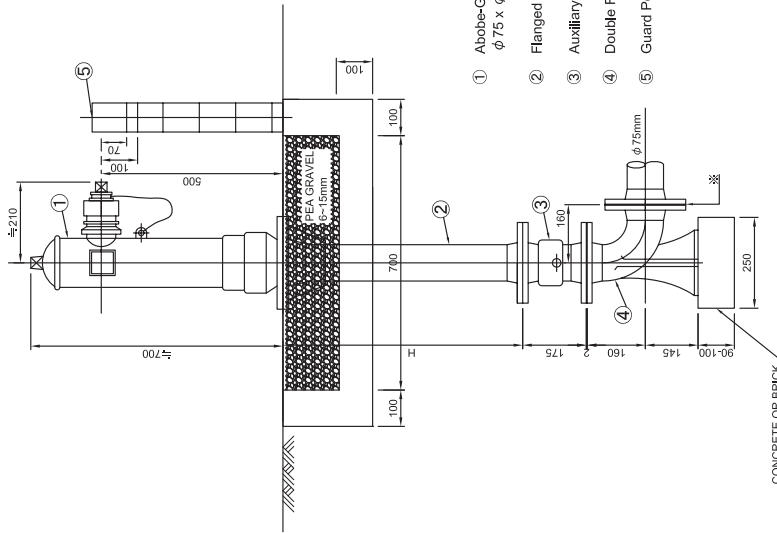


SINGLE MOUTH TYPE FIRE HYDRANT

| Pipeline (mm) | H | |
|---------------|--------|---------|
| | Type I | Type II |
| φ 100 | 900 | 500 |
| φ 150 | 950 | 550 |
| φ 200 | 950 | 550 |
| φ 250 | 1000 | 600 |

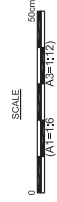


- ① Above-Ground Double Mouths Type Fire Hydrant
φ 75 x φ 65, One-Way Strike-To-Fall Type
- ② Flanged Extension Pipe
- ③ Auxiliary Valve
- ④ Double Flanged 90° Bend with Duck-Foot
- ⑤ Guard Post Type A Equipped with Reduced Memorial Plate

※ PN10 - φ 75 FLANGE

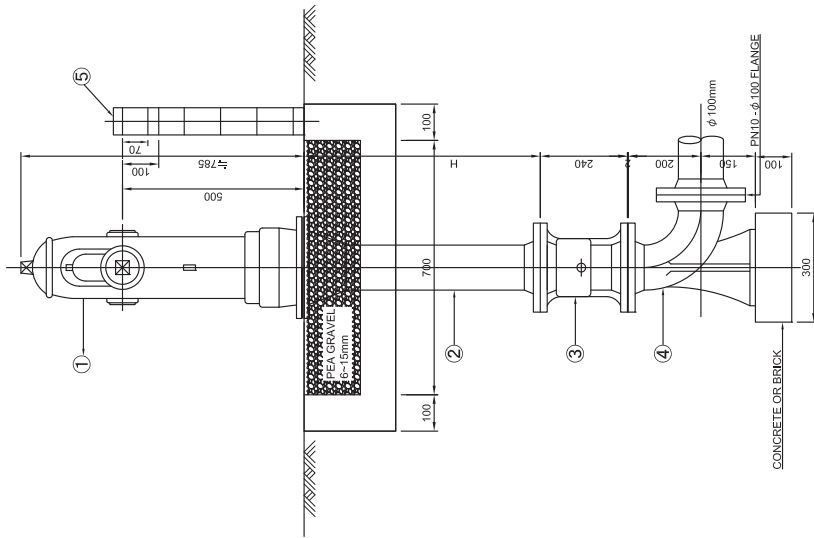
TYPE - I H=1.2m
TYPE - II H=0.8m

SINGLE MOUTH TYPE FIRE HYDRANT



| | | | | |
|---|---|-------------|------|----------------------|
| PROJECT THE PREPARATORY SURVEY ON THE PROJECT ON ADDITIONAL NEW WATER TREATMENT PLANTS FOR KAMPONG CHAM AND BATTAMBANG WATERWORKS カンボジア地方上水道拡張整備計画準備調査 | DESCRIPTION Single Mouth Type Fire Hydrant | APPROVE BY | DATE | DRAWING No. K-D18 |
| | | PREPARED BY | DATE | SCALE |

NIHON SUIDO CONSULTANTS CO., LTD.
WATER AND SEWER BUREAU, CITY OF KITAKYUSHU
CTI ENGINEERING INTERNATIONAL CO., LTD.



TYPE - I H=1.2m
 TYPE - II H=0.8m

DOUBLE MOUTHS TYPE FIRE HYDRANT

| Pipeline (mm) | H | |
|---------------|--------|---------|
| | TYPE I | TYPE II |
| φ 300 | 900 | 500 |
| φ 350 | 950 | 550 |
| φ 400 | 950 | 550 |

- ① Above-Ground Double Mouths Type Fire Hydrant
φ 100 x (φ 65 x 2nos.), Two-Ways Stike-To-Fall type
- ② Flanged Extension Pipe
- ③ Auxiliary Valve
- ④ Double Flanged 90° Bend with Duck-Foot
- ⑤ Guard Post Type A Equipped with Reduced Memorial Plate

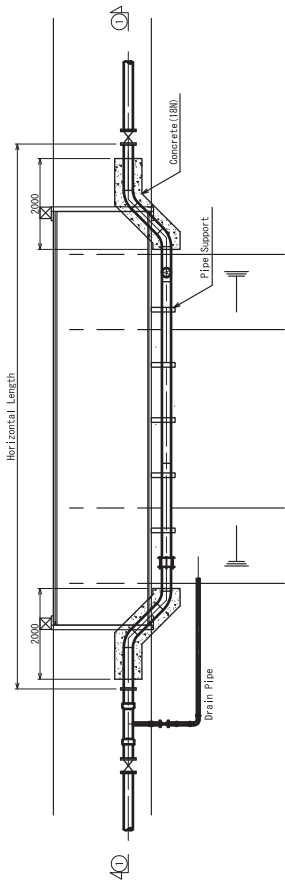
DOUBLE MOUTHS TYPE FIRE HYDRANT

| | | | | |
|---|---|-------------|------|----------------------|
| PROJECT THE PREPARATORY SURVEY ON THE PROJECT ON ADDITIONAL NEW WATER TREATMENT PLANTS FOR KAMPONG CHAM AND BATTAMBANG WATERWORKS カンボジア地方上水道拡張整備計画準備調査 | DESCRIPTION Double Mouths Type Fire Hydrant | APPROVE BY | DATE | DRAWING No. K-D19 |
| | | PREPARED BY | DATE | SCALE |

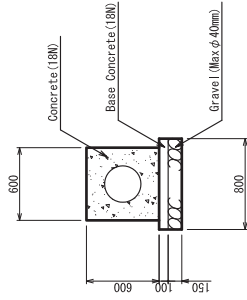
NIHON SUDO CONSULTANTS CO., LTD.
 WATER AND SEWER BUREAU, CITY OF KITAKYUSHU
 CUI ENGINEERING INTERNATIONAL CO., LTD.

