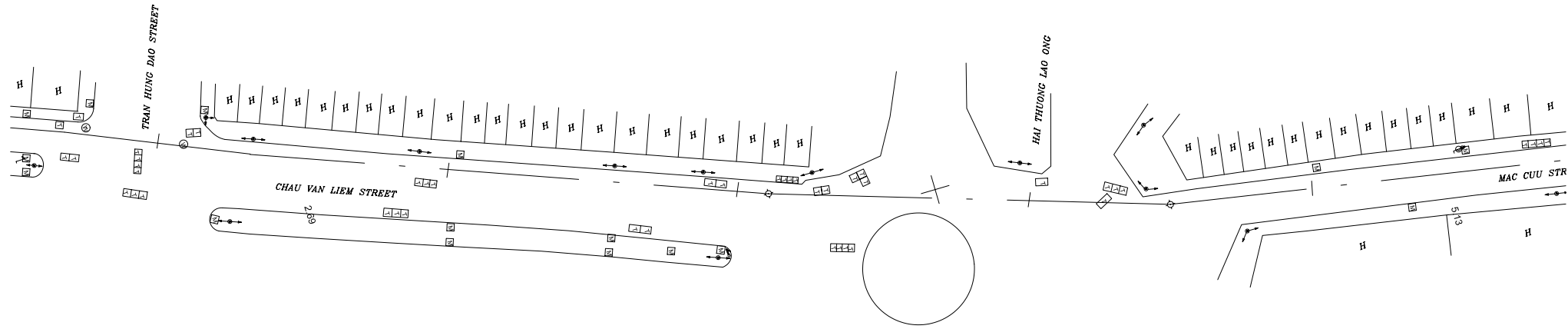
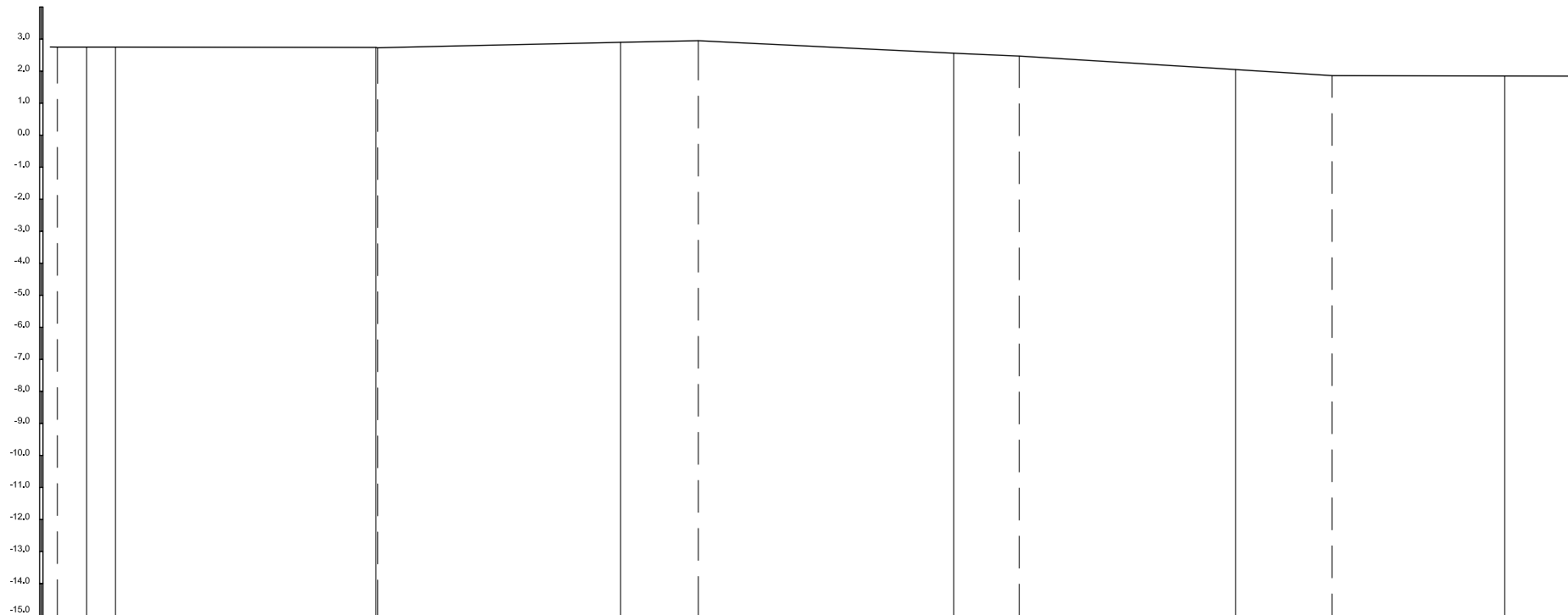


PLAN S = 1/500

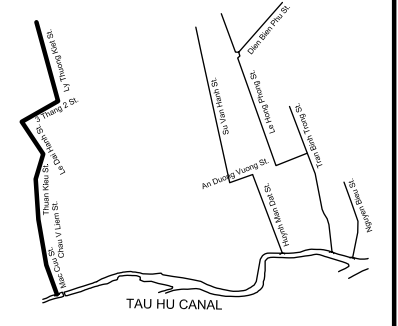


PROFILE S_H = 1/500, S_V = 1/100



| | | | | | | | | | | | |
|-------------------------------|--------|--------|--------|------------------|--------|--------|--------|--------|--------|--------|--------|
| Manhole Number | | | | | | | | | | | |
| Diameter (mm) | | | | | | | | | | | |
| Gradient (‰) | | | | | | | | | | | |
| Length (m) | | | | | | | | | | | |
| Existing Ground Elevation (m) | 2.75 | 2.75 | 2.75 | 2.74 2.74 | 2.90 | 2.95 | 2.56 | 2.47 | 2.05 | 1.86 | 1.85 |
| Earth Covering (m) | | | | | | | | | | | |
| Invert Elevation (m) | | | | | | | | | | | |
| Total Accumulation Length (m) | 2322.8 | 2327.4 | 2331.9 | 2372.6 2372.5 | 2410.8 | 2422.9 | 2462.8 | 2473.0 | 2506.8 | 2521.8 | 2548.8 |

KEYMAP



| | | | | |
|-----|------|--------------|----|-------|
| NO. | DATE | DESCRIPTIONS | BY | APRO. |
|-----|------|--------------|----|-------|

REVISIONS

PROJECT MANAGEMENT UNIT FOR
HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN ON HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT PROJECT
IN THE SOCIALIST REPUBLIC OF VIET NAM

PLAN AND LONGITUDINAL
SURVEY OF EXISTING
COMBINED SEWER ROUTE (9)

