

ภาคผนวก ก.

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ข้อที่	จำนวน	รายการละเอียดอะไหล่สำรอง	
		อะไหล่ (Spare part) ที่จะซื้อนี้ จะต้องเป็นของใหม่ ไม่เคยใช้งานมาก่อน ไม่เป็นของเก่า เก็บ อยู่ในสภาพที่จะใช้งานได้ดีและมีคุณลักษณะตรงตามที่กำหนดไว้ท้ายนี้ทุกประการ	
1	10 pc	Grade Sliding plate	อ้างอิงตามเอกสาร General part for UIC 60 (Page 21)
2	20 pc	Sliding plate	อ้างอิงตามเอกสาร General part for UIC 60 (Page 20)
3	20 pc	Roller slide set	อ้างอิงตามเอกสาร General part for UIC 60 (Page 39)
4	20 pc	Roller slide Plate	อ้างอิงตามเอกสาร General part for UIC 60 (Page 40)
5	1 set	Stud long, shot Stop: for T/O UIC60-100-1:6	อ้างอิงตามชื่อของอุปกรณ์ For T/O UIC60-100-1:6
6	1 set	Stud long, shot Stop: for T/O UIC60-350-1:12	อ้างอิงตามชื่อของอุปกรณ์ For T/O UIC60-350-1:12
7	1 set	Stud long, shot Stop: for T/O UIC60-500-1:12	อ้างอิงตามชื่อของอุปกรณ์ For T/O UIC60-500-1:12
8	1 set	Stud long, shot Stop: for T/O UIC60-12800-350	อ้างอิงตามชื่อของอุปกรณ์ For T/O UIC60-12800-350
9	1 set	Stud long, shot Stop: for T/O UIC60-12804-350	อ้างอิงตามชื่อของอุปกรณ์ For T/O UIC60-12804-350
10	1 set	Stud long, shot Stop: for crossover-UIC60-4m (Curve)	อ้างอิงตามชื่อของอุปกรณ์ For crossover-UIC60-4m (Curve)
11	10 Pc (All 20pc.)	Adjusting pad for stop 1 set per all type(h=1,h=1.5)	อ้างอิงตามเอกสาร General part for UIC 60 (page 9)

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12	100 Pc (All 200pc.)	Adjusting pad for check rail 1 set per all type(h=2,h=3)	อ้างอิงตามเอกสาร General part for UIC 60 (page 10)
13	10 pc	Inner Stock Rail Bracing Schwihag Type	อ้างอิงตามชื่อของอุปกรณ์
14	10 pc	Inner Stock Rail Bracing Flat Spring 250 Type	อ้างอิงตามชื่อของอุปกรณ์

# UIC60-100-1:6 Simple Turnout

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## Table of detail

## List of Switch layout

Seq No.	Drawing No.	Description	Quantity	Note
1	ZX 9712	Tongue Rail/Stock rail Assembly Left 1:6 LL	1	
2	ZX 9712	Tongue Rail/Stock rail Assembly Left 1:6 LR	1	
3	ZX 9712	Tongue Rail/Stock rail Assembly Right 1:6 RL	1	
4	ZX 9712	Tongue Rail/Stock rail Assembly Right 1:6 RR	1	
5	ZX 9712-10	Check rail block 229-258/A	1	
6	ZX 9712-10	Check rail block 324-357/A	1	
7	ZX 9712-11	Check rail block 248-277/B	1	
8	ZX 9712-11	Check rail block 344-378/B	1	
9	ZX 9716-18	Tie plate A	5	
10	ZX 9716-20	slide plate 590	2	
11	ZX 9712-13	slide plate 590	2	
12	ZX 9712-13	slide plate 590	2	
13	ZX 9712-13	slide plate 590	2	
14	ZX 9716-23	Set to prevent switch rail flopping 60-88/30	1	
15	ZX 9716-23	Set to prevent switch rail flopping 60-88/30	1	
16	ZX 9712-14	Tie plate 673	1	
17	ZX 9712-15	Tie plate 748	1	
18	ZX 9712-16	Tie plate 693	1	
19	ZX 9712-17	Tie plate 768	1	
20	ZX 9712-18	Tie plate 797	1	
21	ZX 9712-18	Tie plate 849	1	
22	ZX 9712-19	Tie plate 817	1	
23	ZX 9712-19	Tie plate 870	1	
24	ZX 9712-20	Tie plate 883	1	
25	ZX 9712-20	Tie plate 943	1	
26	ZX 9712-20	Tie plate 906	1	
27	ZX 9712-20	Tie plate 966	1	
28	ZX 3351-3	II Clip	50	
29	ZX 9716-3	Bolt M24X60	50	
30	GB 41	Nut M24	50	
31	TB1495.4	Washer 24	50	

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## List of Switch layout

Seq No.	Drawing No.	Description	Quantity	Note
32	GB1228	bolt M27x110	10	
33	GB1228	bolt M27x120	10	
34	ZX 9716-8	nut M27	10	
35	ZX 9716-11	bar 410	2	
36	ZX 9716-12	bar 410	2	
37	ZX 9716-16	Flat spring 250	20	
38	ZX 9716-17	Key spannkeil 175	20	
39	ZX 9716-15	Gauge block 60 9-11	10	
40	ZX 9716-15	Gauge block 60 13-15	10	
41	ZX 9716-16	Gauge block 60 11-13	10	
42	ZX 9716-17	Gauge block 60/11-17	10	
43	ZX 9716-17	Gauge block 60/13-17	10	
44	ZX 9716-26	Rubber pad 60-200-149	10	
45	ZX 9716-24	Rubber pad 60-200-149	10	
46	ZX 9716-26	Rubber pad 60-170-139	10	
47	ZX 9716-26	Rubber pad 60-170-109	2	
48	ZX 9716-30	Rubber pad 440x180x10	10	
49	ZX 9716-30	Rubber pad 590x200x10	10	
50	ZX 9716-30	Rubber pad 673x200x10	1	
51	ZX 9716-30	Rubber pad 748x200x10	1	
52	ZX 9716-30	Rubber pad 693x200x10	1	
53	ZX 9716-30	Rubber pad 768x200x10	1	
54	ZX 9716-30	Rubber pad 797x200x10	1	
55	ZX 9716-30	Rubber pad 849x200x10	1	
56	ZX 9716-30	Rubber pad 817x200x10	1	
57	ZX 9716-30	Rubber pad 870x200x10	1	
58	ZX 9716-30	Rubber pad 883x200x10	1	
59	ZX 9716-30	Rubber pad 943x200x10	1	
60	ZX 9716-30	Rubber pad 906x200x10	1	
61	ZX 9716-30	Rubber pad 966x200x10	1	
62	ZX 9716-25	Adjusting pad 440x180x5	10	

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## List of Switch layout

Seq No.	Drawing No.	Description	Quantity	Note
63	ZX 9716-25	Adjusting pad 590x200x5	20	
64	ZX 9716-25	Adjusting pad 673x200x5	20	
65	ZX 9716-25	Adjusting pad 748x200x5	20	
66	ZX 9716-25	Adjusting pad 693x200x5	20	
67	ZX 9716-25	Adjusting pad 768x200x5	20	
68	ZX 9716-25	Adjusting pad 797x200x5	20	
69	ZX 9716-25	Adjusting pad 849x200x5	20	
70	ZX 9716-25	Adjusting pad 817x200x5	20	
71	ZX 9716-25	Adjusting pad 870x200x5	20	
72	ZX 9716-25	Adjusting pad 883x200x5	20	
73	ZX 9716-25	Adjusting pad 943x200x5	20	
74	ZX 9716-25	Adjusting pad 906x200x5	20	
75	ZX 9716-25	Adjusting pad 966x200x5	20	

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## General Layout

Seq No.	Drawing No.	Description	Unit	Quantity	Note
1		Joint bar	piece	3	
2	ZX 9716-18	Tie plate A	piece	5	
3	ZX 9716-18	Tie plate B	piece	5	
4	ZX 9716-18	Tie plate C	piece	5	
5	ZX 9716-18	Tie plate C'	piece	5	be made with C symmetrically
6	ZX 9716-31	Tie plate P120	piece	5	
7	ZX 9716-32	Tie plate P60	piece	5	
8	ZX 3351-3	ll clip	piece	100	
9	ZX 9716-3	Bolt M24X60	piece	100	
10	GB41	NUT 24	piece	50	
11	TB1495.4	Washer	piece	50	
12		Hex bolt		30	
13		Hex nut		30	
14	ZX 9716-15	Gauge block 60 9-11	piece	20	
15	ZX 9716-15	Gauge block 60 13-15	piece	20	
16	ZX 9716-17	Gauge block 60/11-17	piece	20	106/4452
17	ZX 9716-17	Gauge block 60/13-17	piece	20	117/4914
18	ZX 9716-17	Gauge block 60/7-17	piece	25 spare	84.2/2105
19	ZX 9716-17	Gauge block 60/9-17	piece	50 spare	95.1/4755
20	ZX 9716-17	Gauge block 60/15-17	piece	50 spare	128/6400
21	ZX 9716-17	Gauge block 60/17-17	piece	25 spare	139/3475
22	ZX 9716-24	insulate gauge block 60 9-11	piece	4	41.2/164.8
23	ZX 9716-24	insulate gauge block 60 13-15	piece	4	63.1/252.4
24	ZX 9716-26	Rubber pad 60-200-149	piece	20	144/6048
25	ZX 9716-29	Rubber pad 440x180x10	piece	20	609/25578
26	ZX 9716-25	Adjusting pad 440x180x5	piece	20	361/15162

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List of Frog and Check rail

Seq No.	Drawing No.	Description	Quantity	Note
1	ZX 9712	Frog for UIC60-100-1:6 Left	1	
2	ZX 9712	Frog for UIC60-100-1:6 Right	1	
3	ZX 9712-24	Check rail 4100	1	
4	ZX 9712-25	Check rail 5800	1	
5	ZX 9712-26	Tie plate 941	1	
6	ZX 9712-26	Tie plate 841	1	
7	ZX 9712-27	Tie plate 742	1	
8	ZX 9712-28	Tie plate 706	2	
9	ZX 9712-28	Tie plate 756	1	
10	ZX 9712-28	Tie plate 706	2	
11	ZX 9712-27	Tie plate 717	1	
12	ZX 9712-29	Tie plate 810	1	
13	ZX 9712-29	Tie plate 898	1	
14	ZX 9712-29	Tie plate 982	1	
15	ZX 9712-30	Check rail tie plate 611	7	
16	ZX 9712-31	Check rail tie plate 611	7	
17	ZX 9712-32	Check rail tie plate 611	1	
18	ZX 9712-33	Check rail tie plate 611	1	
19	ZX 9712-34	Check rail tie plate 611	1	
20	ZX 9716-18	Tie plate B	1	
21	ZX 9716-18	Tie plate D	2	
22	ZX 9716-18	Tie plate E	2	
23	ZX 9716-18	Tie plate C'	3	symmetrically with C
24	ZX 9712-35	Tie plate 440	1	
25	ZX 9716-18	Tie plate C	2	
26	ZX 9716-13	Flate spring 250	17	
27	ZX 9716-14	Key spannkeil 155	17	
28	ZX 9716-10	Adjusting pad 140x70x <sub>2</sub> <sup>3</sup>	17 <sub>34</sub>	
29	ZX 9716-4	Bolt M24x80	10	
30	ZX 9716-3	Botl M24x60	50	
31	ZX 9716-3	Botl M24x85	2	

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## List of Frog and Check rail

Seq No.	Drawing No.	Description	Quantity	Note
32	ZX 9716-8	Nut M24	10	
33	GB 41	Nut M24	50	
34	GB 7244	Washer M24	10	
35	TB/T 1495.4	Washer M24	50	
36	ZX 3351-3	II Clip	50	
37	ZX 9716-15	Gauge block 60 9-11	20	
38	ZX 9716-15	Gauge block 60 13-15	20	
39	ZX 9716-7	Offset clip 167-149-79	1	
40	ZX 9716-7	Offset clip 146-128-68	1	
41	ZX 9716-17	Gauge block 60/11-17	10	
42	ZX 9716-17	Gauge block 60/13-17	10	
43	ZX 9716-26	Rubber pad 60-200-149	10	
44	ZX 9716-26	Rubber pad 60-240-149	1	
45	ZX 9716-28	Rubber pad 439x200x5	4	
46	ZX 9716-28	Rubber pad 489x200x5	1	
47	ZX 9716-30	Rubber pad 941x200x10	1	
48	ZX 9716-30	Rubber pad 841x200x10	1	
49	ZX 9716-30	Rubber pad 742x200x10	1	
50	ZX 9716-30	Rubber pad 706x200 10	4	
51	ZX 9716-30	Rubber pad 756x200 10	1	
52	ZX 9716-30	Rubber pad 717x200x10	1	
53	ZX 9716-30	Rubber pad 810x200x10	1	
54	ZX 9716-30	Rubber pad 898x200x10	1	
55	ZX 9716-30	Rubber pad 982x200x10	1	
56	ZX 9716-30	Rubber pad 611x200x10	10	
57	ZX 9716-29	Rubber pad 440x220x10	1	
58	ZX 9716-29	Rubber pad 440x180x10	10	
59	ZX 9716-25	Adjusting pad	1	
60	ZX 9716-25	Adjusting pad 941x200x5	1	
61	ZX 9716-25	Adjusting pad 742x200x5	1	

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## List of Frog and Check rail

Seq No.	Drawing No.	Description	Quantity	Note
62	ZX 9716-25	Adjusting pad 706x200x5	4	
63	ZX 9716-25	Adjusting pad 756x200x5	1	
64	ZX 9716-25	Adjusting pad 717x200 x5	1	
65	ZX 9716-25	Adjusting pad 810x200x5	1	
66	ZX 9716-25	Adjusting pad 898x200x5	1	
67	ZX 9716-25	Adjusting pad 982x200x5	1	
68	ZX 9716-25	Adjusting pad 611x200x5	10	
69	ZX 9716-25	Adjusting pad 440x220x5	1	
70	ZX 9716-25	Adjusting pad 440x180x5	10	

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## Straight stock rail

Seq No.	Drawing No.	Description	Quantity	Note
1	ZX 9712-12	Stop 62-64	1	
2	ZX 9712-12	Stop 91-93	1	
3	ZX 9712-12	Stop 123-126	1	
4	ZX 9712-12	Stop 158-161	1	
5	ZX 9712-12	Stop 198-201	1	
6	GB5780	Bolt M24x80	10	
7	ZX 9716-8	Nut M24	10	
8	GB7244	Washer 24	10	
9	ZX 9716-9	Adjusting pad 1	5	1.5mm Spare
		130x180x1.5	5	

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## Curved stock rail

Seq NO.	Drawing NO.	Description	Quantity	Note
1	ZX 9712-12	Stop 81-79	1	
2	ZX 9712-12	Stop 111-108	1	
3	ZX 9712-12	Stop 143-141	1	
4	ZX 9712-12	Stop 180-177	1	
5	ZX 9712-12	Stop 220-217	1	
6	GB5780	Bolt M24x80	10	
7	ZX 9716-11	Nut M24	10	
8	GB7244	Washer 24	10	
9	ZX 9716-12	Adjusting pad 1	5	1.5mm Spare
		130x180x1.5	5	

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## Curved switch rail

Seq NO.	Drawing NO.	Description	Quantity	Note
1	ZX 9716-37	Joint iron	1	
2	ZX 9716-41	Adjusting pad for rod <sup>2</sup> <sub>4</sub> 185x90x3	1	2 pieces spare
3	ZX 9716-40	Adjusting pad for joint iron 185x80x5	1	
4	ZX 9716-38	Insulated tube 20x20	2	
5	ZX 9716-39	Insulated washer 20	2	
6	GB7244	Washer 20	2	
7	GB5780	Bolt M20x130	2	
8	GB41	Nut M20	4	

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## Straight switch rail

Seq NO.	Drawing NO.	Description	Quantity	Note
1	ZX 9716-37	Joint iron	1	
2	ZX 9716-41	Adjusting pad for rod <sup>3</sup> <sub>a</sub> 185x90x2	1	2 pieces spare
3	ZX 9716-40	Adjusting pad for joint iron 185x80x5	1	
4	ZX 9716-38	Insulated tube 20x20	2	
5	ZX 9716-39	Insulated washer 20	2	
6	GB7244	Washer 20	2	
7	GB5780	Bolt M20x130	2	
8	GB41	Nut M20	4	

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## List of Frog and Check rail

Seq No.	Drawing No.	Description	Quantity	Note
1	ZX 9712-6	Straigh stock rail 11975	1	
2	ZX 9712-7	Curved stock rail 11975	1	
3	ZX 9712-8	Curved switch rail 8800	1	
4	ZX 9712-9	Straigh switch rail 8800	1	
5	ZX 9712-10	Check rail block 229-258/A	1	
6	ZX 9712-10	Check rail block 324-357/A	1	
7	ZX 9712-11	Check rail block 248-277/B	1	
8	ZX 9712-11	Check rail block 344-378/B	1	
9	ZX 9716-18	Tle plate A	5	
10	ZX 9716-20	slide plate 590	2	
11	ZX 9712-13	slide plate 590	2	
12	ZX 9712-13	slide plate 590	2	
13	ZX 9712-13	slide plate 590	2	
14	ZX 9716-23	Set to prevent switch rail flopping 60-88/30	1	
15	ZX 9716-23	Set to prevent switch rail flopping 60-88/30	1	
16	ZX 9712-14	Tle plate 673	1	
17	ZX 9712-15	Tle plate 748	1	
18	ZX 9712-16	Tle plate 693	1	
19	ZX 9712-17	Tle plate 768	1	
20	ZX 9712-18	Tle plate 797	1	
21	ZX 9712-18	Tle plate 849	1	
22	ZX 9712-19	Tle plate 817	1	
23	ZX 9712-19	Tle plate 870	1	
24	ZX 9712-20	Tle plate 883	1	
25	ZX 9712-20	Tle plate 943	1	
26	ZX 9712-20	Tle plate 906	1	
27	ZX 9712-20	Tle plate 966	1	
28	ZX 3351-3	ll Clip	50	
29	ZX 9716-3	Bolt M24X60	50	
30	GB 41	Nut M24	50	
31	TB1495.4	Washer 24	50	

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## List of Frog and Check rail

Seq No.	Drawing No.	Description	Quantity	Note
32	GB1228	bolt M27x110	10	
33	GB1228	bolt M27x120	10	
34	ZX 9716-8	nut M27	10	
35	ZX 9716-11	bar 410	2	
36	ZX 9716-12	bar 410	2	
37	ZX 9716-16	Flat spring 250	20	
38	ZX 9716-17	Key spannkeil 175	20	
39	ZX 9716-15	Gauge block 60 9-11	10	
40	ZX 9716-15	Gauge block 60 13-15	10	
41	ZX 9716-16	Gauge block 60 11-13	10	
42	ZX 9716-17	Gauge block 60/11-17	10	
43	ZX 9716-17	Gauge block 60/13-17	10	
44	ZX 9716-26	Rubber pad 60-200-149	10	
45	ZX 9716-24	Rubber pad 60-200-149	10	
46	ZX 9716-26	Rubber pad 60-170-139	10	
47	ZX 9716-26	Rubber pad 60-170-109	2	
48	ZX 9716-30	Rubber pad 440x180x10	10	
49	ZX 9716-30	Rubber pad 590x200x10	10	
50	ZX 9716-30	Rubber pad 673x200x10	1	
51	ZX 9716-30	Rubber pad 748x200x10	1	
52	ZX 9716-30	Rubber pad 693x200x10	1	
53	ZX 9716-30	Rubber pad 768x200x10	1	
54	ZX 9716-30	Rubber pad 797x200x10	1	
55	ZX 9716-30	Rubber pad 849x200x10	1	
56	ZX 9716-30	Rubber pad 817x200x10	1	
57	ZX 9716-30	Rubber pad 870x200x10	1	
58	ZX 9716-30	Rubber pad 883x200x10	1	
59	ZX 9716-30	Rubber pad 943x200x10	1	
60	ZX 9716-30	Rubber pad 906x200x10	1	
61	ZX 9716-30	Rubber pad 966x200x10	1	
62	ZX 9716-25	Adjusting pad 440x180x5	10	

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**Table of detail****List of Frog and Check rail**

Seq No.	Drawing No.	Description	Quantity	Note
63	ZX 9716-25	Adjusting pad 590x200x5	20	
64	ZX 9716-25	Adjusting pad 673x200x5	20	
65	ZX 9716-25	Adjusting pad 748x200x5	20	
66	ZX 9716-25	Adjusting pad 693x200x5	20	
67	ZX 9716-25	Adjusting pad 768x200x5	20	
68	ZX 9716-25	Adjusting pad 797x200x5	20	
69	ZX 9716-25	Adjusting pad 849x200x5	20	
70	ZX 9716-25	Adjusting pad 817x200x5	20	
71	ZX 9716-25	Adjusting pad 870x200x5	20	
72	ZX 9716-25	Adjusting pad 883x200x5	20	
73	ZX 9716-25	Adjusting pad 943x200x5	20	
74	ZX 9716-25	Adjusting pad 906x200x5	20	
75	ZX 9716-25	Adjusting pad 966x200x5	20	

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General Layout

Seq No.	Drawing No.	Description	Unit	Quantity	Note
1	ZX 9710-4	Tongue Rail /Stock rail Assembly Left 1:9 LL	set	1	
2	ZX 9710-4	Tongue Rail /Stock rail Assembly Left 1:9 LR	set	1	
3	ZX 9710-4	Tongue Rail /Stock rail Assembly Right 1:9 RL	set	1	
4	ZX 9710-4	Tongue Rail /Stock rail Assembly Left 1:9 RR	set	1	
5	ZX 9716-19	Grade tie plate A	plece	5	
6	ZX 9716-19	Grade tie plate B	plece	5	
7	ZX 9716-19	Grade tie plate C	plece	5	
8	ZX 9716-19	Grade tie plate D	plece	5	
9	ZX 9716-19	Grade tie plate E	plece	5	
10	ZX 9716-19	Grade tie plate F	plece	2	
11	ZX 3351-3	ll clip	plece	100	
12	ZX 9716-3	Bolt M24X65	plece	50	
13	ZX 9716-3	Bolt M24X70	plece	50	
14	GB41	NUT 24	plece	50	
15	TB1495.4	Washer	plece	50	
16	ZX 9716-15	Gauge block 60 9-11	plece	20	
17	ZX 9716-15	Gauge block 60 13-15	plece	20	
18	ZX 9716-17	Gauge block 60/11-17	plece	20	
19	ZX 9716-17	Gauge block 60/13-17	plece	20	
20	ZX 9716-17	Gauge block 60/7-17	plece	20 spare	
21	ZX 9716-17	Gauge block 60/9-17	plece	20spare	
22	ZX 9716-17	Gauge block 60/15-17	plece	20spare	
23	ZX 9716-17	Gauge block 60/17-17	plece	20 spare	
24	ZX 9716-24	insulate gauge block 60 9-11	plece	4	
25	ZX 9716-24	insulate gauge block 60 13-15	plece	4	
26	ZX 9716-26	Rubber pad 60-200-149	plece	50	
27	ZX 9716-29	Rubber pad 440x180x10	plece	50	
28	ZX 9716-25	Adjusling pad 440x180x5	plece	50	

# UIC60-350-1:9 Simple Turnout

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## Table of detail

## List of Frog and Check rail

Seq No.	Drawing No.	Description	Quantity	Note
1	ZX 9711-6	Frog for UIC60-350-1:9 Left	1	
2	ZX 9711-6	Frog for UIC60-350-1:9 Right	1	
3	ZX 9711-7	check rail 7400	1	
4	ZX 9711-8	Check rail 5100	1	
5	ZX 9711-9	Tie plate 991	1	
6	ZX 9711-9	Tie plate 947	1	
7	ZX 9711-9	Tie plate 902	1	
8	ZX 9711-9	Tie plate 856	1	
9	ZX 9711-9	Tie plate 808	1	
10	ZX 9711-9	Tie plate 760	1	
11	ZX 9711-10	Tie plate 711	1	
12	ZX 9711-11	Tie plate 666	1	
13	ZX 9711-12	Tie plate 666	1	
14	ZX 9711-12	Tie plate 701	1	
15	ZX 9711-12	Tie plate 721	1	
16	ZX 9711-12	Tie plate 740	1	
17	ZX 9711-12	Tie plate 760	1	
18	ZX 9711-12	Tie plate 780	1	
19	ZX 9711-12	Tie plate 799	1	
20	ZX 9711-12	Tie plate 740	1	
21	ZX 9711-13	Tie plate 740	1	
22	ZX 9711-14	Tie plate 792	1	
23	ZX 9711-14	Tie plate 853	1	
24	ZX 9711-14	Tie plate 914	1	
25	ZX 9711-14	Tie plate 977	1	
26	ZX 9716-22	Check rail tie plate 595	10	

# UIC60-350-1:9 Simple Turnout

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## Table of detail

## List of Frog and Check rail

Seq No.	Drawing No.	Description	Quantity	Note
27	ZX 9711-15	Check rail tie plate 595	10	
28	ZX 9716-13	Flat spring 250	20	
29	ZX 9716-14	Key spannkeil 155	20	
30	ZX 9716-10	Adjusting pad 140X70X <sub>2</sub> <sup>3</sup>	<sup>22</sup> <sub>44</sub>	
31	ZX 9716-4	Bolt M24X80	10	
32	ZX 9716-3	Bolt M24X70	20	
33	ZX 9716-3	Bolt M24X65	20	
34	ZX 9716-3	Bolt M24X85	2	
35	ZX 9716-8	Nut M24	20	
36	GB 41	Nut M24	50	
37	GB 7244	Washer M24	20	
38	TB/T 1495.4	Washer M24	50	
39	ZX 3351-3	ll Clip	100	
40	ZX 9716-15	Gauge block 60 9-11	20	
41	ZX 9716-15	Gauge block 60 13-15	10	
42	ZX 9716-7	Offset clip 143-134-69	1	
43	ZX 9716-7	Offset clip 92-83-44	1	
44	ZX 9716-17	Gauge block 60/11-17	10	
45	ZX 9716-17	Gauge block 60/13-17	10	
46	ZX 9716-26	Rubber pad 60-200-149	10	
47	ZX 9716-28	Rubber pad 399X200X5	1	
48	ZX 9716-28	Rubber pad 434X200X5	1	
49	ZX 9716-28	Rubber pad 454X200X5	2	
50	ZX 9716-28	Rubber pad 473X200X5	1	
51	ZX 9716-28	Rubber pad 493X200X5	1	

# UIC60-350-1:9 Simple Turnout

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Table of detail

List of Frog and Check rail

Seq No.	Drawing No.	Description	Quantity	Note
52	ZX 9716-28	Rubber pad 513X200X5	1	
53	ZX 9716-28	Rubber pad 532X200X5	1	
54	ZX 9716-30	Rubber pad 991X200X10	1	
55	ZX 9716-30	Rubber pad 947X200X10	1	
56	ZX 9716-30	Rubber pad 902X200X10	1	
57	ZX 9716-30	Rubber pad 856X200X10	1	
58	ZX 9716-30	Rubber pad 808X200X10	1	
59	ZX 9716-30	Rubber pad 760X200X10	2	
60	ZX 9716-30	Rubber pad 711X200X10	1	
61	ZX 9716-30	Rubber pad 666X200X10	2	
62	ZX 9716-30	Rubber pad 701X200X10	1	
63	ZX 9716-30	Rubber pad 721X200X10	1	
64	ZX 9716-30	Rubber pad 740X200X10	3	
65	ZX 9716-30	Rubber pad 780X200X10	1	
66	ZX 9716-30	Rubber pad 799X200X10	1	
67	ZX 9716-30	Rubber pad 792X200X10	1	
68	ZX 9716-30	Rubber pad 853X200X10	1	
69	ZX 9716-30	Rubber pad 914X200X10	1	
70	ZX 9716-30	Rubber pad 977X200X10	1	
71	ZX 9716-30	Rubber pad 595X200X7	20	
72	ZX 9716-25	Adjusting pad 991X200X5	1	
73	ZX 9716-25	Adjusting pad 947X200X5	1	
74	ZX 9716-25	Adjusting pad 902X200X5	1	
75	ZX 9716-25	Adjusting pad 856X200X5	1	
76	ZX 9716-25	Adjusting pad 808X200X5	1	

# UIC60-350-1:9 Simple Turnout

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## Table of detail

## List of Frog and Check rail

Seq No.	Drawing No.	Description	Quantity	Note
77	ZX 9716-25	Adjusting pad 760X200X5	2	
78	ZX 9716-25	Adjusting pad 711X200X5	1	
79	ZX 9716-25	Adjusting pad 666X200X5	2	
80	ZX 9716-25	Adjusting pad 701X200X5	1	
81	ZX 9716-25	Adjusting pad 721X200X5	1	
82	ZX 9716-25	Adjusting pad 740X200X5	3	
83	ZX 9716-25	Adjusting pad 780X200X5	1	
84	ZX 9716-25	Adjusting pad 799X200X5	1	
85	ZX 9716-25	Adjusting pad 792X200X5	1	
86	ZX 9716-25	Adjusting pad 853X200X5	1	
87	ZX 9716-25	Adjusting pad 914X200X5	1	
88	ZX 9716-25	Adjusting pad 977X200X5	1	
89	ZX 9716-25	Adjusting pad 595X200X5	20	

# UIC60-350-1:12 Simple Turnout

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Table of detail

General Layout

Seq NO.	Drawing NO.	Description	Unit	Quantity	Note
1	ZX 9716-19	Grade tie plate A	piece	5	
2	ZX 9716-19	Grade tie plate B	piece	5	
3	ZX 9716-19	Grade tie plate C	piece	5	
4	ZX 9716-19	Grade tie plate E	piece	5	
5	ZX 9716-19	Grade tie plate F	piece	5	
6	ZX 3351-3	ll clip	piece	100	
7	ZX 9716-3	Bolt M24X65	piece	50	
8	ZX 9716-3	Bolt M24X70	piece	50	
9	GB41	NUT 24	piece	50	
10	TB1495.4	Washer	piece	50	
11	ZX 9716-15	Gauge block 60 9-11	piece	50	
12	ZX 9716-15	Gauge block 60 13-15	piece	50	
13	ZX 9716-17	Gauge block 60/11-17	piece	50	
14	ZX 9716-17	Gauge block 60/13-17	piece	50	
15	ZX 9716-17	Gauge block 60/7-17	piece	50 spare	
16	ZX 9716-17	Gauge block 60/9-17	piece	50spare	
17	ZX 9716-17	Gauge block 60/15-17	piece	50spare	
18	ZX 9716-17	Gauge block 60/17-17	piece	50 spare	
19	ZX 9716-24	insulate gauge block 60 9-11	piece	4	
20	ZX 9716-24	insulate gauge block 60 13-15	piece	4	
21	ZX 9716-26	Rubber pad 60-200-149	piece	50	
22	ZX 9716-29	Rubber pad 440x180x10	piece	50	
23	ZX 9716-25	Adjusting pad 440x180x5	piece	50	

# UIC60-350-1:12 Simple Turnout

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## Table of detail

Layout of frog and check rail

Seq NO.	Drawing NO.	Description	Quantity	Note
1	ZX 9710-22	Frog for UIC60-350-1:12 Left	1	
2	ZX 9710-22	Frog for UIC60-350-1:12 Right	1	
3	ZX 9710-23	Through track check rail	1	
4	ZX 9710-24	Turnout track check rail	1	
5	ZX 9710-22	check rail tie plate	10	
6	ZX 9710-25	check rail tie plate	3	
7	ZX 9710-26	Tie plate 991	1	
8	ZX 9710-26	Tie plate 947	1	
9	ZX 9710-26	Tie plate 902	1	
10	ZX 9710-26	Tie plate 856	1	
11	ZX 9710-26	Tie plate 808	1	
12	ZX 9710-26	Tie plate 760	1	
13	ZX 9710-27	Tie plate 714	1	
14	ZX 9710-27	Tie plate 661	1	
15	ZX 9710-28	Tie plate 714	2	
16	ZX 9710-28	Tie plate 714	6	
17	ZX 9710-29	Tie plate 639	1	
18	ZX 9710-29	Tie plate 689	1	
19	ZX 9710-30	Tie plate 737	1	
20	ZX 9710-30	Tie plate 785	1	
21	ZX 9710-30	Tie plate 833	1	
22	ZX 9710-30	Tie plate 884	1	
23	ZX 9710-30	Tie plate	1	
24	ZX 9710-30	Tie plate	1	
25	ZX 9716-19	Tie plate C	2	
26	ZX 3351-3	ll Clip	100	
27	ZX 9716-13	Flat spring 250	10	
28	ZX 9716-14	Key spannkeil 175	10	

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Table of detail

Layout of frog and check rail

Seq NO.	Drawing NO.	Description	Quantity	Note
29	ZX 9716-10	Adjusting pad 140x60x $\frac{3}{2}$	22 44	
30	ZX 9716-4	Bolt M24x80	10	
31	ZX 9716-3	Bolt M24x65	20	
	ZX 9716-3	Bolt M24x70	20	
32	ZX 9716-3	Bolt M24x85	4	
33	ZX 9716-8	Nut M24	10	
	GB41	Nut M24	20	
34	GB7244	Washer M24	20	
35	TB1495.4	Washer	20	
	ZX 9716-7	Offset clip 143-134-69	1	
36	ZX 9716-7	Offset clip 93-83-44	1	
37	ZX 9716-7	Offset clip 67-57-31	1	
	ZX 9716-7	Offset clip 117-108-56	1	
38	ZX 9716-15	Gauge block 60 9-11	20	
39	ZX 9716-15	Gauge block 60 13-15	20	
	ZX 9716-17	Gauge block 60/11-17	20	
40	ZX 9716-17	Gauge block 60/13-17	20	
41	ZX 9716-26	Rubber pad 60-200-149	20	
	ZX 9716-28	Rubber pad 439x200x5	5	
42	ZX 9716-30	Rubber pad 595x200x7	20	
43	ZX 9716-30	Rubber pad 991x200x10	1	
	ZX 9716-30	Rubber pad 947x200x10	1	
44	ZX 9716-30	Rubber pad 902x200x10	1	
45	ZX 9710-30	Rubber pad 856x200x10	1	
	ZX 9716-30	Rubber pad 808x200x10	1	
46	ZX 9716-30	Rubber pad 760x200x10	1	
47	ZX 9716-30	Rubber pad 714x200x10	5	

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Layout of frog and check rail

Seq NO.	Drawing NO.	Description	Quantity	Note
48	ZX 9716-30	Rubber pad 661x200x10	1	
49	ZX 9716-30	Rubber pad 639x200x10	1	
50	ZX 9716-30	Rubber pad 689x200x10	1	
51	ZX 9716-30	Rubber pad 737x200x10	1	
52	ZX 9710-30	Rubber pad 785x200x10	1	
53	ZX 9716-30	Rubber pad 833x200x10	1	
54	ZX 9716-30	Rubber pad 884x200x10	1	
55	ZX 9716-30	Rubber pad 934x200x10	1	
56	ZX 9716-30	Rubber pad 984x200x10	1	
57	ZX 9716-29	Rubber pad 440x180x10	2	
58	ZX 9716-25	Adjusting pad 595x200x5	10	
59	ZX 9716-25	Adjusting pad 991x200x5	1	
60	ZX 9716-25	Adjusting pad 947x200x5	1	
61	ZX 9716-25	Adjusting pad 902x200x5	1	
62	ZX 9716-25	Adjusting pad 856x200x5	1	
63	ZX 9716-25	Adjusting pad 808x200x5	1	
64	ZX 9716-25	Adjusting pad 760x200x5	1	
65	ZX 9716-25	Adjusting pad 714x200x5	5	
66	ZX 9716-25	Adjusting pad 661x200x5	1	
67	ZX 9716-25	Adjusting pad 639x200x5	1	
68	ZX 9716-25	Adjusting pad 689x200x5	1	
69	ZX 9716-25	Adjusting pad 737x200x5	1	
70	ZX 9716-25	Adjusting pad 785x200x5	1	
71	ZX 9716-25	Adjusting pad 833x200x5	1	
72	ZX 9716-25	Adjusting pad 884x200x5	1	
73	ZX 9716-25	Adjusting pad 934x200x5	1	
74	ZX 9716-25	Adjusting pad 984x200x5	1	
75	ZX 9716-25	Adjusting pad 440x200x5	2	

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## Table of detail

## Curved stock rail

Seq NO.	Drawing NO.	Description	Quantity	Note
1	ZX 9710-12-1	Stop 52-51	1	
2	ZX 9710-12	Stop 65-64	1	
3	ZX 9710-12	Stop 79-78	1	
4	ZX 9710-12	Stop 94-93	1	
5	ZX 9710-12	Stop 110-109	1	
6	ZX 9710-12	Stop 128-126	1	
7	ZX 9710-31	Bolt M24x80	2	
8	GB5780	Bolt M24x80	10	
9	ZX 9716-11	Nut M24	10	
10	GB7244	Washer 24	10	
11	ZX 9716-12	Adjusting pad 1 130x180x1.5	6 6	1.5mm Spare

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## Table of detail

## Straight stock rail

Seq NO.	Drawing NO.	Description	Quantity	Note
1	ZX 9710-12-1	Stop 51-52	1	
2	ZX 9710-12	Stop 64-65	1	
3	ZX 9710-12	Stop 78-79	1	
4	ZX 9710-12	Stop 93-94	1	
5	ZX 9710-12	Stop 109-110	1	
6	ZX 9710-12	Stop 126-128	1	
7	ZX 9710-31	Bolt M24x80	2	
8	GB5780	Bolt M24x80	10	
9	ZX 9716-8	Nut M24	10	
10	GB7244	Washer 24	10	
11	ZX 9716-9	Adjusting pad 1 130x180x1.5	5 5	1.5mm Spare

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## Table of detail

## List of switch layout

Seq NO.	Drawing NO.	Description	Quantity	Note
1	ZX 9710-6	Tongue Rail /Stock rail Assembly Left 1:12 LL	1	
2	ZX 9710-7	Tongue Rail /Stock rail Assembly Left 1:12 LR	1	
3	ZX 9710-8	Tongue Rail /Stock rail Assembly Right 1:12 RL	1	
4	ZX 9710-9	Tongue Rail /Stock rail Assembly Right 1:12 RR	1	
5	ZX 9710-10	Check rail block 140-151/A	1	
6	ZX 9710-10	Check rail block 178-191/A	1	
7	ZX 9710-11	Check rail block 140-152/B	1	
8	ZX 9710-11	Check rail block 179-192/B	1	
9	ZX 9710-19	Grade tie plate A	2	
10	ZX 9710-33	Roller side set 88	4	
11	ZX 9710-33	Roller side set 86	4	be made symmetrically
12	ZX 9710-21	Grade slide plate 590	5	
13	ZX 9710-13	Grade slide plate 590	5	
14	ZX 9710-13	Grade slide plate 590	2	
15	ZX 9716-23	Set to prevent switch rail flopping 60-88/21	1	
16	ZX 9716-23	Set to prevent switch rail flopping 60-86/23	1	
17	ZX 9716-23	Set to prevent switch rail flopping 60-88/81	1	
18	ZX 9716-23	Set to prevent switch rail flopping 60-86/81	1	
19	ZX 9710-14	Tie plate 676	1	
20	ZX 9710-14	Tie plate 676	1	
21	ZX 9710-14	Tie plate 676	1	
22	ZX 9710-14	Tie plate 676	1	
23	ZX 9710-15	Tie plate 676	1	
24	ZX 9710-15	Tie plate 676	1	
25	ZX 9710-15	Tie plate 676	1	
26	ZX 9710-15	Tie plate 676	1	
27	ZX 9710-16	Tie plate 670	1	

