

| CROSS SECTION TYPE | SUPER-ELEVATION | HORIZONTAL | STATION | GROUND HEIGHT | PAVEMENT HEIGHT | VERTICAL ALIGNMENT |
|--------------------|-----------------|------------|---------|---------------|-----------------|---------------------------------|
| TYPE-6 | 15+401 | NC | 15+400 | 9.89 | -10.746 | $I = -0.04\%$ $L = 780.00$ |
| | 3.00 | | -3.00 | 15+420 | 9.88 | |
| TYPE-6 | 15+534 | BC | 15+440 | 9.85 | -10.744 | $R_c = \infty$ $L = 185.233$ |
| | 3.00 | | -3.00 | 15+460 | 9.79 | |
| TYPE-6 | 15+574 | BC | 15+480 | 9.78 | -10.743 | $R_c = 1500$ $L_c = 589.805$ |
| | 3.00 | | -3.00 | 15+500 | 9.82 | |
| TYPE-6 | 15+614 | BC | 15+520 | 9.86 | -10.741 | $R_c = 1500$ $L_c = 589.805$ |
| | 3.00 | | -3.00 | 15+540 | 9.93 | |
| TYPE-6 | 15+654 | BC | 15+560 | 10.01 | -10.739 | $R_c = 1500$ $L_c = 589.805$ |
| | 3.00 | | -3.00 | 15+580 | 10.06 | |
| TYPE-6 | 15+694 | BC | 15+600 | 10.08 | -10.737 | $R_c = 1500$ $L_c = 589.805$ |
| | 3.00 | | -3.00 | 15+620 | 10.01 | |
| TYPE-6 | 15+734 | BC | 15+640 | 9.94 | -10.735 | $R_c = 1500$ $L_c = 589.805$ |
| | 3.00 | | -3.00 | 15+660 | 9.85 | |
| TYPE-6 | 15+774 | BC | 15+680 | 9.82 | -10.734 | $R_c = 1500$ $L_c = 589.805$ |
| | 3.00 | | -3.00 | 15+700 | 9.86 | |
| TYPE-6 | 15+814 | BC | 15+720 | 9.96 | -10.732 | $R_c = 1500$ $L_c = 589.805$ |
| | 3.00 | | -3.00 | 15+740 | 10.04 | |
| TYPE-6 | 15+854 | BC | 15+760 | 9.98 | -10.730 | $R_c = 1500$ $L_c = 589.805$ |
| | 3.00 | | -3.00 | 15+780 | 9.94 | |
| TYPE-6 | 15+894 | BC | 15+800 | 9.90 | -10.728 | $R_c = 1500$ $L_c = 589.805$ |
| | 3.00 | | -3.00 | 15+820 | 9.85 | |
| TYPE-6 | 15+934 | BC | 15+840 | 9.84 | -10.726 | $R_c = 1500$ $L_c = 589.805$ |
| | 3.00 | | -3.00 | 15+860 | 9.89 | |
| TYPE-6 | 15+974 | BC | 15+880 | 9.89 | -10.725 | $R_c = 1500$ $L_c = 589.805$ |
| | 3.00 | | -3.00 | 15+900 | 9.84 | |
| TYPE-6 | 16+014 | BC | 15+920 | 9.82 | -10.723 | $R_c = 1500$ $L_c = 589.805$ |
| | 3.00 | | -3.00 | 15+940 | 9.80 | |
| TYPE-6 | 16+054 | BC | 15+960 | 9.73 | -10.721 | $R_c = 1500$ $L_c = 589.805$ |
| | 3.00 | | -3.00 | 15+980 | 9.66 | |
| TYPE-6 | 16+094 | BC | 16+000 | 9.63 | -10.719 | $R_c = 1500$ $L_c = 589.805$ |
| | 3.00 | | -3.00 | 16+020 | 9.62 | |
| TYPE-6 | 16+134 | BC | 16+040 | 9.52 | -10.717 | $R_c = 1500$ $L_c = 589.805$ |
| | 3.00 | | -3.00 | 16+060 | 9.42 | |
| TYPE-6 | 16+174 | BC | 16+080 | 9.45 | -10.716 | $R_c = 1500$ $L_c = 589.805$ |
| | 3.00 | | -3.00 | 16+100 | 9.55 | |

MINISTRY OF PUBLIC WORKS AND TRANSPORT (MPWT)

THE PROJECT FOR THE IMPROVEMENT OF NATIONAL ROAD NO.1 (PHNOM PENH-NEAK LOUENG SECTION) IN THE KINGDOM OF CAMBODIA

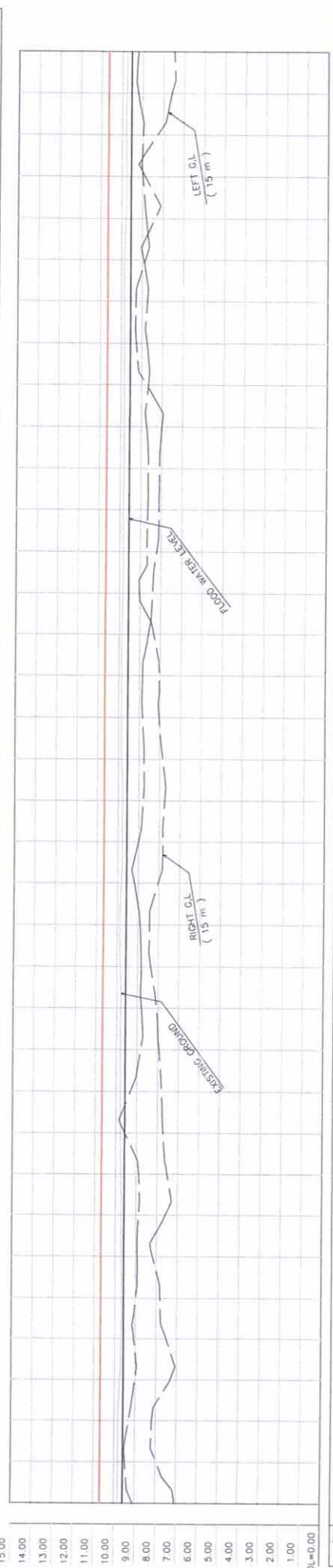
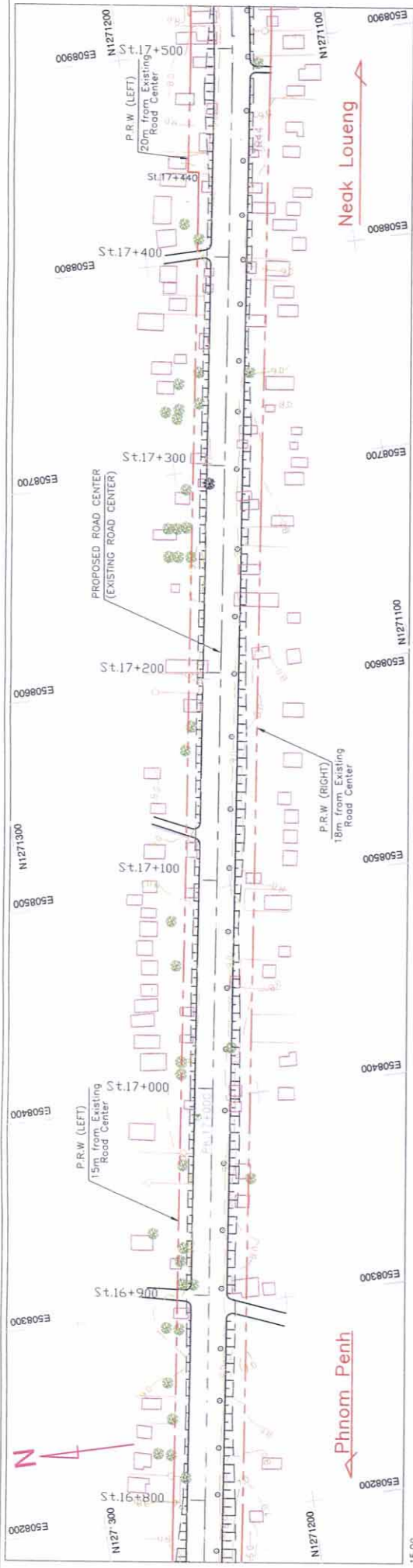
JAPAN INTERNATIONAL COOPERATION AGENCY
KATAHIRA & ENGINEERS INTERNATIONAL
CTI ENGINEERING INTERNATIONAL CO.,LTD

TITLE : PLAN AND PROFILE (STA. 15+400 - STA. 16+100)

SCALE
 H=1/2000
 V=1/200

Drawing No
Sheet No.
 PL-23

TYPE-6



| CROSS SECTION TYPE | SURF. ELEVATION | STATION | GROUND HEIGHT | PAVEMENT HEIGHT | VERTICAL ALIGNMENT |
|--------------------|-----------------|---------|---------------|-----------------|--------------------------|
| TYPE-4 | 16+801 | ST | 9.81 | 10.683 | $A=0.0445$ $L=760.00$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+442 | TS | 9.83 | 10.662 | $A=250$ $L=89.286$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.81 | 10.661 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.82 | 10.664 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.83 | 10.663 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.84 | 10.656 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.85 | 10.657 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.86 | 10.666 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.87 | 10.665 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.88 | 10.679 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.89 | 10.678 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.90 | 10.682 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.91 | 10.682 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.92 | 10.678 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.93 | 10.673 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.94 | 10.677 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.95 | 10.676 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.96 | 10.675 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.97 | 10.674 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.98 | 10.672 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.97 | 10.671 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.81 | 10.670 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.78 | 10.669 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.78 | 10.668 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.83 | 10.667 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.86 | 10.666 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.87 | 10.665 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.88 | 10.664 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.82 | 10.664 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.83 | 10.663 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.83 | 10.662 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.81 | 10.661 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.82 | 10.660 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.83 | 10.659 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.83 | 10.658 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.85 | 10.657 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.84 | 10.656 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.78 | 10.656 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.76 | 10.655 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.79 | 10.654 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.77 | 10.653 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |
| TYPE-4 | 17+492 | | 9.74 | 10.652 | $R_c=∞$ $L=641.039$ |
| | 3.00 - 3.00 | | | | |

MINISTRY OF PUBLIC WORKS AND TRANSPORT (MPWT)

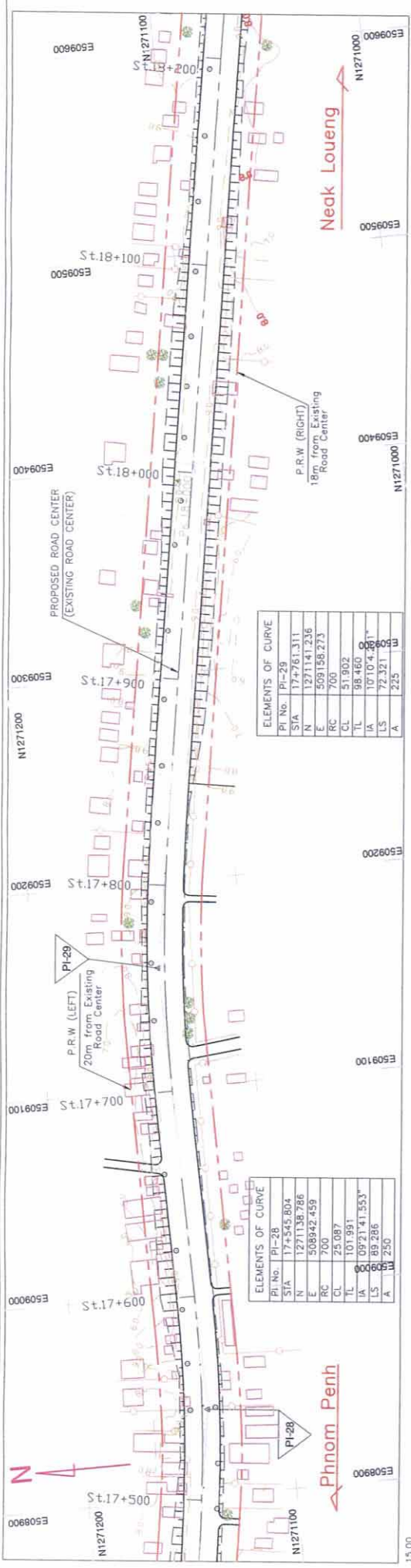
THE PROJECT FOR THE IMPROVEMENT OF NATIONAL ROAD NO.1 (PHNOM PENH-NEAK LOUENG SECTION) IN THE KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL CTI ENGINEERING INTERNATIONAL CO.,LTD

TITLE : PLAN AND PROFILE (STA. 16+800 - STA. 17+500)

SCALE H=1/2000 V=1/200

Drawing No. Sheet No. PL-25



ELEMENTS OF CURVE

| | |
|--------|-------------|
| PI No. | PI-29 |
| STA | 17+761.311 |
| N | 1271141.236 |
| E | 509196.273 |
| RC | 700 |
| CL | 51.902 |
| TL | 98.460 |
| LA | 10710.4281° |
| LS | 72.321 |
| A | 225 |

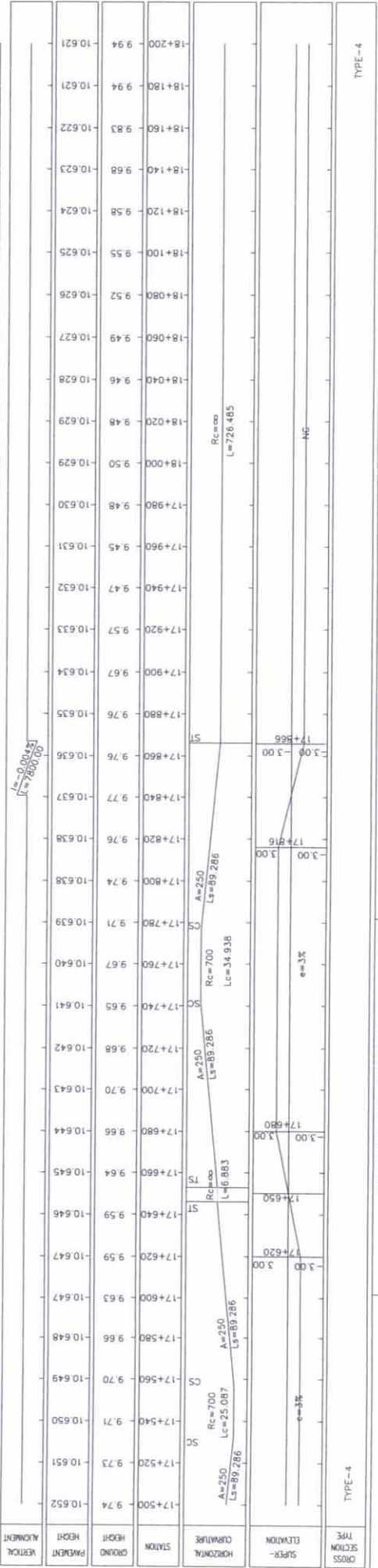
ELEMENTS OF CURVE

| | |
|--------|--------------|
| PI No. | PI-28 |
| STA | 17+545.804 |
| N | 1271138.786 |
| E | 508942.459 |
| RC | 700 |
| CL | 25.087 |
| TL | 101.991 |
| LA | 09271.41353° |
| LS | 89.286 |
| A | 250 |



CURVE DATA

| |
|---------|
| DL=0.00 |
| 14.00 |
| 13.00 |
| 12.00 |
| 11.00 |
| 10.00 |
| 9.00 |
| 8.00 |
| 7.00 |
| 6.00 |
| 5.00 |
| 4.00 |
| 3.00 |
| 2.00 |
| 1.00 |
| 0.00 |



CURVE DATA

| |
|---------|
| DL=0.00 |
| 18.200 |
| 18.180 |
| 18.160 |
| 18.140 |
| 18.120 |
| 18.100 |
| 18.080 |
| 18.060 |
| 18.040 |
| 18.020 |
| 18.000 |
| 17.980 |
| 17.960 |
| 17.940 |
| 17.920 |
| 17.900 |
| 17.880 |
| 17.860 |
| 17.840 |
| 17.820 |
| 17.800 |
| 17.780 |
| 17.760 |
| 17.740 |
| 17.720 |
| 17.700 |
| 17.680 |
| 17.660 |
| 17.640 |
| 17.620 |
| 17.600 |
| 17.580 |
| 17.560 |
| 17.540 |
| 17.520 |
| 17.500 |

MINISTRY OF PUBLIC WORKS AND TRANSPORT (MPWT)

THE PROJECT FOR THE IMPROVEMENT OF NATIONAL ROAD NO.1 (PHNOM PENH-NEAK LOUENG SECTION) IN THE KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL CTI ENGINEERING INTERNATIONAL CO.,LTD

