

Appendix 5

Land Bridge

- Scope
- Estimate
- Program
- RMS Drawings

Land Bridge

Scope

The Land Bridge is a variation on the tunnel with a new four-lane carriageway directed under Rose Street and through a concrete box section in the area now occupied by the commuter car park. The top of the land bridge would be a landscaped area.

- The southern limit is assumed to be just north of the intersection of Johnson Road and the Pacific Highway. The intersection is to remain in the current configuration and operate for the Pacific Highway as two-lane two-way with all current turning movements retained i.e. no intersection improvements.
- A one-way service road between Johnson Road and the Wyong River together with an upgrade to South Tacoma Road up to a position just under the existing Rail Bridge. A new intersection with South Tacoma Road and McPherson Road.
- New Bridge over the Wyong River for northbound traffic.
- Refurbish the existing road bridge over the Wyong River consistent with the expected life of the upgraded highway, 20 years.
- Upgrade River Road intersection with local street adjustments.
- New dual carriageway Pacific Highway from Johnson Road to approximately 100m south of Cutler Drive.
- Rose Street Bridge extended over new southbound carriageway and bus-way.
- Construction of reinforced concrete box section to accommodate new northbound and southbound carriageways adjacent to existing Pacific highway approximately 100m long.
- For consistency the intersection details at North Road are assumed to be the same as the 'preferred through town' central corridor option i.e. seagull intersection.
- Shared pedestrian cycle-way path full length.
- Urban standard throughout entire length of works, i.e. to include street lighting, kerb and gutter drainage, shared pedestrian cycle-way path, property access, landscaping and parking.
- The northern limit is 100m south of Cutler Drive.

Client: Client: Roads & Maritime Services
 Project: Through Town & Bypass Options - Pacific Highway Wyong
 Option: Landbridge
 Detail: Project Summary



No	Item	Estimate (Exc Contingency)	Contingency		Estimate (Inc Contingency)	% of Total Estimate
			%	Amount		
1	Project Development					
1.1	Route / Concept / EIS	\$2,540,000	40%	\$1,016,000	\$3,556,000	
1.2	Project Management Services	\$364,000	30%	\$109,200	\$473,200	
1.3	Client Representation	\$33,280	10%	\$3,328	\$36,608	
	Sub total	\$2,937,280	38%	\$1,128,528	\$4,065,808	2.8%
2	Investigation and Design					
2.1	Investigation and Design	\$4,187,500	50%	\$2,093,750	\$6,281,250	
2.2	Project Management Services	\$581,245	30%	\$174,374	\$755,619	
2.3	Client Representation	\$24,941	10%	\$2,494	\$27,435	
	Sub total	\$4,793,686	47%	\$2,270,618	\$7,064,303	4.8%
3	Property Acquisitions					
3.1	Property Acquisitions	\$7,542,500	55%	\$4,148,375	\$11,690,875	
3.2	Professional Services for Property	\$113,138	30%	\$33,941	\$147,079	
3.3	Project Management Services	\$153,400	30%	\$46,020	\$199,420	
3.4	Client Representation	\$36,920	10%	\$3,692	\$40,612	
	Sub total	\$7,845,958	54%	\$4,232,028	\$12,077,986	8.3%
4	Public Utility Adjustments					
4.1	Public Utility Adjustments	\$11,500,000	100%	\$11,500,000	\$23,000,000	
4.2	Project Management Services	\$400,400	30%	\$120,120	\$520,520	
4.3	Client Representation	\$33,280	10%	\$3,328	\$36,608	
	Sub total	\$11,933,680	97%	\$11,623,448	\$23,557,128	16.1%
5	Construction of Works					
5.1	Infrastructure	\$68,010,000	36%	\$24,483,600.00	\$92,493,600	
5.2	Project Management Services	\$4,777,850	30%	\$1,433,355	\$6,211,205	
5.3	Client Representation	\$144,300	10%	\$14,430	\$158,730	
	Sub total	\$72,932,150	36%	\$25,931,385	\$98,863,535	67.6%
6	Handover					
6.1	Handover	\$360,000	50%	\$180,000	\$540,000	
6.2	Project Management Services	\$92,300	30%	\$27,690	\$119,990	
6.3	Client Representation	\$9,230	10%	\$923	\$10,153	
	Sub total	\$461,530	45%	\$208,613	\$670,143	0.5%
	TOTAL	\$100,904,283	45%	\$45,394,620	\$146,298,903	100%

No	Item	Estimate (Exc Contingency)	Estimate (Contingency)	Estimate Total
Total Project Management Allowances				
i	Project Management	\$6,369,195	\$1,910,759	\$8,279,954
ii	Client Presentation	\$281,951	\$28,195	\$310,146
Reality Checks				
		Cost / km (\$m)	Length of Road (km)	
iii	Project Cost per kilometer	\$71.02	2.06	
iv	Project Cost per lane kilometer	\$17.75	8.24	

Client: Client: Roads & Maritime Services
 Project: Through Town & Bypass Options - Pacific Highway Wyong
 Option: Landbridge
 Detail: Project Development



ITEM	DESCRIPTION	UNIT	RATE	TOTAL	COMMENTS
1.1	Route / Concept / EIS				Estimated Duration - 12months
1.1.1	Concept Design				
	Integrated Design Consultant - Concept Road, Bridge, Drainage, Pavement, Lighting, Landscape etc	item	\$ 700,000	\$ 700,000	
1.1.2	Preliminary Geotech				
	Investigation and reporting, test pits, boreholes, ground model, soil testing etc	item	\$ 300,000	\$ 300,000	
	Ground support model	item	\$ 20,000	\$ 20,000	
1.1.3	Traffic Modelling				
	Traffic model for concept design solutions	item	\$ 75,000	\$ 75,000	
1.1.4	Community Liaison				
	Included within project management services	item	\$ -	\$ -	
1.1.5	Environmental Investigations EIS				
	EIS REF	item	\$ 1,000,000	\$ 1,000,000	
	Water quality testing	item	\$ 10,000	\$ 10,000	
1.1.6	Survey				
	Ground survey model	item	\$ 200,000	\$ 200,000	
1.1.7	Specialist Sub Consultants				
	Urban Design	item	\$ 60,000	\$ 60,000	
	Noise	item	\$ 100,000	\$ 100,000	
	Hydrology	item	\$ 25,000	\$ 25,000	
	Archaeology	item	\$ 50,000	\$ 50,000	
	Total Item 1.1			\$ 2,540,000	

Notes / Assumptions

ITEM	DESCRIPTION	UTILISATION	WEEKS	RATE	TOTAL	COMMENTS
1.2	Project Management Services					Estimated Duration - 12 months
	Project manager	100%	52	\$ 5,100	\$ 265,200	
	Clerical assistant	20%	52	\$ 2,000	\$ 20,800	
	Assisting Engineer	50%	52	\$ 3,000	\$ 78,000	
	Total Item 1.2				\$ 364,000	

Notes / Assumptions

All rates are weekly

ITEM	DESCRIPTION	UTILISATION	WEEKS	RATE	TOTAL	COMMENTS
1.3	Client Representation					Estimated Duration - 12 months
	Project manager	10%	52	\$ 5,100	\$ 26,520	
	Clerical assistant	5%	52	\$ 2,000	\$ 5,200	
	Assisting Engineer	1%	52	\$ 3,000	\$ 1,560	
	Total Item 1.3				\$ 33,280	

Notes / Assumptions

All Rates are weekly

TOTAL ITEM	\$ 2,937,280					
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Client: Client: Roads & Maritime Services
 Project: Through Town & Bypass Options - Pacific Highway Wyong
 Option: Landbridge
 Detail: Investigation and Design



ITEM	DESCRIPTION	UNIT	RATE	TOTAL	COMMENTS
2.1	<u>Investigation and Design</u>				Estimated Duration - 9 months
2.1.1	Investigation & Design				
	Integrated Design Consultant - Road, Bridge, Staging, Drainage, Pavement, Lighting, Landscape, Line Marking, Signage, Traffic Signals, Property Adjustments, Services / Utilities, Roadside Furniture, ITS etc	item	\$ 3,375,000	\$ 3,375,000	
2.1.2	Detailed Geotechnical Design				
	Investigation and reporting, test pits, boreholes, ground model, soil testing etc	item	\$ 225,000	\$ 225,000	
2.1.3	Survey				
	Ground survey model	item	\$ 187,500	\$ 187,500	
2.1.4	Independent Design Verification				
	Independent Design Review	item	\$ -	\$ -	
2.1.5	Specialist Consultants				
	Urban Design	item	\$ 100,000	\$ 100,000	
	Noise	item	\$ 100,000	\$ 100,000	
	Hydrology	item	\$ 100,000	\$ 100,000	
	Miscellaneous Consultants; Allowance	item	\$ 100,000	\$ 100,000	Commerical advice, communit consultation, community advice etc
	Total Item 2.1			\$ 4,187,500	

ITEM	DESCRIPTION	UTILISATION	WEEKS	RATE	TOTAL	COMMENTS
2.2	<u>Project Management Services</u>					Estimated Duration - 9 months
	Project manager	100%	39	\$ 5,100	\$ 198,747	
	Clercial assistant	20%	39	\$ 2,000	\$ 15,588	
	Assisting Engineer	100%	39	\$ 3,000	\$ 116,910	
	Tender Documentation	item	1	\$ 250,000	\$ 250,000.00	
	Total Item 2.2				\$ 581,245	

Notes / Assumptions

All rates are weekly

ITEM	DESCRIPTION	UTILISATION	WEEKS	RATE	TOTAL	COMMENTS
2.3	<u>Client Representation</u>					Estimated Duration - 9 months
	Project manager	10%	39	\$ 5,100	\$ 19,874.70	
	Clercial assistant	5%	39	\$ 2,000	\$ 3,897	
	Assisting Engineer	1%	39	\$ 3,000	\$ 1,169.10	
	Total Item 2.3				\$ 24,941	

Notes / Assumptions

All rates are weekly

TOTAL ITEM	\$ 4,793,686					
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Client: Client: Roads & Maritime Services
 Project: Through Town & Bypass Options - Pacific Highway Wyong
 Option: Landbridge
 Detail: Property Acquisitions



