



87.B

88.B



88.A

SCALE
1:6,356

0 0.6 KILOMETRE

0 0.3 MILE

LEGEND

• 2.40 Leveling point with ground elevation in meter

MASTER PLAN AND FEASIBILITY STUDY FOR
SEWERAGE AND DRAINAGE SYSTEM PROJECT IN
ALOR SETAR AND ITS URBAN ENVIRONS

JAPAN INTERNATIONAL
COOPERATION AGENCY

NIHON SUIDO CONSULTANTS CO., LTD.
TOKYO, JAPAN

RESULTS OF LEVELING ON
MAIN SEWER ROUTES

FIGURE
SM-27



75-C

76-C

75-D

88-B

SCALE
1:6,336

0 0.6 KILOMETRE

0 0.3 MILE

LEGEND
• 3.20 Leveling point with ground elevation in meter

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TOKYO, JAPAN

RESULTS OF LEVELING ON MAIN SEWER ROUTES

FIGURE SM-28



SCALE
1:6,336

0 0.6 KILOMETRE

0 0.3 MILE

LEGEND

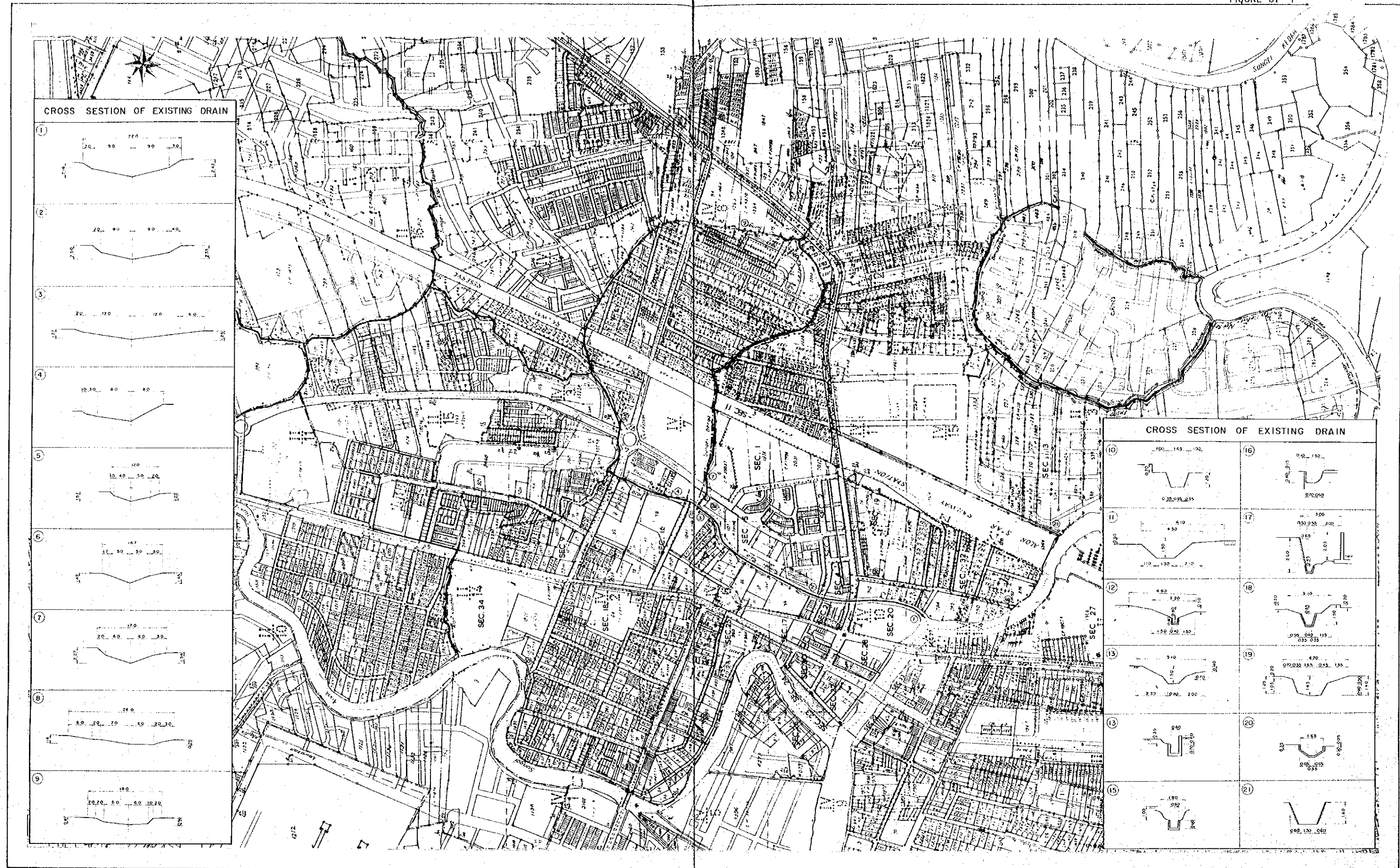
• 1.91 Leveling point with ground elevation in meter

