

Japan International Cooperation Agency
Ministry of Works and Supply, Republic of Zambia
Ministry of Transport and Energy, Republic of Zimbabwe

The Feasibility Study on the Proposed New Bridge Over
the Zambezi River at Chirundu Border Post

Between

the Republic of Zambia
and
the Republic of Zimbabwe

Final Report
(Drawing)

March 1993

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Chirundu Camp, Malawi

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**The Feasibility Study on the Proposed New Bridge Over
the Zambezi River at Chirundu Border Post**

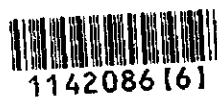
Between

**the Republic of Zambia
and
the Republic of Zimbabwe**

**Final Report
(Drawings)**

March 1998

Chodai Co., Ltd.

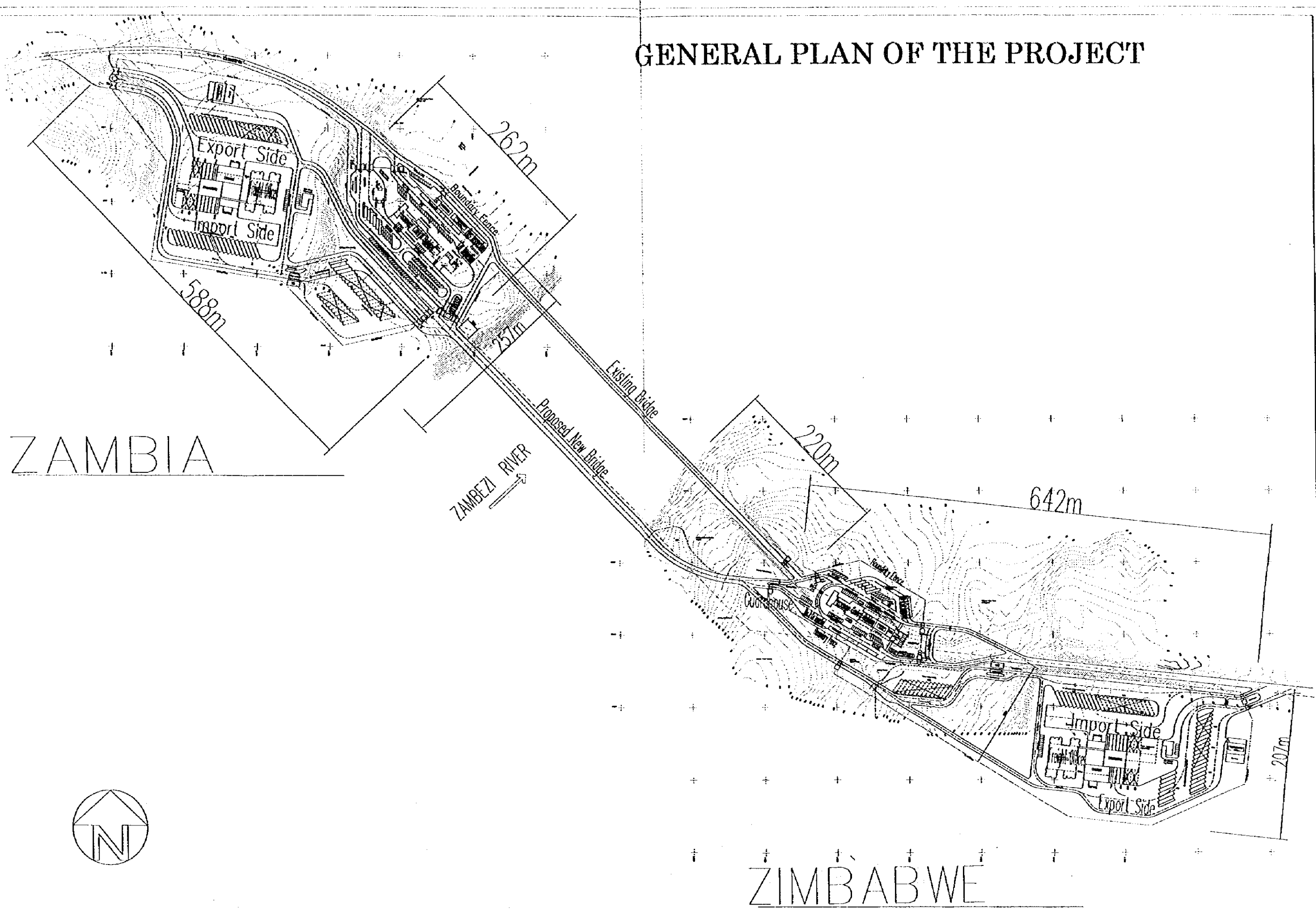


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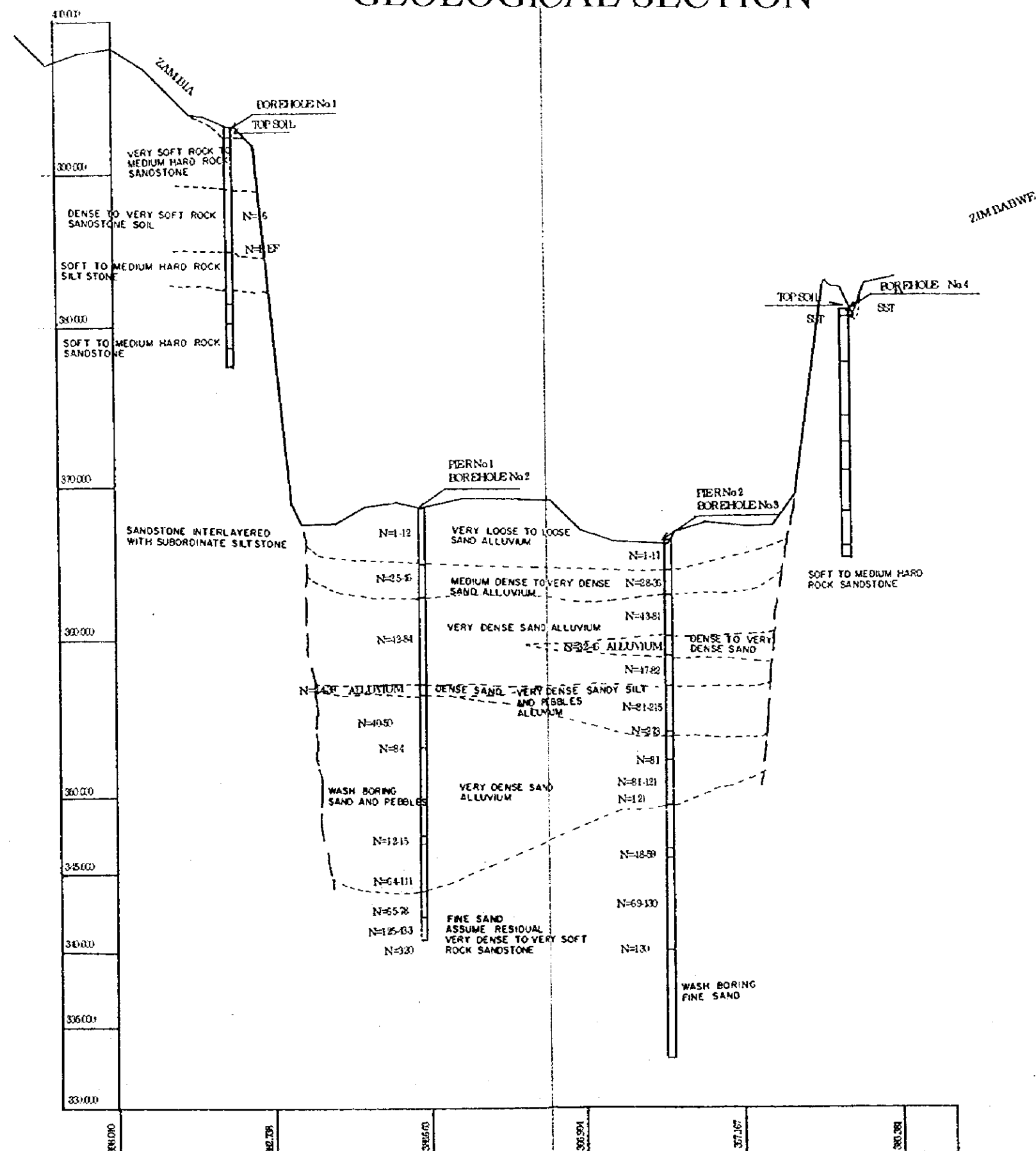
GENERAL PLAN OF THE PROJECT



ZAMBIA

ZIMBABWE

GEOLOGICAL SECTION



TOPOGRAPHICAL MAP 1

This is a detailed topographical map titled "TOPOGRAPHICAL MAP 1". The map features contour lines indicating elevation, with labels such as 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 1100, 1200, 1300, 1400, 1500, 1600, 1700, 1800, 1900, 2000, 2100, 2200, 2300, 2400, 2500, 2600, 2700, 2800, 2900, 3000, 3100, 3200, 3300, 3400, 3500, 3600, 3700, 3800, 3900, 4000, 4100, 4200, 4300, 4400, 4500, 4600, 4700, 4800, 4900, 5000, 5100, 5200, 5300, 5400, 5500, 5600, 5700, 5800, 5900, 6000, 6100, 6200, 6300, 6400, 6500, 6600, 6700, 6800, 6900, 7000, 7100, 7200, 7300, 7400, 7500, 7600, 7700, 7800, 7900, 8000, 8100, 8200, 8300, 8400, 8500, 8600, 8700, 8800, 8900, 9000, 9100, 9200, 9300, 9400, 9500, 9600, 9700, 9800, 9900, 10000. The map also shows a network of roads, including a main road labeled "ROAD 1" and several smaller roads. A watercourse is depicted as a dashed line. A powerline is shown as a solid line with cross-ticks. Telephone lines are represented by dashed lines with cross-ticks. Fences are indicated by lines with cross-ticks. Culverts are shown as lines with cross-ticks. Power poles are marked with dots. Telephone poles are marked with dots. Buildings are represented by small circles. The map includes a key in the top right corner, a north arrow in the top center, and a scale bar in the bottom center. The map is divided into sections by a vertical line and a horizontal line. The title "TOPOGRAPHICAL MAP 1" is centered at the top.