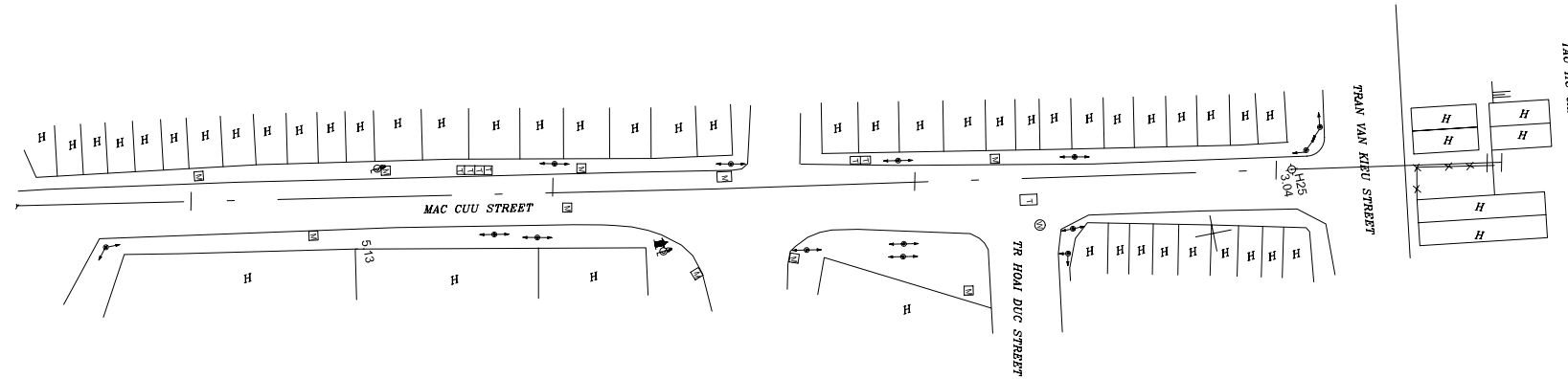
SCALE : As Shown

JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

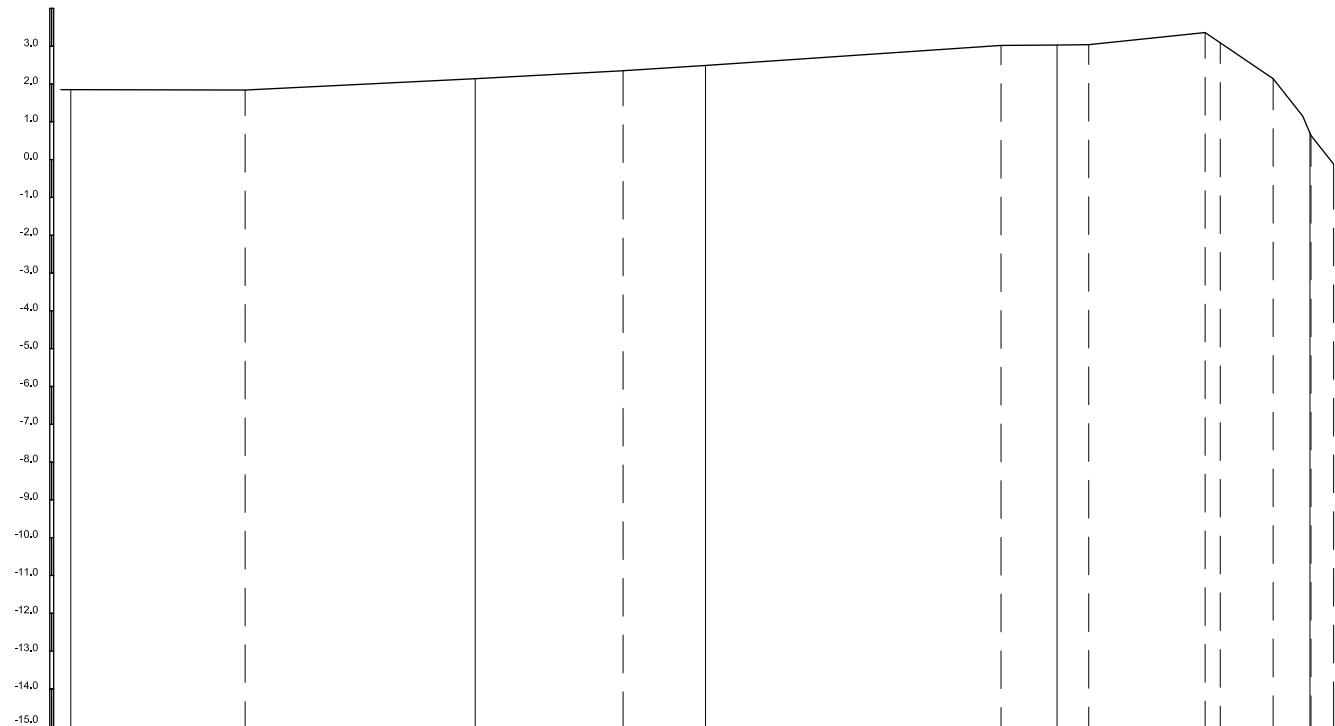
PACIFIC CONSULTANTS INTERNATIONAL

| | |
|----------|----------|
| DESIGNED | CHECKED |
| DATE : | DWG. No. |

PLAN S = 1/500

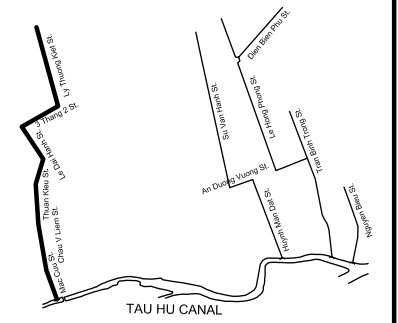


PROFILE S_H = 1/500, S_V = 1/100



| | | | | | | | | | | | | | | |
|-------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Manhole Number | | | | | | | | | | | | | | |
| Diameter (mm) | | | | | | | | | | | | | | |
| Gradient (‰) | | | | | | | | | | | | | | |
| Length (m) | | | | | | | | | | | | | | |
| Existing Ground Elevation (m) | 1.85 | 1.84 | 2.14 | 2.35 | 2.49 | 3.02 | 3.03 | 3.04 | 3.36 | 3.09 | 2.14 | 0.70 | 0.64 | -0.12 |
| Earth Covering (m) | | | | | | | | | | | | | | |
| Invert Elevation (m) | | | | | | | | | | | | | | |
| Total Accumulation Length (m) | 2548.8 | 2571.8 | 2602.3 | 2621.8 | 2632.7 | 2671.8 | 2679.2 | 2683.4 | 2698.8 | 2700.8 | 2707.8 | 2712.7 | 2712.8 | 2715.8 |

KEYMAP



| NO. | DATE | DESCRIPTIONS | BY | APRO. |
|-----|------|--------------|----|-------|
|-----|------|--------------|----|-------|

REVISIONS

PROJECT MANAGEMENT UNIT FOR
HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN ON HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT PROJECT
IN THE SOCIALIST REPUBLIC OF VIET NAM

PLAN AND LONGITUDINAL
SURVEY OF EXISTING
COMBINED SEWER ROUTE (10)

