

CIRCULAR CURVE DETAILS

RADIUS:	1317.308m
ARC:	124.163m
V:	60km/h (HH)
Ea:	30mm
D:	2mm
C:	342531.344
E	1378952.306
N	

TRANSITION DETAILS

RADIUS:	1317.308m
LENGTH:	55.000m
V:	60km/h (HH)
Xc:	54.998m
Droc:	1mm/sec
M:	2.302 x 10 ⁻⁶

SCHEDULE OF COORDINATED ALIGNMENT POINTS

RADIUS	POINT	KM	CENTRELINE	EASTING	NORTHING
1317.308 LEFT	TRS	202km298.717	PROPOSED UP RELIEF	342328.665	1378253.929
	CENTRE			342531.344	1378952.306
	TRS	202km422.881	PROPOSED UP RELIEF	342207.061	1378229.076
	TP	202km477.881	PROPOSED UP RELIEF	342153.949	1378214.796
	TP	202km480.000	PROPOSED UP RELIEF	341793.394	1378115.160

CONTROL MC30
DATUM R.L.60.0

VERTICAL ALIGNMENT	HORIZONTAL ALIGNMENT	DESIGN RAIL LEVELS	DESIGN FORMATION	EXISTING SURFACE	CANT SCHEMATIC
L=495.520m G=1.071% V.C=120.000m R=10487.363m	R=1317.308m ARC=124.163m L=55.000m STR=374.069m	65.128, 65.337, 65.513, 65.651, 65.751, 65.813, 65.837, 65.827, 65.812, 65.798, 65.796, 65.781, 65.797, 65.785, 65.799, 65.870, 65.976, 66.118, 66.296	64.385, 64.594, 64.770, 64.908, 65.008, 65.089, 65.169, 65.246, 65.299, 65.354, 65.411, 65.453, 65.497, 65.524, 65.561, 65.684, 65.845, 65.889, 65.960	65.745, 65.710, 65.614, 65.571, 65.523, 65.478, 67.246, 66.729, 65.854, 65.341, 64.453, 65.087, 64.885, 65.081, 65.426, 65.684, 65.845, 65.889, 65.960	DOWN RAIL - 0 mm CANT UP RAIL - 30 mm CANT SUPER RAMP = 1 IN 1833 DOWN RAIL - 0 mm CANT UP RAIL - 0 mm CANT

KILOMETRAGE	202km300	202km320	202km340	202km360	202km380	202km400	202km420	202km440	202km460	202km480	202km500	202km520	202km540	202km560	202km580	202km600	202km620	202km640
IP-RL	65.578																	
IP-RL	65.578																	

LONGITUDINAL SECTION
SCALE 1:500(H) 1:100(V)

NOTES:

- FOR GENERAL NOTES REFER TO DRG No. ARTCN1100015507.
- INDICATED TRAIN SPEEDS USED IN CALCULATIONS REFER TO MODELLED TRAIN SPEEDS. FREIGHT, PASSENGER AND XPT MAXIMUM SPEEDS COMPLY AT HIGHER RATES OF CHANGE.

FOR CONSTRUCTION

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Used on / Next higher assembly:
H8R-DWG-S2G-TRA-2526

Alternate DMS number:

ARTC APPROVAL	Approved By				
Signed:					
Approval Date	06.08.10	ISSUED FOR CONSTRUCTION			
Rev	Date	Revision Description	Drawn	Checked	Approved
			D.J.C	T.L*	G.W*

Designing Company:
GHD
GHD Job Number:
22-14630

Address:
Level 3 GHD Tower, 24 Honeysuckle Drive
Newcastle NSW 2300 Australia
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Drawn
D.CRANE