KEY

- ROAD EDGE
- WATERCOURSE
- POWERLINE
- TELEPHONE LINE
- FENCE
- CULVERT
- POWER POLES
- TELEPHONE POLES
- BUILDINGS

ROAD EDGE

WATERCOURSE

POWERLINE

TELEPHONE LINE

FENCE

CULVERT

POWER POLES

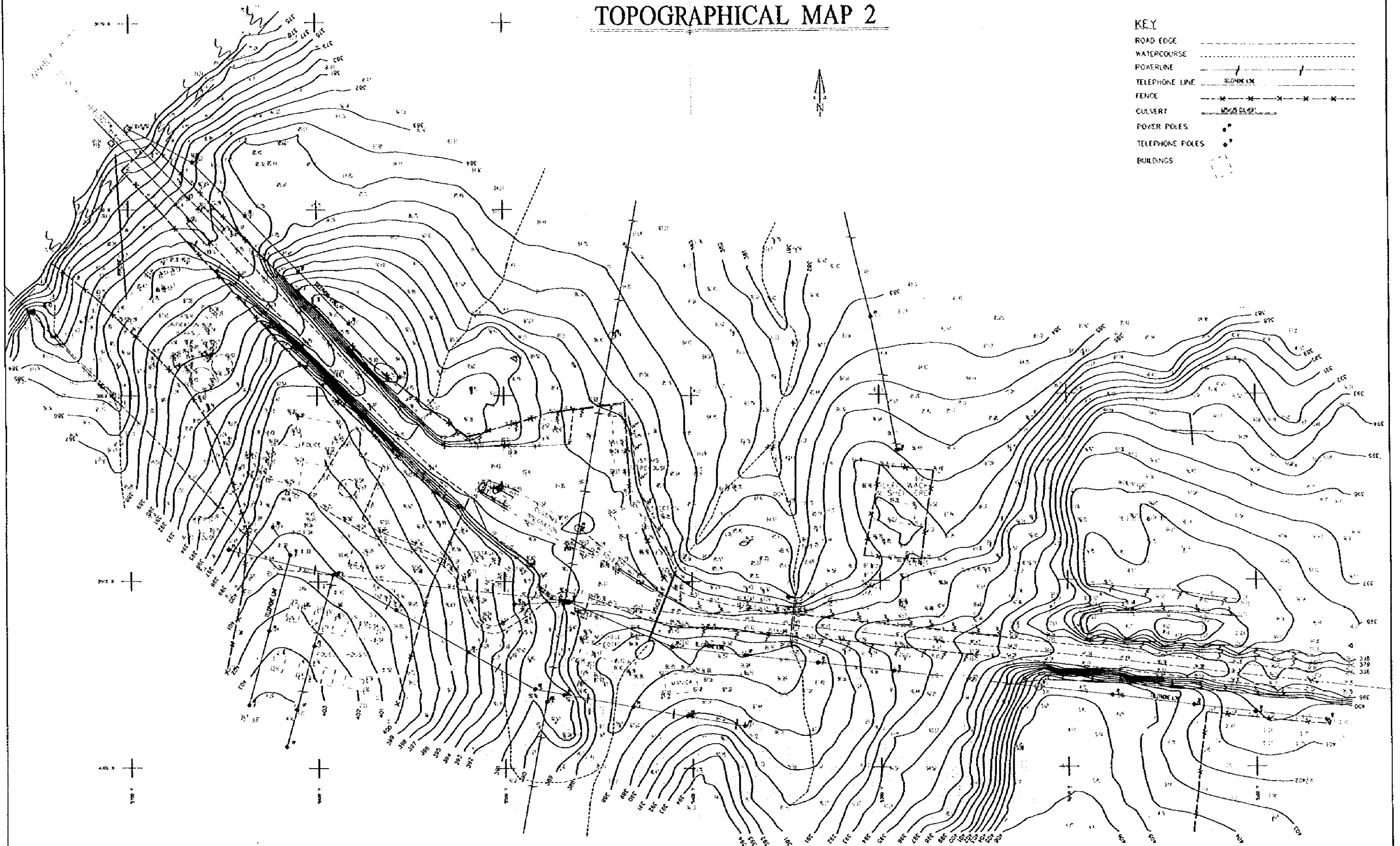
TELEPHONE POLES

BUILDINGS

TOPOGRAPHICAL MAP 2

KEY

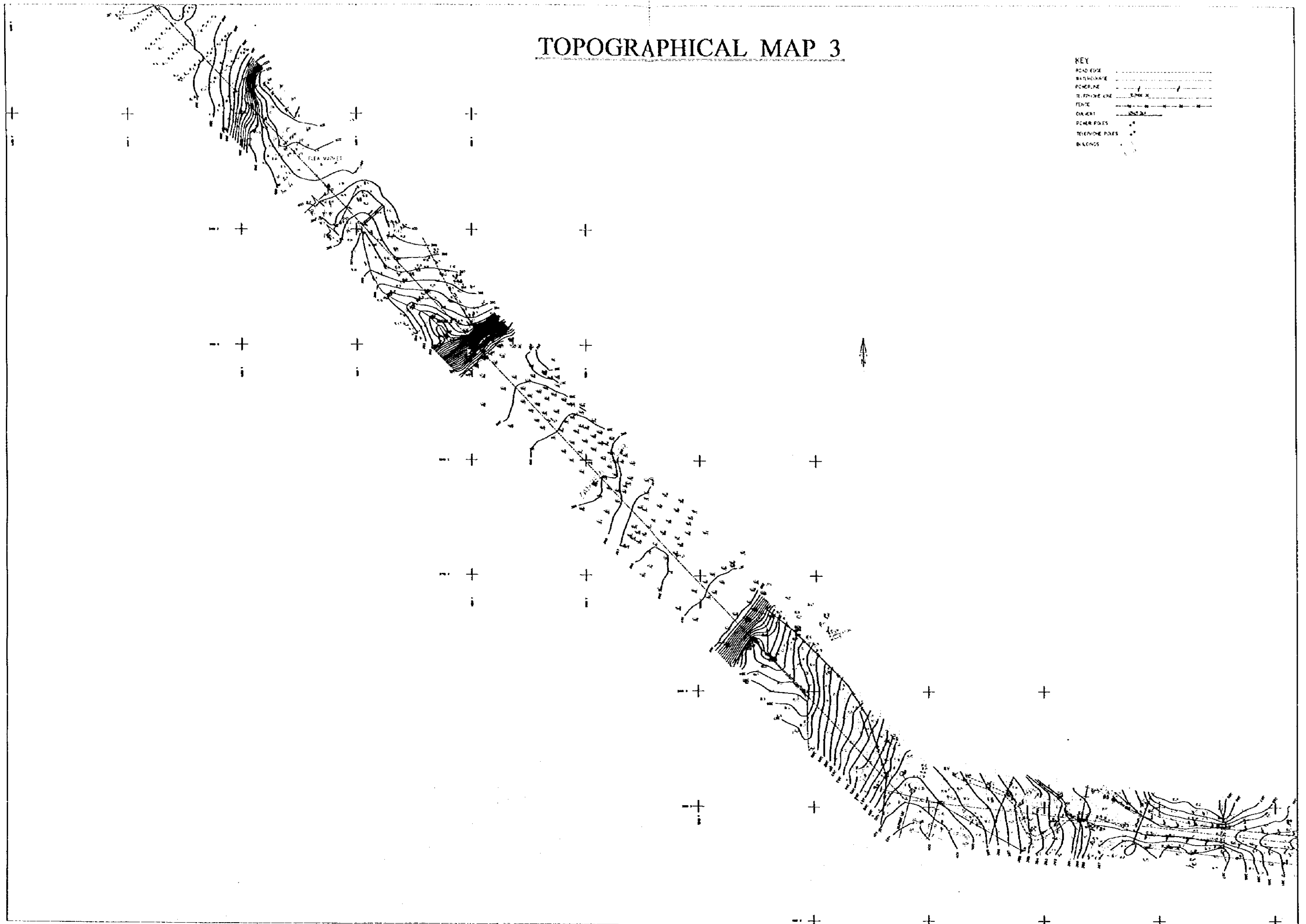
- ROAD EDGE
- WATERCOURSE
- POWERLINE
- TELEPHONE LINE
- FENCE
- CULVERT
- POWER POLES
- TELEPHONE POLES
- BUILDINGS



TOPOGRAPHICAL MAP 3

KEY

ROAD EDGE	---
WATERWAY	~~~~~
POWER LINE	—•—•—•—
TELEPHONE LINE	—x—x—x—x—
RAILROAD	—+—+—+—+—
CLIFF	
POWER POLES	•
TELEPHONE POLES	x
BUILDINGS	■