SCALE : As Shown

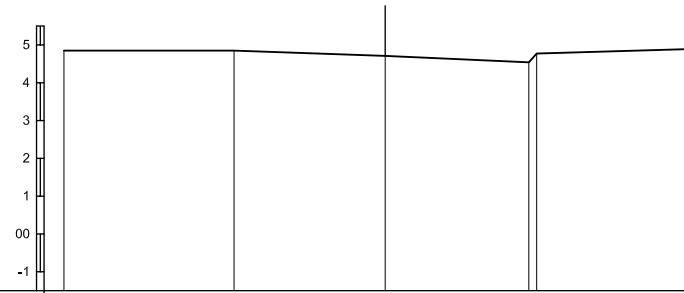
JICA JAPAN INTERNATIONAL COOPERATION
AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED CHECKED

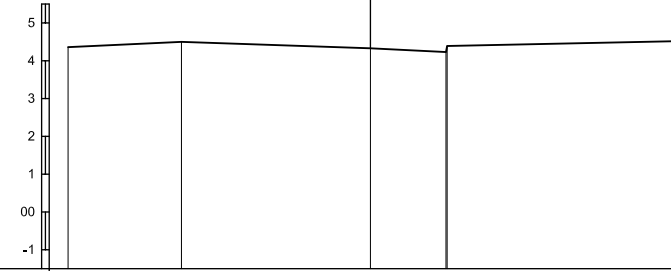
DATE : DWG. No.

0+00



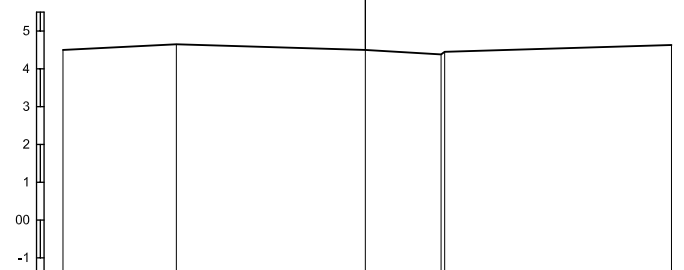
| | | | | | | |
|------------------------|------|------|------|------|------|------|
| Invert Elevation (m) | | | | | | |
| Ground Elevation (m) | 4.85 | 4.85 | 4.72 | 4.57 | 4.57 | 4.89 |
| Distance (m) | | 4.5 | 4 | 3.8 | 0.21 | 3.99 |

0+200



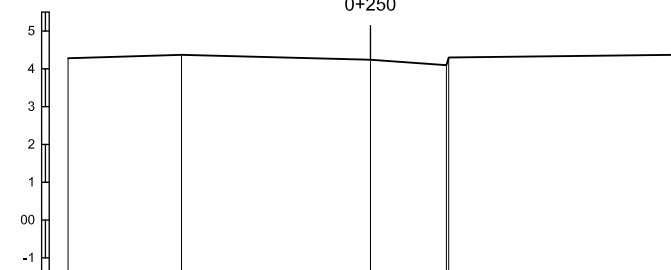
| | | | | | | |
|------------------------|------|------|------|------|------|------|
| Invert Elevation (m) | | | | | | |
| Ground Elevation (m) | 4.36 | 4.50 | 4.34 | 4.23 | 4.39 | 4.52 |
| Distance (m) | | 3 | 5 | 2 | 0.03 | 6.17 |

0+050



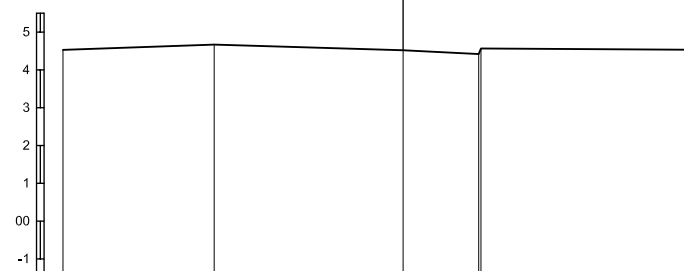
| | | | | | | |
|------------------------|------|------|------|------|------|------|
| Invert Elevation (m) | | | | | | |
| Ground Elevation (m) | 4.50 | 4.65 | 4.51 | 4.38 | 4.45 | 4.63 |
| Distance (m) | | 3 | 5 | 2 | 0.1 | 6 |

0+250



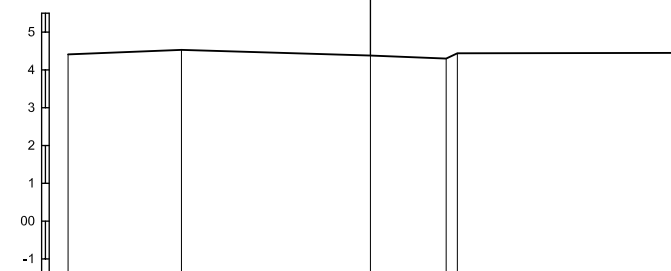
| | | | | | | |
|------------------------|------|------|------|------|------|------|
| Invert Elevation (m) | | | | | | |
| Ground Elevation (m) | 4.28 | 4.37 | 4.25 | 4.10 | 4.30 | 4.37 |
| Distance (m) | | 3 | 5 | 2.01 | 0.06 | 5.93 |

0+100



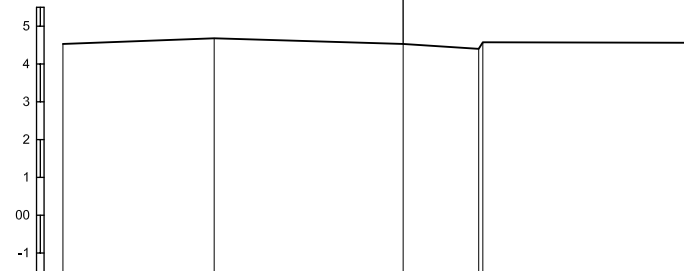
| | | | | | | |
|------------------------|------|------|------|------|------|------|
| Invert Elevation (m) | | | | | | |
| Ground Elevation (m) | 4.53 | 4.67 | 4.53 | 4.42 | 4.57 | 4.53 |
| Distance (m) | | 4 | 5 | 2 | 0.06 | 6.14 |

0+300



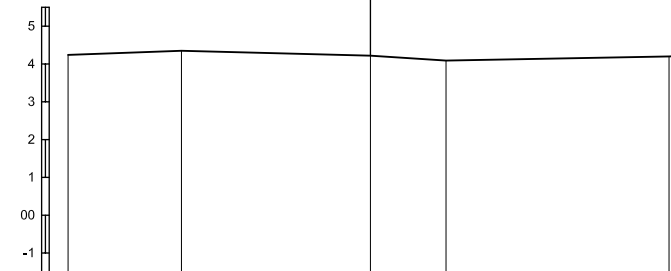
| | | | | | | |
|------------------------|------|------|------|------|------|------|
| Invert Elevation (m) | | | | | | |
| Ground Elevation (m) | 4.41 | 4.53 | 4.34 | 4.30 | 4.44 | 4.45 |
| Distance (m) | | 3 | 5 | 2 | 0.3 | 5.7 |

