

別添 7: 概略設計図

PREPARATORY SURVEY FOR THE PROJECT
FOR
THE URGENT REPLACEMENT OF BRIDGES
IN
FLOOD-PRONE AREAS

OUTLINE DESIGN DRAWINGS

MAY 2017

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO.,LTD.

DRAWING LIST (1)

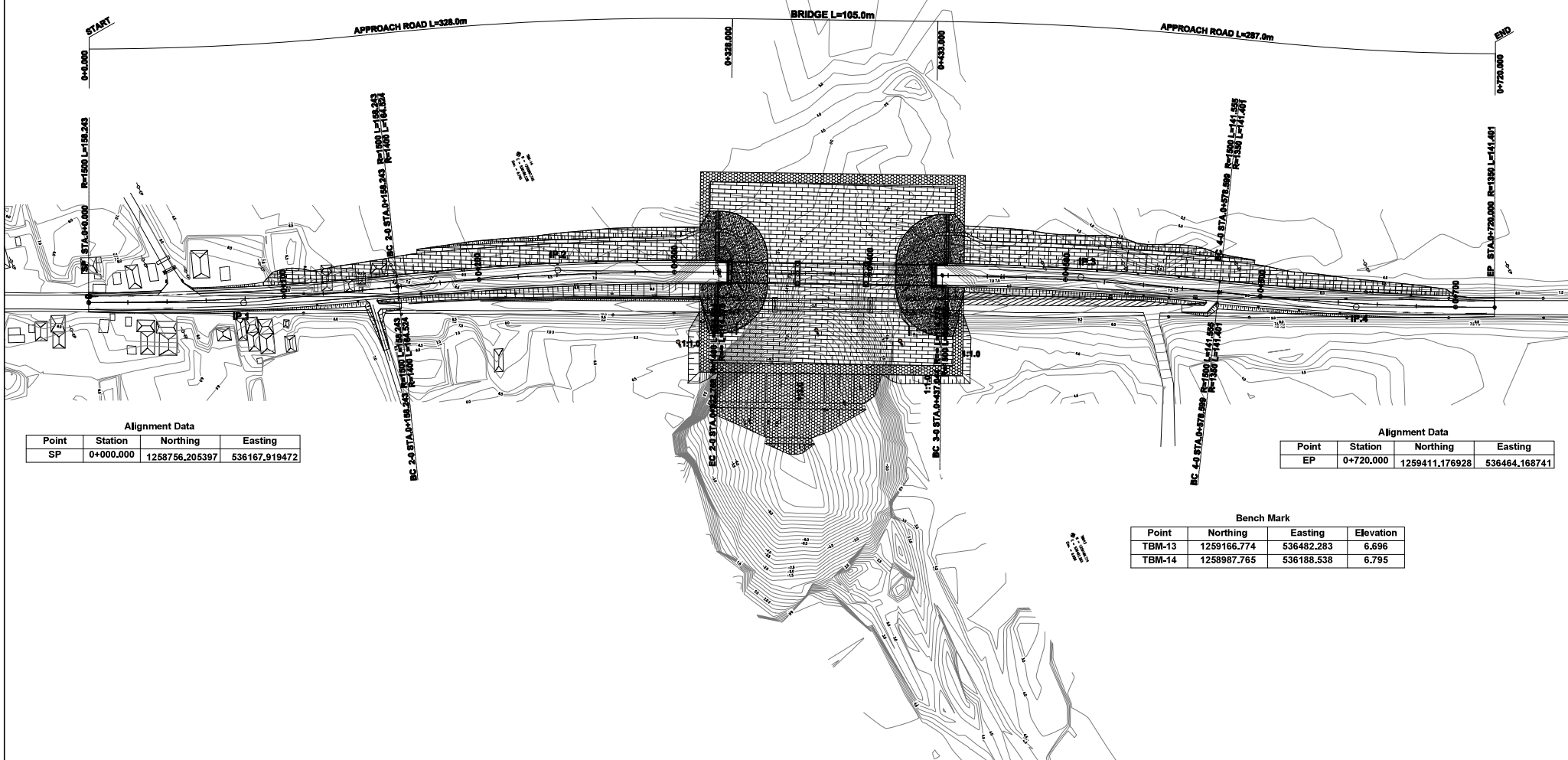
| No. | DRAWING TITLE | SHEET NO. | No. of Sheets | No. | DRAWING TITLE | SHEET NO. | No. of Sheets | |
|-----|--|---------------------|---------------|-----|--|---|---------------|---|
| 1. | BA BAONG NO.2 BRIDGE | BB - 01 ~ 19 | 19 | | STRUCTURAL DRAWING OF BRIDGE ABUTMENT AND PIER | PS - 05 06 | 2 | |
| | GENERAL PLAN | BB - 01 | 1 | | TYPICAL CROSS SECTION OF APPROACH ROAD | PS - 07 | 1 | |
| | GENERAL PROFILE | BB - 02 | 1 | | CROSS SECTION OF APPROACH ROAD | PS - 08 ~ 11 | 4 | |
| | GENERAL VIEW OF BRIDGE | BB - 03 | 1 | | PLAN OF APPROACH ROAD (ANCILLARY) | PS - 12 | 1 | |
| | STRUCTURAL DRAWING OF SUPERSTRUCTURE O BRIDGE | BB - 04 ~ 05 | 2 | | REVTMENT AND RIVER BED PROTECTION | PS - 13 ~ 16 | 4 | |
| | STRUCTURAL DRAWING OF BRIDGE ABUTMENT AND PIER | BB - 06 ~ 07 | 2 | | | | | |
| 2. | BA BAONG NO.1 BRIDGE | BA - 01 ~ 19 | 19 | 4. | PREK RUS BRIDGE | PR - 01 ~ 18 | 18 | |
| | GENERAL PLAN | BA - 01 | 1 | | GENERAL PLAN | PR - 01 | 1 | |
| | GENERAL PROFILE | BA - 02 | 1 | | GENERAL PROFILE | PR - 02 | 1 | |
| | GENERAL VIEW OF BRIDGE | BA - 03 | 1 | | GENERAL VIEW OF BRIDGE | PR - 03 | 1 | |
| | STRUCTURAL DRAWING OF SUPERSTRUCTURE O BRIDGE | BA - 04 ~ 05 | 2 | | STRUCTURAL DRAWING OF SUPERSTRUCTURE O BRIDGE | PR - 04 ~ 05 | 2 | |
| | STRUCTURAL DRAWING OF BRIDGE ABUTMENT AND PIER | BA - 06 ~ 07 | 2 | | STRUCTURAL DRAWING OF BRIDGE ABUTMENT AND PIER | PR - 06 ~ 07 | 2 | |
| 3. | PREK SANDAN BRIDGE | PS - 01 ~ 16 | 16 | 5. | ANGLONG KHLE BRIDGE | AK - 01 ~ 17 | 17 | |
| | GENERAL PLAN | PS - 01 | 1 | | | GENERAL PLAN | AK - 01 | 1 |
| | GENERAL PROFILE | PS - 02 | 1 | | | GENERAL PROFILE | AK - 02 | 1 |
| | GENERAL VIEW OF BRIDGE | PS - 03 | 1 | | | GENERAL VIEW OF BRIDGE | AK - 03 | 1 |
| | STRUCTURAL DRAWING OF SUPERSTRUCTURE O BRIDGE | PS - 04 | 1 | | | STRUCTURAL DRAWING OF SUPERSTRUCTURE O BRIDGE | AK - 04 | 1 |
| | | | | | | | | |
| 4. | PREK RUS BRIDGE | BB - 08 | 1 | 5. | ANGLONG KHLE BRIDGE | AK - 05 ~ 06 | 2 | |
| | TYPICAL CROSS SECTION OF APPROACH ROAD | BB - 09 ~ 12 | 4 | | | GENERAL PLAN | AK - 07 | 1 |
| | CROSS SECTION OF APPROACH ROAD | BB - 13 | 1 | | | CROSS SECTION OF APPROACH ROAD | AK - 08 ~ 12 | 5 |
| | PLAN OF APPROACH ROAD (ANCILLARY) | BB - 14 ~ 19 | 6 | | | PLAN OF APPROACH ROAD (ANCILLARY) | AK - 13 | 1 |
| | REVTMENT AND RIVER BED PROTECTION | | | | | REVTMENT AND RIVER BED PROTECTION | AK - 14 ~ 17 | 4 |
| | | | | | | | | |

DRAWING LIST (2)

| No. | DRAWING TITLE | SHEET NO. | No. of Sheets | No. | DRAWING TITLE | SHEET NO. | No. of Sheets |
|-----|---|--------------|---------------|-----|---|-------------|---------------|
| 6. | PREK CHHLOUNG BRIDGE | PC - 01 ~ 21 | 21 | 8. | OUTLINE OF ROAD ANCILLARIES | RA - 01 ~ 7 | 7 |
| | GENERAL PLAN | PC - 01 | 1 | | DETAIL OF ASPHALT PAVEMENT | RA - 01 | 1 |
| | GENERAL PROFILE | PC - 02 | 1 | | GUARDRAIL LAYOUT AR BRIDGE | RA - 02 | 1 |
| | GENERAL VIEW OF BRIDGE | PC - 03 | 1 | | DELINEATIONS AND GUIDEPOSTS | RA - 03 | 1 |
| | STRUCTURAL DRAWING OF SUPERSTRUCTURE O BRIDGE | PC - 04 ~ 05 | 2 | | LANE MARKINGS AND ROAD STUD REFLECTOR | RA - 04 | 1 |
| | STRUCTURAL DRAWING OF BRIDGE ABUTMENT AND PIER | PC - 06 ~ 09 | 4 | | TRAFFIC SIGN AT SCHOOL APPROACH AND CROSSWALK MARKING | RA 05 | 1 |
| | TYPICAL CROSS SECTION OF APPROACH ROAD | PC - 10 | 1 | | TRAFFIC SIGN | RA - 06 | 1 |
| | CROSS SECTION OF APPROACH ROAD | PC - 11 ~ 13 | 3 | | OUTLINE OF DRAINAGE STRUCTURE | RA - 07 | 1 |
| | PLAN OF APPROACH ROAD (ANCILLARY) | PC - 14 | 1 | | | | |
| | REVTMENT AND RIVER BED PROTECTION | PC - 15 ~ 17 | 3 | | | | |
| | ACCESS ROAD (PEDESTRIAN) AND RIVER BED PROTECTION | PC - 18 | 1 | | | | |
| | L-SHAPED RETAINING WALL | PC - 19 ~ 21 | 3 | | | | |
| 7. | PEAM TE BRIDGE | PT - 01 ~ 22 | 22 | | | | |
| | GENERAL PLAN | PT - 01 | 1 | | | | |
| | GENERAL PROFILE | PT - 02 | 1 | | | | |
| | GENERAL VIEW OF BRIDGE | PT - 03 | 1 | | | | |
| | STRUCTURAL DRAWING OF SUPERSTRUCTURE O BRIDGE | PT - 04 ~ 05 | 2 | | | | |
| | STRUCTURAL DRAWING OF BRIDGE ABUTMENT AND PIER | PT - 06 ~ 09 | 4 | | | | |
| | TYPICAL CROSS SECTION OF APPROACH ROAD | PT - 10 | 1 | | | | |
| | CROSS SECTION OF APPROACH ROAD | PT - 11 ~ 15 | 5 | | | | |
| | PLAN OF APPROACH ROAD (ANCILLARY) | PT - 16 | 1 | | | | |
| | REVTMENT AND RIVER BED PROTECTION | PT - 17 ~ 19 | 3 | | | | |
| | GENERAL VIEW OF CULVERT(10.0×5.0) | PT - 20 ~ 21 | 2 | | | | |
| | PLAN OF PAPER DRAIN | PT - 22 | 1 | | | | |

Ba Baong No.2 Bridge

| Elements of Horizontal Curve | | | | | | | | | |
|------------------------------|-----------|-------|----------------|---------------|-------------|------|--------|---------|-------|
| IP | Station | Speed | Northing | Easting | IA | R | TL | CL | SL |
| 1 | 0+79.122 | 80 | 1258828.424160 | 536200.420578 | 6-02-40.026 | 1500 | 79.195 | 158.243 | 2.089 |
| 2 | 0+240.505 | 80 | 1258981.907231 | 536250.838872 | 6-43-59.673 | 1400 | 82.357 | 164.524 | 2.420 |
| 3 | 0+507.821 | 80 | 1259224.472208 | 536363.527929 | 5-24-25.268 | 1500 | 70.830 | 141.555 | 1.671 |
| 4 | 0+649.300 | 80 | 1259346.693540 | 536435.020759 | 6-00-04.476 | 1350 | 70.765 | 141.401 | 1.853 |



| Alignment Data | | | |
|----------------|-----------|----------------|---------------|
| Point | Station | Northing | Easting |
| SP | 0+000.000 | 1258756.205397 | 536167.919472 |

| Alignment Data | | | |
|----------------|-----------|----------------|---------------|
| Point | Station | Northing | Easting |
| EP | 0+720.000 | 1259411.176928 | 536464.168741 |

| Bench Mark | | | |
|------------|-------------|------------|-----------|
| Point | Northing | Easting | Elevation |
| TBM-13 | 1259166.774 | 536482.283 | 6.696 |
| TBM-14 | 1258987.765 | 536188.538 | 6.795 |

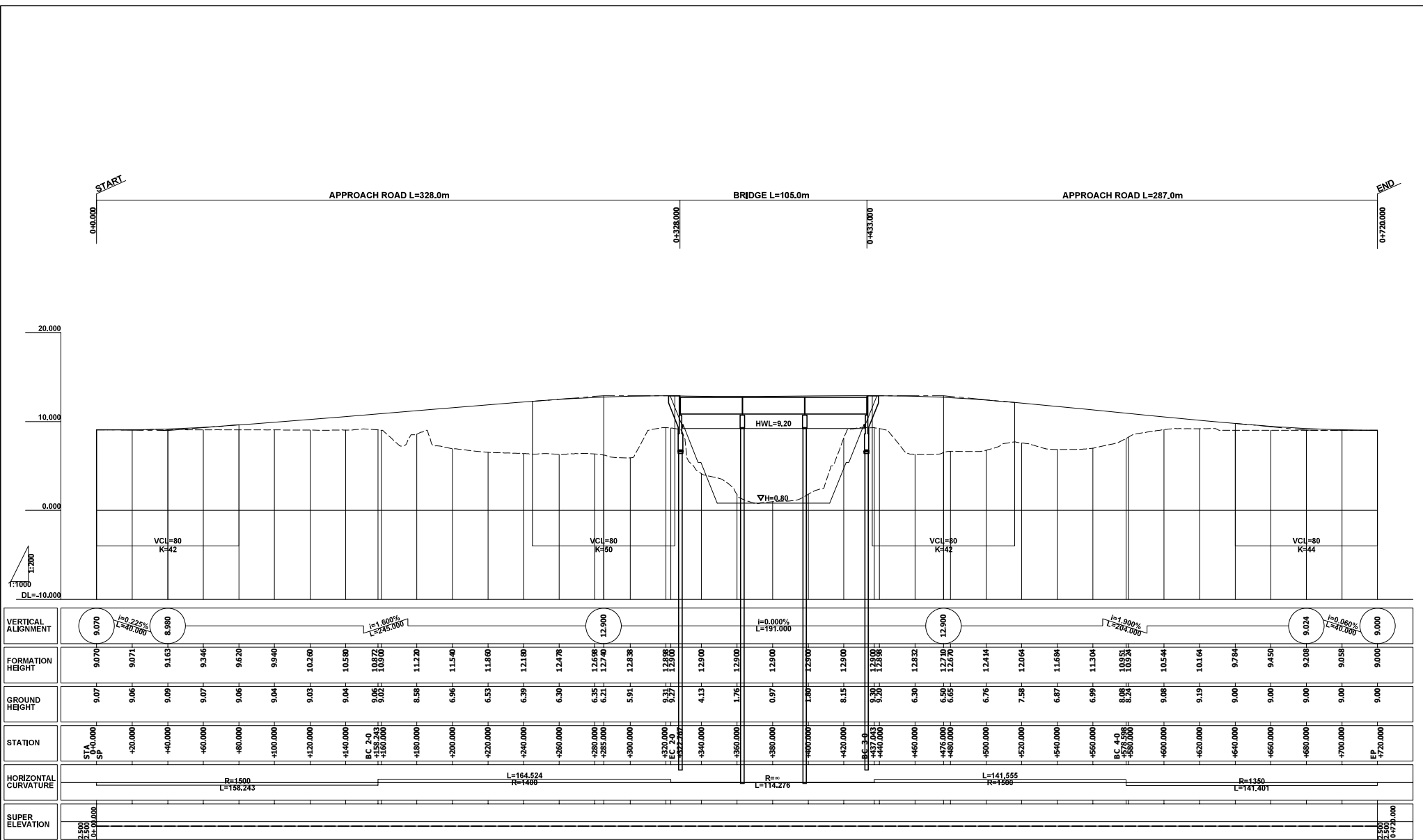
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

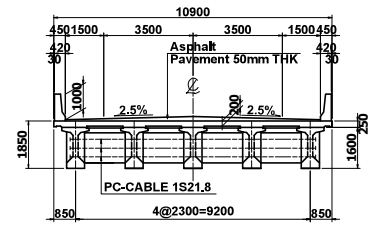
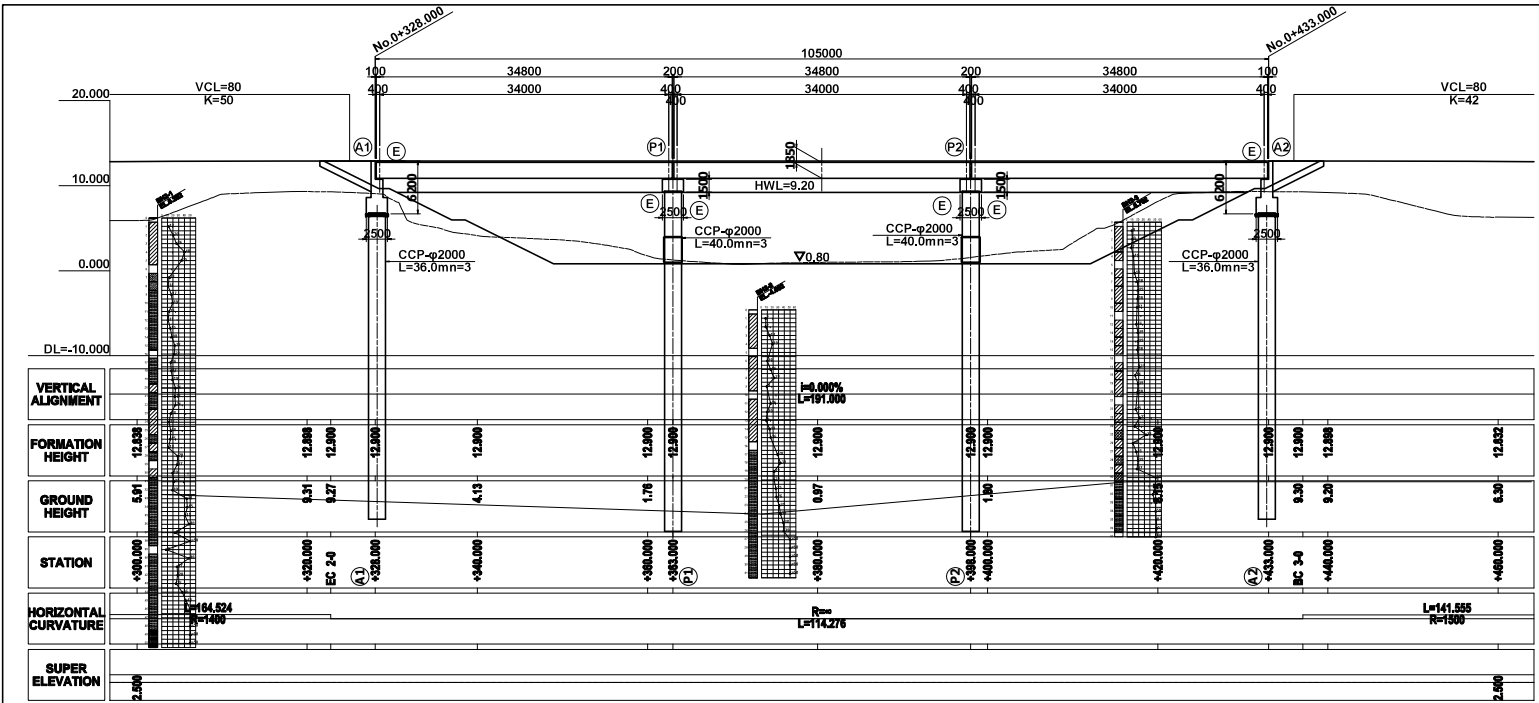
DRAWING TITLE:
1_Ba Baong Bridge No.2
GENERAL PLAN

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------------|-------------|
| 1/2,000 (1/1,000) | BB-01 |



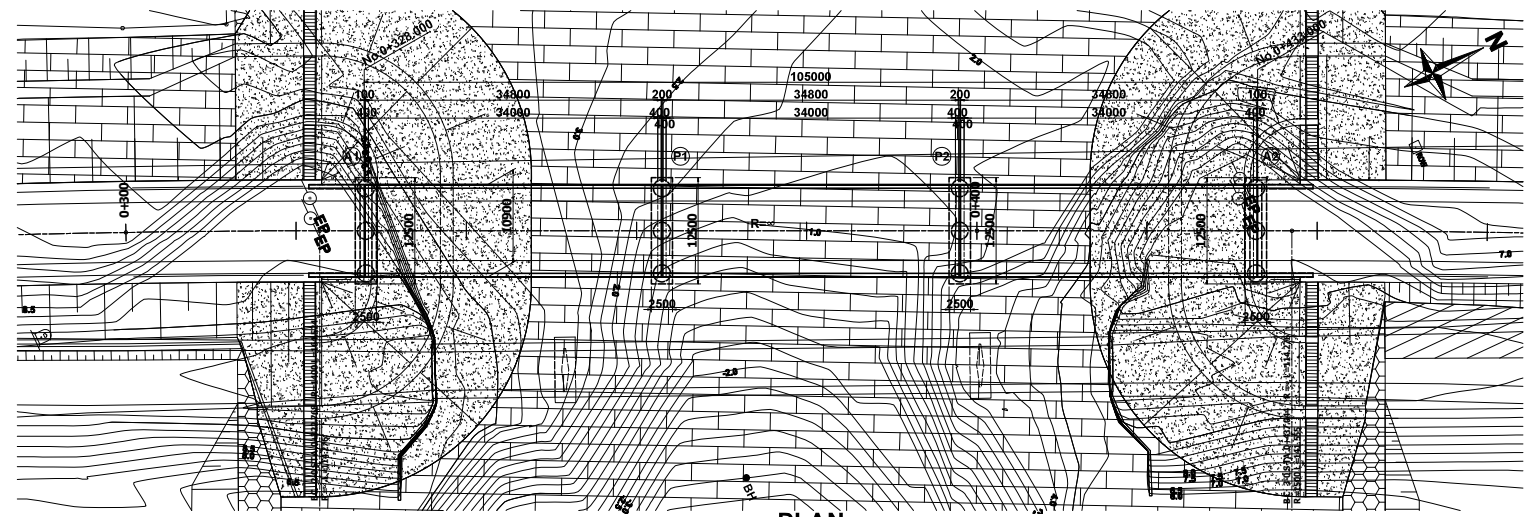
Profile H = 1/1000
V = 1/200

| | | | | | |
|--|---|--|---|----------------|-------------|
| MINISTRY OF PUBLIC WORKS AND TRANSPORT KINGDOM OF CAMBODIA | JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD. | PROJECT TITLE: PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT OF BRIDGES IN FLOOD-PRONE AREAS | DRAWING TITLE: 1_Ba Baong Bridge No.2 GENERAL PROFILE | SCALE(A1 SIZE) | DRAWING NO. |
| | | | | AS SHOWN | BB-02 |



CROSS SECTION S=1:100

PROFILE S=1:300



PLAN S=1:300

DESIGN CRITERIA

| | |
|------------------------|--|
| ROAD CLASS | SECONDARY PRINCIPAL ROAD |
| DESIGN SPEED | 80km/h |
| LIVE LOAD | AASHTO HS20-44x125% OR EQUIVALENT |
| BRIDGE LENGTH | 105,000m |
| SPAN LENGTH | 34,000+34,000+34,000m |
| TOTAL WIDTH | 2x3.5m(Carriage Way)+2x1.5m(Shoulder) |
| SEISMIC COEFFICIENT | kh=0.05(L1) |
| SUPER STRUCTURE TYPE | PC I-Girder |
| SUBSTRUCTURE TYPE | REVERSED T-ABUTMENT, PILE BENT PIRE |
| FOUNDATION TYPE | CAST-IN PLACE CONCRETE PILE(A1,P1,P2,A2) |
| SPECIFICATION CRITERIA | Bridge Design Standard (CAM.PW.04.102.99), 2003 DESIGN SPECIFICATIONS OF HIGHWAY BRIDGES (JAPAN ROAD ASSOCIATION) |

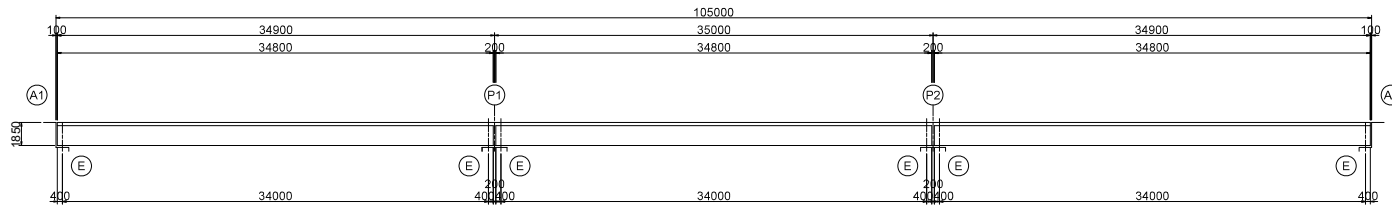
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
1_Ba Baong Bridge No.2
GENERAL VIEW OF BRIDGE

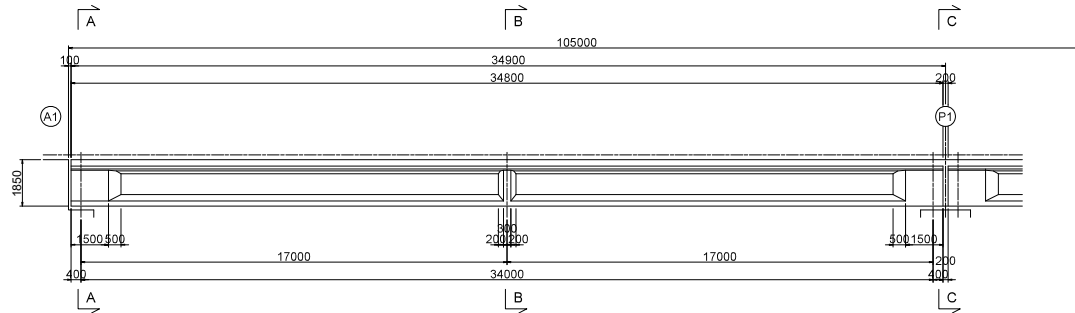
| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| AS SHOWN | BB-03 |



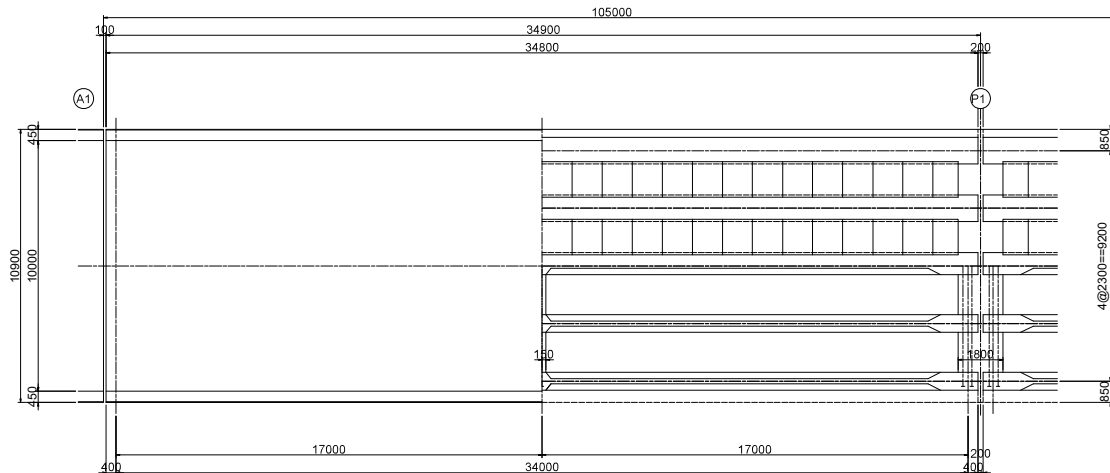
SIDE ELEVATION S=1/200

| DESIGN CRITERIA | |
|-----------------|----------------------------------|
| CATEGORY | PRESTRESSED CONCRETE ROAD BRIDGE |
| BRIDGE LENGTH | 105,000 m |
| WIDTH | 10,900 m |
| LIVE-LOAD | HS20-44×1,25 |
| ANGLE OF SKEW | 90°00'00" |

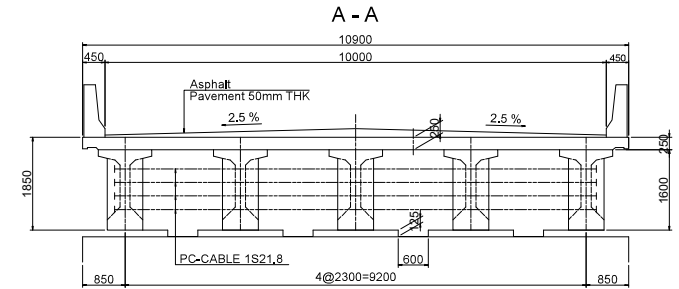
| MATERIALS | | |
|--------------|------------|----------------------------|
| CONCRETE | GIRDER | cck=45,0 N/mm ² |
| | CROSS BEAM | cck=45,0 N/mm ² |
| | DECK SLAB | cck=40,0 N/mm ² |
| PC STEEL | GIRDER | 12S12.7(SWPR7BL) |
| | CROSS BEAM | 1S21.8(SWPR19) |
| DEFORMED BAR | Grade 400 | |



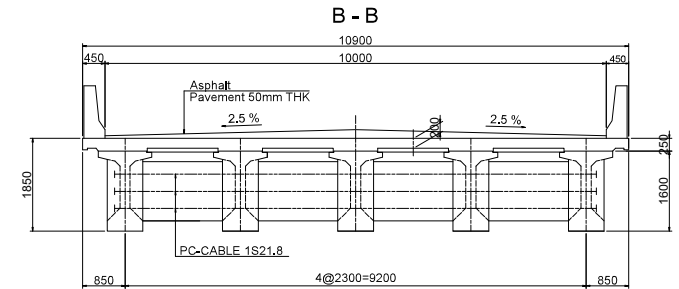
SIDE ELEVATION S=1/100



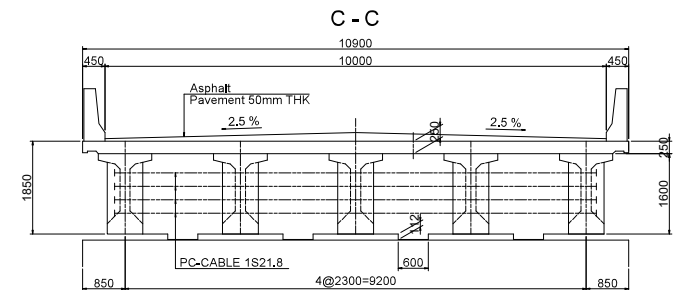
PLAN S=1/100



A - A



B - B



C - C

CROSS SECTION S=1/50

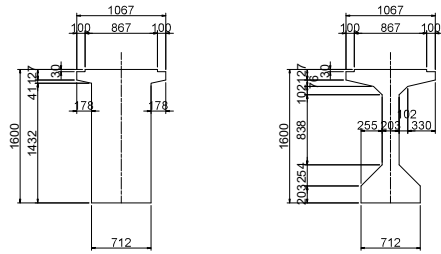
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

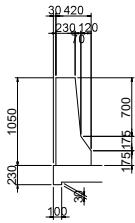
PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
1_Ba Baong Bridge No.2
STRUCTURE DRAWING(1)

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| AS SHOWN | BB-04 |

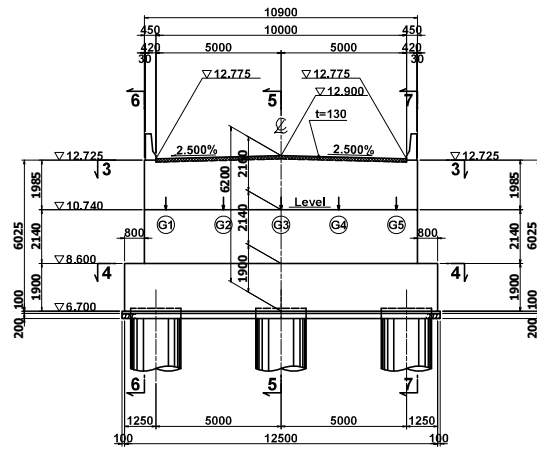


PC GIRDER S=1/30

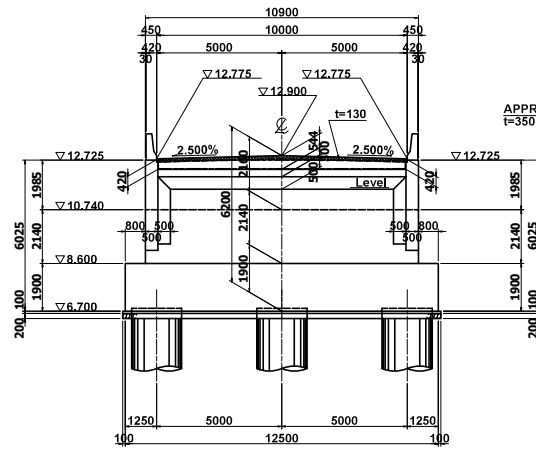


DETAILS OF RAILING S=1/30

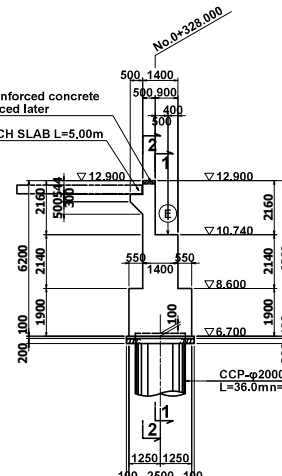
| | | | | | |
|--|---|--|--|----------------|-------------|
| MINISTRY OF PUBLIC WORKS AND TRANSPORT KINGDOM OF CAMBODIA | JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD. | PROJECT TITLE: PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT OF BRIDGES IN FLOOD-PRONE AREAS | DRAWING TITLE: 1_Ba Baong Bridge No.2 STRUCTURE DRAWING(2) | SCALE(A1 SIZE) | DRAWING NO. |
| | | | | AS SHOWN | BB-05 |



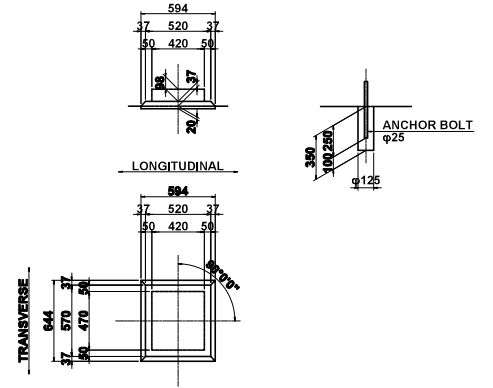
1-1



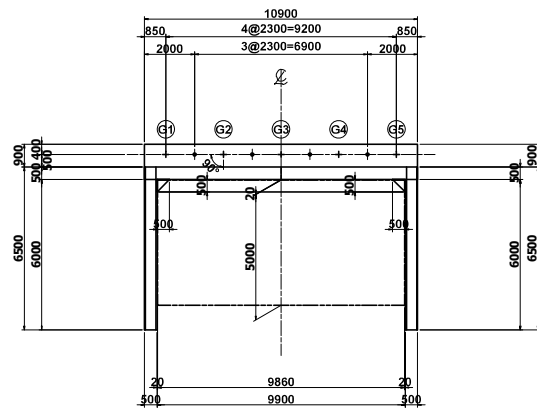
2-2



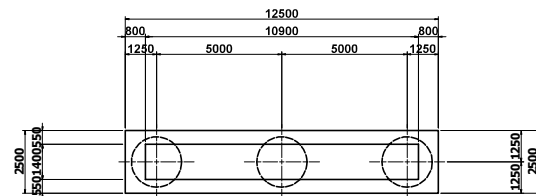
5-5



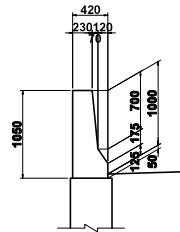
DETAIL S=1/20



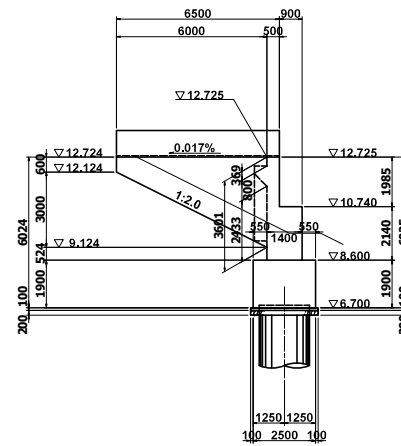
3-3



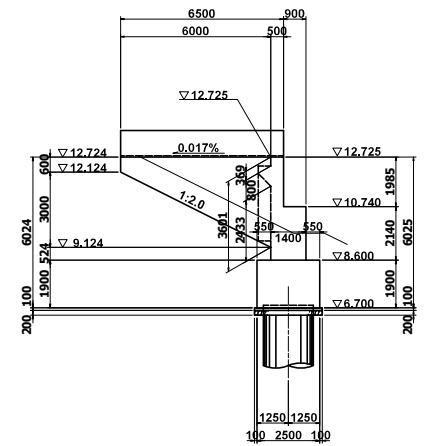
4-4



DETAIL S=1/30



6-6



7-7

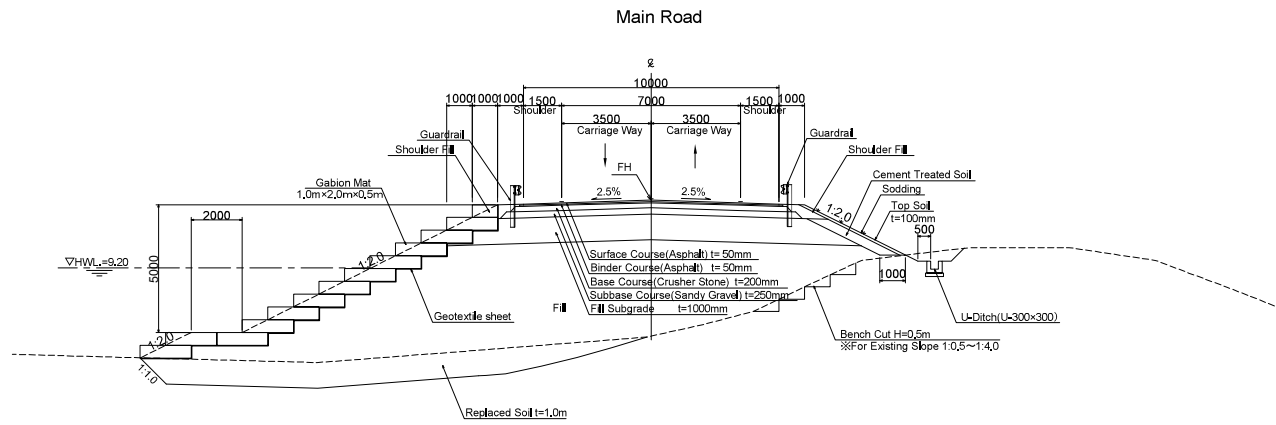
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
1_Ba Baong Bridge No.2
STRUCTURAL DRAWING OF A1 ABUTMENT

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/100 | BB-06 |



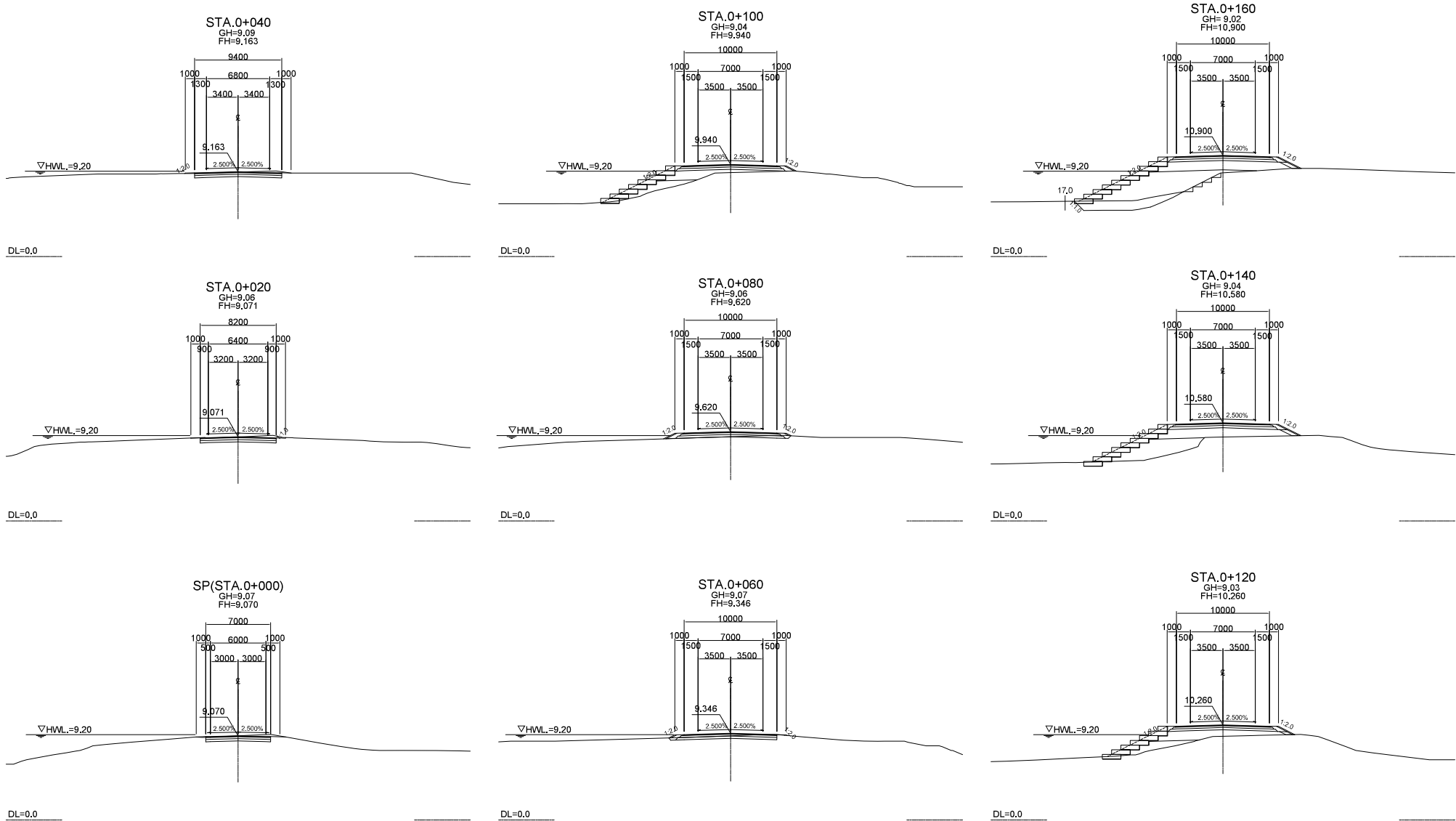
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
1_Ba Baong Bridge No.2
TYPICAL CROSS SECTION OF APPROACH ROAD

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/100 | BB-08 |



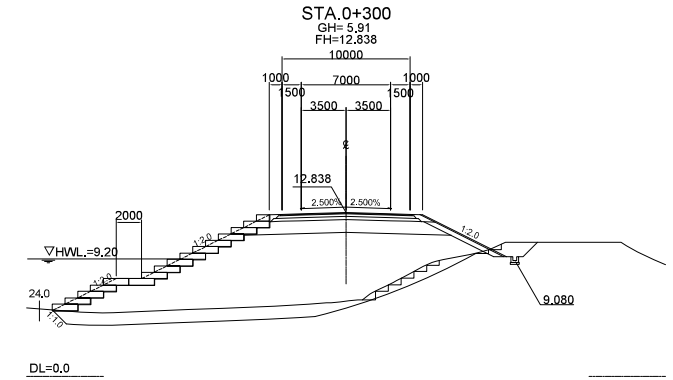
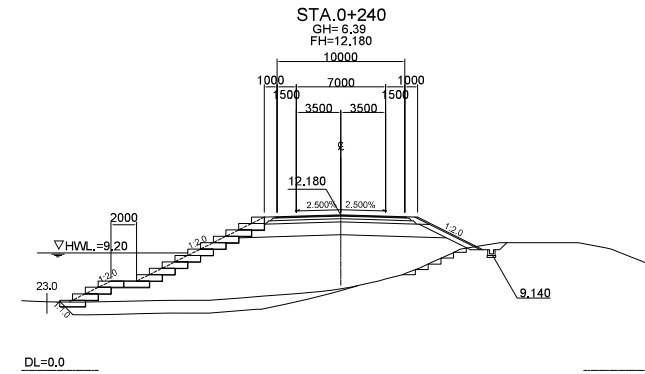
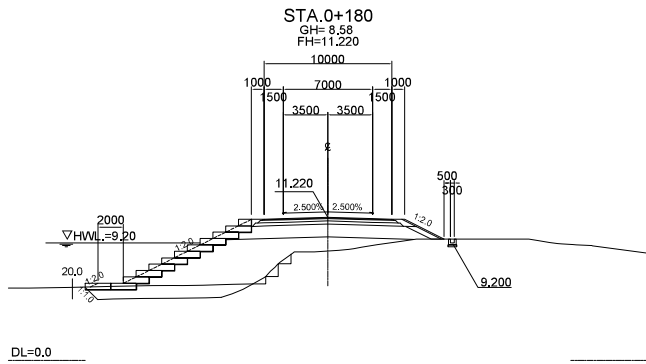
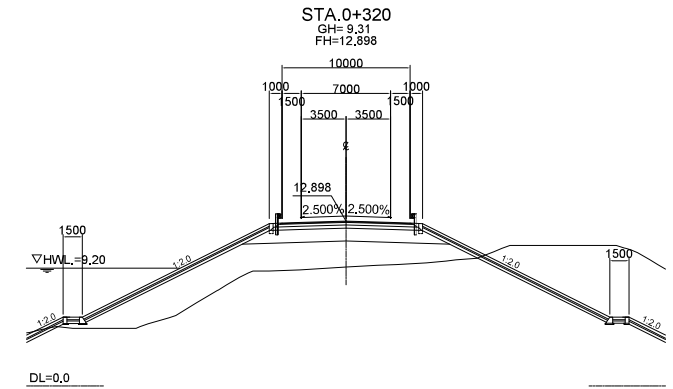
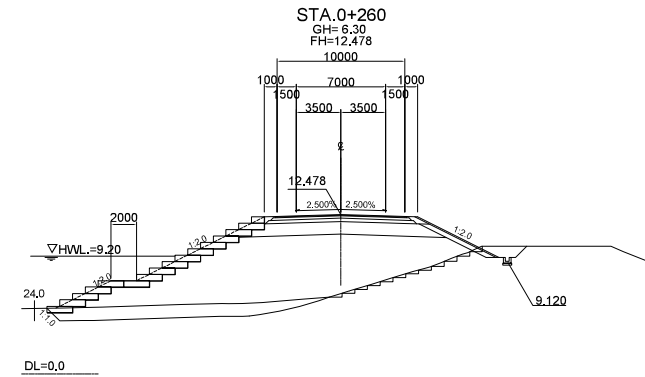
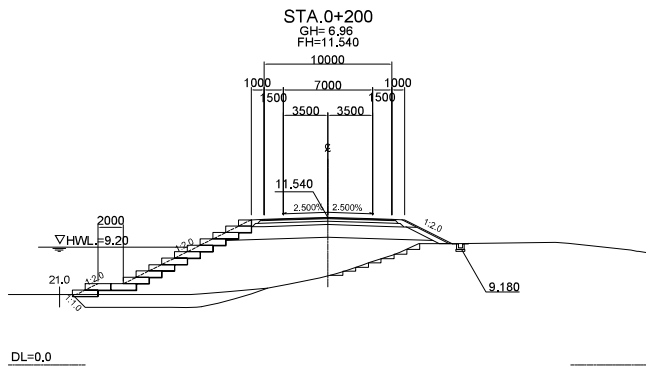
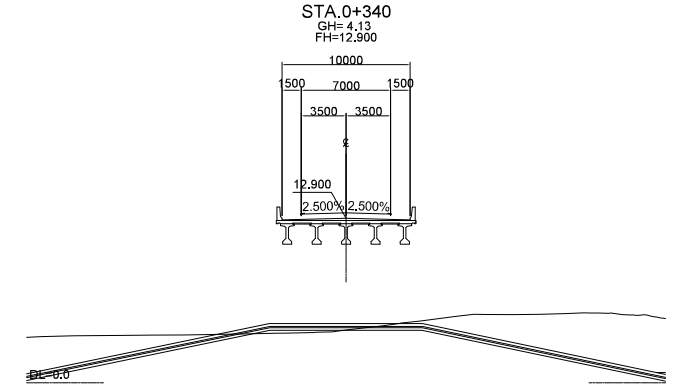
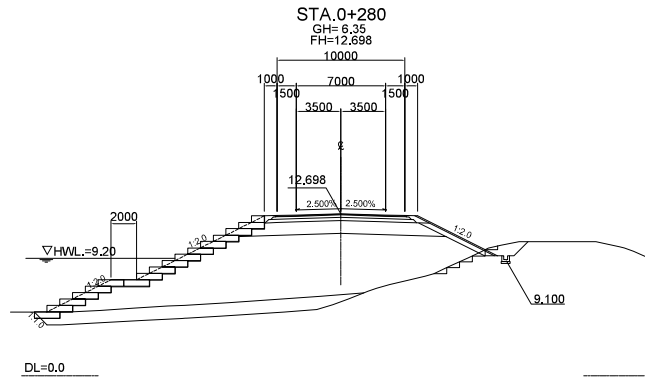
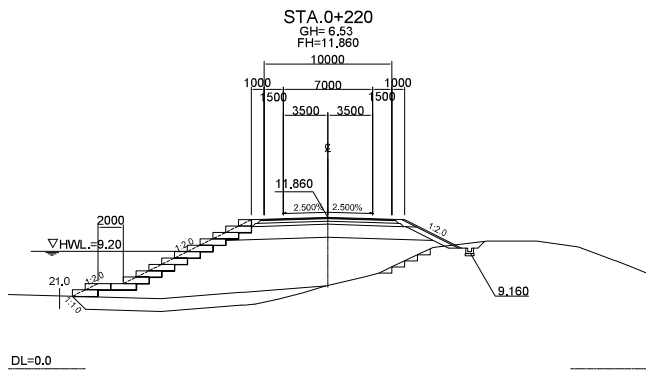
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
1_Ba Baong Bridge No.2
CROSS SECTION OF APPROACH ROAD (1)

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/200 | BB-09 |



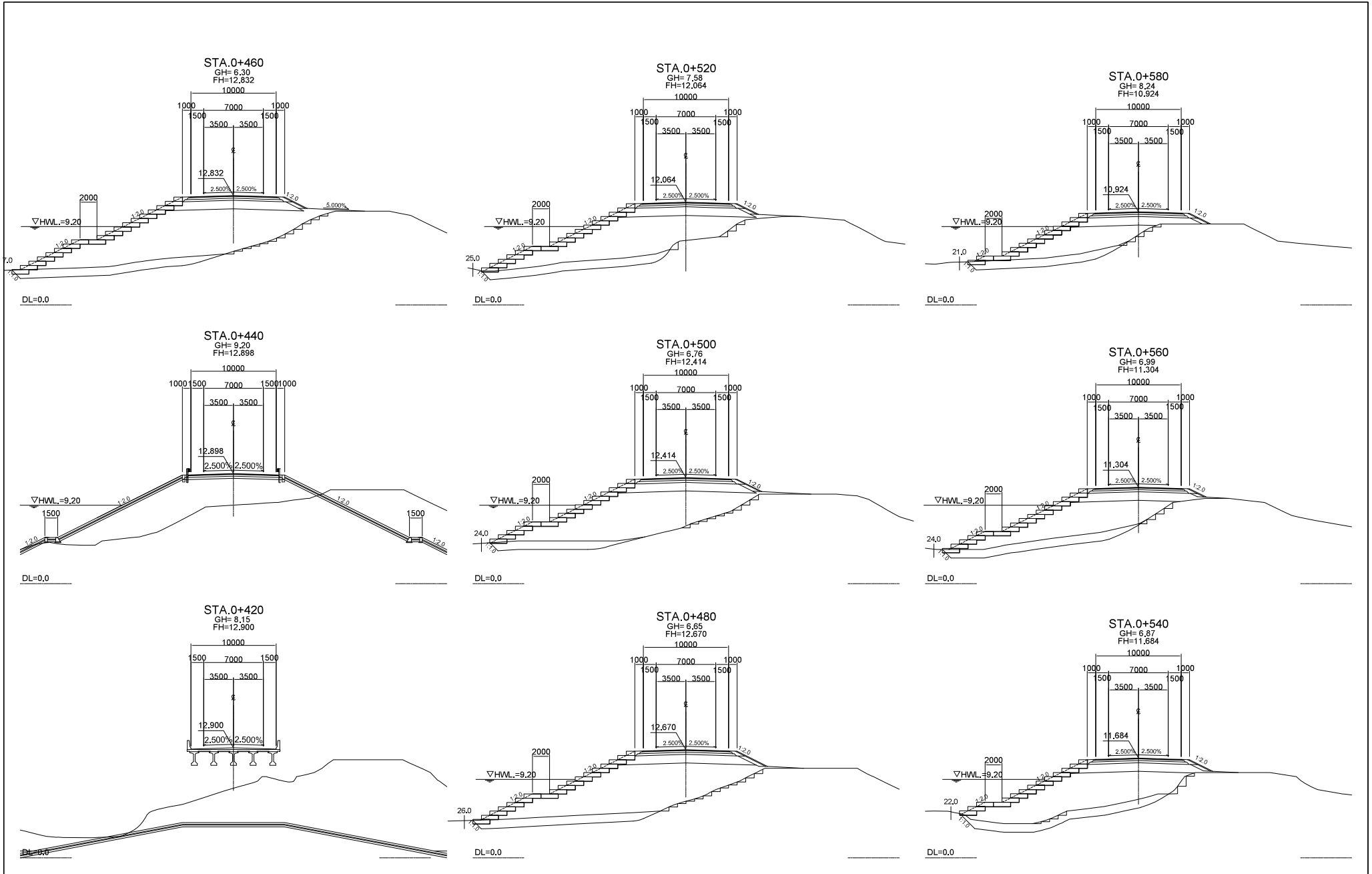
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

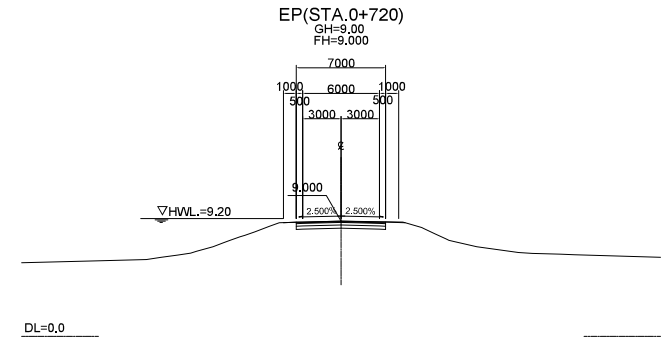
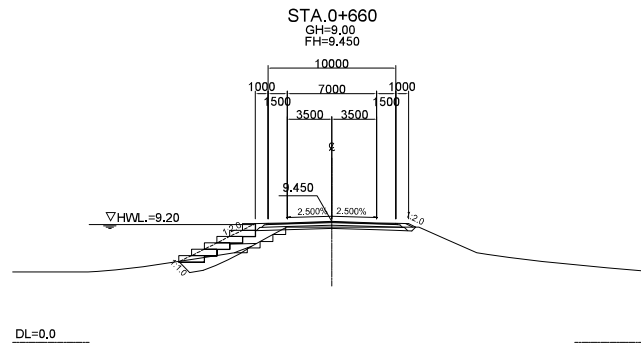
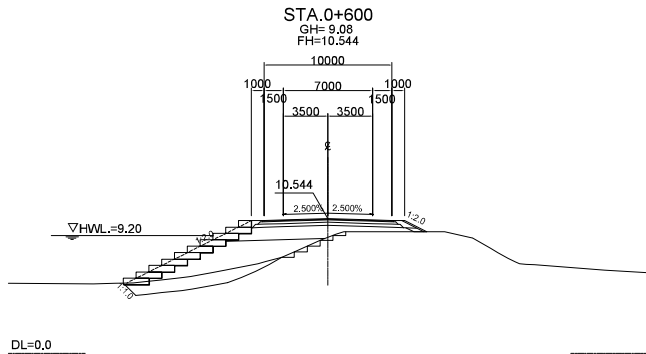
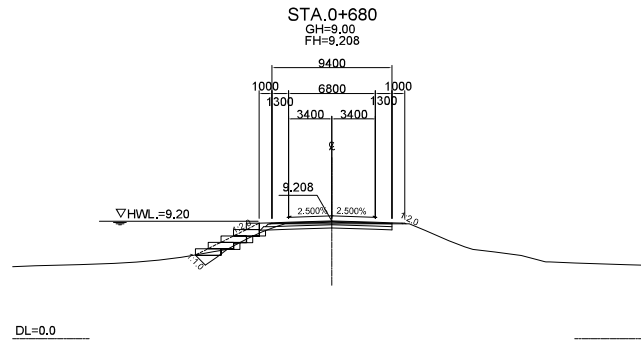
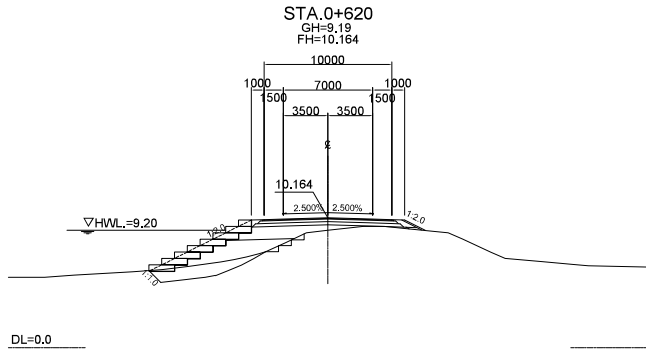
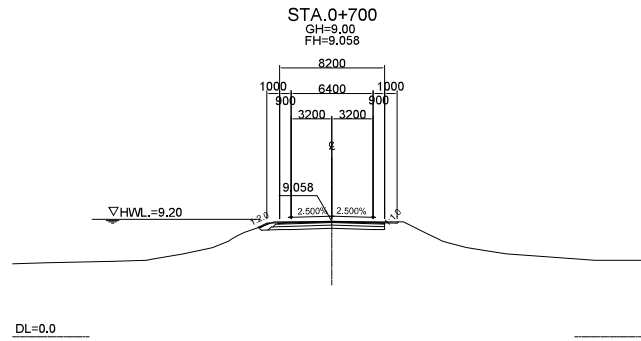
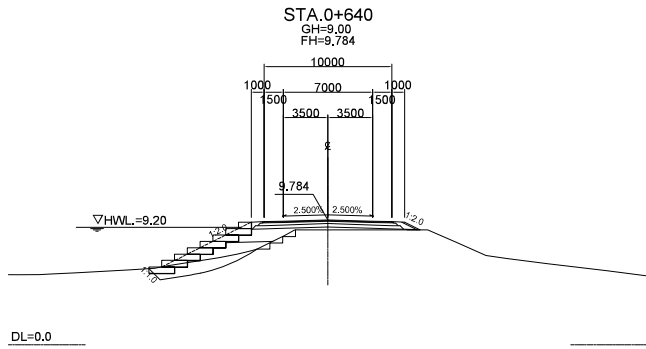
DRAWING TITLE:
1_Ba Baong Bridge No.2
CROSS SECTION OF APPROACH ROAD (2)

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/200 | BB-10 |



| | | | | | |
|--|---|--|--|-------------------------|----------------------|
| MINISTRY OF PUBLIC WORKS AND TRANSPORT KINGDOM OF CAMBODIA | JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD. | PROJECT TITLE: PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT OF BRIDGES IN FLOOD-PRONE AREAS | DRAWING TITLE: 1_Ba Baong Bridge No.2 CROSS SECTION OF APPROACH ROAD (3) | SCALE(A1 SIZE) 1/200 | DRAWING NO. BB-11 |
|--|---|--|--|-------------------------|----------------------|

別添7-17



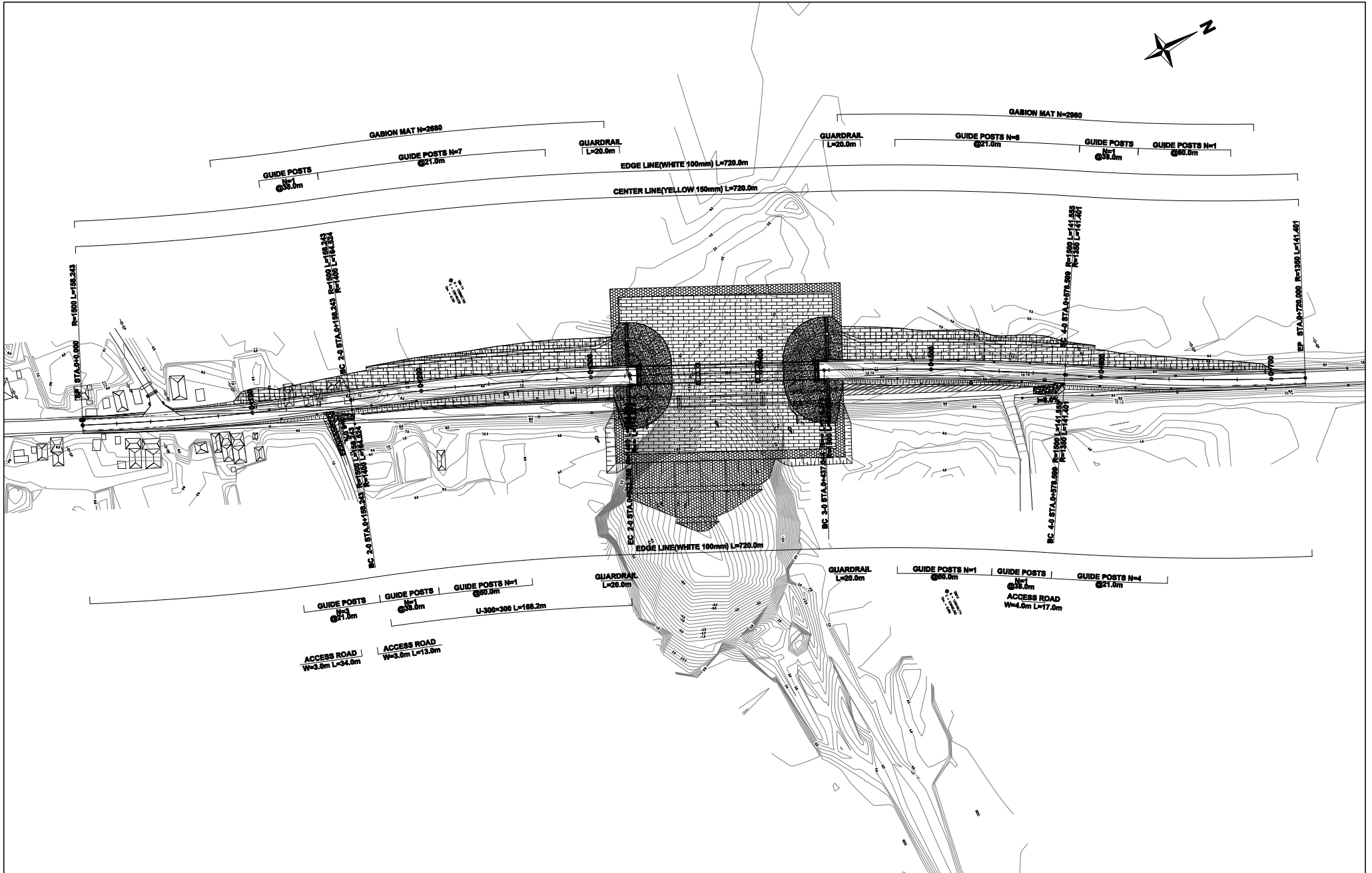
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

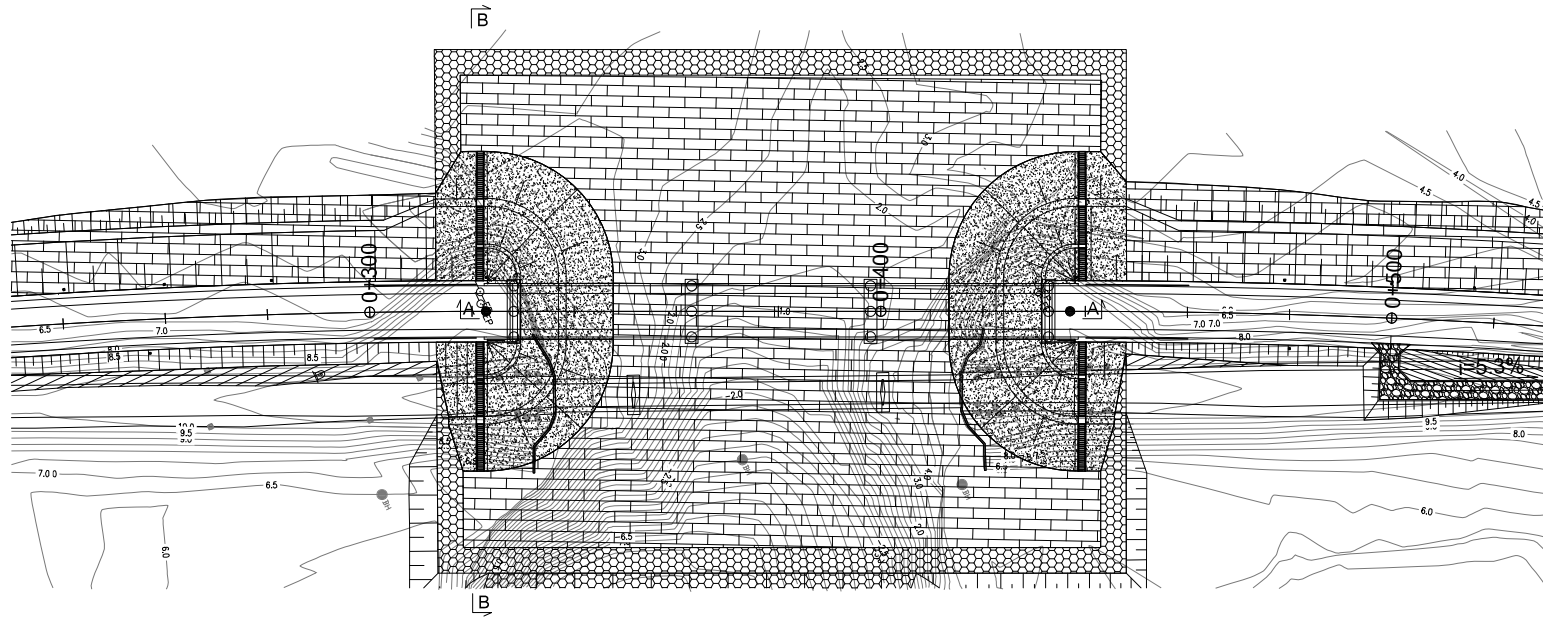
PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
1_Ba Baong Bridge No.2
CROSS SECTION OF APPROACH ROAD (4)

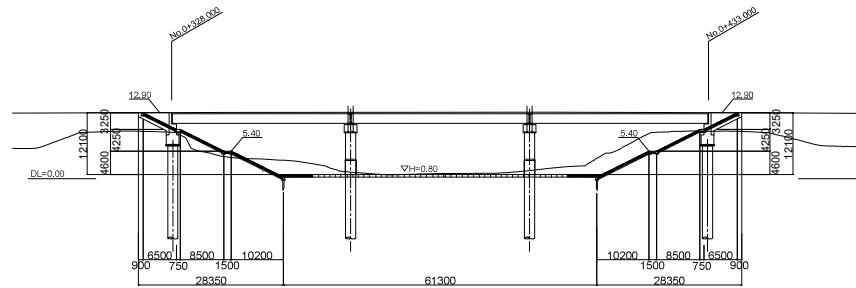
| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/200 | BB-12 |



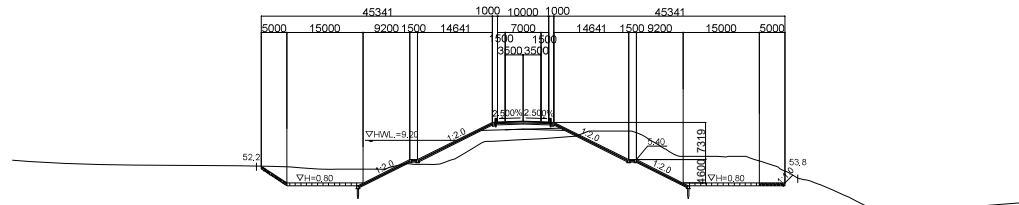
| | | | | | |
|---|---|---|---|---|------------------------------|
| <p>MINISTRY OF PUBLIC WORKS AND TRANSPORT KINGDOM OF CAMBODIA</p> | <p>JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD.</p> | <p>PROJECT TITLE: PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT OF BRIDGES IN FLOOD-PRONE AREAS</p> | <p>DRAWING TITLE: 1_Ba Baong Bridge No.2 PLAN OF APPROACH ROAD (ANCILLARY)</p> | <p>SCALE(A1 SIZE) 1/2,000 (1/1,000)</p> | <p>DRAWING NO. BB-13</p> |
|---|---|---|---|---|------------------------------|



PLAN s= 1/500



SECTION A-A s= 1/500



SECTION B-B s= 1/500

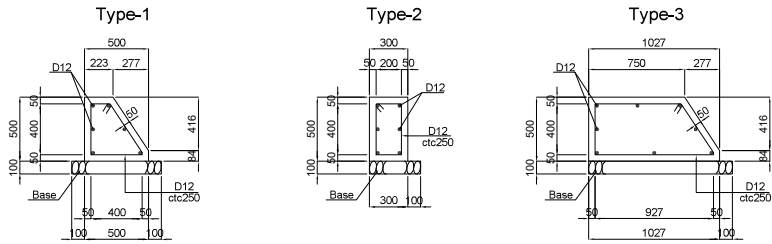
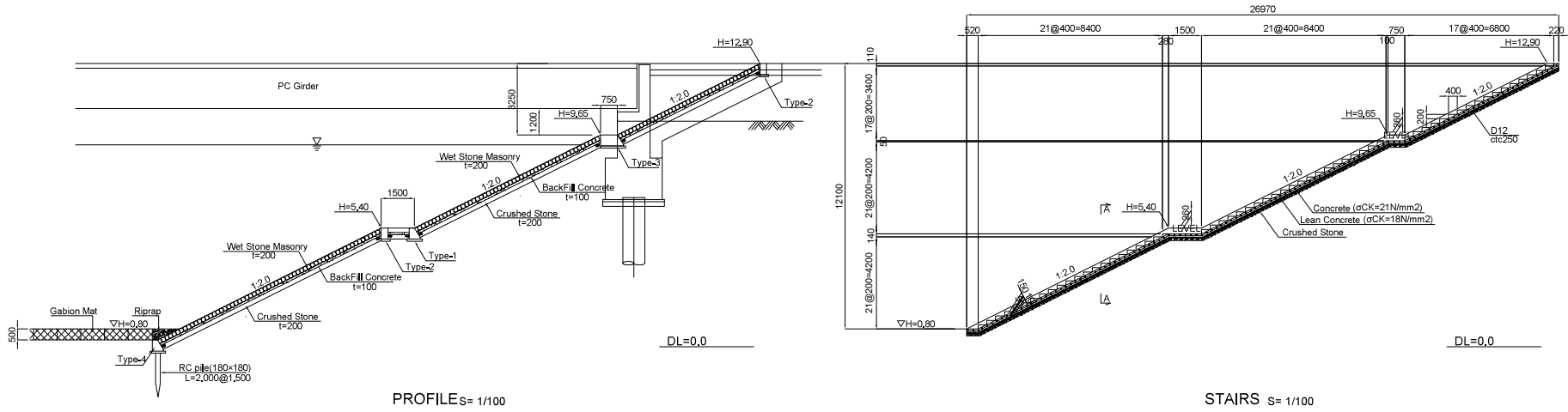
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

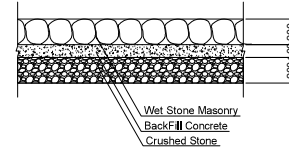
PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
1_Ba Baong Bridge No.2
REVTMENT AND RIVER BED PROTECTION(1)

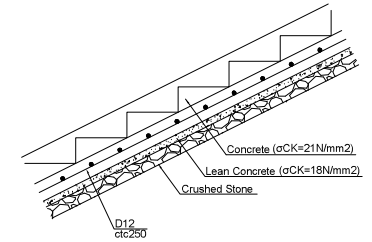
| | |
|----------------|-------------|
| SCALE(A1 SIZE) | DRAWING NO. |
| AS SHOWN | BB-14 |



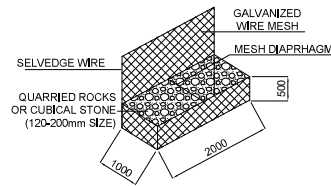
DETAILS S= 1/20



DETAILS S= 1/20

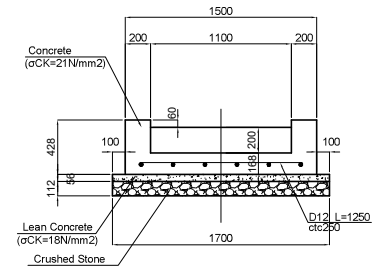


DETAILS S= 1/20



GABION MAT DETAIL

S = None Scale



SECTION A-A S= 1/20

MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

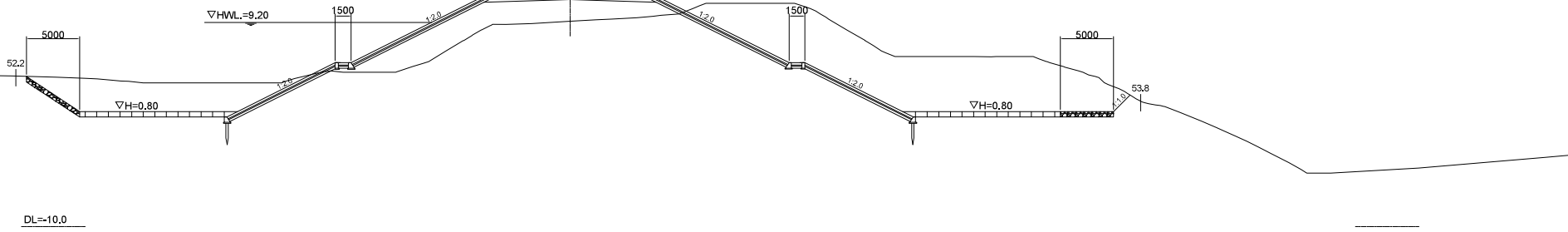
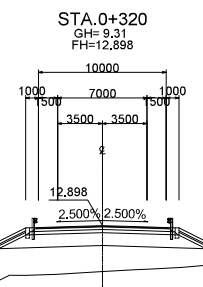
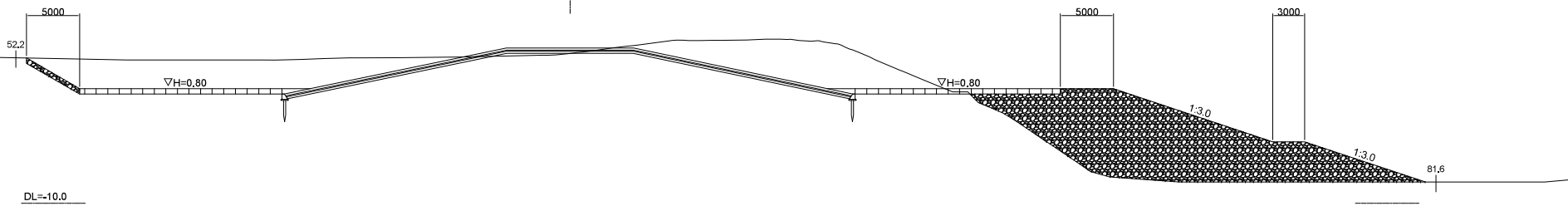
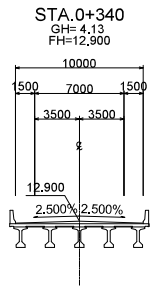
JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
1_Ba Baong Bridge No.2
REVTMENT AND RIVER BED PROTECTION(2)

| | |
|----------------|-------------|
| SCALE(A1 SIZE) | DRAWING NO. |
| AS SHOWN | BB-15 |

別添7-21



MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

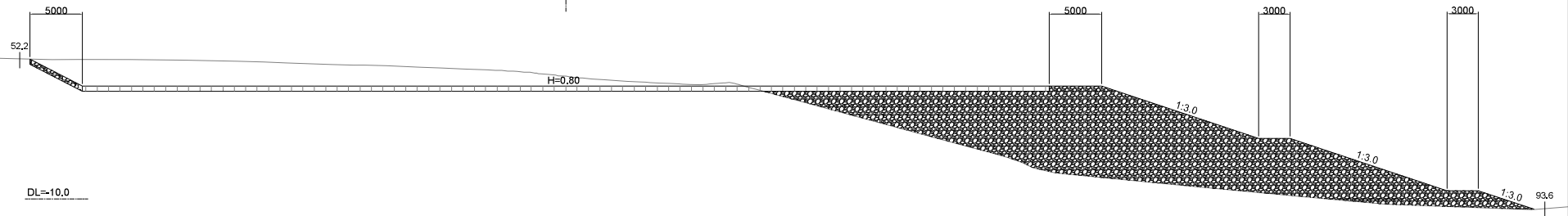
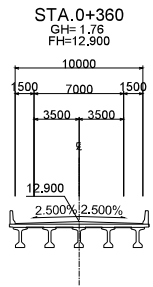
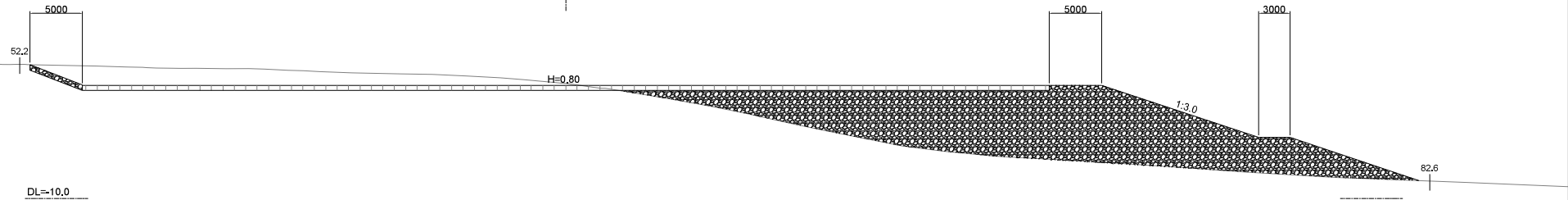
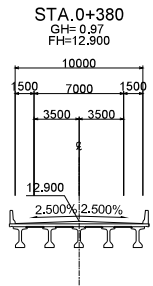
JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
1_Ba Baong Bridge No.2
REVETMENT AND RIVER BED PROTECTION(3)

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/200 | BB-16 |

別添7-22



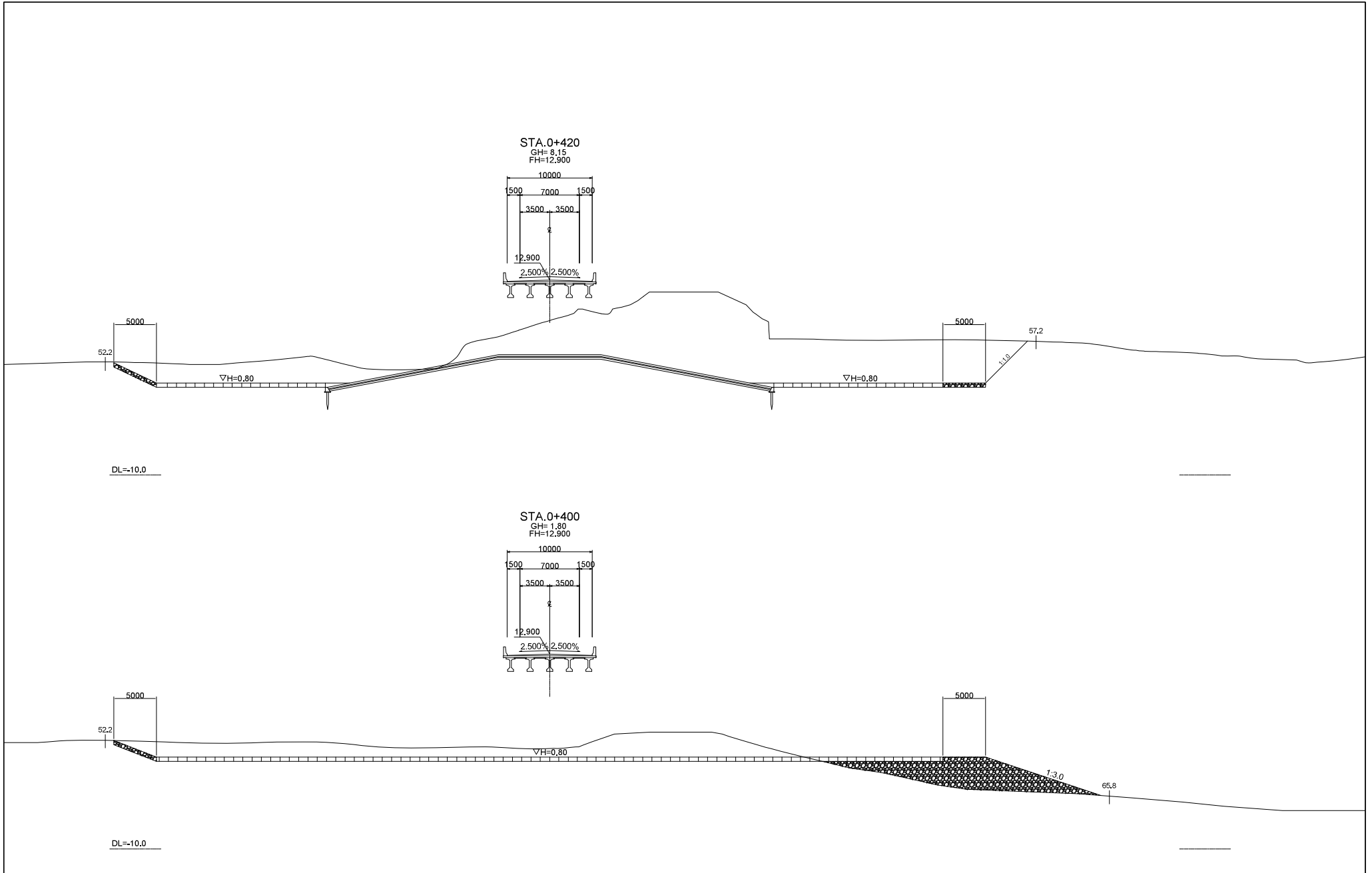
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
1_Ba Baong Bridge No.2
REVETMENT AND RIVER BED PROTECTION(4)