Standard Drawing for Bridge Attached Pipe

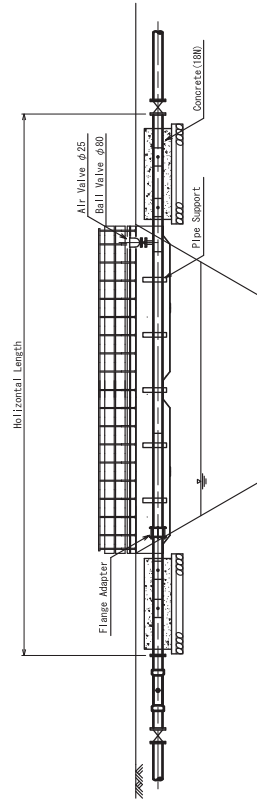
BAP (Bridge Attached Pipe)



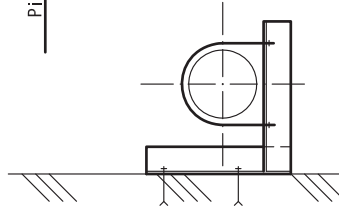
Concrete



Section ①-①



Pipe Support



Pipe Support

| Diameter | Main Material | U-band | Anchor |
|------------|-----------------------------|-------------|-------------------|
| ϕ 100 | L-65 \times 65 \times 6 | ϕ 100用 | M12 \times 100L |
| ϕ 150 | L-75 \times 75 \times 6 | ϕ 150用 | M12 \times 100L |
| ϕ 200 | L-90 \times 90 \times 6 | ϕ 200用 | M16 \times 100L |
| ϕ 250 | L-90 \times 90 \times 6 | ϕ 250用 | M20 \times 160L |

PROJECT

THE PREPARATORY SURVEY ON THE PROJECT ON ADDITIONAL NEW WATER TREATMENT PLANTS
FOR KAMPONG CHAM AND BATTAMBANG WATERWORKS
カンボジア国地方上水道拡張整備計画準備調査

DESCRIPTION

Standard Drawing for
Bridge Attached Pipe

APPROVE BY

DATE

DRAWING No

NIHON SUIDO CONSULTANTS CO., LTD.
WATER AND SEWER BUREAU, CITY OF KITAKYUSHU
CTI ENGINEERING INTERNATIONAL CO., LTD.

PREPARED BY

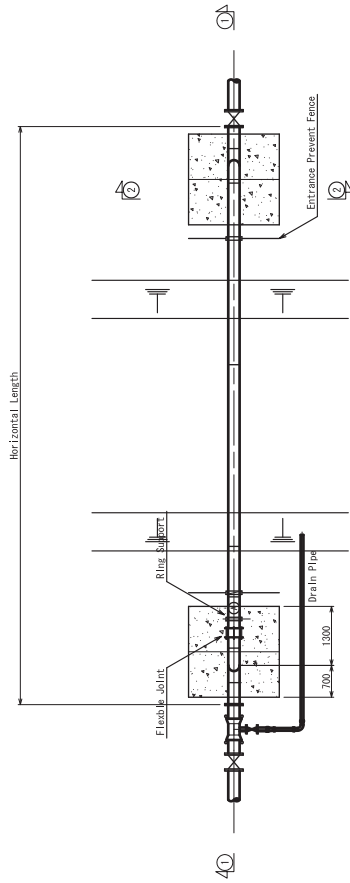
DATE

SCALE

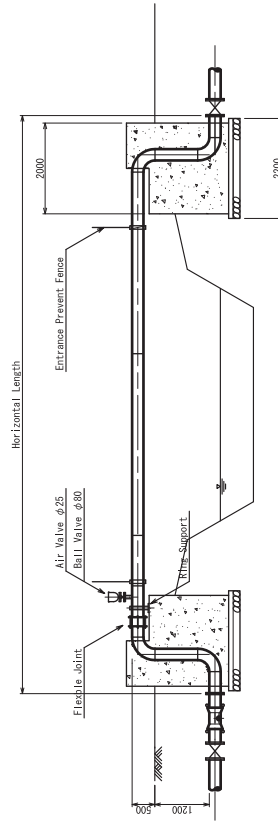
K-D20

Standard Drawing for Pipe Beam

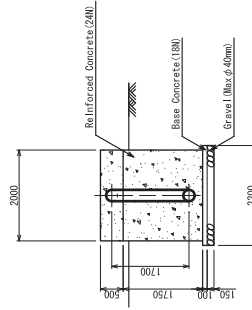
PB (Pipe beam)



Section ①-①



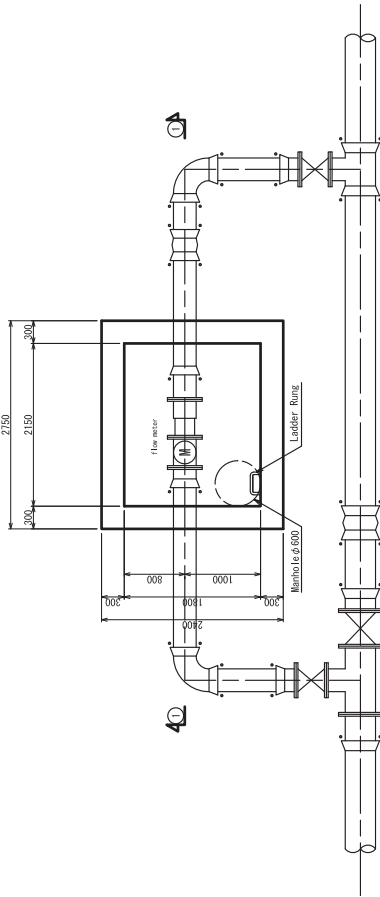
Section ②-②



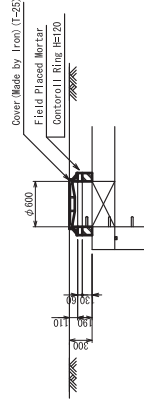
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|---|-----------------------------------|-------------|------|--|
| PROJECT | DESCRIPTION | APPROVE BY | DATE | DRAWING No |
| | | | | K-D21 |
| THE PREPARATORY SURVEY ON THE PROJECT ON ADDITIONAL NEW WATER TREATMENT PLANTS FOR KAMPONG CHAM AND BATTAMBANG WATERWORKS カンボジア即地方上水道拡張整備計画準備調査 | Standard Drawing for Pipe Beam | PREPARED BY | DATE | SCALE |
| | | | | NIHON SUIDO CONSULTANTS CO., LTD. WATER AND SEWER BUREAU, CITY OF KITAKYUSHU CTI ENGINEERING INTERNATIONAL CO., LTD. |