0+150



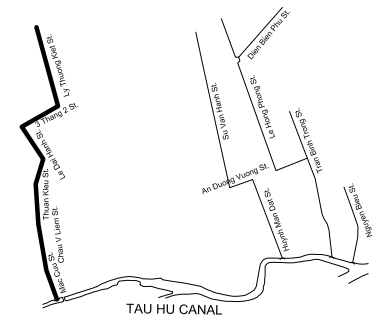
| | | | | | | |
|------------------------|------|------|------|------|------|------|
| Invert Elevation (m) | | | | | | |
| Ground Elevation (m) | 4.53 | 4.68 | 4.52 | 4.40 | 4.57 | 4.56 |
| Distance (m) | | 4 | 5 | 2 | 0.11 | 5.89 |

0+350



| | | | | | | |
|------------------------|------|------|------|------|------|------|
| Invert Elevation (m) | | | | | | |
| Ground Elevation (m) | 4.24 | 4.35 | 4.23 | 4.09 | 4.20 | 4.40 |
| Distance (m) | | 3 | 5 | 2 | 5.9 | 4.9 |

KEYMAP



| NO. | DATE | DESCRIPTIONS | BY | APRO. |
|-----|------|--------------|----|-------|
|-----|------|--------------|----|-------|

REVISIONS

PROJECT MANAGEMENT UNIT FOR
HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN ON HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT PROJECT
IN THE SOCIALIST REPUBLIC OF VIET NAM

CROSS SECTION SURVEY OF EXISTING COMBINED SEWER ROUTE (1)

SCALE : 1 / 100

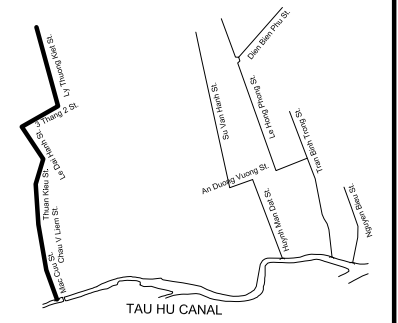
JAPAN INTERNATIONAL COOPERATION
AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

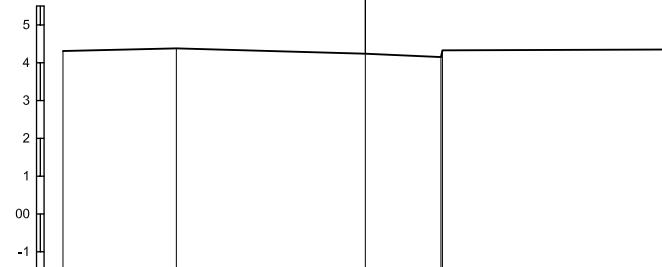
DESIGNED _____ CHECKED _____

DATE : _____ DWG. No. _____

KEYMAP

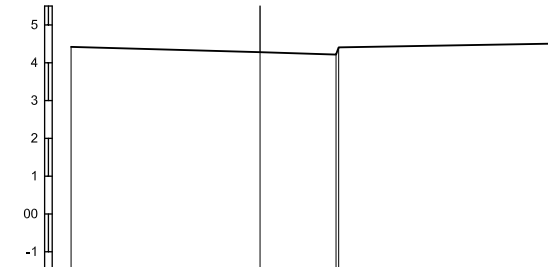


0+400



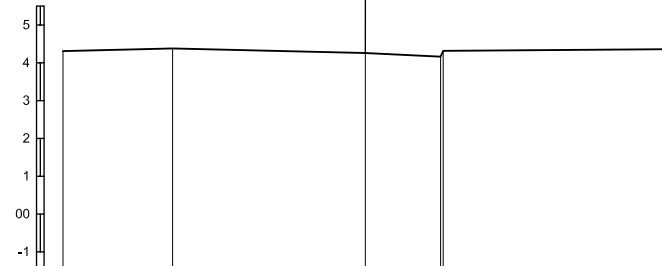
| | | | | | | |
|------------------------|------|------|------|------|------|------|
| Invert Elevation (m) | | | | | | |
| Ground Elevation (m) | 4.31 | 4.38 | 4.25 | 4.15 | 4.33 | 4.35 |
| Distance (m) | 3 | 5 | 2 | 0.04 | 5.86 | |

0+600



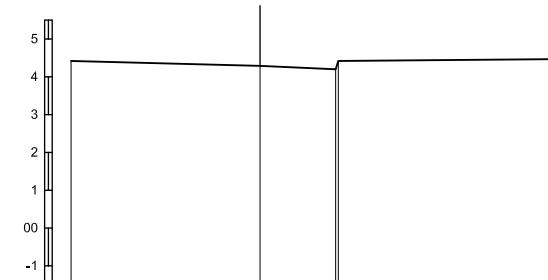
| | | | | | | |
|------------------------|------|------|------|------|------|--|
| Invert Elevation (m) | | | | | | |
| Ground Elevation (m) | 4.42 | 4.29 | 4.22 | 4.41 | 4.51 | |
| Distance (m) | 5 | 2.01 | 0.07 | 5.92 | | |

0+450



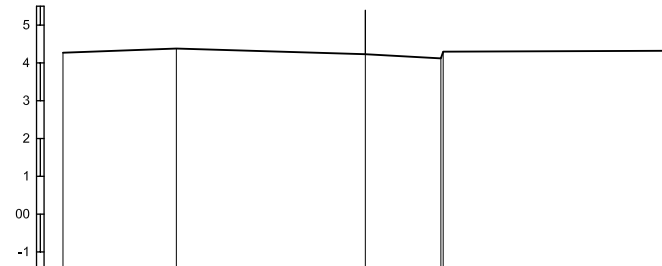
| | | | | | | |
|------------------------|------|------|------|------|------|------|
| Invert Elevation (m) | | | | | | |
| Ground Elevation (m) | 4.31 | 4.38 | 4.27 | 4.16 | 4.32 | 4.36 |
| Distance (m) | 2.9 | 5.1 | 1.99 | 0.07 | 5.84 | |

0+650



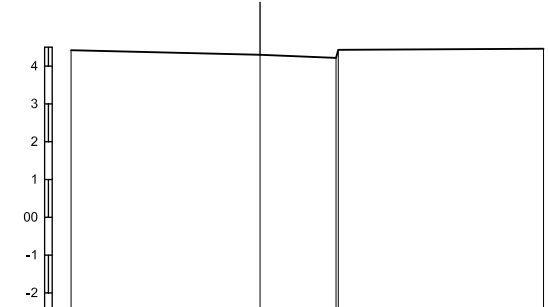
| | | | | | | |
|------------------------|------|------|------|------|------|--|
| Invert Elevation (m) | | | | | | |
| Ground Elevation (m) | 4.42 | 4.30 | 4.20 | 4.42 | 4.48 | |
| Distance (m) | 0 | 5 | 2 | 0.07 | 7.23 | |