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/200 | BB-17 |



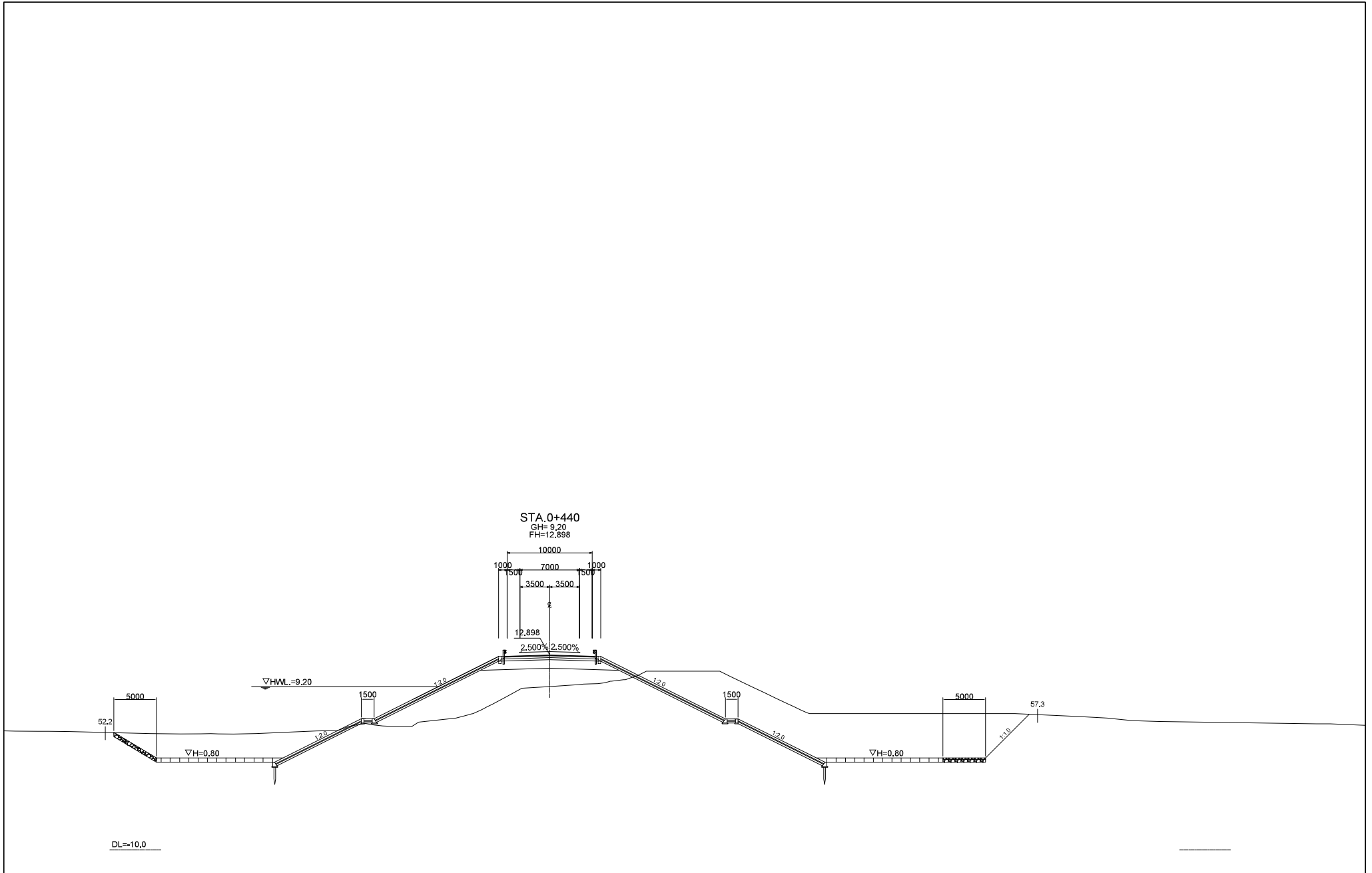
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
1_Ba Baong Bridge No.2
REVTMENT AND RIVER BED PROTECTION(5)

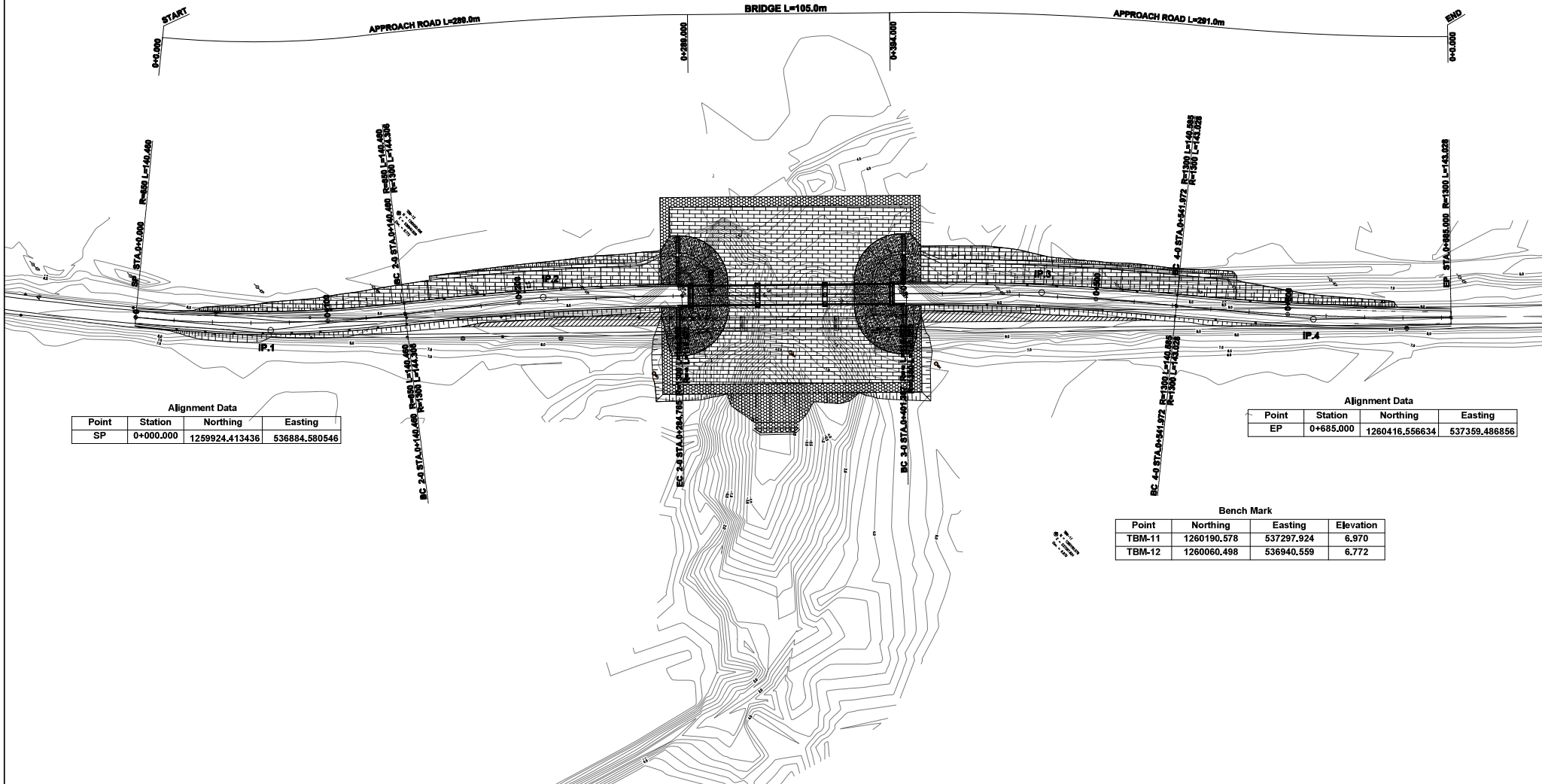
| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/200 | BB-18 |



| | | | | | |
|--|---|--|---|-------------------------|----------------------|
| MINISTRY OF PUBLIC WORKS AND TRANSPORT KINGDOM OF CAMBODIA | JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD. | PROJECT TITLE: PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT OF BRIDGES IN FLOOD-PRONE AREAS | DRAWING TITLE: 1_Ba Baong Bridge No.2 REVETMENT AND RIVER BED PROTECTION(6) | SCALE(A1 SIZE) 1/200 | DRAWING NO. BB-19 |
|--|---|--|---|-------------------------|----------------------|

Ba Baong No.1 Bridge

| IP | Station | Speed | Northing | Easting | IA | R | TL | CL | SL |
|----|-----------|-------|----------------|---------------|--------------|------|--------|---------|-------|
| 1 | 0+70.230 | 80 | 1259970.265312 | 536938.138725 | 12-22-52.143 | 650 | 70.504 | 140.460 | 3.813 |
| 2 | 0+212.613 | 80 | 1260084.178315 | 537024.139199 | 6-21-36.284 | 1300 | 72.227 | 144.306 | 2.005 |
| 3 | 0+471.680 | 80 | 1260272.477559 | 537202.277498 | 6-11-46.000 | 1300 | 70.361 | 140.585 | 1.903 |
| 4 | 0+613.486 | 80 | 1260364.461737 | 537310.388217 | 6-18-13.498 | 1300 | 71.586 | 143.028 | 1.969 |



| Point | Station | Northing | Easting |
|-------|-----------|----------------|---------------|
| SP | 0+000.000 | 1259924.413436 | 536884.580546 |

| Point | Station | Northing | Easting |
|-------|-----------|----------------|---------------|
| EP | 0+685.000 | 1260416.556634 | 537359.486856 |

| Point | Northing | Easting | Elevation |
|--------|-------------|------------|-----------|
| TBM-11 | 1260190.578 | 537297.924 | 6.970 |
| TBM-12 | 1260060.498 | 536940.559 | 6.772 |

別添7-26

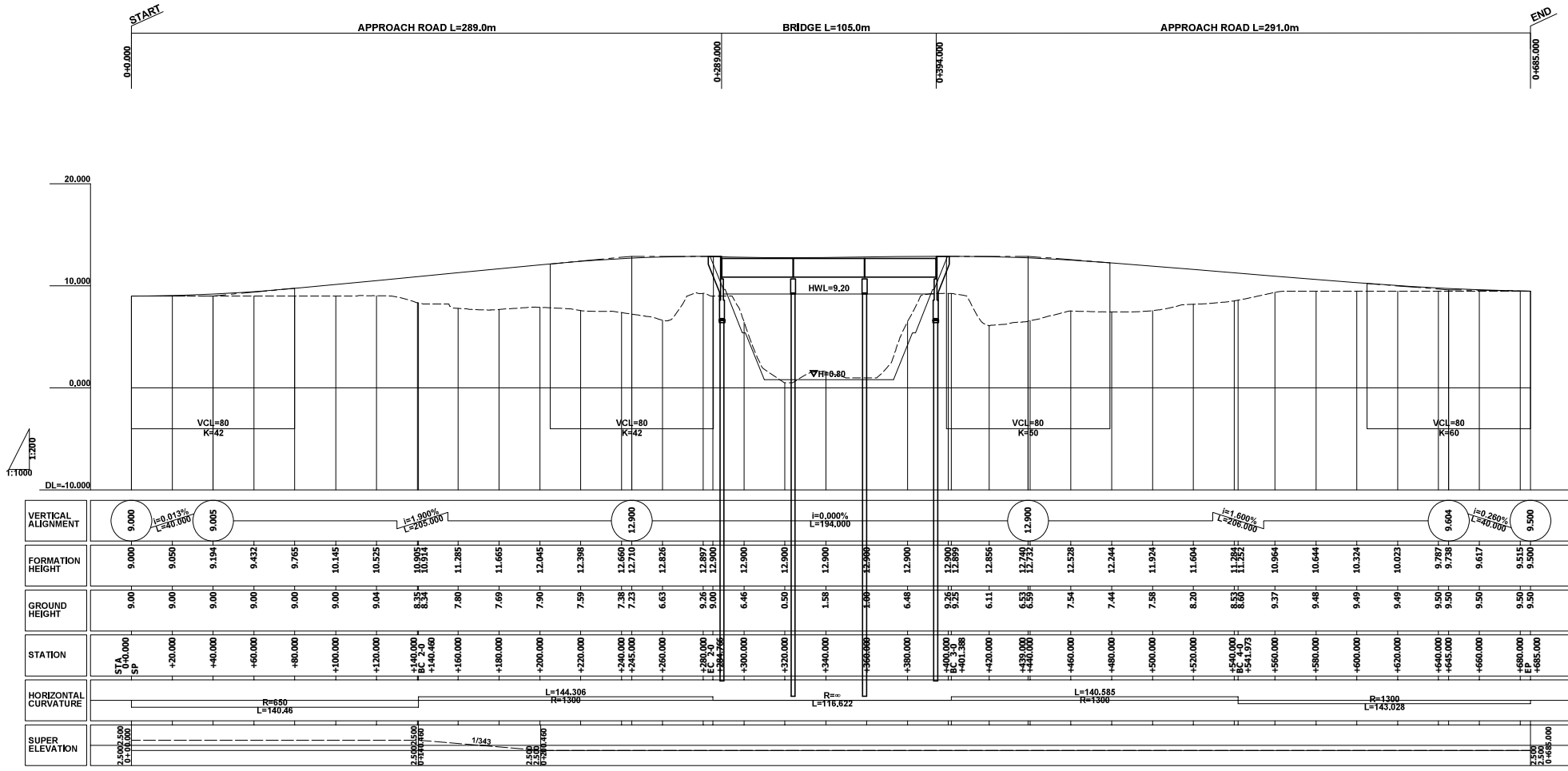
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
2_Ba Baong Bridge No.1
GENERAL PLAN

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------------|-------------|
| 1/2,000 (1/1,000) | BA-01 |



Profile H = 1/1000
V = 1/200

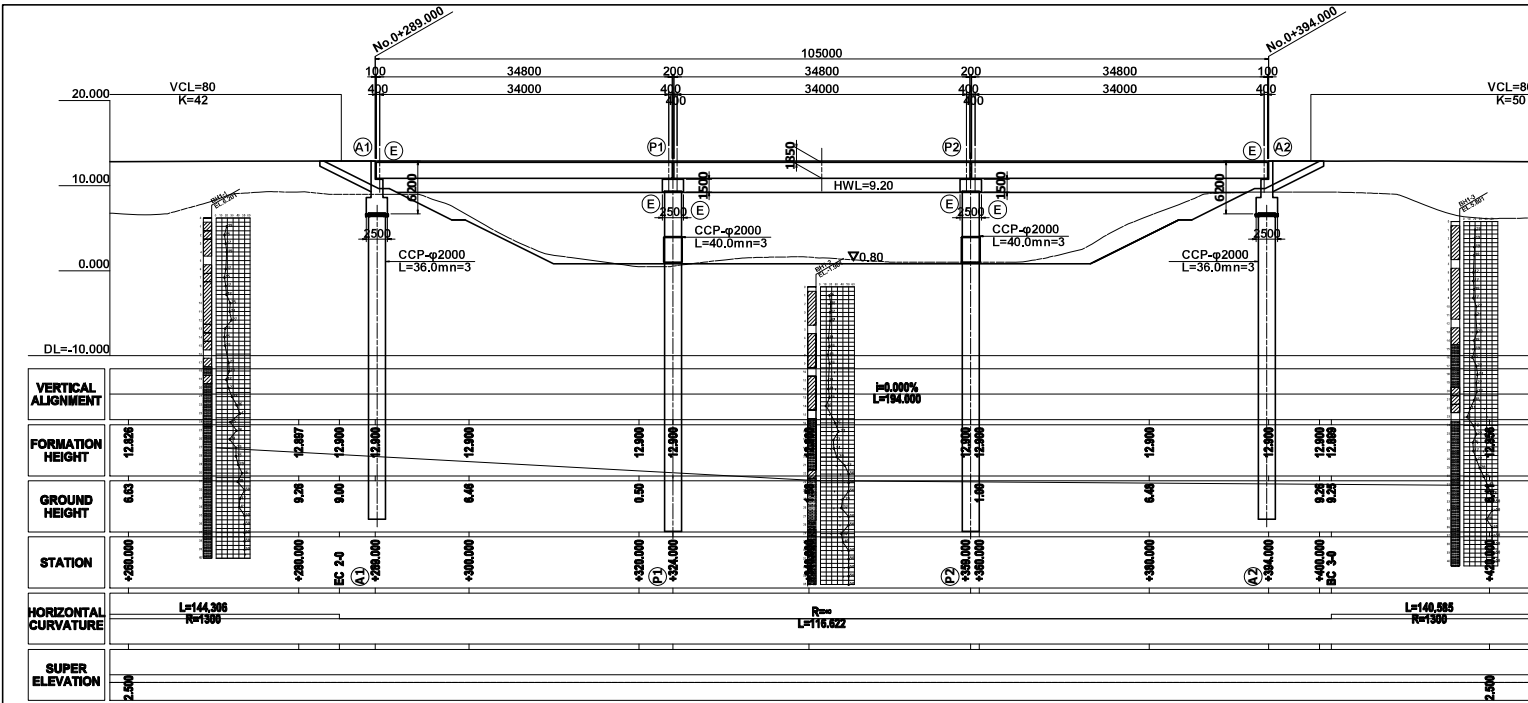
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

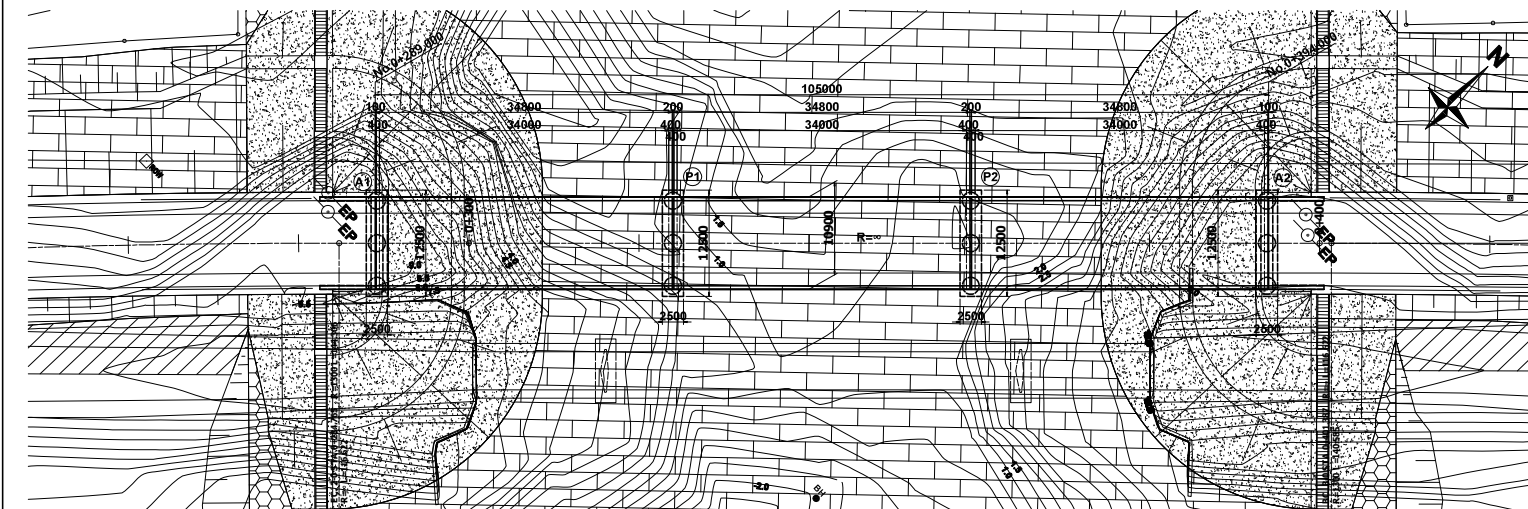
PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
2_Ba Baong Bridge No.1
GENERAL PROFILE

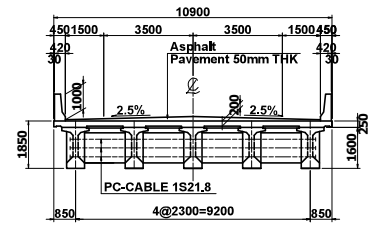
SCALE(A1 SIZE) DRAWING NO.
AS SHOWN BA-02



PROFILE S=1:300



PLAN S=1:300



CROSS SECTION S=1:100

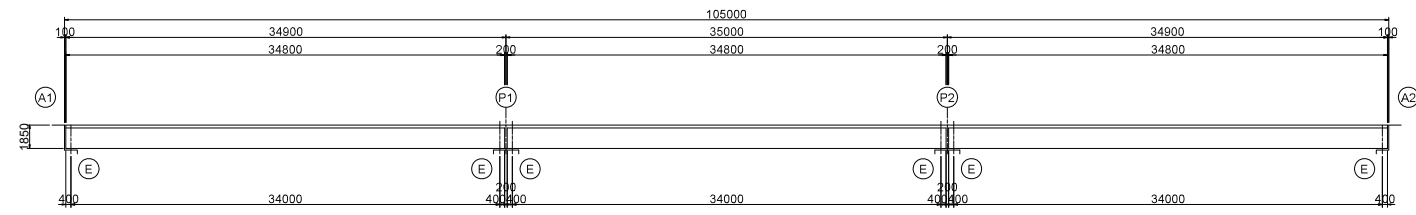
DESIGN CRITERIA

| | |
|------------------------|---|
| ROAD CLASS | SECONDARY PRINCIPAL ROAD |
| DESIGN SPEED | 80km/h |
| LIVE LOAD | AASHTO HS20-44x125% OR EQUIVALENT |
| BRIDGE LENGTH | 105,000m |
| SPAN LENGTH | 34,000+34,000+34,000m |
| TOTAL WIDTH | 2x3.5m(Carriage Way)+2x1.5m(Shoulder) |
| SEISMIC COEFFICIENT | kh=0.05(L1) |
| SUPER STRUCTURE TYPE | PC I-Girder |
| SUBSTRUCTURE TYPE | REVERSED T-ABUTMENT, PILE BENT PIRE |
| FOUNDATION TYPE | CAST-IN PLACE CONCRETE PILE(A1,P1,P2,A2) |
| SPECIFICATION CRITERIA | Bridge Design Standard (CAM.PW.04.102.99), 2003 DESIGN SPECIFICATIONS OF HIGHWAY BRIDGES (JAPAN ROAD ASSOCIATION) |

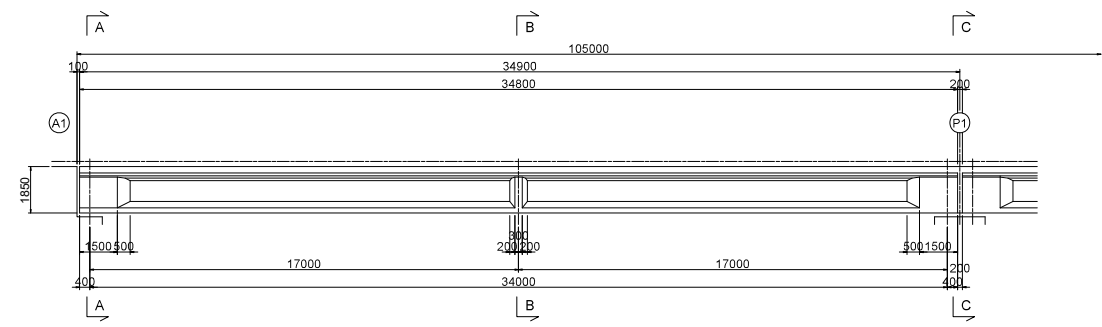
| | | | | | |
|---|---|--|---|----------------|-------------|
| MINISTRY OF PUBLIC WORKS AND TRANSPORT KINGDOM OF CAMBODIA | JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD. | PROJECT TITLE: PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT OF BRIDGES IN FLOOD-PRONE AREAS | DRAWING TITLE: 2_Ba Baong Bridge No.1 GENERAL VIEW OF BRIDGE | SCALE(A1 SIZE) | DRAWING NO. |
| | | | | AS SHOWN | BA-03 |

| DESIGN CRITERIA | |
|-----------------|----------------------------------|
| CATEGORY | PRESTRESSED CONCRETE ROAD BRIDGE |
| BRIDGE LENGTH | 105,000 m |
| WIDTH | 10,900 m |
| LIVE-LOAD | HS20-44x1,25 |
| ANGLE OF SKEW | 90°00'00" |

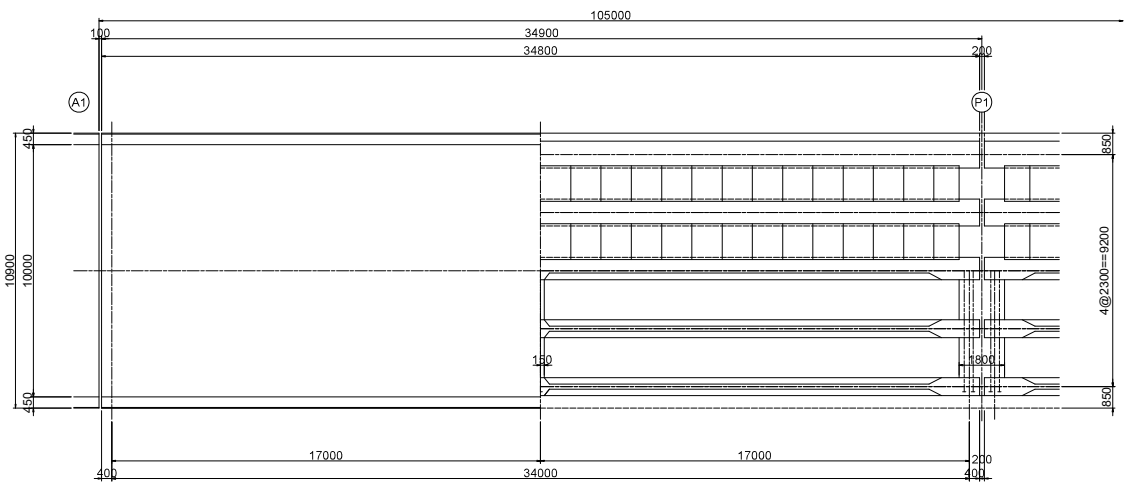
| MATERIALS | | |
|--------------|------------|--------------------------------------|
| CONCRETE | GIRDER | $\sigma_{ck}=45,0$ N/mm ² |
| | CROSS BEAM | $\sigma_{ck}=45,0$ N/mm ² |
| | DECK SLAB | $\sigma_{ck}=40,0$ N/mm ² |
| PC STEEL | GIRDER | 12S12,7(SWPR7BL) |
| | CROSS BEAM | 1S21,8 (SWPR19) |
| DEFORMED BAR | Grade 400 | |



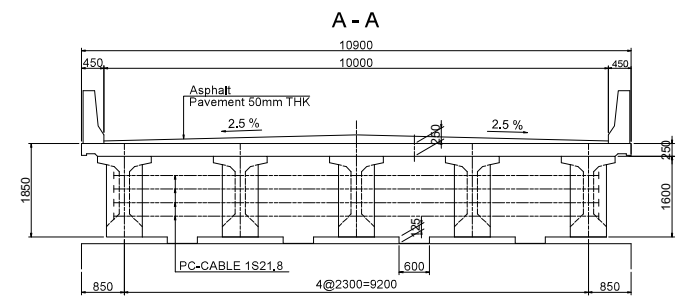
SIDE ELEVATION S=1/200



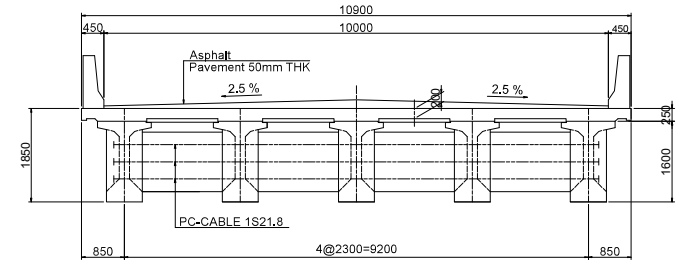
SIDE ELEVATION S=1/100



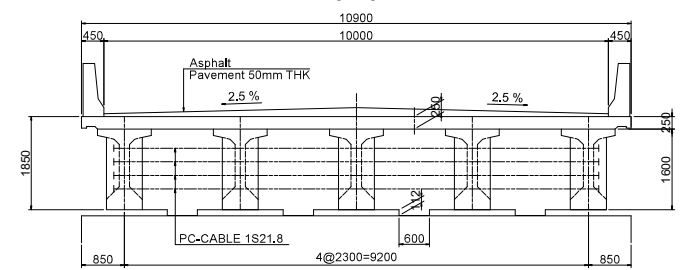
PLAN S=1/100



A - A



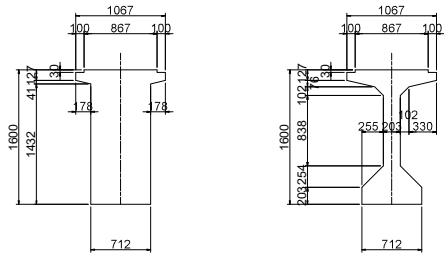
B - B



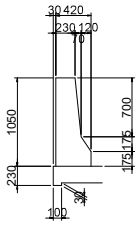
C - C

CROSS SECTION S=1/50

| | | | | | |
|--|---|--|--|----------------|-------------|
| MINISTRY OF PUBLIC WORKS AND TRANSPORT KINGDOM OF CAMBODIA | JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD. | PROJECT TITLE: | DRAWING TITLE: | SCALE(A1 SIZE) | DRAWING NO. |
| | | PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT OF BRIDGES IN FLOOD-PRONE AREAS | 2_Ba Baong Bridge No.1 STRUCTURE DRAWING(1) | AS SHOWN | BA-04 |

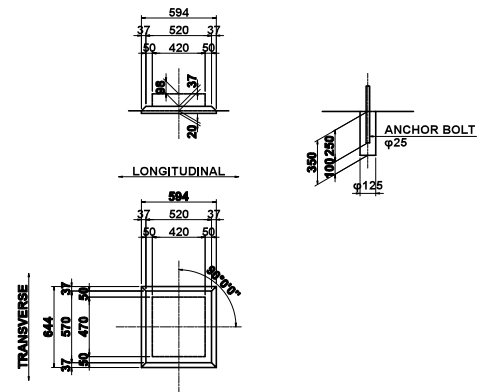
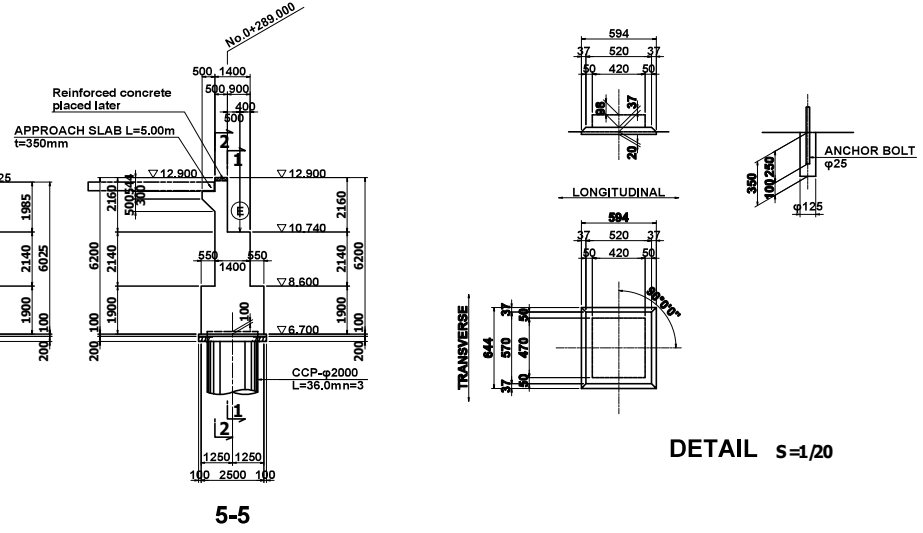
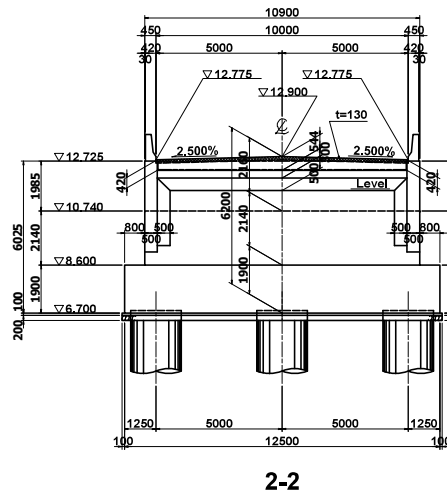
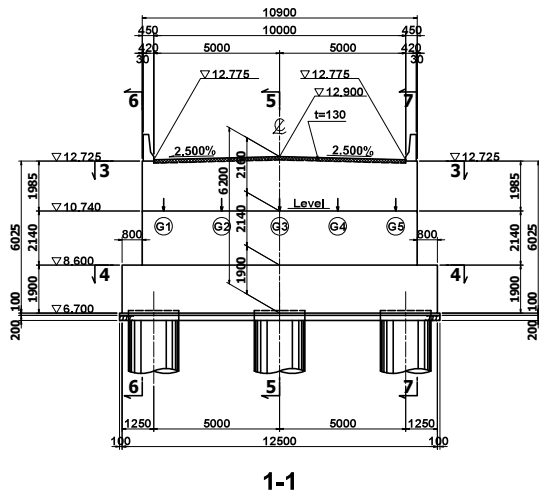


PC GIRDER S=1/30

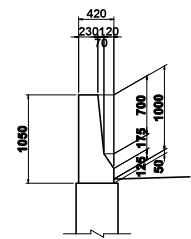
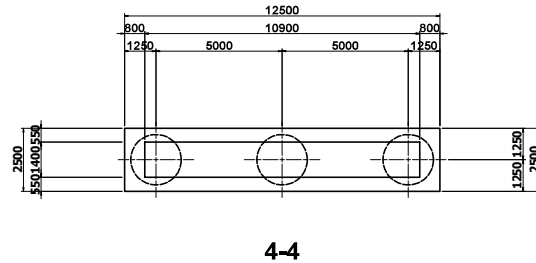
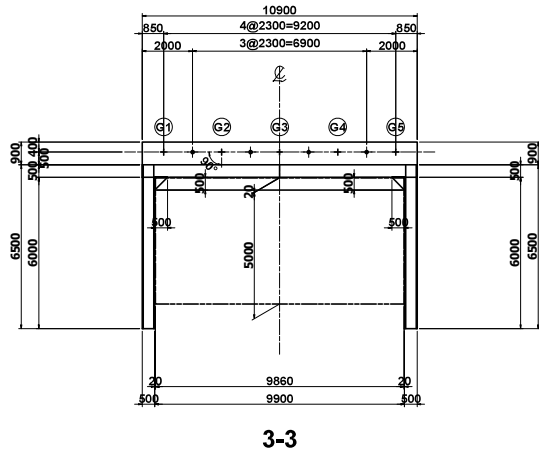


DETAILS OF RAILING S=1/30

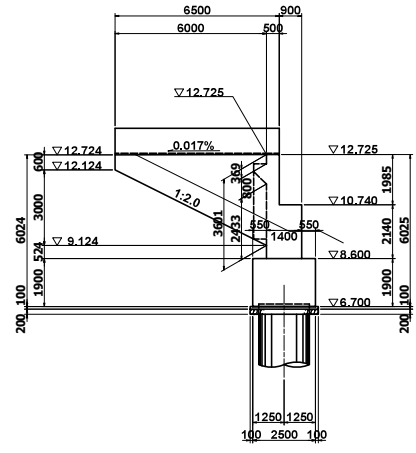
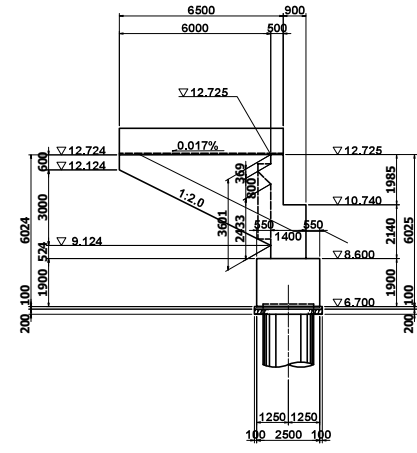
| | | | | | |
|--|---|--|--|----------------|-------------|
| MINISTRY OF PUBLIC WORKS AND TRANSPORT KINGDOM OF CAMBODIA | JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD. | PROJECT TITLE: PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT OF BRIDGES IN FLOOD-PRONE AREAS | DRAWING TITLE: 2_Ba Baong Bridge No.1 STRUCTURE DRAWING(2) | SCALE(A1 SIZE) | DRAWING NO. |
| | | | | AS SHOWN | BA-05 |



DETAIL S=1/20



DETAIL S=1/30

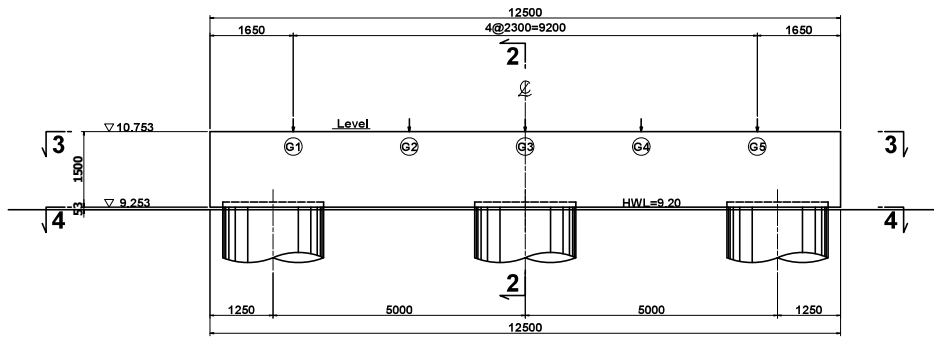


6-6

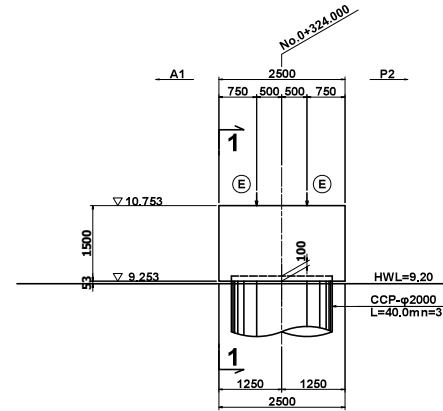
7-7

| | | | | | |
|--|---|--|---|-------------------------|----------------------|
| MINISTRY OF PUBLIC WORKS AND TRANSPORT KINGDOM OF CAMBODIA | JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD. | PROJECT TITLE: PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT OF BRIDGES IN FLOOD-PRONE AREAS | DRAWING TITLE: 2_Ba Baong Bridge No.1 STRUCTURAL DRAWING OF A1 ABUTMENT | SCALE(A1 SIZE) 1/100 | DRAWING NO. BA-06 |
|--|---|--|---|-------------------------|----------------------|

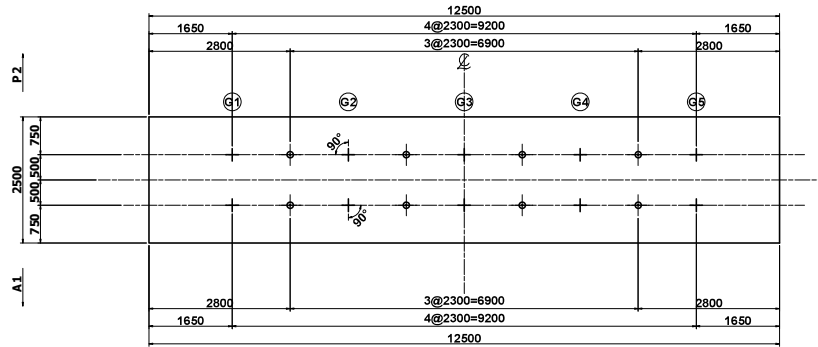
別添7-32



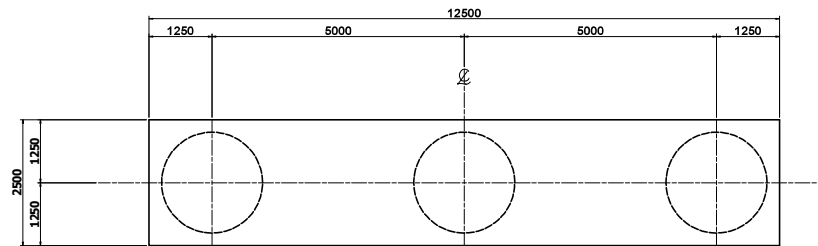
1-1



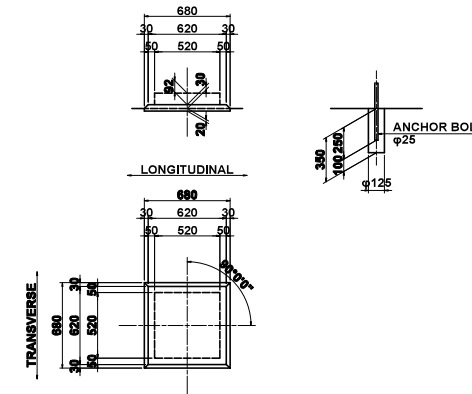
2-2



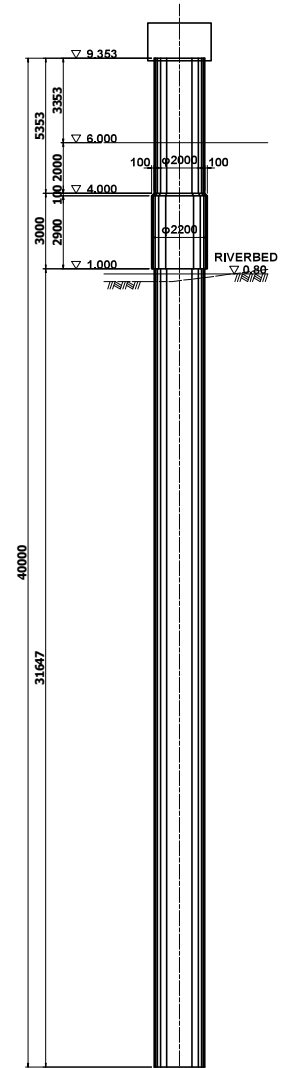
3-3



4-4



DETAIL S=1/20



PROFILE S=1/100

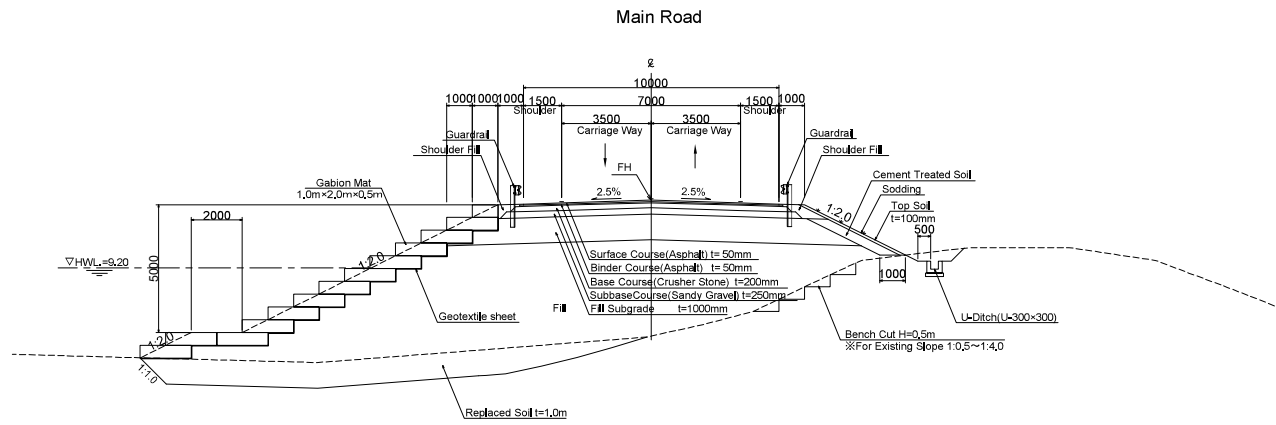
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
2_Ba Baong Bridge No.1
STRUCTURAL DRAWING OF P1 BRIDGE PIER

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/50 | BA-07 |



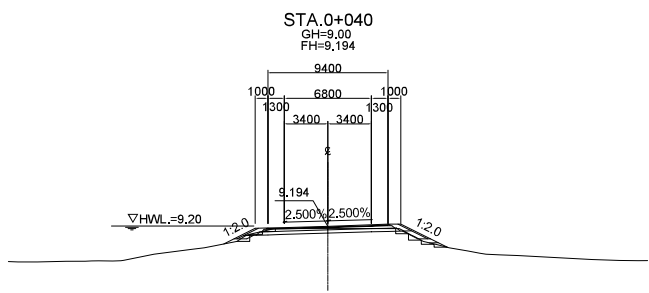
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

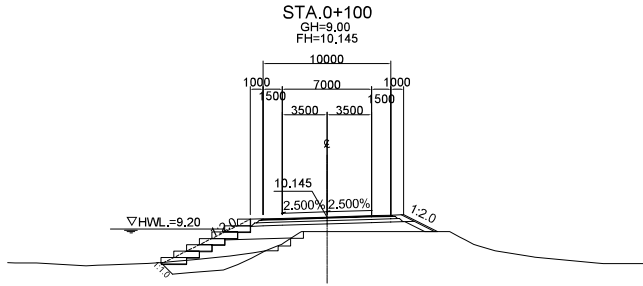
PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
2_Ba Baong Bridge No.1
TYPICAL CROSS SECTION OF APPROACH ROAD

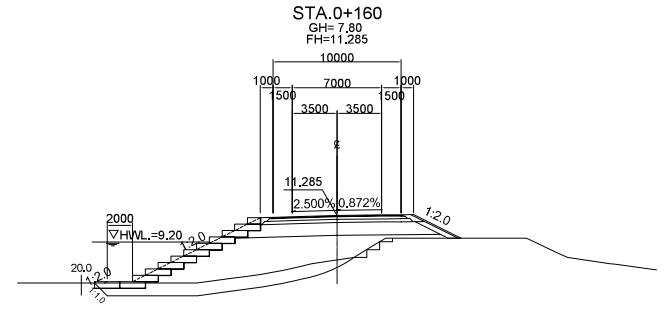
| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/100 | BA-08 |



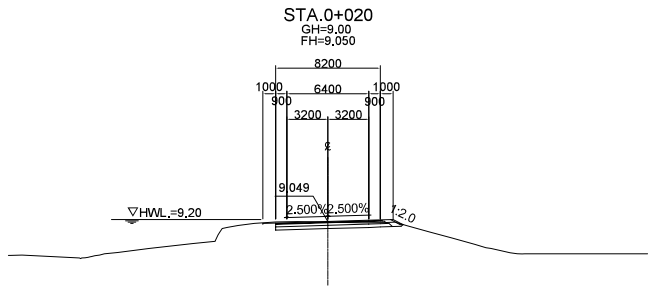
DL=0.0



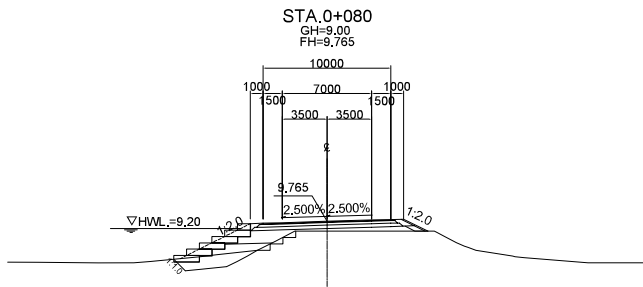
DL=0.0



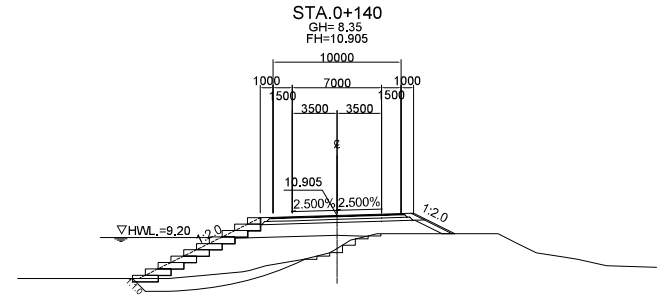
DL=0.0



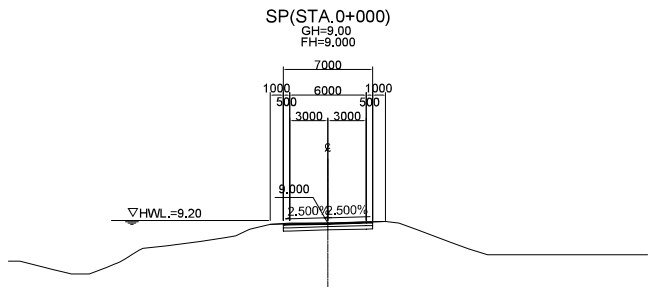
DL=0.0



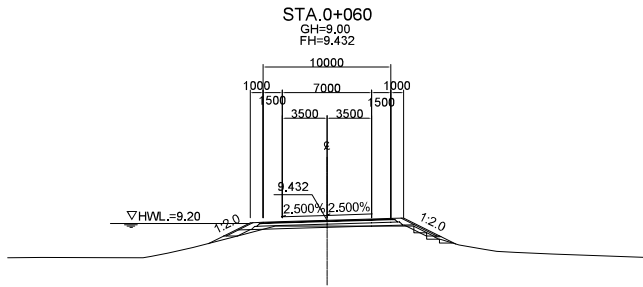
DL=0.0



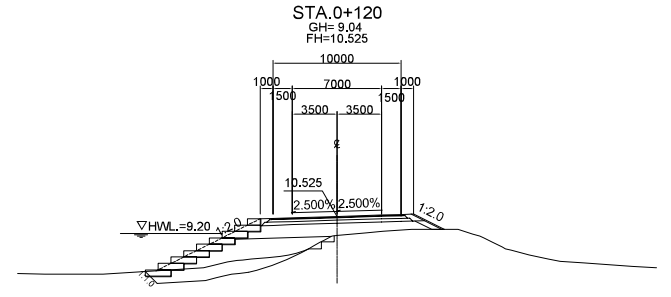
DL=0.0



DL=0.0



DL=0.0



DL=0.0

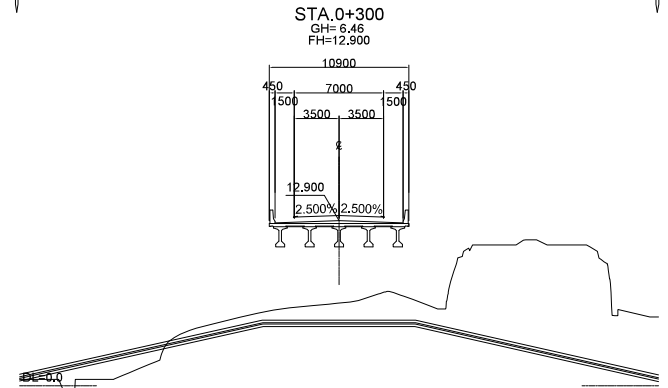
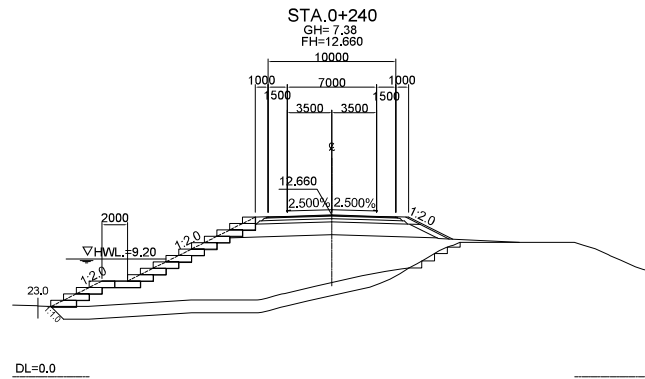
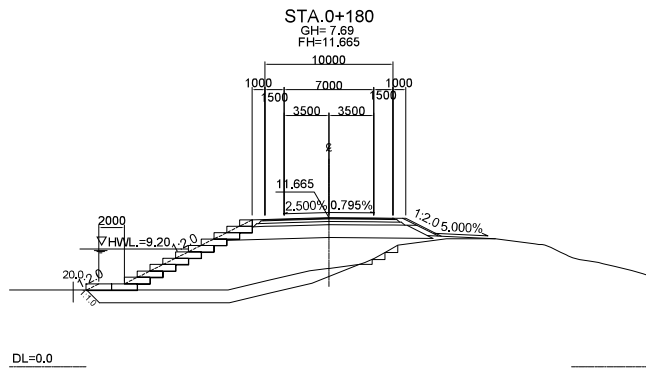
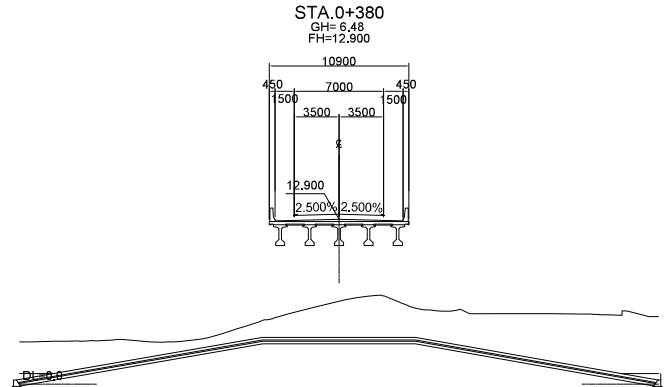
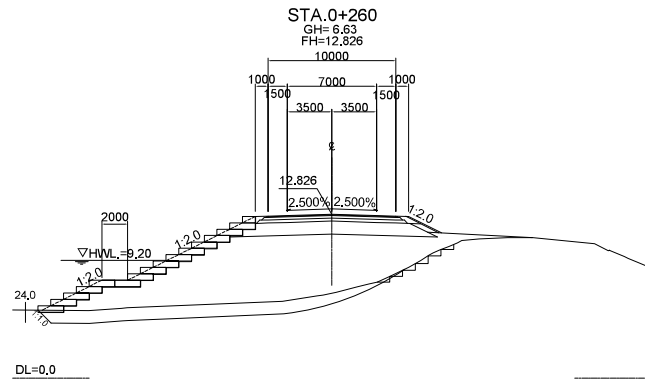
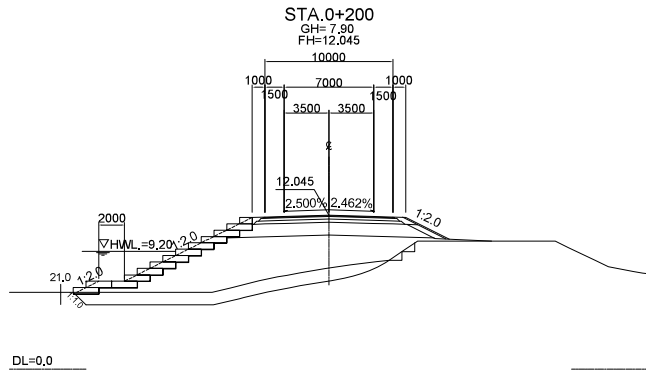
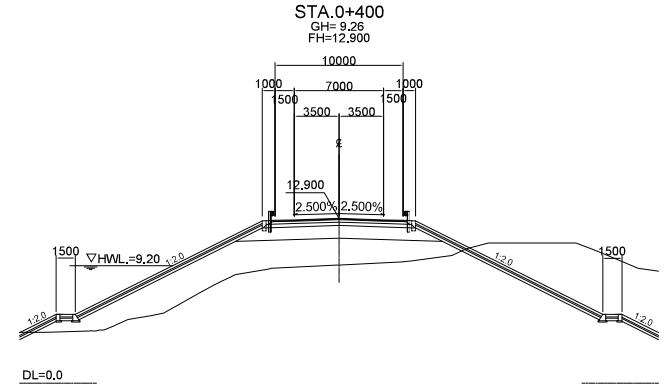
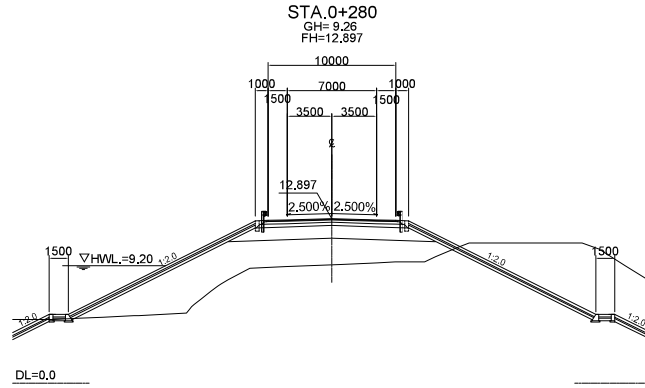
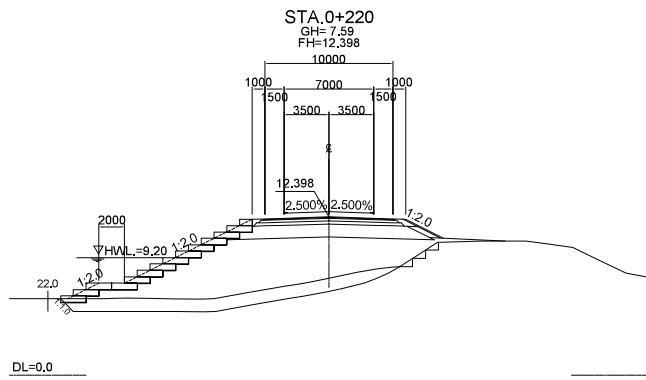
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
2_Ba Baong Bridge No.1
CROSS SECTION OF APPROACH ROAD (1)

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/200 | BA-09 |



MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

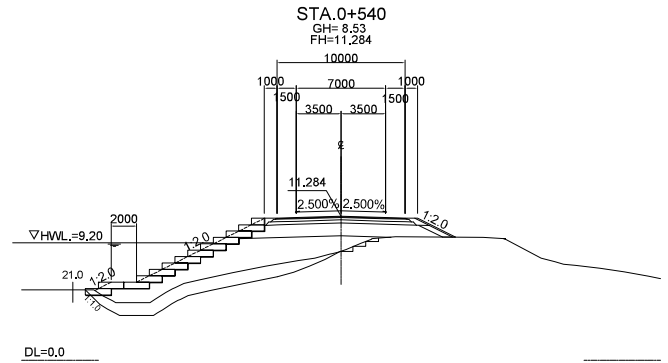
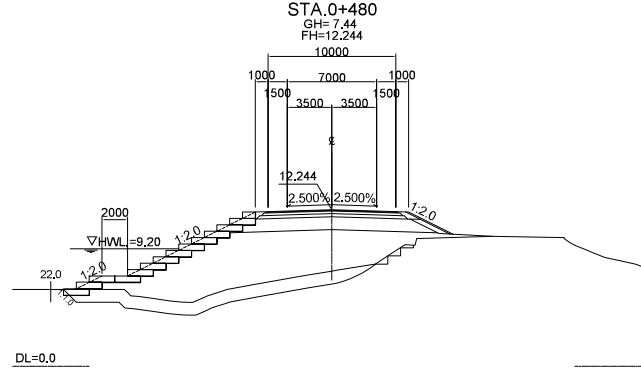
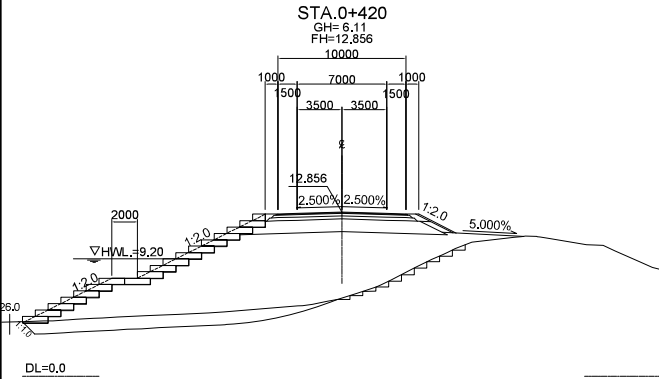
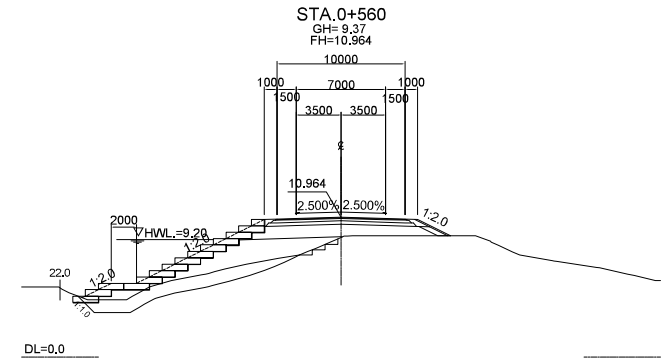
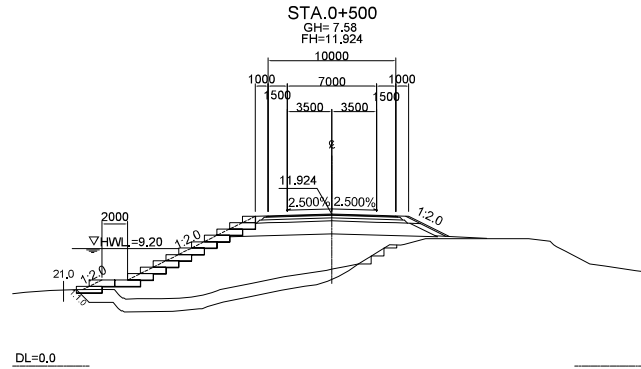
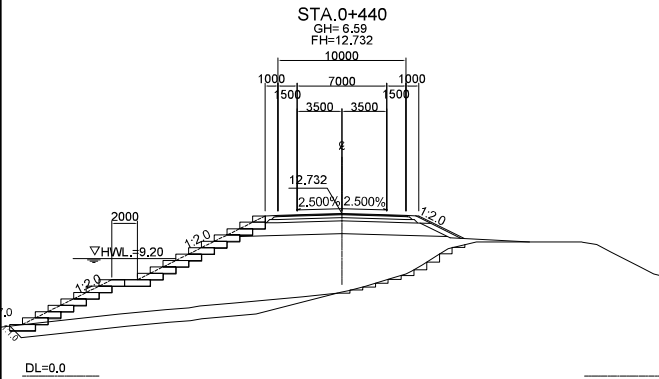
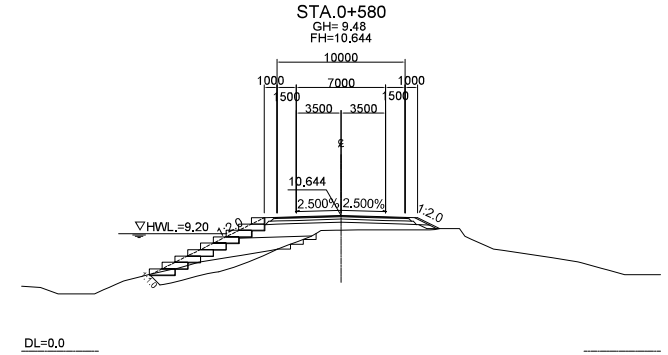
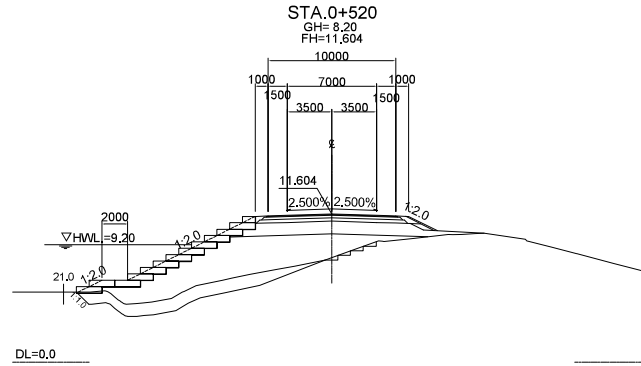
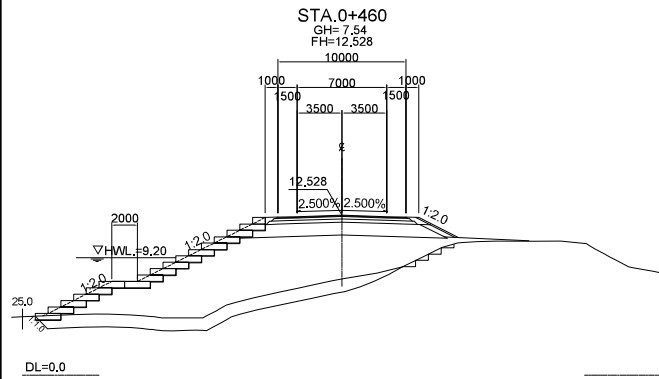
JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
2_Ba Baong Bridge No.1
CROSS SECTION OF APPROACH ROAD (2)

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/200 | BA-10 |

別添7-36



MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

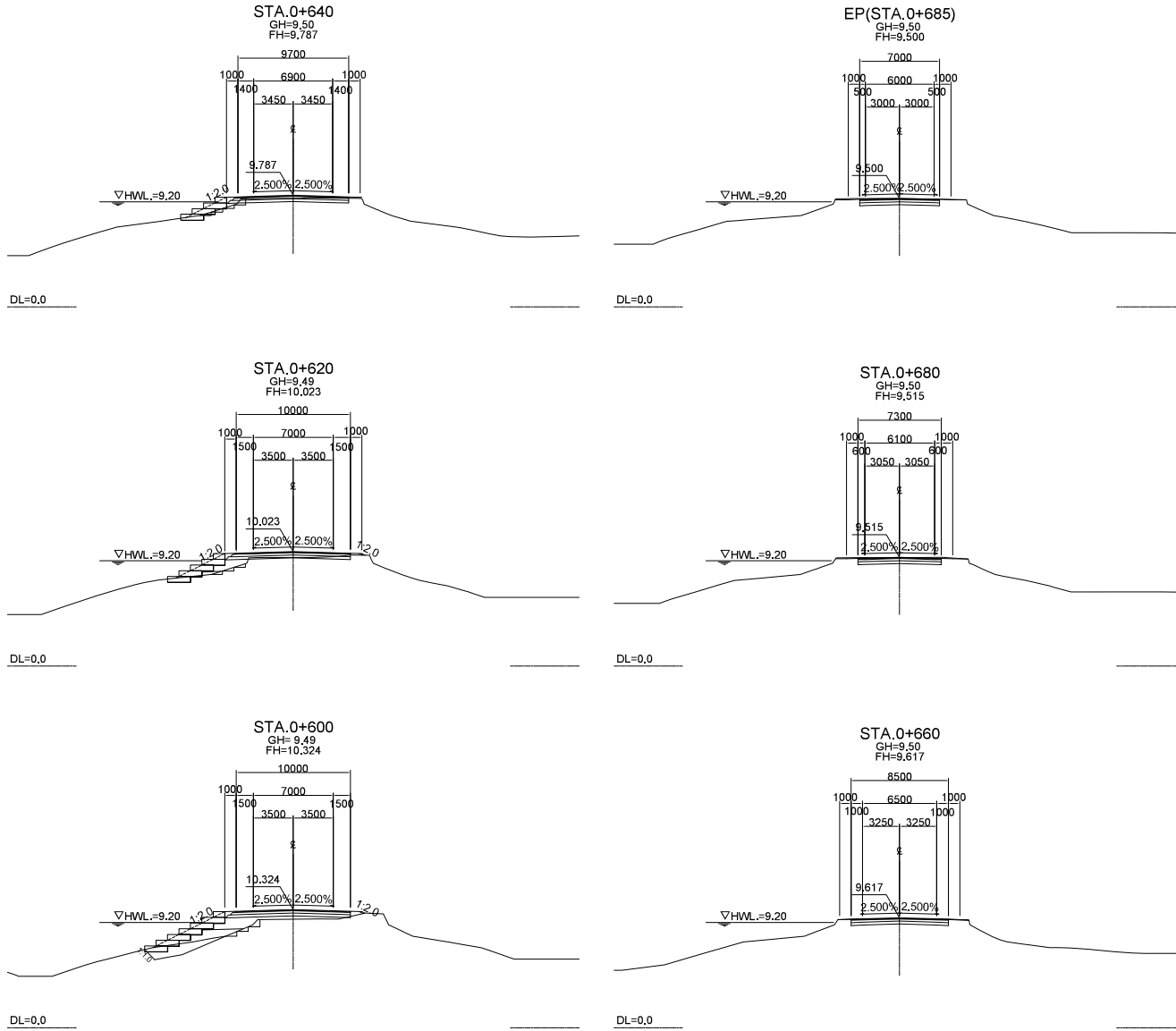
JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

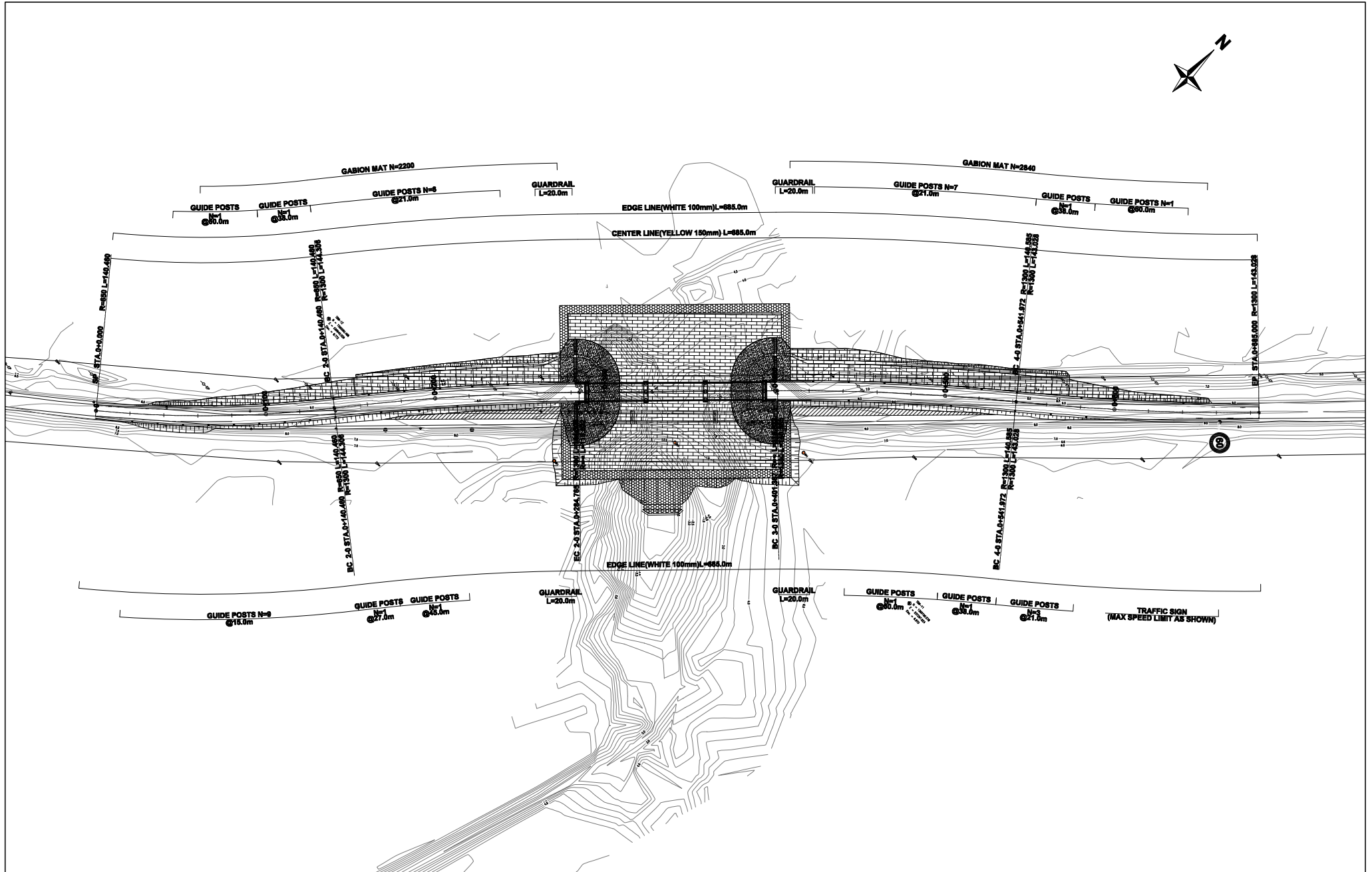
DRAWING TITLE:
2_Ba Baong Bridge No.1
CROSS SECTION OF APPROACH ROAD (3)

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/200 | BA-11 |

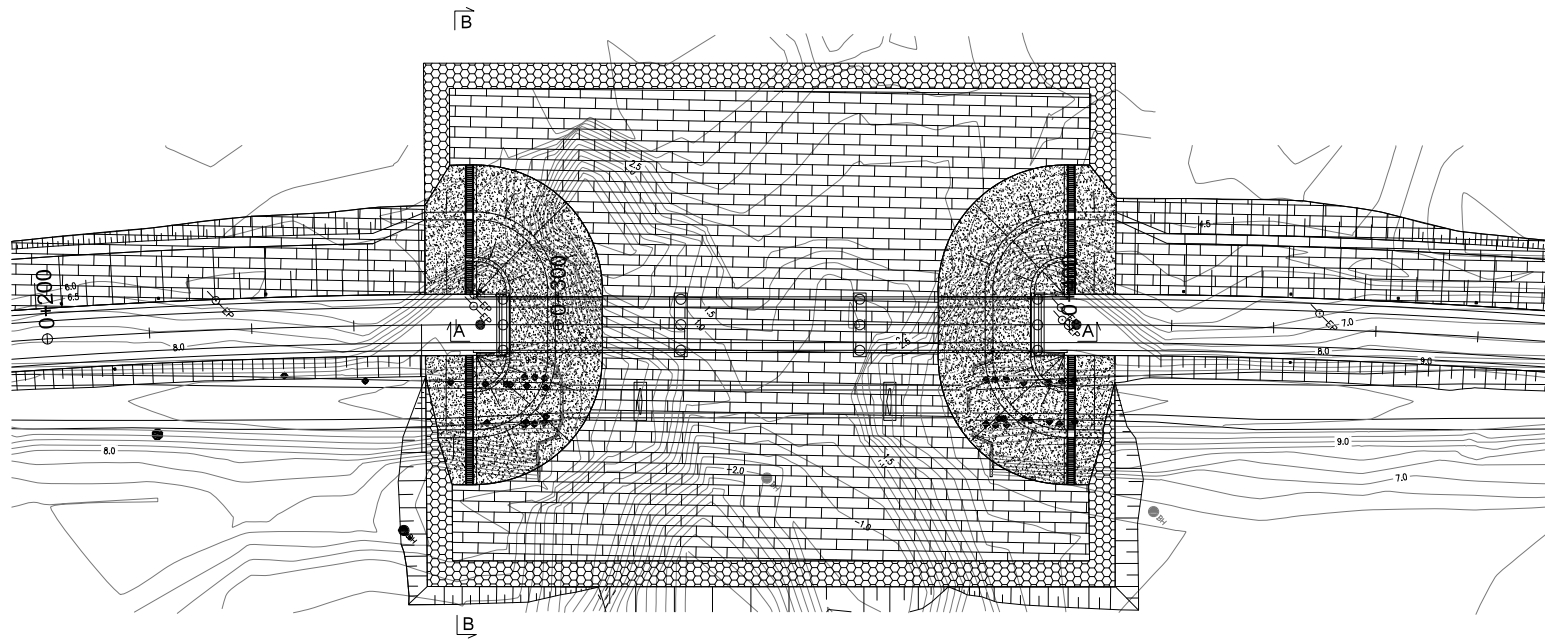
別添7-37



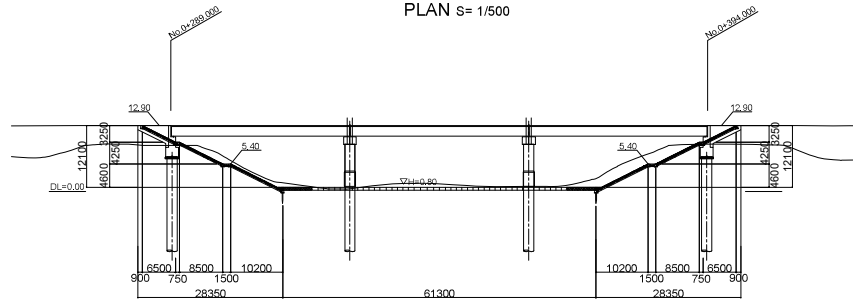
| | | | | | |
|--|---|--|--|----------------|-------------|
| MINISTRY OF PUBLIC WORKS AND TRANSPORT KINGDOM OF CAMBODIA | JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD. | PROJECT TITLE: PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT OF BRIDGES IN FLOOD-PRONE AREAS | DRAWING TITLE: 2_Ba Baong Bridge No.1 CROSS SECTION OF APPROACH ROAD (4) | SCALE(A1 SIZE) | DRAWING NO. |
| | | | | 1/200 | BA-12 |



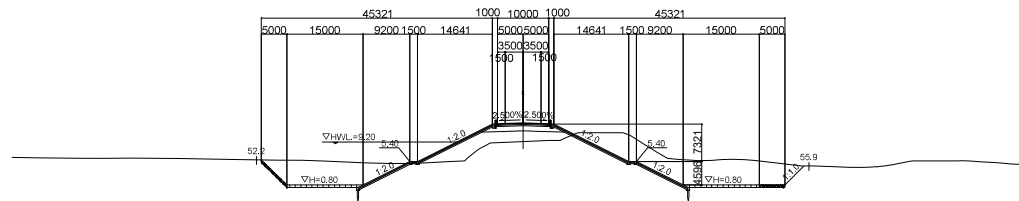
| | | | | | |
|---|---|---|---|---|------------------------------|
| <p>MINISTRY OF PUBLIC WORKS AND TRANSPORT KINGDOM OF CAMBODIA</p> | <p>JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD.</p> | <p>PROJECT TITLE: PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT OF BRIDGES IN FLOOD-PRONE AREAS</p> | <p>DRAWING TITLE: 2_Ba Baong Bridge No.1 PLAN OF APPROACH ROAD (ANCILLARY)</p> | <p>SCALE(A1 SIZE) 1/2,000 (1/1,000)</p> | <p>DRAWING NO. BA-13</p> |
|---|---|---|---|---|------------------------------|



PLAN s= 1/500



SECTION A-A s= 1/500



SECTION B-B s= 1/500

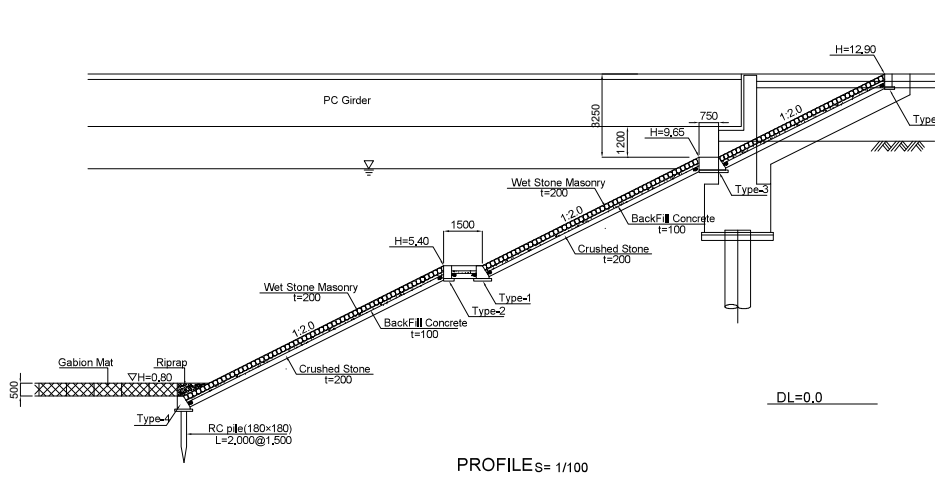
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

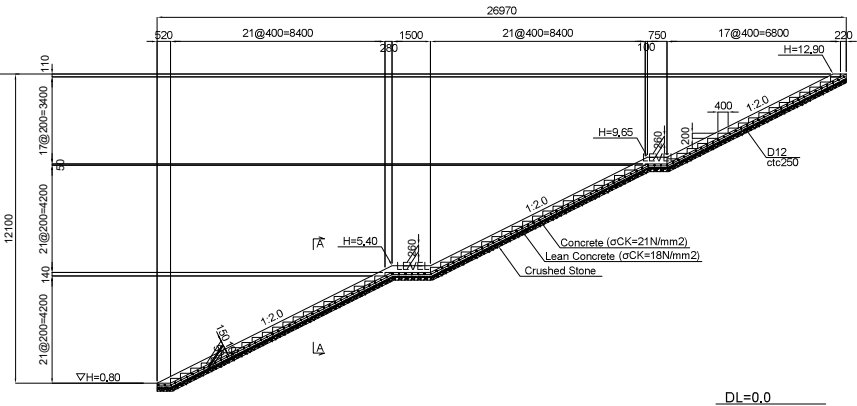
PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
2_Ba-Baong Bridge No.1
REVTMENT AND RIVER BED PROTECTION(1)

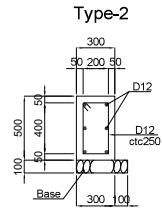
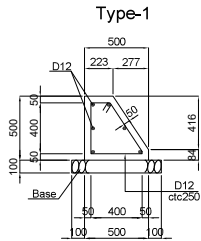
| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| AS SHOWN | BA-14 |



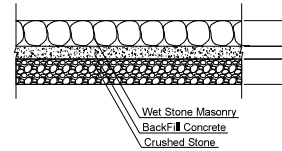
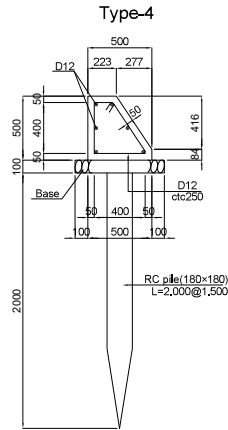
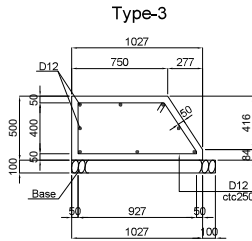
PROFILE s= 1/100