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List of switch layout

Seq NO.	Drawing NO.	Description	Quantity	Note
28	ZX 9710-16	Tle plate 693	1	
29	ZX 9710-16	Tle plate 717	1	
30	ZX 9710-17	Tle plate 670	1	
31	ZX 9710-17	Tle plate 693	1	
32	ZX 9710-17	Tle plate 717	1	
33	ZX 9710-18	Tle plate 743	1	
34	ZX 9710-18	Tle plate 768	1	
35	ZX 9710-18	Tle plate 795	1	
36	ZX 9710-18	Tle plate 824	1	
37	ZX 9710-18	Tle plate 852	1	
38	ZX 9710-18	Tle plate 882	1	
39	ZX 9710-18	Tle plate 914	1	
40	ZX 9710-18	Tle plate 946	1	
41	ZX 9710-18	Tle plate 979	1	
42	ZX 9710-19	Tle plate 743	1	
43	ZX 9710-19	Tle plate 768	1	
44	ZX 9710-19	Tle plate 795	1	
45	ZX 9710-19	Tle plate 824	1	
46	ZX 9710-19	Tle plate 852	1	
47	ZX 9710-19	Tle plate 882	1	
48	ZX 9710-19	Tle plate 914	1	
49	ZX 9710-19	Tle plate 946	1	
50	ZX 9710-19	Tle plate 979	1	
51	ZX 9716-7	Offset clip 104-100-51	2	
52	ZX 9716-7	Offset clip 126-122-62	2	
53	ZX 9716-7	Offset clip 150-146-74	2	
54	ZX 9716-3	Bolt M24x70	20	

# UIC60-350-1:12 Simple Turnout

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List of switch layout

Seq NO.	Drawing NO.	Description	Quantity	Note
55	ZX 9716-3	Bolt M24x65	20	
56	ZX 9716-3	Bolt M24x85	5	
57	GB41	Nut M24	30	
58	TB1495.4	Washer 24	30	
59	GB1228	Bolt M27x110	10	
60	GB1228	Bolt M27x130	10	
61	ZX 9716-8	Nut M27	20	
62	ZX 9716-11	Bar 360	4	
63	ZX 9716-12	Bar 360	4	
64	ZX 3351-3	ll clip	100	
65	ZX 9716-13	Flat spring 250	20	
66	ZX 9716-14	Key spannkell 175	20	
67	ZX 9716-14	Key spannkell 155	8	
68	ZX 9716-15	Gauge block 60 9-11	20	
69	ZX 9716-15	Gauge block 60 13-15	20	
70	ZX 9716-16	Gauge block 60 11-13	5	
71	ZX 9716-17	Gauge block 60/11-17	20	106/7844
72	ZX 9716-17	Gauge block 60/13-17	20	117/8658
73	ZX 9716-26	Rubber pad 60-200-149	20	144/9216
74	ZX 9716-27	Rubber pad 60-200	20	150/4200
75	ZX 9716-27	Rubber pad 60-280	5	
76	ZX 9716-26	Rubber pad 60-170-139	5	
77	ZX 9716-29	Rubber pad 440x180x10	5	
78	ZX 9716-30	Rubber pad 660x280x10	5	
79	ZX 9716-30	Rubber pad 590x200x10	20	
80	ZX 9716-30	Rubber pad 676x200x10	5	
81	ZX 9716-30	Rubber pad 670x200x10	2	

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## Table of detail

## List of switch layout

Seq NO.	Drawing NO.	Description	Quantity	Note
82	ZX 9716-30	Rubber pad 693x200x10	2	
83	ZX 9716-30	Rubber pad 717x200x10	2	
84	ZX 9716-30	Rubber pad 743x200x10	2	
85	ZX 9716-30	Rubber pad 768x200x10	2	
86	ZX 9716-30	Rubber pad 795x200x10	2	
87	ZX 9716-30	Rubber pad 824x200x10	2	
88	ZX 9716-30	Rubber pad 852x200x10	2	
89	ZX 9716-30	Rubber pad 882x200x10	2	
90	ZX 9716-30	Rubber pad 914x200x10	2	
91	ZX 9716-30	Rubber pad 946x200x10	2	
92	ZX 9716-30	Rubber pad 979x200x10	2	
93	ZX 9716-25	Adjusting pad 440x180x5	5	
94	ZX 9716-25	Adjusting pad 660x280x5	5	
95	ZX 9716-25	Adjusting pad 590x200x5	10	
96	ZX 9716-25	Adjusting pad 676x200x5	5	
97	ZX 9716-25	Adjusting pad 670x200x5	2	
98	ZX 9716-25	Adjusting pad 693x200x5	2	
99	ZX 9716-25	Adjusting pad 717x200x5	2	
100	ZX 9716-25	Adjusting pad 743x200x5	2	
101	ZX 9716-25	Adjusting pad 768x200x5	2	
102	ZX 9716-25	Adjusting pad 795x200x5	2	
103	ZX 9716-25	Adjusting pad 824x200x5	2	
104	ZX 9716-25	Adjusting pad 852x200x5	2	
105	ZX 9716-25	Adjusting pad 882x200x5	2	
106	ZX 9716-25	Adjusting pad 914x200x5	2	
107	ZX 9716-25	Adjusting pad 946x200x5	2	
108	ZX 9716-25	Adjusting pad 979x200x5	2	

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General Layout

Seq NO.	Drawing NO.	Description	Unit	Quantity	Note
1	ZX 9710-4	Switch	set	1	Left hand
2	ZX 9710-4	Switch	set	1	Right hand
3	ZX 9710-20	1:12 frog and check rail	set	1	Left hand
4	ZX 9710-20	1:12 frog and check rail	set	1	Right hand
5	ZX 9714-4	1:6acute frog and check rail	set	1	
6	ZX 9714-11	1:6 obtuse frog	set	1	
8	ZX 9716-19	Tie plate A	piece	20	
9	ZX 9716-19	Tie plate B	piece	20	Right hand
10	ZX 9716-19	Tie plate B'	piece	20	Left hand
11	ZX 9716-19	Tie plate C	piece	20	Right hand
12	ZX 9716-19	Tie plate C'	piece	20	Left hand
13	ZX 9716-19	Tie plate E	piece	3	Right hand
14	ZX 9716-19	Tie plate E'	piece	3	Left hand
15	ZX 9716-3	Bolt M24x65	piece	50	
16	ZX 9716-3	Bolt M24x70	piece	50	
17	GB41	Nut M24	piece	50	
18	TB1495.4	Washer	piece	50	
19	ZX 3351-3	II Clip	piece	100	
20	ZX 9716-15	Gauge block 60 9-11	piece	20	
21	ZX 9716-15	Gauge block 60 13-15	piece	20	
22	ZX 9716-17	Gauge block 60/11-17	piece	20	
23	ZX 9716-17	Gauge block 60/13-17	piece	20	
24	ZX 9716-17	Gauge block 60/7-17	piece	20	Spare
25	ZX 9716-17	Gauge block 60/9-17	piece	20	Spare
26	ZX 9716-17	Gauge block 60/15-17	piece	20	Spare
27	ZX 9716-17	Gauge block 60/17-17	piece	20	Spare
28	ZX 9716-24	Insulated gauge block 60 9-11	piece	10	
29	ZX 9716-24	Insulated gauge block 60 13-15	piece	10	
30	ZX 9716-26	Rubber pad 60-200-149	piece	50	
31	ZX 9716-29	Rubber pad 440x180x10	piece	50	
32	ZX 9716-25	Adjusting pad 440x180x5	piece	50	
33	ZX 9716-35	Rail insulated	set	4	

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Table of detail

Layout of 1:6 obtuse frog

Seq NO.	Drawing NO.	Description	Quantity	Note
1	ZX 9714-14	Tie plate 972	1	
2	ZX 9714-14	Tie plate 871	1	
3	ZX 9714-15	Tie plate 826	2	
4	ZX 9714-15	Tie plate 840	2	
5	ZX 9714-15	Tie plate 747	2	
6	ZX 9714-15	Tie plate 683	2	
7	ZX 9714-16	Tie plate 871	1	
8	ZX 9714-16	Tie plate 972	1	
9	ZX 3351-3	ll Clip	30	
10	ZX 9716-3	Bolt M24x65	15	
11	ZX 9716-3	Bolt M24x70	15	
12	GB 41	Nut M24	20	
13	TB1495.4	Washer	20	
14	ZX 9716-15	Gauge block 60 9-11	16	
15	ZX 9716-15	Gauge block 60 13-15	16	
16	ZX 9716-17	Gauge block 60/11-17	12	
17	ZX 9716-17	Gauge block 60/13-15	12	
18	ZX 9716-26	Rubber pad 60-200-149	8	
19	ZX 9716-28	Rubber pad 559x200x5	2	
20	ZX 9716-28	Rubber pad 573x200x5	2	
21	ZX 9716-28	Rubber pad 480x200x5	2	
22	ZX 9716-28	Rubber pad 416x200x5	2	
23	ZX 9716-30	Rubber pad 972x200x10	2	
24	ZX 9716-30	Rubber pad 871x200x10	2	
25	ZX 9716-30	Rubber pad 826x200x10	2	
26	ZX 9716-30	Rubber pad 840x200x10	2	
27	ZX 9716-30	Rubber pad 747x200x10	2	
28	ZX 9716-30	Rubber pad 683x200x10	2	
29	ZX 9716-25	Adjusting pad 972x200x5	2	
30	ZX 9716-25	Adjusting pad 871x200x5	2	
31	ZX 9716-25	Adjusting pad 826x200x5	2	
32	ZX 9716-25	Adjusting pad 840x200x5	2	
33	ZX 9716-25	Adjusting pad 747x200x5	2	
34	ZX 9716-25	Adjusting pad 683x200x5	2	

**ภาคผนวก ข.**

UIC-100-1:6 Simple Turnout

112

Suvarnabhumi Airport Rail Link And The City Terminal Of Thailand

# UIC60-100-1:6 Simple turnout

(UIC60B Switch rail  Frog  Groove check rail   Clip  Pre-stressed concrete sleepers  Ballast track)

PLAN NO. ZX 9712

China Railway Engineering Consultants Group

AUGUST, 2009 Beijing



## Specification

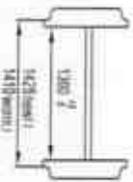
1. The drawing is commissioned by China railway construction (Thailand) Co.LTD, is designed for Suvarnabhumi Airport Rail Link and City Terminal.
  2. The drawing can not be used in other project without our written permission.
  3. The drawing is designed according to SRT's PS and turnout primary design (TRW/0002-C) concerned request.
  4. The permissive passing speed of the turnout:
    - The permissive passing speed of the through track is 50km/h.
    - The permissive passing speed of the turnout track is 25km/h.
  5. Pre-stressed concrete sleepers are adopted, the plan No. is ZX 9651. The distance is 432mm between the rail surface and the bottom of the sleeper, thickness of turnout ballast bed is not less than the interzone track.
  6. The length of short rail is not less than 3m for two direct turnouts; the space between is not less than 5m when the turnout is used in crossing.
  7. The drawing is the same with span interzone jointless rail, the temperature of the rail is permitted rising 35°C, falling 40°C.
  8. Thermite is adopted in the through track rail, the gap is 25mm; the joint bar is used in the turnout track rail, the gap is 6mm.
  9. Lead Curve's radius is 100m according to PS request.
  10. Main structure characteristics of turnout:
    - 1) The switch rail is made of UIC60B rail, the switch point is housing, the heels of switch are connected by fillers. Switch interval set up rather slide set of screwing.
    - 2) One tow point is set on the switch rail, the switch throw is 160mm.
    - 3) The gauge is measured at the position under the rail top 14mm.
    - 4) The frog is cast in manganese welded frog, the plate is set under the frog.
    - 5) The check rail is separated from the stock rail and is made of UIC33 rail, the top surface of it is 12mm higher than that of the stock rail.
    - 6) The running surface of the rail should be quenched within total length. The material of the rail is the same with roadway.
    - 7) If fastening are adopted, gauge block are to be installed as follow:
      - The gauge block for rail
- No.13 gauge blocks should be installed on gauge line side of the rail, No.11 on another.

 KINGDOM OF THAILAND MINISTRY OF TRANSPORT STATE RAILWAY OF THAILAND	CONTACT INFORMATION 1. CONTACT PERSON: MR. SUKUMVIT CHONGKALERT 2. CONTACT ADDRESS: SUVARNA BHUMI AIRPORT RAIL LINK, 10110 BANGKOK, THAILAND 3. CONTACT PHONE: 02-511-1111 4. CONTACT FAX: 02-511-1111 5. CONTACT E-MAIL: sukvit.c@srta.co.th	CONTACT INFORMATION 1. CONTACT PERSON: MR. SUKUMVIT CHONGKALERT 2. CONTACT ADDRESS: SUVARNA BHUMI AIRPORT RAIL LINK, 10110 BANGKOK, THAILAND 3. CONTACT PHONE: 02-511-1111 4. CONTACT FAX: 02-511-1111 5. CONTACT E-MAIL: sukvit.c@srta.co.th	OPERATOR 1. OPERATOR NAME: SUVARNA BHUMI AIRPORT RAIL LINK AND CITY AIR TERMINAL SYSTEM TRACKWORK 2. OPERATOR ADDRESS: SUVARNA BHUMI AIRPORT RAIL LINK, 10110 BANGKOK, THAILAND 3. OPERATOR PHONE: 02-511-1111 4. OPERATOR FAX: 02-511-1111 5. OPERATOR E-MAIL: sukvit.c@srta.co.th
PROJECT INFORMATION 1. PROJECT NAME: SUVARNA BHUMI AIRPORT RAIL LINK AND CITY AIR TERMINAL SYSTEM TRACKWORK 2. PROJECT ADDRESS: SUVARNA BHUMI AIRPORT RAIL LINK, 10110 BANGKOK, THAILAND 3. PROJECT PHONE: 02-511-1111 4. PROJECT FAX: 02-511-1111 5. PROJECT E-MAIL: sukvit.c@srta.co.th		DRAWING INFORMATION 1. DRAWING NO.: TRW-100-18 2. DRAWING TITLE: SPECIFICATION 3. DRAWING DATE: 2011-11-11 4. DRAWING SCALE: 1:1 5. DRAWING SHEET: 1 OF 1	

For the frog, No. 13 gauge blocks are installed on one side and No. 11 on another.  
 For the insulation of joint, insulation of gauge blocks are installed on sides.  
 The gauge block for the plate

No. 13 gauge blocks should be installed on gauge line side of the rail, No. 11 on another.  
 For the frog, No. 13 gauge blocks are installed on one side and No. 11 on another.  
 No. 7 & NO. 17 gauge blocks should be spaced, those are transfer in the fieldwork.

5). The turnout is no rail cant, the change cant the plates are used in the end of the turnout. The plate is replaced change cant the plates when the turnout is connected with no rail cant turnout.  
 11. The wheel set data of turnout is designed as follow. If changed dimension of wheel set, should be checked up flangeway dimension of turnout.



12. The frog is checked as follow:  
 The distance between the gauge line of the check rail to the gauge line of the point rail is not less than 1395.

The distance between the gauge line of the check rail to the gauge line of the wing rail is not more than 1358mm.

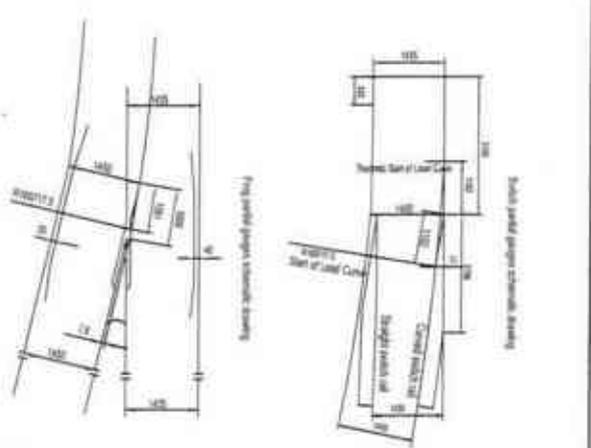
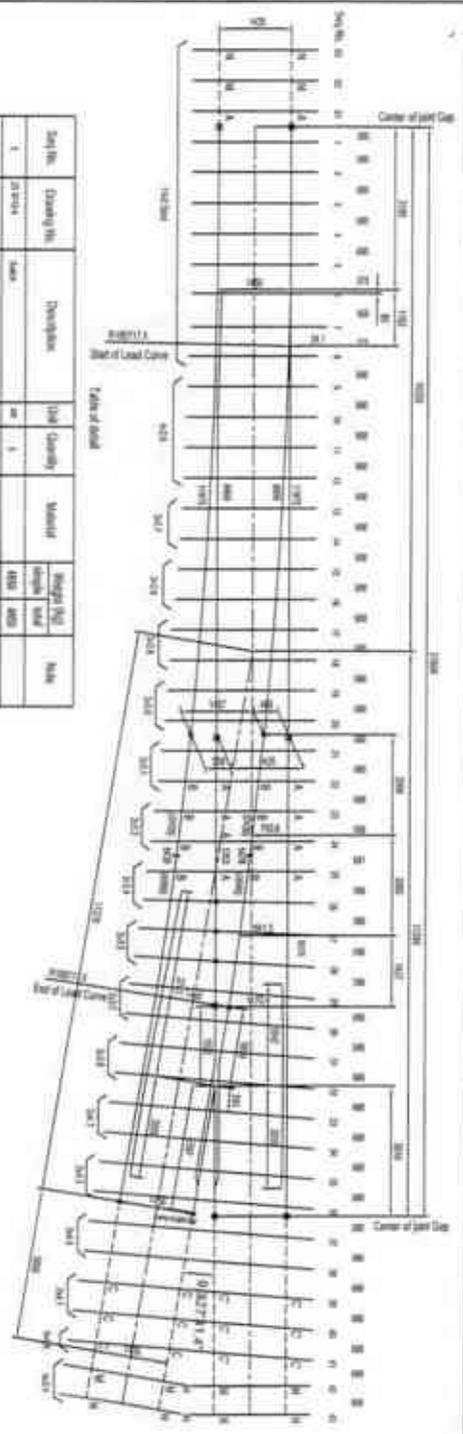
13. 5mm rubber plates are set under the rail and frog. 10mm rubber plates are set under the the plate, 5mm adjusting plates are set under the rubber plates.

14. The behind length of the turnout track is shorter than than of the through track. It should be adjusted by roadway rail.

15. Track circuit is designed in this turnout, the insulated joint is used placed insulated, the gap is 6mm.

16. The drawing are designated to the right hand turnout, in case of left hand turnout should be laid symmetrically.

17. 'BUT/412' The turnout technical conditions of standard gauge railway is compiled in these drawing.



Seq No	Quantity	Description	Unit	Quantity	Material	Weight (kg)	Rate
1	1	Bar	m	1	400	400	
2	1	Reinforcement	m	1	200	200	
3	1	Reinforcement	m	1	1400	1400	
4	1	Reinforcement	m	1	1400	1400	
5	1	Reinforcement	m	1	1400	1400	
6	1	Reinforcement	m	1	1400	1400	
7	1	Reinforcement	m	1	1400	1400	
8	1	Reinforcement	m	1	1400	1400	
9	1	Reinforcement	m	1	1400	1400	
10	1	Reinforcement	m	1	1400	1400	
11	1	Reinforcement	m	1	1400	1400	
12	1	Reinforcement	m	1	1400	1400	
13	1	Reinforcement	m	1	1400	1400	
14	1	Reinforcement	m	1	1400	1400	
15	1	Reinforcement	m	1	1400	1400	
16	1	Reinforcement	m	1	1400	1400	
17	1	Reinforcement	m	1	1400	1400	
18	1	Reinforcement	m	1	1400	1400	
19	1	Reinforcement	m	1	1400	1400	
20	1	Reinforcement	m	1	1400	1400	
21	1	Reinforcement	m	1	1400	1400	
22	1	Reinforcement	m	1	1400	1400	
23	1	Reinforcement	m	1	1400	1400	
24	1	Reinforcement	m	1	1400	1400	
25	1	Reinforcement	m	1	1400	1400	
26	1	Reinforcement	m	1	1400	1400	
27	1	Reinforcement	m	1	1400	1400	
28	1	Reinforcement	m	1	1400	1400	
29	1	Reinforcement	m	1	1400	1400	
30	1	Reinforcement	m	1	1400	1400	

Table of concrete sleeper quantity

Seq No	Length	Qty	Rate
1	1.00	1	1.00
2	1.00	1	1.00
3	1.00	1	1.00
4	1.00	1	1.00
5	1.00	1	1.00
6	1.00	1	1.00
7	1.00	1	1.00
8	1.00	1	1.00
9	1.00	1	1.00
10	1.00	1	1.00
11	1.00	1	1.00
12	1.00	1	1.00
13	1.00	1	1.00
14	1.00	1	1.00
15	1.00	1	1.00
16	1.00	1	1.00
17	1.00	1	1.00
18	1.00	1	1.00
19	1.00	1	1.00
20	1.00	1	1.00
21	1.00	1	1.00
22	1.00	1	1.00
23	1.00	1	1.00
24	1.00	1	1.00
25	1.00	1	1.00
26	1.00	1	1.00
27	1.00	1	1.00
28	1.00	1	1.00
29	1.00	1	1.00
30	1.00	1	1.00

1. All the reinforcement lengths and number of bars are given in quantity.
2. All the reinforcement lengths are given in meter.
3. The reinforcement lengths are given in meter.
4. The reinforcement lengths are given in meter.
5. The reinforcement lengths are given in meter.
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27. The reinforcement lengths are given in meter.
28. The reinforcement lengths are given in meter.
29. The reinforcement lengths are given in meter.
30. The reinforcement lengths are given in meter.

The total length of the sleepers is 101.00m

Scale: 1:100  
 Date: 10/10/2018  
 Drawn by: [Name]  
 Checked by: [Name]





Date	Drawing No.	Description	Qty	Material	Weight		No.
					Single	Total	
1	200704	Single track of 11875	1	20230-450	380	380	
2	200702	Concrete of 11875	1		790	790	
3	200704	Concrete of 800	1		790	790	
4	200704	Single track of 800	1		792	792	
5	200704	Concrete of 200-280A	1	20230-450	39.3	39.3	
6	200704	Concrete of 200-280A	1	20230-450	36.8	36.8	
7	200701	Concrete of 218-277B	1	20230-450	41.8	41.8	
8	200701	Concrete of 218-277B	1	20230-450	33.3	33.3	
9	200704	Rebar A	18		15.5	15.5	
10	200704	Rebar 150	9		20.1	20.1	
11	200704	Rebar 150	3		38.1	38.1	
12	200704	Rebar 150	3		38.1	38.1	
13	200704	Rebar 150	3		38.1	38.1	
14	200707	Set to ground cable of 100-6000	1		32.3	32.3	
15	200707	Set to ground cable of 100-6000	1		32.3	32.3	
16	200704	Rebar 173	1		46.5	46.5	
17	200704	Rebar 178	1		45.9	45.9	
18	200704	Rebar 183	1		41.3	41.3	
19	200704	Rebar 188	1		48.7	48.7	
20	200704	Rebar 193	1		43.8	43.8	
21	200704	Rebar 198	1		46.6	46.6	
22	200704	Rebar 187	1		44.0	44.0	
23	200704	Rebar 195	1		46.5	46.5	
24	200704	Rebar 181	1		31.2	31.2	
25	200704	Rebar 181	1		32.8	32.8	
26	200704	Rebar 196	1		31.8	31.8	
27	200704	Rebar 196	1		33.5	33.5	
28	200704	Rebar 196	1		33.5	33.5	

Date	Drawing No.	Description	Qty	Material	Weight		No.
					Single	Total	
29	200704	Rebar 181	1		31.2	31.2	
30	0001	Rebar 24	156		11.6	11.6	
31	100004	Rebar 24	156		11.6	11.6	
32	000008	Rebar 24	156		11.6	11.6	
33	000008	Rebar 24	156		11.6	11.6	
34	200704	Rebar 187	24		41.3	41.3	
35	200704	Rebar 187	4		3.8	3.8	
36	200704	Rebar 187	4		4.0	4.0	
37	200704	Rebar 208	20		12.5	12.5	
38	200704	Rebar 178	20		16.8	16.8	
39	200704	Rebar 181	48		3.8	3.8	
40	200704	Rebar 181	36		15.4	15.4	
41	200704	Rebar 181	8		4.3	4.3	
42	200704	Rebar 181	42		30.9	30.9	
43	200704	Rebar 181	42		11.7	11.7	
44	200704	Rebar 181	28		14.1	14.1	
45	200704	Rebar 181	20		15.0	15.0	
46	200704	Rebar 181	8		11.9	11.9	
47	200704	Rebar 181	2		3.0	3.0	
48	200704	Rebar 181	30		6.9	6.9	
49	200704	Rebar 181	20		9.9	9.9	
50	200704	Rebar 181	1		11.2	11.2	
51	200704	Rebar 181	1		12.5	12.5	
52	200704	Rebar 181	1		11.0	11.0	
53	200704	Rebar 181	1		12.9	12.9	
54	200704	Rebar 181	1		13.4	13.4	
55	200704	Rebar 181	1		14.9	14.9	
56	200704	Rebar 181	1		13.9	13.9	

Date	Drawing No.	Description	Qty	Material	Weight		No.
					Single	Total	
57	200704	Rebar 181	1		14.7	14.7	
58	200704	Rebar 181	1		14.5	14.5	
59	200704	Rebar 181	1		15.0	15.0	
60	200704	Rebar 181	1		13.5	13.5	
61	200704	Rebar 181	1		14.1	14.1	
62	200704	Rebar 181	10		30.1	30.1	
63	200704	Rebar 181	20		59.5	59.5	
64	200704	Rebar 181	1		6.8	6.8	
65	200704	Rebar 181	1		7.3	7.3	
66	200704	Rebar 181	1		6.8	6.8	
67	200704	Rebar 181	1		7.3	7.3	
68	200704	Rebar 181	1		7.0	7.0	
69	200704	Rebar 181	1		8.1	8.1	
70	200704	Rebar 181	1		7.0	7.0	
71	200704	Rebar 181	1		8.5	8.5	
72	200704	Rebar 181	1		8.4	8.4	
73	200704	Rebar 181	1		9.8	9.8	
74	200704	Rebar 181	1		8.1	8.1	
75	200704	Rebar 181	1		8.1	8.1	

Gross weight of rebar: 4553g  
 The total volume of rebar: 2420cm<sup>3</sup>  
 Rebar is 420cm<sup>3</sup>  
 Plastic is 2420cm<sup>3</sup>  
 Foreign matter is 840cm<sup>3</sup>

  
**KINGDOM OF THAILAND**  
**MINISTRY OF TRANSPORT**  
**STATE RAILWAY OF THAILAND**

  
**STATE RAILWAY OF THAILAND**  
**STATE RAILWAY OF THAILAND**  
**STATE RAILWAY OF THAILAND**

**CONTRACTOR**  
**CONSTRUCTION**  
**CONSTRUCTION**



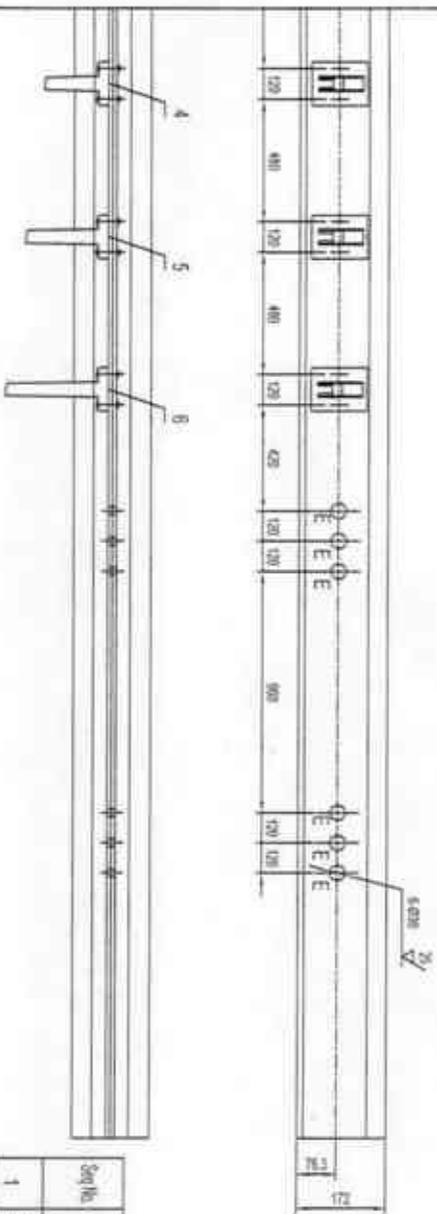


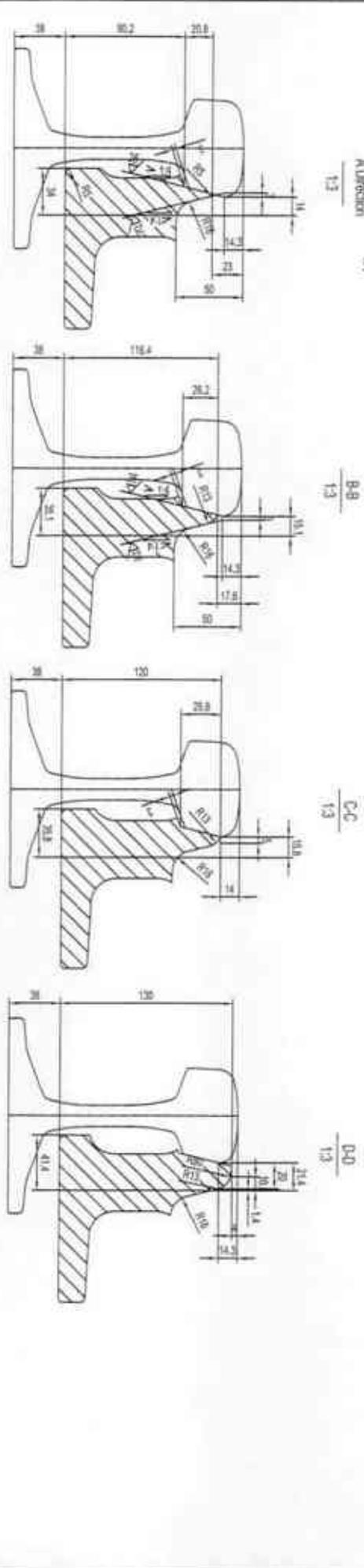
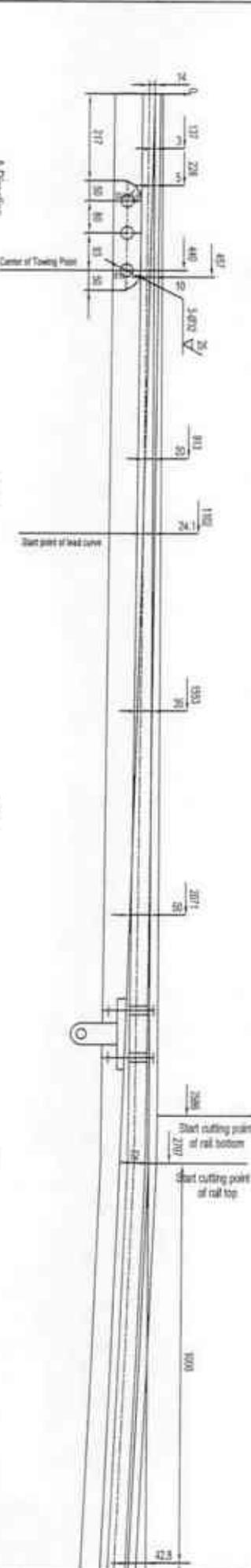
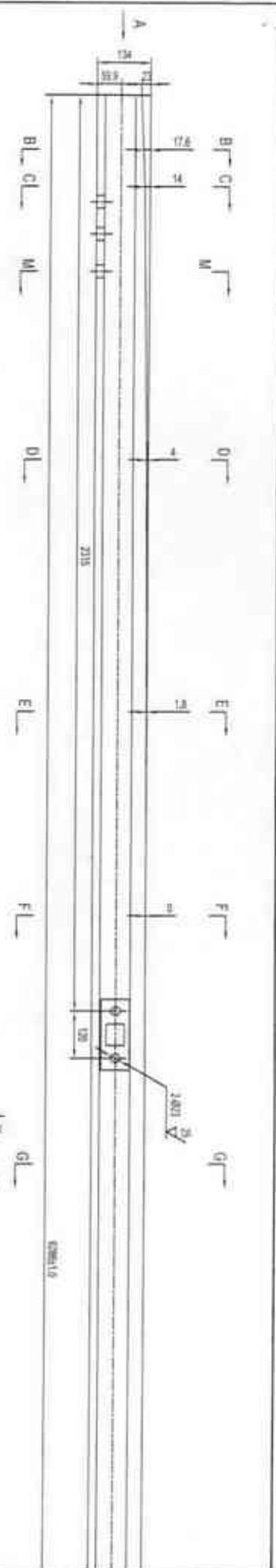
Table of material

Seq No.	Drawing No.	Description	Quantity	Material	Length		Note
					Stock	Total	
1	ZX9712-6	Straight Stock Rail 11975	1	UNCOB RAIL	723	723	
2	ZX9712-12	Slip 62-64	1	KTH350-10	3.95	3.95	
3	ZX9712-12	Slip 91-93	1	"	4.35	4.35	
4	ZX9712-12	Slip 123-126	1	"	4.81	4.81	
5	ZX9712-12	Slip 158-161	1	"	5.30	5.30	
6	ZX9712-12	Slip 198-201	1	"	5.86	5.86	
7	GB6780	Bolt M24X90	10		0.535	5.35	
8	ZX9716-8	Nut M24	10		0.153	1.53	
9	GB7244	Washer 24	10		0.047	0.47	
10	ZX9716-9	Adjusting pad 130X180X1.5	1	Q195	0.138	0.69	1.Sren Spare
			5		0.207	1.04	

<p><b>KINGDOM OF THAILAND</b> MINISTRY OF TRANSPORT STATE RAILWAY OF THAILAND</p>	<p>CONTRACTOR: SIVAPARNRANG AIRPORT RAIL LINE AND CITY AIR TERMINAL SYSTEM TRACKWORK</p> <p>DESIGNER: SIVAPARNRANG AIRPORT RAIL LINE AND CITY AIR TERMINAL SYSTEM TRACKWORK</p> <p>DATE: 11/11/2023</p> <p>SCALE: 1:100</p> <p>PROJECT: SIVAPARNRANG AIRPORT RAIL LINE AND CITY AIR TERMINAL SYSTEM TRACKWORK</p> <p>NO. OF SHEETS: 1</p> <p>SHEET NO.: 1</p>
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 KINGDOM OF THAILAND  
 MINISTRY OF TRANSPORT  
 STATE RAILWAYS OF THAILAND

CONTRACTOR  
 SANGHAT ENGINEERING CONSULTANTS CO., LTD.  
 110/110 PHRACHINCHAI ROAD, PHRACHINCHAI DISTRICT,  
 BANGKOK 10700 (TEL. 02-251-1111)  
 ARCHITECT  
 SANGHAT ENGINEERING CONSULTANTS CO., LTD.  
 110/110 PHRACHINCHAI ROAD, PHRACHINCHAI DISTRICT,  
 BANGKOK 10700 (TEL. 02-251-1111)

CONSULTANT  

  
 CONSULTANT  
 SANGHAT ENGINEERING CONSULTANTS CO., LTD.  
 110/110 PHRACHINCHAI ROAD, PHRACHINCHAI DISTRICT,  
 BANGKOK 10700 (TEL. 02-251-1111)

DISCUSSION

NO.	DATE	DESCRIPTION
1	2017.11.8	FOR REVIEW
2	2017.11.8	FOR REVIEW
3	2017.11.8	FOR REVIEW
4	2017.11.8	FOR REVIEW
5	2017.11.8	FOR REVIEW

BOARD/ARCHITECT/RAIL LINE AND CITY AIR TERMINAL  
 SYSTEM TRACKWORK  
 NO. 108  
 TITLE OF AS-BUILT AS-CORRECTED DRAWING  
 THCR0-100-108 simple turnout  
 Corred switch rail  
 ARL/TRW-111E-FA5ACDZ\_8102-2-A part 13 of 44











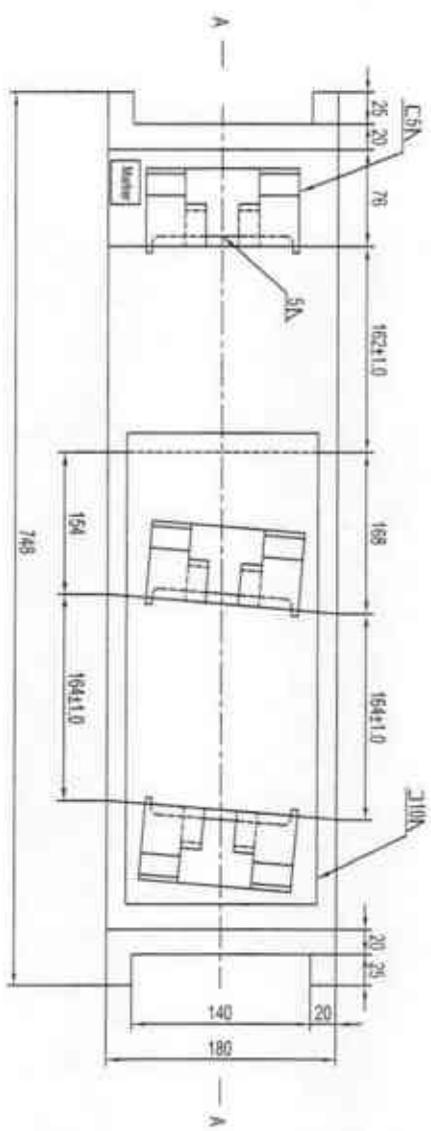
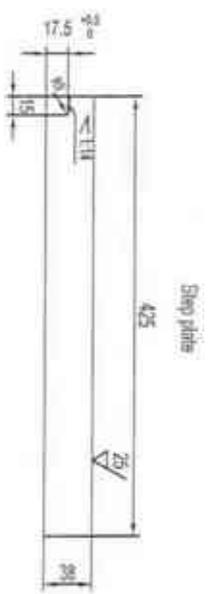
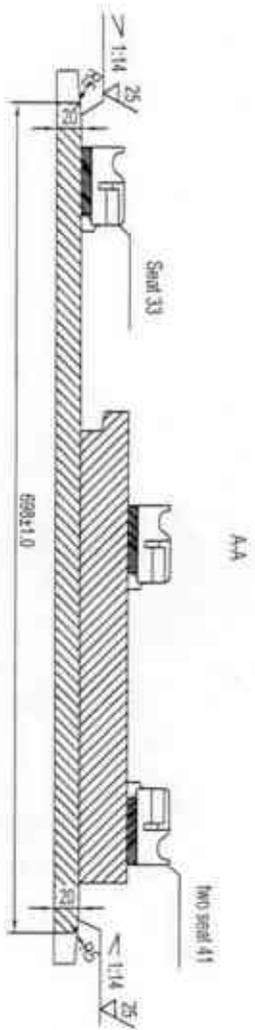








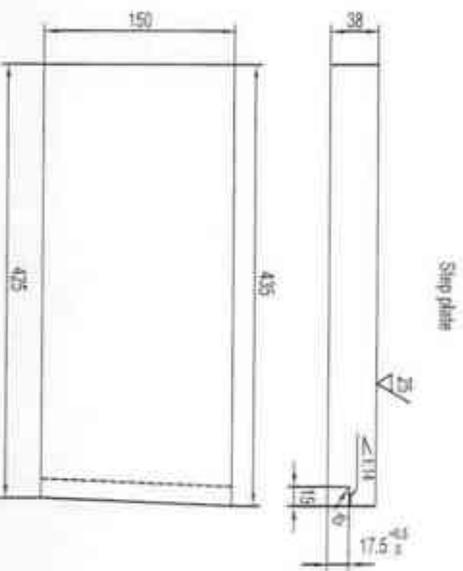
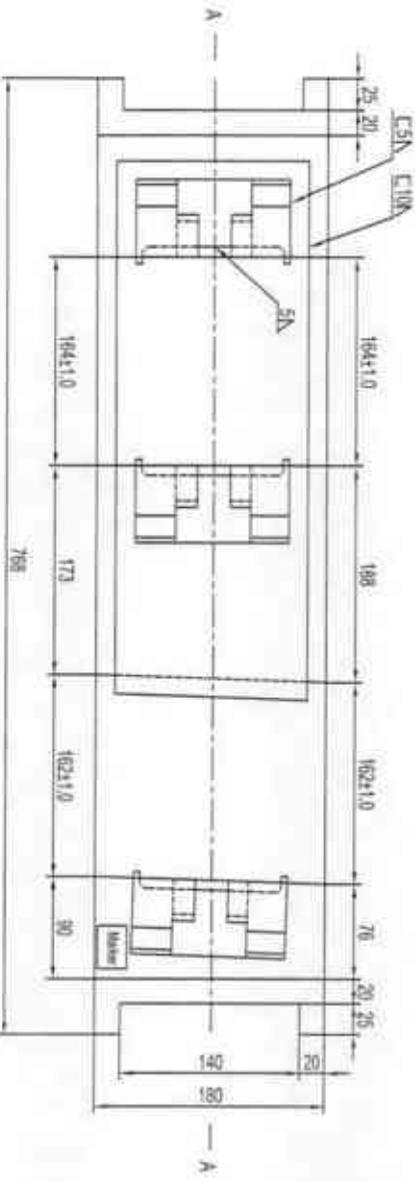
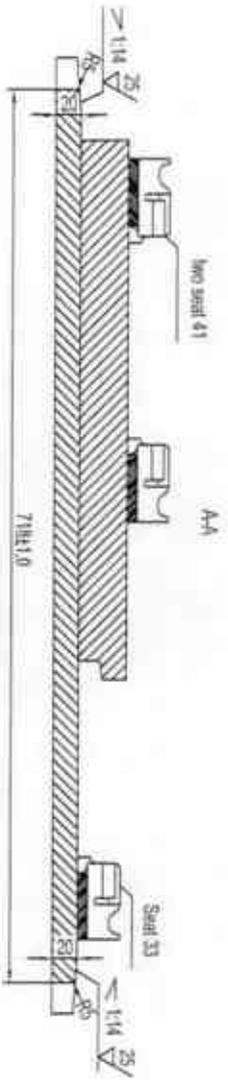




- Note:
1. The material of the plate and slip plate is Q235.
  2. The seat please look at "ZX 9716-5".
  3. The rail type, the turnout number, and No and left-hand or right-hand should be marked on the position as shown in the figure.
  4. The drawing are designed to the right hand turnout, in case of left hand turnout the manufacture should be made symmetrically.
  5. The plate weight is 21, the total weight is 45.5kg.