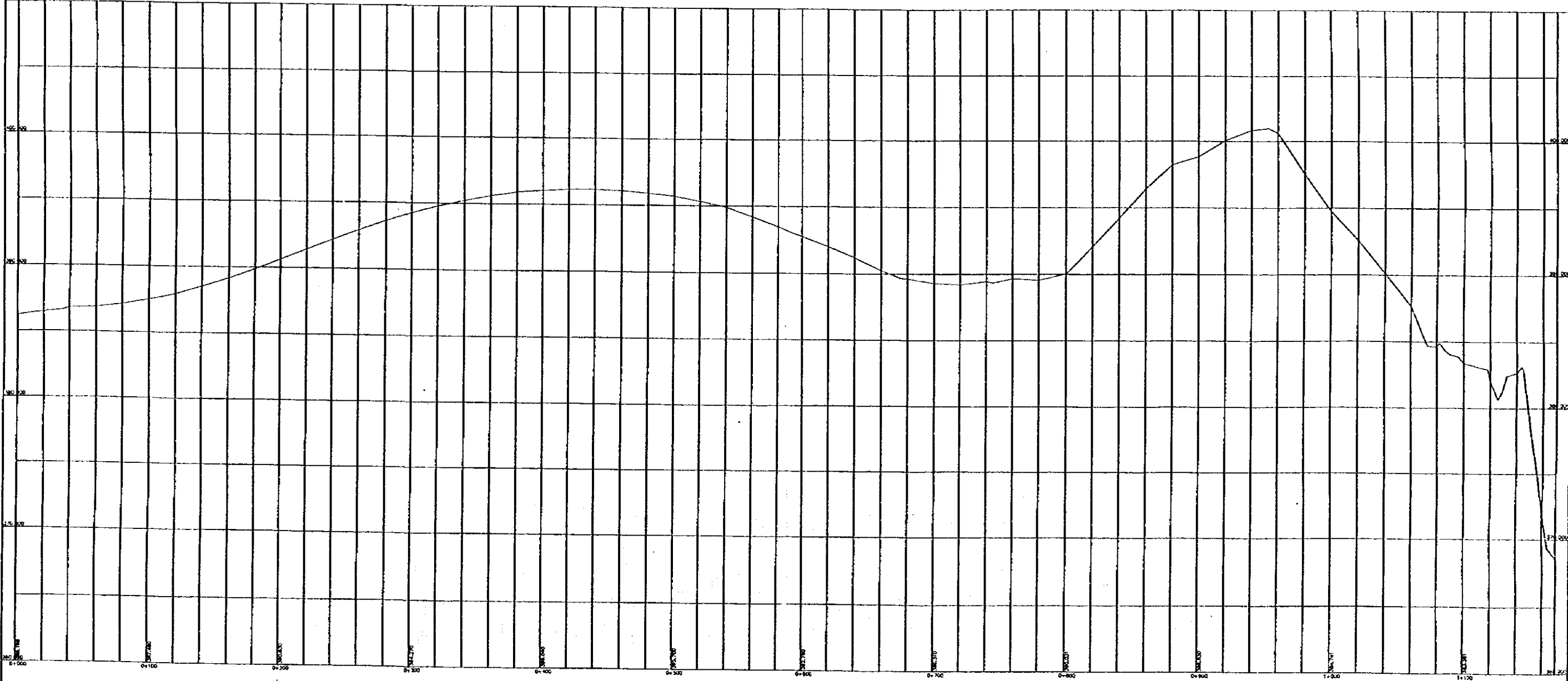


LONGITUDINAL PROFILE

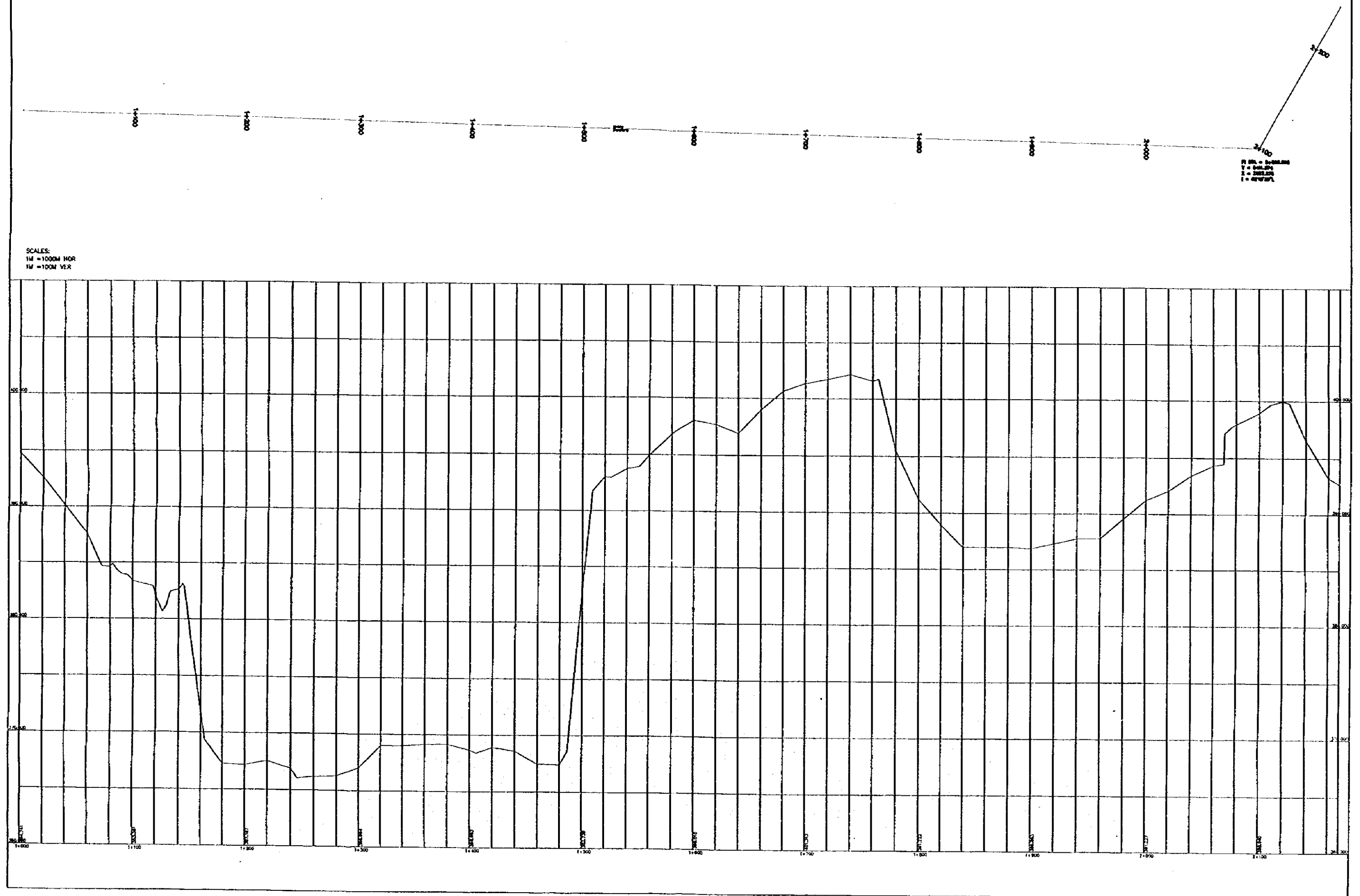
17:45

17:45
17:45
17:45
17:45

SCALES:
1" = 1000' HOR
1" = 100' VER

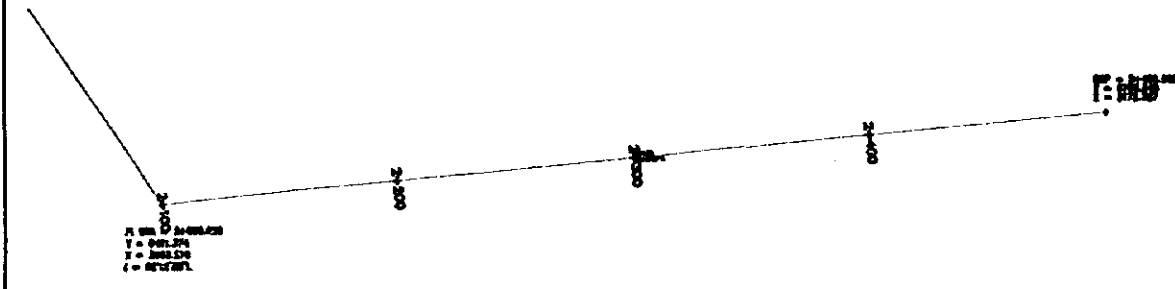


LONGITUDINAL PROFILE 2

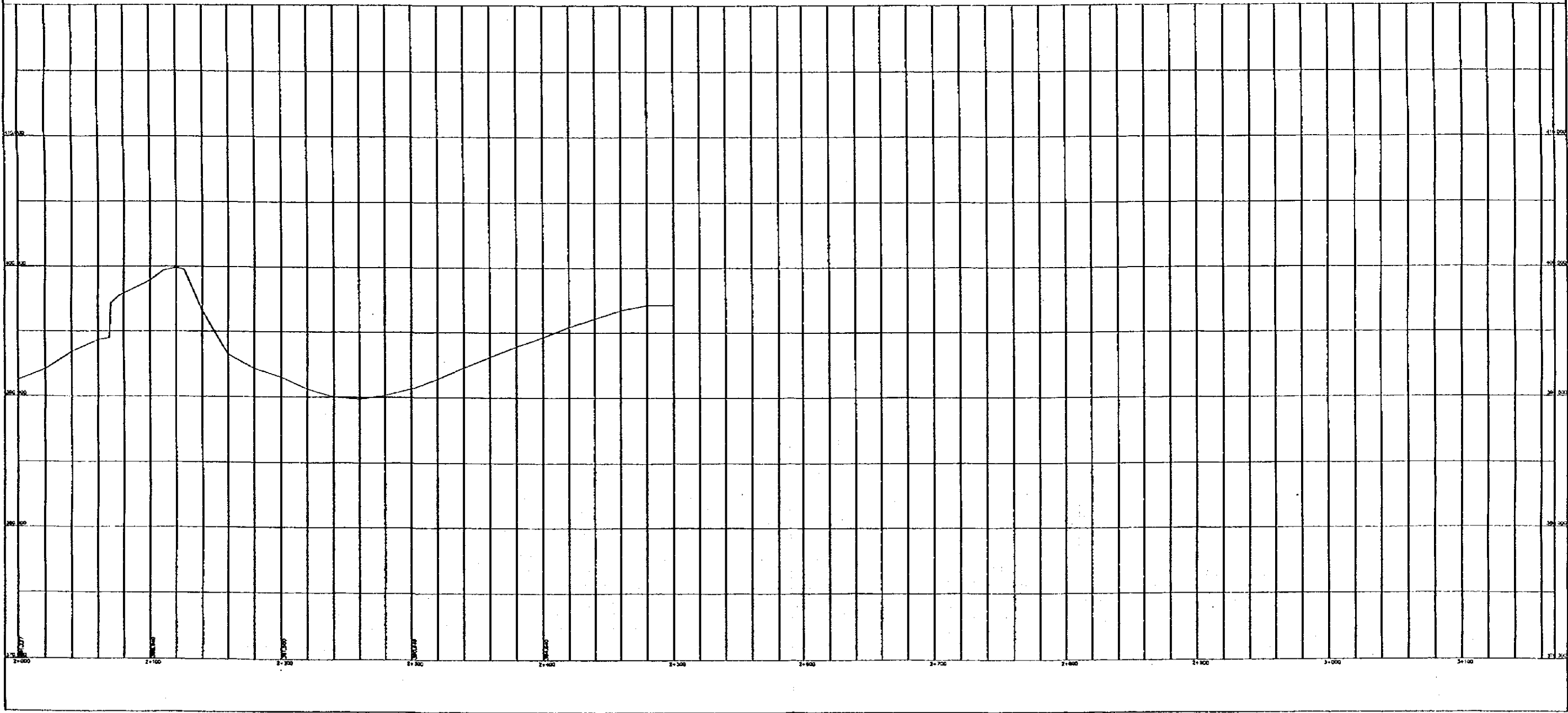


1

LONGITUDINAL PROFILE 3



SCALES:
1M = 100M HOR
1M = 100M VER



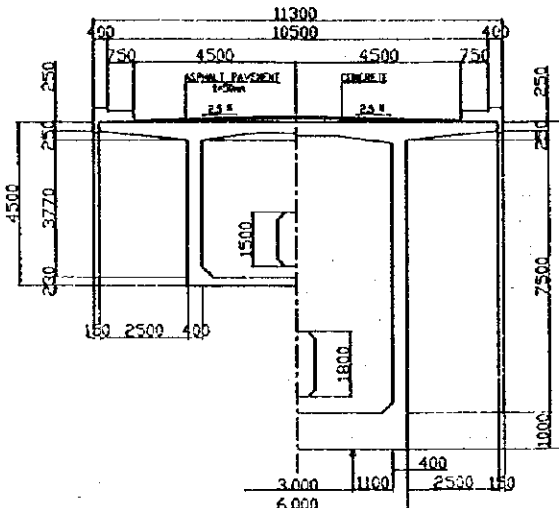
CHIRUNDU BRIDGE GENERAL VIEW



GIRDER CROSS SECTION (1:200)

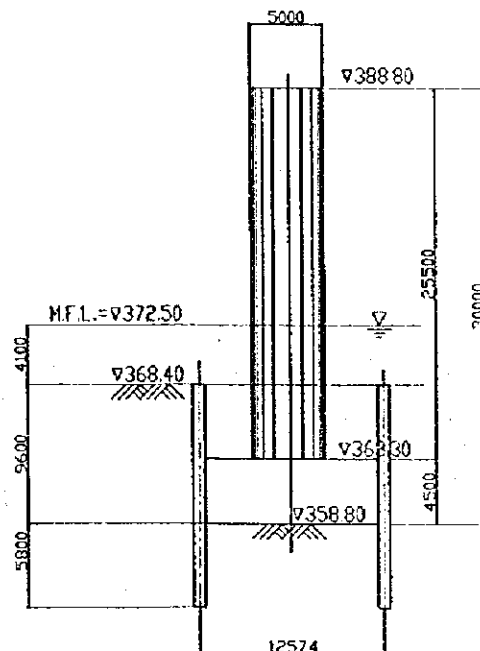
CENTER

SUPPORT

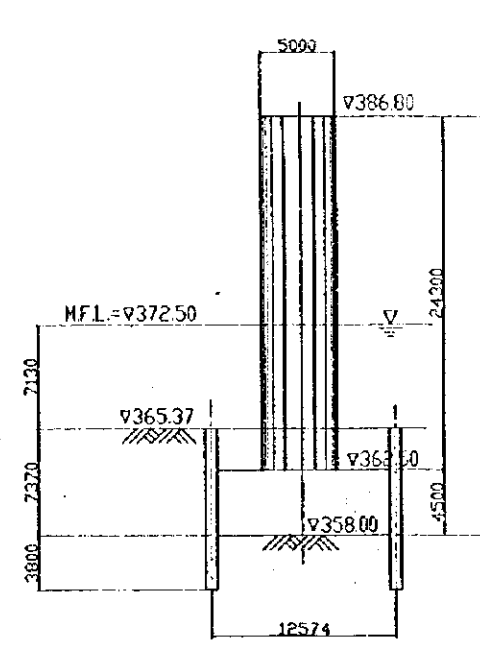


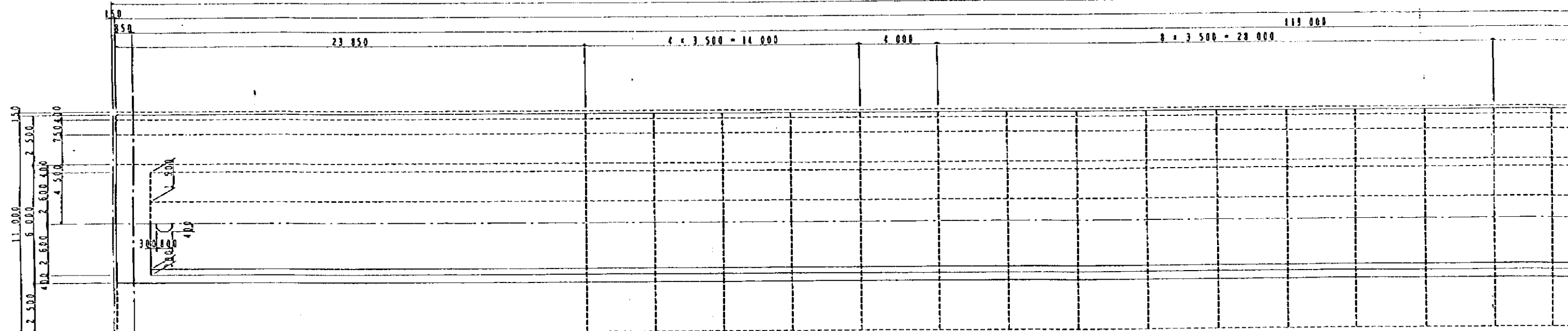
PIER (1:500)

P1



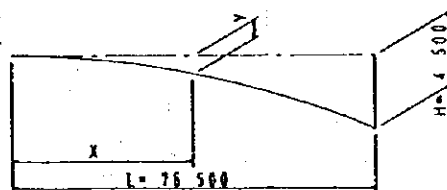
P2





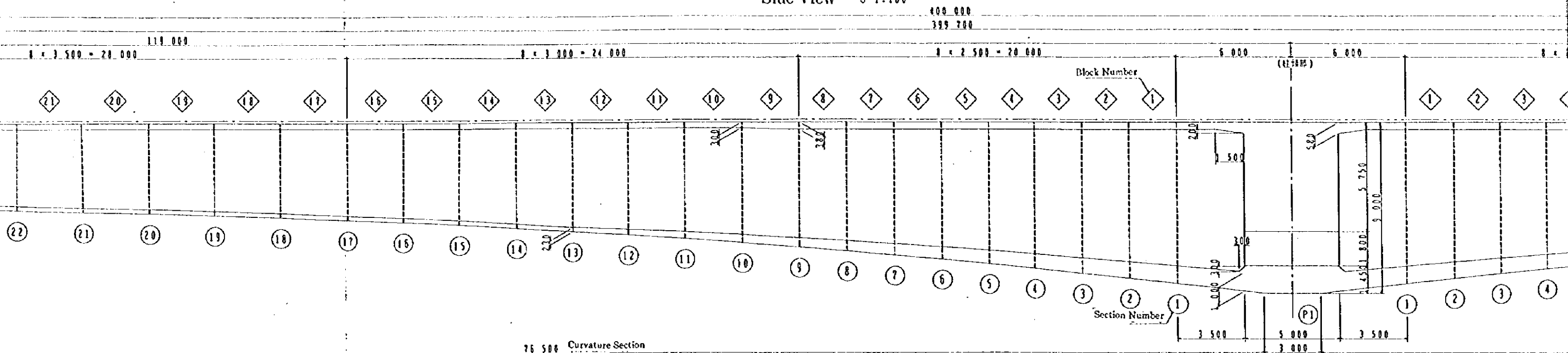
Curvature Formula

$$\gamma = \kappa \cdot \left(\frac{\lambda}{l} \right)^p$$

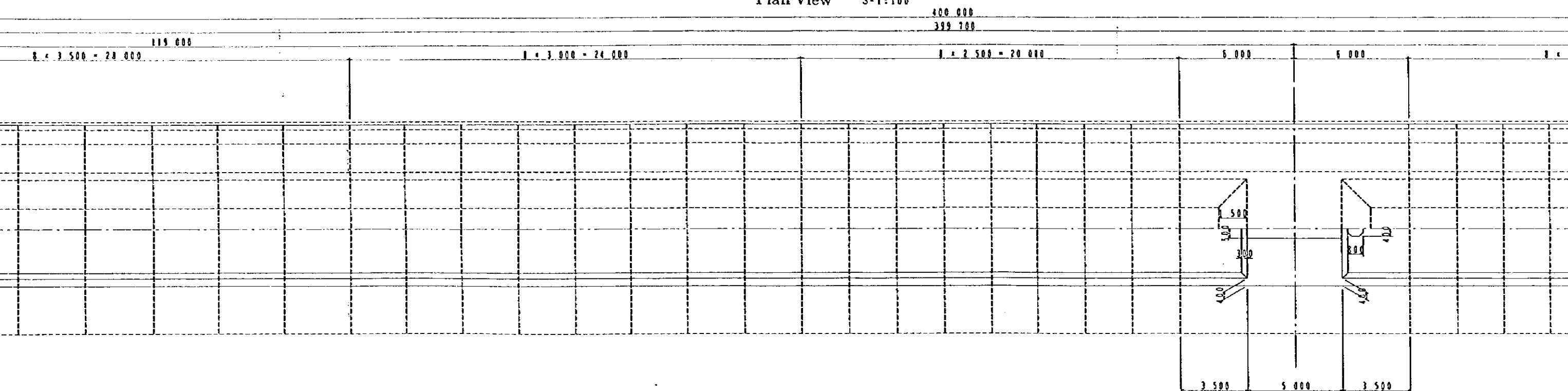
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SUPERSTRUCTURAL PLAN 1

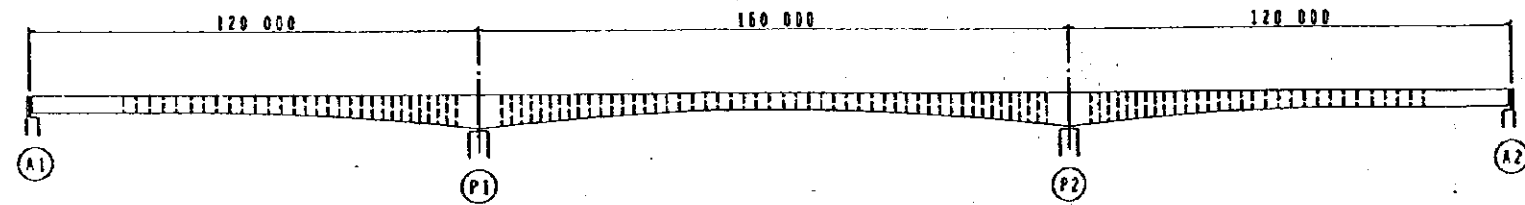
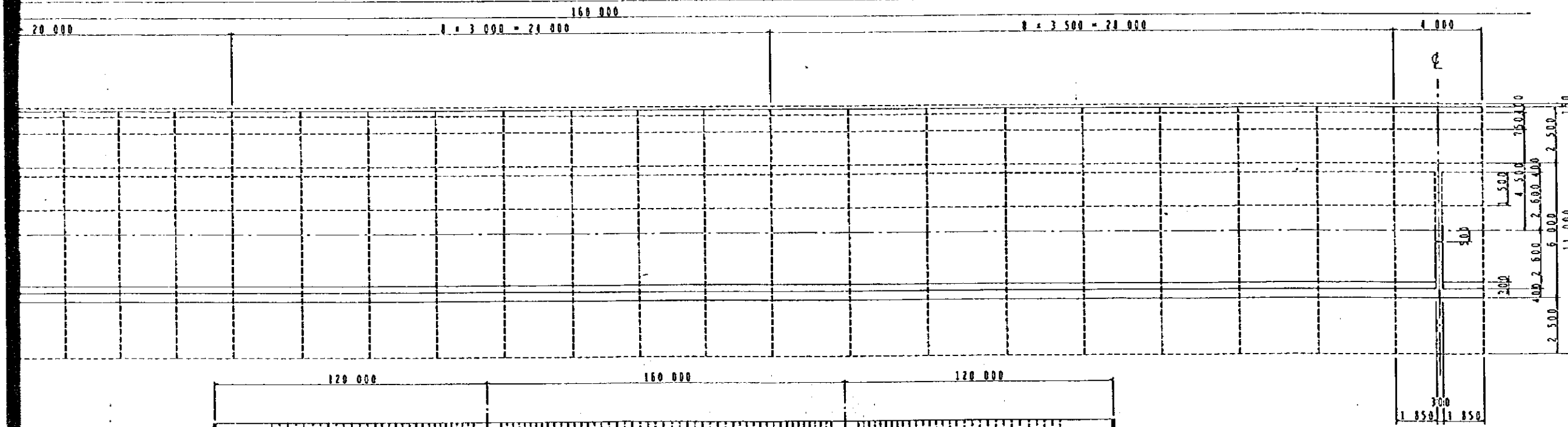
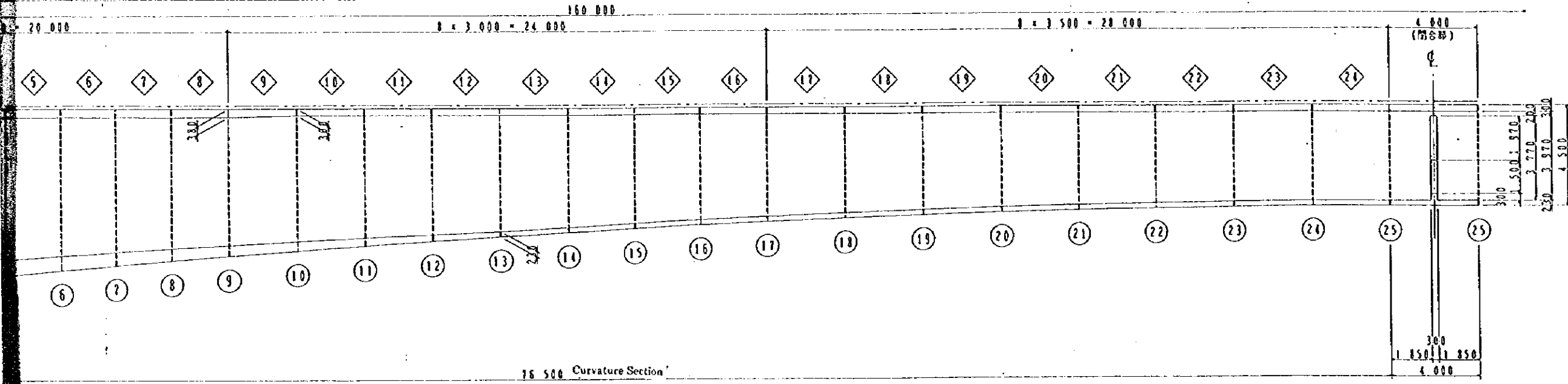
Side View S=1:100



