



MELCOMBE STREET

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LAGMHOR ROAD

EXISTING DRAIN

MAIN SOUTH RAIL LINE

ARCHIBALD STREET (SH1)

LAYOUT PLAN
SCALE 1:200

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

LEGEND - PROPOSED

- CONCRETE SHARED PATH
- AC SHARED PATH
- VELOSTRAIL RUBBER PANEL
- FENCE
- FLASHING LIGHTS AND BELL FOR PEDESTRIAN CROSSING TO BE INSTALLED
- RELOCATED FLASHING LIGHTS / BELL AND HALF BARRIER TO BE INSTALLED
- RELOCATED FLASHING LIGHTS TO BE INSTALLED

LEGEND - EXISTING

- LEGAL BOUNDARY LINE
- KIWRAIL FLASHING LIGHTS

NOTES:

- FOR LEVEL CROSSING SAFE WORKING ZONES REFER TO DRG 12560966-RA204.
- THE KIWRAIL SCOPE ZONE IS INDICATIVE. REFER TO THE PROJECT SPECIFICATION FOR THE DETAILS OF THE DEFINED KIWRAIL SCOPE, SEPARATE TO THE CIVIL SCOPE. LIAISON BETWEEN THE CIVIL CONTRACTOR AND KIWRAIL IS EXPECTED TO INTEGRATE AND COMPLETE WORKS.
- REFER TO KIWRAIL PLAN OF WORK AND THE SEPARATE LIST OF THE MATERIALS AND ITEMS TO BE SUPPLIED TO THE WAKA KOTAHI CIVIL CONTRACTOR.

WAKA KOTAHI SCOPE:
RELOCATED RPX1 ASSEMBLY WITH
CROSSBUCK SIGN. REFER NOTE 3.

WAKA KOTAHI SCOPE:
NEW RPX1 ASSEMBLY WITH
CROSSBUCK SIGN. REFER NOTE 3.

WAKA KOTAHI SCOPE:
PEDESTRIAN FLASHING LIGHTS AND BELLS.
REFER TO DRG 12560966-C501. REFER NOTE 3.

WAKA KOTAHI SCOPE:
NEW PEDESTRIAN LEVEL CROSSING. REFER
TO DRG 12560966-RA202. REFER NOTE 3.

KIWRAIL SCOPE:
EXISTING RAIL CONTROL BOX (TO BE REPLACED WITH
NEW LOC AND BATTERY CABINETS) WITH RAIL SIGNAL
AND POWER CONNECTIONS. REFER TO RAIL SIGNALLING
DESIGN PLANS. REFER NOTE 3.

KIWRAIL SCOPE:
VELOSTRAIL CROSSING WITH MATS LAID 3m WIDTHS TO NEW
CONCRETE SLEEPERS (LAID AT 600mm CENTRES, POSITION
ADJUSTED AS NEEDED), PLUS END RESTRAINTS.
WAKA KOTAHI SCOPE:
CONCRETE KERBSTONE TRANSITION TO VELOSTRAIL, AS
PER KIWRAIL STANDARD DETAILS S3 DETAIL B. AC PATH
SURFACE TRANSITION AS PER KIWRAIL C00182 S3 DETAIL B.

WAKA KOTAHI SCOPE:
PEDESTRIAN FLASHING LIGHTS AND
BELLS. REFER TO DRG 12560966-C501.
REFER NOTE 3

2m x 1m SAFE WORKING AREA

WAKA KOTAHI SCOPE:
RELOCATED RPX1 ASSEMBLY
WITH CROSSBUCK SIGN AND
SINGLE HALF ARM BARRIER.
REFER NOTE 3.

WAKA KOTAHI SCOPE:
NEW RPX1 ASSEMBLY WITH
CROSSBUCK SIGN. REFER
NOTE 3.

WAKA KOTAHI SCOPE:
RELOCATED RPX1 ASSEMBLY WITH CROSSBUCK
SIGN AND SINGLE HALF ARM BARRIER COMBINED
WITH ROAD SIGNAL ASPECTS. REFER NOTE 3.