0+500



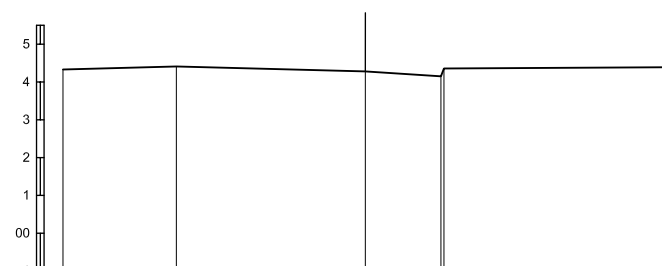
| | | | | | | |
|------------------------|------|------|------|------|------|------|
| Invert Elevation (m) | | | | | | |
| Ground Elevation (m) | 4.27 | 4.38 | 4.24 | 4.12 | 4.30 | 4.32 |
| Distance (m) | 3 | 5 | 2 | 0.06 | 5.84 | |

0+700



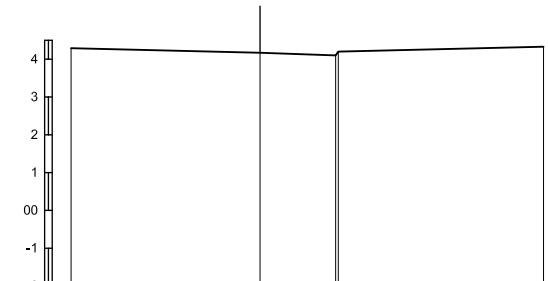
| | | | | | | |
|------------------------|------|------|------|------|------|--|
| Invert Elevation (m) | | | | | | |
| Ground Elevation (m) | 4.42 | 4.31 | 4.23 | 4.43 | 4.46 | |
| Distance (m) | 0 | 5 | 2.01 | 0.06 | 5.43 | |

0+550



| | | | | | | |
|------------------------|------|------|------|------|------|------|
| Invert Elevation (m) | | | | | | |
| Ground Elevation (m) | 4.33 | 4.41 | 4.29 | 4.15 | 4.36 | 4.39 |
| Distance (m) | 3 | 5 | 2 | 0.08 | 5.92 | |

0+750



| | | | | | | |
|------------------------|------|------|------|------|------|--|
| Invert Elevation (m) | | | | | | |
| Ground Elevation (m) | 4.29 | 4.18 | 4.10 | 4.20 | 4.33 | |
| Distance (m) | 0 | 5 | 2 | 0.07 | 5.43 | |

| NO. | DATE | DESCRIPTIONS | BY | APRO. |
|-----|------|--------------|----|-------|
|-----|------|--------------|----|-------|

REVISIONS

PROJECT MANAGEMENT UNIT FOR
HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN ON HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT PROJECT
IN THE SOCIALIST REPUBLIC OF VIET NAM

CROSS SECTION SURVEY OF
EXISTING COMBINED SEWER
ROUTE (2)

SCALE : 1 / 100

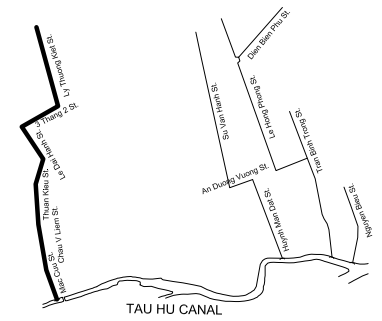
JICA JAPAN INTERNATIONAL COOPERATION
AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

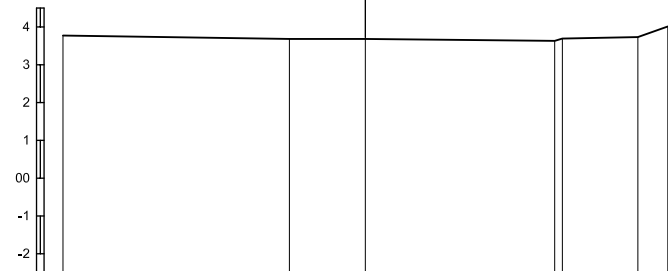
DESIGNED CHECKED

DATE : DWG. No.

KEYMAP

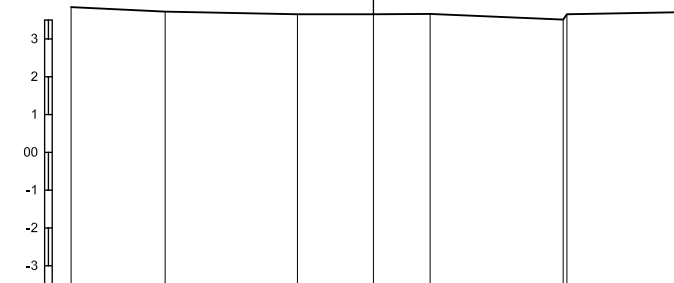


1+212.3



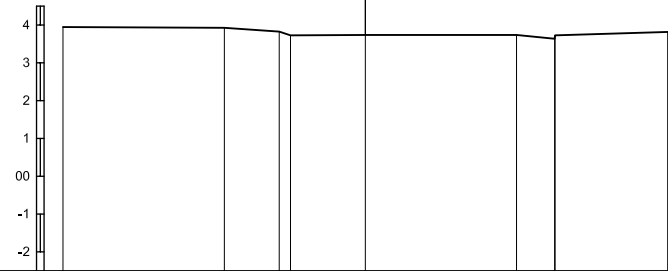
| | | | | | | | | | |
|------------------------|------|------|------|------|--|------|------|------|------|
| Invert Elevation (m) | | | | | | | | | |
| Ground Elevation (m) | 3.77 | | 3.68 | 3.68 | | 3.63 | 3.69 | 3.73 | 4.01 |
| Distance (m) | 0 | 5.99 | | 2.01 | | 5.01 | 0.2 | 2 | 0.79 |

1+412.3



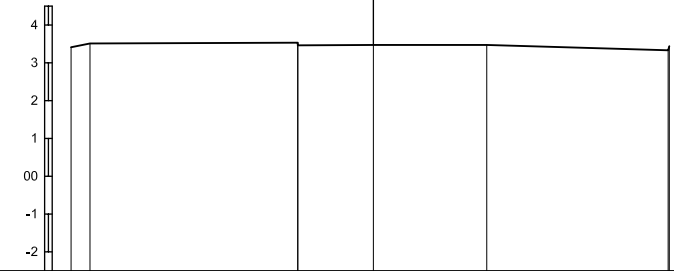
| | | | | | | | | | | |
|------------------------|------|------|------|-----|------|------|------|------|------|------|
| Invert Elevation (m) | | | | | | | | | | |
| Ground Elevation (m) | 3.78 | | 3.66 | | 3.59 | 3.59 | 3.60 | 3.45 | 3.65 | |
| Distance (m) | 0 | 2.49 | | 3.5 | | 2.01 | 1.5 | 3.52 | 0.1 | 3.29 |

