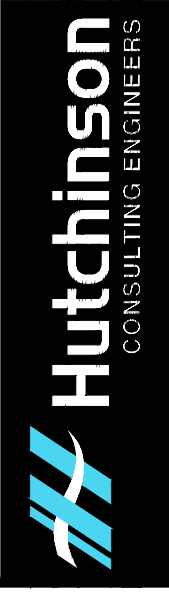


# PROPOSED WALKING TRAIL PT WELLS TO MATAKANA FOR NZ WALKING ACCESS COMMISSION



154 Centreway Road  
Orewa  
Auckland

P.O. Box 150  
Orewa  
Auckland

Telephone (09) 426-5702  
Email info@hc.co.nz

**INFORMATION ONLY**  
(NOT FOR CONSTRUCTION)

**5 AUG 2020**



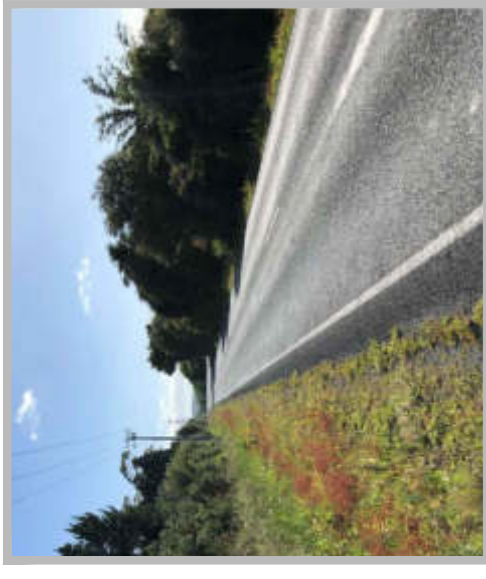
LOCALITY PLAN



AERIAL LOCALITY PLAN

## DRAWINGS

- GE-01 COVER
- GE-02 OVERALL SITE PLAN
- GE-03 OVERALL SITE PLAN - EW'S
- GE-04 SERVICES SITE PLAN 1 OF 2
- GE-05 SERVICES SITE PLAN 2 OF 2
- GE-06 SITE PLAN CHAINAGE 50m
- GE-07 CROSS SECTION
- GE-08 SITE PLAN CHAINAGE 250m
- GE-09 CROSS SECTIONS
- GE-10 SITE PLAN CHAINAGE 450m
- GE-11 CROSS SECTIONS
- GE-12 CROSS SECTIONS
- GE-13 CROSS SECTIONS
- GE-14 SITE PLAN CHAINAGE 850m
- GE-15 CROSS SECTIONS
- GE-16 CROSS SECTIONS
- GE-17 CROSS SECTIONS
- GE-18 SITE PLAN CHAINAGE 1050m
- GE-19 CROSS SECTIONS
- GE-20 SITE PLAN CHAINAGE 1250m
- GE-21 CROSS SECTIONS
- GE-22 SITE PLAN CHAINAGE 1450m
- GE-23 CROSS SECTIONS
- GE-24 SITE PLAN CHAINAGE 1650m
- GE-25 CROSS SECTIONS
- GE-26 SITE PLAN CHAINAGE 1850m
- GE-27 SITE PLAN CHAINAGE 2050m
- SW-01 PROPOSED STORMWATER UPGRADE 1 OF 3
- SW-02 PROPOSED STORMWATER UPGRADE 2 OF 3
- SW-03 PROPOSED STORMWATER UPGRADE 3 OF 3
- E-01 TIMBER POLE RETAINING WALL
- E-02 PROPOSED KEYSTONE RETAINING WALL
- E-03 TIMBER KICKER BEAM
- E-04 TYPICAL BARRIER
- E-05 TYPICAL PATH DETAIL (1 OF 2)
- E-06 TYPICAL PATH DETAIL (2 OF 2)
- E-07 PROPOSED DISH CHANNEL



**21887-GE-01**





No.

WARRD0055  
ISSUED FOR APPROVAL

Revision

N.B

N.B

Drawn

P.F

P.F

Chk.

I.H

I.H

Appd.

21 JULY 20

NOV 2019

Date



Design	N. BROAD	NOV 2019
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Scale		
Scale vert. exag.		



Project  
PROPOSED WALKING TRAIL  
NZ WALKING ACCESS COMMISSION  
PT WELLS TO MATAKANA COUNTRY PARK

Title  
OVERALL SITE PLAN

Job No.  
21887

Sheet No.  
GE-02













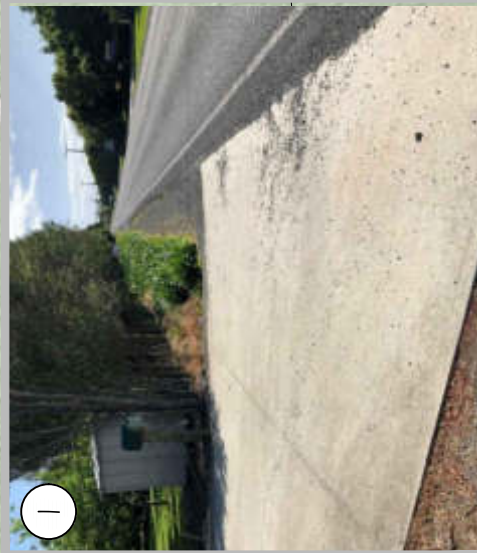
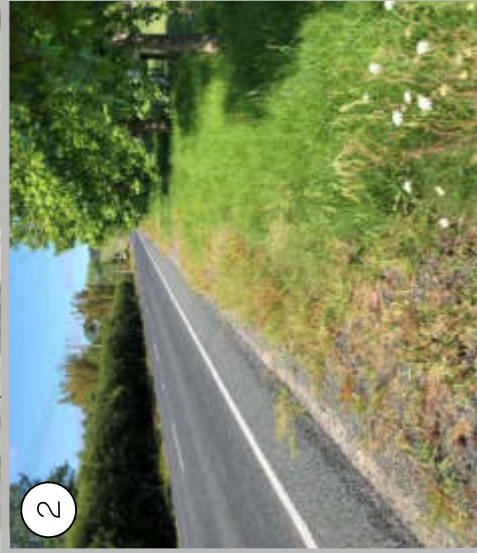
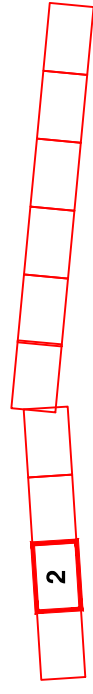
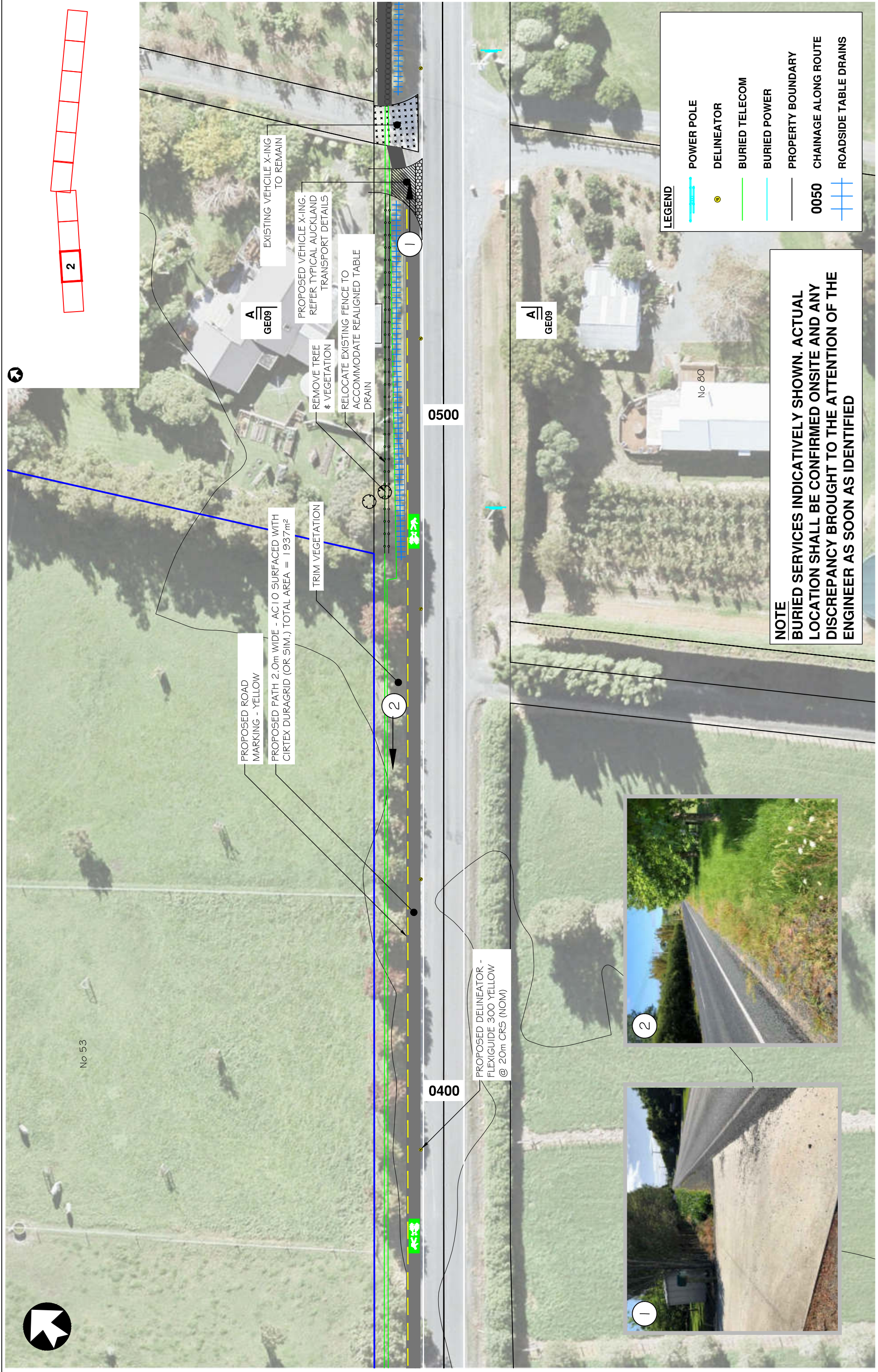












**NOTE**  
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**LEGEND**

	POWER POLE
	DELINEATOR
	BURIED TELECOM
	BURIED POWER
	PROPERTY BOUNDARY
	CHAINAGE ALONG ROUTE
	ROADSIDE TABLE DRAINS

No.	Revision	ISSUED FOR APPROVAL	N.B	P.F	I.H	21 JULY 20	Date	N. BROAD	NOV 2019
									NOV 2019
No.	Revision	ISSUED FOR APPROVAL	N.B	P.F	I.H	NOV 2019	Date	P. FARLEY	NOV 2019
									NOV 2019
No.	Revision	ISSUED FOR APPROVAL	N.B	P.F	I.H	NOV 2019	Date	I. HUTCHINSON	NOV 2019
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**Project**  
 PROPOSED WALKING TRAIL  
 NZ WALKING ACCESS COMMISSION  
 PT WELLS TO MATAKANA COUNTRY PARK