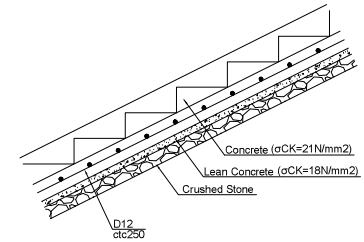
STAIRS s= 1/100



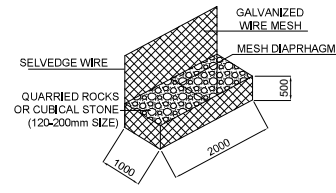
DETAILS s= 1/20



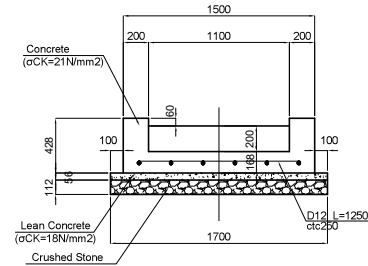
DETAILS s= 1/20



DETAILS s= 1/20



GABION MAT DETAIL
S = None Scale



SECTION A-A s= 1/20

MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

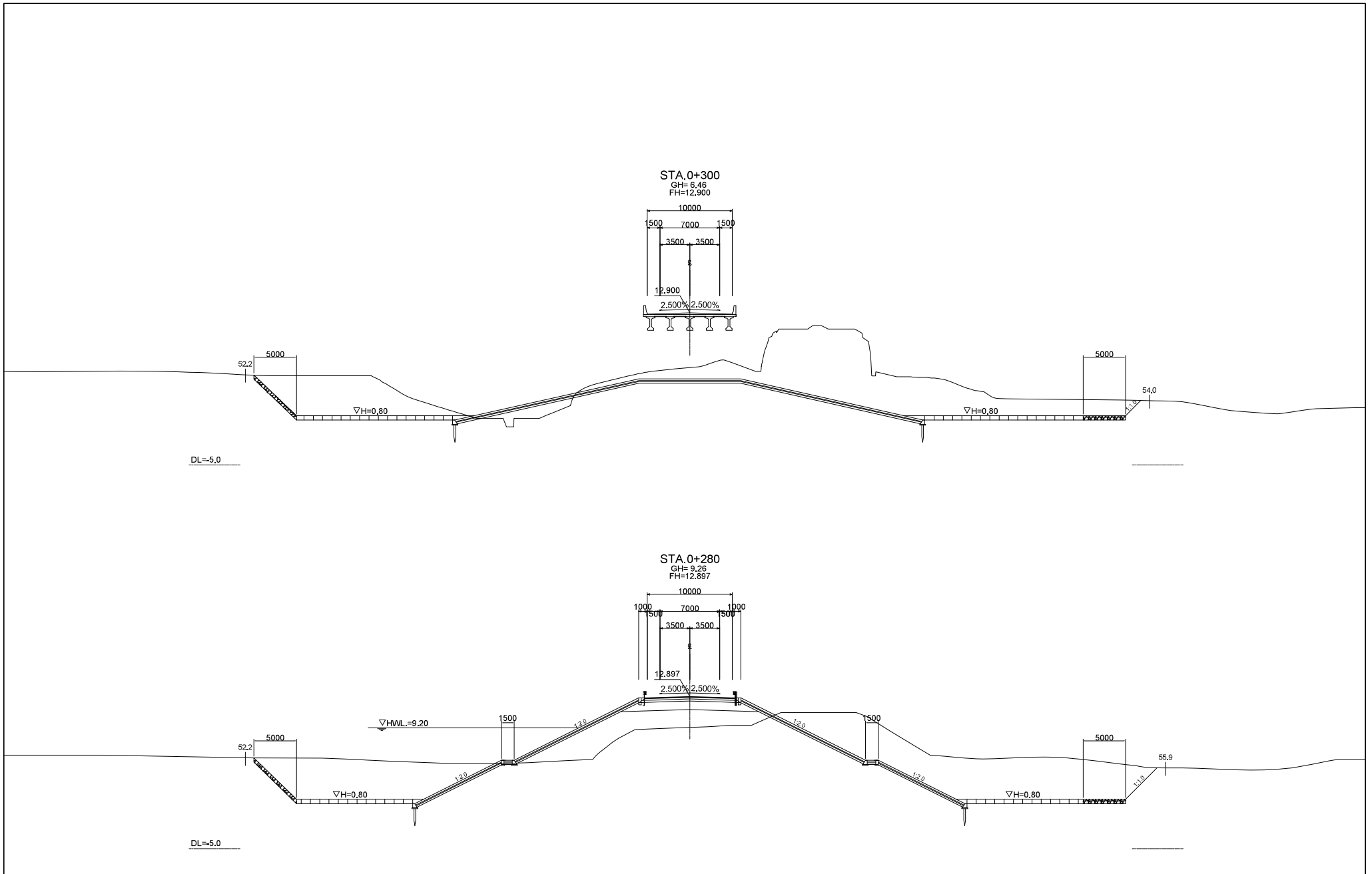
JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

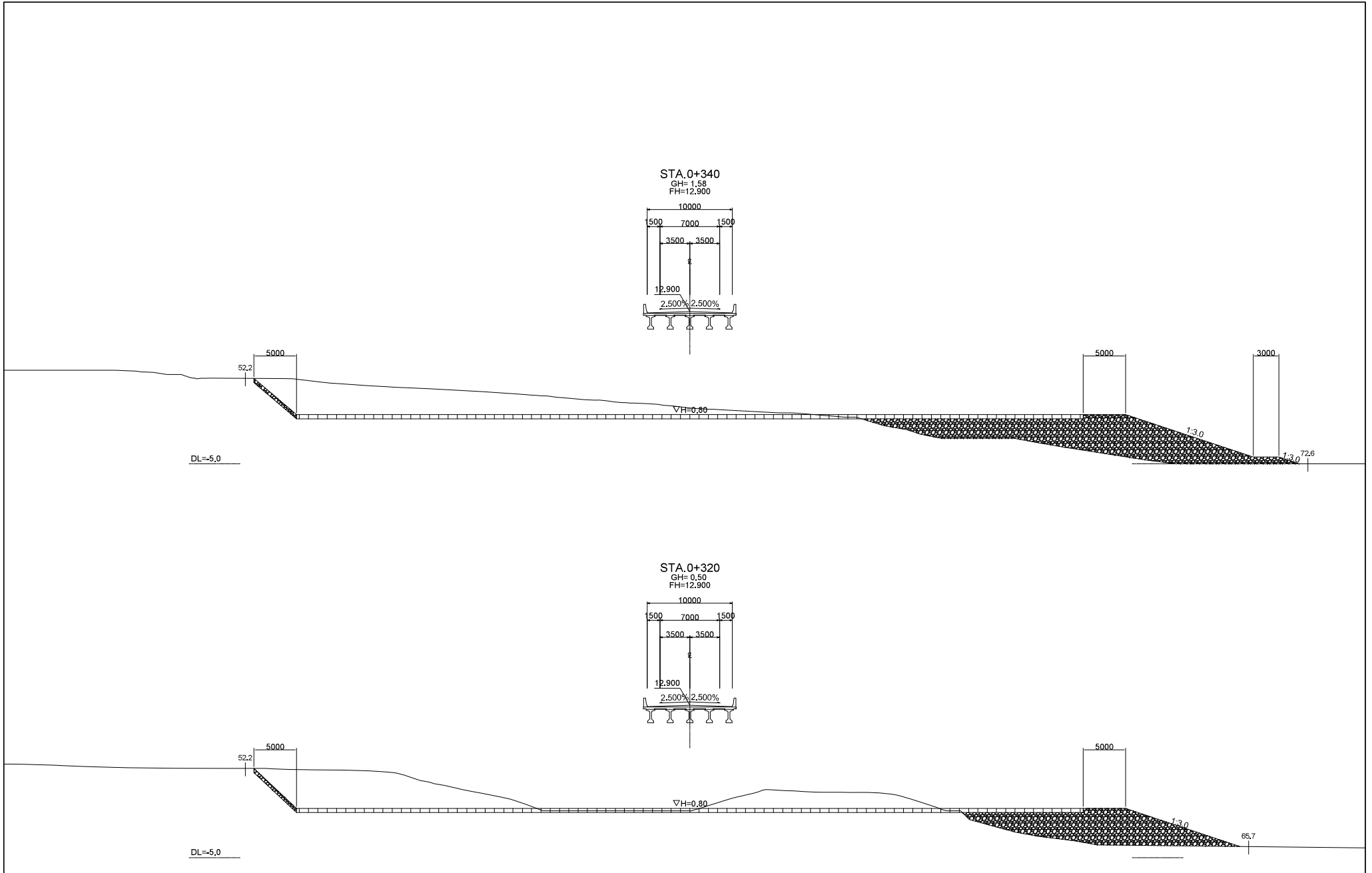
DRAWING TITLE:
2_Ba-Baong Bridge No.1
REVTMENT AND RIVER BED PROTECTION(2)

| | |
|----------------|-------------|
| SCALE(AT SIZE) | DRAWING NO. |
| AS SHOWN | BA-15 |

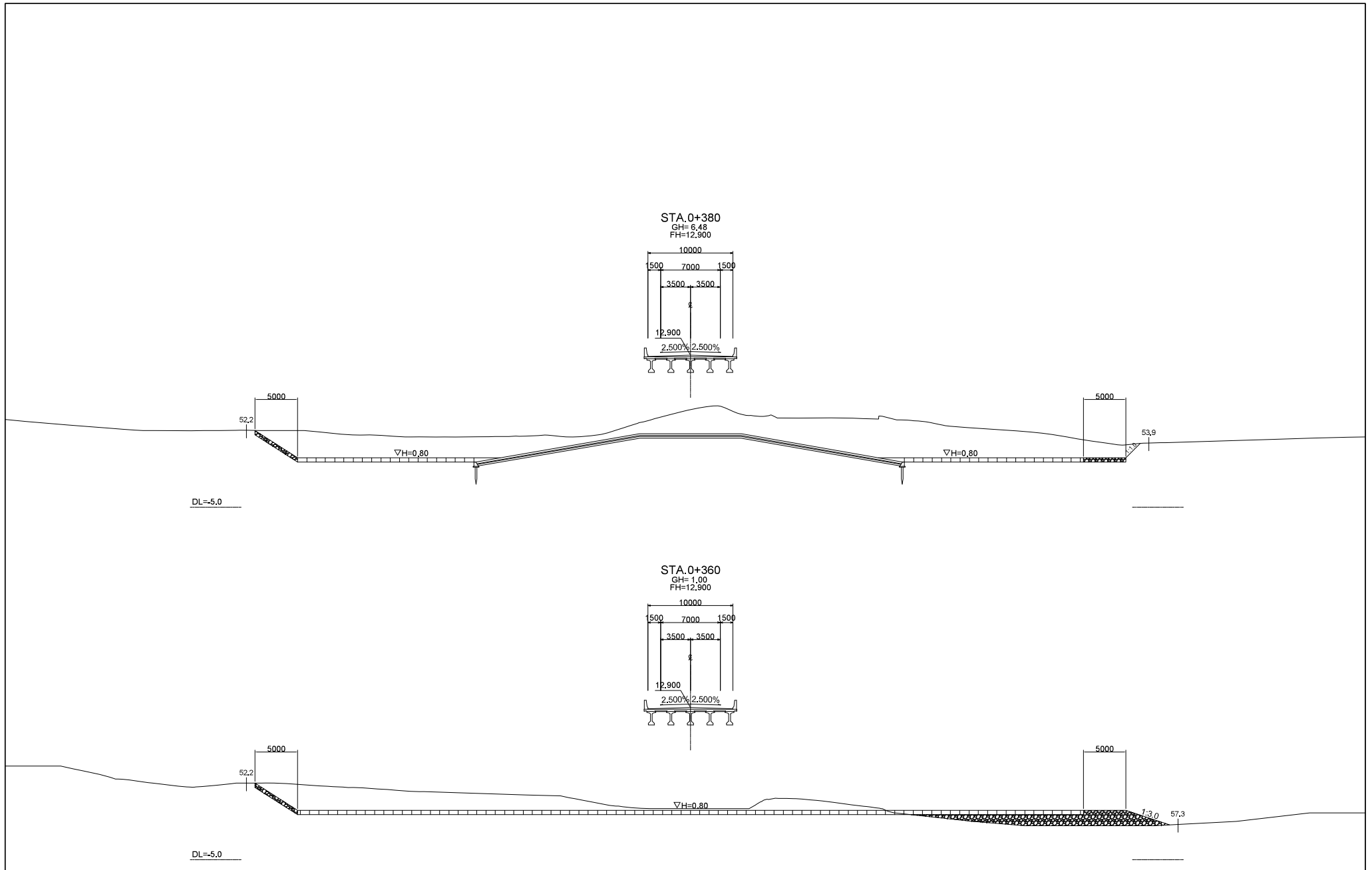
別添7-41



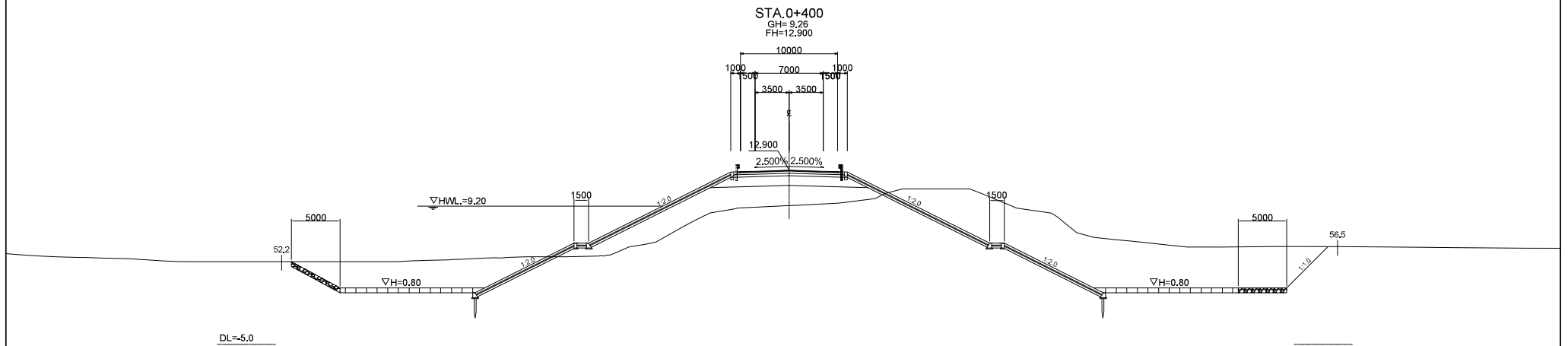
| | | | | | |
|--|---|--|---|-------------------------|----------------------|
| MINISTRY OF PUBLIC WORKS AND TRANSPORT KINGDOM OF CAMBODIA | JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD. | PROJECT TITLE: PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT OF BRIDGES IN FLOOD-PRONE AREAS | DRAWING TITLE: 2_Ba-Baong Bridge No.1 REVETMENT AND RIVER BED PROTECTION(3) | SCALE(A1 SIZE) 1/200 | DRAWING NO. BA-16 |
|--|---|--|---|-------------------------|----------------------|



| | | | | | |
|--|---|--|---|-------------------------|----------------------|
| MINISTRY OF PUBLIC WORKS AND TRANSPORT KINGDOM OF CAMBODIA | JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD. | PROJECT TITLE: PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT OF BRIDGES IN FLOOD-PRONE AREAS | DRAWING TITLE: 2_Ba-Baong Bridge No.1 REVETMENT AND RIVER BED PROTECTION(4) | SCALE(A1 SIZE) 1/200 | DRAWING NO. BA-17 |
|--|---|--|---|-------------------------|----------------------|



| | | | | | |
|--|---|--|---|----------------|-------------|
| MINISTRY OF PUBLIC WORKS AND TRANSPORT KINGDOM OF CAMBODIA | JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD. | PROJECT TITLE: PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT OF BRIDGES IN FLOOD-PRONE AREAS | DRAWING TITLE: 2_Ba-Baong Bridge No.1 REVETMENT AND RIVER BED PROTECTION(5) | SCALE(A1 SIZE) | DRAWING NO. |
| | | | | 1/200 | BA-18 |



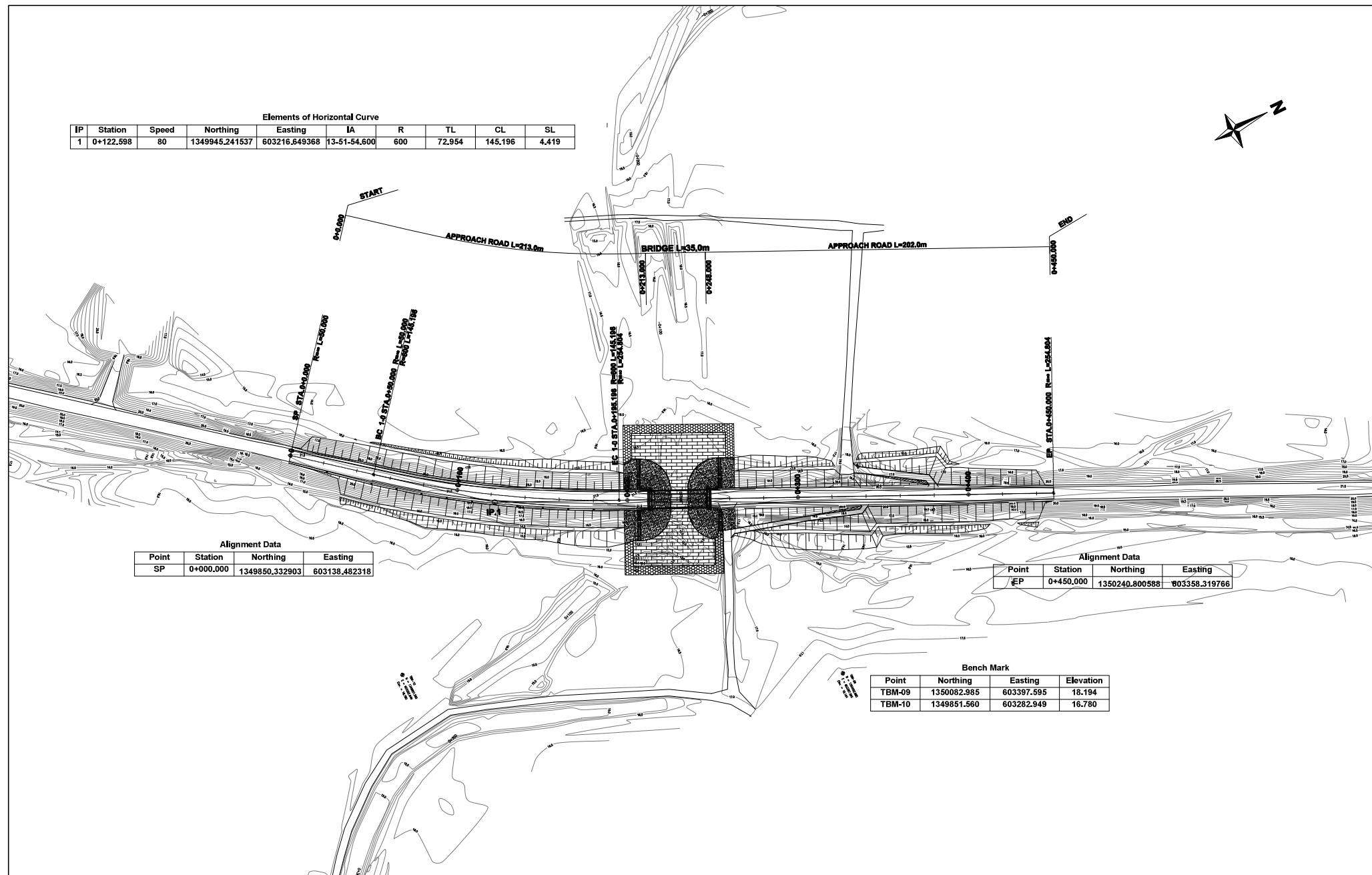
| | | | | | |
|--|---|--|--|-------------------------|----------------------|
| MINISTRY OF PUBLIC WORKS AND TRANSPORT KINGDOM OF CAMBODIA | JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD. | PROJECT TITLE: PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT OF BRIDGES IN FLOOD-PRONE AREAS | DRAWING TITLE: 2_Ba-Baong Bridge No.1 REVTMENT AND RIVER BED PROTECTION(6) | SCALE(A1 SIZE) 1/200 | DRAWING NO. BA-19 |
|--|---|--|--|-------------------------|----------------------|

Prek Sandan Bridge



Elements of Horizontal Curve

| IP | Station | Speed | Northing | Easting | IA | R | TL | CL | SL |
|----|-----------|-------|----------------|---------------|--------------|-----|--------|---------|-------|
| 1 | 0+122.598 | 80 | 1349945.241537 | 603216.649368 | 13-51-54.600 | 600 | 72.954 | 145.196 | 4.419 |



Alignment Data

| Point | Station | Northing | Easting |
|-------|-----------|----------------|---------------|
| SP | 0+000.000 | 1349850.332903 | 603138.482318 |

Alignment Data

| Point | Station | Northing | Easting |
|-------|-----------|----------------|---------------|
| EP | 0+450.000 | 1350240.800588 | 603358.319766 |

Bench Mark

| Point | Northing | Easting | Elevation |
|--------|-------------|------------|-----------|
| TBM-09 | 1350082.985 | 603397.595 | 18.194 |
| TBM-10 | 1349851.560 | 603282.949 | 16.780 |

別添7-46

MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:

PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:

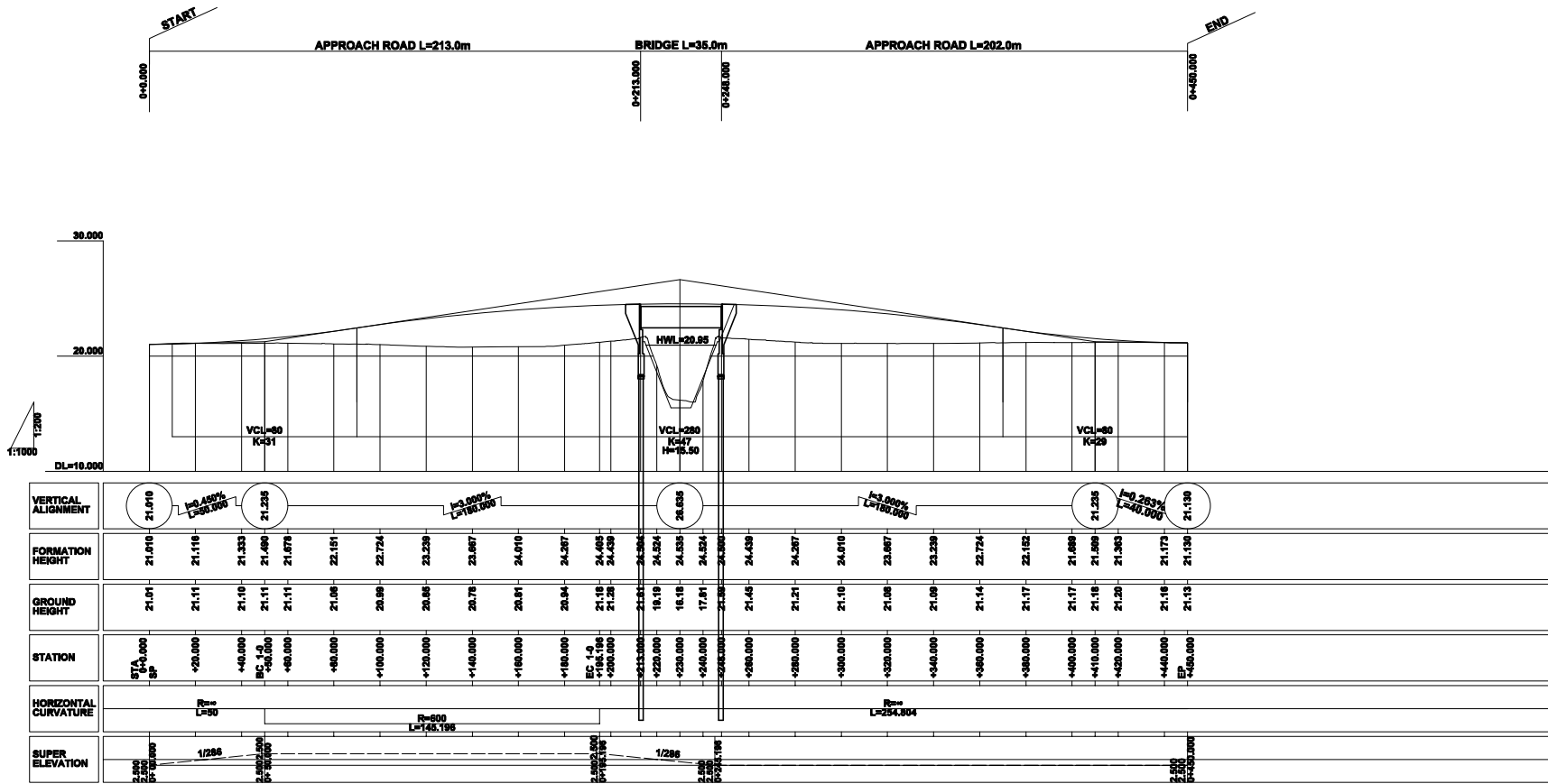
3_Prek Sandan Bridge
GENERAL PLAN

SCALE(A1 SIZE)

1/2,000
(1/1,000)

DRAWING NO.

PS-01



Profile^{H = 1/1000}_{V = 1/200}

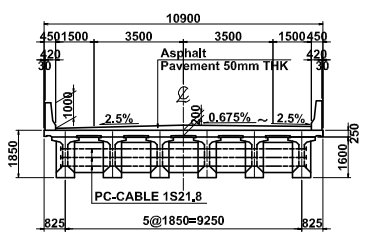
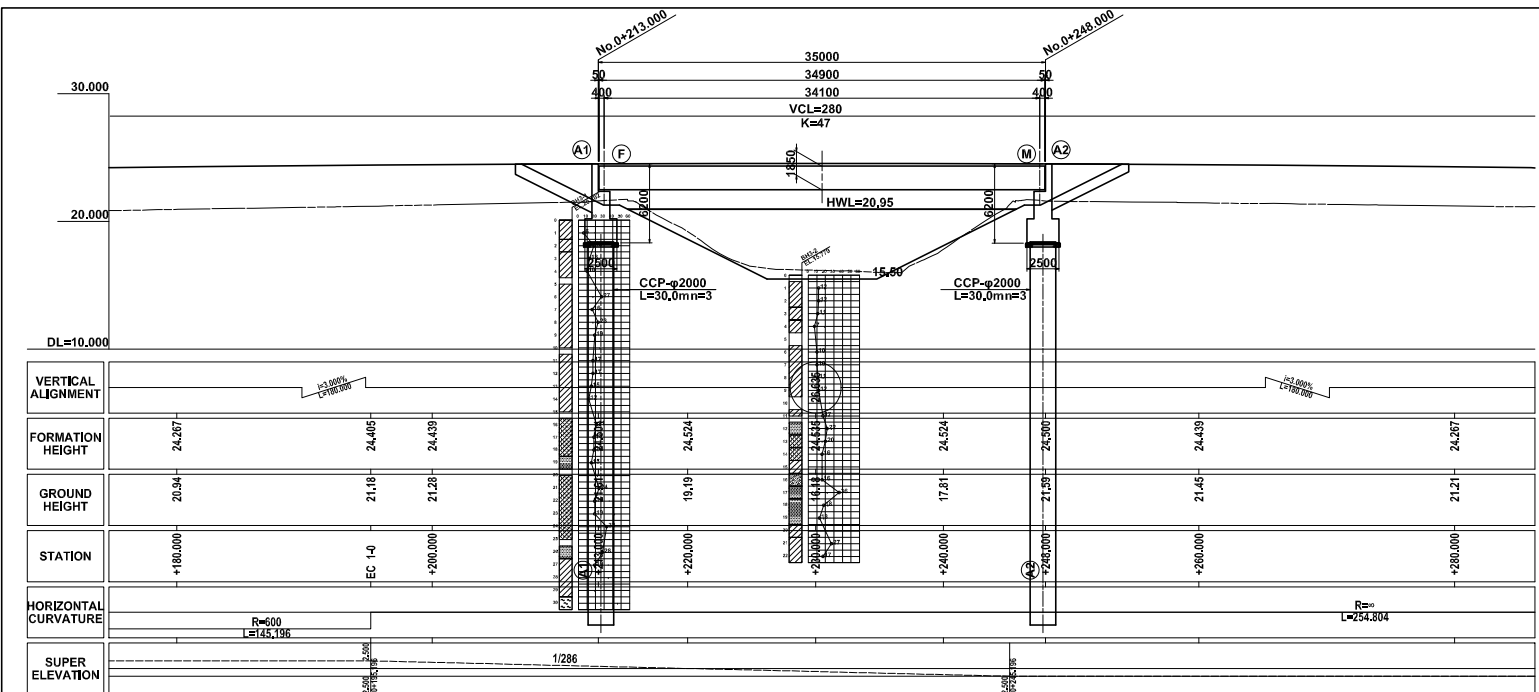
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

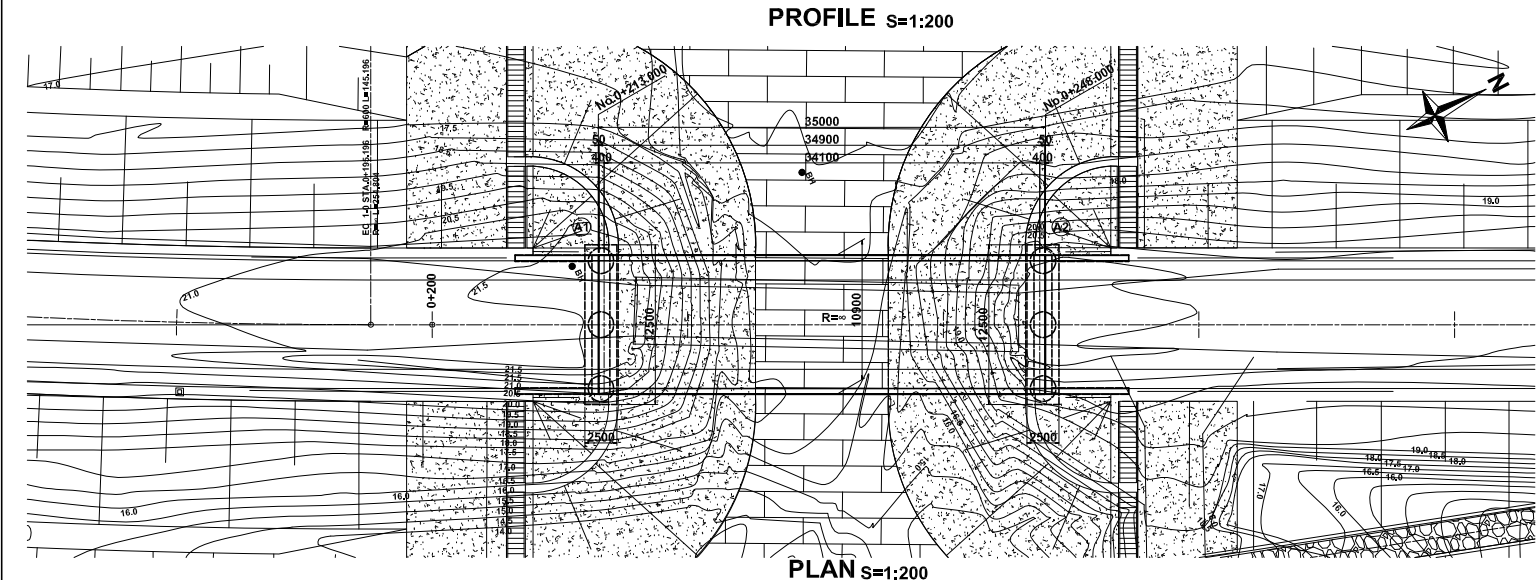
PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
3-Prek Sandan Bridge
GENERAL PROFILE

| | |
|----------------|-------------|
| SCALE(A1 SIZE) | DRAWING NO. |
| AS SHOWN | PS-02 |



CROSS SECTION S=1:100



PLAN S=1:200

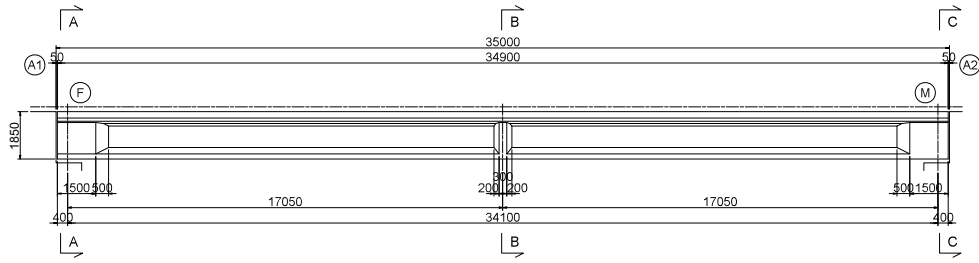
DESIGN CRITERIA

| | |
|------------------------|--|
| ROAD CLASS | SECONDARY PRINCIPAL ROAD |
| DESIGN SPEED | 80km/h |
| LIVE LOAD | AASHTO HS20-44x125% OR EQUIVALENT |
| BRIDGE LENGTH | 35.000m |
| SPAN LENGTH | 34.100m |
| TOTAL WIDTH | 2x3.5m(Carrilage Way)+2x1.5m(Shoulder) |
| SEISMIC COEFFICIENT | kh=0.05(L1) |
| SUPER STRUCTURE TYPE | PC I-Girder |
| SUBSTRUCTURE TYPE | REVERSED T-ABUTMENT |
| FOUNDATION TYPE | CAST-IN PLACE CONCRETE PILE(A1,A2) |
| SPECIFICATION CRITERIA | Bridge Design Standard (CAM.PW.04.102.99), 2003 DESIGN SPECIFICATIONS OF HIGHWAY BRIDGES (JAPAN ROAD ASSOCIATION) |

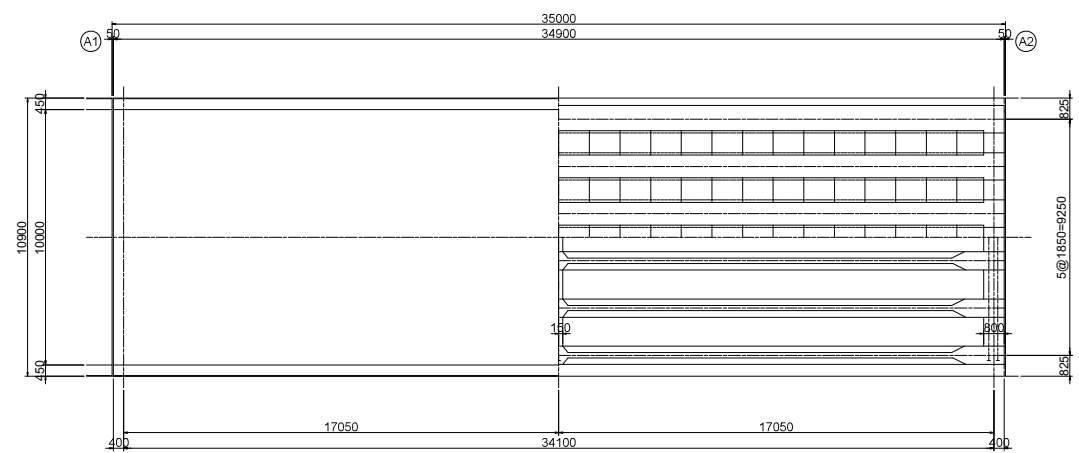
| | | | | | |
|---|---|--|--|----------------|-------------|
| MINISTRY OF PUBLIC WORKS AND TRANSPORT KINGDOM OF CAMBODIA | JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD. | PROJECT TITLE: PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT OF BRIDGES IN FLOOD-PRONE AREAS | DRAWING TITLE: 3_Prek Sandan Bridge GENERAL VIEW OF BRIDGE | SCALE(A1 SIZE) | DRAWING NO. |
| | | | | AS SHOWN | PS-03 |

| DESIGN CRITERIA | |
|-----------------|----------------------------------|
| CATEGORY | PRESTRESSED CONCRETE ROAD BRIDGE |
| BRIDGE LENGTH | 35,000 m |
| WIDTH | 10,900 m |
| LIVE-LOAD | HS20-44x1.25 |
| ANGLE OF SKEW | 90°00'00" |

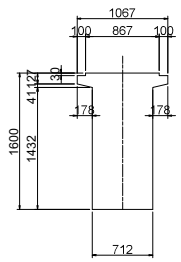
| MATERIALS | | |
|--------------|------------|---|
| CONCRETE | GIRDER | σ _{ck} =45,0 N/mm ² |
| | CROSS BEAM | σ _{ck} =45,0 N/mm ² |
| | DECK SLAB | σ _{ck} =40,0 N/mm ² |
| PC STEEL | GIRDER | 12S12,7(SWPR7BL) |
| | CROSS BEAM | 12S12,8(SWPR19) |
| DEFORMED BAR | Grade 400 | |



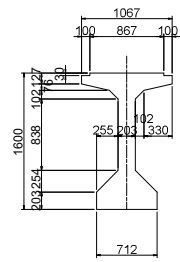
SIDE ELEVATION S=1/100



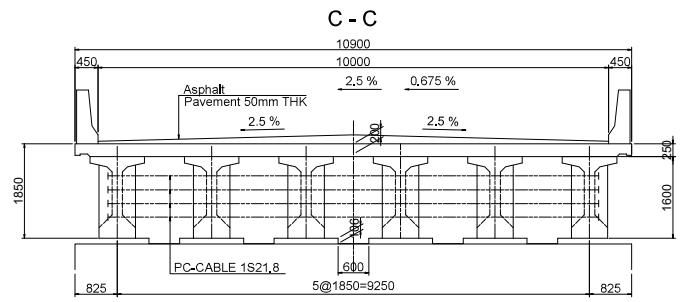
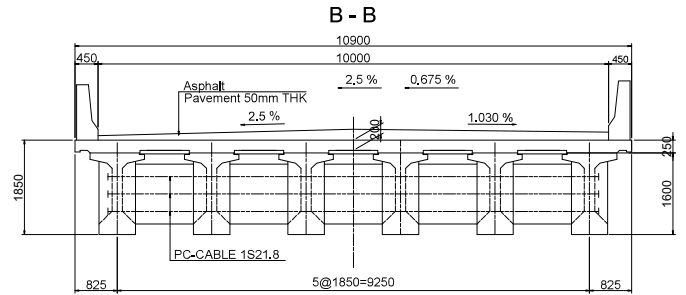
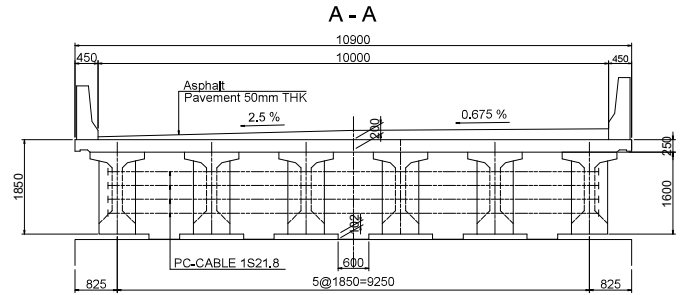
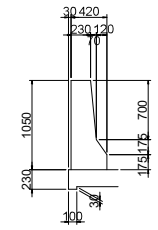
PLAN S=1/100



PC GIRDER S=1/30



DETAILS OF RAILING S=1/30



CROSS SECTION S=1/50

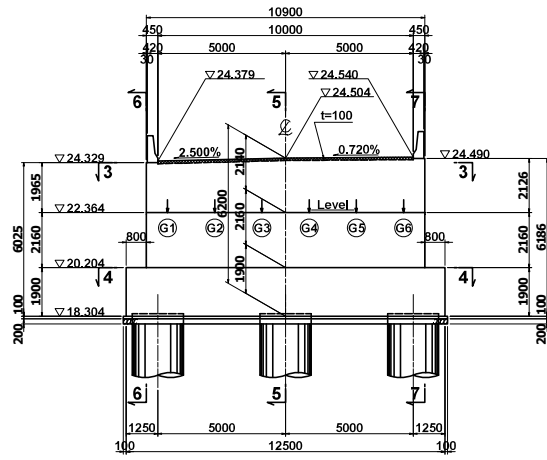
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

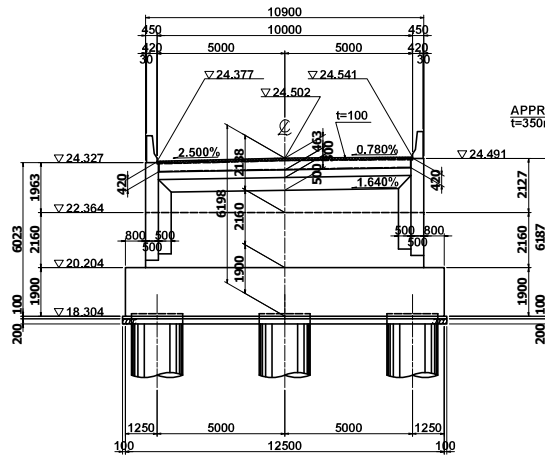
PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
3_Prek Sandan Bridge
STRUCTURE DRAWING

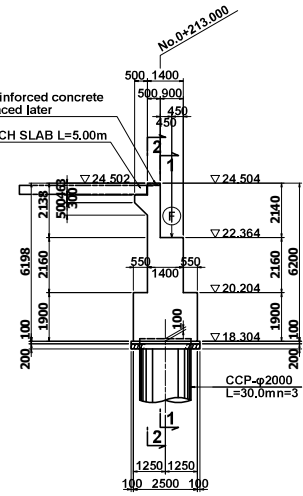
| | |
|----------------|-------------|
| SCALE(A1 SIZE) | DRAWING NO. |
| AS SHOWN | PS-04 |



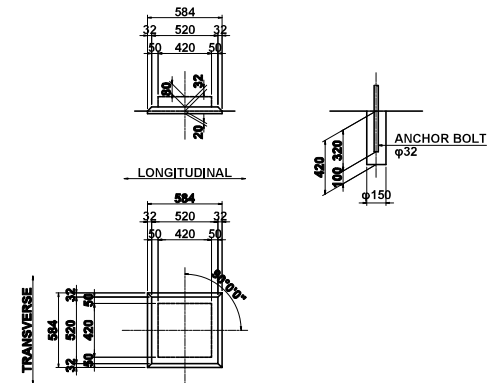
1-1



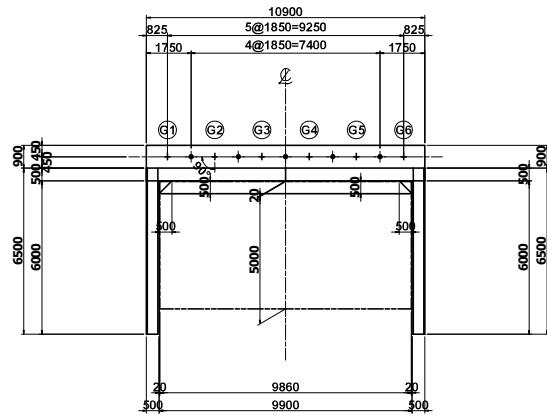
2-2



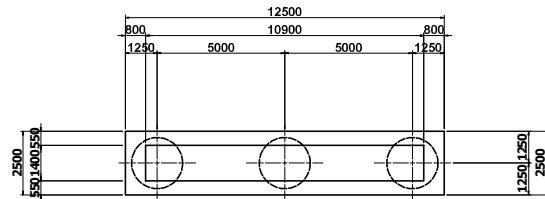
5-5



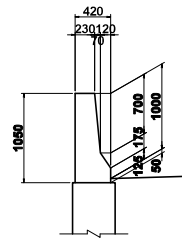
DETAIL S=1:20



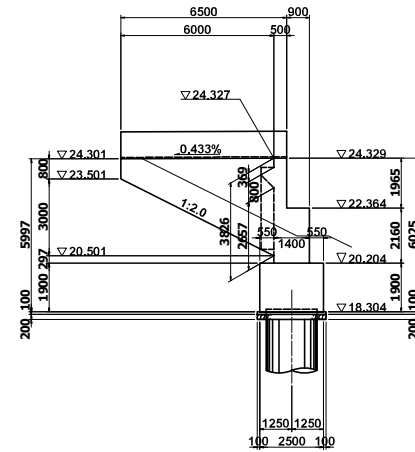
3-3



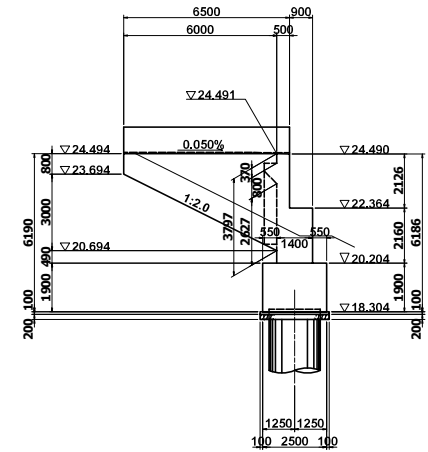
4-4



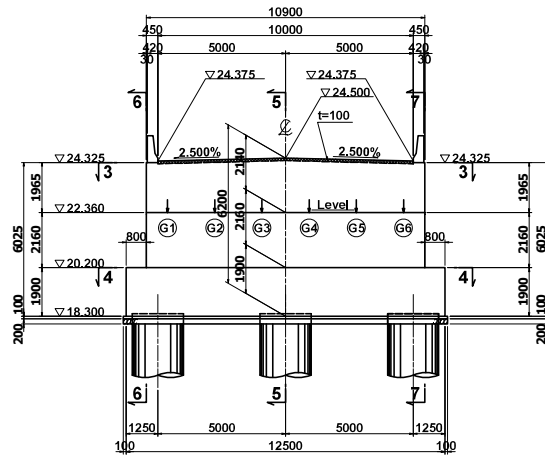
DETAIL S=1:30



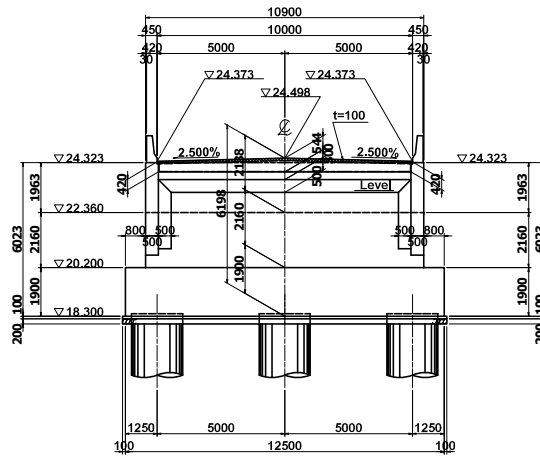
6-6



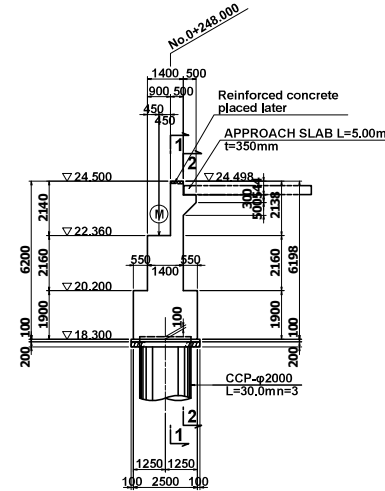
7-7



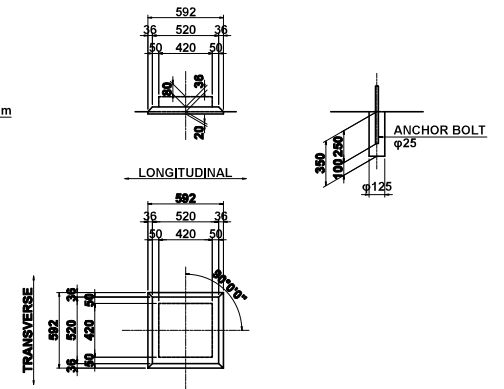
1-1



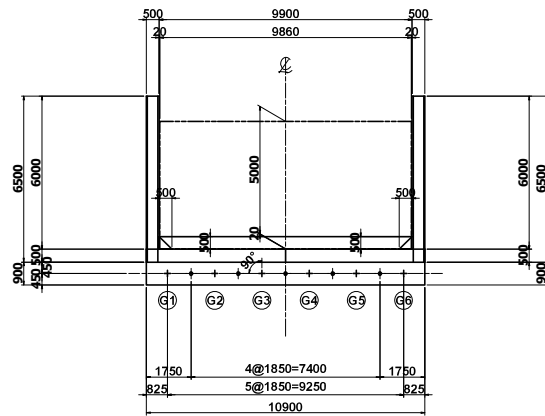
2-2



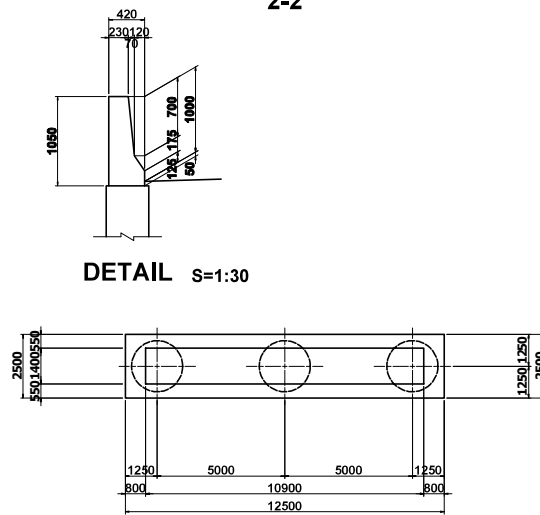
5-5



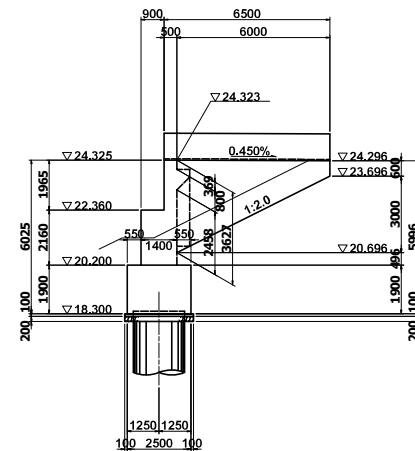
DETAIL S=1:20



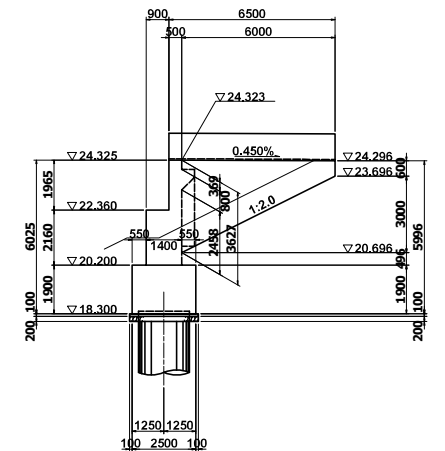
3-3



4-4



6-6



7-7

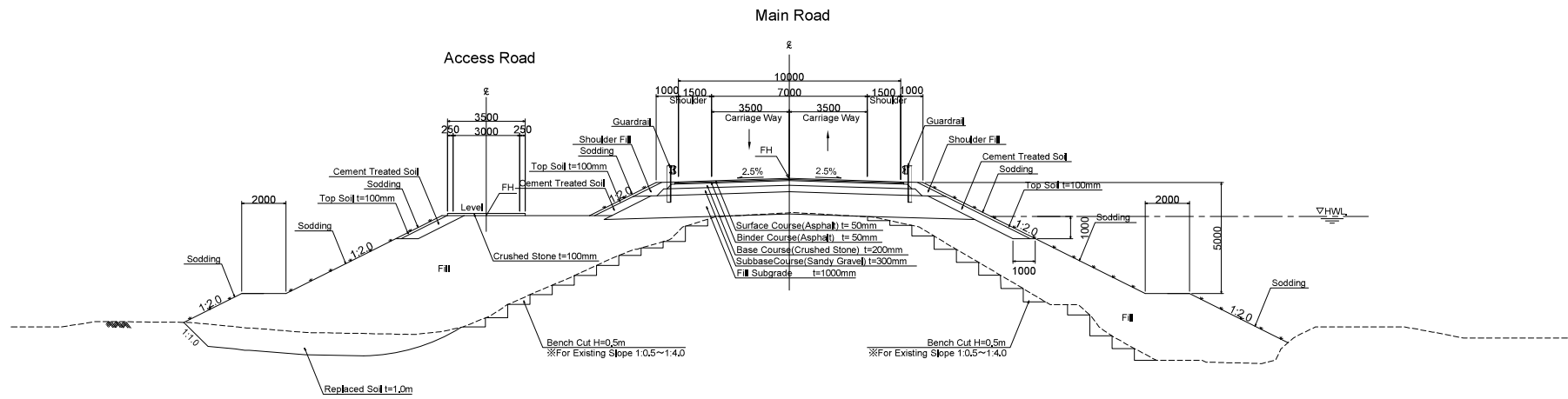
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

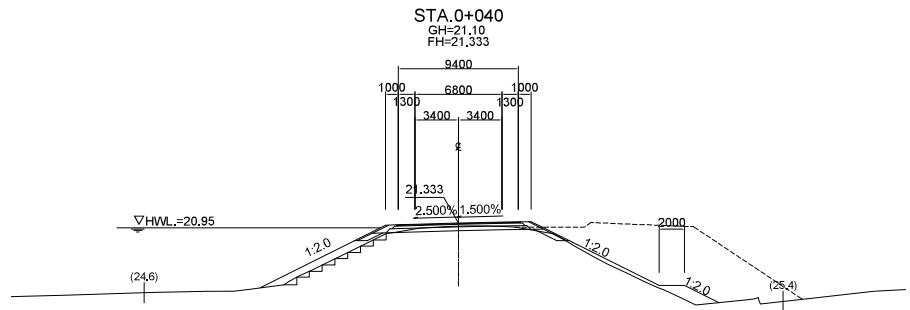
PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
3_Prek Sandan Bridge
STRUCTURAL DRAWING OF A2 ABUTMENT

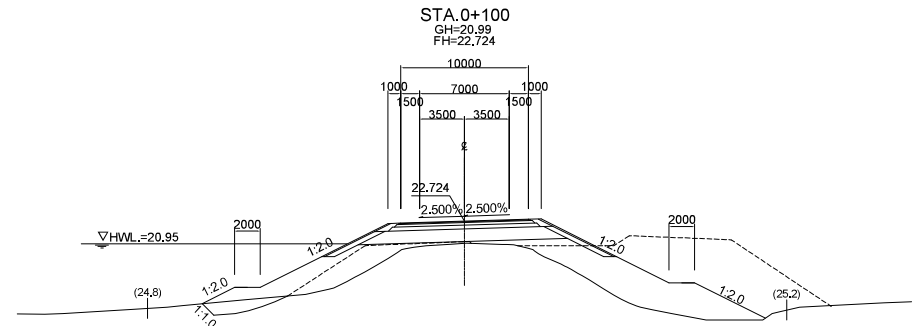
| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/100 | PS-06 |



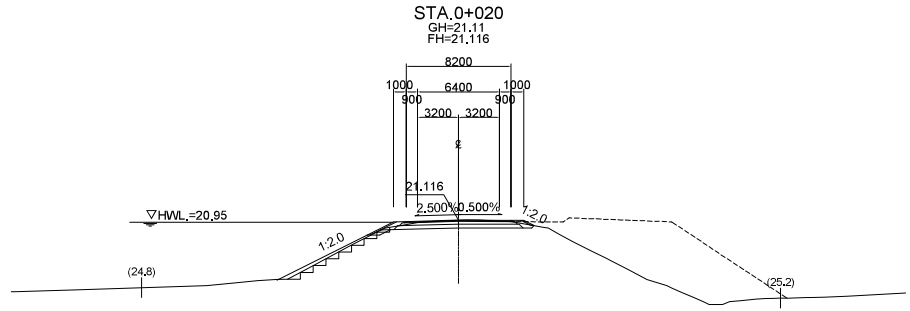
| | | | | | |
|--|---|--|--|----------------|-------------|
| MINISTRY OF PUBLIC WORKS AND TRANSPORT KINGDOM OF CAMBODIA | JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD. | PROJECT TITLE: PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT OF BRIDGES IN FLOOD-PRONE AREAS | DRAWING TITLE: 3_PreK Sandan Bridge TYPICAL CROSS SECTION OF APPROACH ROAD | SCALE(A1 SIZE) | DRAWING NO. |
| | | | | 1/100 | PS-07 |



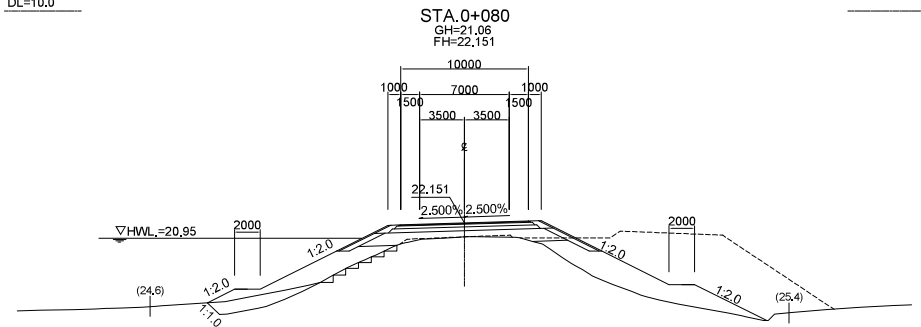
DL=10.0



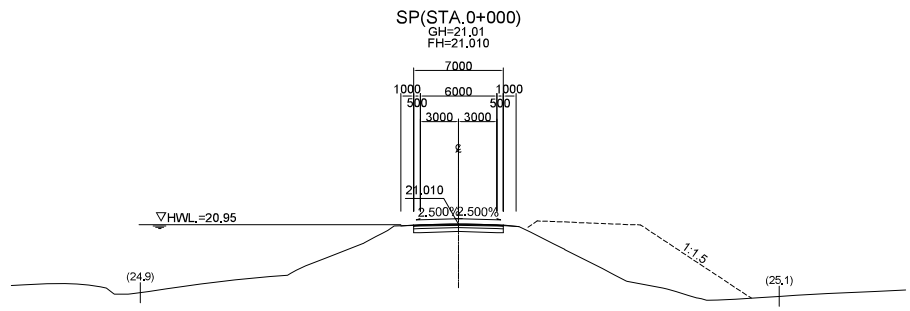
DL=10.0



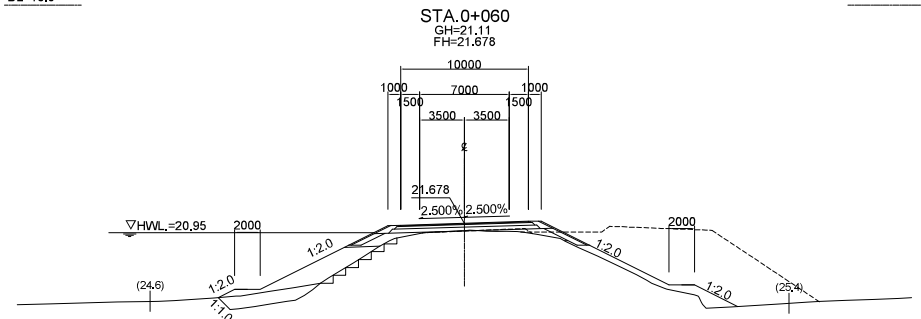
DL=10.0



DL=10.0



DL=10.0



DL=10.0

MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

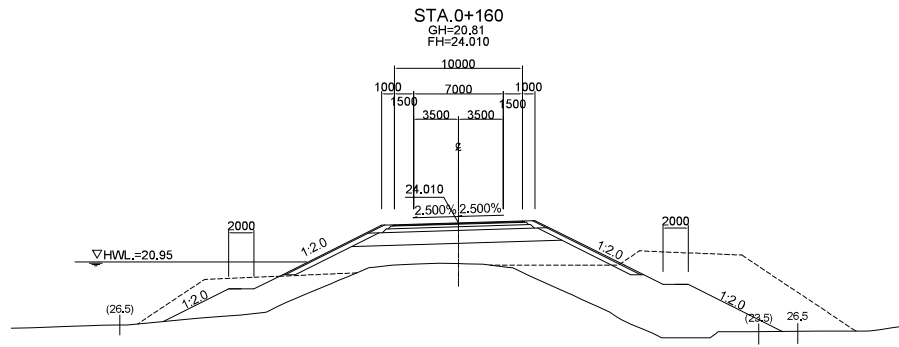
JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

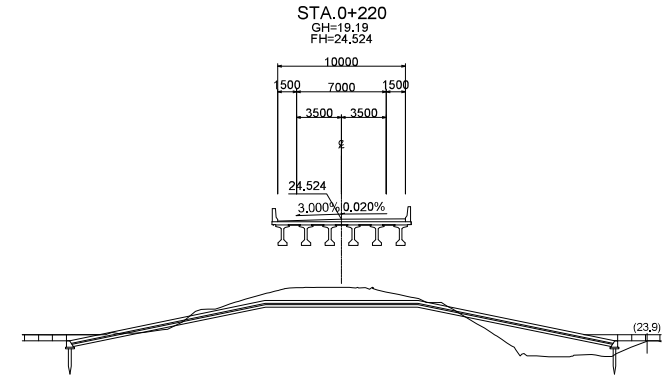
DRAWING TITLE:
3_PreK Sandan Bridge
CROSS SECTION OF APPROACH ROAD (1)

| | |
|----------------|-------------|
| SCALE(A1 SIZE) | DRAWING NO. |
| 1/200 | PS-08 |

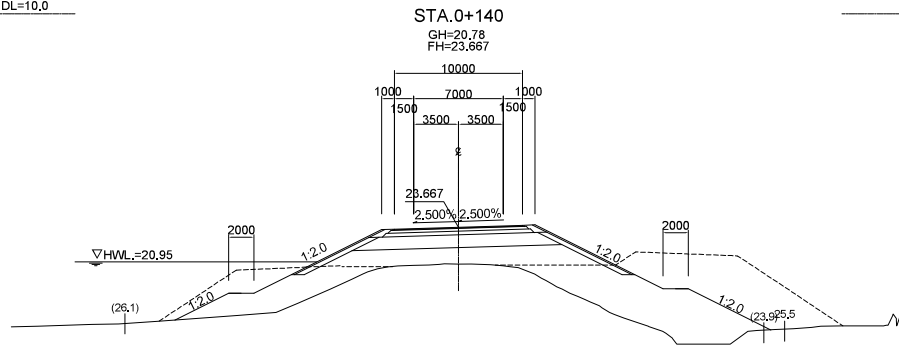
別添7-54



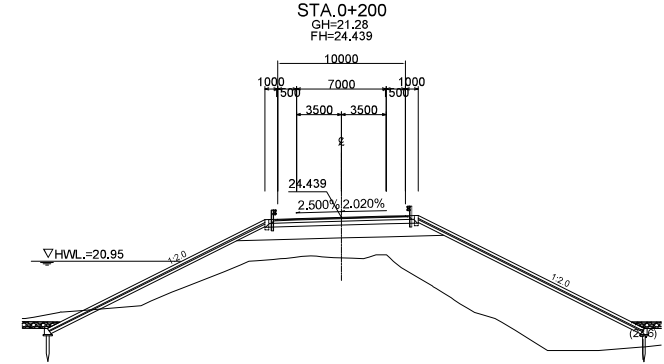
DL=10.0



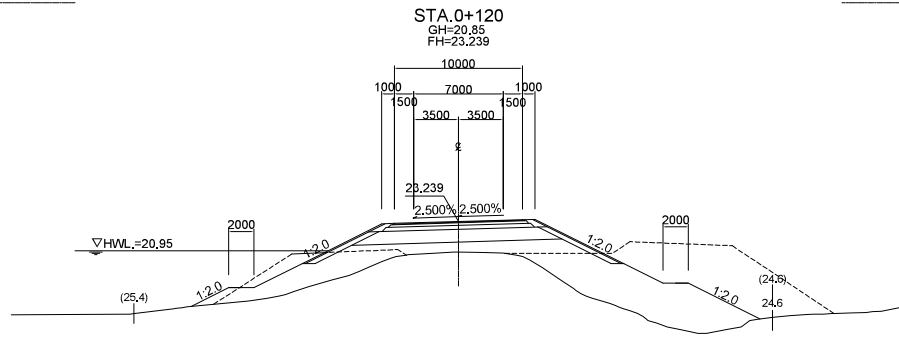
DL=10.0



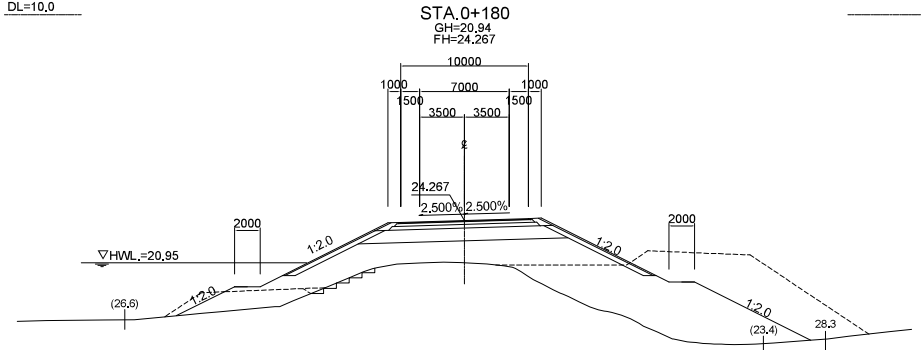
DL=10.0



DL=10.0



DL=10.0



DL=10.0

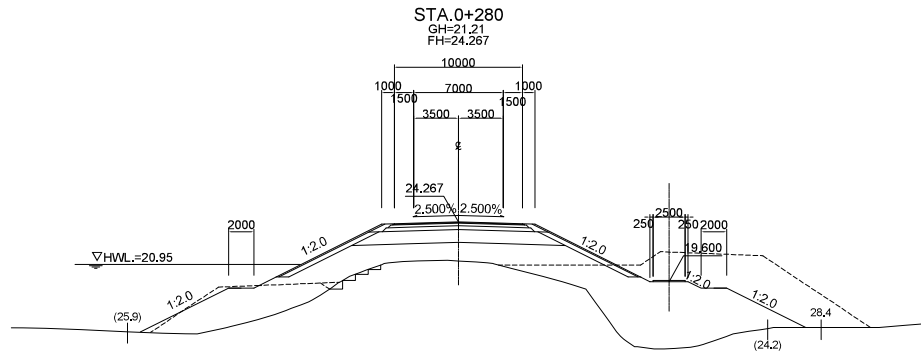
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

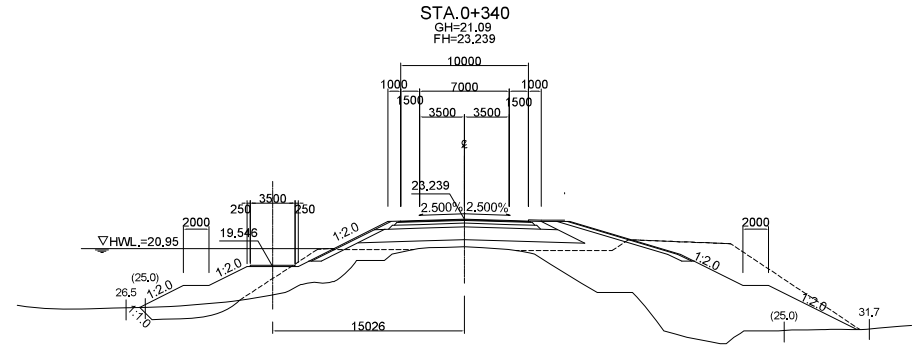
PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
3_PreK Sandan Bridge
CROSS SECTION OF APPROACH ROAD (2)

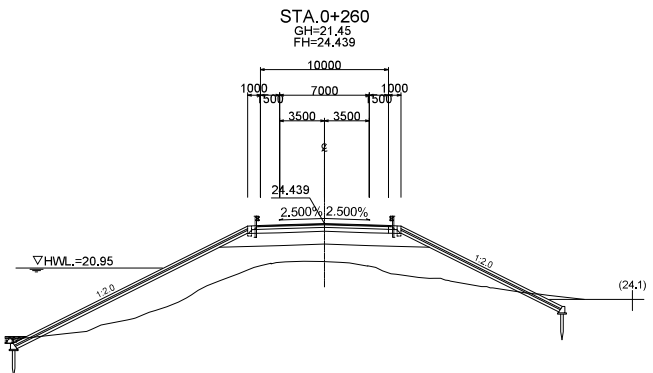
| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/200 | PS-09 |



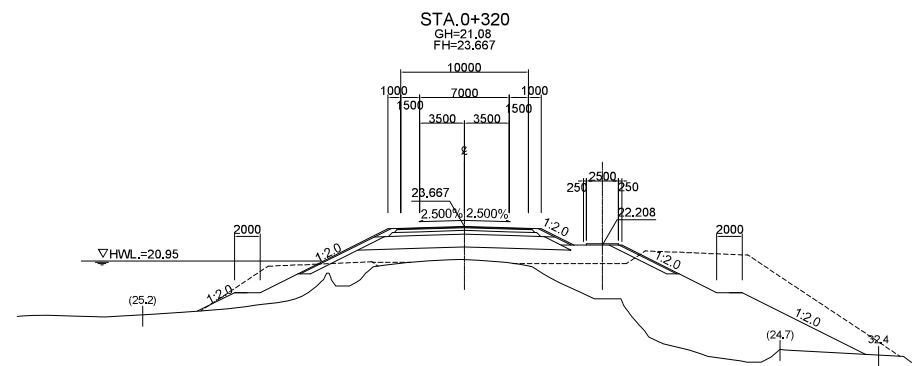
DL=10.0



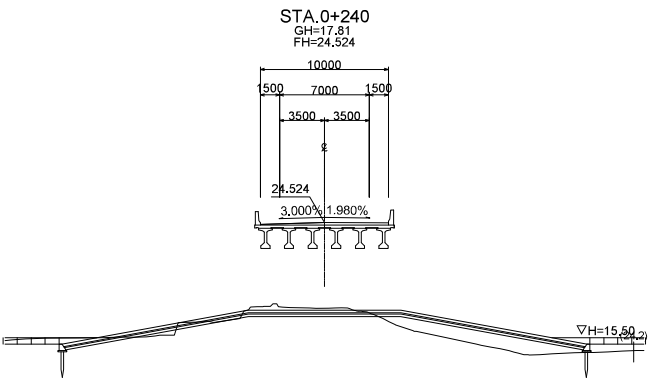
DL=10.0



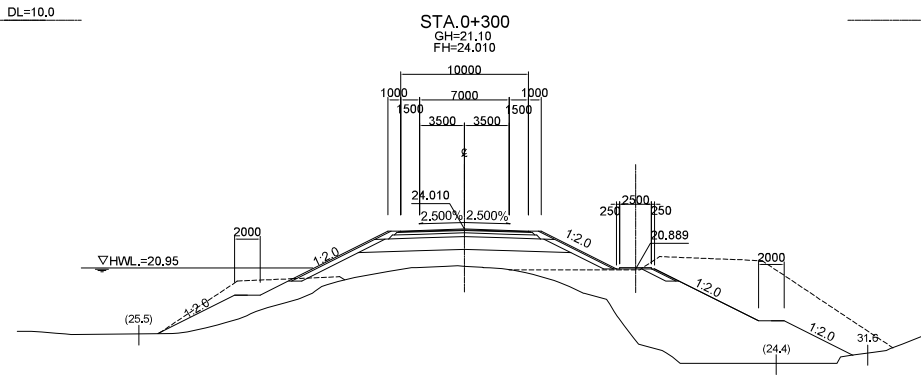
DL=10.0



DL=10.0



DL=10.0



DL=10.0

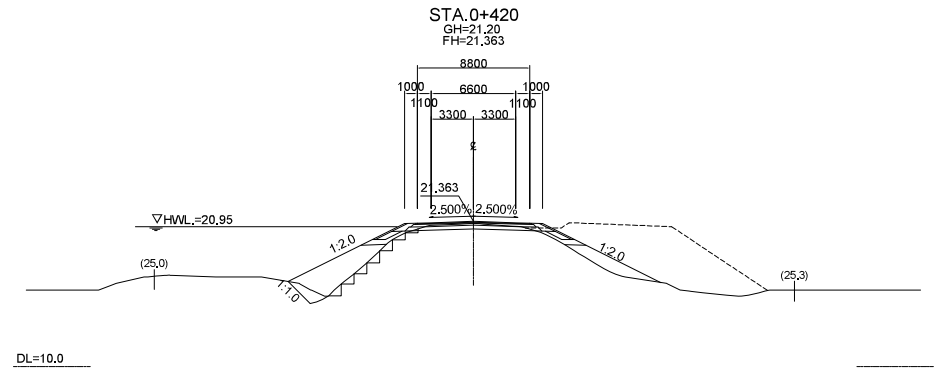
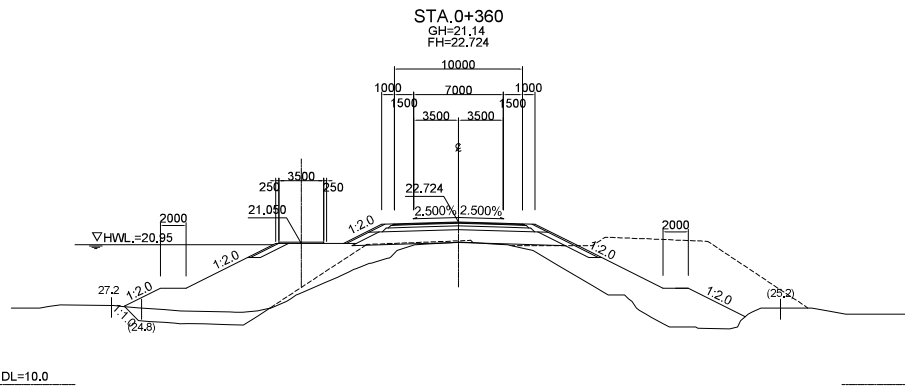
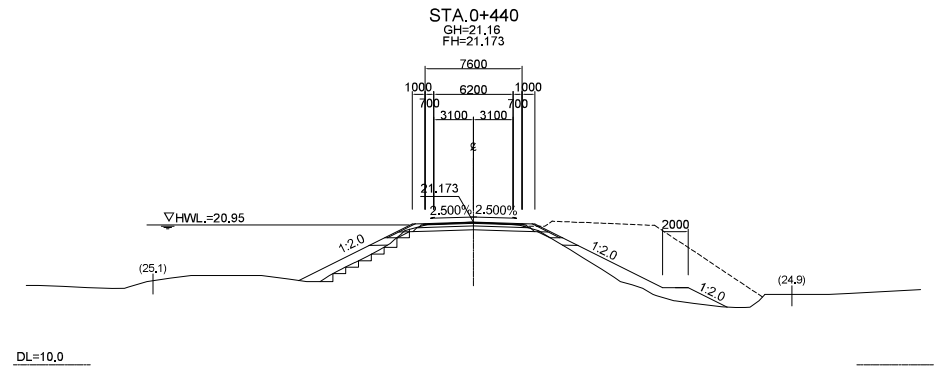
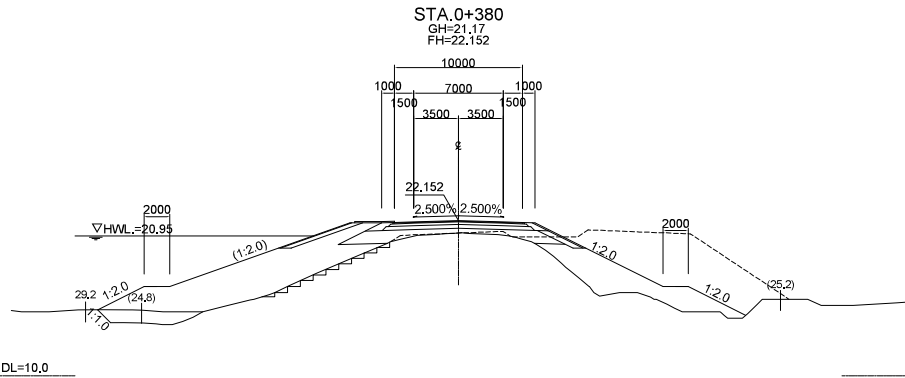
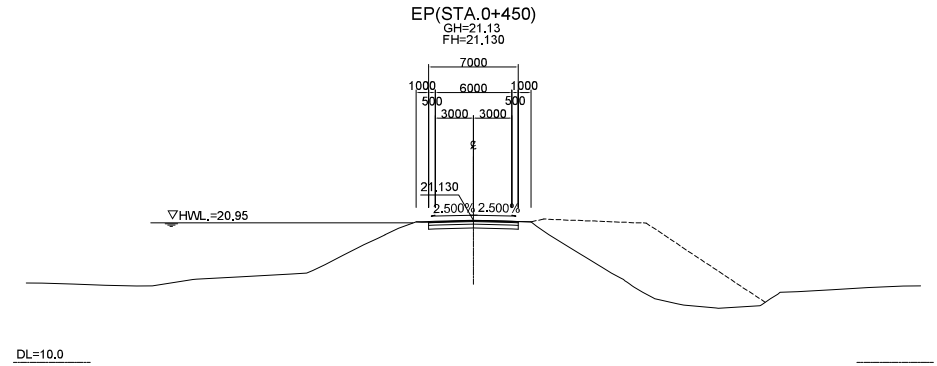
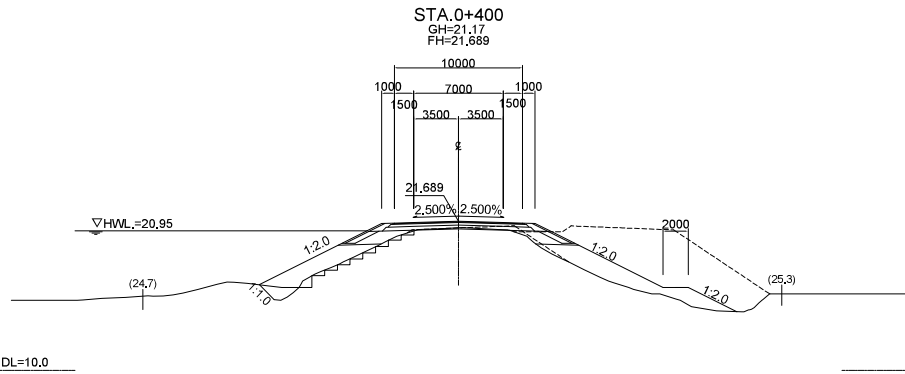
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
3_Prek Sandan Bridge
CROSS SECTION OF APPROACH ROAD (3)

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/200 | PS-10 |



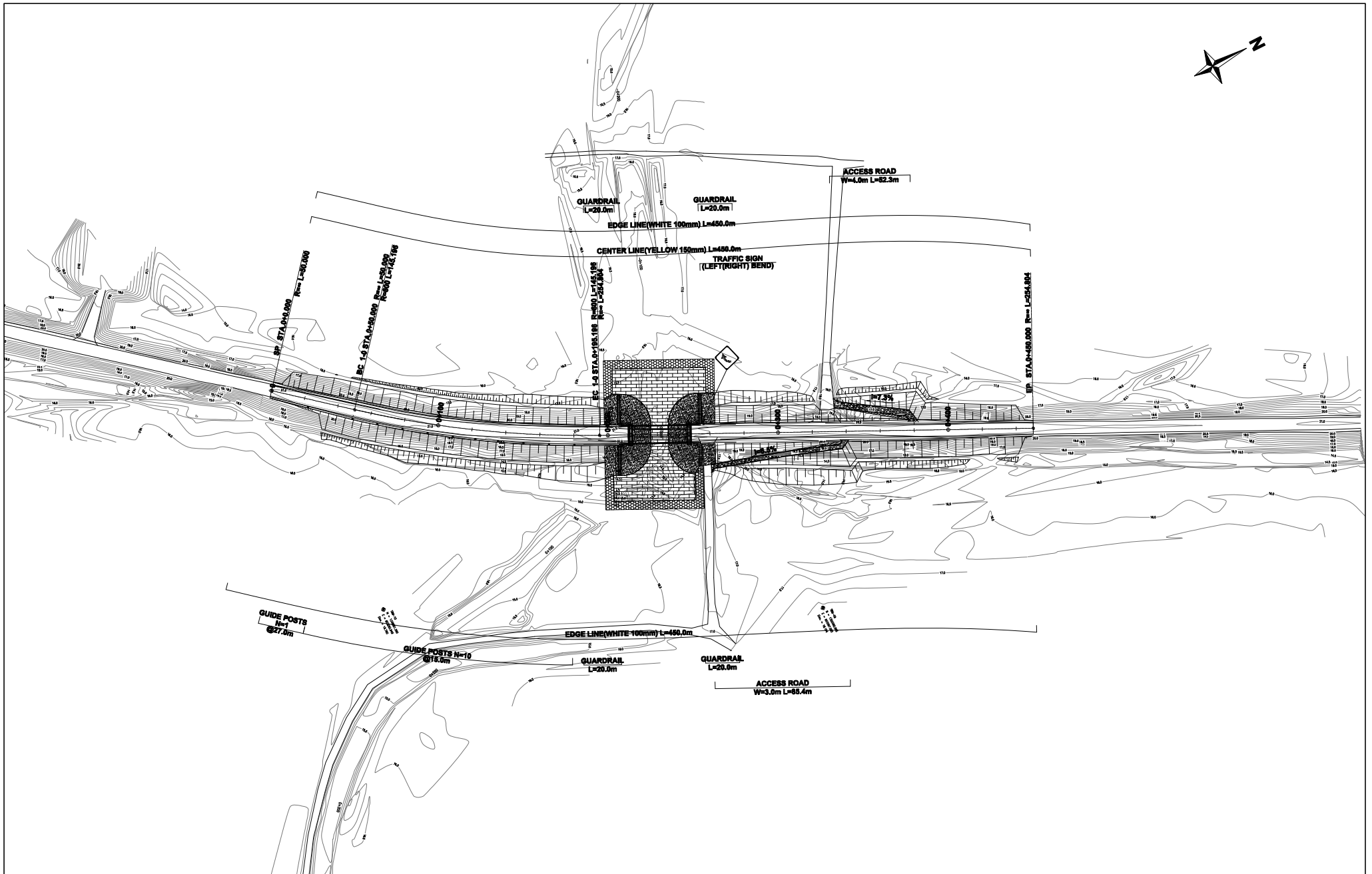
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
3_PreK Sandan Bridge
CROSS SECTION OF APPROACH ROAD (4)

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/200 | PS-11 |



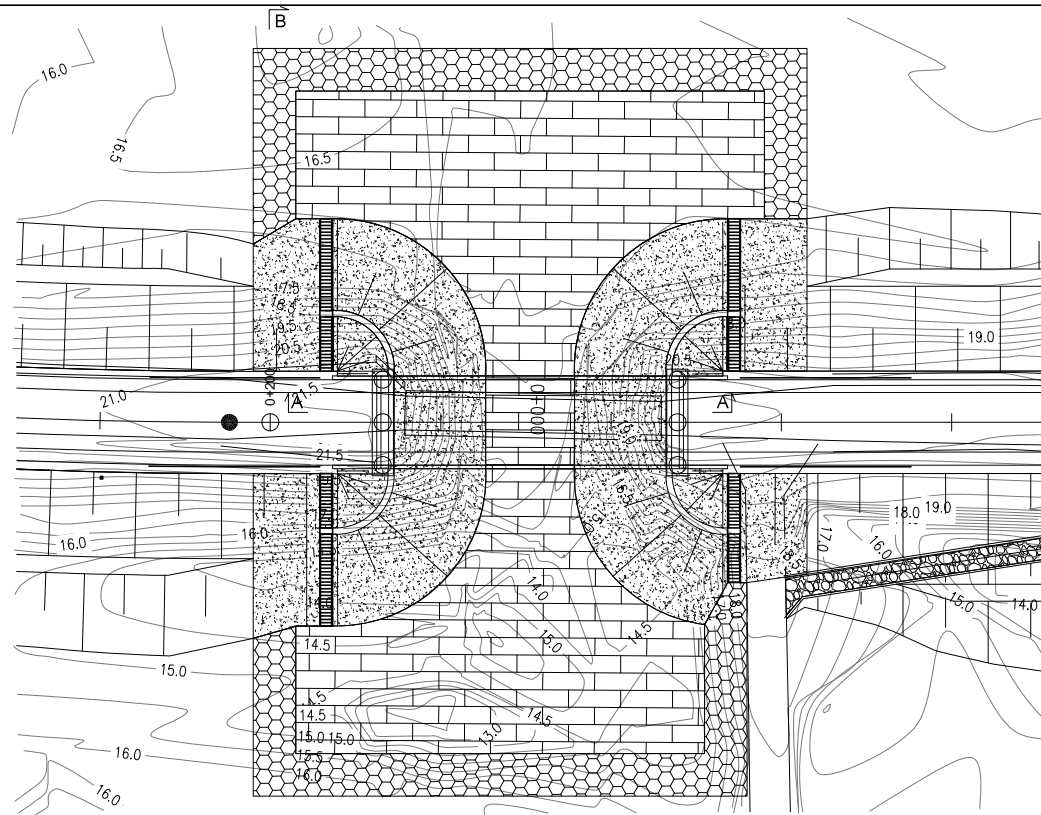
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

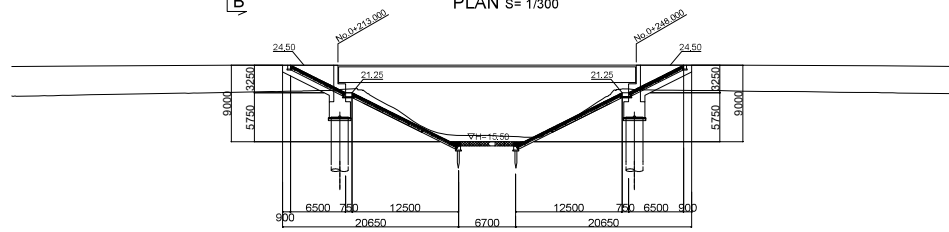
PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
3_Prek Sandan Bridge
PLAN OF APPROACH ROAD
(ANCILLARY)