Standard Drawing for Flow Meter Chamber

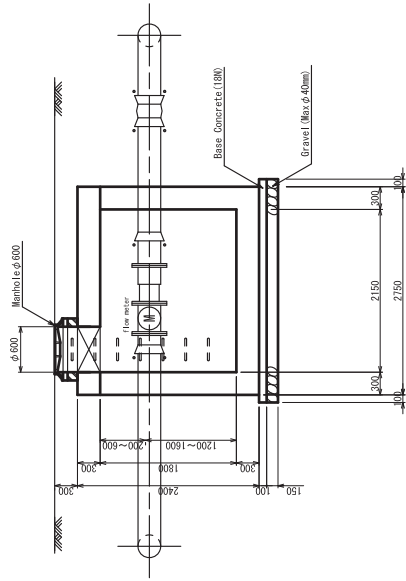
Plan



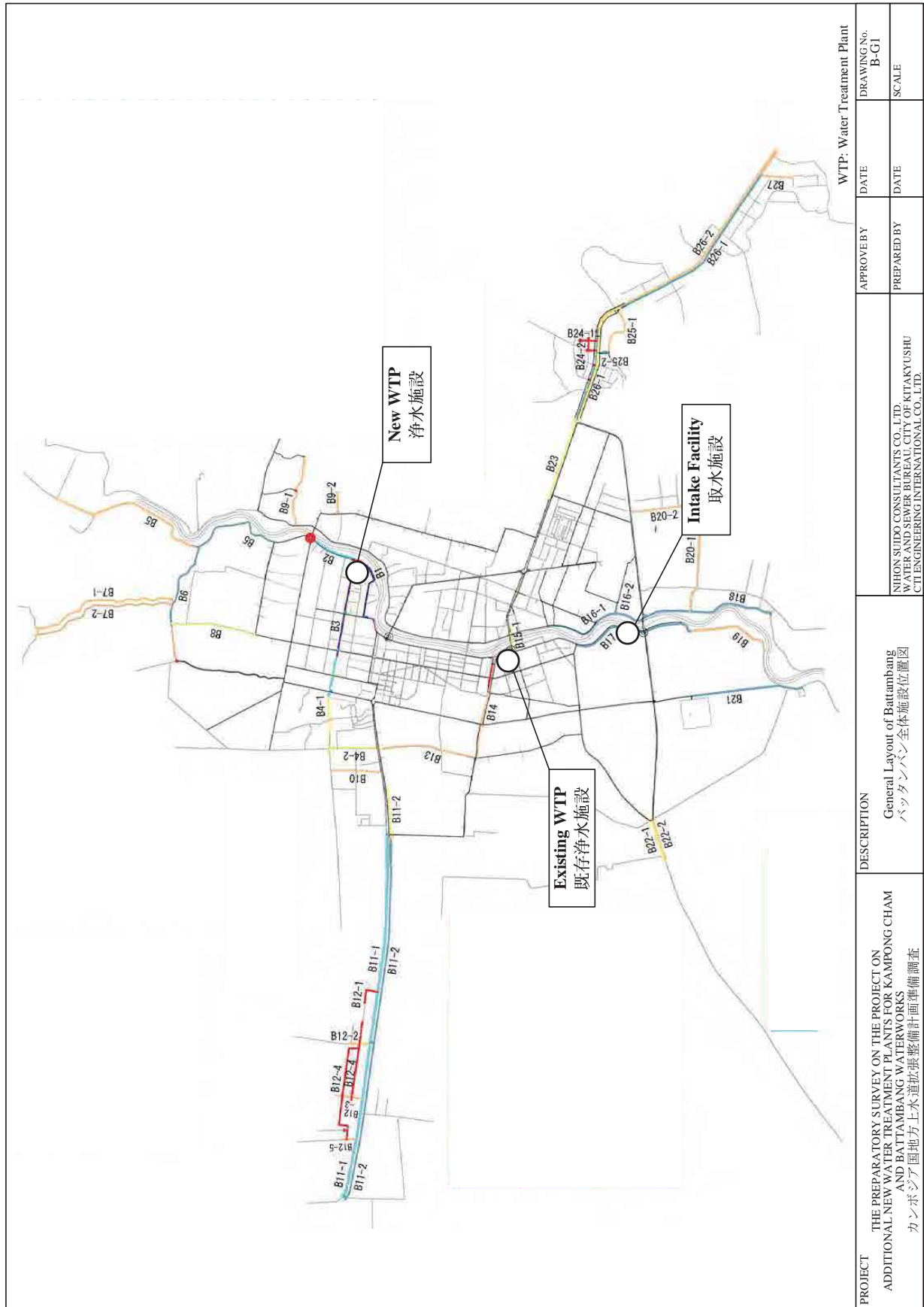
Enlarged



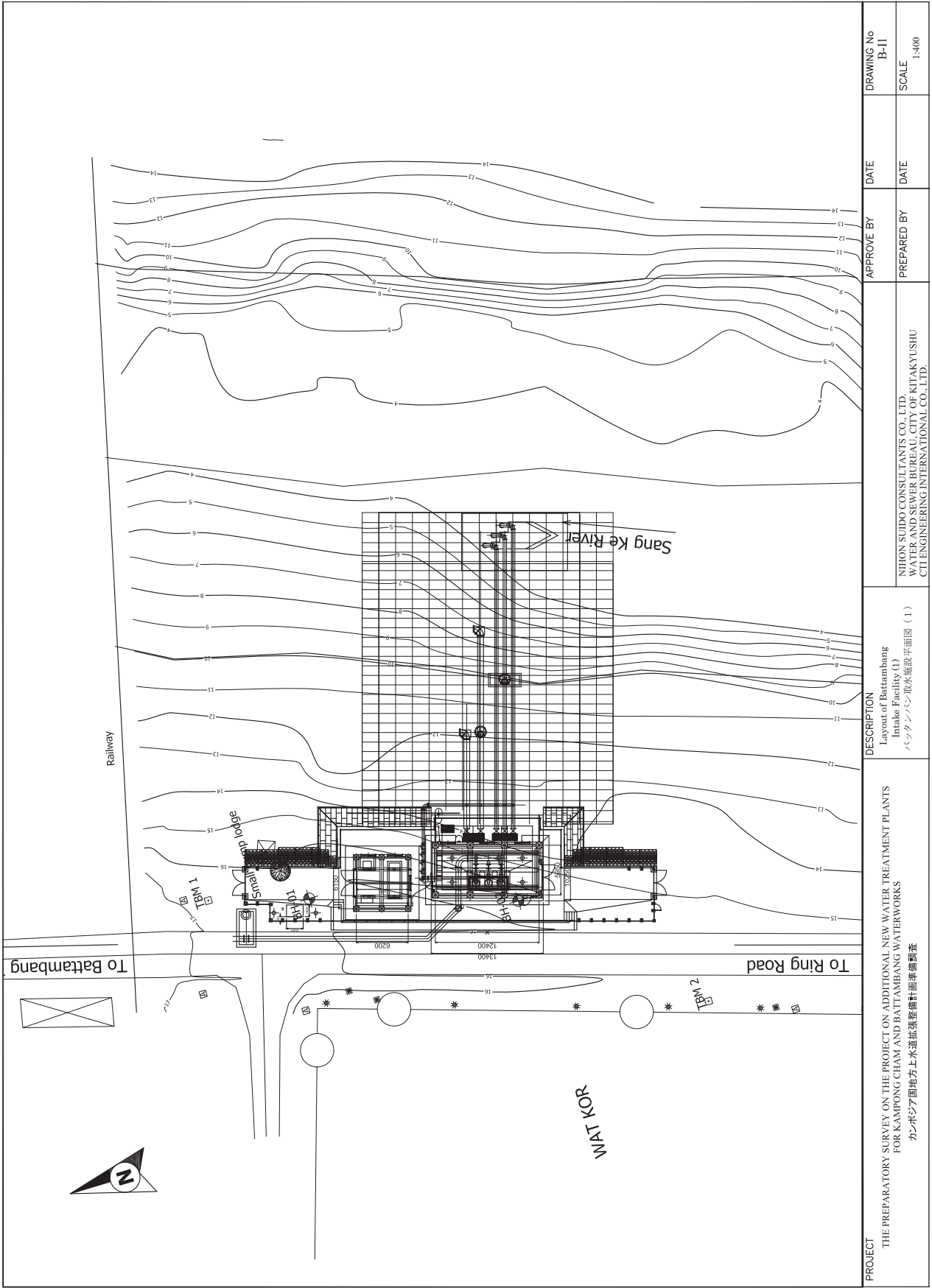
Section ①-①



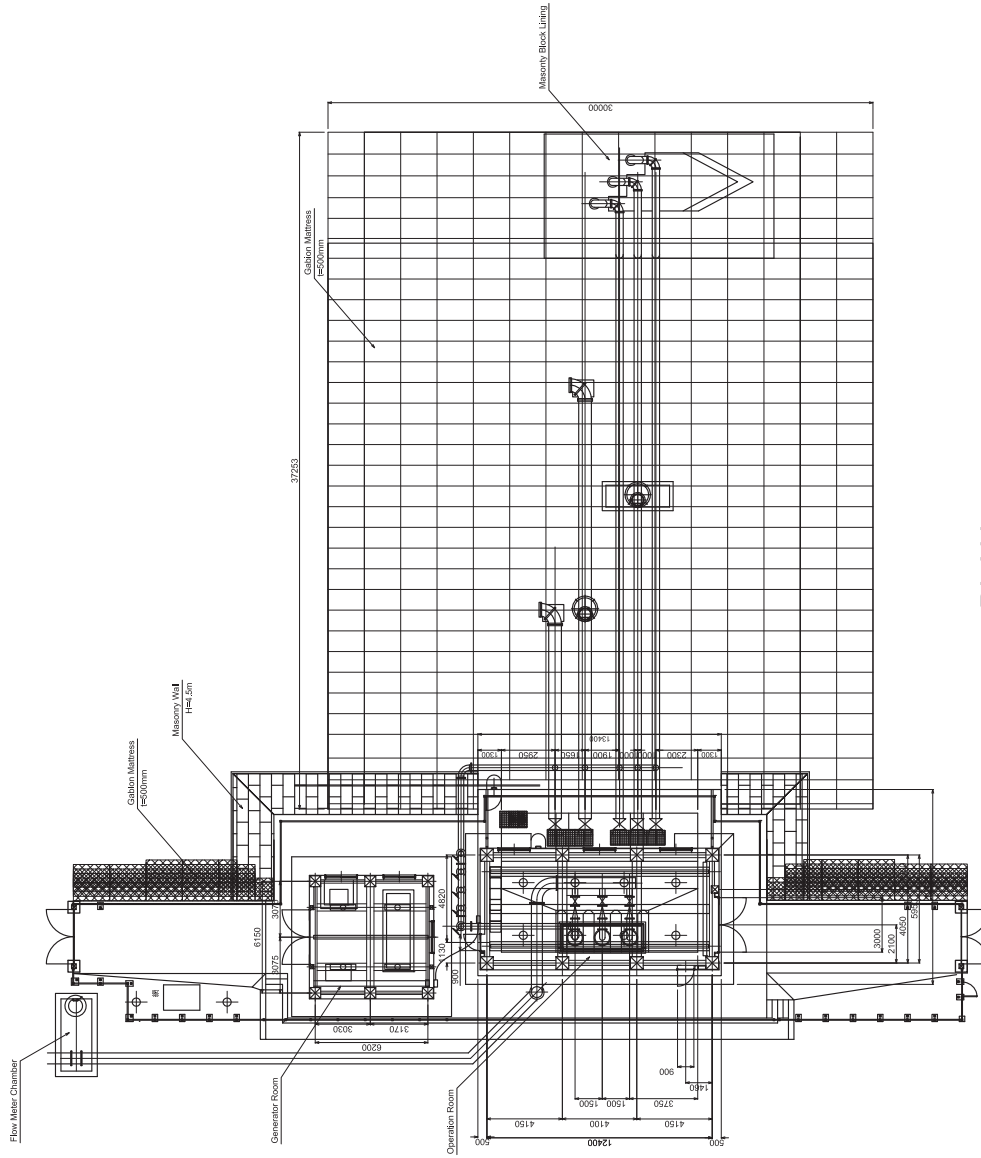
| | | | | | | |
|---------|--|---|--|------------|------|------------|
| PROJECT | THE PREPARATORY SURVEY ON THE PROJECT ON ADDITIONAL NEW WATER TREATMENT PLANTS FOR KAMPONG CHAM AND BATTAMBANG WATERWORKS カンボジア国地方上水道拡張整備計画準備調査 | DESCRIPTION | | APPROVE BY | DATE | DRAWING No |
| | | Standard Drawing for Flow Meter Chamber | | | | |
| | | | | | | K-D22 |



| | | | |
|---|--|----------------------------|-------|
| PROJECT THE PREPARATORY SURVEY ON THE PROJECT ON ADDITIONAL NEW WATER TREATMENT PLANTS FOR KAMPONG CHAM AND BATTAMBANG WATERWORKS カンボジア 国地方上水道拡張整備計画準備調査 | DESCRIPTION General Layout of Battambang បាត់ដំបងទឹកស្អាតទីស្ថានភ្នំទូទាំងទីក្រុង | WTP: Water Treatment Plant | |
| | | APPROVE BY | DATE |
| NIHON SUDO CONSULTANTS CO., LTD. WATER AND SEWER BUREAU, CITY OF MIYAKUSHU C/I ENGINEERING INTERNATIONAL CO., LTD. | | PREPARED BY | SCALE |

