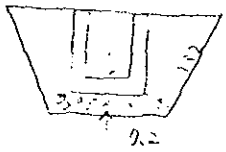
NIPPON KOEI CO.,LTD.

QUANTITY CALCULATION COVER SHEET

Project	Detailed Design on Port Reactivation Project in La Union Province	Project Code	JC1N004/2N001
Work Section Title	Trench 300mm grating	Pay Item No. (BOQ)	2H - ~~13~~12 01
Quantity Item	Excavation and Disposal	Unit	m^3

Calculation Procedure Applied



Average of inlet level and outlet level

H = Ground Level − Average Level + 0.2

Calculation of area : slope 1:2 ,

Calculation of volume : Area times length

References, Calculation Base and Revisions

See the item of excavation and disposal of 300mm without cover. (2H - ~~13~~12 01)

Rev	Prepared by	Prepared Date	No. of Pages	Checked by	Checked Date	Reviewed by	Reviewed Date	Superseded by Calc No.
0	Karlo Garcia			Mr. Inuma		Mr. Ando		
1								
2								
3								

FN : Calculation_Cover_Sheet_020504_seg cover

Trench集計

		W_{inner} (m)	W_{outer} (m)	G (m)	Y_{in} (m)	Y_{out} (m)	H (m)	L (m)	Lac (m)	Vex (m3)	Vcs (m3)	Vbf (m3)	Cmpct (m2)	Form (m2)	Re-bar (kg)	Concrete (m3)	Cut of Board (m2)
No cover																	
1	AU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
2	AU-4	0.3	0.5	5.132	4.732	4.557	0.687	87.49	86.49	56.1	5.19	16.88	128.7	258	1,670	16.4	1.29
3	AU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
4	CU-4	0.3	0.5	5.132	4.732	4.529	0.701	87.49	86.49	57.7	5.19	17.88	129.9	263	1,670	16.7	1.32
5	CU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
6	DU-10	0.3	0.5	5.019	4.619	4.402	0.708	127.5	126.5	85.5	7.59	26.81	190.8	387	2,430	24.5	1.94
7	DU-11	0.3	0.5	4.844	4.444	4.304	0.67	93.6	92.6	58.1	5.56	16.89	136.2	270	1,780	17.3	1.35
8	DU-8	0.3	0.5	5.164	4.764	4.314	0.825	90	89	74.4	5.34	27.9	144.7	315	1,710	19.4	1.58
9	DU-9	0.3	0.5	5.164	4.764	4.674	0.645	90	89	53.0	5.34	14.51	128.7	251	1,710	16.2	1.26
10	EU-10	0.3	0.5	4.675	4.275	4.11	0.682	165.33	164.3	105.5	9.86	31.39	243.6	485	3,150	30.9	2.43
11	EU-4-1	0.3	0.5	5.59	5.19	5.055	0.667	90	89	55.5	5.34	16.03	130.6	259	1,710	16.6	1.3
	Total							1110		723	65.7	222	1640	3300	21100	210	16.6
Concrete cover																	
1	AU-1	0.3	0.5	5.522	5.122	4.972	0.675	75	74	46.9	4.44	13.79	109.2	218	1,430	13.9	1.09
2	AU-2	0.3	0.5	5.522	5.122	5.042	0.64	40	39	23.0	2.34	6.23	56.2	111	760	7.2	0.56
3	AU-4-1	0.3	0.5	5.148	4.748	4.528	0.71	110	109	74.0	6.54	23.32	164.6	335	2,090	21.2	1.68
4	AU-5-1	0.3	0.5	4.878	4.478	4.428	0.625	50	49	28.0	2.94	7.3	69.9	135	950	8.8	0.68
5	AU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
6	CU-1	0.3	0.5	5.637	5.237	5.172	0.632	65	64	37.1	3.84	9.84	91.7	178	1,240	11.5	0.89
7	CU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
8	CU-2	0.3	0.5	5.507	5.107	4.977	0.665	26	25	15.6	1.5	4.54	36.7	75	500	4.8	0.38
9	CU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
10	DU-1	0.3	0.5	6.05	5.65	4.89	0.98	152	151	161.3	9.06	70.7	268.8	627	2,890	37.4	3.14
11	DU-10-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
12	DU-10-2	0.3	0.5	5.01	4.61	4.725	0.442	50	49	17.8	2.94	1.59	60.9	99	950	7	0.5
13	DU-2	0.3	0.5	5.3	4.9	4.788	0.656	45	44	26.8	2.64	7.53	64.1	128	860	8.2	0.64
14	DU-3	0.3	0.5	5.14	4.74	4.58	0.68	160	159	101.7	9.54	30.15	235.4	468	3,040	29.8	2.34
15	DU-5	0.3	0.5	5.14	4.74	4.53	0.705	105	104	69.9	6.24	21.8	156.6	318	2,000	20.1	1.59
16	DU-5-1	0.3	0.5	5.14	4.74	4.6	0.67	70	69	43.3	4.14	12.6	101.5	202	1,330	12.9	1.01
17	DU-6	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
18	DU-6-1	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
19	DU-9-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
20	EU-1	0.3	0.5	6.05	5.65	5.294	0.778	178	177	136.2	10.62	47.88	279.4	590	3,390	36.6	2.95
21	EU-11	0.3	0.5	5.22	4.82	4.53	0.745	145	144	104.4	8.64	34.92	222.5	462	2,760	28.9	2.31
22	EU-2	0.3	0.5	6.06	5.66	5.557	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
23	EU-3	0.3	0.5	5.97	5.57	5.19	0.79	81.47	80.47	63.3	4.83	22.67	128	274	1,550	17	1.37
24	EU-4	0.3	0.5	5.59	5.19	4.934	0.728	55	54	37.9	3.24	12.31	82.6	172	1,050	10.8	0.86
25	EU-5	0.3	0.5	5.33	4.93	4.803	0.663	27.3	26.3	16.3	1.58	4.69	38.5	78	520	5	0.39
26	EU-6	0.3	0.5	5.94	5.54	5.355	0.692	185	184	120.5	11.04	36.6	274.6	550	3,520	34.9	2.75
27	EU-7	0.3	0.5	5.97	5.57	4.8	0.985	165.33	164.3	176.9	9.86	77.9	293.4	685	3,150	40.9	3.43
28	EU-8	0.3	0.5	5.94	5.54	4.827	0.956	142.69	141.7	146.1	8.51	62.78	248.9	575	2,720	34.5	2.88
29	EU-9	0.3	0.5	5.23	4.83	4.568	0.731	175	174	122.9	10.44	40.17	266.4	547	3,330	34.4	2.74
30	EU-9-1	0.3	0.5	5.23	4.83	4.69	0.67	140	139	87.1	8.34	25.25	204.4	404	2,660	25.8	2.02
31	EU-9-2	0.3	0.5	5.34	4.94	4.837	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
	Total							2902		2070	173	695	4420	9150	55300	574	45.8
Grating cover																	
1	AU-9-1	0.3	0.5	4.711	4.311	4.206	0.652	70	69	41.7	4.14	11.62	100.2	197	1,330	12.7	0.99
2	BU-5-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
3	BU-7	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
4	BU-8	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
5	BU-8-1	0.3	0.5	4.711	4.311	4.245	0.633	66	65	37.8	3.9	10.08	93.2	181	1,260	11.7	0.91
6	CU-7-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
	Total							308		182	18.2	50.2	438	864	5870	55.6	4.4
No cover																	
1	DU-7	0.45	0.65	4.625	4.075	3.543	1.016	355	354	452.5	26.55	169.16	696	1514	8,670	95.3	8.11
	Total							355		453	26.6	170	696	1520	8670	95.3	8.2
Concrete cover																	
1	CU-9-2	0.45	0.65	4.711	4.161	4.057	0.802	104	103	95.1	7.73	26.99	180.5	355	2,540	23.5	1.93
2	CU-5-1	0.45	0.65	4.928	4.378	4.273	0.802	105	104	96.1	7.8	27.33	182.3	358	2,570	23.7	1.95
3	DU-11-1	0.45	0.65	4.844	4.294	4.184	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
4	DU-11-2	0.45	0.65	4.711	4.161	4.051	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
5	DU-4	0.45	0.65	5.14	4.59	4.43	0.83	160	159	153.8	11.93	45.76	283.1	564	3,910	37	3.06
6	EU-12	0.45	0.65	4.89	4.34	4.205	0.817	54	53	50.2	3.98	14.63	93.7	188	1,320	12.4	1.02
	Total							645		598	47.8	173	1130	2220	15800	147	12.1
Grating cover																	
1	AU-6-1	0.45	0.65	5.332	4.782	4.742	0.77	40	39	34.1	2.93	9.12	67.1	132	980	8.8	0.72
2	AU-7-1	0.45	0.65	5.132	4.582	4.546	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
3	AU-8-1	0.45	0.65	4.928	4.378	4.34	0.769	38	37	32.3	2.78	8.63	63.7	125	930	8.4	0.68
4	BU-1-1	0.45	0.65	5.332	4.782	4.716	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
5	BU-2-1	0.45	0.65	5.132	4.582	4.516	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
6	BU-3-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
7	BU-4-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
8	BU-6-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
9	BU-7-1	0.45	0.65	4.711	4.161	4.095	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
10	CU-8-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
11	CU-9-1	0.45	0.65	4.711	4.161	4.093	0.784	68	67	60.0	5.03	16.48	116.2	227	1,660	15.1	1.24
12	CU-6-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
	Total							650		567	48.0	155	1110	2160	16000	145	11.8

QUANTITY CALCULATION COVER SHEET

Project	Detailed Design on Port Reactivation Project in La Union Province	Project Code	JC1N004/2N001
Work Section Title	Trench 300 mm grating	Pay Item No. (BOQ)	2H - ~~1302~~ 13
Quantity Item	Crushed stone for foundation	Unit	m^3

Calculation Procedure Applied

1. Calculation of area : thickness 0.1 m, width
2. Calculation of volume : Area times length

References, Calculation Base and Revisions

See the item of excavation and disposal of 300 mm without cover. (2H - ~~1101~~ 12)

Rev	Prepared by	Prepared Date	No. of Pages	Checked by	Checked Date	Reviewed by	Reviewed Date	Superseded by Calc No.
0	Khaila Garcia			Mr. Inuma		Mr. Ando		
1								
2								
3								

Trench集計

		W_{inner} (m)	W_{outer} (m)	G (m)	Y_{in} (m)	Y_{out} (m)	H (m)	L (m)	Lac (m)	Vex (m3)	Vcs (m3)	Vbf (m3)	Cmpct (m2)	Form (m2)	Re-bar (kg)	Concrete (m3)	Formwork (m2)
No cover																	
1	AU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
2	AU-4	0.3	0.5	5.132	4.732	4.557	0.687	87.49	86.49	56.1	5.19	16.88	128.7	258	1,670	16.4	1.29
3	AU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
4	CU-4	0.3	0.5	5.132	4.732	4.529	0.701	87.49	86.49	57.7	5.19	17.88	129.9	263	1,670	16.7	1.32
5	CU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
6	DU-10	0.3	0.5	5.019	4.619	4.402	0.708	127.5	126.5	85.5	7.59	26.81	190.8	387	2,430	24.5	1.94
7	DU-11	0.3	0.5	4.844	4.444	4.304	0.67	93.6	92.6	58.1	5.56	16.89	136.2	270	1,780	17.3	1.35
8	DU-8	0.3	0.5	5.164	4.764	4.314	0.825	90	89	74.4	5.34	27.9	144.7	315	1,710	19.4	1.58
9	DU-9	0.3	0.5	5.164	4.764	4.674	0.645	90	89	53.0	5.34	14.51	128.7	251	1,710	16.2	1.26
10	EU-10	0.3	0.5	4.675	4.275	4.11	0.682	165.33	164.3	105.5	9.86	31.39	243.6	485	3,150	30.9	2.43
11	EU-4-1	0.3	0.5	5.59	5.19	5.055	0.667	90	89	55.5	5.34	16.03	130.6	259	1,710	16.6	1.3
	Total							1110		723	65.7	222	1640	3300	21100	210	16.6
Concrete cover																	
1	AU-1	0.3	0.5	5.522	5.122	4.972	0.675	75	74	46.9	4.44	13.79	109.2	218	1,430	13.9	1.09
2	AU-2	0.3	0.5	5.522	5.122	5.042	0.64	40	39	23.0	2.34	6.23	56.2	111	760	7.2	0.56
3	AU-4-1	0.3	0.5	5.148	4.748	4.528	0.71	110	109	74.0	6.54	23.32	164.6	335	2,090	21.2	1.68
4	AU-5-1	0.3	0.5	4.878	4.478	4.428	0.625	50	49	28.0	2.94	7.3	69.9	135	950	8.8	0.68
5	AU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
6	CU-1	0.3	0.5	5.637	5.237	5.172	0.632	65	64	37.1	3.84	9.84	91.7	178	1,240	11.5	0.89
7	CU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
8	CU-2	0.3	0.5	5.507	5.107	4.977	0.665	26	25	15.6	1.5	4.54	36.7	75	500	4.8	0.38
9	CU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
10	DU-1	0.3	0.5	6.05	5.65	4.89	0.98	152	151	161.3	9.06	70.7	268.8	627	2,890	37.4	3.14
11	DU-10-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
12	DU-10-2	0.3	0.5	5.01	4.81	4.725	0.442	50	49	17.8	2.94	1.59	60.9	99	950	7	0.5
13	DU-2	0.3	0.5	5.3	4.9	4.786	0.656	45	44	26.8	2.64	7.53	64.1	128	860	8.2	0.64
14	DU-3	0.3	0.5	5.14	4.74	4.58	0.68	160	159	101.7	9.54	30.15	235.4	468	3,040	29.8	2.34
15	DU-5	0.3	0.5	5.14	4.74	4.53	0.705	105	104	69.9	6.24	21.8	156.6	318	2,000	20.1	1.59
16	DU-5-1	0.3	0.5	5.14	4.74	4.6	0.67	70	69	43.3	4.14	12.6	101.5	202	1,330	12.9	1.01
17	DU-6	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
18	DU-6-1	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
19	DU-9-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
20	EU-1	0.3	0.5	6.05	5.65	5.294	0.778	178	177	136.2	10.62	47.88	279.4	590	3,390	36.6	2.95
21	EU-11	0.3	0.5	5.22	4.82	4.53	0.745	145	144	104.4	8.64	34.92	222.5	462	2,760	28.9	2.31
22	EU-2	0.3	0.5	6.06	5.66	5.557	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
23	EU-3	0.3	0.5	5.97	5.57	5.19	0.79	81.47	80.47	63.3	4.83	22.67	128	274	1,550	17	1.37
24	EU-4	0.3	0.5	5.59	5.19	4.934	0.728	55	54	37.9	3.24	12.31	82.6	172	1,050	10.8	0.86
25	EU-5	0.3	0.5	5.33	4.93	4.803	0.663	27.3	26.3	16.3	1.58	4.69	38.5	78	520	5	0.39
26	EU-6	0.3	0.5	5.94	5.54	5.355	0.692	185	184	120.5	11.04	36.6	274.6	550	3,520	34.9	2.75
27	EU-7	0.3	0.5	5.97	5.57	4.8	0.985	165.33	164.3	176.9	9.86	77.9	293.4	685	3,150	40.9	3.43
28	EU-8	0.3	0.5	5.94	5.54	4.827	0.956	142.69	141.7	146.1	8.51	62.78	248.9	575	2,720	34.5	2.88
29	EU-9	0.3	0.5	5.23	4.83	4.568	0.731	175	174	122.9	10.44	40.17	266.4	547	3,330	34.4	2.74
30	EU-9-1	0.3	0.5	5.23	4.83	4.69	0.67	140	139	87.1	8.34	25.25	204.4	404	2,660	25.8	2.02
31	EU-9-2	0.3	0.5	5.34	4.94	4.837	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
	Total							2902		2070	173	695	4420	9150	55300	574	45.8
Grating cover																	
1	AU-9-1	0.3	0.5	4.711	4.311	4.206	0.652	70	69	41.7	4.14	11.62	100.2	197	1,330	12.7	0.99
2	BU-5-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
3	BU-7	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
4	BU-8	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
5	BU-8-1	0.3	0.5	4.711	4.311	4.245	0.633	66	65	37.8	3.9	10.08	93.2	181	1,260	11.7	0.91
6	CU-7-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
	Total							308		182	18.2	50.2	438	864	5870	55.6	4.4
No cover																	
1	DU-7	0.45	0.65	4.625	4.075	3.543	1.016	355	354	452.5	26.55	169.16	696	1514	8,670	95.3	8.11
	Total							355		453	26.6	170	696	1520	8670	95.3	8.2
Concrete cover																	
1	CU-9-2	0.45	0.65	4.711	4.161	4.057	0.802	104	103	95.1	7.73	26.99	180.5	355	2,540	23.5	1.93
2	CU-5-1	0.45	0.65	4.928	4.378	4.273	0.802	105	104	96.1	7.8	27.33	182.3	358	2,570	23.7	1.95
3	DU-11-1	0.45	0.65	4.844	4.294	4.184	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
4	DU-11-2	0.45	0.65	4.711	4.161	4.051	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
5	DU-4	0.45	0.65	5.14	4.59	4.43	0.83	160	159	153.8	11.93	45.76	283.1	564	3,910	37	3.06
6	EU-12	0.45	0.65	4.89	4.34	4.205	0.817	54	53	50.2	3.98	14.63	93.7	188	1,320	12.4	1.02
	Total							645		598	47.8	173	1130	2220	15800	147	12.1
Grating cover																	
1	AU-6-1	0.45	0.65	5.332	4.782	4.742	0.77	40	39	34.1	2.93	9.12	67.1	132	980	8.8	0.72
2	AU-7-1	0.45	0.65	5.132	4.582	4.546	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
3	AU-8-1	0.45	0.65	4.928	4.378	4.34	0.769	38	37	32.3	2.78	8.63	63.7	125	930	8.4	0.68
4	BU-1-1	0.45	0.65	5.332	4.782	4.716	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
5	BU-2-1	0.45	0.65	5.132	4.582	4.516	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
6	BU-3-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
7	BU-4-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
8	BU-6-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
9	BU-7-1	0.45	0.65	4.711	4.161	4.095	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
10	CU-8-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
11	CU-9-1	0.45	0.65	4.711	4.161	4.093	0.784	68	67	60.0	5.03	16.48	116.2	227	1,660	15.1	1.24
12	CU-6-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
	Total							650		567	48.0	155	1110	2160	16000	145	11.8

QUANTITY CALCULATION COVER SHEET

Project	Detailed Design on Port Reactivation Project in La Union Province	**Project Code**	JC1N004/2N001
Work Section Title	Trench 300 mm grating	**Pay Item No. (BOQ)**	2H-~~13~~18 03
Quantity Item	Reinforcement	**Unit**	kg

Calculation Procedure Applied

1. Calculation of weight of reinforcement per 1 m
2. Calculation of weight : unit weight times length

References, Calculation Base and Revisions

See the item of excavation and disposal of 300 mm without cover. (2H-~~#~~12 01)

Rev	Prepared by	Prepared Date	No. of Pages	Checked by	Checked Date	Reviewed by	Reviewed Date	Superseded by Calc No.
0	Kaila Garcia			Mr. Tsuma		Mr. Ando		
1								
2								
3								

TABLE OF REINFORCEMENT (TRENCH)

No.	D	L (m)	Qty	W/bar (kg)	W (kg)	Remarks
Trench (300)						
A1	D13	0.80	10	0.796	7.96	
A2	D13	1.00	11	0.995	10.95	
				total	18.91	per m
Trench (450)						
A1	D13	1.25	10	1.24375	12.44	
A2	D13	1.00	12	0.995	11.94	
				total	24.38	per m