Designed
V.ALEX

Drafting Check
P.TOBIN*

Design Check
T.LYONS*

Approved
G.WICKENS*

Date
06/08/2010

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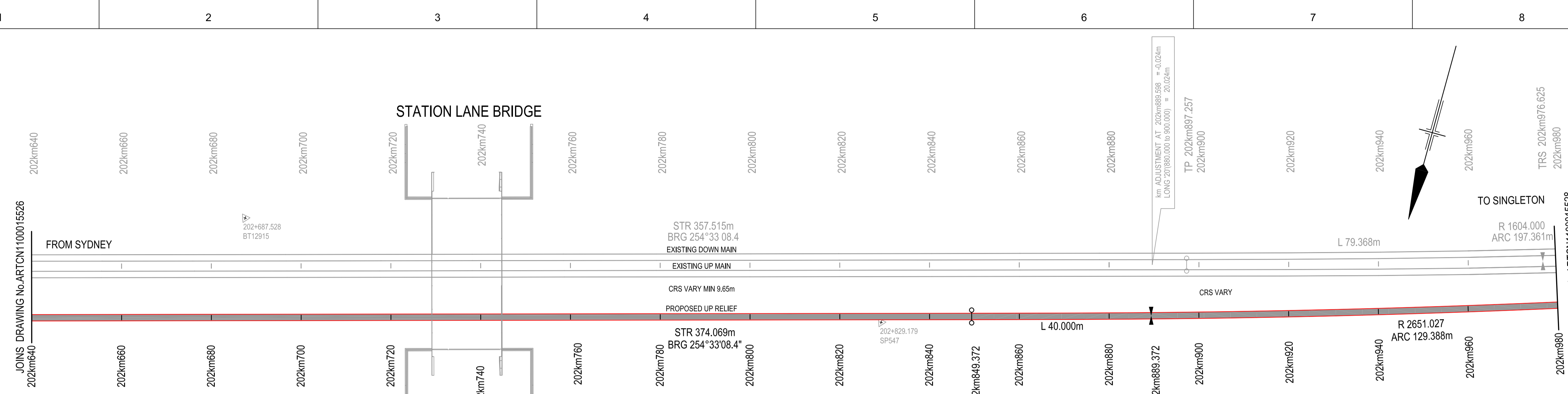
ARTC DWG NUMBER 0

ARTCN1100015526

MAITLAND TO MINIMBAH - THIRD TRACK
TRACK ALIGNMENT - UP RELIEF (PROP)
202km300 TO 202km640

Sheet No.
20 of 67
Scale (A1):
1:500(H) 1:100(V)

PLOT DATE: 06 August 2010 3:46 PM PLOTTED BY: DCR42 GHD FILE PATH: G:\2010\14630\Drawings\03\ARTCN1100015526.dwg

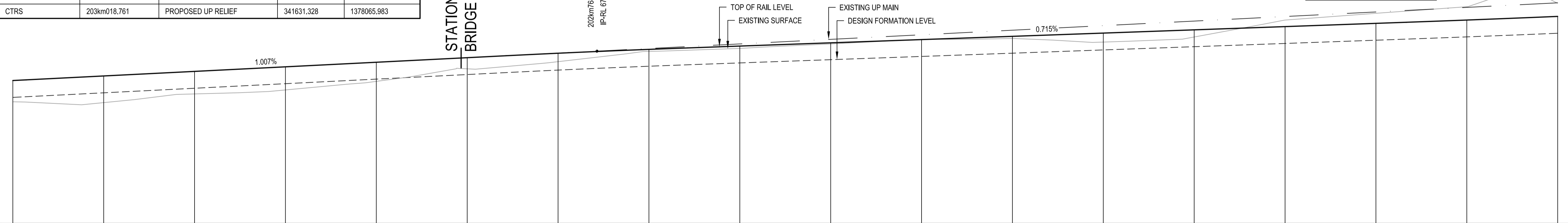


PLAN
SCALE 1:500

SCHEDULE OF COORDINATED ALIGNMENT POINTS					
RADIUS	POINT	KM	CENTRELINE	EASTING	NORTHING
	TP	202km477.881	PROPOSED UP RELIEF	342153.949	1378214.796
	TP	202km849.372	PROPOSED UP RELIEF	341793.394	1378115.160
	TRS	202km889.372	PROPOSED UP RELIEF	341754.866	1378104.409
2651.027 LEFT	CENTRE			342480.247	1375554.552
	CTRS	203km018.761	PROPOSED UP RELIEF	341631.328	1378065.983

TRANSITION DETAILS	
RADIUS:	2651.027m
LENGTH:	40.000m
V:	60km/h (HH)
Xc:	39.998m
Droc:	7mm/sec
M:	1.572 x 10 ⁻⁶

