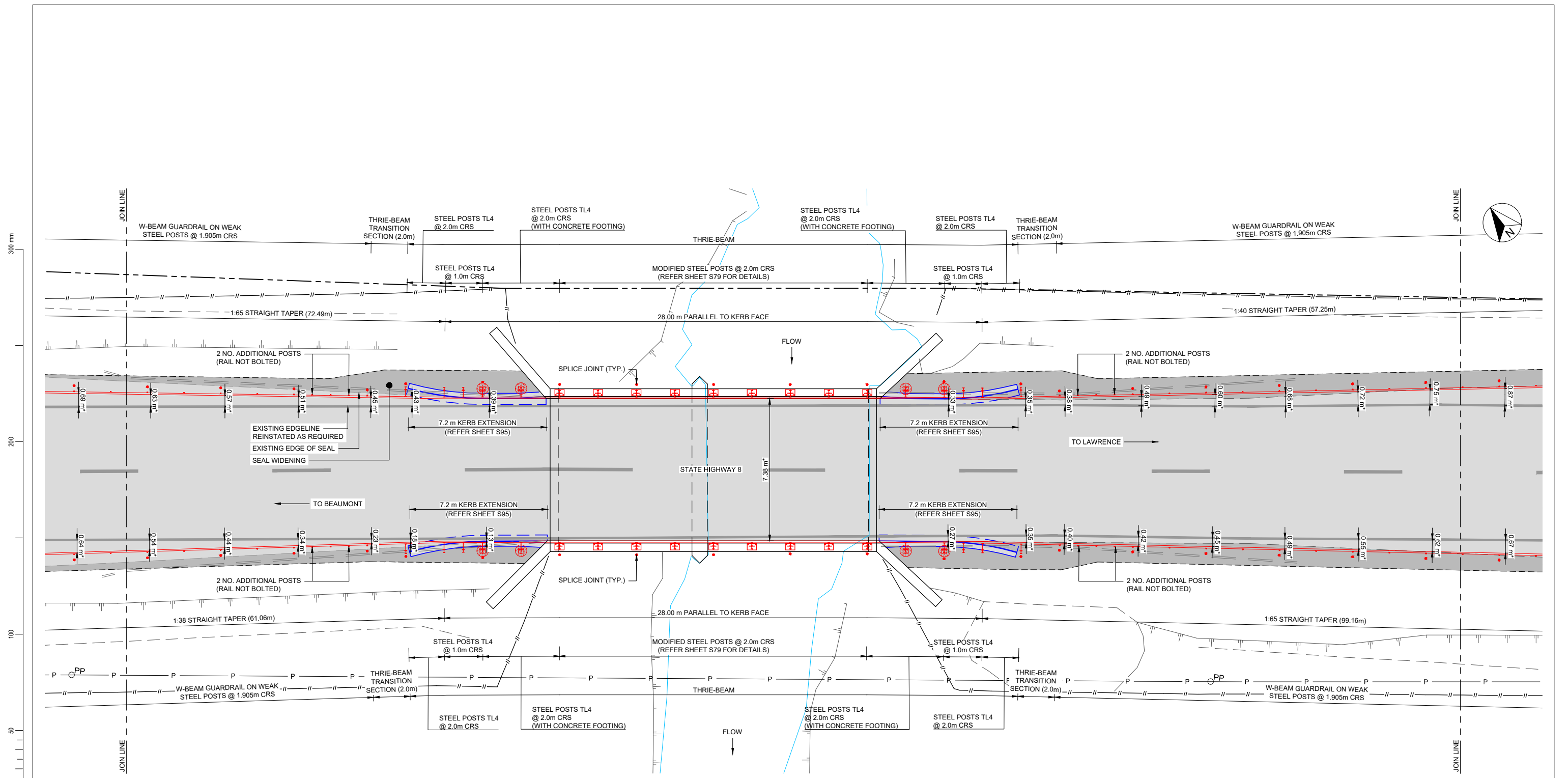
ISSUED FOR REVIEW AND COMMENT - NOT FOR CONSTRUCTION



Revision	Amendment	Approved	Revision Date
A	ISSUED FOR REVIEW AND COMMENT	MD	09-04-2020