Trench集計

		W_{inner} (m)	W_{outer} (m)	G (m)	Y_{in} (m)	Y_{out} (m)	H (m)	L (m)	Lac (m)	Vex (m3)	Vcs (m3)	Vbf (m3)	Cmpct (m2)	Form (m2)	Re-bar (kg)	Concrete (m3)	Elec sign Board (m2)
No cover																	
1	AU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
2	AU-4	0.3	0.5	5.132	4.732	4.557	0.687	87.49	86.49	56.1	5.19	16.88	128.7	258	1,670	16.4	1.29
3	AU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
4	CU-4	0.3	0.5	5.132	4.732	4.529	0.701	87.49	86.49	57.7	5.19	17.88	129.9	263	1,670	16.7	1.32
5	CU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
6	DU-10	0.3	0.5	5.019	4.619	4.402	0.708	127.5	126.5	85.5	7.59	26.81	190.8	387	2,430	24.5	1.94
7	DU-11	0.3	0.5	4.844	4.444	4.304	0.67	93.6	92.6	58.1	5.56	16.89	136.2	270	1,780	17.3	1.35
8	DU-8	0.3	0.5	5.164	4.764	4.314	0.825	90	89	74.4	5.34	27.9	144.7	315	1,710	19.4	1.58
9	DU-9	0.3	0.5	5.164	4.764	4.674	0.645	90	89	53.0	5.34	14.51	128.7	251	1,710	16.2	1.26
10	EU-10	0.3	0.5	4.675	4.275	4.11	0.682	165.33	164.3	105.5	9.86	31.39	243.6	485	3,150	30.9	2.43
11	EU-4-1	0.3	0.5	5.59	5.19	5.055	0.667	90	89	55.5	5.34	16.03	130.6	259	1,710	16.6	1.3
	Total							1110		723	65.7	222	1640	3300	21100	210	16.6
Concrete cover																	
1	AU-1	0.3	0.5	5.522	5.122	4.972	0.675	75	74	46.9	4.44	13.79	109.2	218	1,430	13.9	1.09
2	AU-2	0.3	0.5	5.522	5.122	5.042	0.64	40	39	23.0	2.34	6.23	56.2	111	760	7.2	0.56
3	AU-4-1	0.3	0.5	5.148	4.748	4.528	0.71	110	109	74.0	6.54	23.32	164.6	335	2,090	21.2	1.68
4	AU-5-1	0.3	0.5	4.878	4.478	4.428	0.625	50	49	28.0	2.94	7.3	69.9	135	950	8.8	0.68
5	AU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
6	CU-1	0.3	0.5	5.637	5.237	5.172	0.632	65	64	37.1	3.84	9.84	91.7	178	1,240	11.5	0.89
7	CU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
8	CU-2	0.3	0.5	5.507	5.107	4.977	0.665	26	25	15.6	1.5	4.54	36.7	75	500	4.8	0.38
9	CU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
10	DU-1	0.3	0.5	6.05	5.65	4.89	0.98	152	151	161.3	9.06	70.7	268.8	627	2,890	37.4	3.14
11	DU-10-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
12	DU-10-2	0.3	0.5	5.01	4.81	4.725	0.442	50	49	17.8	2.94	1.59	60.9	99	950	7	0.5
13	DU-2	0.3	0.5	5.3	4.9	4.788	0.656	45	44	26.8	2.64	7.53	64.1	128	860	8.2	0.64
14	DU-3	0.3	0.5	5.14	4.74	4.58	0.68	160	159	101.7	9.54	30.15	235.4	468	3,040	29.8	2.34
15	DU-5	0.3	0.5	5.14	4.74	4.53	0.705	105	104	69.9	6.24	21.8	156.6	318	2,000	20.1	1.59
16	DU-5-1	0.3	0.5	5.14	4.74	4.6	0.67	70	69	43.3	4.14	12.6	101.5	202	1,330	12.9	1.01
17	DU-6	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
18	DU-6-1	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
19	DU-9-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
20	EU-1	0.3	0.5	6.05	5.65	5.294	0.778	178	177	136.2	10.62	47.88	279.4	590	3,390	36.6	2.95
21	EU-11	0.3	0.5	5.22	4.82	4.53	0.745	145	144	104.4	8.64	34.92	222.5	462	2,760	28.9	2.31
22	EU-2	0.3	0.5	6.06	5.66	5.557	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
23	EU-3	0.3	0.5	5.97	5.57	5.19	0.79	81.47	80.47	63.3	4.83	22.67	128	274	1,550	17	1.37
24	EU-4	0.3	0.5	5.59	5.19	4.934	0.728	55	54	37.9	3.24	12.31	82.6	172	1,050	10.8	0.86
25	EU-5	0.3	0.5	5.33	4.93	4.803	0.663	27.3	26.3	16.3	1.58	4.69	38.5	78	520	5	0.39
26	EU-6	0.3	0.5	5.94	5.54	5.355	0.692	185	184	120.5	11.04	36.6	274.6	550	3,520	34.9	2.75
27	EU-7	0.3	0.5	5.97	5.57	4.8	0.985	165.33	164.3	176.9	9.86	77.9	293.4	685	3,150	40.9	3.43
28	EU-8	0.3	0.5	5.94	5.54	4.827	0.956	142.69	141.7	146.1	8.51	62.78	248.9	575	2,720	34.5	2.88
29	EU-9	0.3	0.5	5.23	4.83	4.568	0.731	175	174	122.9	10.44	40.17	266.4	547	3,330	34.4	2.74
30	EU-9-1	0.3	0.5	5.23	4.83	4.69	0.67	140	139	87.1	8.34	25.25	204.4	404	2,660	25.8	2.02
31	EU-9-2	0.3	0.5	5.34	4.94	4.837	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
	Total							2902		2070	173	695	4420	9150	55300	574	45.8
Grating cover																	
1	AU-9-1	0.3	0.5	4.711	4.311	4.206	0.652	70	69	41.7	4.14	11.62	100.2	197	1,330	12.7	0.99
2	BU-5-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
3	BU-7	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
4	BU-8	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
5	BU-8-1	0.3	0.5	4.711	4.311	4.245	0.633	66	65	37.8	3.9	10.08	93.2	181	1,260	11.7	0.91
6	CU-7-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
	Total							308		182	18.2	50.2	438	864	5870	55.6	4.4
No cover																	
1	DU-7	0.45	0.65	4.625	4.075	3.543	1.016	355	354	452.5	26.55	169.16	698	1514	8,670	95.3	8.11
	Total							355		453	26.6	170	696	1520	8670	95.3	8.2
Concrete cover																	
1	CU-9-2	0.45	0.65	4.711	4.161	4.057	0.802	104	103	95.1	7.73	26.99	180.5	355	2,540	23.5	1.93
2	CU-5-1	0.45	0.65	4.928	4.378	4.273	0.802	105	104	96.1	7.8	27.33	182.3	358	2,570	23.7	1.95
3	DU-11-1	0.45	0.65	4.844	4.294	4.184	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
4	DU-11-2	0.45	0.65	4.711	4.161	4.051	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
5	DU-4	0.45	0.65	5.14	4.59	4.43	0.83	160	159	153.8	11.93	45.76	283.1	564	3,910	37	3.06
6	EU-12	0.45	0.65	4.89	4.34	4.205	0.817	54	53	50.2	3.98	14.63	93.7	188	1,320	12.4	1.02
	Total							645		598	47.8	173	1130	2220	15800	147	12.1
Grating cover																	
1	AU-6-1	0.45	0.65	5.332	4.782	4.742	0.77	40	39	34.1	2.93	9.12	67.1	132	980	8.8	0.72
2	AU-7-1	0.45	0.65	5.132	4.582	4.546	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
3	AU-8-1	0.45	0.65	4.928	4.378	4.34	0.769	38	37	32.3	2.78	8.63	63.7	125	930	8.4	0.68
4	BU-1-1	0.45	0.65	5.332	4.782	4.716	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
5	BU-2-1	0.45	0.65	5.132	4.582	4.516	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
6	BU-3-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
7	BU-4-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
8	BU-6-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
9	BU-7-1	0.45	0.65	4.711	4.161	4.095	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
10	CU-8-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
11	CU-9-1	0.45	0.65	4.711	4.161	4.093	0.784	68	67	60.0	5.03	16.48	116.2	227	1,660	15.1	1.24
12	CU-6-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
	Total							650		567	48.0	155	1110	2160	16000	145	11.8

QUANTITY CALCULATION COVER SHEET

Project	Detailed Design on Port Reactivation Project in La Union Province	Project Code	JC1N004/2N001
Work Section Title	Trench 300mm grating	Pay Item No. (BOQ)	2H-~~13~~12 0401
Quantity Item	Form for trench	Unit	m^2

Calculation Procedure Applied

1. Calculation of depth
2. Calculation of both inside area and outside area
3. Calculation of volume : Area times length

References, Calculation Base and Revisions

See the item of excavation and disposal of 300 mm without cover. (2H-~~11~~12 01)

Rev	Prepared by	Prepared Date	No. of Pages	Checked by	Checked Date	Reviewed by	Reviewed Date	Superseded by Calc No.
0	Karla Garcia			Mr. Taung		Mr. Ando		
1								
2								
3								

FN : Calculation_Cover_Sheet_020504_seg cover

Trench集計

		W_{inner}	W_{outer}	G	Y_{in}	Y_{out}	H	L	Lac	Vex	Vcs	Vbf	Cmpct	Form	Re-bar	Concrete	Exc rch Bank
		(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m3)	(m3)	(m3)	(m2)	(m2)	(kg)	(m3)	(m2)
No cover																	
1	AU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
2	AU-4	0.3	0.5	5.132	4.732	4.557	0.687	87.49	86.49	56.1	5.19	16.88	128.7	258	1,670	16.4	1.29
3	AU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
4	CU-4	0.3	0.5	5.132	4.732	4.529	0.701	87.49	86.49	57.7	5.19	17.88	129.9	263	1,670	16.7	1.32
5	CU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
6	DU-10	0.3	0.5	5.019	4.619	4.402	0.708	127.5	126.5	85.5	7.59	26.81	190.8	387	2,430	24.5	1.94
7	DU-11	0.3	0.5	4.844	4.444	4.304	0.67	93.6	92.6	58.1	5.56	16.89	136.2	270	1,780	17.3	1.35
8	DU-8	0.3	0.5	5.164	4.764	4.314	0.825	90	89	74.4	5.34	27.9	144.7	315	1,710	19.4	1.58
9	DU-9	0.3	0.5	5.164	4.764	4.674	0.645	90	89	53.0	5.34	14.51	128.7	251	1,710	16.2	1.26
10	EU-10	0.3	0.5	4.675	4.275	4.11	0.682	165.33	164.3	105.5	9.86	31.39	243.6	485	3,150	30.9	2.43
11	EU-4-1	0.3	0.5	5.59	5.19	5.055	0.667	90	89	55.5	5.34	16.03	130.8	259	1,710	16.6	1.3
	Total							1110		723	65.7	222	1640	3300	21100	210	16.6
Concrete cover																	
1	AU-1	0.3	0.5	5.522	5.122	4.972	0.675	75	74	46.9	4.44	13.79	109.2	218	1,430	13.9	1.09
2	AU-2	0.3	0.5	5.522	5.122	5.042	0.64	40	39	23.0	2.34	6.23	56.2	111	760	7.2	0.56
3	AU-4-1	0.3	0.5	5.148	4.748	4.528	0.71	110	109	74.0	6.54	23.32	164.6	335	2,090	21.2	1.68
4	AU-5-1	0.3	0.5	4.878	4.478	4.428	0.625	50	49	28.0	2.94	7.3	69.9	135	950	8.8	0.68
5	AU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
6	CU-1	0.3	0.5	5.637	5.237	5.172	0.632	65	64	37.1	3.84	9.84	91.7	178	1,240	11.5	0.89
7	CU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
8	CU-2	0.3	0.5	5.507	5.107	4.977	0.665	26	25	15.6	1.5	4.54	36.7	75	500	4.8	0.38
9	CU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
10	DU-1	0.3	0.5	6.05	5.65	4.89	0.98	152	151	161.3	9.06	70.7	268.8	627	2,890	37.4	3.14
11	DU-10-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
12	DU-10-2	0.3	0.5	5.01	4.81	4.725	0.442	50	49	17.8	2.94	1.59	60.9	99	950	7	0.5
13	DU-2	0.3	0.5	5.3	4.9	4.788	0.656	45	44	26.8	2.64	7.53	64.1	128	860	8.2	0.64
14	DU-3	0.3	0.5	5.14	4.74	4.58	0.68	160	159	101.7	9.54	30.15	235.4	468	3,040	29.8	2.34
15	DU-5	0.3	0.5	5.14	4.74	4.53	0.705	105	104	69.9	6.24	21.8	156.6	318	2,000	20.1	1.59
16	DU-5-1	0.3	0.5	5.14	4.74	4.6	0.67	70	69	43.3	4.14	12.6	101.5	202	1,330	12.9	1.01
17	DU-6	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
18	DU-6-1	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
19	DU-9-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
20	EU-1	0.3	0.5	6.05	5.65	5.294	0.778	178	177	136.2	10.62	47.88	279.4	590	3,390	36.6	2.95
21	EU-11	0.3	0.5	5.22	4.82	4.53	0.745	145	144	104.4	8.64	34.92	222.5	462	2,760	28.9	2.31
22	EU-2	0.3	0.5	6.06	5.66	5.557	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
23	EU-3	0.3	0.5	5.97	5.57	5.19	0.79	81.47	80.47	63.3	4.83	22.67	128	274	1,550	17	1.37
24	EU-4	0.3	0.5	5.59	5.19	4.934	0.728	55	54	37.9	3.24	12.31	82.6	172	1,050	10.8	0.86
25	EU-5	0.3	0.5	5.33	4.93	4.803	0.663	27.3	26.3	16.3	1.58	4.69	38.5	78	520	5	0.39
26	EU-6	0.3	0.5	5.94	5.54	5.355	0.692	185	184	120.5	11.04	36.6	274.6	550	3,520	34.9	2.75
27	EU-7	0.3	0.5	5.97	5.57	4.8	0.985	165.33	164.3	176.9	9.86	77.9	293.4	685	3,150	40.9	3.43
28	EU-8	0.3	0.5	5.94	5.54	4.827	0.956	142.69	141.7	146.1	8.51	62.78	248.9	575	2,720	34.5	2.88
29	EU-9	0.3	0.5	5.23	4.83	4.568	0.731	175	174	122.9	10.44	40.17	266.4	547	3,330	34.4	2.74
30	EU-9-1	0.3	0.5	5.23	4.83	4.69	0.67	140	139	87.1	8.34	25.25	204.4	404	2,660	25.8	2.02
31	EU-9-2	0.3	0.5	5.34	4.94	4.837	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
	Total							2902		2070	173	695	4420	9150	55300	574	45.8
Grating cover																	
1	AU-9-1	0.3	0.5	4.711	4.311	4.206	0.652	70	69	41.7	4.14	11.62	100.2	197	1,330	12.7	0.99
2	BU-5-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
3	BU-7	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
4	BU-8	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
5	BU-8-1	0.3	0.5	4.711	4.311	4.245	0.633	66	65	37.8	3.9	10.08	93.2	181	1,260	11.7	0.91
6	CU-7-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
	Total							308		182	18.2	50.2	438	864	5870	55.6	4.4
No cover																	
1	DU-7	0.45	0.65	4.625	4.075	3.543	1.016	355	354	452.5	26.55	169.16	696	1514	8,670	95.3	8.11
	Total							355		453	26.6	170	696	1520	8670	95.3	8.2
Concrete cover																	
1	CU-9-2	0.45	0.65	4.711	4.161	4.057	0.802	104	103	95.1	7.73	26.99	180.5	355	2,540	23.5	1.93
2	CU-5-1	0.45	0.65	4.928	4.378	4.273	0.802	105	104	96.1	7.8	27.33	182.3	358	2,570	23.7	1.95
3	DU-11-1	0.45	0.65	4.844	4.294	4.184	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
4	DU-11-2	0.45	0.65	4.711	4.161	4.051	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
5	DU-4	0.45	0.65	5.14	4.59	4.43	0.83	160	159	153.8	11.93	45.76	283.1	564	3,910	37	3.06
6	EU-12	0.45	0.65	4.89	4.34	4.205	0.817	54	53	50.2	3.98	14.63	93.7	188	1,320	12.4	1.02
	Total							645		598	47.8	173	1130	2220	15800	147	12.1
Grating cover																	
1	AU-6-1	0.45	0.65	5.332	4.782	4.742	0.77	40	39	34.1	2.93	9.12	67.1	132	980	8.8	0.72
2	AU-7-1	0.45	0.65	5.132	4.582	4.546	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
3	AU-8-1	0.45	0.65	4.928	4.378	4.34	0.769	38	37	32.3	2.78	8.63	63.7	125	930	8.4	0.68
4	BU-1-1	0.45	0.65	5.332	4.782	4.716	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
5	BU-2-1	0.45	0.65	5.132	4.582	4.516	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
6	BU-3-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
7	BU-4-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
8	BU-6-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
9	BU-7-1	0.45	0.65	4.711	4.161	4.095	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
10	CU-8-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
11	CU-9-1	0.45	0.65	4.711	4.161	4.093	0.784	68	67	60.0	5.03	16.48	116.2	227	1,660	15.1	1.24
12	CU-6-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
	Total							650		567	48.0	155	1110	2160	16000	145	11.8

QUANTITY CALCULATION COVER SHEET

Project	Detailed Design on Port Reactivation Project in La Union Province	Project Code	JC1N004/2N001
Work Section Title	Trench 300mm curating	Pay Item No. (BOQ)	2H-~~13~~ 14 0402
Quantity Item	Concrete for trench	Unit	m^3

Calculation Procedure Applied

1 Calculation of sectional area (by the average height)

2. Calculation of volume : sectional area times length

References. Calculation Base and Revisions

See the item of excavation and disposal of 300mm without cover. (2H-~~#~~ 12 01)

Rev	Prepared by	Prepared Date	No. of Pages	Checked by	Checked Date	Reviewed by	Reviewed Date	Superseded by Calc No.
0	KatoGorio			Mr. Touma		Mr. Ando		
1								
2								
3								

FN : Calculation_Cover_Sheet_020504_seg cover

Trench集計

		W_{inner} (m)	W_{outer} (m)	G (m)	Y_{in} (m)	Y_{out} (m)	H (m)	L (m)	Lac (m)	Vex (m3)	Vcs (m3)	Vbf (m3)	Cmpct (m2)	Form (m2)	Re-bar (kg)	Concrete (m3)	Cut on Road (m2)
No cover																	
1	AU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
2	AU-4	0.3	0.5	5.132	4.732	4.557	0.687	87.49	86.49	56.1	5.19	16.88	128.7	258	1,670	16.4	1.29
3	AU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
4	CU-4	0.3	0.5	5.132	4.732	4.529	0.701	87.49	86.49	57.7	5.19	17.88	128.8	263	1,670	16.7	1.32
5	CU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
6	DU-10	0.3	0.5	5.019	4.619	4.402	0.708	127.5	126.5	85.5	7.59	26.81	190.8	387	2,430	24.5	1.94
7	DU-11	0.3	0.5	4.844	4.444	4.304	0.67	93.6	92.6	58.1	5.56	16.89	136.2	270	1,780	17.3	1.35
8	DU-8	0.3	0.5	5.164	4.764	4.314	0.825	90	89	74.4	5.34	27.9	144.7	315	1,710	19.4	1.58
9	DU-9	0.3	0.5	5.164	4.764	4.674	0.645	90	89	53.0	5.34	14.51	128.7	251	1,710	16.2	1.26
10	EU-10	0.3	0.5	4.675	4.275	4.11	0.682	165.33	164.3	105.5	9.86	31.39	243.6	485	3,150	30.9	2.43
11	EU-4-1	0.3	0.5	5.59	5.19	5.055	0.667	90	89	55.5	5.34	16.03	130.6	259	1,710	16.6	1.3
	Total							1110		723	65.7	222	1640	3300	21100	210	16.6
Concrete cover																	
1	AU-1	0.3	0.5	5.522	5.122	4.972	0.675	75	74	46.9	4.44	13.79	109.2	218	1,430	13.9	1.09
2	AU-2	0.3	0.5	5.522	5.122	5.042	0.64	40	39	23.0	2.34	6.23	56.2	111	760	7.2	0.56
3	AU-4-1	0.3	0.5	5.148	4.748	4.528	0.71	110	109	74.0	6.54	23.32	164.6	335	2,090	21.2	1.68
4	AU-5-1	0.3	0.5	4.878	4.478	4.428	0.625	50	49	28.0	2.94	7.3	69.9	135	950	8.8	0.68
5	AU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
6	CU-1	0.3	0.5	5.637	5.237	5.172	0.632	65	64	37.1	3.84	9.84	91.7	178	1,240	11.5	0.89
7	CU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
8	CU-2	0.3	0.5	5.507	5.107	4.977	0.665	26	25	15.6	1.5	4.54	36.7	75	500	4.8	0.38
9	CU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
10	DU-1	0.3	0.5	6.05	5.65	4.89	0.98	152	151	161.3	9.06	70.7	268.8	627	2,890	37.4	3.14
11	DU-10-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
12	DU-10-2	0.3	0.5	5.01	4.81	4.725	0.442	50	49	17.8	2.94	1.59	60.9	99	950	7	0.5
13	DU-2	0.3	0.5	5.3	4.9	4.788	0.656	45	44	26.8	2.64	7.53	64.1	128	860	8.2	0.64
14	DU-3	0.3	0.5	5.14	4.74	4.58	0.68	160	159	101.7	9.54	30.15	235.4	468	3,040	29.8	2.34
15	DU-5	0.3	0.5	5.14	4.74	4.53	0.705	105	104	69.9	6.24	21.8	156.6	318	2,000	20.1	1.59
16	DU-5-1	0.3	0.5	5.14	4.74	4.6	0.67	70	69	43.3	4.14	12.6	101.5	202	1,330	12.9	1.01
17	DU-6	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
18	DU-6-1	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
19	DU-9-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
20	EU-1	0.3	0.5	6.05	5.65	5.294	0.778	178	177	136.2	10.62	47.88	279.4	590	3,390	36.6	2.95
21	EU-11	0.3	0.5	5.22	4.82	4.53	0.745	145	144	104.4	8.64	34.92	222.5	462	2,760	28.9	2.31
22	EU-2	0.3	0.5	6.06	5.66	5.557	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
23	EU-3	0.3	0.5	5.97	5.57	5.19	0.79	81.47	80.47	63.3	4.83	22.67	128	274	1,550	17	1.37
24	EU-4	0.3	0.5	5.59	5.19	4.934	0.728	55	54	37.9	3.24	12.31	82.6	172	1,050	10.8	0.86
25	EU-5	0.3	0.5	5.33	4.93	4.803	0.663	27.3	26.3	16.3	1.58	4.69	38.5	78	520	5	0.39
26	EU-6	0.3	0.5	5.94	5.54	5.355	0.692	185	184	120.5	11.04	36.6	274.6	550	3,520	34.9	2.75
27	EU-7	0.3	0.5	5.97	5.57	4.8	0.985	165.33	164.3	176.9	9.86	77.9	293.4	685	3,150	40.9	3.43
28	EU-8	0.3	0.5	5.94	5.54	4.827	0.956	142.69	141.7	146.1	8.51	62.78	248.9	575	2,720	34.5	2.88
29	EU-9	0.3	0.5	5.23	4.83	4.568	0.731	175	174	122.9	10.44	40.17	266.4	547	3,330	34.4	2.74
30	EU-9-1	0.3	0.5	5.23	4.83	4.69	0.67	140	139	87.1	8.34	25.25	204.4	404	2,660	25.8	2.02
31	EU-9-2	0.3	0.5	5.34	4.94	4.837	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
	Total							2902		2070	173	695	4420	9150	55300	574	45.8
Grating cover																	
1	AU-9-1	0.3	0.5	4.711	4.311	4.206	0.652	70	69	41.7	4.14	11.62	100.2	197	1,330	12.7	0.99
2	BU-5-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
3	BU-7	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
4	BU-8	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
5	BU-8-1	0.3	0.5	4.711	4.311	4.245	0.633	66	65	37.8	3.9	10.08	93.2	181	1,260	11.7	0.91
6	CU-7-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
	Total							308		182	18.2	50.2	438	864	5870	55.6	4.4
No cover																	
1	DU-7	0.45	0.65	4.625	4.075	3.543	1.016	355	354	452.5	26.55	169.16	696	1514	8,670	95.3	8.11
	Total							355		453	26.6	170	696	1520	8670	95.3	8.2
Concrete cover																	
1	CU-9-2	0.45	0.65	4.711	4.161	4.057	0.802	104	103	95.1	7.73	26.99	180.5	355	2,540	23.5	1.93
2	CU-5-1	0.45	0.65	4.928	4.378	4.273	0.802	105	104	96.1	7.8	27.33	182.3	358	2,570	23.7	1.95
3	DU-11-1	0.45	0.65	4.844	4.294	4.184	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
4	DU-11-2	0.45	0.65	4.711	4.161	4.051	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
5	DU-4	0.45	0.65	5.14	4.59	4.43	0.83	160	159	153.8	11.93	45.76	283.1	564	3,910	37	3.06
6	EU-12	0.45	0.65	4.89	4.34	4.205	0.817	54	53	50.2	3.98	14.63	93.7	188	1,320	12.4	1.02
	Total							645		598	47.8	173	1130	2220	15800	147	12.1
Grating cover																	
1	AU-6-1	0.45	0.65	5.332	4.782	4.742	0.77	40	39	34.1	2.93	9.12	67.1	132	980	8.8	0.72
2	AU-7-1	0.45	0.65	5.132	4.582	4.546	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
3	AU-8-1	0.45	0.65	4.928	4.378	4.34	0.769	38	37	32.3	2.78	8.63	63.7	125	930	8.4	0.68
4	BU-1-1	0.45	0.65	5.332	4.782	4.716	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
5	BU-2-1	0.45	0.65	5.132	4.582	4.516	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
6	BU-3-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
7	BU-4-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
8	BU-6-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
9	BU-7-1	0.45	0.65	4.711	4.161	4.095	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
10	CU-8-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
11	CU-9-1	0.45	0.65	4.711	4.161	4.093	0.784	68	67	60.0	5.03	16.48	116.2	227	1,660	15.1	1.24
12	CU-6-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
	Total							650		567	48.0	155	1110	2160	16000	145	11.8

NIPPON KOEI CO.,LTD.