ITEM	DESCRIPTION	UNIT	QTY	RATE	TOTAL	COMMENTS
3.1	Property Acquisitions					Estimated Duration - 2 years
	Commerical Property	sq.m	1,850	\$ 2,800	\$ 5,180,000	Refer to property acquisition quantification
	Railcorp Land	sq.m	6,300	\$ 375	\$ 2,362,500	
	Council Land	sq.m	20,100	\$ -	\$ -	
	Total Item 3.1				\$ 7,542,500	

Notes / Assumptions

ITEM	DESCRIPTION	TOTAL VALUE OF PROPERTY	% FEE	TOTAL	COMMENTS
3.2	Professional Services for Property				Estimated Duration - 2 years
	Property Consultant & Valuation Expert	\$ 7,542,500	1.00%	\$ 75,425	
	Legal Advice	\$ 7,542,500	0.50%	\$ 37,713	
	Total Item 3.2			\$ 113,138	

Notes / Assumptions

ITEM	DESCRIPTION	UTILISATION	WEEKS	RATE	TOTAL	COMMENTS
3.3	Project Management Services					Estimated Duration - 2 years
	Project manager	25%	104	\$ 5,100	\$ 132,600	
	Clercial assistant	10%	104	\$ 2,000	\$ 20,800	
	Total Item 3.3				\$ 153,400	

Notes / Assumptions

All rates are weekly

ITEM	DESCRIPTION	UNIT	WEEKS	RATE	TOTAL	COMMENTS
3.4	Client Representation					Estimated Duration - 2 years
	Project manager	5%	104	\$ 5,100	\$ 26,520	
	Clercial assistant	5%	104	\$ 2,000	\$ 10,400	
	Total Item 3.4				\$ 36,920	

Notes / Assumptions

All rates are weekly

TOTAL ITEM						\$ 7,845,958
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Client: Client: Roads & Maritime Services
Project: Through Town & Bypass Options - Pacific Highway Wyong
Option: Landbridge
Detail: Public Utility Adjustments



ITEM	DESCRIPTION	UNIT	TOTAL	COMMENTS
4.1	<u>Adjust Utilities</u>			Estimated Duration - 12 months
	Water Utilities			
	Relocation of services - Water	item	\$ 1,750,000	Refer to public utility quantification spreadsheet
	Relocation of services - Sewer	item	\$ 1,250,000	Refer to public utility quantification spreadsheet
	Telecommunications			
	Relocation of services	item	\$ 1,500,000	Refer to public utility quantification spreadsheet
	Power / Electrical Utilities HV & LV			
	Relocation of services	item	\$ 5,000,000	Refer to public utility quantification spreadsheet
	Gas Utilities HP & LP			
	Relocation of services	item	\$ 2,000,000	Refer to public utility quantification spreadsheet
	Total Item 4.1		\$ 11,500,000	

Notes

Please see spreadsheet 'Services' for further breakdown

ITEM	DESCRIPTION	UTILISATION	WEEKS	RATE	TOTAL	COMMENTS
4.2	<u>Project Management Services</u>					Estimated Duration - 12 months
	Project manager	100%	52	\$ 5,100	\$ 265,200	
	Assisting Engineer	100%	52	\$ 2,000	\$ 104,000	
	Clerical assistant	20%	52	\$ 3,000	\$ 31,200	
	Total Item 4.2				\$ 400,400	

Notes / Assumptions

rates are weekly

ITEM	DESCRIPTION	UTILISATION	WEEKS	RATE	TOTAL	COMMENTS
4.3	<u>Client Representation</u>					Estimated Duration - 12 months
	Project manager	10%	52	\$ 5,100	\$ 26,520	
	Clerical assistant	5%	52	\$ 2,000	\$ 5,200	
	Assisting Engineer	1%	52	\$ 3,000	\$ 1,560	
	Total Item 4.3				\$ 33,280	

Notes / Assumptions

All rates are weekly

TOTAL ITEM	\$ 11,933,680
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Client: Client: Roads & Maritime Services
 Project: Through Town & Bypass Options - Pacific Highway Wyong
 Option: Landbridge
 Detail: Construction of Works



ITEM	DESCRIPTION	TOTAL	COMMENTS
5.1	Infrastructure		Estimated Duration - 2.5 years
	Direct Works Costs	\$ 46,710,000	
	Overhead Costs	\$ 12,400,000	
	Contractors Margin	\$ 8,900,000	
	Total Item 5.1	\$ 68,010,000	

ITEM	DESCRIPTION	UNIT	RATE	TOTAL	COMMENTS
5.2 (a)	Project Management Services - Support Services				Estimated Duration - 2.5 years
	Design Support	item	\$ 168,750	\$ 168,750	
	Urban Design	item	\$ 100,000	\$ 100,000	
	Geotechnical Design Support Services	item	\$ 50,000	\$ 50,000	
	Quality & Safety Audit Services	item	\$ 25,000	\$ 25,000	
	Community Consultation	item	\$ 150,000	\$ 150,000	
	Traffic Management Support	item	\$ 25,000	\$ 25,000	
	Legal Services	item	\$ 200,000	\$ 200,000	
	Reports, Conditions of Approval etc	item	\$ 50,000	\$ 50,000	
	Community Liaison Representative	item	\$ 50,000	\$ 50,000	
	Survey	item	\$ 20,000	\$ 20,000	
	Commercial Advisor	item	\$ 100,000	\$ 100,000	
	Insurance - PA	Item	\$ 680,100	\$ 680,100	
	Total Item 5.2 (a)			\$ 1,618,850	

ITEM	DESCRIPTION	UTILISATION	NO	WEEKS	RATE	TOTAL	COMMENTS
5.2 (b)	Project Management Services - Staff						Estimated Duration - 2.5 years
	PM Staff: Management						
	Project Manager	100%	1	130	\$ 5,100	\$ 663,000	
	Project Engineers	100%	2	130	\$ 3,750	\$ 975,000	
	Surveillance Officers	100%	2	130	\$ 3,600	\$ 936,000	
	Health & Safety Advisor	50%	1	130	\$ 3,000	\$ 195,000	
	Quality Advisor	50%	1	130	\$ 3,000	\$ 195,000	
	Environmental Advisor	50%	1	130	\$ 3,000	\$ 195,000	
	Total Item 5.2 (b)					\$ 3,159,000	
	Total Item 5.2 (a) & (b)					\$ 4,777,850	

Notes / Assumptions
 All rates are weekly

ITEM	DESCRIPTION	UTILISATION	WEEKS	RATE	TOTAL	COMMENTS
5.3	Client Representation					Estimated Duration - 2.5 years
	Senior Management Review	10%	130	\$ 4,000	\$ 52,000	
	Client Manager	10%	130	\$ 5,100	\$ 66,300	
	Clerical assistant	10%	130	\$ 2,000	\$ 26,000	
	Total Item 5.3				\$ 144,300	

Notes / Assumptions
 All rates are weekly

TOTAL ITEM						\$ 72,932,150
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Client: Client: Roads & Maritime Services
 Project: Through Town & Bypass Options - Pacific Highway Wyong
 Option: Landbridge
 Detail: Handover



ITEM	DESCRIPTION	UNIT	QTY	RATE	TOTAL	COMMENTS
6.1	Handover					Estimated Duration - 6 Months
	Final Reporting	item	1	\$ 100,000	\$ 100,000	
	Legal	item	1	\$ 100,000	\$ 100,000	
	Claims Response	item	1	\$ 100,000	\$ 100,000	
	Noise Survey	item	1	\$ 20,000	\$ 20,000	
	Traffic Verification	item	1	\$ 20,000	\$ 20,000	
	Environmental Monitors	item	1	\$ 20,000	\$ 20,000	
	Total Item 6.1				\$ 360,000	

Notes / Assumptions

ITEM	DESCRIPTION	UTILISATION	WEEKS	RATE	TOTAL	COMMENTS
6.2	Project Management Services					Estimated Duration - 6 months
	Project manager	50%	26	\$ 5,100	\$ 66,300	
	Clerical assistant	50%	26	\$ 2,000	\$ 26,000	
	Total Item 6.2				\$ 92,300	

Notes / Assumptions

All rates are weekly

ITEM	DESCRIPTION	UTILISATION	WEEKS	RATE	TOTAL	COMMENTS
6.3	Client Representation					Estimated Duration - 6 months
	Project manager	5%	26	\$ 5,100	\$ 6,630	
	Clerical assistant	5%	26	\$ 2,000	\$ 2,600	
	Total Item 6.3				\$ 9,230	

Notes / Assumptions

All rates are weekly

TOTAL ITEM						\$ 461,530
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Client: Client: Roads & Maritime Services
 Project: Through Town & Bypass Options - Pacific Highway Wyong
 Option: Landbridge
 Detail: Property Acquisitions Quantification



ITEM	DESCRIPTION	NO	FLOOR AREA	PROPERTY AREA	COMMENTS
1	<u>Property Acquisition</u>				
1.1	Commerical Property	1	180	800	Station Masters Cottage
		1	670	1050	Railway Sq shops (Corner of Church St)
	Total	2	850	1850	Property Area brought forward to summary

ITEM	DESCRIPTION	LAND AREA	LAND OWNER	COMMENTS
2	<u>Land Acquisition</u>			
2.1	Wyong River Bridge to Church St	6,300	Railcorp	Along Railway lane before station masters cottage
2.2	Church St to Rose St	3,250	Council	Section 1 within train station car park
		6,100	Council	Section 2 within train station car park
2.3	Rose St to Anzac St	3,700	Council	Rose St to Anzac St along railway line
2.4	Anzac St to North Road	2,600	Council	Along Railway lane
		650	Council	Anzac St intersection allowances
2.5	North Road to End	3,800	Council	Along railway track
	Total	26,400		
	Council Owned Land	20,100		
	Rail Corp Owned Land	6,300		