 Christchurch Office +64 3 363 5400			PO Box 1482 Christchurch 8140 New Zealand		
Designed	Approved	Approved Date	Project		
M. RINGROSE	M. DAVIES	09-04-2020	WAKA KOTAHI NZ TRANSPORT AGENCY SH8 BEAUMONT OTAGO RS 401 / 6300 NEW BEAUMONT BRIDGE		
Drawn	Scales		Sheet		
K. HEWSON	AS SHOWN @ A1		LOW BURN BRIDGE BARRIER UPGRADE GUARDRAIL LAYOUT PLAN - SHEET 1		
			Project No.	Sheet No.	Revision
			6-CT012.00	S91	A

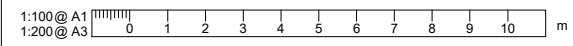


GUARDRAIL LAYOUT - SHEET 2

SCALE: 1:100

NOTES:
 * INDICATES SITE DIMENSION (DIMENSION TO BE CONFIRMED AS PART OF FIRST WORKS)

300 mm
200
100
50
10 mm
0



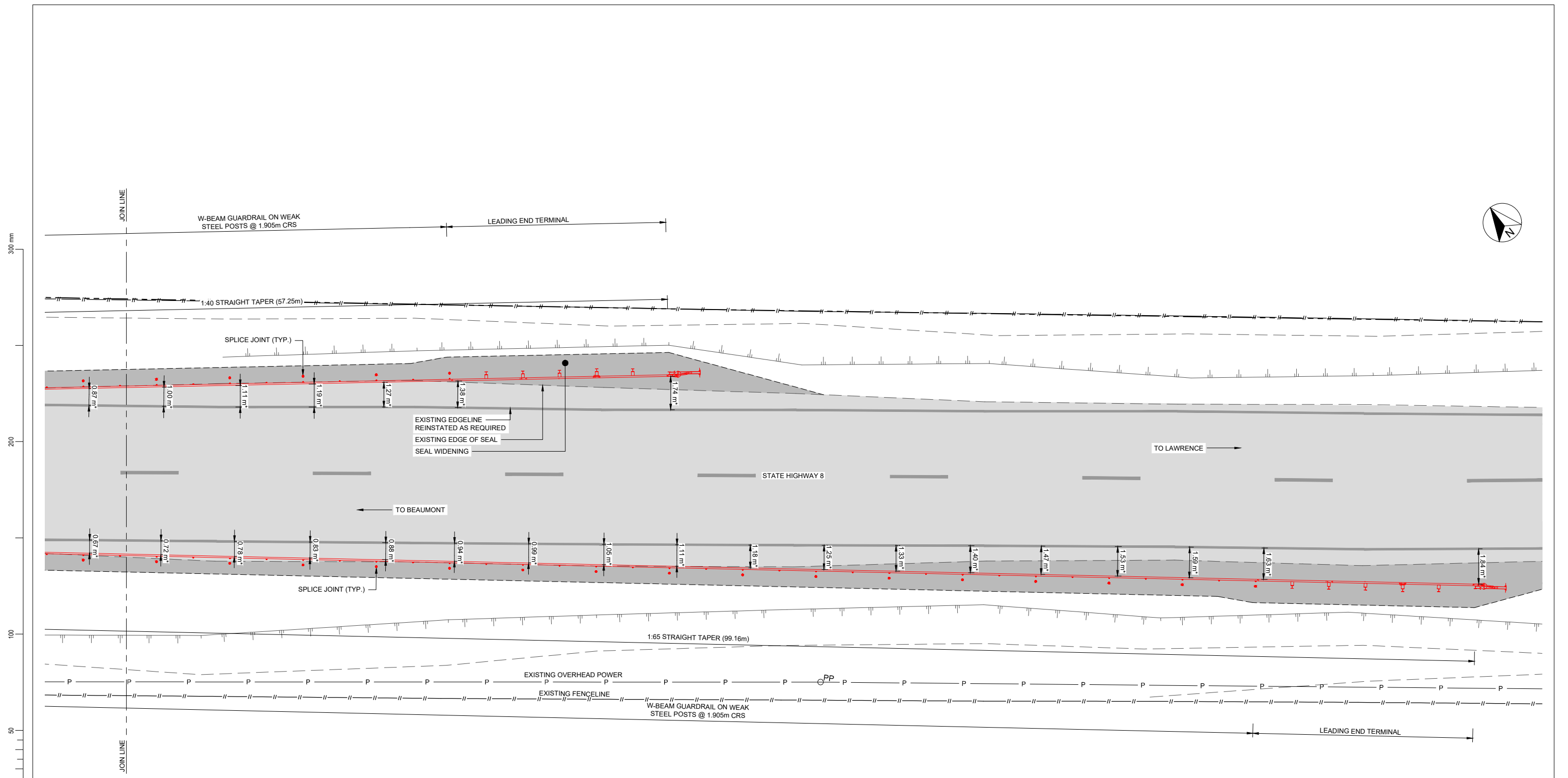
ISSUED FOR REVIEW AND COMMENT - NOT FOR CONSTRUCTION