Plan View S=1:100



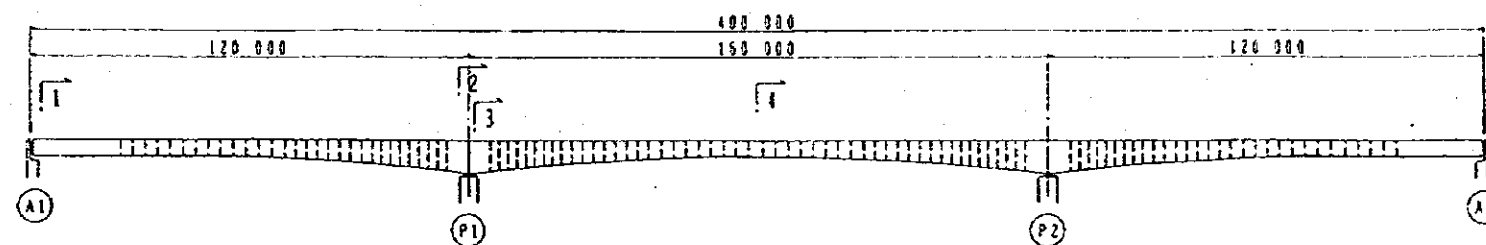
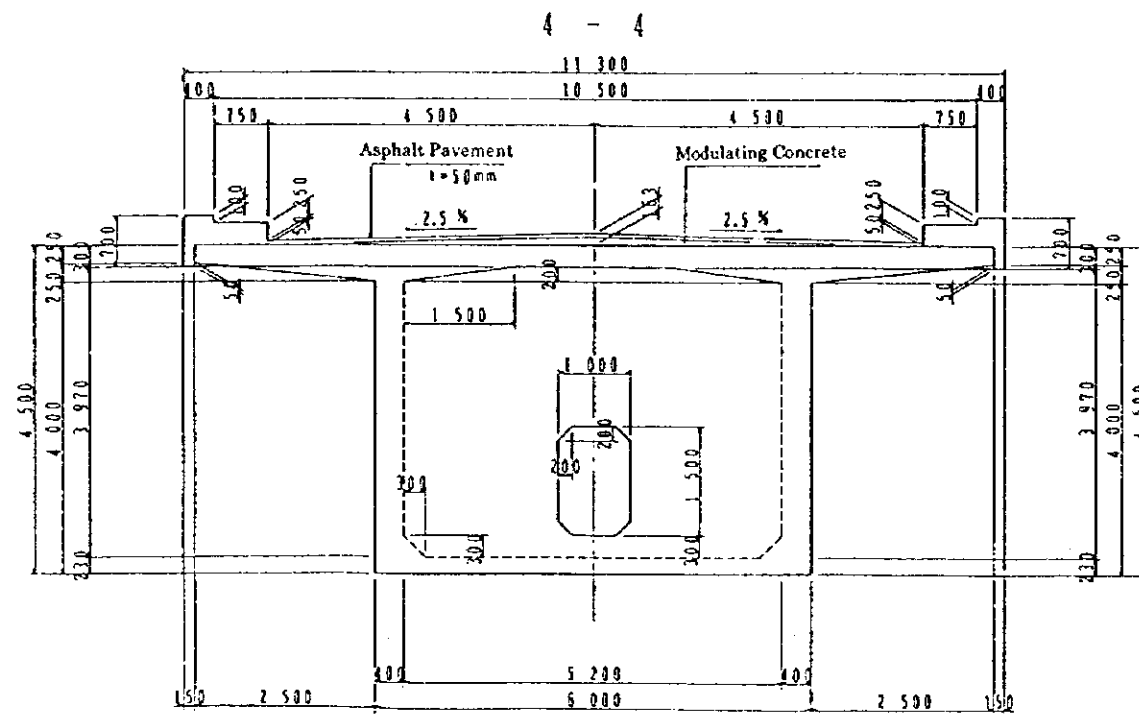
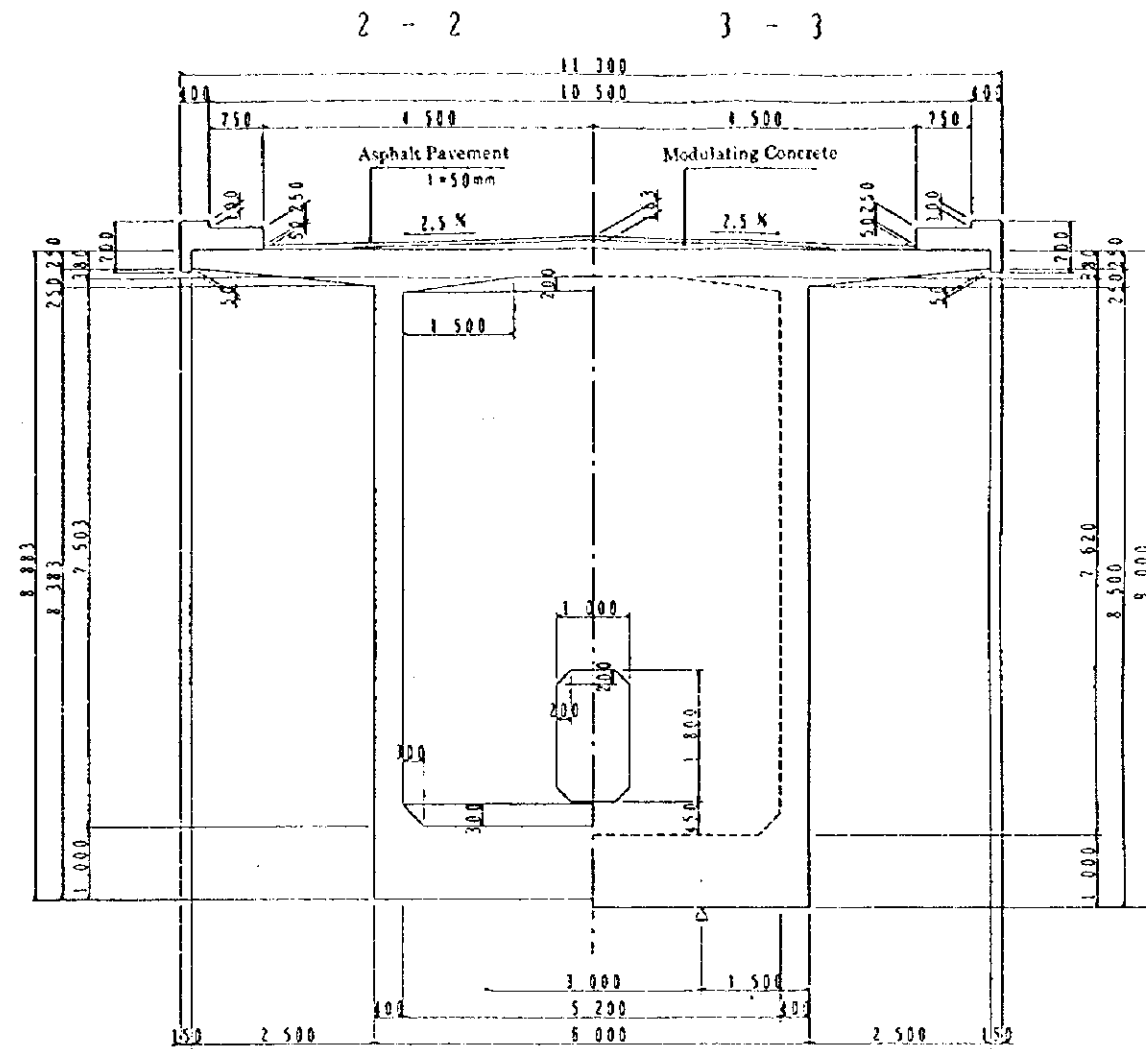
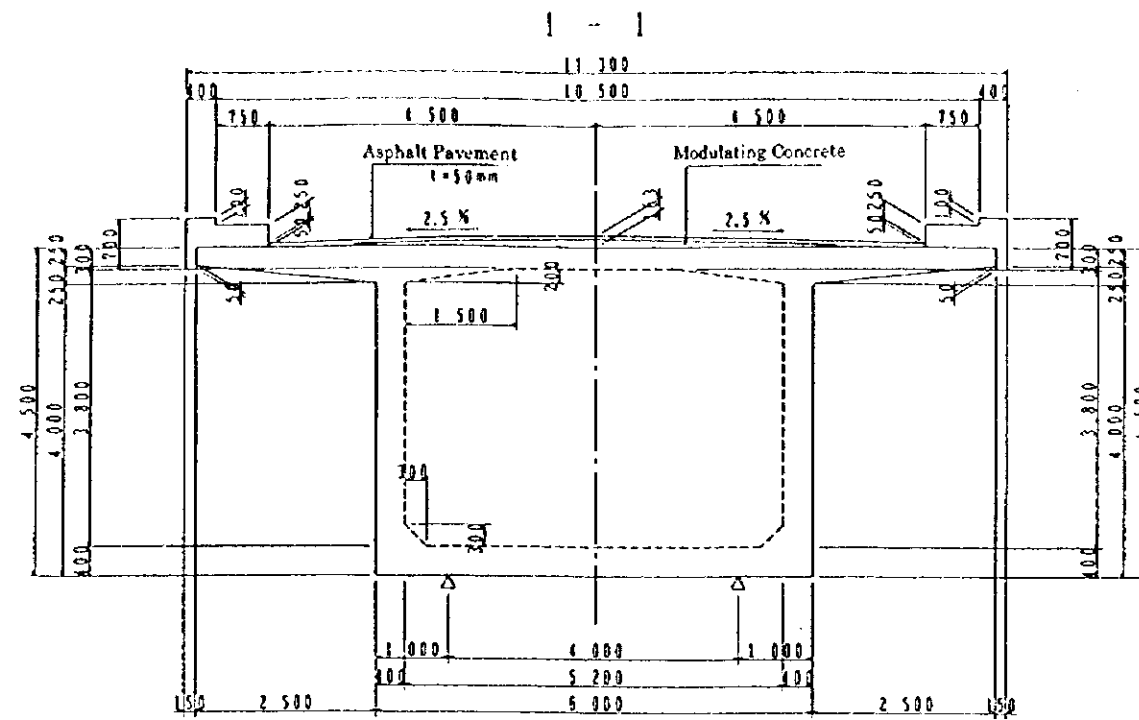
230	400	300	4 585
230	400	300	4 651
230	400	300	4 735
230	400	300	4 839
230	400	300	4 962
230	400	300	5 103
230	400	300	5 239
230	400	300	5 389
230	400	300	5 553
230	400	300	5 730
235	400	300	5 922
360	400	300	6 127
425	400	300	6 346
490	400	300	6 579
545	400	300	6 784
599	400	300	6 998
653	400	300	7 222
707	400	300	7 456
761	400	300	7 699
816	400	300	7 952
870	400	300	8 214
924	400	300	8 486
1000	400	300	8 823
1000	400	300	9 000
1000	400	300	8 823
924	400	300	8 486
870	400	300	8 214
816	400	300	7 952
761	400	300	7 699



653	400	380	7 222
599	400	380	6 998
545	400	380	6 784
490	400	380	6 579
425	400	300	6 346
360	400	300	6 127
295	400	300	5 922
230	400	300	5 730
230	400	300	5 553
230	400	300	5 389
230	400	300	5 239
230	400	300	5 103
230	400	300	4 982
230	400	300	4 839
230	400	300	4 735
230	400	300	4 651
230	400	300	4 585
230	400	300	4 538
230	400	300	4 509
230	400	300	4 500

SUPERSTRUCTURAL PLAN 2

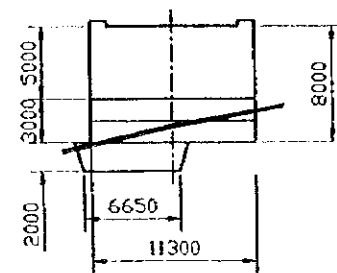
Section View S-1:50



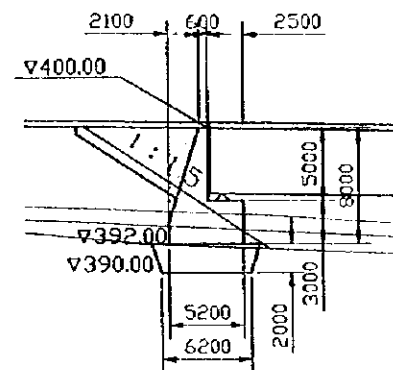
(1:500)