MASTER PLAN AND FEASIBILITY STUDY FOR
SEWERAGE AND DRAINAGE SYSTEM PROJECT IN
ALOR SETAR AND ITS URBAN ENVIRONS

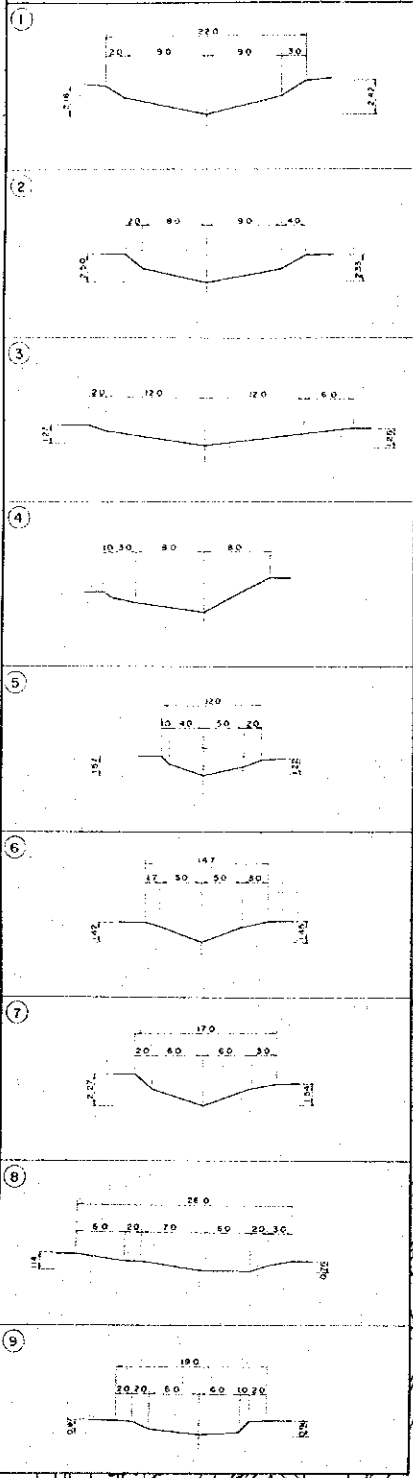
JAPAN INTERNATIONAL COOPERATION AGENCY
NIHON SUDO CONSULTANTS CO., LTD.
TOKYO, JAPAN