Revision	Amendment	Approved	Revision Date
A	ISSUED FOR REVIEW AND COMMENT	MD	09-04-2020



 Christchurch Office +64 3 363 5400			PO Box 1482 Christchurch 8140 New Zealand
Designed	Approved	Approved Date	
M. RINGROSE	M. DAVIES	09-04-2020	
Drawn	Scales		
K. HEWSON	AS SHOWN @ A1		

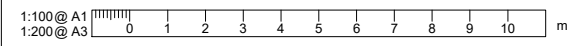
Project WAKA KOTAHI NZ TRANSPORT AGENCY SH8 BEAUMONT OTAGO RS 401 / 6300 NEW BEAUMONT BRIDGE	
Sheet LOW BURN BRIDGE BARRIER UPGRADE GUARDRAIL LAYOUT PLAN - SHEET 2	
Project No.	Sheet No. Revision
6-CT012.00	S92 A



GUARDRAIL LAYOUT - SHEET 3

SCALE: 1:100

NOTES:
 * INDICATES SITE DIMENSION (DIMENSION TO BE CONFIRMED AS PART OF FIRST WORKS)



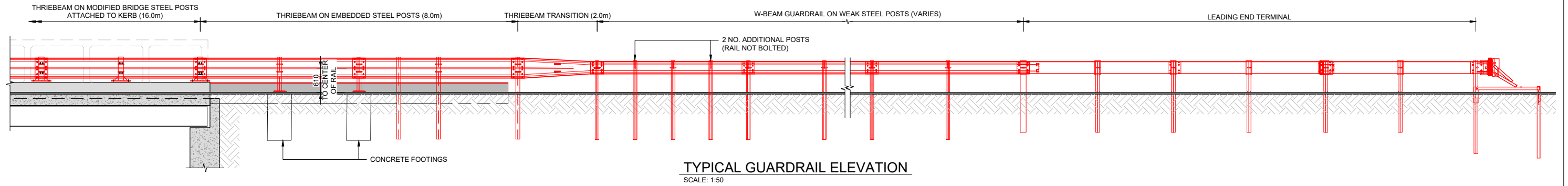
ISSUED FOR REVIEW AND COMMENT - NOT FOR CONSTRUCTION

Revision	Amendment	Approved	Revision Date
A	ISSUED FOR REVIEW AND COMMENT	MD	09-04-2020

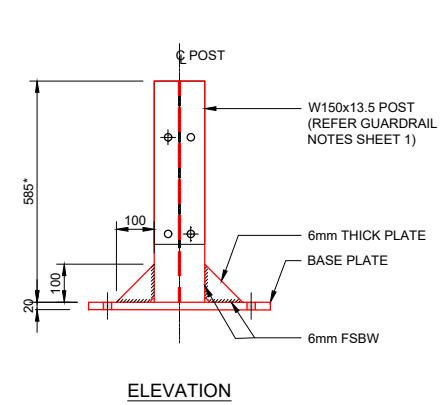
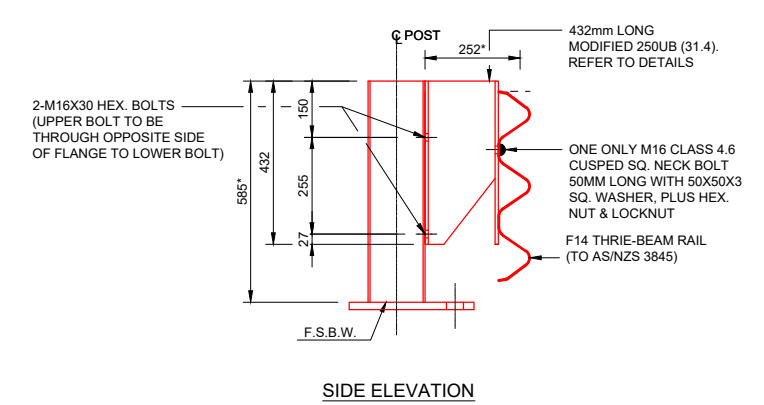