2m x 1m SAFE WORKING AREA

1m x 1m SAFE WORKING AREA

WAKA KOTAHI SCOPE:
NEW ROAD SIGNAL DUCTING UNDER TRACKS TO
ROAD SIGNALS AND TO RAIL SIGNAL CONTROL BOX.
KIWRAIL SCOPE:
RAIL SIGNALING PITS AND DUCTING. REFER TO RAIL
SIGNALLING DESIGN PLANS. REFER TO NOTE 3.

WAKA KOTAHI SCOPE:
BALLAST, SLEEPERS AND TRACK (50kg RAIL) FOR
REGRADE THROUGH LEVEL CROSSING AND ON
APPROACHES AS PER LAGMHOR ROAD LONG
SECTION, INCLUDING VERTICAL CREST CURVE.
REFER TO RAIL TRACK DESIGN PLANS AND
FORMATION DESIGN PLANS. REFER NOTE 3.

WAKA KOTAHI SCOPE:
NEW RPX1 ASSEMBLY WITH
CROSSBUCK SIGN. REFER NOTE 3.

WAKA KOTAHI SCOPE:
NEW LEVEL CROSSING WITH FORMATION AS PER KIWRAIL
STANDARD DETAILS DRG 300.182 S1 AND S3. REFER TO RAIL
TRACK DESIGN PLANS AND FORMATION DESIGN PLANS.

KIWRAIL SCOPE:
VELOSTRAIL CROSSING PLUS END RESTRAINTS.
WAKA KOTAHI SCOPE:
CONCRETE KERBSTONE TRANSITION TO VELOSTRAIL,
AS PER KIWRAIL STANDARD DETAILS S3 DETAIL B.

Rev	Description	Checked	Approved	Date
1	ISSUED FOR CONSTRUCTION	SN*	DM*	21.06.23
0	ISSUED FOR TENDER	SN*	DM*	14.03.23
Author	N. MACHIE	Drafting Check	G. DOUGHERTY*	
Designer	G. RYAN	Design Check	S. NILSSON*	

Plot Date: 21 June 2023 - 10:28 am

Plotted by: Nicki Mackie



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Project No.

12560966

Client WAKA KOTAHI NZ TRANSPORT AGENCY

Project TINWALD CORRIDOR IMPROVEMENTS

Status CONSTRUCTION

Drawing Title RAIL WORKS
GENERAL ARRANGEMENT PLAN

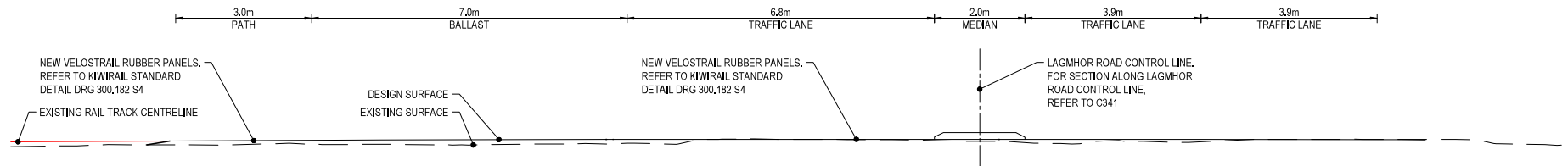
Status Code S4

Drawing No. 12560966-RA201

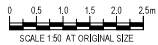
Size A1

Rev 1

File Name: c:\12560966\RA-00-12D-00161-12560966 - Tinwald Corridor Implementation_12560966\Drawings\12560966-RA201.dwg



A SECTION
RA201 SCALE 1 : 50



Revision History			
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1	ISSUED FOR CONSTRUCTION	SN*	DMP* 21.06.23
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Author: N. MACQUE, Drafting Check: G. DOUGHERTY*, Designer: G. RYAN, Design Check: S. NILSSON*			