A1

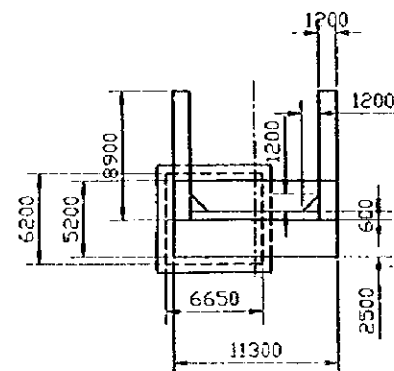
FRONT VIEW



SIDE VIEW

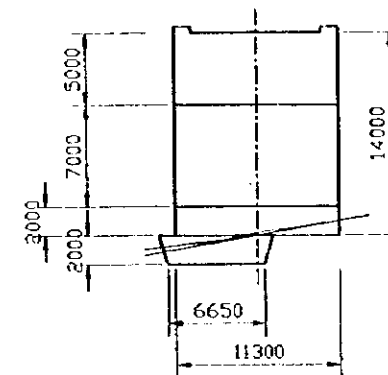


PLAN VIEW

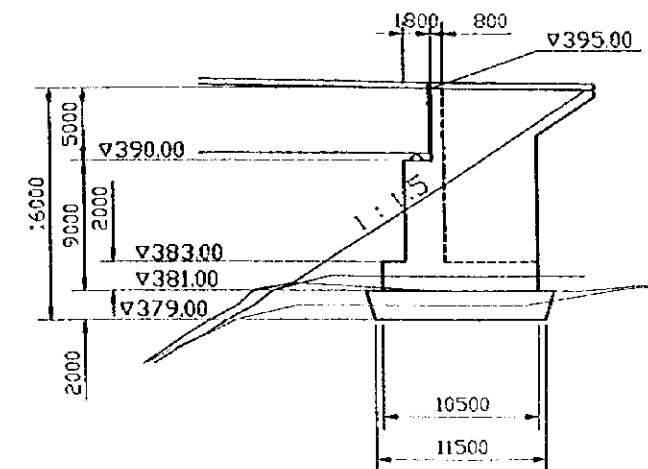


A2

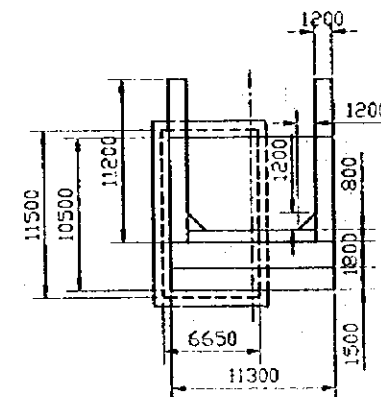
FRONT VIEW



SIDE VIEW



PLAN VIEW



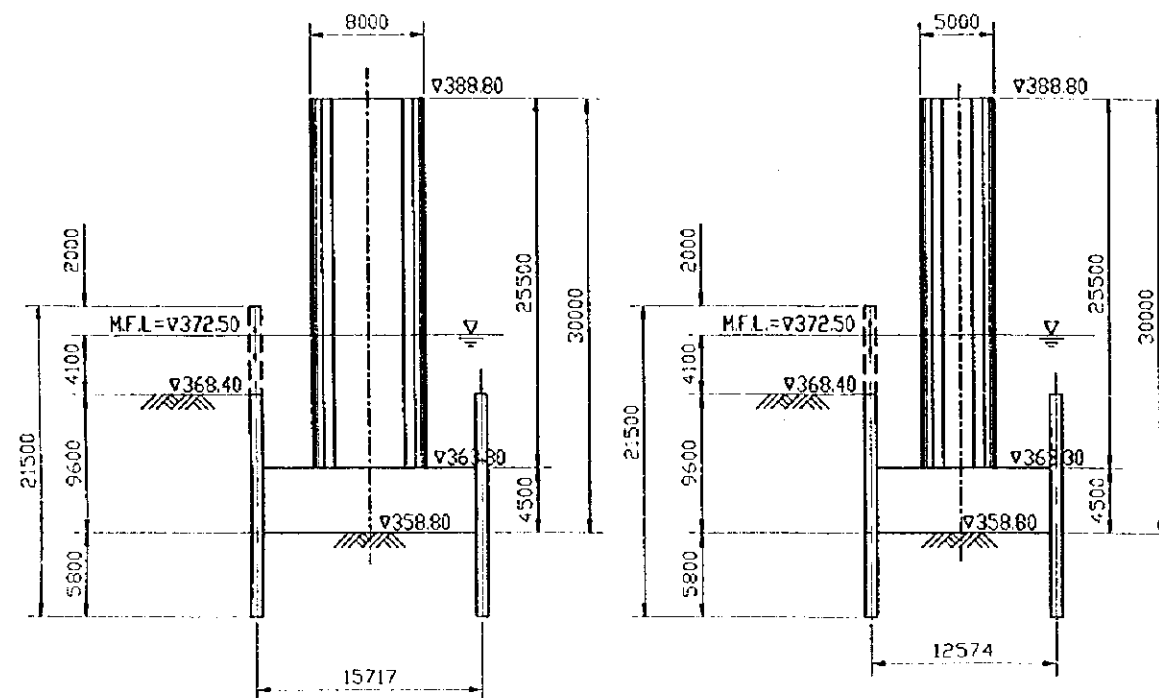
SUBSTRUCTURAL PLAN 2

(1:500)

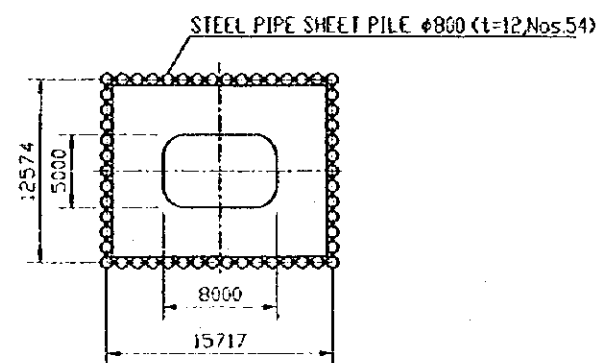
P1

FRONT VIEW

SIDE VIEW



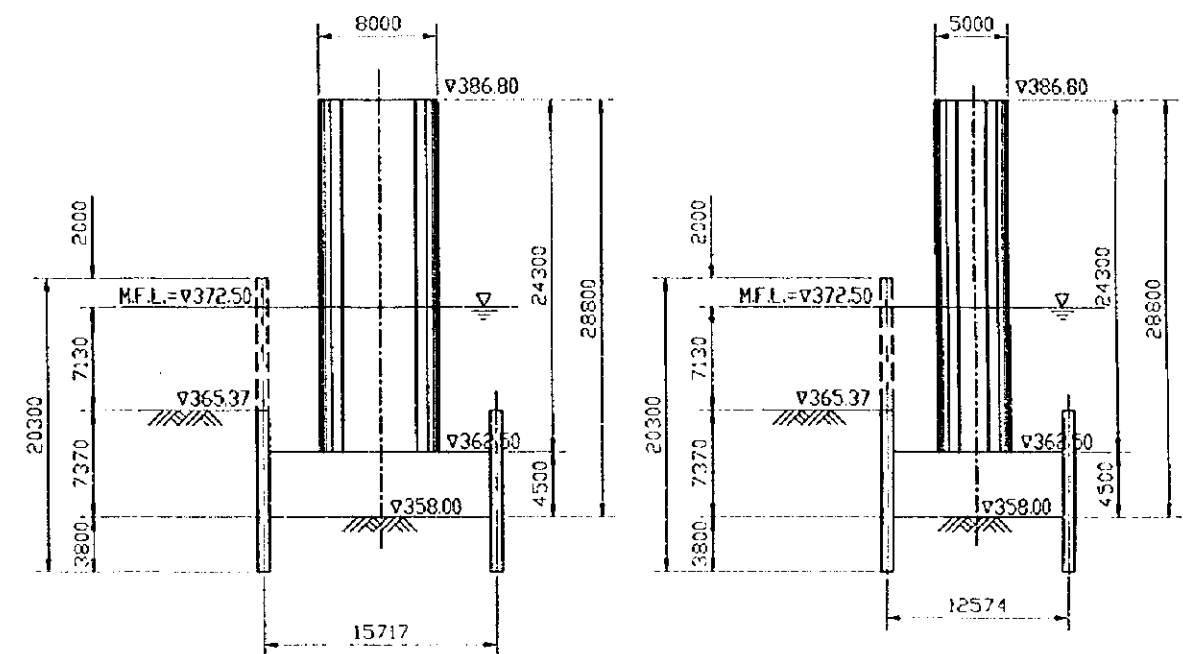
PLANE VIEW



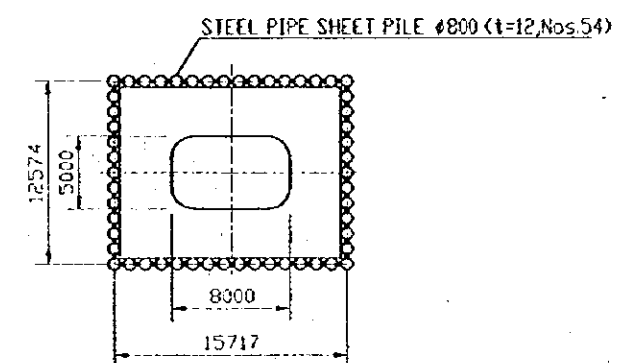
P2

FRONT VIEW

SIDE VIEW

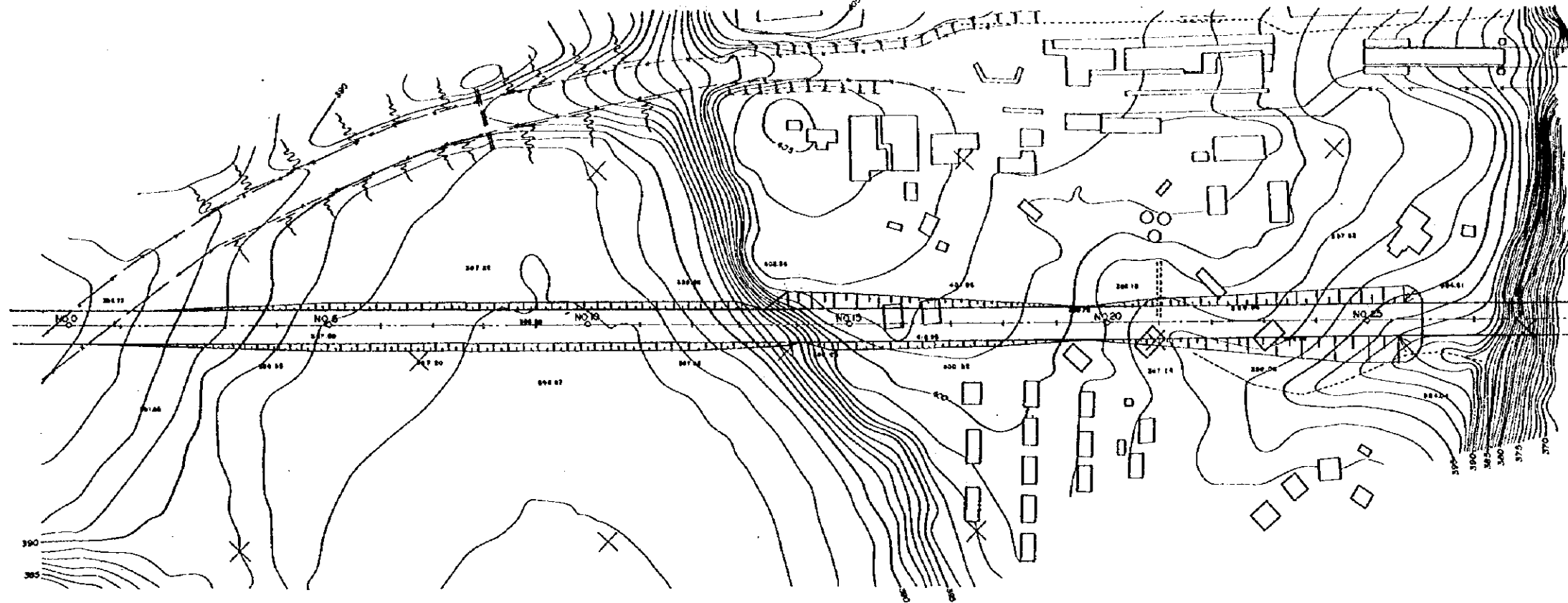


PLANE VIEW

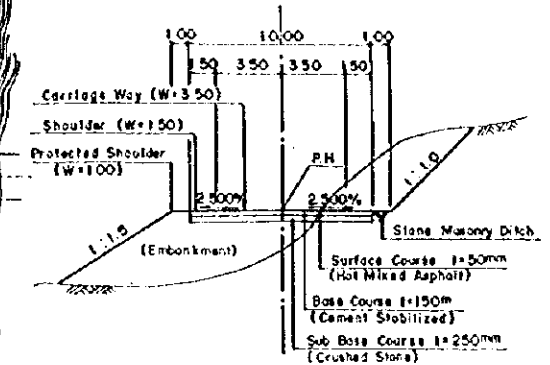


ROAD PLAN AND PROFILE 1 (ZAMBIA SIDE)