 Christchurch Office +64 3 363 5400			PO Box 1482 Christchurch 8140 New Zealand		
Designed	Approved	Approved Date	Project		
M. RINGROSE	M. DAVIES	09-04-2020	WAKA KOTAHİ NZ TRANSPORT AGENCY SH8 BEAUMONT OTAGO RS 401 / 6300 NEW BEAUMONT BRIDGE		
Drawn	Scales	Project No.	Sheet No.	Revision	
K. HEWSON	AS SHOWN @ A1	6-CT012.00	S93	A	

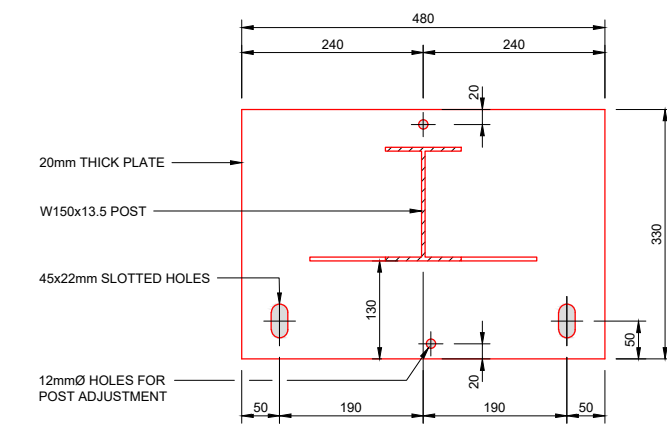
Project WAKA KOTAHİ NZ TRANSPORT AGENCY SH8 BEAUMONT OTAGO RS 401 / 6300 NEW BEAUMONT BRIDGE					
Sheet LOW BURN BRIDGE BARRIER UPGRADE GUARDRAIL LAYOUT PLAN - SHEET 3					
Project No.	Sheet No.	Revision			
6-CT012.00	S93	A			



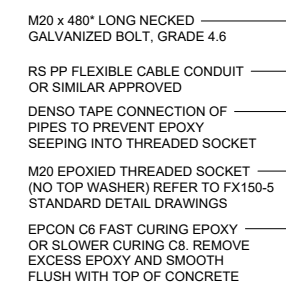
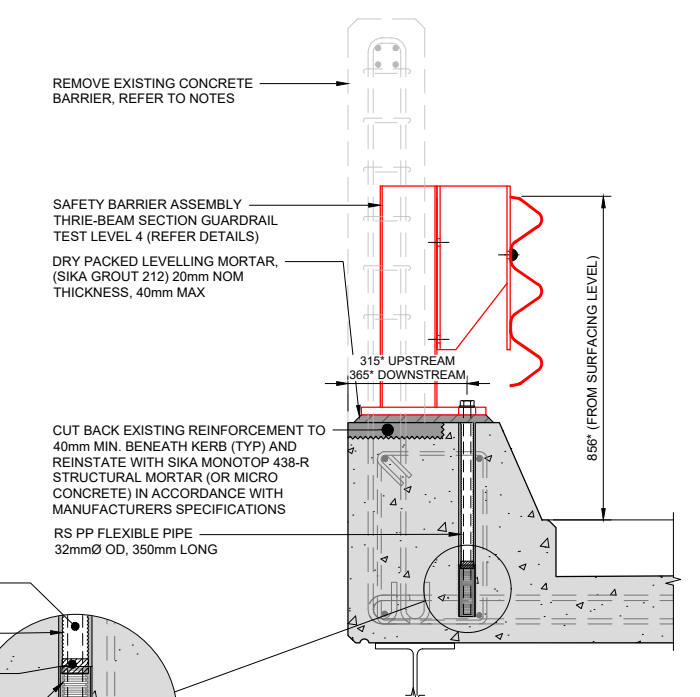
300 mm
200
100
50
10 mm
0