**Title**  
 SITE PLAN CHAINAGE 250M

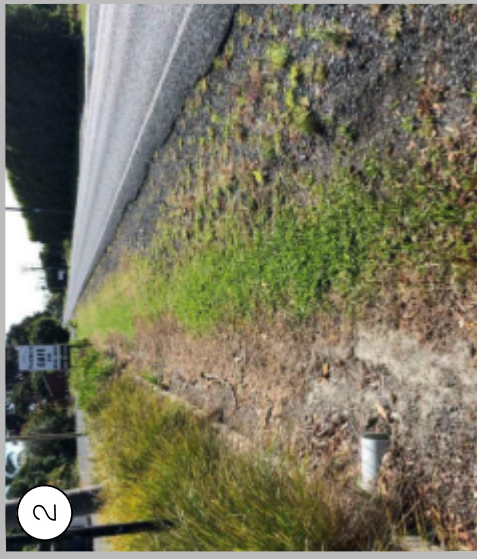
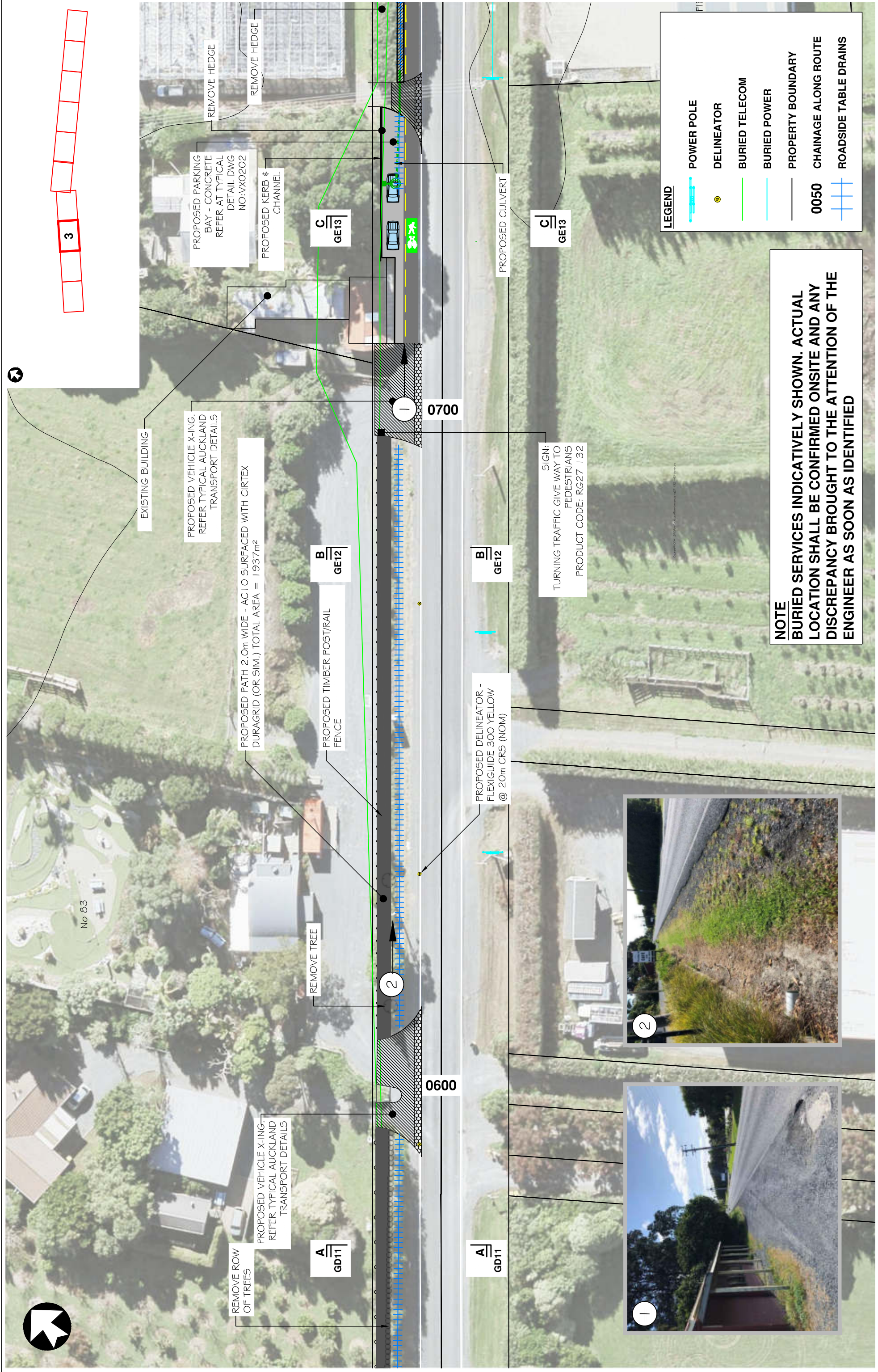
**Job No.**  
 21887

**Sheet No.**  
 GE-08









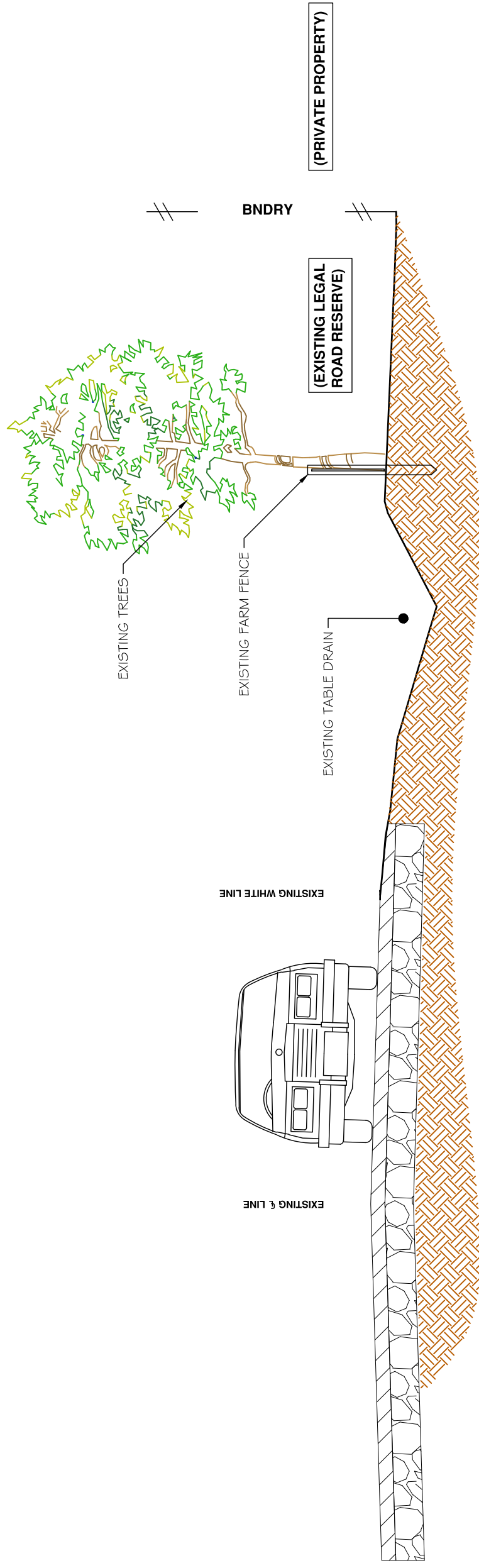
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 TURNING TRAFFIC GIVE WAY TO PEDESTRIANS  
 PRODUCT CODE: RG27 132

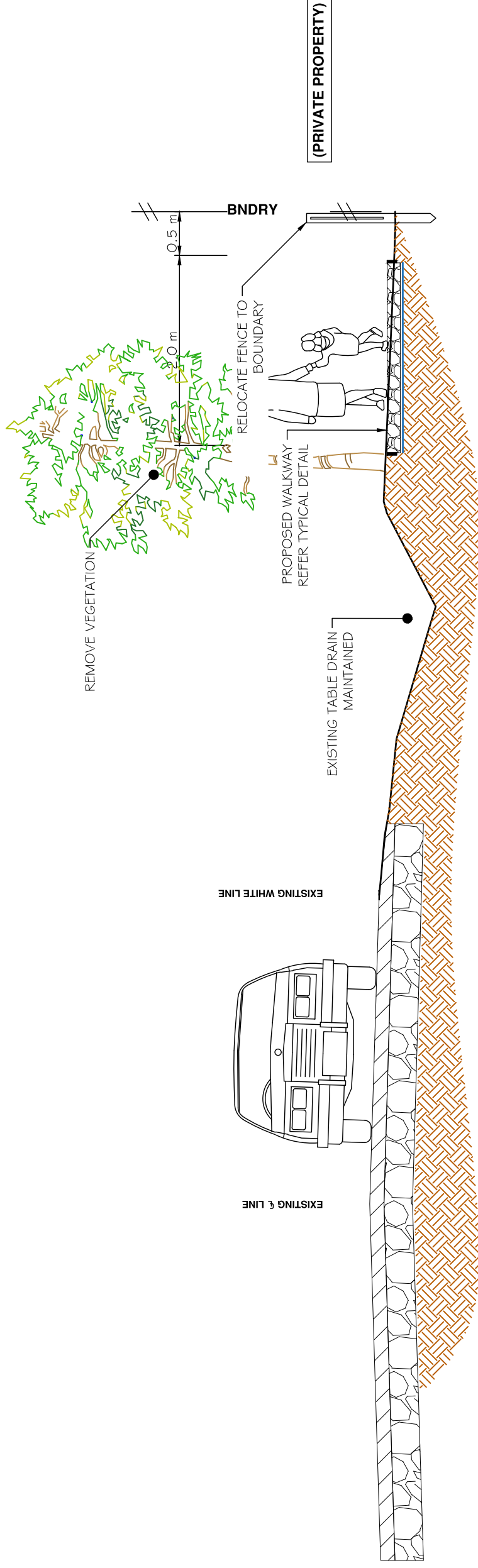
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	DELINEATOR
	BURIED TELECOM
	BURIED POWER
	PROPERTY BOUNDARY
	CHAINAGE ALONG ROUTE
	ROADSIDE TABLE DRAINS

No.	Revision	ISSUED FOR APPROVAL	N.B	P.F	I.H	21 JULY 20	Date	N. BROAD	NOV 2019	N. BROAD	NOV 2019	P. FARLEY	NOV 2019	I. HUTCHINSON	NOV 2019	Project	Proposed Walking Trail NZ Walking Access Commission Pt Wells to Matakana Country Park	Title	SITE PLAN CHAINAGE 450M	Sheet No.	GE-10
<p>Hutchinson Engineering</p> <p>PO Box 150, Orewa 0946 154 Centaway Road, Orewa 0931 Ph: 09 426 5702 www.hc.co.nz</p>																					





**A-A EXISTING X-SECTION**  
SCALE 1:50  
GE10



**A-A PROPOSED X-SECTION**  
SCALE 1:50  
GE10

No.	Revision	Drawn	Chk.	Appd.	Date
-	ISSUED FOR APPROVAL	N.B	P.F	I.H	21 JULY 20
-		N.B	P.F	I.H	NOV 2019

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Drawn	N. BROAD	NOV 2019
Checked	P. FARLEY	NOV 2019
Approved	I. HUTCHINSON	NOV 2019
Scale		
Scale vert. exag.		