1+262.3



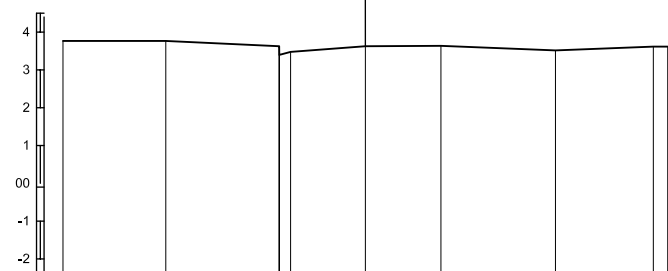
| | | | | | | | | | | |
|------------------------|------|------|------|------|------|------|------|------|------|------|
| Invert Elevation (m) | | | | | | | | | | |
| Ground Elevation (m) | 3.95 | | 3.93 | 3.93 | 3.67 | | 3.74 | 3.73 | 3.62 | |
| Distance (m) | 0 | 4.27 | | 1.45 | 0.3 | 1.98 | | 4 | 1.01 | 2.98 |

1+462.3



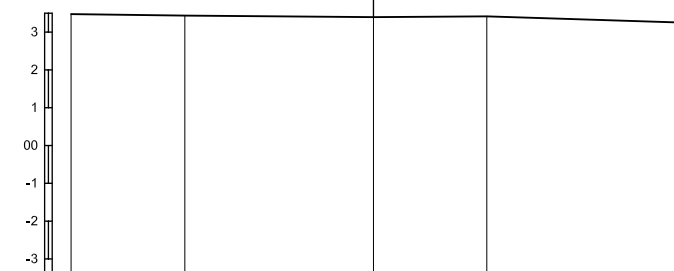
| | | | | | | | | | | |
|------------------------|------|------|--|------|------|---|------|------|------|------|
| Invert Elevation (m) | | | | | | | | | | |
| Ground Elevation (m) | 3.41 | 3.51 | | 3.53 | 3.46 | | 3.43 | 3.47 | 3.33 | 3.44 |
| Distance (m) | 0 | 0.5 | | 5.5 | | 2 | 3 | 3.47 | 4.8 | 0.03 |

1+312.3



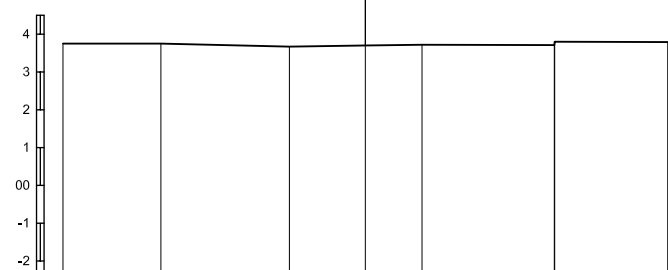
| | | | | | | | | | | |
|------------------------|------|------|------|------|------|------|------|------|------|------|
| Invert Elevation (m) | | | | | | | | | | |
| Ground Elevation (m) | 3.77 | 3.77 | 3.40 | 3.46 | 3.63 | 3.64 | 3.52 | 3.62 | 3.62 | |
| Distance (m) | 0 | 2.72 | | 3 | 0.3 | 1.98 | 2 | 3.03 | 2.59 | 0.38 |

1+512.3



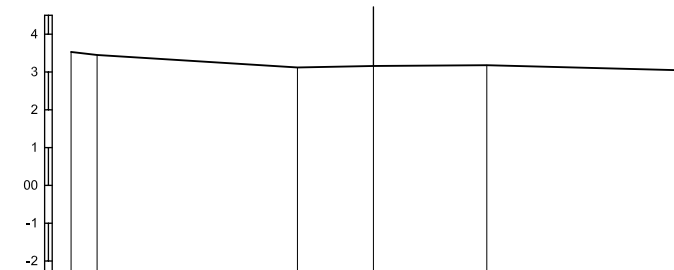
| | | | | | | | | | |
|------------------------|------|------|------|------|------|---|------|------|------|
| Invert Elevation (m) | | | | | | | | | |
| Ground Elevation (m) | 3.41 | | 3.37 | | 3.33 | | 3.35 | | 3.19 |
| Distance (m) | 0 | 3.01 | | 4.99 | | 3 | | 5.03 | |

1+362.3



| | | | | | | | | | | |
|------------------------|------|------|------|------|------|------|------|------|------|------|
| Invert Elevation (m) | | | | | | | | | | |
| Ground Elevation (m) | 3.64 | 3.64 | 3.56 | 3.59 | 3.61 | 3.69 | 3.60 | 3.68 | | |
| Distance (m) | 0 | 2.59 | | 3.4 | | 2.01 | 1.5 | 3.5 | 0.01 | 2.99 |

1+562.3



| | | | | | | | | | | | |
|------------------------|------|------|--|------|------|------|------|------|------|------|------|
| Invert Elevation (m) | | | | | | | | | | | |
| Ground Elevation (m) | 3.61 | 3.53 | | 3.20 | 3.24 | | 3.26 | 3.13 | 3.23 | 3.34 | |
| Distance (m) | 0 | 0.69 | | 5.3 | | 2.01 | 3 | 3.26 | 4.98 | 0.03 | 1.99 |

| NO. | DATE | DESCRIPTIONS | BY | APPRO. |
|-----|------|--------------|----|--------|
|-----|------|--------------|----|--------|

REVISIONS

PROJECT MANAGEMENT UNIT FOR
HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN ON HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT PROJECT
IN THE SOCIALIST REPUBLIC OF VIET NAM

CROSS SECTION SURVEY OF
EXISTING COMBINED SEWER
ROUTE (3)