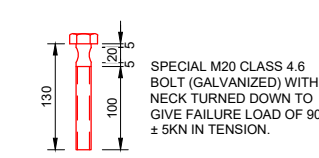
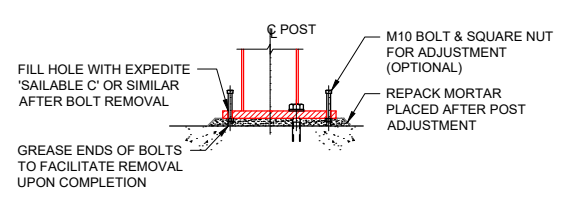
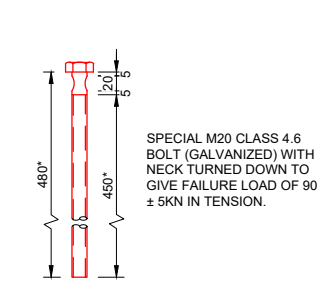
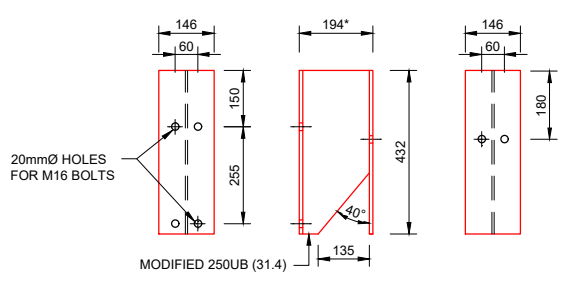
BRIDGE POST DETAIL
SCALE: 1:10



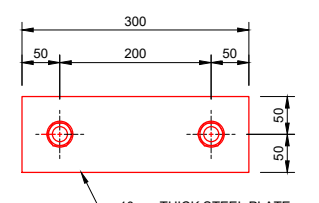
BASE PLATE
SCALE: 1:5



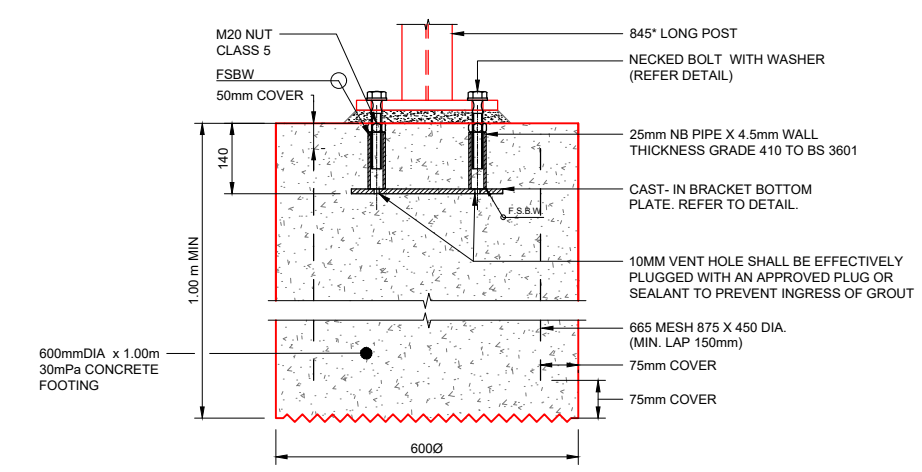
NOTES:
* INDICATES SITE DIMENSION (DIMENSION TO BE CONFIRMED AS PART OF FIRST WORKS)