**WALKING ACCESS**  
ARA HIKOI AOTEAROA

Project  
**PROPOSED WALKING TRAIL**  
NZ WALKING ACCESS COMMISSION  
PT WELLS TO MATAKANA COUNTRY PARK

Title  
**CROSS SECTIONS**

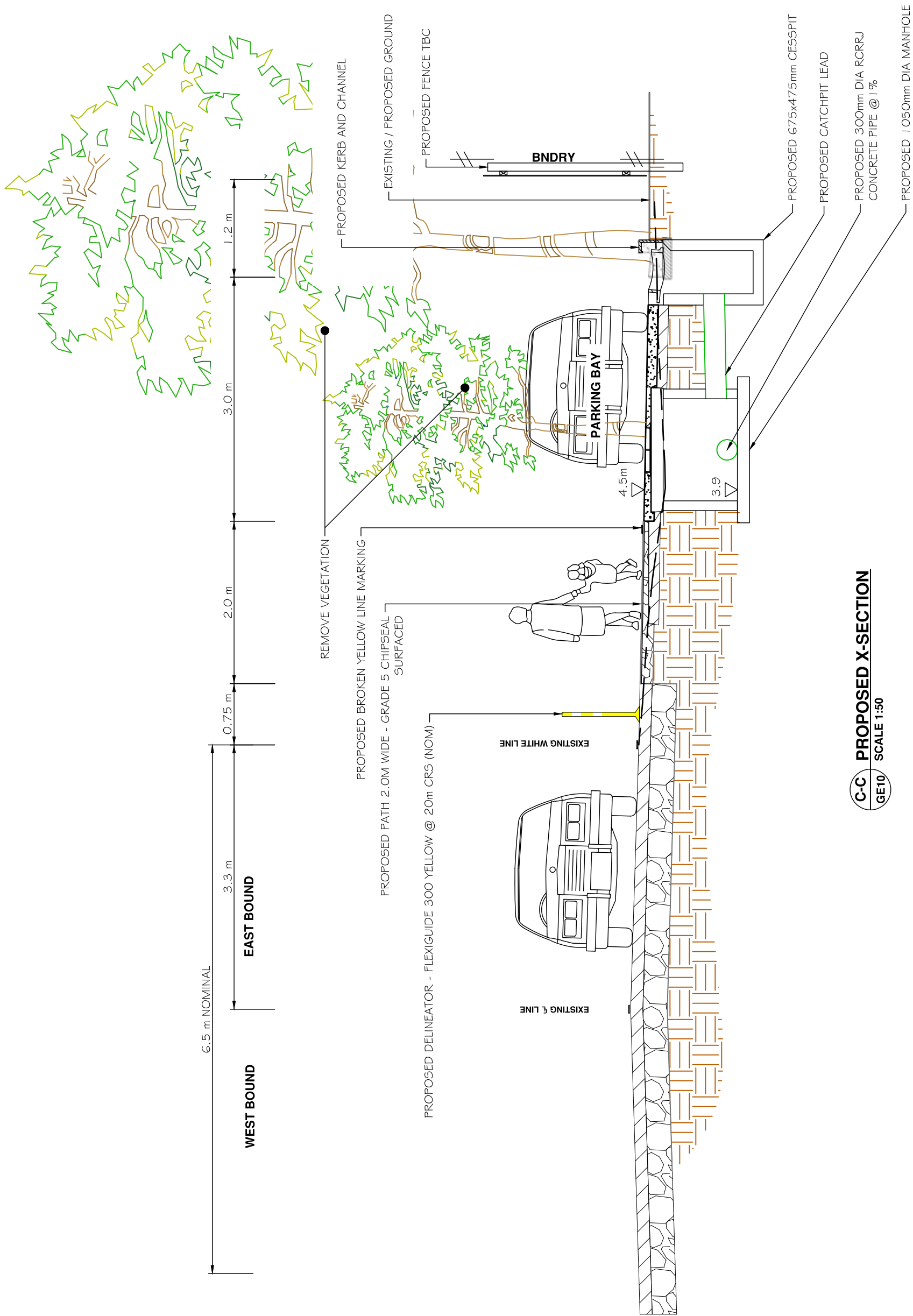
Job No.  
**21887**

Sheet No.  
**GE-11**





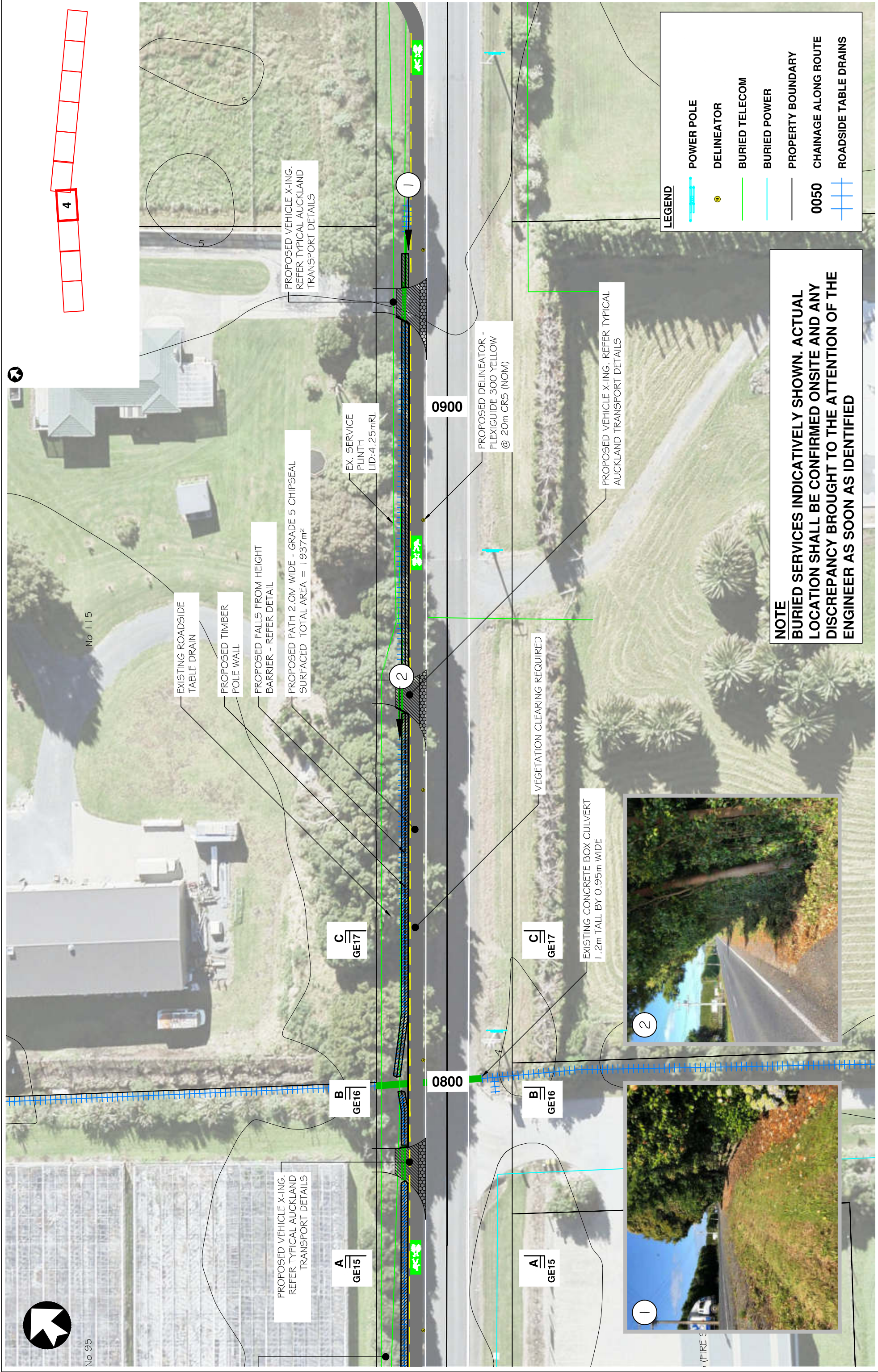




**C-C PROPOSED X-SECTION**  
 GE10 SCALE 1:50

No.	Revision	ISSUED FOR APPROVAL		Date	Appd.	Chk.	Drawn	N.B	P.F	I.H	21 JULY 20
		N.B	P.F					I.H	NOV 2019		
A	WARRD01SS	ISSUED FOR APPROVAL		NOV 2019	I.H	P.F	I.H	N.B	P.F	I.H	21 JULY 20
<p><b>Hutchinson</b>          CONSULTING ENGINEERS          PO Box 150, Orewa 0946          154 Centaway Road, Orewa 0831          Ph: 09 426 5702 www.hc.co.nz</p>											
Design			N. BROAD	NOV 2019							
Drawn			N. BROAD	NOV 2019							
Checked			P. FARLEY	NOV 2019							
Approved			I. HUTCHINSON	NOV 2019							
Scale											
Scale vert. exag.											
<p>Project  <b>PROPOSED WALKING TRAIL          NZ WALKING ACCESS COMMISSION          PT WELLS TO MATAKANA COUNTRY PARK</b></p>											
<p>Title  <b>CROSS SECTIONS</b></p>											
<p>Job No.  <b>21887</b></p>											
<p>Sheet No.  <b>GE-13</b></p>											



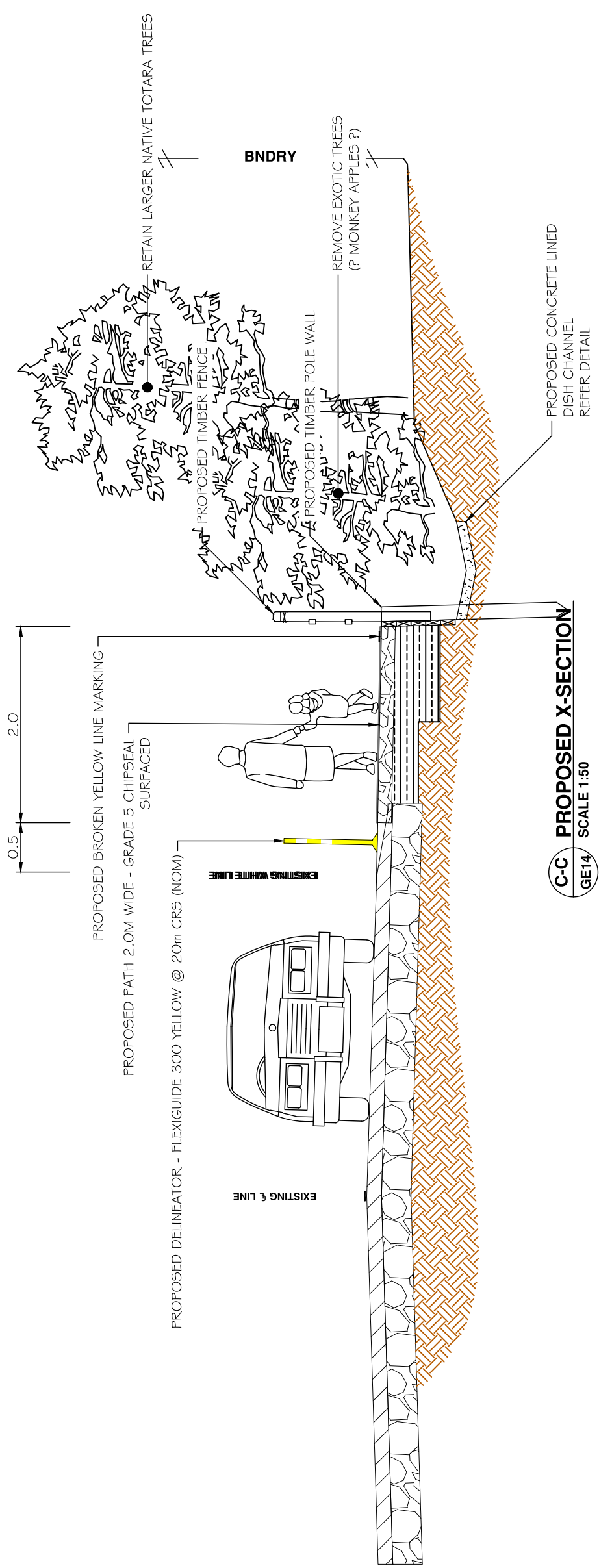


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LEGEND	
	POWER POLE
	DELINEATOR
	BURIED TELECOM
	BURIED POWER
	PROPERTY BOUNDARY
	0050 CHAINAGE ALONG ROUTE
	ROADSIDE TABLE DRAINS