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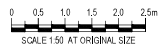
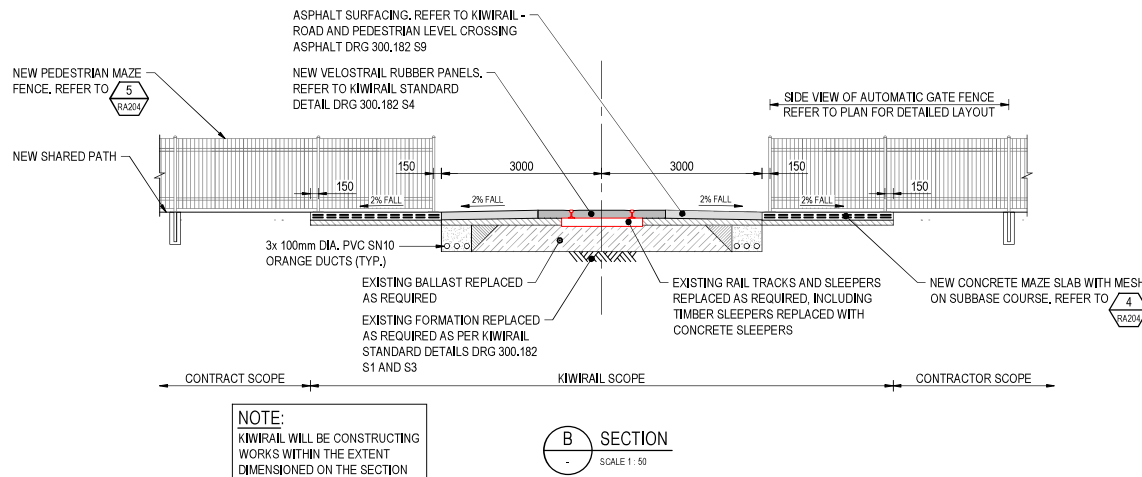
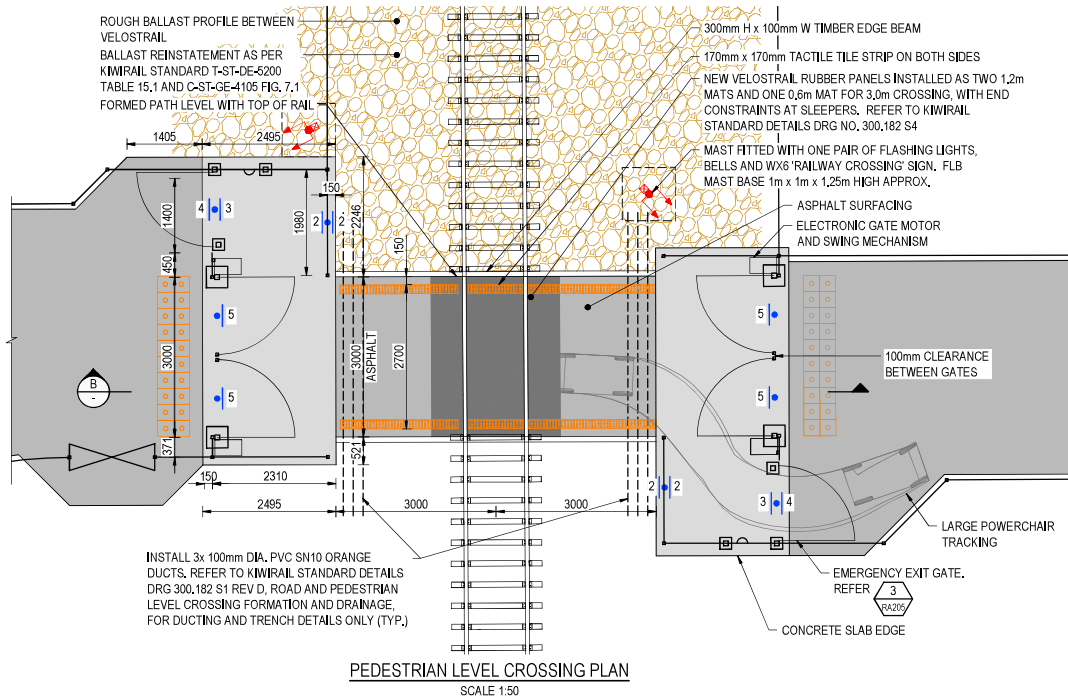


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Project No.
12560966

Client	WAKA KOTAHI NZ TRANSPORT AGENCY		
Project	TINWALD CORRIDOR IMPROVEMENTS		
Status	CONSTRUCTION	Status Code	S4

Drawing Title	RAIL WORKS LONGITUDINAL SECTION OF RAILWAY LINE	
Drawing No.	12560966-RA202	Rev 1



GENERAL NOTES:

- ALL WORKS TO BE PERFORMED BY THE CONTRACTOR EXCEPT AS STATED AS 'KIWIRAIL SCOPE'.
- CONTRACTOR TO CONFIRM FINAL LOCATION ON SITE WITH ENGINEER AND DATE OF AUTOMATIC GATES INSTALLATION WITH KIWIRAIL NOMINATED AUTOMATIC GATES CONTRACTOR.
- ALL DIMENSIONS ON THIS DRAWING ARE IN MILLIMETRES UNLESS STATED.
- LEVELS AND GRADES ARE TO BE SHOWN ON LAYOUT PLANS.