QUANTITY CALCULATION COVER SHEET

Project	Detailed Design on Port Reactivation Project in La Union Province	Project Code	JC1N004/2N001
Work Section Title	Trench. 300mm grating	Pay Item No. (BOQ)	2H-~~13~~ 12 04-03
Quantity Item	Elastic board	Unit	m^2

Calculation Procedure Applied

1. Calculation of sectional area (by the average height)
2. Calculation of number (by every 10m)
3. Calculation of area : sectional area times number

References, Calculation Base and Revisions

See the item of excavation and disposal of 300 mm without cover. (2H-~~11~~ 12 01)

Rev	Prepared by	Prepared Date	No. of Pages	Checked by	Checked Date	Reviewed by	Reviewed Date	Superseded by Calc No.
0	Karlo Garcia			Mr. Inoma		Mr. Ando		
1								
2								
3								

FN : Calculation_Cover_Sheet_020504_seg cover

Trench集計

		W_{inner} (m)	W_{outer} (m)	G (m)	Y_{in} (m)	Y_{out} (m)	H (m)	L (m)	Lao (m)	Vex (m3)	Vcs (m3)	Vbf (m3)	Cmpct (m2)	Form (m2)	Re-bar (kg)	Concrete (m3)	Elev. Cpk Board (m2)
No cover																	
1	AU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
2	AU-4	0.3	0.5	5.132	4.732	4.557	0.687	87.49	86.49	56.1	5.19	16.88	128.7	258	1,670	16.4	1.29
3	AU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
4	CU-4	0.3	0.5	5.132	4.732	4.529	0.701	87.49	86.49	57.7	5.19	17.88	129.9	263	1,670	16.7	1.32
5	CU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
6	DU-10	0.3	0.5	5.019	4.619	4.402	0.708	127.5	126.5	85.5	7.59	26.81	190.8	387	2,430	24.5	1.94
7	DU-11	0.3	0.5	4.844	4.444	4.304	0.67	93.6	92.6	58.1	5.56	16.89	136.2	270	1,780	17.3	1.35
8	DU-8	0.3	0.5	5.164	4.764	4.314	0.825	90	89	74.4	5.34	27.9	144.7	315	1,710	19.4	1.58
9	DU-9	0.3	0.5	5.164	4.764	4.674	0.645	90	89	53.0	5.34	14.51	128.7	251	1,710	16.2	1.26
10	EU-10	0.3	0.5	4.675	4.275	4.11	0.682	165.33	164.3	105.5	9.86	31.39	243.6	485	3,150	30.9	2.43
11	EU-4-1	0.3	0.5	5.59	5.19	5.055	0.667	90	89	55.5	5.34	16.03	130.6	259	1,710	16.6	1.3
	Total							1110		723	65.7	222	1640	3300	21100	210	16.6
Concrete cover																	
1	AU-1	0.3	0.5	5.522	5.122	4.972	0.675	75	74	46.9	4.44	13.79	109.2	218	1,430	13.9	1.09
2	AU-2	0.3	0.5	5.522	5.122	5.042	0.64	40	39	23.0	2.34	6.23	56.2	111	760	7.2	0.56
3	AU-4-1	0.3	0.5	5.148	4.748	4.528	0.71	110	109	74.0	6.54	23.32	164.6	335	2,090	21.2	1.68
4	AU-5-1	0.3	0.5	4.878	4.478	4.428	0.625	50	49	28.0	2.94	7.3	69.9	135	950	8.8	0.68
5	AU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
6	CU-1	0.3	0.5	5.637	5.237	5.172	0.632	65	64	37.1	3.84	9.84	91.7	178	1,240	11.5	0.89
7	CU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
8	CU-2	0.3	0.5	5.507	5.107	4.977	0.665	26	25	15.6	1.5	4.54	36.7	75	500	4.8	0.38
9	CU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
10	DU-1	0.3	0.5	6.05	5.65	4.89	0.98	152	151	161.3	9.06	70.7	268.8	627	2,890	37.4	3.14
11	DU-10-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
12	DU-10-2	0.3	0.5	5.01	4.81	4.725	0.442	50	49	17.8	2.94	1.59	60.9	99	950	7	0.5
13	DU-2	0.3	0.5	5.3	4.9	4.788	0.656	45	44	26.8	2.64	7.53	64.1	128	860	8.2	0.64
14	DU-3	0.3	0.5	5.14	4.74	4.58	0.68	160	159	101.7	9.54	30.15	235.4	468	3,040	29.8	2.34
15	DU-5	0.3	0.5	5.14	4.74	4.53	0.705	105	104	69.9	6.24	21.8	156.6	318	2,000	20.1	1.59
16	DU-5-1	0.3	0.5	5.14	4.74	4.6	0.67	70	69	43.3	4.14	12.6	101.5	202	1,330	12.9	1.01
17	DU-6	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
18	DU-6-1	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
19	DU-9-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
20	EU-1	0.3	0.5	6.05	5.65	5.294	0.778	178	177	136.2	10.62	47.88	279.4	590	3,390	36.6	2.95
21	EU-11	0.3	0.5	5.22	4.82	4.53	0.745	145	144	104.4	8.64	34.92	222.5	462	2,760	28.9	2.31
22	EU-2	0.3	0.5	6.06	5.66	5.557	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
23	EU-3	0.3	0.5	5.97	5.57	5.19	0.79	81.47	80.47	63.3	4.83	22.67	128	274	1,550	17	1.37
24	EU-4	0.3	0.5	5.59	5.19	4.934	0.728	55	54	37.9	3.24	12.31	82.6	172	1,050	10.8	0.86
25	EU-5	0.3	0.5	5.33	4.93	4.803	0.663	27.3	26.3	16.3	1.58	4.69	38.5	78	520	5	0.39
26	EU-6	0.3	0.5	5.94	5.54	5.355	0.692	185	184	120.5	11.04	36.6	274.6	550	3,520	34.9	2.75
27	EU-7	0.3	0.5	5.97	5.57	4.8	0.985	165.33	164.3	176.9	9.86	77.9	293.4	685	3,150	40.9	3.43
28	EU-8	0.3	0.5	5.94	5.54	4.827	0.956	142.69	141.7	146.1	8.51	62.78	248.9	575	2,720	34.5	2.88
29	EU-9	0.3	0.5	5.23	4.83	4.568	0.731	175	174	122.9	10.44	40.17	266.4	547	3,330	34.4	2.74
30	EU-9-1	0.3	0.5	5.23	4.83	4.69	0.67	140	139	87.1	8.34	25.25	204.4	404	2,660	25.8	2.02
31	EU-9-2	0.3	0.5	5.34	4.94	4.837	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
	Total							2902		2070	173	695	4420	9150	55300	574	45.8
Grating cover																	
1	AU-9-1	0.3	0.5	4.711	4.311	4.206	0.652	70	69	41.7	4.14	11.62	100.2	197	1,330	12.7	0.99
2	BU-5-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
3	BU-7	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
4	BU-8	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
5	BU-8-1	0.3	0.5	4.711	4.311	4.245	0.633	66	65	37.8	3.9	10.08	93.2	181	1,260	11.7	0.91
6	CU-7-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
	Total							308		182	18.2	50.2	438	864	5870	55.6	4.4
No cover																	
1	DU-7	0.45	0.65	4.625	4.075	3.543	1.016	355	354	452.5	26.55	169.16	696	1514	8,670	95.3	8.11
	Total							355		453	26.6	170	696	1520	8670	95.3	8.2
Concrete cover																	
1	CU-9-2	0.45	0.65	4.711	4.161	4.057	0.802	104	103	95.1	7.73	26.99	180.5	355	2,540	23.5	1.93
2	CU-5-1	0.45	0.65	4.928	4.378	4.273	0.802	105	104	96.1	7.8	27.33	182.3	358	2,570	23.7	1.95
3	DU-11-1	0.45	0.65	4.844	4.294	4.184	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
4	DU-11-2	0.45	0.65	4.711	4.161	4.051	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
5	DU-4	0.45	0.65	5.14	4.59	4.43	0.83	160	159	153.8	11.93	45.76	283.1	564	3,910	37	3.06
6	EU-12	0.45	0.65	4.89	4.34	4.205	0.817	54	53	50.2	3.98	14.63	93.7	188	1,320	12.4	1.02
	Total							645		598	47.8	173	1130	2220	15800	147	12.1
Grating cover																	
1	AU-6-1	0.45	0.65	5.332	4.782	4.742	0.77	40	39	34.1	2.93	9.12	67.1	132	980	8.8	0.72
2	AU-7-1	0.45	0.65	5.132	4.582	4.546	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
3	AU-8-1	0.45	0.65	4.928	4.378	4.34	0.769	38	37	32.3	2.78	8.63	63.7	125	930	8.4	0.68
4	BU-1-1	0.45	0.65	5.332	4.782	4.716	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
5	BU-2-1	0.45	0.65	5.132	4.582	4.516	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
6	BU-3-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
7	BU-4-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
8	BU-6-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
9	BU-7-1	0.45	0.65	4.711	4.161	4.095	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
10	CU-8-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
11	CU-9-1	0.45	0.65	4.711	4.161	4.093	0.784	68	67	60.0	5.03	16.48	116.2	227	1,660	15.1	1.24
12	CU-6-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
	Total							650		567	48.0	155	1110	2160	16000	145	11.8

QUANTITY CALCULATION COVER SHEET

Project	Detailed Design on Port Reactivation Project in La Union Province	Project Code	JC1N004/2N001
Work Section Title	Trench 300 mm grating	Pay Item No. (BOQ)	2H-~~#~~12 09 04
Quantity Item	Grating cover	Unit	Nos

Calculation Procedure Applied

Number of grating cover was computed on the assumption that the length was 1m.

References. Calculation Base and Revisions

See the item of excavation and disposal of 300 mm without cover. (2H-~~#~~12 01)

Rev	Prepared by	Prepared Date	No. of Pages	Checked by	Checked Date	Reviewed by	Reviewed Date	Superseded by Calc No.
0	Karla Garcia			Mr. Inoma		Mr. Ando		
1								
2								
3								

FN : Calculation_Cover_Sheet_020504_seg cover

Project	Detailed Design on Port Reactivation Project in La Union	Calc. File No.	
Section	Trench 300 mm grating	Calc. Index No.	
Subject	grating cover	Page No.	Rev.

References/ Notes

L = 308 m

N = 308 ÷ 1.0 = 308

		Prepared by		Checked by	
			/ /200		/ /200

FN: Calculation_Sheet

NIPPON KOEI CO.,LTD.

QUANTITY CALCULATION COVER SHEET

Project	Detailed Design on Port Reactivation Project in La Union Province	Project Code	JC1N004/2N001
Work Section Title	Trench 300mm grating	Pay Item No. (BOQ)	24-~~13~~16 05 01
Quantity Item	Backfill sand	Unit	m^3

Calculation Procedure Applied

Volume of backfill sand was computed by deduction of crushed stone and trench from the excavation volume.

References, Calculation Base and Revisions

See the item of excavation and disposal of 300 mm without cover. (24 - ~~#01~~ 12)

Rev	Prepared by	Prepared Date	No. of Pages	Checked by	Checked Date	Reviewed by	Reviewed Date	Superseded by Calc No.
0	Karla Garcia			Mr. Inoma		Mr. Ando		
1								
2								
3								

FN : Calculation_Cover_Sheet_020504_seg cover

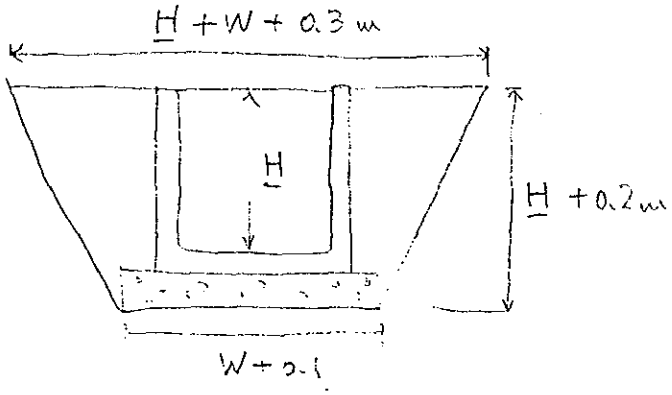
Trench集計

		W_{inner}	W_{outer}	G	Y_{in}	Y_{out}	H	L	Lac	Vex	Vcs	Vbf	Cmpct	Form	Re-bar	Concrete	Dim Cpt Bond
		(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m3)	(m3)	(m3)	(m2)	(m2)	(kg)	(m3)	(m2)
No cover																	
1	AU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
2	AU-4	0.3	0.5	5.132	4.732	4.557	0.687	87.49	86.49	56.1	5.19	16.88	128.7	258	1,670	16.4	1.29
3	AU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
4	CU-4	0.3	0.5	5.132	4.732	4.529	0.701	87.49	86.49	57.7	5.19	17.88	129.9	263	1,670	16.7	1.32
5	CU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
6	DU-10	0.3	0.5	5.019	4.619	4.402	0.708	127.5	126.5	85.5	7.59	26.81	190.8	387	2,430	24.5	1.94
7	DU-11	0.3	0.5	4.844	4.444	4.304	0.67	93.6	92.6	58.1	5.56	16.89	136.2	270	1,780	17.3	1.35
8	DU-8	0.3	0.5	5.164	4.764	4.314	0.825	90	89	74.4	5.34	27.9	144.7	315	1,710	19.4	1.58
9	DU-9	0.3	0.5	5.164	4.764	4.674	0.645	90	89	53.0	5.34	14.51	128.7	251	1,710	16.2	1.26
10	EU-10	0.3	0.5	4.675	4.275	4.11	0.682	165.33	164.3	105.5	9.86	31.39	243.6	485	3,150	30.9	2.43
11	EU-4-1	0.3	0.5	5.59	5.19	5.055	0.667	90	89	55.5	5.34	16.03	130.6	259	1,710	16.6	1.3
	Total							1110		723	65.7	222	1640	3300	21100	210	16.6
Concrete cover																	
1	AU-1	0.3	0.5	5.522	5.122	4.972	0.675	75	74	46.9	4.44	13.79	109.2	216	1,430	13.9	1.09
2	AU-2	0.3	0.5	5.522	5.122	5.042	0.64	40	39	23.0	2.34	6.23	56.2	111	760	7.2	0.56
3	AU-4-1	0.3	0.5	5.148	4.748	4.528	0.71	110	109	74.0	6.54	23.32	164.6	335	2,090	21.2	1.68
4	AU-5-1	0.3	0.5	4.878	4.478	4.428	0.625	50	49	28.0	2.94	7.3	69.9	135	950	8.8	0.68
5	AU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
6	CU-1	0.3	0.5	5.637	5.237	5.172	0.632	65	64	37.1	3.84	9.84	91.7	178	1,240	11.5	0.89
7	CU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
8	CU-2	0.3	0.5	5.507	5.107	4.977	0.665	26	25	15.6	1.5	4.54	36.7	75	500	4.8	0.38
9	CU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
10	DU-1	0.3	0.5	6.05	5.65	4.89	0.98	152	151	161.3	9.06	70.7	268.8	627	2,890	37.4	3.14
11	DU-10-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
12	DU-10-2	0.3	0.5	5.01	4.81	4.725	0.442	50	49	17.8	2.94	1.59	60.9	99	950	7	0.5
13	DU-2	0.3	0.5	5.3	4.9	4.788	0.656	45	44	26.8	2.64	7.53	64.1	128	860	8.2	0.64
14	DU-3	0.3	0.5	5.14	4.74	4.58	0.68	160	159	101.7	9.54	30.15	235.4	468	3,040	29.8	2.34
15	DU-5	0.3	0.5	5.14	4.74	4.53	0.705	105	104	69.9	6.24	21.8	156.6	318	2,000	20.1	1.59
16	DU-5-1	0.3	0.5	5.14	4.74	4.6	0.67	70	69	43.3	4.14	12.6	101.5	202	1,330	12.9	1.01
17	DU-6	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
18	DU-6-1	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
19	DU-9-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
20	EU-1	0.3	0.5	6.05	5.65	5.294	0.778	178	177	136.2	10.62	47.88	279.4	590	3,390	36.6	2.95
21	EU-11	0.3	0.5	5.22	4.82	4.53	0.745	145	144	104.4	8.64	34.92	222.5	462	2,760	28.9	2.31
22	EU-2	0.3	0.5	6.06	5.66	5.557	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
23	EU-3	0.3	0.5	5.97	5.57	5.19	0.79	81.47	80.47	63.3	4.83	22.67	128	274	1,550	17	1.37
24	EU-4	0.3	0.5	5.59	5.19	4.934	0.728	55	54	37.9	3.24	12.31	82.6	172	1,050	10.8	0.86
25	EU-5	0.3	0.5	5.33	4.93	4.803	0.663	27.3	26.3	16.3	1.58	4.69	38.5	78	520	5	0.39
26	EU-6	0.3	0.5	5.94	5.54	5.355	0.692	185	184	120.5	11.04	36.6	274.6	550	3,520	34.9	2.75
27	EU-7	0.3	0.5	5.97	5.57	4.6	0.985	165.33	164.3	176.9	9.86	77.9	293.4	685	3,150	40.9	3.43
28	EU-8	0.3	0.5	5.94	5.54	4.827	0.956	142.69	141.7	146.1	8.51	62.78	248.9	575	2,720	34.5	2.88
29	EU-9	0.3	0.5	5.23	4.83	4.568	0.731	175	174	122.9	10.44	40.17	266.4	547	3,330	34.4	2.74
30	EU-9-1	0.3	0.5	5.23	4.83	4.69	0.67	140	139	87.1	8.34	25.25	204.4	404	2,660	25.8	2.02
31	EU-9-2	0.3	0.5	5.34	4.94	4.837	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
	Total							2902		2070	173	695	4420	9150	55300	574	45.8
Grating cover																	
1	AU-9-1	0.3	0.5	4.711	4.311	4.206	0.652	70	69	41.7	4.14	11.62	100.2	197	1,330	12.7	0.99
2	BU-5-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
3	BU-7	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
4	BU-8	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
5	BU-8-1	0.3	0.5	4.711	4.311	4.245	0.633	66	65	37.8	3.9	10.08	93.2	181	1,260	11.7	0.91
6	CU-7-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
	Total							308		182	18.2	50.2	438	864	5870	55.6	4.4
No cover																	
1	DU-7	0.45	0.65	4.625	4.075	3.543	1.016	355	354	452.5	26.55	169.16	696	1514	8,670	95.3	8.11
	Total							355		453	26.6	170	696	1520	8670	95.3	8.2
Concrete cover																	
1	CU-9-2	0.45	0.65	4.711	4.161	4.057	0.802	104	103	95.1	7.73	26.99	180.5	355	2,540	23.5	1.93
2	CU-5-1	0.45	0.65	4.928	4.378	4.273	0.802	105	104	96.1	7.8	27.33	182.3	358	2,570	23.7	1.95
3	DU-11-1	0.45	0.65	4.844	4.294	4.184	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
4	DU-11-2	0.45	0.65	4.711	4.161	4.051	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
5	DU-4	0.45	0.65	5.14	4.59	4.43	0.83	160	159	153.8	11.93	45.76	283.1	564	3,910	37	3.06
6	EU-12	0.45	0.65	4.89	4.34	4.205	0.817	54	53	50.2	3.98	14.63	93.7	188	1,320	12.4	1.02
	Total							645		598	47.8	173	1130	2220	15800	147	12.1
Grating cover																	
1	AU-6-1	0.45	0.65	5.332	4.782	4.742	0.77	40	39	34.1	2.93	9.12	67.1	132	980	8.8	0.72
2	AU-7-1	0.45	0.65	5.132	4.582	4.546	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
3	AU-8-1	0.45	0.65	4.928	4.378	4.34	0.769	38	37	32.3	2.78	8.63	63.7	125	930	8.4	0.68
4	BU-1-1	0.45	0.65	5.332	4.782	4.716	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
5	BU-2-1	0.45	0.65	5.132	4.582	4.516	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
6	BU-3-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
7	BU-4-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
8	BU-6-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
9	BU-7-1	0.45	0.65	4.711	4.161	4.095	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
10	CU-8-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
11	CU-9-1	0.45	0.65	4.711	4.161	4.093	0.784	68	67	60.0	5.03	16.48	116.2	227	1,660	15.1	1.24
12	CU-6-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
	Total							650		567	48.0	155	1110	2160	16000	145	11.8

QUANTITY CALCULATION COVER SHEET

Project	Detailed Design on Port Reactivation Project in La Union Province	**Project Code**	JC1N004/2N001
Work Section Title	Trench 300mm grating	**Pay Item No. (BOQ)**	2H-~~#~~12 0502
Quantity Item	Compaction	**Unit**	m^2

Calculation Procedure Applied



Compaction area was computed by multiplying (H + 0.3) by the length.