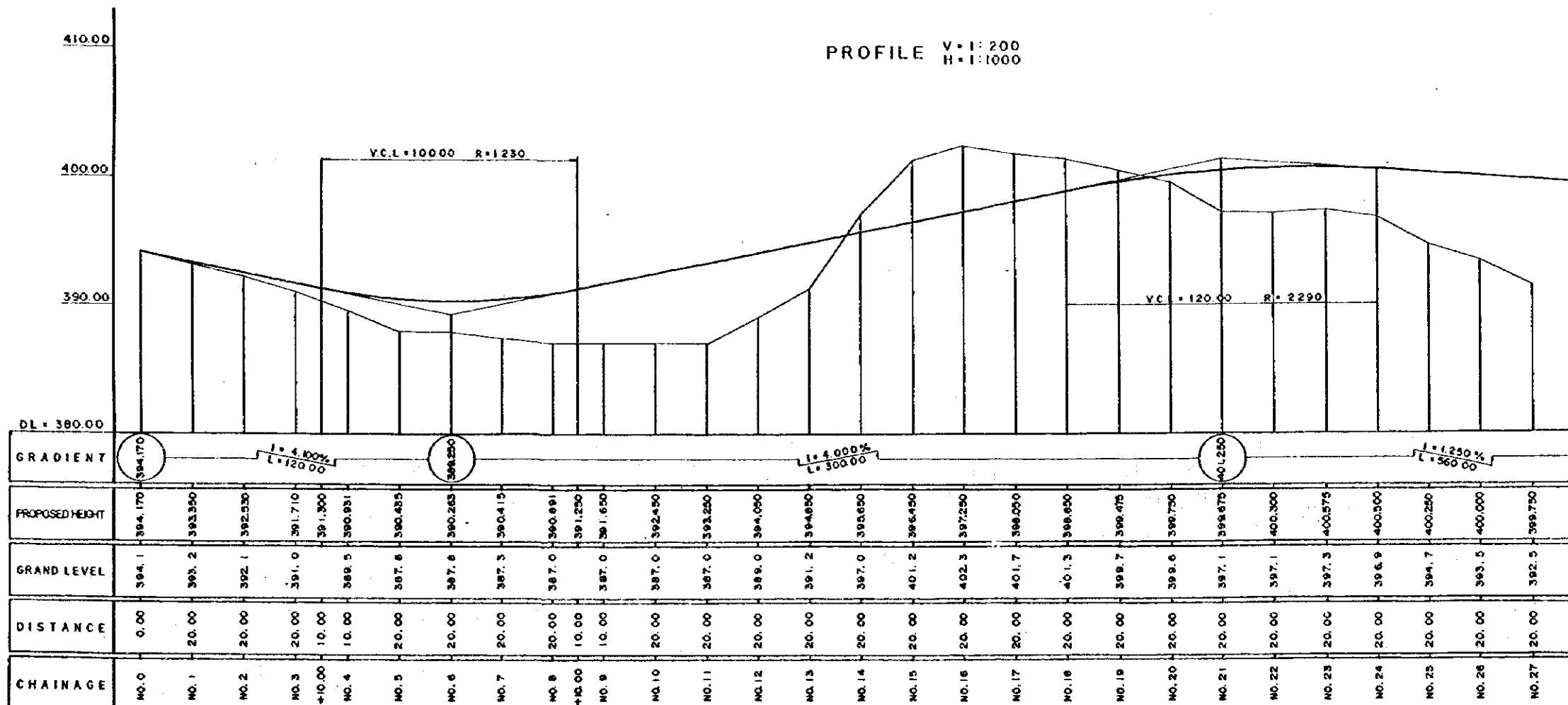
PLAN S=1:1000



TYPICAL CROSS SECTION S=1:200

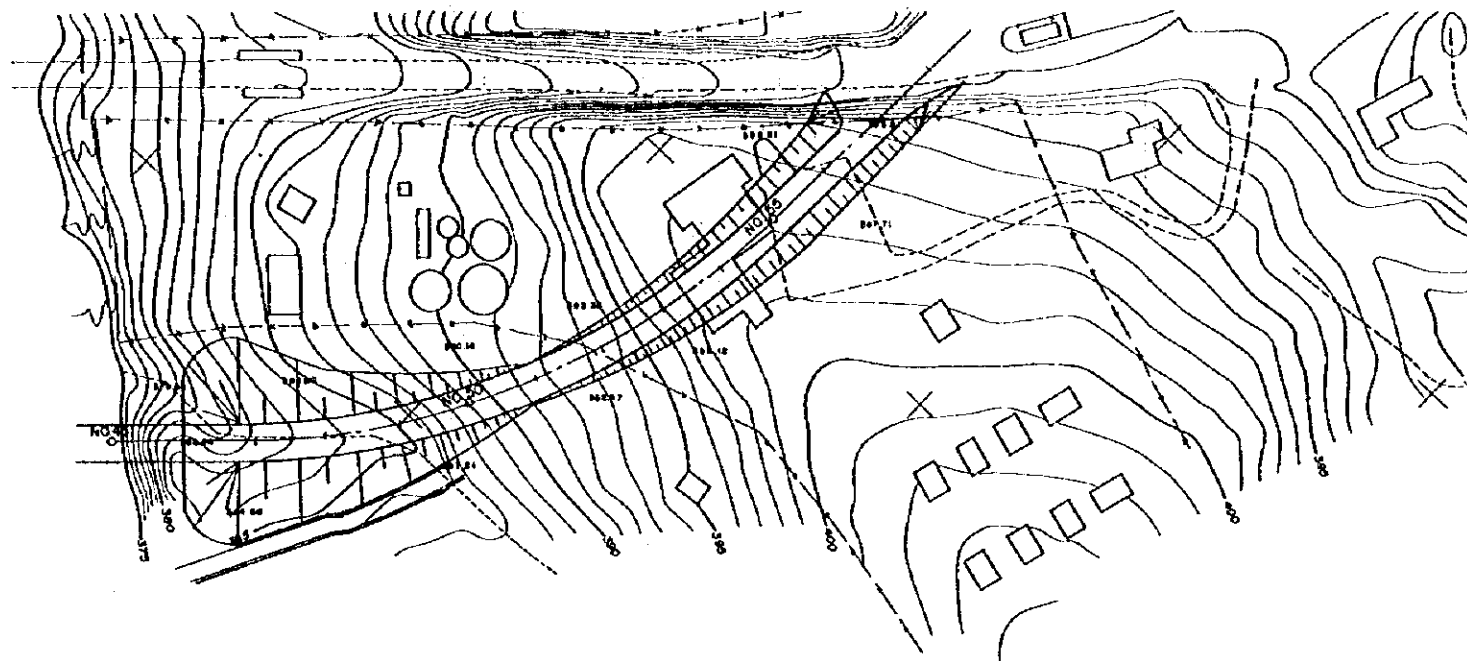


PROFILE V=1:200
H=1:1000

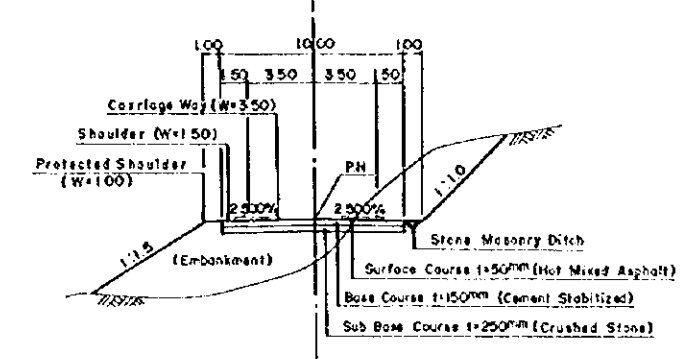


ROAD PLAN AND PROFILE 2 (ZIMBABWE SIDE)

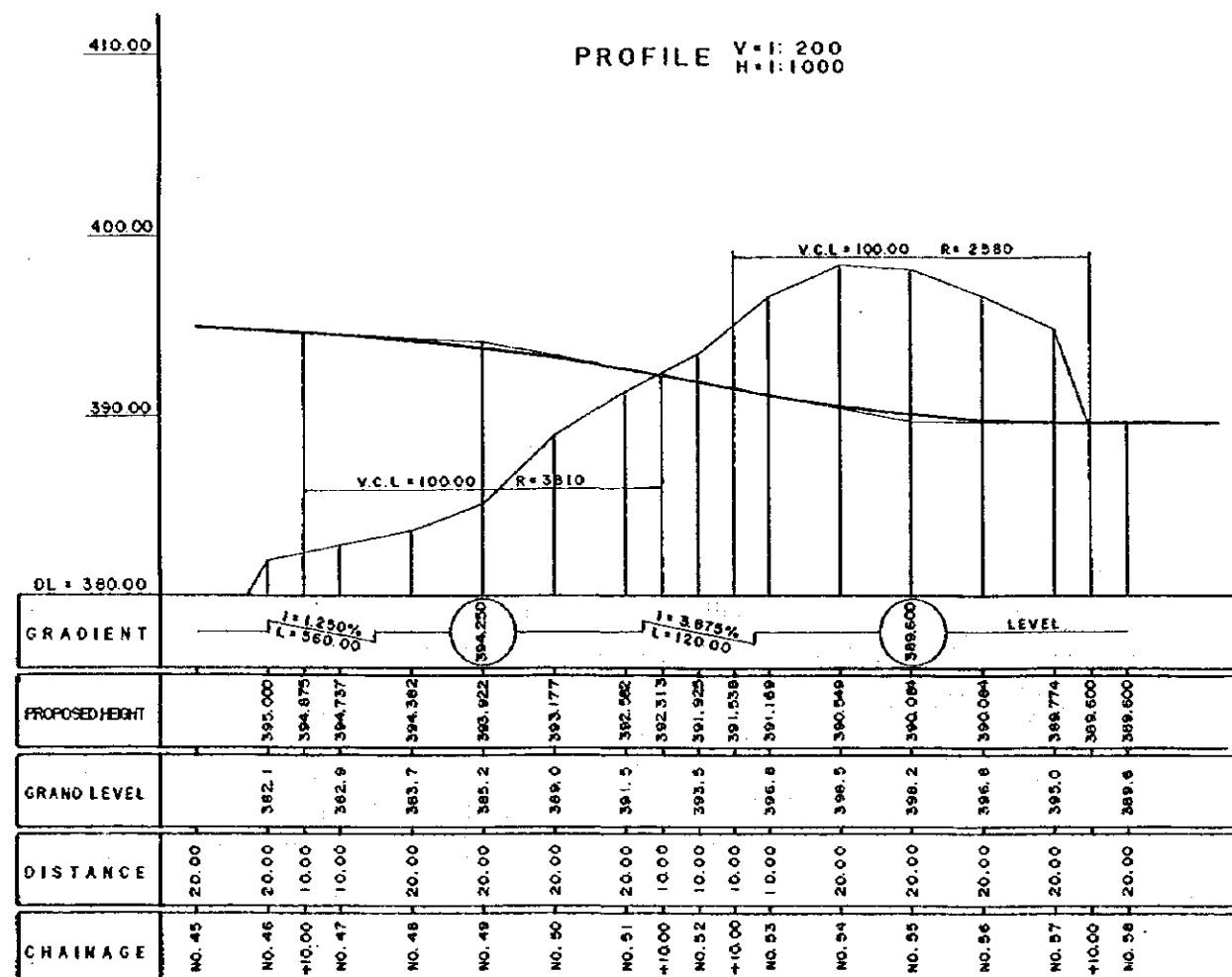
PLAN S=1:1000



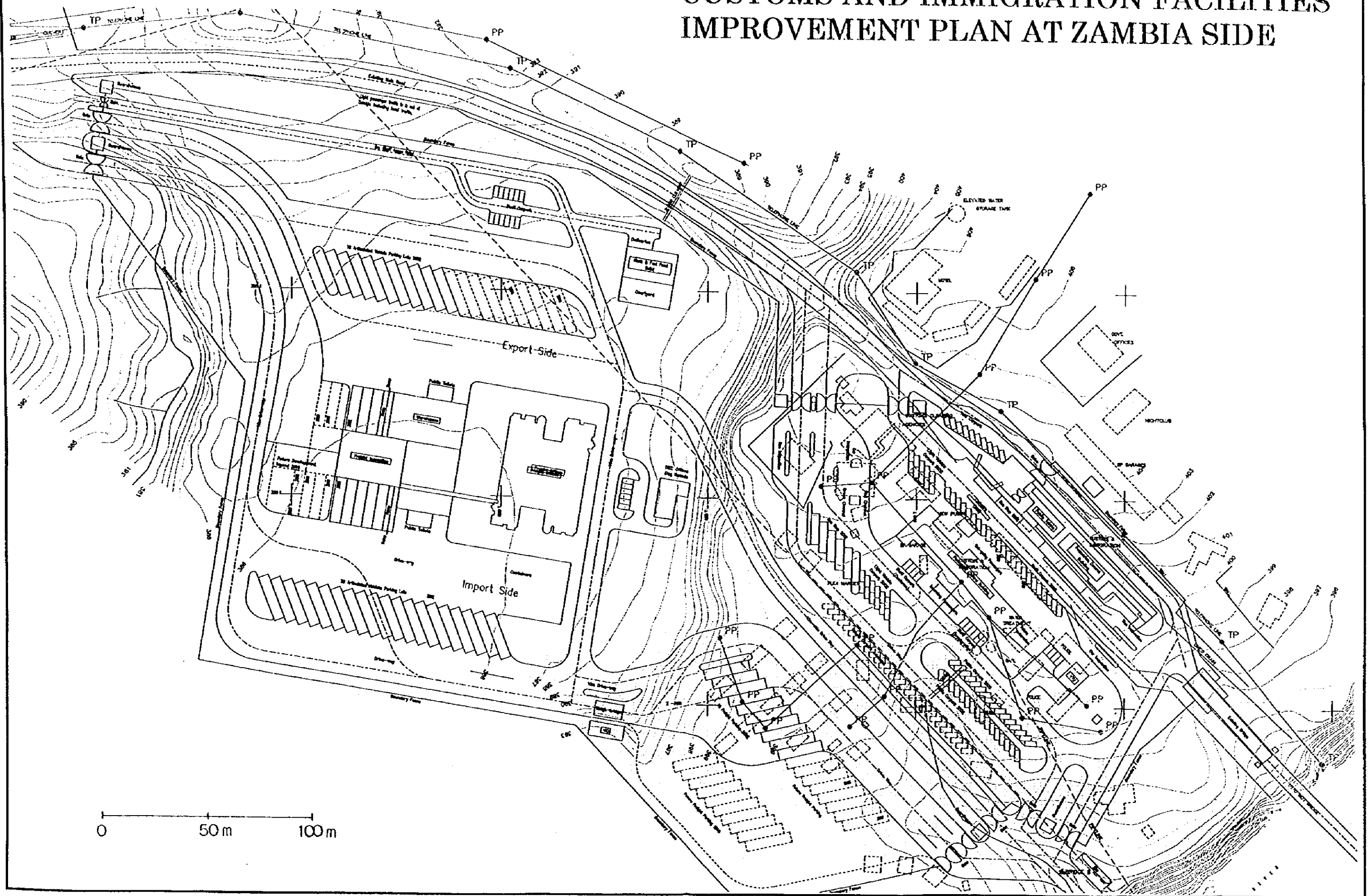
TYPICAL CROSS SECTION S=1:200



PROFILE V=1:200
H=1:1000

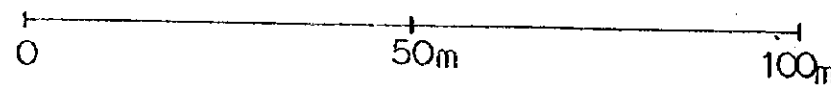


CUSTOMS AND IMMIGRATION FACILITIES IMPROVEMENT PLAN AT ZAMBIA SIDE

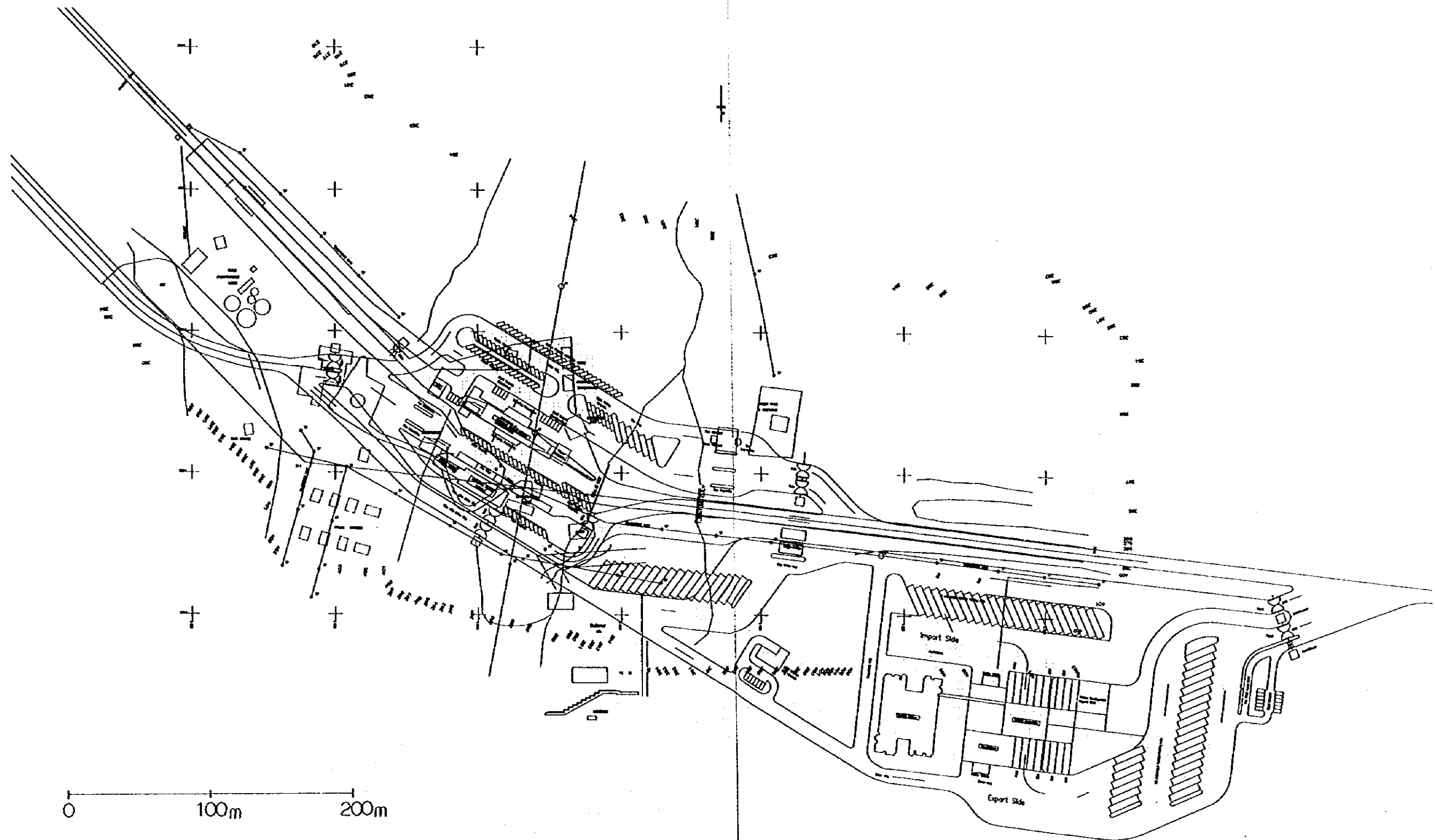


The site plan illustrates the layout of the Port of Mombasa, divided into an Import Side and an Export Side. The plan includes the following features:

- Import Side:**
 - 20 Articulated Vehicle Parking Lots (2002)
 - Freight Inspection area with multiple ramps
 - Warehouse
 - Public Toilets
 - Containers
 - Drive-way
- Export Side:**
 - 10 Articulated Vehicle Parking Lots (2002)
 - Freight Offices
 - Public Toilets
- General Features:**
 - Boundary Fence
 - 10m Drive-way
 - Future Development beyond 2010
 - Scale: 50m, 100m
 - Topographic contours (e.g., 381, 386, 387, 388, 389, 390, 393)
 - Other structures: DEC Off, Dog Ken, Wash-bridge, VAD



CUSTOMS AND IMMIGRATION FACILITIES IMPROVEMENT PLAN AT ZIMBABWE SIDE



LAYOUT OF BORDER FACILITIES ZIMBABWE SIDE 1

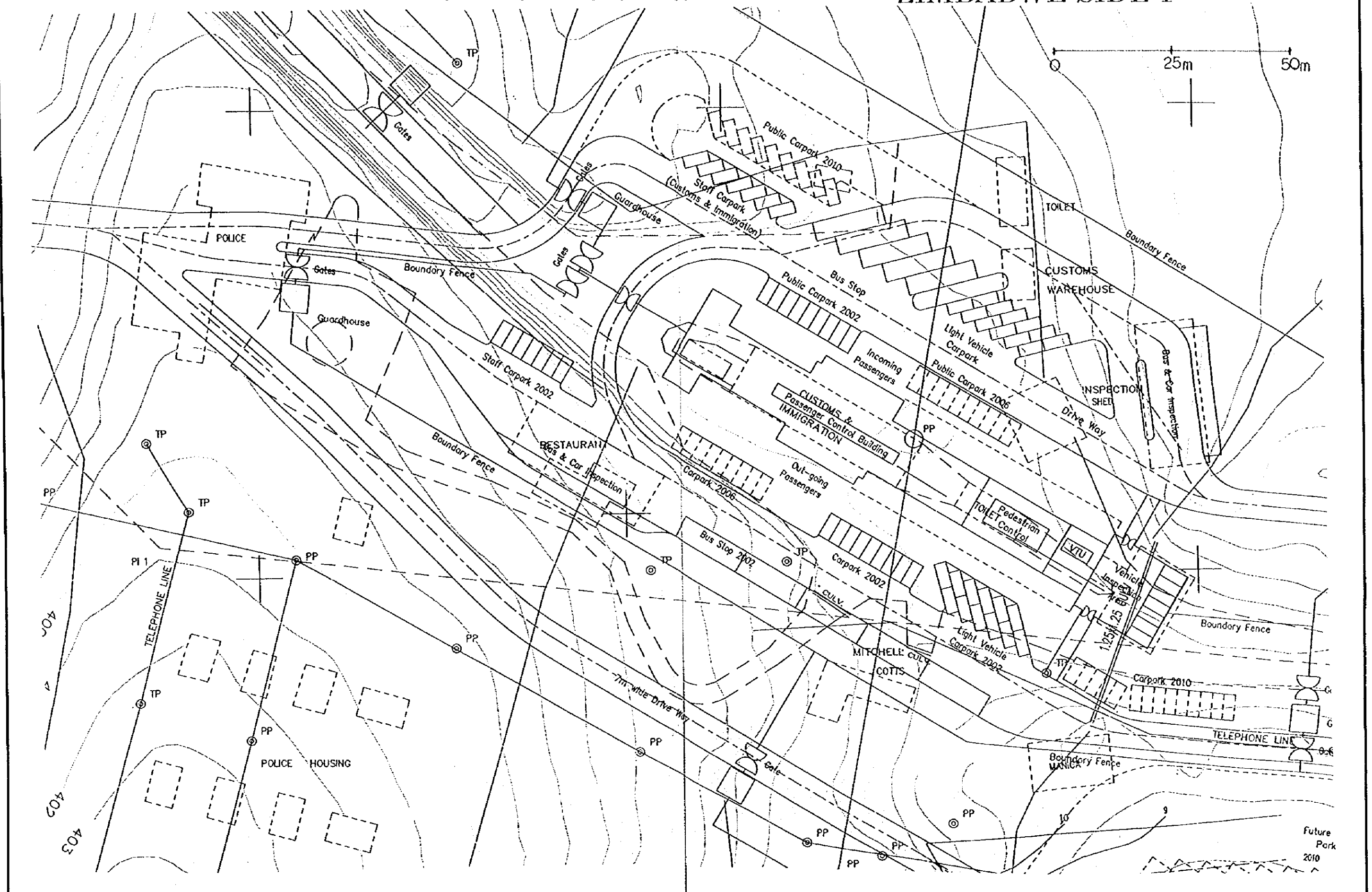
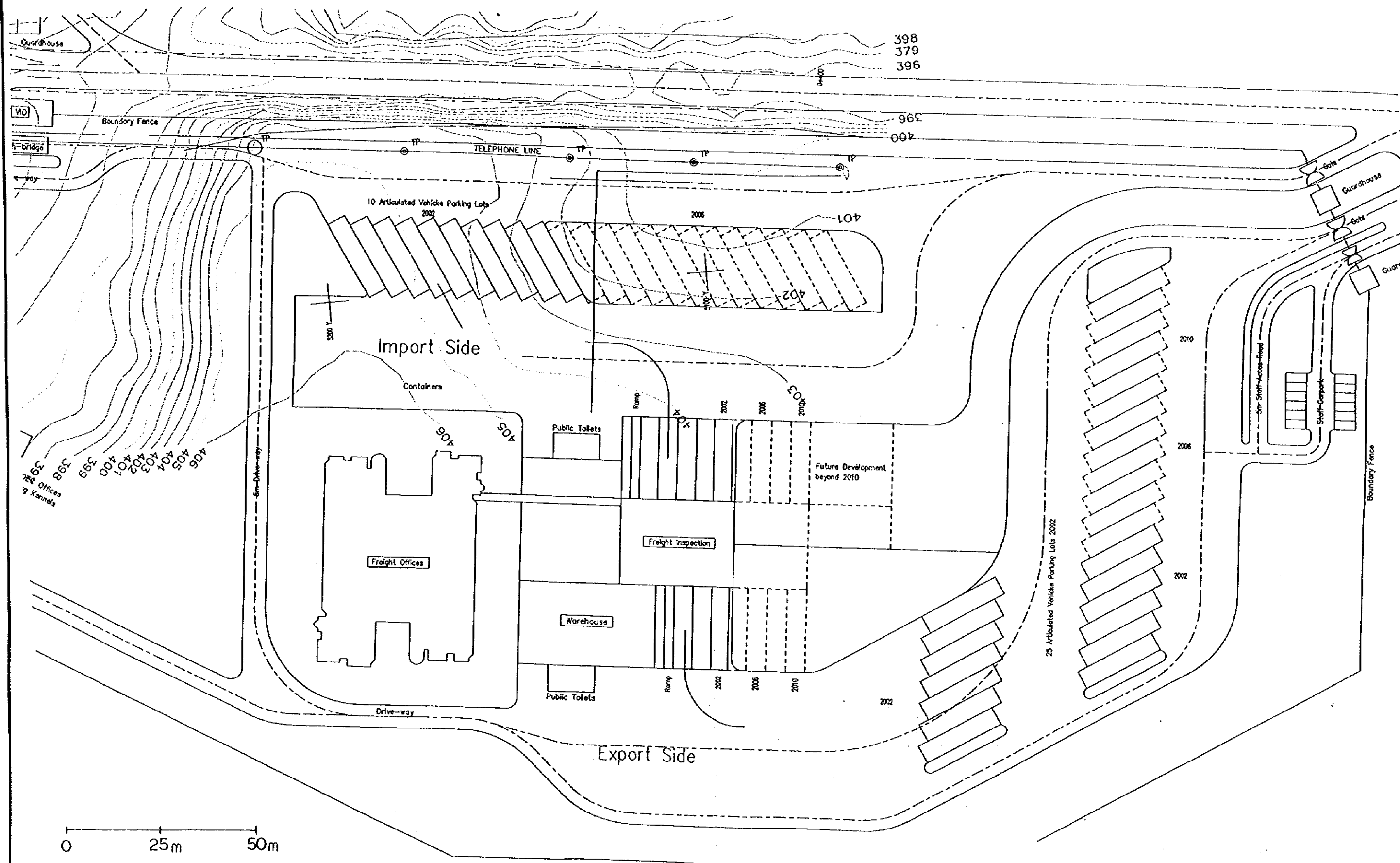


EXHIBIT 1 - SITE PLAN

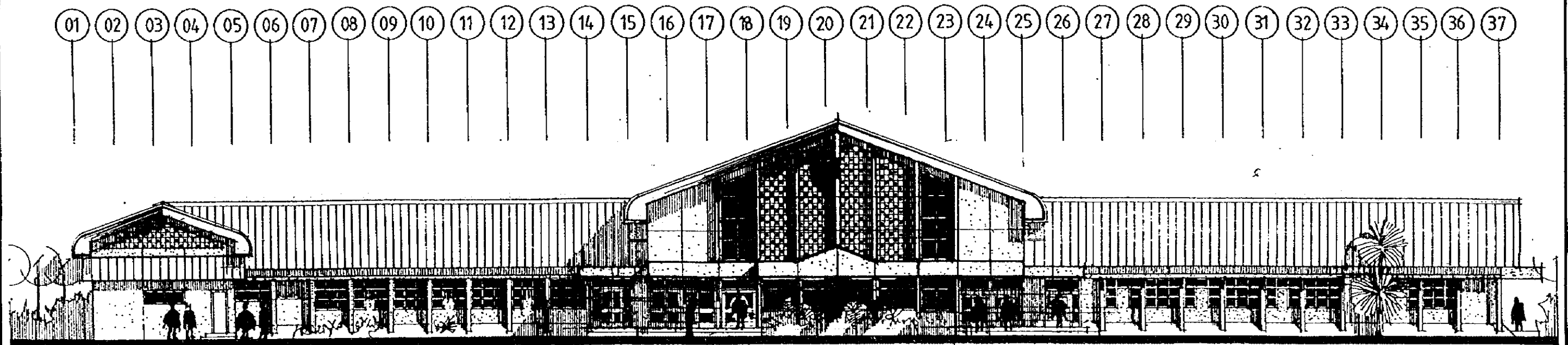
The map shows a complex layout of a site with various functional areas. Key features include:

- Parking Areas:** Carpark 2002, Carpark 2010, Future Freight Parking 2010, Taxi Carpark 2002, Flight Vehicle Carpark 2002.
- Infrastructure:** Boundary Fence, Gate, Guardhouse, Weigh-bridge, 6m Drive-way, Bus Stop 2002, Telephone Line, TP (Telephone Point).
- Buildings and Structures:** Pedestrian TOILET Control, MITCHELL COTTIS, Backmarker, Dog Kennels, BEE Offices.
- Topography:** Contour lines indicating elevation (e.g., 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406).
- Scale and Orientation:** Scale bar (0 to 50m), North arrow.

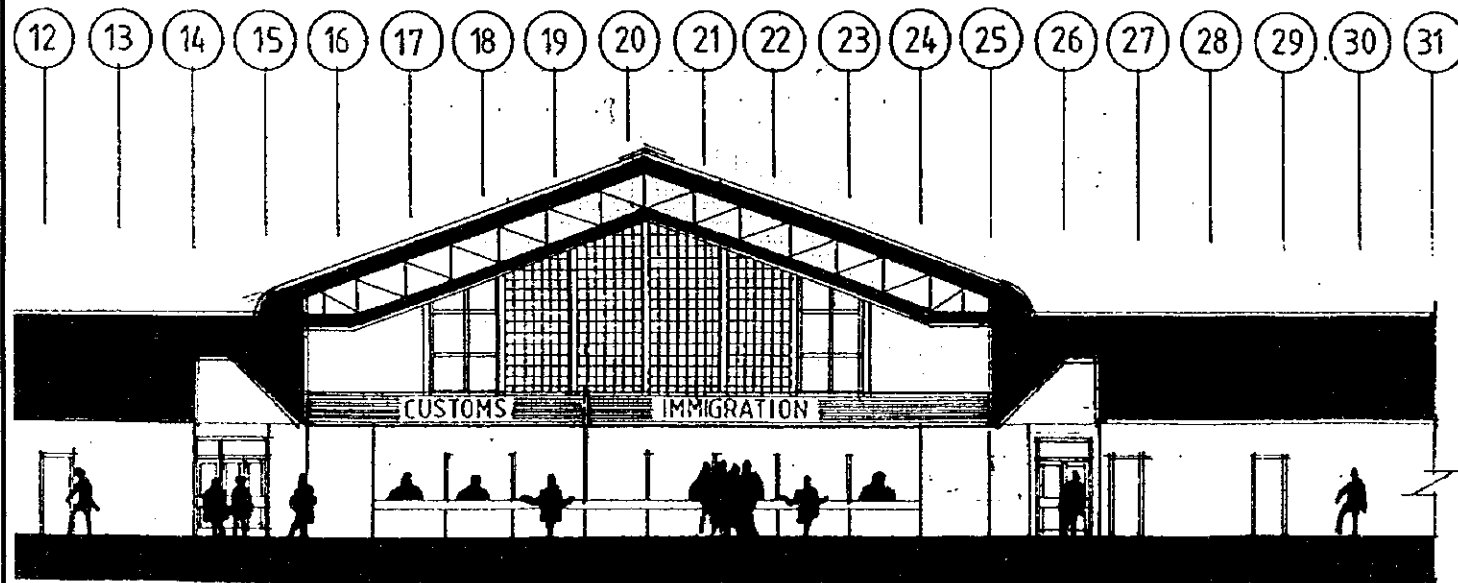
LAYOUT OF BORDER FACILITIES ZIMBABWE SIDE 3