MAZE FENCING:

- STEEL FENCE WIRE TO BE HIGH TENSILE WITH ULTIMATE STRENGTH OF 600-800N/mm.
- THE WIRES ARE TO BE ELECTRICALLY WELDED TO COMPLY WITH AS/NZS 4671:2001.
- TOLERANCES ON OVERALL DIMENSIONS OF THE FINISHED PANEL TO BE 25mm AND BARS TO BE PLACED WITHIN 2mm OF THEIR TRUE LOCATION.
- FOLDED PANEL POSTS AND BASE PLATES TO BE GALVANIZED TO SPECIFICATION CES 3.6:1992.
- SHARP EDGES OF THE PANEL ARE TO BE ROUNDED OFF BEFORE GALVANIZING.
- POSTS MUST BE INSTALLED VERTICAL.
- FENCE PANELS MUST NOT HAVE MORE THAN 100mm GAP FROM GROUND LEVEL TO INSTALLED PANEL.
- ENSURE ADEQUATE CLEARANCE IS PROVIDED FOR ACCESS TO THE MOTOR FOR MAINTENANCE.
- FOR AUTOMATIC GATES, PROVIDE 100mm CLEARANCE BETWEEN GATE AND CLOSING POST TO AVOID CRUSH INJURY BUT NO LARGER TO ENSURE A CLOSED GATE PREVENTS ACCESS TO THE RAIL CORRIDOR.

ASPHALT FOOTPATH CROSSING:

- DEPTH OF BASECOURSE MATERIAL TO BE INCREASED WHERE CBR ≥ 10 IS NOT ACHIEVABLE.

PEDESTRIAN GATE CONCRETE SLAB:

- SUBGRADE CBR REQUIREMENT $> 5\%$.
- GAP40 OR EQUIVALENT BASECOURSE COMPACTED TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS/NZS 4402:1996. CBR REQUIREMENT OF 10%.
- THE CONTRACTOR SHALL UNDERTAKE SUBGRADE TESTING TO CONFIRM THE SUBGRADE STRENGTH PRIOR TO COMMENCEMENT OF NEW PAVEMENT CONSTRUCTION WORKS. SCALA PENETROMETER TESTING MUST BE UNDERTAKEN IN A GRID PATTERN OF AT MAXIMUM 2x2m. TESTING OF THE SUBGRADE SHALL COMMENCE AT THE LESSER OF GROUND LEVEL OR 300mm BELOW THE TOP FORMATION LEVEL. BLOW COUNTS SHALL BE RECORDED AT 100mm INTERVALS AND EACH TEST SHALL EXTEND A MINIMUM OF 1m DEPTH. THE MAXIMUM ALLOWABLE PENETRATION RATE IS 50mm/BLOW FOR CBR 3.5% OVER A DEPTH OF 1.0m BELOW THE TOP OF THE DESIGN SUBGRADE SURFACE. SHEAR VANE TESTING MUST ALSO BE UNDERTAKEN. THE SHEAR VANE STRENGTH SHOULD BE EQUAL TO OR GREATER THAN 140kPa FOR CBR 5.5%. IF CBR $< 5.5\%$ CONTACT ENGINEER FOR INSTRUCTION.
- THE PAVEMENT THICKNESS MAY BE REVISED PENDING SUBGRADE CBR TESTING RESULTS.
- THE CONTRACTOR SHALL PROTECT THE SUBGRADE AND KEPT FREE OF STANDING WATER AT ALL TIMES.
- CONCRETE FINISH TO BE 30MPa STRENGTH AT 28 DAYS WITH CLASS U5 IN ACCORDANCE WITH NZS 3114 SPECIFICATIONS FOR CONCRETE SURFACE FINISHES.
- SAWCUTS AT 2m CENTRES (MAX.) AT 25-30% OF THE SLAB THICKNESS.
- CONSTRUCT SLAB 2% FALL ON MAZE CONCRETE SLAB IN DIRECTIONS SHOWN.
- SLAB WEIGHT TO BE ASSESSED FOR JOINTING AND LIFTING POINTS AT SHOP FABRICATION. SHOP DRAWINGS TO BE APPROVED BY KIWIRAIL.
- IF REQUIRED, SLAB JOINTING TO FOLLOW KIWIRAIL LEVEL CROSSING MAZE STANDARD 26807 SHEET 6.
- IF REQUIRED, GROUND BEAM FOR SLAB LENGTH TO FOLLOW KIWIRAIL LEVEL CROSSING MAZE STANDARD 26807 SHEET 5 "MOULD SG SINGLE GATE GROUND BEAM", LENGTHENED TO SUIT DOUBLE GATE SLAB.
- REFER TO KIWIRAIL S.26807 FOR LEVEL CROSSING MAZE FOR DETAILS, INCLUDING: IN-SITU CONCRETE SPECIFICATIONS, DOUBLE GATE LAYOUT, GATE AND FENCING DETAILS, LAYOUT AND SIGNAGE DETAILS, OR SUBSEQUENT STANDARD/S. WHERE INFORMATION CONFLICTS, THIS LAYOUT AND ENGINEER INSTRUCTION TAKES PRECEDENCE.
- ALL NEW ASPHALT FOOTPATH AS PER ARC STD DRG G-102.
- CONTRACTOR TO ALLOW FOR LIFTING POINTS AND ADDITIONAL REINFORCEMENT AS REQUIRED.