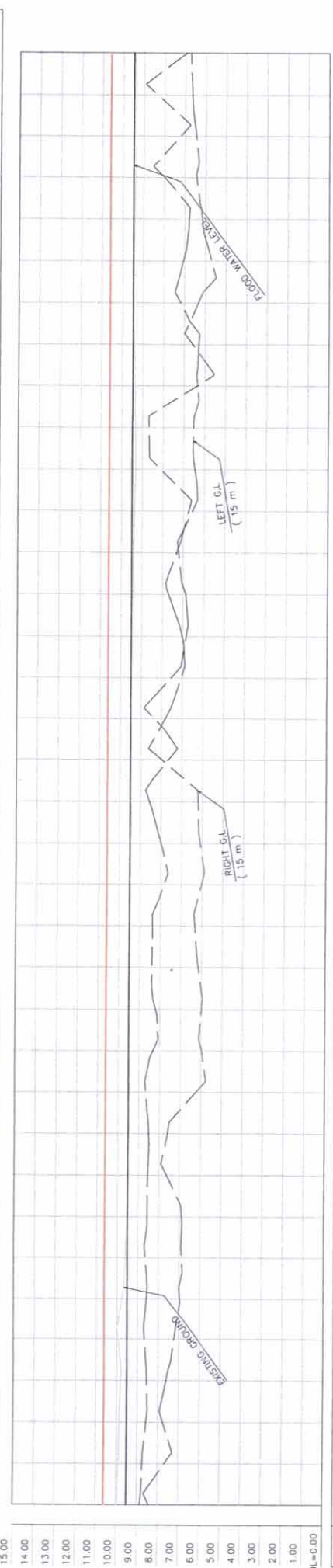
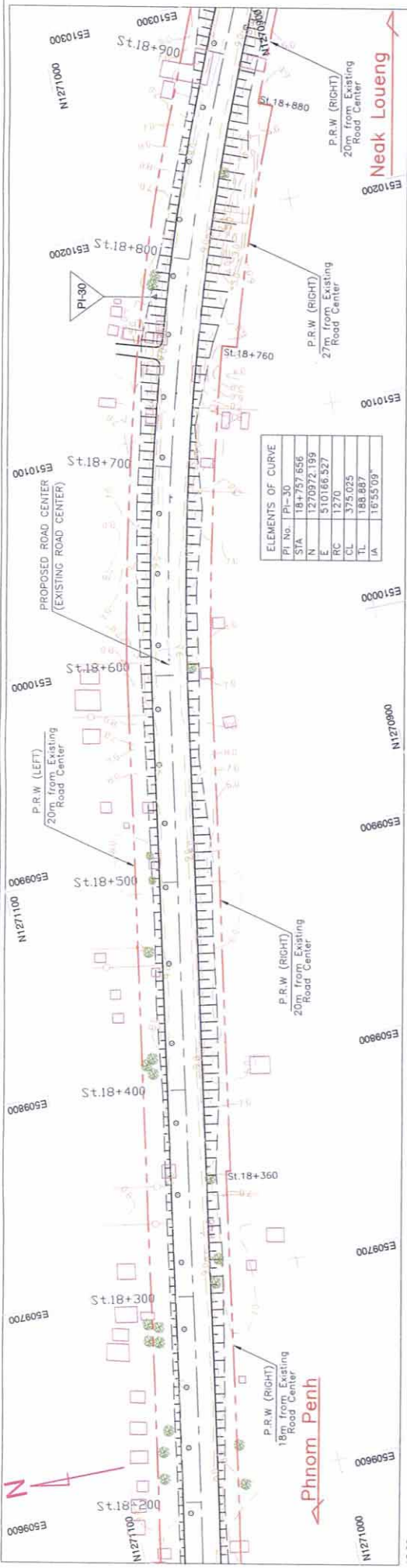
TITLE : PLAN AND PROFILE (STA.17+500 - STA.18+200)

SCALE H=1/2000 V=1/200

Drawing No. PL-26

Sheet No. PL-26

CROSS SECTION TYPE TYPE-4



| CROSS SECTION TYPE | SUPER-ELEVATION | HORIZONTAL CURVATURE | STATION | GROUND HEIGHT | PROPOSED HEIGHT | VERTICAL CURVATURE |
|--------------------|-----------------|----------------------|---------|---------------|-----------------|-----------------------|
| TYPE-4 | NC | Rc=∞ L=726.485 | 18+200 | 9.94 | 10.621 | m=0.0045 L=1800.00 |
| | | | 18+220 | 9.90 | 10.620 | |
| TYPE-4 | NC | Rc=∞ L=726.485 | 18+240 | 9.87 | 10.619 | m=0.0045 L=1800.00 |
| | | | 18+260 | 9.80 | 10.618 | |
| TYPE-4 | NC | Rc=∞ L=726.485 | 18+280 | 9.92 | 10.617 | m=0.0045 L=1800.00 |
| | | | 18+300 | 9.75 | 10.616 | |
| TYPE-4 | NC | Rc=∞ L=726.485 | 18+320 | 9.61 | 10.615 | m=0.0045 L=1800.00 |
| | | | 18+340 | 9.52 | 10.614 | |
| TYPE-4 | NC | Rc=∞ L=726.485 | 18+360 | 9.50 | 10.613 | m=0.0045 L=1800.00 |
| | | | 18+380 | 9.51 | 10.612 | |
| TYPE-4 | NC | Rc=∞ L=726.485 | 18+400 | 9.47 | 10.612 | m=0.0045 L=1800.00 |
| | | | 18+420 | 9.49 | 10.611 | |
| TYPE-4 | NC | Rc=∞ L=726.485 | 18+440 | 9.50 | 10.610 | m=0.0045 L=1800.00 |
| | | | 18+460 | 9.45 | 10.609 | |
| TYPE-4 | NC | Rc=∞ L=726.485 | 18+480 | 9.48 | 10.608 | m=0.0045 L=1800.00 |
| | | | 18+500 | 9.50 | 10.607 | |
| TYPE-4 | NC | Rc=∞ L=726.485 | 18+520 | 9.44 | 10.606 | m=0.0045 L=1800.00 |
| | | | 18+540 | 9.43 | 10.605 | |
| TYPE-4 | NC | Rc=∞ L=726.485 | 18+560 | 9.44 | 10.604 | m=0.0045 L=1800.00 |
| | | | 18+580 | 9.47 | 10.603 | |
| TYPE-4 | NC | Rc=∞ L=726.485 | 18+600 | 9.51 | 10.603 | m=0.0045 L=1800.00 |
| | | | 18+620 | 9.48 | 10.602 | |
| TYPE-4 | NC | Rc=∞ L=726.485 | 18+640 | 9.42 | 10.601 | m=0.0045 L=1800.00 |
| | | | 18+660 | 9.39 | 10.600 | |
| TYPE-4 | NC | Rc=∞ L=726.485 | 18+680 | 9.35 | 10.599 | m=0.0045 L=1800.00 |
| | | | 18+700 | 9.32 | 10.598 | |
| TYPE-4 | NC | Rc=∞ L=726.485 | 18+720 | 9.34 | 10.597 | m=0.0045 L=1800.00 |
| | | | 18+740 | 9.37 | 10.596 | |
| TYPE-4 | NC | Rc=∞ L=726.485 | 18+760 | 9.41 | 10.595 | m=0.0045 L=1800.00 |
| | | | 18+780 | 9.45 | 10.594 | |
| TYPE-4 | NC | Rc=∞ L=726.485 | 18+800 | 9.43 | 10.594 | m=0.0045 L=1800.00 |
| | | | 18+820 | 9.40 | 10.593 | |
| TYPE-4 | NC | Rc=∞ L=726.485 | 18+840 | 9.38 | 10.592 | m=0.0045 L=1800.00 |
| | | | 18+860 | 9.37 | 10.591 | |
| TYPE-4 | NC | Rc=∞ L=726.485 | 18+880 | 9.37 | 10.590 | m=0.0045 L=1800.00 |
| | | | 18+900 | 9.39 | 10.589 | |

MINISTRY OF PUBLIC WORKS AND TRANSPORT (MPWT)

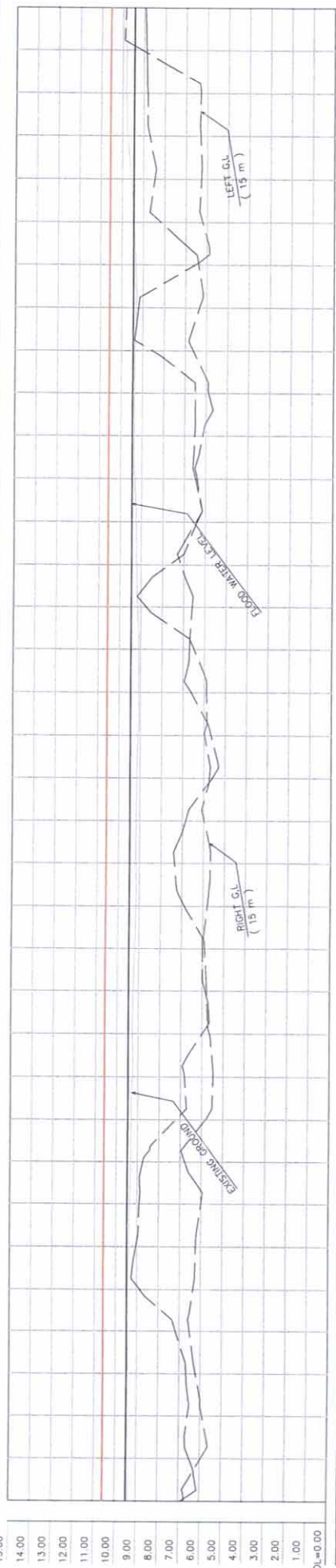
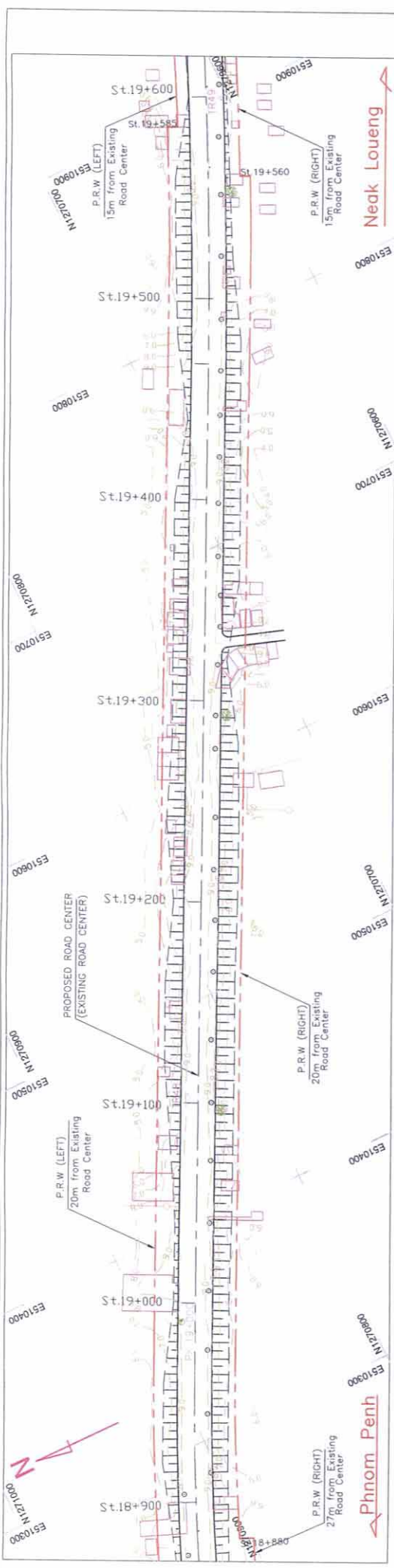
THE PROJECT FOR THE IMPROVEMENT OF NATIONAL ROAD NO.1 (PHNOM PENH-NEAK LOUENG SECTION) IN THE KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL CTI ENGINEERING INTERNATIONAL CO.,LTD

TITLE: PLAN AND PROFILE (STA.18+200 - STA.18+900)

SCALE: H=1/2000 V=1/200

Drawing No. PL-27



| CROSS SECTION TYPE | SUPER-ELEVATION | HORIZONTAL CURVATURE | STATION | GROUND HEIGHT | PROPOSED HEIGHT | VERTICAL ALIGNMENT |
|--------------------|------------------------------------|----------------------------|---------|---------------|-----------------|---------------------------|
| TYPE-4 | EC R=1270 Lc=375.025 e=3% | BC R=2820 Lc=349.733 | 18+900 | 9.39 | 10.589 | $L=780.045$ $R=0.0045$ |
| | | | 18+920 | 9.41 | 10.588 | |
| TYPE-4 | EC R=1270 Lc=375.025 e=3% | BC R=2820 Lc=349.733 | 18+940 | 9.42 | 10.587 | $L=780.045$ $R=0.0045$ |
| | | | 18+960 | 9.42 | 10.586 | |
| TYPE-4 | EC R=1270 Lc=375.025 e=3% | BC R=2820 Lc=349.733 | 18+980 | 9.42 | 10.586 | $L=780.045$ $R=0.0045$ |
| | | | 18+993 | 9.42 | 10.586 | |
| TYPE-4 | EC R=1270 Lc=375.025 e=3% | BC R=2820 Lc=349.733 | 19+000 | 9.41 | 10.585 | $L=780.045$ $R=0.0045$ |
| | | | 19+020 | 9.39 | 10.584 | |
| TYPE-4 | EC R=1270 Lc=375.025 e=3% | BC R=2820 Lc=349.733 | 19+040 | 9.35 | 10.583 | $L=780.045$ $R=0.0045$ |
| | | | 19+060 | 9.32 | 10.582 | |
| TYPE-4 | EC R=1270 Lc=375.025 e=3% | BC R=2820 Lc=349.733 | 19+080 | 9.32 | 10.581 | $L=780.045$ $R=0.0045$ |
| | | | 19+100 | 9.27 | 10.580 | |
| TYPE-4 | EC R=1270 Lc=375.025 e=3% | BC R=2820 Lc=349.733 | 19+120 | 9.27 | 10.579 | $L=780.045$ $R=0.0045$ |
| | | | 19+140 | 9.24 | 10.578 | |
| TYPE-4 | EC R=1270 Lc=375.025 e=3% | BC R=2820 Lc=349.733 | 19+160 | 9.19 | 10.577 | $L=780.045$ $R=0.0045$ |
| | | | 19+180 | 9.15 | 10.577 | |
| TYPE-4 | EC R=1270 Lc=375.025 e=3% | BC R=2820 Lc=349.733 | 19+200 | 9.17 | 10.576 | $L=780.045$ $R=0.0045$ |
| | | | 19+220 | 9.17 | 10.575 | |
| TYPE-4 | EC R=1270 Lc=375.025 e=3% | BC R=2820 Lc=349.733 | 19+240 | 9.15 | 10.574 | $L=780.045$ $R=0.0045$ |
| | | | 19+260 | 9.09 | 10.573 | |
| TYPE-4 | EC R=1270 Lc=375.025 e=3% | BC R=2820 Lc=349.733 | 19+280 | 9.08 | 10.572 | $L=780.045$ $R=0.0045$ |
| | | | 19+300 | 9.09 | 10.571 | |
| TYPE-4 | EC R=1270 Lc=375.025 e=3% | BC R=2820 Lc=349.733 | 19+320 | 9.16 | 10.570 | $L=780.045$ $R=0.0045$ |
| | | | 19+340 | 9.21 | 10.569 | |
| TYPE-4 | EC R=1270 Lc=375.025 e=3% | BC R=2820 Lc=349.733 | 19+360 | 9.25 | 10.568 | $L=780.045$ $R=0.0045$ |
| | | | 19+380 | 9.33 | 10.568 | |
| TYPE-4 | EC R=1270 Lc=375.025 e=3% | BC R=2820 Lc=349.733 | 19+400 | 9.35 | 10.567 | $L=780.045$ $R=0.0045$ |
| | | | 19+420 | 9.36 | 10.566 | |
| TYPE-4 | EC R=1270 Lc=375.025 e=3% | BC R=2820 Lc=349.733 | 19+440 | 9.36 | 10.565 | $L=780.045$ $R=0.0045$ |
| | | | 19+460 | 9.31 | 10.564 | |
| TYPE-4 | EC R=1270 Lc=375.025 e=3% | BC R=2820 Lc=349.733 | 19+480 | 9.33 | 10.563 | $L=780.045$ $R=0.0045$ |
| | | | 19+500 | 9.46 | 10.562 | |
| TYPE-4 | EC R=1270 Lc=375.025 e=3% | BC R=2820 Lc=349.733 | 19+520 | 9.57 | 10.561 | $L=780.045$ $R=0.0045$ |
| | | | 19+540 | 9.74 | 10.560 | |
| TYPE-4 | EC R=1270 Lc=375.025 e=3% | BC R=2820 Lc=349.733 | 19+560 | 9.81 | 10.559 | $L=780.045$ $R=0.0045$ |
| | | | 19+580 | 9.82 | 10.559 | |
| TYPE-4 | EC R=1270 Lc=375.025 e=3% | BC R=2820 Lc=349.733 | 19+600 | 9.88 | 10.558 | $L=780.045$ $R=0.0045$ |
| | | | | | | |