References. Calculation Base and Revisions

See the item of excavation and disposal of 300 mm without cover. (2H - ~~#~~12 01)

Rev	Prepared by	Prepared Date	No. of Pages	Checked by	Checked Date	Reviewed by	Reviewed Date	Superseded by Calc No.
0	Karla Garcia			Mr. Inoma		Mr. Ando		
1								
2								
3								

FN : Calculation_Cover_Sheet_020504_seg cover

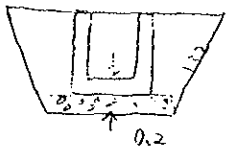
Trench集計

		W_{inner}	W_{outer}	G	Y_0	Y_{out}	H	L	Lac	Vex	Vcs	Vbf	Cmpct	Form	Re-bar	Concrete	Tunnel excavated
		(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m3)	(m3)	(m3)	(m2)	(m2)	(kg)	(m3)	(m2)
No cover																	
1	AU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
2	AU-4	0.3	0.5	5.132	4.732	4.557	0.687	87.49	86.49	56.1	5.19	16.88	128.7	258	1,670	16.4	1.29
3	AU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
4	CU-4	0.3	0.5	5.132	4.732	4.529	0.701	87.49	86.49	57.7	5.19	17.88	129.9	263	1,670	16.7	1.32
5	CU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
6	DU-10	0.3	0.5	5.019	4.619	4.402	0.708	127.5	126.5	85.5	7.59	26.81	190.8	387	2,430	24.5	1.94
7	DU-11	0.3	0.5	4.844	4.444	4.304	0.67	93.6	92.6	58.1	5.56	16.89	136.2	270	1,780	17.3	1.35
8	DU-8	0.3	0.5	5.164	4.764	4.314	0.825	90	89	74.4	5.34	27.9	144.7	315	1,710	19.4	1.58
9	DU-9	0.3	0.5	5.164	4.764	4.674	0.645	90	89	53.0	5.34	14.51	128.7	251	1,710	16.2	1.26
10	EU-10	0.3	0.5	4.675	4.275	4.11	0.682	165.33	164.3	105.5	9.86	31.39	243.6	485	3,150	30.9	2.43
11	EU-4-1	0.3	0.5	5.59	5.19	5.055	0.667	90	89	55.5	5.34	16.03	130.6	259	1,710	16.6	1.3
	Total							1110		723	65.7	222	1640	3300	21100	210	16.6
Concrete cover																	
1	AU-1	0.3	0.5	5.522	5.122	4.972	0.675	75	74	46.9	4.44	13.79	109.2	218	1,430	13.9	1.09
2	AU-2	0.3	0.5	5.522	5.122	5.042	0.64	40	39	23.0	2.34	6.23	56.2	111	760	7.2	0.56
3	AU-4-1	0.3	0.5	5.148	4.748	4.528	0.71	110	109	74.0	6.54	23.32	164.6	335	2,090	21.2	1.68
4	AU-5-1	0.3	0.5	4.878	4.478	4.428	0.625	50	49	28.0	2.94	7.3	69.9	135	950	8.8	0.68
5	AU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
6	CU-1	0.3	0.5	5.637	5.237	5.172	0.632	65	64	37.1	3.84	9.84	91.7	178	1,240	11.5	0.89
7	CU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
8	CU-2	0.3	0.5	5.507	5.107	4.977	0.665	26	25	15.6	1.5	4.54	36.7	75	500	4.8	0.38
9	CU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
10	DU-1	0.3	0.5	6.05	5.65	4.89	0.98	152	151	161.3	9.06	70.7	268.8	627	2,890	37.4	3.14
11	DU-10-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
12	DU-10-2	0.3	0.5	5.01	4.61	4.725	0.442	50	49	17.8	2.94	1.59	60.9	99	950	7	0.5
13	DU-2	0.3	0.5	5.3	4.9	4.788	0.656	45	44	26.8	2.64	7.53	64.1	128	860	8.2	0.64
14	DU-3	0.3	0.5	5.14	4.74	4.58	0.68	160	159	101.7	9.54	30.15	235.4	468	3,040	29.8	2.34
15	DU-5	0.3	0.5	5.14	4.74	4.53	0.705	105	104	69.9	6.24	21.8	156.6	318	2,000	20.1	1.59
16	DU-5-1	0.3	0.5	5.14	4.74	4.6	0.67	70	69	43.3	4.14	12.6	101.5	202	1,330	12.9	1.01
17	DU-6	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
18	DU-6-1	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
19	DU-9-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
20	EU-1	0.3	0.5	6.05	5.65	5.294	0.778	178	177	136.2	10.62	47.88	279.4	590	3,390	36.6	2.95
21	EU-11	0.3	0.5	5.22	4.82	4.53	0.745	145	144	104.4	8.64	34.92	222.5	462	2,760	28.9	2.31
22	EU-2	0.3	0.5	6.06	5.66	5.557	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
23	EU-3	0.3	0.5	5.97	5.57	5.19	0.79	81.47	80.47	63.3	4.83	22.67	128	274	1,550	17	1.37
24	EU-4	0.3	0.5	5.59	5.19	4.934	0.728	55	54	37.9	3.24	12.31	82.6	172	1,050	10.8	0.86
25	EU-5	0.3	0.5	5.33	4.93	4.803	0.663	27.3	26.3	16.3	1.58	4.69	38.5	78	520	5	0.39
26	EU-6	0.3	0.5	5.94	5.54	5.355	0.692	185	184	120.5	11.04	36.8	274.6	550	3,520	34.9	2.75
27	EU-7	0.3	0.5	5.97	5.57	4.8	0.985	165.33	164.3	176.9	9.86	77.9	293.4	685	3,150	40.9	3.43
28	EU-8	0.3	0.5	5.94	5.54	4.827	0.956	142.69	141.7	146.1	8.51	62.78	248.9	575	2,720	34.5	2.88
29	EU-9	0.3	0.5	5.23	4.83	4.568	0.731	175	174	122.9	10.44	40.17	266.4	547	3,330	34.4	2.74
30	EU-9-1	0.3	0.5	5.23	4.83	4.69	0.67	140	139	87.1	8.34	25.25	204.4	404	2,660	25.8	2.02
31	EU-9-2	0.3	0.5	5.34	4.94	4.837	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
	Total							2902		2070	173	695	4420	9150	55300	574	45.8
Grating cover																	
1	AU-9-1	0.3	0.5	4.711	4.311	4.206	0.652	70	69	41.7	4.14	11.62	100.2	197	1,330	12.7	0.99
2	BU-5-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
3	BU-7	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
4	BU-8	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
5	BU-8-1	0.3	0.5	4.711	4.311	4.245	0.633	66	65	37.8	3.9	10.08	93.2	181	1,260	11.7	0.91
6	CU-7-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
	Total							308		182	18.2	50.2	438	864	5870	55.6	4.4
No cover																	
1	DU-7	0.45	0.65	4.625	4.075	3.543	1.016	355	354	452.5	26.55	169.16	696	1514	8,670	95.3	8.11
	Total							355		453	26.6	170	696	1520	8670	95.3	8.2
Concrete cover																	
1	CU-9-2	0.45	0.65	4.711	4.161	4.057	0.802	104	103	95.1	7.73	26.99	180.5	355	2,540	23.5	1.93
2	CU-5-1	0.45	0.65	4.928	4.378	4.273	0.802	105	104	96.1	7.8	27.33	182.3	358	2,570	23.7	1.95
3	DU-11-1	0.45	0.65	4.844	4.294	4.184	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
4	DU-11-2	0.45	0.65	4.711	4.161	4.051	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
5	DU-4	0.45	0.65	5.14	4.59	4.43	0.83	160	159	153.8	11.93	45.76	283.1	564	3,910	37	3.06
6	EU-12	0.45	0.65	4.89	4.34	4.205	0.817	54	53	50.2	3.98	14.63	93.7	188	1,320	12.4	1.02
	Total							645		598	47.8	173	1130	2220	15800	147	12.1
Grating cover																	
1	AU-6-1	0.45	0.65	5.332	4.782	4.742	0.77	40	39	34.1	2.93	9.12	67.1	132	980	8.8	0.72
2	AU-7-1	0.45	0.65	5.132	4.582	4.546	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
3	AU-8-1	0.45	0.65	4.928	4.378	4.34	0.769	38	37	32.3	2.78	8.63	63.7	125	930	8.4	0.68
4	BU-1-1	0.45	0.65	5.332	4.782	4.716	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
5	BU-2-1	0.45	0.65	5.132	4.582	4.516	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
6	BU-3-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
7	BU-4-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
8	BU-6-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
9	BU-7-1	0.45	0.65	4.711	4.161	4.095	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
10	CU-8-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
11	CU-9-1	0.45	0.65	4.711	4.161	4.093	0.784	68	67	60.0	5.03	16.48	116.2	227	1,660	15.1	1.24
12	CU-6-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
	Total							650		567	48.0	155	1110	2160	16000	145	11.8

QUANTITY CALCULATION COVER SHEET

Project	Detailed Design on Port Reactivation Project in La Union Province	**Project Code**	JC1N004/2N001
Work Section Title	Trench 450mm no cover	**Pay Item No. (BOQ)**	2H - ~~14~~ 15 01
Quantity Item	Excavation and Disposal	**Unit**	m^3

Calculation Procedure Applied



Average of inlet level and outlet level

H = Ground Level − Average Level + 0.2

Calculation of area : slope 1:2 ,

Calculation of volume : Area times length

References, Calculation Base and Revisions

See the item of excavation and disposal of 300 mm without cover. (2H - ~~11~~ 12 01)

Rev	Prepared by	Prepared Date	No. of Pages	Checked by	Checked Date	Reviewed by	Reviewed Date	Superseded by Calc No.
0	Karla Garcia			Mr. Touma		Mr. Ando		
1								
2								
3								

FN : Calculation_Cover_Sheet_020504_seg cover

Trench集計

		W_{inner}	W_{outer}	G	Y_{in}	Y_{out}	H	L	Lac	Vex	Vcs	Vbf	Cmpct	Form	Re-bar	Concrete	Ebr Cph Board
		(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m3)	(m3)	(m3)	(m2)	(m2)	(kg)	(m3)	(m2)
No cover																	
1	AU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
2	AU-4	0.3	0.5	5.132	4.732	4.557	0.687	87.49	86.49	56.1	5.19	16.88	128.7	258	1,670	16.4	1.29
3	AU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
4	CU-4	0.3	0.5	5.132	4.732	4.529	0.701	87.49	86.49	57.7	5.19	17.88	129.9	263	1,670	16.7	1.32
5	CU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
6	DU-10	0.3	0.5	5.019	4.619	4.402	0.708	127.5	126.5	85.5	7.59	26.81	190.8	387	2,430	24.5	1.94
7	DU-11	0.3	0.5	4.844	4.444	4.304	0.67	93.6	92.6	58.1	5.56	16.89	136.2	270	1,780	17.3	1.35
8	DU-8	0.3	0.5	5.164	4.764	4.314	0.825	90	89	74.4	5.34	27.9	144.7	315	1,710	19.4	1.58
9	DU-9	0.3	0.5	5.164	4.764	4.674	0.645	90	89	53.0	5.34	14.51	128.7	251	1,710	16.2	1.26
10	EU-10	0.3	0.5	4.675	4.275	4.11	0.682	165.33	164.3	105.5	9.86	31.39	243.6	485	3,150	30.9	2.43
11	EU-4-1	0.3	0.5	5.59	5.19	5.055	0.667	90	89	55.5	5.34	16.03	130.6	259	1,710	16.6	1.3
	Total							1110		723	65.7	222	1640	3300	21100	210	16.6
Concrete cover																	
1	AU-1	0.3	0.5	5.522	5.122	4.972	0.675	75	74	46.9	4.44	13.78	109.2	218	1,430	13.9	1.09
2	AU-2	0.3	0.5	5.522	5.122	5.042	0.64	40	39	23.0	2.34	6.23	56.2	111	760	7.2	0.56
3	AU-4-1	0.3	0.5	5.148	4.748	4.528	0.71	110	109	74.0	6.54	23.32	164.6	335	2,090	21.2	1.68
4	AU-5-1	0.3	0.5	4.878	4.478	4.428	0.625	50	49	28.0	2.94	7.3	69.9	135	950	8.8	0.68
5	AU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
6	CU-1	0.3	0.5	5.637	5.237	5.172	0.632	65	64	37.1	3.84	9.84	91.7	178	1,240	11.5	0.89
7	CU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
8	CU-2	0.3	0.5	5.507	5.107	4.977	0.665	26	25	15.6	1.5	4.54	36.7	75	500	4.8	0.38
9	CU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
10	DU-1	0.3	0.5	6.05	5.65	4.89	0.98	152	151	161.3	9.06	70.7	268.8	627	2,890	37.4	3.14
11	DU-10-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
12	DU-10-2	0.3	0.5	5.01	4.81	4.725	0.442	50	49	17.8	2.94	1.59	60.9	99	950	7	0.5
13	DU-2	0.3	0.5	5.3	4.9	4.788	0.656	45	44	26.8	2.64	7.53	64.1	128	860	8.2	0.64
14	DU-3	0.3	0.5	5.14	4.74	4.58	0.68	160	159	101.7	9.54	30.15	235.4	468	3,040	29.8	2.34
15	DU-5	0.3	0.5	5.14	4.74	4.53	0.705	105	104	69.9	6.24	21.8	156.6	318	2,000	20.1	1.59
16	DU-5-1	0.3	0.5	5.14	4.74	4.6	0.67	70	69	43.3	4.14	12.6	101.5	202	1,330	12.9	1.01
17	DU-6	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
18	DU-6-1	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
19	DU-9-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
20	EU-1	0.3	0.5	6.05	5.65	5.294	0.778	178	177	136.2	10.62	47.88	279.4	590	3,390	36.6	2.95
21	EU-11	0.3	0.5	5.22	4.82	4.53	0.745	145	144	104.4	8.64	34.92	222.5	462	2,760	28.9	2.31
22	EU-2	0.3	0.5	6.06	5.66	5.557	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
23	EU-3	0.3	0.5	5.97	5.57	5.19	0.79	81.47	80.47	63.3	4.83	22.67	128	274	1,550	17	1.37
24	EU-4	0.3	0.5	5.59	5.19	4.934	0.728	55	54	37.9	3.24	12.31	82.6	172	1,050	10.8	0.86
25	EU-5	0.3	0.5	5.33	4.93	4.803	0.663	27.3	26.3	16.3	1.58	4.69	38.5	78	520	5	0.39
26	EU-6	0.3	0.5	5.94	5.54	5.355	0.692	185	184	120.5	11.04	36.6	274.6	550	3,520	34.9	2.75
27	EU-7	0.3	0.5	5.97	5.57	4.8	0.985	165.33	164.3	176.9	9.86	77.9	293.4	685	3,150	40.9	3.43
28	EU-8	0.3	0.5	5.94	5.54	4.827	0.956	142.69	141.7	146.1	8.51	62.78	248.9	575	2,720	34.5	2.88
29	EU-9	0.3	0.5	5.23	4.83	4.568	0.731	175	174	122.9	10.44	40.17	266.4	547	3,330	34.4	2.74
30	EU-9-1	0.3	0.5	5.23	4.83	4.69	0.67	140	139	87.1	8.34	25.25	204.4	404	2,660	25.8	2.02
31	EU-9-2	0.3	0.5	5.34	4.94	4.837	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
	Total							2902		2070	173	685	4420	9150	55300	574	45.8
Grating cover																	
1	AU-9-1	0.3	0.5	4.711	4.311	4.206	0.652	70	69	41.7	4.14	11.62	100.2	197	1,330	12.7	0.99
2	BU-5-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
3	BU-7	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
4	BU-8	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
5	BU-8-1	0.3	0.5	4.711	4.311	4.245	0.633	66	65	37.8	3.9	10.08	93.2	181	1,260	11.7	0.91
6	CU-7-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
	Total							308		182	18.2	50.2	438	864	5870	55.6	4.4
No cover																	
1	DU-7	0.45	0.65	4.625	4.075	3.543	1.016	355	354	452.5	26.55	169.16	696	1514	8,670	95.3	8.11
	Total							355		453	26.6	170	696	1520	8670	95.3	8.2
Concrete cover																	
1	CU-9-2	0.45	0.65	4.711	4.161	4.057	0.802	104	103	95.1	7.73	26.99	180.5	355	2,540	23.5	1.93
2	CU-5-1	0.45	0.65	4.928	4.378	4.273	0.802	105	104	96.1	7.8	27.33	182.3	358	2,570	23.7	1.95
3	DU-11-1	0.45	0.65	4.844	4.294	4.184	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
4	DU-11-2	0.45	0.65	4.711	4.161	4.051	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
5	DU-4	0.45	0.65	5.14	4.59	4.43	0.83	160	159	153.8	11.93	45.76	283.1	564	3,910	37	3.06
6	EU-12	0.45	0.65	4.89	4.34	4.205	0.817	54	53	50.2	3.98	14.63	93.7	188	1,320	12.4	1.02
	Total							645		598	47.8	173	1130	2220	15800	147	12.1
Grating cover																	
1	AU-6-1	0.45	0.65	5.332	4.782	4.742	0.77	40	39	34.1	2.93	9.12	67.1	132	980	8.8	0.72
2	AU-7-1	0.45	0.65	5.132	4.582	4.546	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
3	AU-8-1	0.45	0.65	4.928	4.378	4.34	0.769	38	37	32.3	2.78	8.63	63.7	125	930	8.4	0.68
4	BU-1-1	0.45	0.65	5.332	4.782	4.716	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
5	BU-2-1	0.45	0.65	5.132	4.582	4.516	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
6	BU-3-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
7	BU-4-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
8	BU-6-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
9	BU-7-1	0.45	0.65	4.711	4.161	4.095	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
10	CU-8-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
11	CU-9-1	0.45	0.65	4.711	4.161	4.093	0.784	68	67	60.0	5.03	16.48	116.2	227	1,660	15.1	1.24
12	CU-6-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
	Total							650		567	48.0	155	1110	2160	16000	145	11.8

QUANTITY CALCULATION COVER SHEET

Project	Detailed Design on Port Reactivation Project in La Union Province	Project Code	JC1N004/2N001
Work Section Title	Trench 450mm no cover	Pay Item No. (BOQ)	2H – ~~14~~ 15 02
Quantity Item	Crushed stone for foundation	Unit	m^3

Calculation Procedure Applied

1. Calculation of area : thickness 0.1m, width
2. Calculation of volume : Area times length

References. Calculation Base and Revisions

See the item of excavation and disposal of 300 mm without cover. (2H – ~~11~~ 12 01)

Rev	Prepared by	Prepared Date	No. of Pages	Checked by	Checked Date	Reviewed by	Reviewed Date	Superseded by Calc No.
0	Karla Garcia			Mr. Inoma		Mr. Ando		
1								
2								
3								