RESULTS OF LEVELING ON
MAIN SEWER ROUTES

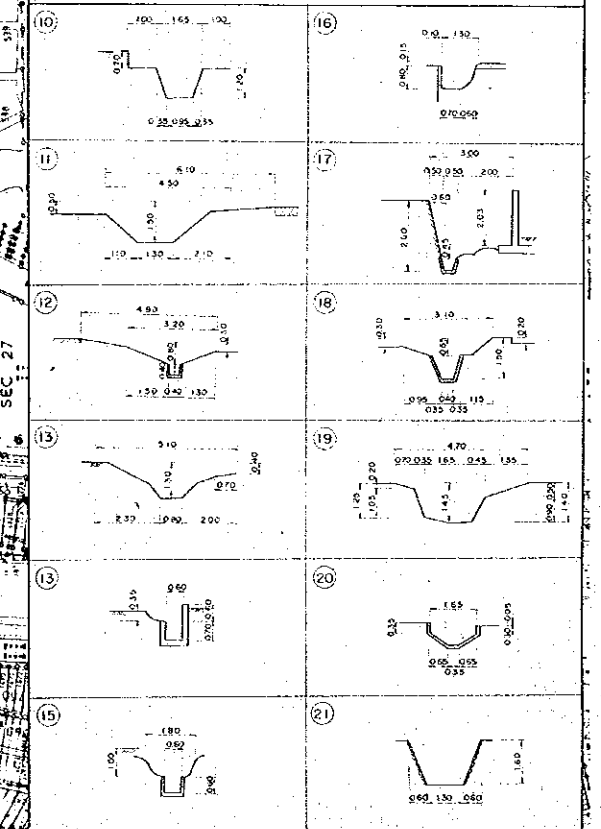
FIGURE
SM-29



CROSS SECTION OF EXISTING DRAIN



CROSS SECTION OF EXISTING DRAIN



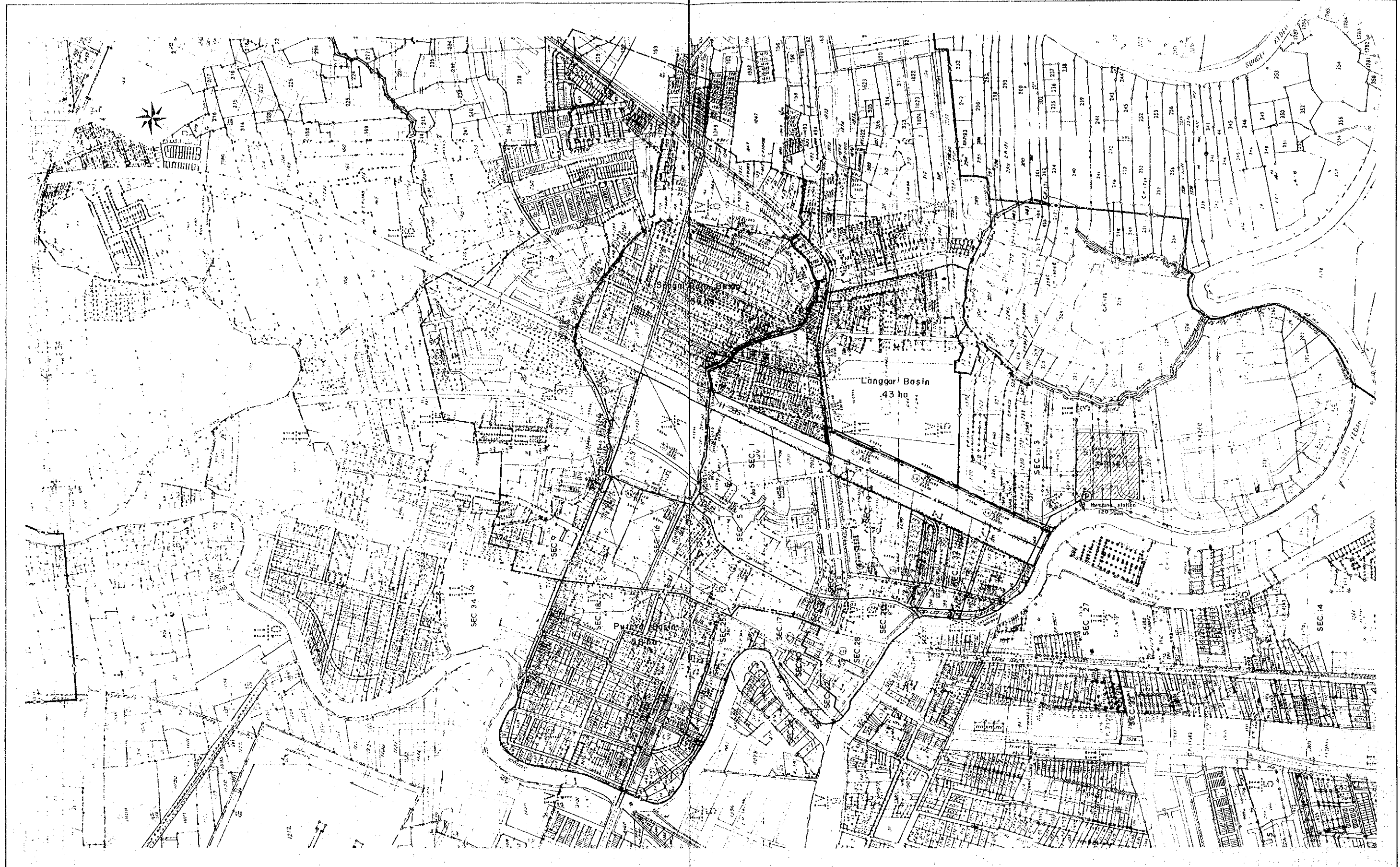
SCALE
1:5,000



LEGEND

- River
- Main Drain
- Concrete Drain
- Earth Drain

MASTER PLAN AND FEASIBILITY STUDY FOR SEWERAGE AND DRAINAGE SYSTEM PROJECT IN ALOR SETAR AND ITS URBAN ENVIRONS	
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EXISTING RETICULATION SYSTEM OF DRAIN	FIGURE DF-1