DESIGNATOR		DRAWING NO.		DATE		REVISION	
NO.	DESCRIPTION	DATE	BY	DATE	BY	DATE	BY
1	ISSUED FOR CONSTRUCTION	2019-10					
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weight is 19.2kg

- Note:
1. The material of the plate and step plate is Q235.
  2. The seat please look at ZX 9716-5'.
  3. The rail type, the turnout number, seat located left-hand or right-hand should be marked on the position as shown in the figure.
  4. The drawing are designed to the right hand turnout. In case of left hand turnout the manufacture should be made symmetrically.
  5. The plate weight is 21.7kg total weight is 46.7kg.

NO.	DATE	DESCRIPTION	BY	CHECKED
1	2018/01/10	ISSUE FOR BIDDING		
2	2018/01/10	ISSUE FOR BIDDING		
3	2018/01/10	ISSUE FOR BIDDING		
4	2018/01/10	ISSUE FOR BIDDING		
5	2018/01/10	ISSUE FOR BIDDING		







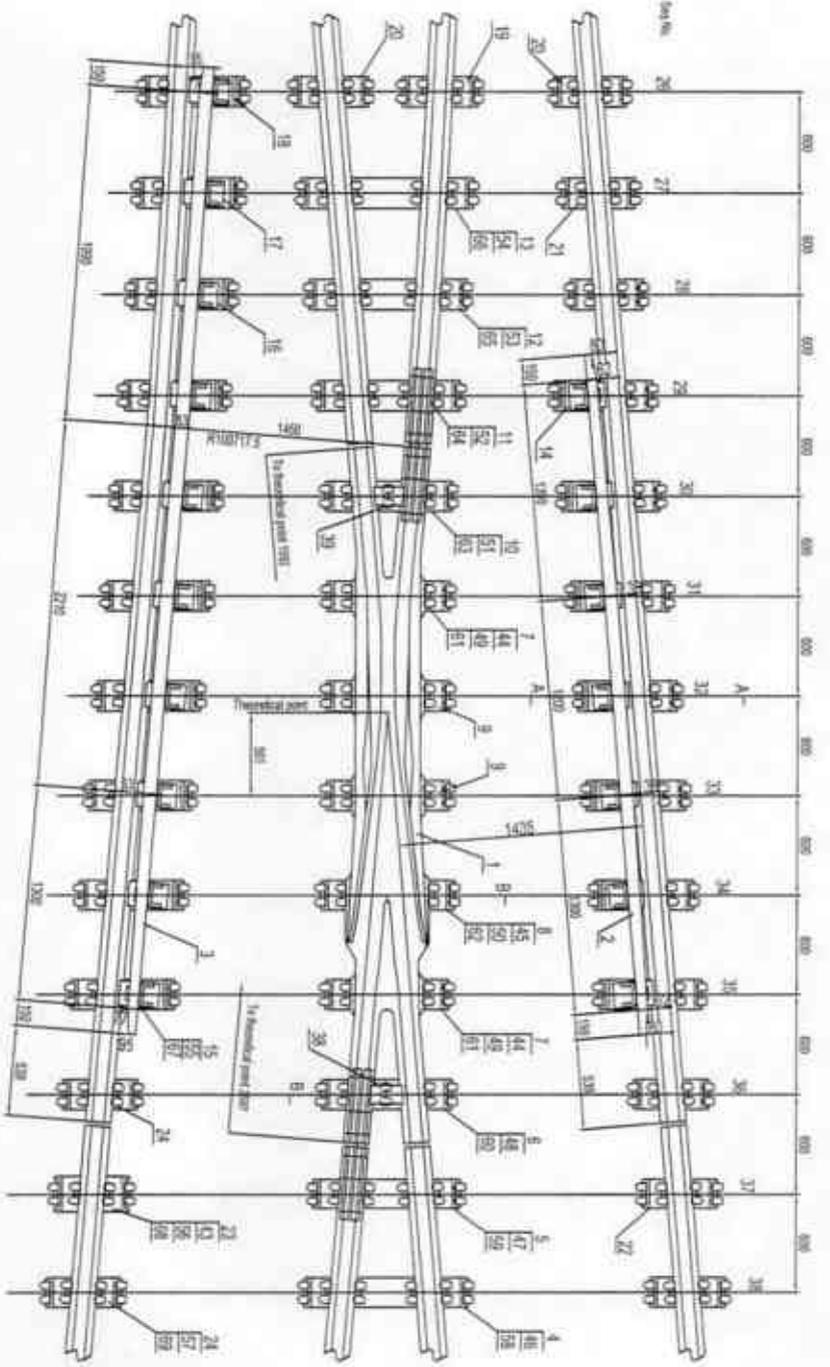
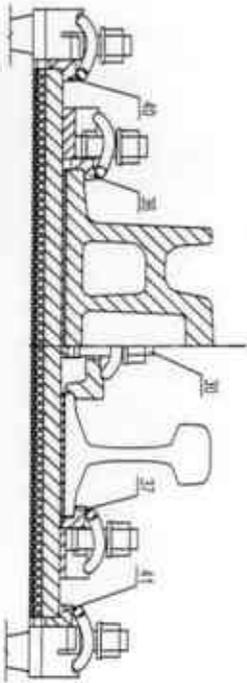
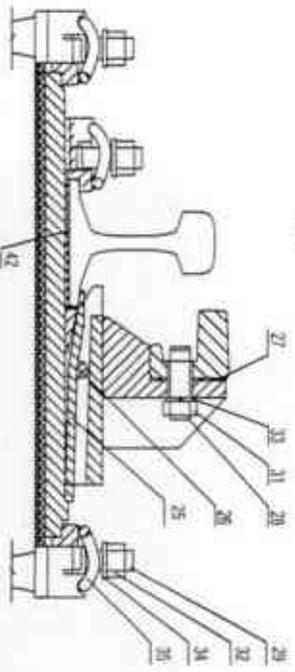
CONSULTANT:
   
 THE ENGINEERING CONSULTANTS' COMPANY
   
 404/1000 PHRACHINTRA ROAD, SUKHUMVIT 101, BANGKOK 10110, THAILAND
   
 ARCHITECT:
   
 ARCHITECTS ASSOCIATION OF THAILAND
   
 111/1111 PHRACHINTRA ROAD, SUKHUMVIT 101, BANGKOK 10110, THAILAND

CONTRACTOR:
   
 SANGHVI & ASSOCIATES
   
 111/1111 PHRACHINTRA ROAD, SUKHUMVIT 101, BANGKOK 10110, THAILAND

ORIGINATOR:

PROJECT NO.	23 8718-21
DATE	11/11/2011
SCALE	AS SHOWN
BY	11/11/2011
CHECKED	11/11/2011
APPROVED	11/11/2011

SUVARNABHUMI AIRPORT RAIL LINE AND CITY AIR TERMINAL SYSTEM TRACKWORK
   
 TITLE OF AS-BUILT / AS-CORRECTED DRAWING:
   
 UIC80-100-18 stangle turnout
   
 Layout of frog and check rail
   
 SHEET NO. 11



Seq No	Drawing No.	Description	Quantity	Material	Weight (kg)	Note
1	ZX 9712-20	Sadd hexagonze steel bog	1		920 920	
2	ZX 9712-24	Check rail 4100	1		135 135	
3	ZX 9712-25	Check rail 5000	1		250 250	
4	ZX 9712-26	The plate 941	1		32.8 32.8	
5	ZX 9712-26	The plate 841	1		30.0 30.0	
6	ZX 9712-27	The plate 742	1		24.7 24.7	
7	ZX 9712-28	The plate 706	2		23.1 46.2	
8	ZX 9712-28	The plate 756	1		25.6 25.6	
9	ZX 9712-28	The plate 706	2		24.2 48.4	
10	ZX 9712-27	The plate 717	1		24.2 24.2	
11	ZX 9712-28	The plate 810	1		29.2 29.2	
12	ZX 9712-29	The plate 898	1		31.6 31.6	
13	ZX 9712-29	The plate 902	1		34.0 34.0	
14	ZX 9712-30	Check rail be plate 611	7		40.4 283	
15	ZX 9712-31	Check rail be plate 611	7		40.4 283	
16	ZX 9712-32	Check rail be plate 611	1		40.4 40.4	
17	ZX 9712-33	Check rail be plate 611	1		40.4 40.4	
18	ZX 9712-34	Check rail be plate 611	1		40.4 40.4	
19	ZX 9716-18	The plate B	1		15.5 15.5	
20	ZX 9716-18	The plate D	2		15.5 31.0	
21	ZX 9716-16	The plate E	2		15.5 31.0	
22	ZX 9716-18	The plate C'	3		15.5 46.5	spesial rail C
23	ZX 9712-35	The plate 440	1		18.3 18.3	
24	ZX 9716-18	The plate C	2		15.5 31.0	
25	ZX 9716-13	Ful spring 250	17		1.25 21.3	
26	ZX 9716-14	Key spanrail 155	17		0.295 5.00	

Seq No	Drawing No.	Description	Quantity	Material	Weight (kg)	Note
27	ZX 9716-10	Adjusting pad 140x30	17		0.87 14.8	
28	ZX 9716-4	Bolt M24x80	17		0.405 6.89	
29	ZX 9716-3	Bolt M24x60	153		0.361 55.2	
30	ZX 9716-3	Bolt M24x85	2		0.439 0.872	
31	ZX 9716-6	Nut M24	17		0.173 2.94	
32	GB 41	Nut M24	155		0.151 23.7	
33	GB 7244	Washer M24	17		0.047 0.799	
34	TB/T 1456.4	Washer M24	155		0.069 10.7	
35	ZX 3151-3	11 Chip	155		0.826 127.9	
36	ZX 9716-15	Gauge block 60.9-11	45		0.338 15.1	
37	ZX 9716-15	Gauge block 90.15-15	28		0.512 14.3	
38	ZX 9716-7	Offset chip 167-149-79	1		2.96 2.96	
39	ZX 9716-7	Offset chip 146-128-88	1		2.42 2.42	
40	ZX 9716-17	Gauge block 60.11-17	40		108 / 430	
41	ZX 9716-17	Gauge block 60.13-17	40		117 / 468	
42	ZX 9716-20	Rubber pad 85-20-149	41		143 / 5663	
43	ZX 9716-20	Rubber pad 85-20-149	1		170 / 110	
44	ZX 9716-20	Rubber pad 430x20x5	4		405 / 1620	
45	ZX 9716-28	Rubber pad 489x20x5	1		451 / 451	
46	ZX 9716-30	Rubber pad 941x20x10	1		1597 / 1597	
47	ZX 9716-30	Rubber pad 841x20x10	1		1421 / 1421	
48	ZX 9716-30	Rubber pad 742x20x10	1		1247 / 1247	
49	ZX 9716-30	Rubber pad 706x20x10	4		1184 / 4736	
50	ZX 9716-30	Rubber pad 756x20x10	1		1272 / 1272	
51	ZX 9716-30	Rubber pad 712x20x10	1		1203 / 1203	
52	ZX 9716-30	Rubber pad 810x20x10	1		1367 / 1367	

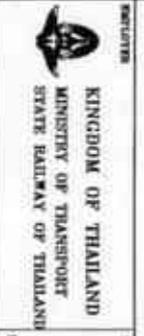
Seq No	Drawing No.	Description	Quantity	Material	Volume (cm <sup>3</sup> )	Note
53	ZX 9716-30	Rubber pad 898x20x10	1	Rubber	1521	
54	ZX 9716-30	Rubber pad 903x20x10	1	Rubber	1669	
55	ZX 9716-30	Rubber pad 611x20x10	17	Rubber	17272	
56	ZX 9716-29	Rubber pad 440x20x10	1	Rubber	761	
57	ZX 9716-29	Rubber pad 440x18x10	10	Rubber	6090	
58	ZX 9716-29	Adjusting pad 941x20x5	1	Plastic	906	
59	ZX 9716-25	Adjusting pad 841x20x5	1	Plastic	808	
60	ZX 9716-25	Adjusting pad 706x20x5	1	Plastic	707	
61	ZX 9716-25	Adjusting pad 756x20x5	4	Plastic	671	2684
62	ZX 9716-25	Adjusting pad 712x20x5	1	Plastic	721	721
63	ZX 9716-25	Adjusting pad 810x20x5	1	Plastic	682	682
64	ZX 9716-25	Adjusting pad 810x20x5	1	Plastic	775	775
65	ZX 9716-25	Adjusting pad 898x20x5	1	Plastic	863	863
66	ZX 9716-25	Adjusting pad 903x20x5	1	Plastic	947	947
67	ZX 9716-25	Adjusting pad 611x20x5	17	Plastic	576	9792
68	ZX 9716-25	Adjusting pad 440x20x5	1	Plastic	449	449
69	ZX 9716-25	Adjusting pad 440x18x5	10	Plastic	3610	

Gross weight of metal: 2600 kg

The total volume of non metal: rubber is: 48400cm<sup>3</sup>;

plastic is: 23100cm<sup>3</sup>;

fiberglass nylon 66 is: 8920cm<sup>3</sup>;



**KINGDOM OF THAILAND**  
**MINISTRY OF TRANSPORT**  
**STATE RAILWAY OF THAILAND**

**CONTRACTOR 1**  
**CONTRACTOR 2**

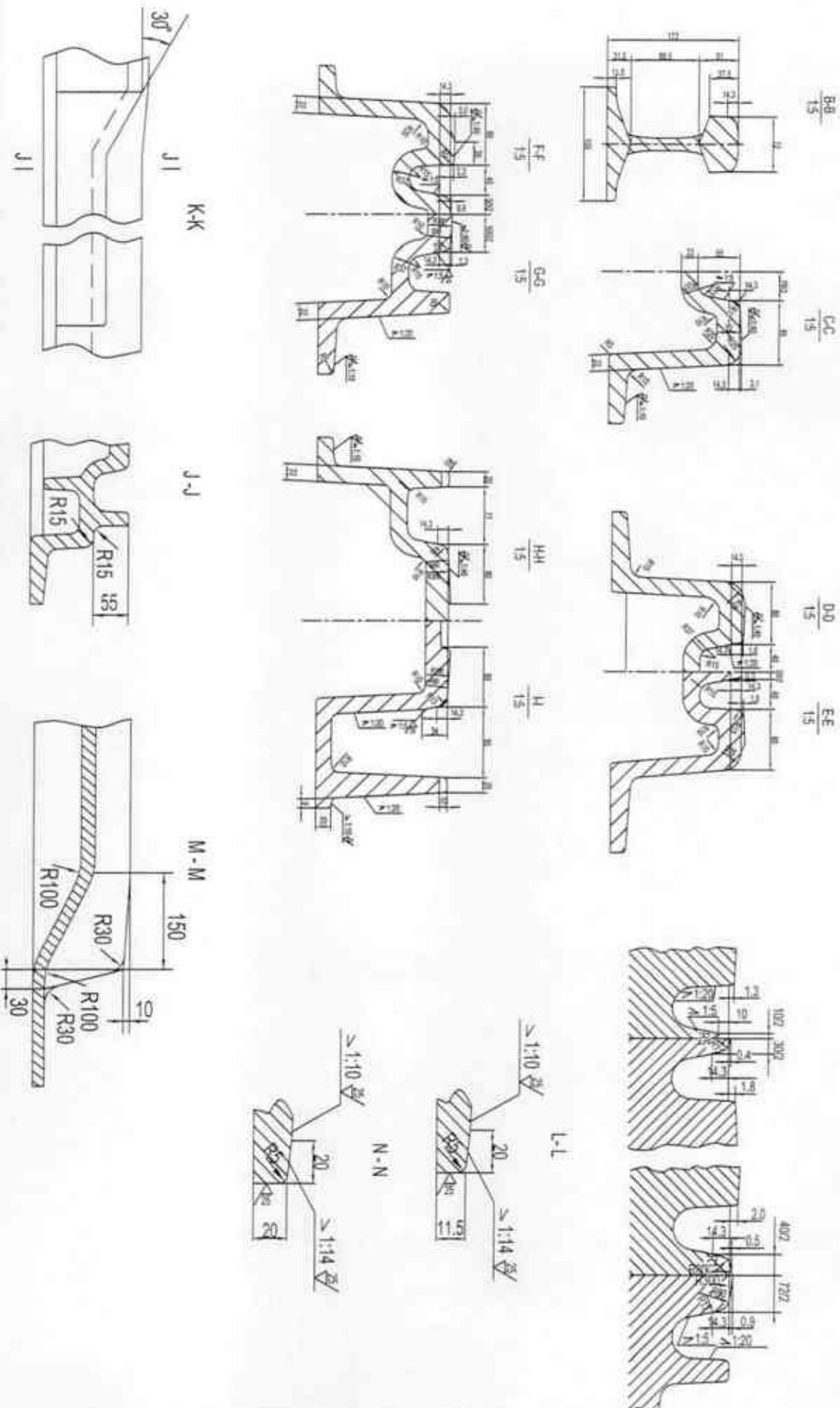
NO.	NAME	POSITION	DATE
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**OPERATOR 1**  
**OPERATOR 2**

**SUVAHABHUMI AIRPORT RAIL LINK AND CITY AIR TERMINAL**  
**SYSTEM TRACKWORK**  
**TITLE OF AS-BUILT / AS-CONSTRUCTED DRAWING**  
 URBAN-100-1-8 atsingle turnout  
 List for layout of frog and check rail  
 DATE: 2023/05/10  
 DRAWING NO: 111E-AGAC02\_8102-2\_A



Outline of point rail at section 10, 30, 40 and 72



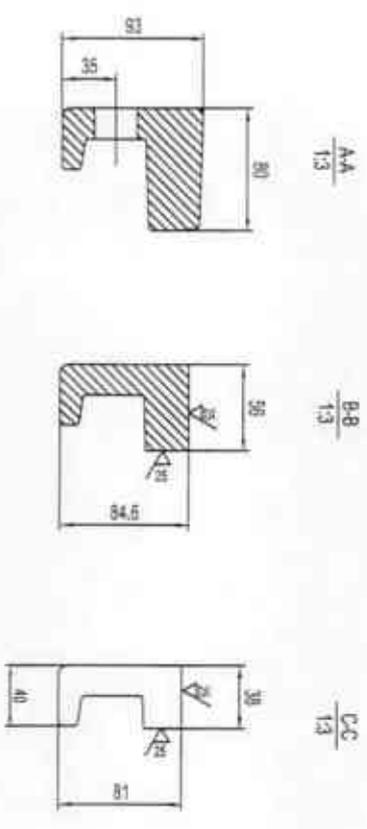
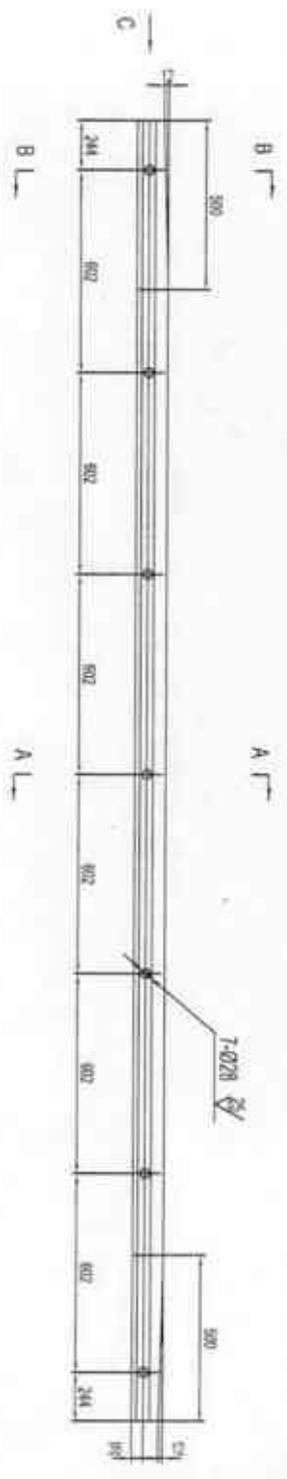

  
 KINGDOM OF THAILAND  
 MINISTRY OF TRANSPORT  
 STATE RAILWAY OF THAILAND

CONSTRUCTION DEPARTMENT  
 RAILWAY CONSTRUCTION DIVISION  
 (101) RAILWAY TRACKS CONSTRUCTION DIVISION  
 101/101 RAILWAY TRACKS CONSTRUCTION DIVISION

RAILWAY TRACKS CONSTRUCTION DIVISION  
 101/101 RAILWAY TRACKS CONSTRUCTION DIVISION

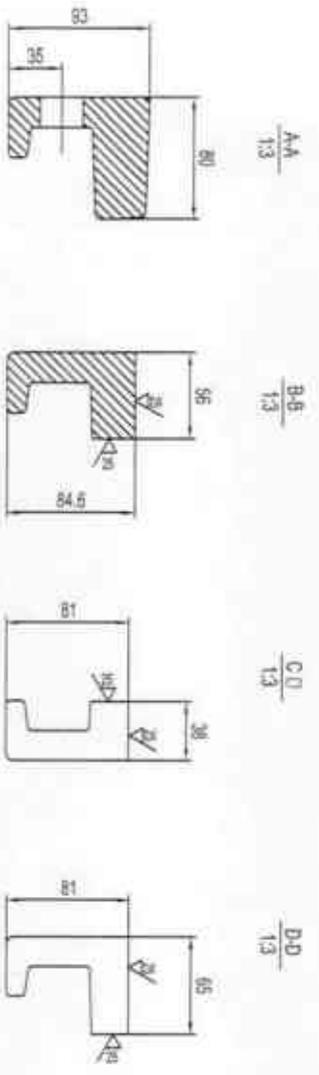
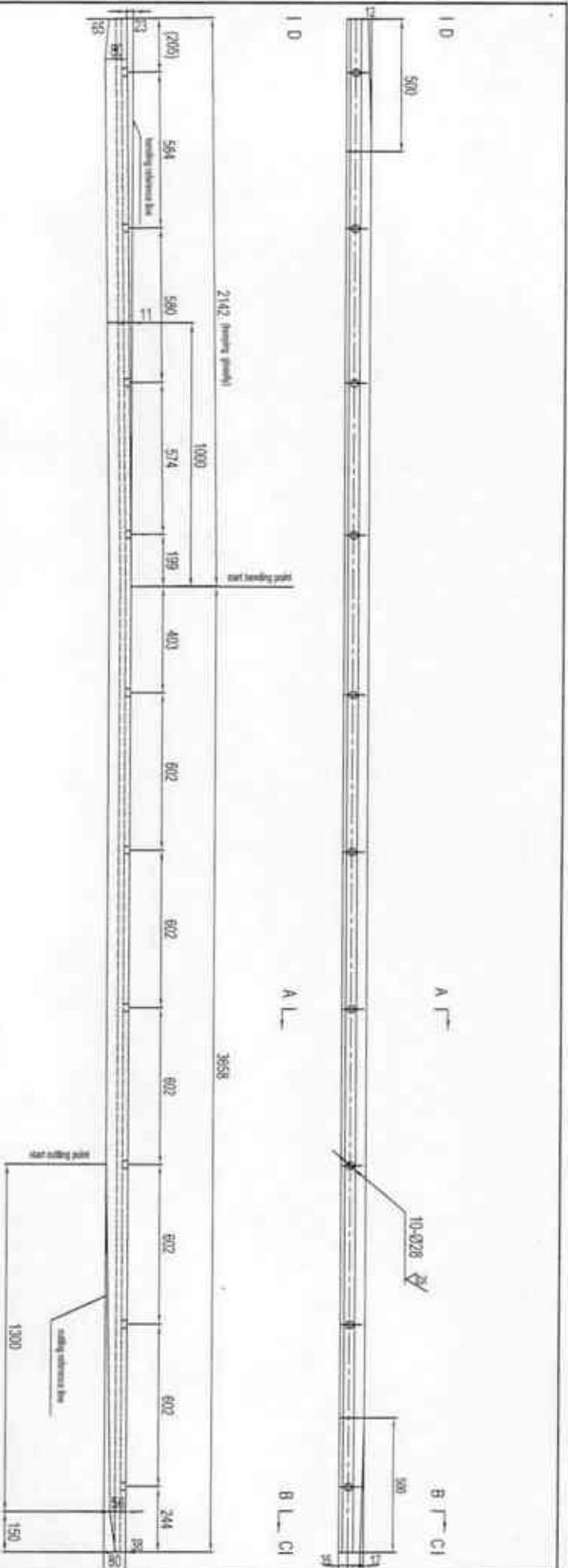
NO.	DATE	REVISION

SUVARNABHUMI AIRPORT RAIL LINE AND CITY AIR TERMINAL  
 SYSTEM TRACKS  
 TITLE OF AS-BUILT / AS-CONSTRUCTED DRAWING  
 UIC80-100-10 simple turnout  
 Frog and check rail  
 APR (TRW-1)TE+AGACD02\_0102-2\_A  
 SHEET 23 OF 44



- Note:
1. The check rail is made of UIC33 rail.
  2. Total length of the check rail is 4100mm.
  3. The operative face of the check rail should be quenched.
  4. Weight is 135kg.

<p>KINGDOM OF THAILAND MINISTRY OF TRANSPORT STATE RAILWAY OF THAILAND</p>		<p>CONTRACTOR: SANGHATKON BANGKOK ENGINEERING CONSULTANTS SANGHATKON BANGKOK ENGINEERING CONSULTANTS (PUBLIC COMPANY) LTD. SANGHATKON ENGINEERING CONSULTANTS (PUBLIC COMPANY) LTD. SANGHATKON ENGINEERING CONSULTANTS (PUBLIC COMPANY) LTD. SANGHATKON ENGINEERING CONSULTANTS (PUBLIC COMPANY) LTD.</p>		<p>CONTRACTOR: SANGHATKON BANGKOK ENGINEERING CONSULTANTS (PUBLIC COMPANY) LTD. SANGHATKON ENGINEERING CONSULTANTS (PUBLIC COMPANY) LTD. SANGHATKON ENGINEERING CONSULTANTS (PUBLIC COMPANY) LTD. SANGHATKON ENGINEERING CONSULTANTS (PUBLIC COMPANY) LTD.</p>		<p>DESIGNATOR: 1 SANGHATKON BANGKOK ENGINEERING CONSULTANTS (PUBLIC COMPANY) LTD. SANGHATKON ENGINEERING CONSULTANTS (PUBLIC COMPANY) LTD. SANGHATKON ENGINEERING CONSULTANTS (PUBLIC COMPANY) LTD. SANGHATKON ENGINEERING CONSULTANTS (PUBLIC COMPANY) LTD.</p>		<p>SYVAAPABHUSHI AIRPORT RAIL LINE AND CITY AIR TERMINAL SYSTEM TRACKWORK SANGHATKON BANGKOK ENGINEERING CONSULTANTS (PUBLIC COMPANY) LTD. SANGHATKON ENGINEERING CONSULTANTS (PUBLIC COMPANY) LTD. SANGHATKON ENGINEERING CONSULTANTS (PUBLIC COMPANY) LTD. SANGHATKON ENGINEERING CONSULTANTS (PUBLIC COMPANY) LTD.</p>	
<p>PROJECT: THROUGH CHECK RAIL OF THROUGH CHECK RAIL</p>		<p>DATE: 28 FEB 13</p>		<p>SCALE: 1:3</p>		<p>TITLE OF AS-BUILT / AS-CONSTRUCTED DRAWING: Through check-rail of Through check-rail</p>		<p>APL (TRM) = SITE + AC/ADZ, B102-2, A</p>	



- Note:
1. The check rail is made of UIC33 rail.
  2. Total length of the check rail is 5800mm.
  3. The operative face of the check rail should be quenched.
  4. The drawing are designed to the right hand turnout. In case of left hand turnout the manufacture should be made symmetrically.
  5. Weight is 191kg.

**CONTRACTOR**

**KINGDOM OF THAILAND**  
MINISTRY OF TRANSPORT  
STATE RAILWAY OF THAILAND

**CONSTRUCTION SUPERVISOR CONSULTANTS 1**

1. JMC ASIA ENGINEERING CONSULTANTS CO., LTD.  
2. T&A ENGINEERING CONSULTANTS CO., LTD.  
3. R&M ENGINEERING CONSULTANTS CO., LTD.  
4. P&C ENGINEERING CONSULTANTS CO., LTD.  
5. S&P ENGINEERING CONSULTANTS CO., LTD.  
6. S&P INTERNATIONAL (THAILAND) LTD.

**CONTRACTOR 2**

1. S&P ENGINEERING CONSULTANTS CO., LTD.  
2. R&M ENGINEERING CONSULTANTS CO., LTD.  
3. P&C ENGINEERING CONSULTANTS CO., LTD.  
4. JMC ASIA ENGINEERING CONSULTANTS CO., LTD.  
5. T&A ENGINEERING CONSULTANTS CO., LTD.  
6. S&P ENGINEERING CONSULTANTS CO., LTD.

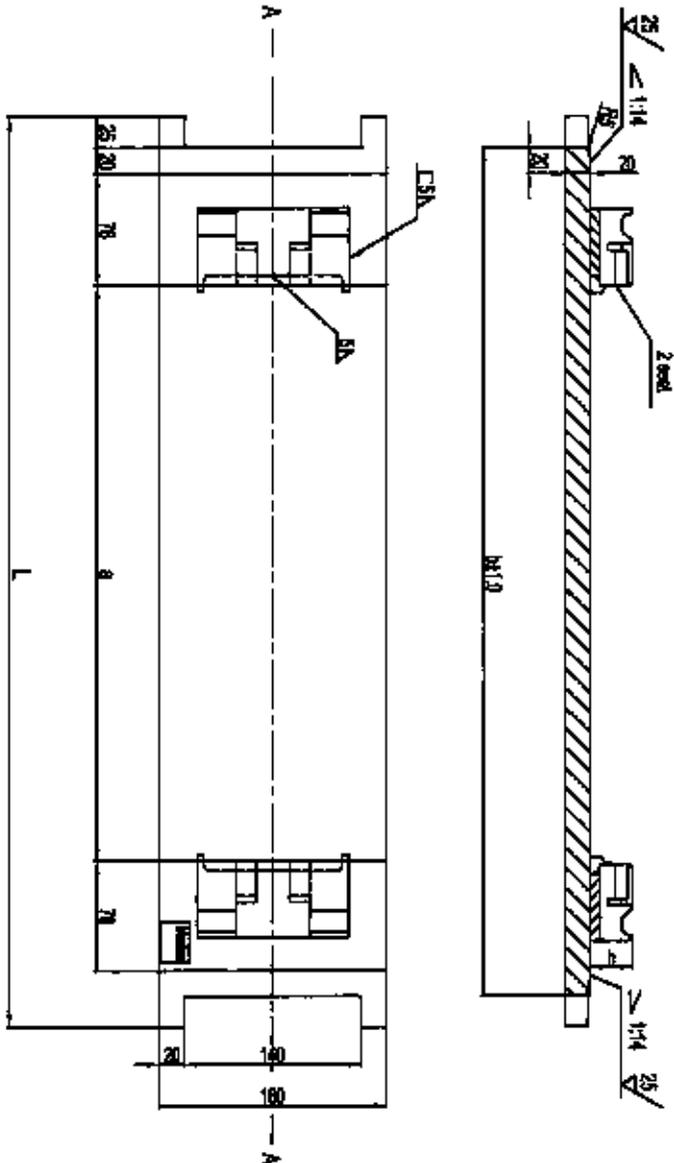
**ORGANIZATION**

DRAWING NO.	10-028
DATE	15/11/25
PROJECT	SOVAPHANBURI AIRPORT RAIL LINK AND CITY AIR TERMINAL
SYSTEM	TRACKWORK
SECTION	TITILE OF AS-BUILT / AS-CORRECTED DRAWING
NO.	UIC30-100-10 Multiple Turnout
DATE	Turnout track check rail of frog and check rail
SCALE	1:1
REVISION	
DATE	
BY	
CHECKED	
DATE	





AA



- Note:
1. The material of the plate is Q235.
  2. The steel pieces look at 'ZX 97 75-5'.
  3. The rail type, the laprod number and sag should be marked on the position as shown in the figure.