No.	Revision	Appd.	Date
	ISSUED FOR APPROVAL	N.B	NOV 2019
	VARIOUS	N.B	21 JULY 20
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		P.F	I.H
		Chk.	
		Drawn	
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Design	N. BROAD	NOV 2019	
Drawn	N. BROAD	NOV 2019	
Checked	P. FARLEY	NOV 2019	
Approved	I. HUTCHINSON	NOV 2019	
Scale			
Scale vert. exag.			
Project		Title	
PROPOSED WALKING TRAIL NZ WALKING ACCESS COMMISSION PT WELLS TO MATAKANA COUNTRY PARK		SITE PLAN CHAINAGE 850M	
		Sheet No.	
		Job No.	
		21887	
		GE-14	





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															Job No. <b>21887</b>













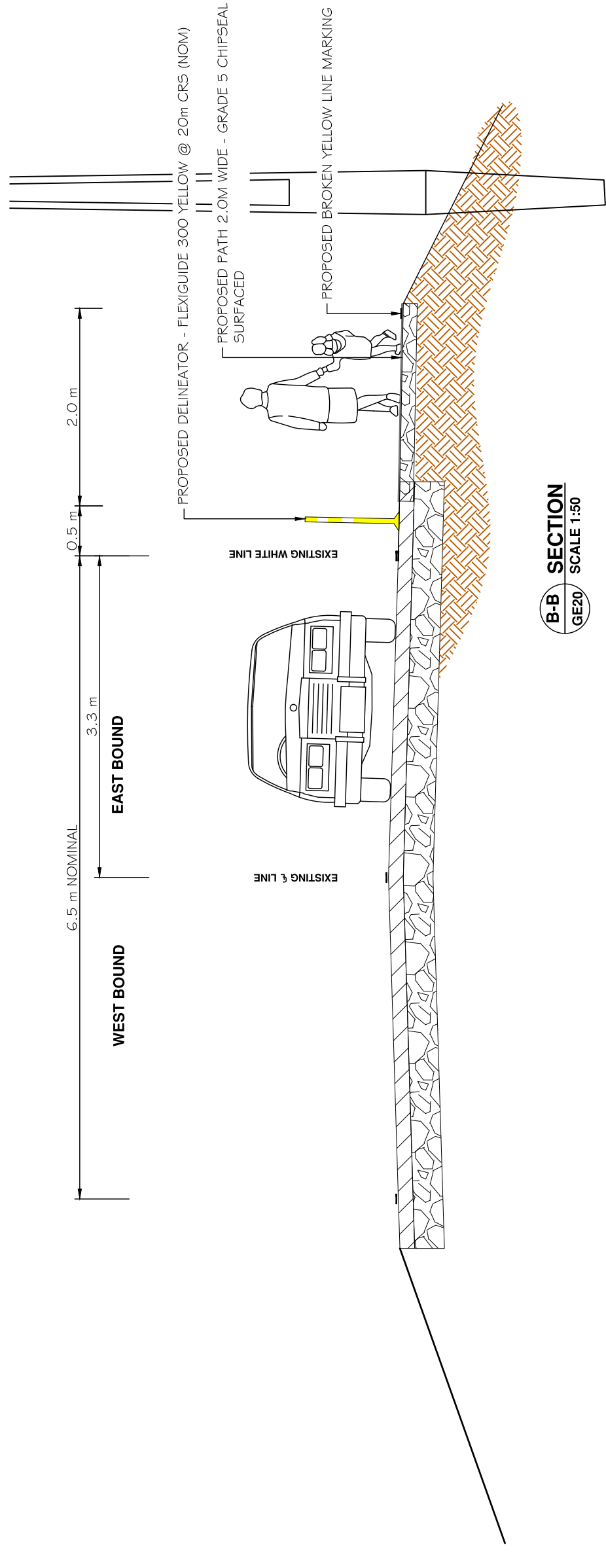
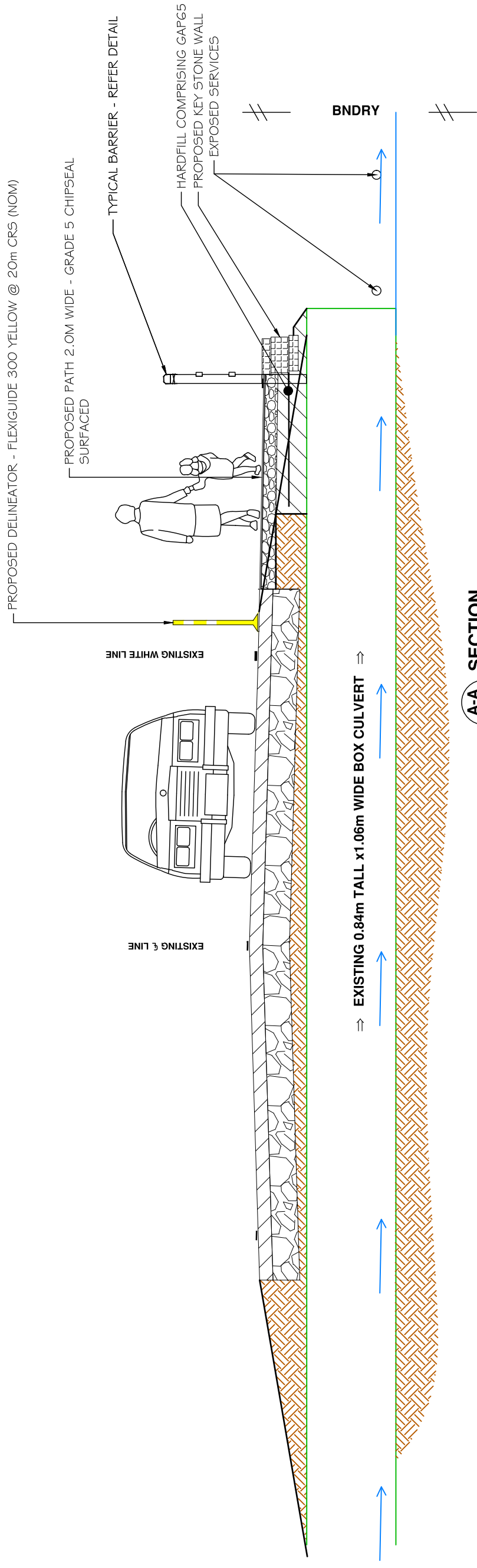












No.	Revision	Drawn	Chk.	Appd.	Date
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-	VARIOUS	N.B	P.F	I.H	NOV 2019

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Checked	P. FARLEY	NOV 2019
Approved	I. HUTCHINSON	NOV 2019
Scale		
Scale vert. exag.		

**WALKING ACCESS**  
ARA HIKOI AOTEAROA

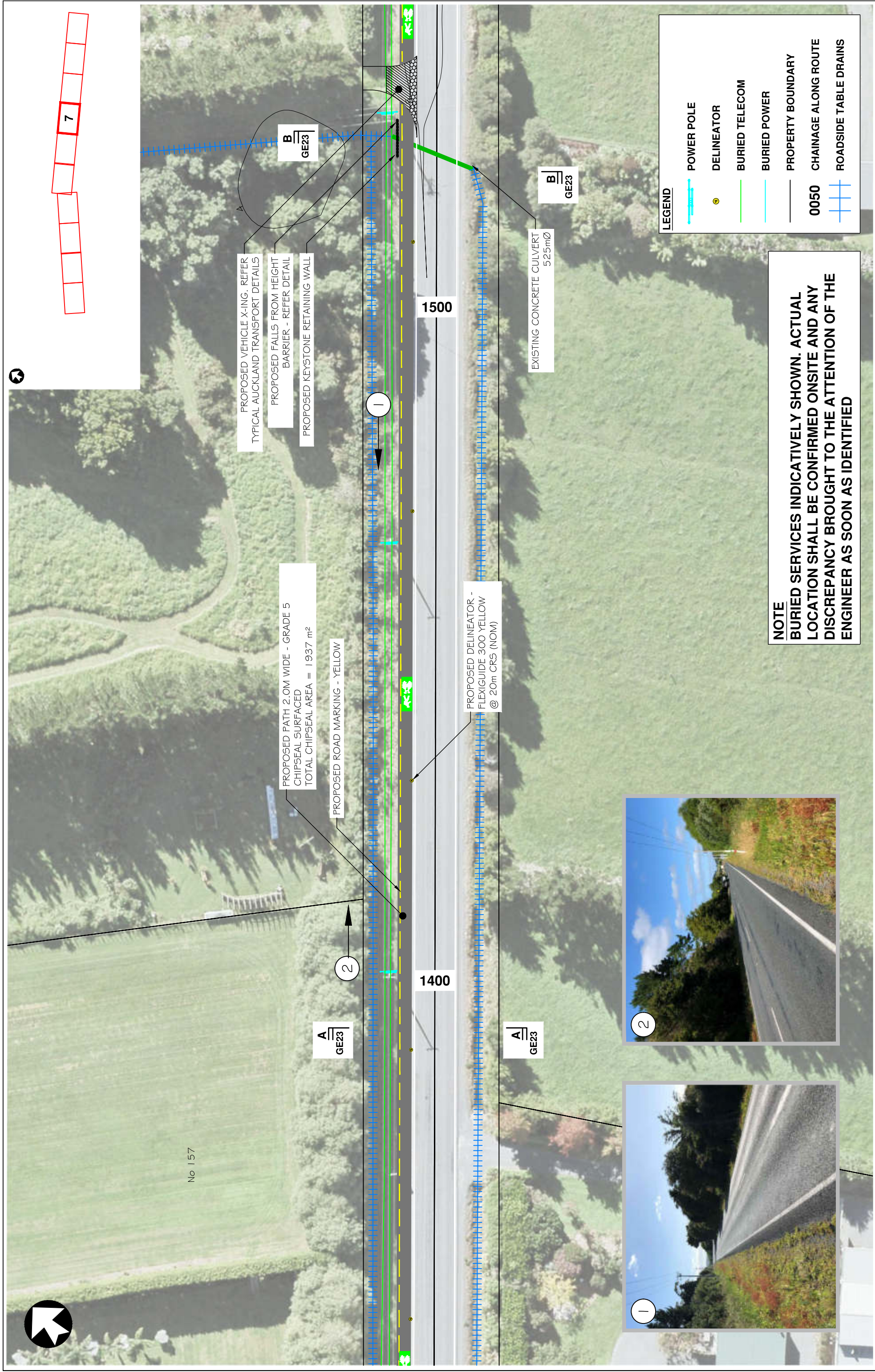
Project  
PROPOSED WALKING TRAIL  
NZ WALKING ACCESS COMMISSION  
PT WELLS TO MATAKANA COUNTRY PARK