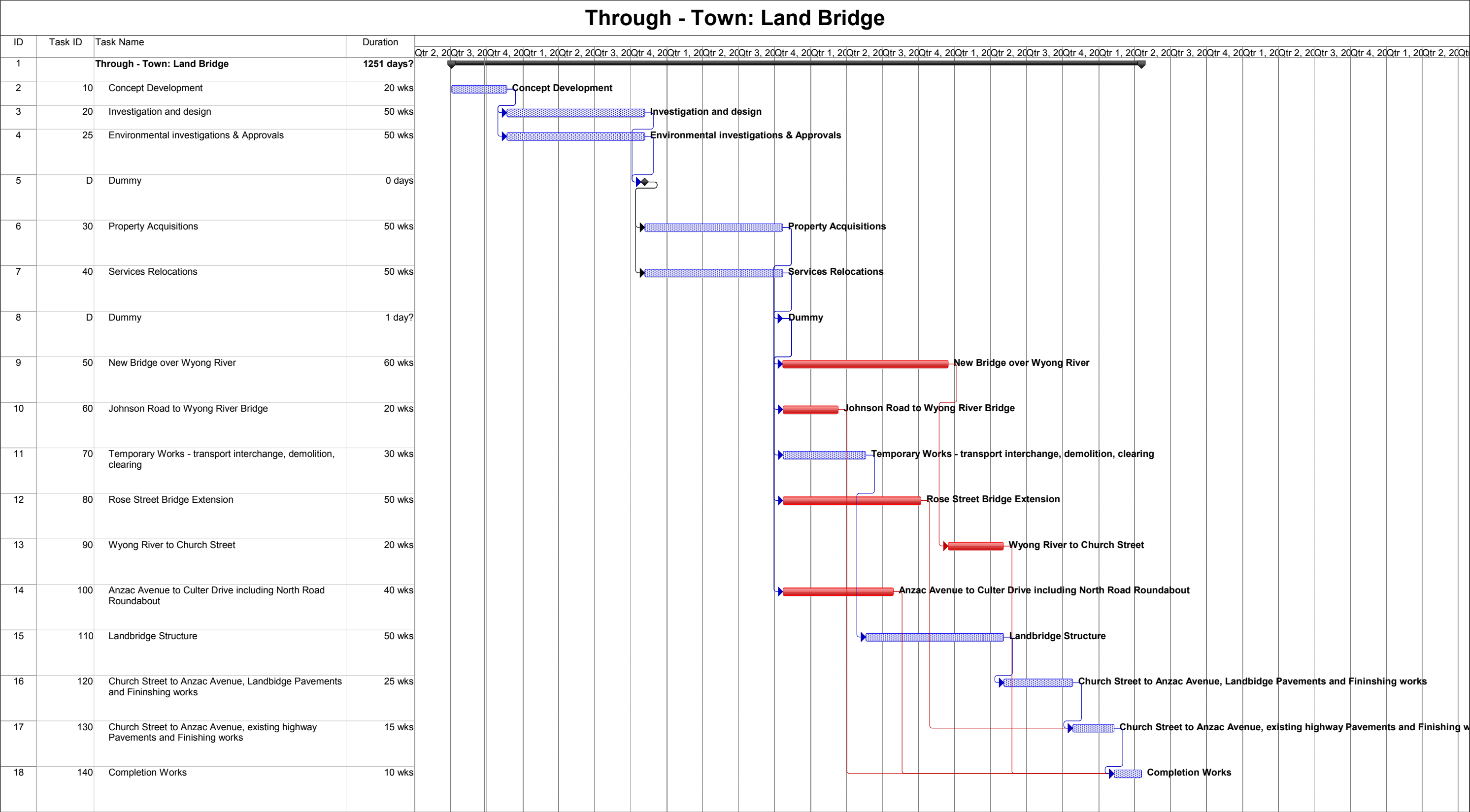
Client: Client: Roads & Maritime Services
 Project: Through Town & Bypass Options - Pacific Highway Wyong
 Option: Landbridge
 Detail: Public Utility Adjustments Quantification



ITEM	DESCRIPTION	UNIT	TOTAL	CONTINGENCY %	CONTINGENCY TOTAL	TOTAL VALUE
1	Power					
	Miscellaneous Power Adjustments - lv	item	\$5,000,000	100%	\$5,000,000	\$10,000,000
	Power Adjustments - hv	item	\$0	100%	\$0	\$0
	Notes:					
	Local power supply includes 415kv & 33kv adjustments including temporary power supply					
	including transformers, pits, temporary power, temporary generators etc					
	New infrastructure work allowed for within direct works estimate					
2	Sewer					
	Assumed 2no rising main at 150mm each to be adjusted	item	\$1,250,000	100%	\$1,250,000	\$2,500,000
	Gravity pit adjustments have been allowed within the direct works					
3	Water					
	Protection & Relocation of Water Utilities	item	\$1,750,000	100%	\$1,750,000	\$3,500,000
4	Telecommunications					
	Local Adjustments	item	\$1,500,000	100%	\$1,500,000	\$3,000,000
5	Gas					
	Protection & Relocation of Gas Utilities	item	\$2,000,000	100%	\$2,000,000	\$4,000,000
	Total Public Utility Adjustment		\$11,500,000	100%	\$11,500,000	\$23,000,000

Line	Item	Description	Quantity	Unit	Labour	Material	Plant	Subcontract	Rate	Total
1										
2		WYONG BYPASS - Land Bridge Option - From Nth of Johnson Road to 100m South Of Cutler Drive.								
3		Estimate - July12 - T Rajeswaran								
4	ITEM									
5										
6	1	GENERAL								
7	1.1	Property Adjustments	10	each				\$ 100,000	\$ 10,000	\$ 100,000
8	1.2	Provision for temp bus interchange and pedestrian access	1	each	\$ 8,547	\$ 354,560	\$ 4,440		\$ 367,547	\$ 367,547
9	1.3	Dilapidation survey & report.	300	each				\$ 172,800	\$ 576	\$ 172,800
10										
11		EE formula - =sum(7:10) General			\$ 8,547	\$ 354,560	\$ 4,440	\$ 272,800		\$ 640,347
12										
13	2	TRAFFIC CONTROL								
14	2.1	Traffic Control	1	Item	\$ 100,751	\$ 22,837	\$ 509,598	\$ 1,086,457	\$ 1,719,642	\$ 1,719,642
15		EE formula - =sum(13:14) Traffic Control			\$ 100,751	\$ 22,837	\$ 509,598	\$ 1,086,457		\$ 1,719,642
16										
17	3	ENVIRONMENTAL								
18	3.1	Sedimentation control	1	Item	\$ 54,036	\$ 16,278	\$ 31,251		\$ 101,565	\$ 101,565
19	3.2	Monitoring	1	item				\$ 79,248	\$ 79,248	\$ 79,248
20		EE formula - =sum(18:19) Environmental			\$ 54,036	\$ 16,278	\$ 31,251	\$ 79,248		\$ 180,813
21										
22		DEmolition								
23	4.1	Demolition - Johnson RD to Cutler Dr	1	Item	\$ 88,000	\$ 800	\$ 287,470	\$ 132,000	\$ 508,270	\$ 508,270
24	4.2	Station Masters building & Warner shops	1	item	\$ 58,000	\$ 3,000	\$ 136,419	\$ 31,800	\$ 229,219	\$ 229,219
25	4.2	Rail Corp maintenace yard	1	item	\$ 47,000	\$ 2,400	\$ 109,135	\$ 31,000	\$ 189,535	\$ 189,535
26		EE formula - =sum(22:25) Demolition			\$ 193,000	\$ 6,200	\$ 533,024	\$ 194,800		\$ 927,024
27										
28	5	Earthworks								
29		Earthworks - Johnson road to Cutler Dr	1,940	m	\$ 566,416	\$ 1,230,925	\$ 2,870,432	\$ 925,020	\$ 2,883	\$ 5,592,792
30	5.1	From Johnson Rd To Cutler Drive - Clear & grub, strip top soil, excavation, cut/fill, select, drainage blanket, unsuitable etc. Lgth is ch to chainage and excludes brdge deck.	1,940	m	\$ 566,416	\$ 1,230,925	\$ 2,870,432	\$ 925,020	\$ 2,883	\$ 5,592,792
31		EE formula - =sum(30) Earthworks			\$ 566,416	\$ 1,230,925	\$ 2,870,432	\$ 925,020		\$ 5,592,792
32										
33	6	DRAINAGE								
34	6.1	SWD including pipes, pits, K & G, subsoil, open drain etc.	5,800	m	\$ 396,675	\$ 1,088,517	\$ 508,541	\$ 972,098	\$ 511	\$ 2,965,830
35	6.2	Kerb & Gutter - SA, SF & SO types	11,140	m	\$ 31,792	\$ 282,351	\$ 72,325	\$ 225,400	\$ 55	\$ 611,868
36		EE formula - =sum(33:35) Drainge			\$ 428,467	\$ 1,370,868	\$ 580,865	\$ 1,197,498		\$ 3,577,698
37										
38	7	PAVEMENTS								
39	7.1	Local Roads	1	m2						
40	7.2	Pavement - Johnson Rd to Cutler Dr	51,740	m2	\$ 300,844	\$ 1,351,966	\$ 729,218	\$ 4,276,016	\$ 129	\$ 6,658,044
41	7.3	Bus lane corridor - line marking	2,240	m2				\$ 67,200	\$ 30	\$ 67,200
42		EE formula - =sum(39:42) Pavements			\$ 300,844	\$ 1,351,966	\$ 729,218	\$ 4,343,216		\$ 6,725,244
43										
44	8	BRIDGES & STRUCTURES								
45		Structures								