RAIL CROSSING:

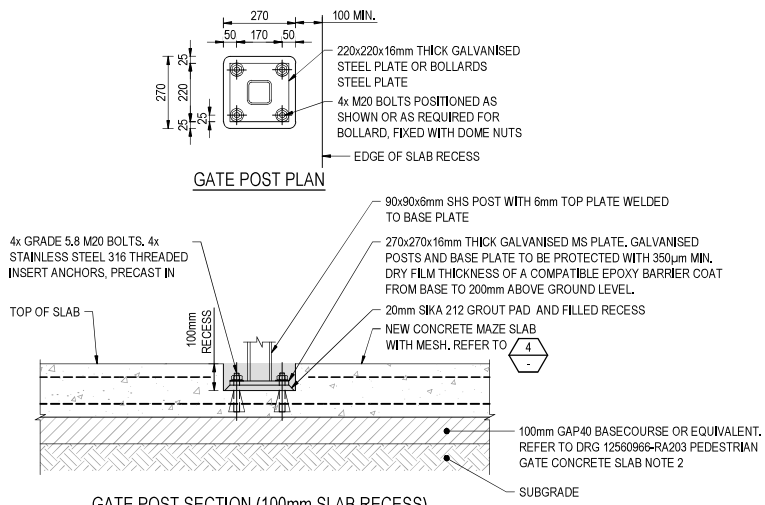
- FOR DETAILS OF PEDESTRIAN RAIL CROSSING FORMATION AND DRAINAGE, GRADING, SURFACING, PAVEMENT ETC REFER TO KIWIRAIL ROAD AND PEDESTRIAN LEVEL CROSSINGS, STANDARD DETAIL DRG NOS: 300.182 S1, S2, S3, S4 AND S9.

SIGNAGE:

- FOR SIGNAGE DETAILS REFER TO DRG 12560966-RA205.
- BACK TO BACK WX8 'LOOK FOR TRAINS' SIGNS.
- 'EMERGENCY EXIT PLEASE PUSH GATE' SIGN.
- RD2 'NO ENTRY' SIGN.
- 'EMERGENCY EXIT WITH RIGHT ARROW' SIGN.