Title  
CROSS SECTIONS

Job No.  
21887

Sheet No.  
GE-21

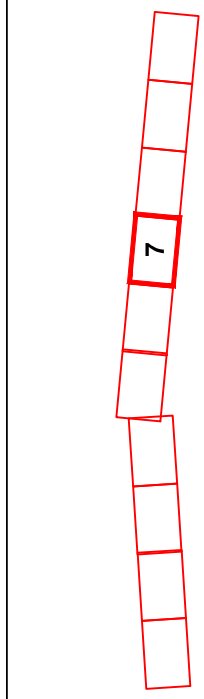
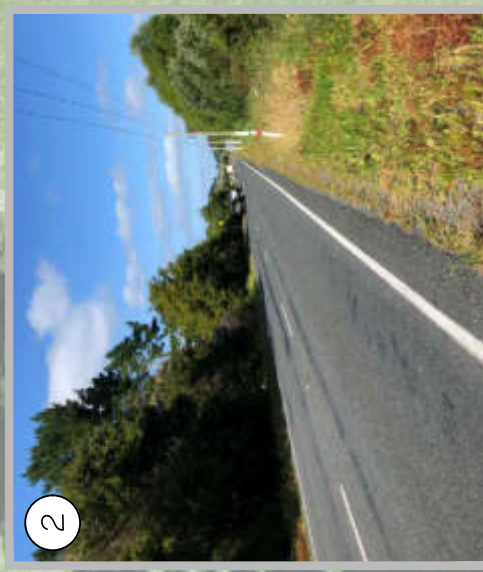




**LEGEND**

- POWER POLE
- DELINEATOR
- BURIED TELECOM
- BURIED POWER
- PROPERTY BOUNDARY
- CHAINAGE ALONG ROUTE
- ROADSIDE TABLE DRAINS

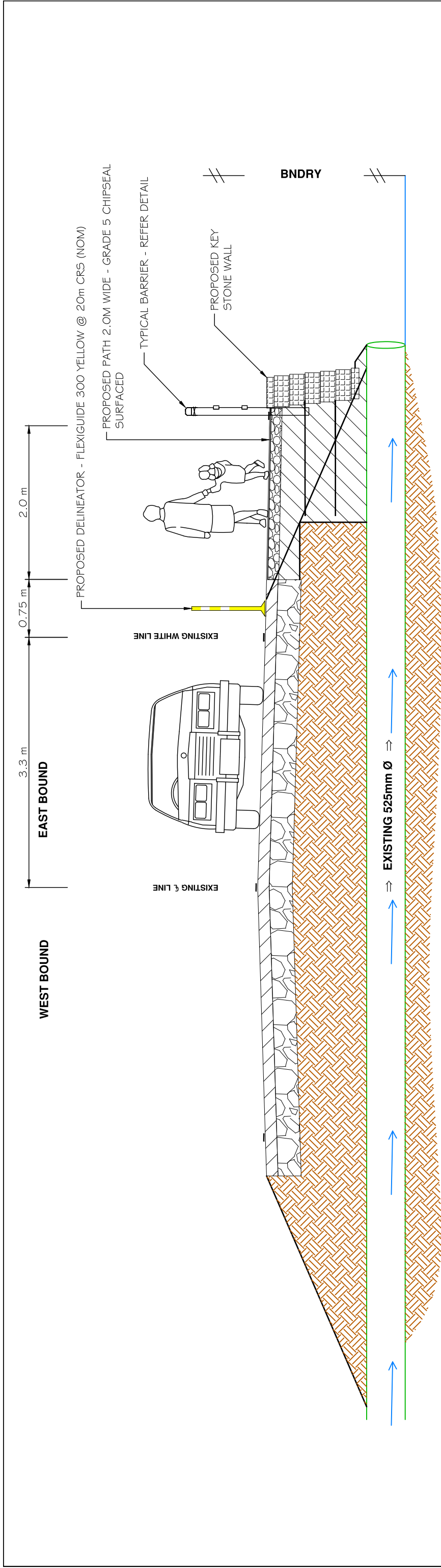
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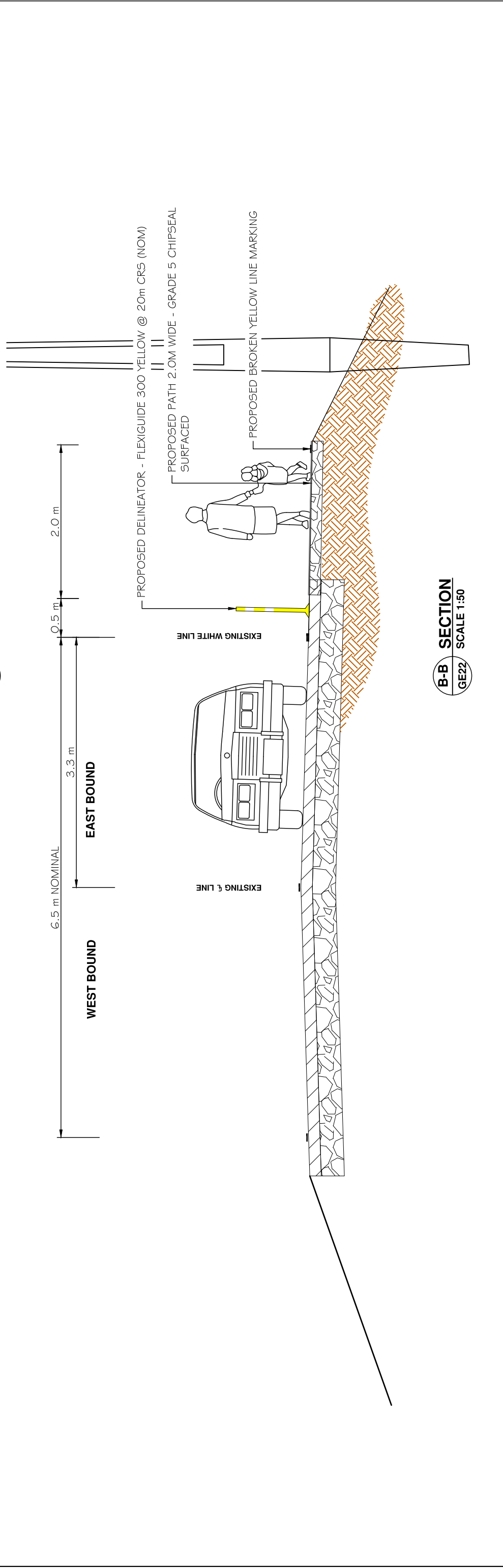
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	ISSUED FOR APPROVAL	N.B	P.F	I.H	NOV 2019
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Design		N. BROAD	NOV 2019		
Drawn		N. BROAD	NOV 2019		
Checked		P. FARLEY	NOV 2019		
Approved		I. HUTCHINSON	NOV 2019		
Scale					
Scale vert. exag.					
<p><b>Project</b>          PROPOSED WALKING TRAIL          NZ WALKING ACCESS COMMISSION          PT WELLS TO MATAKANA COUNTRY PARK</p>					
<p><b>Walking Access</b>          ARA HIKOI AOTEAROA</p>					
Title		SITE PLAN CHAINAGE 1450M			
Job No.		21887			
Sheet No.		GE-22			





**A-A SECTION**  
GE22 SCALE 1:50



**B-B SECTION**  
GE22 SCALE 1:50

No.	Revision	Drawn	Chk.	Appd.	Date
	ISSUED FOR APPROVAL	N.B	P.F	I.H	NOV 2019
-	VARIOUS	N.B	P.F	I.H	21 JULY 20
Design		N. BROAD	NOV 2019		
Drawn		N. BROAD	NOV 2019		
Checked		P. FARLEY	NOV 2019		
Approved		I. HUTCHINSON	NOV 2019		
Scale					
Scale vert. exag.					
<p>Hutchinson MULTIMEDIA ENGINEERS</p> <p>PO Box 150, Orewa 0946 154 Centenary Road, Orewa 0931 Ph: 09 426 5702 www.hc.co.nz</p>					
Project		<p>WALKING ACCESS ARA HIKOI AOTEAROA</p>			
Title		<p>PROPOSED WALKING TRAIL NZ WALKING ACCESS COMMISSION PT WELLS TO MATAKANA COUNTRY PARK</p>			
Job No.		21887			
Sheet No.		GE-23			