Line	Item	Description	Quantity	Unit	Labour	Material	Plant	Subcontract	Rate	Total
1										
2		WYONG BYPASS - Land Bridge Option - From Nth of Johnson Road to 100m South Of Cutler Drive.								
3		Estimate - July12 - T Rajeswaran								
46										
47		Bridge Structures								
48		Bridge No 1 - Wyong River	1,440	item	\$ 72,469	\$ 186,414	\$ 80,678	\$ 7,266,201	\$ 5,282	\$ 7,605,762
49	8.1/a	Prepare bridge corridor including Earth embankment on approaches.	1		\$ 20,834	\$ 41,636	\$ 53,183	\$ 6,762	\$ 122,415	\$ 122,415
50	8.1/b	Bridge across rail crossing including pedestrian walkway.	1,440	m2	\$ 1,188	\$ 108,000	\$ 8,022	\$ 6,950,484	\$ 4,908	\$ 7,067,694
51	8.1/c	Reinforced Earth wall including parapets	320	m2	\$ 50,447	\$ 36,778	\$ 19,473	\$ 308,955	\$ 1,299	\$ 415,653
52										
53	8.2	Bridge No 2 - Land Bridge	2,400	m2	\$ 2,046,409	\$ 3,295,558	\$ 743,026	\$ 1,612,280	\$ 3,207	\$ 7,697,273
54	8.2a	Earthworks under bridge	19,120	m3	\$ 55,572	\$ 2,275	\$ 525,390	\$ 313,698	\$ 47	\$ 896,934
55	8.2b	Sheet piling to excavation	1,760	m2				\$ 742,720	\$ 422	\$ 742,720
56	8.2c	Structure - Base, walls, columns & roof slab.	2,400	m2	\$ 1,986,877	\$ 3,173,284	\$ 215,480	\$ 485,582	\$ 2,442	\$ 5,861,223
57		F Type barrier & crash coudion etc	500	m	\$ 3,960	\$ 120,000	\$ 2,156	\$ 70,280	\$ 393	\$ 196,396
58										
59	8.3	Bridge 3 - Extend Rose street bridge over new underpass	720	m2				\$ 2,376,000	\$ 3,300	\$ 2,376,000
60	8.3a	All inclusive cost as per Land brdge costing above	720	m2				\$ 2,376,000	\$ 3,300	\$ 2,376,000
61										
62	8.4	Bridge No 4 - Refurbish existing brdge over Wyong River.	1,080	m2				\$ 1,944,000	\$ 1,800	\$ 1,944,000
63		EE formula - =sum(45:62) Bridge & structures			\$ 2,118,878	\$ 3,481,972	\$ 823,703	\$ 13,198,481		\$ 19,623,035
64										
65		9 MISCELLANEOUS								
66	9.1a	Lighting - Johnson Rd To Cutler Dr	120	no				\$ 1,830,400	\$ 15,253	\$ 1,830,400
67	9.2	Traffic Lights - Church st, Roase st, Anzac Ave & Nth Rd	4	no				\$ 1,152,000	\$ 288,000	\$ 1,152,000
68	9.3	Signs	116	no				\$ 147,450	\$ 1,271	\$ 147,450
69	9.4	Topsoil and Turf	7,720	m2	\$ 5,777	\$ 40,755	\$ 14,294	\$ 94,560	\$ 20	\$ 155,386
70	9.5	Concrete Medians	4,100	m2	\$ 87,067	\$ 173,496	\$ 15,949	\$ 158,342	\$ 106	\$ 434,854
71	9.6	Concrete shared path	13,425	m2	\$ 205,689	\$ 519,318	\$ 52,223	\$ 400,595	\$ 88	\$ 1,177,826
72	9.8	Hand rails & Ped fencing	980	Item				\$ 502,000	\$ 512	\$ 502,000
73	9.9	Noise Attenuation	1	m2						
74	9.1	Urban Design big no	1	item						
75	9.11	Guardrail / Wire rope	1,130	m				\$ 150,900	\$ 134	\$ 150,900
76		F Type barrier	600	m	\$ 4,950	\$ 150,000	\$ 2,695	\$ 10,350	\$ 280	\$ 167,995
77	9.12	Landscape - Remove & relocate palm trees, and general landscape	1	Item				\$ 2,000,000	\$ 2,000,000	\$ 2,000,000
78		EE formula - =sum(66:77) Miscellaneous			\$ 303,483	\$ 883,569	\$ 85,160	\$ 6,446,597		\$ 7,718,810
79										
80		EE formula - =sum(4:77)			\$ 4,074,422	\$ 8,719,175	\$ 6,167,691	\$ 27,744,116		\$ 46,705,404
81										
82										
		Total for all items			\$ 4,074,422	\$ 8,719,175	\$ 6,167,691	\$ 27,744,116		\$ 46,705,404



Project: Through-Town Land Bridge.m
Date: Tue 25/09/12

Task

Task Progress

Critical Task

Critical Task Progress

Milestone

Summary

Rolled Up Task

Rolled Up Critical Task

Milestone

Summary

Rolled Up Task

Rolled Up Critical Task

Rolled Up Milestone

Rolled Up Progress

Split

External Tasks

Rolled Up Milestone

Rolled Up Progress

Split

External Tasks

Project Summary

Group By Summary

Inactive Task

Inactive Milestone

Project Summary

Group By Summary

Inactive Task

Inactive Milestone

Inactive Summary

Manual Task

Duration-only

Manual Summary Rollup

Inactive Summary

Manual Task

Duration-only

Manual Summary Rollup

Manual Summary

Start-only

Finish-only

Deadline

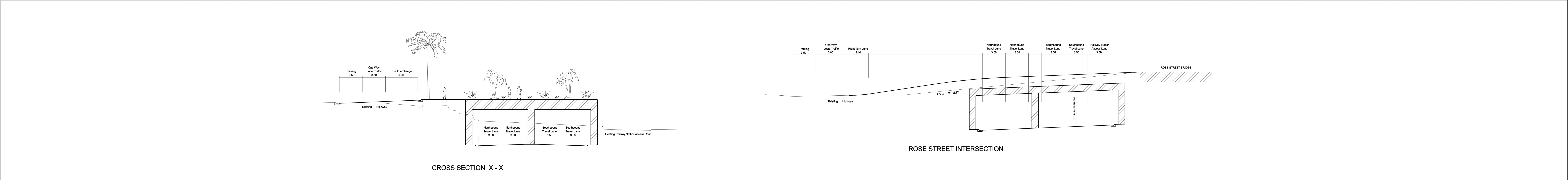
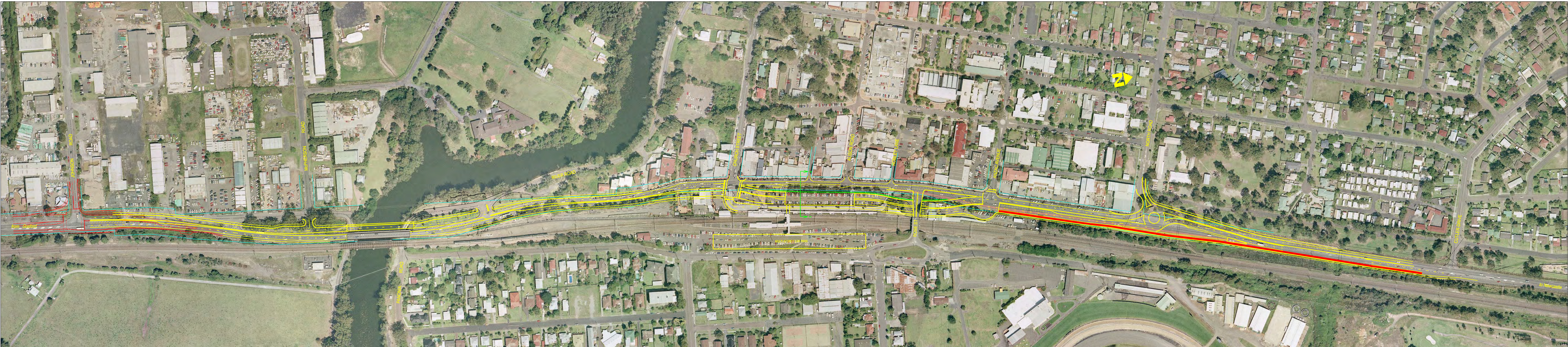
Manual Summary