LEGEND - PROPOSED

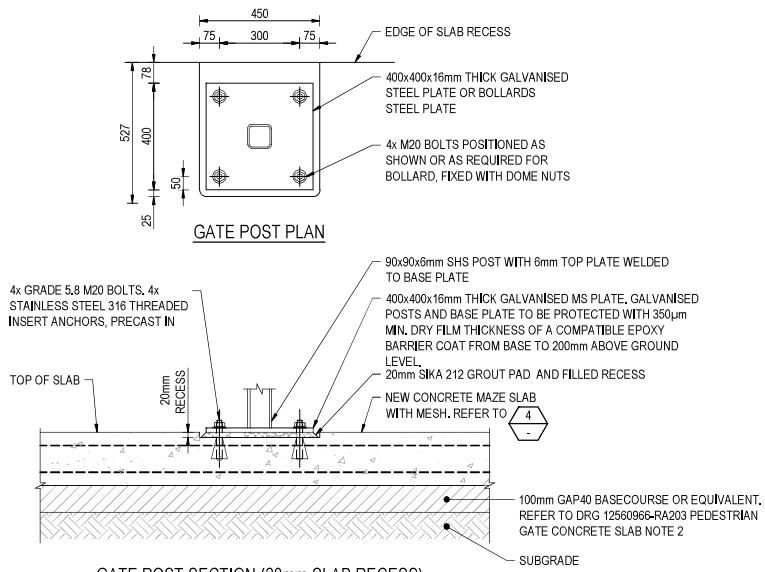
	CONCRETE SHARED PATH
	AC SHARED PATH
	VELOSTRAIL RUBBER PANEL
	FENCE
	MAST FITTED WITH ONE PAIR OF FLASHING LIGHTS, BELL AND 100mm x 250mm WX6 SIGN
	90x90x6 SHS GATE POST WITH 220x220 BASE PLATE. REFER 1A RA204
	90x90x6 SHS GATE POST WITH 400x400 BASE PLATE. REFER 1B RA204
	50x50x5 SHS FENCE POST WITH 125x125 BASE PLATE. REFER 2 RA204
	PROPOSED SIGN



GATE POST PLAN

GATE POST SECTION (100mm SLAB RECESS)

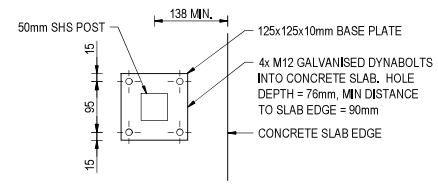
1A DETAIL
RA205 SCALE 1:10



GATE POST PLAN

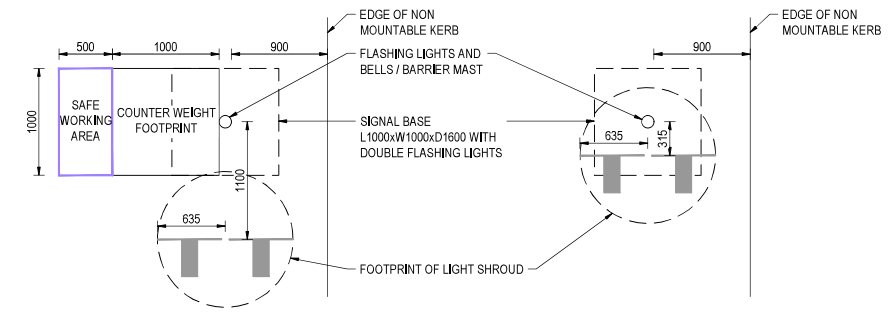
GATE POST SECTION (20mm SLAB RECESS)