FN : Calculation_Cover_Sheet_020504_seg cover

Trench集計

		W_{inner}	W_{outer}	G	Y_{in}	Y_{out}	H	L	Lac	Vex	Vcs	Vbf	Cmpct	Form	Re-bar	Concrete	Elts rgh Board
		(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m3)	(m3)	(m3)	(m2)	(m2)	(kg)	(m3)	(m2)
No cover																	
1	AU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
2	AU-4	0.3	0.5	5.132	4.732	4.557	0.687	87.49	86.49	56.1	5.19	16.88	128.7	258	1,670	16.4	1.29
3	AU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
4	CU-4	0.3	0.5	5.132	4.732	4.529	0.701	87.49	86.49	57.7	5.19	17.88	129.9	263	1,670	16.7	1.32
5	CU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
6	DU-10	0.3	0.5	5.019	4.619	4.402	0.708	127.5	126.5	85.5	7.59	26.81	190.8	387	2,430	24.5	1.94
7	DU-11	0.3	0.5	4.844	4.444	4.304	0.67	93.6	92.6	58.1	5.56	16.89	136.2	270	1,780	17.3	1.35
8	DU-8	0.3	0.5	5.164	4.764	4.314	0.825	90	89	74.4	5.34	27.9	144.7	315	1,710	19.4	1.58
9	DU-9	0.3	0.5	5.164	4.764	4.674	0.645	90	89	53.0	5.34	14.51	128.7	251	1,710	16.2	1.26
10	EU-10	0.3	0.5	4.675	4.275	4.11	0.682	165.33	164.3	105.5	9.86	31.39	243.6	485	3,150	30.9	2.43
11	EU-4-1	0.3	0.5	5.59	5.19	5.055	0.667	90	89	55.5	5.34	16.03	130.6	259	1,710	16.6	1.3
	Total							1110		723	65.7	222	1640	3300	21100	210	16.6
Concrete cover																	
1	AU-1	0.3	0.5	5.522	5.122	4.972	0.675	75	74	46.9	4.44	13.79	109.2	218	1,430	13.9	1.09
2	AU-2	0.3	0.5	5.522	5.122	5.042	0.64	40	39	23.0	2.34	6.23	56.2	111	760	7.2	0.56
3	AU-4-1	0.3	0.5	5.148	4.748	4.528	0.71	110	109	74.0	6.54	23.32	164.6	335	2,090	21.2	1.68
4	AU-5-1	0.3	0.5	4.878	4.478	4.428	0.625	50	49	28.0	2.94	7.3	69.9	135	950	8.8	0.68
5	AU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
6	CU-1	0.3	0.5	5.637	5.237	5.172	0.632	65	64	37.1	3.84	9.84	91.7	178	1,240	11.5	0.89
7	CU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
8	CU-2	0.3	0.5	5.507	5.107	4.977	0.665	26	25	15.6	1.5	4.54	36.7	75	500	4.8	0.38
9	CU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
10	DU-1	0.3	0.5	6.05	5.65	4.89	0.98	152	151	161.3	9.06	70.7	268.8	627	2,890	37.4	3.14
11	DU-10-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
12	DU-10-2	0.3	0.5	5.01	4.61	4.725	0.442	50	49	17.8	2.94	1.59	60.9	99	950	7	0.5
13	DU-2	0.3	0.5	5.3	4.9	4.788	0.656	45	44	26.8	2.64	7.53	64.1	128	860	8.2	0.64
14	DU-3	0.3	0.5	5.14	4.74	4.58	0.68	160	159	101.7	9.54	30.15	235.4	468	3,040	29.8	2.34
15	DU-5	0.3	0.5	5.14	4.74	4.53	0.705	105	104	69.9	6.24	21.8	156.6	318	2,000	20.1	1.59
16	DU-5-1	0.3	0.5	5.14	4.74	4.6	0.67	70	69	43.3	4.14	12.6	101.5	202	1,330	12.9	1.01
17	DU-6	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
18	DU-6-1	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
19	DU-9-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
20	EU-1	0.3	0.5	6.05	5.65	5.294	0.778	178	177	136.2	10.62	47.88	279.4	590	3,390	36.6	2.95
21	EU-11	0.3	0.5	5.22	4.82	4.53	0.745	145	144	104.4	8.64	34.92	222.5	462	2,760	28.9	2.31
22	EU-2	0.3	0.5	6.06	5.66	5.557	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
23	EU-3	0.3	0.5	5.97	5.57	5.19	0.79	81.47	80.47	63.3	4.83	22.67	128	274	1,550	17	1.37
24	EU-4	0.3	0.5	5.59	5.19	4.934	0.728	55	54	37.9	3.24	12.31	82.6	172	1,050	10.8	0.86
25	EU-5	0.3	0.5	5.33	4.93	4.803	0.663	27.3	26.3	16.3	1.58	4.69	38.5	78	520	5	0.39
26	EU-6	0.3	0.5	5.94	5.54	5.355	0.692	185	184	120.5	11.04	36.6	274.6	550	3,520	34.9	2.75
27	EU-7	0.3	0.5	5.97	5.57	4.8	0.985	165.33	164.3	176.9	9.86	77.9	293.4	685	3,150	40.9	3.43
28	EU-8	0.3	0.5	5.94	5.54	4.827	0.956	142.69	141.7	146.1	8.51	62.78	248.9	575	2,720	34.5	2.88
29	EU-9	0.3	0.5	5.23	4.83	4.568	0.731	175	174	122.9	10.44	40.17	266.4	547	3,330	34.4	2.74
30	EU-9-1	0.3	0.5	5.23	4.83	4.69	0.67	140	139	87.1	8.34	25.25	204.4	404	2,660	25.8	2.02
31	EU-9-2	0.3	0.5	5.34	4.94	4.837	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
	Total							2902		2070	173	695	4420	9150	55300	574	45.8
Grating cover																	
1	AU-9-1	0.3	0.5	4.711	4.311	4.206	0.652	70	69	41.7	4.14	11.62	100.2	197	1,330	12.7	0.99
2	BU-5-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
3	BU-7	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
4	BU-8	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
5	BU-8-1	0.3	0.5	4.711	4.311	4.245	0.633	66	65	37.8	3.9	10.08	93.2	181	1,260	11.7	0.91
6	CU-7-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
	Total							308		182	18.2	50.2	438	864	5870	55.6	4.4
No cover																	
1	DU-7	0.45	0.65	4.625	4.075	3.543	1.016	355	354	452.5	26.55	169.16	696	1514	8,670	95.3	8.11
	Total							355		453	26.6	170	696	1520	8670	95.3	8.2
Concrete cover																	
1	CU-9-2	0.45	0.65	4.711	4.161	4.057	0.802	104	103	95.1	7.73	26.99	180.5	355	2,540	23.5	1.93
2	CU-5-1	0.45	0.65	4.928	4.378	4.273	0.802	105	104	96.1	7.8	27.33	182.3	358	2,570	23.7	1.95
3	DU-11-1	0.45	0.65	4.844	4.294	4.184	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
4	DU-11-2	0.45	0.65	4.711	4.161	4.051	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
5	DU-4	0.45	0.65	5.14	4.59	4.43	0.83	160	159	153.8	11.93	45.76	283.1	564	3,910	37	3.06
6	EU-12	0.45	0.65	4.89	4.34	4.205	0.817	54	53	50.2	3.98	14.63	93.7	188	1,320	12.4	1.02
	Total							645		598	47.8	173	1130	2220	15800	147	12.1
Grating cover																	
1	AU-6-1	0.45	0.65	5.332	4.782	4.742	0.77	40	39	34.1	2.93	9.12	67.1	132	980	8.8	0.72
2	AU-7-1	0.45	0.65	5.132	4.582	4.546	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
3	AU-8-1	0.45	0.65	4.928	4.378	4.34	0.769	38	37	32.3	2.78	8.63	63.7	125	930	8.4	0.68
4	BU-1-1	0.45	0.65	5.332	4.782	4.716	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
5	BU-2-1	0.45	0.65	5.132	4.582	4.516	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
6	BU-3-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
7	BU-4-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
8	BU-6-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
9	BU-7-1	0.45	0.65	4.711	4.161	4.095	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
10	CU-8-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
11	CU-9-1	0.45	0.65	4.711	4.161	4.093	0.784	68	67	60.0	5.03	16.48	116.2	227	1,660	15.1	1.24
12	CU-6-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
	Total							650		567	48.0	155	1110	2160	16000	145	11.8

NIPPON KOEI CO.,LTD.

QUANTITY CALCULATION COVER SHEET

Project	Detailed Design on Port Reactivation Project in La Union Province	**Project Code**	JC1N004/2N001
Work Section Title	Trench 450mm no cover	**Pay Item No. (BOQ)**	2H-~~#~~03
Quantity Item	Reinforcement	**Unit**	kg

Calculation Procedure Applied

1. Calculation of weight of reinforcement per 1m
2. Calculation of weight : unit weight times length

References, Calculation Base and Revisions

See the item of excavation and disposal of 300mm without cover. (2H-~~#~~01)

Rev	Prepared by	Prepared Date	No. of Pages	Checked by	Checked Date	Reviewed by	Reviewed Date	Superseded by Calc No.
0	Karla Garcia			Mr. Inuma		Mr. Ando		
1								
2								
3								

FN : Calculation_Cover_Sheet_020504_seg cover

TABLE OF REINFORCEMENT (TRENCH)

No.	D	L (m)	Qty	W/bar (kg)	W (kg)	Remarks
Trench (300)						
A1	D13	0.80	10	0.796	7.96	
A2	D13	1.00	11	0.995	10.95	
				total	18.91	per m
Trench (450)						
A1	D13	1.25	10	1.24375	12.44	
A2	D13	1.00	12	0.995	11.94	
				total	24.38	per m

Trench集計

		W_{inner}	W_{outer}	G	Y_{in}	Y_{out}	H	L	Lac	Vex	Vcs	Vbf	Cmpct	Form	Re-bar	Concrete	Ext Gth Board
		(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m3)	(m3)	(m3)	(m2)	(m2)	(kg)	(m3)	(m2)
No cover																	
1	AU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
2	AU-4	0.3	0.5	5.132	4.732	4.557	0.687	87.49	86.49	56.1	5.19	16.88	128.7	258	1,670	16.4	1.29
3	AU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
4	CU-4	0.3	0.5	5.132	4.732	4.529	0.701	87.49	86.49	57.7	5.19	17.88	129.9	263	1,670	16.7	1.32
5	CU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
6	DU-10	0.3	0.5	5.019	4.619	4.402	0.708	127.5	126.5	85.5	7.59	26.81	190.8	387	2,430	24.5	1.94
7	DU-11	0.3	0.5	4.844	4.444	4.304	0.67	93.6	92.6	58.1	5.56	16.89	136.2	270	1,780	17.3	1.35
8	DU-8	0.3	0.5	5.164	4.764	4.314	0.825	90	89	74.4	5.34	27.9	144.7	315	1,710	19.4	1.58
9	DU-9	0.3	0.5	5.164	4.764	4.674	0.645	90	89	53.0	5.34	14.51	128.7	251	1,710	16.2	1.26
10	EU-10	0.3	0.5	4.675	4.275	4.11	0.682	165.33	164.3	105.5	9.86	31.39	243.6	485	3,150	30.9	2.43
11	EU-4-1	0.3	0.5	5.59	5.19	5.055	0.667	90	89	55.5	5.34	16.03	130.6	259	1,710	16.6	1.3
	Total							1110		723	65.7	222	1640	3300	21100	210	16.6
Concrete cover																	
1	AU-1	0.3	0.5	5.522	5.122	4.972	0.675	75	74	46.9	4.44	13.79	109.2	218	1,430	13.9	1.09
2	AU-2	0.3	0.5	5.522	5.122	5.042	0.64	40	39	23.0	2.34	6.23	56.2	111	760	7.2	0.56
3	AU-4-1	0.3	0.5	5.148	4.748	4.528	0.71	110	109	74.0	6.54	23.32	164.6	335	2,090	21.2	1.68
4	AU-5-1	0.3	0.5	4.878	4.478	4.428	0.625	50	49	28.0	2.94	7.3	69.9	135	950	8.8	0.68
5	AU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
6	CU-1	0.3	0.5	5.637	5.237	5.172	0.632	65	64	37.1	3.84	9.84	91.7	178	1,240	11.5	0.89
7	CU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
8	CU-2	0.3	0.5	5.507	5.107	4.977	0.665	26	25	15.6	1.5	4.54	36.7	75	500	4.8	0.38
9	CU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
10	DU-1	0.3	0.5	6.05	5.65	4.89	0.98	152	151	161.3	9.06	70.7	268.8	627	2,890	37.4	3.14
11	DU-10-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
12	DU-10-2	0.3	0.5	5.01	4.81	4.725	0.442	50	49	17.8	2.94	1.59	60.9	99	950	7	0.5
13	DU-2	0.3	0.5	5.3	4.9	4.788	0.656	45	44	26.8	2.64	7.53	64.1	128	860	8.2	0.64
14	DU-3	0.3	0.5	5.14	4.74	4.58	0.68	160	159	101.7	9.54	30.15	235.4	468	3,040	29.8	2.34
15	DU-5	0.3	0.5	5.14	4.74	4.53	0.705	105	104	69.9	6.24	21.8	156.6	318	2,000	20.1	1.59
16	DU-5-1	0.3	0.5	5.14	4.74	4.6	0.67	70	69	43.3	4.14	12.6	101.5	202	1,330	12.9	1.01
17	DU-6	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
18	DU-6-1	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
19	DU-9-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
20	EU-1	0.3	0.5	6.05	5.65	5.294	0.778	178	177	136.2	10.62	47.88	279.4	590	3,390	36.6	2.95
21	EU-11	0.3	0.5	5.22	4.82	4.53	0.745	145	144	104.4	8.64	34.92	222.5	462	2,760	28.9	2.31
22	EU-2	0.3	0.5	6.06	5.66	5.557	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
23	EU-3	0.3	0.5	5.97	5.57	5.19	0.79	81.47	80.47	63.3	4.83	22.67	128	274	1,550	17	1.37
24	EU-4	0.3	0.5	5.59	5.19	4.934	0.728	55	54	37.9	3.24	12.31	82.6	172	1,050	10.8	0.86
25	EU-5	0.3	0.5	5.33	4.93	4.803	0.663	27.3	26.3	16.3	1.58	4.69	38.5	78	520	5	0.39
26	EU-6	0.3	0.5	5.94	5.54	5.355	0.692	185	184	120.5	11.04	36.6	274.6	550	3,520	34.9	2.75
27	EU-7	0.3	0.5	5.97	5.57	4.8	0.985	165.33	164.3	176.9	9.86	77.9	293.4	685	3,150	40.9	3.43
28	EU-8	0.3	0.5	5.94	5.54	4.827	0.956	142.69	141.7	146.1	8.51	62.78	248.9	575	2,720	34.5	2.88
29	EU-9	0.3	0.5	5.23	4.83	4.568	0.731	175	174	122.9	10.44	40.17	266.4	547	3,330	34.4	2.74
30	EU-9-1	0.3	0.5	5.23	4.83	4.69	0.67	140	139	87.1	8.34	25.25	204.4	404	2,660	25.8	2.02
31	EU-9-2	0.3	0.5	5.34	4.94	4.837	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
	Total							2902		2070	173	695	4420	9150	55300	574	45.8
Grating cover																	
1	AU-9-1	0.3	0.5	4.711	4.311	4.206	0.652	70	69	41.7	4.14	11.62	100.2	197	1,330	12.7	0.99
2	BU-5-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
3	BU-7	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
4	BU-8	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
5	BU-8-1	0.3	0.5	4.711	4.311	4.245	0.633	66	65	37.8	3.9	10.08	93.2	181	1,260	11.7	0.91
6	CU-7-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
	Total							308		182	18.2	50.2	438	864	5870	55.6	4.4
No cover																	
1	DU-7	0.45	0.65	4.625	4.075	3.543	1.016	355	354	452.5	26.55	169.16	696	1514	8,670	95.3	8.11
	Total							355		453	26.6	170	696	1520	8670	95.3	8.2
Concrete cover																	
1	CU-9-2	0.45	0.65	4.711	4.161	4.057	0.802	104	103	95.1	7.73	26.99	180.5	355	2,540	23.5	1.93
2	CU-5-1	0.45	0.65	4.928	4.378	4.273	0.802	105	104	96.1	7.8	27.33	182.3	358	2,570	23.7	1.95
3	DU-11-1	0.45	0.65	4.844	4.294	4.184	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
4	DU-11-2	0.45	0.65	4.711	4.161	4.051	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
5	DU-4	0.45	0.65	5.14	4.59	4.43	0.83	160	159	153.8	11.93	45.76	283.1	564	3,910	37	3.06
6	EU-12	0.45	0.65	4.89	4.34	4.205	0.817	54	53	50.2	3.98	14.63	93.7	188	1,320	12.4	1.02
	Total							645		598	47.8	173	1130	2220	15800	147	12.1
Grating cover																	
1	AU-6-1	0.45	0.65	5.332	4.782	4.742	0.77	40	39	34.1	2.93	9.12	67.1	132	980	8.8	0.72
2	AU-7-1	0.45	0.65	5.132	4.582	4.546	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
3	AU-8-1	0.45	0.65	4.928	4.378	4.34	0.769	38	37	32.3	2.78	8.63	63.7	125	930	8.4	0.68
4	BU-1-1	0.45	0.65	5.332	4.782	4.716	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
5	BU-2-1	0.45	0.65	5.132	4.582	4.516	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
6	BU-3-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
7	BU-4-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
8	BU-6-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
9	BU-7-1	0.45	0.65	4.711	4.161	4.095	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
10	CU-8-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
11	CU-9-1	0.45	0.65	4.711	4.161	4.093	0.784	68	67	60.0	5.03	16.48	116.2	227	1,660	15.1	1.24
12	CU-6-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
	Total							650		567	48.0	155	1110	2160	16000	145	11.8

QUANTITY CALCULATION COVER SHEET

Project	Detailed Design on Port Reactivation Project in La Union Province	Project Code	JC1N004/2N001
Work Section Title	Trench 450mm no cover	Pay Item No. (BOQ)	2H-~~14~~15 09-01
Quantity Item	Form for trench	Unit	m^2

Calculation Procedure Applied

1. Calculation of depth
2. Calculation of both inside area and outside area
3. Calculation of volume : Area times length

References, Calculation Base and Revisions

See the item of excavation and disposal of 300 mm without cover. (2H-~~11~~12 01)

Rev	Prepared by	Prepared Date	No. of Pages	Checked by	Checked Date	Reviewed by	Reviewed Date	Superseded by Calc No.
0	Karla Garcia			Mr. Inoma		Mr. Sato		
1								
2								
3								

Trench集計

		W_{inner} (m)	W_{outer} (m)	G (m)	Y_{in} (m)	Y_{out} (m)	H (m)	L (m)	Lac (m)	Vex (m3)	Vcs (m3)	Vbf (m3)	Cmpct (m2)	Form (m2)	Re-bar (kg)	Concrete (m3)	Cut Sph. Band (m2)
No cover																	
1	AU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
2	AU-4	0.3	0.5	5.132	4.732	4.557	0.687	87.49	86.49	56.1	5.19	16.88	128.7	258	1,670	16.4	1.29
3	AU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
4	CU-4	0.3	0.5	5.132	4.732	4.529	0.701	87.49	86.49	57.7	5.19	17.88	129.9	263	1,670	16.7	1.32
5	CU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
6	DU-10	0.3	0.5	5.019	4.619	4.402	0.708	127.5	126.5	85.5	7.59	26.81	190.8	387	2,430	24.5	1.94
7	DU-11	0.3	0.5	4.844	4.444	4.304	0.67	93.6	92.6	58.1	5.56	16.89	136.2	270	1,780	17.3	1.35
8	DU-8	0.3	0.5	5.164	4.764	4.314	0.825	90	89	74.4	5.34	27.9	144.7	315	1,710	19.4	1.58
9	DU-9	0.3	0.5	5.164	4.764	4.674	0.645	90	89	53.0	5.34	14.51	128.7	251	1,710	16.2	1.26
10	EU-10	0.3	0.5	4.675	4.275	4.11	0.682	165.33	164.3	105.5	9.86	31.39	243.6	485	3,150	30.9	2.43
11	EU-4-1	0.3	0.5	5.59	5.19	5.055	0.667	90	89	55.5	5.34	16.03	130.6	259	1,710	16.8	1.3
	Total							1110		723	65.7	222	1640	3300	21100	210	16.6
Concrete cover																	
1	AU-1	0.3	0.5	5.522	5.122	4.972	0.675	75	74	46.9	4.44	13.79	109.2	218	1,430	13.9	1.09
2	AU-2	0.3	0.5	5.522	5.122	5.042	0.64	40	39	23.0	2.34	6.23	56.2	111	760	7.2	0.56
3	AU-4-1	0.3	0.5	5.148	4.748	4.528	0.71	110	109	74.0	6.54	23.32	164.6	335	2,090	21.2	1.68
4	AU-5-1	0.3	0.5	4.878	4.478	4.428	0.625	50	49	28.0	2.94	7.3	69.9	135	950	8.8	0.68
5	AU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
6	CU-1	0.3	0.5	5.637	5.237	5.172	0.632	65	64	37.1	3.84	9.84	91.7	178	1,240	11.5	0.89
7	CU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
8	CU-2	0.3	0.5	5.507	5.107	4.977	0.665	26	25	15.6	1.5	4.54	36.7	75	500	4.8	0.38
9	CU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
10	DU-1	0.3	0.5	6.05	5.65	4.89	0.98	152	151	161.3	9.06	70.7	268.8	627	2,890	37.4	3.14
11	DU-10-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
12	DU-10-2	0.3	0.5	5.01	4.81	4.725	0.442	50	49	17.8	2.94	1.59	60.9	99	950	7	0.5
13	DU-2	0.3	0.5	5.3	4.9	4.788	0.656	45	44	26.8	2.64	7.53	64.1	128	860	8.2	0.64
14	DU-3	0.3	0.5	5.14	4.74	4.58	0.68	160	159	101.7	9.54	30.15	235.4	468	3,040	29.8	2.34
15	DU-5	0.3	0.5	5.14	4.74	4.53	0.705	105	104	69.9	6.24	21.8	156.6	318	2,000	20.1	1.59
16	DU-5-1	0.3	0.5	5.14	4.74	4.6	0.67	70	69	43.3	4.14	12.6	101.5	202	1,330	12.9	1.01
17	DU-6	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
18	DU-6-1	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
19	DU-9-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
20	EU-1	0.3	0.5	6.05	5.65	5.294	0.778	178	177	136.2	10.62	47.88	279.4	590	3,390	36.6	2.95
21	EU-11	0.3	0.5	5.22	4.82	4.53	0.745	145	144	104.4	8.64	34.92	222.5	462	2,760	28.9	2.31
22	EU-2	0.3	0.5	6.06	5.66	5.557	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
23	EU-3	0.3	0.5	5.97	5.57	5.19	0.79	81.47	80.47	63.3	4.83	22.67	128	274	1,550	17	1.37
24	EU-4	0.3	0.5	5.59	5.19	4.934	0.728	55	54	37.9	3.24	12.31	82.6	172	1,050	10.8	0.86
25	EU-5	0.3	0.5	5.33	4.93	4.803	0.663	27.3	26.3	16.3	1.58	4.69	38.5	78	520	5	0.39
26	EU-6	0.3	0.5	5.94	5.54	5.355	0.692	185	184	120.5	11.04	36.6	274.6	550	3,520	34.9	2.75
27	EU-7	0.3	0.5	5.97	5.57	4.8	0.985	165.33	164.3	176.9	9.86	77.9	293.4	685	3,150	40.9	3.43
28	EU-8	0.3	0.5	5.94	5.54	4.827	0.956	142.69	141.7	146.1	8.51	62.78	248.9	575	2,720	34.5	2.88
29	EU-9	0.3	0.5	5.23	4.83	4.568	0.731	175	174	122.9	10.44	40.17	266.4	547	3,330	34.4	2.74
30	EU-9-1	0.3	0.5	5.23	4.83	4.69	0.67	140	139	87.1	8.34	25.25	204.4	404	2,660	25.8	2.02
31	EU-9-2	0.3	0.5	5.34	4.94	4.837	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
	Total							2902		2070	173	695	4420	9150	55300	574	45.8
Grating cover																	
1	AU-9-1	0.3	0.5	4.711	4.311	4.206	0.652	70	69	41.7	4.14	11.62	100.2	197	1,330	12.7	0.99
2	BU-5-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
3	BU-7	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
4	BU-8	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
5	BU-8-1	0.3	0.5	4.711	4.311	4.245	0.633	66	65	37.8	3.9	10.08	93.2	181	1,260	11.7	0.91
6	CU-7-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
	Total							308		182	18.2	50.2	438	864	5870	55.6	4.4
No cover																	
1	DU-7	0.45	0.65	4.625	4.075	3.543	1.016	355	354	452.5	26.55	169.16	696	1514	8,670	95.3	8.11
	Total							355		453	26.6	170	696	1520	8670	95.3	8.2
Concrete cover																	
1	CU-9-2	0.45	0.65	4.711	4.161	4.057	0.802	104	103	95.1	7.73	26.99	180.5	355	2,540	23.5	1.93
2	CU-5-1	0.45	0.65	4.928	4.378	4.273	0.802	105	104	96.1	7.8	27.33	182.3	358	2,570	23.7	1.95
3	DU-11-1	0.45	0.65	4.844	4.294	4.184	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
4	DU-11-2	0.45	0.65	4.711	4.161	4.051	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
5	DU-4	0.45	0.65	5.14	4.59	4.43	0.83	160	159	153.8	11.93	45.76	283.1	564	3,910	37	3.06
6	EU-12	0.45	0.65	4.89	4.34	4.205	0.817	54	53	50.2	3.98	14.63	93.7	188	1,320	12.4	1.02
	Total							645		598	47.8	173	1130	2220	15800	147	12.1
Grating cover																	
1	AU-6-1	0.45	0.65	5.332	4.782	4.742	0.77	40	39	34.1	2.93	9.12	67.1	132	980	8.8	0.72
2	AU-7-1	0.45	0.65	5.132	4.582	4.546	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
3	AU-8-1	0.45	0.65	4.928	4.378	4.34	0.769	38	37	32.3	2.78	8.63	63.7	125	930	8.4	0.68
4	BU-1-1	0.45	0.65	5.332	4.782	4.716	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
5	BU-2-1	0.45	0.65	5.132	4.582	4.516	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
6	BU-3-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
7	BU-4-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
8	BU-6-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
9	BU-7-1	0.45	0.65	4.711	4.161	4.095	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
10	CU-8-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
11	CU-9-1	0.45	0.65	4.711	4.161	4.093	0.784	68	67	60.0	5.03	16.48	116.2	227	1,660	15.1	1.24
12	CU-6-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
	Total							650		567	48.0	155	1110	2160	16000	145	11.8