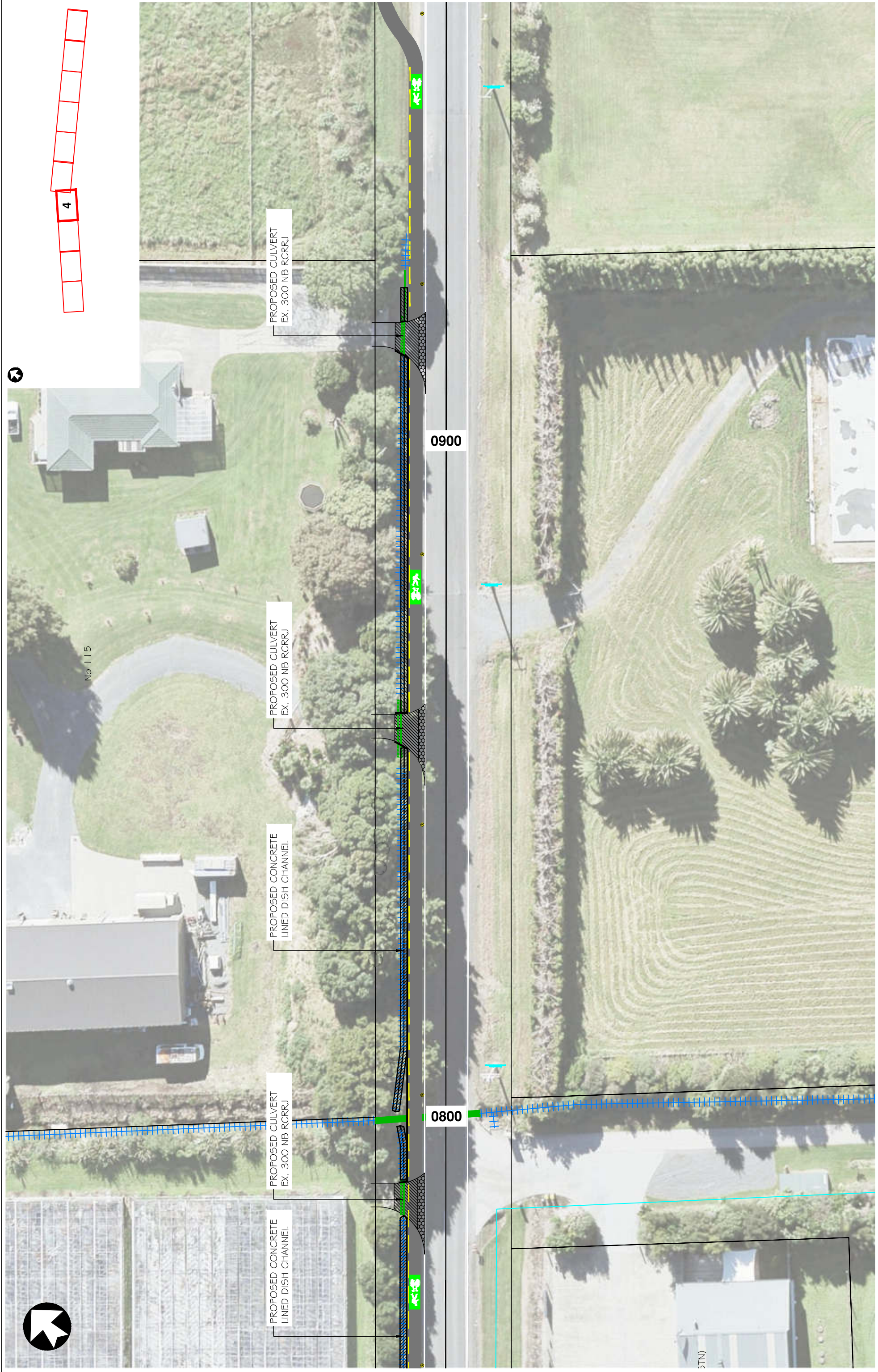












PROPOSED CULVERT  
EX. 300 NB RCR RJ

PROPOSED CULVERT  
EX. 300 NB RCR RJ

PROPOSED CONCRETE  
LINED DISH CHANNEL

PROPOSED CULVERT  
EX. 300 NB RCR RJ

PROPOSED CONCRETE  
LINED DISH CHANNEL

0900

0800



No 115

Sheet No.	SW-02
Title	PROPOSED STORMWATER UPGRADE 2 OF 3
Job No.	21887

Project  
**PROPOSED WALKING TRAIL**  
 NZ WALKING ACCESS COMMISSION  
 PT WELLS TO MATAKANA COUNTRY PARK



Design	N. BROAD	NOV 2019
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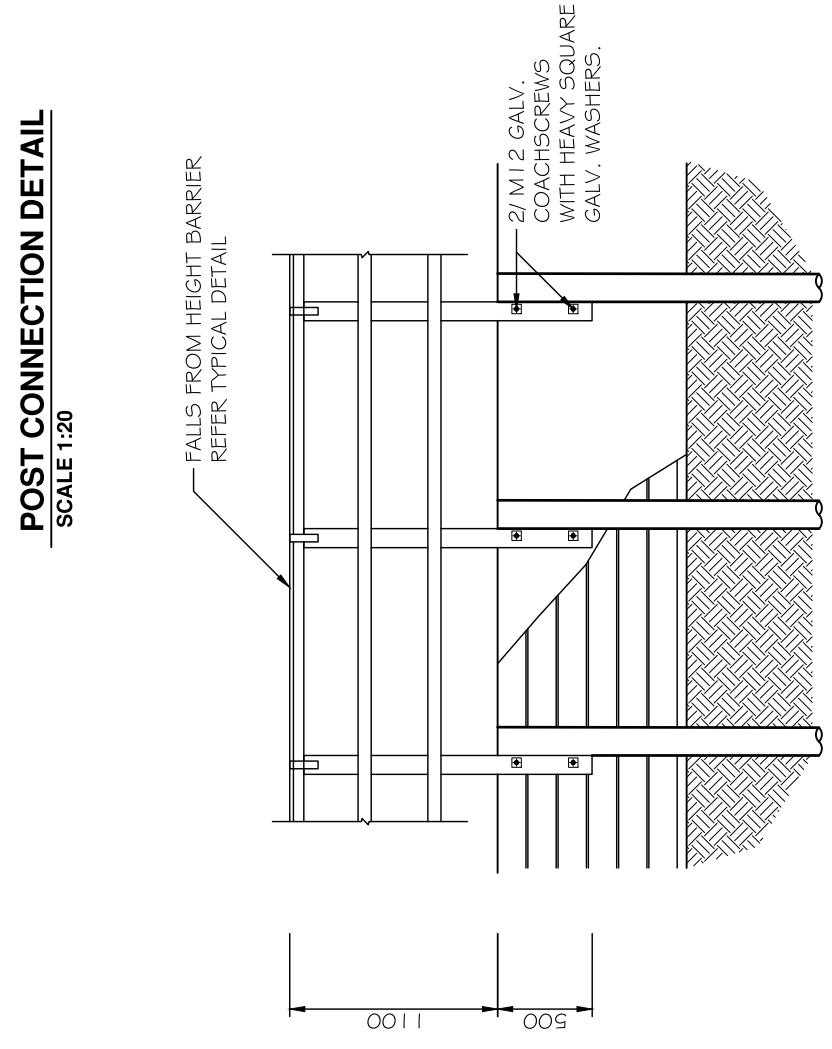
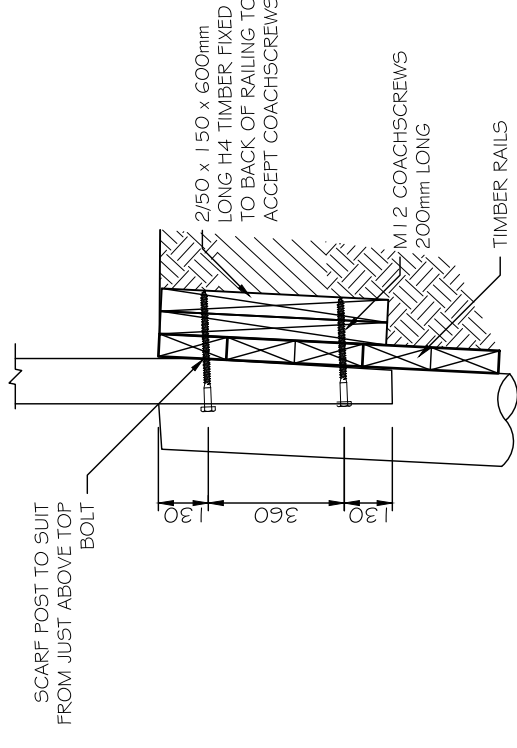
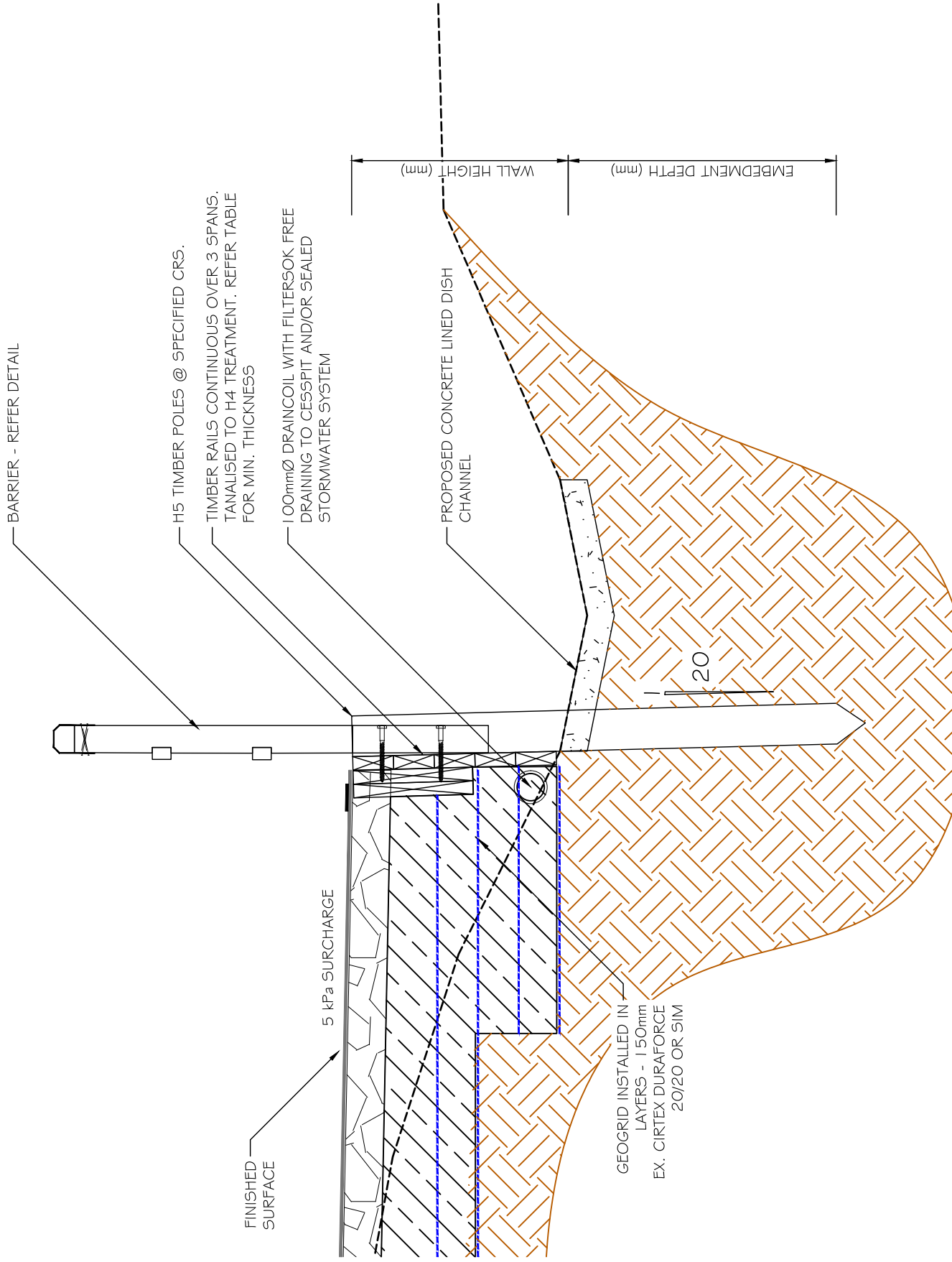
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**TYPICAL POLE RETAINING WALL DETAIL**  
SCALE 1:20

RETAINING WALL DESIGNED IN ACCORDANCE WITH FOLLOWING

**DESIGN PARAMETERS:**

UNIT WEIGHT OF RETAINED SOIL,  $\gamma_s = 18 \text{ kN/m}^3$   
 SOIL UNDRAINED SHEAR STRENGTH,  $S_u = 50 \text{ kPa}$   
 ACTIVE COEFFICIENT OF EARTH PRESSURE,  $K_a = 0.5$   
 LIVE LOAD SURCHARGE,  $Q = 5 \text{ kPa}$

POLE SPACING = 1200mm  
 POLE DENSITY = NORMAL (38MPa)  
 GRADE OF MACHINED TIMBER = SG8

- NOTES:**
- All poles shall be machined, peeled and tanalised to a minimum timber preservation treatment of H5 or approved equivalent.
  - All poles shall be supplied and installed at the specified pole density.
  - The timber rails shall be rough sawn timber to the minimum thickness and grade as specified. The timber rails should be continuous over three spans and the joints should be staggered. The rail thickness should not be made up from thinner rails.
  - The timber rails shall be tanalised to a minimum timber preservation treatment of H4 or approved equivalent.
  - This retaining wall has been designed to support vertical cuts in original firm clay subgrades only. Any variation to this design assumption should be referred to the Engineer.
  - The timber pole retaining wall shall be constructed in accordance with the construction specification included with these specific design details.
  - The wall shall be constructed with a 1 in 20 vertical layback.
  - When a permanent hand-stand surface, driveway and/or the like is constructed to the top of the retaining wall, it is recommended that the hand-stand surface is both reinforced and secured with galvanised steel ties through the top of each pole. Refer to the engineer for specific construction details and recommendations.
  - Storm water and ground water should be diverted away from the wall so that ponding does not occur.
  - These drawings are to be read in conjunction with the standard specifications provided within the structural calculations.