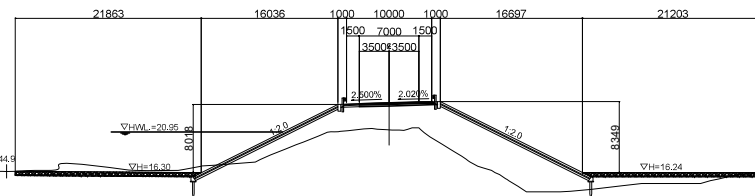
| SCALE(AT SIZE) | DRAWING NO. |
|----------------------|-------------|
| 1/2,000 (1/1,000) | PS-12 |



PLAN s= 1/300



SECTION A-A s= 1/300



SECTION B-B s= 1/300

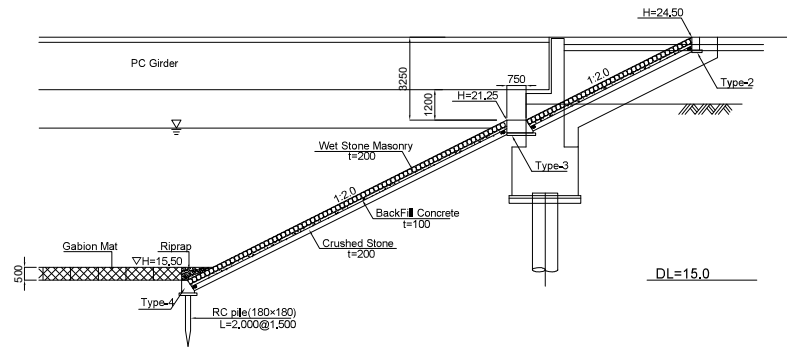
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

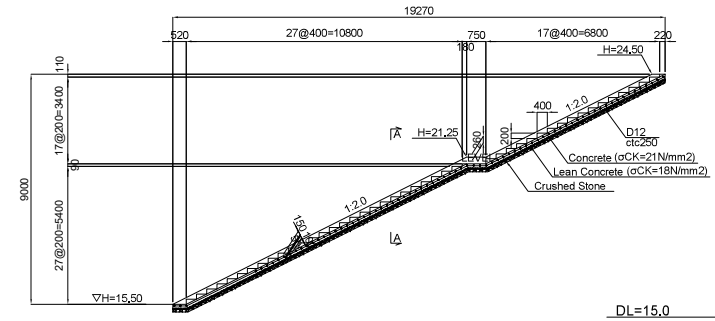
PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
3_PreK Sandan Bridge
REVTMENT AND RIVER BED PROTECTION(1)

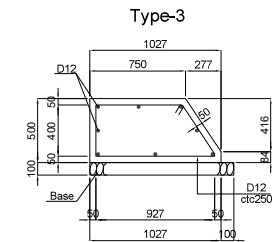
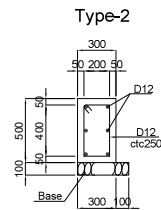
| SCALE(AT SIZE) | DRAWING NO. |
|----------------|-------------|
| AS SHOWN | PS-13 |



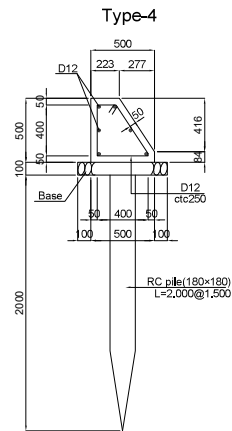
PROFILE S= 1/100



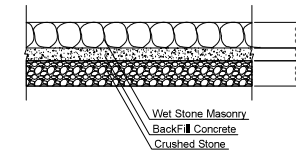
STAIRS S= 1/100



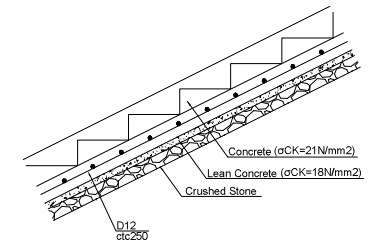
DETAILS S= 1/20



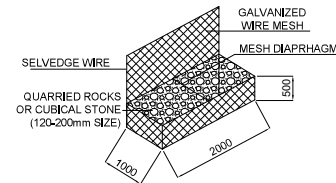
Type-4



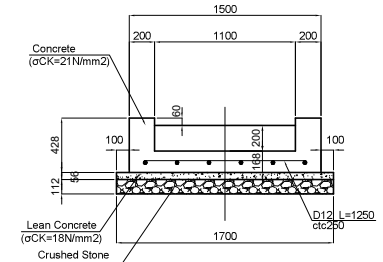
DETAILS S= 1/20



DETAILS S= 1/20



GABION MAT DETAIL
S = None Scale



SECTION A-A S= 1/20

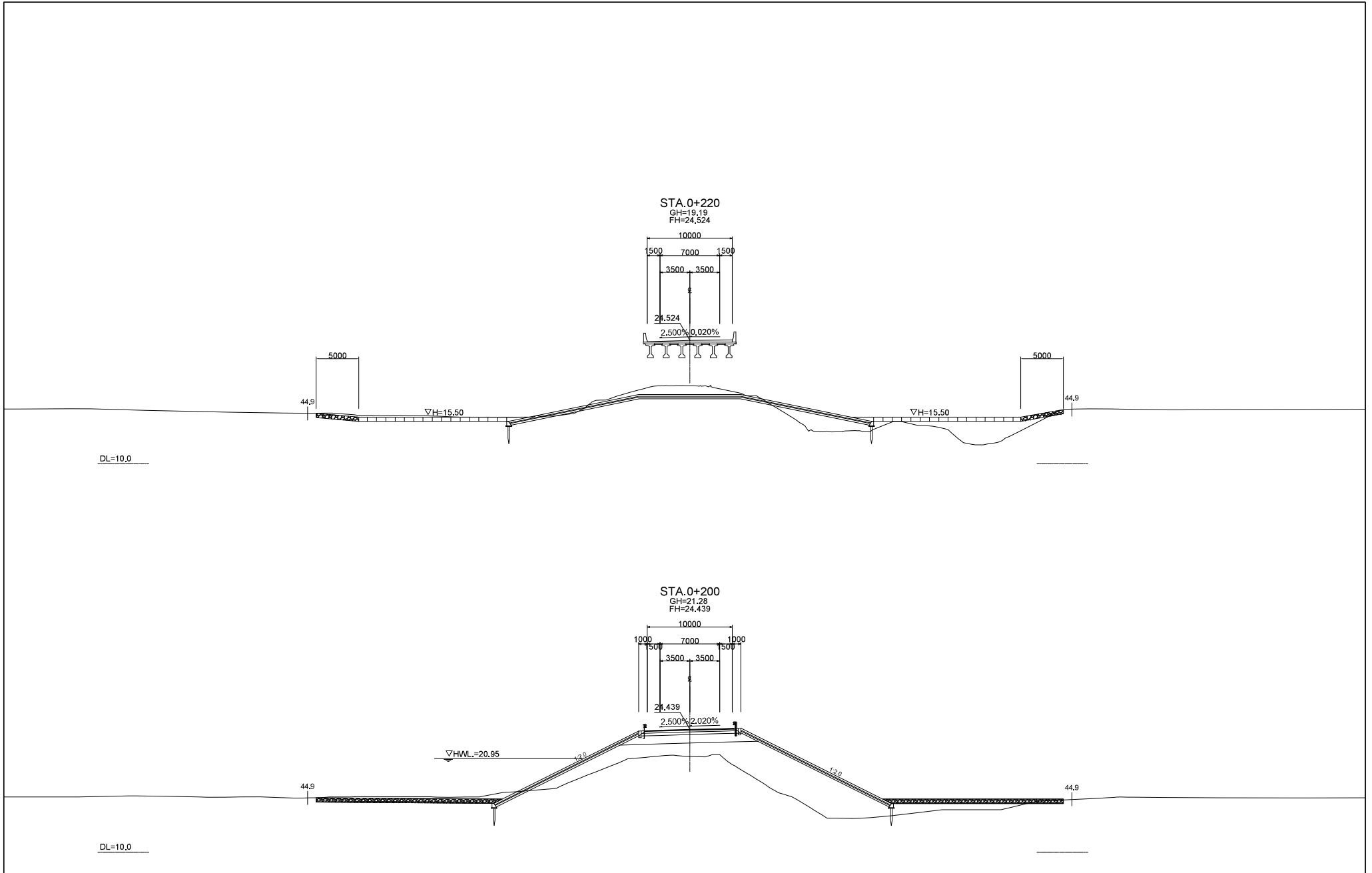
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

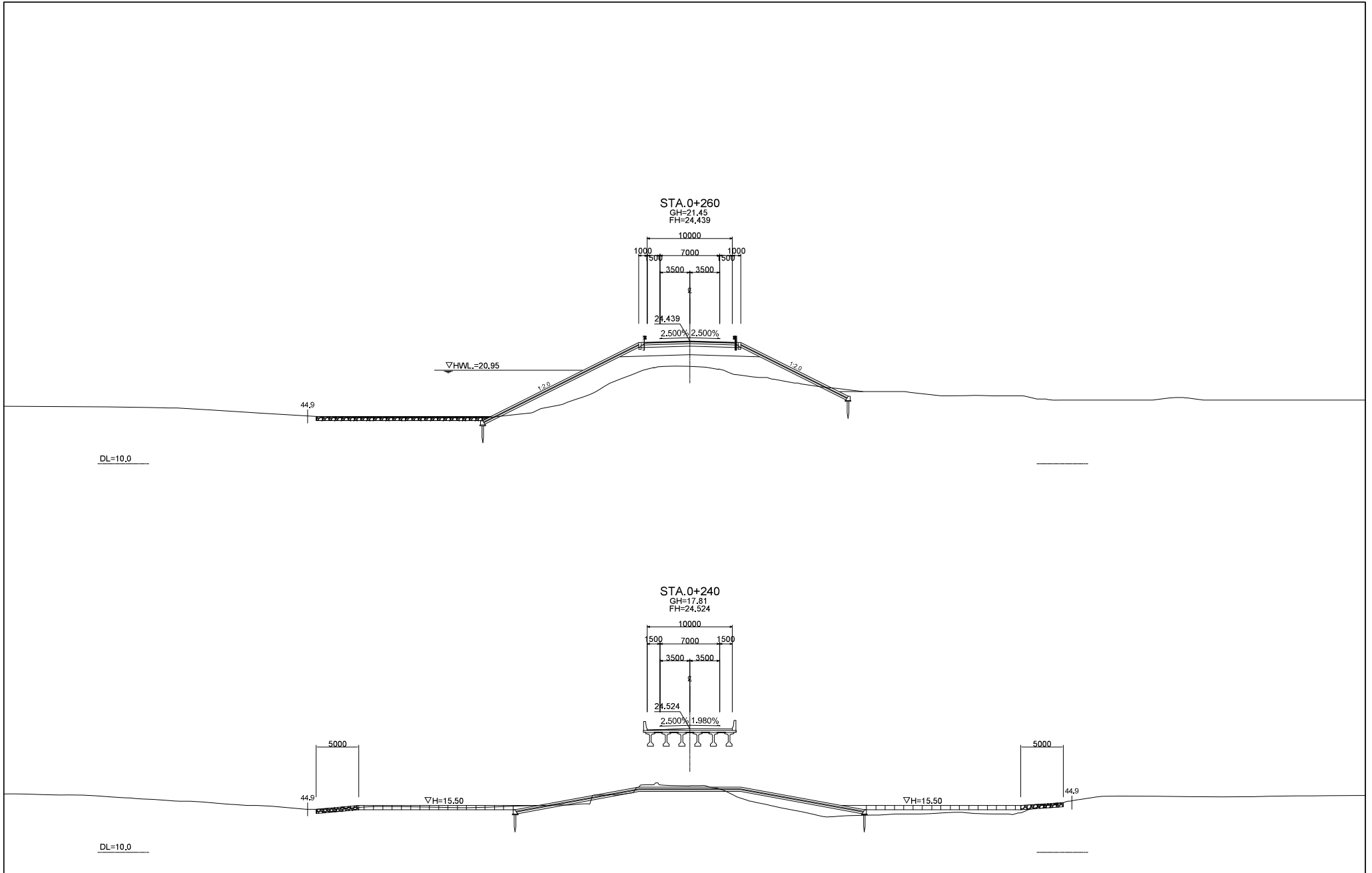
PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
3_PreK Sandan Bridge
REVTMENT AND RIVER BED PROTECTION(2)

| | |
|----------------|-------------|
| SCALE(AT SIZE) | DRAWING NO. |
| AS SHOWN | PS-14 |



| | | | | | |
|--|---|--|---|-------------------------|----------------------|
| MINISTRY OF PUBLIC WORKS AND TRANSPORT KINGDOM OF CAMBODIA | JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD. | PROJECT TITLE: PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT OF BRIDGES IN FLOOD-PRONE AREAS | DRAWING TITLE: 3_PreK Sandan Bridge REVETMENT AND RIVER BED PROTECTION(3) | SCALE(A1 SIZE) 1/200 | DRAWING NO. PS-15 |
|--|---|--|---|-------------------------|----------------------|

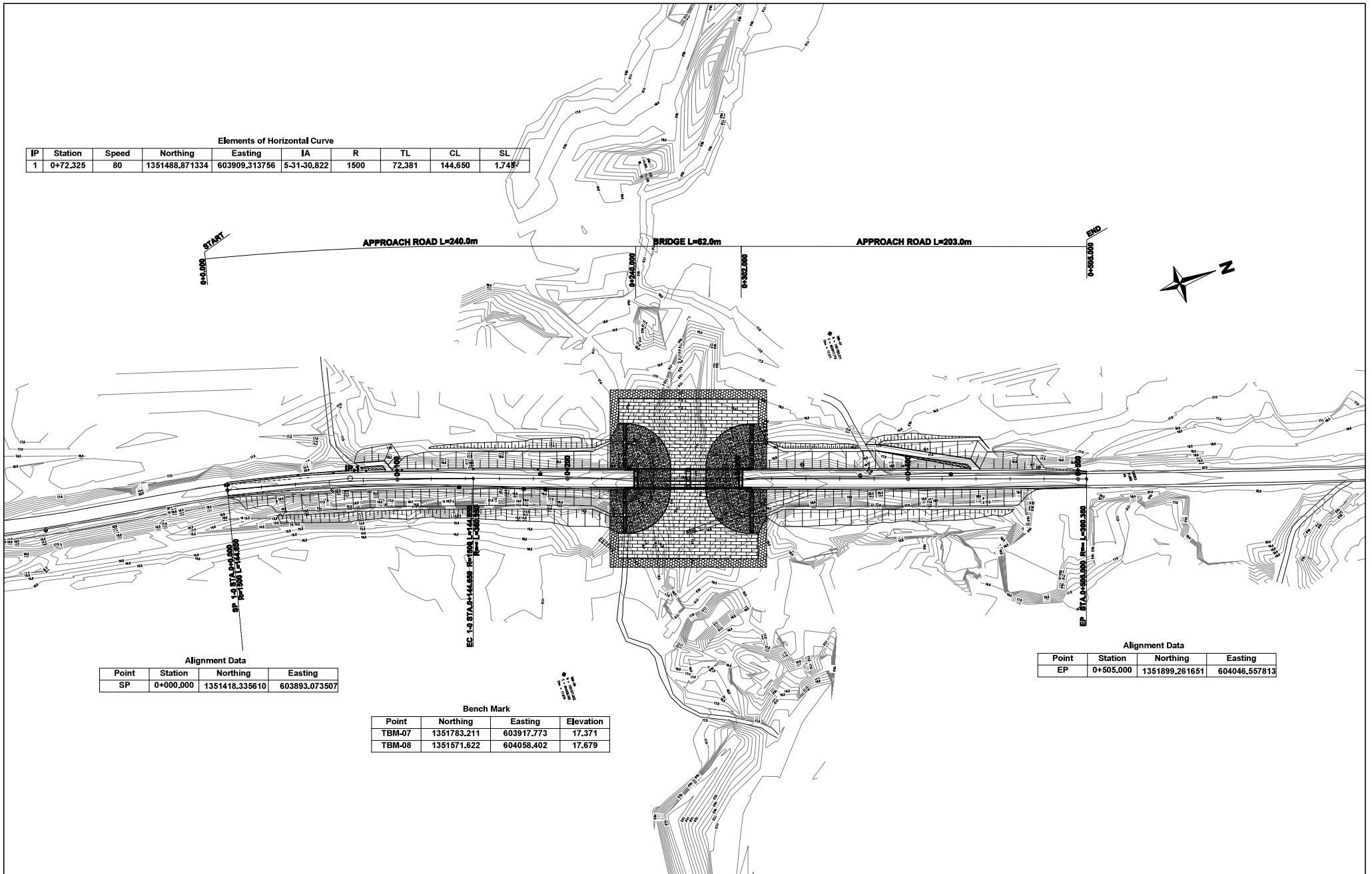


| | | | | | |
|--|---|--|---|-------------------------|----------------------|
| MINISTRY OF PUBLIC WORKS AND TRANSPORT KINGDOM OF CAMBODIA | JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD. | PROJECT TITLE: PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT OF BRIDGES IN FLOOD-PRONE AREAS | DRAWING TITLE: 3_PreK Sandan Bridge REVETMENT AND RIVER BED PROTECTION(4) | SCALE(A1 SIZE) 1/200 | DRAWING NO. PS-16 |
|--|---|--|---|-------------------------|----------------------|

Prek Rus Bridge

別添7-63

| Elements of Horizontal Curve | | | | | | | | | |
|------------------------------|----------|-------|----------------|---------------|-------------|------|--------|---------|--------------------|
| IP | Station | Speed | Northing | Easting | IA | R | TL | CL | SL |
| 1 | 0+72.325 | 80 | 1351488.871334 | 603909.313756 | 5-31-30.822 | 1500 | 72.381 | 144.650 | 1.745 ² |



MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:

PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:

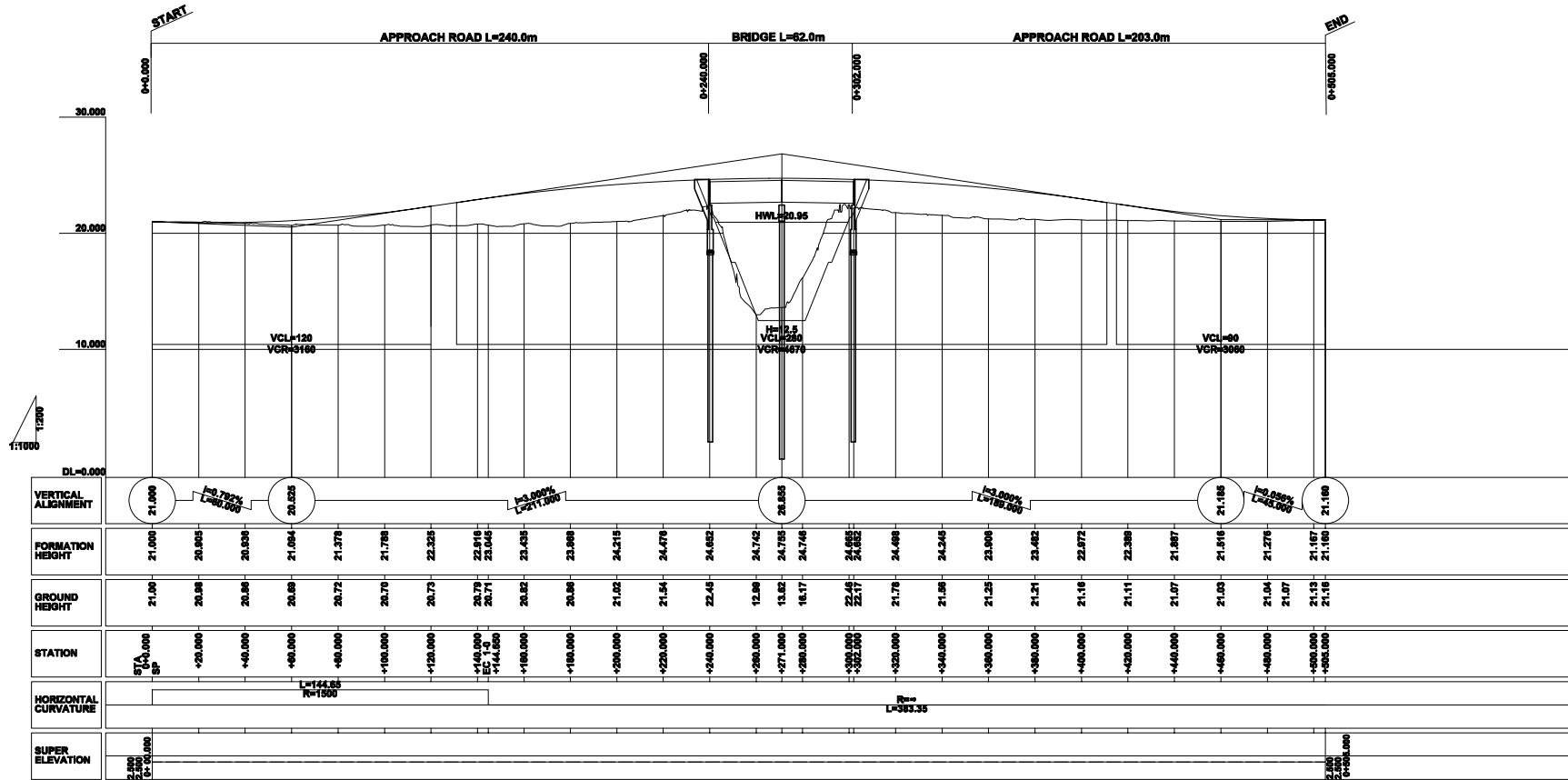
4_Prak Rus Bridge
GENERAL PLAN

SCALE(A1 SIZE)

1/2,000
(1/1,000)

DRAWING NO.

PR-01



Profile H = 1/1000
V = 1/200

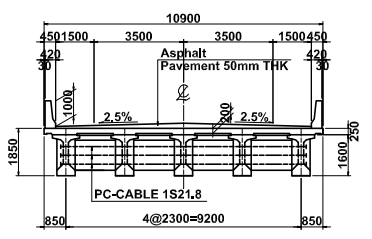
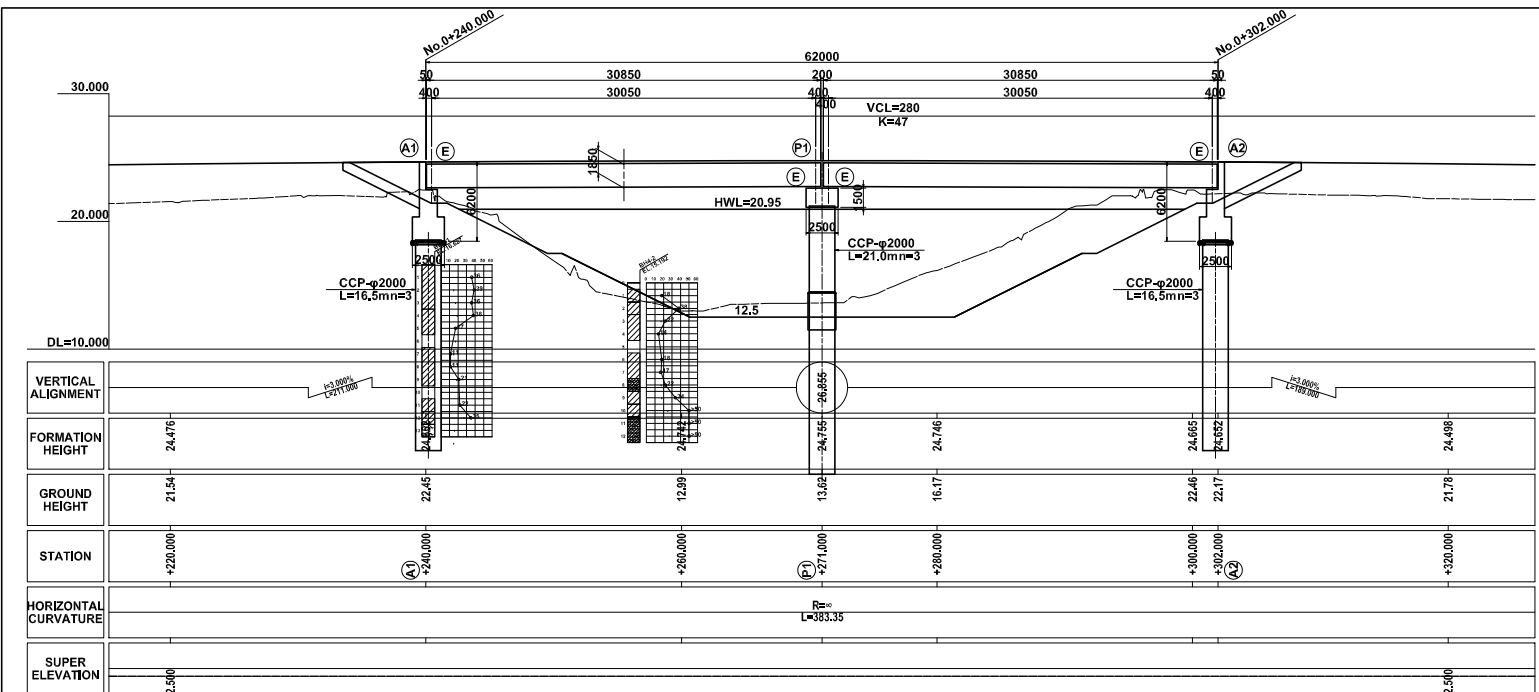
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

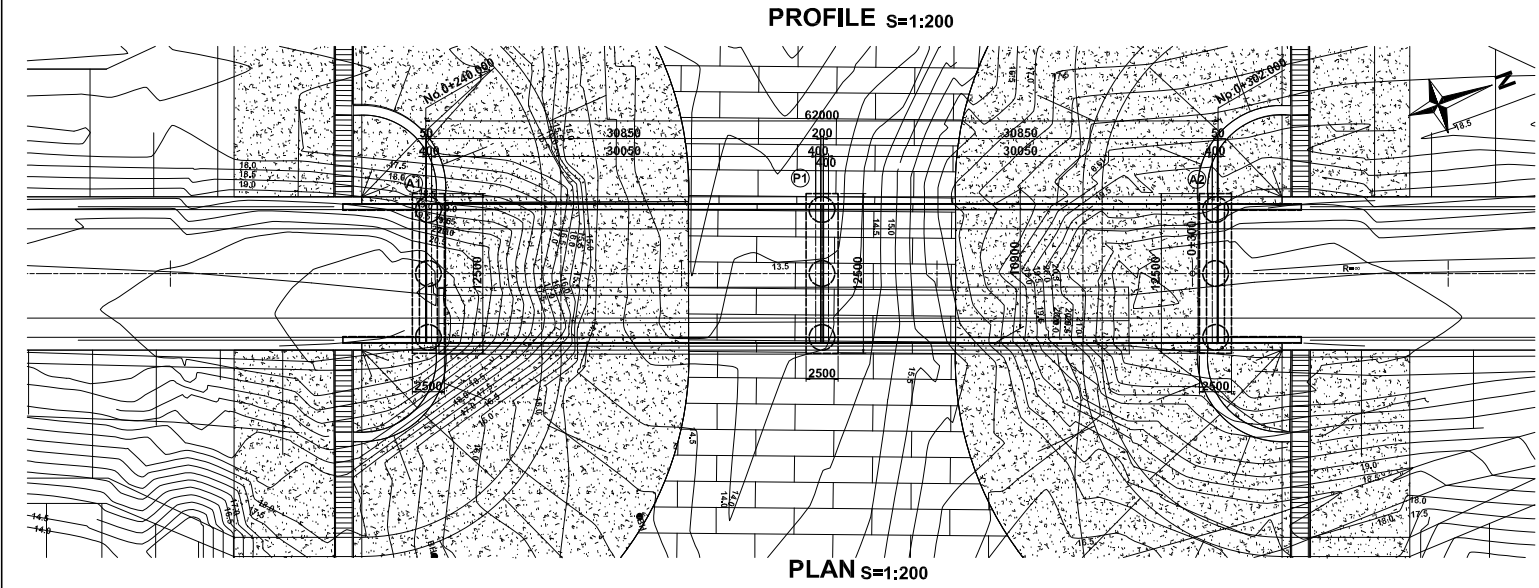
PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
**4_Prek Rus Bridge
GENERAL PROFILE**

| | |
|----------------|-------------|
| SCALE(A1 SIZE) | DRAWING NO. |
| AS SHOWN | PR-02 |



CROSS SECTION S=1:100

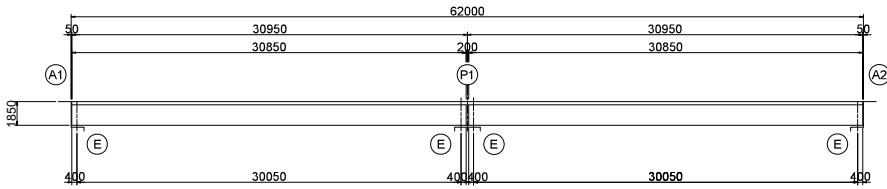


PLAN S=1:200

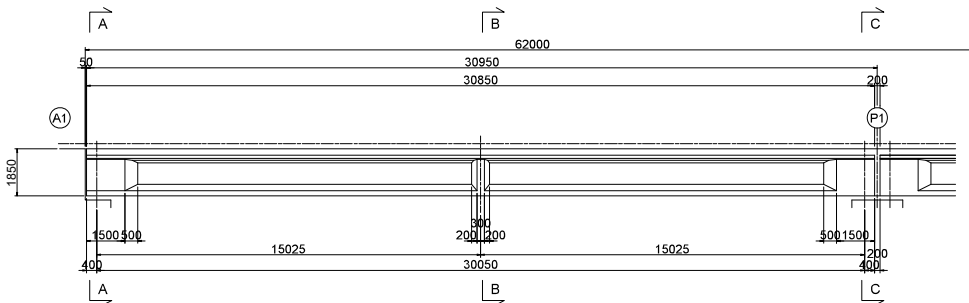
DESIGN CRITERIA

| | |
|------------------------|--|
| ROAD CLASS | SECONDARY PRINCIPAL ROAD |
| DESIGN SPEED | 80km/h |
| LIVE LOAD | AASHTO HS20-44x125% OR EQUIVALENT |
| BRIDGE LENGTH | 62.000m |
| SPAN LENGTH | 30,050+30,050m |
| TOTAL WIDTH | 2x3,5m(Carrlage Way)+2x1,5m(Shoulder) |
| SEISMIC COEFFICIENT | kh=0.05(L1) |
| SUPER STRUCTURE TYPE | PC I-Girder |
| SUBSTRUCTURE TYPE | REVERSED T-ABUTMENT, PILE BENT PIRE |
| FOUNDATION TYPE | CAST-IN PLACE CONCRETE PILE(A1,P1,A2) |
| SPECIFICATION CRITERIA | Bridge Design Standard (CAM.PW.04.102.99), 2003 DESIGN SPECIFICATIONS OF HIGHWAY BRIDGES (JAPAN ROAD ASSOCIATION) |

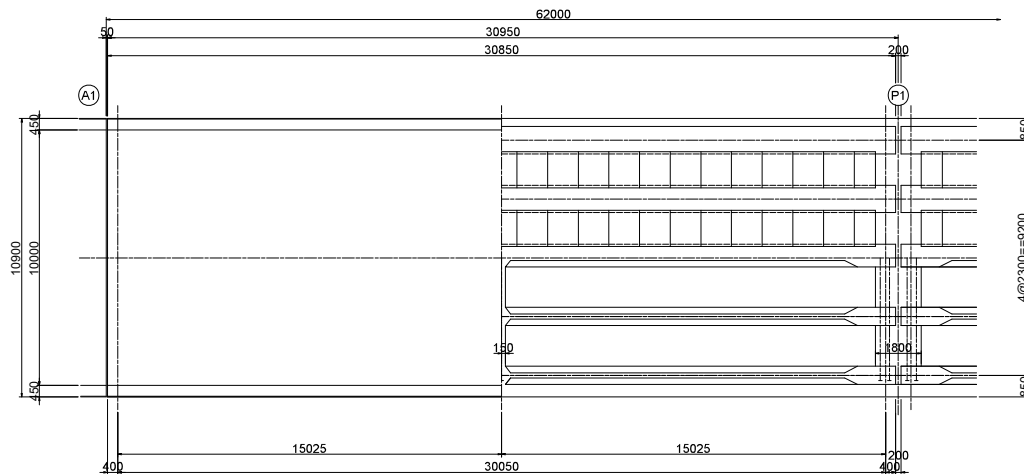
| | | | | | |
|---|---|--|---|----------------|-------------|
| MINISTRY OF PUBLIC WORKS AND TRANSPORT KINGDOM OF CAMBODIA | JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD. | PROJECT TITLE: PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT OF BRIDGES IN FLOOD-PRONE AREAS | DRAWING TITLE: 4_Prek Rus Bridge GENERAL VIEW OF BRIDGE | SCALE(A1 SIZE) | DRAWING NO. |
| | | | | AS SHOWN | PR-03 |



SIDE ELEVATION S=1/200



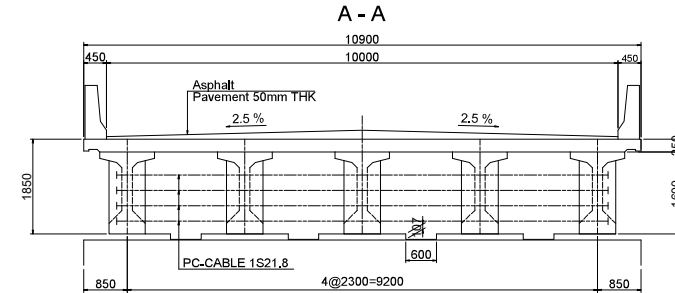
SIDE ELEVATION S=1/100



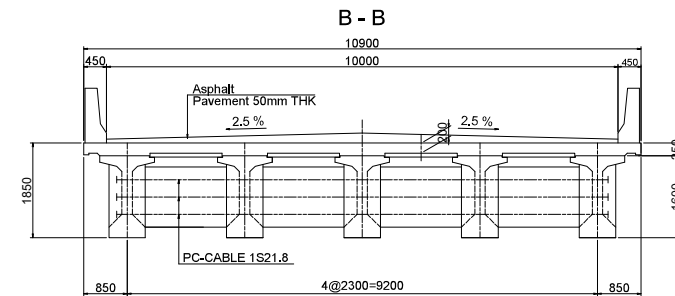
PLAN S=1/100

| DESIGN CRITERIA | |
|-----------------|----------------------------------|
| CATEGORY | PRESTRESSED CONCRETE ROAD BRIDGE |
| BRIDGE LENGTH | 62,000 m |
| WIDTH | 10,800 m |
| LIVE-LOAD | HS20-44×1.25 |
| ANGLE OF SKEW | 90°00'00" |

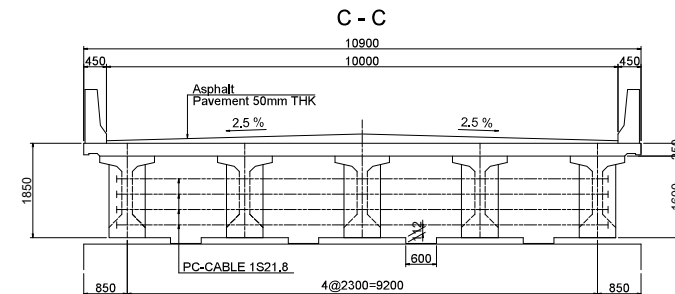
| MATERIALS | | |
|--------------|------------|----------------------------|
| CONCRETE | GIRDER | cck=45.0 N/mm ² |
| | CROSS BEAM | cck=45.0 N/mm ² |
| | DECK SLAB | cck=40.0 N/mm ² |
| PC STEEL | GIRDER | 12S12.7(SWPR7BL) |
| | CROSS BEAM | 1S21.8 (SWPR19) |
| DEFORMED BAR | | Grade 400 |



A - A



B - B



C - C

CROSS SECTION S=1/50

別添7-66

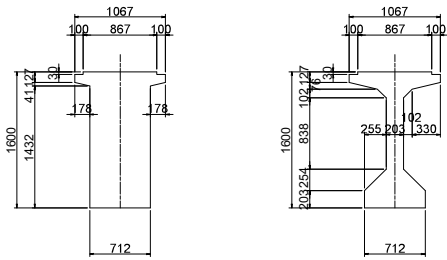
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

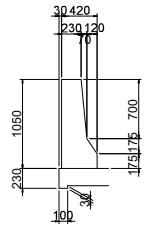
PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
4_Prek Rus Bridge
STRUCTURE DRAWING(1)

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| AS SHOWN | PR-04 |



PC GIRDER S=1/30



DETAILS OF RAILING S=1/30

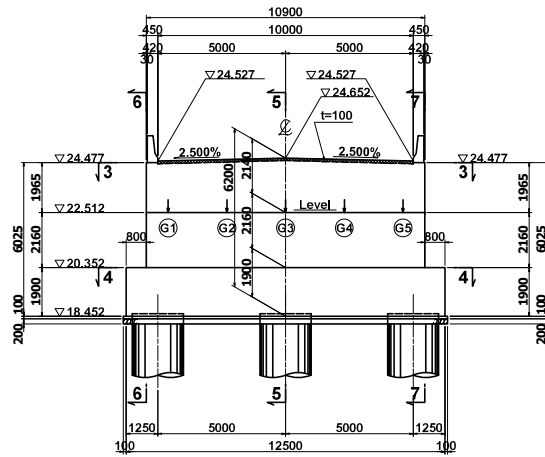
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

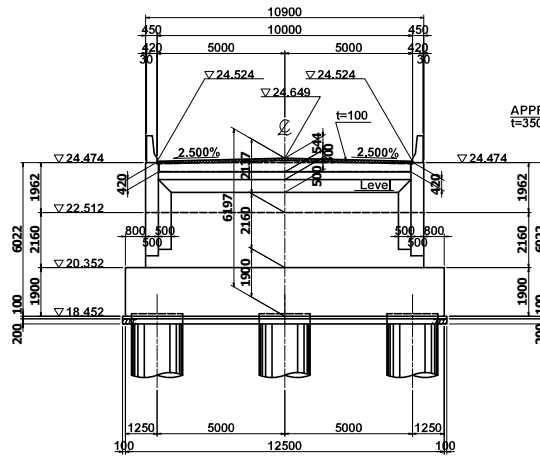
PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
4_PreK Rus Bridge
STRUCTURE DRAWING(2)

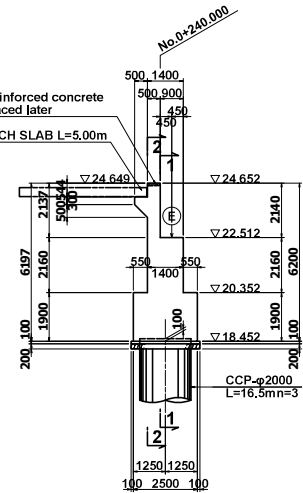
| SCALE(AT SIZE) | DRAWING NO. |
|----------------|-------------|
| AS SHOWN | PR-05 |



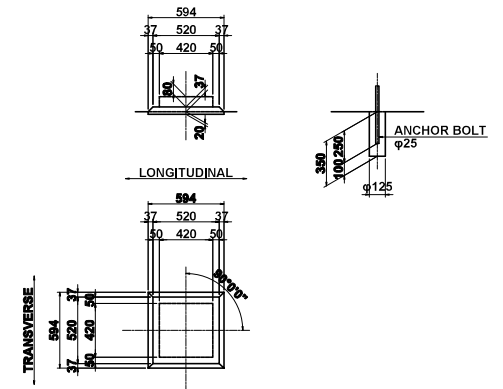
1-1



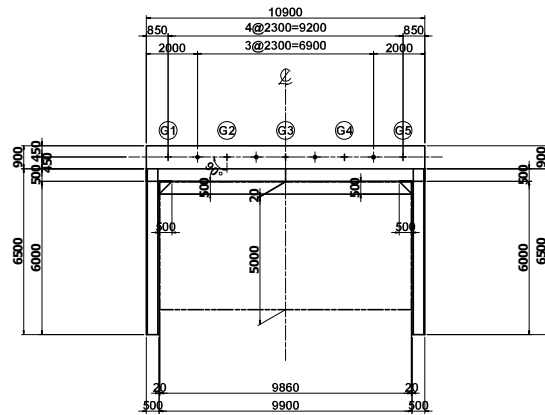
2-2



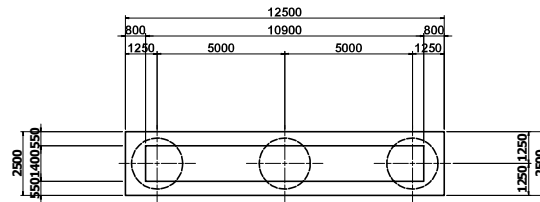
5-5



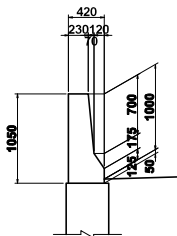
DETAIL S=1/20



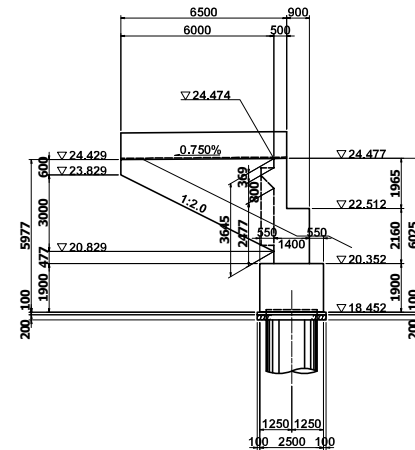
3-3



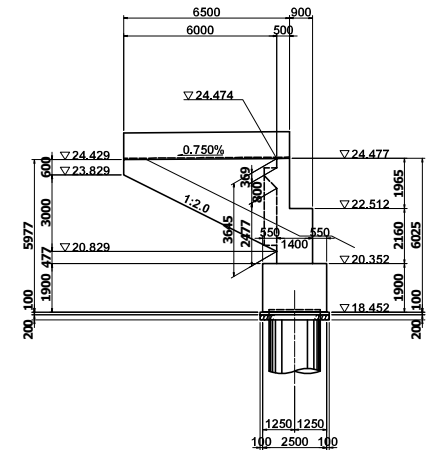
4-4



DETAIL S=1/30



6-6



7-7

MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

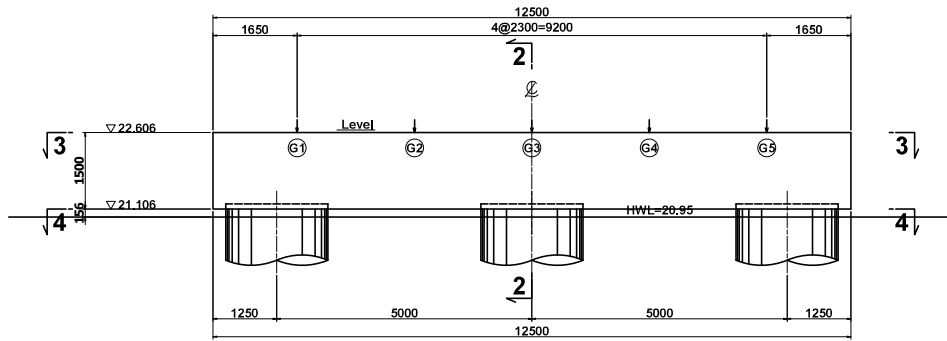
JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

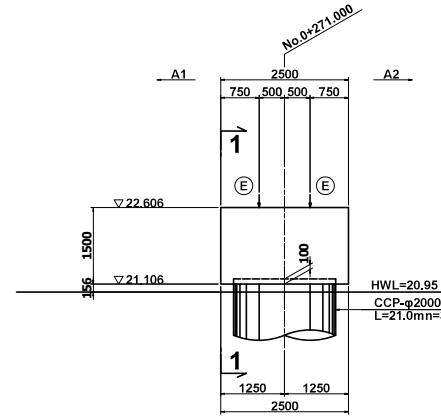
DRAWING TITLE:
4_Prek Rus Bridge
STRUCTURAL DRAWING OF A1 ABUTMENT

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/100 | PR-06 |

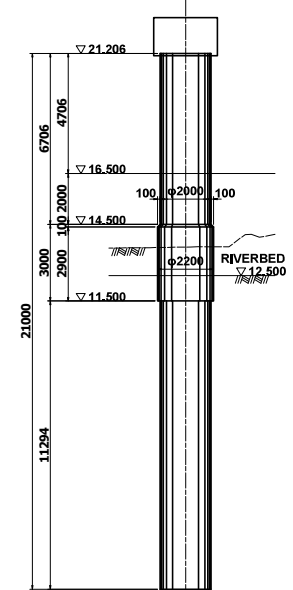
別添7-69



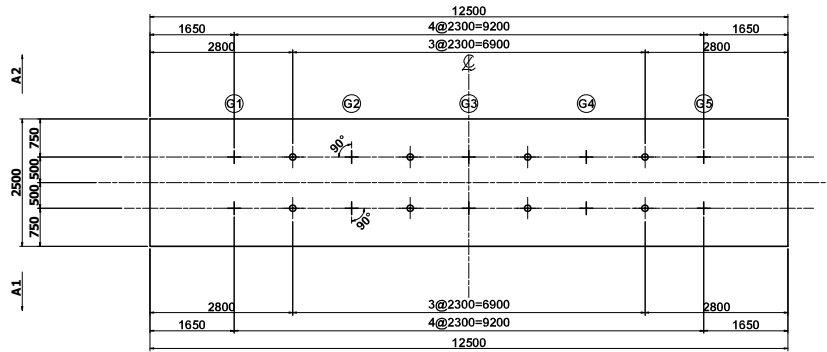
1-1



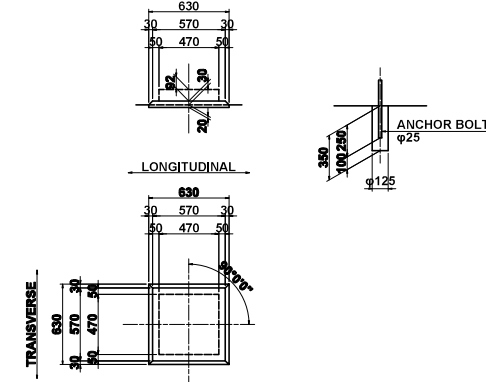
2-2



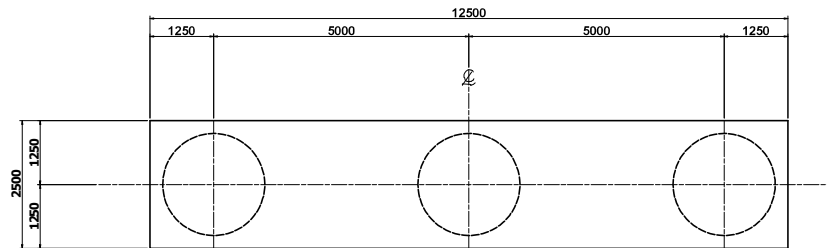
PROFILE S=1/100



3-3



DETAIL S=1/20



4-4

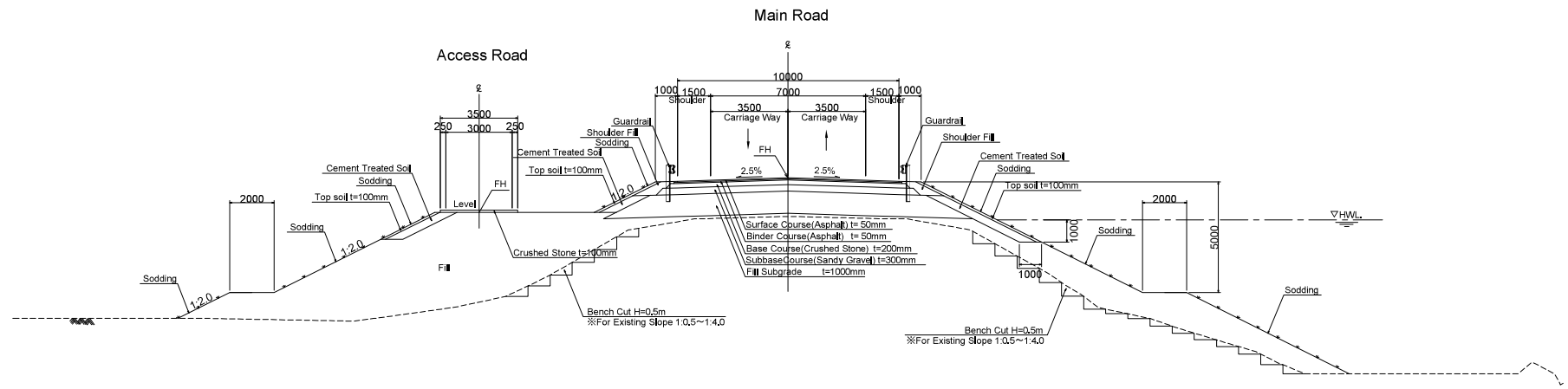
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
4_Prek Rus Bridge
STRUCTURAL DRAWING OF P1 BRIDGE PIER

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/50 | PR-07 |



※Typical cross section with cross section of Access Road

MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

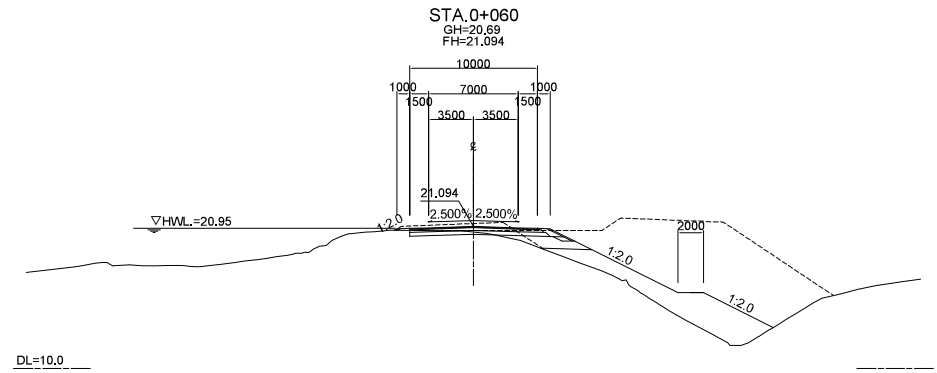
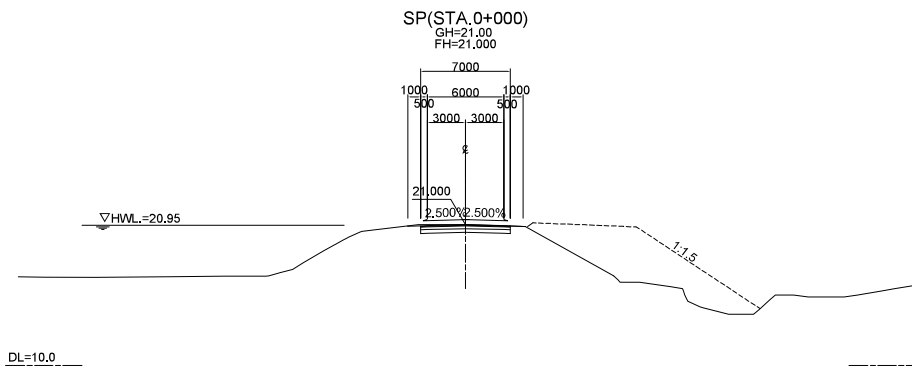
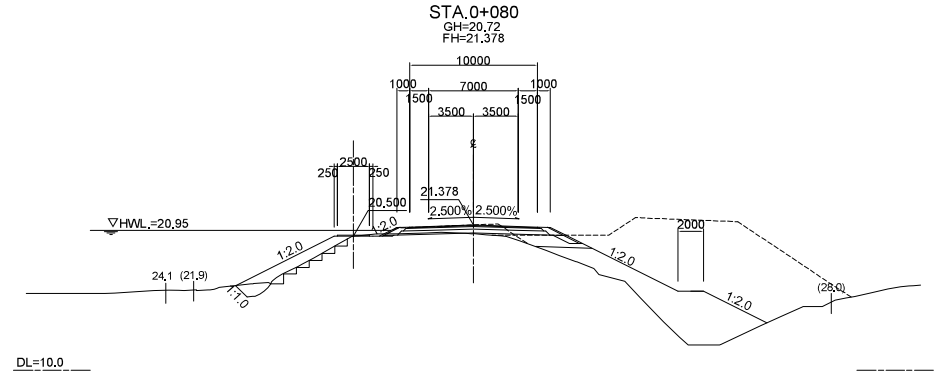
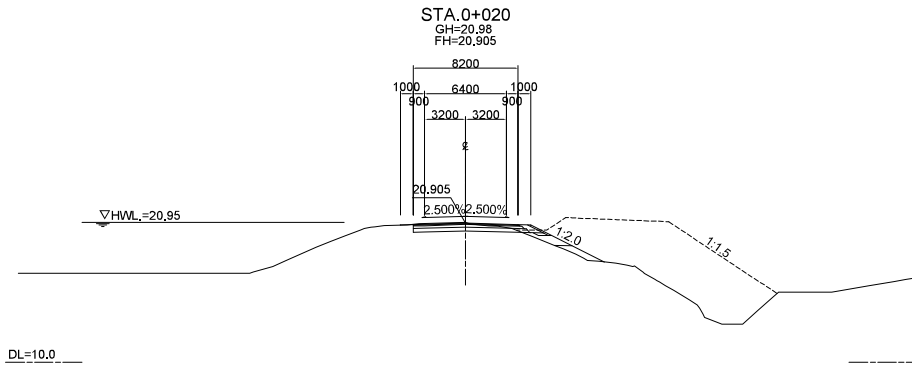
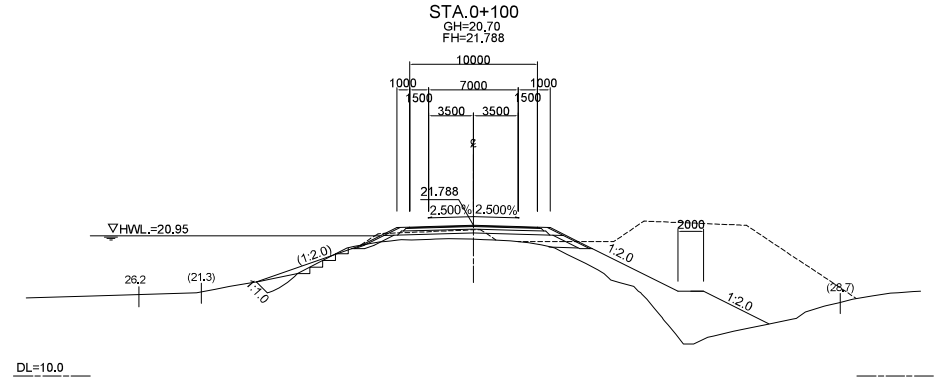
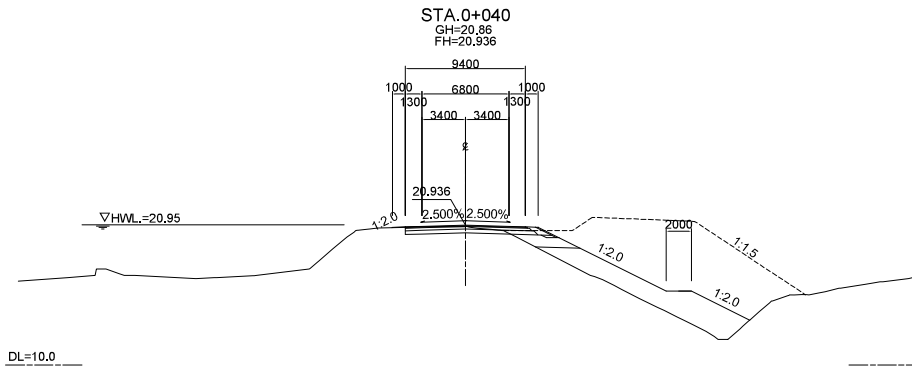
JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
4_PreK Rus Bridge
TYPICAL CROSS SECTION OF APPROACH ROAD

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/100 | PR-08 |

別添7-71



MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

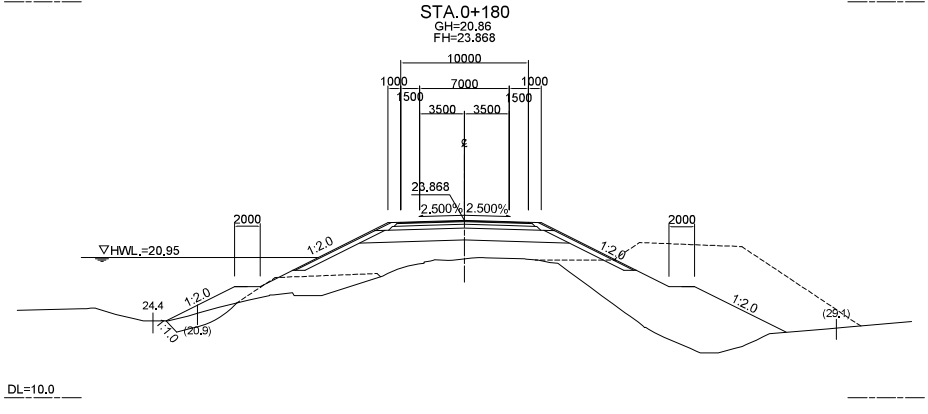
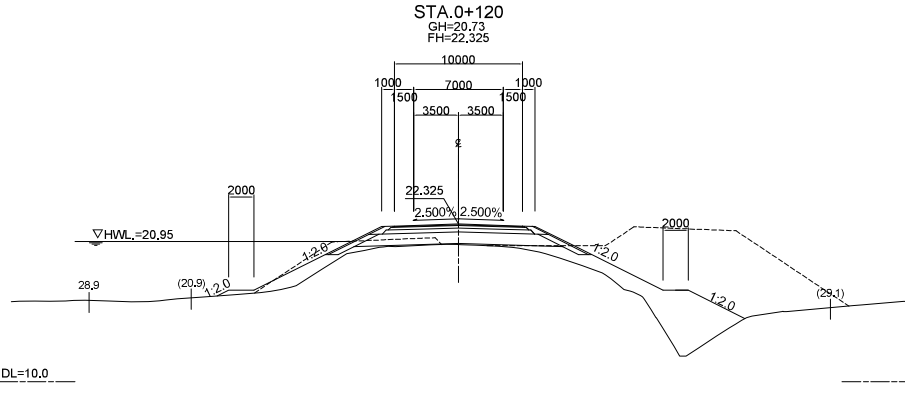
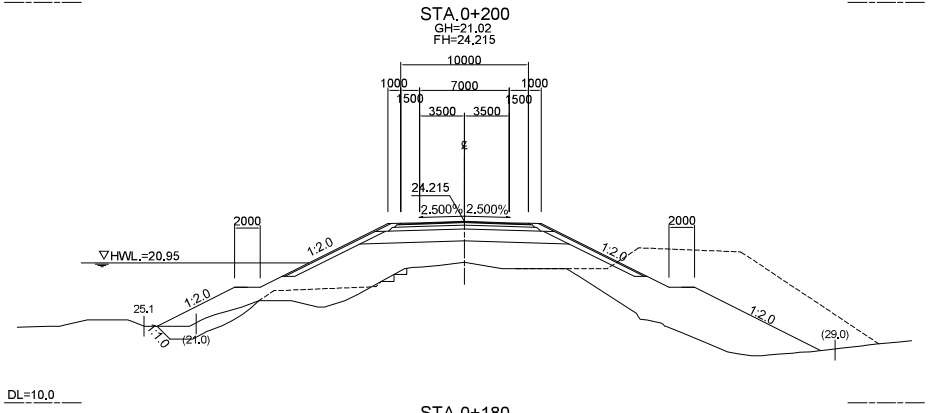
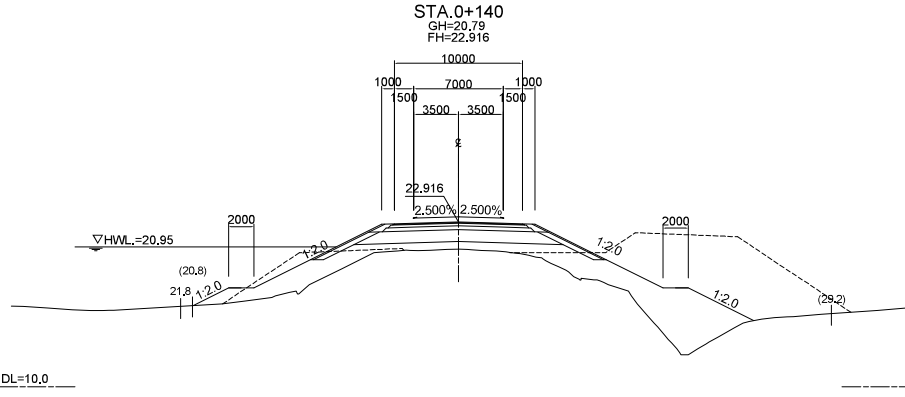
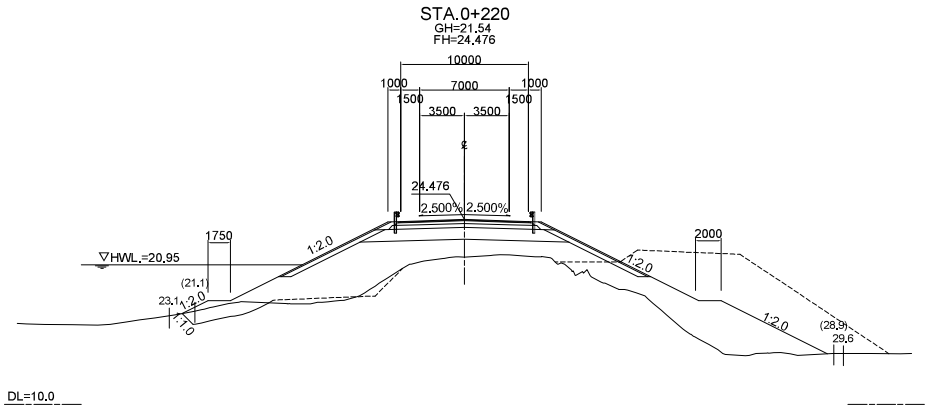
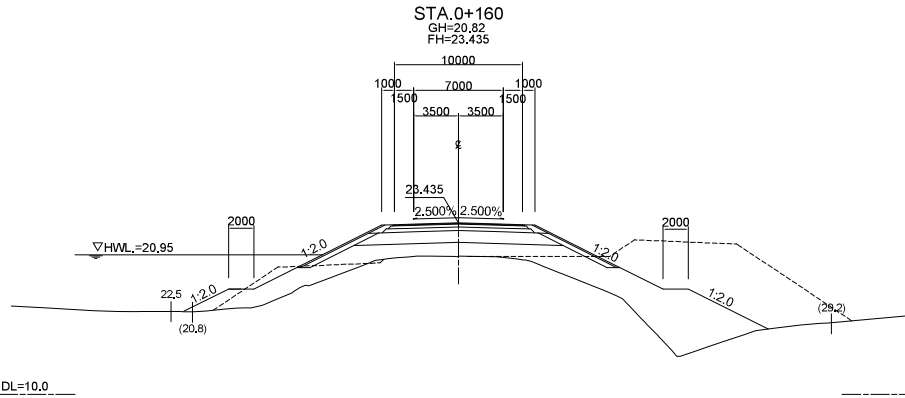
JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
4_PreK Rus Bridge
CROSS SECTION OF APPROACH ROAD (1)

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/200 | PR-09 |

別添7-12



MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

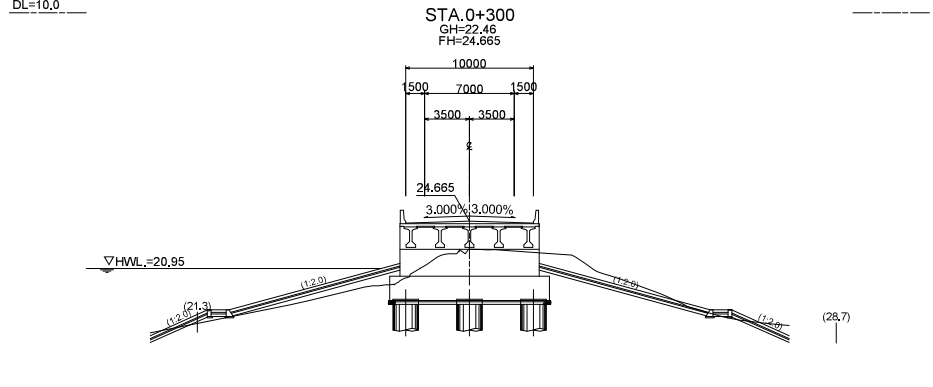
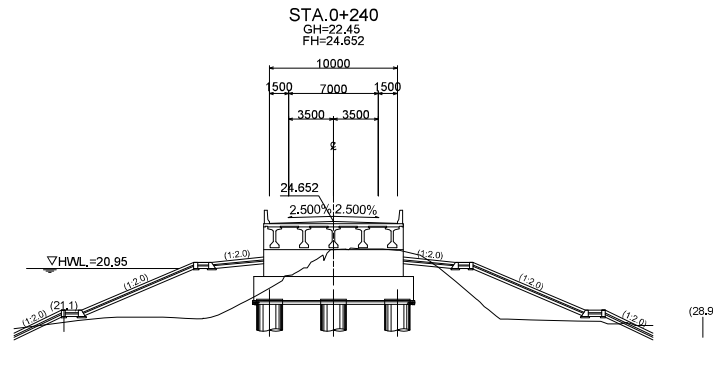
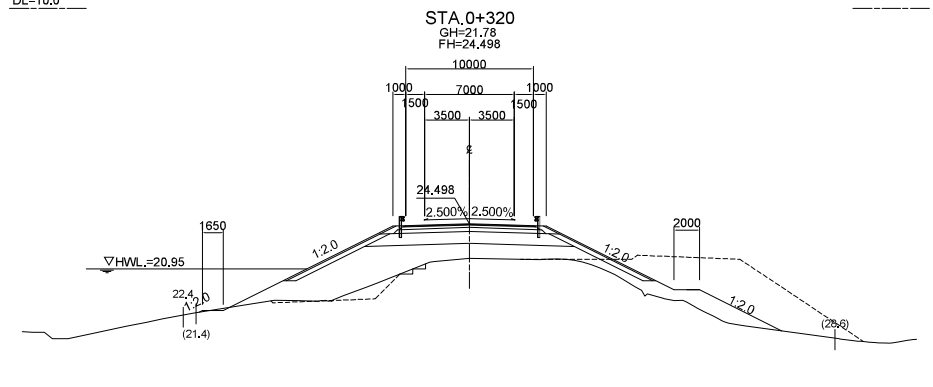
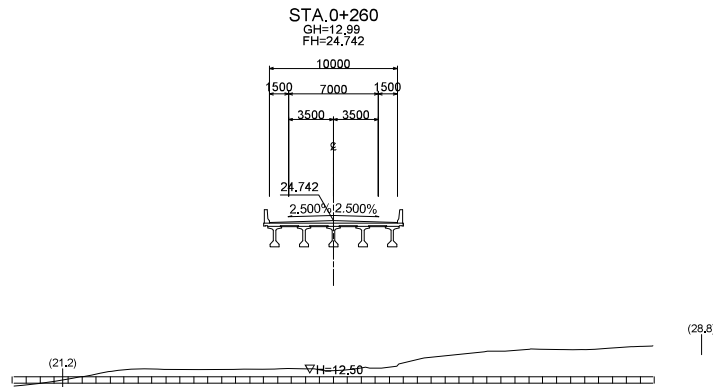
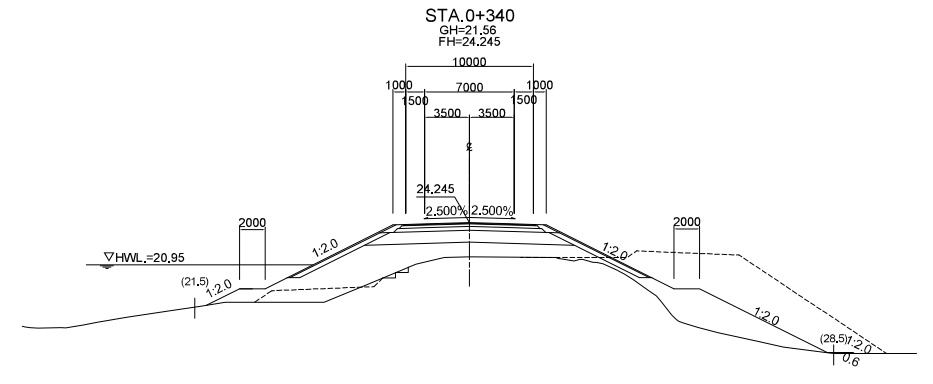
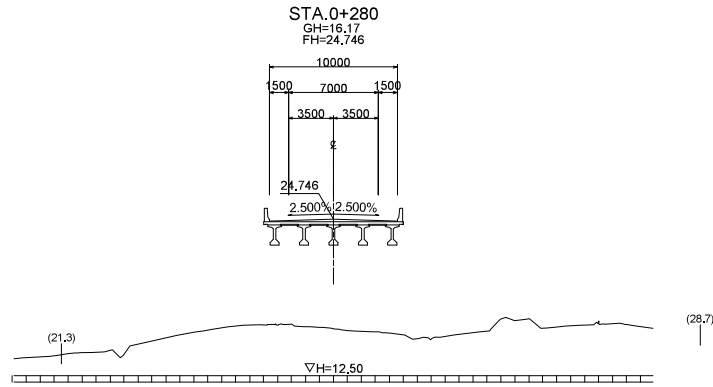
JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
4_PreK Rus Bridge
CROSS SECTION OF APPROACH ROAD (2)

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/200 | PR-10 |

別添7-73



MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

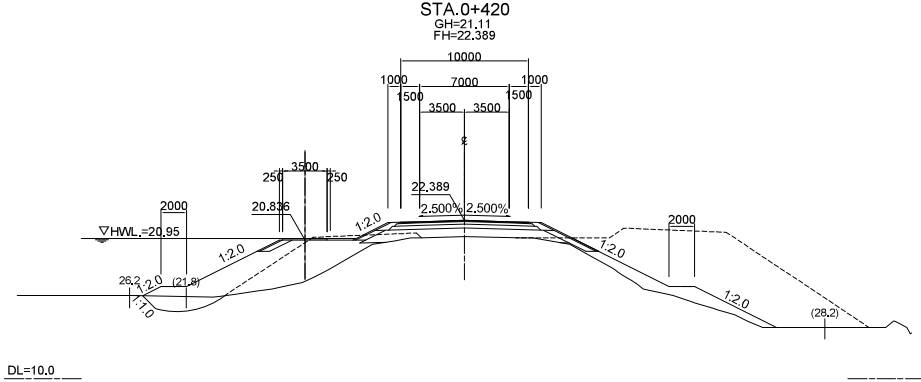
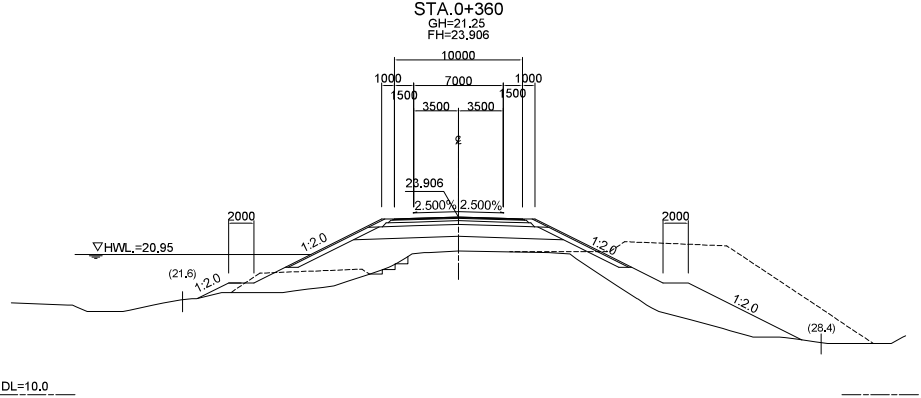
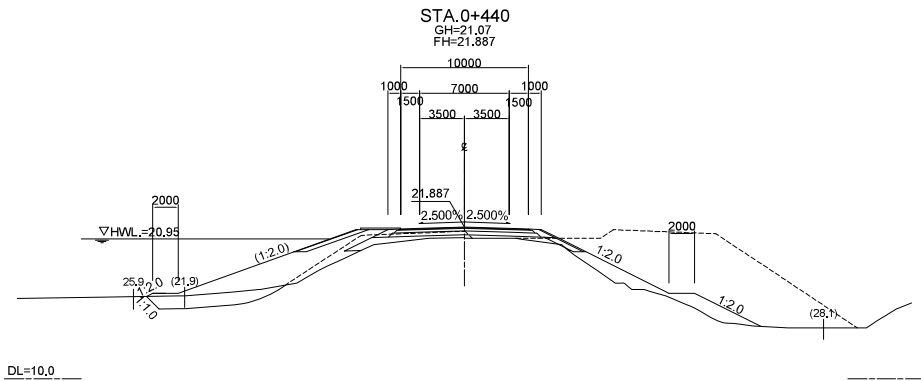
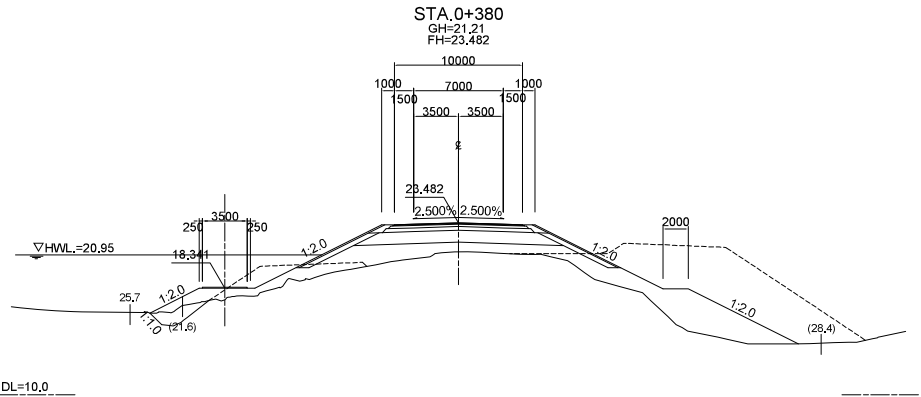
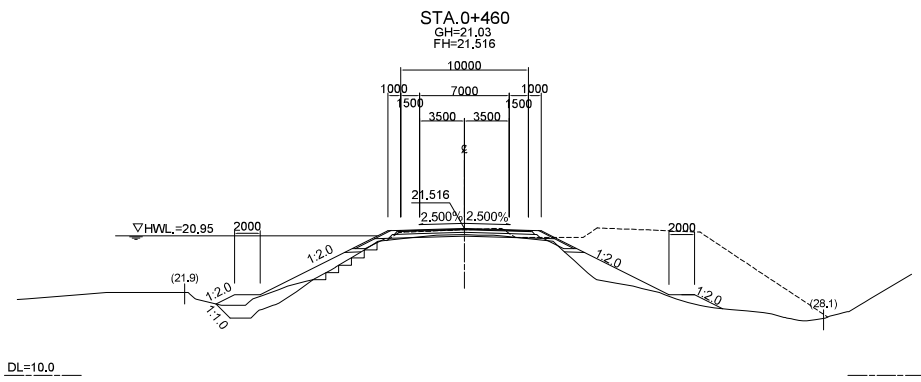
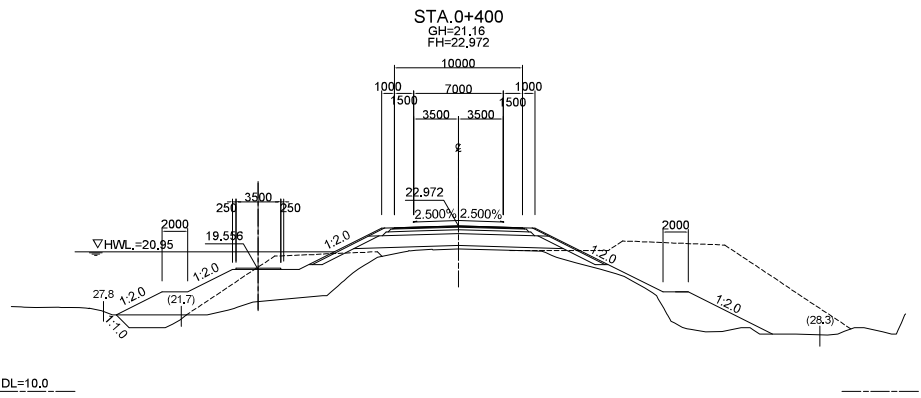
JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

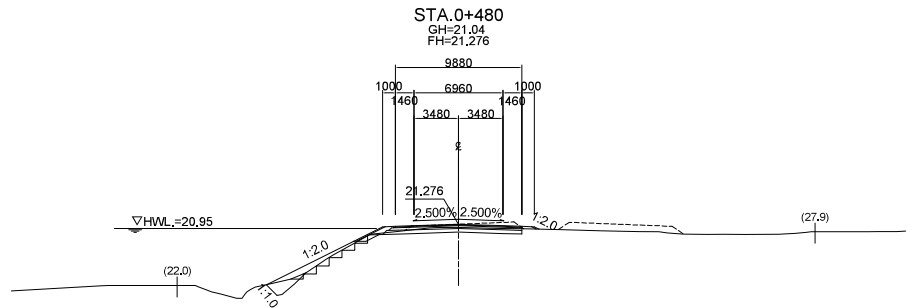
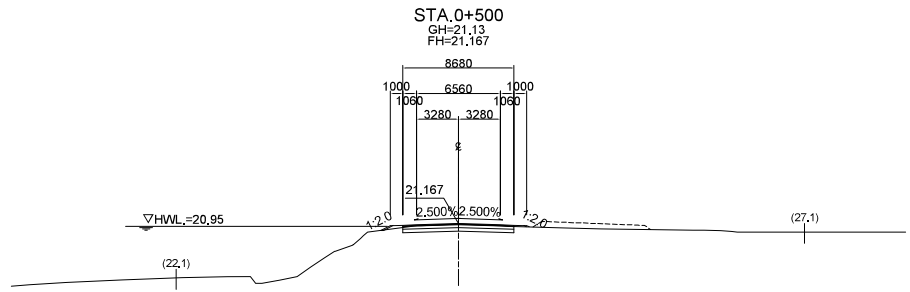
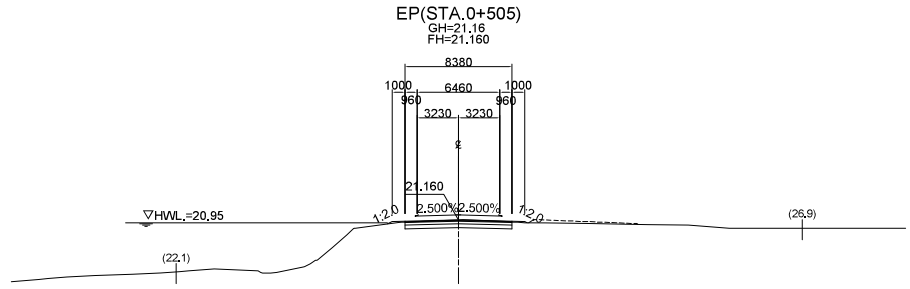
DRAWING TITLE:
4_PreK Rus Bridge
CROSS SECTION OF APPROACH ROAD (3)

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/200 | PR-11 |

別添7-74



| | | | | | |
|---|---|---|--|---------------------------------|------------------------------|
| <p>MINISTRY OF PUBLIC WORKS AND TRANSPORT KINGDOM OF CAMBODIA</p> | <p>JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD.</p> | <p>PROJECT TITLE: PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT OF BRIDGES IN FLOOD-PRONE AREAS</p> | <p>DRAWING TITLE: 4_PreK Rus Bridge CROSS SECTION OF APPROACH ROAD (4)</p> | <p>SCALE(A1 SIZE) 1/200</p> | <p>DRAWING NO. PR-12</p> |
|---|---|---|--|---------------------------------|------------------------------|



MINISTRY OF PUBLIC WORKS
 AND TRANSPORT
 KINGDOM OF CAMBODIA

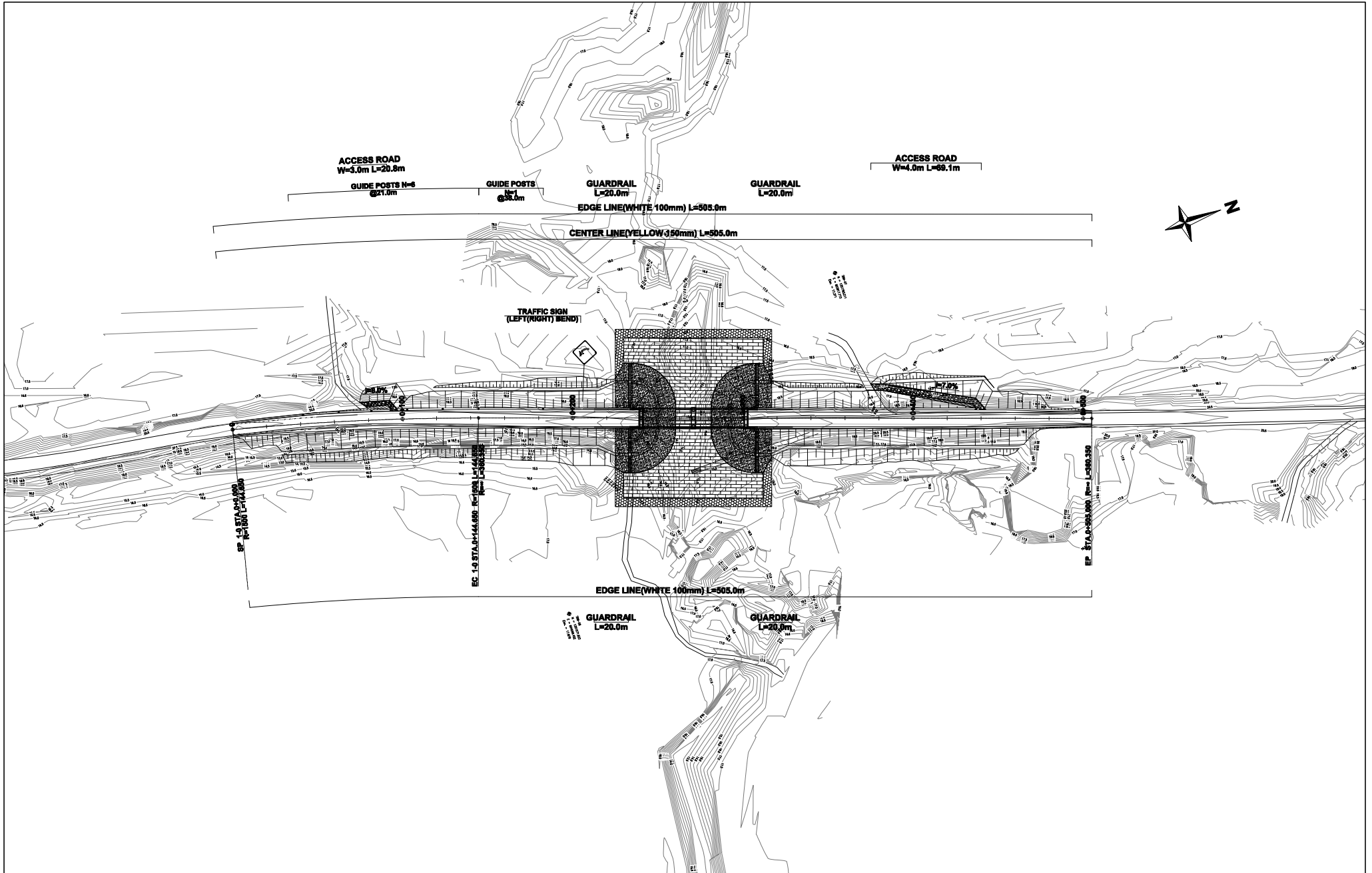
JAPAN INTERNATIONAL COOPERATION AGENCY
 CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
 PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
 OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
 4_Prek Rus Bridge
 CROSS SECTION OF APPROACH ROAD (5)

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/200 | PR-13 |

別添7-76



MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:

PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

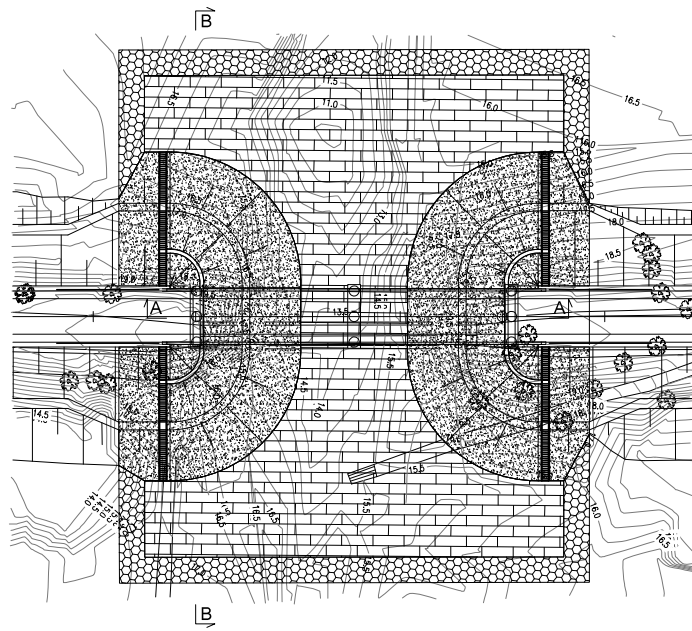
DRAWING TITLE:

4_Prek Rus Bridge
PLAN OF APPROACH ROAD
(ANCILLARY)

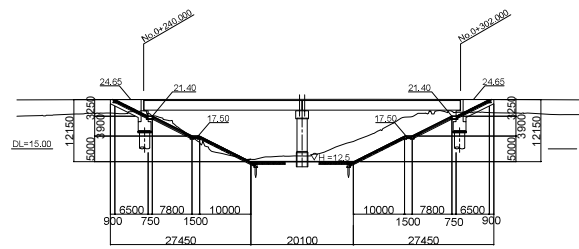
SCALE(A1 SIZE) DRAWING NO.