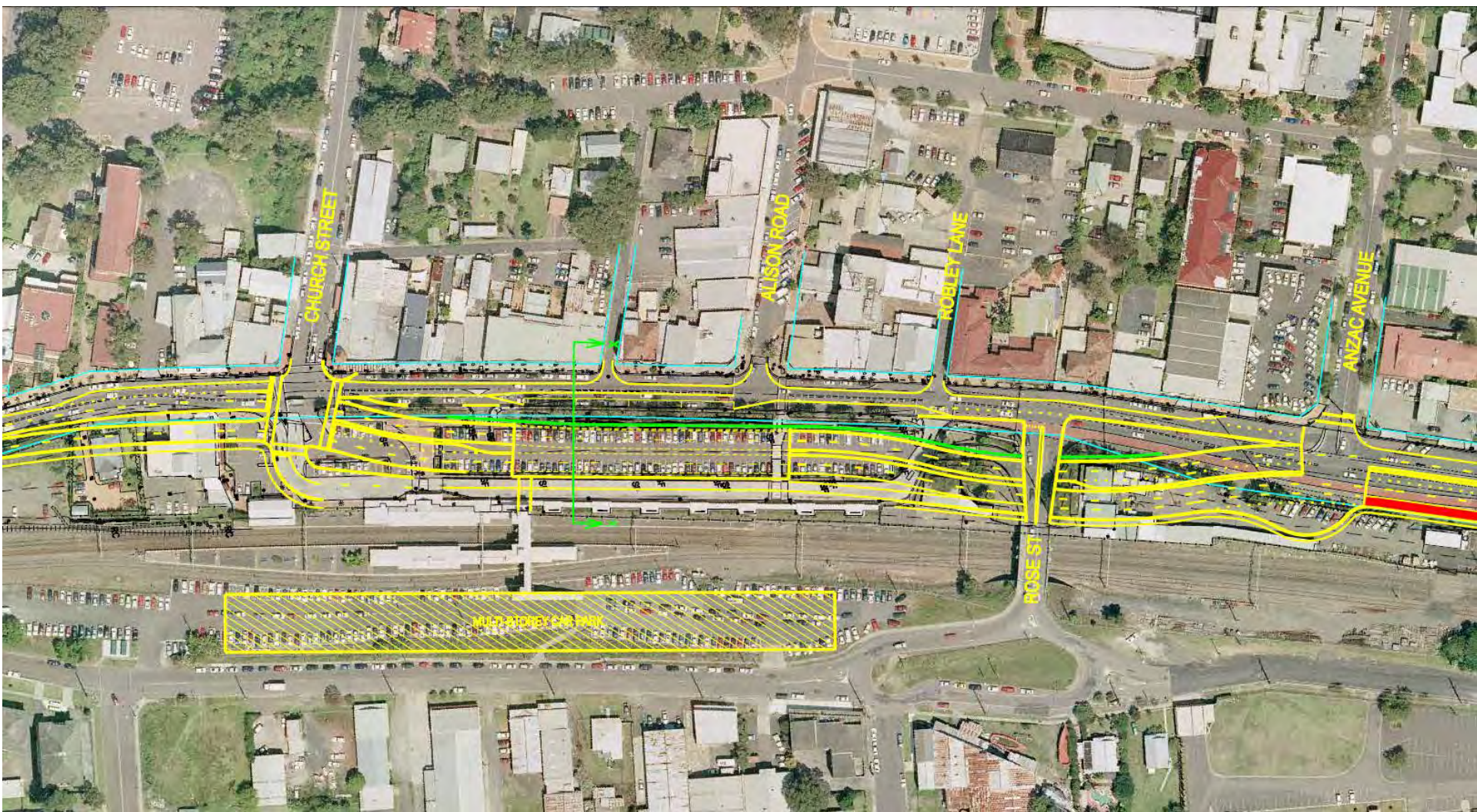
Start-only

Finish-only

Deadline

Page 1





Appendix 6

Howarth Street

- Scope
- Estimate
- Program
- RMS Drawings

Howarth Street

Scope

The Howarth Street alternative is a new one-way two-lane southbound carriageway east of the railway line along Howarth Street with the existing Pacific Highway becoming northbound only. The road would be as close to the railway line as possible and cross over the railway line just north of Rose Street and just south of the existing railway station.

- The southern limit is assumed to be just north of the intersection of Johnson Road and the Pacific Highway. The intersection is to remain in the current configuration and operate for the Pacific Highway with all current turning movements retained i.e. no intersection improvements.
- A one-way service road between Johnson Road and the Wyong River together with an upgrade to South Tacoma Road up to a position just under the existing Rail Bridge. A new intersection with South Tacoma Road and McPherson Road.
- New Bridge over the Wyong River for northbound traffic.
- Refurbish the existing road bridge over the Wyong River consistent with the expected life of the upgraded highway, 20 years.
- Upgrade River Road, local adjustment with left in, left out to northbound traffic. No access for southbound.
- New dual carriageway Pacific Highway from Johnson Road to just north of Wyong River.
- New two lane single carriageway for southbound traffic from Wyong River up over the railway line south of the existing railway station, past Warner Avenue and Rose Street, up over the railway line north of Rose Street back to the existing Pacific Highway just south of North Road.
- New bridges over the rail line north and south of railway station.
- High level road embankment to be supported on reinforced soil walls.
- New traffic signals at Church Street, Anzac Avenue and North Road intersections.
- New left in, left out intersections at South Tacoma Road, River Road, Alison Road.
- Traffic signal pedestrian crossing at Alison Road.
- Bridge extension over the bus-way at Rose Street.
- New bus access road from southbound carriageway under Rose Street to the railway station and behind the Warner Shops complex and Station Masters Cottage back to the southbound carriageway.
- Retaining walls as required.
- Shared path cycle-ways from Johnson Road (south) to Cutler Drive (north).
- All highway pavements to be new heavy duty bound base with deep asphalt overlay.
- Urban standard throughout entire length of works, i.e. to include street lighting, kerb and gutter drainage, shared pedestrian cycle-way path, property access, landscaping and parking.
- Modifications to the Station Masters Cottage and Warner Shops complex
- The northern limit is 100 m south of Cutler Drive.

Client: Roads & Maritime Services
 Project: Through Town & Bypass Options - Pacific Highway Wyong
 Option: Howarth St
 Detail: Project Summary



No	Item	Estimate (Exc Contingency)	Contingency		Estimate (Inc Contingency)	% of Total Estimate
			%	Amount		
1	Project Development					
1.1	Route / Concept / EIS	\$2,540,000	40%	\$1,016,000	\$3,556,000	
1.2	Project Management Services	\$364,000	30%	\$109,200	\$473,200	
1.3	Client Representation	\$33,280	10%	\$3,328	\$36,608	
	Sub total	\$2,937,280	38%	\$1,128,528	\$4,065,808	2.1%
2	Investigation and Design					
2.1	Investigation and Design	\$4,187,500	50%	\$2,093,750	\$6,281,250	
2.2	Project Management Services	\$581,245	30%	\$174,374	\$755,619	
2.3	Client Representation	\$24,941	10%	\$2,494	\$27,435	
	Sub total	\$4,793,686	47%	\$2,270,618	\$7,064,303	3.6%
3	Property Acquisitions					
3.1	Property Acquisitions	\$7,707,500	60%	\$4,624,500	\$12,332,000	
3.2	Professional Services for Property	\$115,613	30%	\$34,684	\$150,296	
3.3	Project Management Services	\$153,400	30%	\$46,020	\$199,420	
3.4	Client Representation	\$36,920	10%	\$3,692	\$40,612	
	Sub total	\$8,013,433	59%	\$4,708,896	\$12,722,328	6.6%
4	Public Utility Adjustments					
4.1	Public Utility Adjustments	\$17,125,000	100%	\$17,125,000	\$34,250,000	
4.2	Project Management Services	\$442,000	30%	\$132,600	\$574,600	
4.3	Client Representation	\$33,280	10%	\$3,328	\$36,608	
	Sub total	\$17,600,280	98%	\$17,260,928	\$34,861,208	18.0%
5	Construction of Works					
5.1	Infrastructure	\$94,140,000	35%	\$32,949,000	\$127,089,000	
5.2	Project Management Services	\$5,355,050	30%	\$1,606,515	\$6,961,565	
5.3	Client Representation	\$158,730	10%	\$15,873	\$174,603	
	Sub total	\$99,653,780	35%	\$34,571,388	\$134,225,168	69.3%
6	Handover					
6.1	Handover	\$360,000	50%	\$180,000	\$540,000	
6.2	Project Management Services	\$92,300	30%	\$27,690	\$119,990	
6.3	Client Representation	\$9,230	10%	\$923	\$10,153	
	Sub total	\$461,530	45%	\$208,613	\$670,143	0.3%
	TOTAL	\$133,459,988	45%	\$60,148,970	\$193,608,959	100%

No	Item	Estimate (Exc Contingency)	Estimate (Contingency)	Estimate Total
Total Project Management Allowances				
i	Project Management	\$6,987,995	\$2,096,399	\$9,084,394
ii	Client Presentation	\$296,381	\$29,638	\$326,019
Reality Checks				
		Cost / km (\$m)	Length of Road (km)	
iii	Project Cost per kilometer	\$93.98	2.06	
iv	Project Cost per lane kilometer	\$23.50	8.24	

Client: Roads & Maritime Services
 Project: Through Town & Bypass Options - Pacific Highway Wyong
 Option: Howarth St
 Detail: Project Development



ITEM	DESCRIPTION	UNIT	RATE	TOTAL	COMMENTS
1.1	Route / Concept / EIS				Estimated Duration - 12months
1.1.1	Concept Design				
	Integrated Design Consultant - Concept Road, Bridge, Drainage, Pavement, Lighting, Landscape etc	Item	\$ 700,000	\$ 700,000	
1.1.2	Preliminary Geotech				
	Investigation and reporting, test pits, boreholes, ground model, soil testing etc	item	\$ 300,000	\$ 300,000	
	Ground support model	item	\$ 20,000	\$ 20,000	
1.1.3	Traffic Modelling				
	Traffic model for concept design solutions	item	\$ 75,000	\$ 75,000	
1.1.4	Community Liaison				
	Included within project management services	item	\$ -	\$ -	
1.1.5	Environmental Investigations EIS				
	EIS REF	Item	\$ 1,000,000	\$ 1,000,000	
	Water quality testing	item	\$ 10,000	\$ 10,000	
1.1.6	Survey				
	Ground survey model	item	\$ 200,000	\$ 200,000	
1.1.7	Specialist Sub Consultants				
	Urban Design	item	\$ 60,000	\$ 60,000	
	Noise	item	\$ 100,000	\$ 100,000	
	Hydrology	item	\$ 25,000	\$ 25,000	
	Archaeology	item	\$ 50,000	\$ 50,000	
	Total Item 1.1			\$ 2,540,000	

Notes / Assumptions

ITEM	DESCRIPTION	UTILISATION	WEEKS	RATE	TOTAL	COMMENTS
1.2	Project Management Services					Estimated Duration - 12 months
	Project manager	100%	52	\$ 5,100	\$ 265,200	
	Clerical assistant	20%	52	\$ 2,000	\$ 20,800	
	Assisting Engineer	50%	52	\$ 3,000	\$ 78,000	
	Total Item 1.2				\$ 364,000	

Notes / Assumptions

All rates are weekly

ITEM	DESCRIPTION	UTILISATION	WEEKS	RATE	TOTAL	COMMENTS
1.3	Client Representation					Estimated Duration - 12 months
	Project manager	10%	52	\$ 5,100	\$ 26,520	
	Clerical assistant	5%	52	\$ 2,000	\$ 5,200	
	Assisting Engineer	1%	52	\$ 3,000	\$ 1,560	
	Total Item 1.3				\$ 33,280	

Notes / Assumptions

All Rates are weekly

TOTAL ITEM	\$ 2,937,280					
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Client: Roads & Maritime Services
 Project: Through Town & Bypass Options - Pacific Highway Wyong
 Option: Howarth St
 Detail: Investigation and Design