Bag No.	a	b	h	L	Weight (kg)	
					Plate weight	Total weight
7	404	630	33	705	20.0	23.1
8	514	705	41	705	21.4	25.5
9	404	630	41	705	20.5	24.2

**MINISTRY OF RAILWAYS**  
DEPARTMENT OF TRANSPORT  
STATE RAILWAY OF THAILAND

**STATE RAILWAY OF THAILAND**  
DEPARTMENT OF TRANSPORT  
STATE RAILWAY OF THAILAND

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DEPARTMENT OF TRANSPORT  
STATE RAILWAY OF THAILAND















UIC-350-1:9 Simple Turnout

Suvarnabhumi Airport Rail Link And The City Terminal Of Thailand

## UIC60-350-1:9 Simple Turnout

(UIC60B Switch rail | Frog | Groove check rail | | Clip | Pre-stressed concrete sleepers | | Ballastless track)

PLAN NO. ZX 9711

China Railway Engineering Consultants Group

AUGUST, 2009 Beijing

## LIST OF DRAWINGS

SHEET NO.	ITEM	DWG. NO.
1	LIST OF DRAWINGS ( SHEET 1 OF 23 )	ZX 9711-1
2,3	Specification	ZX 9711-2
4,5	General layout	ZX 9711-3
6,7	General layout	ZX 9711-3-1
8,9	General layout	ZX 9711-3-2
10,11	Layout of frog and check rail	ZX 9711-4
12,13	Lat of frog and check rail layout	ZX 9711-5
14-17	Frog at frog and check rail	ZX 9711-6
18,19	Through track check rail of frog and check rail	ZX 9711-7
20	Turnout track check rail of frog and check rail	ZX 9711-8
21	Frog and check rail seq. No. 4-9 tie plate	ZX 9711-9
22	Frog and check rail seq. No. 10 tie plate	ZX 9711-10
23	Frog and check rail seq. No. 11 tie plate	ZX 9711-11
24	Frog and check rail seq. No. 12-19 tie plate	ZX 9711-12
25	Frog and check rail seq. No. 20 tie plate	ZX 9711-13
26	Frog and check rail seq. No. 21-24 tie plate	ZX 9711-14
27	Frog and check rail seq. No. 25 tie plate	ZX 9711-15



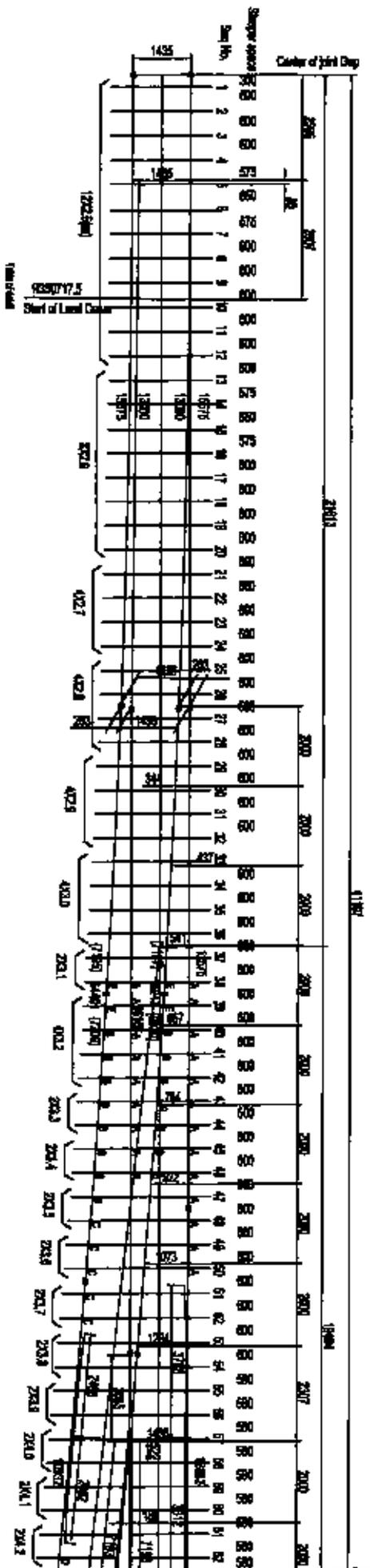
**KINGDOM OF THAILAND**  
**MINISTRY OF TRANSPORT**  
**STATE RAILWAY OF THAILAND**

**CONTRACTOR** : STEVENSON CONSULTANTS (THAI) CO., LTD.  
**CLIENT** : STATE RAILWAY OF THAILAND  
**PROJECT** : SUVARNABHUMI AIRPORT RAIL LINK AND CITY AIR TERMINAL  
**SYSTEM** : TRACKWORK  
**SCALE** : 1:1  
**TITLE OF SHEET / AS-CONSTRUCTED DRAWING** :  
**UNIFORM** : 550-119 simple horizontal  
**LIST OF DRAWINGS**  
**DATE** : 200808  
**APP. (TRM-1) THE ASGC/DZ** : 6101-9-A  
**DATE** : 07









No.	Order No.	Condition	Qty	Material	Unit Price		Total
					Unit	Price	
1	10000	10000	1	10000	10000	10000	
2	10000	10000	1	10000	10000	10000	
3	10000	10000	1	10000	10000	10000	
4	10000	10000	1	10000	10000	10000	
5	10000	10000	1	10000	10000	10000	
6	10000	10000	1	10000	10000	10000	
7	10000	10000	1	10000	10000	10000	
8	10000	10000	1	10000	10000	10000	
9	10000	10000	1	10000	10000	10000	
10	10000	10000	1	10000	10000	10000	
11	10000	10000	1	10000	10000	10000	
12	10000	10000	1	10000	10000	10000	
13	10000	10000	1	10000	10000	10000	
14	10000	10000	1	10000	10000	10000	
15	10000	10000	1	10000	10000	10000	
16	10000	10000	1	10000	10000	10000	
17	10000	10000	1	10000	10000	10000	
18	10000	10000	1	10000	10000	10000	
19	10000	10000	1	10000	10000	10000	
20	10000	10000	1	10000	10000	10000	
21	10000	10000	1	10000	10000	10000	
22	10000	10000	1	10000	10000	10000	
23	10000	10000	1	10000	10000	10000	
24	10000	10000	1	10000	10000	10000	
25	10000	10000	1	10000	10000	10000	
26	10000	10000	1	10000	10000	10000	
27	10000	10000	1	10000	10000	10000	

Table of concrete sleeper quantity

No.	Length (m)	Qty	Unit
1	2.5	1000	m
2	2.4	1000	m
3	2.3	1000	m
4	2.2	1000	m
5	2.1	1000	m
6	2.0	1000	m
7	1.9	1000	m
8	1.8	1000	m
9	1.7	1000	m
10	1.6	1000	m
11	1.5	1000	m
12	1.4	1000	m

Table of concrete sleeper quantity

No.	Length (m)	Qty	Unit
13	1.3	1000	m
14	1.2	1000	m
15	1.1	1000	m
16	1.0	1000	m
17	0.9	1000	m
18	0.8	1000	m
19	0.7	1000	m
20	0.6	1000	m
21	0.5	1000	m
22	0.4	1000	m
23	0.3	1000	m
24	0.2	1000	m
25	0.1	1000	m

The total required length of the sleepers is 255.5m

Green weight of steel is 100kg/m  
 The total volume of concrete is 1000m<sup>3</sup>  
 The total volume of steel is 1000m<sup>3</sup>  
 The total volume of concrete is 1000m<sup>3</sup>  
 The total volume of steel is 1000m<sup>3</sup>

**KINGDOM OF THAILAND**  
**MINISTRY OF TRANSPORT**  
**STATE RAILWAY OF THAILAND**

**CONTRACTOR: SIVANABHUIR AIRPORT RAIL LINK AND CITY AIR TERMINAL**  
**STATION: TRACTWORK**  
**TITLE OF ASSEMBLY / AS-COMPLETED DRAWING:**  
**02500-000-010** (Example)  
**Contract layout**



Table of steel

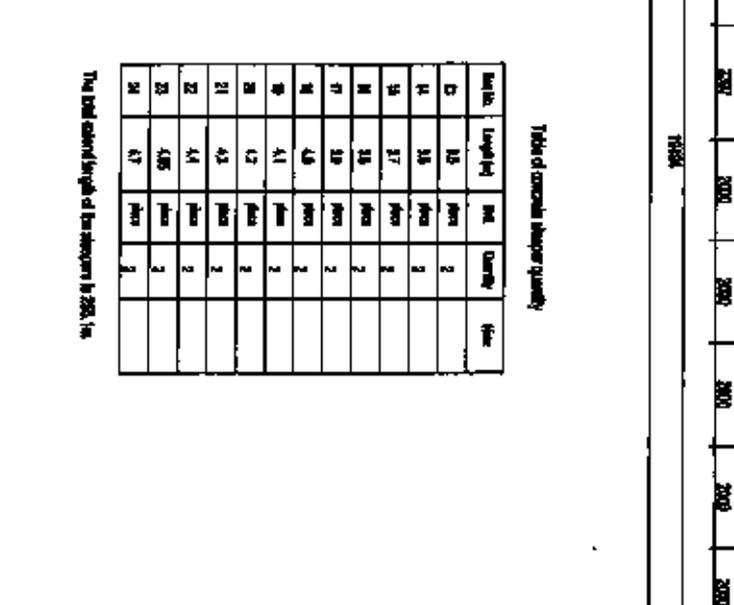
No./Sp.	Quantity	Specification	Unit	Quantity	Weight	Remarks
1	1	Angle 4x4	kg	1	7.85	
2	1	Angle 4x4	kg	1	7.85	
3	1	Angle 4x4	kg	1	7.85	
4	1	Angle 4x4	kg	1	7.85	
5	1	Angle 4x4	kg	1	7.85	
6	1	Angle 4x4	kg	1	7.85	
7	1	Angle 4x4	kg	1	7.85	
8	1	Angle 4x4	kg	1	7.85	
9	1	Angle 4x4	kg	1	7.85	
10	1	Angle 4x4	kg	1	7.85	
11	1	Angle 4x4	kg	1	7.85	
12	1	Angle 4x4	kg	1	7.85	
13	1	Angle 4x4	kg	1	7.85	
14	1	Angle 4x4	kg	1	7.85	
15	1	Angle 4x4	kg	1	7.85	
16	1	Angle 4x4	kg	1	7.85	
17	1	Angle 4x4	kg	1	7.85	
18	1	Angle 4x4	kg	1	7.85	
19	1	Angle 4x4	kg	1	7.85	
20	1	Angle 4x4	kg	1	7.85	
21	1	Angle 4x4	kg	1	7.85	
22	1	Angle 4x4	kg	1	7.85	
23	1	Angle 4x4	kg	1	7.85	
24	1	Angle 4x4	kg	1	7.85	
25	1	Angle 4x4	kg	1	7.85	
26	1	Angle 4x4	kg	1	7.85	
27	1	Angle 4x4	kg	1	7.85	

Table of concrete slabs quantity

Slab No.	Length (m)	Width (m)	Thickness (m)	Volume (m <sup>3</sup> )
1	22	3.0	0.15	9.9
2	34	3.0	0.15	15.3
3	25	3.0	0.15	11.25
4	18	3.0	0.15	8.1
5	21	3.0	0.15	9.45
6	28	3.0	0.15	12.6
7	29	3.0	0.15	13.05
8	18	3.0	0.15	8.1
9	11	3.0	0.15	4.95
10	12	3.0	0.15	5.4

Table of concrete slabs quantity

Slab No.	Length (m)	Width (m)	Thickness (m)	Volume (m <sup>3</sup> )
11	15	3.0	0.15	6.75
12	18	3.0	0.15	8.1
13	17	3.0	0.15	7.65
14	18	3.0	0.15	8.1
15	19	3.0	0.15	8.55
16	14	3.0	0.15	6.3
17	12	3.0	0.15	5.4
18	11	3.0	0.15	4.95
19	12	3.0	0.15	5.4
20	12	3.0	0.15	5.4



The total volume of concrete slabs is 223,000 m<sup>3</sup>  
 The total volume of concrete slabs is 110,000 m<sup>3</sup>  
 The total volume of concrete slabs is 113,000 m<sup>3</sup>



Bay No.	Spanning No.	Structure	Unit	Quantity	Material	Weight (kg)	Notes
1	01/01/01	Abutment	m <sup>3</sup>	1	Concrete	1100 / 1100	
2	01/01/02	Abutment	m <sup>3</sup>	1	Concrete	4200 / 4200	
3	01/01/03	Abutment	m <sup>3</sup>	1	Concrete	6234 / 6234	
4	01/01/04	Abutment	m <sup>3</sup>	1	Concrete	1034 / 1034	
5	01/01/05	Abutment	m <sup>3</sup>	1	Concrete	183 / 183	
6	01/01/06	Abutment	m <sup>3</sup>	1	Concrete	183 / 183	
7	01/01/07	Abutment	m <sup>3</sup>	1	Concrete	183 / 183	
8	01/01/08	Abutment	m <sup>3</sup>	1	Concrete	183 / 183	
9	01/01/09	Abutment	m <sup>3</sup>	1	Concrete	183 / 183	
10	01/01/10	Abutment	m <sup>3</sup>	1	Concrete	183 / 183	
11	01/01/11	Abutment	m <sup>3</sup>	1	Concrete	183 / 183	
12	01/01/12	Abutment	m <sup>3</sup>	1	Concrete	183 / 183	
13	01/01/13	Abutment	m <sup>3</sup>	1	Concrete	183 / 183	
14	01/01/14	Abutment	m <sup>3</sup>	1	Concrete	183 / 183	
15	01/01/15	Abutment	m <sup>3</sup>	1	Concrete	183 / 183	
16	01/01/16	Abutment	m <sup>3</sup>	1	Concrete	183 / 183	
17	01/01/17	Abutment	m <sup>3</sup>	1	Concrete	183 / 183	
18	01/01/18	Abutment	m <sup>3</sup>	1	Concrete	183 / 183	
19	01/01/19	Abutment	m <sup>3</sup>	1	Concrete	183 / 183	
20	01/01/20	Abutment	m <sup>3</sup>	1	Concrete	183 / 183	
21	01/01/21	Abutment	m <sup>3</sup>	1	Concrete	183 / 183	
22	01/01/22	Abutment	m <sup>3</sup>	1	Concrete	183 / 183	
23	01/01/23	Abutment	m <sup>3</sup>	1	Concrete	183 / 183	
24	01/01/24	Abutment	m <sup>3</sup>	1	Concrete	183 / 183	
25	01/01/25	Abutment	m <sup>3</sup>	1	Concrete	183 / 183	
26	01/01/26	Abutment	m <sup>3</sup>	1	Concrete	183 / 183	
27	01/01/27	Abutment	m <sup>3</sup>	1	Concrete	183 / 183	

Table of steel

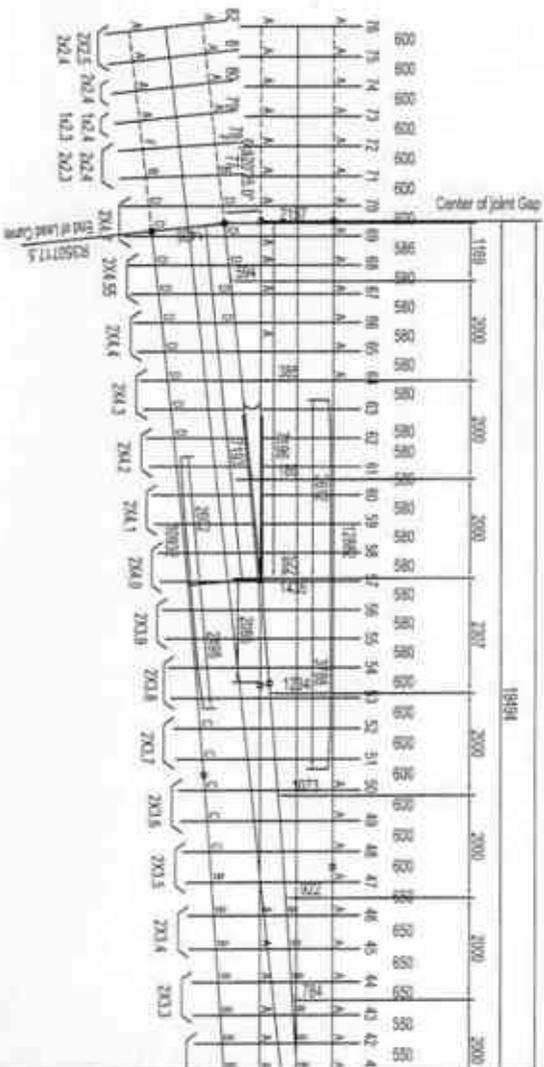


Table of concrete sleeper quantity

Bay No.	Length (m)	Unit	Quantity	Notes
1	2.3	piece	3	
2	2.4	piece	7	
3	2.5	piece	14	
4	2.6	piece	8	
5	2.7	piece	4	
6	2.8	piece	4	
7	2.9	piece	4	
8	3.0	piece	4	
9	3.1	piece	7	
10	3.2	piece	4	
11	3.3	piece	2	
12	3.4	piece	2	

Table of concrete sleeper quantity

Bay No.	Length (m)	Unit	Quantity	Notes
13	3.5	piece	2	
14	3.6	piece	2	
15	3.7	piece	2	
16	3.8	piece	2	
17	3.9	piece	2	
18	4.0	piece	2	
19	4.1	piece	2	
20	4.2	piece	2	
21	4.3	piece	2	
22	4.4	piece	2	
23	4.5	piece	2	
24	4.6	piece	2	

The total volume of the sleepers is 258.1m<sup>3</sup>

Gross weight of steel is 19200kg  
The total volume of iron nails is 271000cm<sup>3</sup>  
Feather nail is 11000cm<sup>3</sup>  
Feather nail is 81000cm<sup>3</sup>



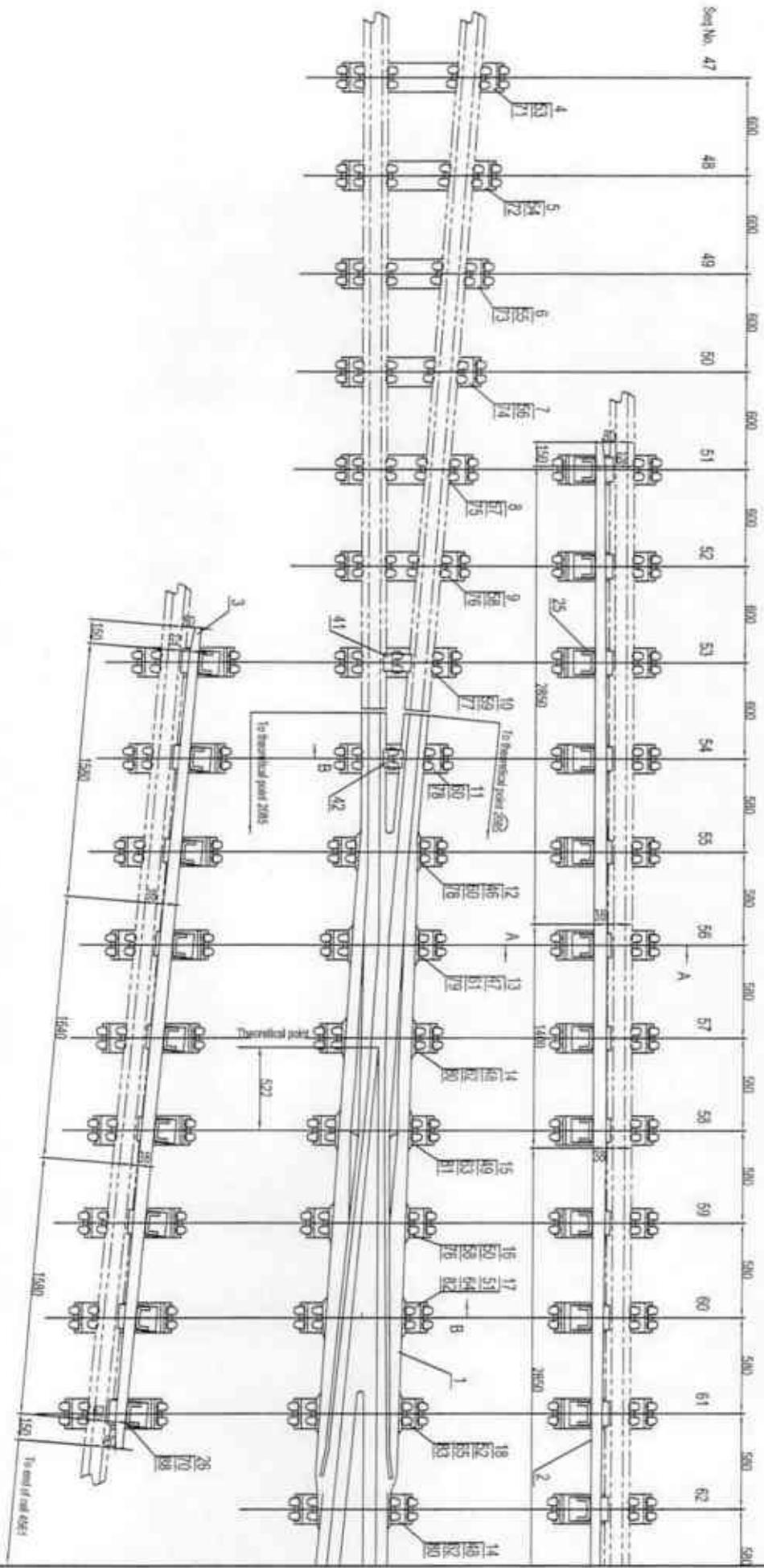
**CONSTRUCTION SUPERVISION CONSULTANTS :**  
 1. **ALC ASIAN ENGINEERING CONSULTANTS CO., LTD.**  
 2. **THAI ENGINEERING CONSULTANTS CO., LTD.**  
 3. **RAMON CONSULTING CO., LTD.**  
 4. **PAJON CONSULTANTS INTERNATIONAL**  
 5. **SOPT ENGINEERING CONSULTANTS CO., LTD.**  
 6. **CONSTRUCTION SUPERVISION CONSULTANTS LTD.**  
 7. **THE INTERNATIONAL ENGINEER**

**CONTRACTOR :**  
 1. **SINCHANG**  
 2. **SIYONG**  
 3. **SIYONG**  
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 62. **SIYONG**

**ORIGINATOR :**

PROJECT NO.	SR 8711-4
PROJECT TITLE	SR 8711-4
PROJECT LOCATION	SR 8711-4
PROJECT STATUS	SR 8711-4
PROJECT DATE	SR 8711-4
PROJECT SCALE	SR 8711-4
PROJECT SHEET NO.	SR 8711-4
PROJECT SHEET TOTAL	SR 8711-4

**SRVAVANABUDHI AIRPORT RAIL LINK AND CITY AIR TERMINAL**  
**SYSTEM TRACK LAYOUT**  
 SCALE: 1:500  
 TITLE OF AS-BUILT / AS-CONSTRUCTED DRAWING :  
 UIC80-850-110 simple turnout  
 Layout of frog and check rail  
 DATE : 2018  
 DRAWN : 2018  
 CHECKED : 2018  
 APPROVED : 2018  
 AIR (TRW-1)TE+ACAC02\_0101-9\_A



Seq No.	Drawing No.	Description	Quantity	Material	Weight		Note
					Single	Total	
1	ZX 9711-8	Key	1		1750	1750	
2	ZX 9711-7	Check rail 2400	1	UNC33 rail	244	244	
3	ZX 9711-8	Check rail 5100	1	UNC33 rail	168	168	
4	ZX 9711-9	The plate 991	1		39.8	39.8	
5	ZX 9711-9	The plate 947	1		38.3	38.3	
6	ZX 9711-9	The plate 902	1		36.8	36.8	
7	ZX 9711-9	The plate 856	1		35.2	35.2	
8	ZX 9711-9	The plate 808	1		33.6	33.6	
9	ZX 9711-9	The plate 760	1		32.1	32.1	
10	ZX 9711-9	The plate 711	1		28.0	28.0	
11	ZX 9711-11	The plate 666	1		26.4	26.4	
12	ZX 9711-12	The plate 618	1		23.8	23.8	
13	ZX 9711-12	The plate 571	1		26.0	26.0	
14	ZX 9711-12	The plate 521	1		26.6	26.6	
15	ZX 9711-12	The plate 464	1		27.3	27.3	
16	ZX 9711-12	The plate 408	1		27.6	27.6	
17	ZX 9711-12	The plate 350	1		28.4	28.4	
18	ZX 9711-12	The plate 293	1		29.0	29.0	
19	ZX 9711-12	The plate 240	1		26.1	26.1	
20	ZX 9711-13	The plate 185	1		31.1	31.1	
21	ZX 9711-14	The plate 132	1		33.1	33.1	

Seq No.	Drawing No.	Description	Quantity	Material	Weight		Note
					Single	Total	
22	ZX 9711-14	The plate 833	1		35.2	35.2	
23	ZX 9711-14	The plate 914	1		37.2	37.2	
24	ZX 9711-14	The plate 977	1		39.4	39.4	
25	ZX 9716-22	Check rail the plate 595	13		45.5	592	
26	ZX 9711-15	Check rail the plate 595	9		45.5	410	
27	ZX 9716-13	The spring 250	22	60S2ZMh	1.25	27.5	
28	ZX 9716-14	Key special 155	22	Q275	0.408	8.93	
29	ZX 9716-16	Adjusting part 1410703?	22	Q195	0.187	4.11	
30	ZX 9716-4	Ball 402000	22		0.405	8.91	
31	ZX 9716-3	Ball 402000	88		0.391	34.4	
32	ZX 9716-3	Ball 402005	88		0.378	33.1	
33	ZX 9716-3	Ball 402005	2		0.438	1.31	
34	ZX 9716-4	Nut M24	22		0.173	3.81	
35	GB 41	Nut M24	178		0.153	27.4	
36	GB 724	Washer M24	22		0.047	1.03	
37	TBT 1495.4	Washer M24	178		0.068	12.4	
38	ZX 3351-3	U.C.P.	178	60S2ZCV	0.825	148	
39	ZX 9716-15	Change block 60 9-11	57	ZG230-4500	336	19.2	
40	ZX 9716-16	Change block 60 13-15	31	ZG230-4500	512	15.9	
41	ZX 9716-7	Obol dip 143-134-60	1	ZG230-4500	3.02	3.02	
42	ZX 9716-7	Obol dip 30-33-44	1	ZG230-4500	1.91	1.91	

**CONTRACTOR**  
**CONSTRUCTION SUPERVISION CONSULTANTS 1**  
**1. SAC** SAHAI ENGINEERING CONSULTANTS CO., LTD.  
**2. SAC** THE ENGINEERING CONSULTANTS CO., LTD.  
**3. SAC** SAKI ENGINEERING CO., LTD.  
**4. SAC** YAKUMI CONSULTANTS INTERNATIONAL  
**5. SAC** YAMR ENGINEERING CONSULTANTS CO., LTD.  
**6. SAC** CENTRICAL ENGINEERING CONSULTANTS CO., LTD.  
**7. SAC** INTERNATIONAL BUILD

**CONTRACTOR 2**  
**1. SAC** AIRPORT AND LINK CONSTRUCTION  
**2. SAC** AIRPORT AND LINK CONSTRUCTION  
**3. SAC** AIRPORT AND LINK CONSTRUCTION  
**4. SAC** AIRPORT AND LINK CONSTRUCTION  
**5. SAC** AIRPORT AND LINK CONSTRUCTION  
**6. SAC** AIRPORT AND LINK CONSTRUCTION  
**7. SAC** AIRPORT AND LINK CONSTRUCTION

**ORGANIZATION**  
**1. SAC** AIRPORT AND LINK CONSTRUCTION  
**2. SAC** AIRPORT AND LINK CONSTRUCTION  
**3. SAC** AIRPORT AND LINK CONSTRUCTION  
**4. SAC** AIRPORT AND LINK CONSTRUCTION  
**5. SAC** AIRPORT AND LINK CONSTRUCTION  
**6. SAC** AIRPORT AND LINK CONSTRUCTION  
**7. SAC** AIRPORT AND LINK CONSTRUCTION

**STATION: TRACKWORK**  
**SCALE: 1/4**  
**TITLE OF AS-BUILT / AS-CONSTRUCTED DRAWING:**  
**UC260-350-130 simple turnout**  
**Let for layout of frog and check rail**  
**APR (TRM-1)E+M&D&CZ 8101-9 A (REV) 15/07 27**







**KINGDOM OF THAILAND**  
**MINISTRY OF TRANSPORT**  
**STATE RAILWAY OF THAILAND**

DATE: 11/11/2085

CONSTRUCTION SUPERVISOR: [Redacted]

DESIGNER: [Redacted]

PROJECT NO: 25-011-4

RAILWAY/ROADWAY AIRPORT RAIL LINE AND CITY AIR TERMINAL

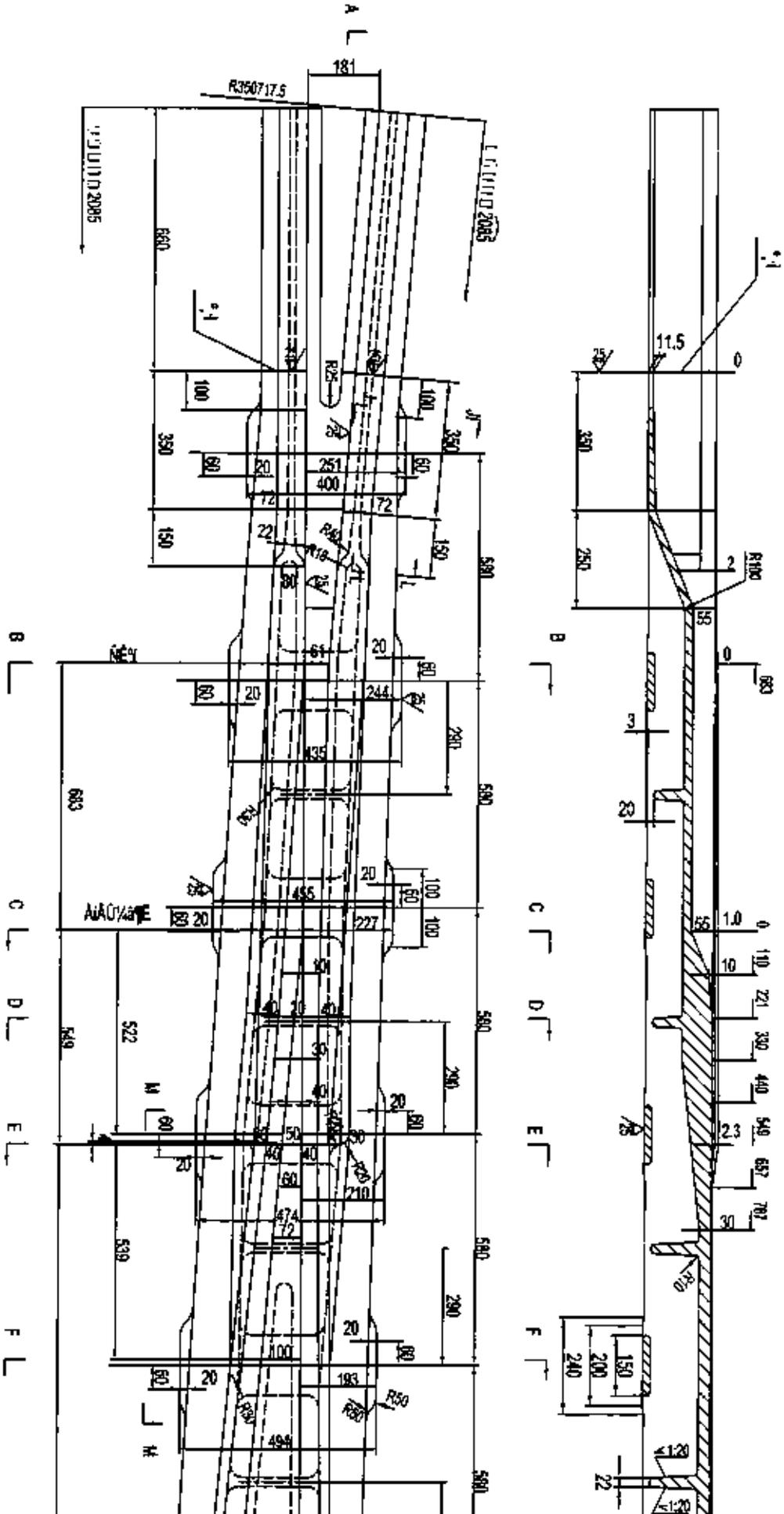
SYSTEM: TRACKWORK

TITLE OF DRAWING / AS CONSTRUCTED DRAWING: [Redacted]

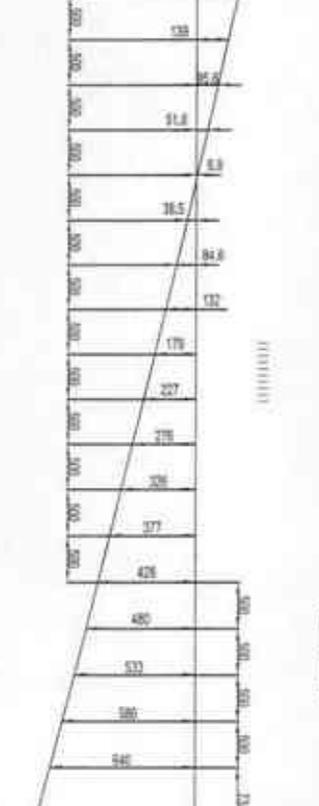
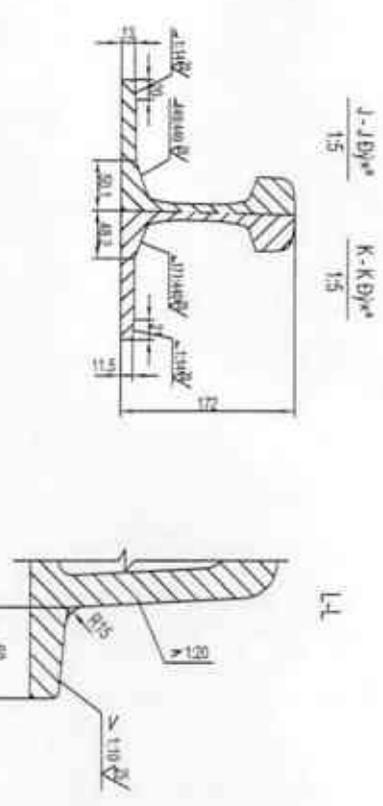
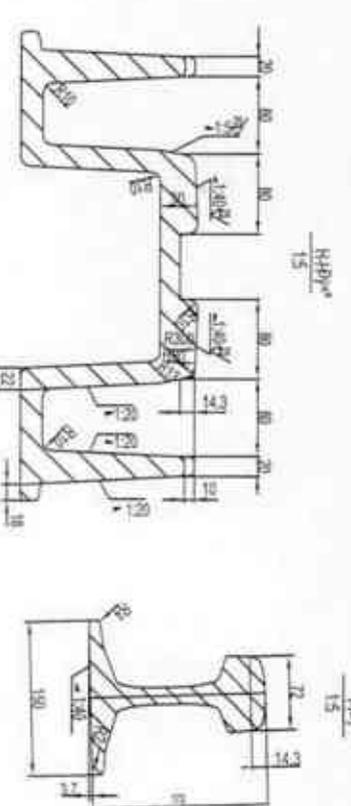
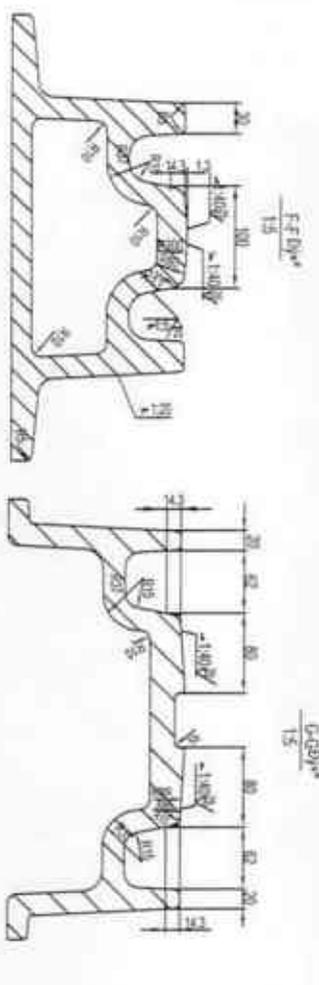
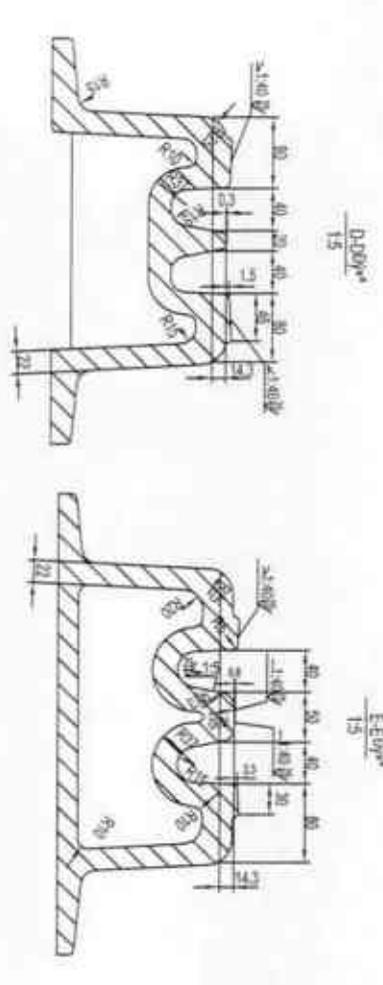
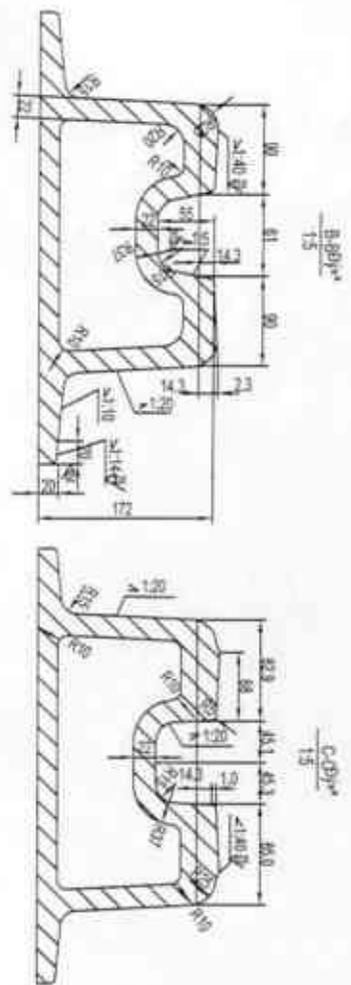
SCALE: 1:100

DATE: 11/11/2085

PROJECT NO: 25-011-4



A-A



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 KINGDOM OF THAILAND  
 MINISTRY OF TRANSPORT  
 STATE RAILWAY OF THAILAND

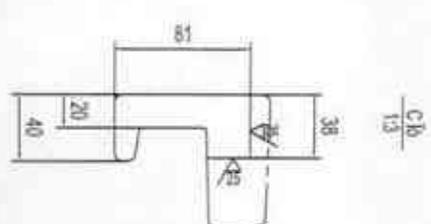
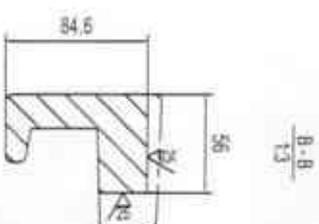
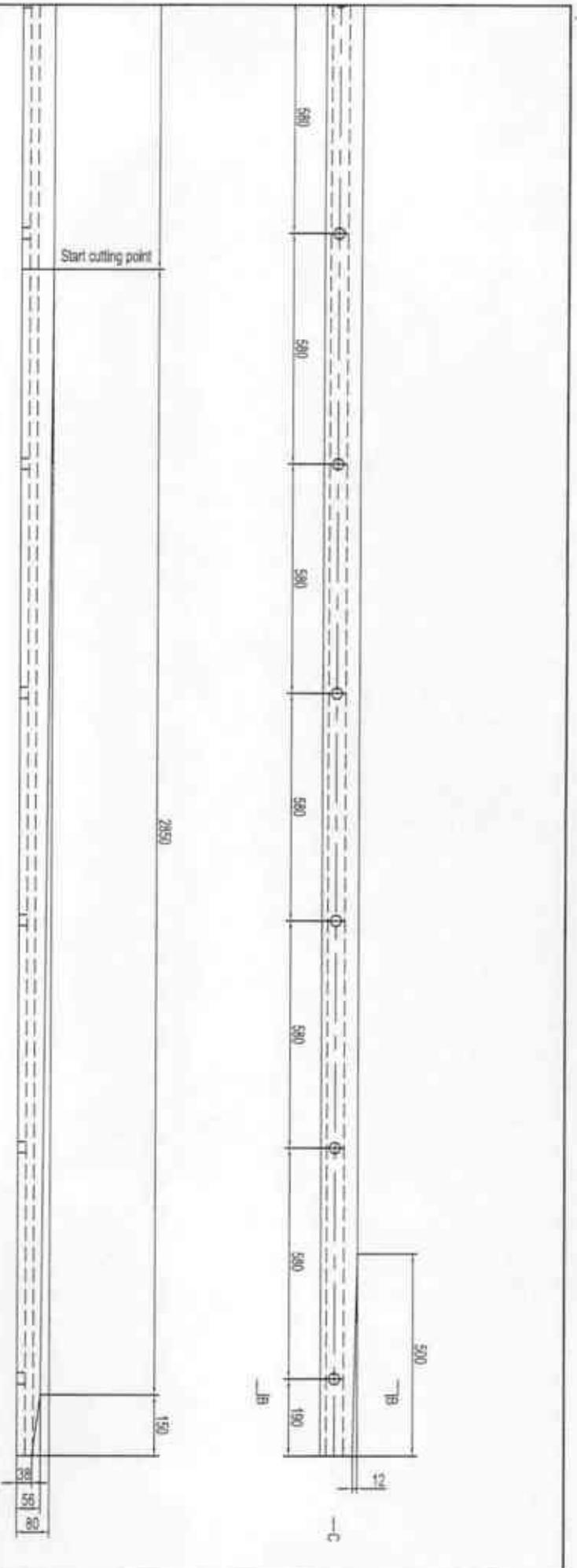
CONSTRUCTION SUPERVISOR CONSULTANTS  
 1. ABC ASIAN ENGINEERING CONSULTANTS CO., LTD.  
 2. THAI ENGINEERING CONSULTANTS CO., LTD.  
 3. SANGHVI CONSULTANTS CO., LTD.  
 4. PALDI CONSULTANTS INTERNATIONAL  
 5. WEST ENGINEERING CONSULTANTS CO., LTD.  
 6. CENTRAL ENGINEERING CONSULTANTS LTD.  
 7. INTERNATIONAL BUREAU

CONTRACTOR  
 1. SANGHVI CONSULTANTS CO., LTD.  
 2. THAI ENGINEERING CONSULTANTS CO., LTD.  
 3. ABC ASIAN ENGINEERING CONSULTANTS CO., LTD.  
 4. PALDI CONSULTANTS INTERNATIONAL  
 5. WEST ENGINEERING CONSULTANTS CO., LTD.  
 6. CENTRAL ENGINEERING CONSULTANTS LTD.  
 7. INTERNATIONAL BUREAU

ORIGINATOR  

  
 SUVARNABHUMI AIRPORT RAIL LINK AND CITY AIR TERMINAL  
 SYSTEM TRACKWORK  
 SCALE: 1/10  
 TITLE OF AS-BUILT / AS-CONSTRUCTED DRAWING:  
 DUC00-350-119 simple turnout  
 Proj. of Proj. and check rail  
 DATE: 11/11/11  
 SHEET: 11/11/11  
 REV. 1: 11/11/11  
 ARL/TRW-STE+M&COZ\_0101-9\_A (part 1) of 2





- Note:
1. The check rail is made of UIC33 rail.
  2. Total length of the check rail is 7400mm.
  3. The operative face of the check rail should be quenched.
  4. Weight is 244kg.