1/2,000
(1/1,000)

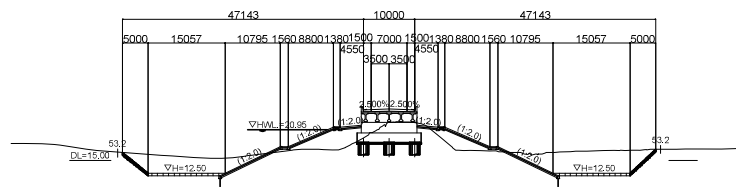
PR-14



PLAN S= 1/500



SECTION A-A S= 1/500



SECTION B-B S= 1/500

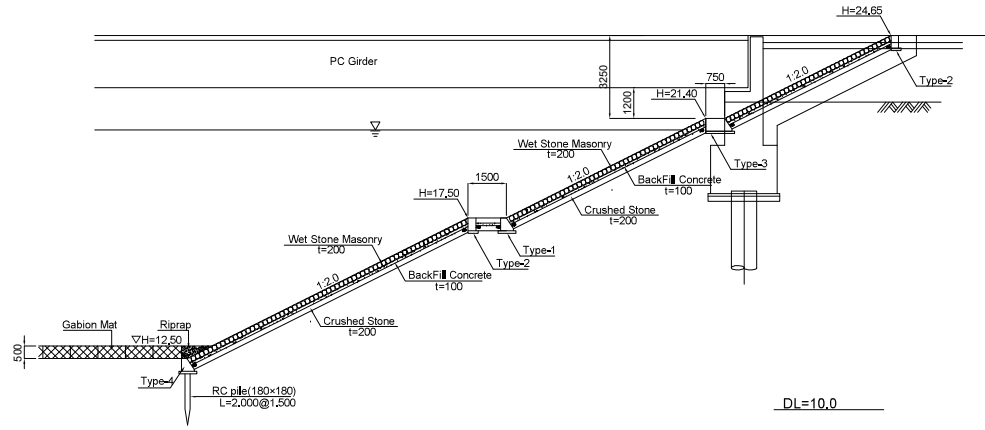
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

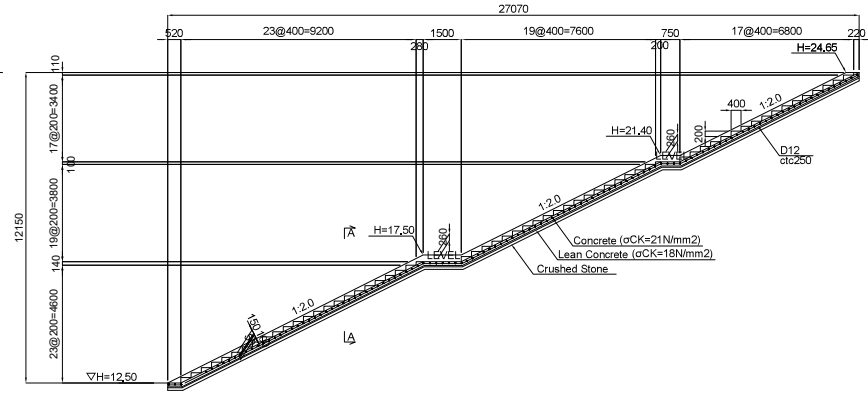
PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
4_PreK Rus Bridge
REVETMENT AND RIVER BED PROTECTION(1)

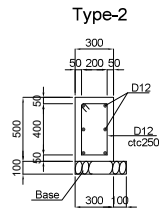
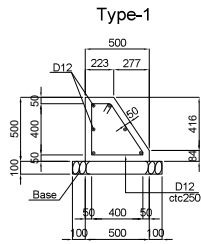
| SCALE(AT SIZE) | DRAWING NO. |
|----------------|-------------|
| AS SHOWN | PR-15 |



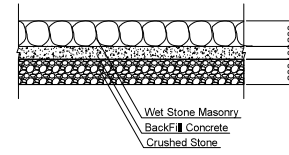
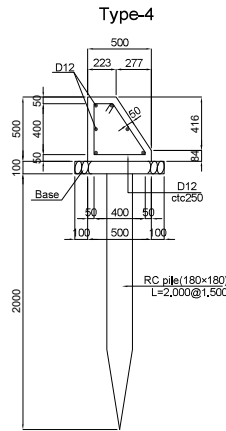
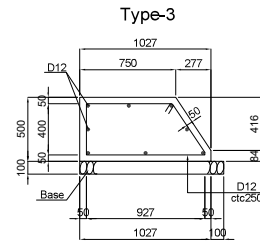
PROFILE s= 1/100



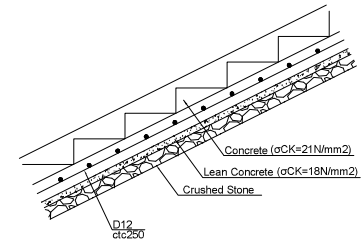
STAIRS s= 1/100



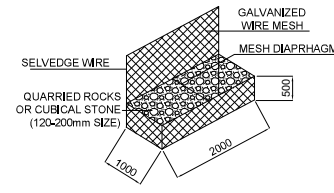
DETAILS s= 1/20



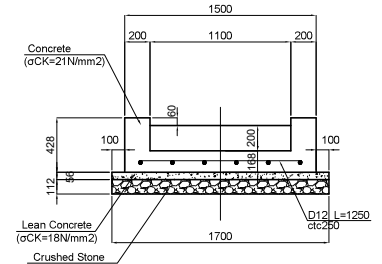
DETAILS s= 1/20



DETAILS s= 1/20



GABION MAT DETAIL
S = None Scale



SECTION A-A s= 1/20

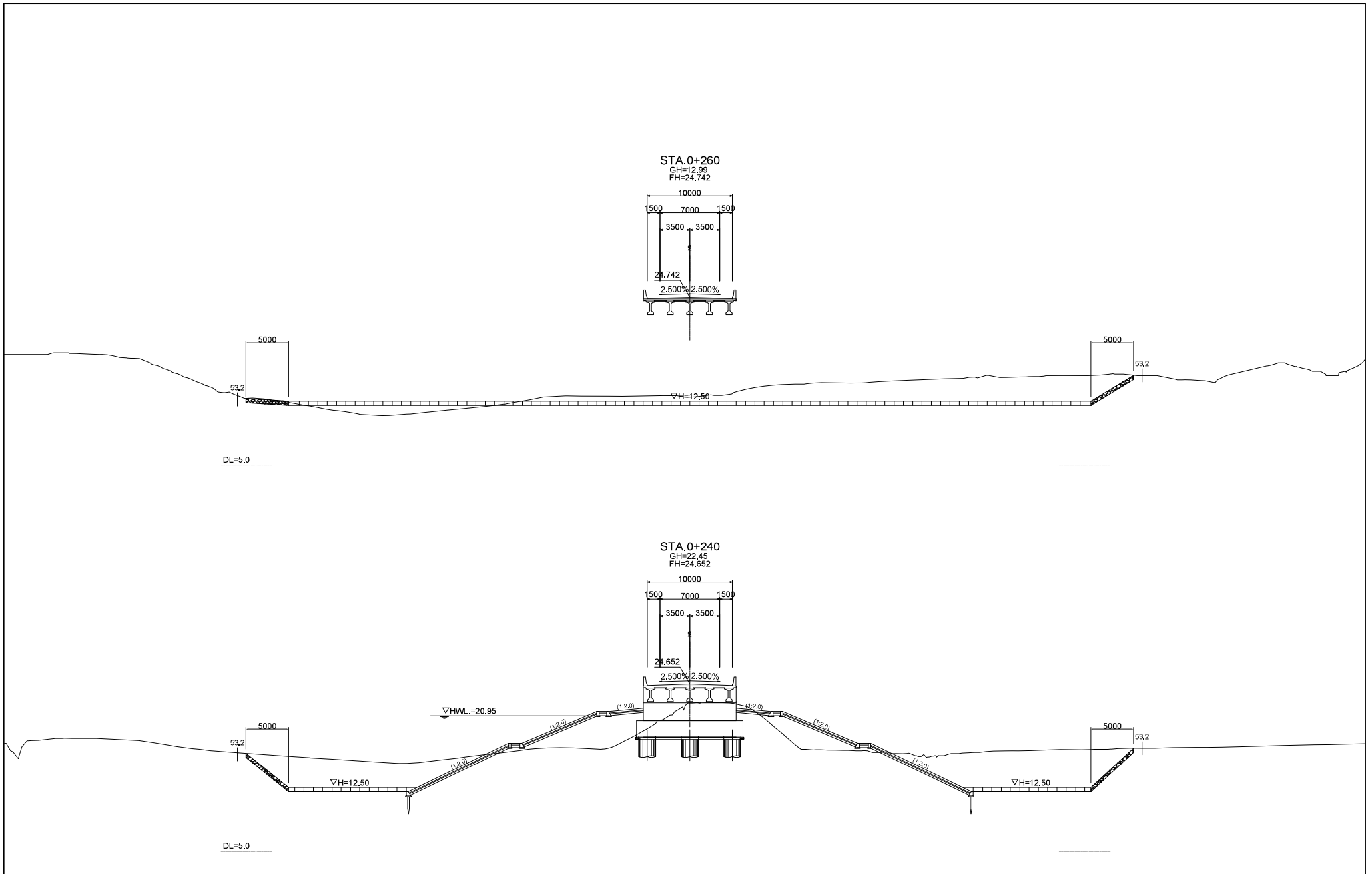
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

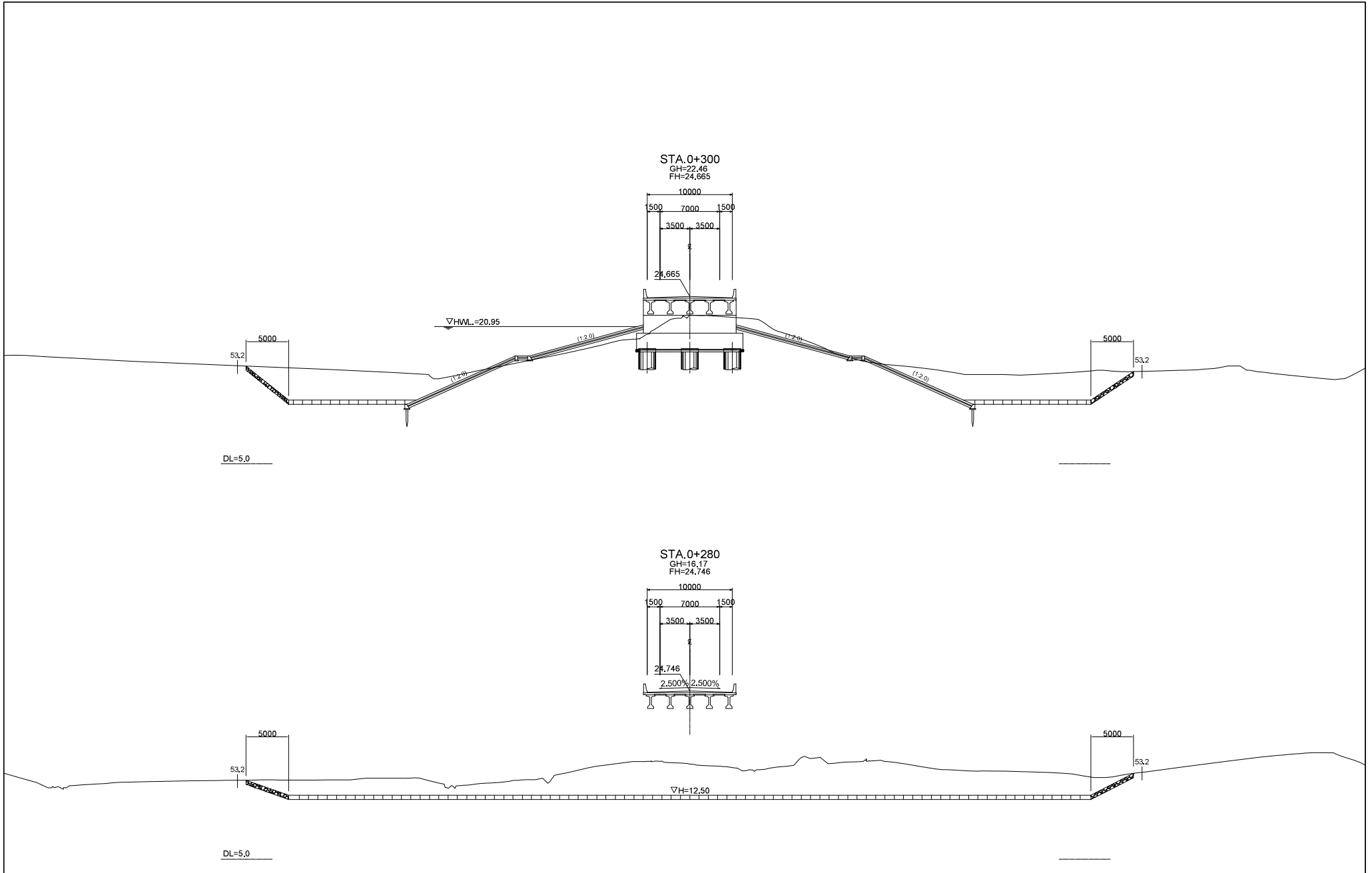
PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
4_Prek Rus Bridge
REVTMENT AND RIVER BED PROTECTION(2)

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| AS SHOWN | PR-16 |



| | | | | | |
|--|---|--|--|-------------------------|----------------------|
| MINISTRY OF PUBLIC WORKS AND TRANSPORT KINGDOM OF CAMBODIA | JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD. | PROJECT TITLE: PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT OF BRIDGES IN FLOOD-PRONE AREAS | DRAWING TITLE: 4_Prek Rus Bridge REVETMENT AND RIVER BED PROTECTION(3) | SCALE(A1 SIZE) 1/200 | DRAWING NO. PR-17 |
|--|---|--|--|-------------------------|----------------------|

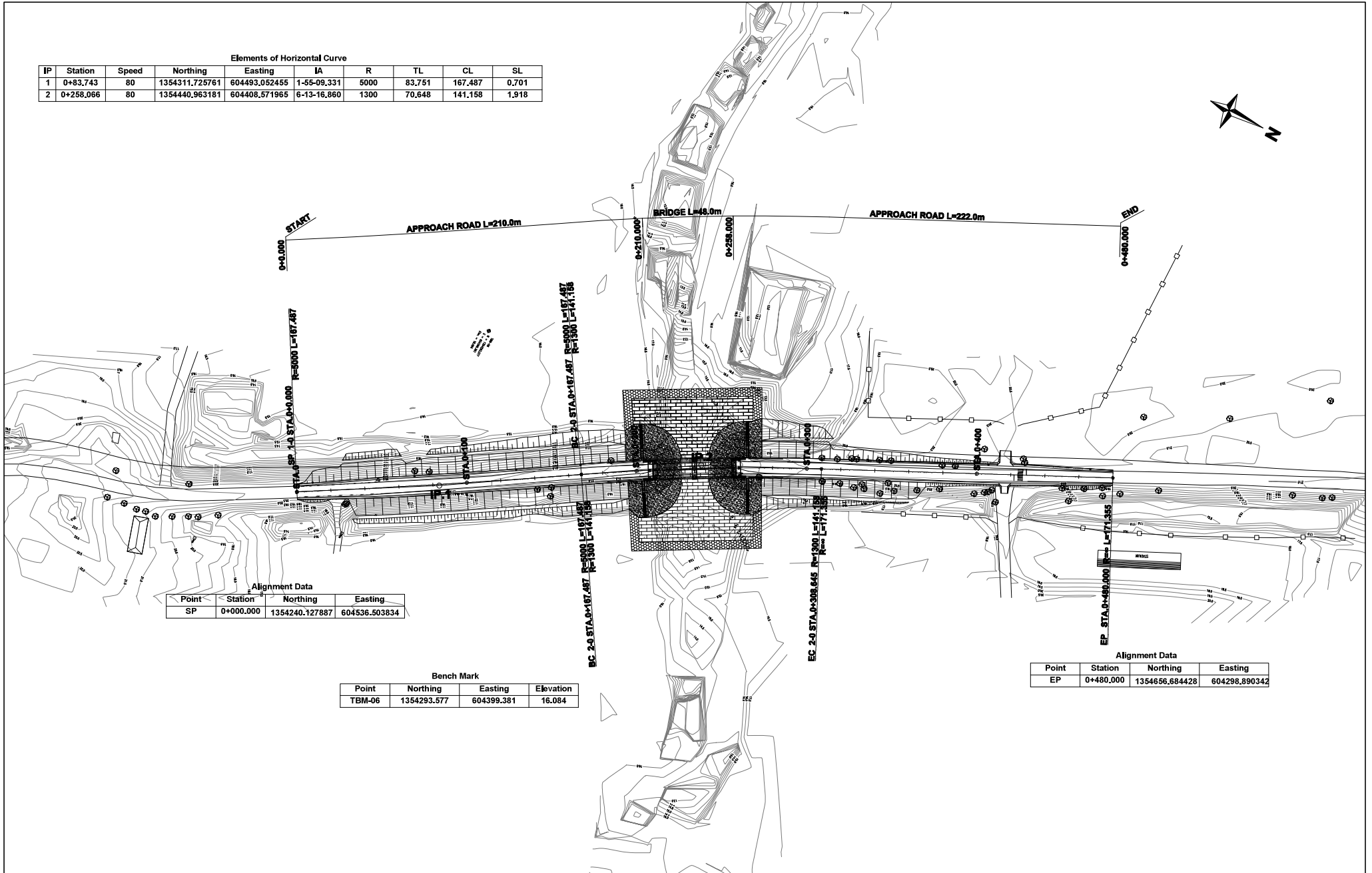


| | | | | | |
|--|---|--|--|-------------------------|----------------------|
| MINISTRY OF PUBLIC WORKS AND TRANSPORT KINGDOM OF CAMBODIA | JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD. | PROJECT TITLE: PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT OF BRIDGES IN FLOOD-PRONE AREAS | DRAWING TITLE: 4_Prek Rus Bridge REVETMENT AND RIVER BED PROTECTION(4) | SCALE(A1 SIZE) 1/200 | DRAWING NO. PR-18 |
|--|---|--|--|-------------------------|----------------------|

Prek Anlong Khle Bridge

別添7-82

| Elements of Horizontal Curve | | | | | | | | | |
|------------------------------|-----------|-------|----------------|---------------|-------------|------|--------|---------|-------|
| IP | Station | Speed | Northing | Easting | IA | R | TL | CL | SL |
| 1 | 0+83.743 | 80 | 1354311.725761 | 604493.052455 | 1-55-09.331 | 5000 | 83.751 | 167.487 | 0.701 |
| 2 | 0+258.066 | 80 | 1354440.963181 | 604408.571965 | 6-13-16.860 | 1300 | 70.848 | 141.158 | 1.918 |



| Alignment Data | | | |
|----------------|-----------|----------------|---------------|
| Point | Station | Northing | Easting |
| SP | 0+000.000 | 1354240.127887 | 604536.503834 |

| Bench Mark | | | |
|------------|-------------|------------|-----------|
| Point | Northing | Easting | Elevation |
| TBM-06 | 1354293.577 | 604399.381 | 16.084 |

| Alignment Data | | | |
|----------------|-----------|----------------|---------------|
| Point | Station | Northing | Easting |
| EP | 0+480.000 | 1354656.684428 | 604298.890342 |

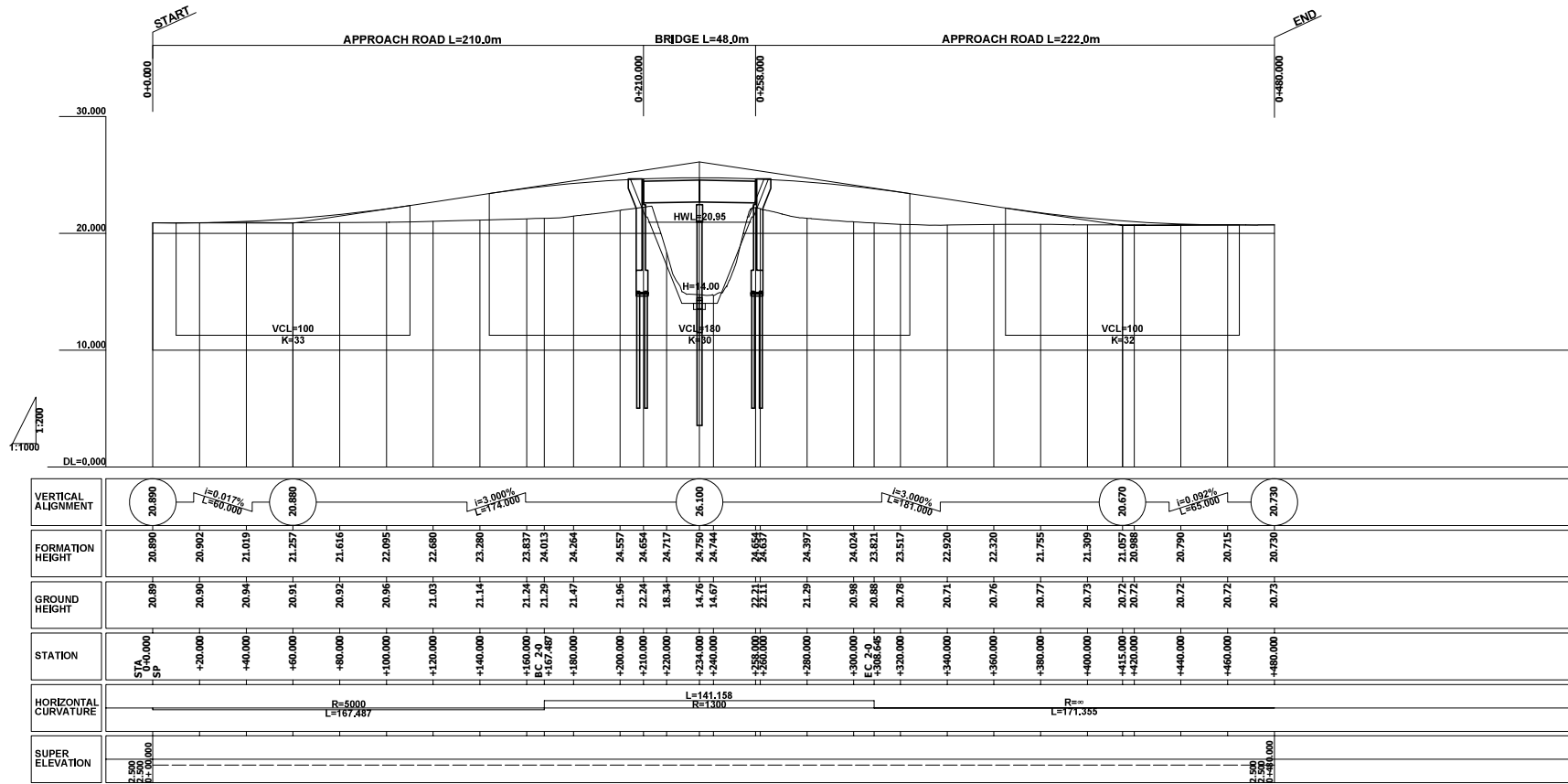
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
5-Prek Anlong Khle Bridge
GENERAL PLAN

| SCALE(AT SITE) | DRAWING NO. |
|----------------------|-------------|
| 1/2,000 (1/1,000) | AK-01 |



Profile $H = 1/1000$
 $V = 1/2000$

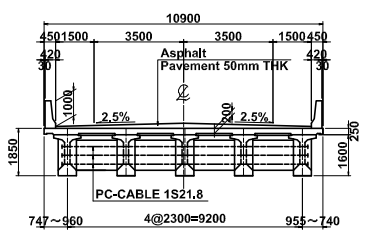
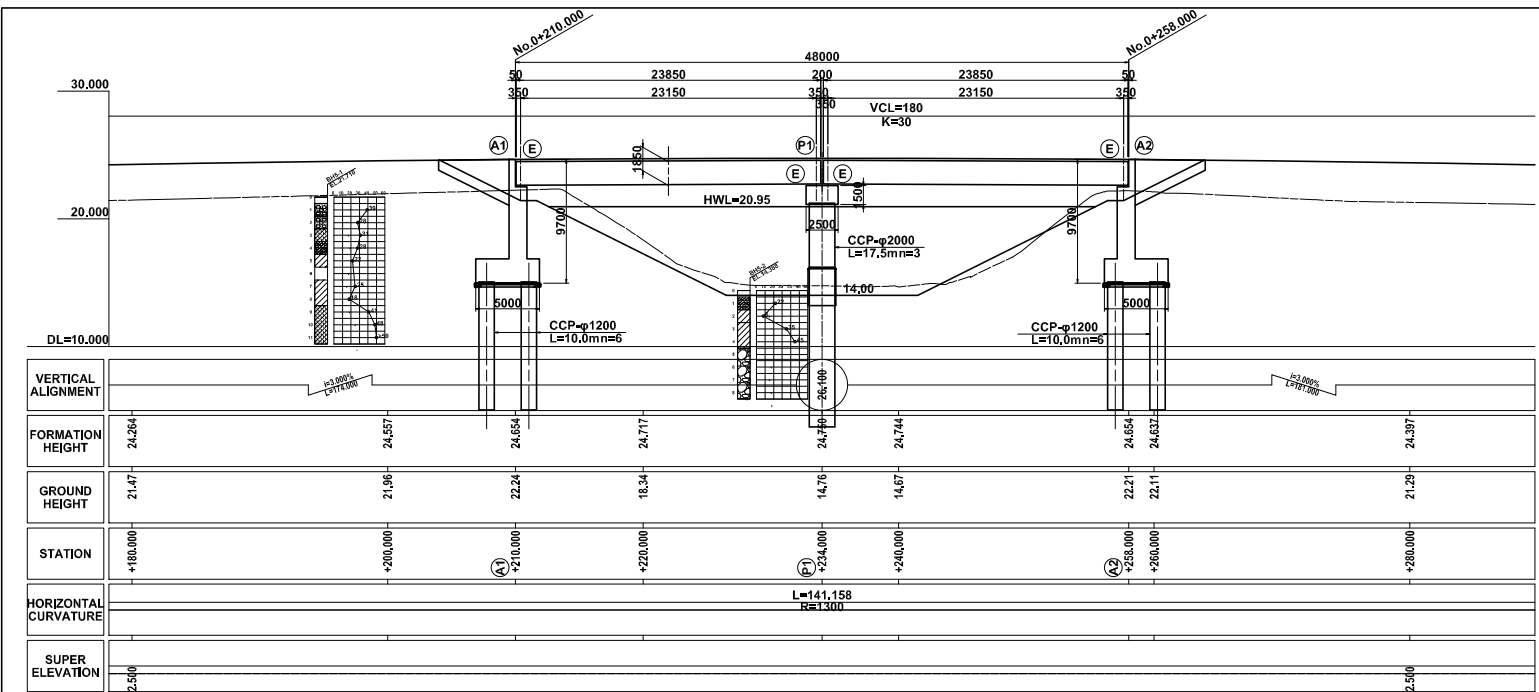
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

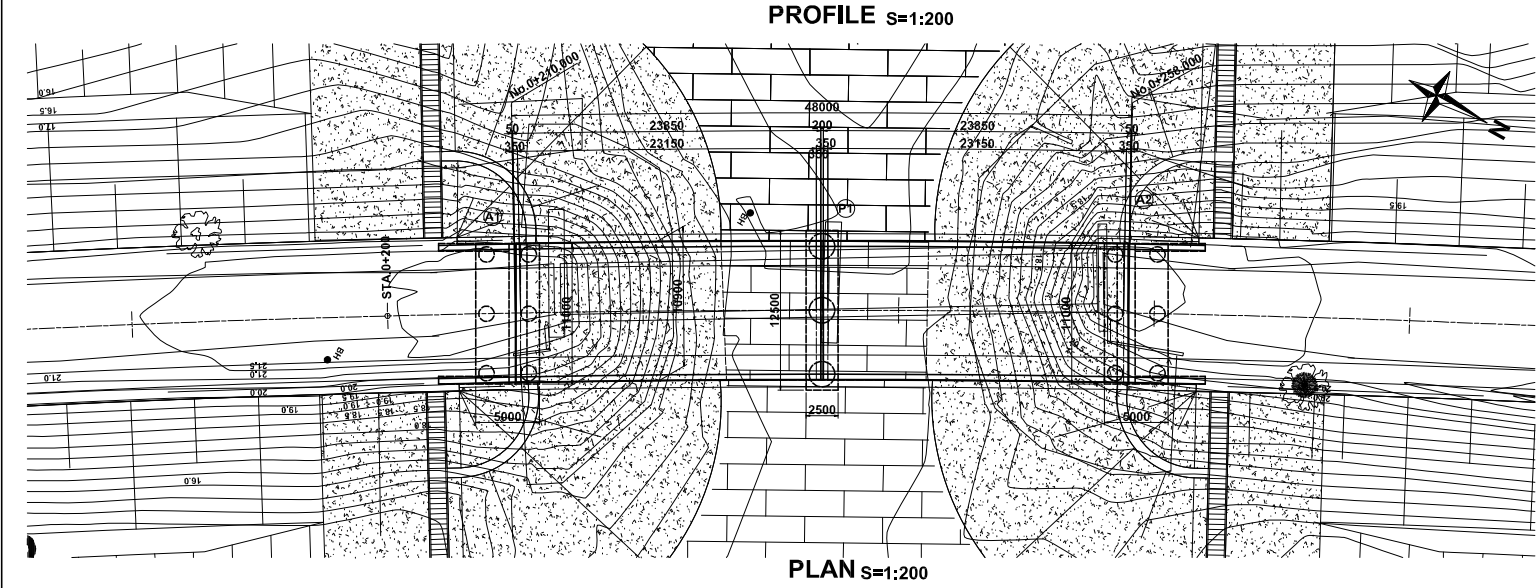
PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
5_Prek Anlong Khle Bridge
GENERAL PROFILE

| | |
|----------------|-------------|
| SCALE(A1 SIZE) | DRAWING NO. |
| AS SHOWN | AK-02 |



CROSS SECTION S=1:100

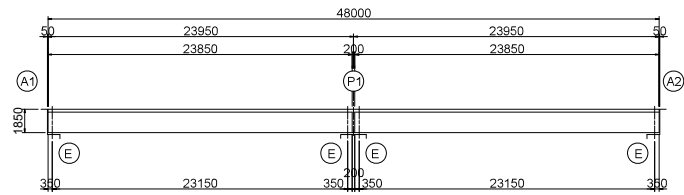


PLAN S=1:200

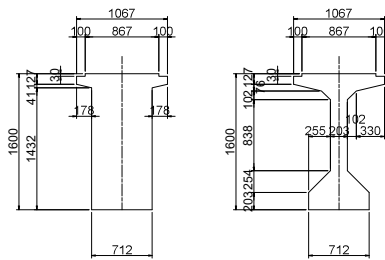
DESIGN CRITERIA

| | |
|------------------------|--|
| ROAD CLASS | SECONDARY PRINCIPAL ROAD |
| DESIGN SPEED | 80km/h |
| LIVE LOAD | AASHTO HS20-44x125% OR EQUIVALENT |
| BRIDGE LENGTH | 48.000m |
| SPAN LENGTH | 23.150+23.150m |
| TOTAL WIDTH | 2x3.5m(Carrlage Way)+2x1.5m(Shoulder) |
| SEISMIC COEFFICIENT | kh=0.05(L1) |
| SUPER STRUCTURE TYPE | PC I-Girder |
| SUBSTRUCTURE TYPE | REVERSED T-ABUTMENT, PILE BENT PIRE |
| FOUNDATION TYPE | CAST-IN PLACE CONCRETE PILE(A1,P1,A2) |
| SPECIFICATION CRITERIA | Bridge Design Standard (CAM.PW.04.102.99), 2003 DESIGN SPECIFICATIONS OF HIGHWAY BRIDGES (JAPAN ROAD ASSOCIATION) |

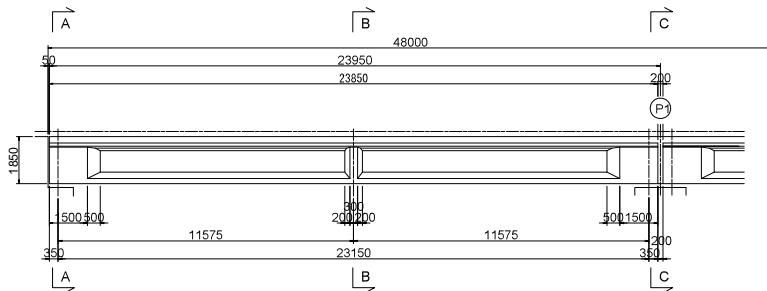
| | | | | | |
|---|---|--|---|----------------|-------------|
| MINISTRY OF PUBLIC WORKS AND TRANSPORT KINGDOM OF CAMBODIA | JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD. | PROJECT TITLE: PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT OF BRIDGES IN FLOOD-PRONE AREAS | DRAWING TITLE: 5_Anglong Khle Bridge GENERAL VIEW OF BRIDGE | SCALE(A1 SIZE) | DRAWING NO. |
| | | | | AS SHOWN | AK-03 |



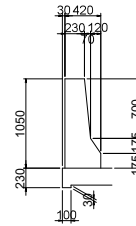
SIDE ELEVATION S=1/200



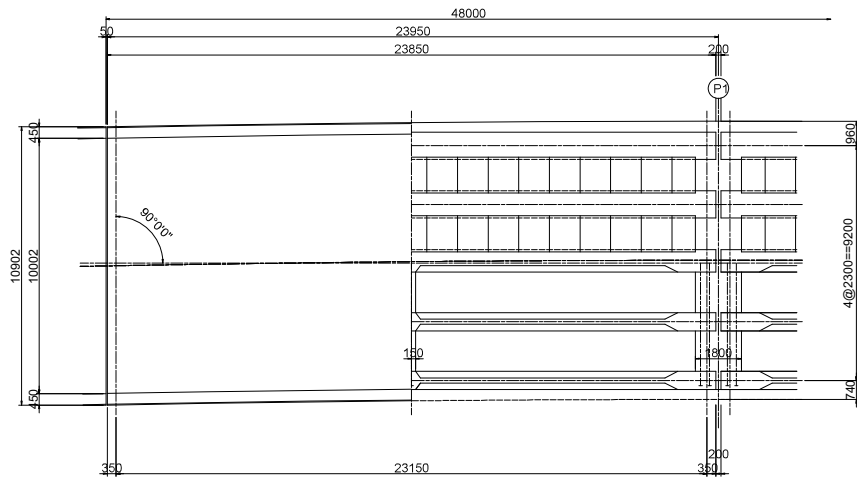
PC GIRDER S=1/30



SIDE ELEVATION S=1/100



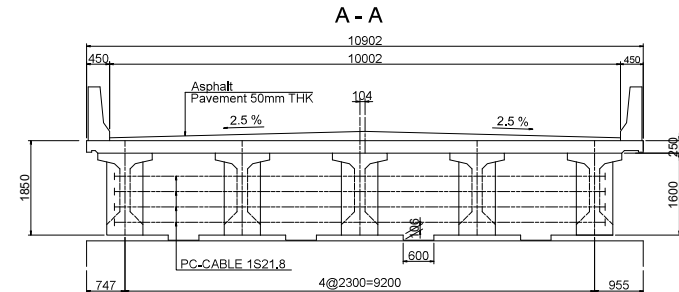
DETAILS OF RAILING S=1/30



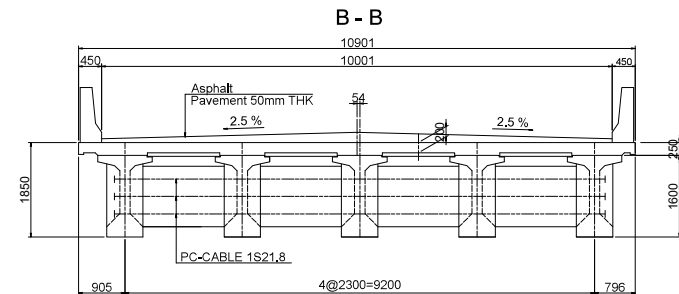
PLAN S=1/100

| DESIGN CRITERIA | |
|-----------------|----------------------------------|
| CATEGORY | PRESTRESSED CONCRETE ROAD BRIDGE |
| BRIDGE LENGTH | 68,000 m |
| WIDTH | 10,900 m |
| LIVE-LOAD | HS20-44x1.25 |
| ANGLE OF SKEW | 90°0'00" |

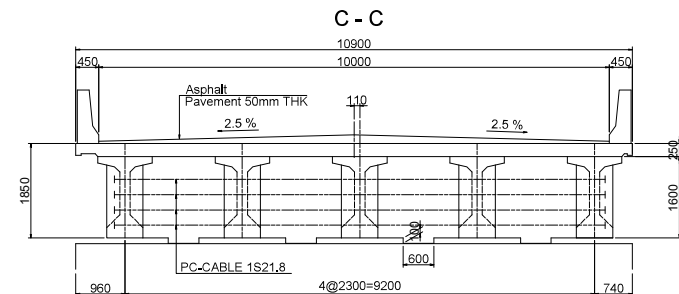
| MATERIALS | | |
|--------------|------------|---|
| CONCRETE | GIRDER | σ _{ck} =45,0 N/mm ² |
| | CROSS BEAM | σ _{ck} =45,0 N/mm ² |
| | DECK SLAB | σ _{ck} =40,0 N/mm ² |
| PC STEEL | GIRDER | 7S12,7(SWPR7BL) |
| | CROSS BEAM | 1S21,8 (SWPR19) |
| DEFORMED BAR | Grad 400 | |



A - A



B - B



CROSS SECTION S=1/50

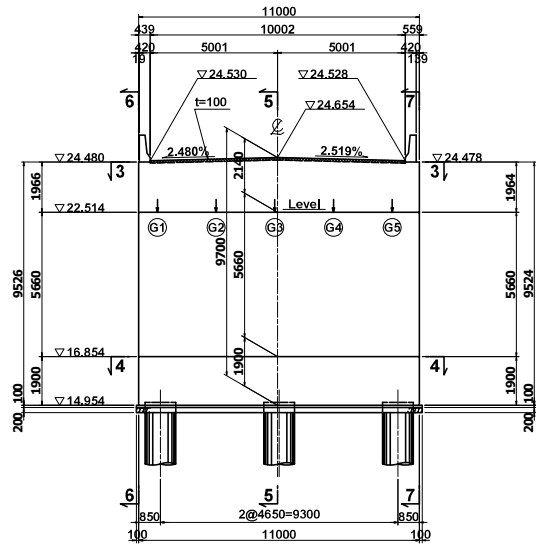
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

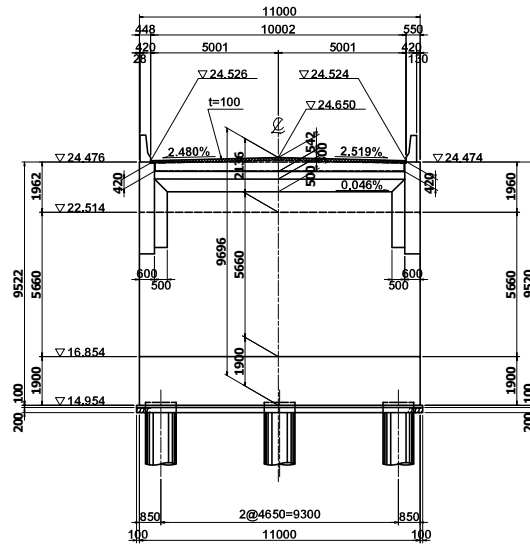
PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
5_Prek Along Khle Bridge
STRUCTURE DRAWING(1)

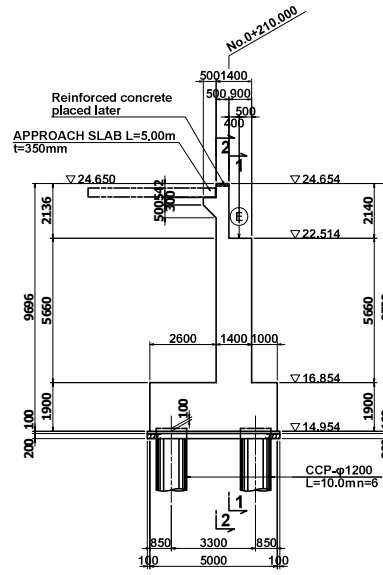
SCALE(A1 SIZE) DRAWING NO.
AS SHOWN AK-04



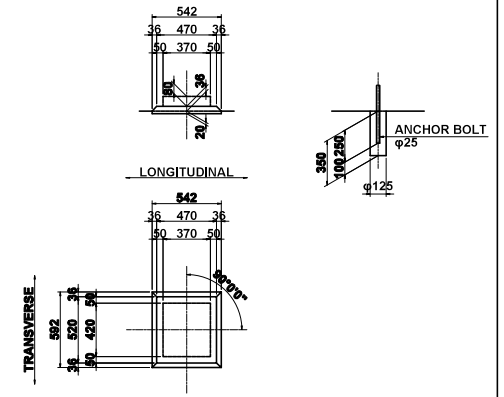
1-1



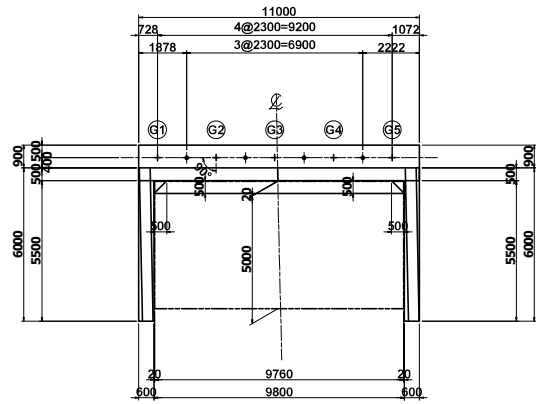
2-2



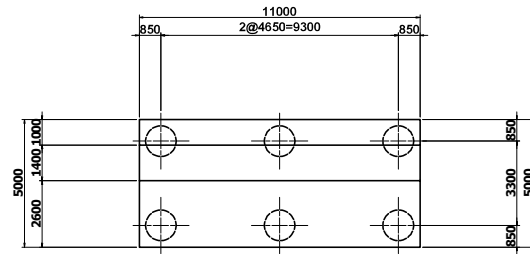
5-5



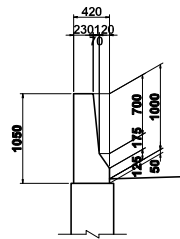
DETAIL S=1/20



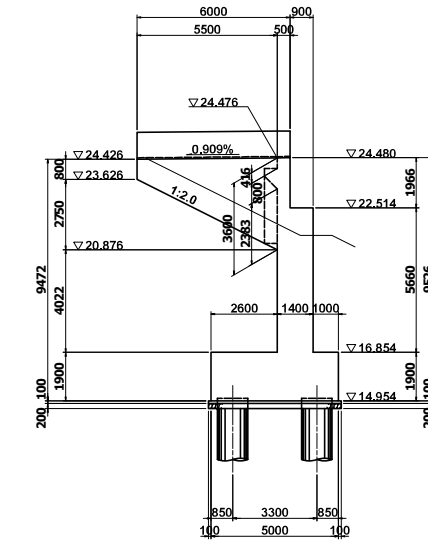
3-3



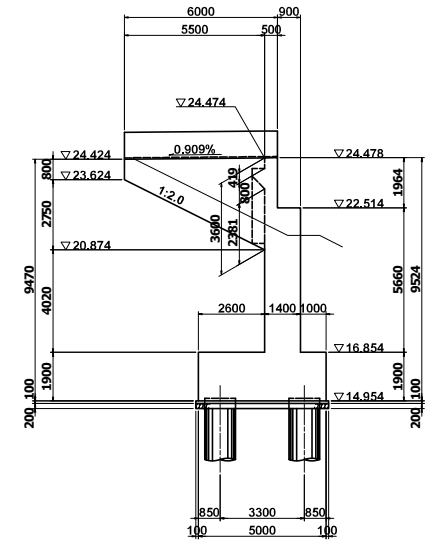
4-4



DETAIL S=1/30



6-6



7-7

MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

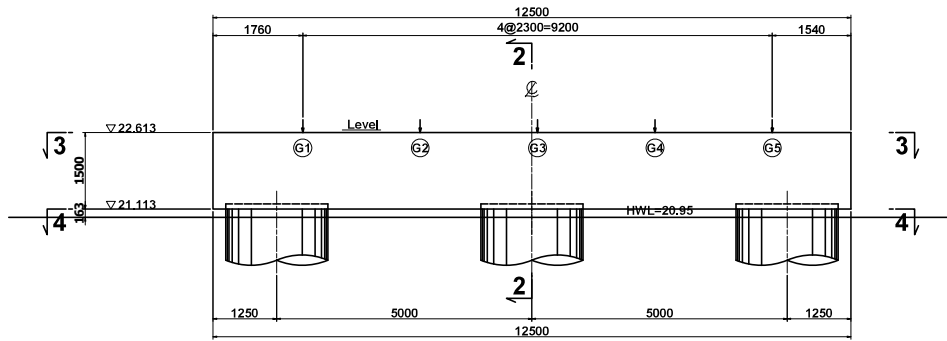
JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

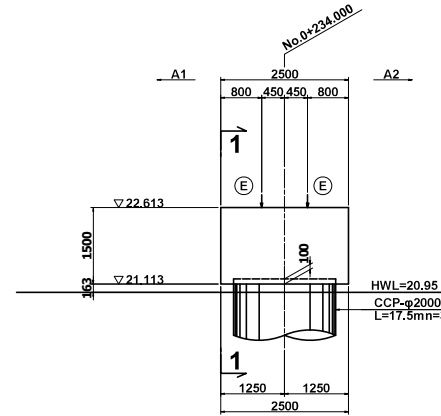
DRAWING TITLE:
5_Prek Anlong Khle Bridge
STRUCTURAL DRAWING OF A1 ABUTMENT

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/100 | AK-05 |

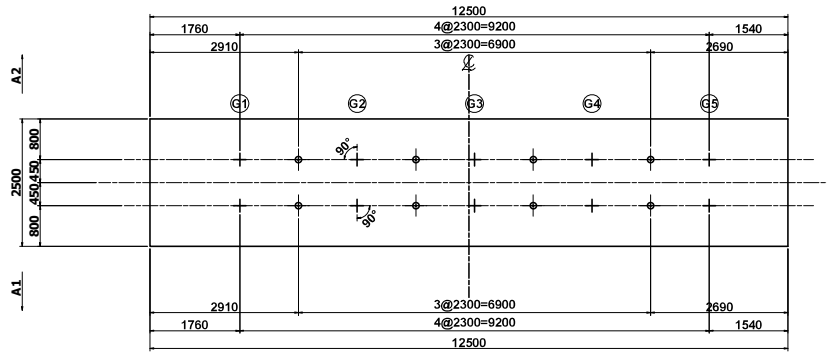
別添7-87



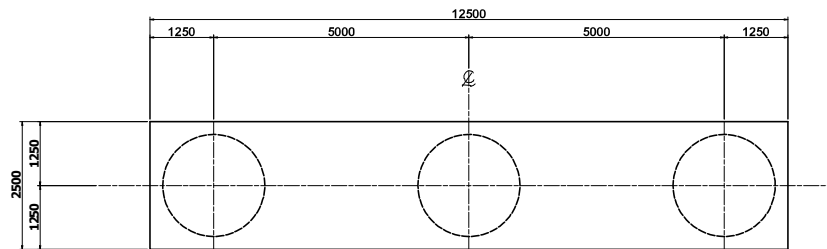
1-1



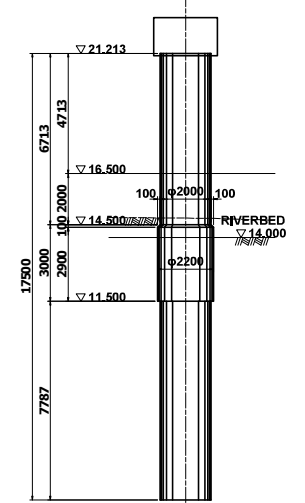
2-2



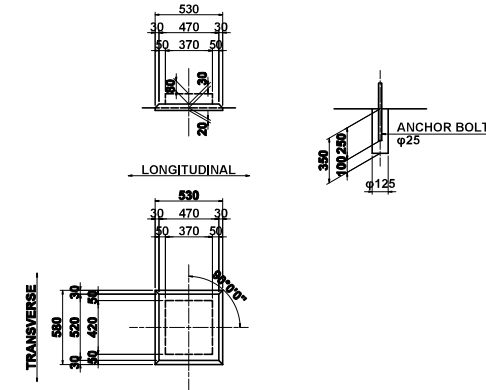
3-3



4-4



PROFILE S=1/100



DETAIL S=1/20

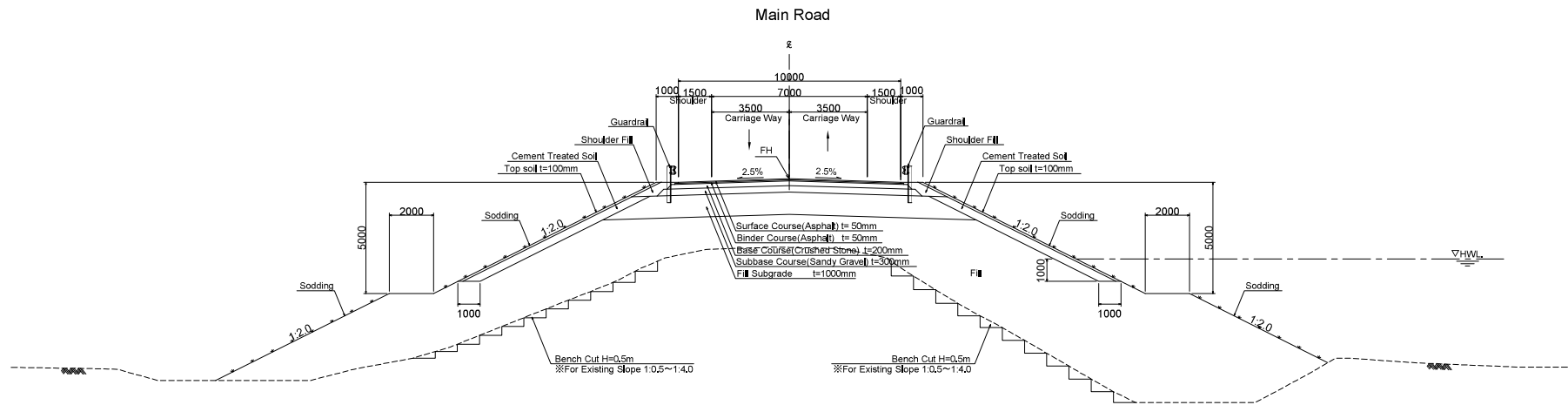
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
5_Prek Anlong Khle Bridge
STRUCTURAL DRAWING OF P1 BRIDGE PIER

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/50 | AK-06 |



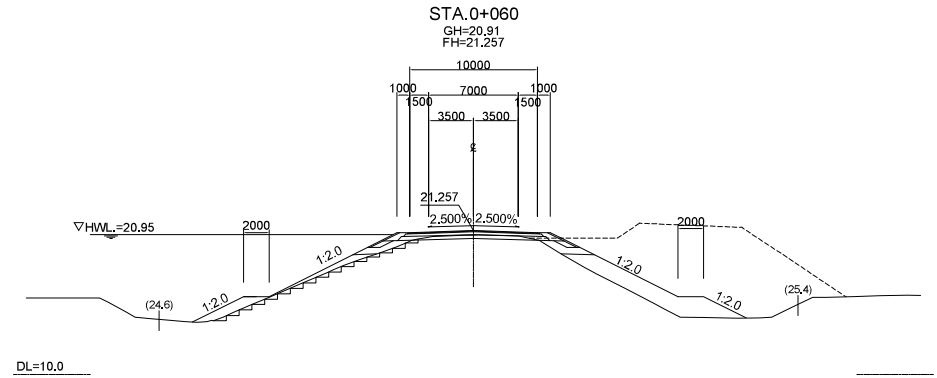
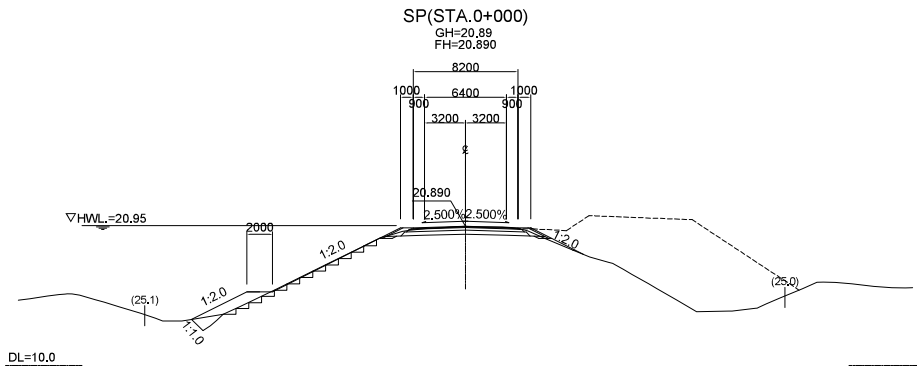
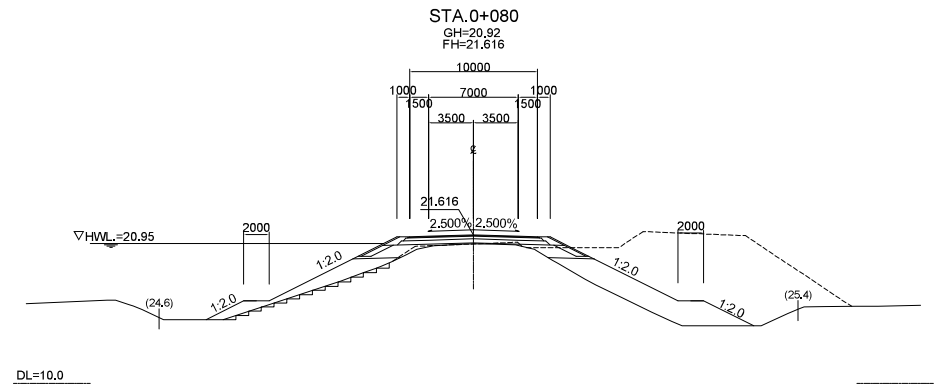
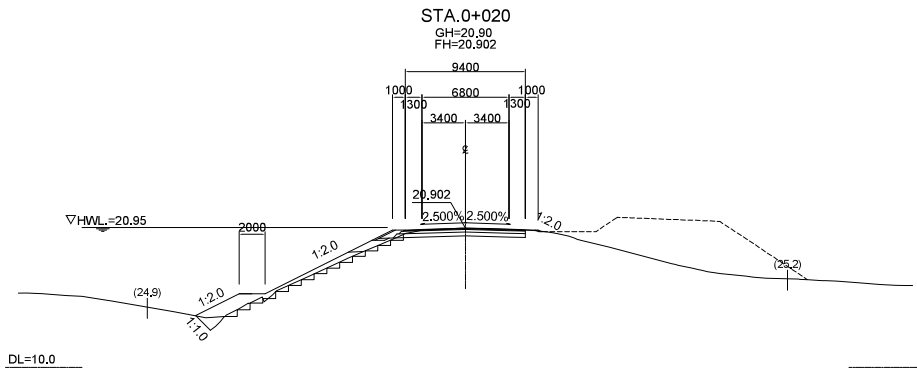
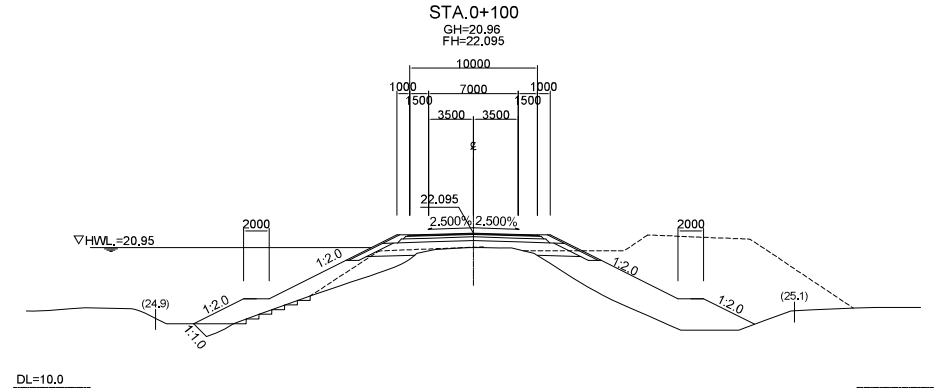
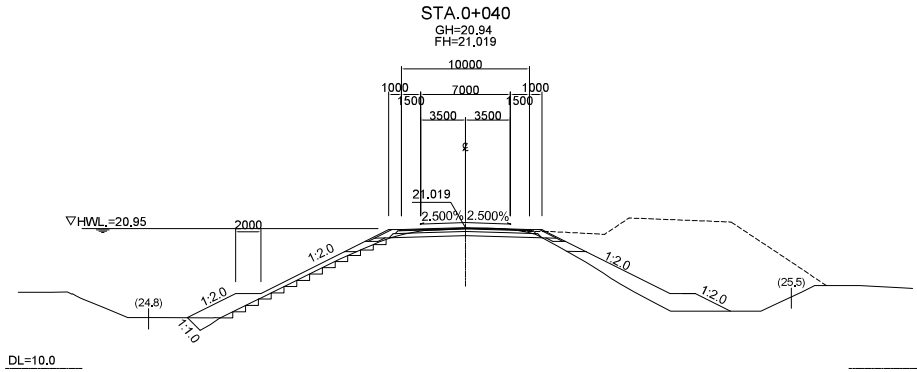
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
5_PreK Anlong Khle Bridge
TYPICAL CROSS SECTION OF APPROACH ROAD

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/100 | AK-07 |



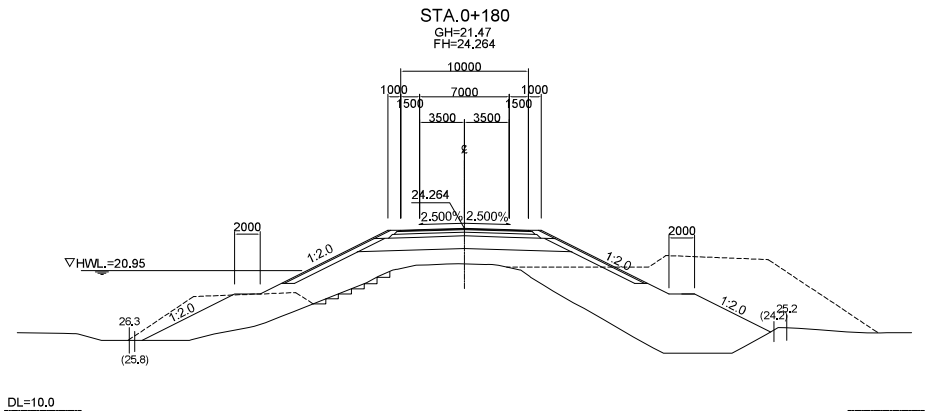
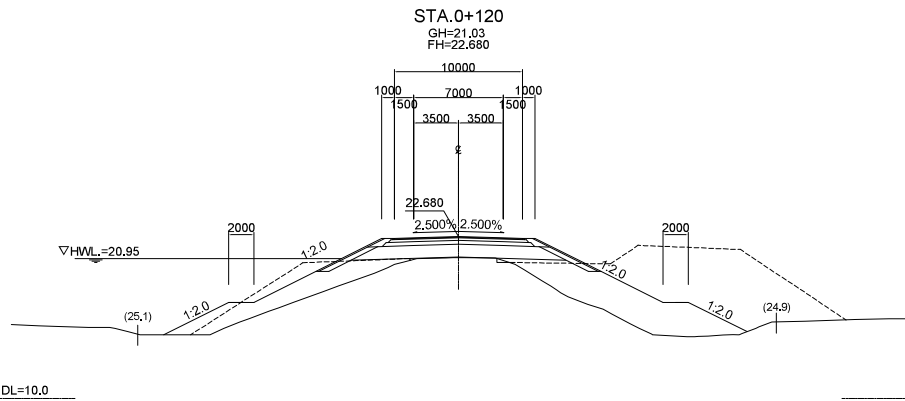
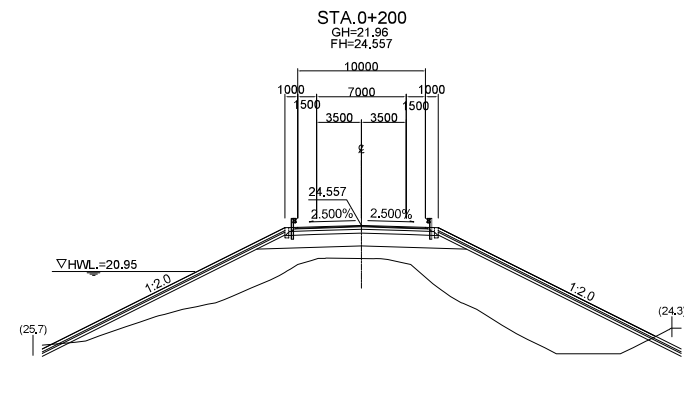
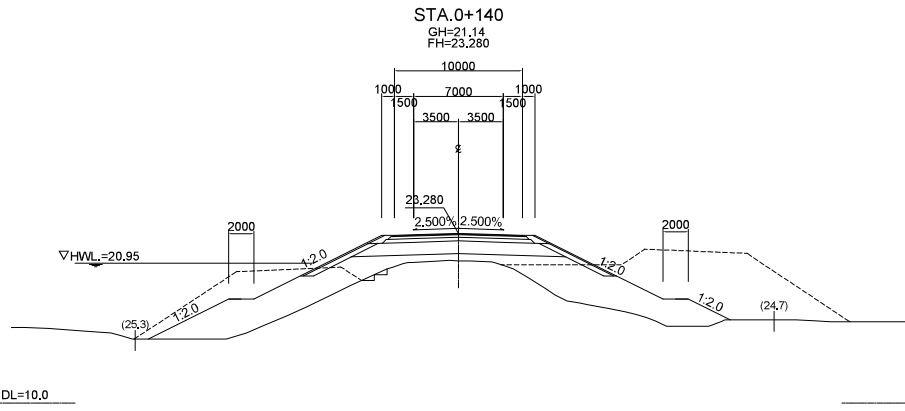
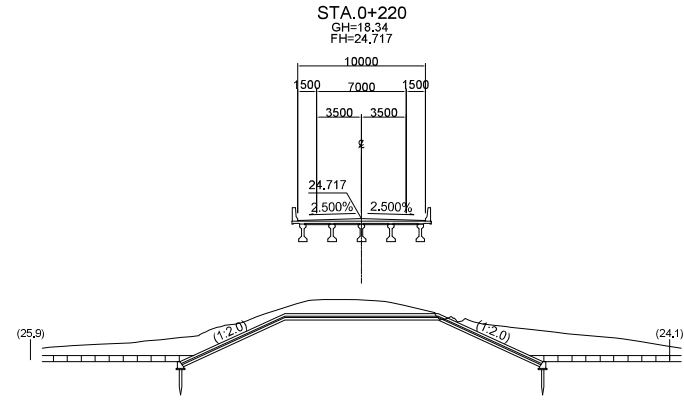
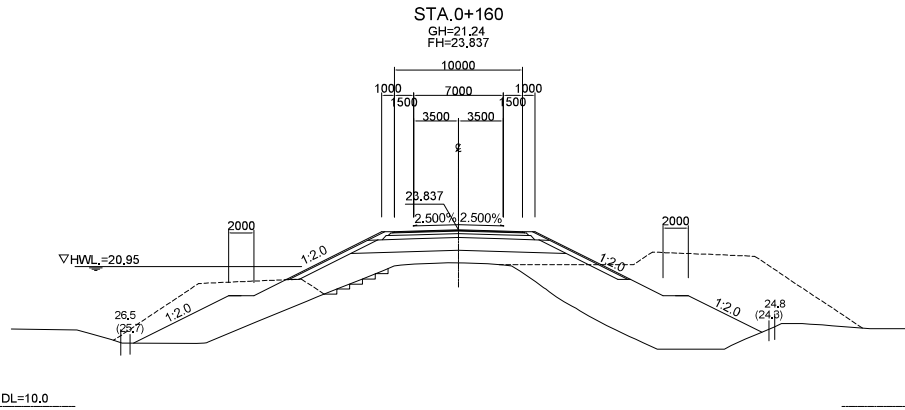
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
5_Prek Anlong Khle Bridge
CROSS SECTION OF APPROACH ROAD(1)

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/200 | AK-08 |



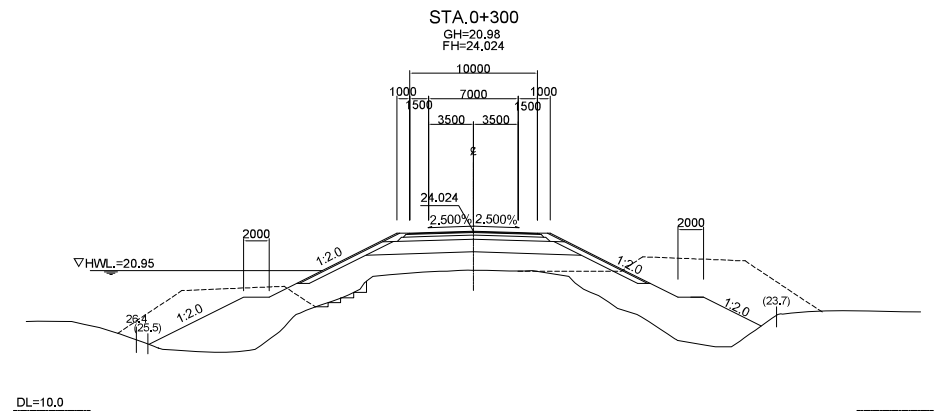
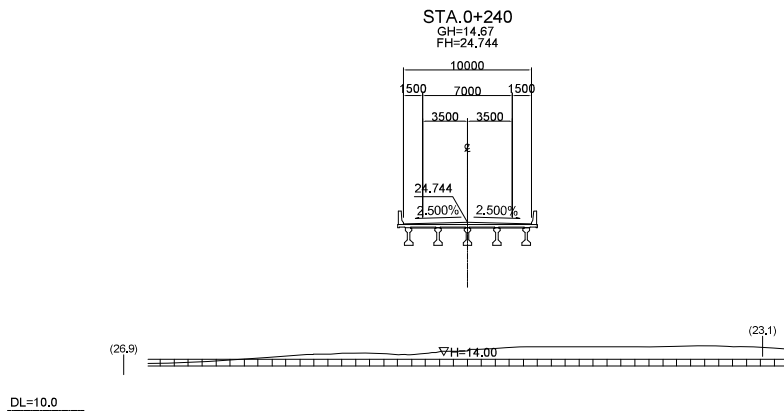
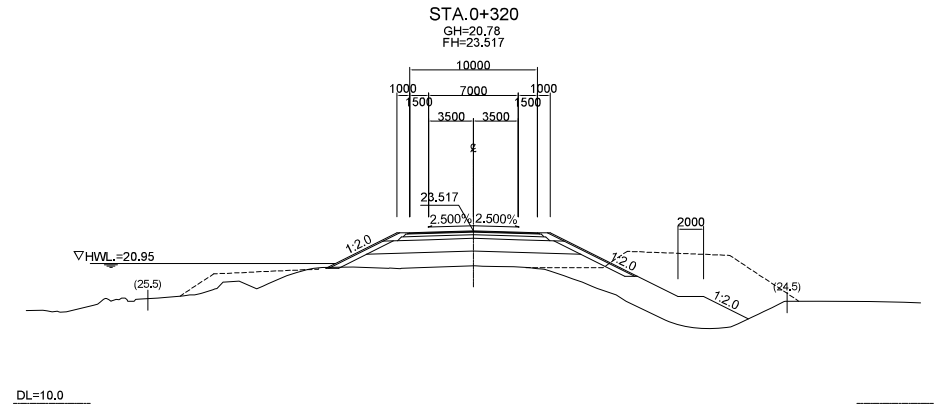
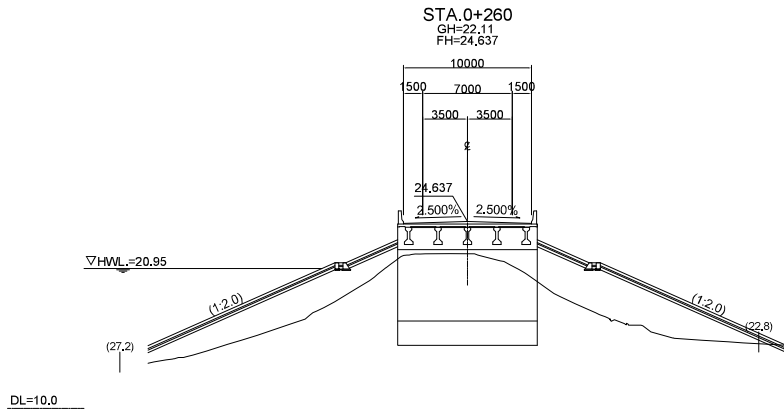
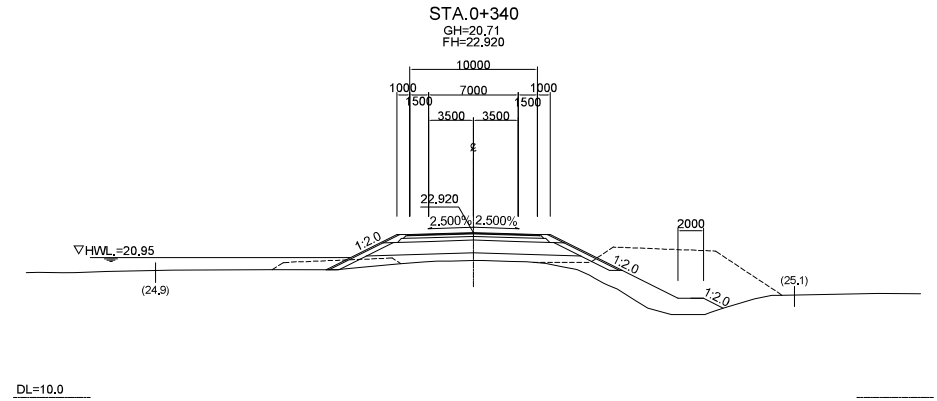
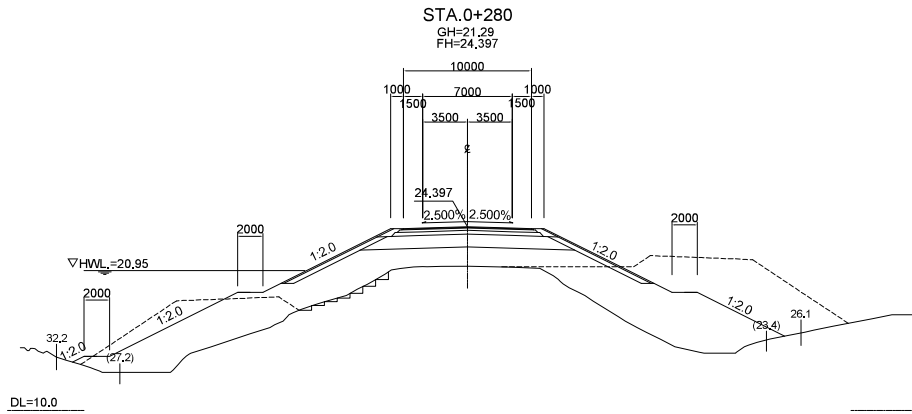
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
5_Prek Anlong Khle Bridge
CROSS SECTION OF APPROACH ROAD(2)

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/200 | AK-09 |



MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

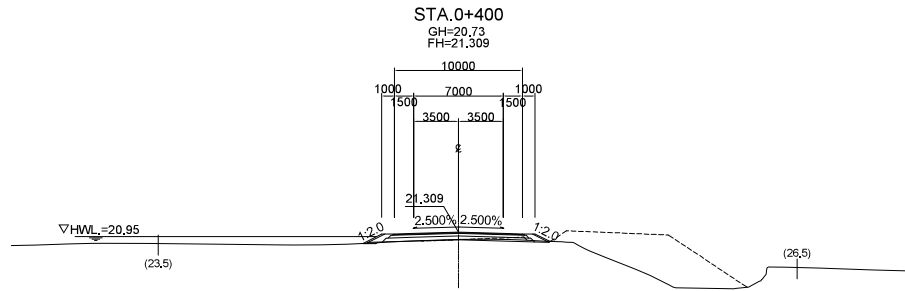
JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

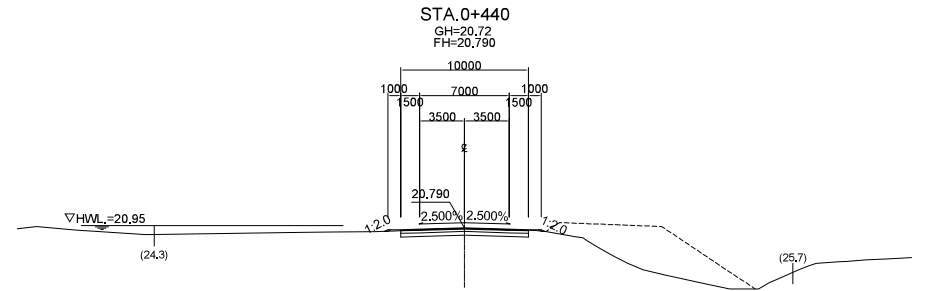
DRAWING TITLE:
5_PreK Anlong Khle Bridge
CROSS SECTION OF APPROACH ROAD(3)

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/200 | AK-10 |

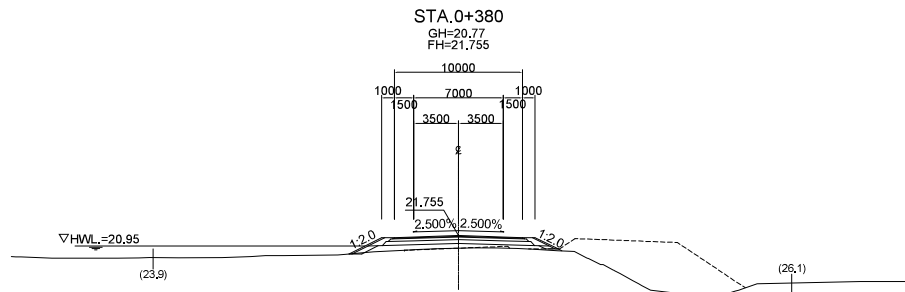
別添7-92



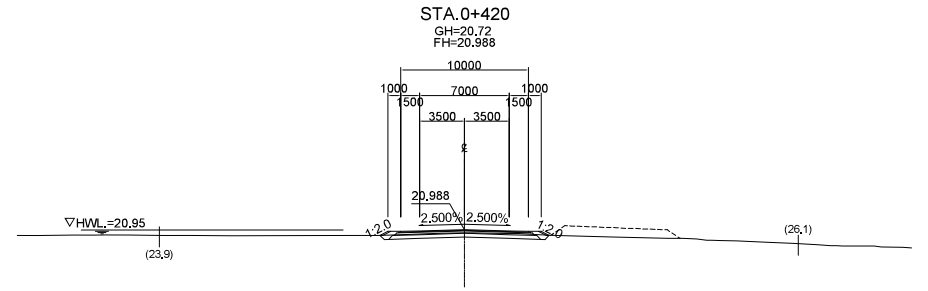
DL=10.0



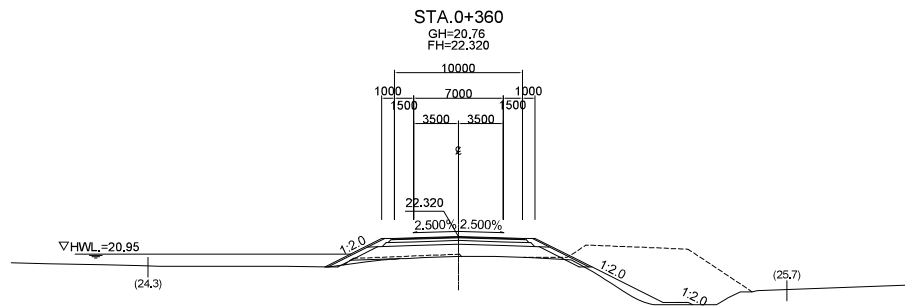
DL=10.0



DL=10.0



DL=10.0



DL=10.0

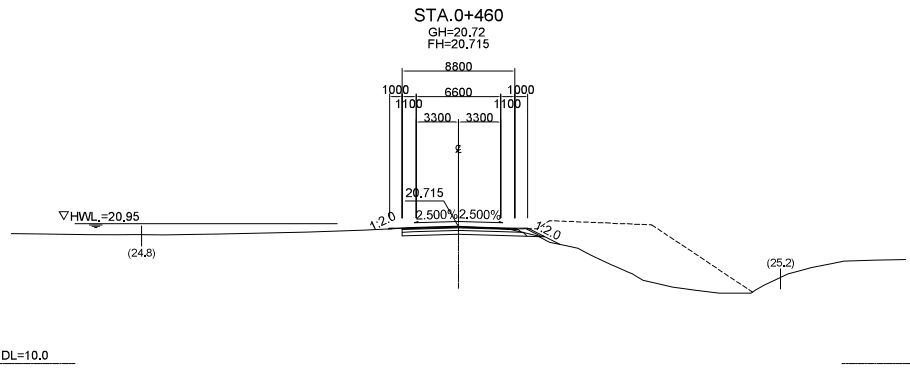
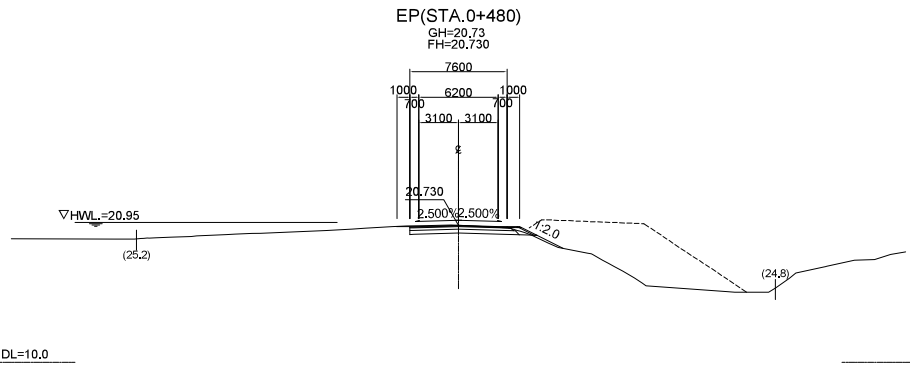
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

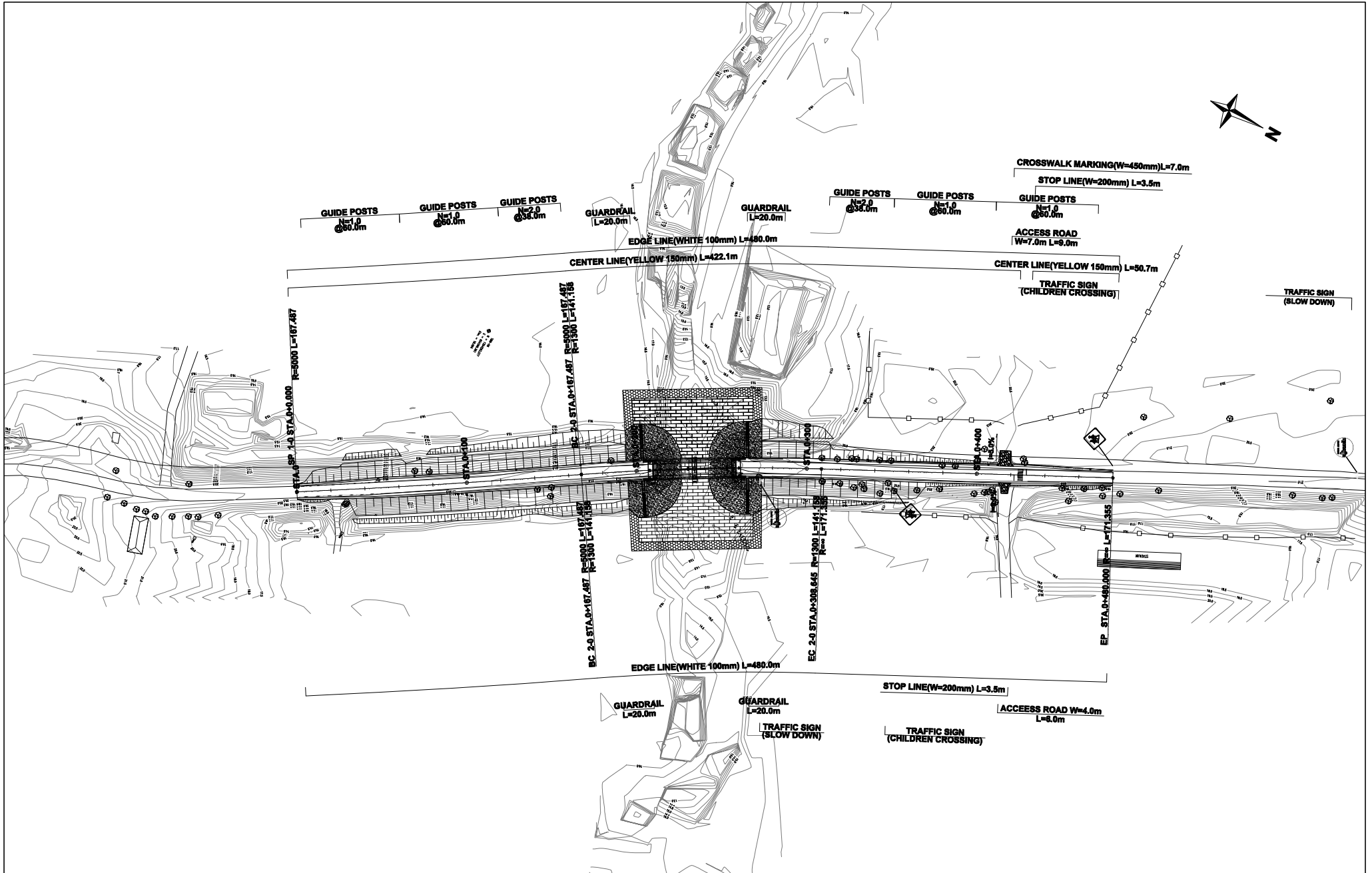
DRAWING TITLE:
5_PreK Anlong Khle Bridge
CROSS SECTION OF APPROACH ROAD(4)