1B DETAIL
RA205 SCALE 1:10



FENCE POST BASE PLATE PLAN

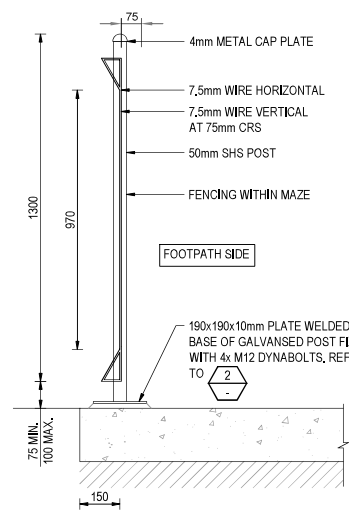
2 DETAIL
RA205 SCALE 1:5



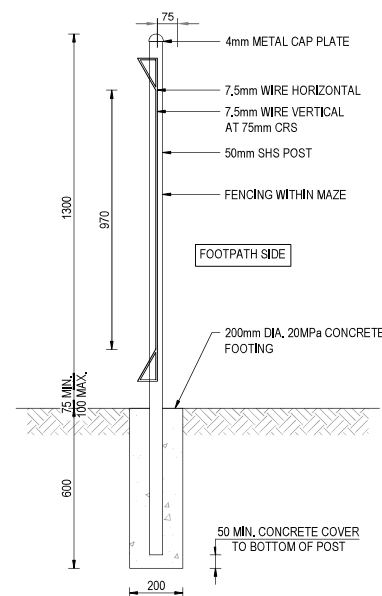
BARRIER ARM / MAST SETUP

FLASHING LIGHT AND BELLS SETUP

LEVEL CROSSING SAFE WORKING ZONES
SCALE 1:25

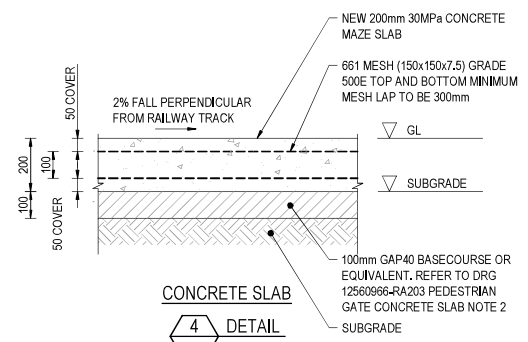


POST AND WIRE FENCE ON SLAB



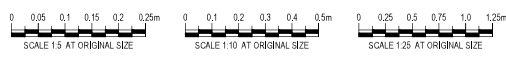
POST AND WIRE FENCE GROUND PLANTED

5 DETAIL
RA203 SCALE 1:10



CONCRETE SLAB

4 DETAIL
RA203 SCALE 1:10



1	ISSUED FOR CONSTRUCTION	SN*	DMP	21.06.23
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Designer	BY OTHERS	Design Check	KIMIRAIL	