**RETAINING WALL DESIGN SPECIFICATIONS:**

WALL HEIGHT (m)	EMBEDMENT DEPTH (m)	POLE DIAMETER (mm)	POLE LENGTH (m)	RAIL THICKNESS (mm)
0.50	1.1	150	1.6	1x50
0.75	1.8	150	2.5	1x50
1.00	2.1	175	3.1	1x50
1.25	2.6	200	3.8	2x50
1.50	2.9	225	4.4	2x50

**TIMBER BARRIER DETAIL**  
SCALE 1:40

No.	Revision	Drawn	Chk.	Appd.	Date
-	ISSUED FOR APPROVAL	N.B	P.F	I.H	21 JULY 20
		N.B	P.F	I.H	NOV 2019
		N. BROAD			NOV 2019
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		I. HUTCHINSON			NOV 2019
		N. BROAD			NOV 2019
		N. BROAD			NOV 2019

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**WALKING ACCESS**  
ARA HIKOI AOTEAROA

Project  
**PROPOSED WALKING TRAIL  
 NZ WALKING ACCESS COMMISSION  
 PT WELLS TO MATAKANA COUNTRY PARK**

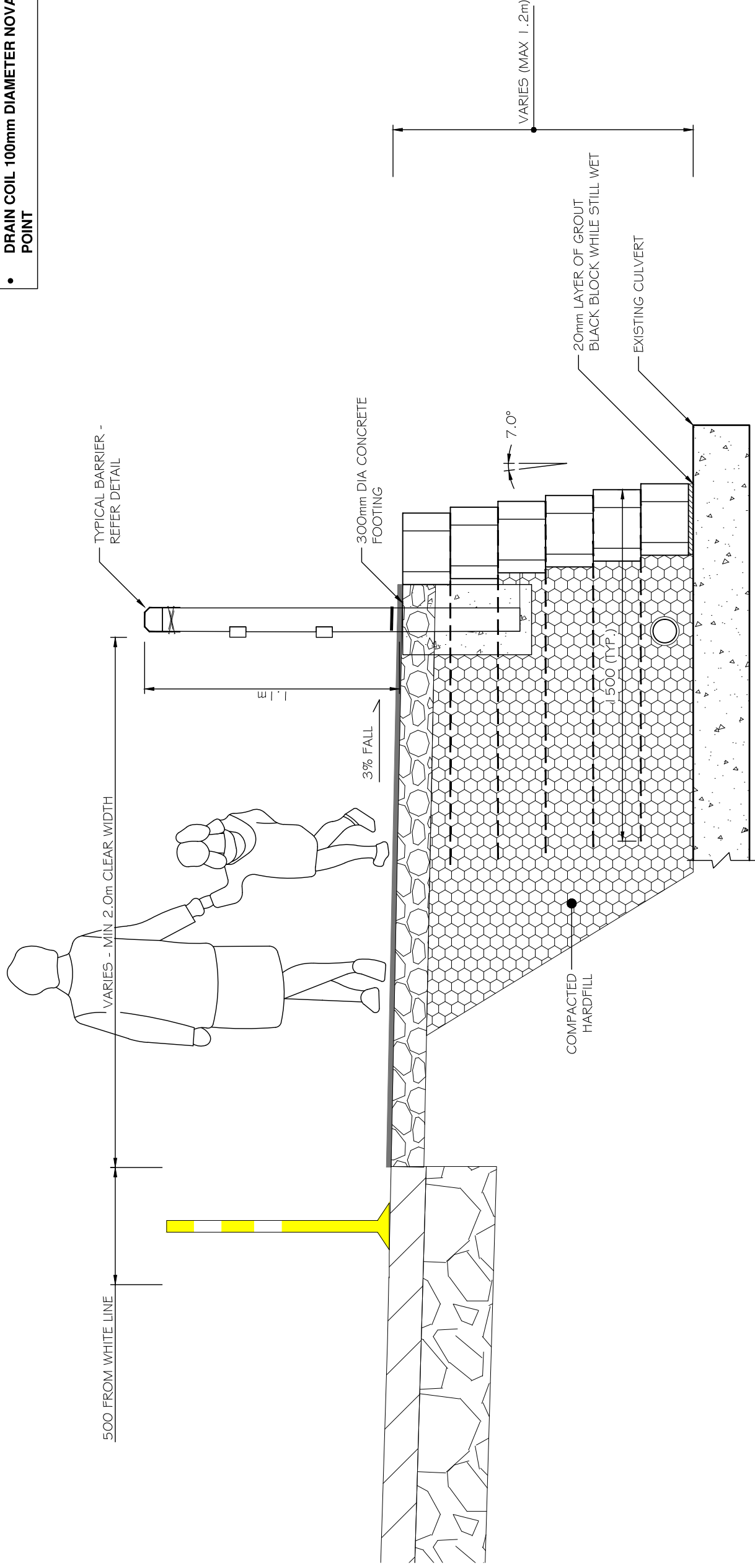
Title  
**TIMBER POLE RETAINING WALL**

Job No.  
**21887**

Sheet No.  
**E-01**



- NOTES**
- KEYSTONE RETAINING WALL SYSTEM TO COMPRISE FIRTH KEYSTONE COMPAC IV - TRIFACE WALL
  - TOP OF WALL TO BE CAPPED WITH FIRTH KEYSTONE COMPAC IV - CAPPING BLOCK
  - FIBREGLASS PINS AS PER FIRTH RECOMMENDATIONS BUT SHALL COMPRISE A MINIMUM OF 2 PINS PER TRIFACE BLOCK
  - GEO-GRID TO COMPRISE CIRTEX ACEGRID GG40
  - COMPACTED GRANULAR MATERIAL TO COMPRISE GAP 40 OR SIMILAR
  - DRAIN COIL 100mm DIAMETER NOVACOIL DRAINING TO LOWEST POINT



1 TYPICAL KEYSTONE RETAINING WALL OVER CULVERT

SCALE 1:20

No.	Revision	Drawn	Chk.	Appd.	Date
-	ISSUED FOR APPROVAL	N.B	P.F	I.H	21 JULY 20
		N.B	P.F	I.H	NOV 2019

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Drawn	N. BROAD	NOV 2019
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Approved	I. HUTCHINSON	NOV 2019
Scale		
Scale vert. exag.		