**KINGDOM OF THAILAND**  
**MINISTRY OF TRANSPORT**  
**STATE RAILWAY OF THAILAND**

**CONSTRUCTION SUPERVISION CONSULTANTS 1**

L.A.C. SAKI ENGINEERING CONSULTANTS CO., LTD.  
THAI ENGINEERING CONSULTANTS CO., LTD.  
AROH CONCEPT CO., LTD.  
PACIFIC CONSULTANTS INTERNATIONAL  
VEAY ENGINEERING CONSULTANTS CO., LTD.  
CONSTRUCTION MACHINE CONSULTANTS LTD.  
SRI INTERNATIONAL GROUP

**CONTRACTOR 1**

SIEMENS

SIEMENS (THAILAND) CO., LTD.  
SIEMENS (INDONESIA) PTY. LTD.  
SIEMENS (MALAYSIA) SDN. BHD.  
SIEMENS (PHILIPPINES) INC.  
SIEMENS (VIETNAM) CO., LTD.

DESIGNATION		DATE		BY		CHECKED		APPROVED	
NO.	REVISION	DATE	BY	DATE	BY	DATE	BY	DATE	BY

**SIYANABHUMI AIRPORT RAIL LINK AND CITY AIR TERMINAL**

**SYSTEM: TRACKWORK**

SCALE: 1:10

TITLE: OF AS-BUILT / AS-CONSTRUCTED DRAWING

UIC33-350-119 single turnout

Through track check rail of frog and check rail

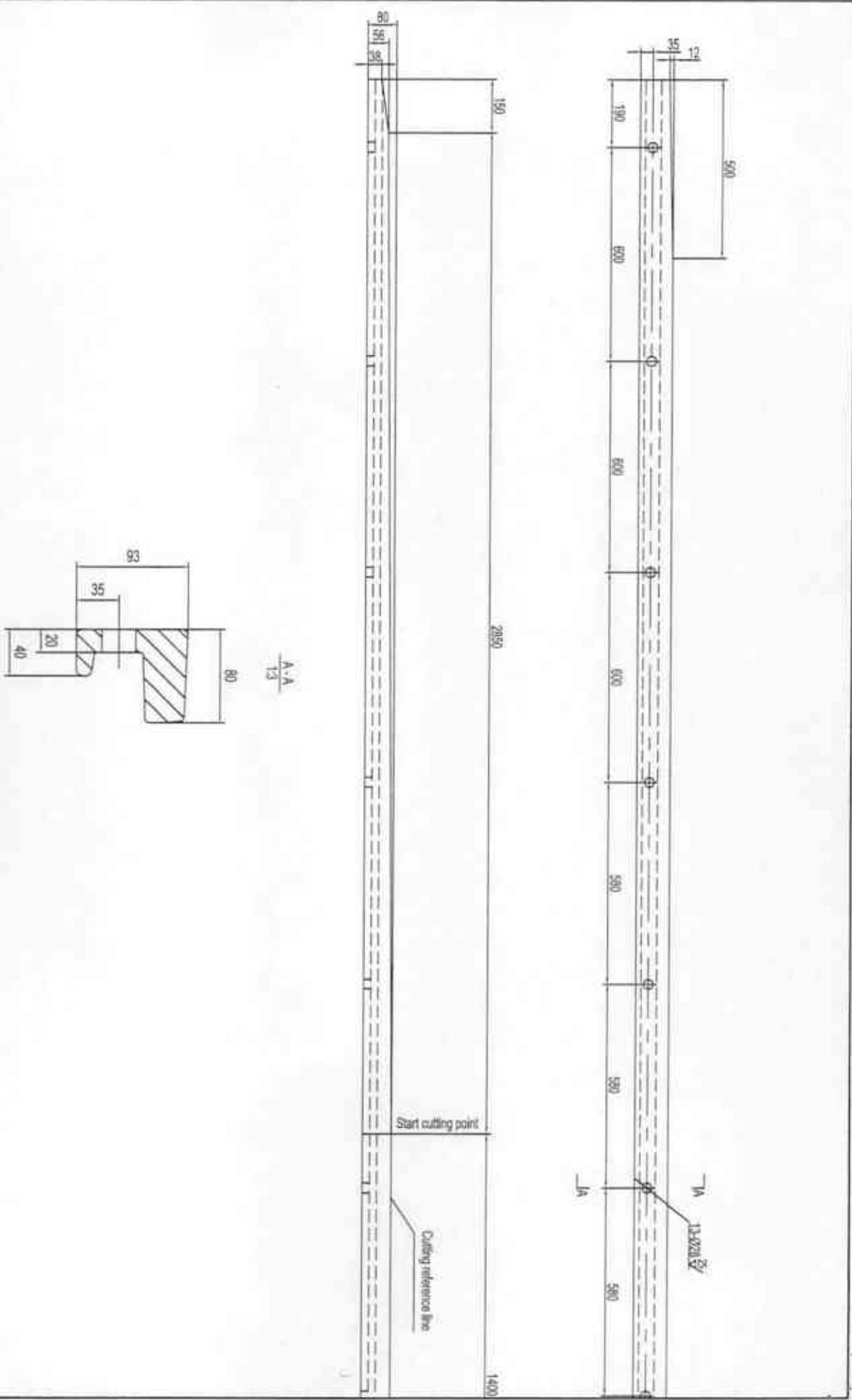
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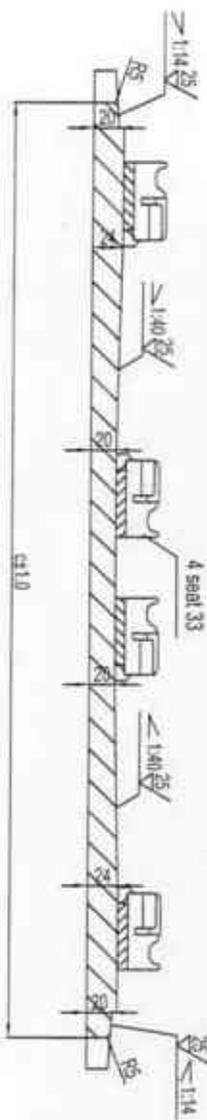
PROJECT: ARL(TRW-1)TE+AGCCOZ\_9101-9\_A1 Turn 1&2 ET

**DESCRIPTION :**

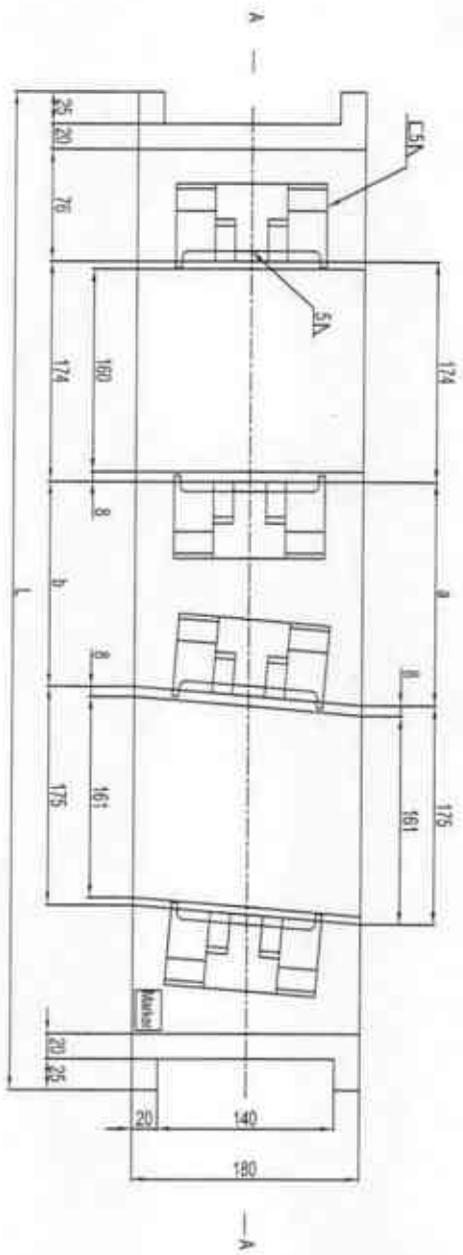
PROJECT NO.	22-8711-2
DATE	2011
SCALE	AS SHOWN
DESIGNER	ASIAN
CHECKER	ASIAN
APPROVER	ASIAN
DATE	2011

**ROYANAHARUAI AIRPORT RAIL LINK AND CITY AIR TERMINAL**  
**SYSTEM TRACKWORK**  
 ROAD : 1102 TITLE OF AS-BUILT / AS-CONSTRUCTED DRAWING :  
 UIC60-300-10 simple turnout  
 Through track check rail of frog and check rail  
 DRAWN : 2011  
 DATE : 2011  
 SHEET NO. : 8101-9-A  
 TOTAL SHEETS : 27





A-A



Seq No.	a	b	c	L	Weight (kg)	
					Plate weight	Total weight
4	401	387	941	991	33.6	39.8
5	356	343	897	947	32.1	38.3
6	311	297	852	902	30.6	36.8
7	265	251	808	856	29.0	35.2
8	217	203	759	808	27.4	33.6
9	169	154	710	760	25.8	32.1

Note:

1. The material of the plate is Q235.
2. The seal 33 please look at "ZX 9718-5".
3. The rail type, the turnout number and seq No. and left-hand or right-hand should be marked on the position as shown in the figure.
4. The drawing are designed to the right hand turnout. In case of left hand turnout, the manufacture should be made symmetrically.

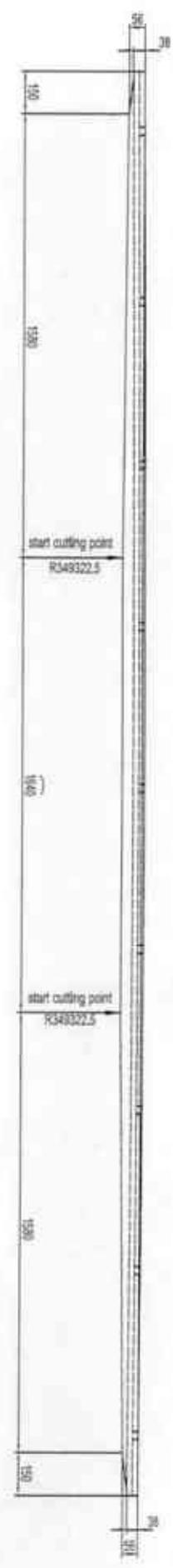
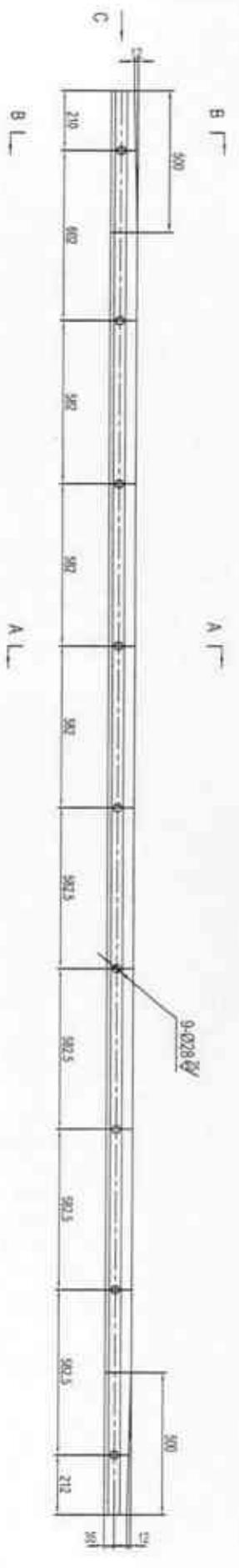
**THAILAND RAILWAY**  
**KINGDOM OF THAILAND**  
 MINISTRY OF TRANSPORT  
 STATE RAILWAY OF THAILAND

CONSTRUCTION SUPERVISION COMPANIES  
 1. SAHA ENGINEERING CONSULTANTS CO., LTD.  
 2. THAI ENGINEERING CONSULTANTS CO., LTD.  
 3. PALANG CONSULTANTS INTERNATIONAL  
 4. SANGHAT ENGINEERING CONSULTANTS CO., LTD.  
 5. CHANGKONG ENGINEERING CONSULTANTS CO., LTD.  
 6. SANGHAT ENGINEERING CONSULTANTS CO., LTD.

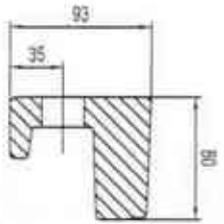
CONTRACTOR  
 1. SANGHAT ENGINEERING CONSULTANTS CO., LTD.  
 2. THAI ENGINEERING CONSULTANTS CO., LTD.  
 3. PALANG CONSULTANTS INTERNATIONAL  
 4. SANGHAT ENGINEERING CONSULTANTS CO., LTD.  
 5. CHANGKONG ENGINEERING CONSULTANTS CO., LTD.

DISCREETOR  
 1. SAHA ENGINEERING CONSULTANTS CO., LTD.  
 2. THAI ENGINEERING CONSULTANTS CO., LTD.  
 3. PALANG CONSULTANTS INTERNATIONAL  
 4. SANGHAT ENGINEERING CONSULTANTS CO., LTD.  
 5. CHANGKONG ENGINEERING CONSULTANTS CO., LTD.

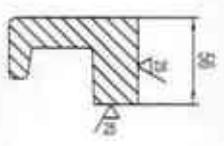
SOVAPHABHONG AIRPORT RAIL LINK AND CITY AIR TERMINAL  
 SYSTEM: TRACKWORK  
 SCALE: 1/4  
 TITLE: OF AS-BUILT / AS-COMPLETED DRAWING  
 DDCB-050-10 Airport Turnout  
 Req No. 4-0 the plate of frog and check rail  
 JAH (TRW)-STE+AGACHZ-8101-9-A / sheet 11 of 12



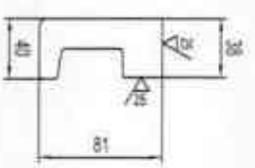
A-A  
1:3



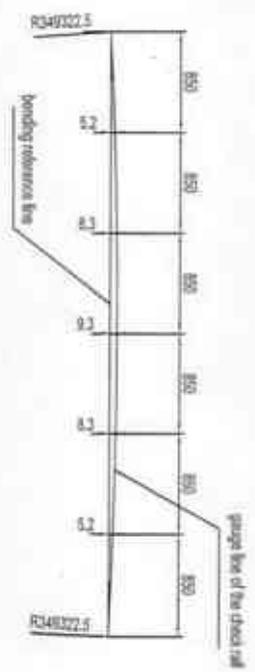
B-B  
1:3



C-C  
1:3



schematic diagram of bending of check rail



gauge line of the check rail

bonding reference line

Note:

1. The check rail is made of UNC33 rail.
2. Total length of the check rail is 5100mm.
3. Check rail bend according to schematic diagram of bending at first, then the gauge line of check rail should be cut.
4. The operative face of the check rail should be quenched.
5. Weight is 169kg.

**ROYAL RAILWAY**  
**KINGDOM OF THAILAND**  
**MINISTRY OF TRANSPORT**  
**STATE RAILWAY OF THAILAND**

**CONSTRUCTION SUPERVISION CONSULTANTS**  
**SAKAI ENGINEERING CONSULTANTS CO., LTD.**  
**THAI ENGINEERING CONSULTANTS CO., LTD.**  
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**CONTRACTOR**  
**SAKAI ENGINEERING CONSULTANTS CO., LTD.**  
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**DESIGNATION**  
**SAKAI ENGINEERING CONSULTANTS CO., LTD.**  
**THAI ENGINEERING CONSULTANTS CO., LTD.**  
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**SAKAI ENGINEERING CONSULTANTS CO., LTD.**

NO.	DATE	REVISION
1	2011-11-08	ISSUE FOR CONSTRUCTION

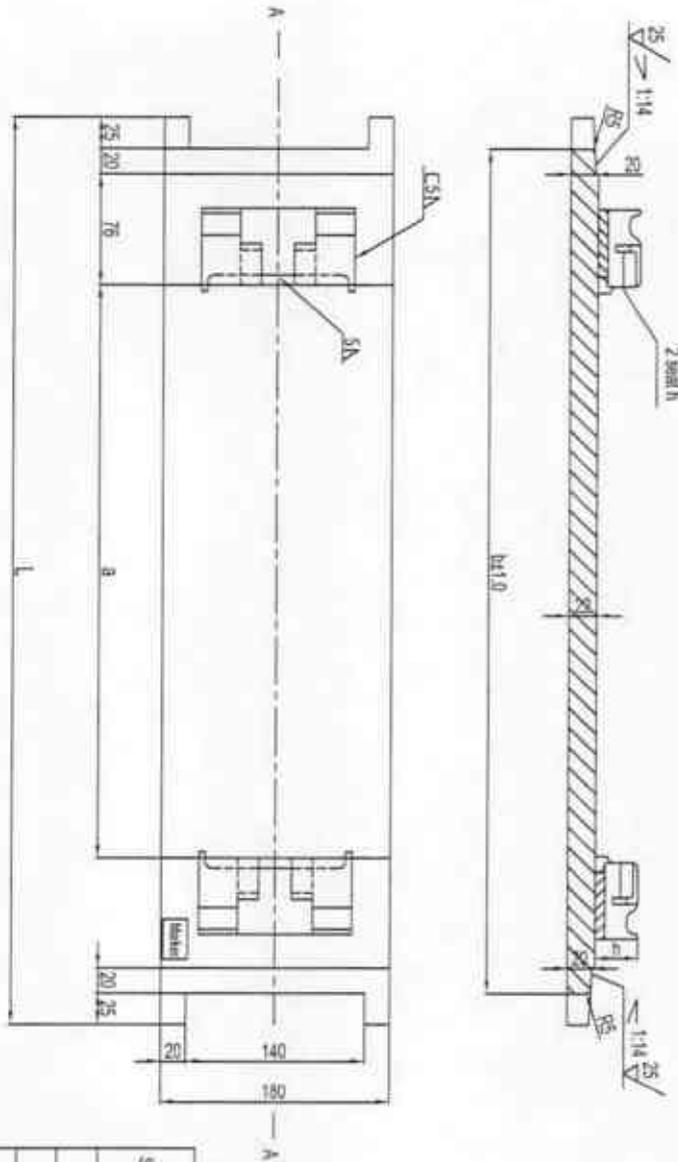
**SIYANABHUMI AIRPORT RAIL LINK AND CITY AIR TERMINAL**  
**SYSTEM TRACKWORK**  
**NO. 118**  
**TITLE OF AS-BUILT / AS-CONSTRUCTED DRAWING**  
**TRUCK-300-118 alongside turnout**  
**Turnout track check rail of frog and check rail**  
**APL (TRM-1)TE+AGKODZ-8101-9-A (part 2) of 27**







AA



- Note:
1. The material of the plate is Q235.
  2. The seal (please look at ZX 8716-5).
  3. The rail type, the burnd number and eng No. should be marked on the position as shown in the figure.

Seq No.	h	a	b	l	Weight (kg)	
					Plate weight	Total weight
12	33	424	516	666	20.7	23.8
13	41	459	651	701	21.8	26.0
14	41	479	671	721	22.4	26.5
15	41	498	690	740	23.0	27.3
16	41	518	710	760	23.6	27.8
17	41	538	730	780	24.2	28.4
18	41	557	749	799	24.8	29.0
19	33	498	690	740	23.0	26.1

**DEVELOPER**

KINGDOM OF THAILAND  
MINISTRY OF TRANSPORT  
STATE RAILWAY OF THAILAND

**CONSTRUCTION SUPERVISION CONSULTANTS 1**

CAEC SALEM ENGINEERING CONSULTANTS CO., LTD.  
THAI ENGINEERING CONSULTANTS CO., LTD.  
SECON CONSULT CO., LTD.  
PACIFIC CONSULTANTS INTERNATIONAL  
KANT ENGINEERING CONSULTANTS CO., LTD.  
CENTRUM ENGINEERING CONSULTANTS LTD.  
24 INTERNATIONAL SQUARE

**CONTRACTOR 1**

SIEMENS

SIEMENS (THAILAND) CO., LTD.

11TH FLOOR, 1111/1112/1113/1114/1115/1116/1117/1118/1119/1120/1121/1122/1123/1124/1125/1126/1127/1128/1129/1130/1131/1132/1133/1134/1135/1136/1137/1138/1139/1140/1141/1142/1143/1144/1145/1146/1147/1148/1149/1150/1151/1152/1153/1154/1155/1156/1157/1158/1159/1160/1161/1162/1163/1164/1165/1166/1167/1168/1169/1170/1171/1172/1173/1174/1175/1176/1177/1178/1179/1180/1181/1182/1183/1184/1185/1186/1187/1188/1189/1190/1191/1192/1193/1194/1195/1196/1197/1198/1199/1200/1201/1202/1203/1204/1205/1206/1207/1208/1209/1210/1211/1212/1213/1214/1215/1216/1217/1218/1219/1220/1221/1222/1223/1224/1225/1226/1227/1228/1229/1230/1231/1232/1233/1234/1235/1236/1237/1238/1239/1240/1241/1242/1243/1244/1245/1246/1247/1248/1249/1250/1251/1252/1253/1254/1255/1256/1257/1258/1259/1260/1261/1262/1263/1264/1265/1266/1267/1268/1269/1270/1271/1272/1273/1274/1275/1276/1277/1278/1279/1280/1281/1282/1283/1284/1285/1286/1287/1288/1289/1290/1291/1292/1293/1294/1295/1296/1297/1298/1299/1300/1301/1302/1303/1304/1305/1306/1307/1308/1309/1310/1311/1312/1313/1314/1315/1316/1317/1318/1319/1320/1321/1322/1323/1324/1325/1326/1327/1328/1329/1330/1331/1332/1333/1334/1335/1336/1337/1338/1339/1340/1341/1342/1343/1344/1345/1346/1347/1348/1349/1350/1351/1352/1353/1354/1355/1356/1357/1358/1359/1360/1361/1362/1363/1364/1365/1366/1367/1368/1369/1370/1371/1372/1373/1374/1375/1376/1377/1378/1379/1380/1381/1382/1383/1384/1385/1386/1387/1388/1389/1390/1391/1392/1393/1394/1395/1396/1397/1398/1399/1400/1401/1402/1403/1404/1405/1406/1407/1408/1409/1410/1411/1412/1413/1414/1415/1416/1417/1418/1419/1420/1421/1422/1423/1424/1425/1426/1427/1428/1429/1430/1431/1432/1433/1434/1435/1436/1437/1438/1439/1440/1441/1442/1443/1444/1445/1446/1447/1448/1449/1450/1451/1452/1453/1454/1455/1456/1457/1458/1459/1460/1461/1462/1463/1464/1465/1466/1467/1468/1469/1470/1471/1472/1473/1474/1475/1476/1477/1478/1479/1480/1481/1482/1483/1484/1485/1486/1487/1488/1489/1490/1491/1492/1493/1494/1495/1496/1497/1498/1499/1500/1501/1502/1503/1504/1505/1506/1507/1508/1509/1510/1511/1512/1513/1514/1515/1516/1517/1518/1519/1520/1521/1522/1523/1524/1525/1526/1527/1528/1529/1530/1531/1532/1533/1534/1535/1536/1537/1538/1539/1540/1541/1542/1543/1544/1545/1546/1547/1548/1549/1550/1551/1552/1553/1554/1555/1556/1557/1558/1559/1560/1561/1562/1563/1564/1565/1566/1567/1568/1569/1570/1571/1572/1573/1574/1575/1576/1577/1578/1579/1580/1581/1582/1583/1584/1585/1586/1587/1588/1589/1590/1591/1592/1593/1594/1595/1596/1597/1598/1599/1600/1601/1602/1603/1604/1605/1606/1607/1608/1609/1610/1611/1612/1613/1614/1615/1616/1617/1618/1619/1620/1621/1622/1623/1624/1625/1626/1627/1628/1629/1630/1631/1632/1633/1634/1635/1636/1637/1638/1639/1640/1641/1642/1643/1644/1645/1646/1647/1648/1649/1650/1651/1652/1653/1654/1655/1656/1657/1658/1659/1660/1661/1662/1663/1664/1665/1666/1667/1668/1669/1670/1671/1672/1673/1674/1675/1676/1677/1678/1679/1680/1681/1682/1683/1684/1685/1686/1687/1688/1689/1690/1691/1692/1693/1694/1695/1696/1697/1698/1699/1700/1701/1702/1703/1704/1705/1706/1707/1708/1709/1710/1711/1712/1713/1714/1715/1716/1717/1718/1719/1720/1721/1722/1723/1724/1725/1726/1727/1728/1729/1730/1731/1732/1733/1734/1735/1736/1737/1738/1739/1740/1741/1742/1743/1744/1745/1746/1747/1748/1749/1750/1751/1752/1753/1754/1755/1756/1757/1758/1759/1760/1761/1762/1763/1764/1765/1766/1767/1768/1769/1770/1771/1772/1773/1774/1775/1776/1777/1778/1779/1780/1781/1782/1783/1784/1785/1786/1787/1788/1789/1790/1791/1792/1793/1794/1795/1796/1797/1798/1799/1800/1801/1802/1803/1804/1805/1806/1807/1808/1809/1810/1811/1812/1813/1814/1815/1816/1817/1818/1819/1820/1821/1822/1823/1824/1825/1826/1827/1828/1829/1830/1831/1832/1833/1834/1835/1836/1837/1838/1839/1840/1841/1842/1843/1844/1845/1846/1847/1848/1849/1850/1851/1852/1853/1854/1855/1856/1857/1858/1859/1860/1861/1862/1863/1864/1865/1866/1867/1868/1869/1870/1871/1872/1873/1874/1875/1876/1877/1878/1879/1880/1881/1882/1883/1884/1885/1886/1887/1888/1889/1890/1891/1892/1893/1894/1895/1896/1897/1898/1899/1900/1901/1902/1903/1904/1905/1906/1907/1908/1909/1910/1911/1912/1913/1914/1915/1916/1917/1918/1919/1920/1921/1922/1923/1924/1925/1926/1927/1928/1929/1930/1931/1932/1933/1934/1935/1936/1937/1938/1939/1940/1941/1942/1943/1944/1945/1946/1947/1948/1949/1950/1951/1952/1953/1954/1955/1956/1957/1958/1959/1960/1961/1962/1963/1964/1965/1966/1967/1968/1969/1970/1971/1972/1973/1974/1975/1976/1977/1978/1979/1980/1981/1982/1983/1984/1985/1986/1987/1988/1989/1990/1991/1992/1993/1994/1995/1996/1997/1998/1999/2000/2001/2002/2003/2004/2005/2006/2007/2008/2009/2010/2011/2012/2013/2014/2015/2016/2017/2018/2019/2020/2021/2022/2023/2024/2025/2026/2027/2028/2029/2030/2031/2032/2033/2034/2035/2036/2037/2038/2039/2040/2041/2042/2043/2044/2045/2046/2047/2048/2049/2050/2051/2052/2053/2054/2055/2056/2057/2058/2059/2060/2061/2062/2063/2064/2065/2066/2067/2068/2069/2070/2071/2072/2073/2074/2075/2076/2077/2078/2079/2080/2081/2082/2083/2084/2085/2086/2087/2088/2089/2090/2091/2092/2093/2094/2095/2096/2097/2098/2099/2100/2101/2102/2103/2104/2105/2106/2107/2108/2109/2110/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UIC-350-1:12 Simple Turnout

Suvarnabhumi Airport Rail Link And The City Terminal Of Thailand

# UIC60-350-1:12 Simple Turnout

(UIC60B Switch rail | | Frog  Groove check rail | |  Clip  Pre-stressed concrete sleepers | | Ballastless track)

PLAN NO. ZX 9710

China Railway Engineering Consultants Group

AUGUST , 2009 Beijing





The gauge block for the plate

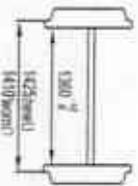
No.13 gauge blocks should be installed on gauge line side of the rail.No.11 on another.

For the frog.No.13 gauge blocks are installed on one side and No.11 on another.

1. The value of adjusting height between -5mm and +10mm, installed 17mm gauge blocks.
  2. The value of adjusting height between +10mm and +15mm, installed 12mm gauge blocks (ordered in addition).
  3. The value of adjusting height between +15mm and +25mm, installed 5mm gauge blocks (ordered in addition).
- No.7-17, 9-17, 15-17, 17-17 gauge blocks are spare.

9). The rail cant is 1:40.

10. The wheel set data of turnout is designed as follow. If changed dimension of wheel set, should be checked up flangeway dimension of turnout.



11. The frog is checked as follow:

The distance between the gauge line of the check rail to the gauge line of the point rail is not less than 1395.

The distance between the gauge line of the check rail to the gauge line of the wing rail is not more than 1350mm.

12. 5mm rubber plates are set under the rail and frog, 7mm rubber plates are set under the check rail plate, 10mm rubber plates are set under the other the plate, 5mm adjusting plates are set under the rubber plates.

13. The adjusting pad is adopted under the the plate. It's value of adjusting height is -5mm+25mm. The others except solid plate and check rail plate maybe adjusted under the rail.It's value of adjusting height is not more than 5mm, the adjusting pad should be ordered in addition is according to the position of adjusting height and the value of adjusting height.

14. The end of closer turnout track check rail stock rail is close with the sleeper, so this stock rail should be welded with roadway match rail at first, then locking the turnout. The builder should pay attention to the sequence of welding.

15. Track circuit is designed in this turnout, the insulated joint is used glued insulated, the gap is 6mm.

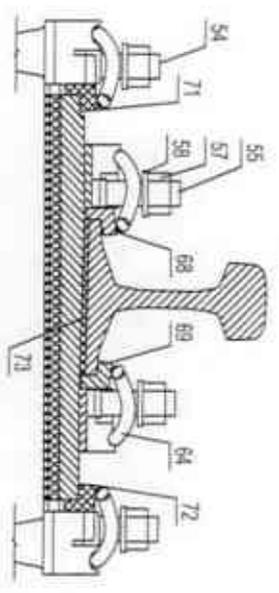
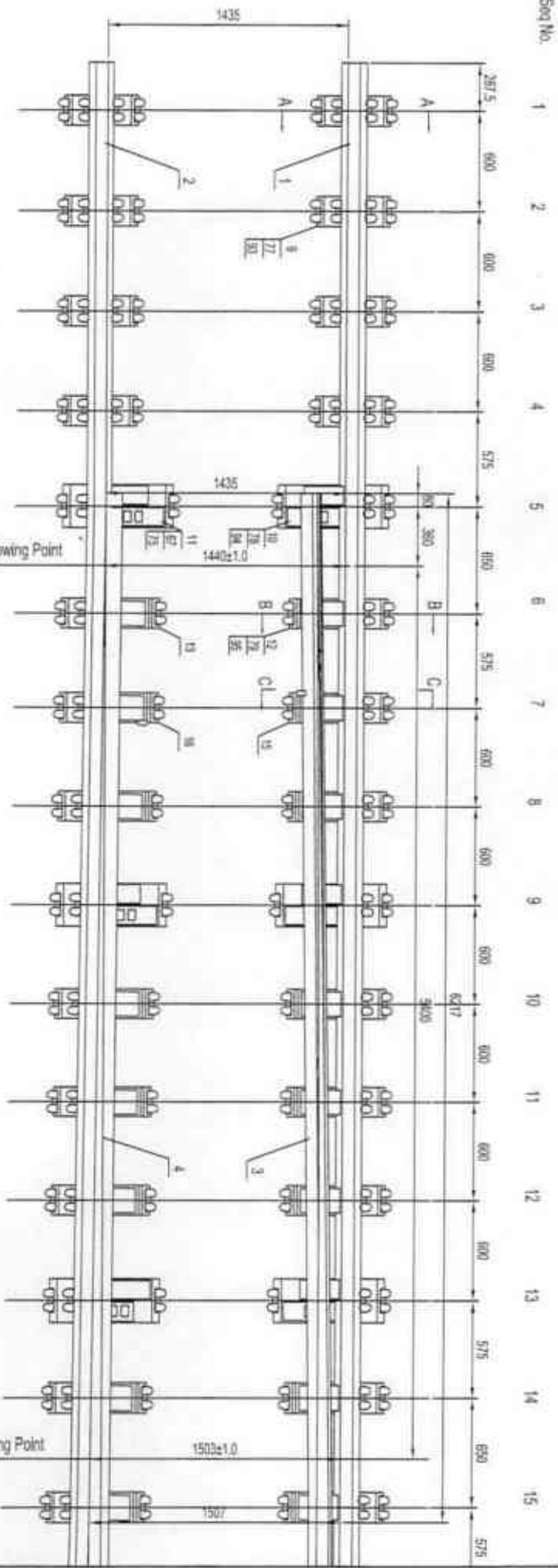
16. The drawing are designated to the right hand turnout,In case of left hand turnout should be laid symmetrically.

17. TB/T412 "The turnout technical conditions of standard gauge railway" is compiled in these drawing.

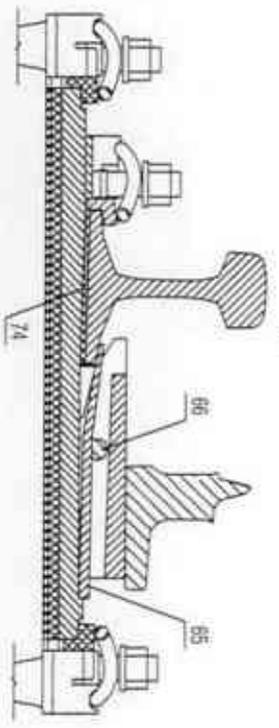




Seq No.