ITEM	DESCRIPTION	UNIT	RATE	TOTAL	COMMENTS
2.1	<u>Investigation and Design</u>				Estimated Duration - 9 months
2.1.1	Investigation & Design				
	Integrated Design Consultant - Road, Bridge, Staging, Drainage, Pavement, Lighting, Landscape, Line Marking, Signage, Traffic Signals, Property Adjustments, Services / Utilities, Roadside Furniture, ITS etc	item	\$ 3,375,000	\$ 3,375,000	
2.1.2	Detailed Geotechnical Design				
	Investigation and reporting, test pits, boreholes, ground model, soil testing etc	item	\$ 225,000	\$ 225,000	
2.1.3	Survey				
	Ground survey model	item	\$ 187,500	\$ 187,500	
2.1.4	Independent Design Verification				
	Independent Design Review	item	\$ -	\$ -	
2.1.5	Specialist Consultants				
	Urban Design	item	\$ 100,000	\$ 100,000	
	Noise	item	\$ 100,000	\$ 100,000	
	Hydrology	item	\$ 100,000	\$ 100,000	
	Miscellaneous Consultants; Allowance	item	\$ 100,000	\$ 100,000	Commerical advice, communit consultation, community advice etc
	Total Item 2.1			\$ 4,187,500	

ITEM	DESCRIPTION	UTILISATION	WEEKS	RATE	TOTAL	COMMENTS
2.2	<u>Project Management Services</u>					Estimated Duration - 9 months
	Project manager	100%	39	\$ 5,100	\$ 198,747	
	Clerical assistant	20%	39	\$ 2,000	\$ 15,588	
	Assisting Engineer	100%	39	\$ 3,000	\$ 116,910	
	Tender Documentation	item	1	\$ 250,000	\$ 250,000.00	
	Total Item 2.2				\$ 581,245	

Notes / Assumptions
 All rates are weekly

ITEM	DESCRIPTION	UTILISATION	WEEKS	RATE	TOTAL	COMMENTS
2.3	<u>Client Representation</u>					Estimated Duration - 9 months
	Project manager	10%	39	\$ 5,100	\$ 19,875	
	Clerical assistant	5%	39	\$ 2,000	\$ 3,897	
	Assisting Engineer	1%	39	\$ 3,000	\$ 1,169	
	Total Item 2.3				\$ 24,941	

Notes / Assumptions
 All rates are weekly

TOTAL ITEM	\$ 4,793,686					
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Client: Roads & Maritime Services
 Project: Through Town & Bypass Options - Pacific Highway Wyong
 Option: Howarth St
 Detail: Property Acquisitions



ITEM	DESCRIPTION	UNIT	QTY	RATE	TOTAL	COMMENTS
3.1	Property Acquisitions					Estimated Duration - 2 years
	Commerical Property	sq.m	1,850	\$ 2,800	\$ 5,180,000	Refer to property acquisition quantification
	Railcorp Land	sq.m	6,740	\$ 375	\$ 2,527,500	
	Council Land	sq.m	-	\$ -	\$ -	
	Total Item 3.1				\$ 7,707,500	

Notes / Assumptions

ITEM	DESCRIPTION	TOTAL VALUE OF PROPERTY	% FEE	Total	COMMENTS
3.2	Professional Services for Property				Estimated Duration - 2 years
	Property Consultant & Valuation Expert	\$ 7,707,500	1.00%	\$ 77,075	
	Legal Advice	\$ 7,707,500	0.50%	\$ 38,538	
	Total Item 3.2			\$ 115,613	

Notes / Assumptions

ITEM	DESCRIPTION	UTILISATION	WEEKS	RATE	TOTAL	COMMENTS
3.3	Project Management Services					Estimated Duration - 2 years
	Project manager	25%	104	\$ 5,100	\$ 132,600	
	Clercial assistant	10%	104	\$ 2,000	\$ 20,800	
	Total Item 3.3				\$ 153,400	

Notes / Assumptions

All rates are weekly

ITEM	DESCRIPTION	UTILISATION	WEEKS	RATE	TOTAL	COMMENTS
3.4	Client Representation					Estimated Duration - 2 years
	Project manager	5%	104	\$ 5,100	\$ 26,520	
	Clercial assistant	5%	104	\$ 2,000	\$ 10,400	
	Total Item 3.4				\$ 36,920	

Notes / Assumptions

All rates are weekly

TOTAL ITEM	\$ 8,013,433
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Client: Roads & Maritime Services
 Project: Through Town & Bypass Options - Pacific Highway Wyong
 Option: Howarth St
 Detail: Public Utility Adjustments



ITEM	DESCRIPTION	UNIT	TOTAL	COMMENTS
4.1	Adjust Utilities			Estimated Duration - 12 months
	Water Utilities			
	Relocation of services - Water	item	\$ 3,000,000	Refer to public utility quantification spreadsheet
	Relocation of services - Sewer	item	\$ 1,875,000	Refer to public utility quantification spreadsheet
	Telecommunications			
	Relocation of services	item	\$ 2,250,000	Refer to public utility quantification spreadsheet
	Power / Electrical Utilities HV & LV			
	Relocation of services	item	\$ 7,500,000	Refer to public utility quantification spreadsheet
	Gas Utilities HP & LP			
	Relocation of services	item	\$ 2,500,000	Refer to public utility quantification spreadsheet
	Total Item 4.1		\$ 17,125,000	

Notes

Please see spreadsheet 'Services' for further breakdown

ITEM	DESCRIPTION	UTILISATION	WEEKS	RATE	TOTAL	COMMENTS
4.2	Project Management Services					Estimated Duration - 12 months
	Project manager	100%	52	\$ 5,100	\$ 265,200	
	Assisting Engineer	100%	52	\$ 3,000	\$ 156,000	
	Clerical assistant	20%	52	\$ 2,000	\$ 20,800	
	Total Item 4.2				\$ 442,000	

Notes / Assumptions

All rates are weekly

ITEM	DESCRIPTION	UTILISATION	WEEKS	RATE	TOTAL	COMMENTS
4.3	Client Representation					Estimated Duration - 12 months
	Project manager	10%	52	\$ 5,100	\$ 26,520	
	Clerical assistant	5%	52	\$ 2,000	\$ 5,200	
	Assisting Engineer	1%	52	\$ 3,000	\$ 1,560	
	Total Item 4.3				\$ 33,280	

Notes / Assumptions

All rates are weekly

TOTAL ITEM						\$ 17,600,280
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Client: Roads & Maritime Services
 Project: Through Town & Bypass Options - Pacific Highway Wyong
 Option: Howarth St
 Detail: Construction of Works



ITEM	DESCRIPTION	TOTAL	COMMENTS
5.1	Infrastructure		Estimated Duration - 2.75 years
	Direct Works Costs	\$ 65,340,000	
	Overhead Costs	\$ 16,500,000	
	Contractors Margin	\$ 12,300,000	
	Total Item 5.1	\$ 94,140,000	

ITEM	DESCRIPTION	UNIT	RATE	TOTAL	COMMENTS
5.2 (a)	Project Management Services - Support Services				Estimated Duration - 2.75 years
	Design Support	item	\$ 168,750	\$ 168,750	
	Urban Design	item	\$ 100,000	\$ 100,000	
	Geotechnical Design Support Services	item	\$ 50,000	\$ 50,000	
	Quality & Safety Audit Services	item	\$ 25,000	\$ 25,000	
	Community Consultation	item	\$ 150,000	\$ 150,000	
	Traffic Management Support	item	\$ 25,000	\$ 25,000	
	Legal Services	item	\$ 200,000	\$ 200,000	
	Reports, Conditions of Approval etc	item	\$ 50,000	\$ 50,000	
	Community Liaison Representative	item	\$ 50,000	\$ 50,000	
	Survey	item	\$ 20,000	\$ 20,000	
	Commercial Advisor	item	\$ 100,000	\$ 100,000	
	Insurance - PA	item	\$ 941,400	\$ 941,400	
	Total Item 5.2 (a)			\$ 1,880,150	

ITEM	DESCRIPTION	UTILISATION	NO	WEEKS	RATE	TOTAL	COMMENTS
5.2 (b)	Project Management Services - Staff						Estimated Duration - 2.75 years
	PM Staff: Management						
	Project Manager	100%	1	143	\$ 5,100	\$ 729,300	
	Project Engineers	100%	2	143	\$ 3,750	\$ 1,072,500	
	Surveillance Officers	100%	2	143	\$ 3,600	\$ 1,029,600	
	Health & Safety Advisor	50%	1	143	\$ 3,000	\$ 214,500	
	Quality Advisor	50%	1	143	\$ 3,000	\$ 214,500	
	Environmental Advisor	50%	1	143	\$ 3,000	\$ 214,500	
	Total Item 5.2 (b)					\$ 3,474,900	
	Total Item 5.2 (a) & (b)					\$ 5,355,050	

Notes / Assumptions
 All rates are weekly

ITEM	DESCRIPTION	UTILISATION	WEEKS	RATE	TOTAL	COMMENTS
5.3	Client Representation					Estimated Duration - 2.75 years
	Senior Management Review	10%	143	\$ 4,000	\$ 57,200	
	Client Manager	10%	143	\$ 5,100	\$ 72,930	
	Clerical assistant	10%	143	\$ 2,000	\$ 28,600	
	Total Item 5.3				\$ 158,730	

Notes / Assumptions
 All rates are weekly

TOTAL ITEM	\$ 99,653,780					
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Client: Roads & Maritime Services
 Project: Through Town & Bypass Options - Pacific Highway Wyong
 Option: Howarth St
 Detail: Handover



ITEM	DESCRIPTION	UNIT	QTY	RATE	TOTAL	COMMENTS
6.1	Handover					Estimated Duration - 6 Months
	Final Reporting	item	1	\$ 100,000	\$ 100,000	
	Legal	item	1	\$ 100,000	\$ 100,000	
	Claims Response	item	1	\$ 100,000	\$ 100,000	
	Noise Survey	item	1	\$ 20,000	\$ 20,000	
	Traffic Verification	item	1	\$ 20,000	\$ 20,000	
	Environmental Monitors	item	1	\$ 20,000	\$ 20,000	
	Total Item 6.1				\$ 360,000	

Notes / Assumptions

ITEM	DESCRIPTION	UTILISATION	WEEKS	RATE	TOTAL	COMMENTS
6.2	Project Management Services					Estimated Duration - 6 months
	Project manager	50%	26	\$ 5,100	\$ 66,300	
	Clerical assistant	50%	26	\$ 2,000	\$ 26,000	
	Total Item 6.2				\$ 92,300	