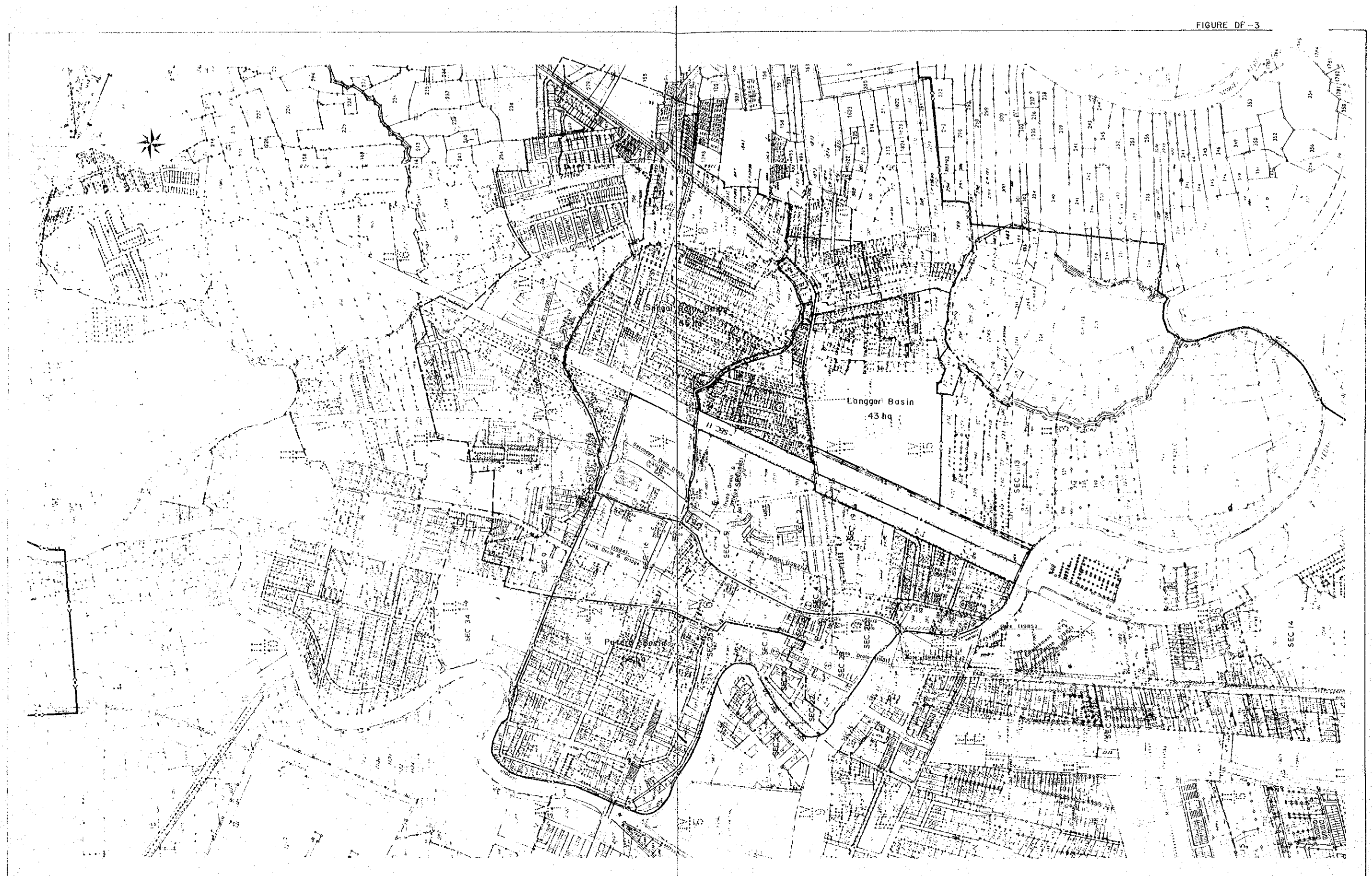
SCALE
1:5,000

LEGEND

- | | | | |
|----------|------------------------------------|------|----------------------------------|
| — | Boundary Delineated by Master Plan | 6.5m | Upper Width |
| — | Boundary of Feasibility Study Area | 4.5m | Bottom Width |
| — | Boundary of Contributing Area | 2.0m | Depth |
| — | Boundary of Basin | | Drain section |
| — | Proposed Trunk Drain | | Open channel (Rubble Wall Drain) |
| — | Proposed Secondary Drain | | Box Culvert |
| ① 6.5x20 | Drain Number and Section (m) | | |
| 0.25 | Invert Slope (%=1/1000) | | |
| 50.00 | Drain Length (m) | | |

- | | |
|---|-----------------|
| — | Embankment |
| Ⓟ | Pumping station |
| Ⓜ | Reservoir |
| Ⓢ | Outlet Gate |
| — | Bridge |

MASTER PLAN AND FEASIBILITY STUDY FOR SEWERAGE AND DRAINAGE SYSTEM PROJECT IN ALOR SETAR AND ITS URBAN ENVIRONS	
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PLAN OF OVERALL DRAINAGE SYSTEM	FIGURE DF-2



SCALE

LEGEND

- | | | | |
|--|------------------------------------|--|----------------------------------|
| | Boundary Delineated by Master Plan | | 6.5 m Upper Width |
| | Boundary of Feasibility Study Area | | 4.5 m Bottom Width |
| | Boundary of Contributing Area | | 2.0 m Depth |
| | Boundary of Basin | | Drain section |
| | Proposed Trunk Drain | | Open channel (Rubble Wall Drain) |
| | Proposed Secondary Drain | | Box Culvert |
| | Drain Number and Section (m) | | |
| | Invert Slope (%*1/1000) | | |
| | Drain Length (m) | | |

- | | |
|--|-----------------|
| | Embankment |
| | Pumping station |
| | Reservoir |
| | Outlet Gate |
| | Bridge |