JAPAN INTERNATIONAL COOPERATION AGENCY
 KATAHIRA & ENGINEERS INTERNATIONAL
 CTI ENGINEERING INTERNATIONAL CO.,LTD

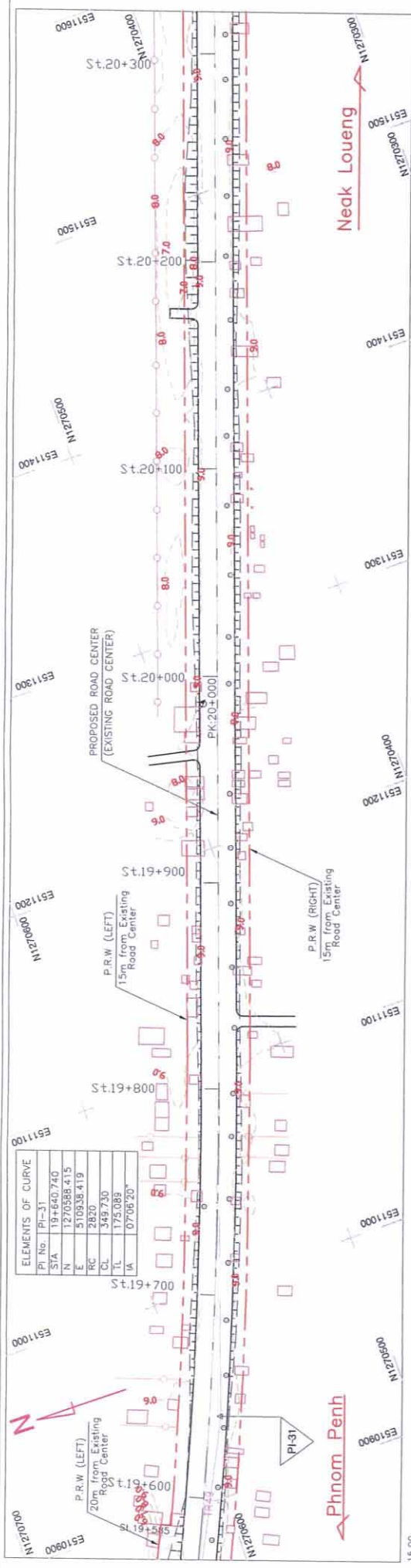
THE PROJECT FOR THE
 IMPROVEMENT OF NATIONAL ROAD NO.1
 (PHNOM PENH-NEAK LOUENG SECTION)
 IN THE KINGDOM OF CAMBODIA

MINISTRY OF
 PUBLIC WORKS AND TRANSPORT
 (MPWT)

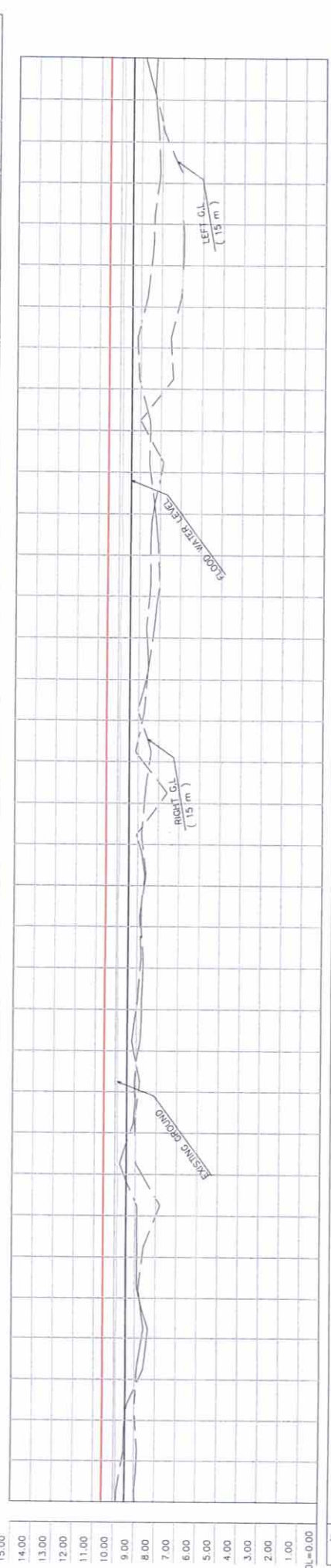
TITLE : PLAN AND PROFILE
 STA.18+900 - STA.19+600

SCALE
 H=1/2000
 V=1/200

Drawing No.
 Sheet No.
 PL-28



| ELEMENTS OF CURVE | |
|-------------------|-------------|
| PI No. | PI-31 |
| STA | 19+640.740 |
| N | 1270588.415 |
| E | 510938.419 |
| RC | 2820 |
| CL | 349.730 |
| TL | 175.089 |
| LA | 07°06'20" |



| VERTICAL ALIGNMENT | HEIGHT | STATION | GROUND HEIGHT | PAVEMENT HEIGHT |
|--------------------|--------|---------|---------------|-----------------|
| 15+00 | 14.00 | 19+600 | 9.88 | 9.88 |
| 13+00 | 13.00 | 19+620 | 9.88 | 9.88 |
| 12+00 | 12.00 | 19+640 | 9.88 | 9.88 |
| 11+00 | 11.00 | 19+660 | 9.92 | 9.88 |
| 10+00 | 10.00 | 19+680 | 9.91 | 9.87 |
| 9+00 | 9.00 | 19+700 | 9.87 | 9.88 |
| 8+00 | 8.00 | 19+720 | 9.88 | 9.88 |
| 7+00 | 7.00 | 19+740 | 9.87 | 9.86 |
| 6+00 | 6.00 | 19+760 | 9.86 | 9.86 |
| 5+00 | 5.00 | 19+780 | 9.88 | 9.88 |
| 4+00 | 4.00 | 19+800 | 9.89 | 9.89 |
| 3+00 | 3.00 | 19+820 | 9.90 | 9.90 |
| 2+00 | 2.00 | 19+840 | 9.91 | 9.91 |
| 1+00 | 1.00 | 19+860 | 9.92 | 9.92 |
| 0+00 | 0.00 | 19+880 | 9.94 | 9.94 |
| | | 19+900 | 9.91 | 9.91 |
| | | 19+920 | 9.88 | 9.88 |
| | | 19+940 | 9.89 | 9.89 |
| | | 19+960 | 9.87 | 9.87 |
| | | 19+980 | 9.89 | 9.89 |
| | | 20+000 | 9.86 | 9.86 |
| | | 20+020 | 9.90 | 9.90 |
| | | 20+040 | 9.87 | 9.87 |
| | | 20+060 | 9.81 | 9.81 |
| | | 20+080 | 9.85 | 9.85 |
| | | 20+100 | 9.84 | 9.84 |
| | | 20+120 | 9.85 | 9.85 |
| | | 20+140 | 9.84 | 9.84 |
| | | 20+160 | 9.85 | 9.85 |
| | | 20+180 | 9.87 | 9.87 |
| | | 20+200 | 9.84 | 9.84 |
| | | 20+220 | 9.80 | 9.80 |
| | | 20+240 | 9.77 | 9.77 |
| | | 20+260 | 9.80 | 9.80 |
| | | 20+280 | 9.83 | 9.83 |
| | | 20+300 | 9.88 | 9.88 |

MINISTRY OF PUBLIC WORKS AND TRANSPORT (MPWT)

THE PROJECT FOR THE IMPROVEMENT OF NATIONAL ROAD NO.1 (PHNOM PENH-NEAK LOUENG SECTION) IN THE KINGDOM OF CAMBODIA

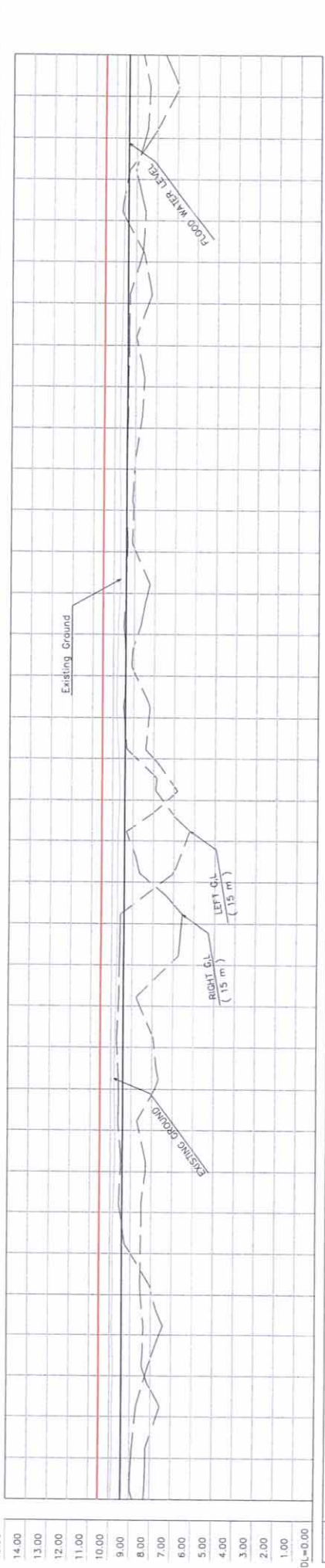
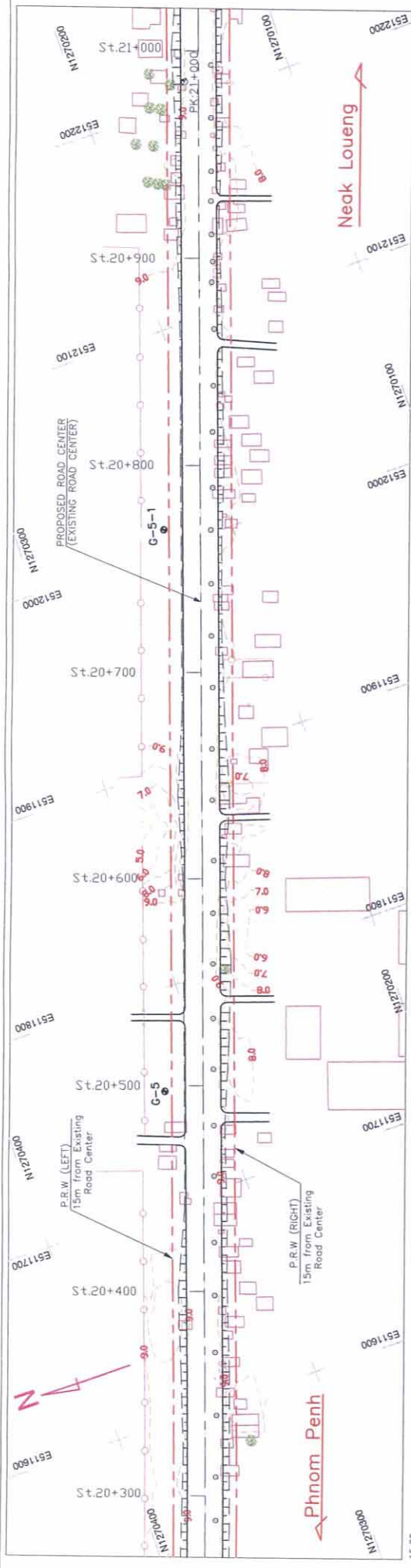
JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL CTI ENGINEERING INTERNATIONAL CO.,LTD

TITLE : PLAN AND PROFILE (STA.19+600-STA.20+300)

SCALE H=1/2000 V=1/200

Drawing No. Sheet No. PL-29

TYPE 4



| VERTICAL ALIGNMENT | STATION | GROUND ELEVATION | PROPOSED ROAD ELEVATION |
|--------------------|---------|------------------|-------------------------|
| 10.526 | 20+300 | 9.88 | 9.88 |
| 10.525 | 20+320 | 9.86 | 9.86 |
| 10.524 | 20+340 | 9.87 | 9.87 |
| 10.524 | 20+360 | 9.82 | 9.82 |
| 10.523 | 20+380 | 9.87 | 9.87 |
| 10.522 | 20+400 | 9.85 | 9.85 |
| 10.521 | 20+420 | 9.87 | 9.87 |
| 10.520 | 20+440 | 9.85 | 9.85 |
| 10.519 | 20+460 | 9.79 | 9.79 |
| 10.518 | 20+480 | 9.79 | 9.79 |
| 10.517 | 20+500 | 9.82 | 9.82 |
| 10.516 | 20+520 | 9.81 | 9.81 |
| 10.516 | 20+540 | 9.77 | 9.77 |
| 10.515 | 20+560 | 9.74 | 9.74 |
| 10.514 | 20+580 | 9.72 | 9.72 |
| 10.513 | 20+600 | 9.74 | 9.74 |
| 10.512 | 20+620 | 9.72 | 9.72 |
| 10.511 | 20+640 | 9.65 | 9.65 |
| 10.510 | 20+660 | 9.69 | 9.69 |
| 10.509 | 20+680 | 9.80 | 9.80 |
| 10.508 | 20+700 | 9.80 | 9.80 |
| 10.507 | 20+720 | 9.77 | 9.77 |
| 10.507 | 20+740 | 9.88 | 9.88 |
| 10.506 | 20+760 | 9.88 | 9.88 |
| 10.505 | 20+780 | 9.88 | 9.88 |
| 10.504 | 20+800 | 9.73 | 9.73 |
| 10.503 | 20+820 | 9.74 | 9.74 |
| 10.502 | 20+840 | 9.72 | 9.72 |
| 10.501 | 20+860 | 9.68 | 9.68 |
| 10.500 | 20+880 | 9.64 | 9.64 |
| 10.499 | 20+900 | 9.61 | 9.61 |
| 10.498 | 20+920 | 9.57 | 9.57 |
| 10.496 | 20+940 | 9.56 | 9.56 |
| 10.497 | 20+960 | 9.55 | 9.55 |
| 10.496 | 20+980 | 9.57 | 9.57 |
| 10.495 | 20+1000 | 9.57 | 9.57 |

Rc=∞
L=2068.364

NC

MINISTRY OF PUBLIC WORKS AND TRANSPORT (MPWT)

THE PROJECT FOR THE IMPROVEMENT OF NATIONAL ROAD NO.1 (PHNOM PENH-NEAK LOUENG SECTION) IN THE KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
KATAHIRA & ENGINEERS INTERNATIONAL
CTI ENGINEERING INTERNATIONAL CO.,LTD

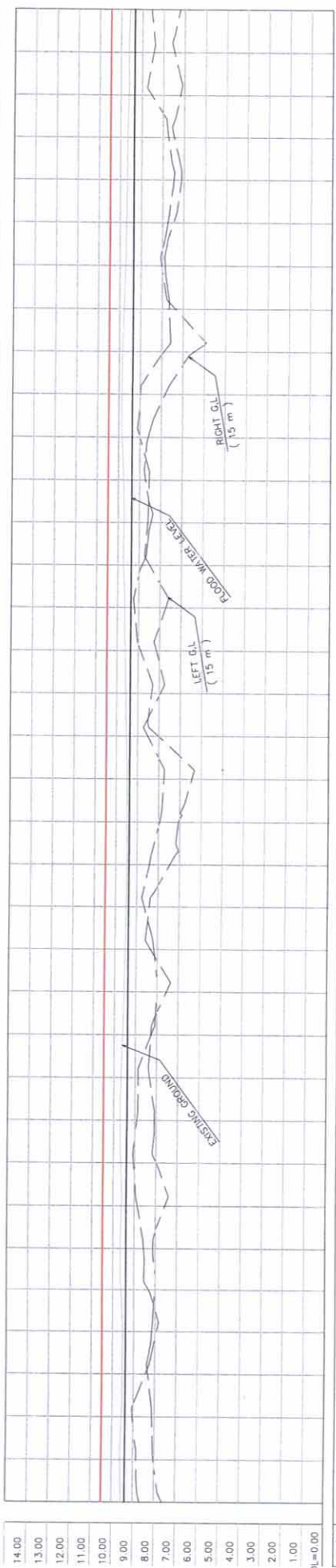
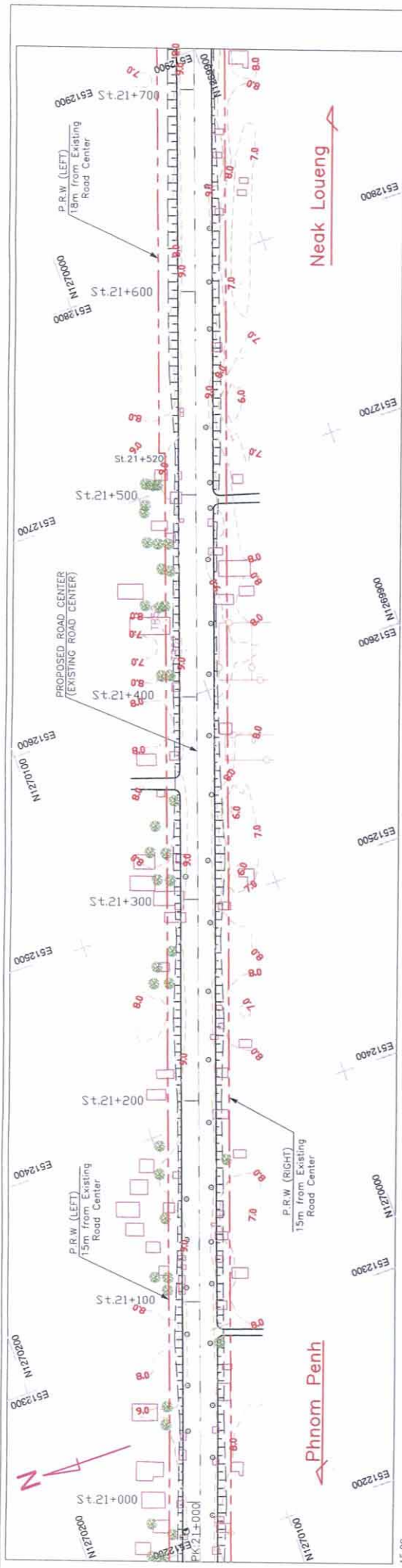
TITLE : PLAN AND PROFILE (STA.20+300-STA.21+000)