AA  
15



B-B  
15

CONTRACTOR: THE ASSOCIATED CONTRACTORS  
 JACOBS  
 ADVISOR: AECOM ENGINEERING CONSULTANTS (THAI) LTD.  
 PROJECT: AIRPORT RAIL LINK (ARL)  
 CONTRACT NO. (A) 10  
 DRAWING NO. (A) 1011-8  
 SHEET NO. 8 OF 15  
 DATE: 15/01/2010

PROJECT: AIRPORT RAIL LINK (ARL)  
 CONTRACTOR: THE ASSOCIATED CONTRACTORS  
 ADVISOR: AECOM ENGINEERING CONSULTANTS (THAI) LTD.  
 PROJECT: AIRPORT RAIL LINK (ARL)  
 CONTRACT NO. (A) 10  
 DRAWING NO. (A) 1011-8  
 SHEET NO. 8 OF 15  
 DATE: 15/01/2010

DESIGNATOR

FORM No.	200701-4
REVISION	
DATE	
BY	
CHECKED	
APPROVED	

BANGKOK AIRPORT RAIL LINK AND CITY AIR TERMINAL  
 SYSTEM TRACKWORK  
 SCALE: 1:25  
 TITLE: AIRPORT RAIL LINK SYSTEM TRACKWORK  
 UIC60-550-1118 single turnout  
 Switch layout  
 ARL (TRW)-131E-FAGKCOZ\_8101-8\_A SHEET 8 OF 15

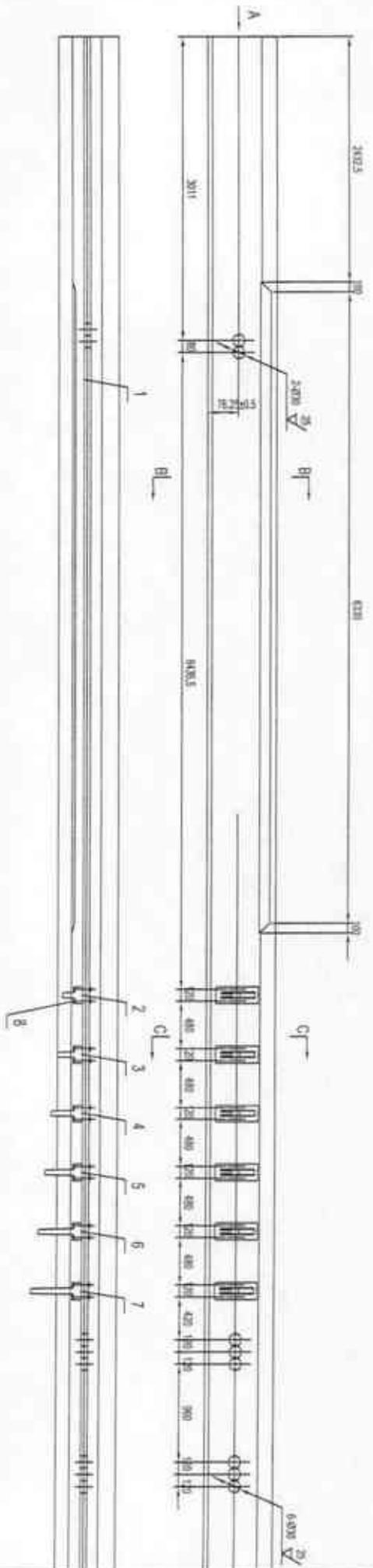




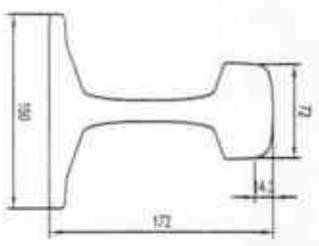
No.	Drawing No.	Description	Unit	Material	Weight		No.
					Single	Total	
1	201001	Reinforcement 10x15	1		800	800	
2	201002	Reinforcement 10x25	1		885	885	
3	201003	Reinforcement 13x20	1		942	942	
4	201004	Reinforcement 13x25	1		942	942	
5	201005	Reinforcement 16x15	1	21220-450	274	274	
6	201006	Reinforcement 17x15	1	21220-450	321	321	
7	201007	Reinforcement 18x15	1	21220-450	378	378	
8	201008	Reinforcement 19x15	1	21220-450	435	435	
9	201009	Reinforcement A	8		188	144	
10	201010	Reinforcement B	4		478	190	
11	201011	Reinforcement C	4		478	190	
12	201012	Reinforcement D	11		313	269	
13	201013	Reinforcement E	7		353	231	
14	201014	Reinforcement F	4		313	134	
15	201015	Reinforcement G	1		367	367	
16	201016	Reinforcement H	1		367	367	
17	201017	Reinforcement I	1		367	367	
18	201018	Reinforcement J	1		367	367	
19	201019	Reinforcement K	1		620	620	
20	201020	Reinforcement L	1		620	620	
21	201021	Reinforcement M	1		620	620	
22	201022	Reinforcement N	1		620	620	
23	201023	Reinforcement O	1		620	620	
24	201024	Reinforcement P	1		620	620	
25	201025	Reinforcement Q	1		620	620	
26	201026	Reinforcement R	1		620	620	
27	201027	Reinforcement S	1		620	620	
28	201028	Reinforcement T	1		620	620	
29	201029	Reinforcement U	1		620	620	
30	201030	Reinforcement V	1		620	620	
31	201031	Reinforcement W	1		620	620	
32	201032	Reinforcement X	1		620	620	
33	201033	Reinforcement Y	1		620	620	
34	201034	Reinforcement Z	1		620	620	
35	201035	Reinforcement AA	1		620	620	
36	201036	Reinforcement AB	1		620	620	
37	201037	Reinforcement AC	1		620	620	

No.	Drawing No.	Description	Unit	Material	Weight		No.
					Single	Total	
38	201038	Reinforcement AD	1		620	620	
39	201039	Reinforcement AE	1		620	620	
40	201040	Reinforcement AF	1		620	620	
41	201041	Reinforcement AG	1		620	620	
42	201042	Reinforcement AH	1		620	620	
43	201043	Reinforcement AI	1		620	620	
44	201044	Reinforcement AJ	1		620	620	
45	201045	Reinforcement AK	1		620	620	
46	201046	Reinforcement AL	1		620	620	
47	201047	Reinforcement AM	1		620	620	
48	201048	Reinforcement AN	1		620	620	
49	201049	Reinforcement AO	1		620	620	
50	201050	Reinforcement AP	1		620	620	
51	201051	Reinforcement AQ	1		620	620	
52	201052	Reinforcement AR	1		620	620	
53	201053	Reinforcement AS	1		620	620	
54	201054	Reinforcement AT	1		620	620	
55	201055	Reinforcement AU	1		620	620	
56	201056	Reinforcement AV	1		620	620	
57	201057	Reinforcement AW	1		620	620	
58	201058	Reinforcement AX	1		620	620	
59	201059	Reinforcement AY	1		620	620	
60	201060	Reinforcement AZ	1		620	620	
61	201061	Reinforcement BA	1		620	620	
62	201062	Reinforcement BB	1		620	620	
63	201063	Reinforcement BC	1		620	620	
64	201064	Reinforcement BD	1		620	620	
65	201065	Reinforcement BE	1		620	620	
66	201066	Reinforcement BF	1		620	620	
67	201067	Reinforcement BG	1		620	620	
68	201068	Reinforcement BH	1		620	620	
69	201069	Reinforcement BI	1		620	620	
70	201070	Reinforcement BJ	1		620	620	
71	201071	Reinforcement BK	1		620	620	
72	201072	Reinforcement BL	1		620	620	
73	201073	Reinforcement BM	1		620	620	
74	201074	Reinforcement BN	1		620	620	

No.	Drawing No.	Description	Unit	Material	Weight		No.
					Single	Total	
75	201075	Reinforcement BO	1		620	620	
76	201076	Reinforcement BP	1		620	620	
77	201077	Reinforcement BQ	1		620	620	
78	201078	Reinforcement BR	1		620	620	
79	201079	Reinforcement BS	1		620	620	
80	201080	Reinforcement BT	1		620	620	
81	201081	Reinforcement BU	1		620	620	
82	201082	Reinforcement BV	1		620	620	
83	201083	Reinforcement BW	1		620	620	
84	201084	Reinforcement BX	1		620	620	
85	201085	Reinforcement BY	1		620	620	
86	201086	Reinforcement BZ	1		620	620	
87	201087	Reinforcement CA	1		620	620	
88	201088	Reinforcement CB	1		620	620	
89	201089	Reinforcement CC	1		620	620	
90	201090	Reinforcement CD	1		620	620	
91	201091	Reinforcement CE	1		620	620	
92	201092	Reinforcement CF	1		620	620	
93	201093	Reinforcement CG	1		620	620	
94	201094	Reinforcement CH	1		620	620	
95	201095	Reinforcement CI	1		620	620	
96	201096	Reinforcement CJ	1		620	620	
97	201097	Reinforcement CK	1		620	620	
98	201098	Reinforcement CL	1		620	620	
99	201099	Reinforcement CM	1		620	620	
100	201100	Reinforcement CN	1		620	620	
101	201101	Reinforcement CO	1		620	620	
102	201102	Reinforcement CP	1		620	620	
103	201103	Reinforcement CQ	1		620	620	
104	201104	Reinforcement CR	1		620	620	
105	201105	Reinforcement CS	1		620	620	
106	201106	Reinforcement CT	1		620	620	
107	201107	Reinforcement CU	1		620	620	
108	201108	Reinforcement CV	1		620	620	
109	201109	Reinforcement CW	1		620	620	
110	201110	Reinforcement CX	1		620	620	
111	201111	Reinforcement CY	1		620	620	
112	201112	Reinforcement CZ	1		620	620	
113	201113	Reinforcement DA	1		620	620	
114	201114	Reinforcement DB	1		620	620	
115	201115	Reinforcement DC	1		620	620	
116	201116	Reinforcement DD	1		620	620	
117	201117	Reinforcement DE	1		620	620	
118	201118	Reinforcement DF	1		620	620	
119	201119	Reinforcement DG	1		620	620	
120	201120	Reinforcement DH	1		620	620	
121	201121	Reinforcement DI	1		620	620	
122	201122	Reinforcement DJ	1		620	620	
123	201123	Reinforcement DK	1		620	620	
124	201124	Reinforcement DL	1		620	620	
125	201125	Reinforcement DM	1		620	620	
126	201126	Reinforcement DN	1		620	620	
127	201127	Reinforcement DO	1		620	620	
128	201128	Reinforcement DP	1		620	620	
129	201129	Reinforcement DQ	1		620	620	
130	201130	Reinforcement DR	1		620	620	
131	201131	Reinforcement DS	1		620	620	
132	201132	Reinforcement DT	1		620	620	
133	201133	Reinforcement DU	1		620	620	
134	201134	Reinforcement DV	1		620	620	
135	201135	Reinforcement DW	1		620	620	
136	201136	Reinforcement DX	1		620	620	
137	201137	Reinforcement DY	1		620	620	
138	201138	Reinforcement DZ	1		620	620	
139	201139	Reinforcement EA	1		620	620	
140	201140	Reinforcement EB	1		620	620	
141	201141	Reinforcement EC	1		620	620	
142	201142	Reinforcement ED	1		620	620	
143	201143	Reinforcement EE	1		620	620	
144	201144	Reinforcement EF	1		620	620	
145	201145	Reinforcement EG	1		620	620	
146	201146	Reinforcement EH	1		620	620	
147	201147	Reinforcement EI	1		620	620	
148	201148	Reinforcement EJ	1		620	620	
149	201149	Reinforcement EK	1		620	620	
150	201150	Reinforcement EL	1		620	620	
151	201151	Reinforcement EM	1		620	620	
152	201152	Reinforcement EN	1		620	620	
153	201153	Reinforcement EO	1		620	620	
154	201154	Reinforcement EP	1		620	620	
155	201155	Reinforcement EQ	1		620	620	
156	201156	Reinforcement ER	1		620	620	
157	201157	Reinforcement ES	1		620	620	
158	201158	Reinforcement ET	1		620	620	
159	201159	Reinforcement EU	1		620	620	
160	201160	Reinforcement EV	1		620	620	
161	201161	Reinforcement EW	1		620	620	
162	201162	Reinforcement EX	1		620	620	
163	201163	Reinforcement EY	1		620	620	
164	201164	Reinforcement EZ	1		620	620	
165	201165	Reinforcement FA	1		620	620	
166	201166	Reinforcement FB	1		620	620	
167	201167	Reinforcement FC	1		620	620	
168	201168	Reinforcement FD	1		620	620	
169	201169	Reinforcement FE	1		620	620	
170	201170	Reinforcement FF	1		620	620	
171	201171	Reinforcement FG	1		620	620	
172	201172	Reinforcement FH	1		620	620	
173	201173	Reinforcement FI	1		620	620	
174	201174	Reinforcement FJ	1		620	620	
175	201175	Reinforcement FK	1		620	620	
176	201176	Reinforcement FL	1		620	620	
177	201177	Reinforcement FM	1		620	620	
178	201178	Reinforcement FN	1		620	620	
179	201179	Reinforcement FO	1		620	620	
180	201180	Reinforcement FP	1		620	620	
181	201181	Reinforcement FQ	1		620	620	
182	201182	Reinforcement FR	1		620	620	
183	201183	Reinforcement FS	1		620	620	
184	201184	Reinforcement FT	1		620	620	
185	201185	Reinforcement FU	1		620	620	
186	201186	Reinforcement FV	1		620	620	
187	201187	Reinforcement FW	1		620	620	
188	201188	Reinforcement FX	1		620	620	
189	201189	Reinforcement FY	1		620	620	
190	201190	Reinforcement FZ	1		62		



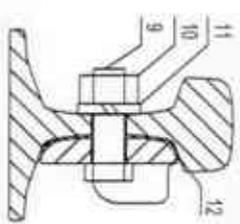
A Direction  
1/4



B-B  
1/4



C-C  
1/4



CONTRACTOR



CONSTRUCTION SUPERVISION COMPANY

ABC ADVANT ENGINEERING CONSULTANTS LTD.  
THAI ENGINEERING CONSULTANTS (INTERNATIONAL) LTD.  
SANGHVI CONSULTANTS (INTERNATIONAL)  
PAKONG ENGINEERING CONSULTANTS (INTERNATIONAL)  
SRI ENGINEERING CONSULTANTS (INTERNATIONAL)  
SRI ENGINEERING CONSULTANTS (INTERNATIONAL)  
SRI ENGINEERING CONSULTANTS (INTERNATIONAL)

CONTRACTOR

ABC ADVANT ENGINEERING CONSULTANTS LTD.  
THAI ENGINEERING CONSULTANTS (INTERNATIONAL) LTD.  
SANGHVI CONSULTANTS (INTERNATIONAL)  
PAKONG ENGINEERING CONSULTANTS (INTERNATIONAL)  
SRI ENGINEERING CONSULTANTS (INTERNATIONAL)  
SRI ENGINEERING CONSULTANTS (INTERNATIONAL)  
SRI ENGINEERING CONSULTANTS (INTERNATIONAL)

ORGANIZATION

NO. 1	NO. 2	NO. 3	NO. 4	NO. 5	NO. 6	NO. 7	NO. 8	NO. 9	NO. 10	NO. 11	NO. 12

BUYARABHARU AIRPORT RAIL LINK AND CITY AIR TERMINAL SYSTEM TRACKWORK

SECTION FOR TITLE OF AS-BUILT / AS-CONSTRUCTED DRAWING  
UNC00-350-112 atamp; turnout  
Straight track rail  
MR. (IRW-1)E+G&CDZ, B101-R, A/sect 1119 of



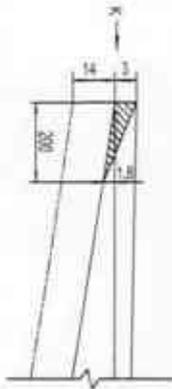




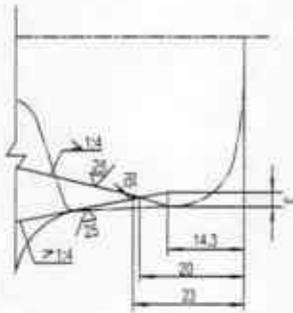




Top Supplementary cutting detail drawing of switch rail



K direction

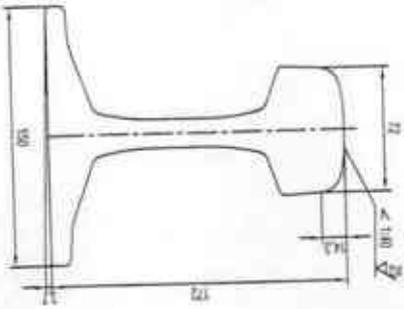


Note:

1. The switch rail is made of UIC50B rail.
2. Total length of switch rail is 13000mm.
3. All holes should be chamfered 1mmx45°.
4. The running surface of the switch rail should be quenched from firm to the end.
5. These drawings are designed to the right hand turnout, in case of left hand turnout the manufacture should be made symmetrically.
6. Weight is 942kg.

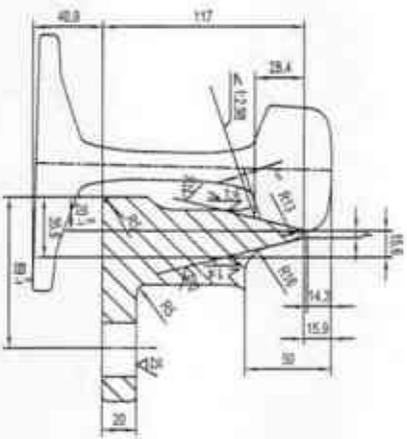
H Direction

1:3



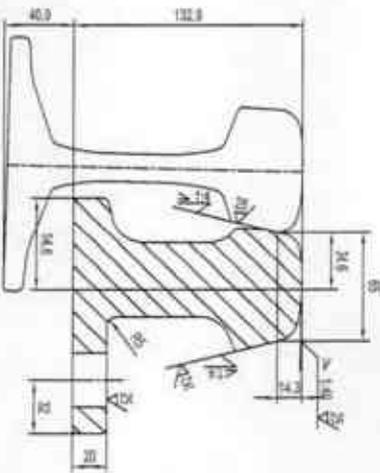
M-M

1:3



N-N

1:3



ENGINEER



KINGDOM OF THAILAND  
MINISTRY OF TRANSPORT  
STATE RAILWAY OF THAILAND

CONSTRUCTION APPROVING COMPANY

SAIC  
SAIC ENGINEERING CONSULTANTS (THAI) CO., LTD.  
SAIC ENGINEERING CONSULTANTS (THAI) CO., LTD.  
SAIC ENGINEERING CONSULTANTS (THAI) CO., LTD.  
SAIC ENGINEERING CONSULTANTS (THAI) CO., LTD.

MANUFACTURER

SAIC ENGINEERING CONSULTANTS (THAI) CO., LTD.  
SAIC ENGINEERING CONSULTANTS (THAI) CO., LTD.  
SAIC ENGINEERING CONSULTANTS (THAI) CO., LTD.  
SAIC ENGINEERING CONSULTANTS (THAI) CO., LTD.

OPERATOR

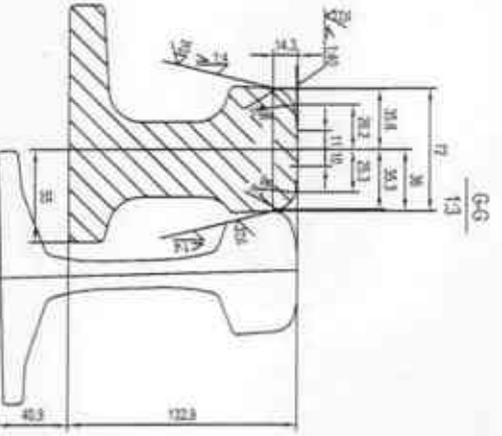
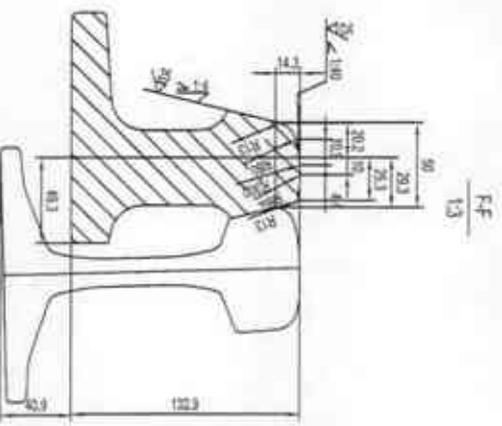
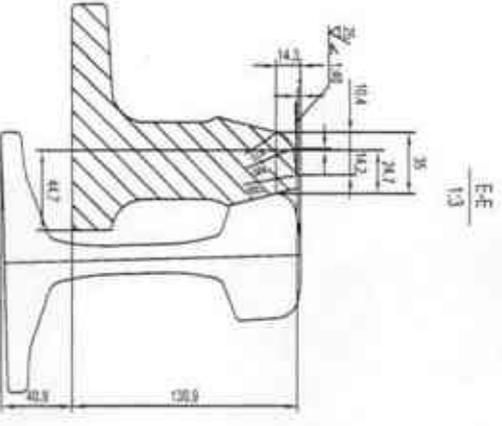
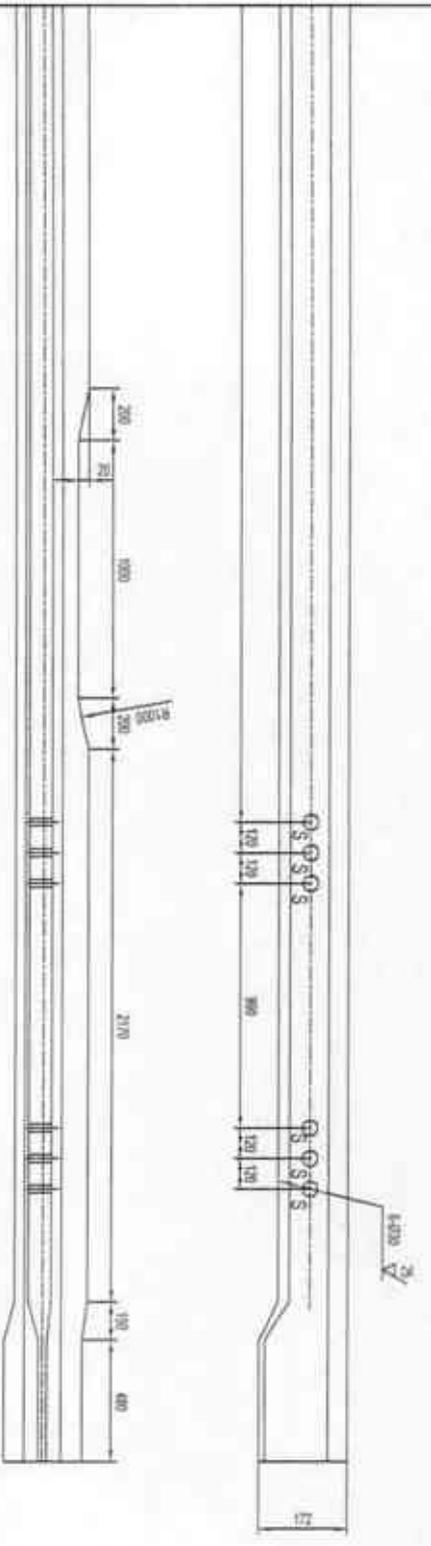
SAIC ENGINEERING CONSULTANTS (THAI) CO., LTD.  
SAIC ENGINEERING CONSULTANTS (THAI) CO., LTD.  
SAIC ENGINEERING CONSULTANTS (THAI) CO., LTD.  
SAIC ENGINEERING CONSULTANTS (THAI) CO., LTD.

SIVAKHABHIND AIRPORT RAIL LINK AND CITY AIR TERMINAL  
SYSTEM TRACKWORK

SOME FOR THE TITLE OF ASSEMBLY (ASSEMBLY/CONCRETE/STEEL/RANGING)  
UC050-500-112 straight turnout  
Curved switch rail

APR. (IRW-1)TE+AG&C02-8101-B-A





1. CONTRACTOR: SIVARANJINI AIRPORT RAIL LINE AND CITY AIR TERMINAL SYSTEM TRACKWORK  
 2. TITLE OF AS-BUILT AS-CONSTRUCTED DRAWING: UIC60-800-112 straight turnout  
 3. DRAWING NO.: 11E1AGK02\_8101-B\_A (part 1 of 4)



KINGDOM OF THAILAND  
 MINISTRY OF TRANSPORT  
 STATE RAILWAY OF THAILAND

CONTRACTOR:  
 SIVARANJINI AIRPORT RAIL LINE AND CITY AIR TERMINAL SYSTEM TRACKWORK  
 11E1AGK02\_8101-B\_A (part 1 of 4)

NO.	DATE	DESCRIPTION
1	2023-11-15	ISSUED FOR CONSTRUCTION
2	2023-11-15	ISSUED FOR CONSTRUCTION
3	2023-11-15	ISSUED FOR CONSTRUCTION
4	2023-11-15	ISSUED FOR CONSTRUCTION
5	2023-11-15	ISSUED FOR CONSTRUCTION
6	2023-11-15	ISSUED FOR CONSTRUCTION
7	2023-11-15	ISSUED FOR CONSTRUCTION
8	2023-11-15	ISSUED FOR CONSTRUCTION
9	2023-11-15	ISSUED FOR CONSTRUCTION
10	2023-11-15	ISSUED FOR CONSTRUCTION

11E1AGK02\_8101-B\_A (part 1 of 4)



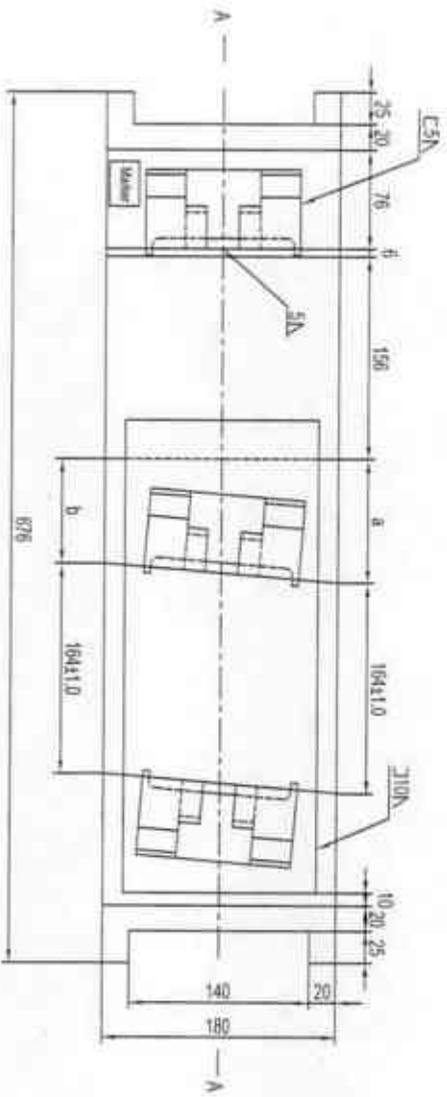
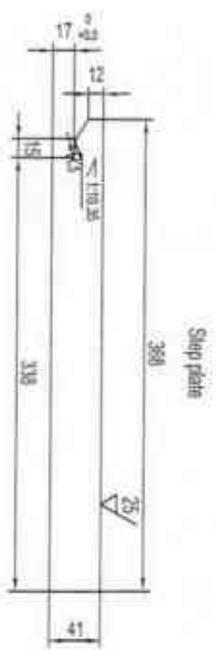
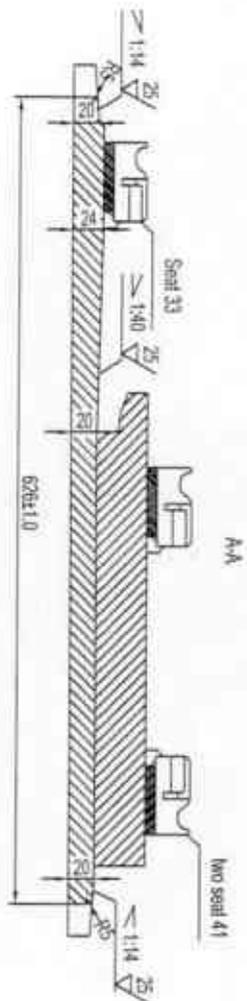












Seq No	a	b	weight (kg)	
			plate weight	total weight
19	30	30	22.9	45.0
20	55	49	22.9	45.0
21	74	88	22.9	45.0
22	95	89	22.9	45.0

- Note:
1. The material of the plate and stop plate is Q235.
  2. The seat please look at "ZX 9715-5".
  3. The rail type, the turnout number, seq No and left-hand or right-hand should be marked on the position as shown in the figure.
  4. The drawing was designed to the right hand turnout. In case of left hand turnout the manufacture should be made symmetrically.

**ENGINEER**

**KINGDOM OF THAILAND**  
**MINISTRY OF TRANSPORT**  
**STATE RAILWAY OF THAILAND**

**CONSTRUCTION SUPERVISOR (CONTRACTOR)**  
**MR. ABC** (NAME AND ADDRESS) (PHONE NO.) (E-MAIL)  
**MR. XYZ** (NAME AND ADDRESS) (PHONE NO.) (E-MAIL)

**CONTRACTOR**  
**MR. DEF** (NAME AND ADDRESS) (PHONE NO.) (E-MAIL)  
**MR. GHI** (NAME AND ADDRESS) (PHONE NO.) (E-MAIL)

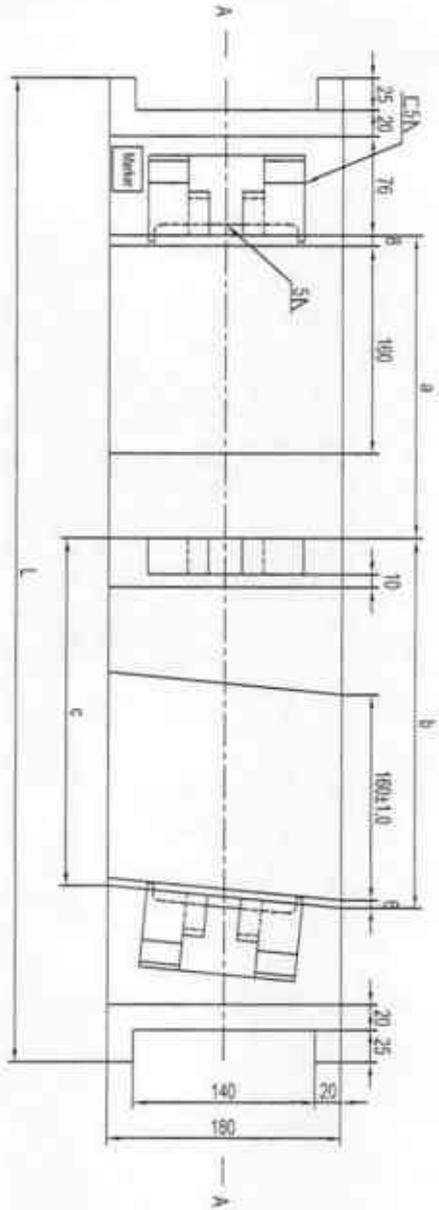
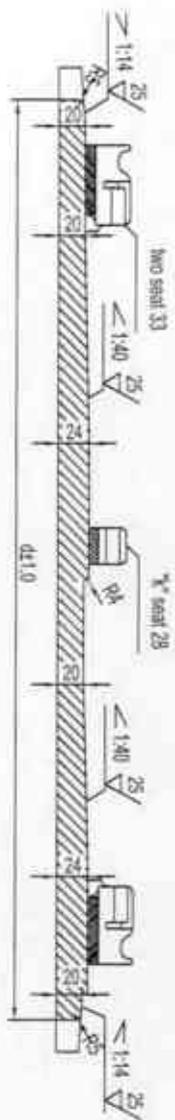
**ORGANIZATION**  
**GOVERNMENT AIRPORT RAIL LINE AND CITY AIR TERMINAL**  
**SYSTEM TRACKWORK**

**WORK No. 14**  
**TITLE OF AS-BUILT / AS-CONSTRUCTED DRAWING:**  
**TRACK-350-11R simple turnout**  
**Seq No. 19-22 match the plate**

**DATE: 2020/08/01**  
**SCALE: 1:100**  
**APP. (TRM-1) TE+AC&CDZ 3101-B A**  
**SEAL (TRM-1)**







Seq No	a	b	c	d	L	weight (kg)	
						plate weight	total weight
30	200	230	223	620	670	22.7	26.6
31	212	241	234	643	693	23.5	27.4
32	224	253	246	667	717	24.3	28.2

- Note:
1. The material of the plate is Q235.
  2. The seat plate look at "ZX 97 16-S", "K" seat look at "ZX 97 16-R".
  3. The rail type, the turnout number, seq No and left-hand or right-hand should be marked on the position as shown in the figure.
  4. The drawing are designed to the right hand turnout, in case of left hand turnout the manufacturer should be made symmetrically.

PROJECT NAME: **KINGDOM OF THAILAND**  
**MINISTRY OF TRANSPORT**  
**STATE RAILWAY OF THAILAND**

CONSULTING ENGINEER: **AMC ADVANCED ENGINEERING CONSULTANTS**  
**AMC ADVANCED ENGINEERING CONSULTANTS, LTD.**  
 25/1, Phahonyothin Road, Phahonyothin, Bangkok 10310, Thailand  
 TEL: 02-261-1111 FAX: 02-261-1112

DESIGNER: **SCS**  
**SCS CONSULTANTS ENGINEERING**  
 100/100, Phahonyothin Road, Phahonyothin, Bangkok 10310, Thailand  
 TEL: 02-261-1111 FAX: 02-261-1112

CONTRACT NO.: **SCS/00-360-118**

PROJECT TITLE: **RAIL LINK AND CITY AIR TERMINAL SYSTEM TRACKWORK**

SECTION: **URC00-360-118**

DRAWING TITLE: **simple turnout**

SCALE: **1:100**

DATE: **APRIL 2008**

PROJECT NO.: **APRIL TRW-131E+AC&COZ\_8101-8**

DATE: **APR 2008**











Sheet No.	Drawing No.	Description	Quantity	Material	Weighting		Note
					single	total	
1	ZX 9710-22	Frog	1		1100	1100	
2	ZX 9710-23	Through track check rail	1	UIC33 rail	243	243	
3	ZX 9710-24	Turnout track check rail	1	UIC33 rail	168	168	
4	ZX 9710-22	Check rail for plate	13		45.5	592	
5	ZX 9710-25	Check rail for plate	9		45.5	410	
6	ZX 9710-26	The plate	1		39.8	39.8	
7	ZX 9710-26	The plate	1		38.3	38.3	
8	ZX 9710-26	The plate	1		36.8	36.8	
9	ZX 9710-26	The plate	1		35.2	35.2	
10	ZX 9710-26	The plate	1		33.6	33.6	
11	ZX 9710-26	The plate	1		32.0	32	
12	ZX 9710-27	The plate	1		28.1	28.1	
13	ZX 9710-27	The plate	1		26.3	26.3	
14	ZX 9710-28	The plate	2		25.3	50.6	
15	ZX 9710-28	The plate	6		26.4	158	
16	ZX 9710-29	The plate	1		25.6	25.6	
17	ZX 9710-29	The plate	1		27.3	27.3	
18	ZX 9710-30	The plate	1		31.2	31.2	
19	ZX 9710-30	The plate	1		32.9	32.9	
20	ZX 9710-30	The plate	1		34.5	34.5	
21	ZX 9710-30	The plate	1		36.2	36.2	

Gross weight of steel is 3700kg.

Sheet No.	Drawing No.	Description	Quantity	Material	Weighting		Note
					single	total	
22	ZX 9710-30	The plate	1		37.8	37.8	
23	ZX 9710-30	The plate	1		39.5	39.5	
24	ZX 9710-19	The plate C	2		18.0	36	
25	ZX 3351-3	8 CW	198	60Si-CVA	0.825	163	
26	ZX 9710-13	RM spring 200	22	60SiMn	1.25	27.5	
27	ZX 9710-14	Key standard 175	22	Q275	0.456	10.0	
28	ZX 9710-10	Adjusting part 140*60* $\frac{3}{2}$	22	Q195	0.182 0.197 0.197	4.33 5.76	
29	ZX 9710-4	Bol M24*60	22		0.405	8.91	
30	ZX 9710-3	Bol M24*60	98		0.376	36.8	
31	ZX 9710-2	Bol M24*75	96		0.391	37.5	
32	ZX 9710-2	Bol M24*65	4		0.436	1.74	
33	ZX 9710-8	Nut M24	22		0.173	3.81	
34	GB 41	Nut M24	198		0.153	30.3	
35	GB 7344	Washer M24	22		0.047	1.03	
36	TB4455.4	Washer	198		0.069	13.7	
37	ZX 9710-7	Orbital dp 140-134-60	1	ZG230-450	2.77	2.77	
38	ZX 9710-7	Orbital dp 55-53-44	1	ZG230-450	1.77	1.77	
39	ZX 9710-7	Orbital dp 67-67-31	1	ZG230-450	1.25	1.25	
40	ZX 9710-7	Orbital dp 117-106-56	1	ZG230-450	2.25	2.25	
41	ZX 9710-15	Gauge block 60.9-11	60	ZG230-450	0.336	20.2	
42	ZX 9710-15	Gauge block 60.15-15	38	ZG230-450	0.512	19.5	



**KINGDOM OF THAILAND**  
**MINISTRY OF TRANSPORT**  
**STATE RAILWAY OF THAILAND**

**CONTRACTOR** : **SIEMENS CONSTRUCTORS**  
**CLIENT** : **RAIL EXPANSION CONSTRUCTORS CO., LTD.**  
**DESIGNER** : **RAIL EXPANSION CONSTRUCTORS CO., LTD.**  
**GENERAL CONTRACTOR** : **SIEMENS CONSTRUCTORS INTERNATIONAL**  
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**GENERAL CONTRACTOR** : **SIEMENS CONSTRUCTORS INTERNATIONAL**

**SIEMENS/RAILWAY AIRPORT RAIL LINK AND CITY AIR TERMINAL**  
**SYSTEM: TRACKWORK**  
**TITLE OF AS-BUILT / AS-CONSTRUCTED DRAWING:**  
**UIC30-350-112 simple turnout**  
**Let for layout of Frog and check rail**  
**ASB (TRW) - SITE + FACTORY - 0101-B - AT sheet 23 of 48**

D. N. N. N. N.

Seq No.	Drawing No.	Description	Quantity	Material	Value (₹)		Note
					single	total	
43	ZX 9716-17	Orange block 6071x17	48	Tempor sign 68	106	5088	
44	ZX 9716-17	Orange block 6071x17	48	Tempor sign 68	117	5616	
45	ZX 9716-26	Rubber pad 60-200-149	56	None	144	8064	
46	ZX 9716-28	Rubber pad 439x200x5	8	*	405	3240	
47	ZX 9716-30	Rubber pad 595x200x7	22	*	652	14344	
48	ZX 9716-30	Rubber pad 991x200x10	1	*	1685	1685	
49	ZX 9716-30	Rubber pad 947x200x10	1	*	1607	1607	
50	ZX 9716-30	Rubber pad 902x200x10	1	*	1528	1528	
51	ZX 9716-30	Rubber pad 856x200x10	1	*	1447	1447	
52	ZX 9716-30	Rubber pad 808x200x10	1	*	1363	1363	
53	ZX 9716-30	Rubber pad 760x200x10	1	*	1278	1278	
54	ZX 9716-30	Rubber pad 714x200x10	9	*	1197	10773	
55	ZX 9716-30	Rubber pad 661x200x10	1	*	1104	1104	
56	ZX 9716-30	Rubber pad 639x200x10	1	*	1086	1086	
57	ZX 9716-30	Rubber pad 689x200x10	1	*	1154	1154	
58	ZX 9716-30	Rubber pad 737x200x10	1	*	1238	1238	
59	ZX 9716-30	Rubber pad 785x200x10	1	*	1322	1322	
60	ZX 9716-30	Rubber pad 833x200x10	1	*	1407	1407	
61	ZX 9716-30	Rubber pad 884x200x10	1	*	1497	1497	
62	ZX 9716-30	Rubber pad 934x200x10	1	None	1584	1584	

The total volume of foam matting rubber is 58500 cm<sup>3</sup>; Jute mat is 31100 cm<sup>3</sup>; Orange nylon mat is 10100 cm<sup>3</sup>.