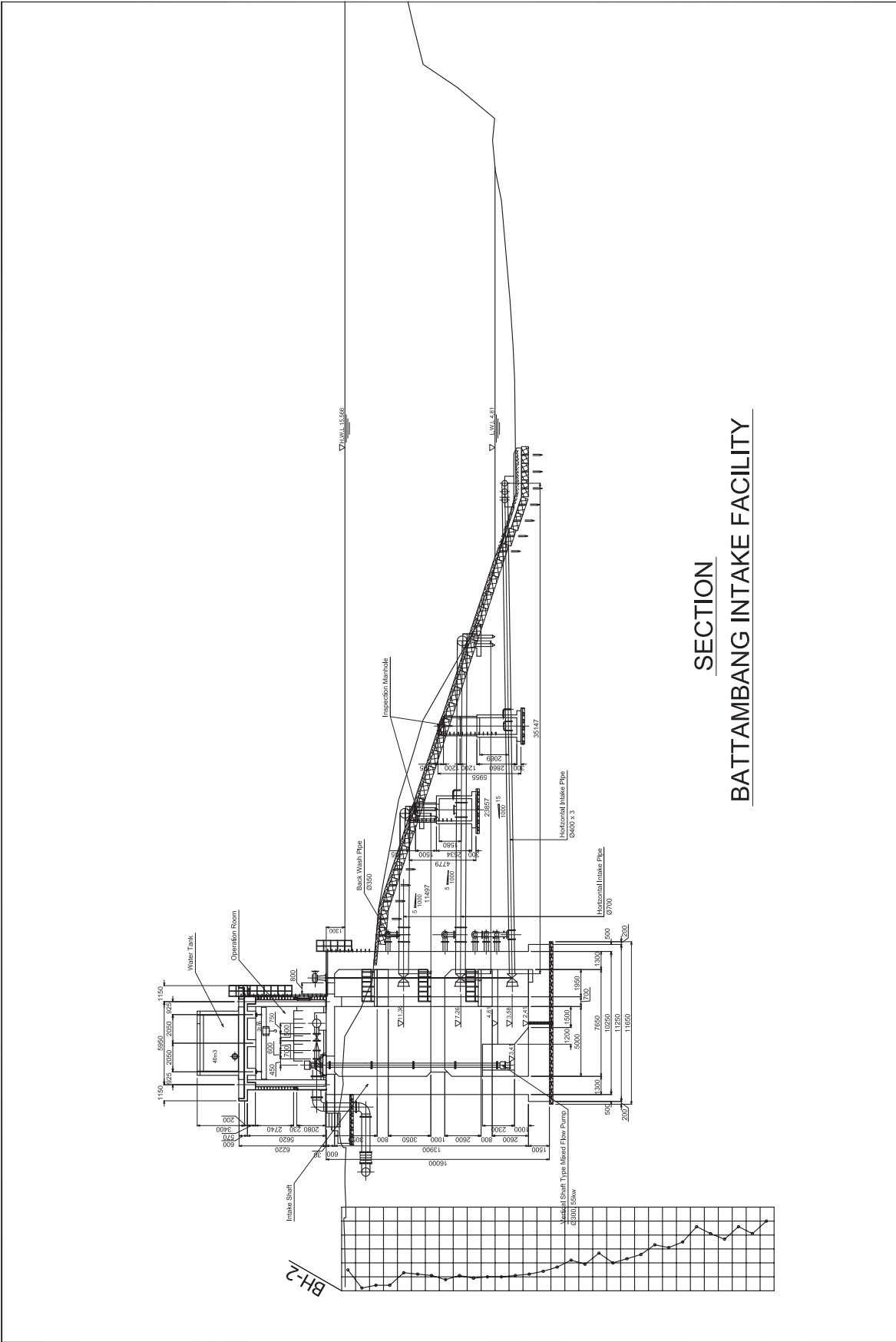


| | | | | | |
|---------|--|--|--|------|------------|
| PROJECT | THE PREPARATORY SURVEY ON THE PROJECT ON ADDITIONAL NEW WATER TREATMENT PLANTS FOR KAMPONG CHAM AND BATTAMBANG WATERWORKS カンボジア国地方上水道拡張整備計画準備調査 | | APPROVE BY | DATE | DRAWING No |
| | DESCRIPTION Layout of Battambang Intake Facility (1) バタンバン取水施設平面図 (1) | | PREPARED BY | DATE | SCALE |
| | | | NIHON SUIDO CONSULTANTS CO., LTD. WATER AND SEWER BUREAU, CITY OF KITAKYUSHU CTI ENGINEERING INTERNATIONAL CO., LTD. | | 1-400 |



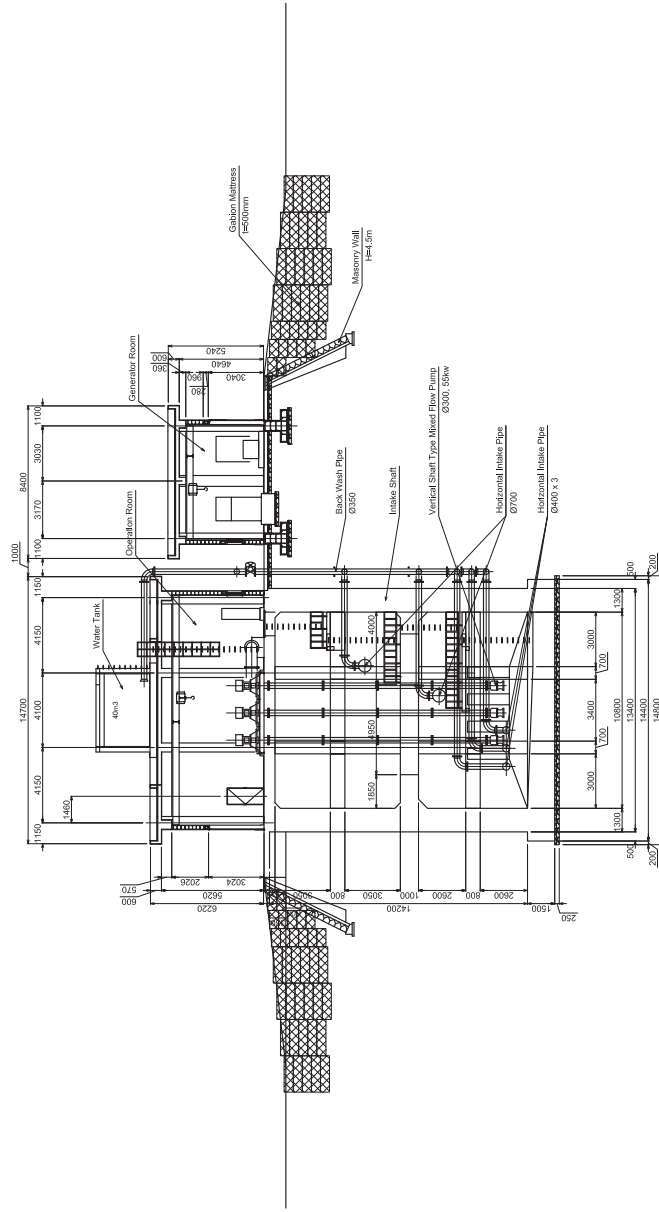
PLAN
BATTAMBANG INTAKE FACILITY

| | | | | |
|---|--|--------------------|-------------|---------------------------|
| PROJECT THE PREPARATORY SURVEY ON THE PROJECT ON ADDITIONAL NEW WATER TREATMENT PLANTS FOR KAMPONG CHAM AND BATTAMBANG WATERWORKS カンボジア即地方上水道拡張整備計画準備調査 | DESCRIPTION Layout of Battambang Intake Facility (2) バンタンバン取水施設平面図 (2) | APPROVE BY | DATE | DRAWING No B-12 |
| | | PREPARED BY | DATE | SCALE 1:250 |



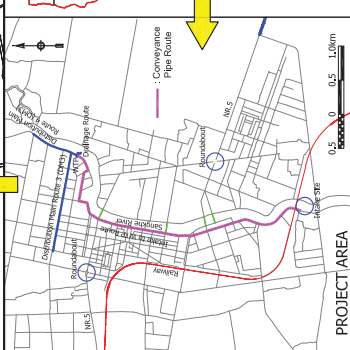
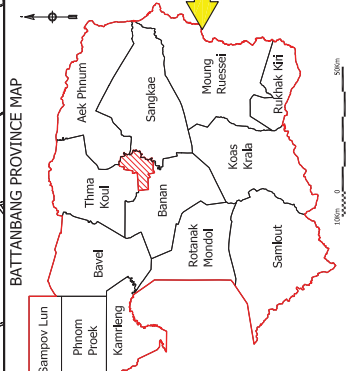
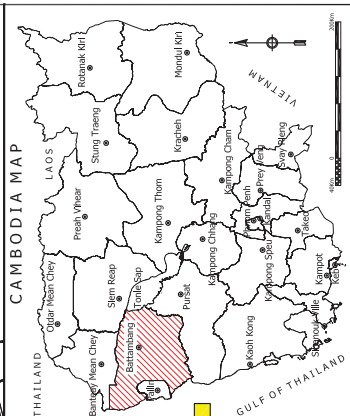
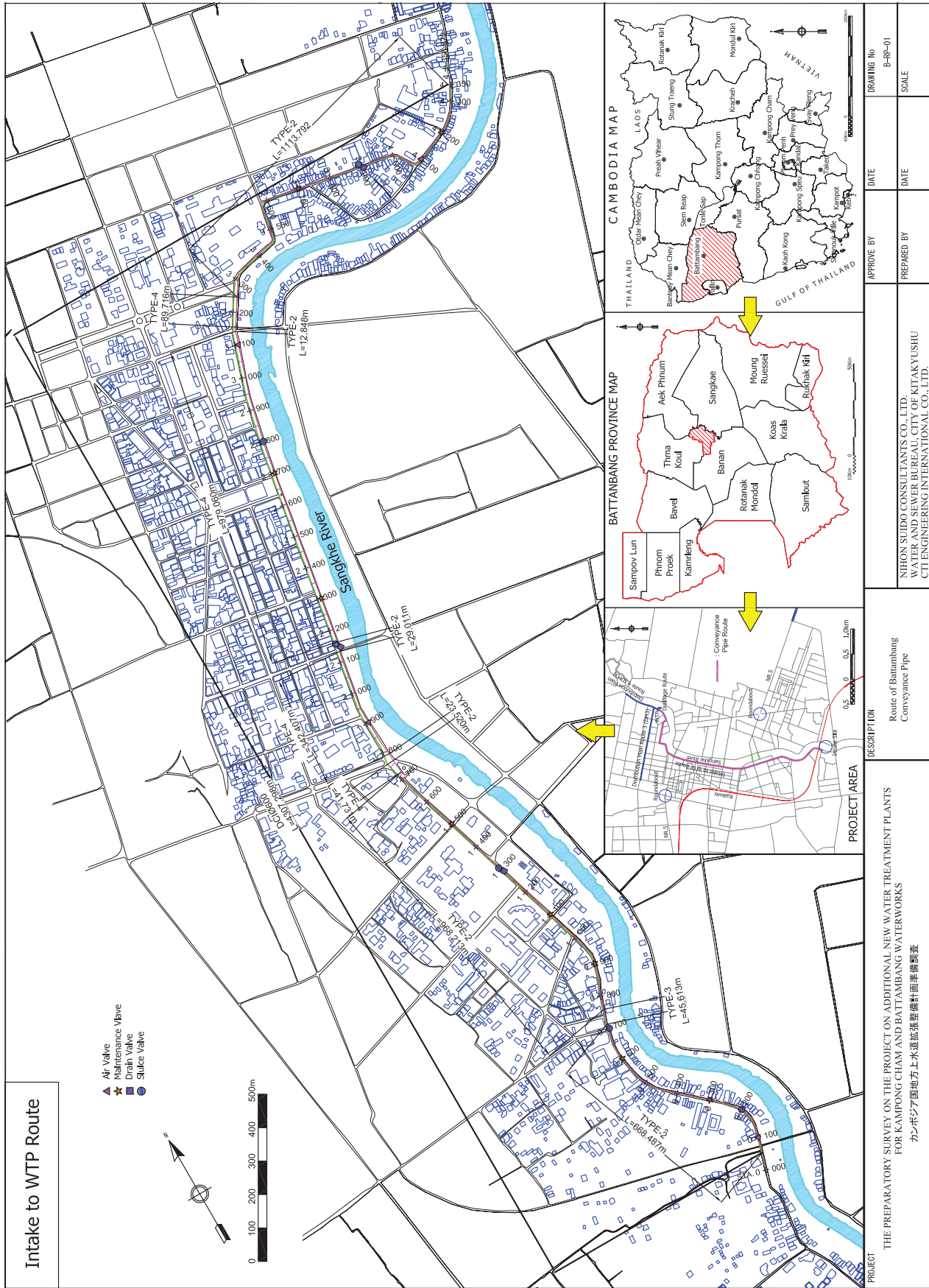
SECTION BATTAMBANG INTAKE FACILITY