SCALE
H=1/2000
V=1/200

Drawing No. PL-30

Sheet No. PL-30

TYPE-4



| TYPE | CROSS SECTION | SUPER-ELEVATION | HORIZONTAL CURVATURE | STATION | GROUND HEIGHT | PAVEMENT HEIGHT | VERTICAL ALIGNMENT |
|--------|---------------|-----------------|----------------------|---------|---------------|-----------------|--------------------|
| TYPE-4 | | | | -21+000 | 9.57 | | |
| | | | | -21+020 | 9.60 | | |
| | | | | -21+040 | 9.55 | | |
| | | | | -21+060 | 9.53 | | |
| | | | | -21+080 | 9.53 | | |
| | | | | -21+100 | 9.60 | | |
| | | | | -21+120 | 9.64 | | |
| | | | | -21+140 | 9.60 | | |
| | | | | -21+160 | 9.65 | | |
| | | | | -21+180 | 9.69 | | |
| | | | | -21+200 | 9.66 | | |
| | | | | -21+220 | 9.60 | | |
| | | | | -21+240 | 9.55 | | |
| | | | | -21+260 | 9.51 | | |
| | | | | -21+280 | 9.48 | | |
| | | | | -21+300 | 9.46 | | |
| | | | | -21+320 | 9.48 | | |
| | | | | -21+340 | 9.49 | | |
| | | | | -21+360 | 9.53 | | |
| | | | | -21+380 | 9.57 | | |
| | | | | -21+400 | 9.62 | | |
| | | | | -21+420 | 9.65 | | |
| | | | | -21+440 | 9.72 | | |
| | | | | -21+460 | 9.72 | | |
| | | | | -21+480 | 9.75 | | |
| | | | | -21+500 | 9.84 | | |
| | | | | -21+520 | 9.86 | | |
| | | | | -21+540 | 9.84 | | |
| | | | | -21+560 | 9.78 | | |
| | | | | -21+580 | 9.73 | | |
| | | | | -21+600 | 9.70 | | |
| | | | | -21+620 | 9.67 | | |
| | | | | -21+640 | 9.65 | | |
| | | | | -21+660 | 9.61 | | |
| | | | | -21+680 | 9.62 | | |
| | | | | -21+700 | 9.57 | | |

MINISTRY OF PUBLIC WORKS AND TRANSPORT (MPWT)

THE PROJECT FOR THE IMPROVEMENT OF NATIONAL ROAD NO.1 (PHNOM PENH-NEAK LOUENG SECTION) IN THE KINGDOM OF CAMBODIA

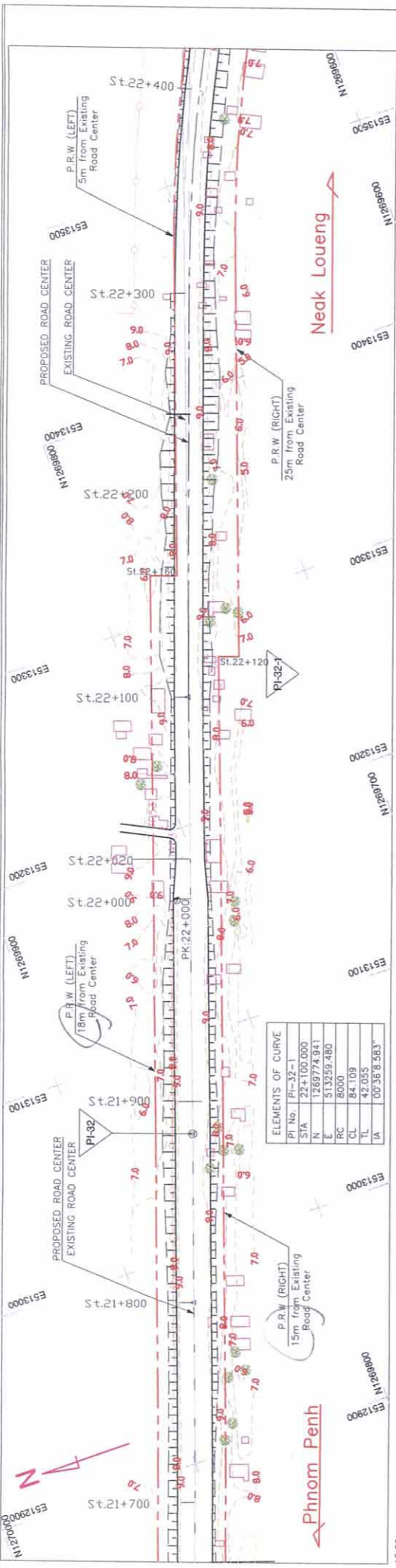
JAPAN INTERNATIONAL COOPERATION AGENCY
KATAHIRA & ENGINEERS INTERNATIONAL
CTI ENGINEERING INTERNATIONAL CO.,LTD

TITLE : PLAN AND PROFILE (STA.21+000 - STA.21+700)

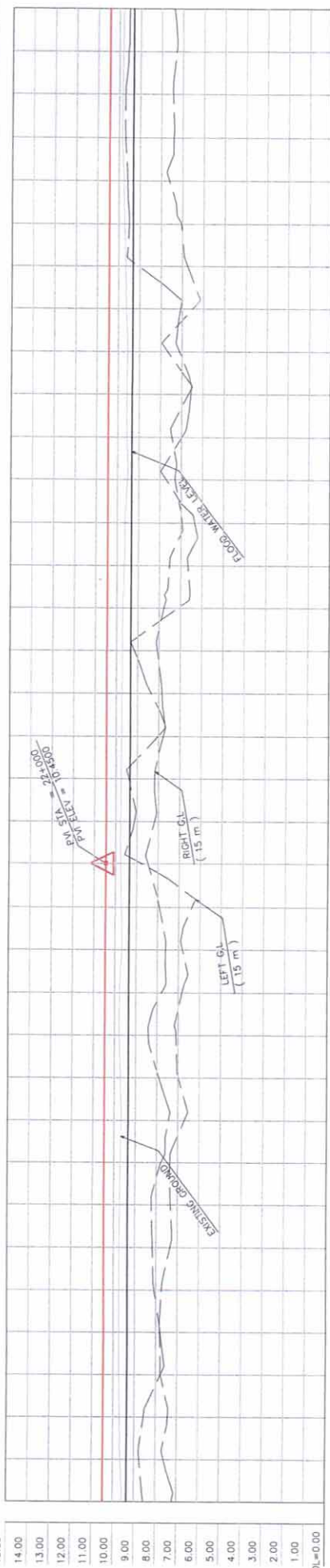
SCALE
H=1/2000
V=1/200

Drawing No.
Sheet No
PL-31

TYPE-4



| ELEMENTS OF CURVE | |
|-------------------|--------------|
| PI No. | PI-32-1 |
| SFA | 22+100.000 |
| N | 1266774.941 |
| E | 513259.480 |
| RC | 8000 |
| CL | 84.109 |
| TL | 42.055 |
| TA | 00°36'5.583" |



| TYPE | CROSS SECTION | TYPE |
|----------------------|---------------|--------|
| TYPE-4 | TYPE-7 | TYPE-7 |
| VERTICAL ALIGNMENT | | |
| PAVEMENT HEIGHT | | |
| GROUND HEIGHT | | |
| STATION | | |
| HORIZONTAL CURVATURE | | |
| SLOPE ELEVATION | | |

MINISTRY OF PUBLIC WORKS AND TRANSPORT (MPWT)

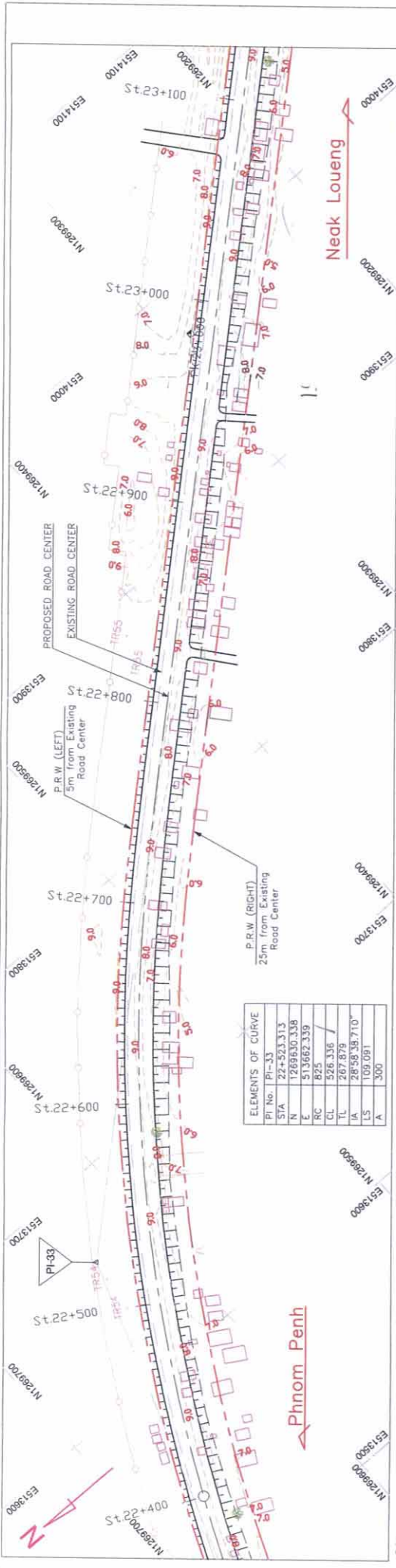
THE PROJECT FOR THE IMPROVEMENT OF NATIONAL ROAD NO.1 (PHNOM PENH-NEAK LOUENG SECTION) IN THE KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL CTI ENGINEERING INTERNATIONAL CO.,LTD

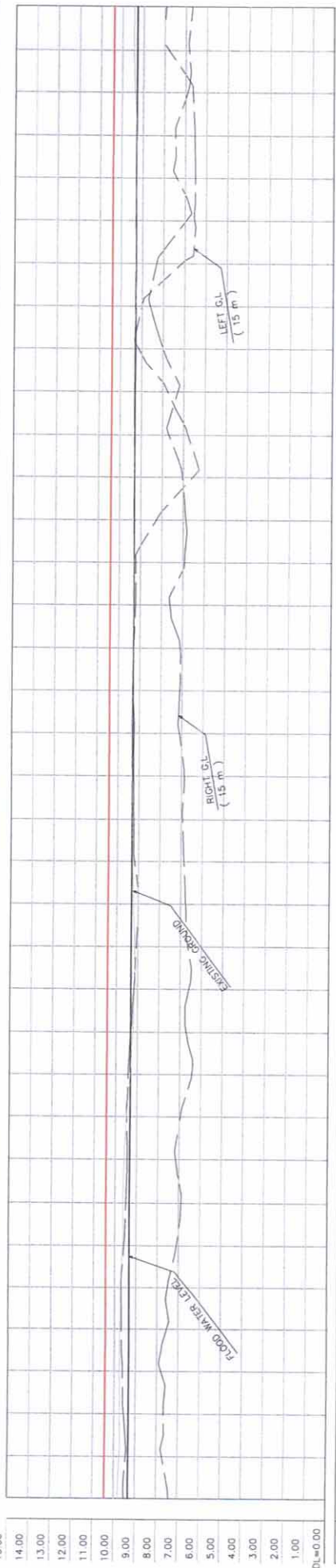
TITLE : PLAN AND PROFILE (STA.21+700 - STA.22+400)

SCALE H=1/2000 V=1/200

Drawing No. _____ Sheet No. PL-32



| ELEMENTS OF CURVE | |
|-------------------|---------------|
| PI No. | PI-33 |
| STA | 22+523.313 |
| N | 1269630.339 |
| E | 513662.339 |
| RC | 823 |
| CL | 526.336 |
| TL | 269.829 |
| LA | 28°58'58.710" |
| LS | 109.091 |
| A | 300 |



| TYPE | SECTION | TYPE |
|----------------------|---------|--------|
| TYPE-7 | | TYPE-7 |
| VERTICAL ALIGNMENT | | |
| HEIGHT | | |
| GROUND HEIGHT | | |
| STATION | | |
| HORIZONTAL CURVATURE | | |
| SURFACE ELEVATION | | |
| CROSS SECTION | | |

MINISTRY OF PUBLIC WORKS AND TRANSPORT (MPWT)

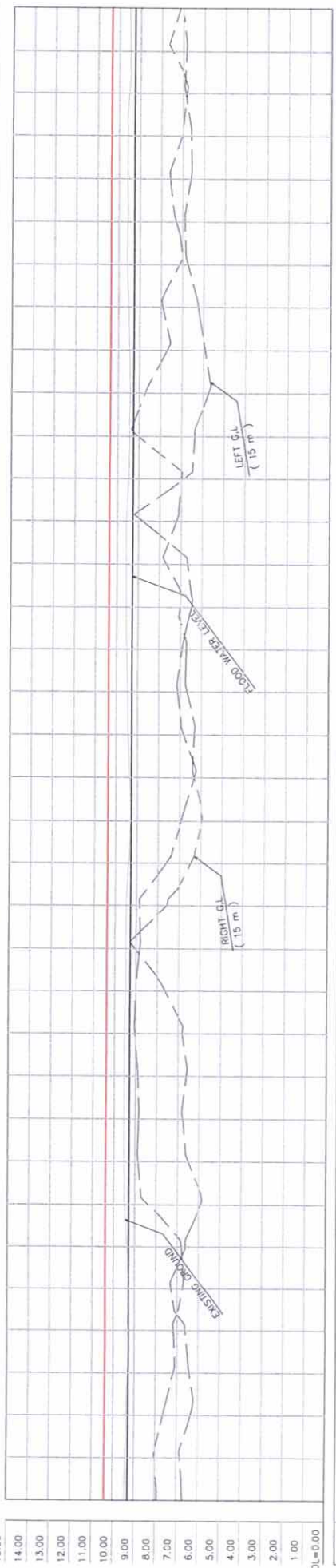
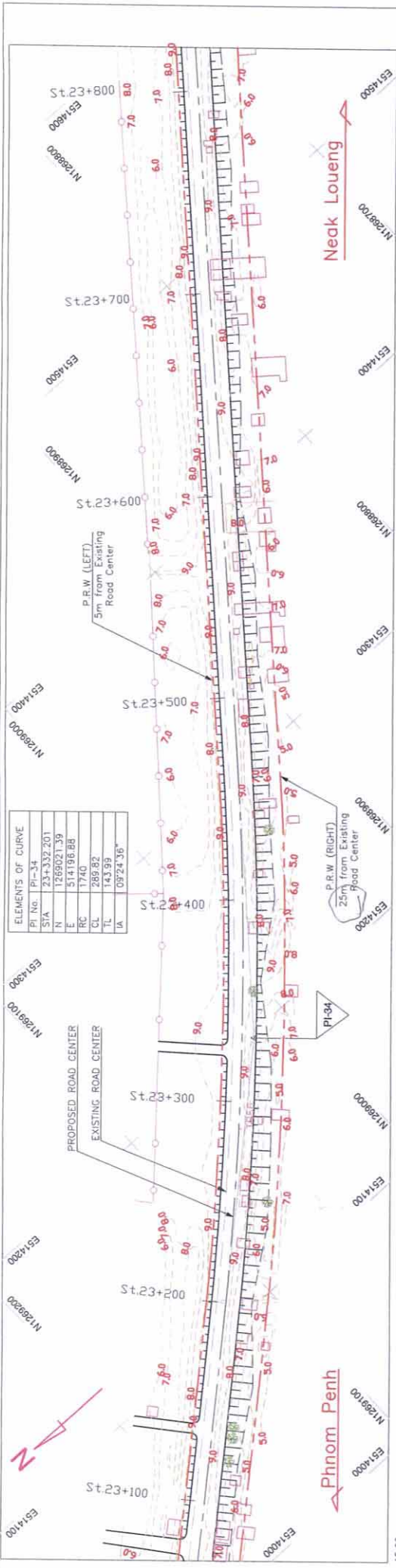
THE PROJECT FOR THE IMPROVEMENT OF NATIONAL ROAD NO.1 (PHNOM PENH-NEAK LOUENG SECTION) IN THE KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL CTI ENGINEERING INTERNATIONAL CO.,LTD

TITLE : PLAN AND PROFILE (STA.22+400 - STA.23+100)