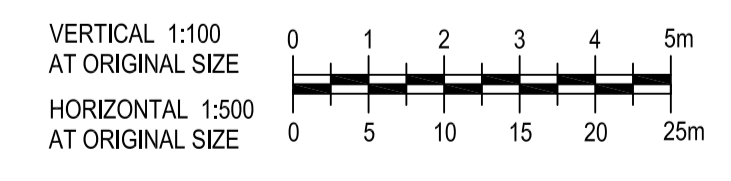
CIRCULAR CURVE DETAILS	
RADIUS:	2651.027m
ARC:	129.388m
V:	60km/h (HH)
Ea:	0mm
D:	16mm
	342480.247
	1375554.552



LONGITUDINAL SECTION
SCALE 1:500(H) 1:100(V)

CONTROL MC30
DATUM R.L.60.0

VERTICAL ALIGNMENT	HORIZONTAL ALIGNMENT	DESIGN RAIL LEVELS	DESIGN FORMATION	EXISTING SURFACE	CANT SCHEMATIC	KILOMETRAGE
V.C.=120.000m R=11112.305m L=105.630m G=1.007%	STR=374.069m	66.296, 66.497, 66.698, 66.900, 67.101, 67.303, 67.499, 67.699, 67.815, 67.958, 68.101, 68.244, 68.397, 68.530, 68.673, 68.816, 68.962, 69.122	66.553, 66.754, 66.955, 67.157, 67.358, 67.560, 67.756, 67.926, 68.072, 68.215, 68.358, 68.501, 68.644, 68.787, 68.930, 69.073, 69.219, 69.380	65.380, 65.322, 65.705, 65.881, 66.259, 66.612, 67.128, 67.381, 67.712, 67.907, 68.110, 68.150, 67.991, 68.214, 68.361, 68.459, 68.549, 68.710	DOWN RAIL - 0 mm CANT UP RAIL - 0 mm CANT	202km640, 202km660, 202km680, 202km700, 202km720, 202km740, 202km760, 202km780, 202km800, 202km820, 202km840, 202km860, 202km880, 202km900, 202km920, 202km940, 202km960, 202km980



LEGEND	
	PROPOSED TRACKWORK
	EXISTING TRACK TO BE REMOVED
	EXISTING TRACK
	PROPOSED TRACKWORK

- NOTES:
- FOR GENERAL NOTES REFER TO DRG No. ARTCN1100015527.
 - INDICATED TRAIN SPEEDS USED IN CALCULATIONS REFER TO MODELLED TRAIN SPEEDS. FREIGHT, PASSENGER AND XPT MAXIMUM SPEEDS COMPLY AT HIGHER RATES OF CHANGE.

FOR CONSTRUCTION

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Drawing standard in accordance with Hunter 8 Alliance standards	
Used on / Next higher assembly:	H8R-DWG-S2G-TRA-2527
Alternate DMS number:	

ARTC APPROVAL	Approved By				
Signed:					
Approval Date	06.08.10	ISSUED FOR CONSTRUCTION	D.J.C.	T.L.*	G.W.*
Rev	Date	Revision Description	Drawn	Checked	Approved

Designing Company:	GHD	Address:	Level 3 GHD Tower, 24 Honeysuckle Drive Newcastle NSW 2300 Australia F 61 2 4941 2796 W www.hunteralliance.com.au
GHD Job Number:	22-14630	Designed:	V.ALEX
Drawn:	D.CRANE	Design Check:	T.LYONS*
Drafting Check:	P.TOBIN*	Approved:	G.WICKENS*
Date:	06/08/2010	This Drawing must not be used for Construction unless signed as Approved	

		ARTC DWG NUMBER	0
ARTCN1100015527			
MAITLAND TO MINIMBAH - THIRD TRACK TRACK ALIGNMENT - UP RELIEF (PROP) 202km640 TO 202km980			Sheet No. 21 of 67 Scale (A1): 1:500(H) 1:100(V)

PLOT DATE: 06 August 2010 3:46 PM
 PLOTTED BY: DCR42
 GHD FILE PATH: G:\22\14630\Drawings\03\ARTCN1100015527.dwg