Seq No.	Drawing No.	Description	Quantity	Material	Value (₹)		Note
					single	total	
63	ZX 9716-30	Rubber pad 984x200x10	1	None	1672	1672	
64	ZX 9716-28	Rubber pad 440x180x10	2	None	609	1218	
65	ZX 9716-26	Adjusting pad 595x200x5	22	None	500	11220	
66	ZX 9716-26	Adjusting pad 991x200x5	1	*	956	956	
67	ZX 9716-26	Adjusting pad 947x200x5	1	*	912	912	
68	ZX 9716-26	Adjusting pad 902x200x5	1	*	867	867	
69	ZX 9716-26	Adjusting pad 856x200x5	1	*	821	821	
70	ZX 9716-26	Adjusting pad 808x200x5	1	*	773	773	
71	ZX 9716-26	Adjusting pad 760x200x5	1	*	725	725	
72	ZX 9716-26	Adjusting pad 714x200x5	9	*	679	6111	
73	ZX 9716-26	Adjusting pad 661x200x5	1	*	626	626	
74	ZX 9716-26	Adjusting pad 639x200x5	1	*	604	604	
75	ZX 9716-26	Adjusting pad 689x200x5	1	*	654	654	
76	ZX 9716-26	Adjusting pad 737x200x5	1	*	702	702	
77	ZX 9716-26	Adjusting pad 785x200x5	1	*	750	750	
78	ZX 9716-26	Adjusting pad 833x200x5	1	*	798	798	
79	ZX 9716-26	Adjusting pad 884x200x5	1	*	849	849	
80	ZX 9716-26	Adjusting pad 934x200x5	1	*	899	899	
81	ZX 9716-26	Adjusting pad 984x200x5	1	*	949	949	
82	ZX 9716-26	Adjusting pad 440x180x5	2	None	361	722	

**KINGDOM OF THAILAND**  
**MINISTRY OF TRANSPORT**  
**STATE RAILWAY OF THAILAND**

CONTRACTOR: **SIYAVARABUDHI AIRPORT RAIL LINK AND CITY AIR TERMINAL SYSTEM TRACKWORK**

CONTRACT NO.: **25710-21**

DATE: **11/11/2019**

PROJECT: **Let for layout of frog and check rail**

REF: **TRW-11TE+AC&C02\_8101-0\_A**

CONTRACTOR: **SIYAVARABUDHI AIRPORT RAIL LINK AND CITY AIR TERMINAL SYSTEM TRACKWORK**

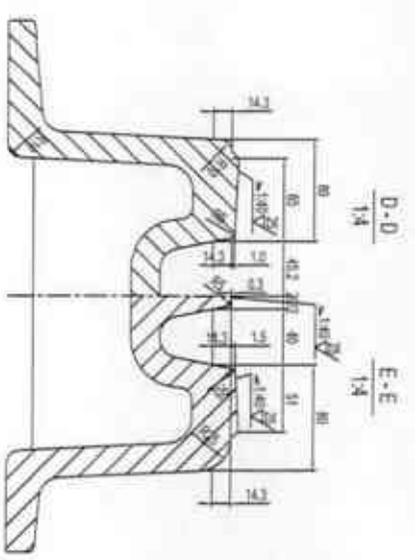
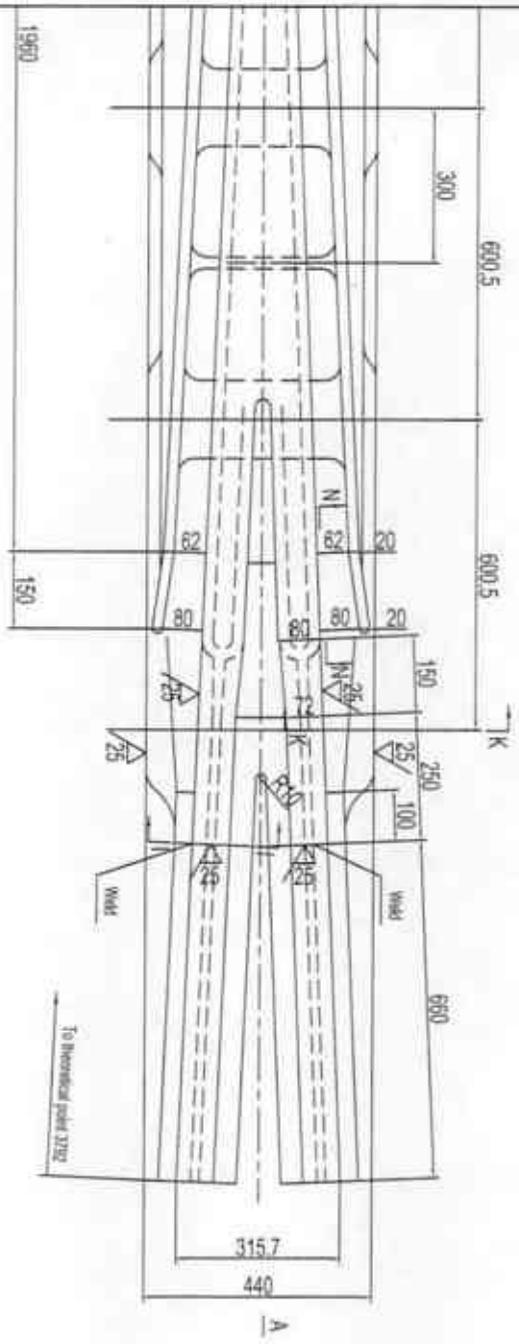
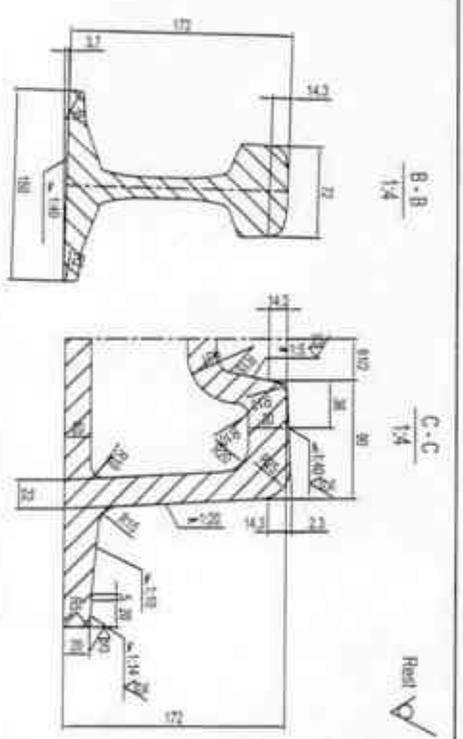
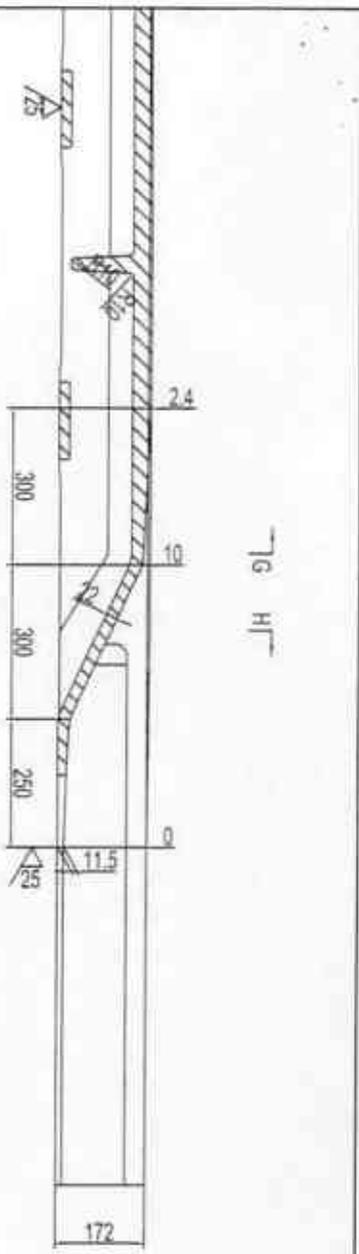
CONTRACT NO.: **25710-21**

DATE: **11/11/2019**

PROJECT: **Let for layout of frog and check rail**

REF: **TRW-11TE+AC&C02\_8101-0\_A**





**ENCLOSURE**

**KINGDOM OF THAILAND**  
**MINISTRY OF TRANSPORT**  
**STATE RAILWAY OF THAILAND**

**CONSULTANT**  
 1. AEC ASIAN ENGINEERING CONSULTANTS CO., LTD.  
 2. T.M.A. THAI ENGINEERING CONSULTANTS CO., LTD.  
 3. SANGHVI CONCEPT CO., LTD.  
 4. PALANI ENGINEERING CONSULTANTS INTERNATIONAL  
 5. WEST ENGINEERING CONSULTANTS CO., LTD.  
 6. CHITRAPHONG ENGINEERING CONSULTANTS LTD.  
 7. S.P. INTERNATIONAL (THAILAND) CO., LTD.

**CONTRACTOR**  
 1. SANGHVI CONCEPT CO., LTD.  
 2. T.M.A. THAI ENGINEERING CONSULTANTS CO., LTD.  
 3. SANGHVI CONCEPT CO., LTD.  
 4. PALANI ENGINEERING CONSULTANTS INTERNATIONAL  
 5. WEST ENGINEERING CONSULTANTS CO., LTD.  
 6. CHITRAPHONG ENGINEERING CONSULTANTS LTD.  
 7. S.P. INTERNATIONAL (THAILAND) CO., LTD.

**ORIGINATOR**  
 1. SANGHVI CONCEPT CO., LTD.  
 2. T.M.A. THAI ENGINEERING CONSULTANTS CO., LTD.  
 3. SANGHVI CONCEPT CO., LTD.  
 4. PALANI ENGINEERING CONSULTANTS INTERNATIONAL  
 5. WEST ENGINEERING CONSULTANTS CO., LTD.  
 6. CHITRAPHONG ENGINEERING CONSULTANTS LTD.  
 7. S.P. INTERNATIONAL (THAILAND) CO., LTD.

**PROJECT INFORMATION**

**PROJECT NAME:** SUVARNAHUMI AIRPORT RAIL LINK AND CITY AIR TERMINAL SYSTEM TRACKWORK

**SCALE:** 1:10

**TITLE OF SHEET / AS-CONSTRUCTED DRAWING:** UIC20-500-1112 simple turnout  
 Frog of frog and check rail

**DATE:** APR. (TRW-1)E+AGACDZ\_8101-01A sheet 31 of 48

Rev. 1

F-F  
1/4

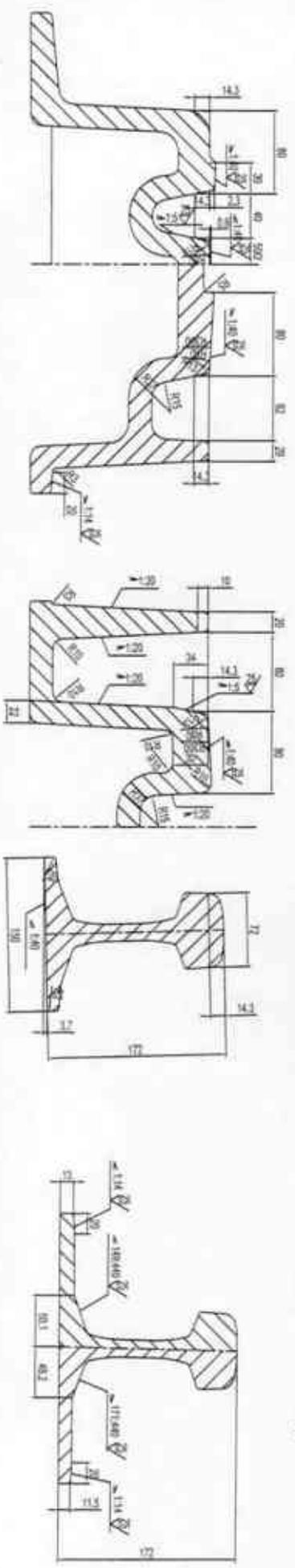
G-G  
1/4

H-H  
1/4

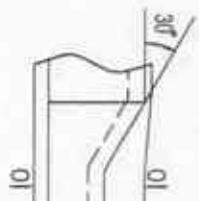
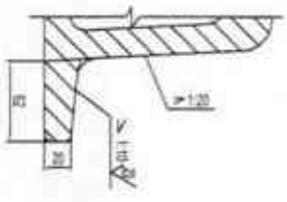
I-I  
1/4

J-J  
1/4

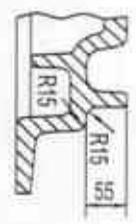
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1/4



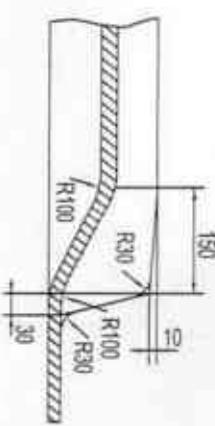
L-L  
1/4



M-M

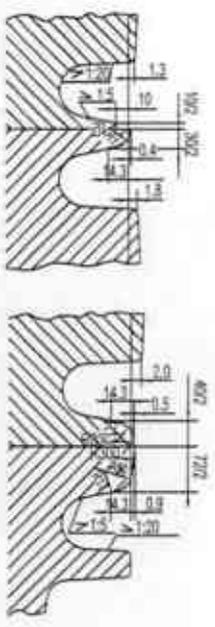


O-O



N-N

Outline of part call at section 10, 20, 40 and 72



- Note
- 1 The frog is made up of solid manganese steel frog and (UC20) rail by welding the mating surfaces of the UC20 rail should be quenched when laid length. The material and mechanical condition of solid manganese steel frog part are according with TBT 447 Technical condition of solid manganese steel frog.
  - 2 The end section size of manganese steel frog is the same as (UC20) rail section.
  - 3 Weight is 1130kg.

**KINGDOM OF THAILAND**  
MINISTRY OF TRANSPORT  
STATE RAILWAY OF THAILAND

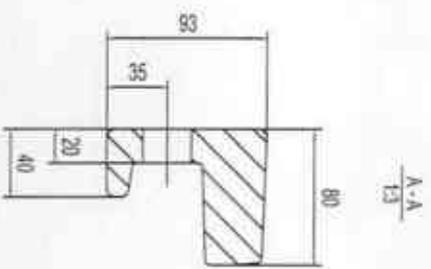
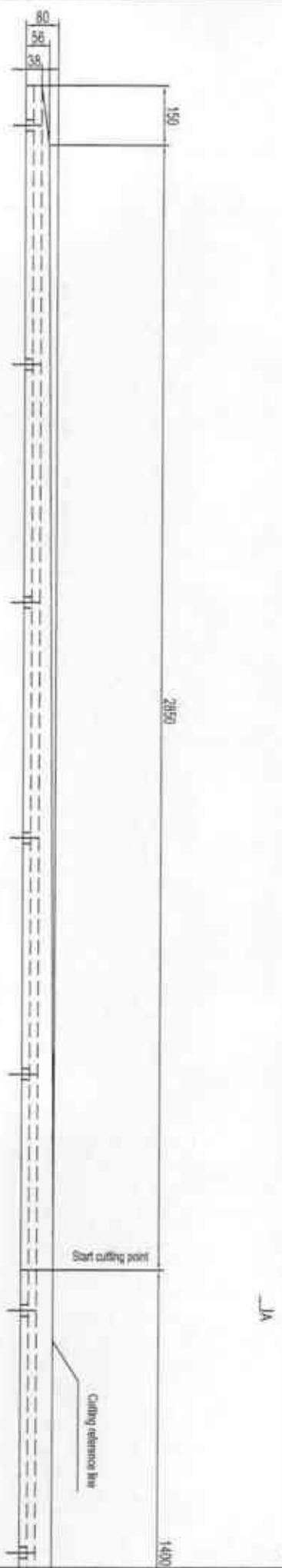
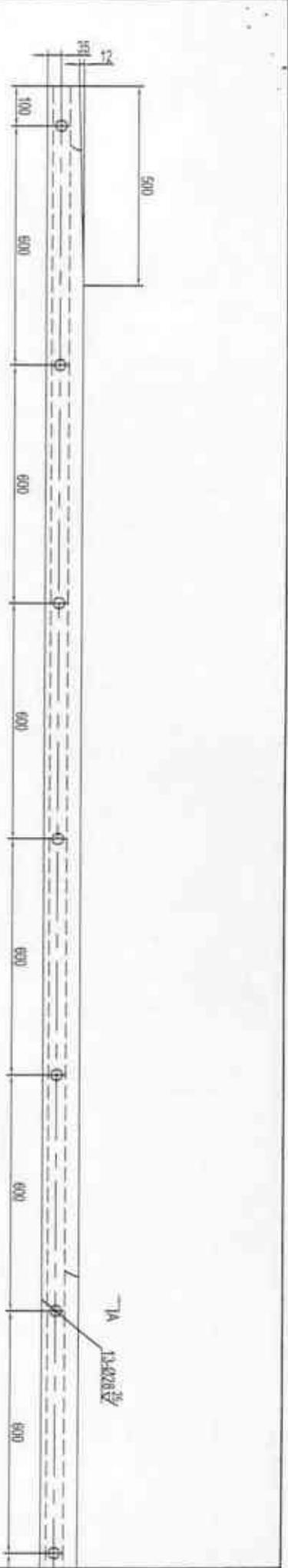
CONSTRUCTION SUPERVISOR CONSULTANTS :  
S.A.C. SAKA ENGINEERING CONSULTANTS CO., LTD.  
S.A.C. SAKA ENGINEERING CONSULTANTS CO., LTD.

CONTRACTOR :  
S.A.C. SAKA ENGINEERING CONSULTANTS CO., LTD.  
S.A.C. SAKA ENGINEERING CONSULTANTS CO., LTD.

ORGANIZATION :

NO.	NAME	DESIGNATION
1	SAKA	CHIEF ENGINEER
2	SAKA	ENGINEER
3	SAKA	ENGINEER
4	SAKA	ENGINEER
5	SAKA	ENGINEER
6	SAKA	ENGINEER
7	SAKA	ENGINEER
8	SAKA	ENGINEER
9	SAKA	ENGINEER
10	SAKA	ENGINEER

SYVAVAHITWAI AIRPORT RAIL LINK AND CITY AIR TERMINAL  
SYSTEM TRACKWORK  
Scale 1:10  
TITLE OF AS-BUILT / AS-CONSTRUCTED DRAWING :  
UC20-350-116 simple turnout  
Frog of frog and check rail  
Date : 2008/04/10  
Rev. : 000000  
APR (THW)-131E+MOC002\_8101-8\_A1 sheet 8 of 89



**RAILWAYS**

**KINGDOM OF THAILAND**  
**MINISTRY OF TRANSPORT**  
**STATE RAILWAY OF THAILAND**

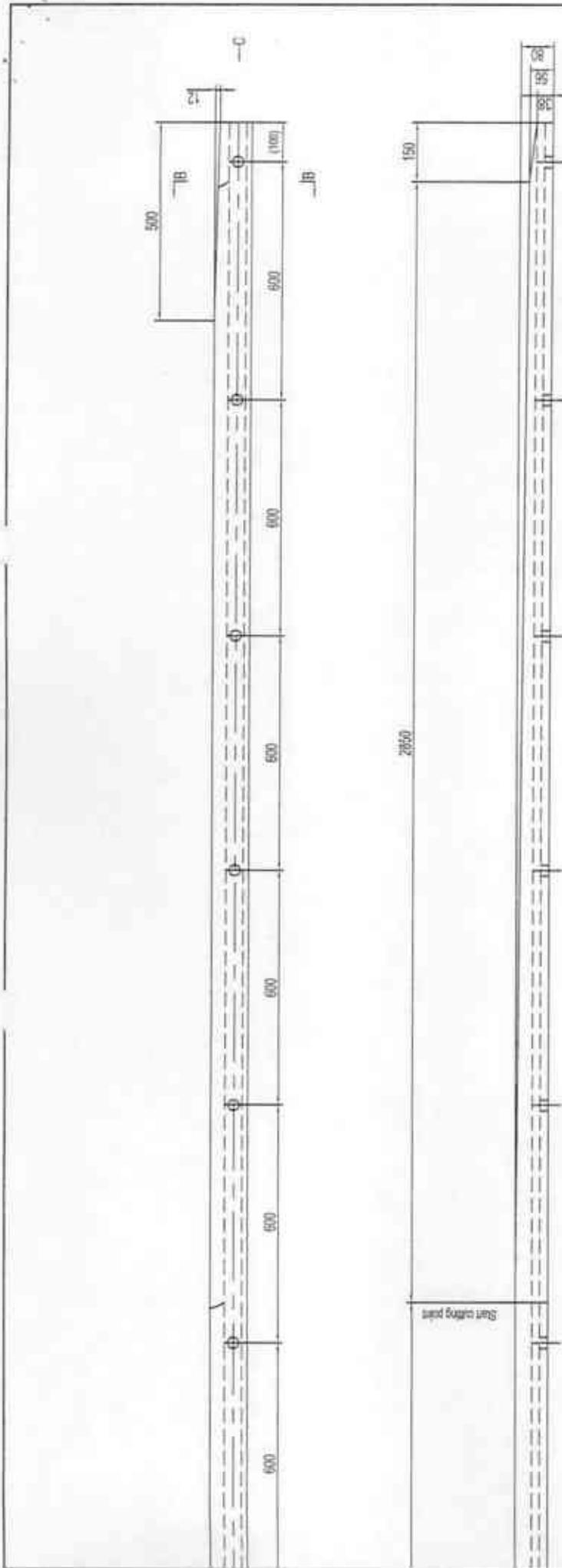
**CONSTRUCTION SUPERVISION CONSULTANTS 1, LTD.**  
**256, VITAI BUILDING, CHONGCHANG 10, BANGKOK**

**DESIGN CONSULTANTS INTERNATIONAL**  
**VIET BUILDING CONSULTANT CO., LTD.**  
**25 - INTERNATIONAL ROAD**

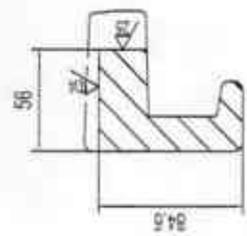
**CONTRACTOR** : **PTSC**

**PROJECT NO.** : 200710-24  
**REVISION** :  
**DATE** :  
**SCALE** :  
**DATE** :  
**SCALE** :  
**DATE** :

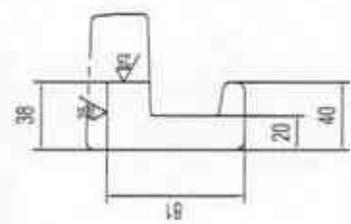
**SIWANHABHUMI AIRPORT RAIL LINK AND CITY AIR TERMINAL**  
**SYSTEM: TRACKWORK**  
**SCALE: 1:10**  
**TITLE OF AS-BUILT / AS-CONSTRUCTED DRAWING :**  
**Through track check rail of frog and check rail**  
**DATE : 200808**  
**REV (REV) : 1 (TE-AGACDZ 8101-B) A (REV) NEW 00**



B-B  
1/3



C-B  
1/3

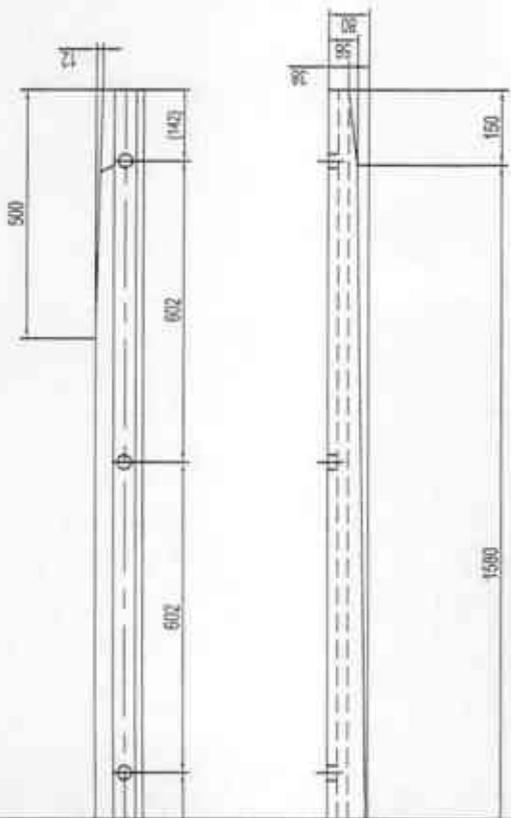


Note:

1. This check rail is made of UC33 rail.
2. Total length of the check rail is 7400mm.
3. The operation face of the check rail should be quenched.
4. Weight is 232kg.

<b>EMPLOYER</b>  <b>KINGDOM OF THAILAND</b> <b>MINISTRY OF TRANSPORT</b> <b>STATE RAILWAY OF THAILAND</b>		<b>CONSULTANT</b>  <b>PCL ENGINEERING CONSULTANTS (THAILAND) CO., LTD.</b> 100/100 Moo 10, Bang Na Expressway, Bang Na District, Bangkok 10760, Thailand TEL: 02-2521111, 02-2521112, 02-2521113, 02-2521114, 02-2521115, 02-2521116, 02-2521117, 02-2521118, 02-2521119, 02-2521120, 02-2521121, 02-2521122, 02-2521123, 02-2521124, 02-2521125, 02-2521126, 02-2521127, 02-2521128, 02-2521129, 02-2521130, 02-2521131, 02-2521132, 02-2521133, 02-2521134, 02-2521135, 02-2521136, 02-2521137, 02-2521138, 02-2521139, 02-2521140, 02-2521141, 02-2521142, 02-2521143, 02-2521144, 02-2521145, 02-2521146, 02-2521147, 02-2521148, 02-2521149, 02-2521150, 02-2521151, 02-2521152, 02-2521153, 02-2521154, 02-2521155, 02-2521156, 02-2521157, 02-2521158, 02-2521159, 02-2521160, 02-2521161, 02-2521162, 02-2521163, 02-2521164, 02-2521165, 02-2521166, 02-2521167, 02-2521168, 02-2521169, 02-2521170, 02-2521171, 02-2521172, 02-2521173, 02-2521174, 02-2521175, 02-2521176, 02-2521177, 02-2521178, 02-2521179, 02-2521180, 02-2521181, 02-2521182, 02-2521183, 02-2521184, 02-2521185, 02-2521186, 02-2521187, 02-2521188, 02-2521189, 02-2521190, 02-2521191, 02-2521192, 02-2521193, 02-2521194, 02-2521195, 02-2521196, 02-2521197, 02-2521198, 02-2521199, 02-2521200		<b>CONTRACTOR</b>  <b>PCL ENGINEERING CONSULTANTS (THAILAND) CO., LTD.</b> 100/100 Moo 10, Bang Na Expressway, Bang Na District, Bangkok 10760, Thailand TEL: 02-2521111, 02-2521112, 02-2521113, 02-2521114, 02-2521115, 02-2521116, 02-2521117, 02-2521118, 02-2521119, 02-2521120, 02-2521121, 02-2521122, 02-2521123, 02-2521124, 02-2521125, 02-2521126, 02-2521127, 02-2521128, 02-2521129, 02-2521130, 02-2521131, 02-2521132, 02-2521133, 02-2521134, 02-2521135, 02-2521136, 02-2521137, 02-2521138, 02-2521139, 02-2521140, 02-2521141, 02-2521142, 02-2521143, 02-2521144, 02-2521145, 02-2521146, 02-2521147, 02-2521148, 02-2521149, 02-2521150, 02-2521151, 02-2521152, 02-2521153, 02-2521154, 02-2521155, 02-2521156, 02-2521157, 02-2521158, 02-2521159, 02-2521160, 02-2521161, 02-2521162, 02-2521163, 02-2521164, 02-2521165, 02-2521166, 02-2521167, 02-2521168, 02-2521169, 02-2521170, 02-2521171, 02-2521172, 02-2521173, 02-2521174, 02-2521175, 02-2521176, 02-2521177, 02-2521178, 02-2521179, 02-2521180, 02-2521181, 02-2521182, 02-2521183, 02-2521184, 02-2521185, 02-2521186, 02-2521187, 02-2521188, 02-2521189, 02-2521190, 02-2521191, 02-2521192, 02-2521193, 02-2521194, 02-2521195, 02-2521196, 02-2521197, 02-2521198, 02-2521199, 02-2521200		<b>ORIGINATOR</b>  <b>AIRPORT RAIL LINK CONSTRUCTION CO., LTD.</b> 100/100 Moo 10, Bang Na Expressway, Bang Na District, Bangkok 10760, Thailand TEL: 02-2521111, 02-2521112, 02-2521113, 02-2521114, 02-2521115, 02-2521116, 02-2521117, 02-2521118, 02-2521119, 02-2521120, 02-2521121, 02-2521122, 02-2521123, 02-2521124, 02-2521125, 02-2521126, 02-2521127, 02-2521128, 02-2521129, 02-2521130, 02-2521131, 02-2521132, 02-2521133, 02-2521134, 02-2521135, 02-2521136, 02-2521137, 02-2521138, 02-2521139, 02-2521140, 02-2521141, 02-2521142, 02-2521143, 02-2521144, 02-2521145, 02-2521146, 02-2521147, 02-2521148, 02-2521149, 02-2521150, 02-2521151, 02-2521152, 02-2521153, 02-2521154, 02-2521155, 02-2521156, 02-2521157, 02-2521158, 02-2521159, 02-2521160, 02-2521161, 02-2521162, 02-2521163, 02-2521164, 02-2521165, 02-2521166, 02-2521167, 02-2521168, 02-2521169, 02-2521170, 02-2521171, 02-2521172, 02-2521173, 02-2521174, 02-2521175, 02-2521176, 02-2521177, 02-2521178, 02-2521179, 02-2521180, 02-2521181, 02-2521182, 02-2521183, 02-2521184, 02-2521185, 02-2521186, 02-2521187, 02-2521188, 02-2521189, 02-2521190, 02-2521191, 02-2521192, 02-2521193, 02-2521194, 02-2521195, 02-2521196, 02-2521197, 02-2521198, 02-2521199, 02-2521200		<b>SYSTEM: TRACKWORK</b> <b>TITLE OF AS-BUILT / AS-CONSTRUCTED DRAWING:</b> UC00-350-1:12 simple turnout Through track check rail of frog and check rail UNIT: mm DATE: 200808 ACU/TRW-13TE+ACR002_B101-B_A	
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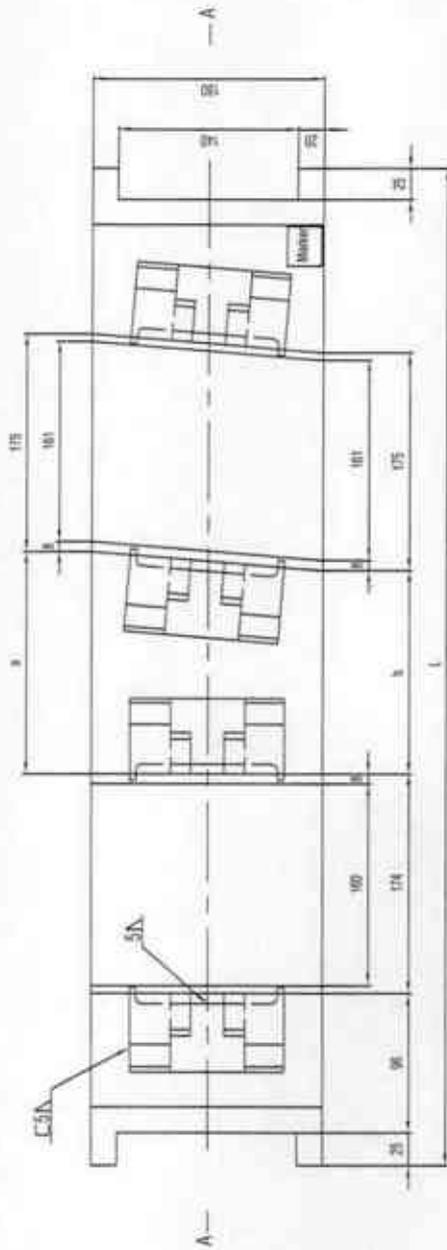
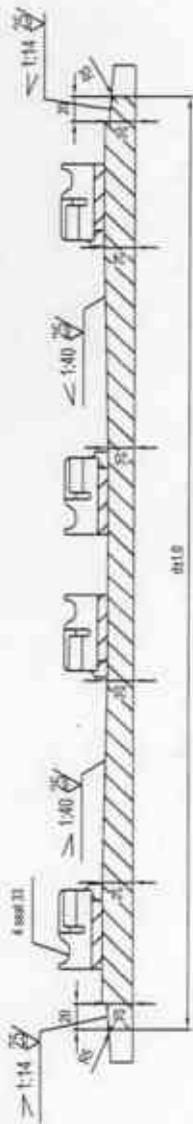
Note:

1. The check rail is made of UIC60 rail.
2. Total length of the check rail is 5100mm.
3. The operative face of the check rail should be quenched.
4. Weight is 105kg.

 <b>KINGDOM OF THAILAND</b> <b>MINISTRY OF TRANSPORT</b> <b>STATE RAILWAY OF THAILAND</b>	<b>CONSTRUCTION SUPERVISOR COMPANIES</b> 	<b>CONTRACTOR</b> 	<b>COORDINATOR</b> 	<b>ORIGINATOR</b> 	<b>SYSTEM: TRACKWORK</b> <b>SCALE: 1:30</b> <b>TITLE OF AS-BUILT / AS-CONSTRUCTED DRAWING:</b> UIC60-350-1112 simple turnout Turnout track check rail of frog and check rail ARL/THW-13TE+AGACDZ_0101-B_A sheet 4 of 18
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A-A

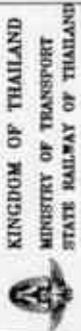


Seq No.	a	b	d	L	Weight (kg)	
					Plate weight	Total weight
6	401	387	941	891	33.6	39.8
7	355	343	897	847	32.1	36.3
8	311	297	852	802	30.6	36.8
9	265	251	808	758	29.0	35.2
10	217	203	758	708	27.4	33.6
11	169	154	710	660	25.8	32.0

Note:

1. The material of the plate is Q235.
2. The seq No should be marked on the position as shown in the figure.
3. The rail type, the turnout number and seq No should be marked on the position as shown in the figure.
4. The drawing are designed to the right hand turnout, in case of left hand turnout the manufacture should be made symmetrically.

EMPLOYER



CONTRACTOR : **SCS** SANGSRI CONSTRUCTION CO., LTD.  
 111/111 PHRACHIN BANGKOK 10110  
 111/111 PHRACHIN BANGKOK 10110  
 111/111 PHRACHIN BANGKOK 10110  
 111/111 PHRACHIN BANGKOK 10110

CONTRACTOR : **SCS** SANGSRI CONSTRUCTION CO., LTD.  
 111/111 PHRACHIN BANGKOK 10110  
 111/111 PHRACHIN BANGKOK 10110  
 111/111 PHRACHIN BANGKOK 10110  
 111/111 PHRACHIN BANGKOK 10110

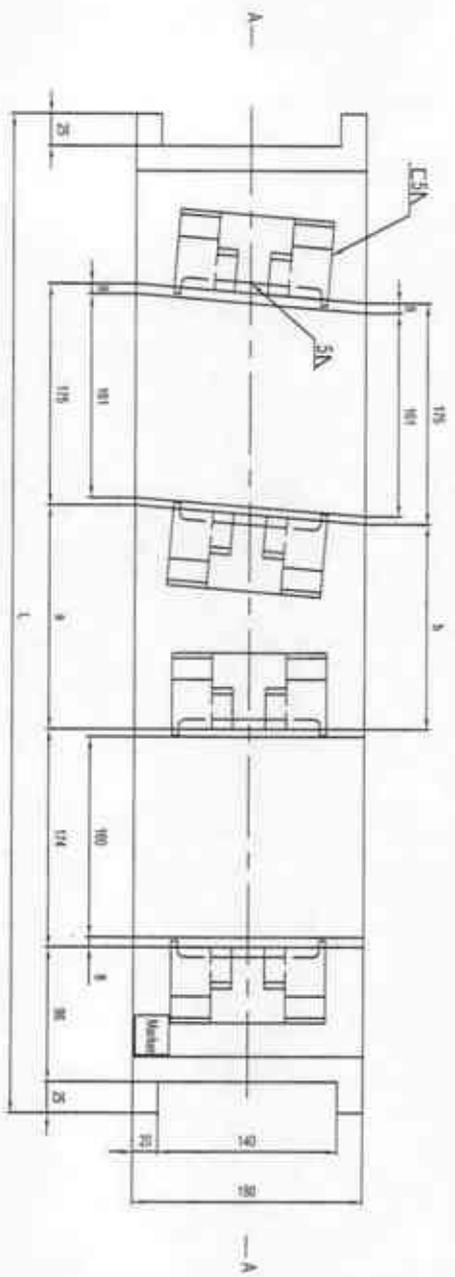
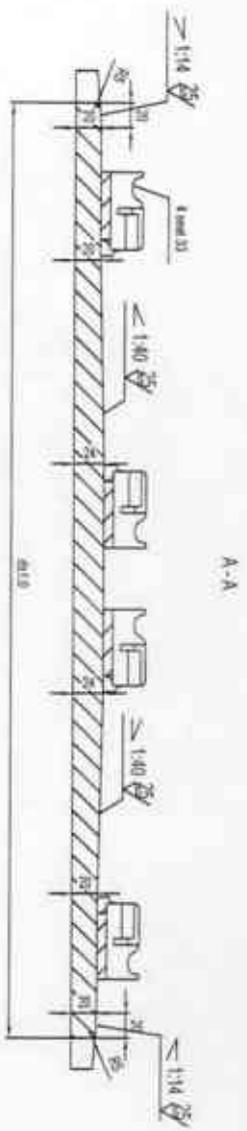
ORIGINATOR : **SR** STATE RAILWAY OF THAILAND  
 111/111 PHRACHIN BANGKOK 10110  
 111/111 PHRACHIN BANGKOK 10110  
 111/111 PHRACHIN BANGKOK 10110  
 111/111 PHRACHIN BANGKOK 10110

SUWANHAKHUMI AIRPORT RAIL LINK AND CITY AIR TERMINAL SYSTEM TRACKWORK  
 SCALE: 1:4  
 TITLE OF AS-BUILT / AS-CONSTRUCTED DRAWING :  
 UIC60-350-1:12 simple turnout  
 Seq No. 6-11 the plate of frog and check rail  
 DATE : 2022/05/10  
 DRAWN : 2022/05/10  
 CHECKED : 2022/05/10  
 APPROVED : 2022/05/10









Seat No.	a	b	d	L	Weight (kg)	
					Plate weight	Total weight
18	146	131	607	737	25.0	31.2
19	194	179	735	765	26.7	32.9
20	242	227	783	833	28.3	34.5
21	283	277	834	894	30.0	36.2
22	343	328	884	934	31.6	37.8
23	393	378	934	984	33.3	39.5

- Note:
1. The material of the plate is Q235.
  2. The seat 33 please look at "ZX 9716-S".
  3. The rail type, the turnout number and seq No. should be marked on the position as shown in the figure.
  4. The drawing are designed to the right hand turnout. In case of left hand turnout, the manufacture should be made symmetrically.

**EMPLOYER**

**KINGDOM OF THAILAND**  
**MINISTRY OF TRANSPORT**  
**STATE RAILWAY OF THAILAND**

**CONTRACTOR**

**SAIC** ASIA ENGINEERING CONSULTANTS COV., LTD.  
**SAIC** THAI ENGINEERING CONSULTANTS CO., LTD.  
**SAIC** BANGKOK ENGINEERING CONSULTANTS CO., LTD.  
**SAIC** BANGKOK CONSTRUCTION ENGINEERING CONSULTANTS CO., LTD.  
**SAIC** BANGKOK CONSTRUCTION ENGINEERING CONSULTANTS CO., LTD.  
**SAIC** BANGKOK CONSTRUCTION ENGINEERING CONSULTANTS CO., LTD.

**OPERATOR**

**SIVANABHURI AIRPORT RAIL LINK AND CITY AIR TERMINAL**  
**SYSTEM: TRACKWORK**

**SCALE: 1:4**

**TITLE OF AS-BUILT / AS-CONSTRUCTED DRAWING:**  
**UNC00-3560-1115: simple turnout**  
**Fig. No. 16-53 the plate of frog and check rail**

**DATE: 11/11/2011**

**APP: (TRW-1)TE+AC&CIV. B101-8. A1 SUR. 410-01**



Cr-UIC60-1:6-6.44 m

Suvarnabhumi Airport Rail Link And The City Terminal Of Thailand

# Cr-UIC60-1:6-6.44m

PLAN NO. ZX 9714

China Railway Engineering Consultants Group

AUGUST , 2009 Beijing



## Specification

1. The drawing is commissioned by China railway construction (Thailand) Co. LTD is designed for Suvarnabhumi Airport Rail Link and City Terminal
2. The drawing can not be used in other project without our written permission.
3. The drawing is designed according to SRT's PS and turnout primary design (TRWY0002-C) concerned request.
4. The permissible passing speed of the turnout:
  - The permissible passing speed of the through track is 180km/h;
  - The permissible passing speed of the turnout track is 50km/h.
5. The drawing is based on ZX 9710-3 \* UIC50-350-1:12 single turnout general layout "1" to design.
6. Pre-stressed concrete sleepers (trackless track) are adopted the plan No. is ZX 9654.
7. The drawing is the same with span in-horizon pointless rail , the temperature of the rail is permitted being 35°C , falling 40°C.
8. The switch rail is made of UIC50B rail, the switch point is housing, the heels of switch are connected by fillets. The frog is made up of solid manganese steel frog and UIC50 rail by welding, the tie plate is set under the frog. The check rail is separated from the stock rail and is made of UIC33 rail.
9. The adjusting pad is adopted under the tie plate. It's value of adjusting height is -5mm~+25mm. The others except solid plate and check rail plate maybe adjusted under the rail. It's value of adjusting height is not more than 5mm, the adjusting pad should be ordered in addition is according to the position of adjusting height and the value of adjusting height.
10. If fastening are adopted, gauge block are to be installed as follow:
  - The gauge block for rail
  - No.13 gauge blocks should be installed on gauge line side of the rail No.11 on another.
  - For the frog No.13 gauge blocks are installed on one side and No.11 on another.
  - For the insulation of joint, insulation of gauge blocks are installed on sides.
  - The gauge block for tie plate
  - No.13 gauge blocks should be installed on gauge line side of the rail No.11 on another.