SCALE H=1/2000 V=1/200

Drawing No. Sheet No. PL-33



| TYPE SECTION | CROSS ELEVATION | HORIZONTAL CURVATURE | STATION | GROUND HEIGHT | PAVEMENT HEIGHT | VERTICAL ALIGNMENT |
|--------------|-----------------|----------------------|---------|---------------|-----------------|-----------------------|
| TYPE--7 | 3.00 - 3.00 | NC | -23+100 | 9.44 | 10.390 | DL=0.00 |
| | 3.00 - 3.00 | NC | -23+120 | 9.41 | 10.389 | |
| TYPE--7 | 3.00 - 3.00 | RC | -23+140 | 9.37 | 10.388 | Rc=∞ L=414.741 |
| | 3.00 - 3.00 | RC | -23+160 | 9.32 | 10.387 | |
| TYPE--7 | 3.00 - 3.00 | BC | -23+180 | 9.28 | 10.386 | Rc=1740 Lc=289.071 |
| | 3.00 - 3.00 | BC | -23+200 | 9.29 | 10.385 | |
| TYPE--7 | 3.00 - 3.00 | RC | -23+220 | 9.35 | 10.384 | Rc=∞ L=883.530 |
| | 3.00 - 3.00 | RC | -23+240 | 9.47 | 10.383 | |
| TYPE--7 | 3.00 - 3.00 | RC | -23+260 | 9.52 | 10.382 | Rc=∞ L=883.530 |
| | 3.00 - 3.00 | RC | -23+280 | 9.55 | 10.381 | |
| TYPE--7 | 3.00 - 3.00 | RC | -23+300 | 9.54 | 10.379 | Rc=∞ L=883.530 |
| | 3.00 - 3.00 | RC | -23+320 | 9.53 | 10.378 | |
| TYPE--7 | 3.00 - 3.00 | RC | -23+340 | 9.47 | 10.377 | Rc=∞ L=883.530 |
| | 3.00 - 3.00 | RC | -23+360 | 9.48 | 10.376 | |
| TYPE--7 | 3.00 - 3.00 | RC | -23+380 | 9.48 | 10.375 | Rc=∞ L=883.530 |
| | 3.00 - 3.00 | RC | -23+400 | 9.38 | 10.374 | |
| TYPE--7 | 3.00 - 3.00 | RC | -23+420 | 9.32 | 10.373 | Rc=∞ L=883.530 |
| | 3.00 - 3.00 | RC | -23+440 | 9.36 | 10.372 | |
| TYPE--7 | 3.00 - 3.00 | RC | -23+460 | 9.43 | 10.371 | Rc=∞ L=883.530 |
| | 3.00 - 3.00 | RC | -23+480 | 9.46 | 10.370 | |
| TYPE--7 | 3.00 - 3.00 | RC | -23+500 | 9.52 | 10.369 | Rc=∞ L=883.530 |
| | 3.00 - 3.00 | RC | -23+520 | 9.55 | 10.368 | |
| TYPE--7 | 3.00 - 3.00 | RC | -23+540 | 9.57 | 10.366 | Rc=∞ L=883.530 |
| | 3.00 - 3.00 | RC | -23+560 | 9.56 | 10.365 | |
| TYPE--7 | 3.00 - 3.00 | RC | -23+580 | 9.47 | 10.364 | Rc=∞ L=883.530 |
| | 3.00 - 3.00 | RC | -23+600 | 9.44 | 10.363 | |
| TYPE--7 | 3.00 - 3.00 | RC | -23+620 | 9.43 | 10.362 | Rc=∞ L=883.530 |
| | 3.00 - 3.00 | RC | -23+640 | 9.47 | 10.361 | |
| TYPE--7 | 3.00 - 3.00 | RC | -23+660 | 9.52 | 10.360 | Rc=∞ L=883.530 |
| | 3.00 - 3.00 | RC | -23+680 | 9.60 | 10.359 | |
| TYPE--7 | 3.00 - 3.00 | RC | -23+700 | 9.57 | 10.358 | Rc=∞ L=883.530 |
| | 3.00 - 3.00 | RC | -23+720 | 9.58 | 10.357 | |
| TYPE--7 | 3.00 - 3.00 | RC | -23+740 | 9.57 | 10.356 | Rc=∞ L=883.530 |
| | 3.00 - 3.00 | RC | -23+760 | 9.52 | 10.354 | |
| TYPE--7 | 3.00 - 3.00 | RC | -23+780 | 9.48 | 10.353 | Rc=∞ L=883.530 |
| | 3.00 - 3.00 | RC | -23+800 | 9.52 | 10.352 | |

MINISTRY OF PUBLIC WORKS AND TRANSPORT (MPWT)

THE PROJECT FOR THE IMPROVEMENT OF NATIONAL ROAD NO.1 (PHNOM PENH-NEAK LOUENG SECTION) IN THE KINGDOM OF CAMBODIA

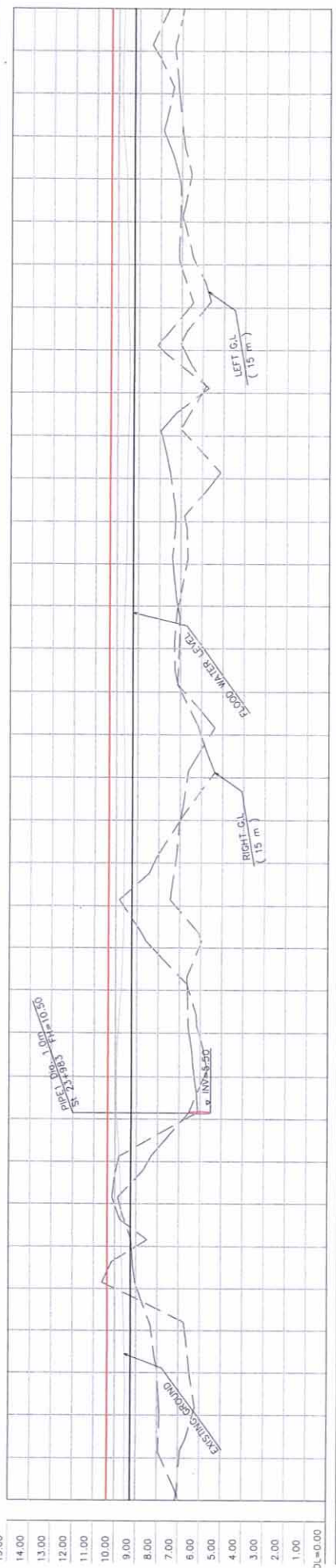
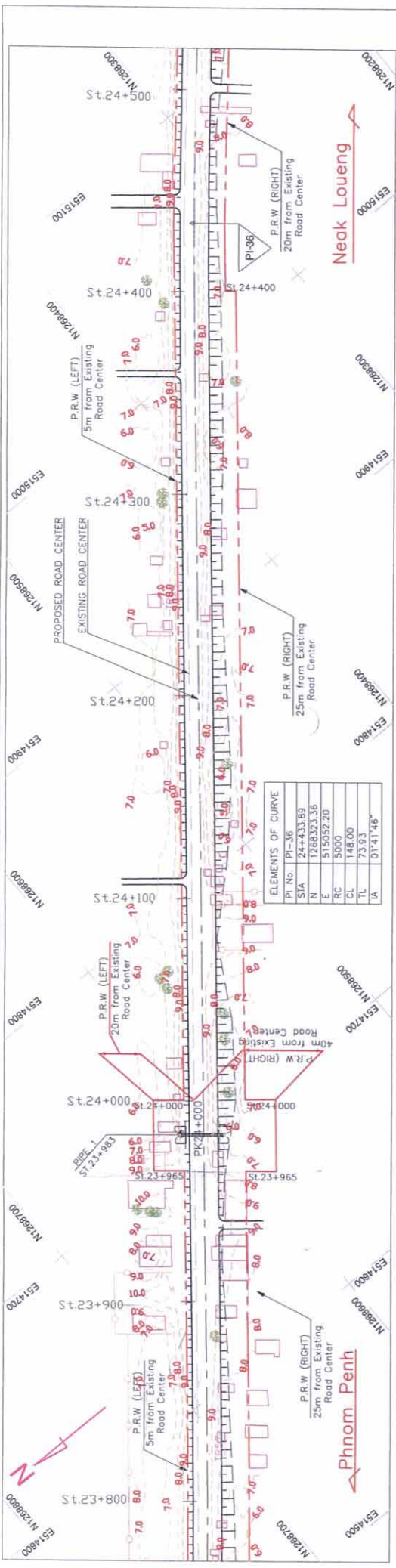
JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL CTI ENGINEERING INTERNATIONAL CO.,LTD

TITLE : PLAN AND PROFILE (STA.23+100 - STA.23+800)

SCALE H=1/2000 V=1/200

Drawing No. Sheet No. PL-34

TYPE--7



| CROSS SECTION TYPE | SUPER-ELEVATION | HORIZONTAL CURVATURE | STATION | GROUND HEIGHT | PAVEMENT HEIGHT | VERTICAL ALIGNMENT |
|--------------------|-----------------|----------------------|---------|---------------|-----------------|----------------------|
| TYPE-7 | NC | NC | 2+3+800 | 9.52 | 10.352 | m=0.0025 L=643.00 |
| | | | 2+3+820 | 9.52 | 10.351 | |
| TYPE-7 | NC | NC | 2+3+840 | 9.53 | 10.350 | Rc=∞ L=883.530 |
| | | | 2+3+860 | 9.51 | 10.349 | |
| TYPE-7 | NC | NC | 2+3+880 | 9.56 | 10.348 | Rc=∞ L=883.530 |
| | | | 2+3+900 | 9.63 | 10.347 | |
| TYPE-7 | NC | NC | 2+3+920 | 9.69 | 10.346 | Rc=∞ L=883.530 |
| | | | 2+3+940 | 9.70 | 10.345 | |
| TYPE-7 | NC | NC | 2+3+960 | 9.79 | 10.344 | Rc=∞ L=883.530 |
| | | | 2+3+980 | 9.91 | 10.343 | |
| TYPE-7 | NC | NC | 2+4+000 | 9.94 | 10.341 | Rc=∞ L=883.530 |
| | | | 2+4+020 | 9.87 | 10.340 | |
| TYPE-7 | NC | NC | 2+4+040 | 9.74 | 10.339 | Rc=∞ L=883.530 |
| | | | 2+4+060 | 9.65 | 10.338 | |
| TYPE-7 | NC | NC | 2+4+080 | 9.63 | 10.337 | Rc=∞ L=883.530 |
| | | | 2+4+100 | 9.62 | 10.336 | |
| TYPE-7 | NC | NC | 2+4+120 | 9.59 | 10.335 | Rc=∞ L=883.530 |
| | | | 2+4+140 | 9.59 | 10.334 | |
| TYPE-7 | NC | NC | 2+4+160 | 9.63 | 10.333 | Rc=∞ L=883.530 |
| | | | 2+4+180 | 9.66 | 10.332 | |
| TYPE-7 | NC | NC | 2+4+200 | 9.67 | 10.331 | Rc=∞ L=883.530 |
| | | | 2+4+220 | 9.62 | 10.330 | |
| TYPE-7 | NC | NC | 2+4+240 | 9.56 | 10.328 | Rc=∞ L=883.530 |
| | | | 2+4+260 | 9.53 | 10.327 | |
| TYPE-7 | NC | NC | 2+4+280 | 9.52 | 10.326 | Rc=∞ L=883.530 |
| | | | 2+4+300 | 9.47 | 10.325 | |
| TYPE-7 | NC | NC | 2+4+320 | 9.42 | 10.324 | Rc=∞ L=883.530 |
| | | | 2+4+340 | 9.44 | 10.323 | |
| TYPE-7 | NC | NC | 2+4+360 | 9.50 | 10.322 | Rc=∞ L=883.530 |
| | | | 2+4+380 | 9.49 | 10.321 | |
| TYPE-7 | NC | NC | 2+4+400 | 9.56 | 10.320 | Rc=∞ L=883.530 |
| | | | 2+4+420 | 9.58 | 10.319 | |
| TYPE-7 | NC | NC | 2+4+440 | 9.73 | 10.318 | Rc=∞ L=883.530 |
| | | | 2+4+460 | 9.81 | 10.317 | |
| TYPE-7 | NC | NC | 2+4+480 | 9.77 | 10.315 | Rc=∞ L=883.530 |
| | | | 2+4+500 | 9.72 | 10.314 | |

MINISTRY OF PUBLIC WORKS AND TRANSPORT (MPWT)

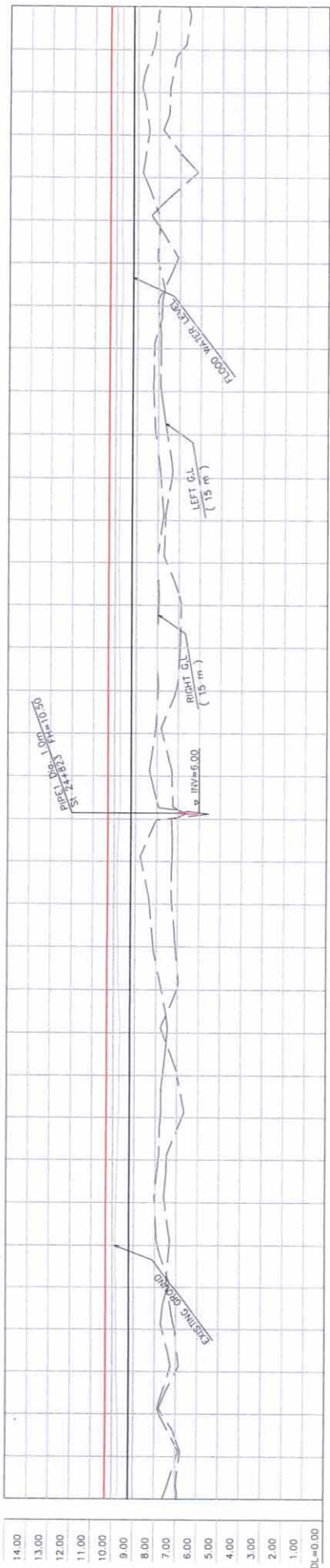
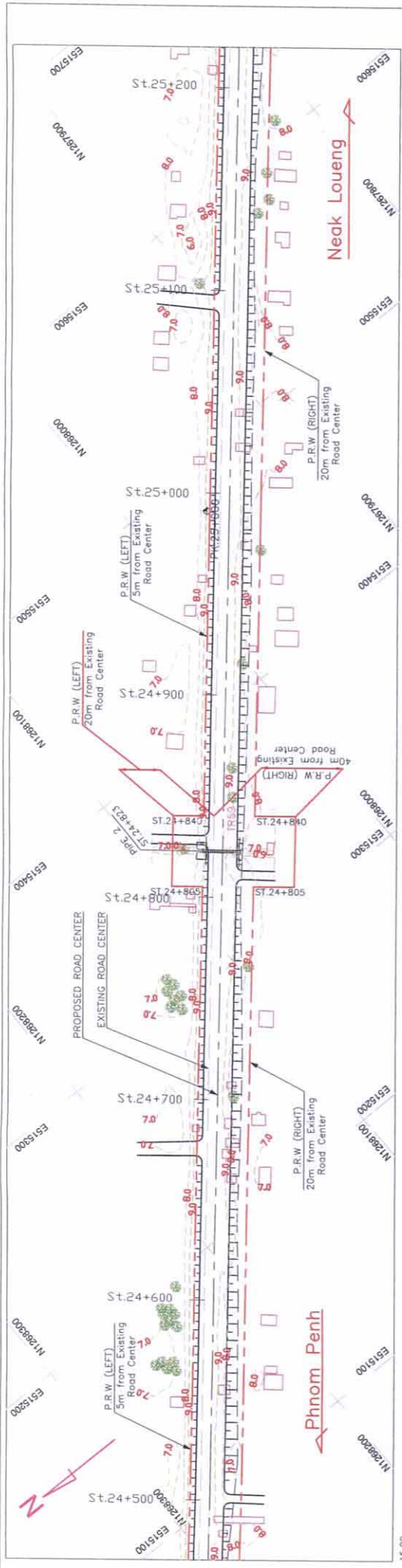
THE PROJECT FOR THE IMPROVEMENT OF NATIONAL ROAD NO.1 (PHNOM PENH-NEAK LOUENG SECTION) IN THE KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL CTI ENGINEERING INTERNATIONAL CO.,LTD

TITLE : PLAN AND PROFILE (STA.23+800 – STA.24+500)

SCALE H=1/2000 V=1/200

Drawing No. Sheet No. PL-35



| STATION | GROUND ELEVATION | PROPOSED ROAD ELEVATION |
|---------|------------------|-------------------------|
| 24+500 | 9.72 | 10.314 |
| 24+520 | 9.71 | 10.313 |
| 24+540 | 9.74 | 10.312 |
| 24+560 | 9.79 | 10.311 |
| 24+580 | 9.83 | 10.310 |
| 24+600 | 9.83 | 10.309 |
| 24+620 | 9.86 | 10.308 |
| 24+640 | 9.83 | 10.307 |
| 24+660 | 9.78 | 10.306 |
| 24+680 | 9.73 | 10.305 |
| 24+700 | 9.72 | 10.303 |
| 24+720 | 9.68 | 10.302 |
| 24+740 | 9.75 | 10.301 |
| 24+760 | 9.78 | 10.300 |
| 24+780 | 9.84 | 10.299 |
| 24+800 | 9.85 | 10.298 |
| 24+820 | 9.77 | 10.297 |
| 24+840 | 9.73 | 10.296 |
| 24+860 | 9.73 | 10.295 |
| 24+880 | 9.74 | 10.294 |
| 24+900 | 9.76 | 10.293 |
| 24+920 | 9.79 | 10.292 |
| 24+940 | 9.82 | 10.290 |
| 24+960 | 9.81 | 10.289 |
| 24+980 | 9.78 | 10.288 |
| 25+000 | 9.78 | 10.287 |
| 25+020 | 9.75 | 10.286 |
| 25+040 | 9.77 | 10.285 |
| 25+060 | 9.71 | 10.284 |
| 25+080 | 9.70 | 10.283 |
| 25+100 | 9.73 | 10.282 |
| 25+120 | 9.72 | 10.281 |
| 25+140 | 9.73 | 10.280 |
| 25+160 | 9.72 | 10.279 |
| 25+180 | 9.71 | 10.277 |
| 25+200 | 9.72 | 10.276 |

MINISTRY OF PUBLIC WORKS AND TRANSPORT (MPWT)