1 2 3 4 5 6 7 8

A

B

C

D

E

F

A

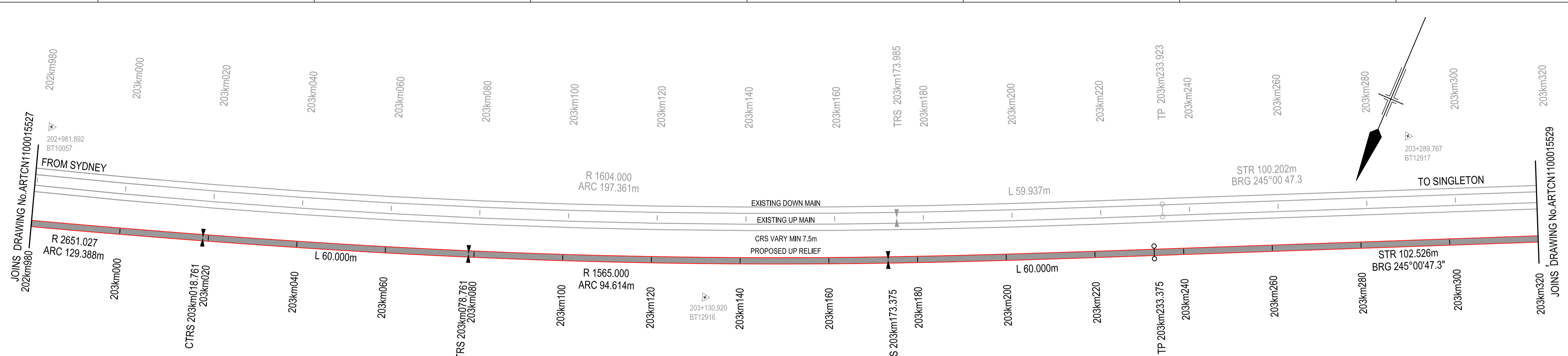
B

C

D

E

F



CIRCULAR CURVE DETAILS

RADIUS:	2651.027m
ARC:	129.388m
V:	60km/h (HH)
Ea:	0mm
D:	16mm
⊙	E 342480.247
⊙	N 1375554.552

COMPOUND TRANSITION DETAILS

RADIUS:	2651.027m - 1565.000m
LENGTH:	60.000m
V:	60km/h (HH)
Xc:	84.861m
Xc:	144.156m
Doc:	4mm/sec
M:	0.741 x 10 ⁶

CIRCULAR CURVE DETAILS

RADIUS:	1565.000m
ARC:	94.614m
V:	60km/h (HH)
Ea:	25mm
D:	2mm
⊙	E 342120.898
⊙	N 1376579.364

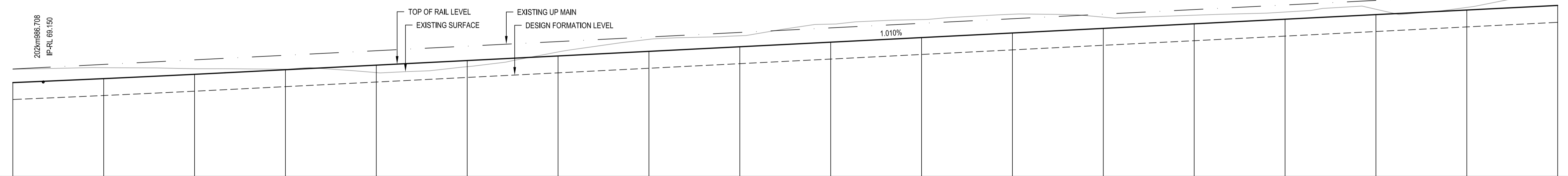
TRANSITION DETAILS

RADIUS:	1565.000m
LENGTH:	60.000m
V:	60km/h (HH)
Xc:	59.998m
D:	1mm/sec
M:	1.776 x 10 ⁶

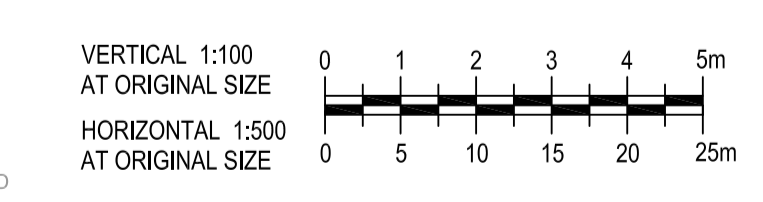
SCHEDULE OF COORDINATED ALIGNMENT POINTS