| | | | |
|--|---|--------------------------------------|--------------------------------------|
| <p>PROJECT</p> <p>THE PREPARATORY SURVEY ON THE PROJECT ON ADDITIONAL NEW WATER TREATMENT PLANTS FOR KAMPONG CHAM AND BATTAMBANG WATERWORKS カンボジア国地方上水道拡張整備計画準備調査</p> | <p>DESCRIPTION</p> <p>Section View of Battambang Intake Facility バタンバン取水施設構断面図 (1)</p> | <p>APPROVE BY</p> <p>DATE</p> | <p>DRAWING No</p> <p>B-13</p> |
| <p>DATE</p> | <p>PREPARED BY</p> <p>NIHON SUIDO CONSULTANTS CO., LTD. WATER AND SEWER BUREAU, CITY OF KITAKYUSHU CTI ENGINEERING INTERNATIONAL CO., LTD.</p> | <p>SCALE</p> <p>1:250</p> | |



FRONT BATTAMANG INTAKE FACILITY

| | | | | |
|---|--|-------------|------|---------------|
| PROJECT THE PREPARATORY SURVEY ON THE PROJECT ON ADDITIONAL NEW WATER TREATMENT PLANTS FOR KAMPONG CHAM AND BATTAMANG WATERWORKS カンボジア国地方上水道拡張整備計画準備調査 | DESCRIPTION Front View of Battambang Intake Facility バンタンバン取水施設構造断面 (2) | APPROVE BY | DATE | DRAWING No |
| | | PREPARED BY | DATE | SCALE |
| | | | | B-14 1:250 |



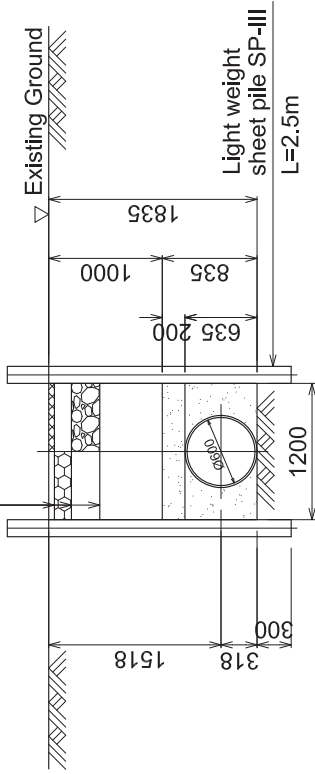
Intake to WTP Route

- ▲ Air Valve
- ★ Maintenance Valve
- Drain Valve
- Sluice Valve



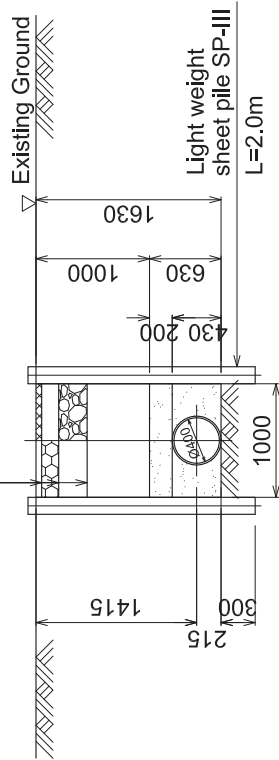
| | | |
|--|--|--|
| PROJECT | THE PREPARATORY SURVEY ON THE PROJECT ON ADDITIONAL NEW WATER TREATMENT PLANTS FOR KAMPONG CHAM AND BATTAMBANG WATERWORKS カンボジア国地方上水道拡張整備計画準備調査 | |
| | PROJECT AREA | DESCRIPTION Route of Battambang Conveyance Pipe |
| APPROVE BY | DATE | DRAWING No. B-PP-01 |
| PREPARED BY | DATE | SCALE |
| NIHON SUDO CONSULTANTS CO., LTD. WATER AND SEWER BUREAU, CITY OF KITAKYUSHU | | |
| CTI ENGINEERING INTERNATIONAL CO., LTD. | | |

Single Bituminous Surface Treatment (t50)
 Mechanically Stabilized Base Course (t150)
 Crusher - Run Subbase (t250)



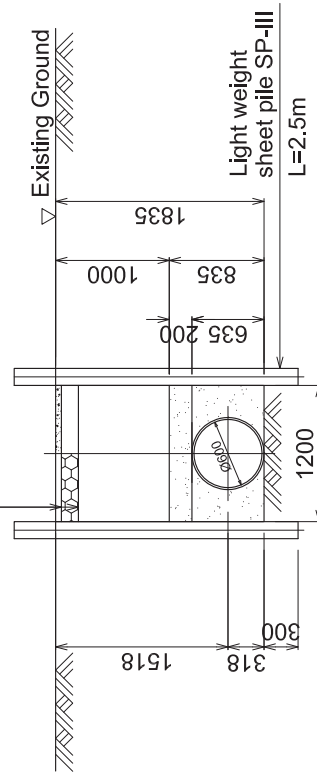
TYPE-2

Single Bituminous Surface Treatment (t50)
 Mechanically Stabilized Base Course (t150)
 Crusher - Run Subbase (t250)