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IMPLEMENTATION PROGRAMME FOR PROPOSED DRAINAGE SYSTEM	FIGURE DF - 3

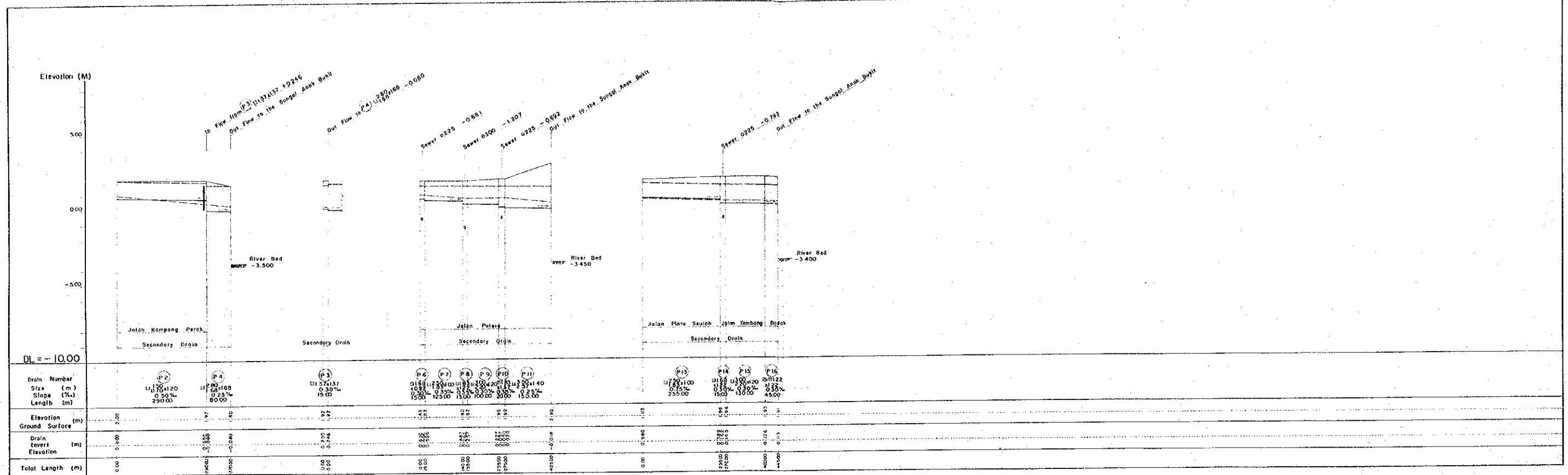
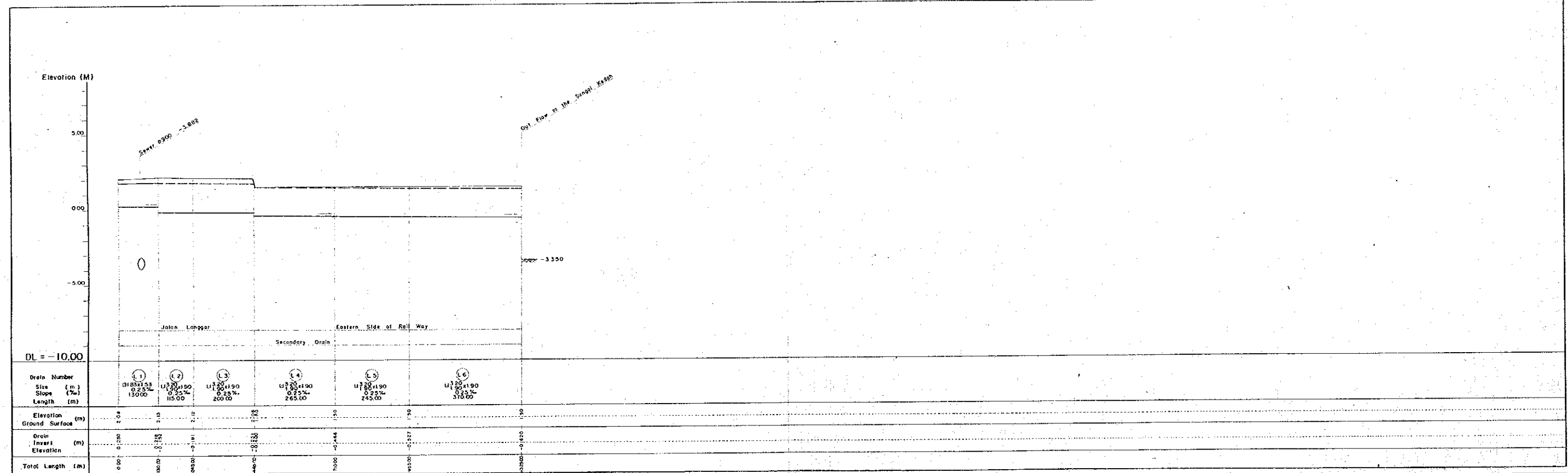


FIGURE DF-5-2



SCALE

Horizontal 1 : 5,000
Vertical 1 : 100

LEGEND

- Crown Level of Proposed Drain
- Proposed Invert
- Existing Invert
- ⊗ Line No.
- ⊗ Rubble Wall Channel
- ⊗ Concrete Box Culvert
- 3.00m : 3.00m Upper Width
- 2.20m : 2.20m Bottom Width
- 1.20m : 1.20m Depth
- % Invert Slope 1/1,000

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PROFILE OF PROPOSED DRAIN
(Putera and Langgar Basin)

FIGURE
DF-5

JICA