THE PROJECT FOR THE IMPROVEMENT OF NATIONAL ROAD NO.1 (PHNOM PENH-NEAK LOUENG SECTION) IN THE KINGDOM OF CAMBODIA

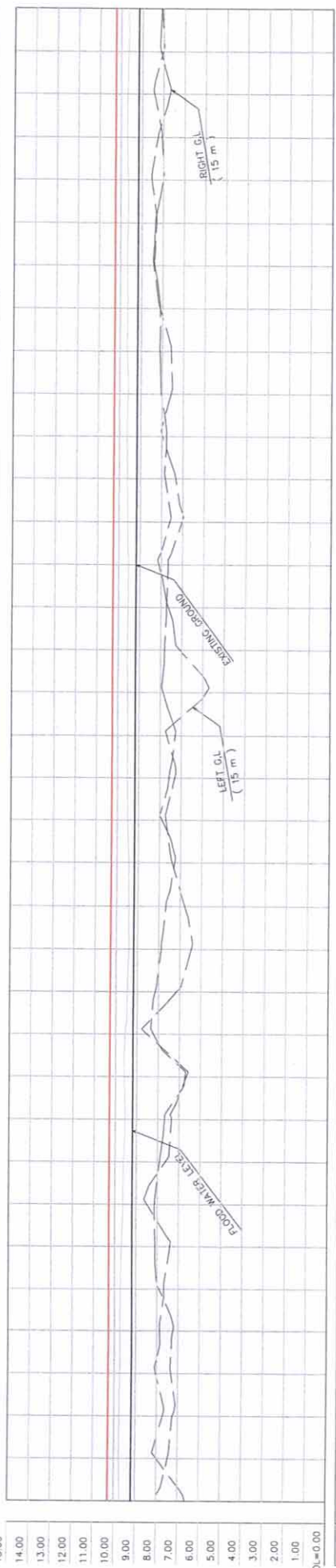
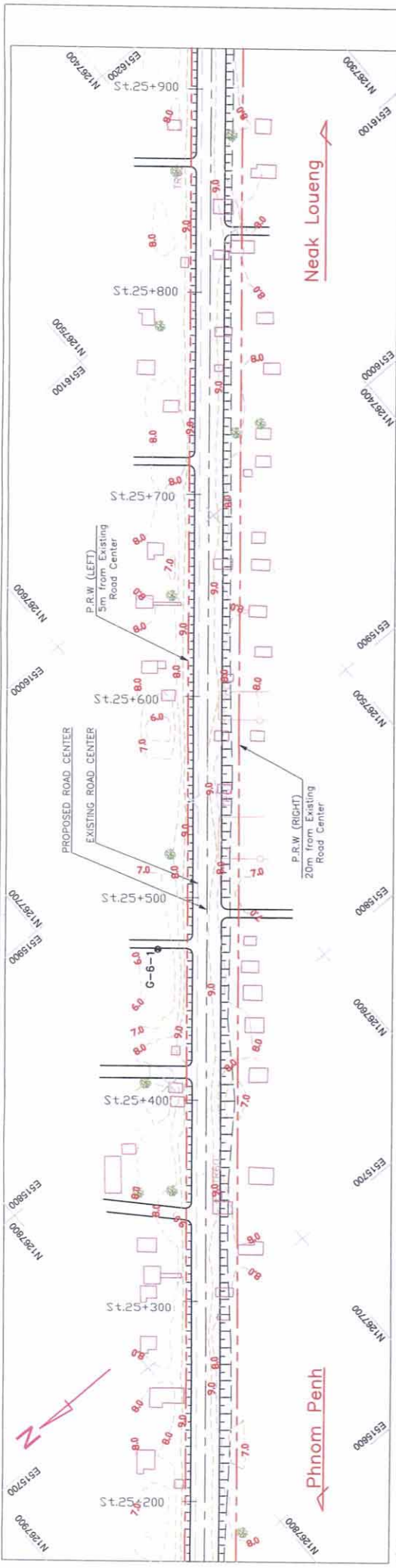
JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL CTI ENGINEERING INTERNATIONAL CO.,LTD

TITLE : PLAN AND PROFILE (STA.24+500 – STA.25+200)

SCALE H=1/2000 V=1/200

Drawing No. PL-36

TYPE-7



| TYPE | CROSS SECTION | SLOPE ELEVATION | HORIZONTAL CURVATURE | STATION | GROUND HEIGHT | PAVEMENT HEIGHT | VERTICAL ALIGNMENT |
|--------|---------------|-----------------|----------------------|---------|---------------|-----------------|--------------------|
| TYPE-7 | | | | -25+200 | 9.72 | | |
| | | | | -25+220 | 9.76 | | |
| | | | | -25+240 | 9.75 | | |
| | | | | -25+260 | 9.73 | | |
| | | | | -25+280 | 9.74 | | |
| | | | | -25+300 | 9.71 | | |
| | | | | -25+320 | 9.67 | | |
| | | | | -25+340 | 9.60 | | |
| | | | | -25+360 | 9.59 | | |
| | | | | -25+380 | 9.53 | | |
| | | | | -25+400 | 9.59 | | |
| | | | | -25+420 | 9.55 | | |
| | | | | -25+440 | 9.46 | | |
| | | | | -25+460 | 9.40 | | |
| | | | | -25+480 | 9.42 | | |
| | | | | -25+500 | 9.43 | | |
| | | | | -25+520 | 9.50 | | |
| | | | | -25+540 | 9.53 | | |
| | | | | -25+560 | 9.52 | | |
| | | | | -25+580 | 9.54 | | |
| | | | | -25+600 | 9.56 | | |
| | | | | -25+620 | 9.54 | | |
| | | | | -25+640 | 9.54 | | |
| | | | | -25+660 | 9.58 | | |
| | | | | -25+680 | 9.61 | | |
| | | | | -25+700 | 9.64 | | |
| | | | | -25+720 | 9.59 | | |
| | | | | -25+740 | 9.65 | | |
| | | | | -25+760 | 9.63 | | |
| | | | | -25+780 | 9.67 | | |
| | | | | -25+800 | 9.63 | | |
| | | | | -25+820 | 9.65 | | |
| | | | | -25+840 | 9.68 | | |
| | | | | -25+860 | 9.69 | | |
| | | | | -25+880 | 9.64 | | |
| | | | | -25+900 | 9.65 | | |

MINISTRY OF PUBLIC WORKS AND TRANSPORT (MPWT)

THE PROJECT FOR THE IMPROVEMENT OF NATIONAL ROAD NO.1 (PHNOM PENH-NEAK LOUENG SECTION) IN THE KINGDOM OF CAMBODIA

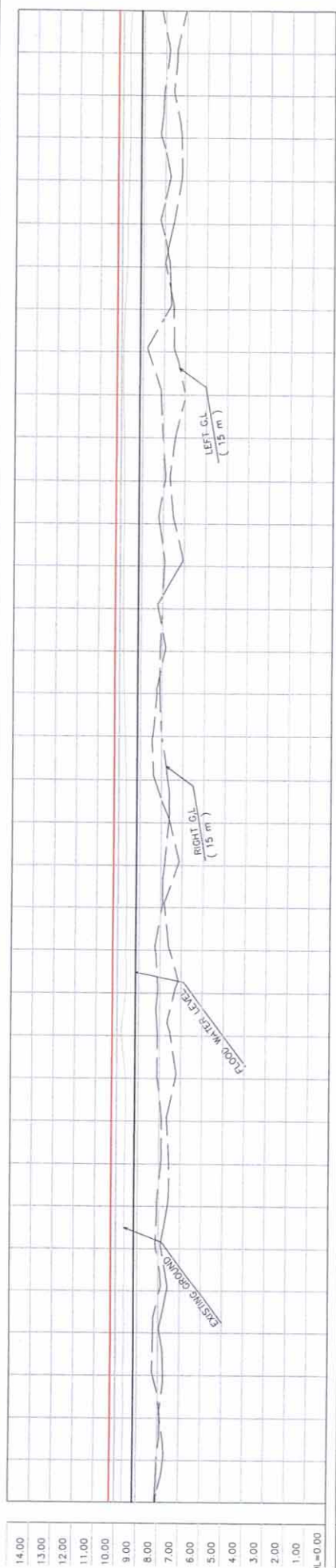
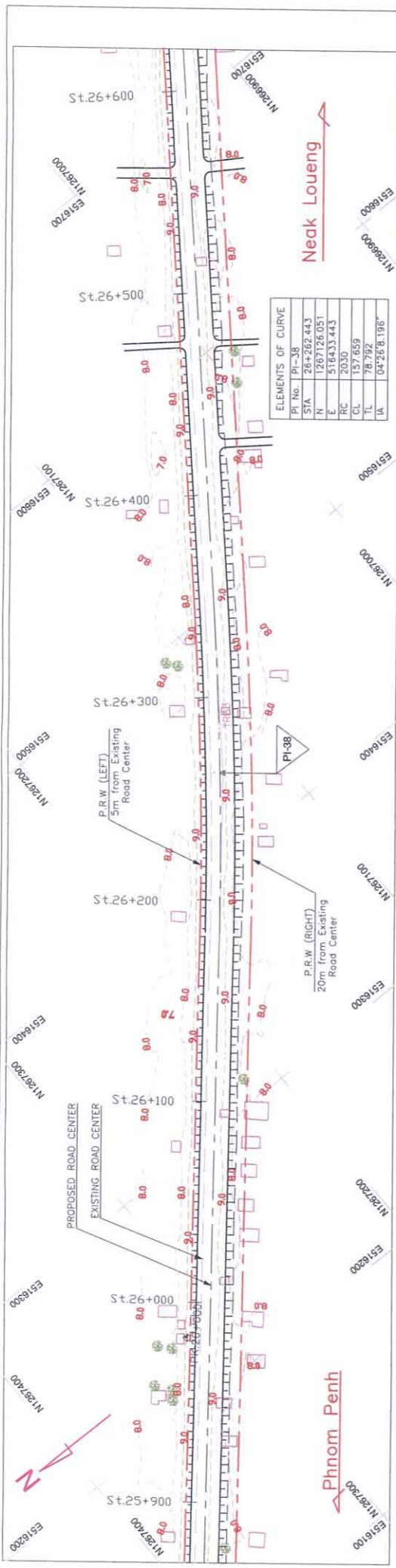
JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL CTI ENGINEERING INTERNATIONAL CO.,LTD

TITLE : PLAN AND PROFILE (STA.25+200 - STA.25+900)

SCALE H = 1/2000 V = 1/200

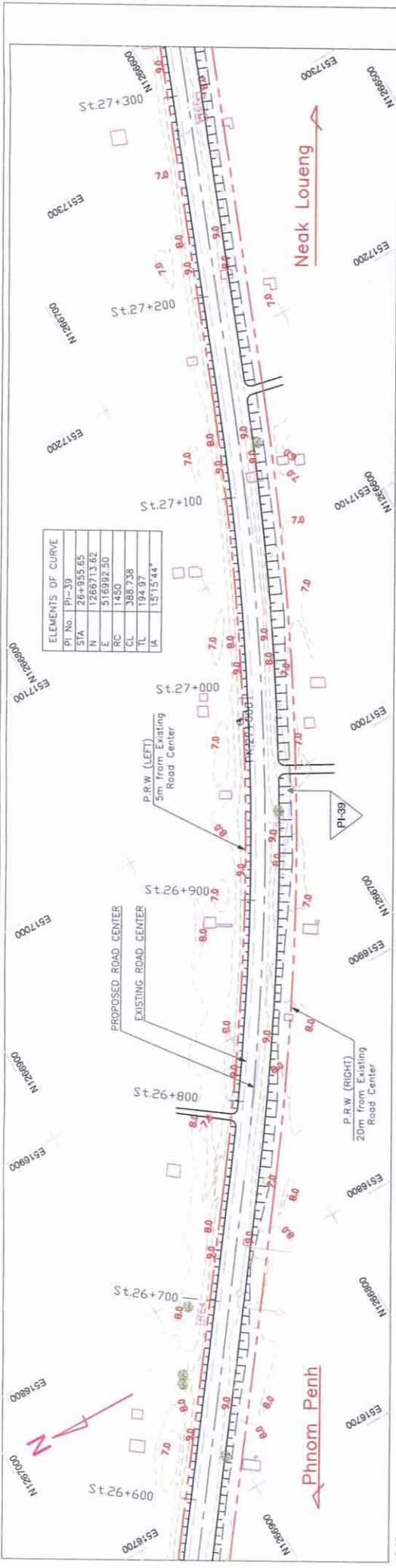
Drawing No. Sheet No. PL-37

TYPE-7

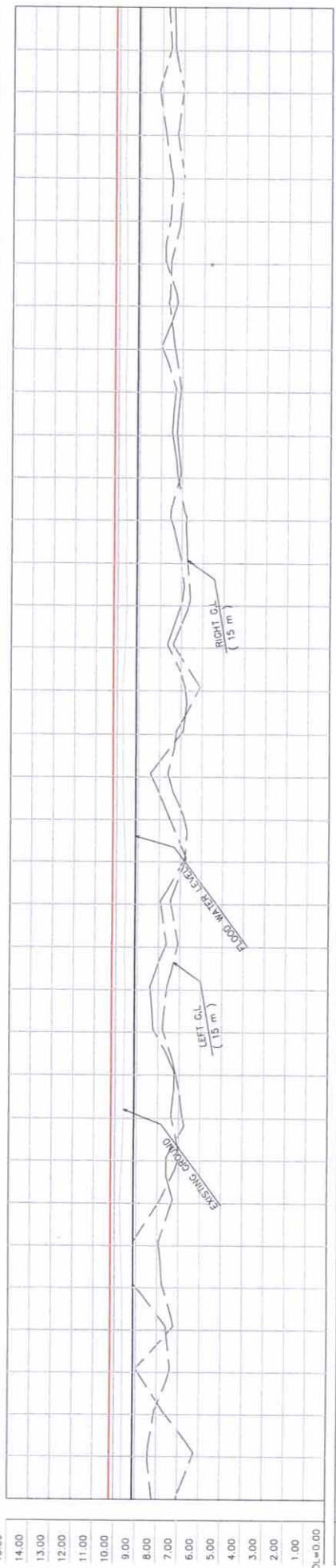


| VERTICAL ALIGNMENT | STATION | GROUND HEIGHT | PAVEMENT HEIGHT | TYPE |
|---------------------------|---------|---------------|-----------------|------|
| RC=2030 Lc=157.659 | 10.238 | 9.65 | - | RC |
| | 10.237 | 9.64 | - | |
| | 10.236 | 9.61 | - | |
| | 10.235 | 9.63 | - | |
| | 10.234 | 9.60 | - | |
| | 10.233 | 9.63 | - | |
| | 10.232 | 9.59 | - | |
| | 10.231 | 9.62 | - | |
| | 10.230 | 9.61 | - | |
| | 10.229 | 9.58 | - | |
| RC=1875.844 L=1875.844 | 10.228 | 9.58 | - | RC |
| | 10.226 | 9.79 | - | |
| | 10.225 | 9.60 | - | |
| | 10.224 | 9.61 | - | |
| | 10.223 | 9.58 | - | |
| | 10.222 | 9.62 | - | |
| | 10.221 | 9.64 | - | |
| | 10.220 | 9.67 | - | |
| | 10.219 | 9.70 | - | |
| | 10.218 | 9.76 | - | |
| RC=2030 Lc=157.659 | 10.217 | 9.80 | - | RC |
| | 10.216 | 9.83 | - | |
| | 10.214 | 9.84 | - | |
| | 10.213 | 9.81 | - | |
| | 10.212 | 9.83 | - | |
| | 10.211 | 9.84 | - | |
| | 10.210 | 9.89 | - | |
| | 10.209 | 9.91 | - | |
| | 10.208 | 9.85 | - | |
| | 10.207 | 9.76 | - | |
| RC=420.234 L=420.234 | 10.206 | 9.73 | - | RC |
| | 10.205 | 9.68 | - | |
| | 10.204 | 9.64 | - | |
| | 10.203 | 9.65 | - | |
| | 10.201 | 9.69 | - | |
| | 10.200 | 9.66 | - | |

| | | | | | |
|---|---|---|--|------------------------|-----------------------------|
| MINISTRY OF PUBLIC WORKS AND TRANSPORT (MPWT) | THE PROJECT FOR THE IMPROVEMENT OF NATIONAL ROAD NO.1 (PHNOM PENH-NEAK LOUENG SECTION) IN THE KINGDOM OF CAMBODIA | JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL CTI ENGINEERING INTERNATIONAL CO.,LTD | PLAN AND PROFILE (STA.25+900 - STA.26+600) | SCALE H=1/2000 V=1/200 | Drawing No. Sheet No. PL-38 |
|---|---|---|--|------------------------|-----------------------------|