RADIUS	POINT	KM	CENTRELINE	EASTING	NORTHING
	TRS	202km889.372	PROPOSED UP RELIEF	341754.866	1378104.409
2651.027 LEFT	CENTRE			342480.247	1375554.552
	CTRS	203km018.761	PROPOSED UP RELIEF	341631.328	1378065.983
	CTRS	203km078.761	PROPOSED UP RELIEF	341574.763	1378045.980
1565.000 LEFT	CENTRE			342120.898	1376579.364
	TRS	203km173.375	PROPOSED UP RELIEF	341487.149	1378010.303
	TP	203km233.375	PROPOSED UP RELIEF	341432.604	1377985.307
	TP	203km335.901	PROPOSED UP RELIEF	341339.675	1377941.999

PLAN
SCALE 1:500



VERTICAL ALIGNMENT	HORIZONTAL ALIGNMENT	DESIGN RAIL LEVELS	DESIGN FORMATION	EXISTING SURFACE	CANT SCHEMATIC	KILOMETRAGE
V.C=80.000m R=27118.631m	R=2651.027m ARC=129.388m	69.122	68.390	69.710	DOWN RAIL - 0 mm CANT UP RAIL - 0 mm CANT	202km980
	L=60.000m	69.297	68.555	69.778	SUPER RAMP = 1 IN 2400	203km000
	R=1565.000m ARC=94.614m	69.487	68.744	69.735		CTRS 203km018.761 203km020
	L=60.000m	69.688	68.945	69.710		203km040
	STR=102.526m	69.890	68.147	69.567		203km060
		70.092	68.349	69.625		CTRS 203km078.761 203km080
		70.294	68.551	70.474	UP RAIL - 25 mm CANT	203km100
		70.496	68.753	71.032		203km120
		70.698	68.955	71.186		203km140
		70.900	70.157	71.688		203km160
		71.102	70.359	71.901		TRS 203km173.375 203km180
		71.304	70.561	72.131	SUPER RAMP = 1 IN 2400	203km200
		71.506	70.763	72.003		203km220
		71.708	70.965	72.086		TP 203km233.375 203km240
		71.910	71.167	72.226		203km260
		72.112	71.369	72.348	DOWN RAIL - 0 mm CANT UP RAIL - 0 mm CANT	203km280
		72.314	71.571	72.429		203km300
		72.516	71.773	72.629		203km320



LEGEND

	PROPOSED TRACKWORK		EXISTING TRACK
	EXISTING TRACK TO BE REMOVED		PROPOSED TRACKWORK

LONGITUDINAL SECTION
SCALE 1:500(H) 1:100(V)

- NOTES:**
- FOR GENERAL NOTES REFER TO DRG No. ARTCN100015507.
 - INDICATED TRAIN SPEEDS USED IN CALCULATIONS REFER TO MODELLED TRAIN SPEEDS. FREIGHT, PASSENGER AND XPT MAXIMUM SPEEDS COMPLY AT HIGHER RATES OF CHANGE.

FOR CONSTRUCTION

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Used on / Next higher assembly:	H8R-DWG-S2G-TRA-2528
Alternate DMS number:	

ARTC APPROVAL	Approved By				
ARTC DWG NUMBER	0				
Approved	G.WICKENS*	Date	06/08/2010	Drawn	D.J.C.
Checked	T.L*	Checked		Approved	G.W*
Revision	0	Date	06.08.10	Revision Description	ISSUED FOR CONSTRUCTION

Designing Company:	GHD	Address:	Level 3 GHD Tower, 24 Honeysuckle Drive Newcastle NSW 2300 Australia F 61 2 4941 2796 W www.hunter8alliance.com.au
GHD Job Number:	22-14630	Designed	V.ALEX
Drawn	D.CRANE	Design Check	T.LYONS*
Drafting Check	P.TOBIN*	Approved	G.WICKENS*
Date	06/08/2010	This Drawing must not be used for Construction unless signed as Approved	

Hunter ALLIANCE

MAITLAND TO MINIMBAH - THIRD TRACK
TRACK ALIGNMENT - UP RELIEF (PROP)
202km980 TO 203km320

ARTC DWG NUMBER 0

ARTCN1100015528

Sheet No. **22 of 67**
Scale (A1): 1:500(H) 1:100(V)

1 2 3 4 5 6 7 8

PLOT DATE: 06 August 2010 3:47 PM PLOTTED BY: DCR42 GHD FILE PATH: G:\22\14630\Drawings\GHD\ARTCN1100015528.dwg