CONCRETE FOOTING BOLT DETAIL
SCALE: 1:5

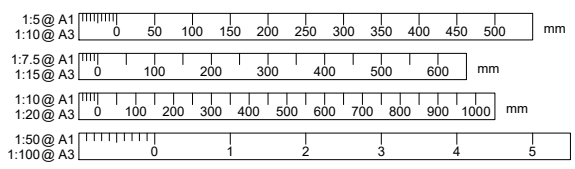


CONCRETE FOOTING CAST-IN BRACKET BOTTOM PLATE
SCALE: 1:5



CAST-IN BRACKET AND CONCRETE FOOTING DETAIL
SCALE: 1:7.5

ISSUED FOR REVIEW AND COMMENT - NOT FOR CONSTRUCTION

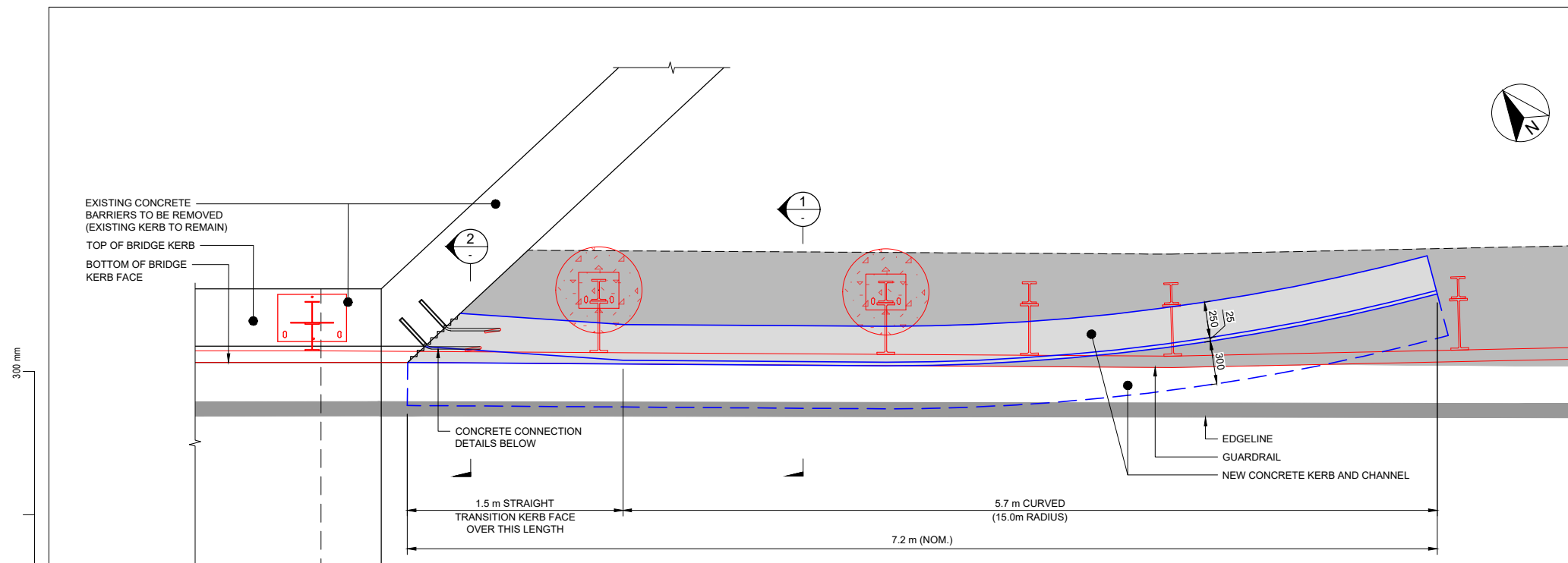


Revision	Amendment	Approved	Revision Date
A	ISSUED FOR REVIEW AND COMMENT	MD	09-04-2020

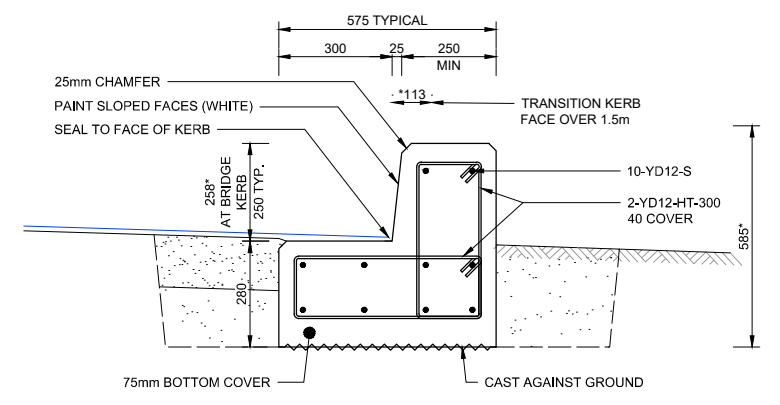


 Christchurch Office +64 3 363 5400		PO Box 1482 Christchurch 8140 New Zealand
Designed	Approved	Approved Date
M. RINGROSE	M. DAVIES	09-04-2020
Drawn	Scales	
K. HEWSON	AS SHOWN @ A1	