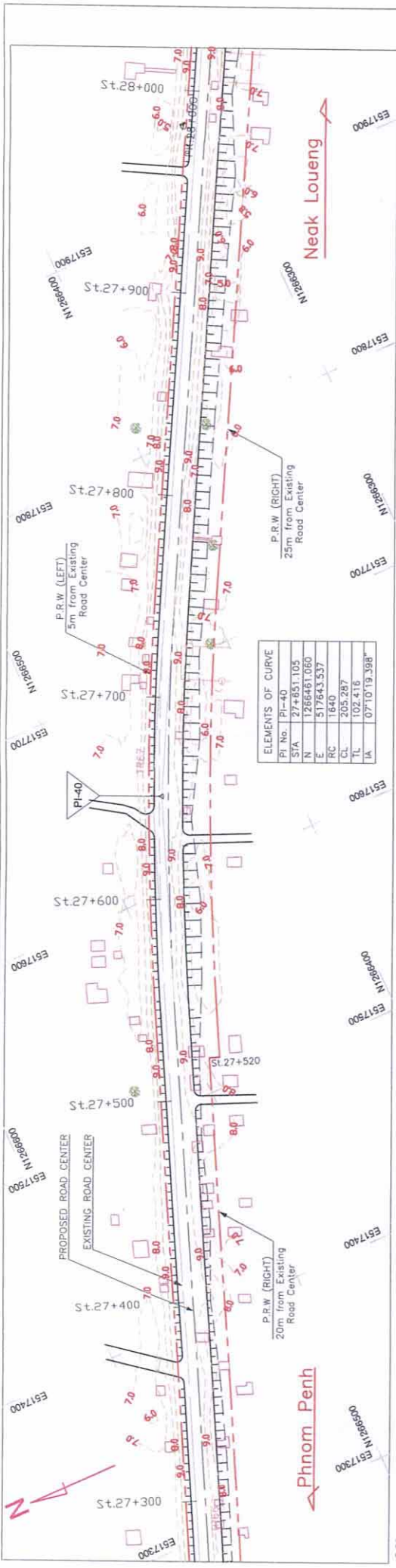


| ELEMENTS OF CURVE | |
|-------------------|------------|
| PI No. | PI-39 |
| SFA | 26+955.65 |
| N | 1266713.62 |
| E | 516992.50 |
| RC | 1450 |
| CL | 388.738 |
| TL | 194.97 |
| LA | 15°15'44" |

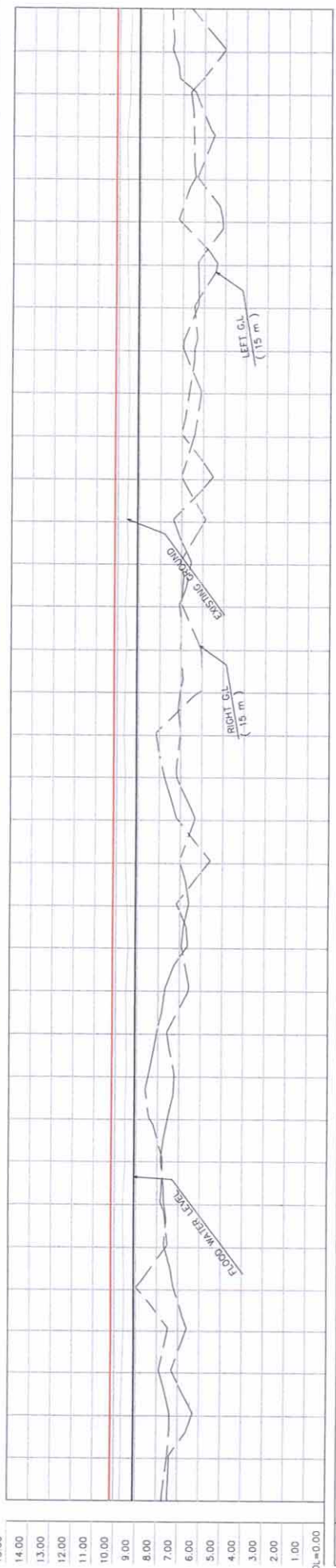


| TYPE SECTION | CROSS ELEVATION | STATION | GROUND HEIGHT | PAVEMENT HEIGHT | VERTICAL ALIGNMENT |
|--------------|-----------------|---------|---------------|-----------------|-----------------------------|
| TYPE-7 | NC | 26+800 | 9.64 | 9.64 | $Rc=420.254$ $L=420.254$ |
| | | 26+820 | 9.63 | 9.63 | |
| | | 26+840 | 9.58 | 9.58 | |
| | | 26+860 | 9.55 | 9.55 | |
| | | 26+880 | 9.58 | 9.58 | |
| | | 26+900 | 9.58 | 9.58 | |
| | | 26+920 | 9.66 | 9.66 | |
| | | 26+940 | 9.71 | 9.71 | |
| | | 26+960 | 9.72 | 9.72 | |
| | | 26+980 | 9.74 | 9.74 | |
| TYPE-7 | NC | 27+000 | 9.62 | 9.62 | $Rc=400.932$ $L=400.932$ |
| | | 27+020 | 9.57 | 9.57 | |
| | | 27+040 | 9.61 | 9.61 | |
| | | 27+060 | 9.60 | 9.60 | |
| | | 27+080 | 9.63 | 9.63 | |
| | | 27+100 | 9.66 | 9.66 | |
| | | 27+120 | 9.67 | 9.67 | |
| | | 27+140 | 9.63 | 9.63 | |
| | | 27+160 | 9.63 | 9.63 | |
| | | 27+180 | 9.63 | 9.63 | |
| TYPE-7 | NC | 27+200 | 9.65 | 9.65 | $Rc=400.932$ $L=400.932$ |
| | | 27+240 | 9.71 | 9.71 | |
| TYPE-7 | NC | 27+280 | 9.67 | 9.67 | $Rc=400.932$ $L=400.932$ |
| | | 27+300 | 9.69 | 9.69 | |

MINISTRY OF PUBLIC WORKS AND TRANSPORT (MPWT)
THE PROJECT FOR THE IMPROVEMENT OF NATIONAL ROAD NO.1 (PHNOM PENH-NEAK LOUENG SECTION) IN THE KINGDOM OF CAMBODIA
JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL CTI ENGINEERING INTERNATIONAL CO.,LTD
TITLE : PLAN AND PROFILE (STA.26+600 - STA.27+300)
 SCALE: H=1/2000 V=1/200
 Drawing No. _____
 Sheet No. PL-39



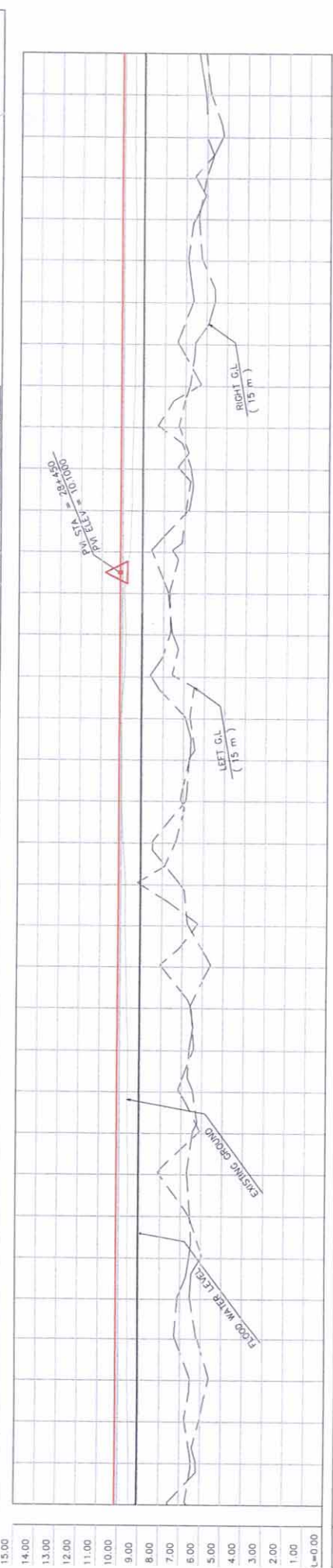
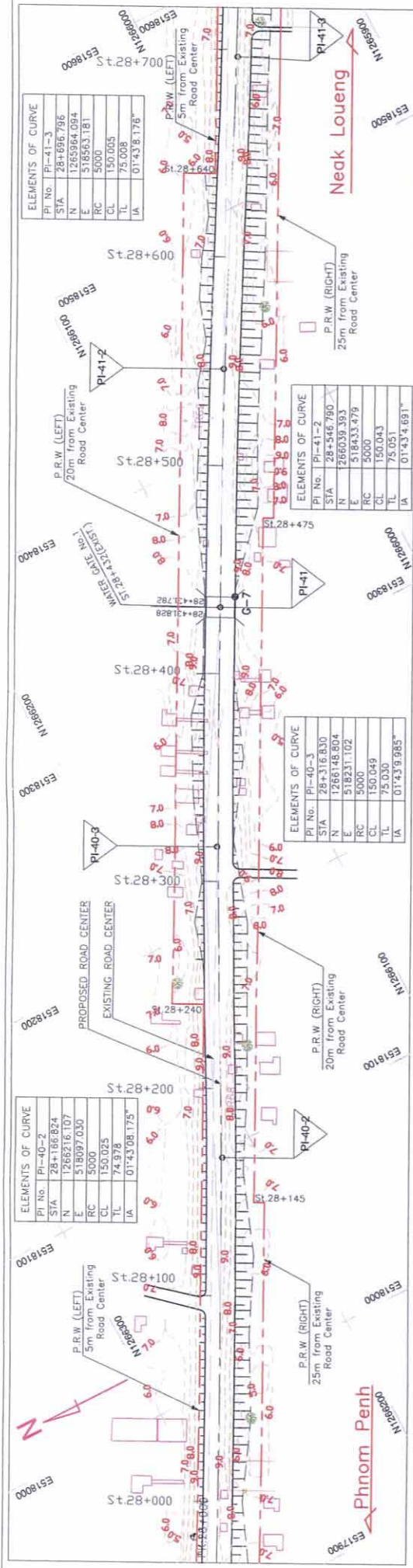
| ELEMENTS OF CURVE | |
|-------------------|-------------|
| PI No. | PI-40 |
| STA | 27+851.105 |
| N | 1266461.060 |
| E | 517643.537 |
| RC | 1640 |
| CL | 205.287 |
| TL | 102.416 |
| VI | 0.71019.368 |



| STATION | GROUND HEIGHT | PAVEMENT HEIGHT | CROSS SECTION TYPE |
|---------|---------------|-----------------|--------------------|
| -27+300 | 9.69 | | TYPE-7 |
| -27+320 | 9.66 | | |
| -27+340 | 9.67 | | |
| -27+360 | 9.62 | | |
| -27+380 | 9.56 | | |
| -27+400 | 9.54 | | |
| -27+420 | 9.57 | | |
| -27+440 | 9.60 | | |
| -27+460 | 9.51 | | |
| -27+480 | 9.53 | | |
| -27+500 | 9.47 | | |
| -27+520 | 9.49 | | |
| -27+540 | 9.51 | | |
| -27+560 | 9.41 | | |
| -27+580 | 9.49 | | |
| -27+600 | 9.56 | | |
| -27+620 | 9.61 | | |
| -27+640 | 9.59 | | |
| -27+660 | 9.65 | | |
| -27+680 | 9.61 | | |
| -27+700 | 9.58 | | |
| -27+720 | 9.63 | | |
| -27+740 | 9.51 | | |
| -27+760 | 9.56 | | |
| -27+780 | 9.51 | | |
| -27+800 | 9.51 | | |
| -27+820 | 9.49 | | |
| -27+840 | 9.53 | | |
| -27+860 | 9.53 | | |
| -27+880 | 9.60 | | |
| -27+900 | 9.60 | | |
| -27+920 | 9.60 | | |
| -27+940 | 9.63 | | |
| -27+960 | 9.50 | | |
| -27+980 | 9.50 | | |
| -28+000 | 9.44 | | |

| CURVATURE | RC | LC |
|-----------|---------|------------|
| EC | Rc=1640 | Lc=205.287 |
| BC | Rc=400 | Lc=9.32 |

| SURF ELEVATION | RC | LC |
|----------------|---------|------------|
| BC | Rc=1640 | Lc=205.287 |
| EC | Rc=1640 | Lc=205.287 |



| STATION | PACIENT HEIGHT | GROUND HEIGHT | STATION |
|---------|----------------|---------------|---------|
| 28+000 | 9.44 | 10.124 | 28+000 |
| 28+020 | 9.45 | 10.123 | 28+020 |
| 28+040 | 9.50 | 10.122 | 28+040 |
| 28+060 | 9.56 | 10.121 | 28+060 |
| 28+080 | 9.53 | 10.120 | 28+080 |
| 28+100 | 9.57 | 10.119 | 28+100 |
| 28+120 | 9.57 | 10.118 | 28+120 |
| 28+140 | 9.56 | 10.117 | 28+140 |
| 28+160 | 9.55 | 10.116 | 28+160 |
| 28+180 | 9.61 | 10.115 | 28+180 |
| 28+200 | 9.60 | 10.114 | 28+200 |
| 28+220 | 9.59 | 10.112 | 28+220 |
| 28+240 | 9.66 | 10.111 | 28+240 |
| 28+260 | 9.71 | 10.110 | 28+260 |
| 28+280 | 9.77 | 10.109 | 28+280 |
| 28+300 | 9.76 | 10.108 | 28+300 |
| 28+320 | 9.90 | 10.107 | 28+320 |
| 28+340 | 9.98 | 10.106 | 28+340 |
| 28+360 | 9.99 | 10.105 | 28+360 |
| 28+380 | 9.87 | 10.104 | 28+380 |
| 28+400 | 9.87 | 10.103 | 28+400 |
| 28+420 | 9.81 | 10.102 | 28+420 |
| 28+440 | 9.89 | 10.101 | 28+440 |
| 28+460 | 9.65 | 10.100 | 28+460 |
| 28+480 | 9.57 | 10.099 | 28+480 |
| 28+500 | 9.57 | 10.098 | 28+500 |
| 28+520 | 9.51 | 10.097 | 28+520 |
| 28+540 | 9.45 | 10.097 | 28+540 |
| 28+560 | 9.45 | 10.096 | 28+560 |
| 28+580 | 9.42 | 10.095 | 28+580 |
| 28+600 | 9.43 | 10.094 | 28+600 |
| 28+620 | 9.41 | 10.094 | 28+620 |
| 28+640 | 9.48 | 10.093 | 28+640 |
| 28+660 | 9.51 | 10.092 | 28+660 |
| 28+680 | 9.48 | 10.091 | 28+680 |
| 28+700 | 9.51 | 10.091 | 28+700 |

MINISTRY OF PUBLIC WORKS AND TRANSPORT (MPWT)

THE PROJECT FOR THE IMPROVEMENT OF NATIONAL ROAD NO.1 (PHNOM PENH-NEAK LOUENG SECTION) IN THE KINGDOM OF CAMBODIA

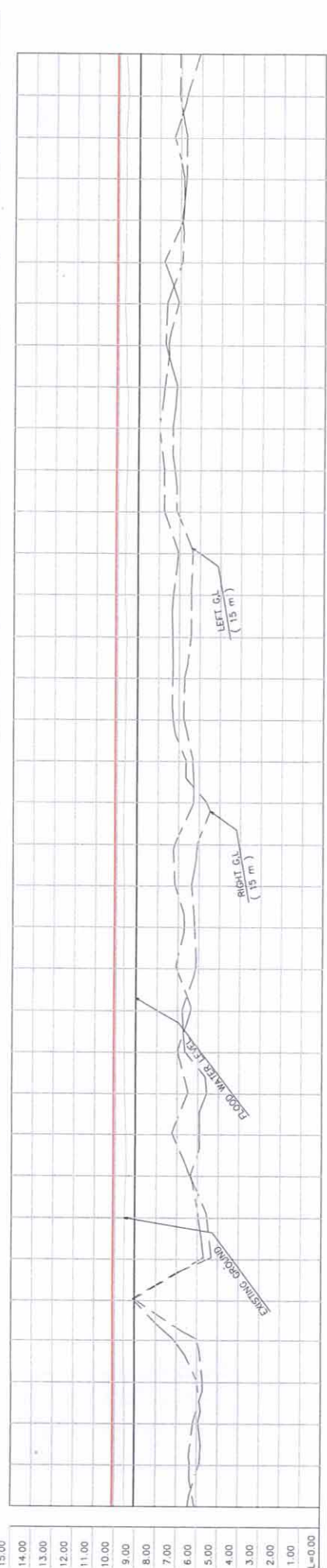
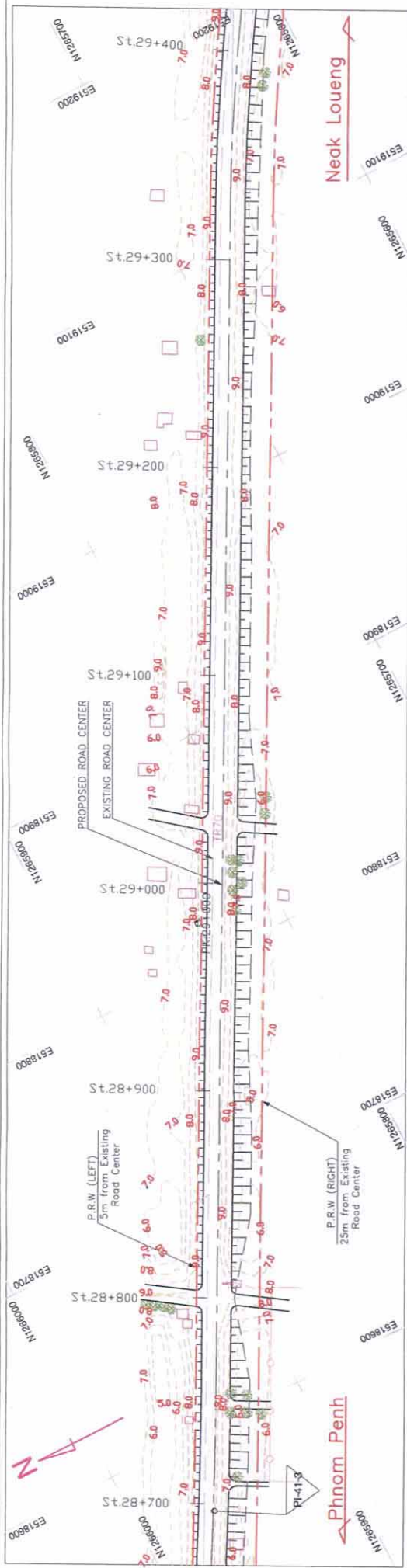
JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL CTI ENGINEERING INTERNATIONAL CO.,LTD