QUANTITY CALCULATION COVER SHEET

Project	Detailed Design on Port Reactivation Project in La Union Province	**Project Code**	JC1N004/2N001
Work Section Title	Trench 450mm no cover	**Pay Item No. (BOQ)**	2H-~~#~~R02
Quantity Item	Concrete for trench	**Unit**	m^3

Calculation Procedure Applied

1. Calculation of sectional area (by the average height)
2. Calculation of volume : sectional area times length

References, Calculation Base and Revisions

See the item of excavation and disposal of 300 mm without cover. (2H-~~#~~R01)

Rev	Prepared		No. of	Checked		Reviewed		Superseded
	by	Date	Pages	by	Date	by	Date	by Calc No.
0	Karla García			Mr. Inuma		Mr. Ando		
1								
2								
3								

Trench集計

		W_{inner} (m)	W_{outer} (m)	G (m)	Y_{in} (m)	Y_{out} (m)	H (m)	L (m)	Lac (m)	Vex (m3)	Vcs (m3)	Vbf (m3)	Cmpct (m2)	Form (m2)	Re-bar (kg)	Concrete (m3)	Dis.ch Board (m2)
No cover																	
1	AU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
2	AU-4	0.3	0.5	5.132	4.732	4.557	0.687	87.49	86.49	56.1	5.19	16.88	128.7	258	1,670	16.4	1.29
3	AU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
4	CU-4	0.3	0.5	5.132	4.732	4.529	0.701	87.49	86.49	57.7	5.19	17.88	129.9	263	1,670	16.7	1.32
5	CU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
6	DU-10	0.3	0.5	5.019	4.619	4.402	0.708	127.5	126.5	85.5	7.59	26.81	190.8	387	2,430	24.5	1.94
7	DU-11	0.3	0.5	4.844	4.444	4.304	0.67	93.6	92.6	58.1	5.56	16.89	136.2	270	1,780	17.3	1.35
8	DU-8	0.3	0.5	5.164	4.764	4.314	0.825	90	89	74.4	5.34	27.9	144.7	315	1,710	19.4	1.58
9	DU-9	0.3	0.5	5.164	4.764	4.674	0.645	90	89	53.0	5.34	14.51	128.7	251	1,710	16.2	1.26
10	EU-10	0.3	0.5	4.675	4.275	4.11	0.882	165.33	164.3	105.5	9.86	31.39	243.6	485	3,150	30.9	2.43
11	EU-4-1	0.3	0.5	5.59	5.19	5.055	0.667	90	89	55.5	5.34	16.03	130.6	259	1,710	16.6	1.3
	Total							1110		723	65.7	222	1640	3300	21100	210	16.6
Concrete cover																	
1	AU-1	0.3	0.5	5.522	5.122	4.972	0.675	75	74	46.9	4.44	13.79	109.2	218	1,430	13.9	1.09
2	AU-2	0.3	0.5	5.522	5.122	5.042	0.64	40	39	23.0	2.34	6.23	56.2	111	760	7.2	0.56
3	AU-4-1	0.3	0.5	5.148	4.748	4.528	0.71	110	109	74.0	6.54	23.32	164.6	335	2,090	21.2	1.68
4	AU-5-1	0.3	0.5	4.878	4.478	4.428	0.625	50	49	28.0	2.94	7.3	69.9	135	950	8.8	0.68
5	AU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
6	CU-1	0.3	0.5	5.637	5.237	5.172	0.632	65	64	37.1	3.84	9.84	91.7	178	1,240	11.5	0.89
7	CU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
8	CU-2	0.3	0.5	5.507	5.107	4.977	0.665	26	25	15.6	1.5	4.54	36.7	75	500	4.8	0.38
9	CU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
10	DU-1	0.3	0.5	6.05	5.65	4.89	0.98	152	151	161.3	9.06	70.7	268.8	627	2,890	37.4	3.14
11	DU-10-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
12	DU-10-2	0.3	0.5	5.01	4.61	4.725	0.442	50	49	17.8	2.94	1.59	60.9	99	950	7	0.5
13	DU-2	0.3	0.5	5.3	4.9	4.788	0.656	45	44	26.8	2.64	7.53	64.1	128	860	8.2	0.64
14	DU-3	0.3	0.5	5.14	4.74	4.58	0.68	160	159	101.7	9.54	30.15	235.4	468	3,040	29.8	2.34
15	DU-5	0.3	0.5	5.14	4.74	4.53	0.705	105	104	69.9	6.24	21.8	156.6	318	2,000	20.1	1.59
16	DU-5-1	0.3	0.5	5.14	4.74	4.6	0.67	70	69	43.3	4.14	12.6	101.5	202	1,330	12.9	1.01
17	DU-6	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
18	DU-6-1	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
19	DU-9-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
20	EU-1	0.3	0.5	6.05	5.65	5.294	0.776	178	177	136.2	10.62	47.88	279.4	590	3,390	36.6	2.95
21	EU-11	0.3	0.5	5.22	4.82	4.53	0.745	145	144	104.4	8.64	34.92	222.5	462	2,760	28.9	2.31
22	EU-2	0.3	0.5	6.06	5.66	5.557	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
23	EU-3	0.3	0.5	5.97	5.57	5.19	0.79	81.47	80.47	63.3	4.83	22.67	128	274	1,550	17	1.37
24	EU-4	0.3	0.5	5.59	5.19	4.934	0.728	55	54	37.9	3.24	12.31	82.6	172	1,050	10.8	0.86
25	EU-5	0.3	0.5	5.33	4.93	4.803	0.663	27.3	26.3	16.3	1.58	4.69	38.5	78	520	5	0.39
26	EU-6	0.3	0.5	5.94	5.54	5.355	0.692	185	184	120.5	11.04	36.6	274.6	550	3,520	34.9	2.75
27	EU-7	0.3	0.5	5.97	5.57	4.8	0.985	165.33	164.3	176.9	9.86	77.9	293.4	685	3,150	40.9	3.43
28	EU-8	0.3	0.5	5.94	5.54	4.827	0.956	142.69	141.7	146.1	8.51	62.78	248.9	575	2,720	34.5	2.88
29	EU-9	0.3	0.5	5.23	4.83	4.568	0.731	175	174	122.9	10.44	40.17	266.4	547	3,330	34.4	2.74
30	EU-9-1	0.3	0.5	5.23	4.83	4.69	0.67	140	139	87.1	8.34	25.25	204.4	404	2,660	25.8	2.02
31	EU-9-2	0.3	0.5	5.34	4.94	4.837	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
	Total							2902		2070	173	695	4420	9150	55300	574	45.8
Grating cover																	
1	AU-9-1	0.3	0.5	4.711	4.311	4.206	0.652	70	69	41.7	4.14	11.62	100.2	197	1,330	12.7	0.99
2	BU-5-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
3	BU-7	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
4	BU-8	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
5	BU-8-1	0.3	0.5	4.711	4.311	4.245	0.633	66	65	37.8	3.9	10.08	93.2	181	1,260	11.7	0.91
6	CU-7-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
	Total							308		182	18.2	50.2	438	864	5870	55.6	4.4
No cover																	
1	DU-7	0.45	0.65	4.625	4.075	3.543	1.016	355	354	452.5	26.55	169.16	696	1514	8,670	95.3	8.11
	Total							355		453	26.6	170	696	1520	8670	95.3	8.2
Concrete cover																	
1	CU-9-2	0.45	0.65	4.711	4.161	4.057	0.802	104	103	95.1	7.73	26.99	180.5	355	2,540	23.5	1.93
2	CU-5-1	0.45	0.65	4.928	4.378	4.273	0.802	105	104	96.1	7.8	27.33	182.3	358	2,570	23.7	1.95
3	DU-11-1	0.45	0.65	4.844	4.294	4.184	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
4	DU-11-2	0.45	0.65	4.711	4.161	4.051	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
5	DU-4	0.45	0.65	5.14	4.59	4.43	0.83	160	159	153.8	11.93	45.76	283.1	564	3,910	37	3.06
6	EU-12	0.45	0.65	4.89	4.34	4.205	0.817	54	53	50.2	3.98	14.63	93.7	188	1,320	12.4	1.02
	Total							645		598	47.8	173	1130	2220	15800	147	12.1
Grating cover																	
1	AU-6-1	0.45	0.65	5.332	4.782	4.742	0.77	40	39	34.1	2.93	9.12	67.1	132	980	8.8	0.72
2	AU-7-1	0.45	0.65	5.132	4.582	4.546	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
3	AU-8-1	0.45	0.65	4.928	4.378	4.34	0.769	38	37	32.3	2.78	8.63	63.7	125	930	8.4	0.68
4	BU-1-1	0.45	0.65	5.332	4.782	4.716	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
5	BU-2-1	0.45	0.65	5.132	4.582	4.516	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
6	BU-3-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
7	BU-4-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
8	BU-6-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
9	BU-7-1	0.45	0.65	4.711	4.161	4.095	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
10	CU-8-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
11	CU-9-1	0.45	0.65	4.711	4.161	4.093	0.784	68	67	60.0	5.03	16.48	116.2	227	1,660	15.1	1.24
12	CU-6-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
	Total							650		567	48.0	155	1110	2160	16000	145	11.8

NIPPON KOEI CO.,LTD.

QUANTITY CALCULATION COVER SHEET

Project	Detailed Design on Port Reactivation Project in La Union Province	**Project Code**	JC1N004/2N001
Work Section Title	Trench 450mm no cover	**Pay Item No. (BOQ)**	2H-~~#4~~5 0403
Quantity Item	Elastish board	**Unit**	m^2

Calculation Procedure Applied

1. Calculation of sectional area (by the average height)
2. Calculation of number (by every 10m)
3. Calculation of area : sectional area times number

References, Calculation Base and Revisions

See the item of excavation and disposal of 300mm without cover. (2H-~~#~~12 01)

Rev	Prepared by	Prepared Date	No. of Pages	Checked by	Checked Date	Reviewed by	Reviewed Date	Superseded by Calc No.
0	Karla Garcia			Mr. Inuma		Mr. Ando		
1								
2								
3								

FN : Calculation_Cover_Sheet_020504_seg cover

Trench集計

		W_{inner} (m)	W_{outer} (m)	G (m)	Y_{in} (m)	Y_{out} (m)	H (m)	L (m)	Lac (m)	Vex (m3)	Vcs (m3)	Vbf (m3)	Cmpct (m2)	Form (m2)	Re-bar (kg)	Concrete (m3)	Elev. Grp Board (m2)
No cover																	
1	AU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
2	AU-4	0.3	0.5	5.132	4.732	4.557	0.687	87.49	86.49	56.1	5.19	16.88	128.7	258	1,670	16.4	1.29
3	AU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
4	CU-4	0.3	0.5	5.132	4.732	4.529	0.701	87.49	86.49	57.7	5.19	17.88	129.9	263	1,670	16.7	1.32
5	CU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
6	DU-10	0.3	0.5	5.019	4.619	4.402	0.708	127.5	126.5	85.5	7.59	26.81	190.8	387	2,430	24.5	1.94
7	DU-11	0.3	0.5	4.844	4.444	4.304	0.67	93.6	92.6	58.1	5.56	16.89	136.2	270	1,780	17.3	1.35
8	DU-8	0.3	0.5	5.164	4.764	4.314	0.825	90	89	74.4	5.34	27.9	144.7	315	1,710	19.4	1.58
9	DU-9	0.3	0.5	5.164	4.764	4.674	0.645	90	89	53.0	5.34	14.51	128.7	251	1,710	16.2	1.26
10	EU-10	0.3	0.5	4.675	4.275	4.11	0.682	165.33	164.3	105.5	9.86	31.39	243.6	485	3,150	30.9	2.43
11	EU-4-1	0.3	0.5	5.59	5.19	5.055	0.667	90	89	55.5	5.34	16.03	130.6	259	1,710	16.6	1.3
	Total							1110		723	65.7	222	1640	3300	21100	210	16.6
Concrete cover																	
1	AU-1	0.3	0.5	5.522	5.122	4.972	0.675	75	74	46.9	4.44	13.79	109.2	218	1,430	13.9	1.09
2	AU-2	0.3	0.5	5.522	5.122	5.042	0.64	40	39	23.0	2.34	6.23	56.2	111	760	7.2	0.56
3	AU-4-1	0.3	0.5	5.148	4.748	4.528	0.71	110	109	74.0	6.54	23.32	164.6	335	2,090	21.2	1.68
4	AU-5-1	0.3	0.5	4.878	4.478	4.428	0.625	50	49	28.0	2.94	7.3	69.9	135	950	8.8	0.68
5	AU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
6	CU-1	0.3	0.5	5.637	5.237	5.172	0.632	65	64	37.1	3.84	9.84	91.7	178	1,240	11.5	0.89
7	CU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
8	CU-2	0.3	0.5	5.507	5.107	4.977	0.665	26	25	15.6	1.5	4.54	36.7	75	500	4.8	0.38
9	CU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
10	DU-1	0.3	0.5	6.05	5.65	4.89	0.98	152	151	161.3	9.06	70.7	268.8	627	2,890	37.4	3.14
11	DU-10-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
12	DU-10-2	0.3	0.5	5.01	4.81	4.725	0.442	50	49	17.8	2.94	1.59	60.9	99	950	7	0.5
13	DU-2	0.3	0.5	5.3	4.9	4.788	0.656	45	44	26.8	2.64	7.53	64.1	128	860	8.2	0.64
14	DU-3	0.3	0.5	5.14	4.74	4.58	0.68	160	159	101.7	9.54	30.15	235.4	468	3,040	29.8	2.34
15	DU-5	0.3	0.5	5.14	4.74	4.53	0.705	105	104	69.9	6.24	21.8	156.6	318	2,000	20.1	1.59
16	DU-5-1	0.3	0.5	5.14	4.74	4.6	0.67	70	69	43.3	4.14	12.6	101.5	202	1,330	12.9	1.01
17	DU-6	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
18	DU-6-1	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
19	DU-9-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
20	EU-1	0.3	0.5	6.05	5.65	5.294	0.778	178	177	136.2	10.62	47.88	279.4	590	3,390	36.6	2.95
21	EU-11	0.3	0.5	5.22	4.82	4.53	0.745	145	144	104.4	8.64	34.92	222.5	462	2,760	28.9	2.31
22	EU-2	0.3	0.5	6.06	5.66	5.557	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
23	EU-3	0.3	0.5	5.97	5.57	5.19	0.79	81.47	80.47	63.3	4.83	22.67	128	274	1,650	17	1.37
24	EU-4	0.3	0.5	5.59	5.19	4.934	0.728	55	54	37.9	3.24	12.31	82.6	172	1,050	10.8	0.86
25	EU-5	0.3	0.5	5.33	4.93	4.803	0.663	27.3	26.3	16.3	1.58	4.69	38.5	78	520	5	0.39
26	EU-6	0.3	0.5	5.94	5.54	5.355	0.692	185	184	120.5	11.04	36.6	274.6	550	3,520	34.9	2.75
27	EU-7	0.3	0.5	5.97	5.57	4.8	0.985	165.33	164.3	176.9	9.86	77.9	293.4	685	3,150	40.9	3.43
28	EU-8	0.3	0.5	5.94	5.54	4.827	0.956	142.69	141.7	146.1	8.51	62.78	248.9	575	2,720	34.5	2.88
29	EU-9	0.3	0.5	5.23	4.83	4.568	0.731	175	174	122.9	10.44	40.17	266.4	547	3,330	34.4	2.74
30	EU-9-1	0.3	0.5	5.23	4.83	4.69	0.67	140	139	87.1	8.34	25.25	204.4	404	2,660	25.8	2.02
31	EU-9-2	0.3	0.5	5.34	4.94	4.837	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
	Total							2902		2070	173	695	4420	9150	55300	574	45.8
Grating cover																	
1	AU-9-1	0.3	0.5	4.711	4.311	4.206	0.652	70	69	41.7	4.14	11.62	100.2	197	1,330	12.7	0.99
2	BU-5-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
3	BU-7	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
4	BU-8	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
5	BU-8-1	0.3	0.5	4.711	4.311	4.245	0.633	66	65	37.8	3.9	10.08	93.2	181	1,260	11.7	0.91
6	CU-7-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
	Total							308		182	18.2	50.2	438	864	5870	55.6	4.4
No cover																	
1	DU-7	0.45	0.65	4.625	4.075	3.543	1.016	355	354	452.5	26.55	169.16	696	1514	8,670	95.3	8.11
	Total							355		453	26.6	170	696	1520	8670	95.3	8.2
Concrete cover																	
1	CU-9-2	0.45	0.65	4.711	4.161	4.057	0.802	104	103	95.1	7.73	26.99	180.5	355	2,540	23.5	1.93
2	CU-5-1	0.45	0.65	4.928	4.378	4.273	0.802	105	104	96.1	7.8	27.33	182.3	358	2,570	23.7	1.95
3	DU-11-1	0.45	0.65	4.844	4.294	4.184	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
4	DU-11-2	0.45	0.65	4.711	4.161	4.051	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
5	DU-4	0.45	0.65	5.14	4.59	4.43	0.83	160	159	153.8	11.93	45.76	283.1	564	3,910	37	3.06
6	EU-12	0.45	0.65	4.89	4.34	4.205	0.817	54	53	50.2	3.98	14.63	93.7	188	1,320	12.4	1.02
	Total							645		598	47.8	173	1130	2220	15800	147	12.1
Grating cover																	
1	AU-6-1	0.45	0.65	5.332	4.782	4.742	0.77	40	39	34.1	2.93	9.12	67.1	132	980	8.8	0.72
2	AU-7-1	0.45	0.65	5.132	4.582	4.546	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
3	AU-8-1	0.45	0.65	4.928	4.378	4.34	0.769	38	37	32.3	2.78	8.63	63.7	125	930	8.4	0.68
4	BU-1-1	0.45	0.65	5.332	4.782	4.716	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
5	BU-2-1	0.45	0.65	5.132	4.582	4.516	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
6	BU-3-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
7	BU-4-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
8	BU-6-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
9	BU-7-1	0.45	0.65	4.711	4.161	4.095	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
10	CU-8-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
11	CU-9-1	0.45	0.65	4.711	4.161	4.093	0.784	68	67	60.0	5.03	16.48	116.2	227	1,660	15.1	1.24
12	CU-6-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
	Total							650		567	48.0	155	1110	2160	16000	145	11.8

NIPPON KOEI CO.,LTD.

QUANTITY CALCULATION COVER SHEET

Project	Detailed Design on Port Reactivation Project in La Union Province	Project Code	JC1N004/2N001
Work Section Title	Trench 450mm no cover	Pay Item No. (BOQ)	2H-~~14~~05 01
Quantity Item	Backfill sand	Unit	m3

Calculation Procedure Applied

Volume of backfill sand was computed by deduction of crushed stone and trench from the excavation volume.