**WALKING ACCESS**  
 ARA HĪKOI AOTEAROA

Project  
 PROPOSED WALKING TRAIL  
 NZ WALKING ACCESS COMMISSION  
 PT WELLS TO MATAKANA COUNTRY PARK

Title  
 PROPOSED KEYSTONE RETAINING WALL

Job No.  
 21887

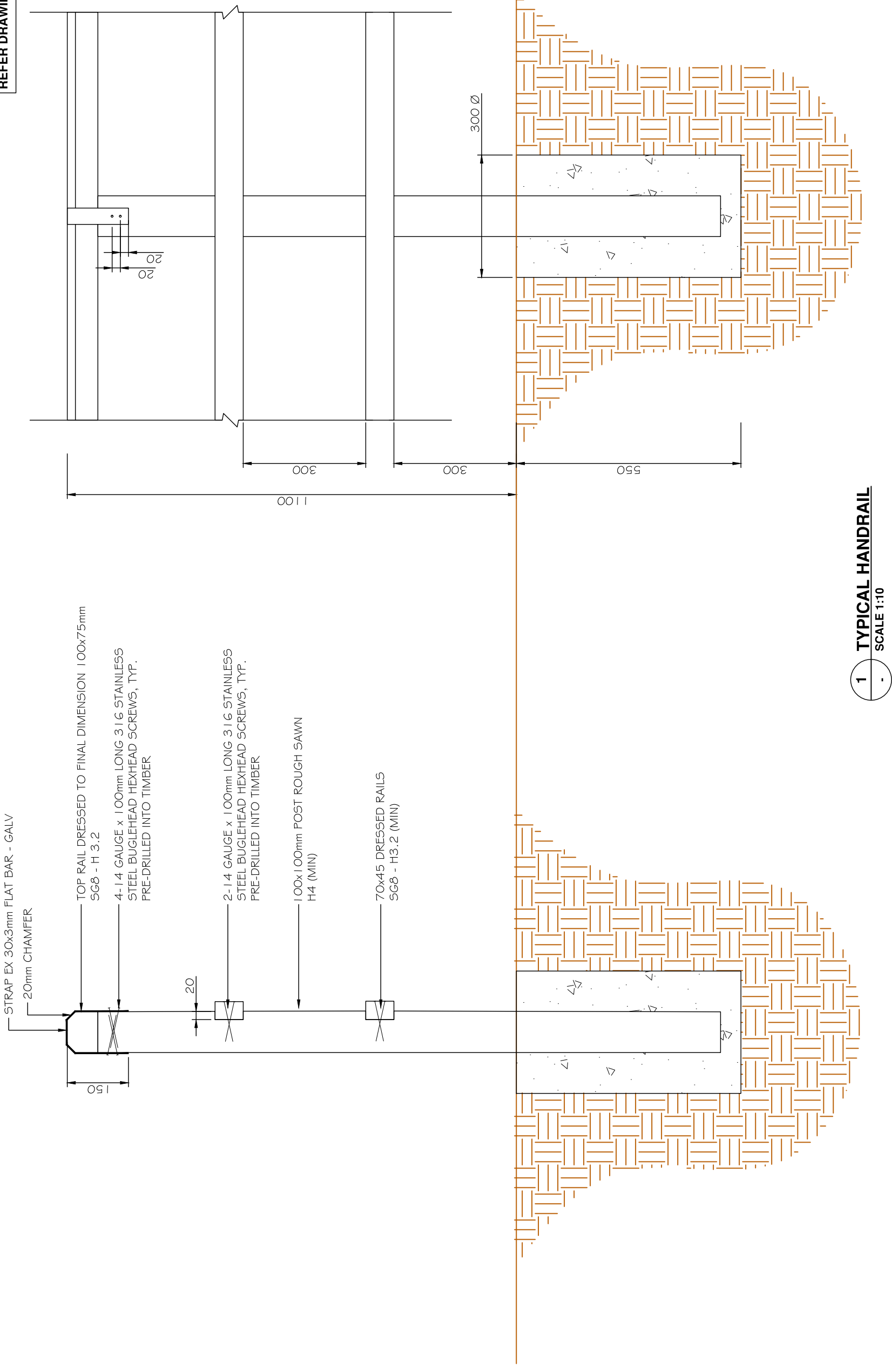
Sheet No.  
 E-02







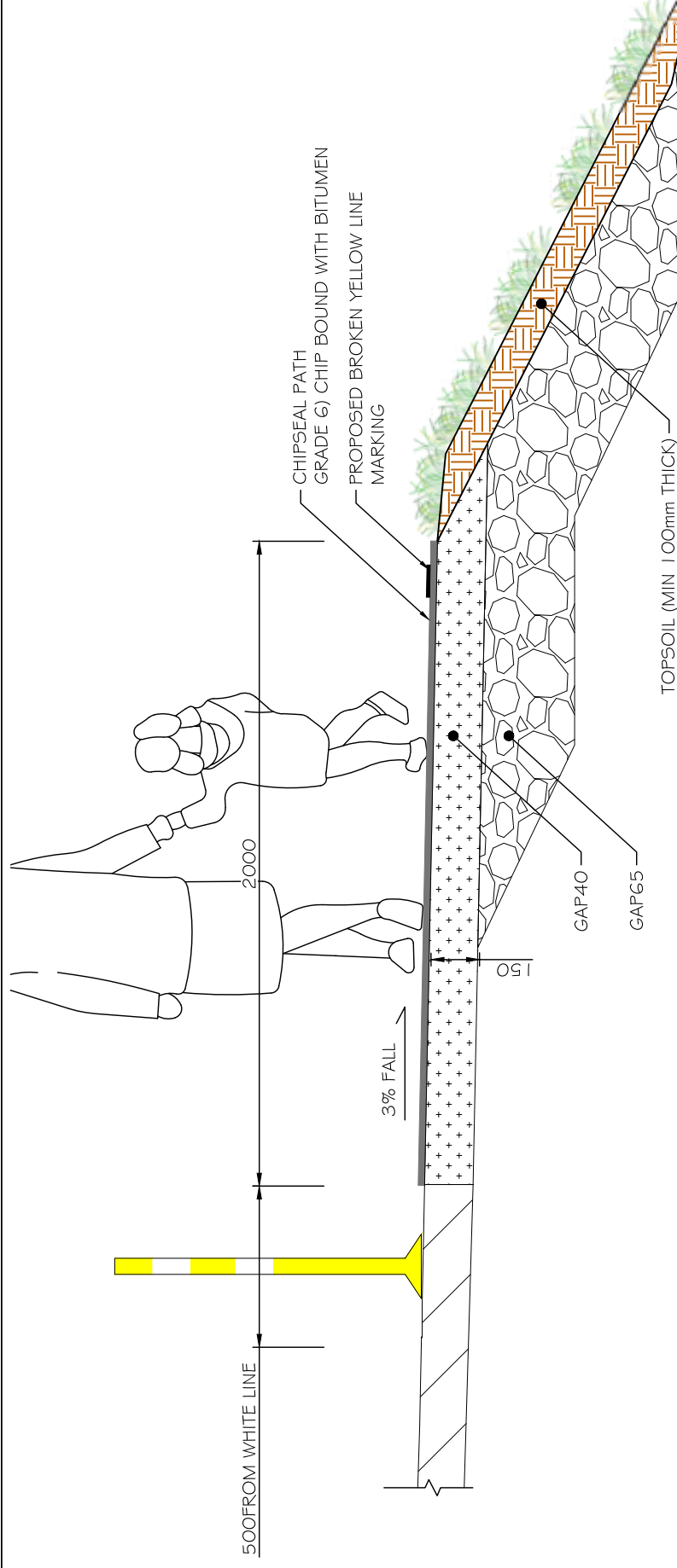
**NOTE:**  
 TO BE READ IN CONJUNCTION WITH AUCKLAND  
 TRANSPORT TYPICAL DETAILS  
 REFER DRAWING NO: FE0010 RevA



**1** TYPICAL HANDRAIL  
 SCALE 1:10

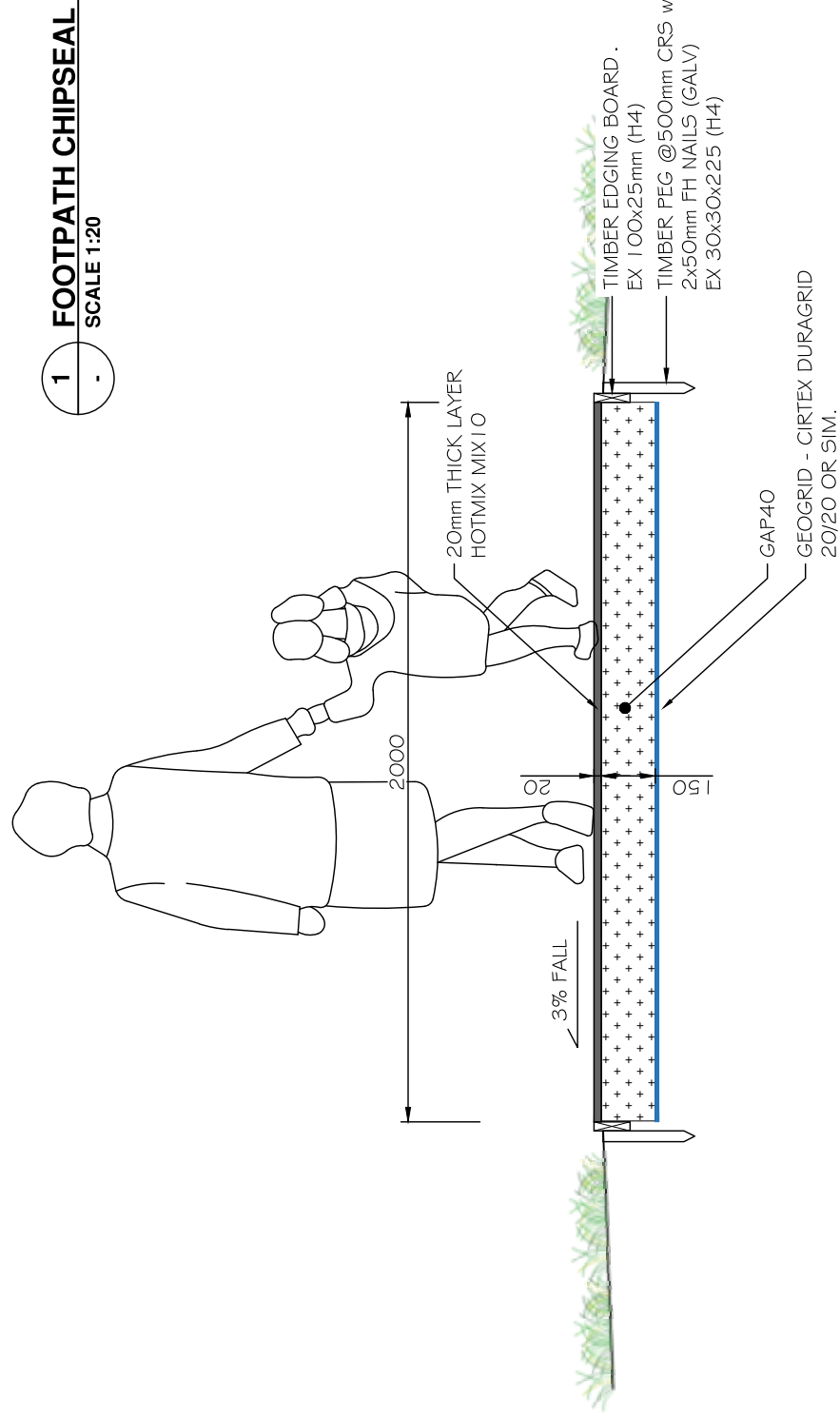
No.	Revision	ISSUED FOR APPROVAL		Date	Appd.	Chk.	Drawn	N.B	P.F	I.H	21 JULY 20
		N.B	P.F					I.H	NOV 2019		
<p><b>Hutchinson</b>          CONSULTING ENGINEERS          PO Box 150, Orewa 0946          154 Centway Road, Orewa 0931          Ph: 09 426 5702 www.hc.co.nz</p>											
Design			N. BROAD	NOV 2019	Project						
Drawn			N. BROAD	NOV 2019	PROPOSED WALKING TRAIL						
Checked			P. FARLEY	NOV 2019	NZ WALKING ACCESS COMMISSION						
Approved			I. HUTCHINSON	NOV 2019	PT WELLS TO MATAKANA COUNTRY PARK						
Scale			Title								
Scale vert. exag.			TYPICAL BARRIER								
Scale			Job No.								
Scale			21887								
Scale			Sheet No.								
Scale			E-04								



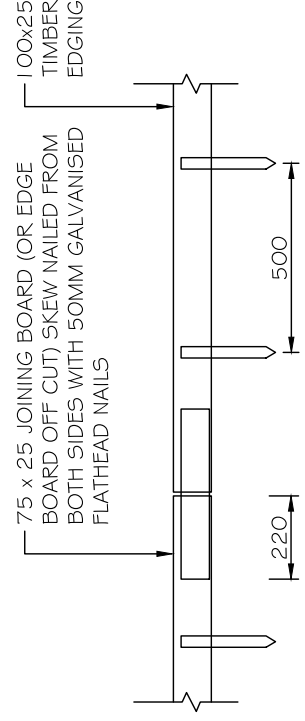


**1 FOOTPATH CHIPSEAL SURFACED**  
SCALE 1:20

**NOTE:**  
TO BE READ IN CONJUNCTION WITH  
AUCKLAND TRANSPORT TYPICAL  
DETAILS  
REFER DRAWING NO: FP0010 RevA



**2 FOOTPATH AC SURFACED**  
SCALE 1:20



**A-A SECTION**  
SCALE 1:20

No.	Revision	Drawn	Chk.	Appd.	Date
-	ISSUED FOR APPROVAL	N.B	P.F	I.H	21 JULY 20
		N.B	P.F	I.H	NOV 2019

**Hutchinson**  
MULTI-DISCIPLINARY ENGINEERS

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Design	N. BROAD	NOV 2019
Drawn	N. BROAD	NOV 2019
Checked	P. FARLEY	NOV 2019
Approved	I. HUTCHINSON	NOV 2019
Scale		
Scale vert. exag.		

**WALKING ACCESS**  
ARA HIKOI AOTEAROA

**Project**  
PROPOSED WALKING TRAIL  
NZ WALKING ACCESS COMMISSION  
PT WELLS TO MATAKANA COUNTRY PARK

**Title**  
TYPICAL PATH DETAIL (1 OF 2)

**Job No.**  
21887

**Sheet No.**  
E-05