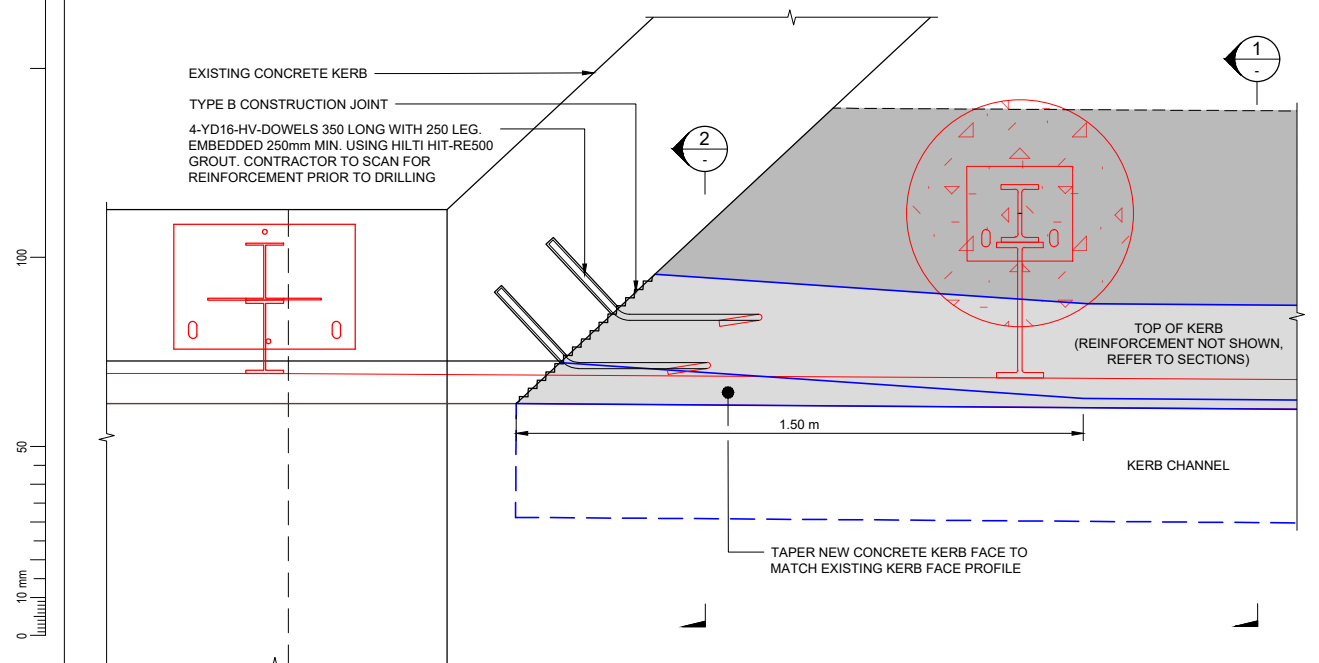
Project WAKA KOTAHI NZ TRANSPORT AGENCY SH8 BEAUMONT OTAGO RS 401 / 6300 NEW BEAUMONT BRIDGE		
Sheet LOW BURN BRIDGE BARRIER UPGRADE GUARDRAIL ELEVATION AND DETAILS		
Project No.	Sheet No.	Revision
6-CT012.00	S94	A