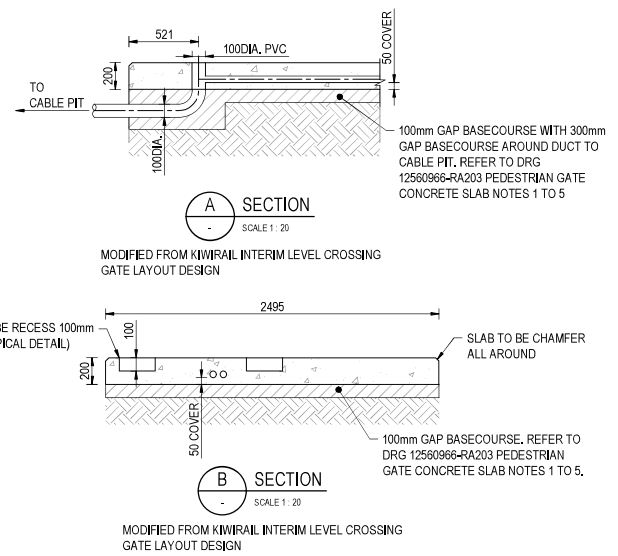
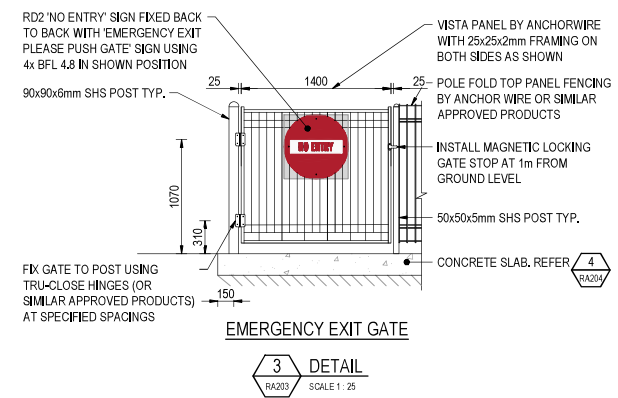
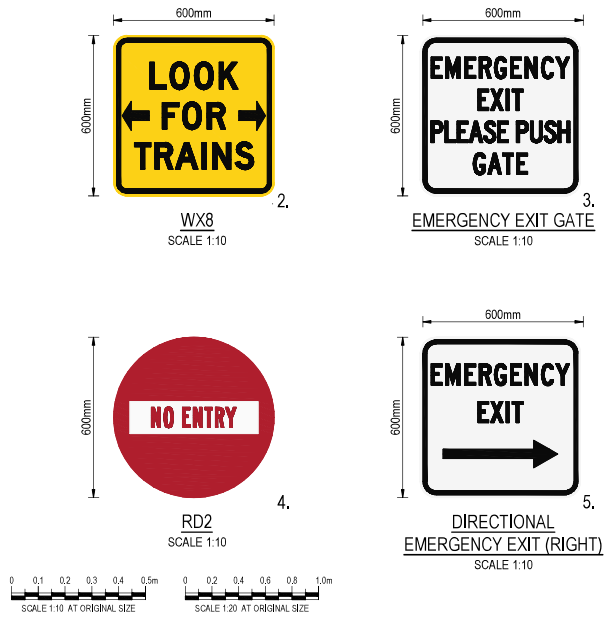
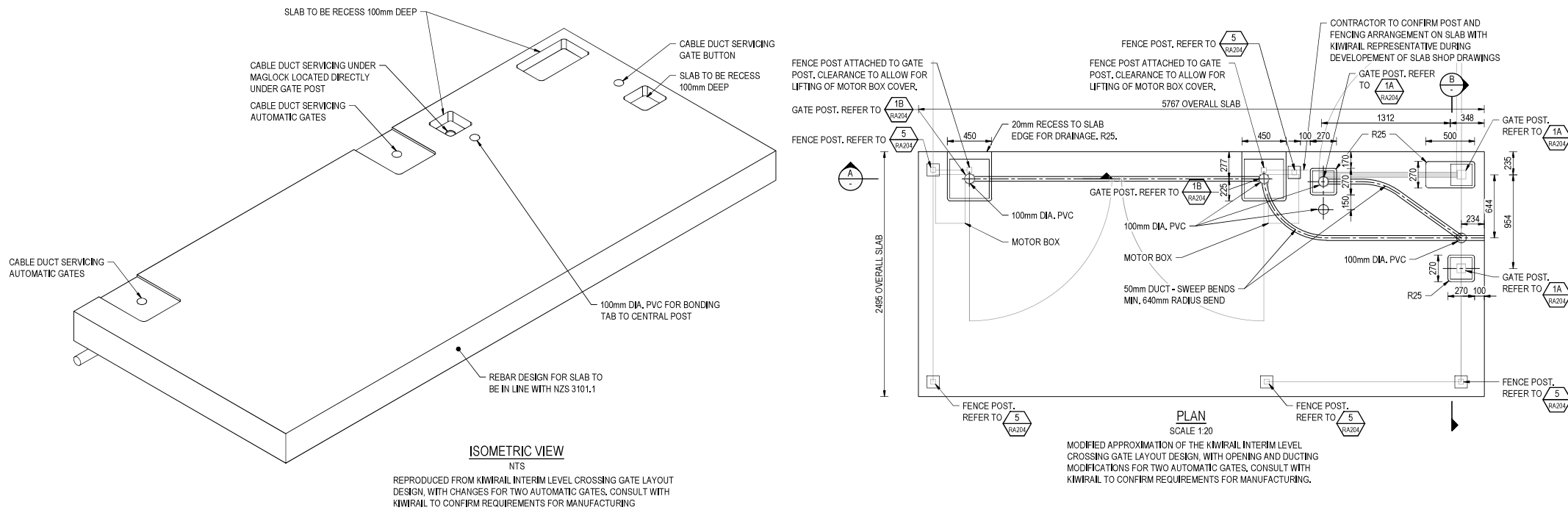
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Client	WAKA KOTAHI NZ TRANSPORT AGENCY
Project	TINWALD CORRIDOR IMPROVEMENTS
Status	CONSTRUCTION

Drawing Title	RAIL WORKS TYPICAL DETAILS SHEET 1
Status Code	S4



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Project	TINWALD CORRIDOR IMPROVEMENTS
Status	CONSTRUCTION

Drawing Title	RAIL WORKS TYPICAL DETAILS SHEET 2
Drawing No.	12560966-RA205
Rev	1