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/200 | AK-11 |

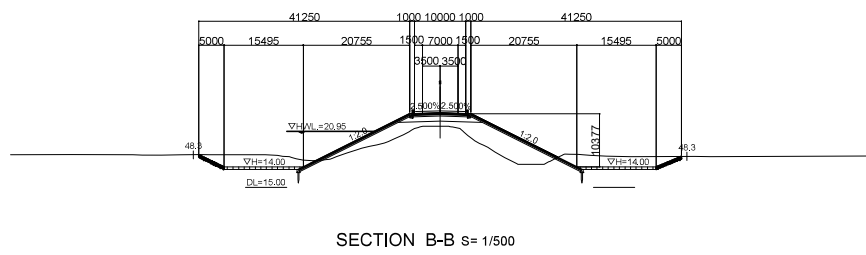
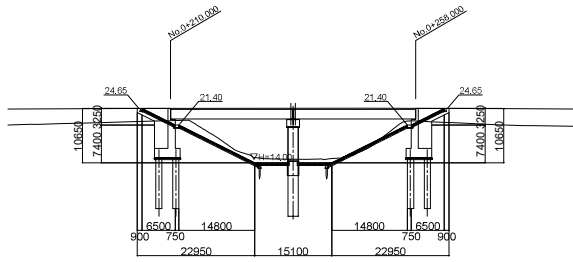
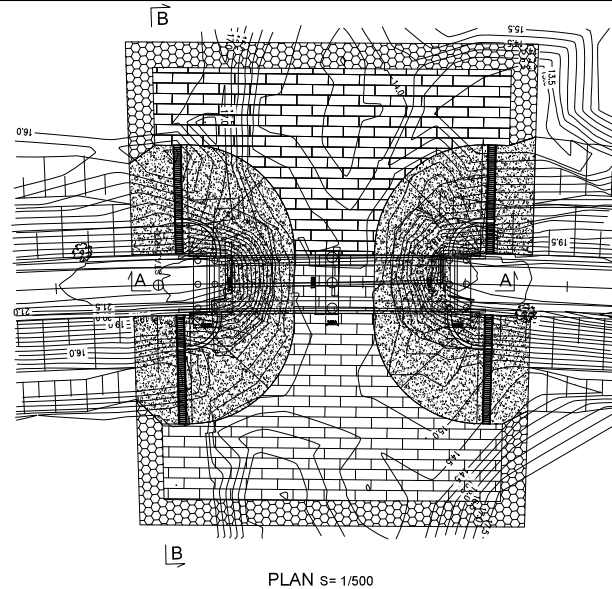


| | | | | | |
|--|---|--|--|----------------|-------------|
| MINISTRY OF PUBLIC WORKS AND TRANSPORT KINGDOM OF CAMBODIA | JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD. | PROJECT TITLE: PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT OF BRIDGES IN FLOOD-PRONE AREAS | DRAWING TITLE: 5_PreK Anlong Khle Bridge CROSS SECTION OF APPROACH ROAD(5) | SCALE(A1 SIZE) | DRAWING NO. |
| | | | | 1/200 | AK-12 |

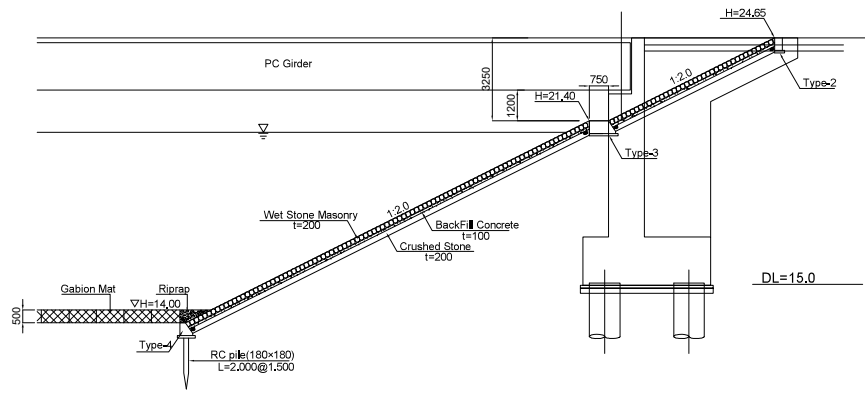
別添7-94



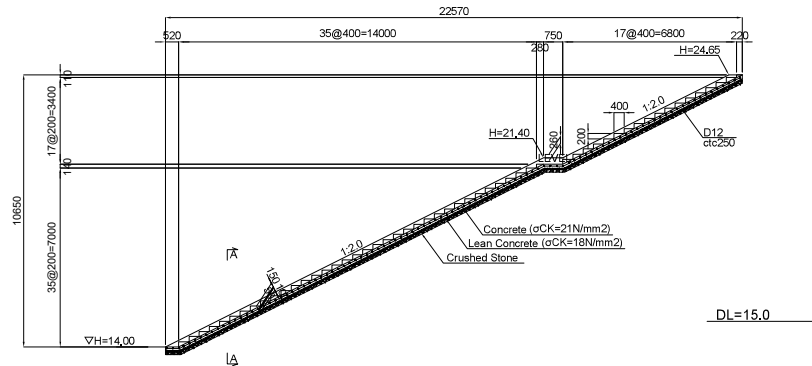
| | | | | | |
|---|---|---|---|---|------------------------------|
| <p>MINISTRY OF PUBLIC WORKS AND TRANSPORT KINGDOM OF CAMBODIA</p> | <p>JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD.</p> | <p>PROJECT TITLE: PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT OF BRIDGES IN FLOOD-PRONE AREAS</p> | <p>DRAWING TITLE: 5_Prek Anlong Khle Bridge PLAN OF APPROACH ROAD (ANCILLARY)</p> | <p>SCALE(AT SITE) 1/2,000 (1/1,000)</p> | <p>DRAWING NO. AK-13</p> |
|---|---|---|---|---|------------------------------|



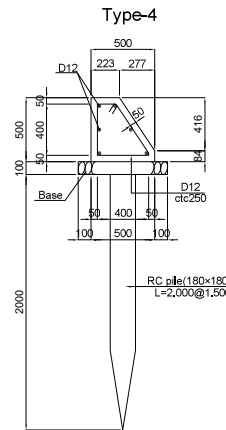
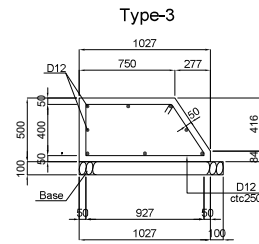
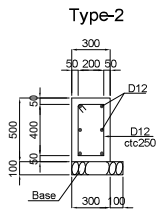
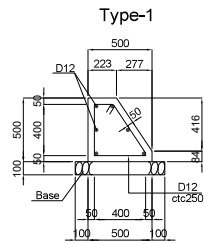
| | | | | | |
|--|---|--|--|----------------|-------------|
| MINISTRY OF PUBLIC WORKS AND TRANSPORT KINGDOM OF CAMBODIA | JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD. | PROJECT TITLE: PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT OF BRIDGES IN FLOOD-PRONE AREAS | DRAWING TITLE: 5_Prek Anlong Khle Bridge REVETMENT AND RIVER BED PROTECTION(1) | SCALE(A1 SIZE) | DRAWING NO. |
| | | | | AS SHOWN | AK-14 |



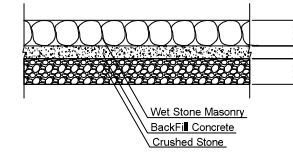
PROFILE :Scale 1/100



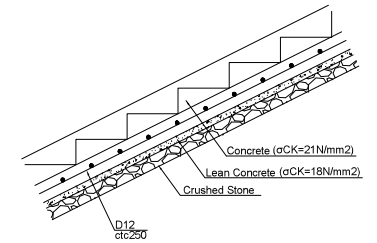
STAIRS :Scale 1/100



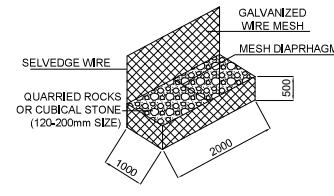
Details:Scale 1/20



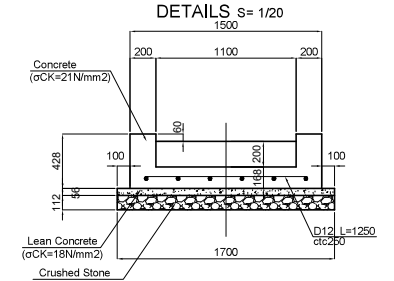
DETAILS S= 1/20



DETAILS S= 1/20



GABION MAT DETAIL
S = None Scale



Section A-A 1/20

MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

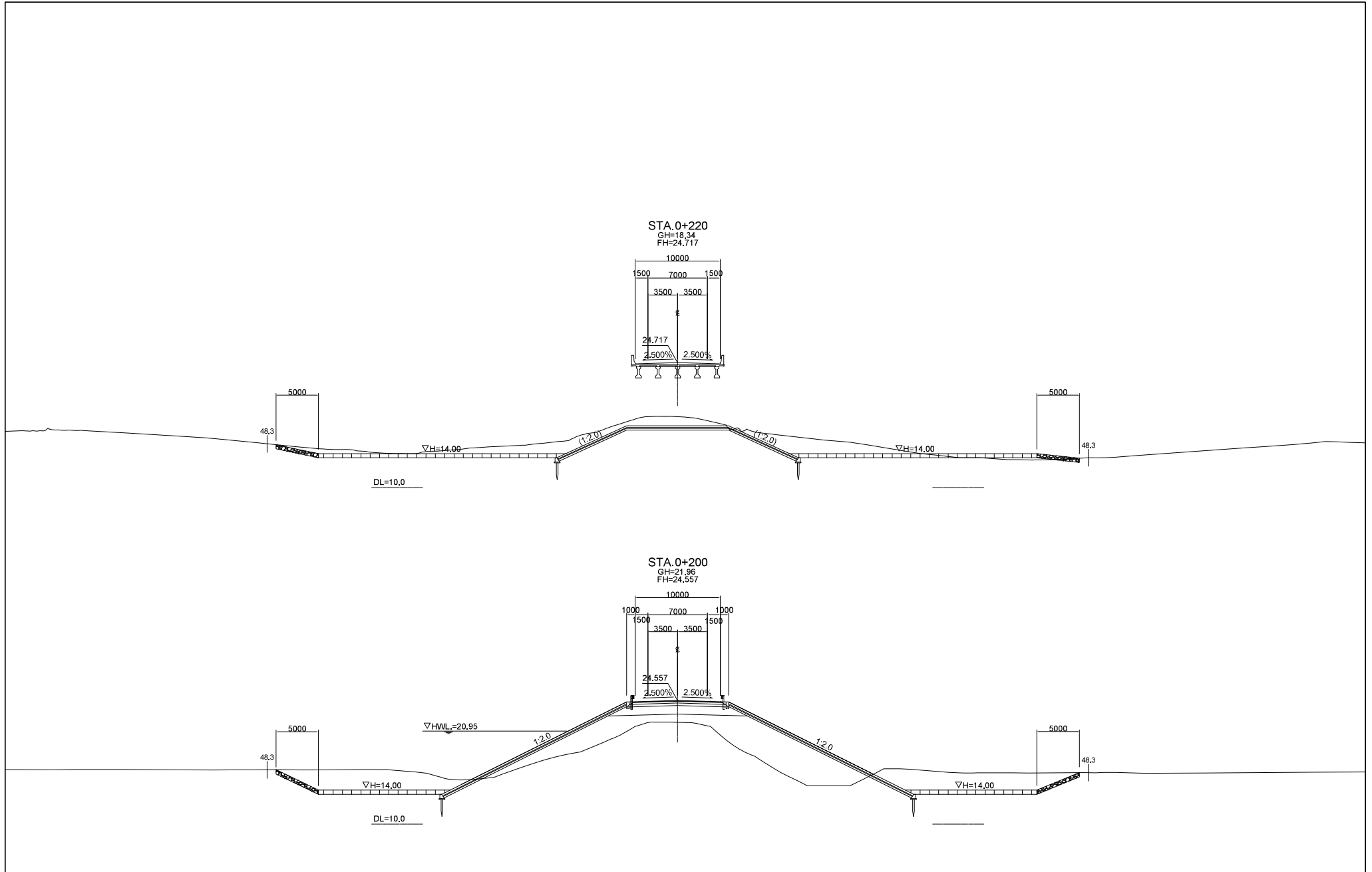
JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

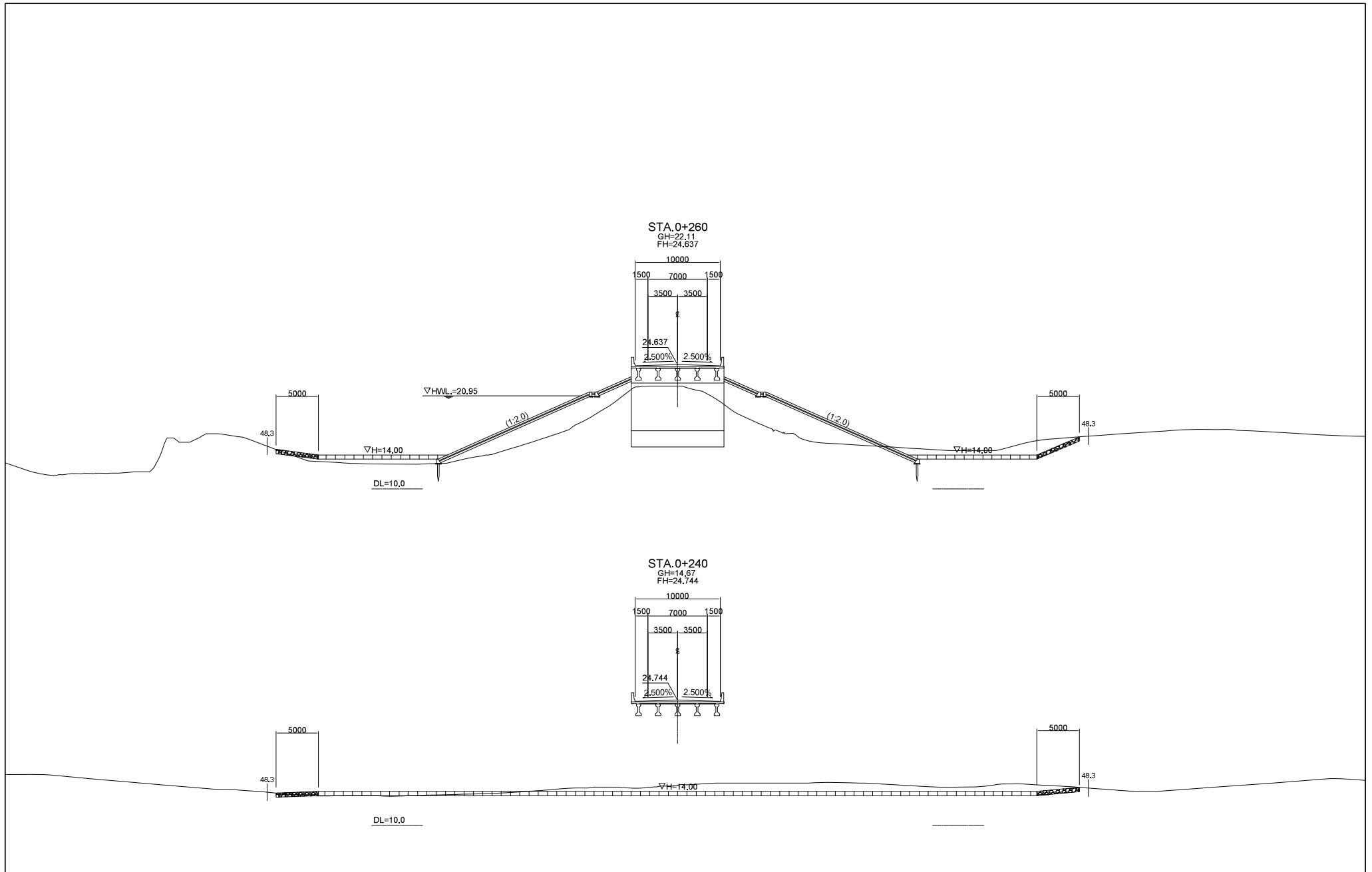
DRAWING TITLE:
5_Prek Anlong Khle Bridge
REVTMENT AND RIVER BED PROTECTION(2)

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| AS SHOWN | AK-15 |

別添7-97



| | | | | | |
|---|---|---|--|---------------------------------|------------------------------|
| <p>MINISTRY OF PUBLIC WORKS AND TRANSPORT KINGDOM OF CAMBODIA</p> | <p>JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD.</p> | <p>PROJECT TITLE: PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT OF BRIDGES IN FLOOD-PRONE AREAS</p> | <p>DRAWING TITLE: 5_Prek Anlong Khle Bridge REVTMENT AND RIVER BED PROTECTION(2)</p> | <p>SCALE(A1 SIZE) 1/200</p> | <p>DRAWING NO. AK-16</p> |
|---|---|---|--|---------------------------------|------------------------------|



| | | | | | |
|--|---|--|--|-------------------------|----------------------|
| MINISTRY OF PUBLIC WORKS AND TRANSPORT KINGDOM OF CAMBODIA | JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD. | PROJECT TITLE: PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT OF BRIDGES IN FLOOD-PRONE AREAS | DRAWING TITLE: 5_PreK Anlong Khle Bridge REVETMENT AND RIVER BED PROTECTION(3) | SCALE(A1 SIZE) 1/200 | DRAWING NO. AK-17 |
|--|---|--|--|-------------------------|----------------------|

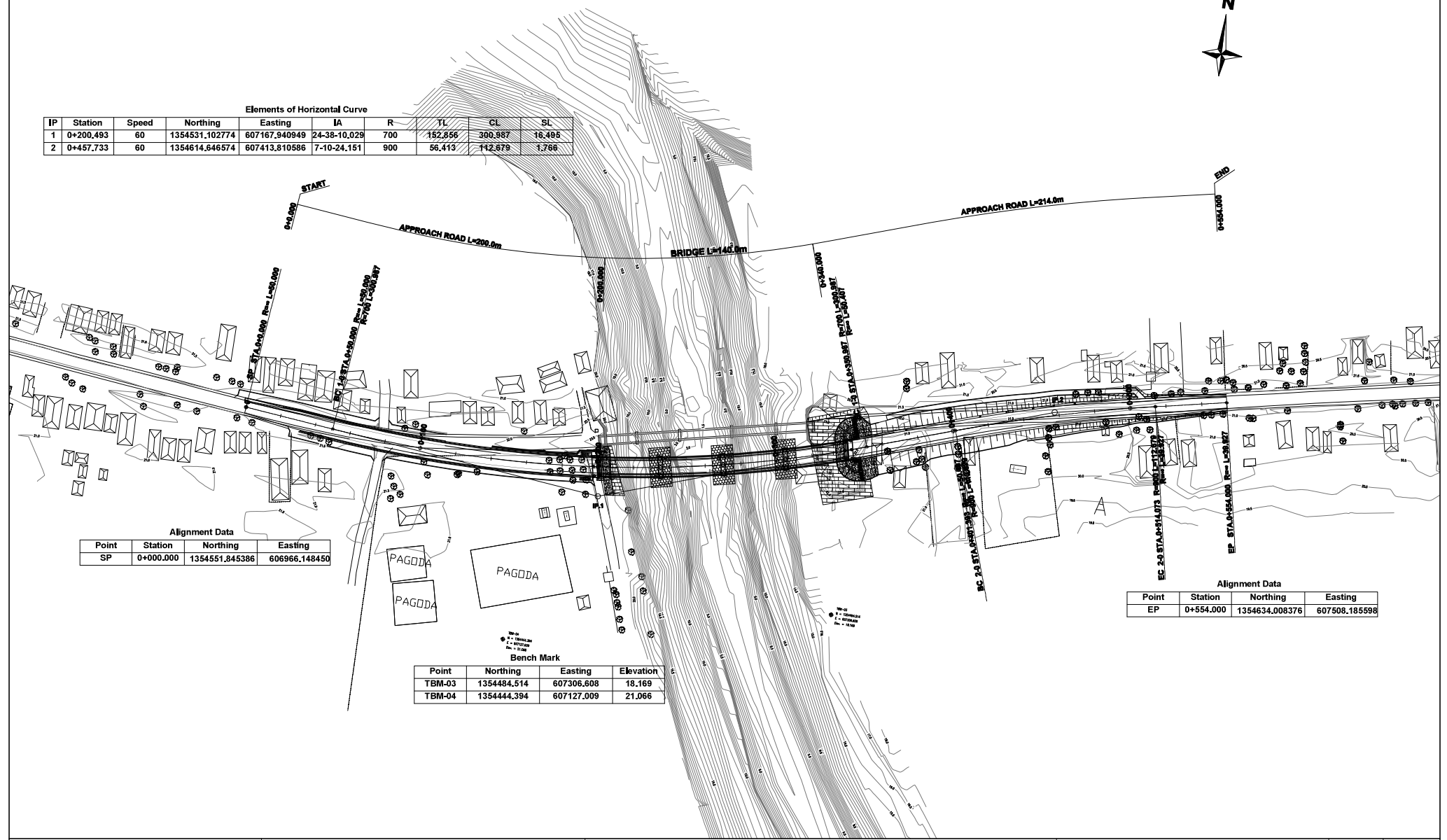
Prek Chhloung Bridge

別添7-100



Elements of Horizontal Curve

| IP | Station | Speed | Northing | Easting | IA | R | TL | CI | SL |
|----|-----------|-------|----------------|---------------|--------------|-----|---------|---------|--------|
| 1 | 0+200.493 | 60 | 1354531.102774 | 607167.940949 | 24-38-10.029 | 700 | 152.856 | 300.987 | 16.495 |
| 2 | 0+457.733 | 60 | 1354614.646574 | 607413.810586 | 7-10-24.151 | 900 | 56.413 | 142.679 | 1.766 |



Alignment Data

| Point | Station | Northing | Easting |
|-------|-----------|----------------|---------------|
| SP | 0+000.000 | 1354551.845386 | 606966.148450 |

Alignment Data

| Point | Station | Northing | Easting |
|-------|-----------|----------------|---------------|
| EP | 0+554.000 | 1354634.008376 | 607508.185598 |

Bench Mark

| Point | Northing | Easting | Elevation |
|--------|-------------|------------|-----------|
| TBM-03 | 1354484.514 | 607306.608 | 18.169 |
| TBM-04 | 1354444.394 | 607127.009 | 21.066 |

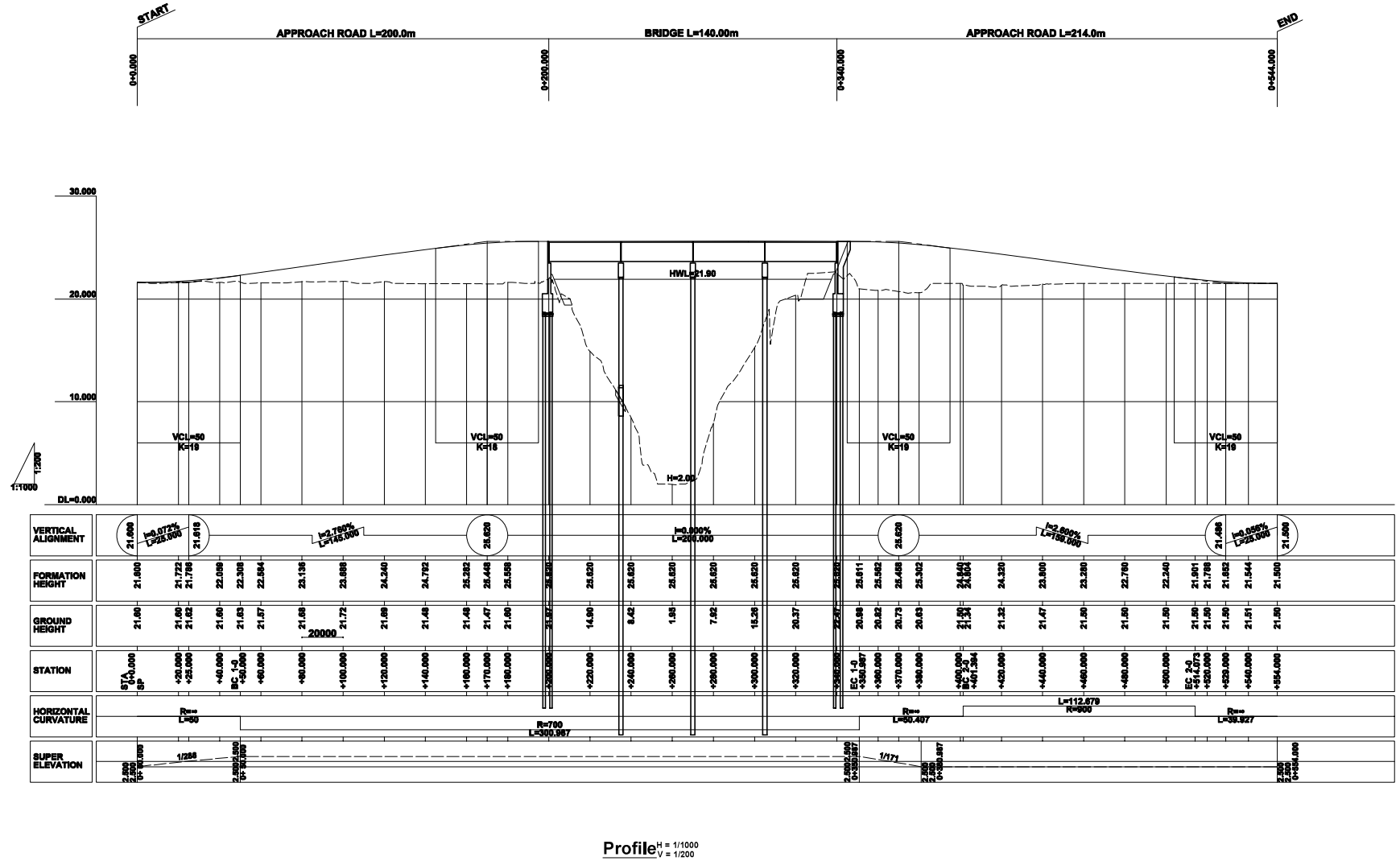
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
6_Prek Chhlong Bridge
GENERAL PLAN

| SCALE(AT SIZE) | DRAWING NO. |
|----------------------|-------------|
| 1/2,000 (1/1,000) | PC-01 |



Profile $H = 1/1000$
 $V = 1/200$

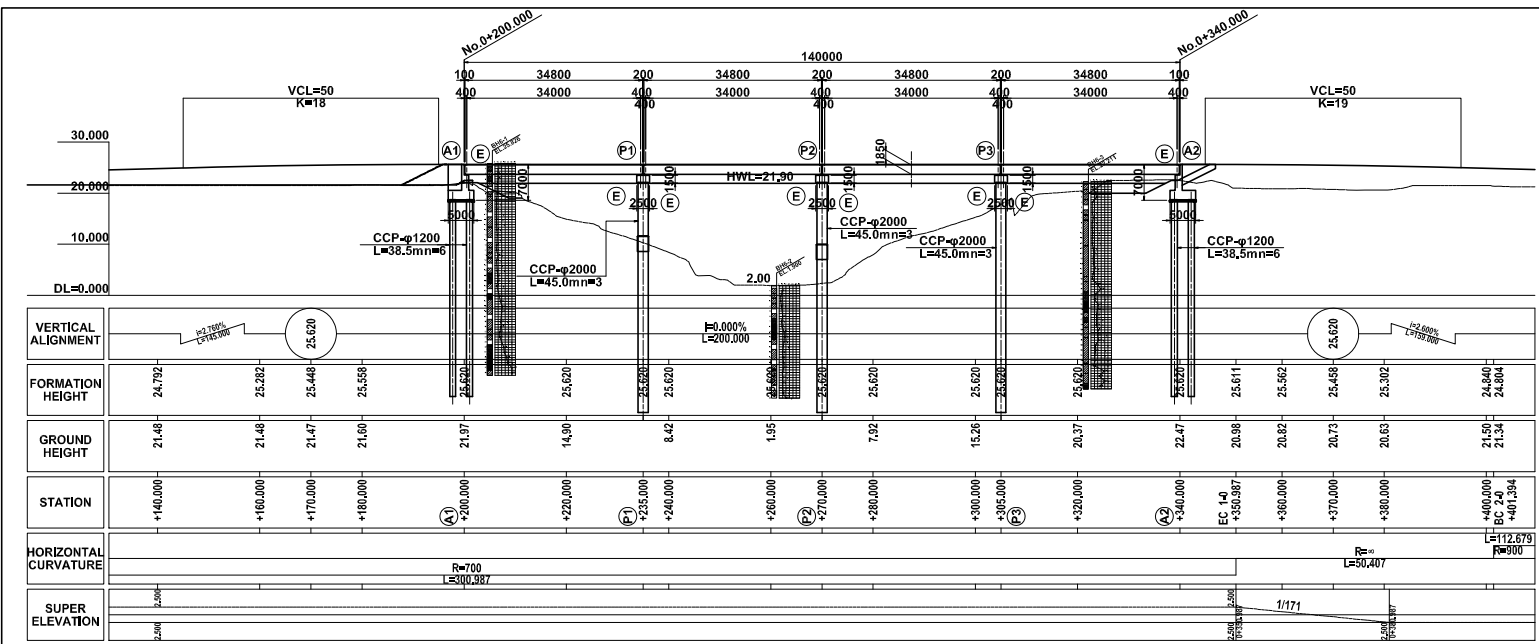
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

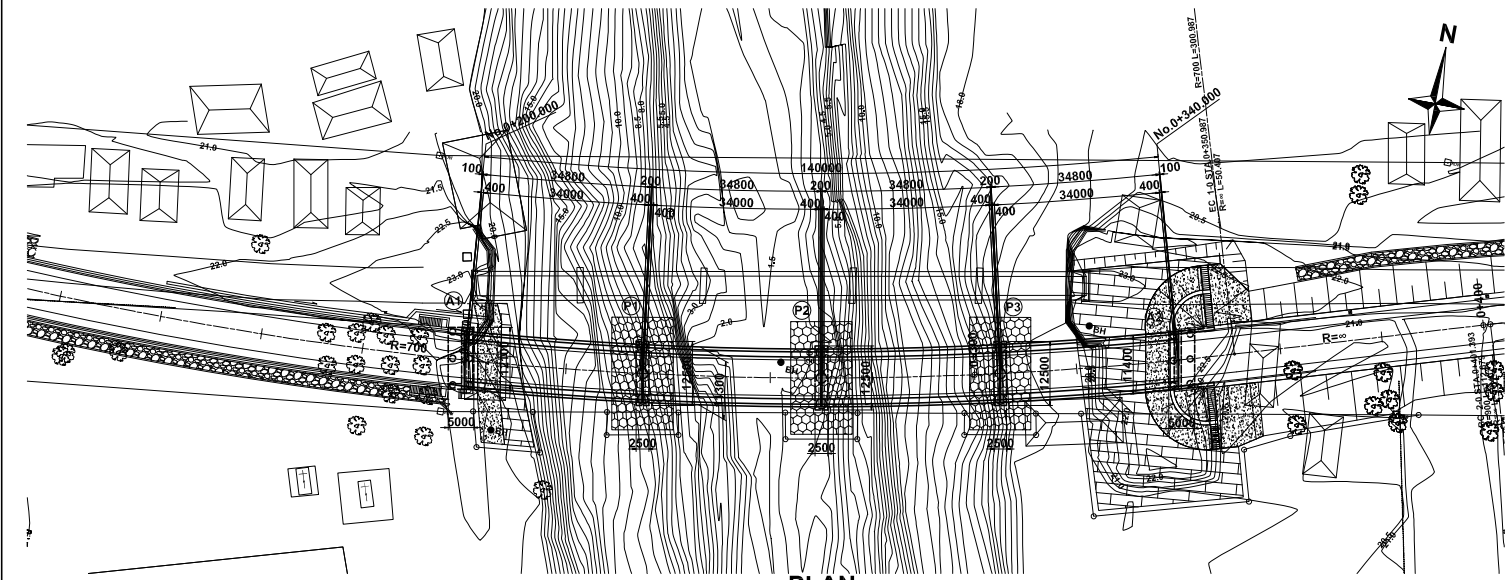
PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
6_Prek Chhlong Bridge
GENERAL PROFILE

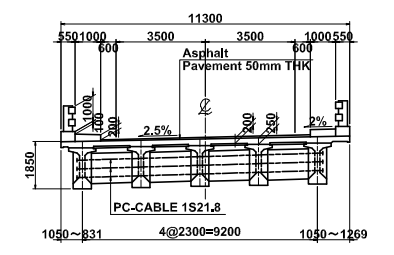
| | |
|----------------|-------------|
| SCALE(A1 SIZE) | DRAWING NO. |
| AS SHOWN | PC-02 |



PROFILE S=1:500



PLAN S=1:500



CROSS SECTION S=1:100

DESIGN CRITERIA

| | |
|------------------------|--|
| ROAD CLASS | SECONDARY PRINCIPAL ROAD |
| DESIGN SPEED | 60km/h |
| LIVE LOAD | AASHTO HS20-44x125% OR EQUIVALENT |
| BRIDGE LENGTH | 140,000m |
| SPAN LENGTH | 34,000+34,000+34,000+34,000m |
| TOTAL WIDTH | 2x3.5m(Carriage Way)+2x0.6m(Shoulder) +2x1.0m(Side Walk) |
| SEISMIC COEFFICIENT | kt=0.05(L1) |
| SUPER STRUCTURE TYPE | PC I-Girder |
| SUBSTRUCTURE TYPE | REVERSED T-ABUTMENT, PILE BENT PIRE |
| FOUNDATION TYPE | CAST-IN PLACE CONCRETE PILE(A1,P1,P2,P3,A2) |
| SPECIFICATION CRITERIA | Bridge Design Standard (CAM,PW,04,102,99), 2003 DESIGN SPECIFICATIONS OF HIGHWAY BRIDGES (JAPAN ROAD ASSOCIATION) |

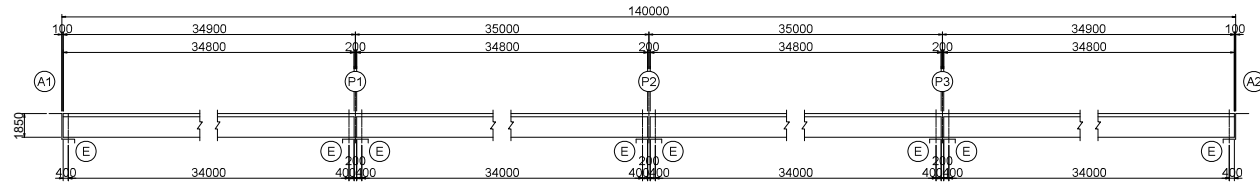
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

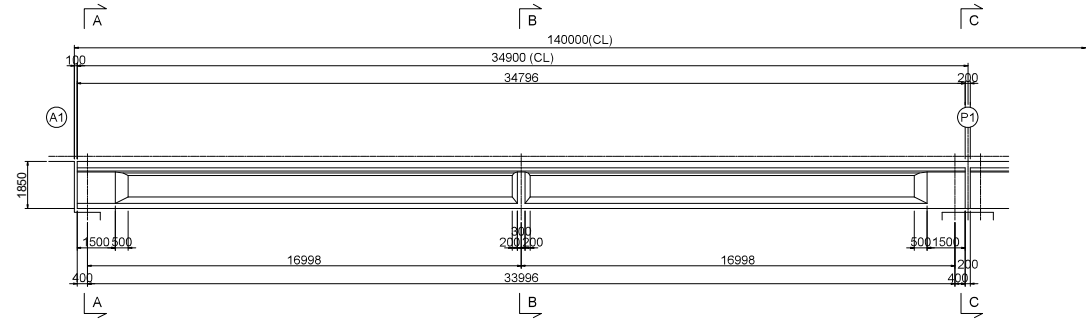
PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
6_Prek Chhloung Bridge
GENERAL VIEW OF BRIDGE

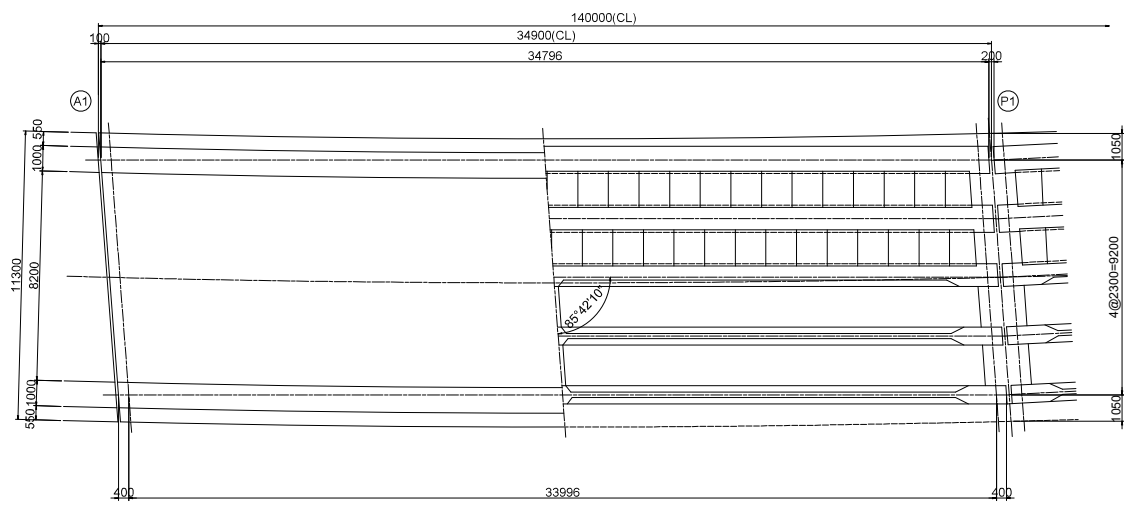
| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| AS SHOWN | PC-03 |



SIDE ELEVATION S=1/200



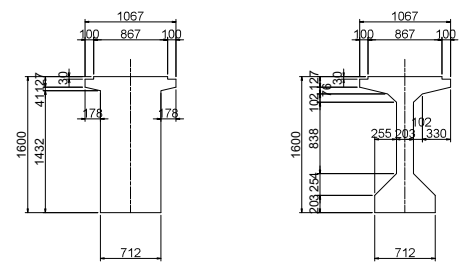
SIDE ELEVATION S=1/100



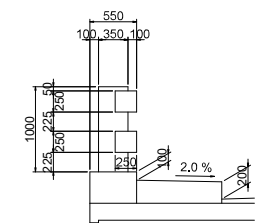
PLAN S=1/100

| DESIGN CRITERIA | |
|-----------------|----------------------------------|
| CATEGORY | PRESTRESSED CONCRETE ROAD BRIDGE |
| BRIDGE LENGTH | 140,000 m |
| WIDTH | 11,300 m |
| LIVE-LOAD | HS20-44x1.25 |
| ANGLE OF SKEW | 85°42'10" 88°34'03" |

| MATERIALS | | |
|--------------|------------|---|
| CONCRETE | GIRDER | σ _{ck} =45,0 N/mm ² |
| | CROSS BEAM | σ _{ck} =45,0 N/mm ² |
| | DECK SLAB | σ _{ck} =40,0 N/mm ² |
| PC STEEL | GIRDER | 12S12,7(SWPR7BL) |
| | CROSS BEAM | 1S21,8(SWPR19) |
| DEFORMED BAR | Grade 400 | |



PC GIRDER S=1/30



DETAILS OF RAILING S=1/30

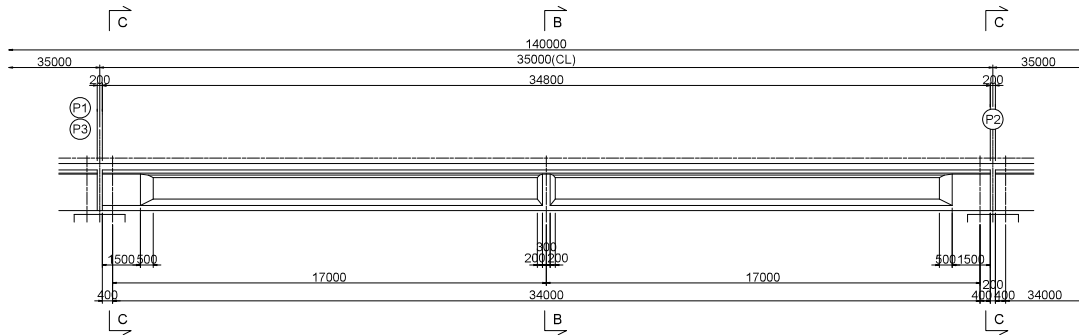
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

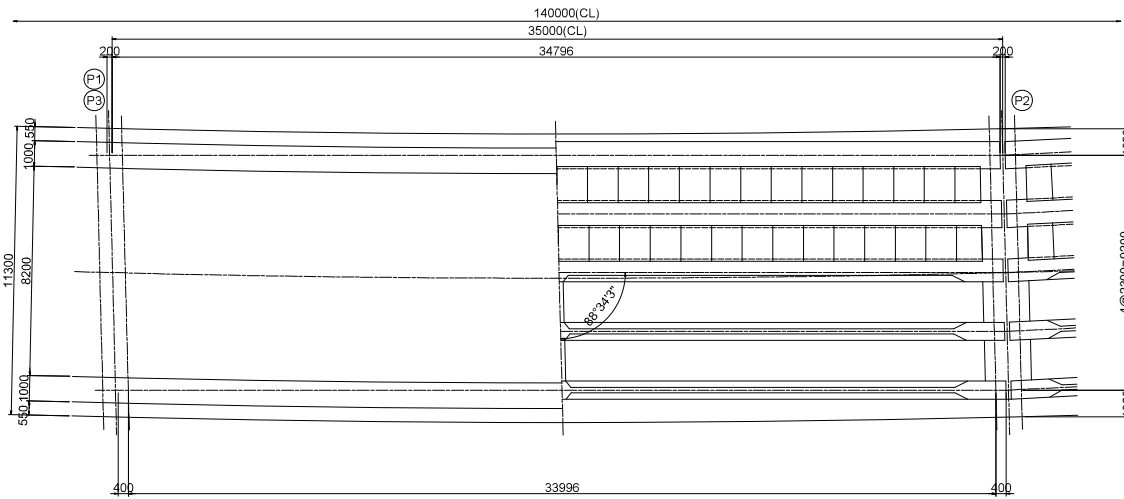
PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
6_ Prek Chhloung Bridge
STRUCTURE DRAWING(1)

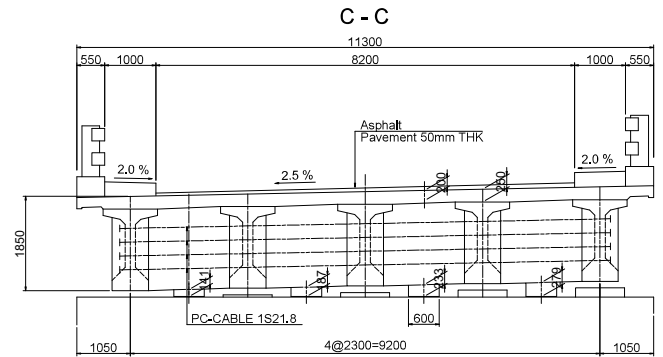
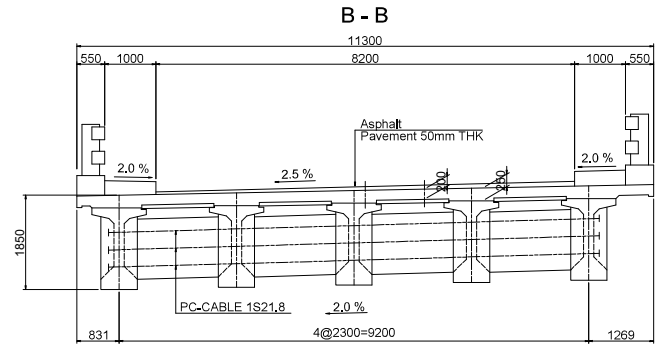
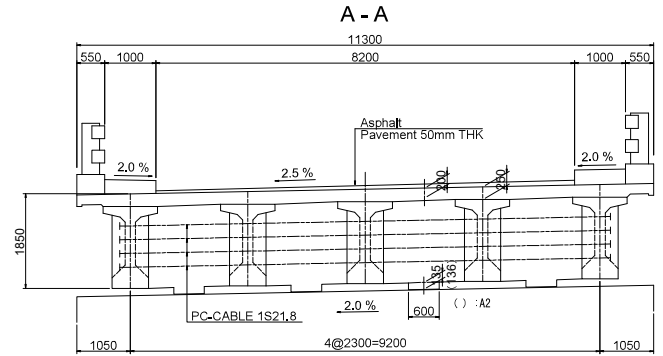
| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| AS SHOWN | PC-04 |



SIDE ELEVATION S=1/100



PLAN S=1/100



CROSS SECTION S=1/50

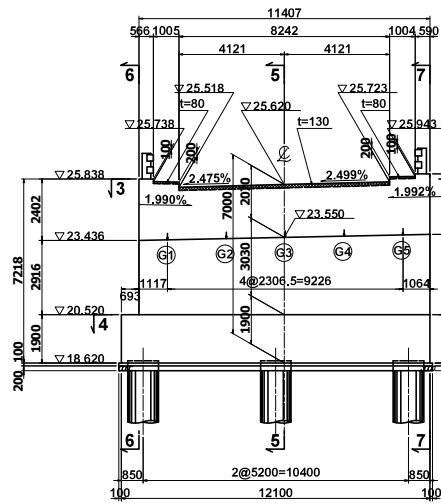
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

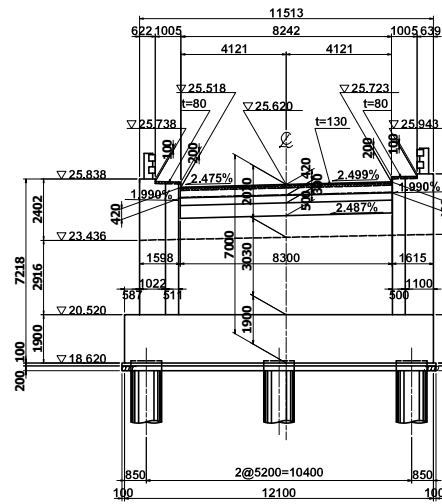
PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
6_ Prek Chhlong Bridge
STRUCTURE DRAWING(2)

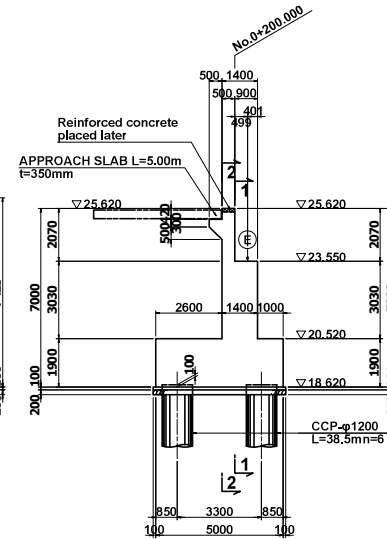
| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| AS SHOWN | PC-05 |



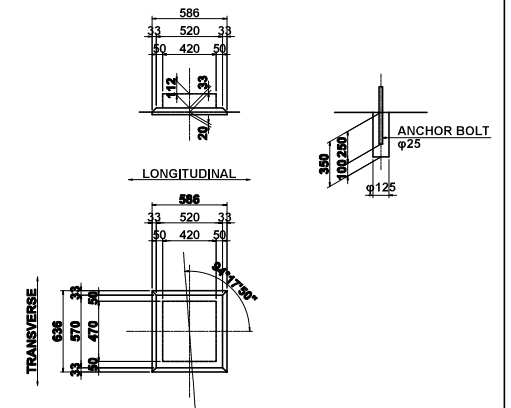
1-1



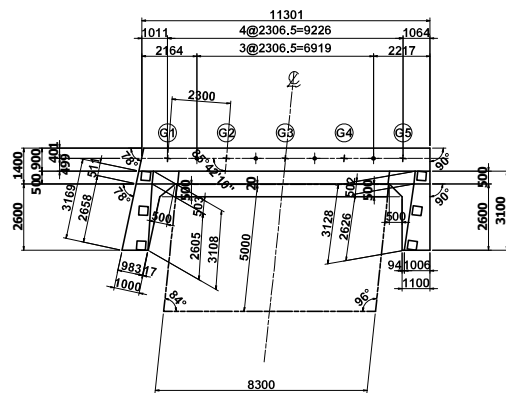
2-2



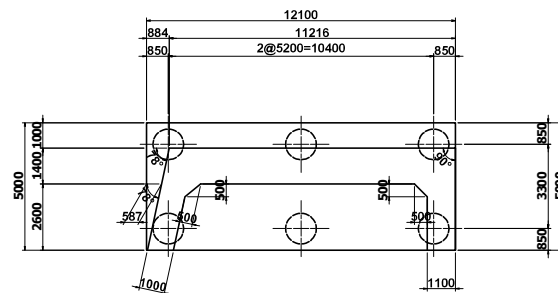
5-5



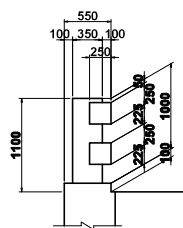
DETAIL S=1/20



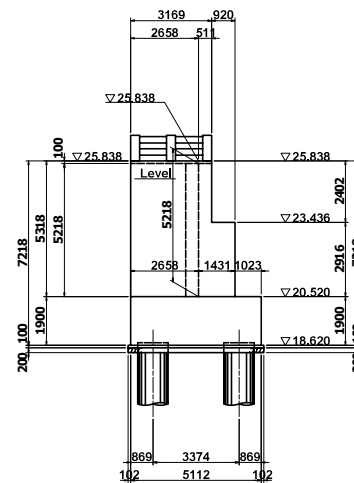
3-3



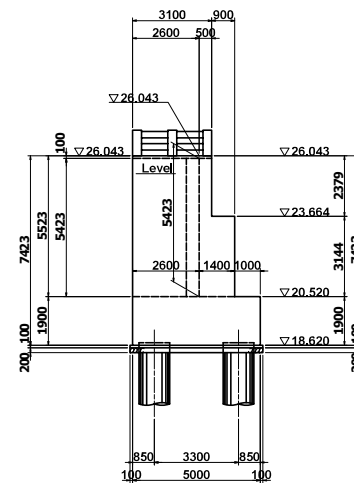
4-4



DETAIL S=1/30



6-6



7-7

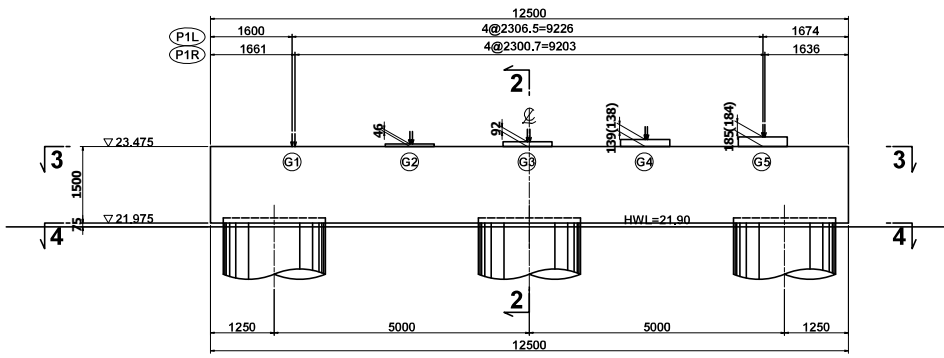
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

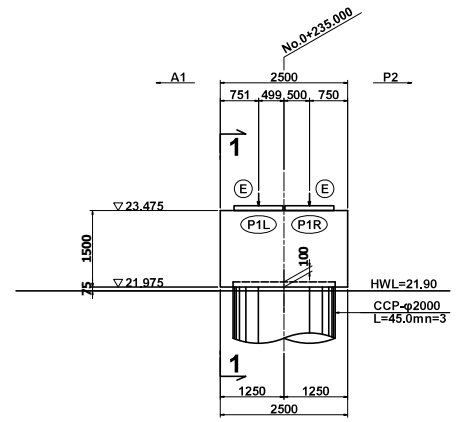
PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
6_ Prek Chhloung Bridge
STRUCTURAL DRAWING OF A1 ABUTMENT

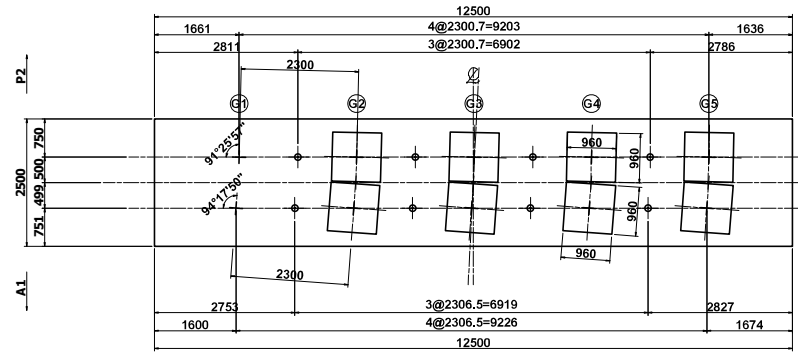
| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/100 | PC-06 |



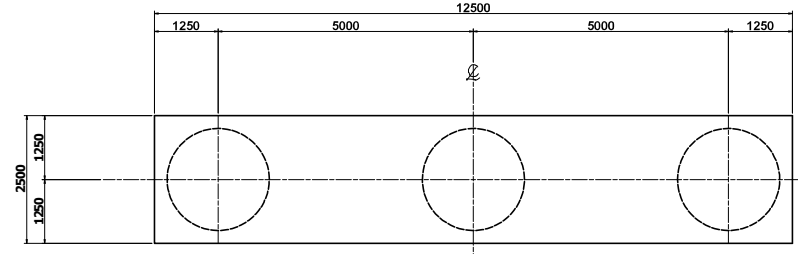
1-1



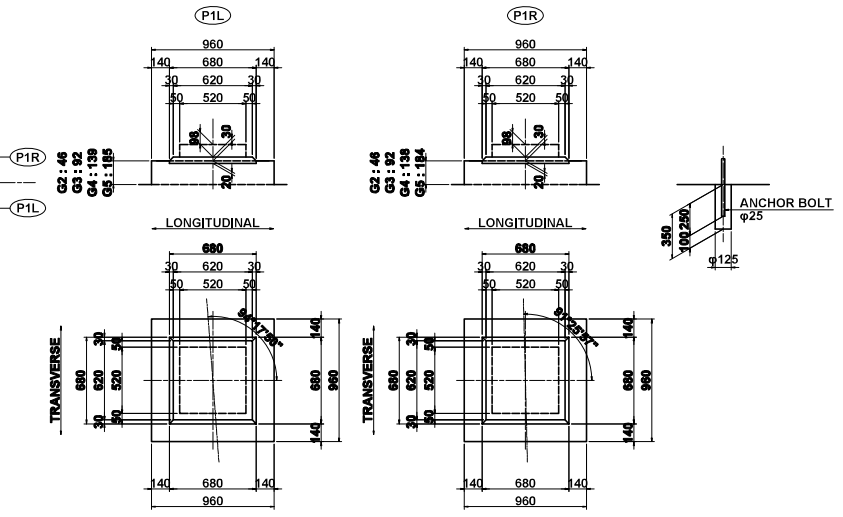
2-2



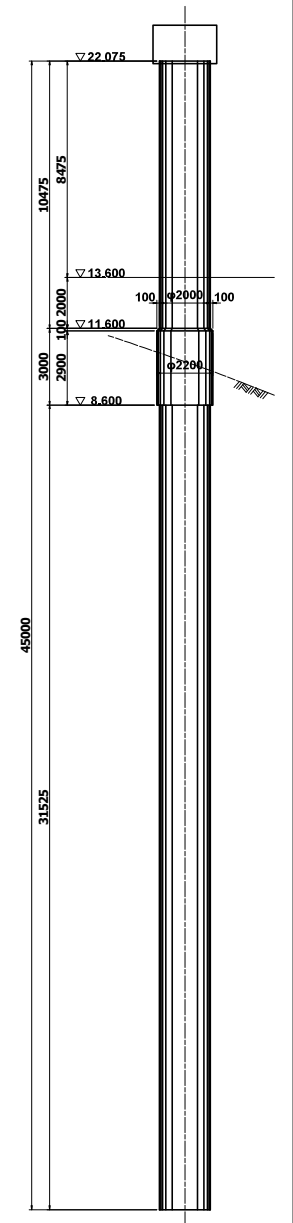
3-3



4-4



DETAIL S=1/20



PROFILE S=1/100

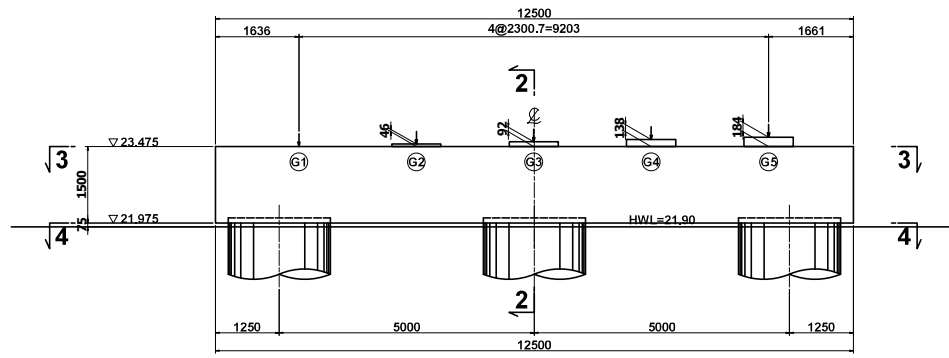
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

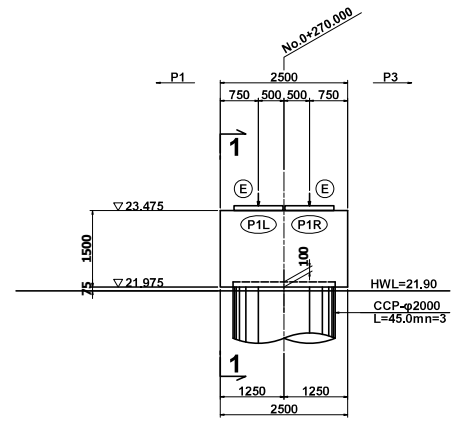
PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
6_ Prek Chhloung Bridge
STRUCTURAL DRAWING OF P1 BRIDGE PIER

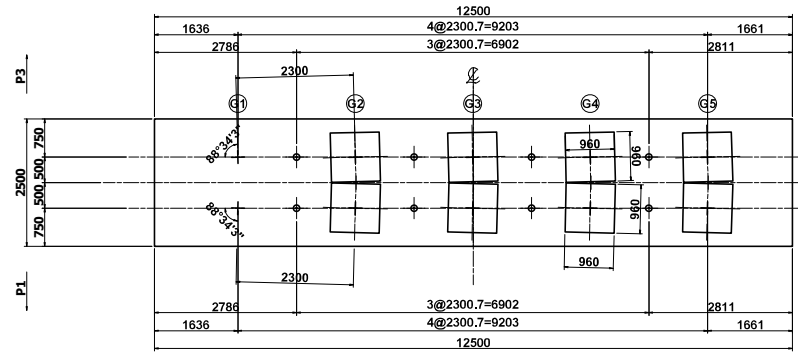
| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/50 | PC-07 |



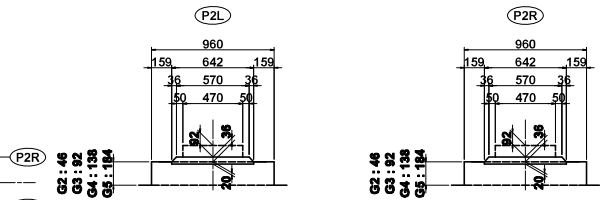
1-1



2-2

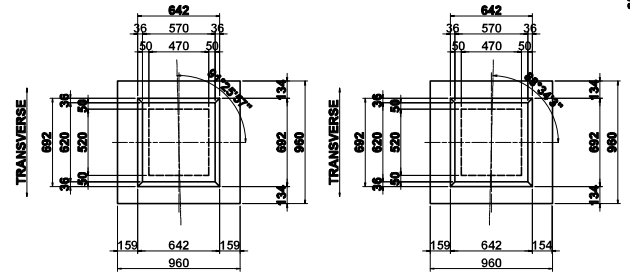


3-3



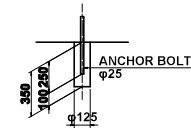
LONGITUDINAL

LONGITUDINAL



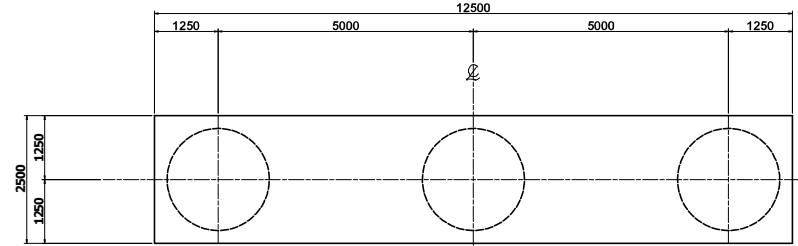
TRANSVERSE

TRANSVERSE

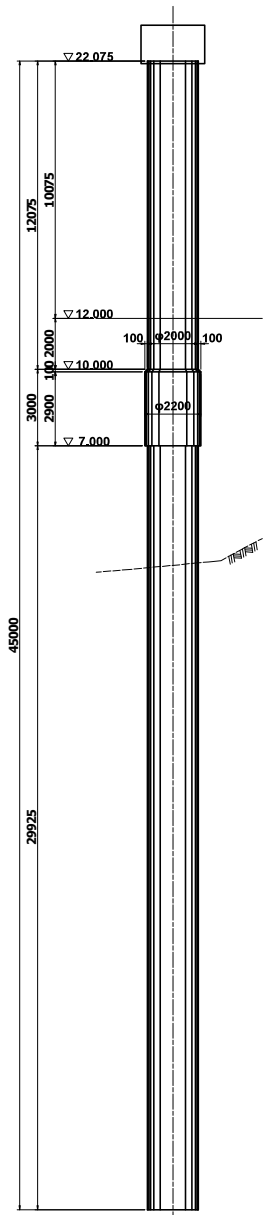


ANCHOR BOLT φ25

DETAIL S=1/20



4-4



PROFILE S=1/100

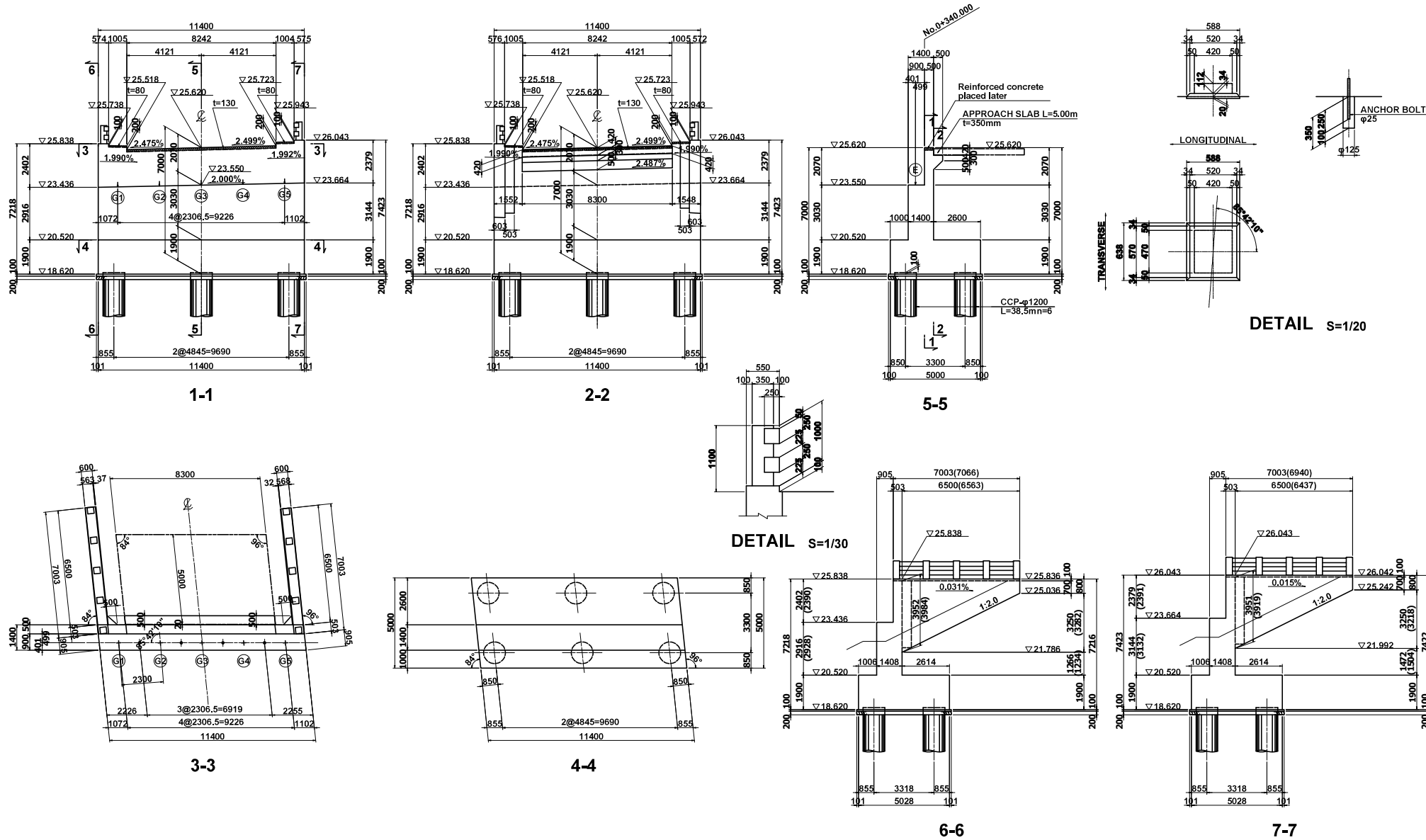
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
6_ Prek Chhloung Bridge
STRUCTURAL DRAWING OF P2 BRIDGE PIER

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/50 | PC-08 |



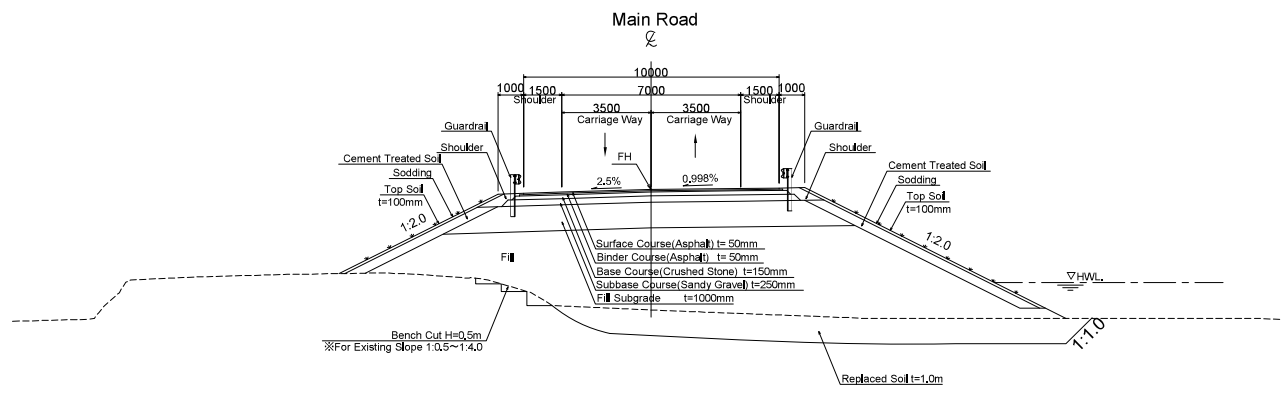
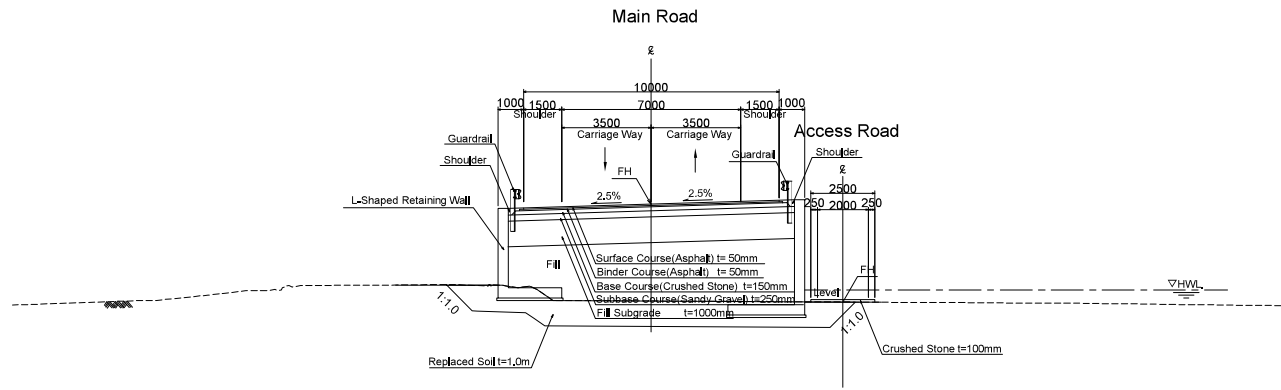
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

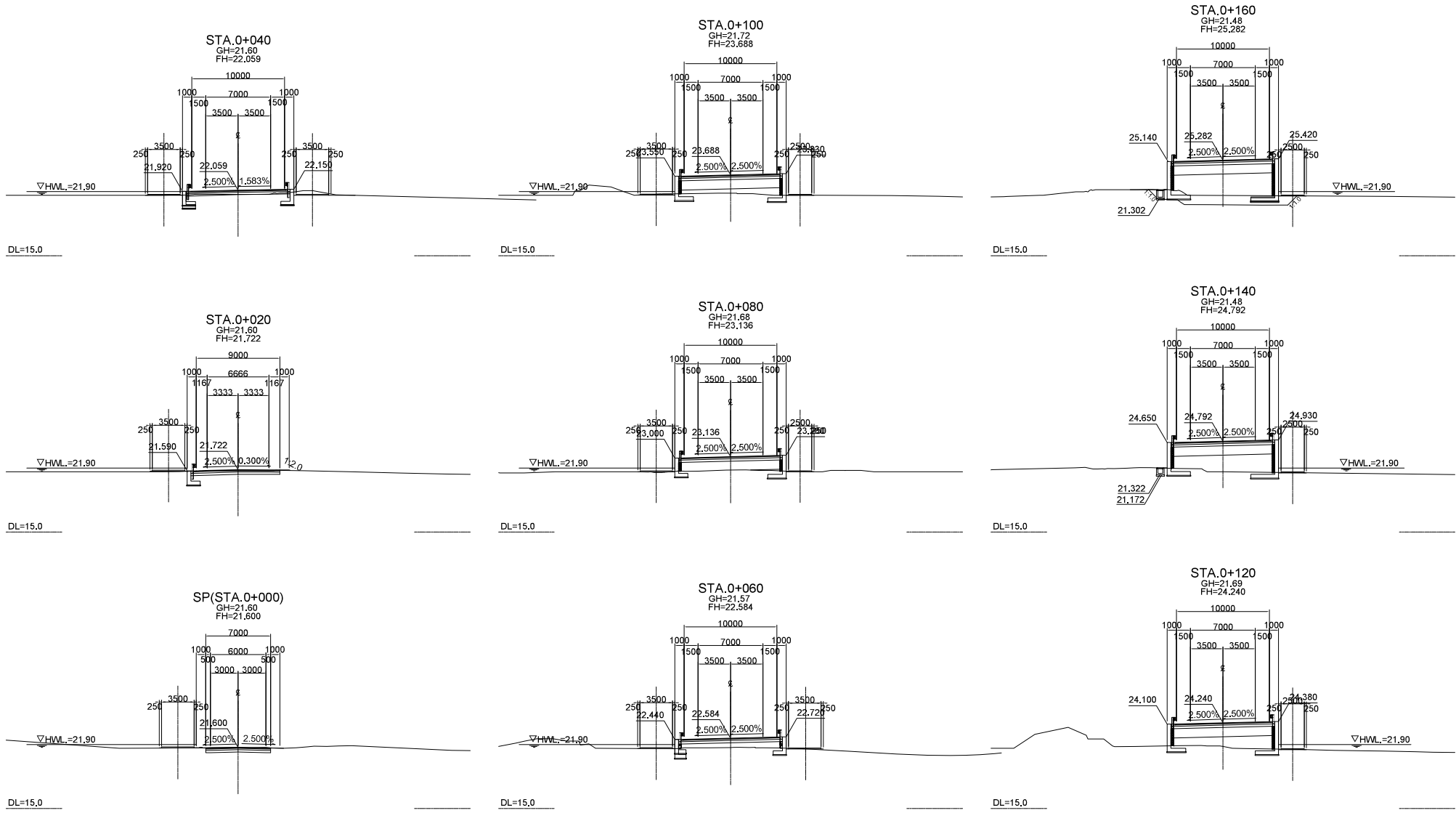
PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
6_ Prek Chhloung Bridge
STRUCTURAL DRAWING OF A2 ABUTMENT

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/100 | PC-09 |

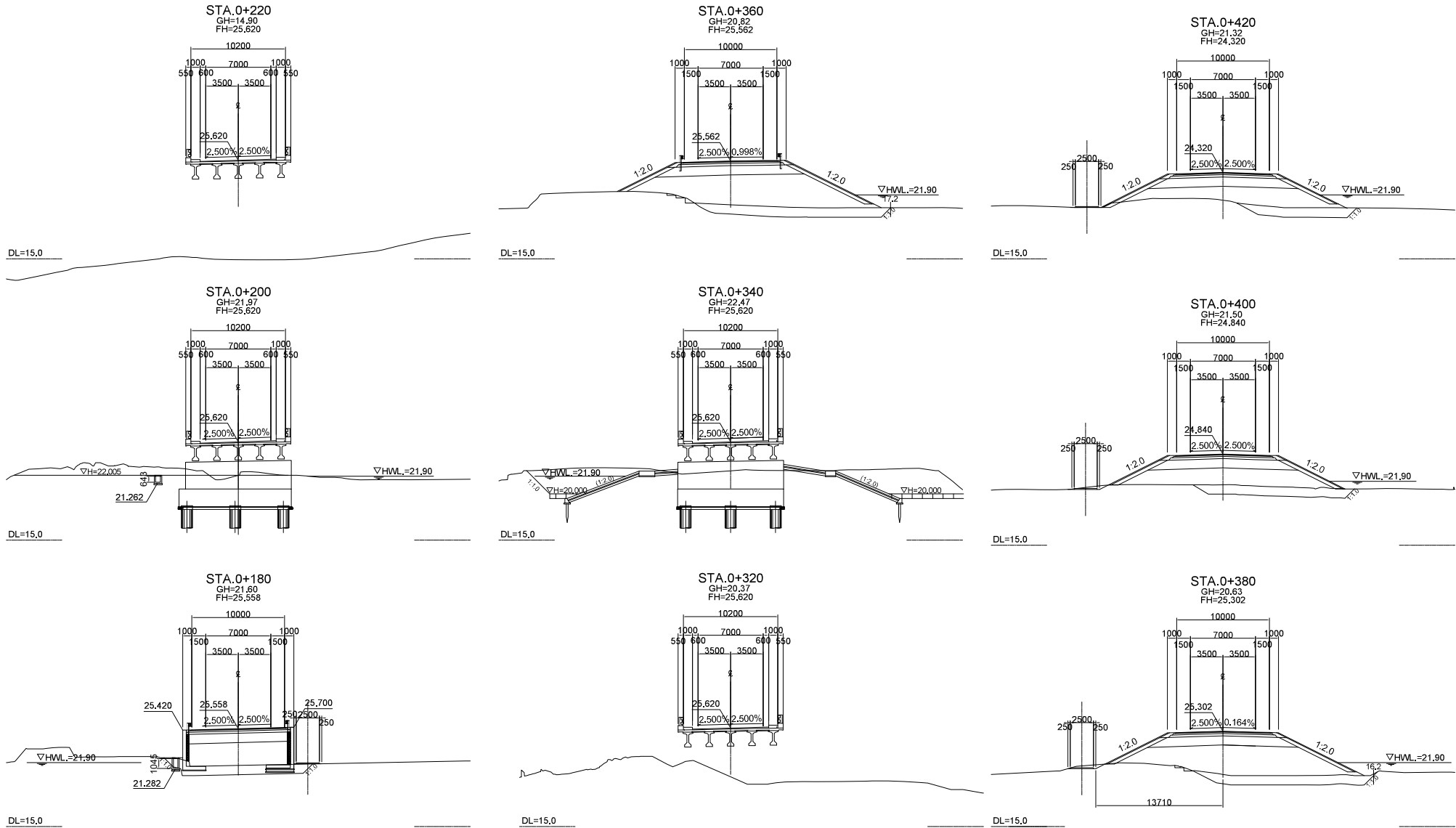


| | | | | | |
|--|---|--|--|-------------------------|----------------------|
| MINISTRY OF PUBLIC WORKS AND TRANSPORT KINGDOM OF CAMBODIA | JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD. | PROJECT TITLE: PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT OF BRIDGES IN FLOOD-PRONE AREAS | DRAWING TITLE: 6_PreK Chhloung Bridge TYPICAL CROSS SECTION OF APPROACH ROAD | SCALE(A1 SIZE) 1/100 | DRAWING NO. PC-10 |
|--|---|--|--|-------------------------|----------------------|



| | | | | | |
|--|---|--|--|-------------------------|----------------------|
| MINISTRY OF PUBLIC WORKS AND TRANSPORT KINGDOM OF CAMBODIA | JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD. | PROJECT TITLE: PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT OF BRIDGES IN FLOOD-PRONE AREAS | DRAWING TITLE: 6_Prek Chhloung Bridge CROSS SECTION OF APPROACH ROAD (1) | SCALE(A1 SIZE) 1/200 | DRAWING NO. PC-11 |
|--|---|--|--|-------------------------|----------------------|

別添7-111



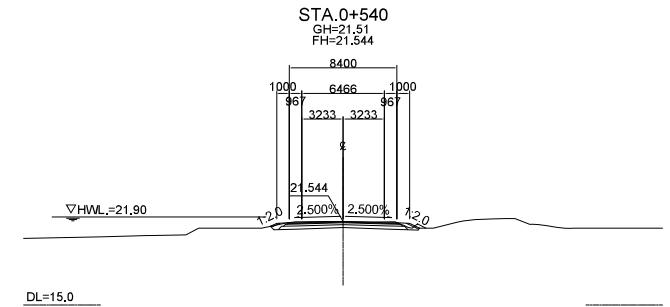
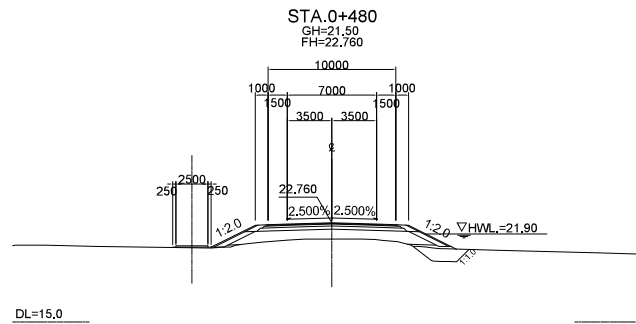
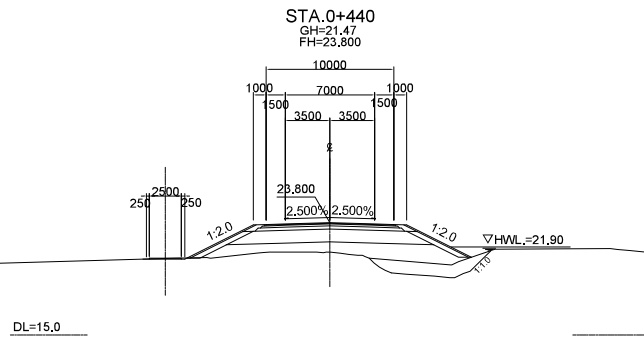
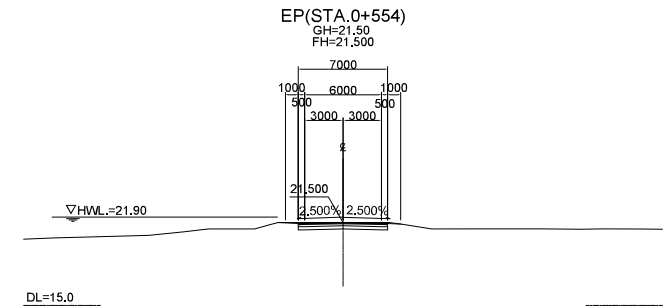
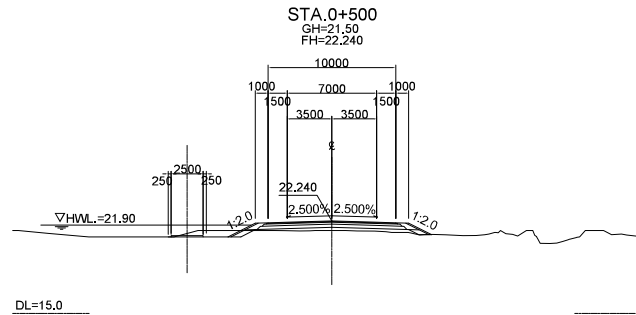
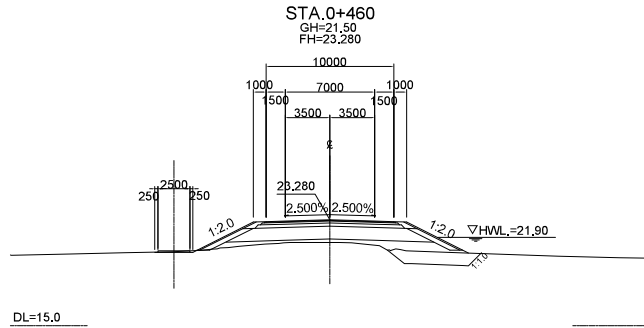
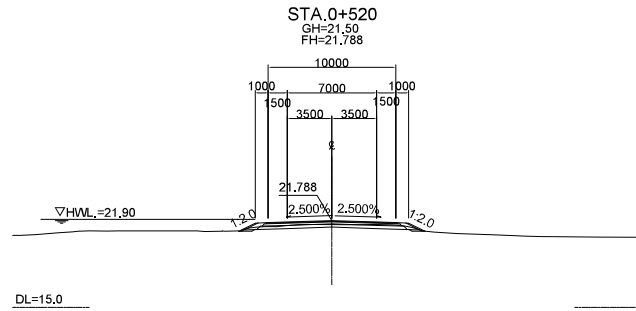
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
6_Prek Chhloung Bridge
CROSS SECTION OF APPROACH ROAD (2)

| SCALE(AT SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/200 | PC-12 |



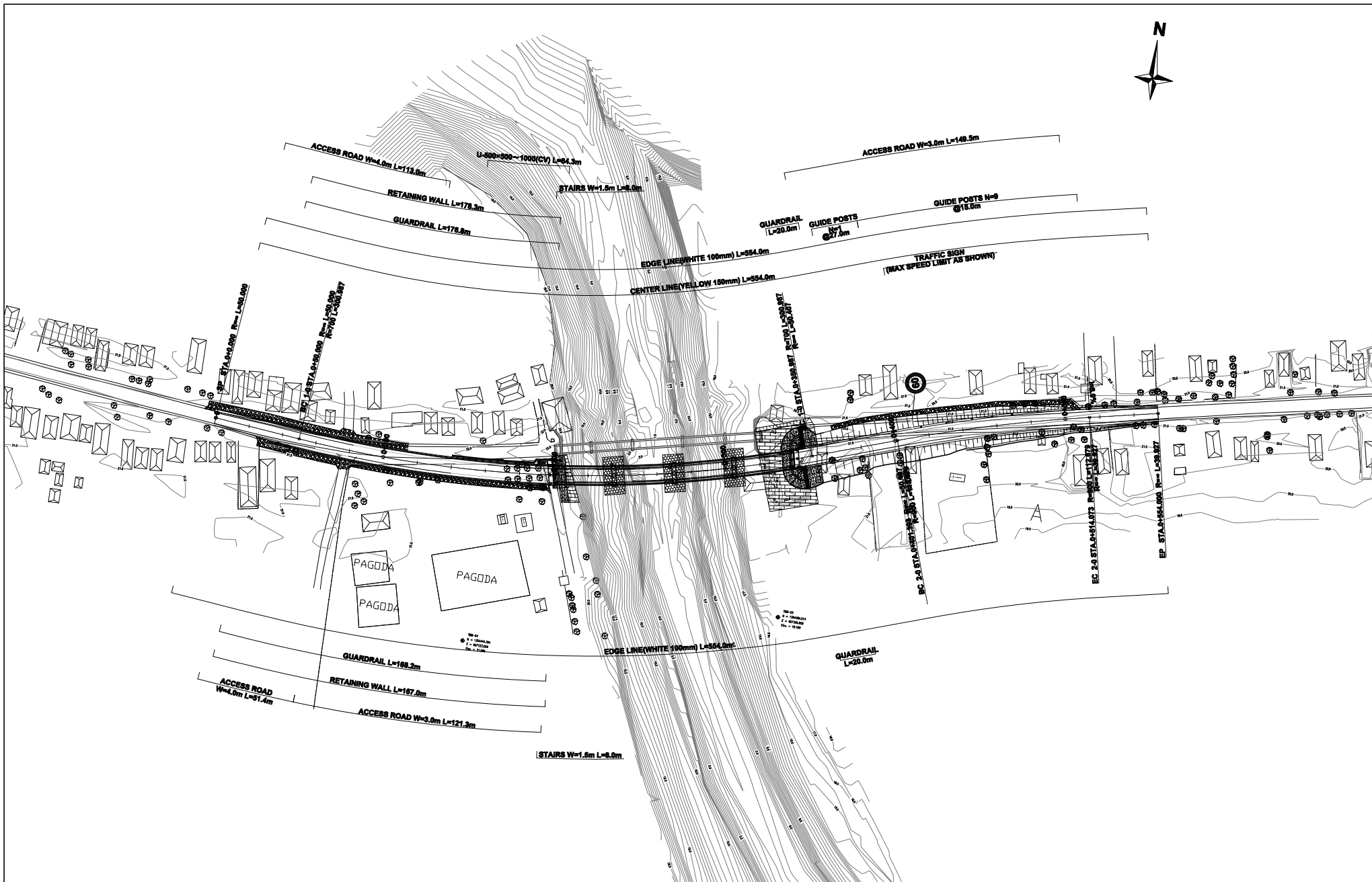
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
6_PreK Chhloung Bridge
CROSS SECTION OF APPROACH ROAD (3)