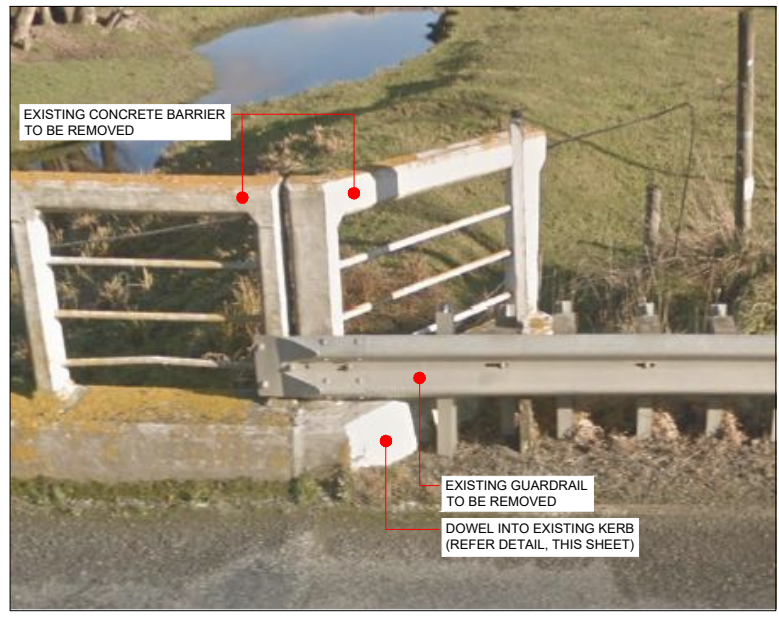
**TYPICAL KERB EXTENSION PLAN
(NORTH EAST CORNER)**
SCALE: 1:20



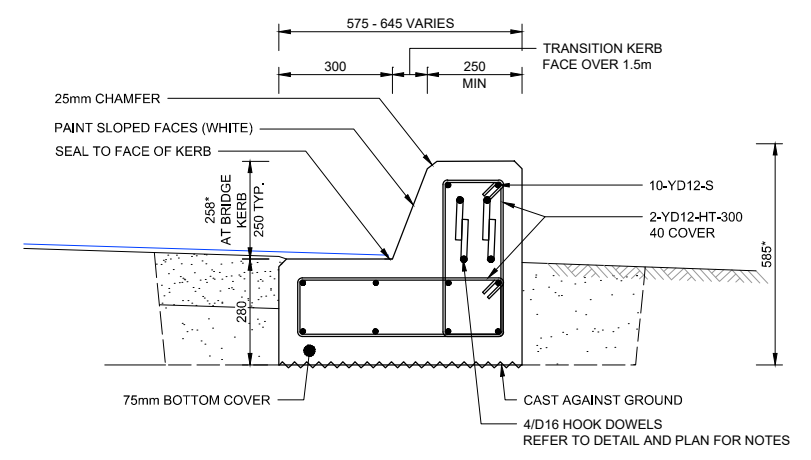
1 TYPICAL KERB EXTENSION DETAIL
SCALE: 1:10



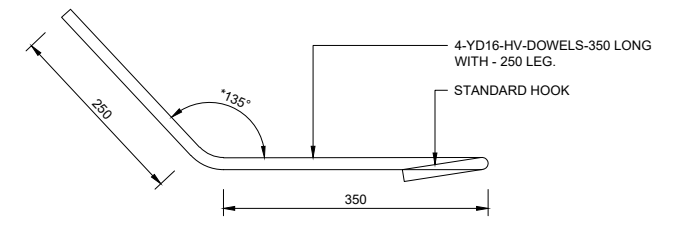
TYPICAL KERB CONNECTION DETAIL
SCALE: 1:10



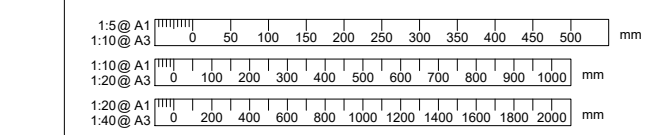
KERB IMAGE



2 KERB CONNECTION DETAIL
SCALE: 1:10



TYPICAL HOOK DOWEL
SCALE: 1:5



Revision	Amendment	Approved	Revision Date
A	ISSUED FOR REVIEW AND COMMENT	MD	09-04-2020



 Christchurch Office +64 3 363 5400			PO Box 1482 Christchurch 8140 New Zealand		
Designed	M. RINGROSE	Approved	M. DAVIES	Approved Date	09-04-2020
Drawn	K. HEWSON	Scales	AS SHOWN @ A1	Project No.	6-CT012.00

Project WAKA KOTAHI NZ TRANSPORT AGENCY SH8 BEAUMONT OTAGO RS 401 / 6300 NEW BEAUMONT BRIDGE					
Sheet LOW BURN BRIDGE BARRIER UPGRADE KERB DETAILS					
Project No.	6-CT012.00	Sheet No.	S95	Revision	A

ISSUED FOR REVIEW AND COMMENT - NOT FOR CONSTRUCTION