TITLE : PLAN AND PROFILE (STA.28+000 – STA.28+700)

SCALE
H=1/2000
V=1/200

Drawing No
Sheet No.
PL-41

TYPE 7



| VERTICAL ALIGNMENT | STATION | GROUND HEIGHT | STATION | GROUND HEIGHT | PHASEMENT HEIGHT | PHASEMENT ALIGNMENT |
|--------------------|---------|---------------|---------|---------------|------------------|---------------------|
| | 28+700 | 9.51 | 28+700 | 9.51 | | |
| | 28+720 | 9.51 | 28+720 | 9.51 | | |
| | 28+740 | 9.51 | 28+740 | 9.51 | | |
| | 28+760 | 9.54 | 28+760 | 9.54 | | |
| | 28+780 | 9.56 | 28+780 | 9.56 | | |
| | 28+800 | 9.55 | 28+800 | 9.55 | | |
| | 28+820 | 9.53 | 28+820 | 9.53 | | |
| | 28+840 | 9.53 | 28+840 | 9.53 | | |
| | 28+860 | 9.46 | 28+860 | 9.46 | | |
| | 28+880 | 9.48 | 28+880 | 9.48 | | |
| | 28+900 | 9.54 | 28+900 | 9.54 | | |
| | 28+920 | 9.57 | 28+920 | 9.57 | | |
| | 28+940 | 9.58 | 28+940 | 9.58 | | |
| | 28+960 | 9.61 | 28+960 | 9.61 | | |
| | 28+980 | 9.62 | 28+980 | 9.62 | | |
| | 29+000 | 9.62 | 29+000 | 9.62 | | |
| | 29+020 | 9.66 | 29+020 | 9.66 | | |
| | 29+040 | 9.65 | 29+040 | 9.65 | | |
| | 29+060 | 9.60 | 29+060 | 9.60 | | |
| | 29+080 | 9.58 | 29+080 | 9.58 | | |
| | 29+100 | 9.57 | 29+100 | 9.57 | | |
| | 29+120 | 9.53 | 29+120 | 9.53 | | |
| | 29+140 | 9.63 | 29+140 | 9.63 | | |
| | 29+160 | 9.61 | 29+160 | 9.61 | | |
| | 29+180 | 9.62 | 29+180 | 9.62 | | |
| | 29+200 | 9.55 | 29+200 | 9.55 | | |
| | 29+220 | 9.54 | 29+220 | 9.54 | | |
| | 29+240 | 9.53 | 29+240 | 9.53 | | |
| | 29+260 | 9.62 | 29+260 | 9.62 | | |
| | 29+280 | 9.69 | 29+280 | 9.69 | | |
| | 29+300 | 9.63 | 29+300 | 9.63 | | |
| | 29+320 | 9.65 | 29+320 | 9.65 | | |
| | 29+340 | 9.63 | 29+340 | 9.63 | | |
| | 29+360 | 9.66 | 29+360 | 9.66 | | |
| | 29+380 | 9.55 | 29+380 | 9.55 | | |
| | 29+400 | 9.65 | 29+400 | 9.65 | | |

MINISTRY OF PUBLIC WORKS AND TRANSPORT (MPWT)

THE PROJECT FOR THE IMPROVEMENT OF NATIONAL ROAD NO.1 (PHNOM PENH-NEAK LOUENG SECTION) IN THE KINGDOM OF CAMBODIA

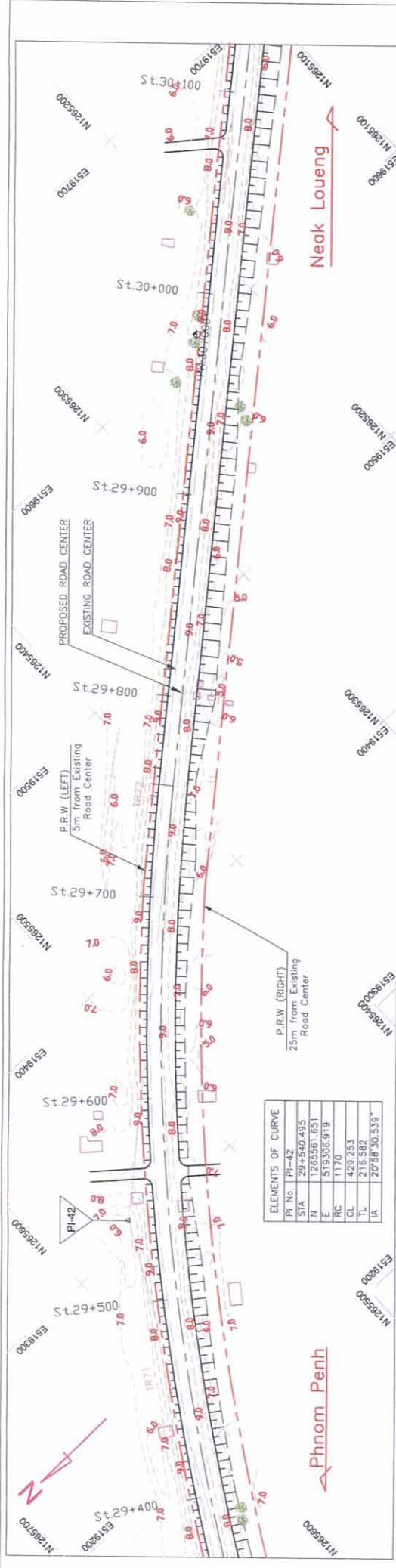
JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL CTI ENGINEERING INTERNATIONAL CO.,LTD

TITLE : PLAN AND PROFILE (STA.28+700-STA.29+400)

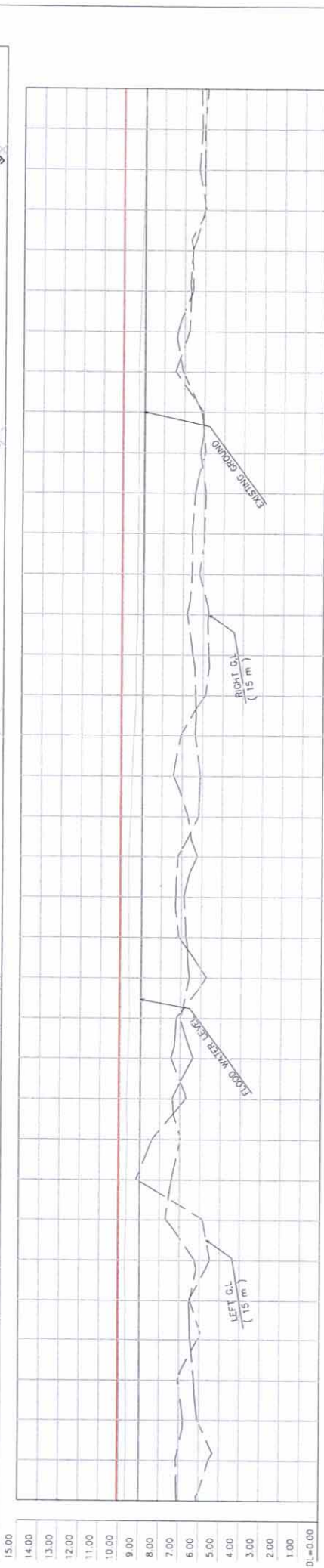
SCALE H=1/2000 V=1/200

Drawing No. _____ Sheet No. PL-42

TYPE 7



| ELEMENTS OF CURVE | |
|-------------------|---------------|
| PI No. | PI-42 |
| STA | 29+540.495 |
| N | 1265561.651 |
| E | 519306.919 |
| RC | 1170 |
| CL | 429.253 |
| TL | 216.582 |
| LA | 20°58'30.539" |



| STATION | GROUND HEIGHT | PAVEMENT HEIGHT | VERTICAL ALIGNMENT |
|---------|---------------|-----------------|--------------------|
| 10.064 | 9.65 | | |
| 10.064 | 9.63 | | |
| 10.062 | 9.65 | | |
| 10.061 | 9.68 | | |
| 10.061 | 9.67 | | |
| 10.061 | 9.71 | | |
| 10.060 | 9.66 | | |
| 10.059 | 9.66 | | |
| 10.058 | 9.64 | | |
| 10.058 | 9.61 | | |
| 10.057 | 9.65 | | |
| 10.056 | 9.59 | | |
| 10.055 | 9.53 | | |
| 10.055 | 9.58 | | |
| 10.054 | 9.60 | | |
| 10.054 | 9.62 | | |
| 10.053 | 9.64 | | |
| 10.052 | 9.54 | | |
| 10.052 | 9.49 | | |
| 10.051 | 9.39 | | |
| 10.050 | 9.30 | | |
| 10.049 | 9.31 | | |
| 10.049 | 9.25 | | |
| 10.048 | 9.27 | | |
| 10.048 | 9.25 | | |
| 10.046 | 9.23 | | |
| 10.046 | 9.24 | | |
| 10.045 | 9.23 | | |
| 10.044 | 9.26 | | |
| 10.043 | 9.22 | | |
| 10.042 | 9.15 | | |
| 10.041 | 9.12 | | |
| 10.040 | 9.03 | | |
| 10.040 | 8.98 | | |
| 10.038 | 9.00 | | |
| 10.038 | 8.92 | | |

MINISTRY OF PUBLIC WORKS AND TRANSPORT (MPWT)

THE PROJECT FOR THE IMPROVEMENT OF NATIONAL ROAD NO.1 (PHNOM PENH-NEAK LOUENG SECTION) IN THE KINGDOM OF CAMBODIA

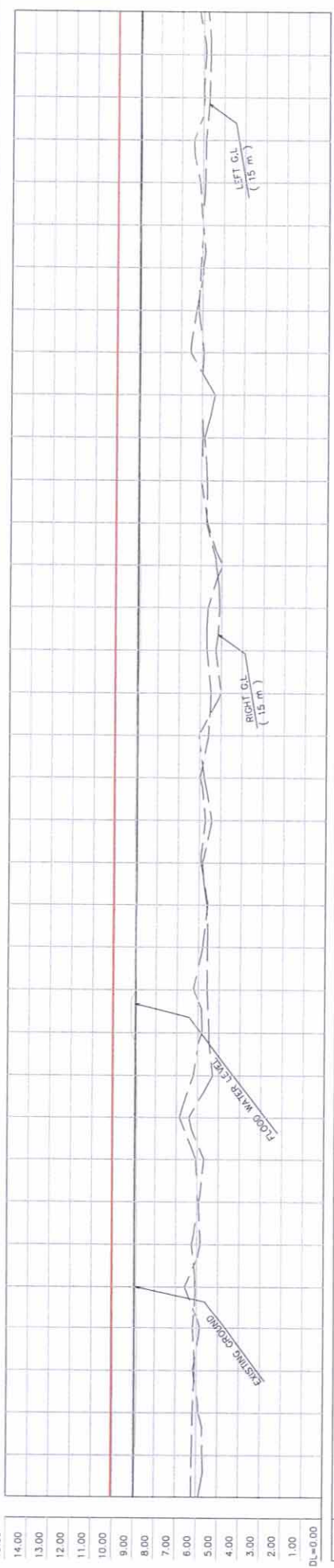
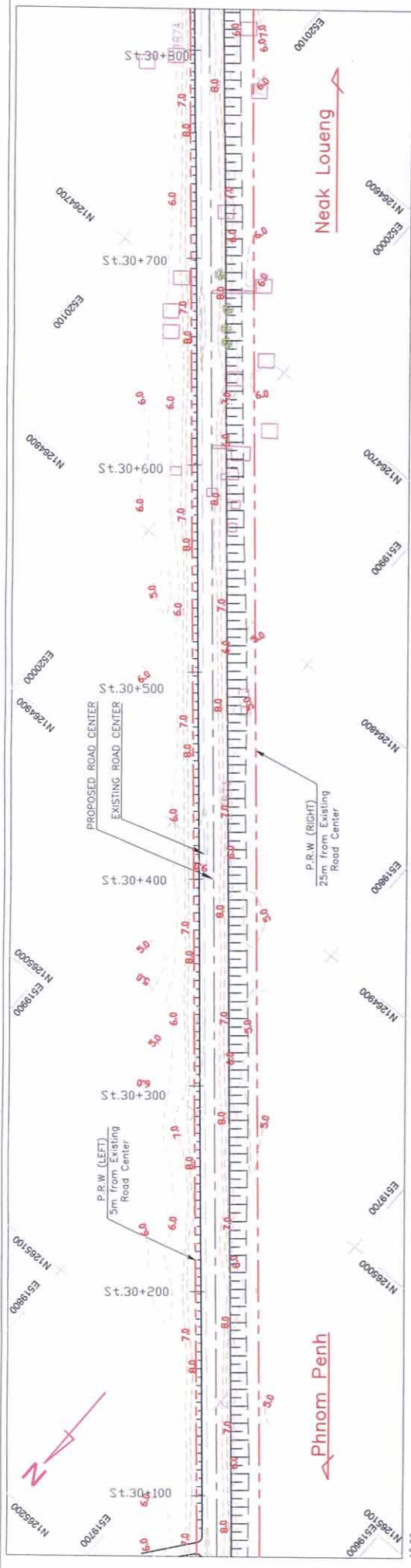
JAPAN INTERNATIONAL COOPERATION AGENCY
KATAHIRA & ENGINEERS INTERNATIONAL
CTI ENGINEERING INTERNATIONAL CO.,LTD

TITLE : PLAN AND PROFILE (STA.29+400 – STA.30+100)

SCALE
H= 1/2000
V= 1/200

Drawing No.
Sheet No.
PL-43

TYPE 7



| TYPE SECTION | CROSS ELEVATION | HORIZONTAL CURVATURE | STATION | GROUND HEIGHT | PAVEMENT HEIGHT | PACENT VERTICAL ALIGNMENT |
|--------------|-----------------|-----------------------|---------|---------------|-----------------|---------------------------|
| | | | 30+100 | 8.92 | 10.038 | |
| | | | 30+120 | 8.90 | 10.037 | |
| | | | 30+140 | 8.86 | 10.037 | |
| | | | 30+160 | 8.85 | 10.036 | |
| | | | 30+180 | 8.85 | 10.035 | |
| | | | 30+200 | 8.88 | 10.034 | |
| | | | 30+220 | 8.86 | 10.034 | |
| | | | 30+240 | 8.85 | 10.033 | |
| | | | 30+260 | 8.87 | 10.032 | |
| | | | 30+280 | 8.86 | 10.031 | |
| | | | 30+300 | 8.87 | 10.031 | |
| | | | 30+320 | 9.17 | 10.030 | |
| | | | 30+340 | 8.92 | 10.029 | |
| | | | 30+360 | 8.94 | 10.028 | |
| | | | 30+380 | 8.94 | 10.028 | |
| | | | 30+400 | 8.98 | 10.027 | |
| | | | 30+420 | 9.04 | 10.026 | |
| | | | 30+440 | 8.97 | 10.025 | |
| | | | 30+460 | 8.96 | 10.025 | |
| | | | 30+480 | 8.94 | 10.024 | |
| | | | 30+500 | 8.84 | 10.023 | |
| | | | 30+520 | 8.85 | 10.022 | |
| | | | 30+540 | 8.85 | 10.022 | |
| | | | 30+560 | 8.89 | 10.021 | |
| | | | 30+580 | 8.89 | 10.020 | |
| | | | 30+600 | 8.92 | 10.019 | |
| | | | 30+620 | 8.96 | 10.019 | |
| | | | 30+640 | 8.98 | 10.018 | |
| | | | 30+660 | 9.01 | 10.017 | |
| | | | 30+680 | 9.02 | 10.016 | |
| | | | 30+700 | 8.92 | 10.016 | |
| | | | 30+720 | 8.89 | 10.015 | |
| | | | 30+740 | 8.89 | 10.014 | |
| | | | 30+760 | 8.91 | 10.013 | |
| | | | 30+780 | 8.92 | 10.013 | |
| | | | 30+800 | 8.88 | 10.012 | |
| | | Rc=∞ L=1001.422 | | | | |
| | | Rc=5000 Lc=150.006 | | | | |
| | | NG | | | | |

MINISTRY OF PUBLIC WORKS AND TRANSPORT (MPWT)

THE PROJECT FOR THE IMPROVEMENT OF NATIONAL ROAD NO.1 (PHNOM PENH-NEAK LOUENG SECTION) IN THE KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
KATAHIRA & ENGINEERS INTERNATIONAL
CTI ENGINEERING INTERNATIONAL CO., LTD

TITLE : PLAN AND PROFILE (STA.30+100 - STA.30+800)

SCALE
H=1/2000
V=1/200

Drawing No.
Sheet No.
PL-44

TYPE 7