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/200 | PC-13 |



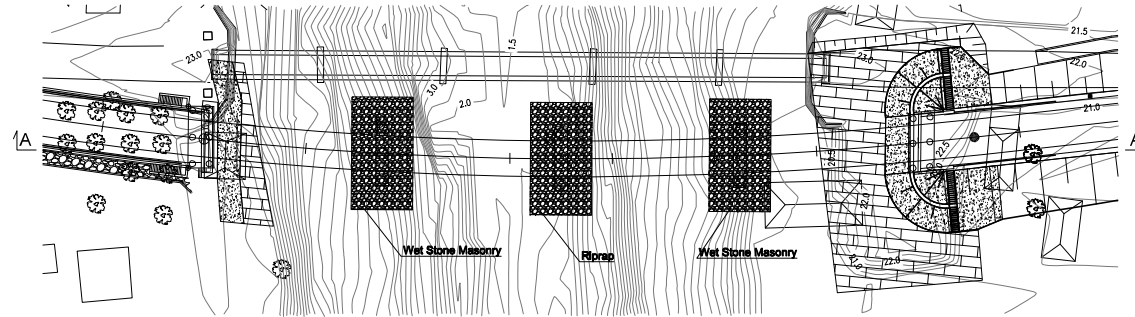
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

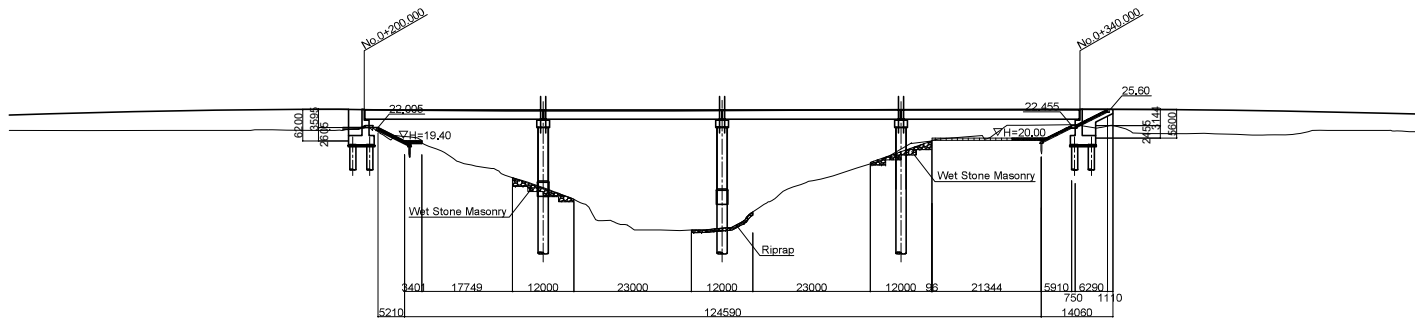
PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
**6 Prek Chhlong Bridge
PLAN OF APPROACH ROAD
(ANCILLARY)**

| SCALE(AT SIZE) | DRAWING NO. |
|----------------------|-------------|
| 1/2,000 (1/1,000) | PC-14 |



PLAN S= 1/500



SECTION A-A S= 1/500

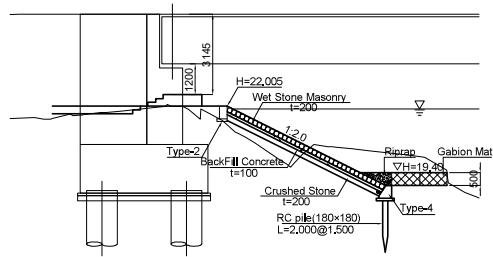
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

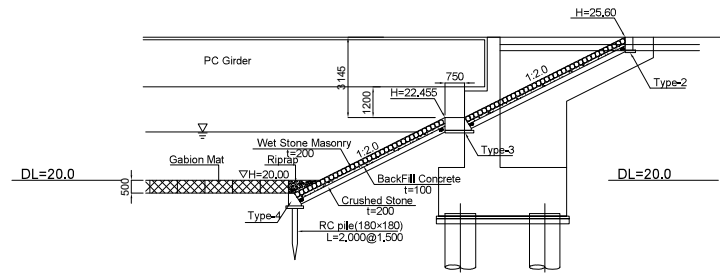
DRAWING TITLE:
6_PreK Chhloung Bridge
REVETMENT AND RIVER BED PROTECTION(1)

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/500 | PC-15 |

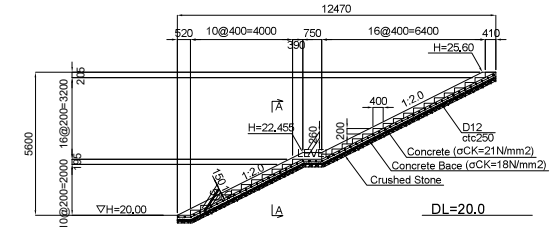


A1 abutment

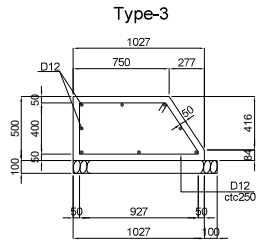
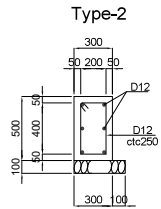
PROFILE s= 1/100



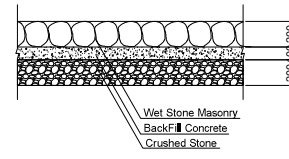
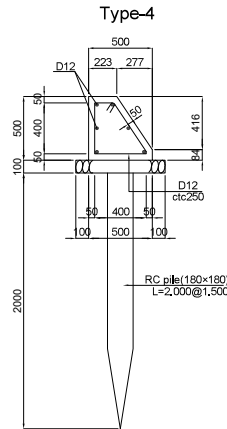
A2 abutment



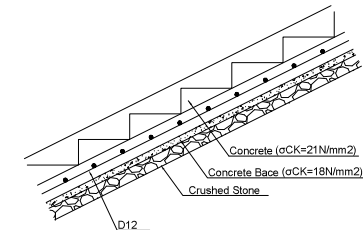
STAIRS s= 1/100



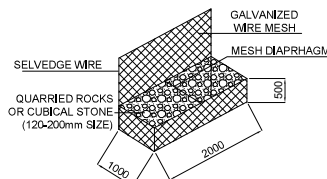
DETAILS s= 1/20



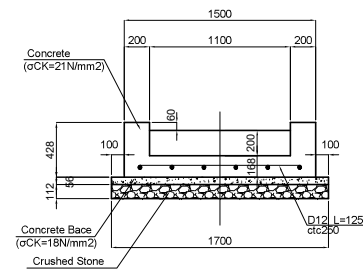
DETAILS s= 1/20



DETAILS s= 1/20



GABION MAT DETAIL
S = None Scale



SECTION A-A s= 1/20

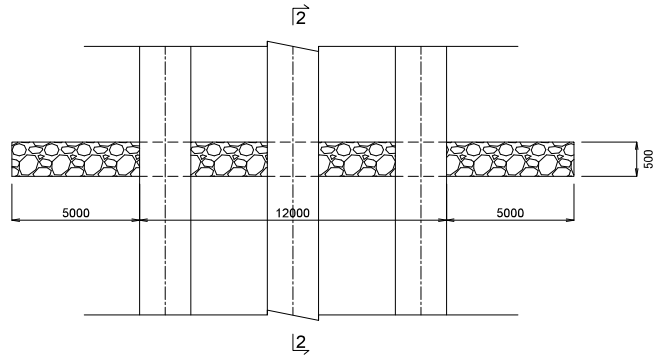
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

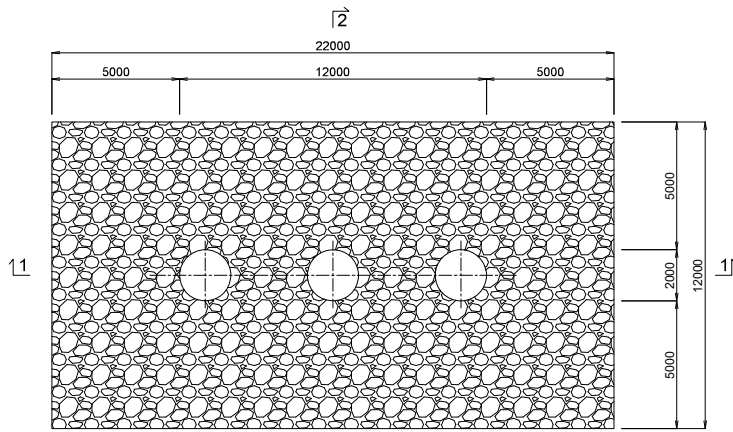
PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
6_Prek Chhlong Bridge
REVETMENT AND RIVER BED PROTECTION(2)

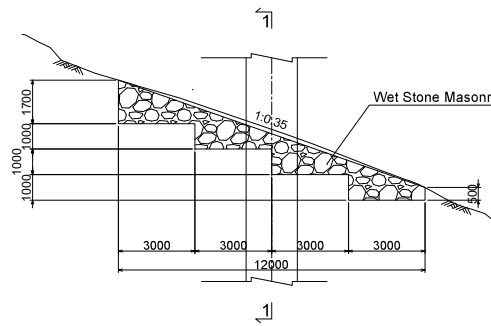
| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| AS SHOWN | PC-16 |



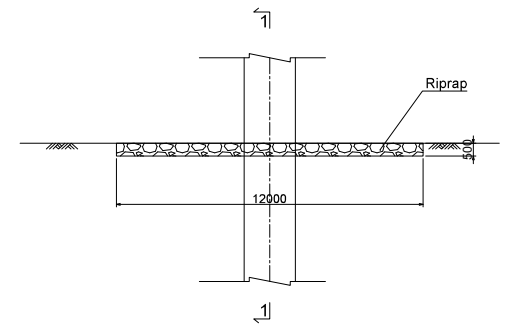
Section 1-1



Plan



A + P1, P3



A + P2

Section 2-2

RIVER BED

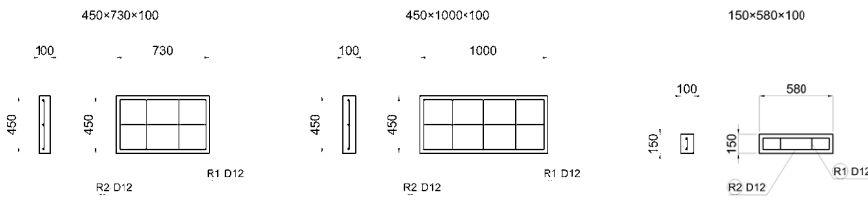
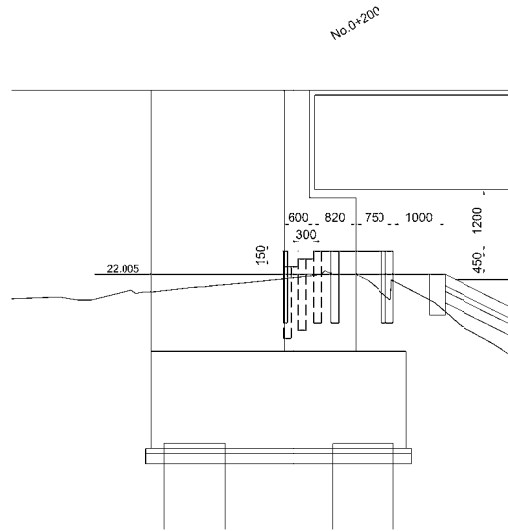
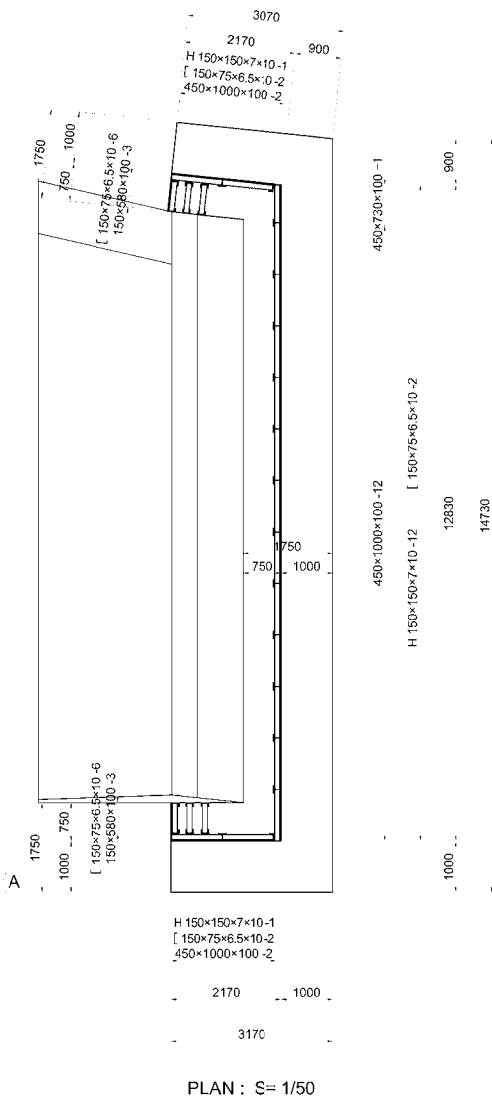
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

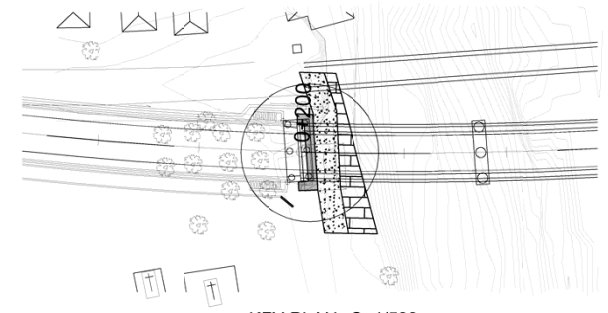
DRAWING TITLE:
6_Prek Chhloung Bridge
REVTMENT AND RIVER BED PROTECTION (3)

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/100 | PC-17 |



concrete panel : S= 1/20

Detour Road(A1 Abutment)



QUANTITIE LIST FOR Steel material

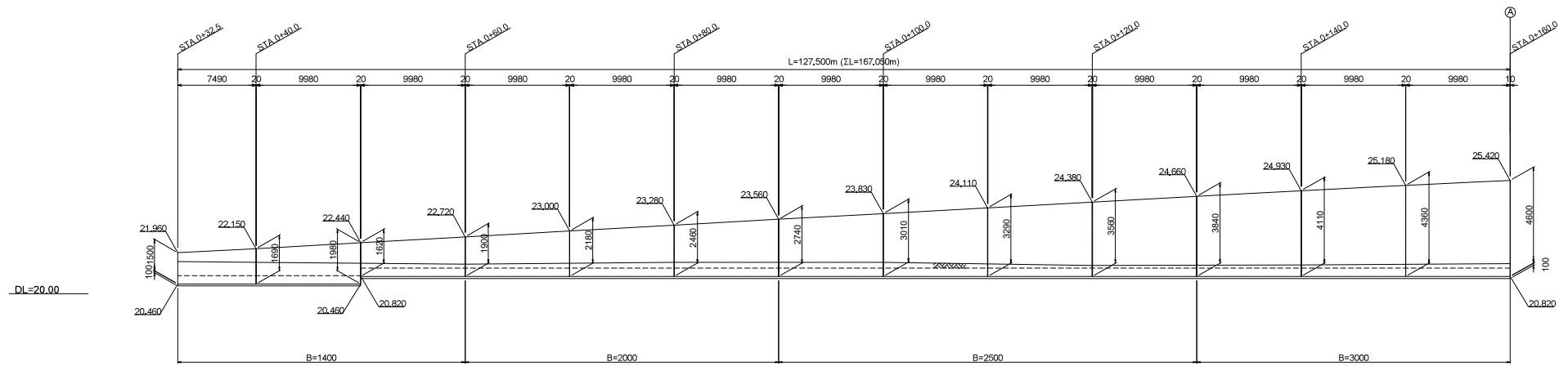
| MARK | SECTION OR SIZE | LENGTH (mm) | QTY. (No) | UNIT WT. (kg/m) | WT/OUN (kg) | WEIGHT (kg) | MATERIAL | |
|------------------------|-----------------|-------------|-----------|-----------------|-------------|-------------|----------|--|
| H | 150x150x7x10 | 1400 | 14 | 31.1 | 43.5 | 609 | SS400 | |
| [| 150x75x6.5x10 | 1400 | 18 | 18.6 | 26.0 | 468 | " | |
| TotalΣ= | | | | | | | 1077 | |
| TOTAL WEIGHT FOR STEEL | | | | | | | | |
| | | | | | | H- | 609 | |
| | | | | | | [| 468 | |
| | | | | | | TotalΣ= | 1077 kg | |

QUANTITIE LIST FOR REBAR

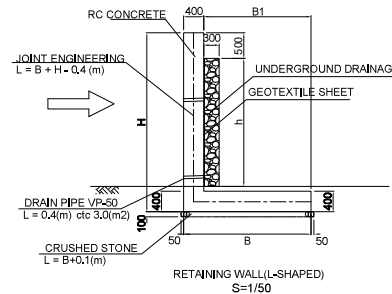
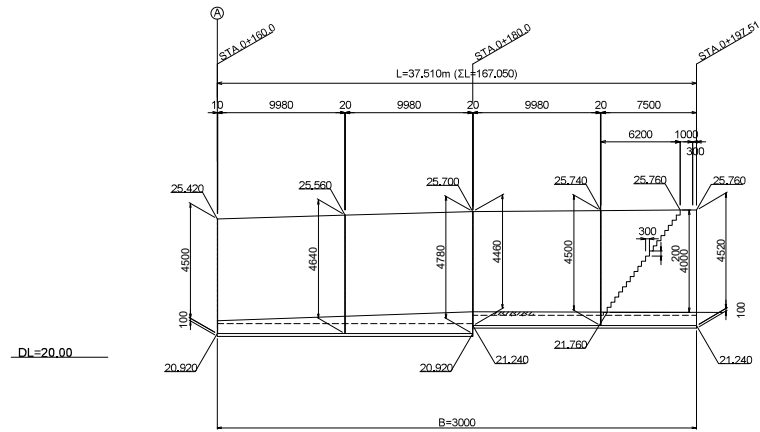
| Type | R1 D12 (ctc.250) | R2 D12 (ctc.250) |
|--------------|------------------|------------------|
| 450x730x100 | 4-D12x390 | 3-D12x670 |
| 450x1000x100 | 5-D12x390 | 3-D12x940 |
| 150x580x100 | 4-D12x90 | 2-D12x520 |

QUANTITIE LIST FOR concrete panel

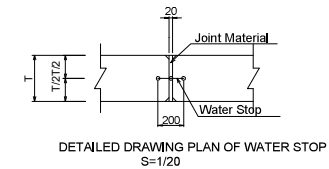
| Type | Concrete σCk=21N/mm2 | | Reinforcement D12 | |
|--------------|-------------------------|-------|----------------------|------|
| | (m3) | (m2) | (m) | (kg) |
| 450x730x100 | 0.33 | 8.20 | 3.57 | 3.2 |
| 450x1000x100 | 0.45 | 10.90 | 4.77 | 4.2 |
| 150x580x100 | 0.09 | 2.62 | 1.40 | 1.2 |



LONGITUDINAL VIEW
STR. 0+32.5~STR. 0+197.51 (RIGHTSIDE) V=1/100
H=1/200



| HEIGHT H(m) | LENGTH B(m) |
|----------------|----------------|
| 1.50 | 1.40 |
| 2.00 | 1.40 |
| 2.50 | 2.00 |
| 3.00 | 2.00 |
| 3.50 | 2.50 |
| 4.00 | 2.50 |
| 4.50 | 3.00 |



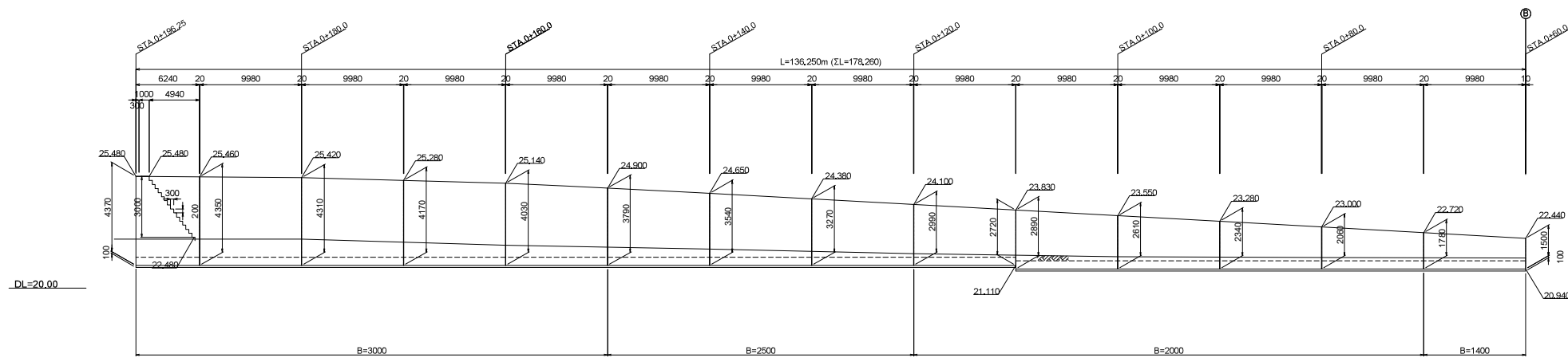
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

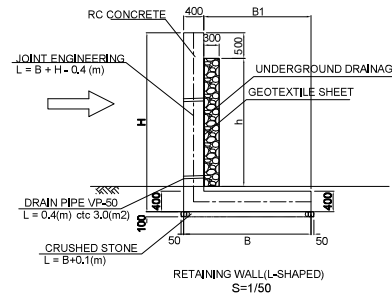
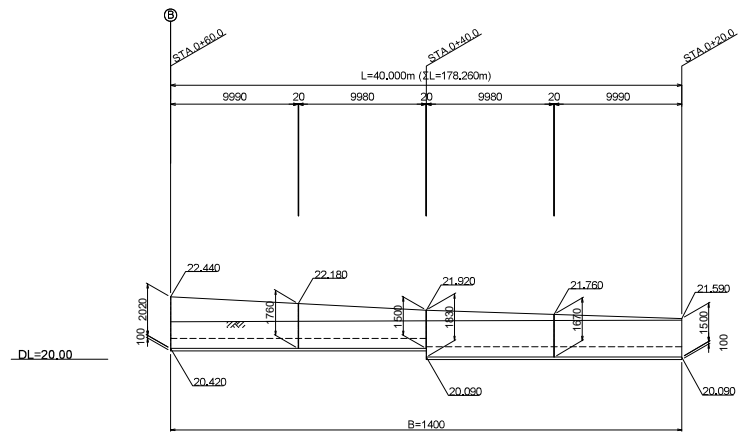
PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
6_Prek Chhlong Bridge
L-SHAPED RETAINING WALL (1)

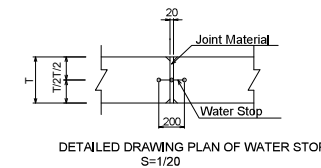
SCALE(A1 SIZE) DRAWING NO.
V=1/100 H=1/200 PC-19



LONGITUDINAL VIEW
STR. 0+20.0~STR. 0+196.25 (LEFTSIDE) V=1/100
H=1/200



| HEIGHT H(m) | LENGTH B(m) |
|----------------|----------------|
| 1.50 | 1.40 |
| 2.00 | 1.40 |
| 2.50 | 2.00 |
| 3.00 | 2.00 |
| 3.50 | 2.50 |
| 4.00 | 2.50 |
| 4.50 | 3.00 |



MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

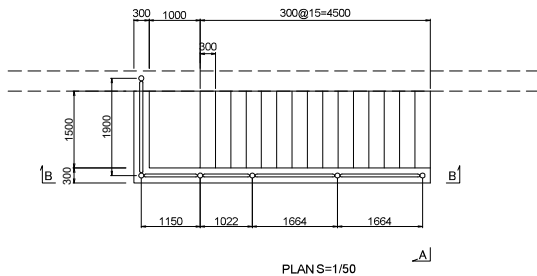
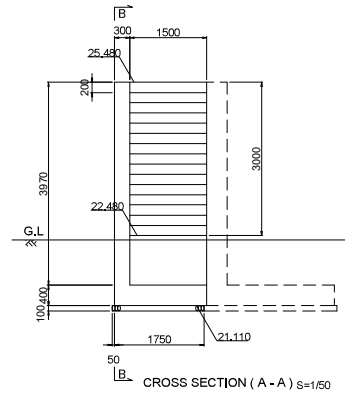
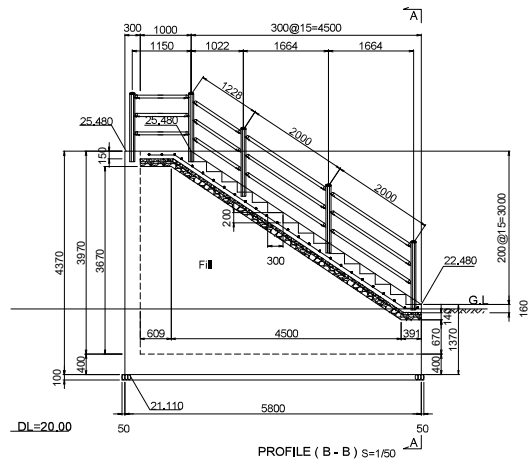
JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

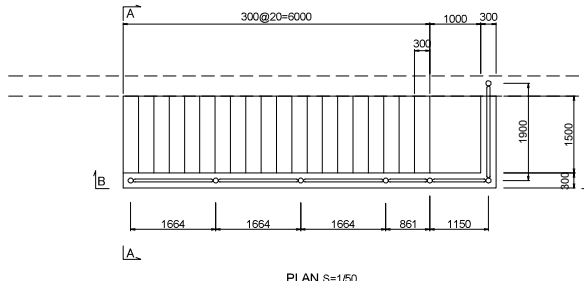
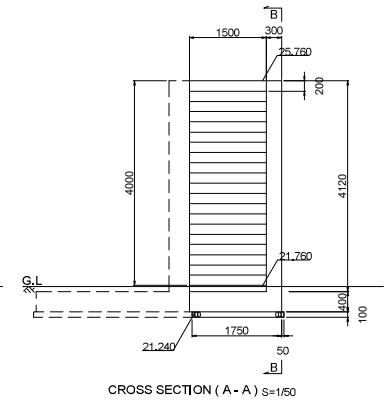
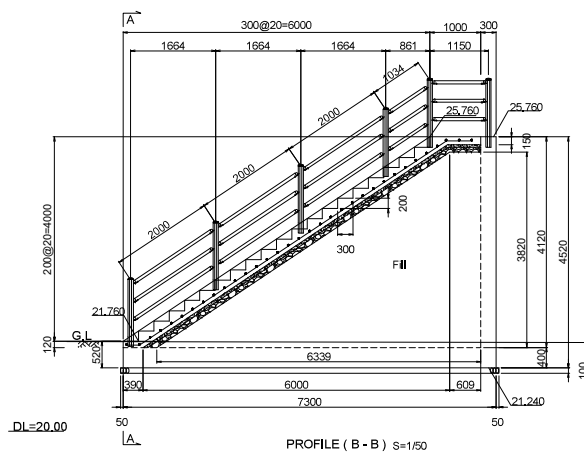
DRAWING TITLE:
6_Prek Chhlong Bridge
L-SHAPED RETAINING WALL (2)

SCALE(A1 SIZE) DRAWING NO.
V=1/100 H=1/200 PC-20

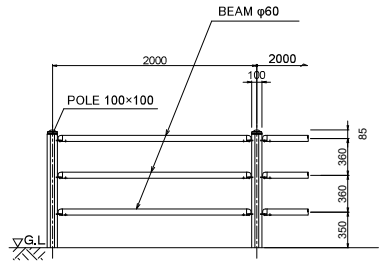
別添7-120



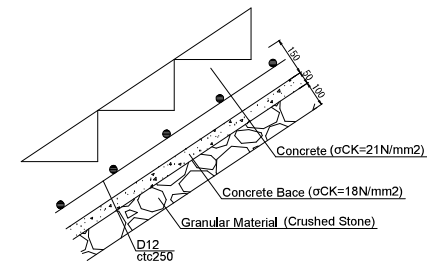
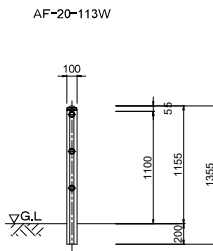
STAIRS AND HANDRAIL (LEFT SIDE)



STAIRS AND HANDRAIL (RIGHT SIDE)



HANDRAIL S=1/25



DETAILS S=1/10

MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
6_PreK Chhlong Bridge
L-SHAPED RETAINING WALL (3)

SCALE(A1 SIZE) DRAWING NO.
AS SHOWN PC-21

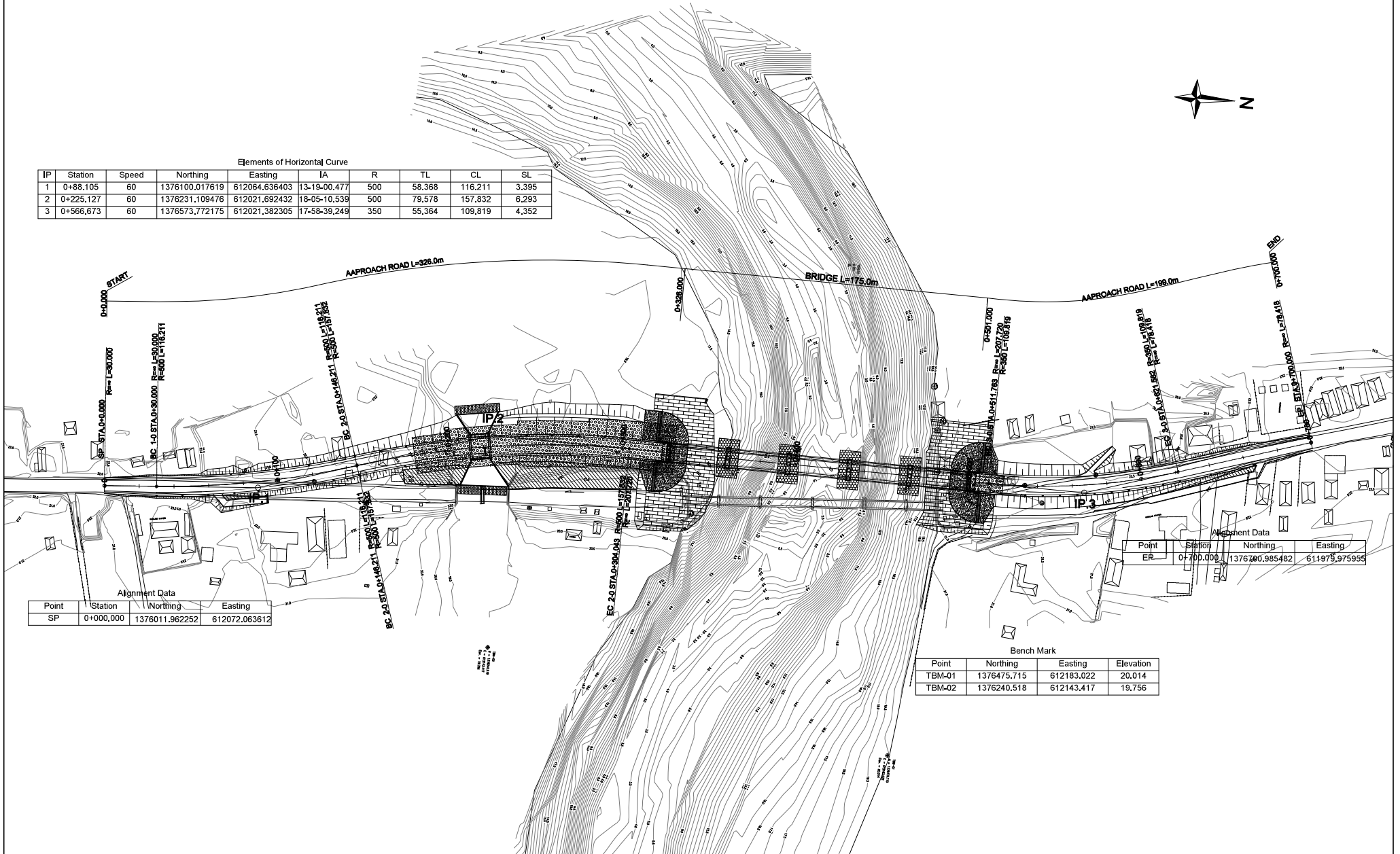
Peam Te Bridge

別添7-122



Elements of Horizontal Curve

| IP | Station | Speed | Northing | Easting | IA | R | TL | CL | SL |
|----|-----------|-------|----------------|---------------|--------------|-----|--------|---------|-------|
| 1 | 0+88.105 | 60 | 1376100.017619 | 612064.636403 | 13-19-00.477 | 500 | 58,368 | 116,211 | 3,395 |
| 2 | 0+225.127 | 60 | 1376231.109476 | 612021.692432 | 18-05-10.539 | 500 | 79,578 | 157,832 | 6,293 |
| 3 | 0+566.673 | 60 | 1376573.772175 | 612021.382305 | 17-58-39.249 | 350 | 55,364 | 109,819 | 4,352 |



Alignment Data

| Point | Station | Northing | Easting |
|-------|-----------|----------------|---------------|
| SP | 0+000.000 | 1376011.962252 | 612072.063612 |

Alignment Data

| Point | Station | Northing | Easting |
|-------|-----------|----------------|---------------|
| EP | 0+700.000 | 1376460.985482 | 611979.975955 |

Bench Mark

| Point | Northing | Easting | Elevation |
|--------|-------------|------------|-----------|
| TBM-01 | 1376475.715 | 612183.022 | 20.014 |
| TBM-02 | 1376240.518 | 612143.417 | 19.756 |

MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:

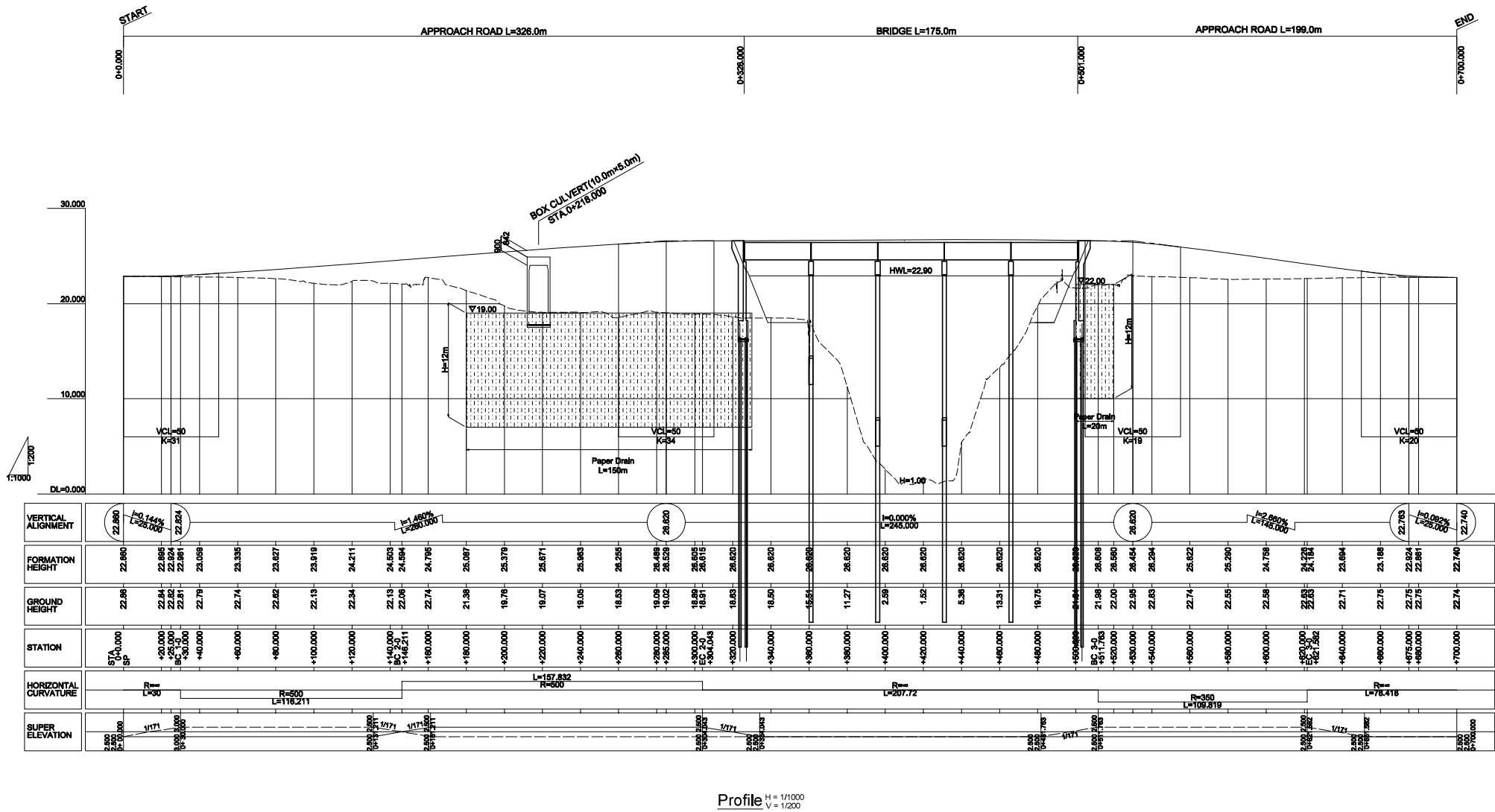
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:

7_Peam Te Bridge
GENERAL PLAN

SCALE(A1 SIZE) DRAWING NO.

1/2,000
(1/1,000) PT-01



Profile H = 1/1000
V = 1/200

MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

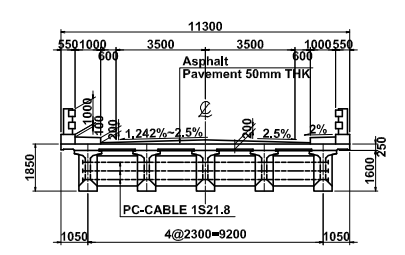
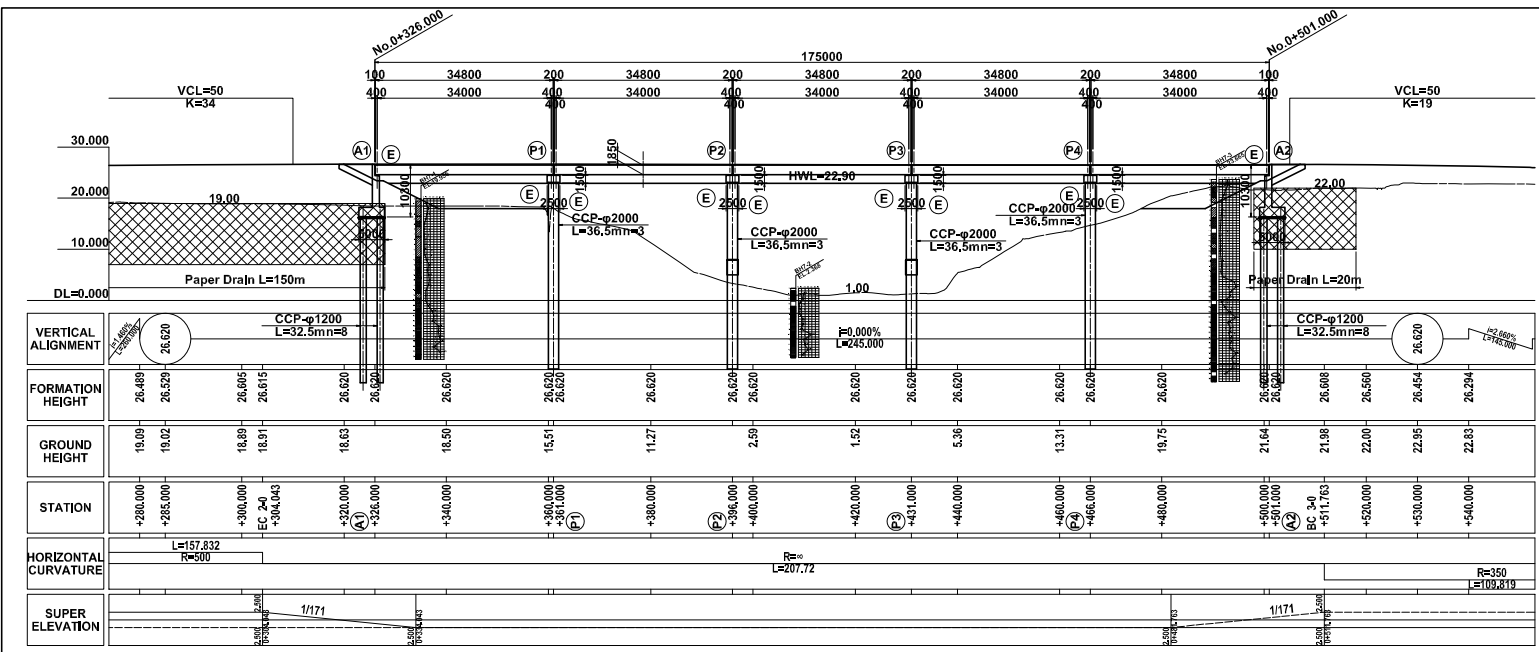
JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

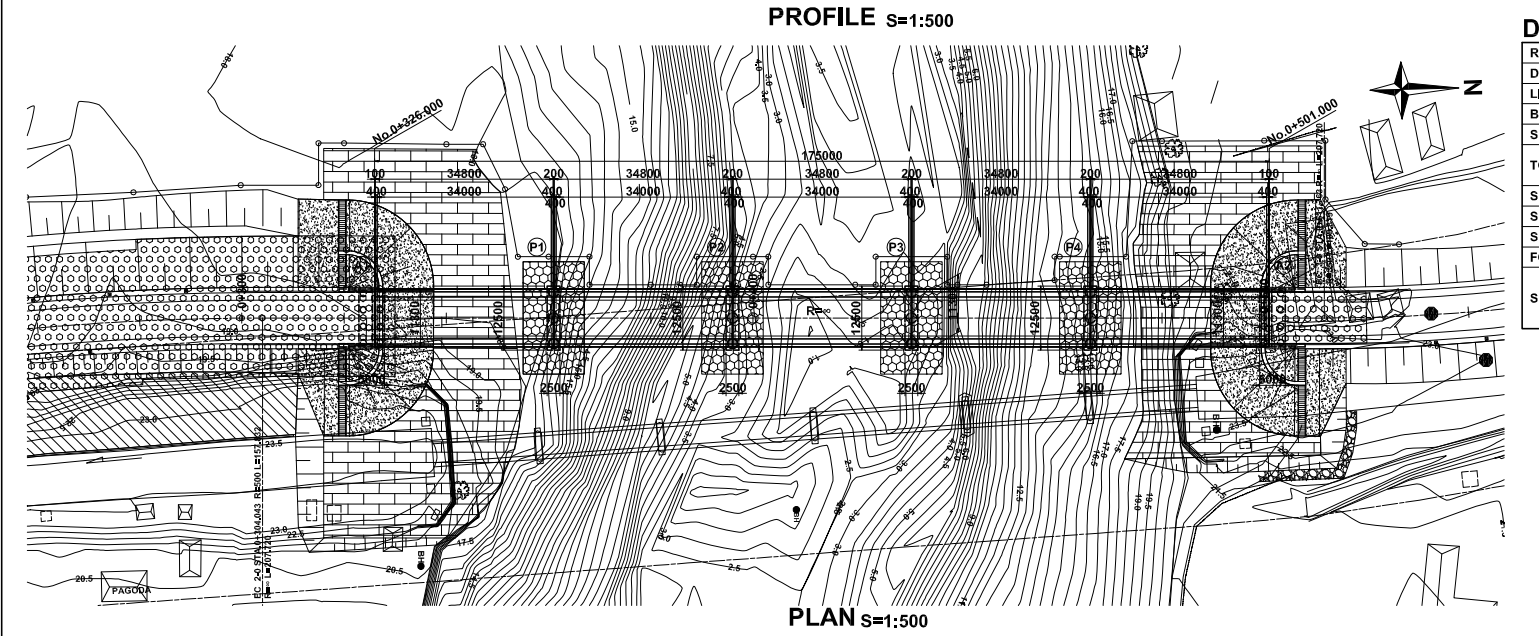
DRAWING TITLE:
7_Peam Te Bridge
GENERAL PROFILE

| | |
|----------------|-------------|
| SCALE(A1 SIZE) | DRAWING NO. |
| AS SHOWN | PT-02 |

別添7-124



CROSS SECTION S=1:100

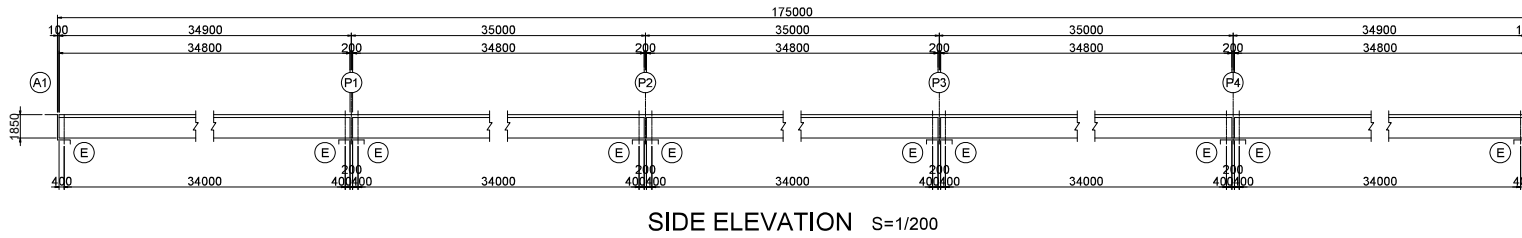


PLAN S=1:500

DESIGN CRITERIA

| | |
|------------------------|---|
| ROAD CLASS | SECONDARY PRINCIPAL ROAD |
| DESIGN SPEED | 60km/h |
| LIVE LOAD | AASHTO HS20-44x125% OR EQUIVALENT |
| BRIDGE LENGTH | 175,000m |
| SPAN LENGTH | 34,000+34,000+34,000+34,000+34,000m |
| TOTAL WIDTH | 2x3.5m(Carriage Way)+2x0.6m(Shoulder) +2x1.0m(Side Walk) |
| SEISMIC COEFFICIENT | k _h =0.25(L1) |
| SUPER STRUCTURE TYPE | PC I-Girder |
| SUBSTRUCTURE TYPE | REVERSED T-ABUTMENT, PILE BENT PIRE |
| FOUNDATION TYPE | CAST-IN PLACE CONCRETE PILE(A1,P1,P2,P3,P4,A2) Bridge Design Standard (CAM,PW,04,102,99), 2003 |
| SPECIFICATION CRITERIA | DESIGN SPECIFICATIONS OF HIGHWAY BRIDGES (JAPAN ROAD ASSOCIATION) |

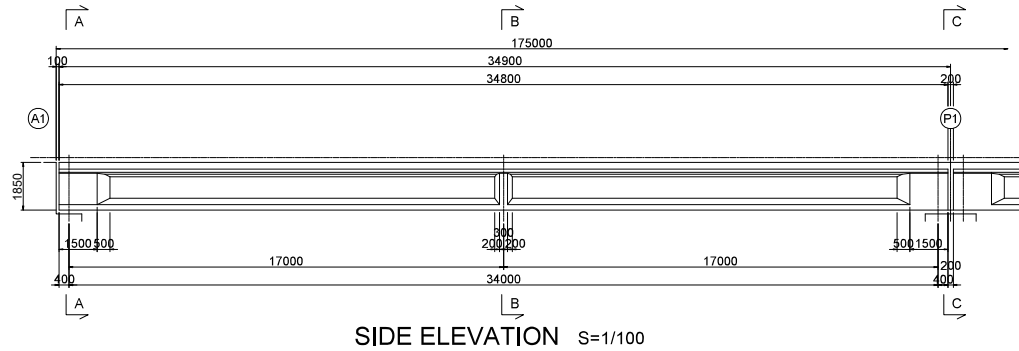
| | | | | | |
|--|---|--|---|----------------------------|----------------------|
| MINISTRY OF PUBLIC WORKS AND TRANSPORT KINGDOM OF CAMBODIA | JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD. | PROJECT TITLE: PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT OF BRIDGES IN FLOOD-PRONE AREAS | DRAWING TITLE: 7_Peam Te Bridge GENERAL VIEW OF BRIDGE | SCALE(A1 SIZE) AS SHOWN | DRAWING NO. PT-03 |
|--|---|--|---|----------------------------|----------------------|



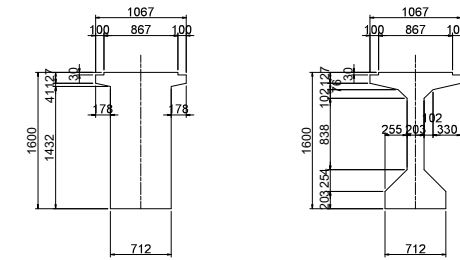
SIDE ELEVATION S=1/200

| DESIGN CRITERIA | |
|-----------------|----------------------------------|
| CATEGORY | PRESTRESSED CONCRETE ROAD BRIDGE |
| BRIDGE LENGTH | 175,000 m |
| WIDTH | 11,300 m |
| LIVE-LOAD | HS20-44×1.25 |
| ANGLE OF SKEW | 90°00'00" |

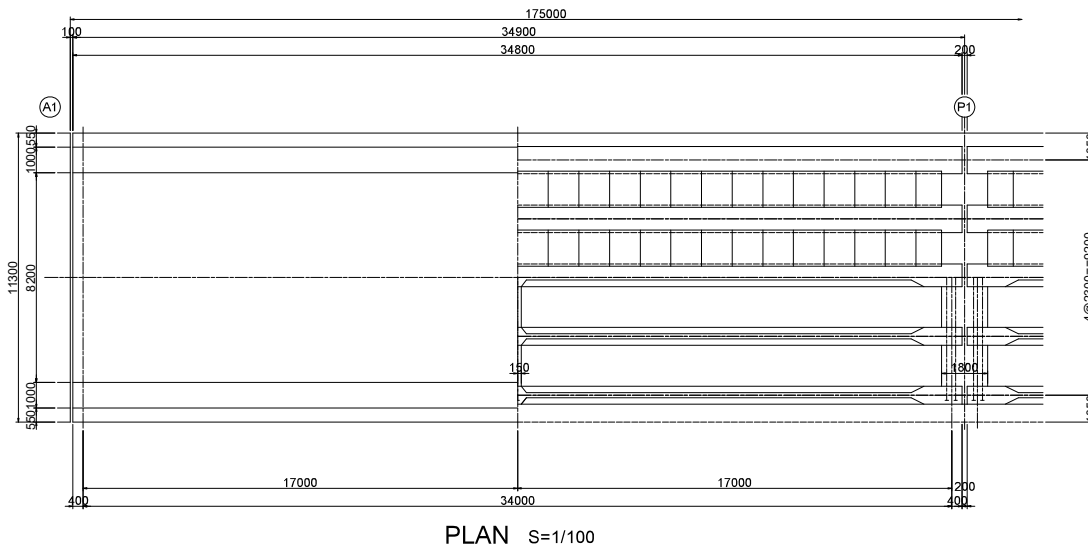
| MATERIALS | | |
|--------------|------------|--------------------------------------|
| CONCRETE | GIRDER | $\sigma_{ck}=45.0$ N/mm ² |
| | CROSS BEAM | $\sigma_{ck}=45.0$ N/mm ² |
| | DECK SLAB | $\sigma_{ck}=40.0$ N/mm ² |
| PC STEEL | GIRDER | 12S12.7(SWPR7BL) |
| | CROSS BEAM | 1S21.8(SWPR19) |
| DEFORMED BAR | Grade 400 | |



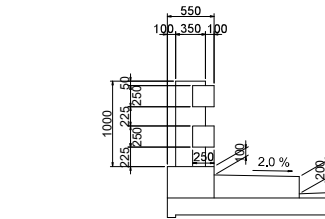
SIDE ELEVATION S=1/100



PC GIRDER S=1/30



PLAN S=1/100



DETAILS OF RAILING S=1/30

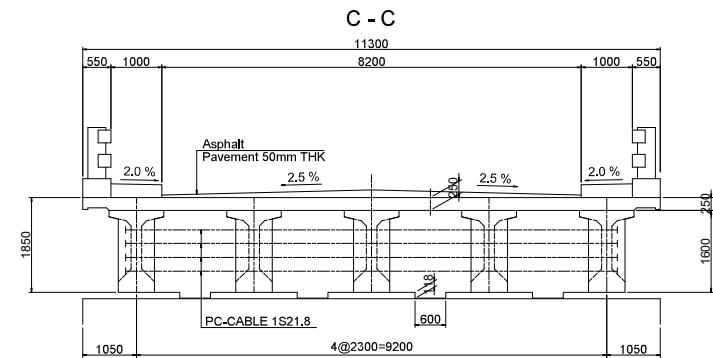
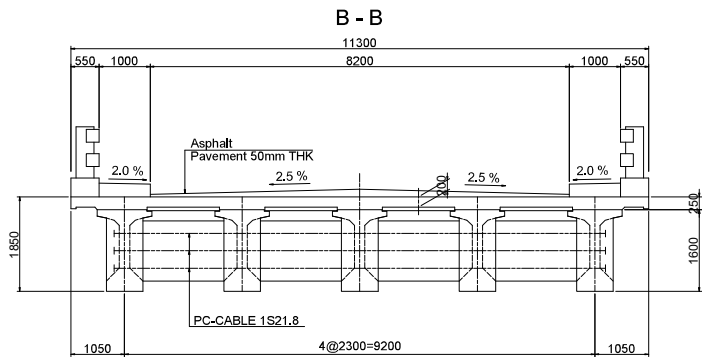
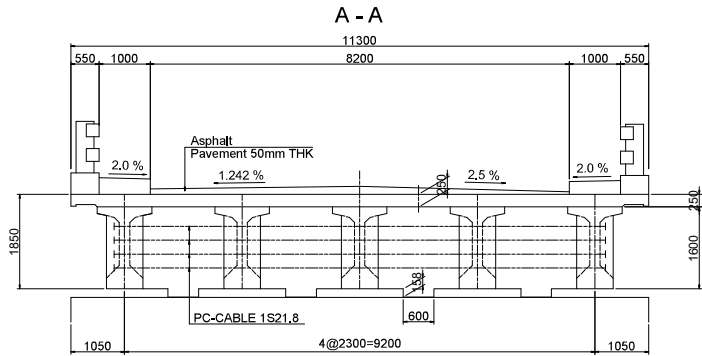
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
7_Peam Te Bridge
STRUCTURE DRAWING(1)

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| AS SHOWN | PT-04 |



CROSS SECTION S=1/50

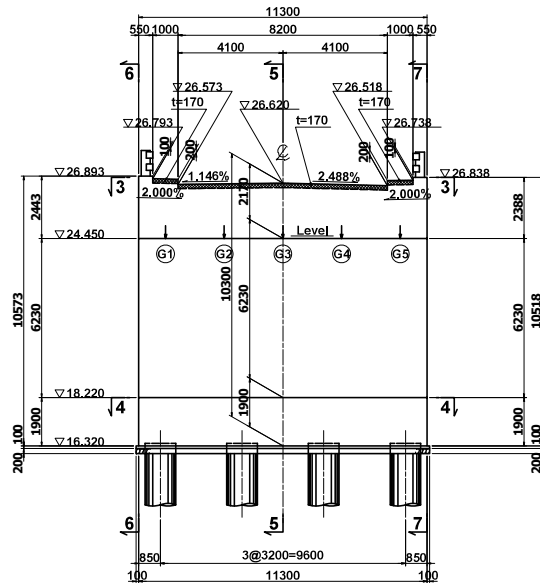
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

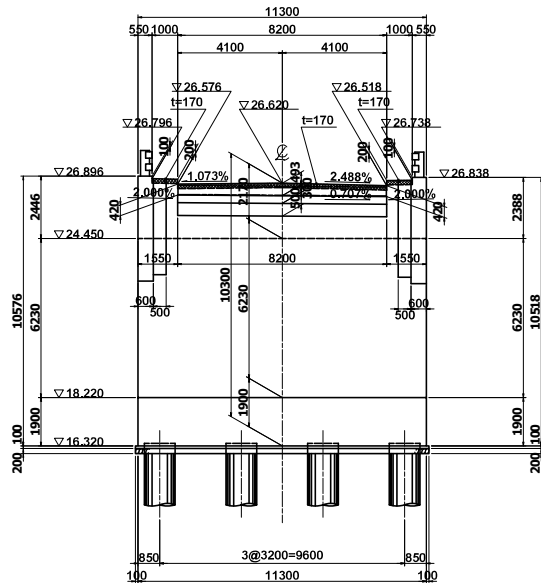
PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
7_Peam Te Bridge
STRUCTURE DRAWING(2)

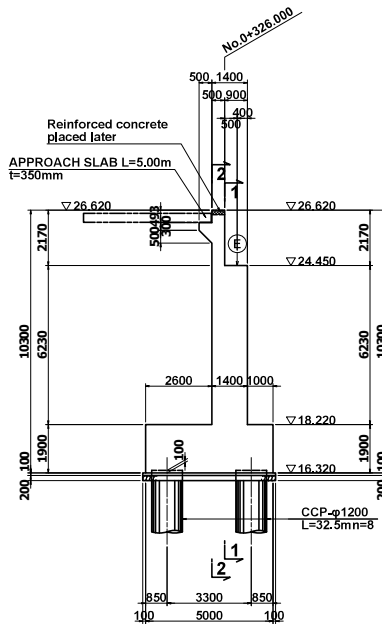
| SCALE(AT SIZE) | DRAWING NO. |
|----------------|-------------|
| AS SHOWN | PT-05 |



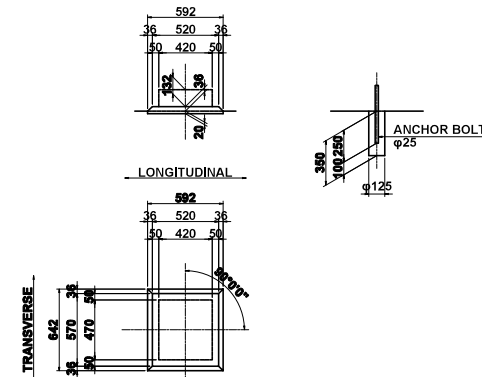
1-1



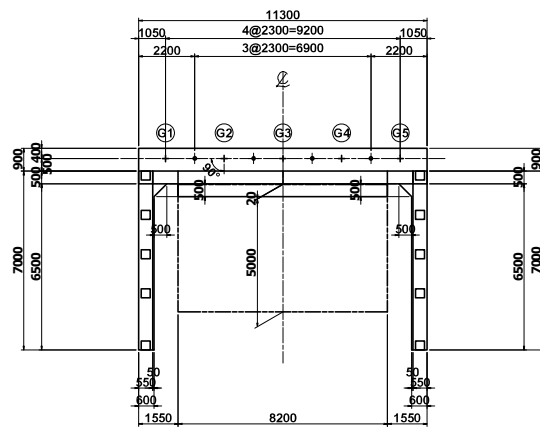
2-2



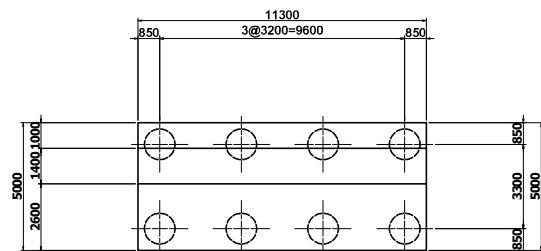
5-5



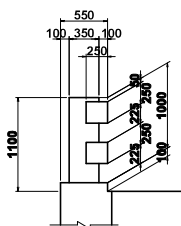
DETAIL S=1/20



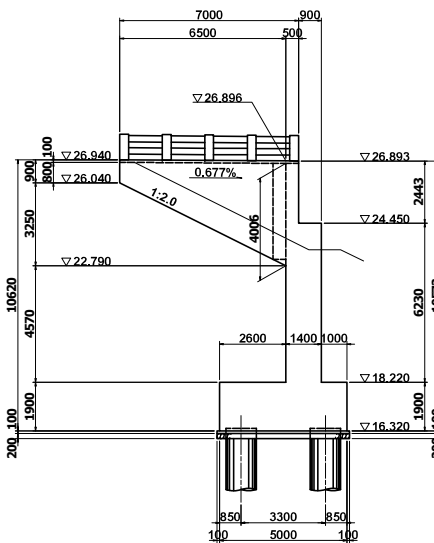
3-3



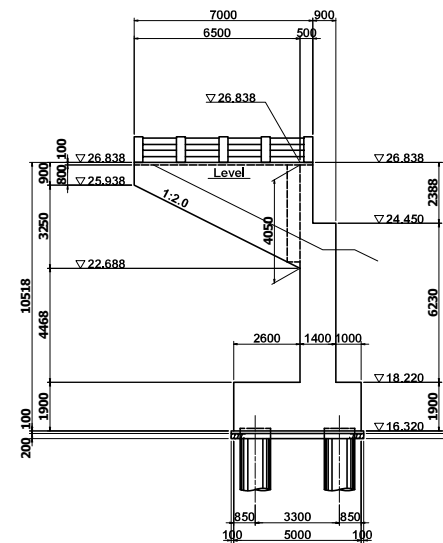
4-4



DETAIL S=1/30



6-6



7-7

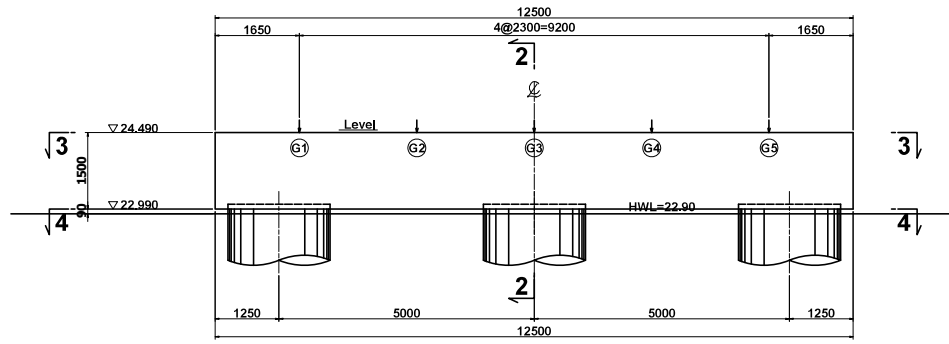
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

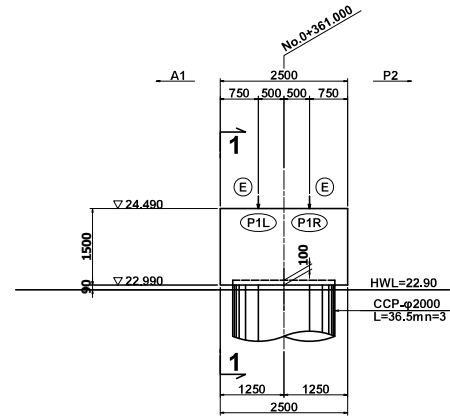
PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
7_Peam Te Bridge
STRUCTURAL DRAWING OF A1 ABUTMENT

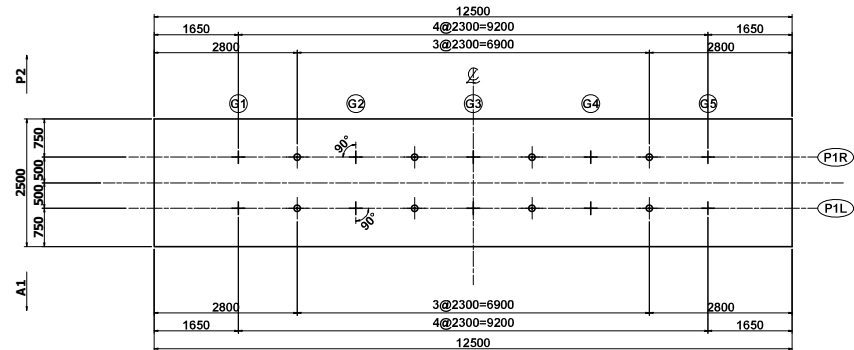
| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/100 | PT-06 |



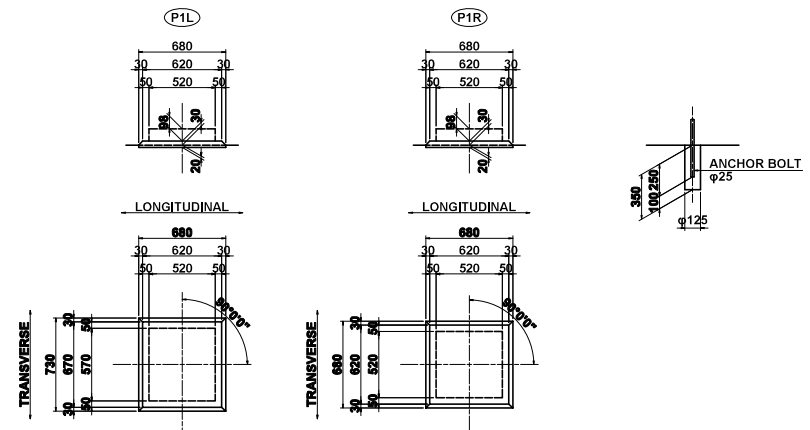
1-1



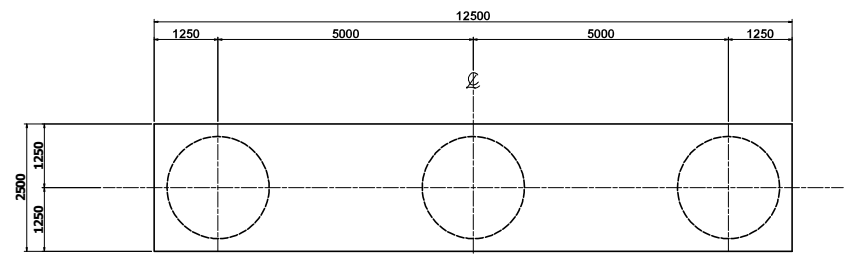
2-2



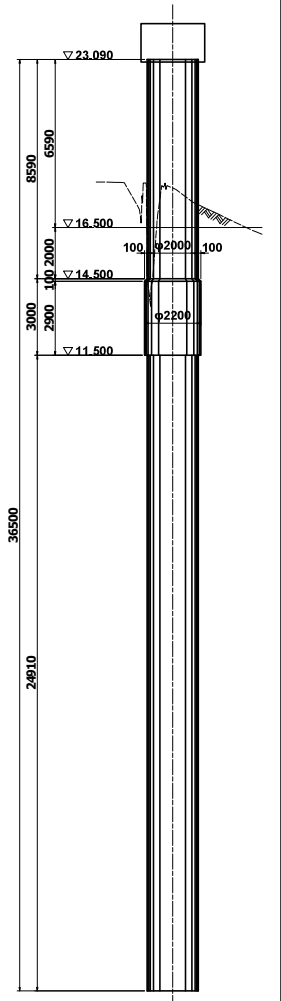
3-3



DETAIL S=1/20



4-4



PROFILE S=1/100

MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

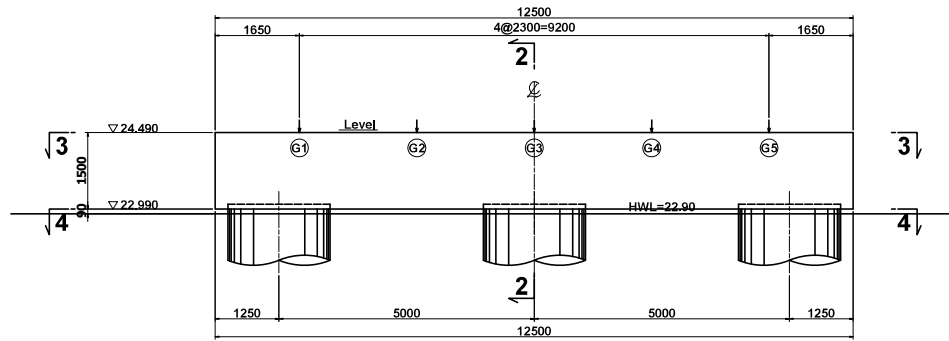
JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

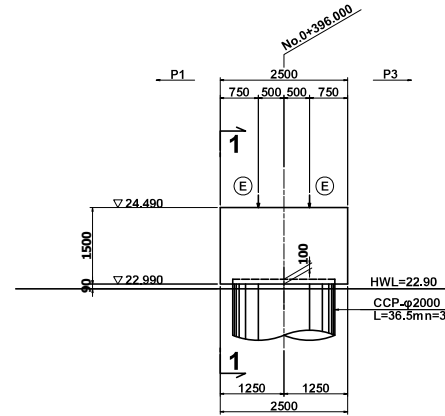
DRAWING TITLE:
7_Peam Te Bridge
STRUCTURAL DRAWING OF P1 BRIDGE PIER

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/50 | PT-07 |

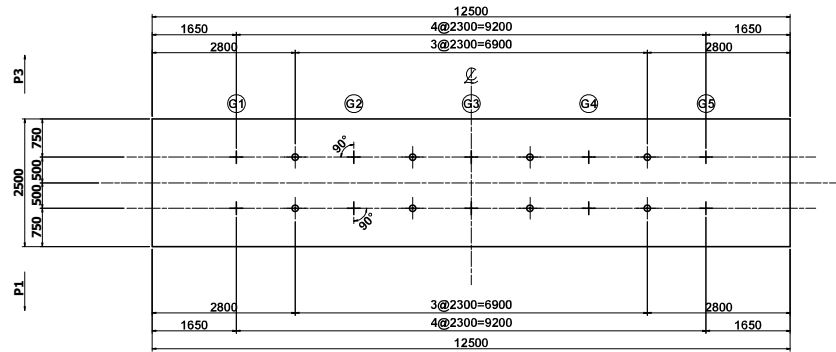
別添7-129



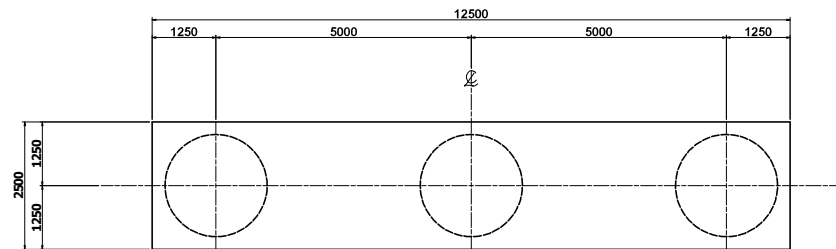
1-1



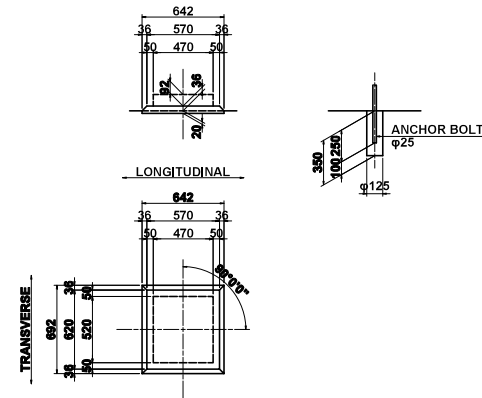
2-2



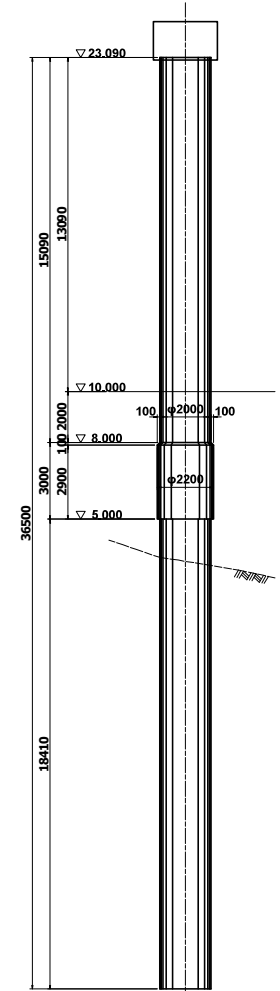
3-3



4-4



DETAIL S=1/20



PROFILE S=1/100

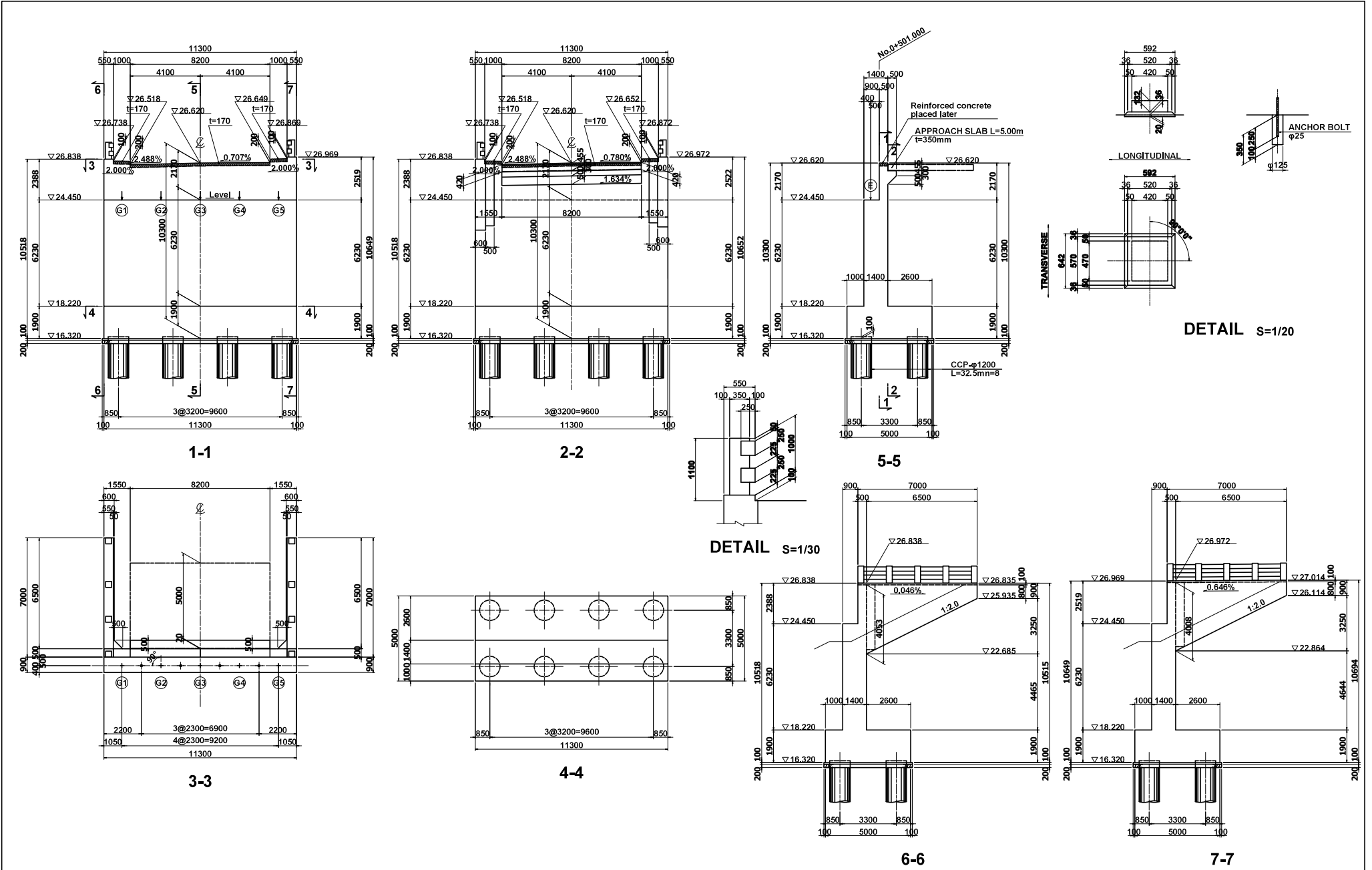
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
7_Peam Te Bridge
STRUCTURAL DRAWING OF P2 BRIDGE PIER

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/50 | PT-08 |



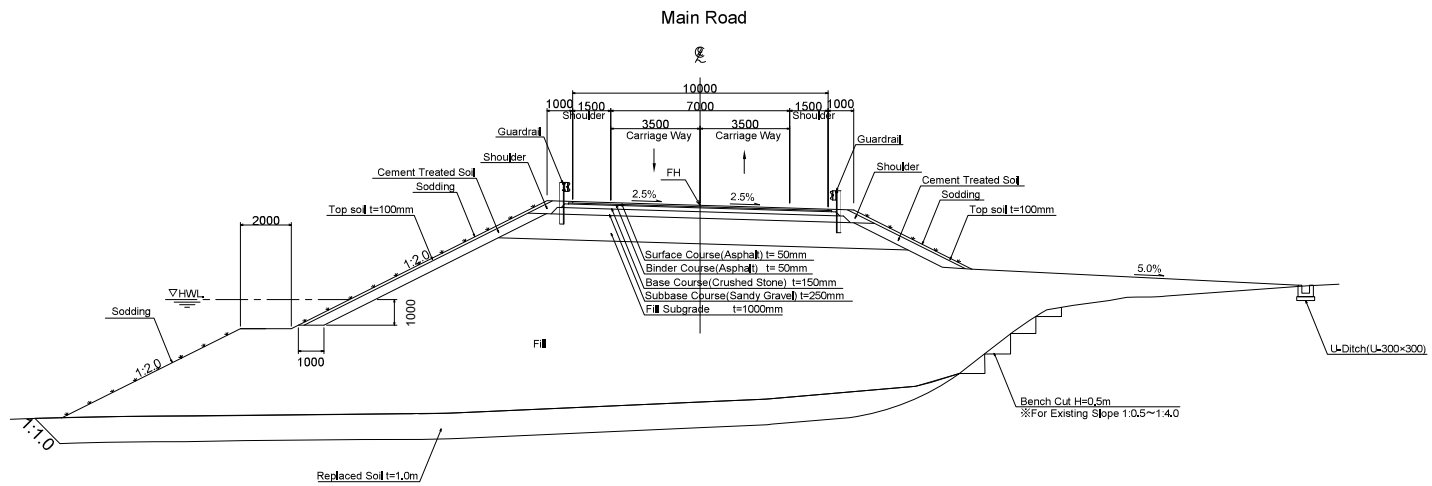
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
7_Peam Te Bridge
STRUCTURAL DRAWING OF A2 BRIDGE PIER

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/100 | PT-09 |



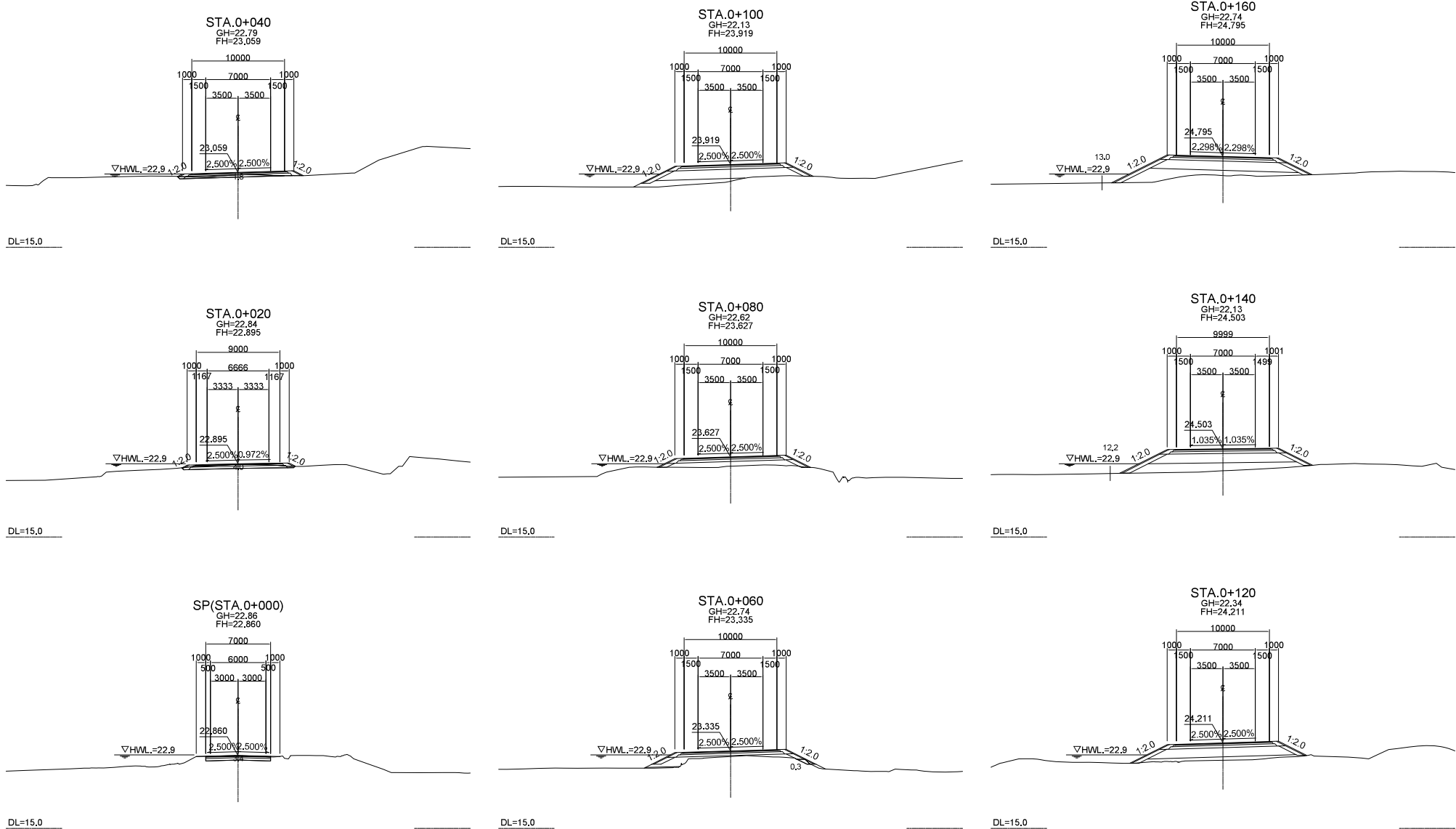
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