 <p style="text-align: center;"><b>KINGDOM OF THAILAND</b> <b>MINISTRY OF TRANSPORT</b> <b>STATE RAILWAY OF THAILAND</b></p>	<p><b>CONTRACTING ORGANIZATION</b></p> <p>CHINA RAILWAY CONSTRUCTION GROUP CO., LTD. 100005 Beijing, China</p> <p><b>DESIGN ORGANIZATION</b></p> <p>THAI RAILWAYS CONSTRUCTION CO., LTD. 10110 Bangkok, Thailand</p> <p><b>CONTRACT NO.</b></p> <p>TRWY0002-C</p>	<p><b>CONTRACT TITLE</b></p> <p>SUVARNABHUMI AIRPORT RAIL LINK AND CITY AIR TERMINAL</p>	<p><b>STATION TRACKS</b></p> <p>STATION TRACKS</p> <p>TYPE OF RAILWAY</p> <p>750mm gauge</p> <p>DATE</p> <p>07-09-2010</p> <p>SCALE</p> <p>1:100</p> <p>NO. OF SHEETS</p> <p>01 of 01</p> <p>PROJECT NO.</p> <p>MOU/TRM-TRTE+ACAC02_0101-10</p> <p style="text-align: right;">Sheet 3 of 25</p>
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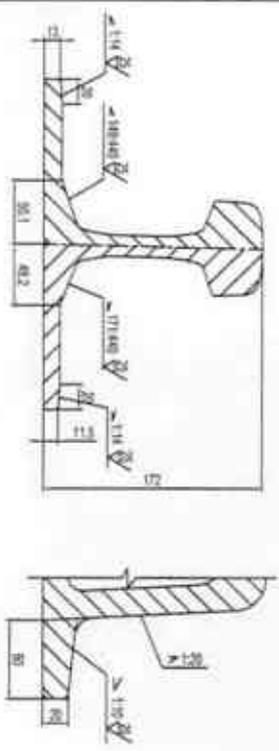
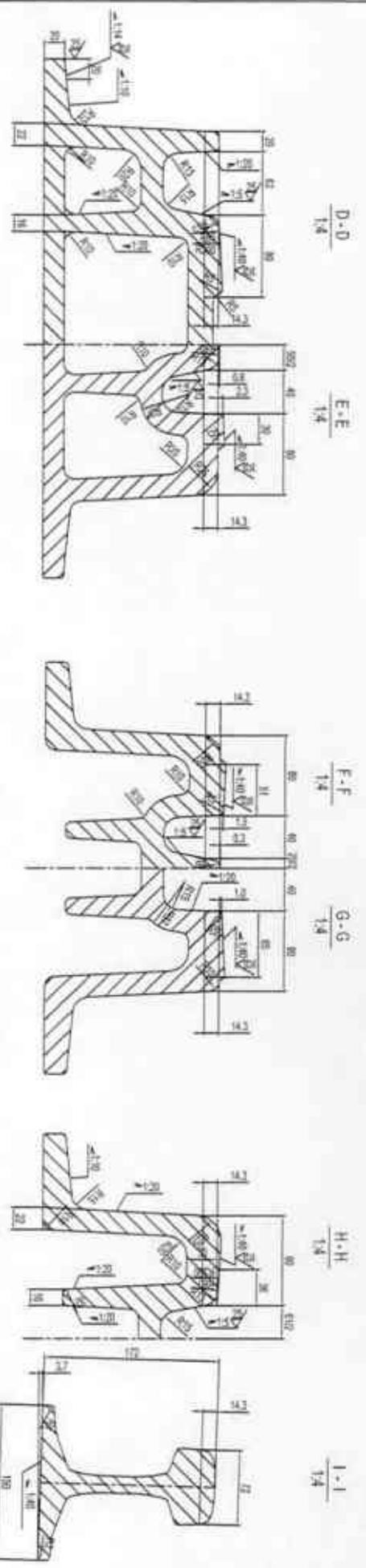




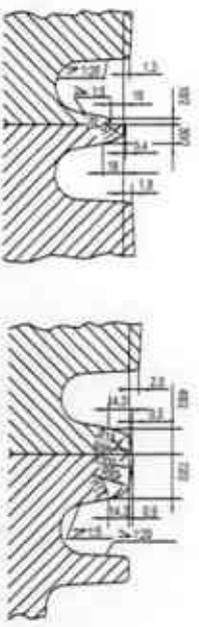








Outline of frog rail at sections 10, 20, 40 and 72



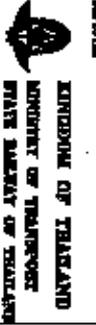
- Note:
1. The frog is made up of mild manganese steel frog and UIC60 rail by welding the mating surface of the UIC60 rail should be quenched within total length, the material and technical condition of mild manganese steel frog part are according with TSP 447 Technical condition of mild manganese steel frog.
  2. The end section size of manganese steel frog is the same as UIC60 rail section.
  3. The frog is designed to the right hand turnout, in case of left hand turnout the manufacturing of ball hole "O" should be made symmetrically.
  4. Weight is 725kg.

**ENGINEER**

**KINGDOM OF THAILAND**  
**MINISTRY OF TRANSPORT**  
**STATE RAILWAY OF THAILAND**

**CONSTRUCTION SUPERVISOR CONSULTANT 1**  
 1. **ABC** 2. **THE ENGINEERING CONSULTANTS CO., LTD.**  
 3. **DESIGN CONSULTANT CO., LTD.**  
 4. **PAJONG ENGINEERING CONSULTANT CO., LTD.**  
 5. **CONSTRUCTION SERVICES CONSULTANT CO., LTD.**  
 6. **INTERNATIONAL TRADE**

**CONTRACTOR 1**  
**SIYANAMHITAI AIRPORT RAIL LINK AND CITY AIR TERMINAL**  
**SYSTEM TRACKWORK**  
 DRAWING NO: **SIY-TR-01-043**  
 TITLE OF AS-BUILT / AS-CONSTRUCTED DRAWING:  
**FRONT OF LID ANGLE FROG AND CHECK RAIL**  
 SCALE: **AS SHOWN**  
 DATE: **17/11/2017**  
 SHEET NO: **10** OF **20**

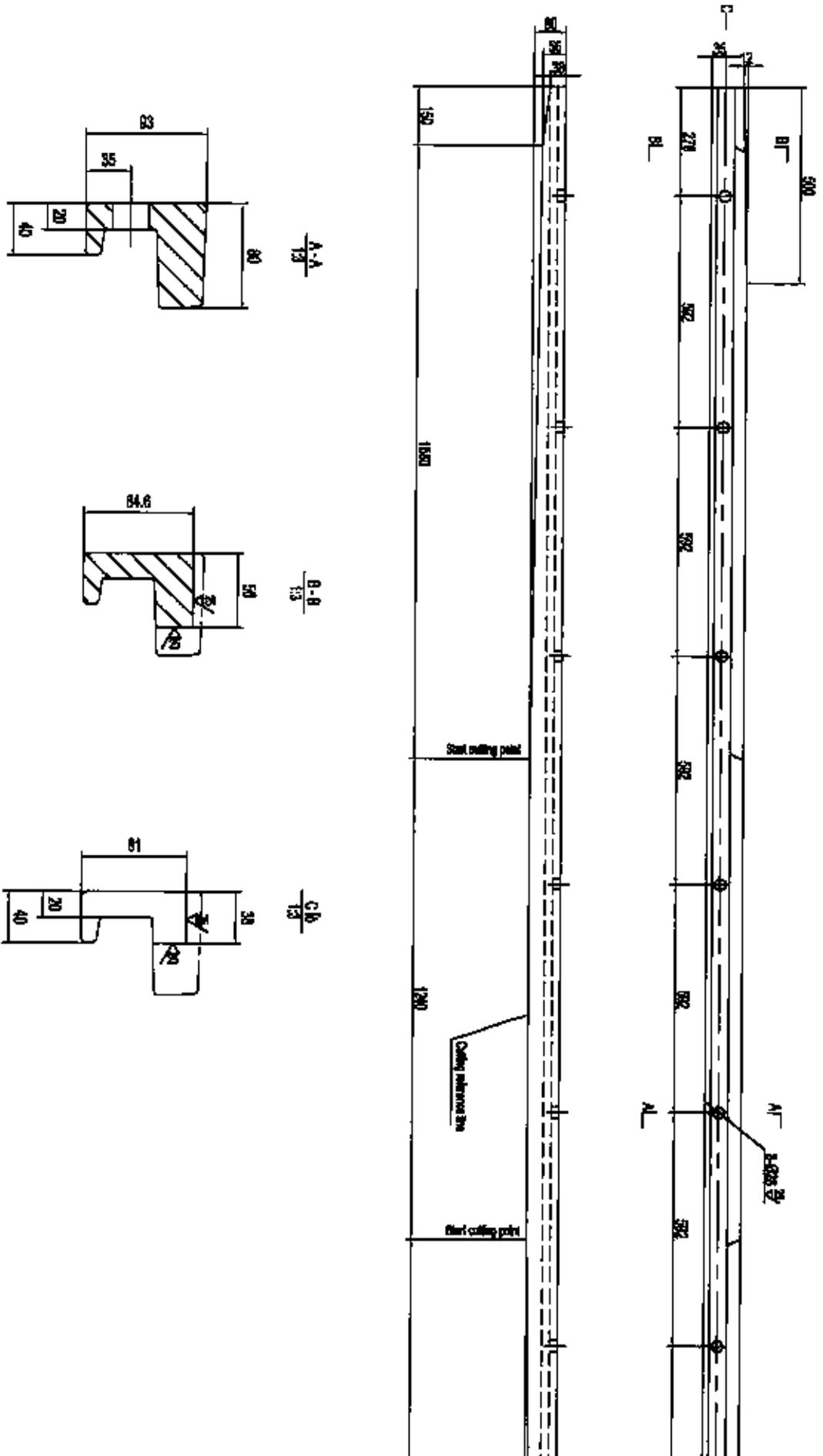


**MINISTRY OF TRANSPORT**  
**STATE BUREAU OF RAILWAYS**

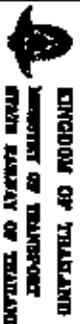
**CONSTRUCTION SUPERVISOR COMPANY (S.C.)**  
 1. S.C. 1111  
 2. S.C. 1112  
 3. S.C. 1113  
 4. S.C. 1114  
 5. S.C. 1115  
 6. S.C. 1116  
 7. S.C. 1117  
 8. S.C. 1118  
 9. S.C. 1119  
 10. S.C. 1120

**CONTRACTOR**  
 1. S.C. 1121  
 2. S.C. 1122  
 3. S.C. 1123  
 4. S.C. 1124  
 5. S.C. 1125  
 6. S.C. 1126  
 7. S.C. 1127  
 8. S.C. 1128  
 9. S.C. 1129  
 10. S.C. 1130

**STATION TRACKWORK**  
 1. S.C. 1131  
 2. S.C. 1132  
 3. S.C. 1133  
 4. S.C. 1134  
 5. S.C. 1135  
 6. S.C. 1136  
 7. S.C. 1137  
 8. S.C. 1138  
 9. S.C. 1139  
 10. S.C. 1140







MINISTRY OF TRANSPORT  
AND COMMUNICATION

ROYAL RAILWAY OF THAILAND

CONSTRUCTION SUBMITTAL DOCUMENTS 1

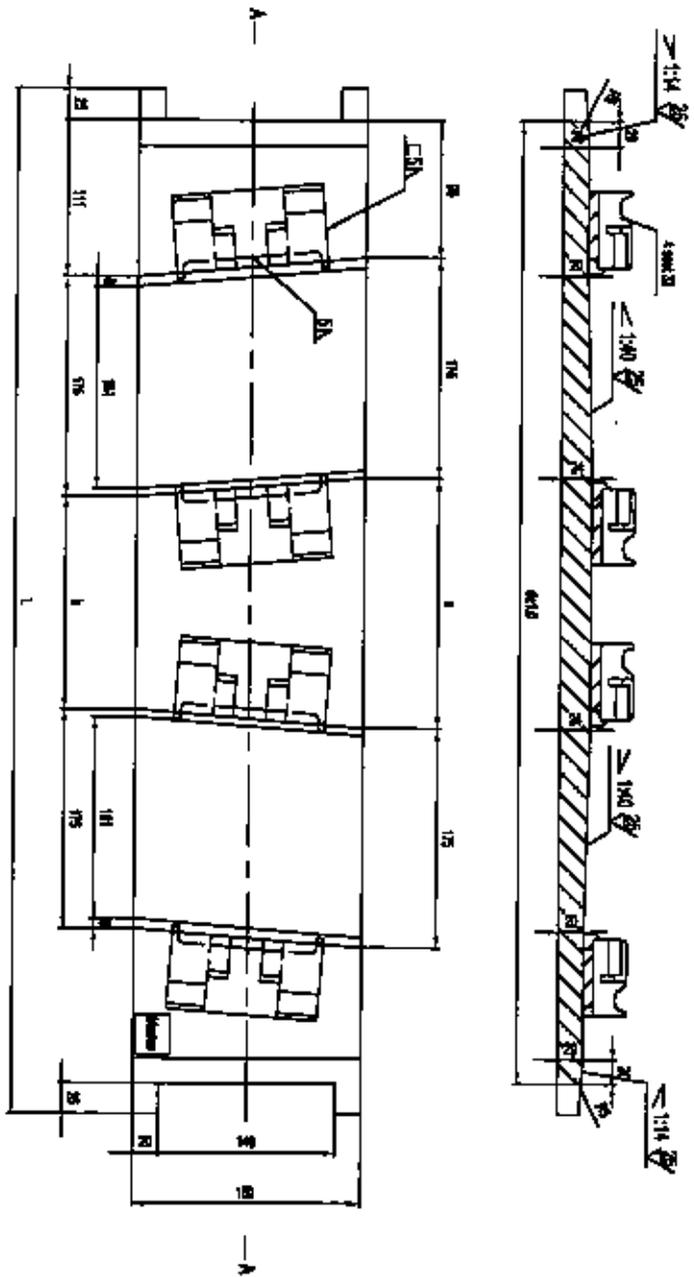
CONTRACT NO. 1

CONSTRUCTION 2

PROVISIONAL ADDRESS: SAO LING AND CHAI AN VILLAGE

Req. No.	a	b	d	L	Weight (kg)	
					Frame weight	Total weight
5	310	280	800	910	30.8	37.1
8	210	180	700	610	27.5	33.7

- Note:
1. The material of the plate is Q235.
  2. The seat SS plate has a 7°/81.6°.
  3. The seat frame kit should be marked on the position as shown in the figure.



DESIGNED BY: [Redacted]  
CHECKED BY: [Redacted]  
DATE: [Redacted]

PROJECT: [Redacted]

SCALE: 1:100

NO. OF SHEETS: 1

SHEET NO.: 1

DATE: [Redacted]

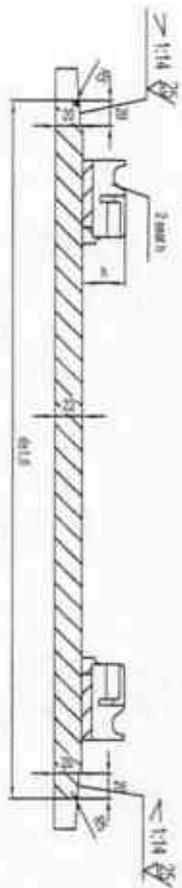
PROJECT: [Redacted]

SCALE: 1:100

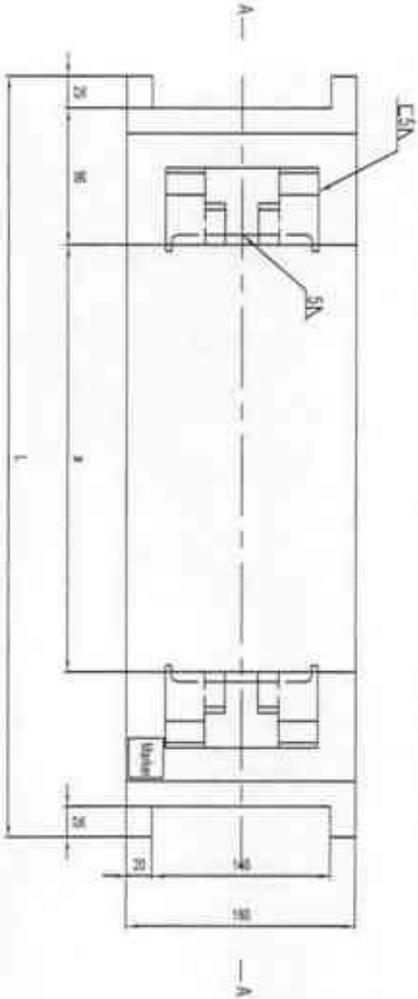
NO. OF SHEETS: 1

SHEET NO.: 1

DATE: [Redacted]



A-A



Sng No.	h	a	d	L	Weight (kg)	
					Run weight	Total weight
7	33	522	714	764	23.7	26.9
8	41	591	783	833	25.9	30.1
9	41	522	714	764	23.7	27.9
10	41	464	656	706	21.9	26.1
11	33	554	746	796	24.7	27.9

- Note
1. The material of the plate is Q235.
  2. The seat please look at "ZX 9716-5".
  3. The rail type, the turnout number, splice between and frog No should be marked on the position as shown in the figure.



**KINGDOM OF THAILAND**  
**MINISTRY OF TRANSPORT**  
**STATE RAILWAY OF THAILAND**

CONTRACTOR 1  
**ABC** ASIAN ENGINEERING CONSULTANTS CO., LTD.  
 123/456 THAI ENGINEERING CONSULTANTS CO., LTD.  
 123/456 THAI ENGINEERING CONSULTANTS CO., LTD.

CONTRACTOR 2  
**DEF** DEFENSE ENGINEERING CONSULTANTS CO., LTD.  
 123/456 THAI ENGINEERING CONSULTANTS CO., LTD.  
 123/456 THAI ENGINEERING CONSULTANTS CO., LTD.

CONTRACTOR 3  
**GHI** GHI ENGINEERING CONSULTANTS CO., LTD.  
 123/456 THAI ENGINEERING CONSULTANTS CO., LTD.  
 123/456 THAI ENGINEERING CONSULTANTS CO., LTD.

OWNER 1  
**JKL** JKL ENGINEERING CONSULTANTS CO., LTD.  
 123/456 THAI ENGINEERING CONSULTANTS CO., LTD.  
 123/456 THAI ENGINEERING CONSULTANTS CO., LTD.

OWNER 2  
**MNO** MNO ENGINEERING CONSULTANTS CO., LTD.  
 123/456 THAI ENGINEERING CONSULTANTS CO., LTD.  
 123/456 THAI ENGINEERING CONSULTANTS CO., LTD.

OWNER 3  
**PQR** PQR ENGINEERING CONSULTANTS CO., LTD.  
 123/456 THAI ENGINEERING CONSULTANTS CO., LTD.  
 123/456 THAI ENGINEERING CONSULTANTS CO., LTD.

DESIGNATOR 1  
**STN** STATION ENGINEERING CONSULTANTS CO., LTD.  
 123/456 THAI ENGINEERING CONSULTANTS CO., LTD.  
 123/456 THAI ENGINEERING CONSULTANTS CO., LTD.

DESIGNATOR 2  
**TRK** TRACK ENGINEERING CONSULTANTS CO., LTD.  
 123/456 THAI ENGINEERING CONSULTANTS CO., LTD.  
 123/456 THAI ENGINEERING CONSULTANTS CO., LTD.

DESIGNATOR 3  
**BRG** BRIDGE ENGINEERING CONSULTANTS CO., LTD.  
 123/456 THAI ENGINEERING CONSULTANTS CO., LTD.  
 123/456 THAI ENGINEERING CONSULTANTS CO., LTD.

**SOVAPHABPHUM AIRPORT RAIL LINK AND CITY AIR TERMINAL**

SYSTEM: TRACKWORK

NO. 114

TITLE OF AS-BUILT / AS-CONSTRUCTED DRAWING :  
 C-11000-10-0.44a  
 Eng No. 7-11 Use plate of 1st angle frog and check rail  
 Rev: 1.000000  
 App: (THW-1)TE+ACR/CDZ\_0101-10\_A



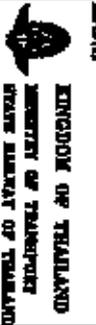


Bag No.	Drawing No.	Description	Quantity	Material	Weight (kg)		Note
					Actual	Net	
1	ZK 8714-13	Orange bag	1		1500	1500	
2	ZK 8714-14	Th plate 872	1		39.2	39.2	
3	ZK 8714-14	Th plate 871	1		35.7	35.7	
4	ZK 8714-13	Th plate 829	2		28.8	57.6	
5	ZK 8714-16	Th plate 840	2		30.3	60.6	
6	ZK 8714-16	Th plate 747	2		27.4	54.8	
7	ZK 8714-15	Th plate 883	2		25.4	50.8	
8	ZK 8714-16	Th plate 871	1		35.7	35.7	
9	ZK 8714-18	Th plate 972	1		39.2	39.2	
10	ZK 8714-1	II OP	50	60SH-CVA	0.225	48.2	
11	ZK 8718-3	RD H24x6	32		0.576	12	
12	ZK 8718-3	RD H24x10	24		0.291	6.36	
13	GR 41	H4024	50		0.153	8.57	
14	TR4024	Yankee	50		0.089	3.86	
15	ZK 8714-15	Orange bag 80 14-1	18	ZK 230-450	0.338	5.38	
16	ZK 8714-15	Orange bag 80 13-10	18	ZK 230-450	0.512	8.19	

Drawn weight of metal is 187kg.

Bag No.	Quantity No.	Description	Quantity	Material	Vol (cu ft)		Note
					Actual	Net	
17	ZK 8718-17	Orange bag 8718-17	12	Orange nylon 88	108	1272	
18	ZK 8718-17	Orange bag 8718-17	12	Orange nylon 88	117	1404	
19	ZK 8718-26	Rubber pad 480x200x10	8	Rubber	144	1152	
20	ZK 8718-26	Rubber pad 658x200x5	2	"	516	1032	
21	ZK 8718-26	Rubber pad 573x200x5	2	"	528	1056	
22	ZK 8718-26	Rubber pad 480x200x5	2	"	443	886	
23	ZK 8718-26	Rubber pad 418x200x5	2	"	394	788	
24	ZK 8718-20	Rubber pad 972x200x10	2	"	1851	3702	
25	ZK 8718-20	Rubber pad 871x200x10	2	"	1474	2948	
26	ZK 8718-20	Rubber pad 828x200x10	2	"	1394	2788	
27	ZK 8718-20	Rubber pad 840x200x10	2	"	1419	2838	
28	ZK 8718-20	Rubber pad 747x200x10	2	"	1258	2512	
29	ZK 8718-20	Rubber pad 883x200x10	2	Rubber	1148	2296	
30	ZK 8718-26	Adjusting pad 872x200x5	2	Plastic	87	1874	
31	ZK 8718-26	Adjusting pad 871x200x5	2	"	838	1672	
32	ZK 8718-25	Adjusting pad 828x200x5	2	"	781	1562	
33	ZK 8718-25	Adjusting pad 840x200x5	2	"	805	1610	
34	ZK 8718-25	Adjusting pad 747x200x5	2	"	712	1424	
35	ZK 8718-25	Adjusting pad 683x200x5	2	Plastic	848	1286	

The total volume of non metal rubber is 27880 cu ft. plastic rubber only. Orange nylon 88 is 2070 cu ft.



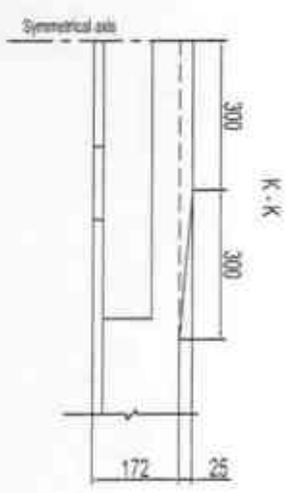
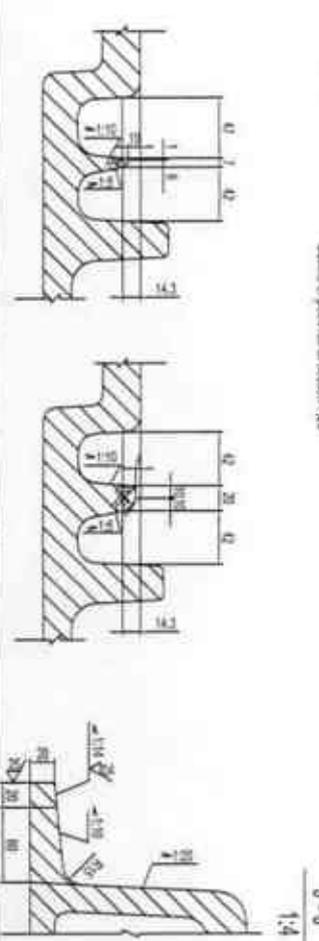
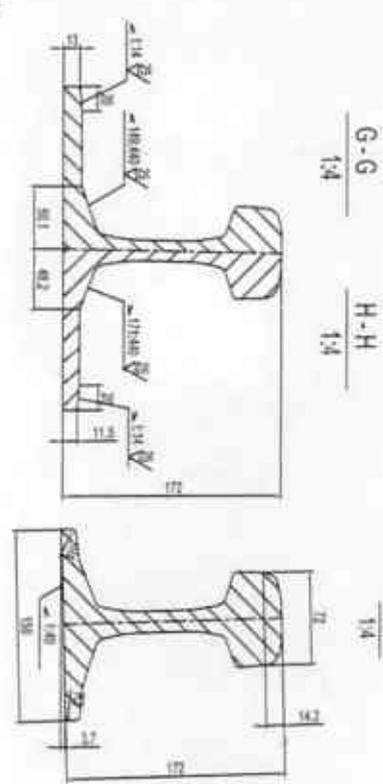
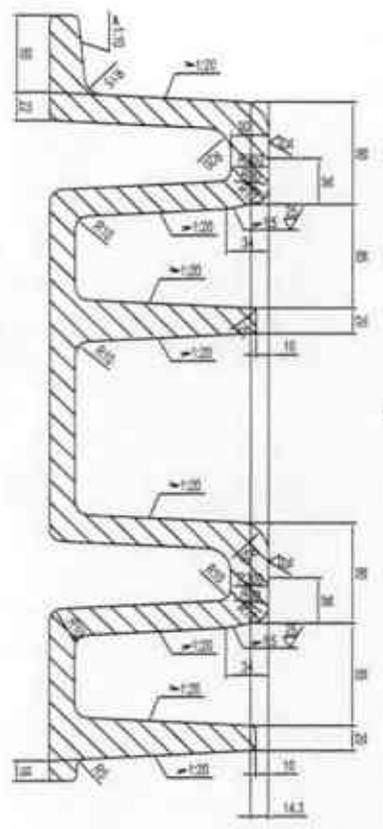
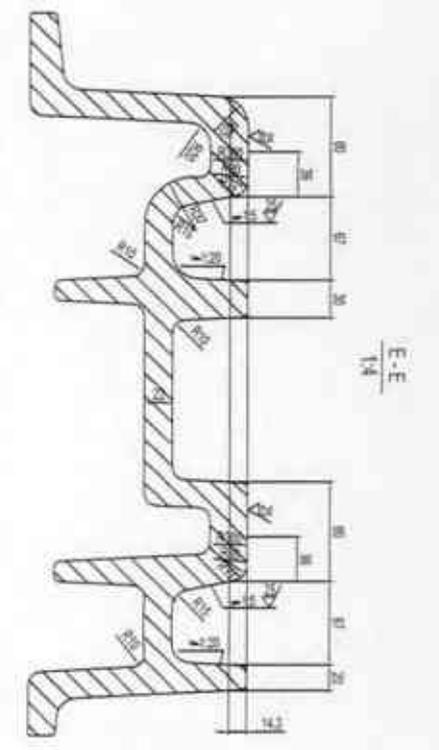
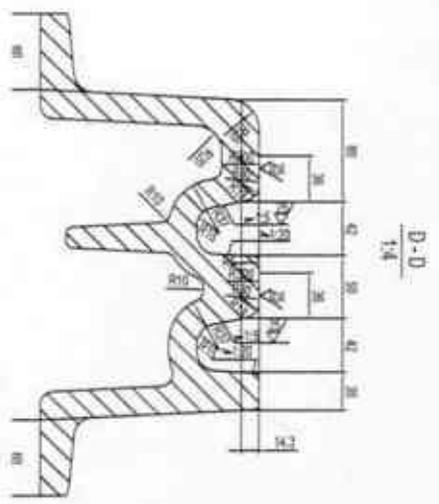
**MINISTRY OF TRANSPORT**  
STATE MINISTRY OF THAILAND

**ROYAL AIR FORCE**  
AIRPORT AND AIR CARRIER

**ROYAL AIR FORCE**  
AIRPORT AND AIR CARRIER







Outline of part rail at section 7.20

REVISIONS

**KINGDOM OF THAILAND**  
**MINISTRY OF TRANSPORT**  
**STATE RAILWAY OF THAILAND**

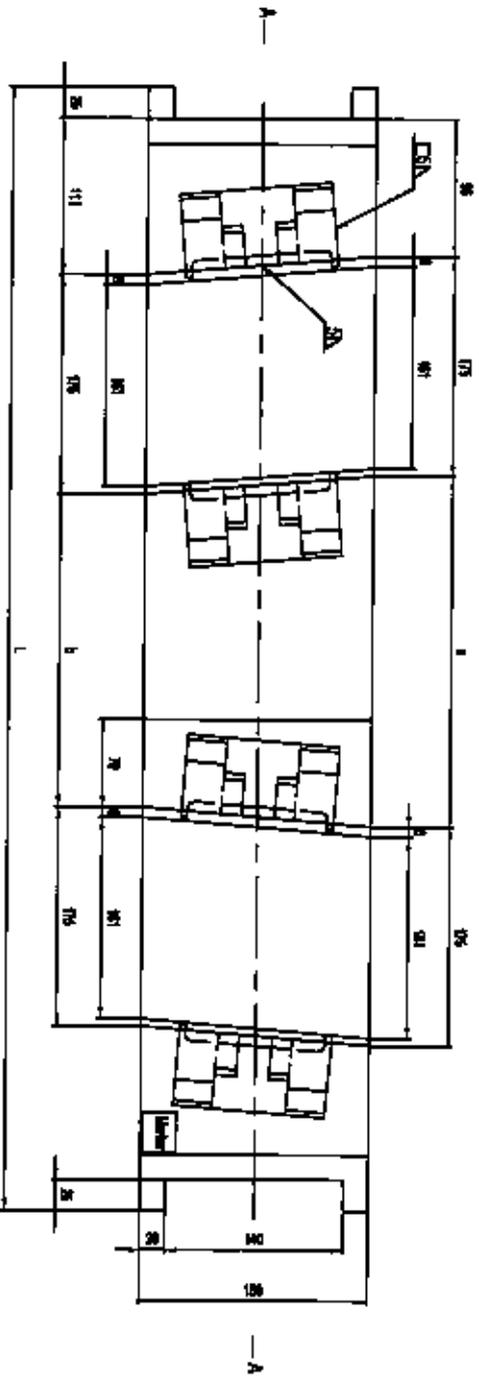
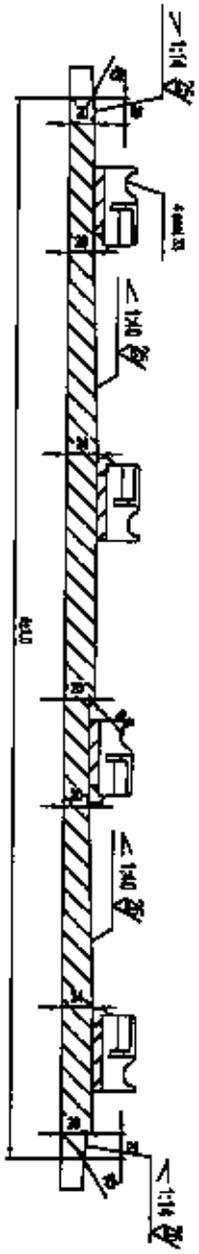
CONSTRUCTION SUPERVISOR: CONSULTANT 1  
 1. JMC also ASSISTANT SUPERVISOR: SUPERVISOR, CEN.  
 2. JMC also ASSISTANT SUPERVISOR: SUPERVISOR, CEN.  
 3. JMC also ASSISTANT SUPERVISOR: SUPERVISOR, CEN.

CONTRACTOR 1  
 1. SANGHVI & ASSOCIATES  
 2. SANGHVI & ASSOCIATES  
 3. SANGHVI & ASSOCIATES

OPERATOR 1  
 1. SRT  
 2. SRT  
 3. SRT

SHIVAMHANGI AIRPORT RAIL LINK AND CITY AIR TERMINAL  
 SYSTEM TRACKWORK  
 SHEET 1/10  
 TITLE OF AS-BUILT / AS-CONSTRUCTED DRAWING:  
 Cc-07000-10-0-44km  
 Frog of 1st oblique frog  
 Date: 2023/08/01  
 PRL (TRM)-17E+ANACUZ 0101-10 A sheet size as

A-A



Engin	a	b	d	L	Height (m)	
					Plan weight	Total weight
2	380	390	922	972	83.0	36.2
3	292	290	421	971	29.5	35.7

- Note:**
1. The material of the plate is Q235.
  2. The steel plate mark is "ZX 9716-5".
  3. The rail type has turned number space between and sag (s) should be marked on the position as shown in the figure.

**CONTRACTOR:** SHANGHAI SHENYANG CONSTRUCTION CO., LTD.  
**DESIGNER:** SHANGHAI SHENYANG CONSTRUCTION CO., LTD.  
**DATE:** 2011.11.11

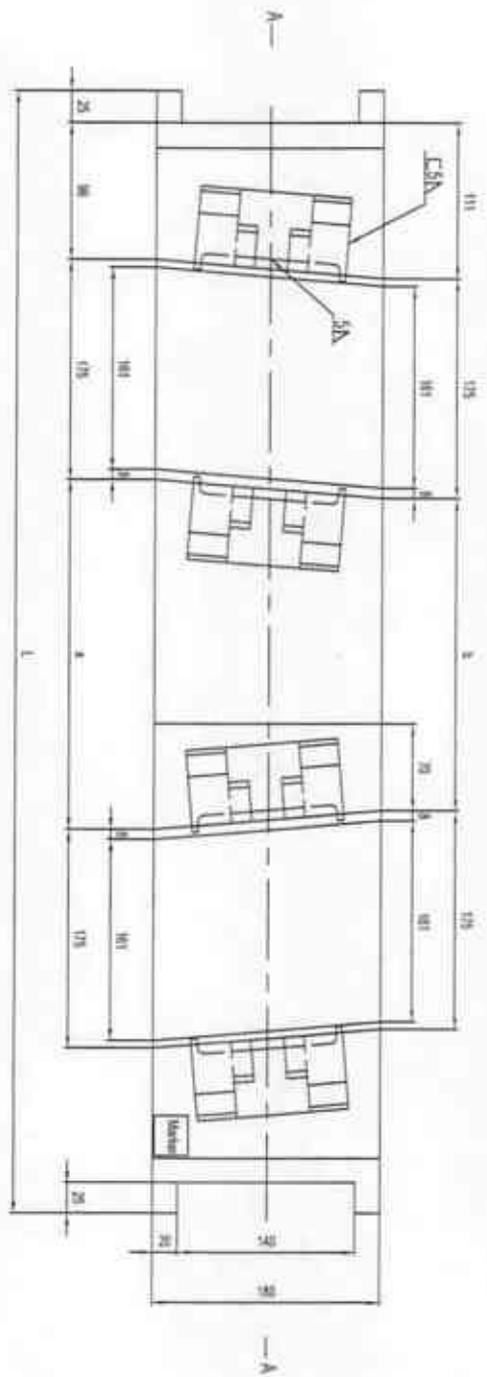
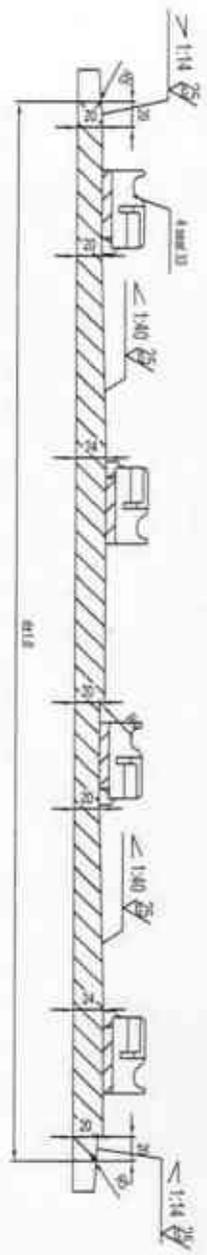
**PROJECT:** SHANGHAI SHENYANG CONSTRUCTION CO., LTD.  
**ADDRESS:** SHANGHAI SHENYANG CONSTRUCTION CO., LTD.  
**CONTACT:** SHANGHAI SHENYANG CONSTRUCTION CO., LTD.

**REVISION:**

NO.	REVISION	DATE
1	...	...
2	...	...
3	...	...
4	...	...
5	...	...
6	...	...
7	...	...
8	...	...
9	...	...
10	...	...

**SYNOPSIS:** SHANGHAI SHENYANG CONSTRUCTION CO., LTD. AND CITY AIR TERMINAL  
**STATION:** SHANGHAI SHENYANG CONSTRUCTION CO., LTD.  
**SCALE:** 1:100  
**DATE:** 2011.11.11  
**DESIGNER:** SHANGHAI SHENYANG CONSTRUCTION CO., LTD.  
**CONTACT:** SHANGHAI SHENYANG CONSTRUCTION CO., LTD.





Length	a	b	d	L	Weight (kg)	
					Plate weight	Total weight
8	280	350	821	871	28.5	35.7
9	380	350	922	972	33.0	39.2

Note:

1. The material of the plate is Q235.
2. The seal please look at "XZ 97 15-5".
3. The rail type, the turnout number, space between and seq No should be marked on the position as shown in the figure.

**KINGDOM OF THAILAND**  
**MINISTRY OF TRANSPORT**  
**STATE RAILWAY OF THAILAND**

CONSTRUCTION SUPERVISION CONSULTANTS :  
 1. AEC ASIAN ENGINEERING CONSULTANTS CO., LTD.  
 2. TSC THAI ENGINEERING CONSULTANTS CO., LTD.  
 3. SCS GROUP COMPANY CO., LTD.  
 4. FACER CONSULTANTS INTERNATIONAL  
 5. HNTB ENGINEERING CONSULTANTS CO., LTD.  
 6. CONSULTING ENGINEER CONSULTANTS LTD.  
 7. INTERNATIONAL CONSULTANTS

CONTRACTOR :  
 SANGHVI CONSTRUCTION CO., LTD.  
 1. SANGHVI CONSTRUCTION CO., LTD.  
 2. SANGHVI CONSTRUCTION CO., LTD.  
 3. SANGHVI CONSTRUCTION CO., LTD.  
 4. SANGHVI CONSTRUCTION CO., LTD.  
 5. SANGHVI CONSTRUCTION CO., LTD.  
 6. SANGHVI CONSTRUCTION CO., LTD.  
 7. SANGHVI CONSTRUCTION CO., LTD.

ORIGINATOR :

NO.	DATE	REVISION
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

SUWANNABHUMI AIRPORT RAIL LINE AND CITY AIR TERMINAL  
 SYSTEM TRACKWORK  
 SCALE: 1:4  
 TITLE OF AS-BUILT / AS-CONSTRUCTED DRAWING :  
 C-UC000-10-8.44m  
 Seq. No. 8.9 (the plate of tie obtuse frog)  
 ARL(TW-1)TE-ADD02\_8101-10\_A (REV. 8/23)