References, Calculation Base and Revisions

See the item of excavation and disposal of 300 mm without cover. (2H-~~14~~12 01)

Rev	Prepared by	Prepared Date	No. of Pages	Checked by	Checked Date	Reviewed by	Reviewed Date	Superseded by Calc No.
0	Karla Garcia			Mr. Tsuma		Mr. Ando		
1								
2								
3								

FN : Calculation_Cover_Sheet_020504_seg cover

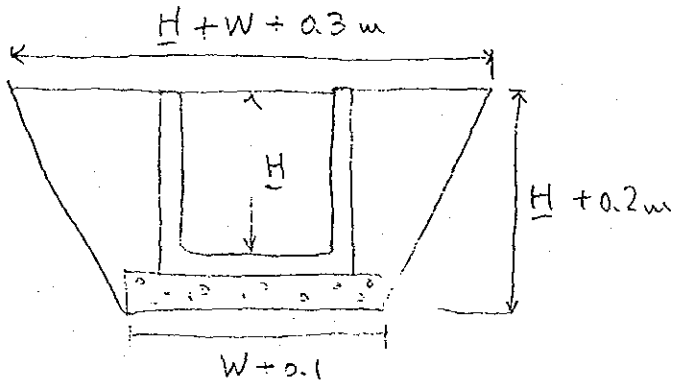
Trench集計

		W_{inner}	W_{outer}	G	Y_{in}	Y_{out}	H	L	Lac	Vex	Vcs	Vbf	Cmpct	Form	Re-bar	Concrete	Finish Board
		(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m3)	(m3)	(m3)	(m2)	(m2)	(kg)	(m3)	(m2)
No cover																	
1	AU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
2	AU-4	0.3	0.5	5.132	4.732	4.557	0.687	87.49	86.49	56.1	5.19	16.88	128.7	258	1,670	16.4	1.29
3	AU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
4	CU-4	0.3	0.5	5.132	4.732	4.529	0.701	87.49	86.49	57.7	5.19	17.88	129.9	263	1,670	16.7	1.32
5	CU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
6	DU-10	0.3	0.5	5.019	4.619	4.402	0.708	127.5	126.5	85.5	7.59	26.81	190.8	387	2,430	24.5	1.94
7	DU-11	0.3	0.5	4.844	4.444	4.304	0.67	93.6	92.6	58.1	5.56	16.89	136.2	270	1,780	17.3	1.35
8	DU-8	0.3	0.5	5.164	4.764	4.314	0.825	90	89	74.4	5.34	27.9	144.7	315	1,710	19.4	1.58
9	DU-9	0.3	0.5	5.164	4.764	4.674	0.645	90	89	53.0	5.34	14.51	128.7	251	1,710	16.2	1.26
10	EU-10	0.3	0.5	4.675	4.275	4.11	0.682	165.33	164.3	105.5	9.86	31.39	243.6	485	3,150	30.9	2.43
11	EU-4-1	0.3	0.5	5.59	5.19	5.055	0.667	90	89	55.5	5.34	16.03	130.6	259	1,710	16.6	1.3
	Total							1110		723	65.7	222	1640	3300	21100	210	16.6
Concrete cover																	
1	AU-1	0.3	0.5	5.522	5.122	4.972	0.675	75	74	46.9	4.44	13.79	109.2	218	1,430	13.9	1.09
2	AU-2	0.3	0.5	5.522	5.122	5.042	0.64	40	39	23.0	2.34	6.23	56.2	111	760	7.2	0.56
3	AU-4-1	0.3	0.5	5.148	4.748	4.528	0.71	110	109	74.0	6.54	23.32	164.6	335	2,090	21.2	1.68
4	AU-5-1	0.3	0.5	4.878	4.478	4.428	0.625	50	49	28.0	2.94	7.3	69.9	135	950	8.8	0.68
5	AU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
6	CU-1	0.3	0.5	5.637	5.237	5.172	0.632	65	64	37.1	3.84	9.84	91.7	178	1,240	11.5	0.89
7	CU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
8	CU-2	0.3	0.5	5.507	5.107	4.977	0.665	26	25	15.6	1.5	4.54	36.7	75	500	4.8	0.38
9	CU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
10	DU-1	0.3	0.5	6.05	5.65	4.89	0.98	152	151	161.3	9.06	70.7	268.8	627	2,890	37.4	3.14
11	DU-10-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
12	DU-10-2	0.3	0.5	5.01	4.81	4.725	0.442	50	49	17.8	2.94	1.59	60.9	99	950	7	0.5
13	DU-2	0.3	0.5	5.3	4.9	4.788	0.658	45	44	26.8	2.64	7.53	64.1	128	860	8.2	0.64
14	DU-3	0.3	0.5	5.14	4.74	4.58	0.68	160	159	101.7	9.54	30.15	235.4	468	3,040	29.8	2.34
15	DU-5	0.3	0.5	5.14	4.74	4.53	0.705	105	104	69.9	6.24	21.8	156.6	318	2,000	20.1	1.59
16	DU-5-1	0.3	0.5	5.14	4.74	4.6	0.67	70	69	43.3	4.14	12.6	101.5	202	1,330	12.9	1.01
17	DU-6	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
18	DU-6-1	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
19	DU-9-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
20	EU-1	0.3	0.5	6.05	5.65	5.294	0.778	178	177	136.2	10.62	47.88	279.4	590	3,390	36.6	2.95
21	EU-11	0.3	0.5	5.22	4.82	4.53	0.745	145	144	104.4	8.64	34.92	222.5	462	2,760	28.9	2.31
22	EU-2	0.3	0.5	6.06	5.66	5.557	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
23	EU-3	0.3	0.5	5.97	5.57	5.19	0.79	81.47	80.47	63.3	4.83	22.67	128	274	1,550	17	1.37
24	EU-4	0.3	0.5	5.59	5.19	4.934	0.728	55	54	37.9	3.24	12.31	82.6	172	1,050	10.8	0.86
25	EU-5	0.3	0.5	5.33	4.93	4.803	0.663	27.3	26.3	16.3	1.58	4.69	38.5	78	520	5	0.39
26	EU-6	0.3	0.5	5.94	5.54	5.355	0.692	185	184	120.5	11.04	36.6	274.6	550	3,520	34.9	2.75
27	EU-7	0.3	0.5	5.97	5.57	4.8	0.985	165.33	164.3	176.9	9.86	77.9	293.4	685	3,150	40.9	3.43
28	EU-8	0.3	0.5	5.94	5.54	4.827	0.956	142.69	141.7	146.1	8.51	62.78	248.9	575	2,720	34.5	2.88
29	EU-9	0.3	0.5	5.23	4.83	4.568	0.731	175	174	122.9	10.44	40.17	266.4	547	3,330	34.4	2.74
30	EU-9-1	0.3	0.5	5.23	4.83	4.69	0.67	140	139	87.1	8.34	25.25	204.4	404	2,660	25.8	2.02
31	EU-9-2	0.3	0.5	5.34	4.94	4.837	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
	Total							2902		2070	173	695	4420	9150	55300	574	45.8
Grating cover																	
1	AU-9-1	0.3	0.5	4.711	4.311	4.206	0.652	70	69	41.7	4.14	11.62	100.2	197	1,330	12.7	0.99
2	BU-5-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
3	BU-7	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
4	BU-8	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
5	BU-8-1	0.3	0.5	4.711	4.311	4.245	0.633	66	65	37.8	3.9	10.08	93.2	181	1,260	11.7	0.91
6	CU-7-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
	Total							308		182	18.2	50.2	438	864	5870	55.6	4.4
No cover																	
1	DU-7	0.45	0.65	4.625	4.075	3.543	1.016	355	354	452.5	26.55	169.16	696	1514	8,670	95.3	8.11
	Total							355		453	26.6	170	696	1520	8670	95.3	8.2
Concrete cover																	
1	CU-9-2	0.45	0.65	4.711	4.161	4.057	0.802	104	103	95.1	7.73	26.99	180.5	355	2,540	23.5	1.93
2	CU-5-1	0.45	0.65	4.928	4.378	4.273	0.802	105	104	96.1	7.8	27.33	182.3	358	2,570	23.7	1.95
3	DU-11-1	0.45	0.65	4.844	4.294	4.184	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
4	DU-11-2	0.45	0.65	4.711	4.161	4.051	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
5	DU-4	0.45	0.65	5.14	4.59	4.43	0.83	160	159	153.8	11.93	45.76	283.1	564	3,910	37	3.06
6	EU-12	0.45	0.65	4.89	4.34	4.205	0.817	54	53	50.2	3.98	14.63	93.7	188	1,320	12.4	1.02
	Total							645		598	47.8	173	1130	2220	15800	147	12.1
Grating cover																	
1	AU-6-1	0.45	0.65	5.332	4.782	4.742	0.77	40	39	34.1	2.93	9.12	67.1	132	980	8.8	0.72
2	AU-7-1	0.45	0.65	5.132	4.582	4.546	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
3	AU-8-1	0.45	0.65	4.928	4.378	4.34	0.769	38	37	32.3	2.78	8.63	63.7	125	930	8.4	0.68
4	BU-1-1	0.45	0.65	5.332	4.782	4.716	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
5	BU-2-1	0.45	0.65	5.132	4.582	4.516	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
6	BU-3-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
7	BU-4-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
8	BU-6-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
9	BU-7-1	0.45	0.65	4.711	4.161	4.095	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
10	CU-8-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
11	CU-9-1	0.45	0.65	4.711	4.161	4.093	0.784	68	67	60.0	5.03	16.48	116.2	227	1,660	15.1	1.24
12	CU-6-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
	Total							650		567	48.0	155	1110	2160	16000	145	11.8

QUANTITY CALCULATION COVER SHEET

Project	Detailed Design on Port Reactivation Project in La Union Province	**Project Code**	JC1N004/2N001
Work Section Title	Trench 450mm no cover	**Pay Item No. (BOQ)**	2H-~~11~~12 0502
Quantity Item	Compaction	**Unit**	m^2

Calculation Procedure Applied



Compaction area was computed by multiplying (H + 0.3) by the length.

References. Calculation Base and Revisions

See the item of excavation and disposal of 300mm without cover. (2H - ~~11~~12 01)

Rev	Prepared by	Prepared Date	No. of Pages	Checked by	Checked Date	Reviewed by	Reviewed Date	Superseded by Calc No.
0	Karla Garcia			Mr. Inuma		Mr. Ando		
1								
2								
3								

Trench集計

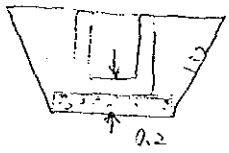
		W_{inner} (m)	W_{outer} (m)	G (m)	Y_{in} (m)	Y_{out} (m)	H (m)	L (m)	Lac (m)	Vex (m3)	Vcs (m3)	Vbf (m3)	Cmpct (m2)	Form (m2)	Re-bar (kg)	Concrete (m3)	Ditch board (m2)
No cover																	
1	AU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
2	AU-4	0.3	0.5	5.132	4.732	4.557	0.687	87.49	86.49	56.1	5.19	16.88	128.7	258	1,670	16.4	1.29
3	AU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
4	CU-4	0.3	0.5	5.132	4.732	4.529	0.701	87.49	86.49	57.7	5.19	17.88	129.9	263	1,670	16.7	1.32
5	CU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
6	DU-10	0.3	0.5	5.019	4.619	4.402	0.708	127.5	126.5	85.5	7.59	26.81	190.8	387	2,430	24.5	1.94
7	DU-11	0.3	0.5	4.844	4.444	4.304	0.67	93.6	92.6	58.1	5.56	16.89	136.2	270	1,780	17.3	1.35
8	DU-8	0.3	0.5	5.164	4.764	4.314	0.825	90	89	74.4	5.34	27.9	144.7	315	1,710	19.4	1.58
9	DU-9	0.3	0.5	5.164	4.764	4.674	0.645	90	89	53.0	5.34	14.51	128.7	251	1,710	16.2	1.26
10	EU-10	0.3	0.5	4.675	4.275	4.11	0.682	165.33	164.3	105.5	9.86	31.39	243.6	485	3,150	30.9	2.43
11	EU-4-1	0.3	0.5	5.59	5.19	5.055	0.667	90	89	55.5	5.34	16.03	130.6	259	1,710	16.6	1.3
	Total							1110		723	65.7	222	1640	3300	21100	210	16.6
Concrete cover																	
1	AU-1	0.3	0.5	5.522	5.122	4.972	0.675	75	74	46.9	4.44	13.79	109.2	218	1,430	13.9	1.09
2	AU-2	0.3	0.5	5.522	5.122	5.042	0.64	40	39	23.0	2.34	6.23	56.2	111	760	7.2	0.56
3	AU-4-1	0.3	0.5	5.148	4.748	4.528	0.71	110	109	74.0	6.54	23.32	164.6	335	2,090	21.2	1.68
4	AU-5-1	0.3	0.5	4.878	4.478	4.428	0.625	50	49	28.0	2.94	7.3	69.9	135	950	8.8	0.68
5	AU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
6	CU-1	0.3	0.5	5.637	5.237	5.172	0.632	65	64	37.1	3.84	9.84	91.7	178	1,240	11.5	0.89
7	CU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
8	CU-2	0.3	0.5	5.507	5.107	4.977	0.665	26	25	15.6	1.5	4.54	36.7	75	500	4.8	0.38
9	CU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
10	DU-1	0.3	0.5	6.05	5.65	4.89	0.98	152	151	161.3	9.06	70.7	268.8	627	2,890	37.4	3.14
11	DU-10-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
12	DU-10-2	0.3	0.5	5.01	4.81	4.725	0.442	50	49	17.8	2.94	1.59	60.9	99	950	7	0.5
13	DU-2	0.3	0.5	5.3	4.9	4.788	0.656	45	44	26.8	2.64	7.53	64.1	128	860	8.2	0.64
14	DU-3	0.3	0.5	5.14	4.74	4.58	0.68	160	159	101.7	9.54	30.15	235.4	468	3,040	29.8	2.34
15	DU-5	0.3	0.5	5.14	4.74	4.53	0.705	105	104	69.9	6.24	21.8	156.6	318	2,000	20.1	1.59
16	DU-5-1	0.3	0.5	5.14	4.74	4.6	0.67	70	69	43.3	4.14	12.6	101.5	202	1,330	12.9	1.01
17	DU-6	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
18	DU-6-1	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
19	DU-9-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
20	EU-1	0.3	0.5	6.05	5.65	5.294	0.778	178	177	136.2	10.62	47.88	279.4	590	3,390	36.6	2.95
21	EU-11	0.3	0.5	5.22	4.82	4.53	0.745	145	144	104.4	8.64	34.92	222.5	462	2,760	28.9	2.31
22	EU-2	0.3	0.5	6.06	5.66	5.557	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
23	EU-3	0.3	0.5	5.97	5.57	5.19	0.79	81.47	80.47	63.3	4.83	22.67	128	274	1,550	17	1.37
24	EU-4	0.3	0.5	5.59	5.19	4.934	0.728	55	54	37.9	3.24	12.31	82.6	172	1,050	10.8	0.86
25	EU-5	0.3	0.5	5.33	4.93	4.803	0.663	27.3	26.3	16.3	1.58	4.69	38.5	78	520	5	0.39
26	EU-6	0.3	0.5	5.94	5.54	5.355	0.692	185	184	120.5	11.04	36.6	274.6	550	3,520	34.9	2.75
27	EU-7	0.3	0.5	5.97	5.57	4.8	0.985	165.33	164.3	176.9	9.86	77.9	293.4	685	3,150	40.9	3.43
28	EU-8	0.3	0.5	5.94	5.54	4.827	0.956	142.69	141.7	146.1	8.51	62.78	248.9	575	2,720	34.5	2.88
29	EU-9	0.3	0.5	5.23	4.83	4.568	0.731	175	174	122.9	10.44	40.17	266.4	547	3,330	34.4	2.74
30	EU-9-1	0.3	0.5	5.23	4.83	4.69	0.67	140	139	87.1	8.34	25.25	204.4	404	2,660	25.8	2.02
31	EU-9-2	0.3	0.5	5.34	4.94	4.837	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
	Total							2902		2070	173	695	4420	9150	55300	574	45.8
Grating cover																	
1	AU-9-1	0.3	0.5	4.711	4.311	4.206	0.652	70	69	41.7	4.14	11.62	100.2	197	1,330	12.7	0.99
2	BU-5-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
3	BU-7	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
4	BU-8	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
5	BU-8-1	0.3	0.5	4.711	4.311	4.245	0.633	66	65	37.8	3.9	10.08	93.2	181	1,260	11.7	0.91
6	CU-7-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
	Total							308		182	18.2	50.2	438	864	5870	55.6	4.4
No cover																	
1	DU-7	0.45	0.65	4.625	4.075	3.543	1.016	355	354	452.5	26.55	169.16	696	1514	8,670	95.3	8.11
	Total							355		453	26.6	170	696	1520	8670	95.3	8.2
Concrete cover																	
1	CU-9-2	0.45	0.65	4.711	4.161	4.057	0.802	104	103	95.1	7.73	26.99	180.5	355	2,540	23.5	1.93
2	CU-5-1	0.45	0.65	4.928	4.378	4.273	0.802	105	104	96.1	7.8	27.33	182.3	358	2,570	23.7	1.95
3	DU-11-1	0.45	0.65	4.844	4.294	4.184	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
4	DU-11-2	0.45	0.65	4.711	4.161	4.051	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
5	DU-4	0.45	0.65	5.14	4.59	4.43	0.83	160	159	153.8	11.93	45.76	283.1	564	3,910	37	3.06
6	EU-12	0.45	0.65	4.89	4.34	4.205	0.817	54	53	50.2	3.98	14.63	93.7	188	1,320	12.4	1.02
	Total							645		598	47.8	173	1130	2220	15800	147	12.1
Grating cover																	
1	AU-6-1	0.45	0.65	5.332	4.782	4.742	0.77	40	39	34.1	2.93	9.12	67.1	132	980	8.8	0.72
2	AU-7-1	0.45	0.65	5.132	4.582	4.546	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
3	AU-8-1	0.45	0.65	4.928	4.378	4.34	0.769	38	37	32.3	2.78	8.63	63.7	125	930	8.4	0.68
4	BU-1-1	0.45	0.65	5.332	4.782	4.716	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
5	BU-2-1	0.45	0.65	5.132	4.582	4.516	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
6	BU-3-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
7	BU-4-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
8	BU-6-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
9	BU-7-1	0.45	0.65	4.711	4.161	4.095	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
10	CU-8-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
11	CU-9-1	0.45	0.65	4.711	4.161	4.093	0.784	68	67	60.0	5.03	16.48	116.2	227	1,660	15.1	1.24
12	CU-6-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
	Total							650		567	48.0	155	1110	2160	16000	145	11.8

NIPPON KOEI CO.,LTD.

QUANTITY CALCULATION COVER SHEET

Project	Detailed Design on Port Reactivation Project in La Union Province	**Project Code**	JC1N004/2N001
Work Section Title	Trench 450mm concrete	**Pay Item No. (BOQ)**	2H-~~15~~13 01
Quantity Item	Excavation and Disposal	**Unit**	m^3

Calculation Procedure Applied



Average of inlet level and outlet level

H = Ground Level − Average Level + 0.2

Calculation of area : slope 1:2 ,

Calculation of volume : Area times length

References, Calculation Base and Revisions

See the item of excavation and disposal of 300 mm without cover. (2H − ~~11~~ 12 01)

Rev	Prepared by	Prepared Date	No. of Pages	Checked by	Checked Date	Reviewed by	Reviewed Date	Superseded by Calc No.
0	Karla García			Mr. Inuma		Mr. Ando		
1								
2								
3								

FN : Calculation_Cover_Sheet_020504_seg cover

Trench集計

		W_{inner} (m)	W_{outer} (m)	G (m)	Y_{in} (m)	Y_{out} (m)	H (m)	L (m)	Lac (m)	Vex (m3)	Vos (m3)	Vbf (m3)	Cmpct (m2)	Form (m2)	Re-bar (kg)	Concrete (m3)	Dry rip-rap (m2)
No cover																	
1	AU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
2	AU-4	0.3	0.5	5.132	4.732	4.557	0.687	87.49	86.49	56.1	5.19	16.88	128.7	258	1,670	16.4	1.29
3	AU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
4	CU-4	0.3	0.5	5.132	4.732	4.529	0.701	87.49	86.49	57.7	5.19	17.88	129.9	263	1,670	16.7	1.32
5	CU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
6	DU-10	0.3	0.5	5.019	4.619	4.402	0.708	127.5	126.5	85.5	7.59	26.81	190.8	387	2,430	24.5	1.94
7	DU-11	0.3	0.5	4.844	4.444	4.304	0.67	93.6	92.6	58.1	5.56	16.89	136.2	270	1,780	17.3	1.35
8	DU-8	0.3	0.5	5.164	4.764	4.314	0.825	90	89	74.4	5.34	27.9	144.7	315	1,710	19.4	1.58
9	DU-9	0.3	0.5	5.164	4.764	4.674	0.645	90	89	53.0	5.34	14.51	128.7	251	1,710	16.2	1.26
10	EU-10	0.3	0.5	4.675	4.275	4.11	0.682	165.33	164.3	105.5	9.86	31.39	243.6	485	3,150	30.9	2.43
11	EU-4-1	0.3	0.5	5.59	5.19	5.055	0.667	90	89	55.5	5.34	16.03	130.6	259	1,710	16.6	1.3
	Total							1110		723	65.7	222	1640	3300	21100	210	16.6
Concrete cover																	
1	AU-1	0.3	0.5	5.522	5.122	4.972	0.675	75	74	46.9	4.44	13.79	109.2	218	1,430	13.9	1.09
2	AU-2	0.3	0.5	5.522	5.122	5.042	0.64	40	39	23.0	2.34	6.23	56.2	111	760	7.2	0.56
3	AU-4-1	0.3	0.5	5.148	4.748	4.528	0.71	110	109	74.0	6.54	23.32	164.6	335	2,090	21.2	1.68
4	AU-5-1	0.3	0.5	4.878	4.478	4.428	0.625	50	49	28.0	2.94	7.3	69.9	135	950	8.8	0.68
5	AU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
6	CU-1	0.3	0.5	5.637	5.237	5.172	0.632	65	64	37.1	3.84	9.84	91.7	178	1,240	11.5	0.89
7	CU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
8	CU-2	0.3	0.5	5.507	5.107	4.977	0.665	26	25	15.6	1.5	4.54	36.7	75	500	4.8	0.38
9	CU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
10	DU-1	0.3	0.5	6.05	5.65	4.89	0.98	152	151	161.3	9.06	70.7	268.8	627	2,890	37.4	3.14
11	DU-10-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
12	DU-10-2	0.3	0.5	5.01	4.81	4.725	0.442	50	49	17.8	2.94	1.59	60.9	99	950	7	0.5
13	DU-2	0.3	0.5	5.3	4.9	4.788	0.656	45	44	26.8	2.64	7.53	64.1	128	860	8.2	0.64
14	DU-3	0.3	0.5	5.14	4.74	4.58	0.68	160	159	101.7	9.54	30.15	235.4	468	3,040	29.8	2.34
15	DU-5	0.3	0.5	5.14	4.74	4.53	0.705	105	104	69.9	6.24	21.8	156.6	318	2,000	20.1	1.59
16	DU-5-1	0.3	0.5	5.14	4.74	4.6	0.67	70	69	43.3	4.14	12.6	101.5	202	1,330	12.9	1.01
17	DU-6	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
18	DU-6-1	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
19	DU-9-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
20	EU-1	0.3	0.5	6.05	5.65	5.294	0.778	178	177	136.2	10.62	47.88	279.4	590	3,390	36.6	2.95
21	EU-11	0.3	0.5	5.22	4.82	4.53	0.745	145	144	104.4	8.64	34.92	222.5	462	2,760	28.9	2.31
22	EU-2	0.3	0.5	6.06	5.66	5.557	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
23	EU-3	0.3	0.5	5.97	5.57	5.19	0.79	81.47	80.47	63.3	4.83	22.67	128	274	1,550	17	1.37
24	EU-4	0.3	0.5	5.59	5.19	4.934	0.728	55	54	37.9	3.24	12.31	82.6	172	1,050	10.8	0.86
25	EU-5	0.3	0.5	5.33	4.93	4.803	0.663	27.3	26.3	16.3	1.58	4.69	38.5	78	520	5	0.39
26	EU-6	0.3	0.5	5.94	5.54	5.355	0.692	185	184	120.5	11.04	36.6	274.6	550	3,520	34.9	2.75
27	EU-7	0.3	0.5	5.97	5.57	4.8	0.985	165.33	164.3	176.9	9.86	77.9	293.4	685	3,150	40.9	3.43
28	EU-8	0.3	0.5	5.94	5.54	4.827	0.956	142.69	141.7	146.1	8.51	62.78	248.9	575	2,720	34.5	2.88
29	EU-9	0.3	0.5	5.23	4.83	4.568	0.731	175	174	122.9	10.44	40.17	266.4	547	3,330	34.4	2.74
30	EU-9-1	0.3	0.5	5.23	4.83	4.69	0.67	140	139	87.1	8.34	25.25	204.4	404	2,660	25.8	2.02
31	EU-9-2	0.3	0.5	5.34	4.94	4.837	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
	Total							2902		2070	173	695	4420	9150	55300	574	45.8
Grating cover																	
1	AU-9-1	0.3	0.5	4.711	4.311	4.206	0.652	70	69	41.7	4.14	11.62	100.2	197	1,330	12.7	0.99
2	BU-5-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
3	BU-7	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
4	BU-8	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
5	BU-8-1	0.3	0.5	4.711	4.311	4.245	0.633	66	65	37.8	3.9	10.08	93.2	181	1,260	11.7	0.91
6	CU-7-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
	Total							308		182	18.2	50.2	438	864	5870	55.6	4.4
No cover																	
1	DU-7	0.45	0.65	4.625	4.075	3.543	1.016	355	354	452.5	26.55	169.16	696	1514	8,670	95.3	8.11
	Total							355		453	26.6	170	696	1520	8670	95.3	8.2
Concrete cover																	
1	CU-9-2	0.45	0.65	4.711	4.161	4.057	0.802	104	103	95.1	7.73	26.99	180.5	355	2,540	23.5	1.93
2	CU-5-1	0.45	0.65	4.928	4.378	4.273	0.802	105	104	96.1	7.8	27.33	182.3	358	2,570	23.7	1.95
3	DU-11-1	0.45	0.65	4.844	4.294	4.184	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
4	DU-11-2	0.45	0.65	4.711	4.161	4.051	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
5	DU-4	0.45	0.65	5.14	4.59	4.43	0.83	160	159	153.8	11.93	45.76	283.1	564	3,910	37	3.06
6	EU-12	0.45	0.65	4.89	4.34	4.205	0.817	54	53	50.2	3.98	14.63	93.7	188	1,320	12.4	1.02
	Total							645		598	47.8	173	1130	2220	15800	147	12.1
Grating cover																	
1	AU-6-1	0.45	0.65	5.332	4.782	4.742	0.77	40	39	34.1	2.93	9.12	67.1	132	980	8.8	0.72
2	AU-7-1	0.45	0.65	5.132	4.582	4.546	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
3	AU-8-1	0.45	0.65	4.928	4.378	4.34	0.769	38	37	32.3	2.78	8.63	63.7	125	930	8.4	0.68
4	BU-1-1	0.45	0.65	5.332	4.782	4.716	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
5	BU-2-1	0.45	0.65	5.132	4.582	4.516	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
6	BU-3-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
7	BU-4-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
8	BU-6-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
9	BU-7-1	0.45	0.65	4.711	4.161	4.095	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
10	CU-8-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
11	CU-9-1	0.45	0.65	4.711	4.161	4.093	0.784	68	67	60.0	5.03	16.48	116.2	227	1,660	15.1	1.24
12	CU-6-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
	Total							650		567	48.0	155	1110	2160	16000	145	11.8