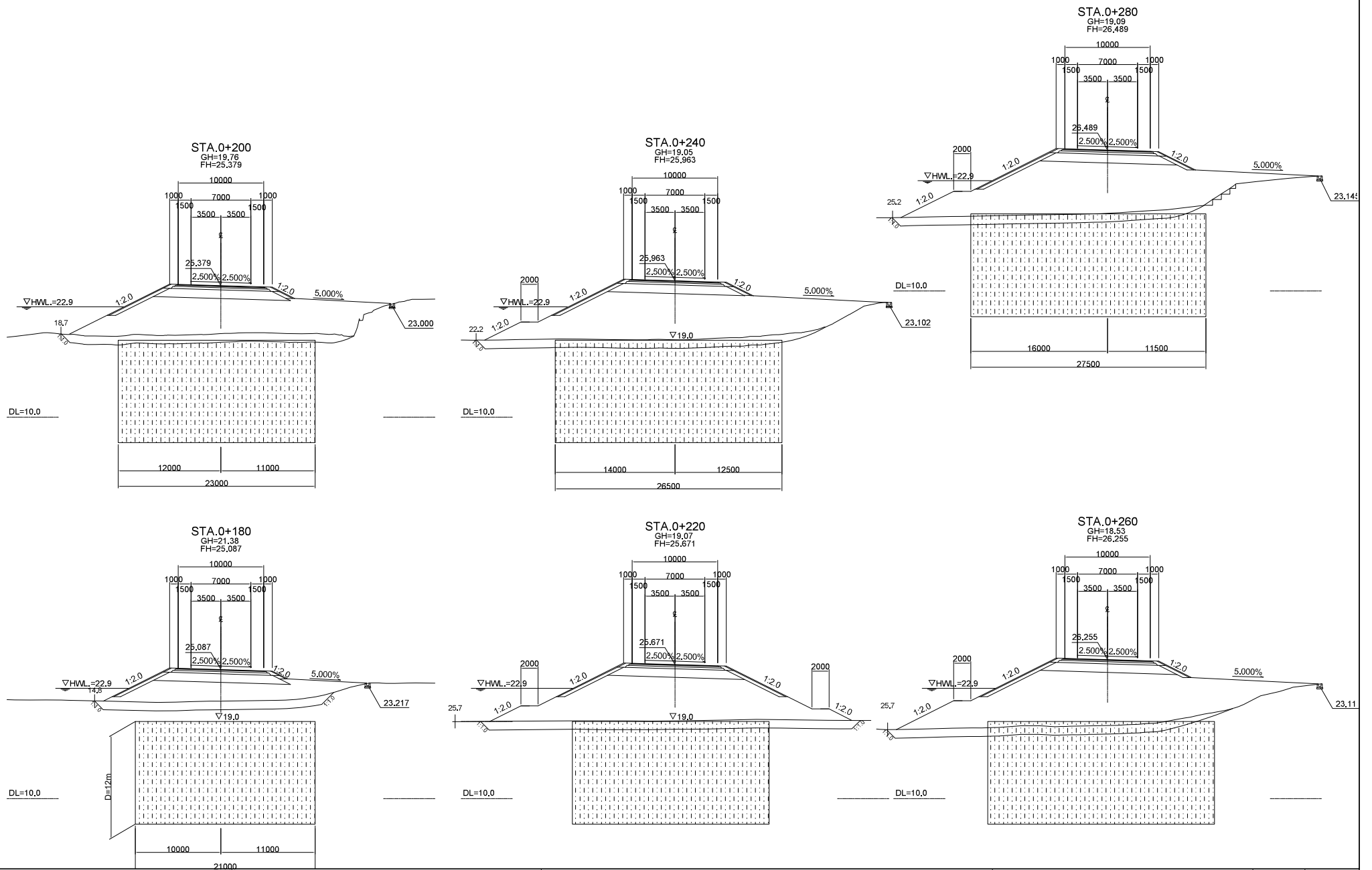
PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
7_Peam Te Bridge
TYPICAL CROSS SECTION OF APPROACH ROAD

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/100 | PT-10 |



| | | | | | |
|--|---|--|--|----------------|-------------|
| MINISTRY OF PUBLIC WORKS AND TRANSPORT KINGDOM OF CAMBODIA | JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD. | PROJECT TITLE: PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT OF BRIDGES IN FLOOD-PRONE AREAS | DRAWING TITLE: 7_Peam Te Bridge CROSS SECTION OF APPROACH ROAD (1) | SCALE(A1 SIZE) | DRAWING NO. |
| | | | | 1/200 | PT-11 |



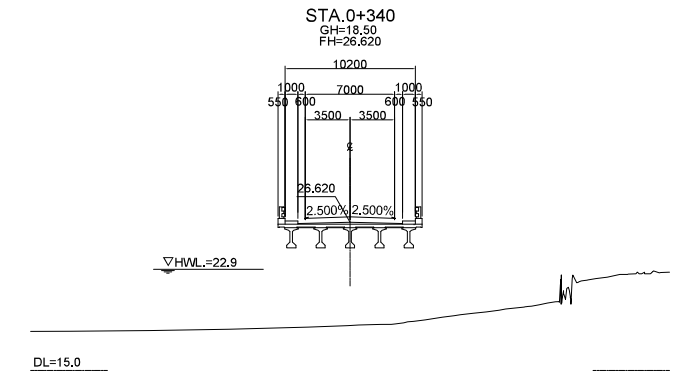
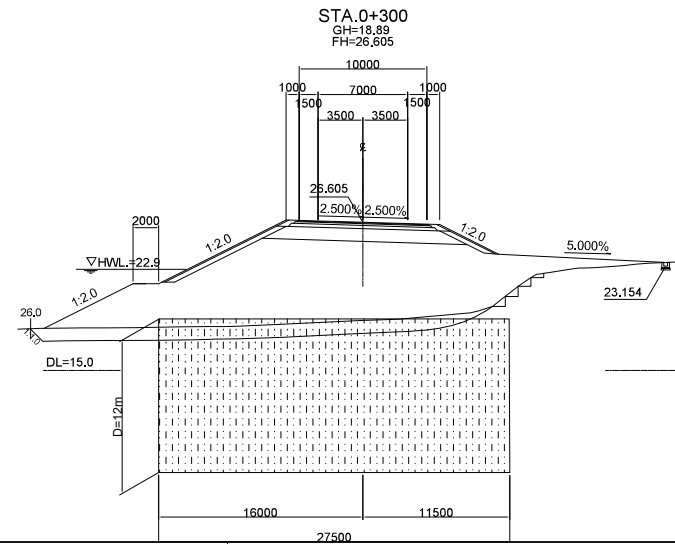
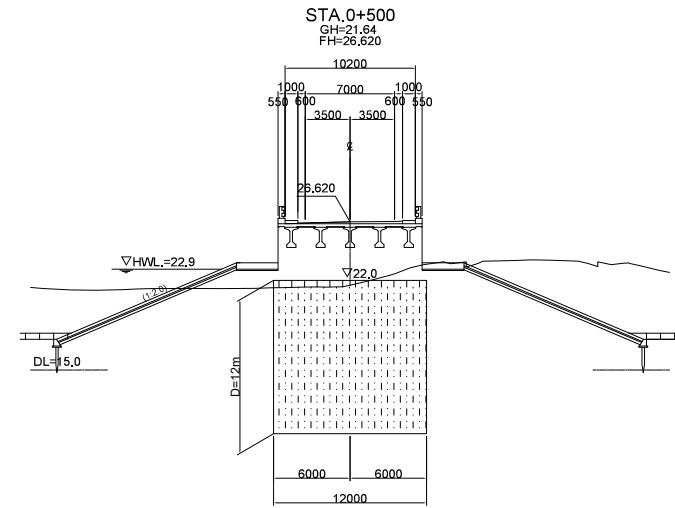
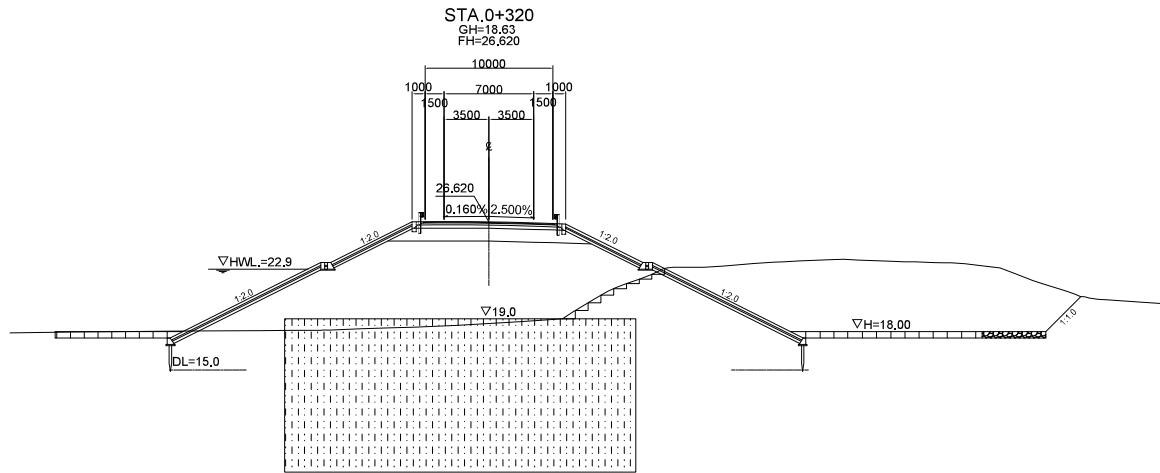
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
7_Peam Te Bridge
CROSS SECTION OF APPROACH ROAD (2)

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/200 | PT-12 |



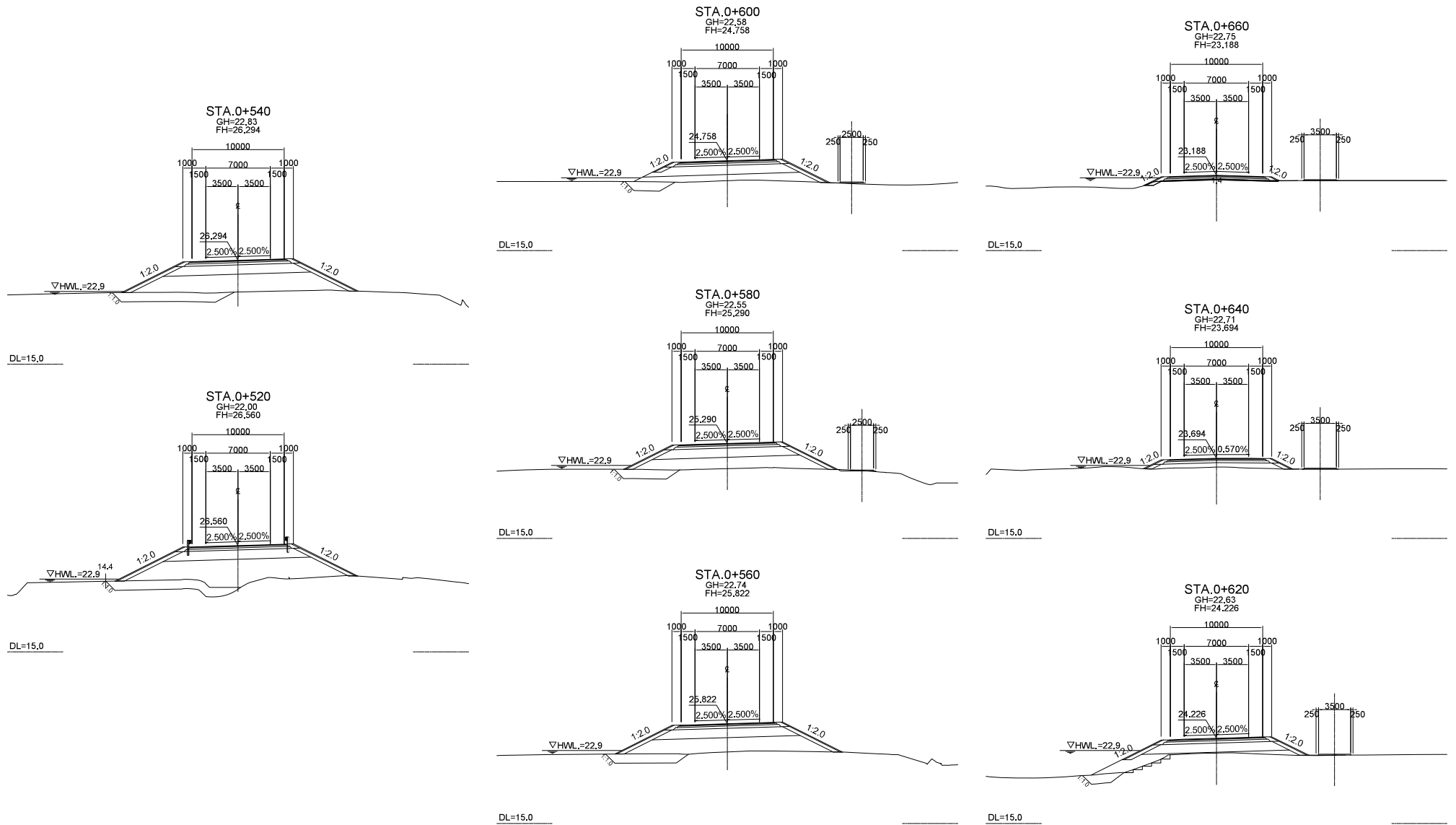
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
7_Peam Te Bridge
CROSS SECTION OF APPROACH ROAD (3)

| SCALE(AT SITE) | DRAWING NO. |
|----------------|-------------|
| 1/200 | PT-13 |



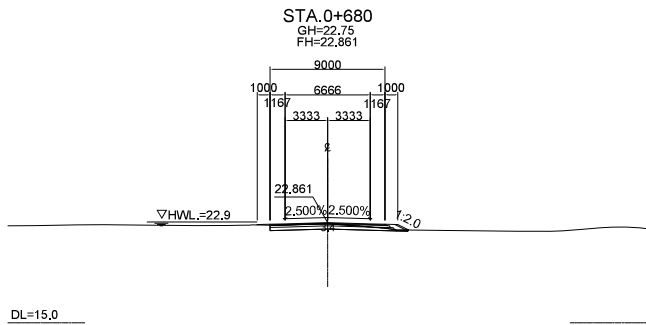
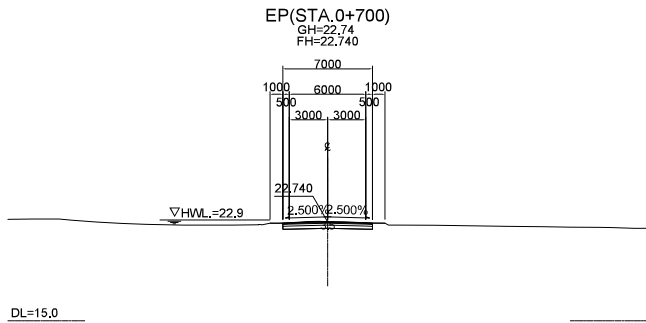
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

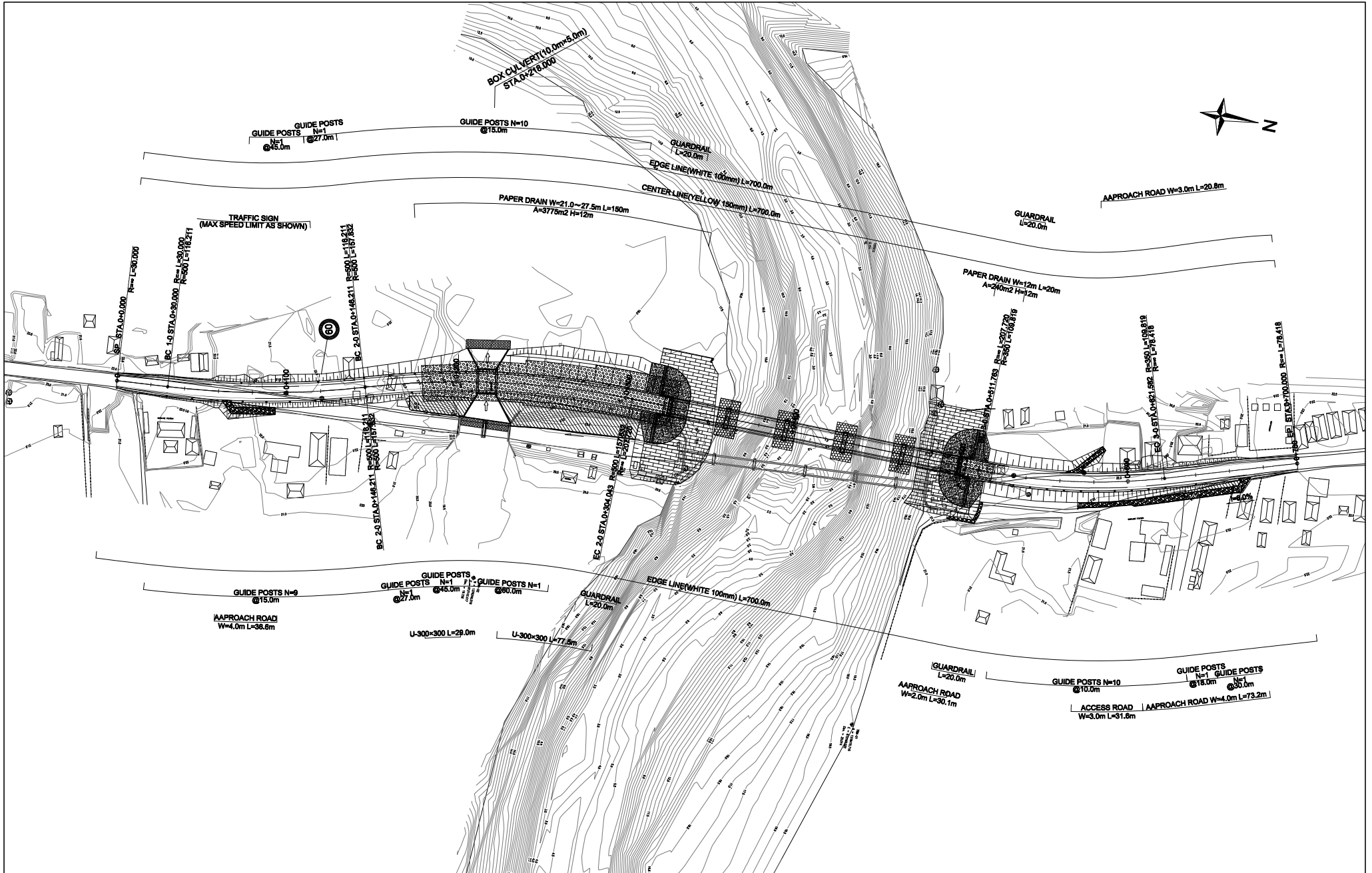
PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
7_Peam Te Bridge
CROSS SECTION OF APPROACH ROAD (4)

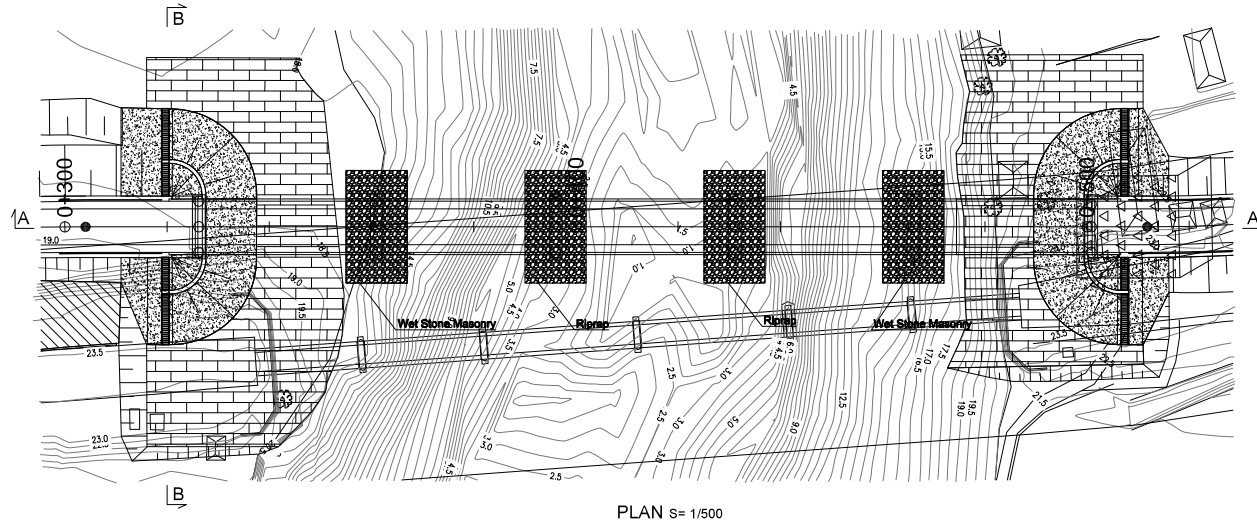
| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/200 | PT-14 |



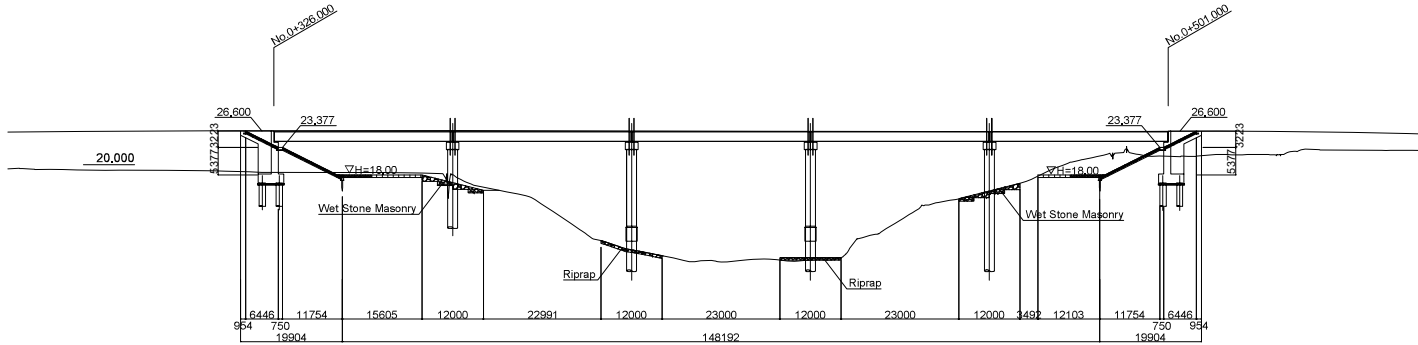
| | | | | | |
|--|---|--|--|----------------|-------------|
| MINISTRY OF PUBLIC WORKS AND TRANSPORT KINGDOM OF CAMBODIA | JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD. | PROJECT TITLE: PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT OF BRIDGES IN FLOOD-PRONE AREAS | DRAWING TITLE: 7_Peam Te Bridge CROSS SECTION OF APPROACH ROAD (5) | SCALE(A1 SIZE) | DRAWING NO. |
| | | | | 1/200 | PT-15 |



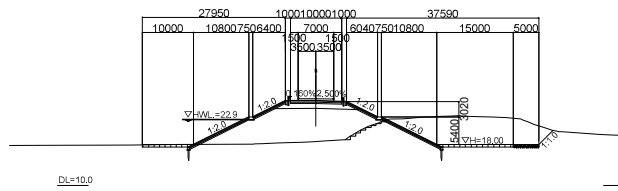
| | | | | | |
|--|---|--|--|--|----------------------|
| MINISTRY OF PUBLIC WORKS AND TRANSPORT KINGDOM OF CAMBODIA | JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD. | PROJECT TITLE: PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT OF BRIDGES IN FLOOD-PRONE AREAS | DRAWING TITLE: 7_Peam Te Bridge PLAN OF APPROACH ROAD (ANCILLARY) | SCALE(AT SITE) 1/2,000 (1/1,000) | DRAWING NO. PT-16 |
|--|---|--|--|--|----------------------|



PLAN S= 1/500



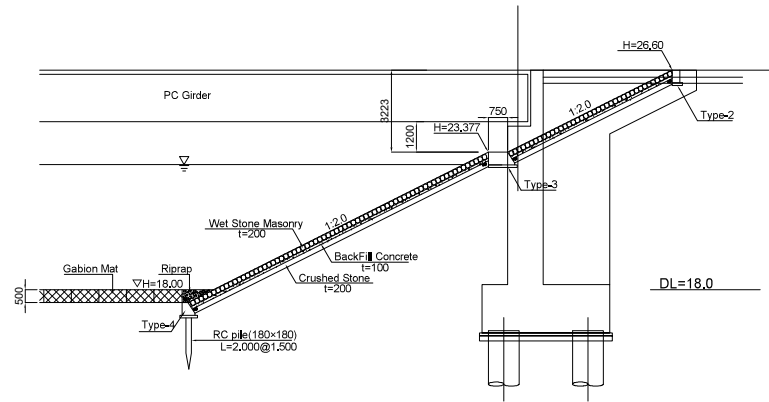
SECTION A-A S= 1/500



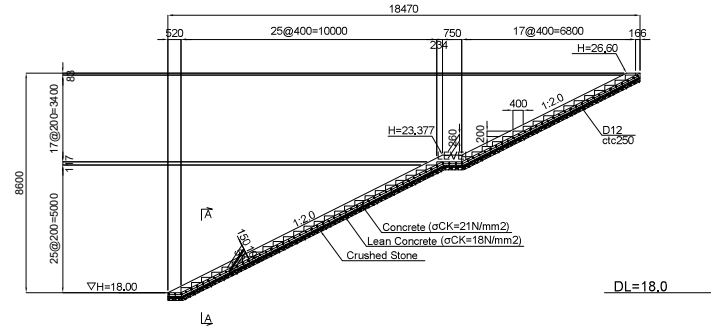
SECTION B-B S= 1/500

別添7-138

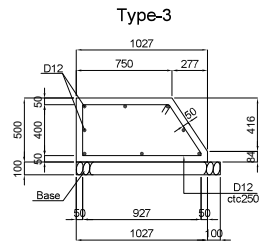
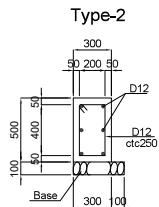
| | | | | | |
|--|---|--|---|----------------------------|----------------------|
| MINISTRY OF PUBLIC WORKS AND TRANSPORT KINGDOM OF CAMBODIA | JAPAN INTERNATIONAL COOPERATION AGENCY CTI ENGINEERING INTERNATIONAL CO., LTD. | PROJECT TITLE: PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT OF BRIDGES IN FLOOD-PRONE AREAS | DRAWING TITLE: 7_Peam Te Bridge REVETMENT AND RIVER BED PROTECTION(1) | SCALE(A1 SIZE) AS SHOWN | DRAWING NO. PT-17 |
|--|---|--|---|----------------------------|----------------------|



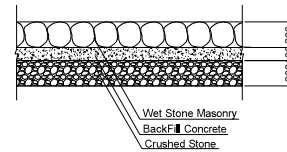
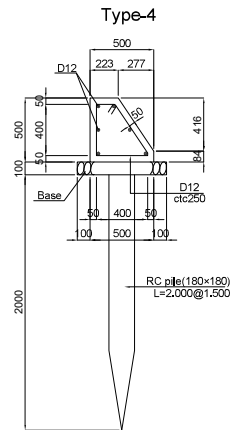
PROFILE s= 1/100



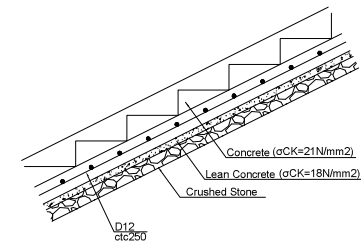
STAIRS s= 1/100



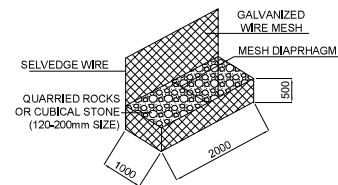
DETAILS s= 1/20



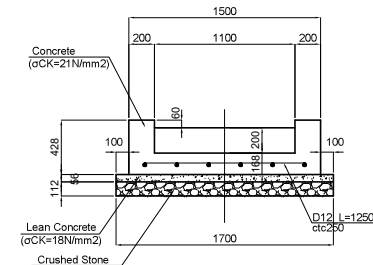
DETAILS s= 1/20



DETAILS s= 1/20



GABION MAT DETAIL
S = None Scale



SECTION A-A s= 1/20

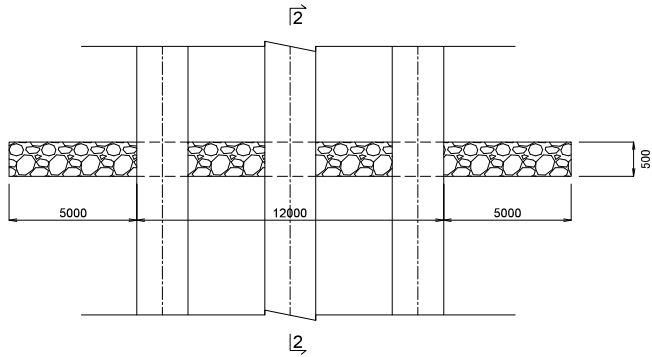
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

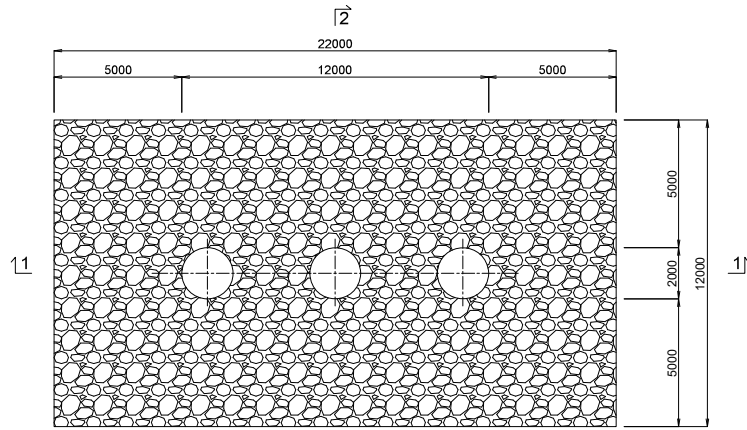
PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
7_Peam Te Bridge
REVETMENT AND RIVER BED PROTECTION(2)

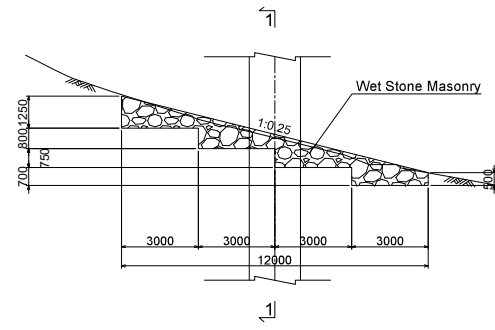
| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| AS SHOWN | PT-18 |



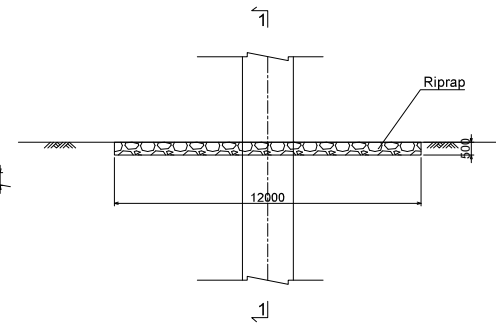
Section 1-1



Plan



A + P1, P4



A + P2, P3

Section 2-2

RIVER BED

MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

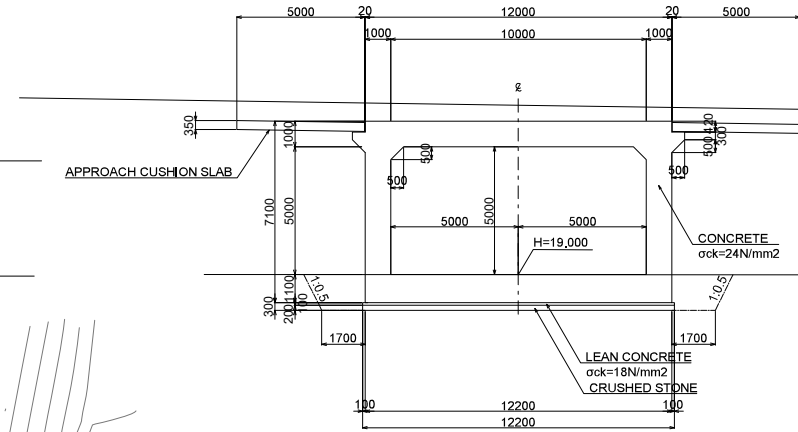
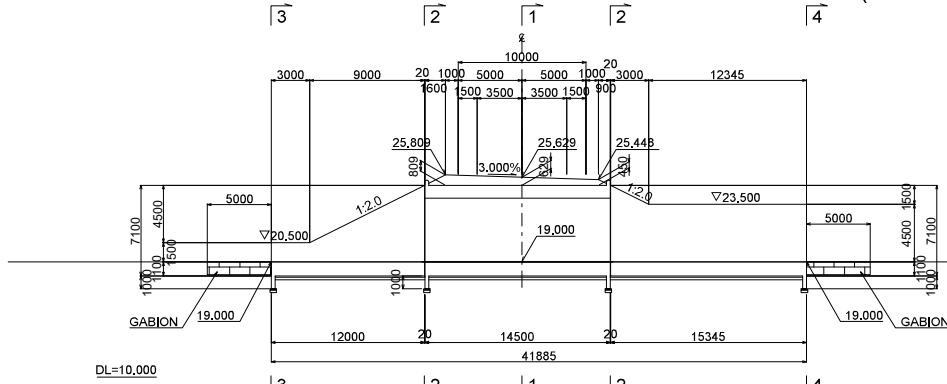
JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

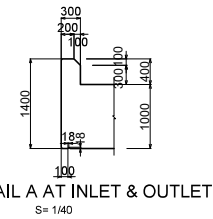
DRAWING TITLE:
7_Peam Te Bridge
REVTMENT AND RIVER BED PROTECTION (3)

| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| 1/100 | PT-19 |

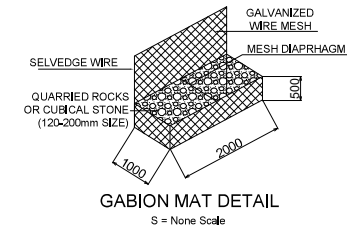
GENERAL VIEW OF CULVERT 10.0×5.0 (1) (NO.0+218.000)



1-1 SECTION
STANDARD SECTION OF BOX CULVERT S=1/100



DETAIL A AT INLET & OUTLET
S=1/40



GABION MAT DETAIL
S = None Scale

SIDE VIEW S=1/200

PLAN VIEW S=1/200

別添7-141

MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

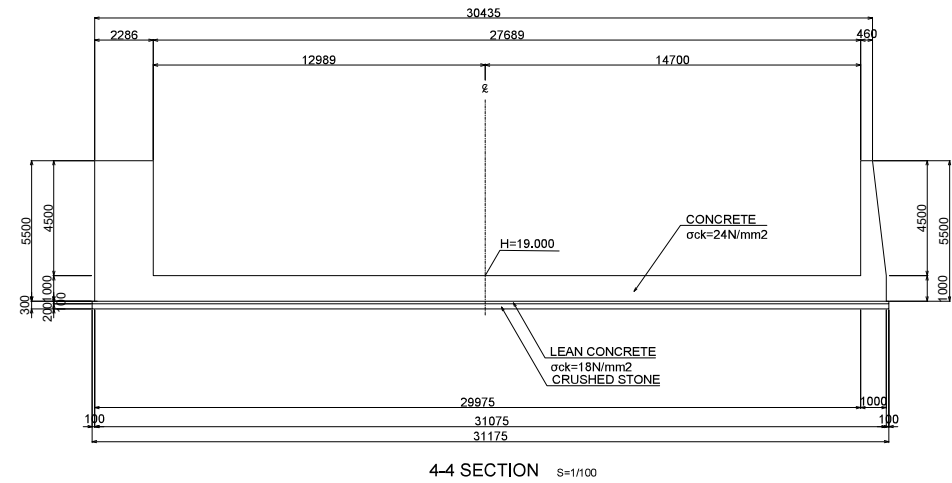
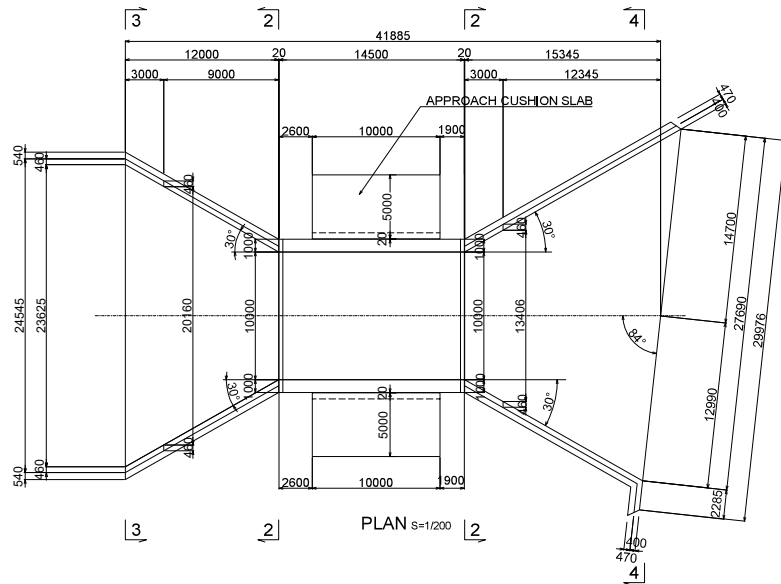
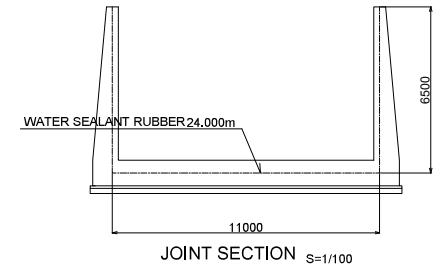
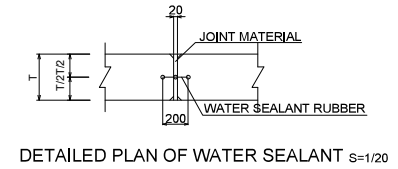
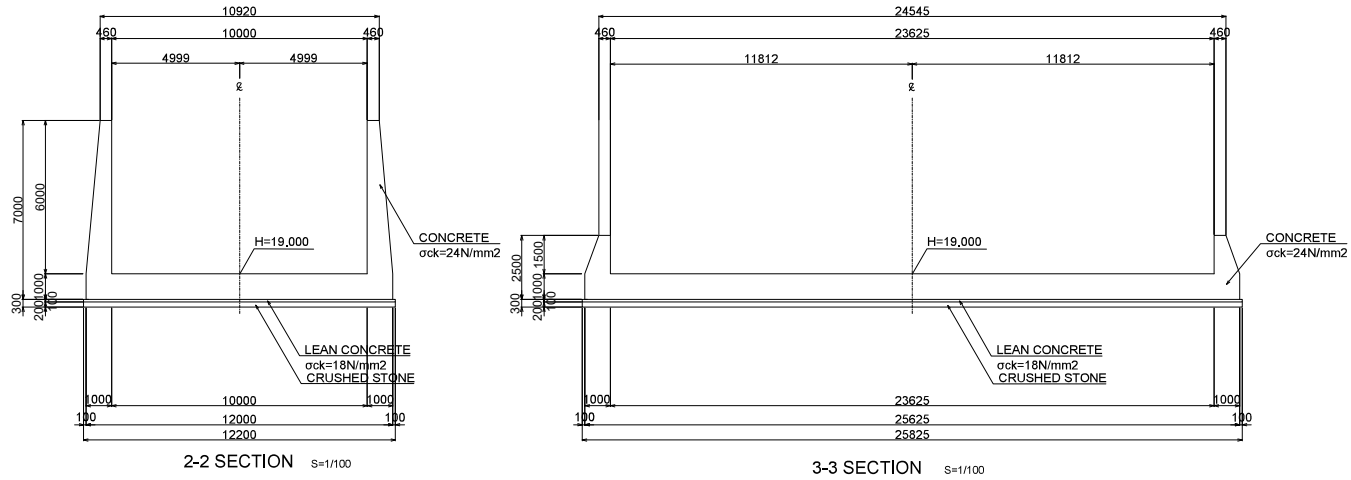
JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
7_Peam Te Bridge
GENERAL VIEW OF CULVERT 10.0×5.0 (1)
(STA.0+218.000)

| SCALE(AT SIZE) | DRAWING NO. |
|----------------|-------------|
| AS SHOWN | PT-20 |

GENERAL VIEW OF CULVERT 10.0×5.0 (2) (NO.0+218.000)



別添7-142

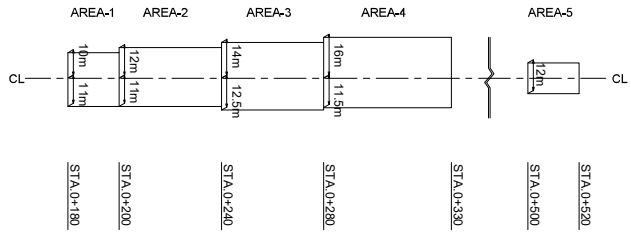
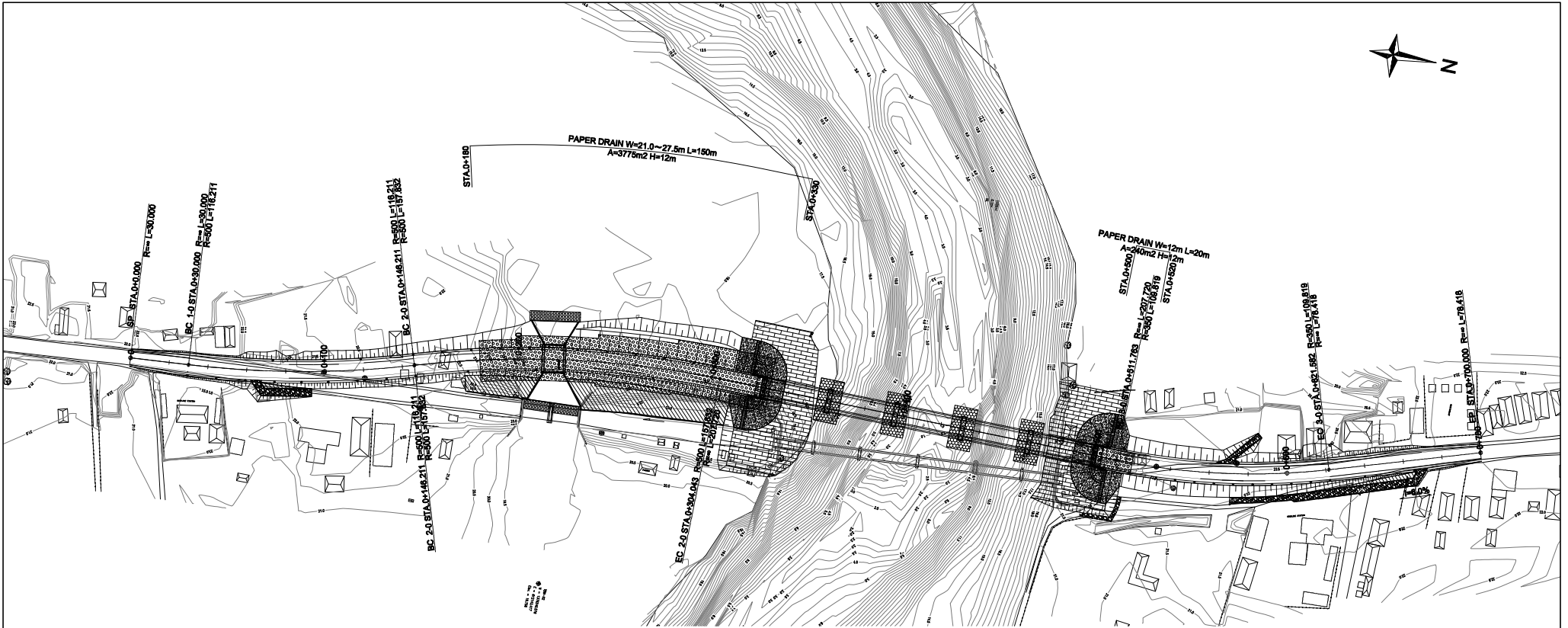
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

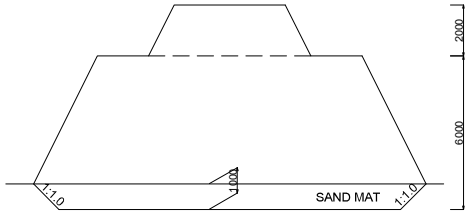
PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
7_Peam Te Bridge
GENERAL VIEW OF CULVERT 10.0×5.0 (2)
(STA.0+218.000)

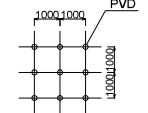
| SCALE(A1 SIZE) | DRAWING NO. |
|----------------|-------------|
| AS SHOWN | PT-21 |



PLAN OF AREA AND WIDTH



TARGET SETTLEMENT
EMBANKMENT H=6.0m: 61days 53cm
H=8.0m:109days 75cm



ARRANGEMENT OF
PREFABRICATED VERTICAL DRAIN

| CALCULATE | | | | |
|-----------|------------------------|----------------|----------------|------------------|
| AREA | AREA (m ²) | PVD LENGTH (m) | PVD Q'ty (Nos) | TOTAL LENGTH (m) |
| AREA-1 | 420 | 12 | 440 | 5280 |
| AREA-2 | 920 | 12 | 960 | 11520 |
| AREA-3 | 1060 | 12 | 1080 | 12960 |
| AREA-4 | 1375 | 12 | 1400 | 16800 |
| AREA-5 | 240 | 12 | 273 | 3276 |
| TOTAL | 4015 | - | 4153 | 49836 |

MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

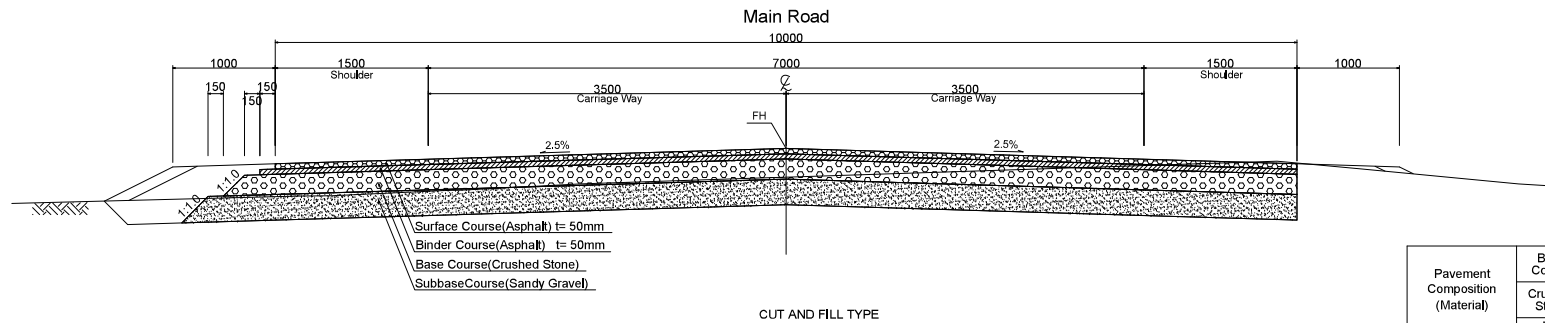
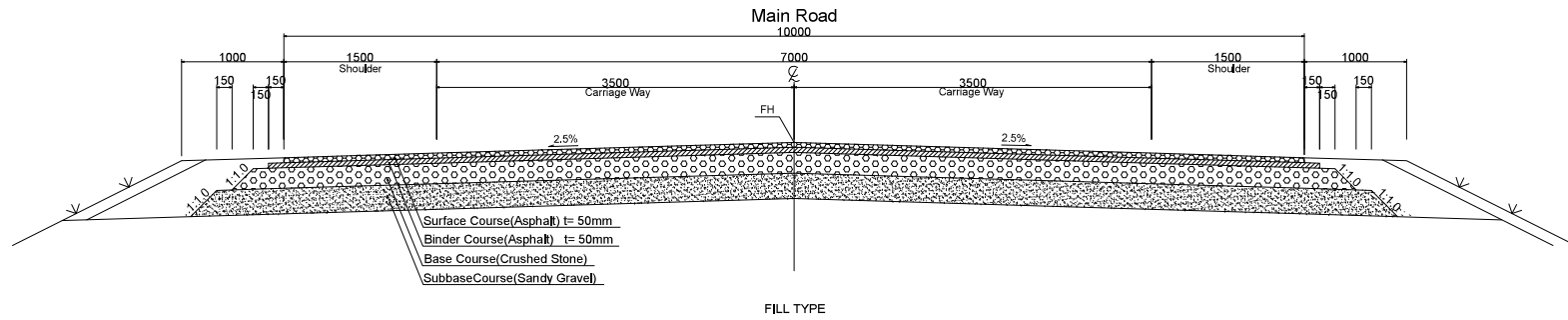
JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

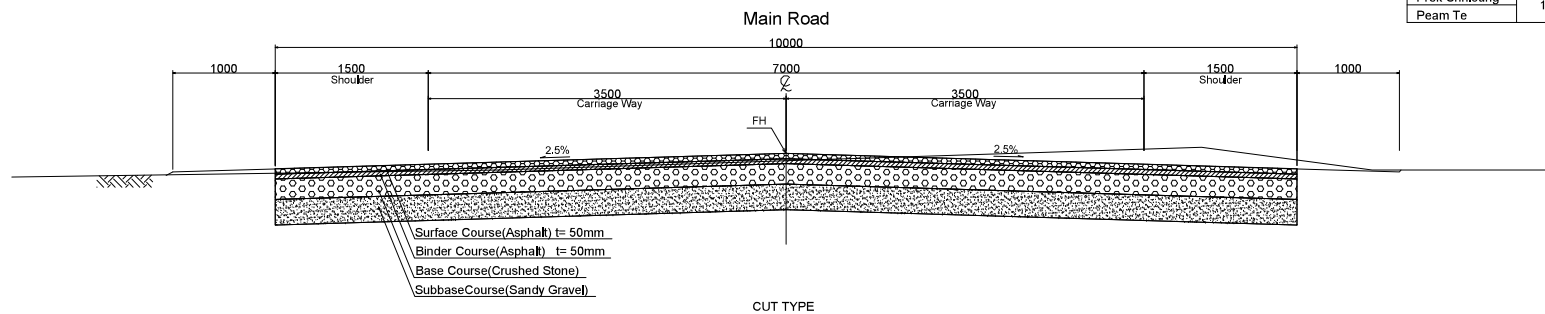
DRAWING TITLE:
7_Peam Te Bridge
PLAN OF PAPER DRAIN

SCALE(AT SITE) DRAWING NO.
1/2,000 (1/1,000) PT-22

Outline of Ancillaries



| Pavement Composition (Material) | Base Course | Subbase Course |
|---------------------------------|---------------|----------------|
| | Crushed Stone | Sandy Gravel |
| Thickness(mm) | | |
| Ba Baong No.2 | 200 | 250 |
| Ba Baong No.1 | | 300 |
| Prek Sandan | | |
| Prek Rus | | |
| Anglong Khle | 150 | 250 |
| Prek Chhloung | | |
| Peam Te | | |



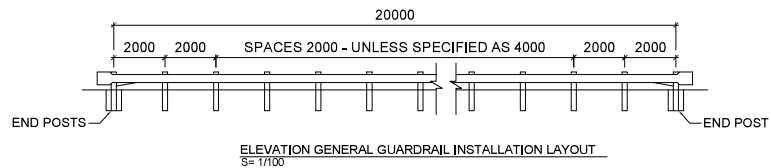
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

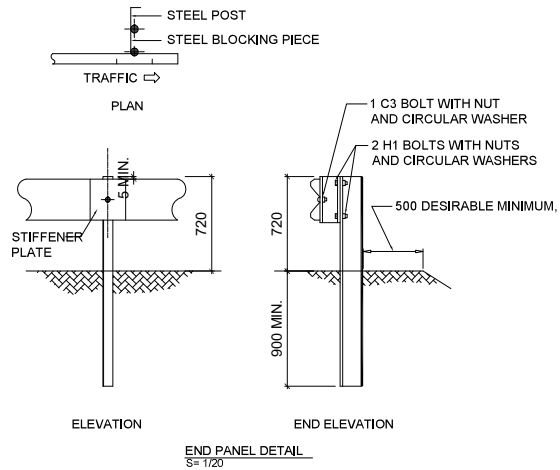
PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
OUTLINE OF ANCILLARIES
DETAIL OF ASPHALT PAVEMENT

| | |
|----------------|-------------|
| SCALE(A1 SIZE) | DRAWING NO. |
| 1/25 | RA-01 |



ELEVATION GENERAL GUARDRAIL INSTALLATION LAYOUT
S= 1/100



END PANEL DETAIL
S= 1/20

SCHEDULE OF GUARDRAIL

| GUARDRAIL CALCULATE | LEFT SIDE | | | RIGHT SIDE | | | | | |
|------------------------|-----------|------------------|----------------|------------|-----------|------------------|----------------|------------|-------|
| | No. | STARTING STATION | ENDING STATION | LENGTH (m) | No. | STARTING STATION | ENDING STATION | LENGTH (m) | |
| 1_Ba Baong Bridge No.2 | 1 | 0 + 300,8 | 0 + 320,8 | 20,0 | 1 | 0 + 300,8 | 0 + 320,8 | 20,0 | |
| | 2 | 0 + 440,2 | 0 + 460,2 | 20,0 | 2 | 0 + 440,2 | 0 + 460,2 | 20,0 | |
| | SUB TOTAL | | | 40,0 | SUB TOTAL | | | 40,0 | |
| TOTAL | | | | 80,0 | TOTAL | | | | 80,0 |
| 2_Ba Baong Bridge No.1 | 1 | 0 + 261,9 | 0 + 281,9 | 20,0 | 1 | 0 + 261,9 | 0 + 281,9 | 20,0 | |
| | 2 | 0 + 401,2 | 0 + 421,2 | 20,0 | 2 | 0 + 401,2 | 0 + 421,2 | 20,0 | |
| | SUB TOTAL | | | 40,0 | SUB TOTAL | | | 40,0 | |
| TOTAL | | | | 80,0 | TOTAL | | | | 80,0 |
| 3_PreK Sandan Bridge | 1 | 0 + 185,8 | 0 + 205,8 | 20,0 | 1 | 0 + 185,8 | 0 + 205,8 | 20,0 | |
| | 2 | 0 + 255,2 | 0 + 275,2 | 20,0 | 2 | 0 + 255,2 | 0 + 275,2 | 20,0 | |
| | SUB TOTAL | | | 40,0 | SUB TOTAL | | | 40,0 | |
| TOTAL | | | | 80,0 | TOTAL | | | | 80,0 |
| 4_PreK Rus Bridge | 1 | 0 + 212,8 | 0 + 232,8 | 20,0 | 1 | 0 + 212,8 | 0 + 232,8 | 20,0 | |
| | 2 | 0 + 308,2 | 0 + 329,2 | 20,0 | 2 | 0 + 308,2 | 0 + 329,2 | 20,0 | |
| | SUB TOTAL | | | 40,0 | SUB TOTAL | | | 40,0 | |
| TOTAL | | | | 80,0 | TOTAL | | | | 80,0 |
| 5_Anglong Khle Bridge | 1 | 0 + 183,5 | 0 + 203,5 | 20,0 | 1 | 0 + 183,5 | 0 + 203,5 | 20,0 | |
| | 2 | 0 + 265,5 | 0 + 285,5 | 20,0 | 2 | 0 + 265,5 | 0 + 285,5 | 20,0 | |
| | SUB TOTAL | | | 40,0 | SUB TOTAL | | | 40,0 | |
| TOTAL | | | | 80,0 | TOTAL | | | | 80,0 |
| 6_PreK Chhlong Bridge | 1 | 0 + 20,1 | 0 + 198,0 | 176,8 | 1 | 0 + 32,5 | 0 + 199,5 | 168,2 | |
| | 2 | 0 + 347,6 | 0 + 367,6 | 20,0 | 2 | 0 + 346,4 | 0 + 366,4 | 20,0 | |
| | SUB TOTAL | | | 196,8 | SUB TOTAL | | | 188,2 | |
| TOTAL | | | | 385,0 | TOTAL | | | | 385,0 |
| 7_Peam Te Bridge | 1 | 0 + 298,9 | 0 + 318,9 | 20,0 | 1 | 0 + 298,9 | 0 + 318,9 | 20,0 | |
| | 2 | 0 + 508,1 | 0 + 528,1 | 20,0 | 2 | 0 + 508,1 | 0 + 528,1 | 20,0 | |
| | SUB TOTAL | | | 40,0 | SUB TOTAL | | | 40,0 | |
| TOTAL | | | | 80,0 | TOTAL | | | | 80,0 |
| ROAD TOTAL | | | | | | | 865,0 | | |

NOTE:

- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE INDICATED

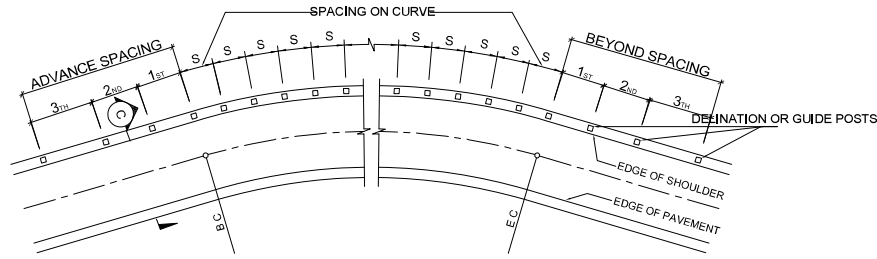
MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

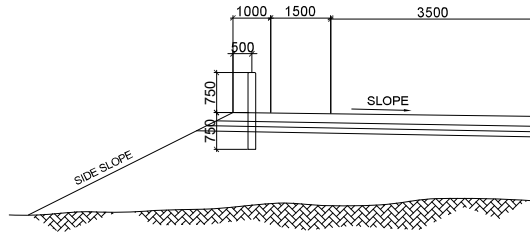
PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
GUARDRAIL LAYOUT AT BRIDGE

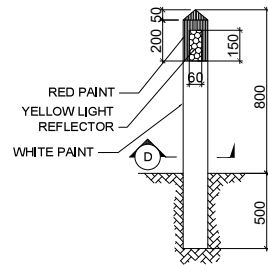
SCALE(AT SIZE) DRAWING NO.
AS SHOWN RA-02



PLAN
S= None Scale



SECTION C-C

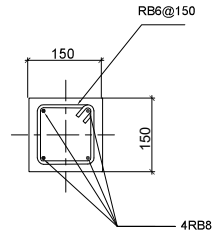


GUIDE POSTS (AT DANGEROUS CURVE)
S= None Scale

DELINEATION OR GUIDE POSTS INSTALLATION
S= None Scale

SPACING FOR DELINEATION AND GUIDE POSTS

| RADIUS IN m | SPACING ON CURVE | SPACING IN ADVANCE & BEYOND CURVE | | |
|----------------|---------------------|-----------------------------------|-----------|-----------|
| | | 1st SPACE | 2nd SPACE | 3th SPACE |
| 15-74 | 4m | 7m | 12m | 24m |
| 75-99 | 6m | 11m | 18m | 36m |
| 100-149 | 7m | 13m | 21m | 42m |
| 150-199 | 8m | 14m | 24m | 48m |
| 200-299 | 9m | 16m | 27m | 54m |
| 300-499 | 10m | 18m | 30m | 60m |
| 500-999 | 15m | 27m | 45m | 60m |
| 1000-1500 | 21m | 38m | 60m | 60m |



SECTION D-D

GUIDE POST
S= None Scale

SCHEDULE OF GUIDE POSTS

| GUIDE POSTS CALCULATE | LEFT SIDE | | | RIGHT SIDE | | | | |
|--------------------------|-----------|---------------------|-------------------|----------------------|-----|---------------------|-------------------|----------------------|
| | No. | STARTING STATION | ENDING STATION | QUANTITY (NUMBER) | No. | STARTING STATION | ENDING STATION | QUANTITY (NUMBER) |
| 1_Ba Baong Bridge No.2 | 1 | 0 + 120,2 | - | 1,0 | 1 | 0 + 116,4 | 0 + 158,2 | 3,0 |
| | 2 | 0 + 158,2 | 0 + 281,0 | 7,0 | 2 | 0 + 196,2 | - | 1,0 |
| | 3 | 0 + 478,9 | 0 + 578,6 | 6,0 | 3 | 0 + 256,2 | - | 1,0 |
| | 4 | 0 + 616,6 | - | 1,0 | 4 | 0 + 480,6 | - | 1,0 |
| | 5 | 0 + 676,6 | - | 1,0 | 5 | 0 + 540,6 | - | 1,0 |
| | | | | | 6 | 0 + 578,6 | 0 + 641,3 | 4,0 |
| | | | 16,0 | | | | 11,0 | |
| | | | | | | | 27,0 | |
| 2_Ba Baong Bridge No.1 | 1 | 0 + 42,5 | - | 1,0 | 1 | 0 + 21,7 | 0 + 140,5 | 9,0 |
| | 2 | 0 + 102,5 | - | 1,0 | 2 | 0 + 167,5 | - | 1,0 |
| | 3 | 0 + 140,5 | 0 + 243,0 | 6,0 | 3 | 0 + 212,5 | - | 1,0 |
| | 4 | 0 + 422,3 | 0 + 542,0 | 7,0 | 4 | 0 + 444,0 | - | 1,0 |
| | 5 | 0 + 580,0 | - | 1,0 | 5 | 0 + 504,0 | - | 1,0 |
| | 6 | 0 + 604,0 | - | 1,0 | 6 | 0 + 542,0 | 0 + 583,8 | 3,0 |
| | | | 17,0 | | | | 16,0 | |
| | | | | | | | 33,0 | |
| 3_PreK Sandan Bridge | | | | | 1 | 0 + 23,0 | - | 1,0 |
| | | | | | 2 | 0 + 50,0 | 0 + 180,4 | 10,0 |
| | | | | | | | 11,0 | |
| | | | | | | | 11,0 | |
| 4_PreK Rus Bridge | 1 | 0 + 41,8 | 0 + 144,6 | 6,0 | | | | |
| | 2 | 0 + 182,6 | - | 1,0 | | | | |
| | | | 7,0 | | | | | |
| | | | | | | | 7,0 | |
| 5_Anglong Khle Bridge | 1 | 0 + 9,5 | 0 + 69,5 | 1,0 | | | | |
| | 2 | 0 + 69,5 | 0 + 129,5 | 1,0 | | | | |
| | 3 | 0 + 129,5 | 0 + 167,5 | 2,0 | | | | |
| | 4 | 0 + 308,6 | 0 + 346,6 | 2,0 | | | | |
| | 5 | 0 + 346,6 | 0 + 406,6 | 1,0 | | | | |
| | 6 | 0 + 406,6 | 0 + 466,6 | 1,0 | | | | |
| | | | 8,0 | | | | | |
| | | | | | | | 8,0 | |
| 6_PreK Chhloung Bridge | 1 | 0 + 374,4 | - | 1,0 | | | | |
| | 2 | 0 + 401,4 | 0 + 514,1 | 9,0 | | | | |
| | | | 10,0 | | | | | |
| | | | | | | | 10,0 | |
| 7_Peam Te Bridge | 1 | 0 + 74,2 | - | 1,0 | 1 | 0 + 30,0 | 0 + 146,2 | 9,0 |
| | 2 | 0 + 119,2 | - | 1,0 | 2 | 0 + 173,2 | - | 1,0 |
| | 3 | 0 + 146,2 | 0 + 289,2 | 10,0 | 3 | 0 + 218,2 | - | 1,0 |
| | | | | | 4 | 0 + 278,2 | - | 1,0 |
| | | | | | 5 | 0 + 533,2 | 0 + 621,6 | 10,0 |
| | | | | | 6 | 0 + 639,6 | - | 1,0 |
| | | | | | 7 | 0 + 668,6 | - | 1,0 |
| | | | 12,0 | | | | 24,0 | |
| | | | | | | | 36,0 | |
| | | | | | | | 132,0 | |

NOTE:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE INDICATED
2. DELINEATION POST, GUIDE POST CONCRETE SHALL BE CLASS D. NO POST SHALL BE INSTALLED AND PAINTED UNLESS THE CONCRETE IS 20 DAYS OLD.
3. CONCRETE COVER SHALL BE 20 MM.
4. GUIDE POST (AT DANGEROUS CURVE) SHALL BE INSTALLED WHEN HEIGHT IS MORE THAN 5M OR CURVE RADIUS IS LESS THAN 200M

MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
DELINEATIONS AND GUIDE POSTS

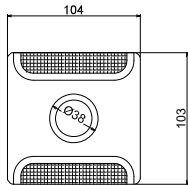
| | |
|----------------|-------------|
| SCALE(A1 SIZE) | DRAWING NO. |
| AS SHOWN | RA-03 |

SOLID YELLOW CENTERLINE WITH ROAD STUD REFLECTOR

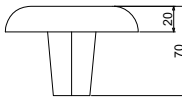
SOLID WHITE EDGE LINE

SOLID WHITE STOP LINE

LANE MARKINGS s=1/50



REFLECTOR STUD FRONT VIEW s=1/2



REFLECTOR STUD LATERAL VIEW s=1/2

SCHEDULE OF LANE MARKINGS

| LANE MARKING CALCULATE | 100mm SOLID WHITE EDGE LINE | | | | | | 150mm SOLID YELLOW CENTER LINE | | | ROAD STUD REFLECTOR QUANTITY (NUMBER) (AT 25m INTERVAL) | | | |
|------------------------|-----------------------------|------------------|----------------|------------|-----------|------------------|--------------------------------|------------|-----------|---|------------------|----------------|------------|
| | LEFT SIDE | | | RIGHT SIDE | | | CENTER LINE | | | | | | |
| | No. | STARTING STATION | ENDING STATION | LENGTH (m) | No. | STARTING STATION | ENDING STATION | LENGTH (m) | No. | | STARTING STATION | ENDING STATION | LENGTH (m) |
| 1_Ba Baong Bridge No.2 | 1 | 0 + 0.0 | 0 + 720.0 | 720.0 | 1 | 0 + 0.0 | 0 + 720.0 | 720.0 | 1 | 0 + 0.0 | 0 + 720.0 | 720.0 | 30 |
| | SUB TOTAL | | | 720.0 | SUB TOTAL | | | 720.0 | SUB TOTAL | | | 720.0 | |
| | TOTAL | | | | | | 1440.0 | TOTAL | | | 720.0 | | |
| 2_Ba Baong Bridge No.1 | 1 | 0 + 0.0 | 0 + 685.0 | 685.0 | 1 | 0 + 0.0 | 0 + 685.0 | 685.0 | 1 | 0 + 0.0 | 0 + 685.0 | 685.0 | 28 |
| | SUB TOTAL | | | 685.0 | SUB TOTAL | | | 685.0 | SUB TOTAL | | | 685.0 | |
| | TOTAL | | | | | | 1370.0 | TOTAL | | | 685.0 | | |
| 3_Prek Sandan Bridge | 1 | 0 + 0.0 | 0 + 450.0 | 450.0 | 1 | 0 + 0.0 | 0 + 450.0 | 450.0 | 1 | 0 + 0.0 | 0 + 450.0 | 450.0 | 19 |
| | SUB TOTAL | | | 450.0 | SUB TOTAL | | | 450.0 | SUB TOTAL | | | 450.0 | |
| | TOTAL | | | | | | 900.0 | TOTAL | | | 450.0 | | |
| 4_Prek Rus Bridge | 1 | 0 + 0.0 | 0 + 505.0 | 505.0 | 1 | 0 + 0.0 | 0 + 505.0 | 505.0 | 1 | 0 + 0.0 | 0 + 505.0 | 505.0 | 21 |
| | SUB TOTAL | | | 505.0 | SUB TOTAL | | | 505.0 | SUB TOTAL | | | 505.0 | |
| | TOTAL | | | | | | 1010.0 | TOTAL | | | 505.0 | | |
| 5_Anglong Khle Bridge | 1 | 0 + 0.0 | 0 + 480.0 | 480.0 | 1 | 0 + 0.0 | 0 + 480.0 | 480.0 | 1 | 0 + 0.0 | 0 + 480.0 | 473.0 | 20 |
| | SUB TOTAL | | | 480.0 | SUB TOTAL | | | 480.0 | SUB TOTAL | | | 473.0 | |
| | TOTAL | | | | | | 960.0 | TOTAL | | | 473.0 | | |
| 6_Prek Chhloung Bridge | 1 | 0 + 0.0 | 0 + 554.0 | 554.0 | 1 | 0 + 0.0 | 0 + 554.0 | 554.0 | 1 | 0 + 0.0 | 0 + 554.0 | 554.0 | 23 |
| | SUB TOTAL | | | 554.0 | SUB TOTAL | | | 554.0 | SUB TOTAL | | | 554.0 | |
| | TOTAL | | | | | | 1108.0 | TOTAL | | | 554.0 | | |
| 7_Peam Te Bridge | 1 | 0 + 0.0 | 0 + 700.0 | 700.0 | 1 | 0 + 0.0 | 0 + 700.0 | 700.0 | 1 | 0 + 0.0 | 0 + 700.0 | 700.0 | 29 |
| | SUB TOTAL | | | 700.0 | SUB TOTAL | | | 700.0 | SUB TOTAL | | | 700.0 | |
| | TOTAL | | | | | | 1400.0 | TOTAL | | | 700.0 | | |
| | ROAD TOTAL | | | | | | 8188.0 | ROAD TOTAL | | | 4087.0 | | |

SCHEDULE OF LANE MARKINGS

| LANE MARKING CALCULATE | 200mm SOLID WHITE STOP LINE | | | | | | | |
|------------------------|-----------------------------|------------------|----------------|------------|-----------|------------------|----------------|------------|
| | LEFT SIDE | | | RIGHT SIDE | | | | |
| | No. | STARTING STATION | ENDING STATION | LENGTH (m) | No. | STARTING STATION | ENDING STATION | LENGTH (m) |
| 5_Anglong Khle Bridge | 1 | 0 + 422.1 | - | 3.5 | 1 | 0 + 429.3 | - | 3.5 |
| | SUB TOTAL | | | 3.5 | SUB TOTAL | | | 3.5 |
| | TOTAL | | | | | | 7.0 | |
| | ROAD TOTAL | | | | | | 7.0 | |

NOTE:

THE MATERIALS, DIMENSION, SHAPES, COLOR, SIZE OF NUMERALS, LETTERS AND INSTALLATION LOCATION SHALL CONFORM WITH THE SPECIFICATION OF MINISTRY OF PUBLIC WORKS AND TRANSPORT

別添7-148

MINISTRY OF PUBLIC WORKS AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:

PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:

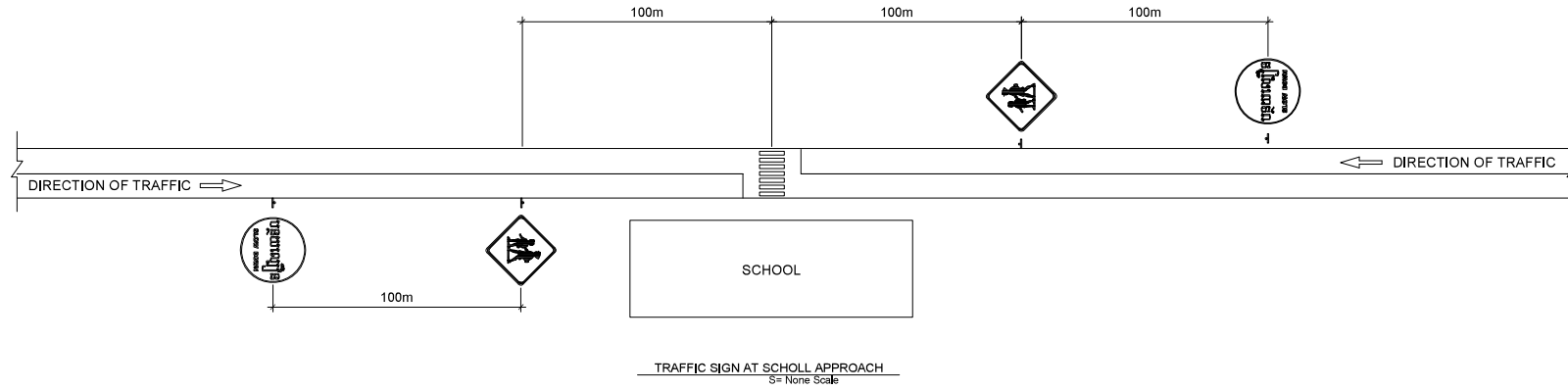
LANE MARKINGS AND ROAD STUD REFLECTOR

SCALE(AT SIZE)

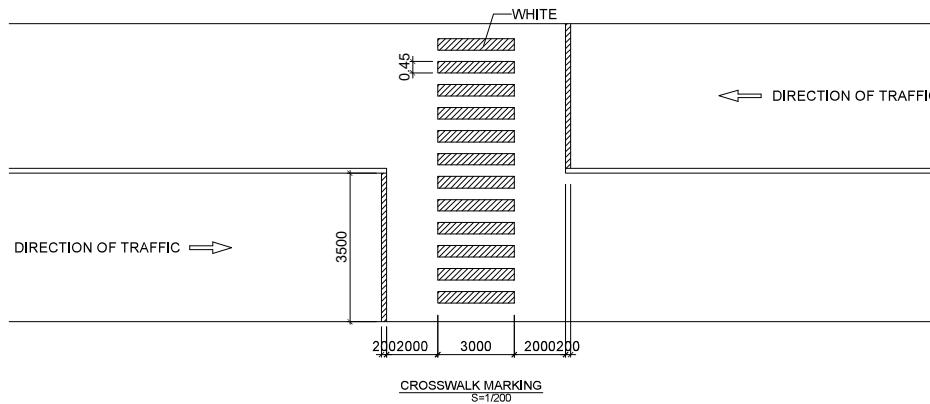
-

DRAWING NO.

RA-04



| LANE MARKING CALCULATE | 450mm CROSSWALK MARKING WHITE | | | |
|------------------------|-------------------------------|------------------|----------------|------------|
| | No. | STARTING STATION | ENDING STATION | LENGTH (m) |
| S_Anglong Khe Bridge | 1 | 0 + 416.5 | - | 7.0 |
| | SUB TOTAL | | | 7.0 |
| | TOTAL | | | 7.0 |



NOTE:
 THE MATERIALS, DIMENSION, SHAPES, COLOR, SIZE OF NUMERALS, LETTERS AND INSTALLATION LOCATION SHALL CONFORM WITH THE SPECIFICATION OF MINISTRY OF PUBLIC WORKS AND TRANSPORT

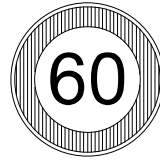
MINISTRY OF PUBLIC WORKS
 AND TRANSPORT
 KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
 CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
 PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
 OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
 TRAFFIC SIGN AT SCHOOL APPROACH
 AND CROSSWALK MARKING

| | |
|----------------|-------------|
| SCALE(A1 SIZE) | DRAWING NO. |
| - | RA-05 |



MAX SPEED LIMIT AS SHOWN



SLOW DOWN
R-2-24



RIGHT BEND
W-03

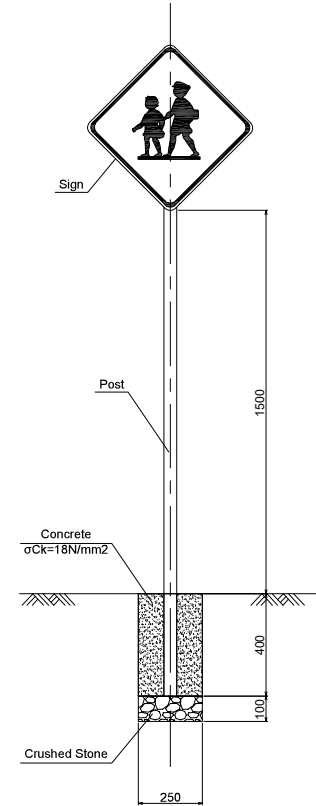


LEFT BEND
W-03



CHILDREN CROSSING
W1-33

REGULATORY PROHIBITORY ROADSIGNS



SIGN POST S=1/10

SCHEDULE OF TRAFFIC SIGNS

| TRAFFIC SIGNS CALCULATE | POINT | SIDE | MAX SPEED LIMIT AS SHOWN (NUMBER) | LEFT(RIGHT) BEND (NUMBER) | CHILDREN CROSSING (NUMBER) | SLOW DOWN (NUMBER) | TOTAL (NUMBER) |
|-------------------------|---------|-------|-----------------------------------|---------------------------|----------------------------|--------------------|----------------|
| 2_Ba Baong Bridge No.1 | 0 + 662 | RIGHT | 1 | - | - | - | 1 |
| 3_Prek Sandan Bridge | 0 + 256 | LEFT | - | 1 | - | - | 1 |
| 4_Prek Rus Bridge | 0 + 185 | LEFT | - | 1 | - | - | 1 |
| 5_Anglong Khle Bridge | 0 + 273 | RIGHT | - | - | - | 1 | 3 |
| | 0 + 351 | RIGHT | - | - | 1 | - | |
| | 0 + 480 | LEFT | - | - | 1 | - | |
| 6_Prek Chhloung Bridge | 0 + 391 | LEFT | 1 | - | - | - | 1 |
| 7_Peam Te Bridge | 0 + 120 | LEFT | 1 | - | - | - | 1 |
| ROAD TOTAL | | | | | | | 8 |

NOTE:

THE MATERIALS, DIMENSION, SHAPES, COLOR, SIZE OF NUMERALS, LETTERS AND INSTALLATION LOCATION SHALL CONFORM WITH THE SPECIFICATION OF MINISTRY OF PUBLIC WORKS AND TRANSPORT

MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:

PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:

TRAFFIC SIGNS

SCALE(AT SIZE) DRAWING NO.

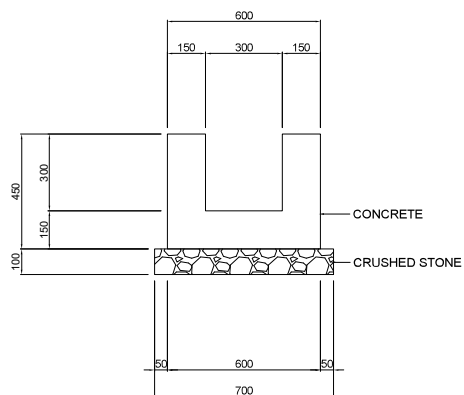
-

RA-06

SIDE DITCH

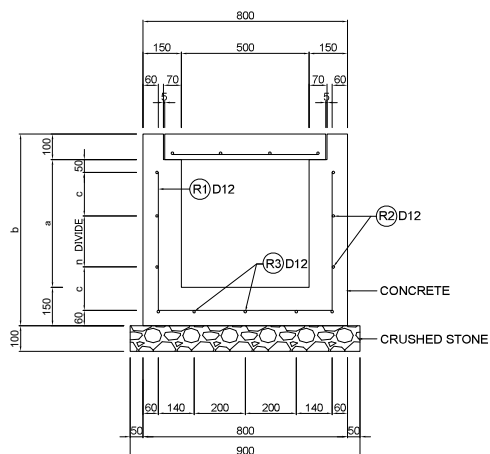
U-DITCH
U-300×300

S=1/10

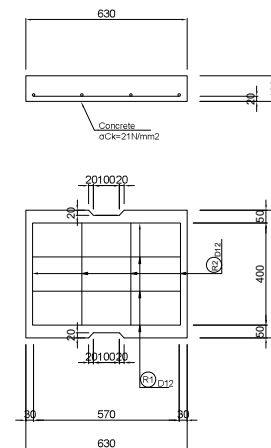


U-DITCH
U-500×500~1000(CV)

S=1/10



COVER



| DIMENSION TABLE (mm) | | | | |
|----------------------|----------|----------|---------|---------|
| Type | a | b | c | REMARKS |
| U-500×500~1000(CV) | 500~1000 | 750~1250 | 170~120 | |

| LIST OF REINFORCEMENT (mm) | | | | | (PER 10.0m) | |
|----------------------------|-----|----------|------------------|---------------|-------------|-------------|
| Type | n | L | (R1) | (R2) | (R3) | REMARKS |
| U-500×500~1000(CV) | 1~4 | 540~1040 | 50-D12×1760~2760 | 3~6-D12×10000 | 5-D12×10000 | (R) etc,200 |

| LIST OF REINFORCEMENT (mm) (PER 10.0m) | | | |
|--|------------|------------|---------|
| Type | (R1) | (R2) | REMARKS |
| U-500×500~1000(CV) | 80-D12×570 | 80-D12×400 | etc,200 |

SCHEDULE OF DRAINAGE

| DRAINAGE CALCULATE | U-300×300 | | | |
|------------------------|-----------|------------------|----------------|------------|
| | No. | STARTING STATION | ENDING STATION | LENGTH (m) |
| 1_Ba Baong Bridge No.2 | 1 | 0 + 163.2 | 0 + 320.0 | 168.2 |
| | | | SUB TOTAL | 168.2 |
| 7_Peam Te Bridge | 1 | 0 + 172.5 | 0 + 202.1 | 29.6 |
| | 2 | 0 + 232.6 | 0 + 310.1 | 77.5 |
| | | | SUB TOTAL | 106.5 |
| | | | ROAD TOTAL | 274.7 |

SCHEDULE OF DRAINAGE

| DRAINAGE CALCULATE | U-500×500~1000(CV) | | | |
|------------------------|--------------------|------------------|----------------|------------|
| | No. | STARTING STATION | ENDING STATION | LENGTH (m) |
| 7_Prek Chihoung Bridge | 1 | 0 + 140.0 | 0 + 204.0 | 64.3 |
| | | | SUB TOTAL | 64.3 |
| | | | ROAD TOTAL | 64.3 |

別添7-151

MINISTRY OF PUBLIC WORKS
AND TRANSPORT
KINGDOM OF CAMBODIA

JAPAN INTERNATIONAL COOPERATION AGENCY
CTI ENGINEERING INTERNATIONAL CO., LTD.

PROJECT TITLE:
PREPARATORY SURVEY FOR THE PROJECT FOR THE URGENT REPLACEMENT
OF BRIDGES IN FLOOD-PRONE AREAS

DRAWING TITLE:
OUTLINE OF DRAINAGE STRUTURE

SCALE(A1 SIZE) DRAWING NO.
1/10 RA-07