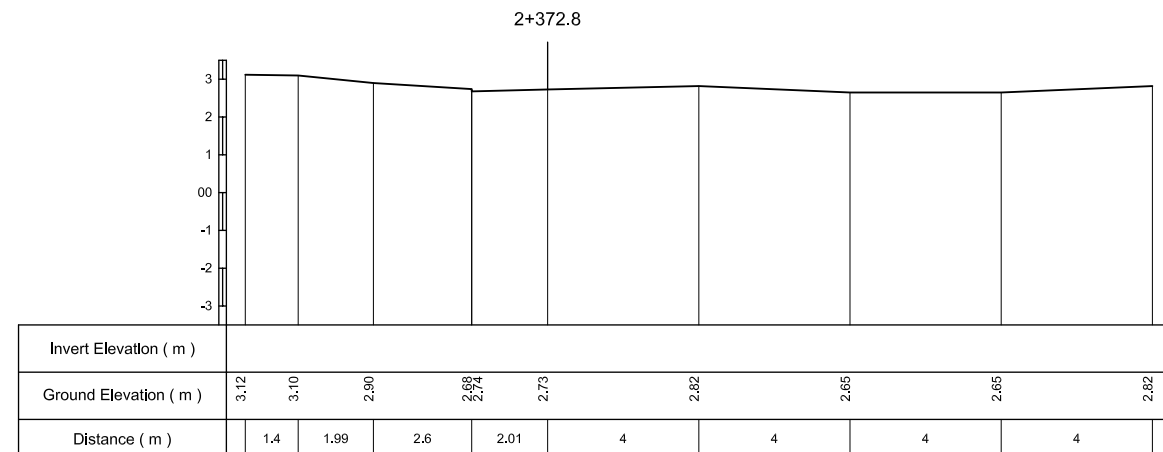
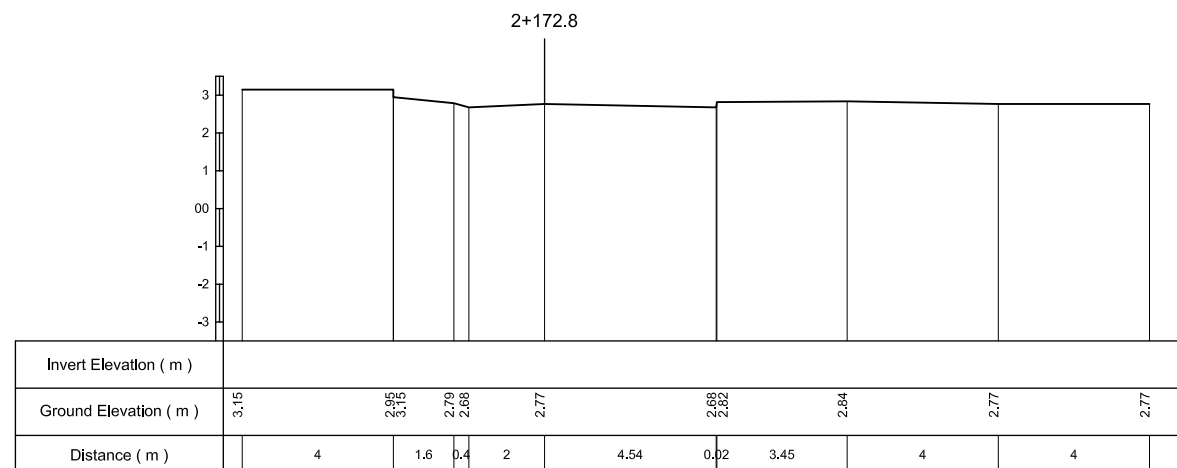
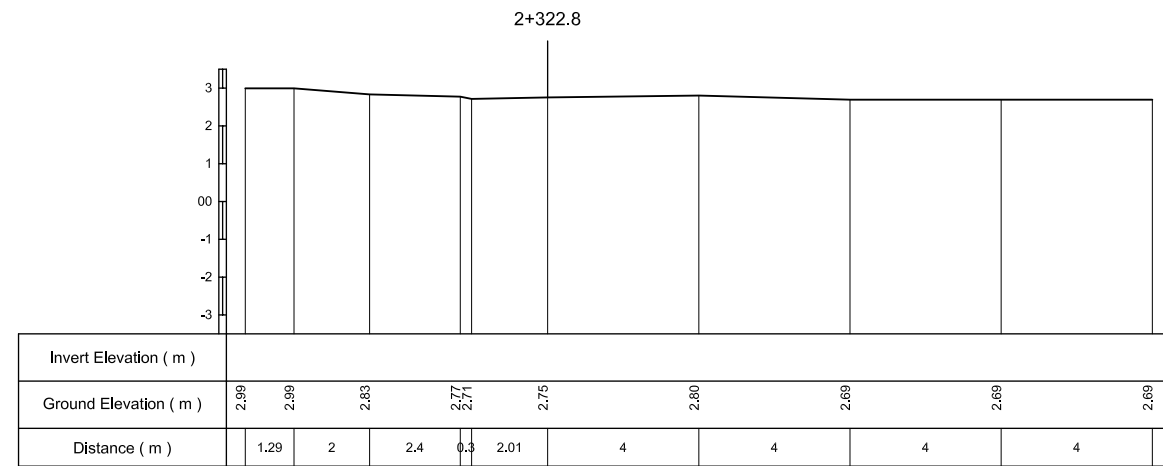
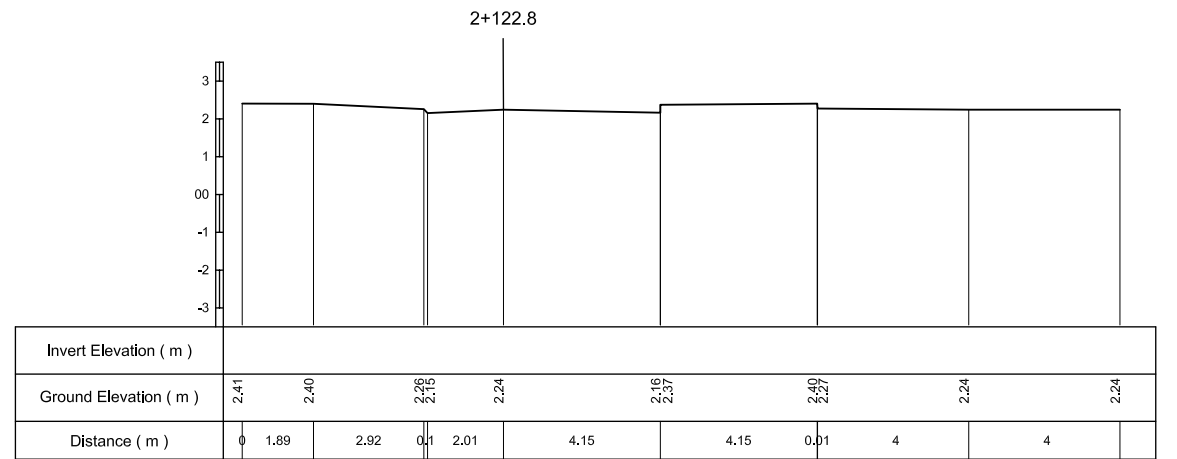
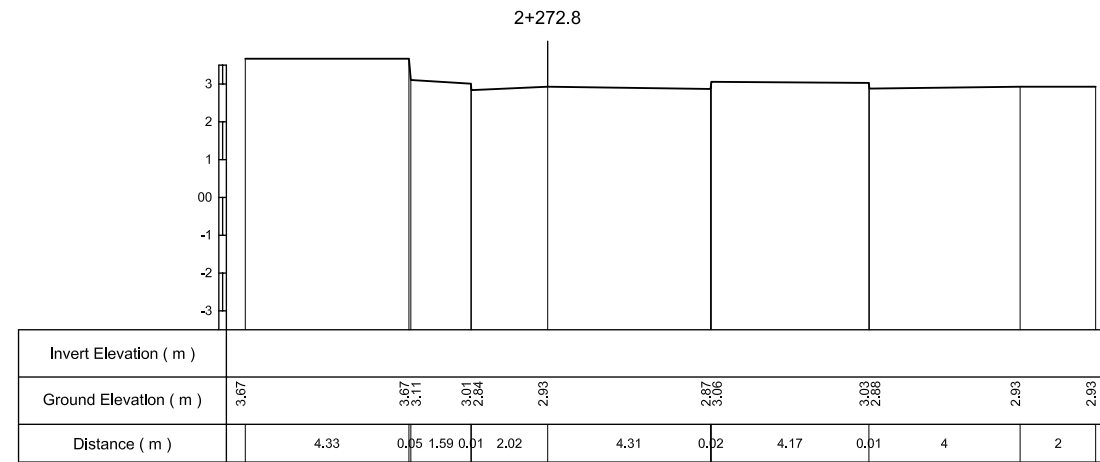
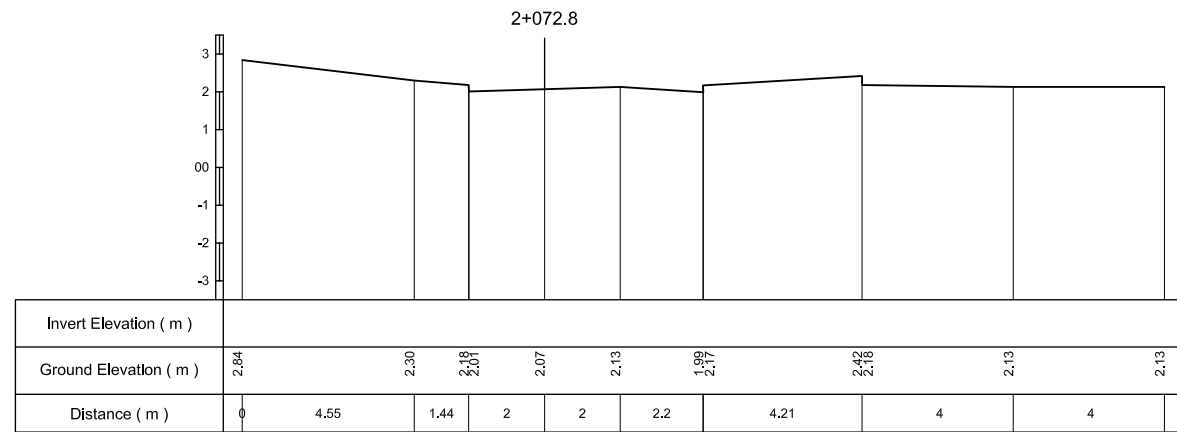
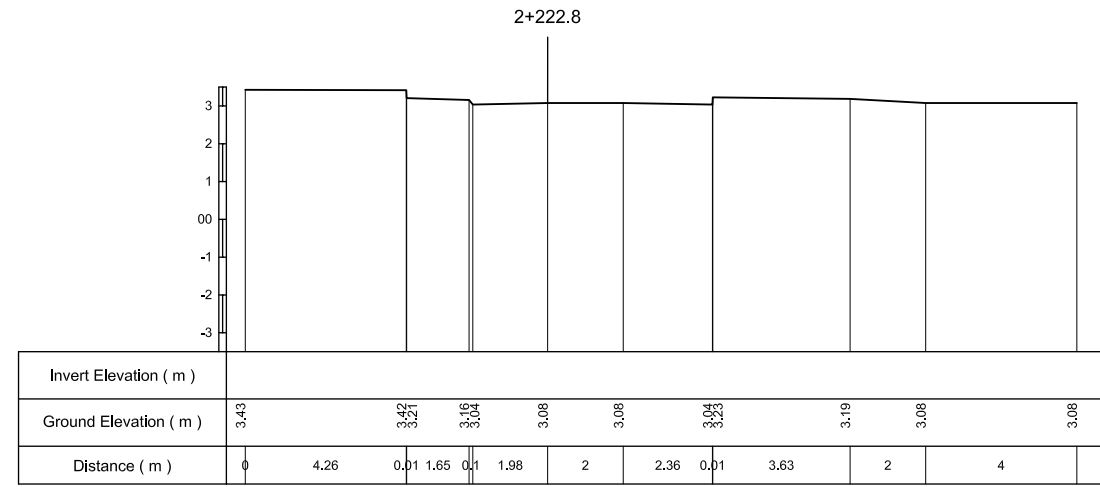
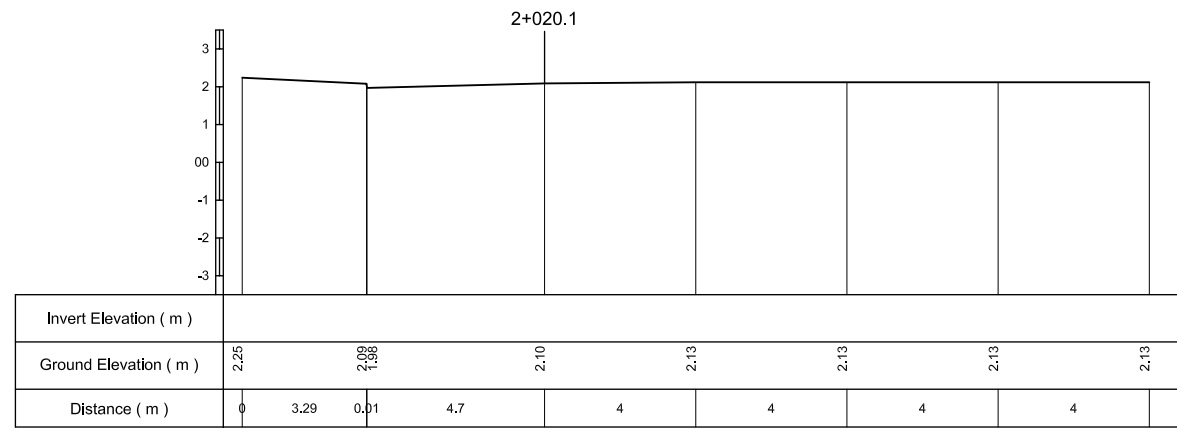
SCALE : 1 / 100

JICA JAPAN INTERNATIONAL COOPERATION
AGENCY (JICA)

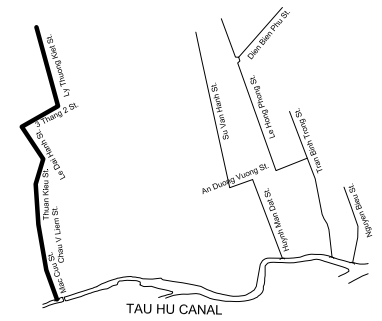
PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED CHECKED

DATE : DWG. No.



KEYMAP



| NO. | DATE | DESCRIPTIONS | BY | APPRO. |
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REVISIONS

PROJECT MANAGEMENT UNIT FOR
HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN ON HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT PROJECT
IN THE SOCIALIST REPUBLIC OF VIET NAM

CROSS SECTION SURVEY OF
EXISTING COMBINED SEWER
ROUTE (4)

SCALE : 1 / 100

JICA JAPAN INTERNATIONAL COOPERATION
AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED CHECKED

DATE : DWG. No.