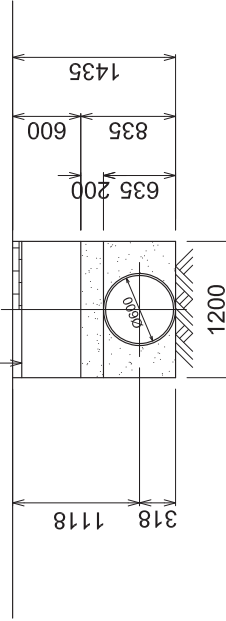
TYPE-1

Concrete Surface Course (t50)
 Crusher - Run Subbase (t150)



TYPE-3

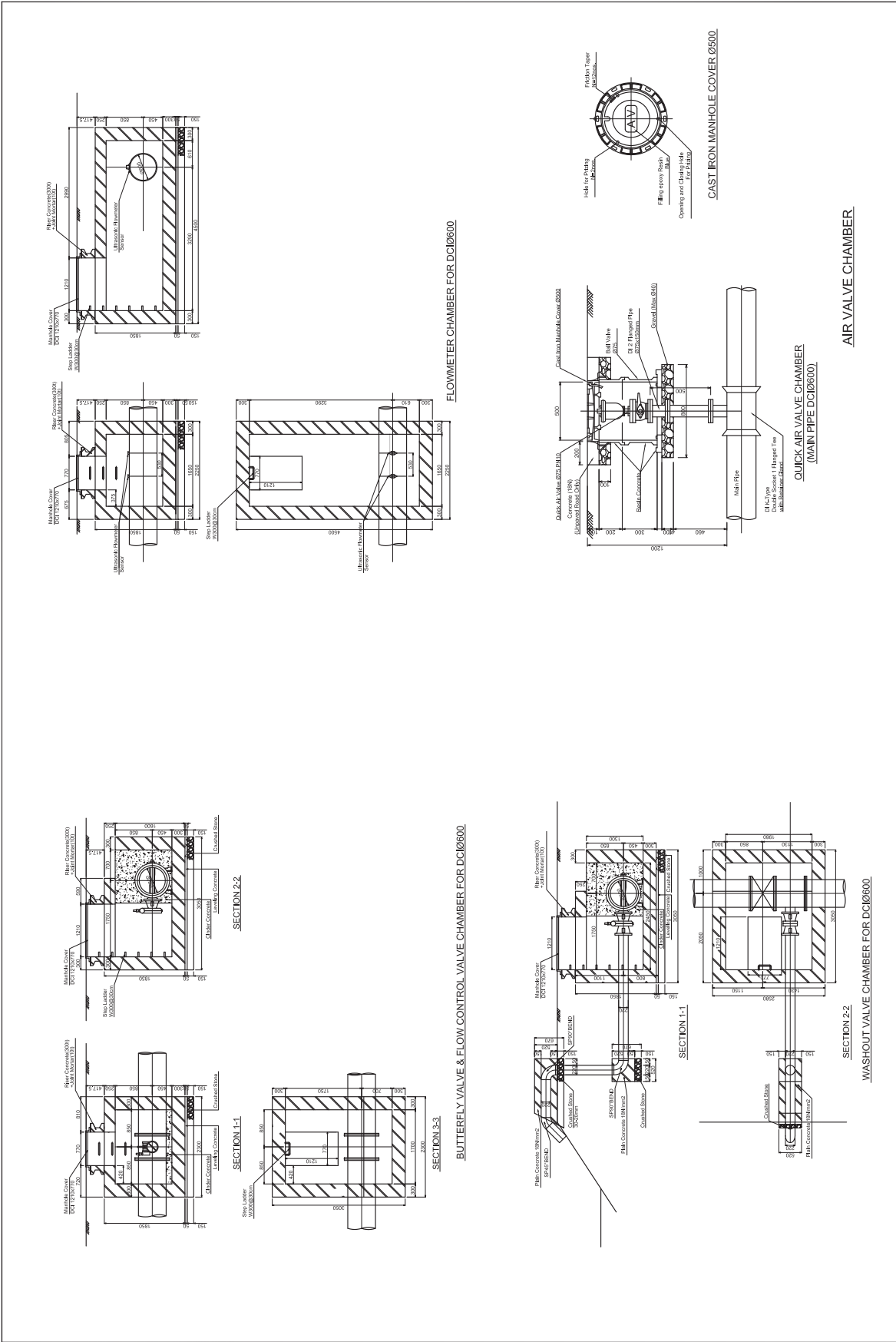
Sidewalk Block (t80)