QUANTITY CALCULATION COVER SHEET

Project	Detailed Design on Port Reactivation Project in La Union Province	**Project Code**	JC1N004/2N001
Work Section Title	Trench 450mm concrete	**Pay Item No. (BOQ)**	2H-~~15~~16 02
Quantity Item	Crushed stone for foundation	**Unit**	m^3

Calculation Procedure Applied

1. Calculation of area : thickness 0.1m, width
2. Calculation of volume : Area times length

References, Calculation Base and Revisions

See the item of excavation and disposal of 300 mm without cover. (2H - ~~#~~12 01)

Rev	Prepared by	Prepared Date	No. of Pages	Checked by	Checked Date	Reviewed by	Reviewed Date	Superseded by Calc No.
0	Karla Gorão			Mr. Inuma		Mr. Ando		
1								
2								
3								

Trench集計

		W_{inner} (m)	W_{outer} (m)	G (m)	Y_{in} (m)	Y_{out} (m)	H (m)	L (m)	Lac (m)	Vex (m3)	Vcs (m3)	Vbf (m3)	Cmpct (m2)	Form (m2)	Re-bar (kg)	Concrete (m3)	Excavation Based (m2)
No cover																	
1	AU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
2	AU-4	0.3	0.5	5.132	4.732	4.557	0.687	87.49	86.49	56.1	5.19	16.88	128.7	258	1,670	16.4	1.29
3	AU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
4	CU-4	0.3	0.5	5.132	4.732	4.529	0.701	87.49	86.49	57.7	5.19	17.88	129.9	263	1,670	16.7	1.32
5	CU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
6	DU-10	0.3	0.5	5.019	4.619	4.402	0.708	127.5	126.5	85.5	7.59	26.81	190.8	387	2,430	24.5	1.94
7	DU-11	0.3	0.5	4.844	4.444	4.306	0.67	93.6	92.6	58.1	5.58	16.89	136.2	270	1,780	17.3	1.35
8	DU-8	0.3	0.5	5.164	4.764	4.314	0.825	90	89	74.4	5.34	27.9	144.7	315	1,710	19.4	1.58
9	DU-9	0.3	0.5	5.164	4.764	4.674	0.645	90	89	53.0	5.34	14.51	128.7	251	1,710	16.2	1.26
10	EU-10	0.3	0.5	4.675	4.275	4.11	0.682	165.33	164.3	105.5	9.86	31.39	243.6	485	3,150	30.9	2.43
11	EU-4-1	0.3	0.5	5.59	5.19	5.055	0.667	90	89	55.5	5.34	16.03	130.6	259	1,710	16.6	1.3
	Total							1110		723	65.7	222	1640	3300	21100	210	16.6
Concrete cover																	
1	AU-1	0.3	0.5	5.522	5.122	4.972	0.675	75	74	46.9	4.44	13.79	109.2	218	1,430	13.9	1.09
2	AU-2	0.3	0.5	5.522	5.122	5.042	0.64	40	39	23.0	2.34	6.23	56.2	111	760	7.2	0.56
3	AU-4-1	0.3	0.5	5.148	4.748	4.528	0.71	110	109	74.0	6.54	23.32	164.6	335	2,090	21.2	1.68
4	AU-5-1	0.3	0.5	4.878	4.478	4.428	0.625	50	49	28.0	2.94	7.3	69.9	135	950	8.8	0.68
5	AU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
6	CU-1	0.3	0.5	5.637	5.237	5.172	0.632	65	64	37.1	3.84	9.84	91.7	178	1,240	11.5	0.89
7	CU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
8	CU-2	0.3	0.5	5.507	5.107	4.977	0.665	26	25	15.6	1.5	4.54	36.7	75	500	4.8	0.38
9	CU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
10	DU-1	0.3	0.5	6.05	5.65	4.89	0.98	152	151	161.3	9.06	70.7	268.8	627	2,890	37.4	3.14
11	DU-10-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
12	DU-10-2	0.3	0.5	5.01	4.81	4.725	0.442	50	49	17.8	2.94	1.59	60.9	99	950	7	0.5
13	DU-2	0.3	0.5	5.3	4.9	4.788	0.656	45	44	26.8	2.64	7.53	64.1	128	860	8.2	0.64
14	DU-3	0.3	0.5	5.14	4.74	4.58	0.68	160	159	101.7	9.54	30.15	235.4	468	3,040	29.8	2.34
15	DU-5	0.3	0.5	5.14	4.74	4.53	0.705	105	104	69.9	6.24	21.8	156.6	318	2,000	20.1	1.59
16	DU-5-1	0.3	0.5	5.14	4.74	4.6	0.67	70	69	43.3	4.14	12.6	101.5	202	1,330	12.9	1.01
17	DU-6	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
18	DU-6-1	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
19	DU-9-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
20	EU-1	0.3	0.5	6.05	5.65	5.294	0.778	178	177	136.2	10.62	47.88	279.4	590	3,390	36.6	2.95
21	EU-11	0.3	0.5	5.22	4.82	4.53	0.745	145	144	104.4	8.64	34.92	222.5	462	2,760	28.9	2.31
22	EU-2	0.3	0.5	6.06	5.66	5.557	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
23	EU-3	0.3	0.5	5.97	5.57	5.19	0.79	81.47	80.47	63.3	4.83	22.67	128	274	1,550	17	1.37
24	EU-4	0.3	0.5	5.59	5.19	4.934	0.728	55	54	37.9	3.24	12.31	82.6	172	1,050	10.8	0.86
25	EU-5	0.3	0.5	5.33	4.93	4.803	0.663	27.3	26.3	16.3	1.58	4.69	38.5	78	520	5	0.39
26	EU-6	0.3	0.5	5.94	5.54	5.355	0.692	185	184	120.5	11.04	36.6	274.6	550	3,520	34.9	2.75
27	EU-7	0.3	0.5	5.97	5.57	4.8	0.985	165.33	164.3	176.9	9.86	77.9	293.4	685	3,150	40.9	3.43
28	EU-8	0.3	0.5	5.94	5.54	4.827	0.956	142.69	141.7	146.1	8.51	62.78	248.9	575	2,720	34.5	2.88
29	EU-9	0.3	0.5	5.23	4.83	4.568	0.731	175	174	122.9	10.44	40.17	266.4	547	3,330	34.4	2.74
30	EU-9-1	0.3	0.5	5.23	4.83	4.69	0.67	140	139	87.1	8.34	25.25	204.4	404	2,660	25.8	2.02
31	EU-9-2	0.3	0.5	5.34	4.94	4.837	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
	Total							2902		2070	173	695	4420	9150	55300	574	45.8
Grating cover																	
1	AU-9-1	0.3	0.5	4.711	4.311	4.206	0.652	70	69	41.7	4.14	11.62	100.2	197	1,330	12.7	0.99
2	BU-5-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
3	BU-7	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
4	BU-8	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
5	BU-8-1	0.3	0.5	4.711	4.311	4.245	0.633	66	65	37.8	3.9	10.08	93.2	181	1,260	11.7	0.91
6	CU-7-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
	Total							308		182	18.2	50.2	438	864	5870	55.6	4.4
No cover																	
1	DU-7	0.45	0.65	4.625	4.075	3.543	1.016	355	354	452.5	26.55	169.16	696	1514	8,670	95.3	8.11
	Total							355		453	26.6	170	696	1520	8670	95.3	8.2
Concrete cover																	
1	CU-9-2	0.45	0.65	4.711	4.161	4.057	0.802	104	103	95.1	7.73	26.99	180.5	355	2,540	23.5	1.93
2	CU-5-1	0.45	0.65	4.928	4.378	4.273	0.802	105	104	96.1	7.8	27.33	182.3	358	2,570	23.7	1.95
3	DU-11-1	0.45	0.65	4.844	4.294	4.184	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
4	DU-11-2	0.45	0.65	4.711	4.161	4.051	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
5	DU-4	0.45	0.65	5.14	4.59	4.43	0.83	160	159	153.8	11.93	45.76	283.1	564	3,910	37	3.06
6	EU-12	0.45	0.65	4.89	4.34	4.205	0.817	54	53	50.2	3.98	14.63	93.7	188	1,320	12.4	1.02
	Total							645		598	47.8	173	1130	2220	15800	147	12.1
Grating cover																	
1	AU-6-1	0.45	0.65	5.332	4.782	4.742	0.77	40	39	34.1	2.93	9.12	67.1	132	980	8.8	0.72
2	AU-7-1	0.45	0.65	5.132	4.582	4.546	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
3	AU-8-1	0.45	0.65	4.928	4.378	4.34	0.769	38	37	32.3	2.78	8.63	63.7	125	930	8.4	0.68
4	BU-1-1	0.45	0.65	5.332	4.782	4.716	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
5	BU-2-1	0.45	0.65	5.132	4.582	4.516	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
6	BU-3-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
7	BU-4-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
8	BU-6-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
9	BU-7-1	0.45	0.65	4.711	4.161	4.095	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
10	CU-8-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
11	CU-9-1	0.45	0.65	4.711	4.161	4.093	0.784	68	67	60.0	5.03	16.48	116.2	227	1,660	15.1	1.24
12	CU-6-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
	Total							650		567	48.0	155	1110	2160	16000	145	11.8

NIPPON KOEI CO.,LTD.

QUANTITY CALCULATION COVER SHEET

Project	Detailed Design on Port Reactivation Project in La Union Province	**Project Code**	JC1N004/2N001
Work Section Title	Trench 450mm concrete	**Pay Item No. (BOQ)**	2H-~~15~~16 03
Quantity Item	Reinforcement	**Unit**	kg

Calculation Procedure Applied

1. Calculation of weight of reinforcement per 1m
2. Calculation of weight : unit weight times length

References, Calculation Base and Revisions

See the item of excavation and disposal of 300mm without cover. (2H-~~#~~12 01)

Rev	Prepared by	Prepared Date	No. of Pages	Checked by	Checked Date	Reviewed by	Reviewed Date	Superseded by Calc No.
0	Karla Garcia			Mr. Inuma		Mr. Ando		
1								
2								
3								

FN : Calculation_Cover_Sheet_020504_seg cover

TABLE OF REINFORCEMENT (TRENCH)

No.	D	L (m)	Qty	W/bar (kg)	W (kg)	Remarks
Trench (300)						
A1	D13	0.80	10	0.796	7.96	
A2	D13	1.00	11	0.995	10.95	
				total	18.91	per m
Trench (450)						
A1	D13	1.25	10	1.24375	12.44	
A2	D13	1.00	12	0.995	11.94	
				total	24.38	per m

Trench集計

		W_{inner}	W_{outer}	G	Y_{in}	Y_{out}	H	L	Lac	Vex	Vcs	Vbf	Cmpct	Form	Re-bar	Concrete	Ext. Fin. Board
		(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m3)	(m3)	(m3)	(m2)	(m2)	(kg)	(m3)	(m2)
No cover																	
1	AU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
2	AU-4	0.3	0.5	5.132	4.732	4.557	0.687	87.49	86.49	56.1	5.19	16.88	128.7	258	1,670	16.4	1.29
3	AU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
4	CU-4	0.3	0.5	5.132	4.732	4.529	0.701	87.49	86.49	57.7	5.19	17.88	129.9	263	1,670	16.7	1.32
5	CU-5	0.3	0.5	4.928	4.528	4.341	0.693	93.6	92.6	60.8	5.56	18.53	138.3	279	1,780	17.7	1.4
6	DU-10	0.3	0.5	5.019	4.619	4.402	0.708	127.5	126.5	85.5	7.59	26.81	190.8	387	2,430	24.5	1.94
7	DU-11	0.3	0.5	4.844	4.444	4.304	0.67	93.6	92.6	58.1	5.56	16.89	136.2	270	1,780	17.3	1.35
8	DU-8	0.3	0.5	5.164	4.764	4.314	0.825	90	89	74.4	5.34	27.9	144.7	315	1,710	19.4	1.58
9	DU-9	0.3	0.5	5.164	4.764	4.674	0.645	90	89	53.0	5.34	14.51	128.7	251	1,710	16.2	1.26
10	EU-10	0.3	0.5	4.675	4.275	4.11	0.682	165.33	164.3	105.5	9.86	31.39	243.6	485	3,150	30.9	2.43
11	EU-4-1	0.3	0.5	5.59	5.19	5.055	0.667	90	89	55.5	5.34	16.03	130.6	259	1,710	16.6	1.3
	Total							1110		723	65.7	222	1640	3300	21100	210	16.6
Concrete cover																	
1	AU-1	0.3	0.5	5.522	5.122	4.972	0.675	75	74	46.9	4.44	13.79	109.2	218	1,430	13.9	1.09
2	AU-2	0.3	0.5	5.522	5.122	5.042	0.64	40	39	23.0	2.34	6.23	56.2	111	760	7.2	0.56
3	AU-4-1	0.3	0.5	5.148	4.748	4.528	0.71	110	109	74.0	6.54	23.32	164.6	335	2,090	21.2	1.68
4	AU-5-1	0.3	0.5	4.878	4.478	4.428	0.625	50	49	28.0	2.94	7.3	69.9	135	950	8.8	0.68
5	AU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
6	CU-1	0.3	0.5	5.637	5.237	5.172	0.632	65	64	37.1	3.84	9.84	91.7	178	1,240	11.5	0.89
7	CU-9	0.3	0.5	4.711	4.311	4.285	0.613	26	25	13.9	1.5	3.49	35.4	69	500	4.5	0.35
8	CU-2	0.3	0.5	5.507	5.107	4.977	0.665	26	25	15.6	1.5	4.54	36.7	75	500	4.8	0.38
9	CU-3	0.3	0.5	5.332	4.932	4.761	0.685	85.75	84.75	54.8	5.09	16.45	125.9	253	1,630	16.1	1.27
10	DU-1	0.3	0.5	6.05	5.65	4.89	0.98	152	151	161.3	9.06	70.7	268.8	627	2,890	37.4	3.14
11	DU-10-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
12	DU-10-2	0.3	0.5	5.01	4.81	4.725	0.442	50	49	17.8	2.94	1.59	60.9	99	950	7	0.5
13	DU-2	0.3	0.5	5.3	4.9	4.788	0.656	45	44	26.8	2.64	7.53	64.1	128	860	8.2	0.64
14	DU-3	0.3	0.5	5.14	4.74	4.58	0.68	160	159	101.7	9.54	30.15	235.4	468	3,040	29.8	2.34
15	DU-5	0.3	0.5	5.14	4.74	4.53	0.705	105	104	69.9	6.24	21.8	156.6	318	2,000	20.1	1.59
16	DU-5-1	0.3	0.5	5.14	4.74	4.6	0.67	70	69	43.3	4.14	12.6	101.5	202	1,330	12.9	1.01
17	DU-6	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
18	DU-6-1	0.3	0.5	4.97	4.57	4.392	0.689	89	88	57.3	5.28	17.31	131.1	264	1,700	16.8	1.32
19	DU-9-1	0.3	0.5	5.119	4.719	4.569	0.675	150	149	94.3	8.94	27.63	219.8	435	2,850	27.8	2.18
20	EU-1	0.3	0.5	6.05	5.65	5.294	0.778	178	177	136.2	10.62	47.88	279.4	590	3,390	36.6	2.95
21	EU-11	0.3	0.5	5.22	4.82	4.53	0.745	145	144	104.4	8.64	34.92	222.5	462	2,760	28.9	2.31
22	EU-2	0.3	0.5	6.06	5.66	5.557	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
23	EU-3	0.3	0.5	5.97	5.57	5.19	0.79	81.47	80.47	63.3	4.83	22.67	128	274	1,550	17	1.37
24	EU-4	0.3	0.5	5.59	5.19	4.934	0.728	55	54	37.9	3.24	12.31	82.6	172	1,050	10.8	0.86
25	EU-5	0.3	0.5	5.33	4.93	4.803	0.663	27.3	26.3	16.3	1.58	4.69	38.5	78	520	5	0.39
26	EU-6	0.3	0.5	5.94	5.54	5.355	0.692	185	184	120.5	11.04	36.6	274.6	550	3,520	34.9	2.75
27	EU-7	0.3	0.5	5.97	5.57	4.8	0.985	165.33	164.3	176.9	9.86	77.9	293.4	685	3,150	40.9	3.43
28	EU-8	0.3	0.5	5.94	5.54	4.827	0.956	142.69	141.7	146.1	8.51	62.78	248.9	575	2,720	34.5	2.88
29	EU-9	0.3	0.5	5.23	4.83	4.568	0.731	175	174	122.9	10.44	40.17	266.4	547	3,330	34.4	2.74
30	EU-9-1	0.3	0.5	5.23	4.83	4.69	0.67	140	139	87.1	8.34	25.25	204.4	404	2,660	25.8	2.02
31	EU-9-2	0.3	0.5	5.34	4.94	4.837	0.651	22	21	12.7	1.26	3.56	30.5	62	420	4	0.31
	Total							2902		2070	173	695	4420	9150	55300	574	45.8
Grating cover																	
1	AU-9-1	0.3	0.5	4.711	4.311	4.206	0.652	70	69	41.7	4.14	11.62	100.2	197	1,330	12.7	0.99
2	BU-5-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
3	BU-7	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
4	BU-8	0.3	0.5	4.711	4.311	4.291	0.61	20	19	10.5	1.14	2.62	26.8	53	380	3.5	0.27
5	BU-8-1	0.3	0.5	4.711	4.311	4.245	0.633	66	65	37.8	3.9	10.08	93.2	181	1,260	11.7	0.91
6	CU-7-1	0.3	0.5	5.132	4.732	4.6	0.666	66	65	40.4	3.9	11.61	95.3	190	1,260	12.1	0.95
	Total							308		182	18.2	50.2	438	864	5870	55.6	4.4
No cover																	
1	DU-7	0.45	0.65	4.625	4.075	3.543	1.016	355	354	452.5	26.55	169.16	696	1514	8,670	95.3	8.11
	Total							355		453	26.6	170	696	1520	8670	95.3	8.2
Concrete cover																	
1	CU-9-2	0.45	0.65	4.711	4.161	4.057	0.802	104	103	95.1	7.73	26.99	180.5	355	2,540	23.5	1.93
2	CU-5-1	0.45	0.65	4.928	4.378	4.273	0.802	105	104	96.1	7.8	27.33	182.3	358	2,570	23.7	1.95
3	DU-11-1	0.45	0.65	4.844	4.294	4.184	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
4	DU-11-2	0.45	0.65	4.711	4.161	4.051	0.805	110	109	101.2	8.18	28.91	191.3	377	2,690	24.9	2.05
5	DU-4	0.45	0.65	5.14	4.59	4.43	0.83	160	159	153.8	11.93	45.76	283.1	564	3,910	37	3.06
6	EU-12	0.45	0.65	4.89	4.34	4.205	0.817	54	53	50.2	3.98	14.63	93.7	188	1,320	12.4	1.02
	Total							645		598	47.8	173	1130	2220	15800	147	12.1
Grating cover																	
1	AU-6-1	0.45	0.65	5.332	4.782	4.742	0.77	40	39	34.1	2.93	9.12	67.1	132	980	8.8	0.72
2	AU-7-1	0.45	0.65	5.132	4.582	4.546	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
3	AU-8-1	0.45	0.65	4.928	4.378	4.34	0.769	38	37	32.3	2.78	8.63	63.7	125	930	8.4	0.68
4	BU-1-1	0.45	0.65	5.332	4.782	4.716	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
5	BU-2-1	0.45	0.65	5.132	4.582	4.516	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
6	BU-3-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
7	BU-4-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
8	BU-6-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
9	BU-7-1	0.45	0.65	4.711	4.161	4.095	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
10	CU-8-1	0.45	0.65	4.928	4.378	4.312	0.783	66	65	58.1	4.88	15.92	112.7	220	1,620	14.7	1.2
11	CU-9-1	0.45	0.65	4.711	4.161	4.093	0.784	68	67	60.0	5.03	16.48	116.2	227	1,660	15.1	1.24
12	CU-6-1	0.45	0.65	5.332	4.782	4.746	0.768	36	35	30.5	2.63	8.13	60.2	118	880	7.9	0.65
	Total							650		567	48.0	155	1110	2160	16000	145	11.8