Notes / Assumptions

All rates are weekly

ITEM	DESCRIPTION	UTILISATION	WEEKS	RATE	TOTAL	COMMENTS
6.3	Client Representation					Estimated Duration - 6 months
	Project manager	5%	26	\$ 5,100	\$ 6,630	
	Clerical assistant	5%	26	\$ 2,000	\$ 2,600	
	Total Item 6.3				\$ 9,230	

Notes / Assumptions

All rates are weekly

TOTAL ITEM						\$ 461,530
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Client: Roads & Maritime Services
 Project: Through Town & Bypass Options - Pacific Highway Wyong
 Option: Howarth St
 Detail: Property Acquisitions Quantification



ITEM	DESCRIPTION	NO	FLOOR AREA	PROPERTY AREA	COMMENTS
<u>1</u>	<u>Property Acquisition</u>				
1.1	Commerical Property	1	180	800	Station Masters Cottage
		1	670	1050	Railway Sq shops (Corner of Church St)
	Total	2	850	1850	Property Area brought forward to summary

ITEM	DESCRIPTION	LAND OWNER	LAND OWNER	COMMENTS
<u>2</u>	<u>Land Acquisition</u>			
2.1	Wyong River Bridge to Church St	6,300	Railcorp	Along Railway lane before station masters cottage
2.2	Church St to Rose St	-	Council	Section 1 within train station car park
		-	Council	Section 2 within train station car park
2.3	Rose St to Anzac St	-	Council	Rose St to Anzac St along railway line
		440		Along Rail lane - Howarth St
2.4	Anzac St to North Road	-	Council	Along Railway lane
		-	Council	Anzac St intersection allowances
2.5	North Road to End	-	Council	Along railway track
	Total	6,740		
	Council Owned Land	-		
	Rail Corp Owned Land	6,740		

Client: Roads & Maritime Services
Project: Through Town & Bypass Options - Pacific Highway Wyong
Option: Howarth St
Detail: Public Utility Adjustments Quantification



ITEM	DESCRIPTION	UNIT	TOTAL	CONTINGENCY %	CONTINGENCY TOTAL	TOTAL VALUE
1	Power					
	Miscellaneous Power Adjustments - lv	item	\$7,500,000	100%	\$7,500,000	\$15,000,000
	Power Adjustments - hv	item	\$0	100%	\$0	\$0
	Notes:					
	Local power supply includes 415kv & 33kv adjustments including temporary power supply					
	including transformers, pits, temporary power, temporary generators etc					
	New infrastructure work allowed for within direct works estimate					
2	Sewer					
	Assumed 2no rising main at 150mm each to be adjusted	item	\$1,875,000	100%	\$1,875,000	\$3,750,000
	Gravity pit adjustments have been allowed within the direct works					
3	Water					
	Protection & Relocation of Water Utilities	item	\$3,000,000	100%	\$3,000,000	\$6,000,000
4	Telecommunications					
	Local Adjustments	item	\$2,250,000	100%	\$2,250,000	\$4,500,000
5	Gas					
	Protection & Relocation of Gas Utilities	item	\$2,500,000	100%	\$2,500,000	\$5,000,000
	Total Public Utility Adjustment		\$17,125,000	100%	\$17,125,000	\$34,250,000




















Line	Item	Description	Quantity	Unit	Labour	Material	Plant	Subcontract	Rate	Total
1										
2		WYONG BYPASS - Howarth Street - From Nth of Johnson Road to 100m South Of Cutler Drive.								
3		Estimate - July12 - T Rajeswaran								
4	ITEM									
5										
6	1	GENERAL								
7	1.1	Property Adjustments	20	each				\$ 200,000	\$ 10,000	\$ 200,000
8	1.2	Provision for temp bus interchange and pedestrian access	1	each	\$ 8,547	\$ 354,560	\$ 4,440		\$ 367,547	\$ 367,547
9	1.3	Dilapidation survey & report.	70	each				\$ 40,320	\$ 576	\$ 40,320
10										
11		EE formula - =sum(7:10) General			\$ 8,547	\$ 354,560	\$ 4,440	\$ 240,320		\$ 607,867
12										
13	2	TRAFFIC CONTROL								
14	2.1	Traffic Control	1	Item	\$ 175,909	\$ 90,976	\$ 595,834	\$ 1,290,503	\$ 2,153,222	\$ 2,153,222
15		EE formula - =sum(13:14) Traffic Control			\$ 175,909	\$ 90,976	\$ 595,834	\$ 1,290,503		\$ 2,153,222
16										
17	3	ENVIRONMENTAL								
18	3.1	Sedimentation control	1	Item	\$ 93,453	\$ 21,265	\$ 47,447		\$ 162,165	\$ 162,165
19	3.2	Monitoring	1	item				\$ 88,293	\$ 88,293	\$ 88,293
20		EE formula - =sum(18:19) Environmental			\$ 93,453	\$ 21,265	\$ 47,447	\$ 88,293		\$ 250,458
21										
22		DEmolition								
23	4.1	Demolition - Johnson RD to Cutler Dr & Howarth St.	1	Item	\$ 122,157	\$ 1,100	\$ 395,271	\$ 147,750	\$ 666,279	\$ 666,279
24	4.2	Station Masters building & Warner shops	1	item	\$ 14,300	\$ 780	\$ 35,469	\$ 11,700	\$ 62,249	\$ 62,249
25	4.2	Rail Corp maintenace yard	1	item	\$ 25,000	\$ 1,200	\$ 54,568	\$ 109,000	\$ 189,768	\$ 189,768
26		EE formula - =sum(22:25) Demolition			\$ 161,457	\$ 3,080	\$ 485,308	\$ 268,450		\$ 918,295
27										
28	5	Earthworks								
29		Earthworks - Johnson road to Cutler Dr & Howarth St	3,430	m	\$ 879,345	\$ 1,804,228	\$ 4,468,004	\$ 1,433,564	\$ 2,503	\$ 8,585,141
30	5.1	From Johnson Rd To Cutler Drive & Howarth St - Clear & grub, strip top soil, excavation, cut/fill, select, drainage blanket, unsuitable etc. Lgth is ch to chainage and excludes brdge deck. Johnson Rd to Cutler = 1,940m, Howarth st = 1,100m & in carpark = 360m . Allup 3 330mtrs in lenth	3,430	m	\$ 879,345	\$ 1,804,228	\$ 4,468,004	\$ 1,433,564	\$ 2,503	\$ 8,585,141
31		EE formula - =sum(30) Earthworks			\$ 879,345	\$ 1,804,228	\$ 4,468,004	\$ 1,433,564		\$ 8,585,141
32										
33	6	DRAINAGE								
34	6.1	SWD including pipes, pits, open drain, GPT etc	7,688	m	\$ 504,358	\$ 1,408,489	\$ 648,735	\$ 1,283,137	\$ 500	\$ 3,844,720
35	6.2	Kerb & Gutter - SA, SF & SO types	17,345	m	\$ 50,126	\$ 440,659	\$ 113,993	\$ 349,551	\$ 55	\$ 954,329
36		EE formula - =sum(34:35) Drainage			\$ 554,485	\$ 1,849,148	\$ 762,728	\$ 1,632,688		\$ 4,799,049
37										
38	7	PAVEMENTS								
39	7.1	Local Roads	900	m2	\$ 4,220	\$ 14,701	\$ 18,148	\$ 12,362	\$ 55	\$ 49,431
40	7.2	Pavement - Johnson Rd to Cutler Dr + Howarth St + linemarking.	71,370	m2	\$ 409,611	\$ 1,864,924	\$ 987,962	\$ 5,328,997	\$ 120	\$ 8,591,494
41		EE formula - =sum(39:40) Pavements			\$ 413,831	\$ 1,879,626	\$ 1,006,110	\$ 5,341,359		\$ 8,640,926
42										