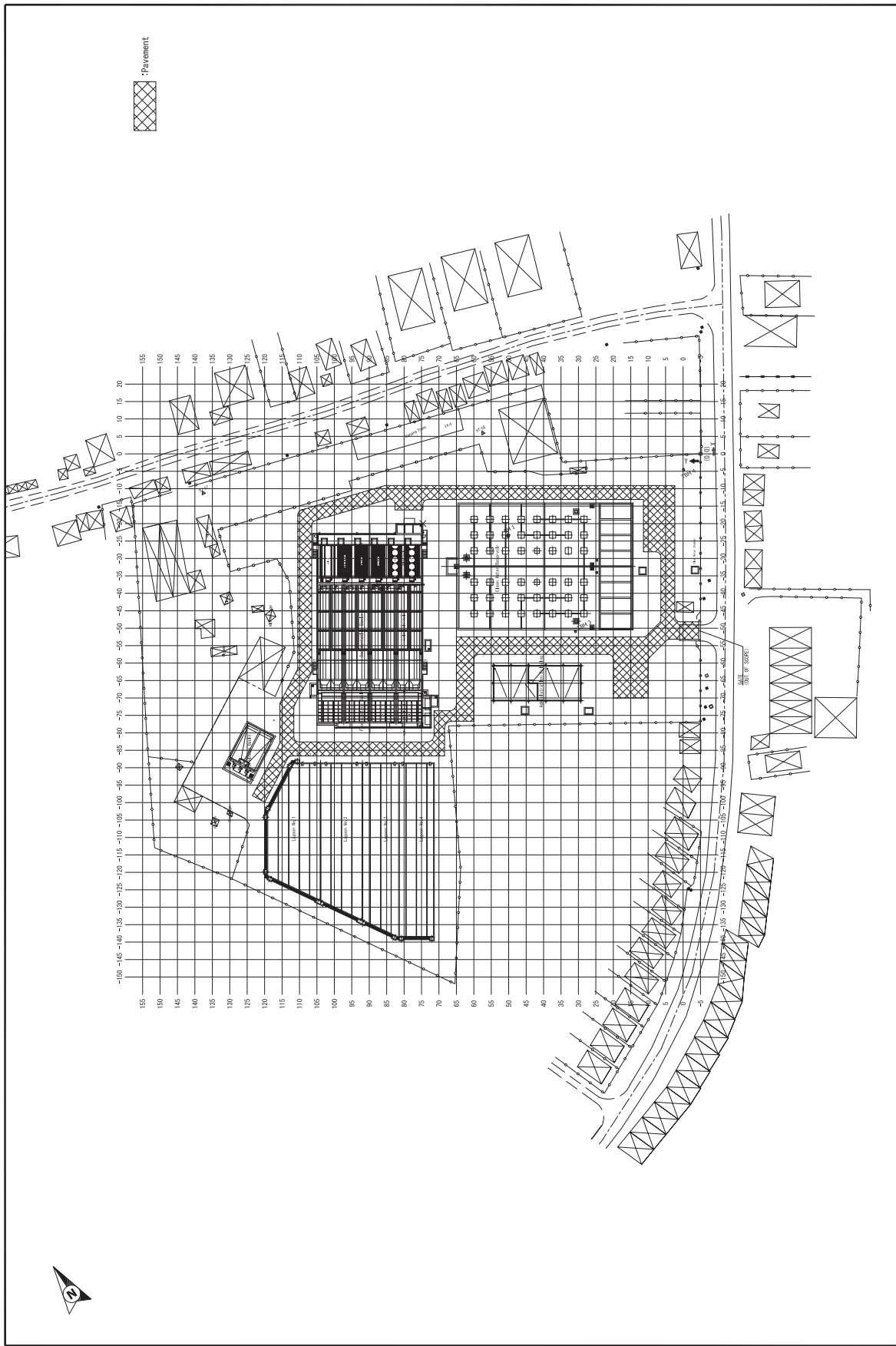
TYPE-4

TYPICAL CROSS SECTION OF CONVEYANCE PIPE

| PROJECT | DESCRIPTION | APPROVE BY | DATE | DRAWING No |
|--|---|-------------|------|------------|
| THE PREPARATORY SURVEY ON THE PROJECT ON ADDITIONAL NEW WATER TREATMENT PLANTS FOR KAMPONG CHAM AND BATTAMBANG WATERWORKS カンボジア国地方上水道拡張整備計画準備調査 | Typical Cross Section for Conveyance Pipe | | | B-R2 |
| | | PREPARED BY | DATE | SCALE |
| | | | | 1:40 |

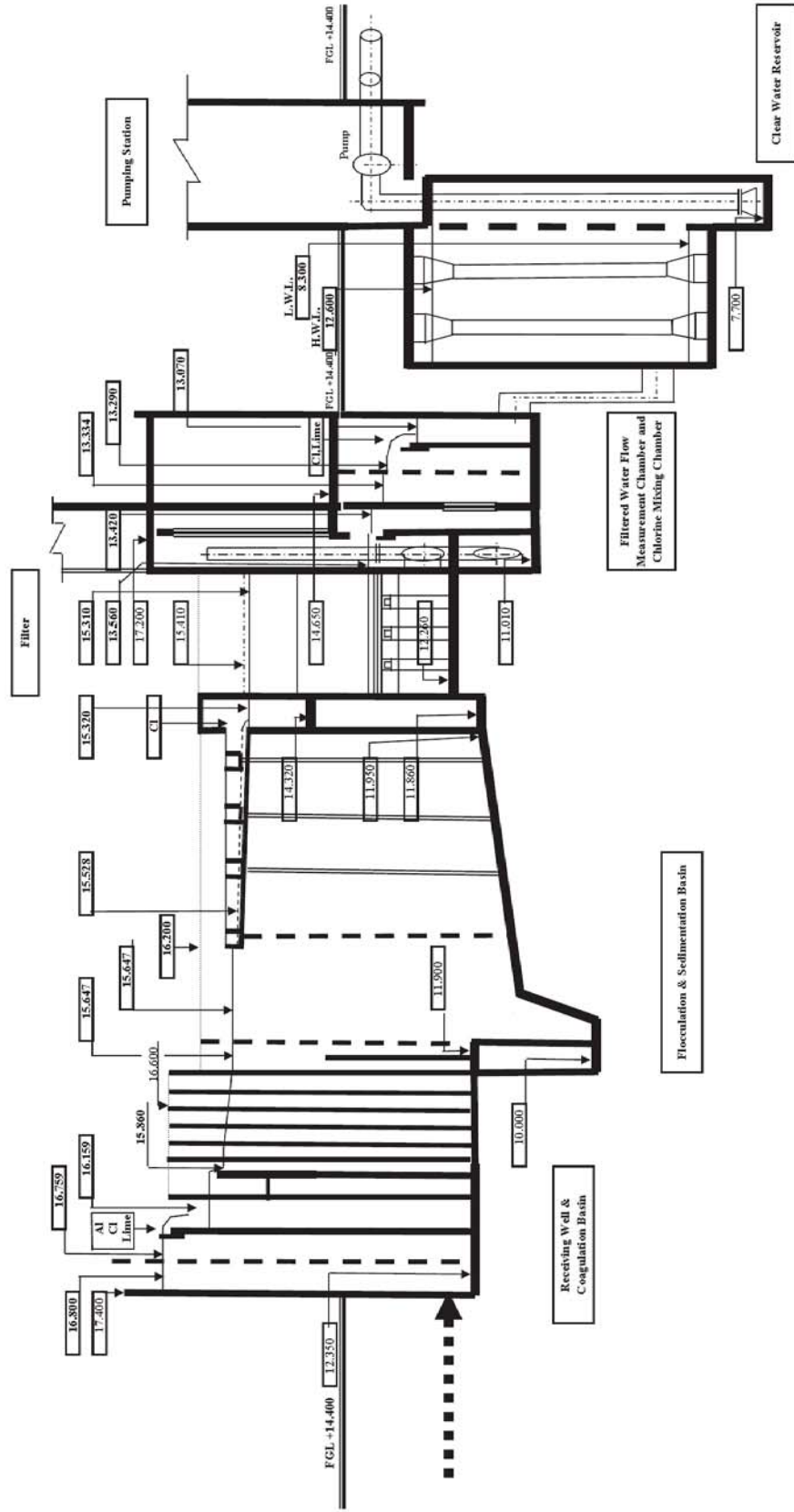


| PROJECT | DESCRIPTION | APPROVE BY | DATE | DRAWING No |
|---------|-------------|--|---------------------|---|
| | | THE PREPARATORY SURVEY ON THE PROJECT ON ADDITIONAL NEW WATER TREATMENT PLANTS FOR KAMPONG CHAM AND BATTAMBANG WATERWORKS カンボジア国地方上水道拡張整備計画準備調査 | | NIHON SUDO CONSULTANTS CO., LTD. WATER AND SEWER BUREAU, CITY OF KITAKYUSHU CUI ENGINEERING INTERNATIONAL CO., LTD. |
| | | PREPARED BY <td>DATE <td>SCALE</td> </td> | DATE <td>SCALE</td> | SCALE |



| | | | | |
|---|-------------|--|------|----------------|
| PROJECT | DESCRIPTION | APPROVE BY | DATE | DRAWING No |
| | | PREPARED BY | DATE | SCALE |
| THE PREPARATORY SURVEY ON THE PROJECT ON ADDITIONAL NEW WATER TREATMENT PLANTS FOR KAMPONG CHAM AND BATTAMBANG WATERWORKS カンボジア圏地方上水道拡張整備計画準備調査 | | NIHON SUIDO CONSULTANTS CO., LTD. WATER AND SEWER BUREAU, CITY OF KITAKYUSHU CTE ENGINEERING INTERNATIONAL CO., LTD. | | B-11 1:1000 |

FLOW DIAGRAM OF BATTAMBANG WATER TREATMENT PLANT



| PROJECT | DESCRIPTION | APPROVE BY | DATE | DRAWING No. |
|---|--|--|------|-------------|
| THE PREPARATORY SURVEY ON THE PROJECT ON ADDITIONAL NEW WATER TREATMENT PLANTS FOR KAMPONG CHAM AND BATTAMBANG WATERWORKS カンボジア 国地方上水道拡張整備計画準備調査 | Water Level Profile of Battambang WTP バタンバン浄水場水位高低図 | NIHON SUDO CONSULTANTS CO., LTD. WATER AND SEWER BUREAU, CITY OF MIYAKYUSHU CI ENGINEERING INTERNATIONAL CO., LTD. | DATE | B-T2 |
| | | PREPARED BY | DATE | SCALE |