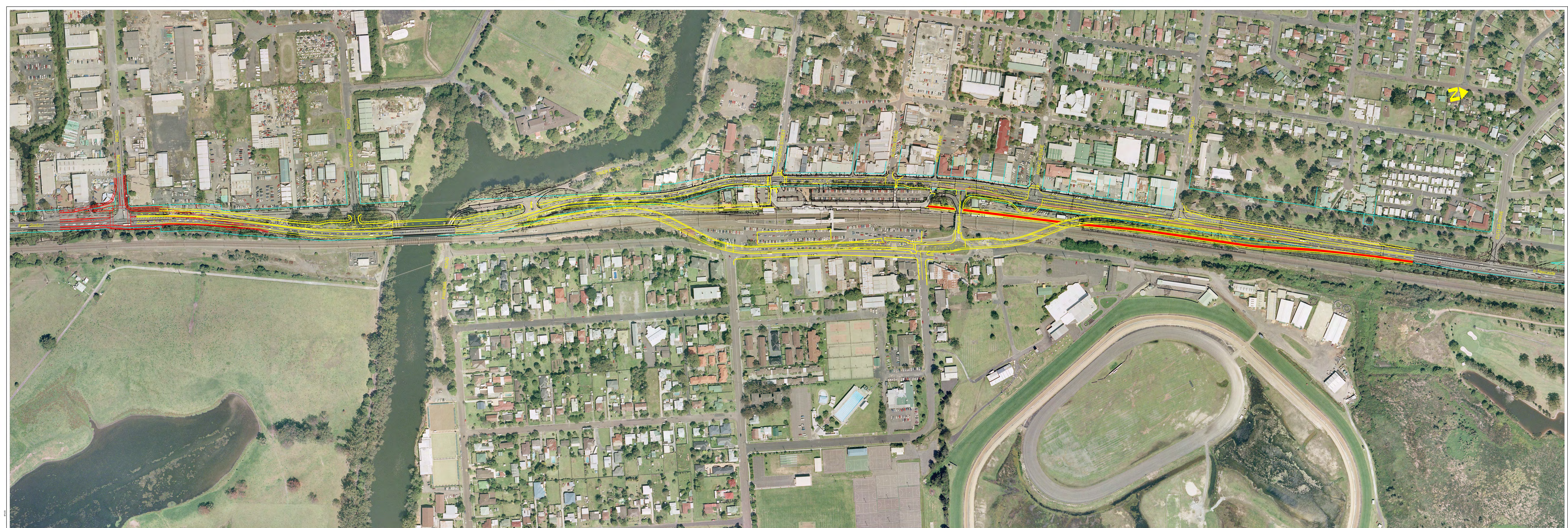
Line	Item	Description	Quantity	Unit	Labour	Material	Plant	Subcontract	Rate	Total
1										
2		WYONG BYPASS - Howarth Street - From Nth of Johnson Road to 100m South Of Cutler Drive.								
3		Estimate - July12 - T Rajeswaran								
43	8	BRIDGES & STRUCTURES								
44		Structures								
45	8.1	Retaining Walls - Block infill & Concrete Retaining wall.	2,712	m2	\$ 672,350	\$ 1,197,395	\$ 251,238	\$ 775,115	\$ 1,068	\$ 2,896,097
46	8.2	Retaining Walls - Block infill & Concrete Retaining wall. - Along Howarth St	150	m2				\$ 165,000	\$ 1,100	\$ 165,000
47										
48		Bridge Structures								
49		Bridge No 1 - Wyong River	1,440	item	\$ 72,469	\$ 186,803	\$ 80,678	\$ 7,266,201	\$ 5,282	\$ 7,606,151
50	8.1/a	Prepare bridge corridor including Earth embankment on approaches.	1		\$ 20,834	\$ 41,636	\$ 53,183	\$ 6,762	\$ 122,415	\$ 122,415
51	8.1/b	Bridge across wyong river including pedestrian walkway.	1,440	m2	\$ 1,188	\$ 108,000	\$ 8,022	\$ 6,950,484	\$ 4,908	\$ 7,067,694
52	8.1/c	Reinforced Earth wall including parapets	320	m2	\$ 50,447	\$ 37,167	\$ 19,473	\$ 308,955	\$ 1,300	\$ 416,042
53										
54	8.3	Bridge 2 - Extend Rose street bridge over new underpass	180	m2	\$ 4,648	\$ 19,660	\$ 35,349	\$ 1,421,983	\$ 8,231	\$ 1,481,639
55		bridge	180	m2		\$ 11,000		\$ 1,267,785	\$ 7,104	\$ 1,278,785
56		Earthworks under bridge	1,200	m3	\$ 4,400	\$ 1,160	\$ 35,214	\$ 109,680	\$ 125	\$ 150,454
57		F Type barrier & crash cushion etc	30	m	\$ 248	\$ 7,500	\$ 135	\$ 44,518	\$ 1,747	\$ 52,400
58										
59	8.4	Bridge No 3 - Refurbish existing bridge over Wyong River.	1,080	m2				\$ 1,944,000	\$ 1,800	\$ 1,944,000
60										
61	8.5	Bridge No 4 - Over Rail Track - Northern End	942	m2	\$ 151,369	\$ 204,919	\$ 83,622	\$ 5,726,309	\$ 6,546	\$ 6,166,219
62	8.5/a	Earthwork	1	Item	\$ 27,500		\$ 68,800	\$ 10,500	\$ 106,800	\$ 106,800
63	8.5/b	Bridge across rail crossing	942	m2	\$ 34,546	\$ 11,000	\$ 198	\$ 3,350,519	\$ 3,605	\$ 3,396,262
64	8.5/c	Reinforced Earth wall including parapets	1,680	m2	\$ 60,345	\$ 173,914	\$ 11,911	\$ 2,361,094	\$ 1,552	\$ 2,607,264
65	8.5/d	Insitu retaining wall	60	m	\$ 28,978	\$ 20,005	\$ 2,713	\$ 4,196	\$ 932	\$ 55,892
66										
67	8.6	Bridge No 5 - Over Rail Track - Southern End	942	m2	\$ 137,619	\$ 204,919	\$ 49,222	\$ 6,019,859	\$ 6,806	\$ 6,411,619
68	8.6/a	Earthwork	1	Item	\$ 13,750		\$ 34,400	\$ 5,250	\$ 53,400	\$ 53,400
69	8.6/b	Bridge across rail crossing	942	m2	\$ 34,546	\$ 11,000	\$ 198	\$ 3,350,519	\$ 3,605	\$ 3,396,262
70	8.6/c	Reinforced Earth wall including parapets	1,680	m2	\$ 60,345	\$ 173,914	\$ 11,911	\$ 2,659,894	\$ 1,730	\$ 2,906,064
71	8.6/d	Insitu retaining wall	60	m	\$ 28,978	\$ 20,005	\$ 2,713	\$ 4,196	\$ 932	\$ 55,892
72										
73		Bridge No 6 - Small over pass across side road - Nth of tracks	514	m2	\$ 14,935	\$ 23,460	\$ 10,530	\$ 2,007,534	\$ 4,001	\$ 2,056,460
74	8.6/a	Earthwork	1	Item						
75	8.6/a	Bridge across rail crossing	514	m2	\$ 14,935	\$ 23,460	\$ 10,530	\$ 2,007,534	\$ 4,001	\$ 2,056,460
76										
77	8.7	Bridge No 7- Over pass across bus lane at the Nthrn end. - Nth of tracks	214	m2	\$ 10,972	\$ 25,972	\$ 7,687	\$ 905,332	\$ 4,439	\$ 949,962
78	8.7/a	Earthwork	1	Item						
79	8.7/b	Bridge across rail crossing	214	m2	\$ 10,609	\$ 14,972	\$ 7,490	\$ 862,573	\$ 4,185	\$ 895,643
80	8.7/c	F Type barrier & crash cushion etc along bus lane	44	m	\$ 363	\$ 11,000	\$ 198	\$ 42,759	\$ 1,235	\$ 54,320
81										
82		EE formula - =sum(45:81) Bridge & structures			\$ 1,064,362	\$ 1,863,128	\$ 518,326	\$ 26,231,331		\$ 29,677,146
83										

Line	Item	Description	Quantity	Unit	Labour	Material	Plant	Subcontract	Rate	Total
1										
2		WYONG BYPASS - Howarth Street - From Nth of Johnson Road to 100m South Of Cutler Drive.								
3		Estimate - July12 - T Rajeswaran								
84	9	MISCELLANEOUS								
85	9.1a	Lighting - Johnson Rd To Cutler Dr	188	no				\$ 2,994,920	\$ 15,930	\$ 2,994,920
86	9.2	Traffic Lights - Church st, Anzac st, Nth Rd & Allison Rd	4	no				\$ 1,152,000	\$ 288,000	\$ 1,152,000
87	9.3	Signs	269	no				\$ 251,380	\$ 934	\$ 251,380
88	9.4	Topsoil and Turf	8,720	m2	\$ 8,630	\$ 62,130	\$ 19,394	\$ 106,560	\$ 23	\$ 196,714
89	9.5	Concrete Medians with SL72 mesh	7,125	m2	\$ 125,852	\$ 302,281	\$ 27,716	\$ 248,606	\$ 99	\$ 704,455
90	9.6	Concrete path	19,950	m2	\$ 305,660	\$ 769,450	\$ 77,606	\$ 595,298	\$ 88	\$ 1,748,014
91	9.8	Hand rails & Ped fencing	1,130	m				\$ 529,000	\$ 468	\$ 529,000
92	9.9	Noise Attenuation	1	m2						
93	9.1	Urban Design big no	1	item						
94	9.11	Guardrail / Wire rope	1,205	m				\$ 126,650	\$ 105	\$ 126,650
95		F Type barrier	600	m	\$ 4,950	\$ 150,000	\$ 2,695	\$ 10,350	\$ 280	\$ 167,995
96	9.12	Landscape - Remove & relocate palm trees, and general landscape	1	Item	\$ 67,692	\$ 31,485	\$ 173,988	\$ 1,553,308	\$ 1,826,472	\$ 1,826,472
97		EE formula - =sum(85:96) Miscellaneous			\$ 512,785	\$ 1,315,345	\$ 301,398	\$ 7,568,072		\$ 9,697,600
98										
99		EE formula - =sum(4:96)			\$ 3,864,174	\$ 9,181,355	\$ 8,189,594	\$ 44,094,580		\$ 65,329,702
100										
101										
		Total for all items			\$ 3,864,174	\$ 9,181,355	\$ 8,189,594	\$ 44,094,580		\$ 65,329,702

Through - Town: Howarth Street

ID	Task ID	Task Name	Duration	
1		Through - Town: Howarth Street	1325 days	
2	10	Concept Development	20 wks	
3	20	Investigation and design	50 wks	
4	25	Environmental Investigations & Approvals	50 wks	
5	D	Dummy	0 days	
6	30	Property Acquisitions	50 wks	
7	40	Services Relocations	50 wks	
8	50	New Bridge over Wyong River	60 wks	
9	D	Dummy	0 days	
10	60	Johnson Road to Wyong River Bridge	20 wks	
11	70	New Bridge over Railway Line - South	75 wks	
12	80	New Bridge over Railway Line - North	75 wks	
13	90	Rose Street Bridge Extension	40 wks	
14	100	Wyong River Bridge to Church Street including Southbound Bus Access Way and Property Adjustments	30 wks	
15	110	Howarth Street Works - between South and North Rail Bridge	30 wks	
16	120	North Approach Bus Access Way - Southbound	10 wks	
17	130	Church Street to Cutler Drive including Existing Highway improvements and Intersection Upgrades	75 wks	
18	140	Completion Works	10 wks	

Project: Through-Town Howarth Stree Date: Tue 25/09/12	Task		Milestone		Rolled Up Milestone		Project Summary		Inactive Summary		Manual Summary	
	Task Progress		Summary		Rolled Up Progress		Group By Summary		Manual Task		Start-only	
	Critical Task		Rolled Up Task		Split		Inactive Task		Duration-only		Finish-only	
	Critical Task Progress		Rolled Up Critical Task		External Tasks		Inactive Milestone		Manual Summary Rollup		Deadline	



Revision Description	By	Date

SDATES



HIGHWAY 10 PACIFIC HIGHWAY WYONG BYPASS
OPTION 6

18.06.2008