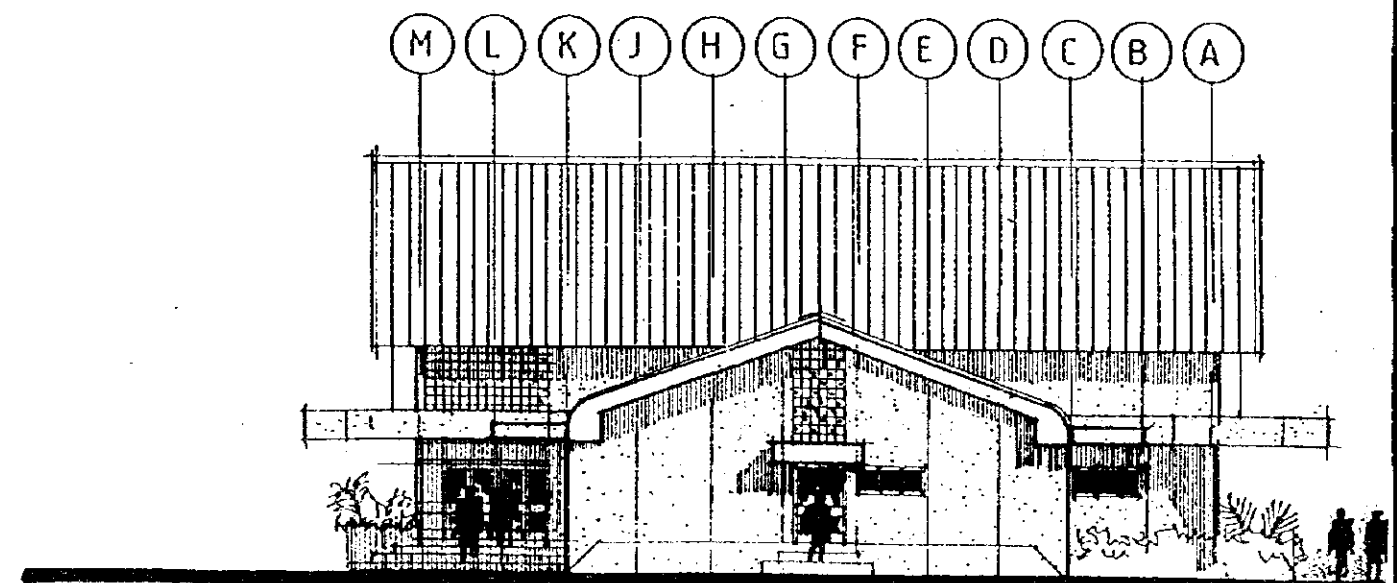
PASSENGER CONTROL BUILDING 1



MAIN ENTRANCE ELEVATION



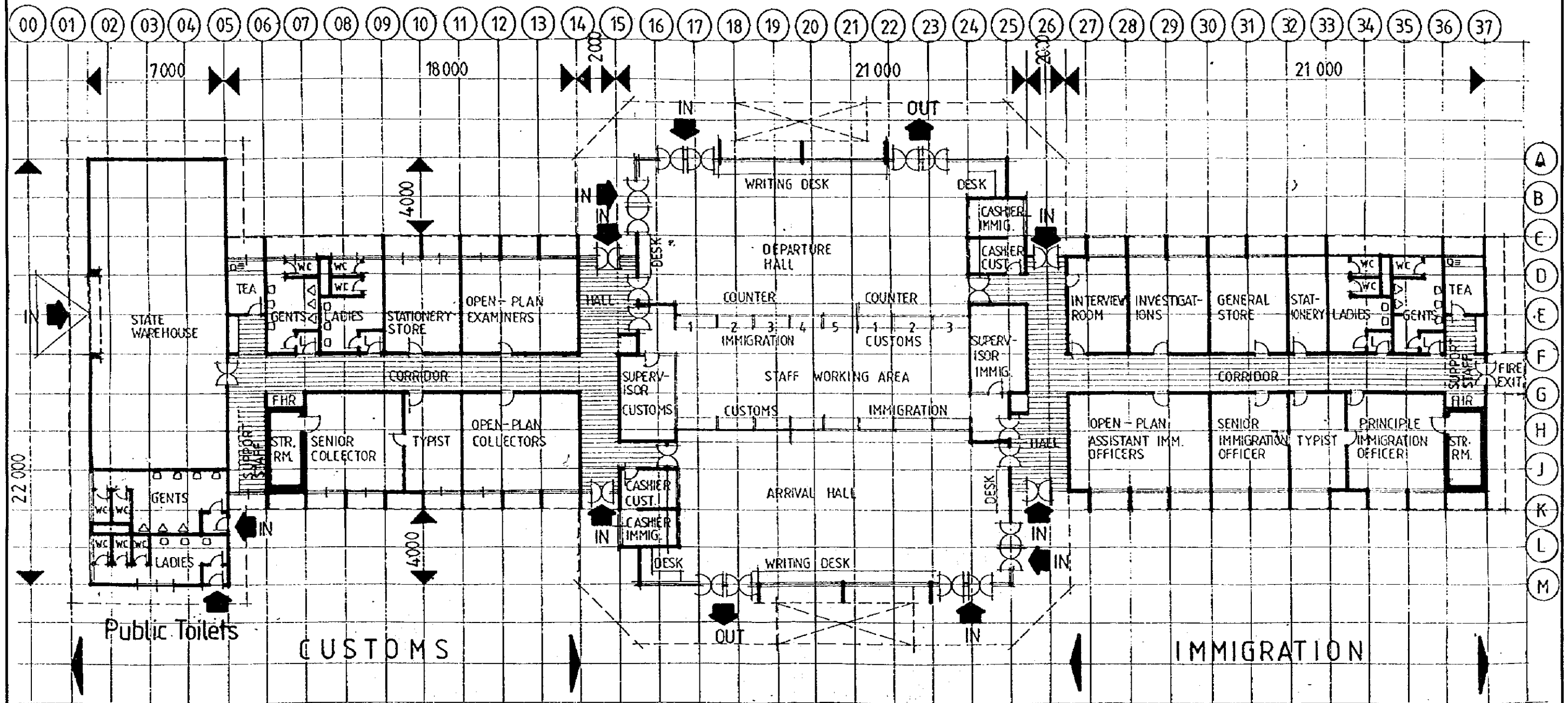
SECTION THRO ARRIVALS HALL



SIDE ELEVATION

PASSENGER CONTROL BUILDING 2

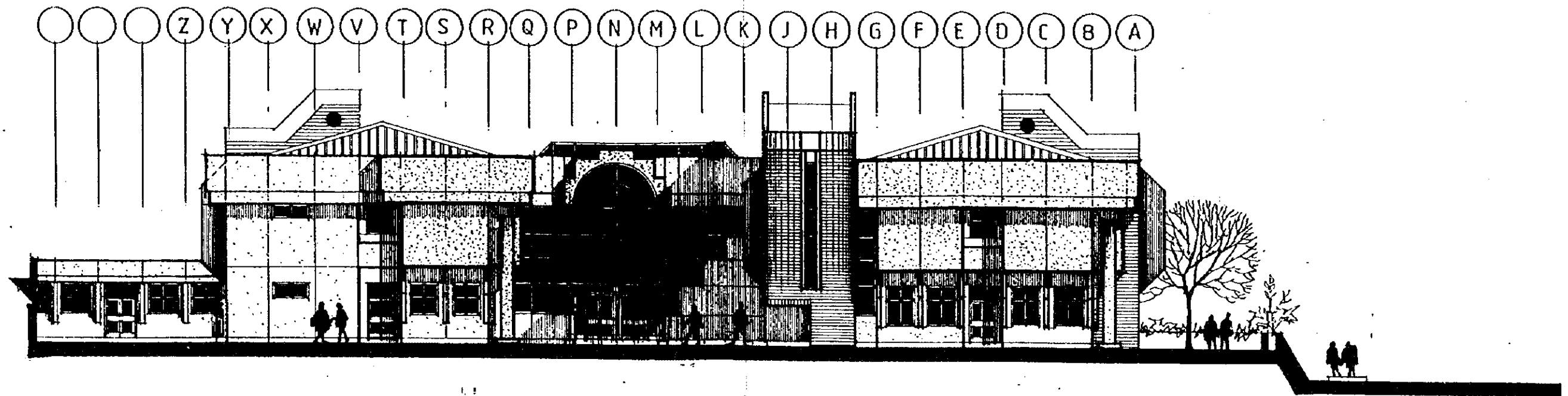
OUT - GOING
PASSENGERS



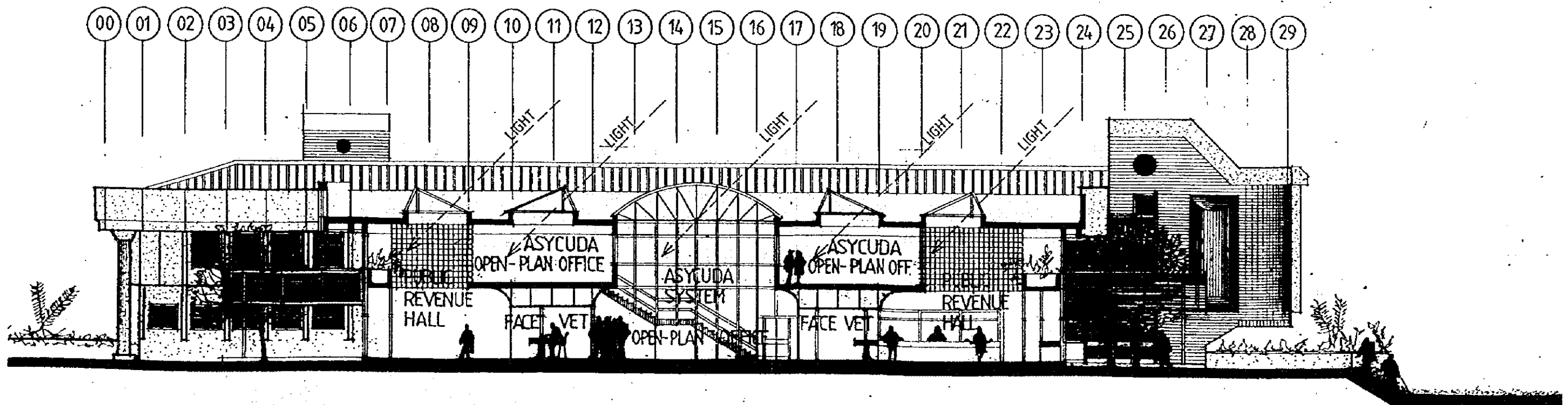
FLOOR PLAN

IN - COMING
PASSENGERS

FREIGHT TERMINAL BUILDING 1

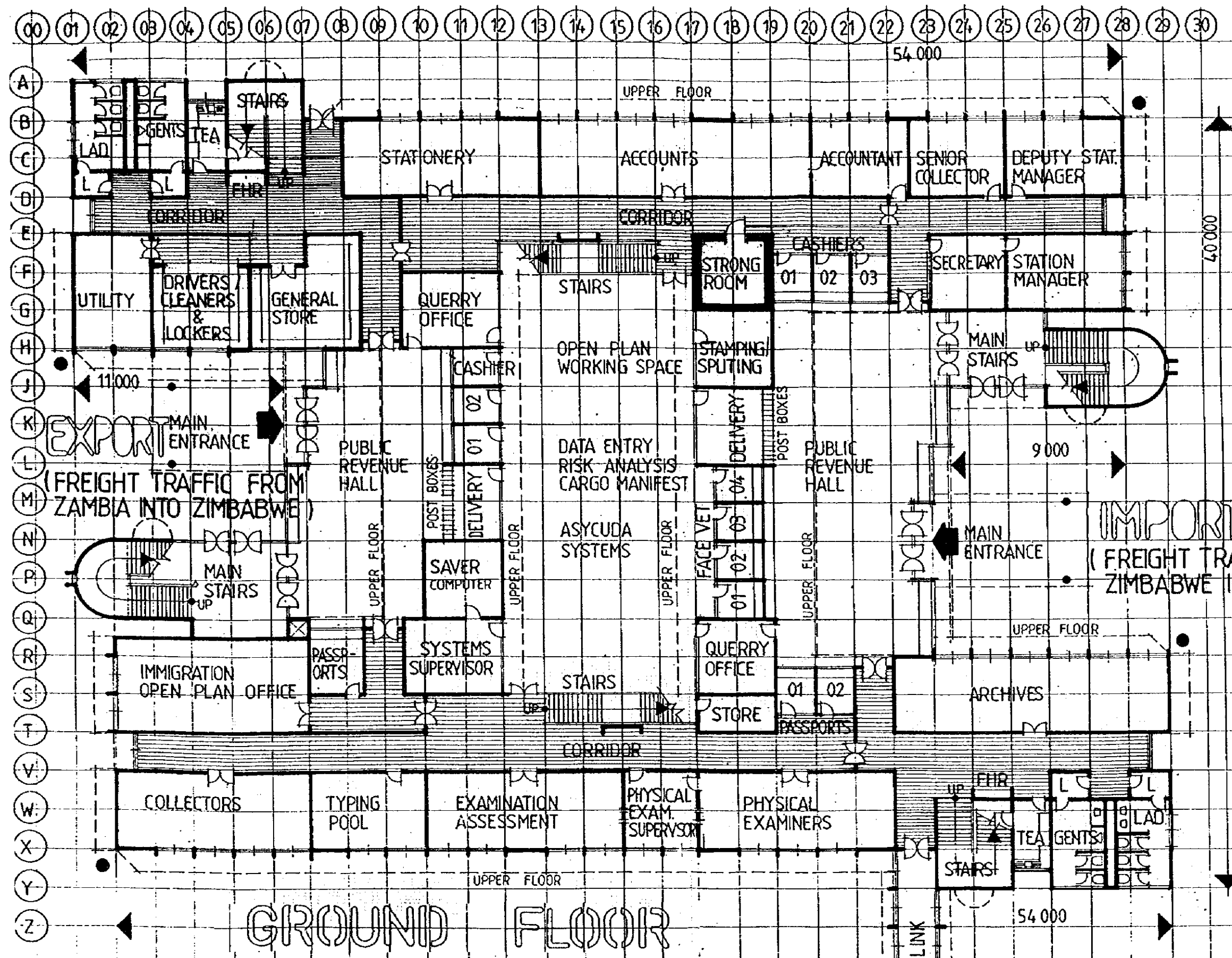


MAIN ENTRANCE ELEVATION — IMPORT SIDE
1:200



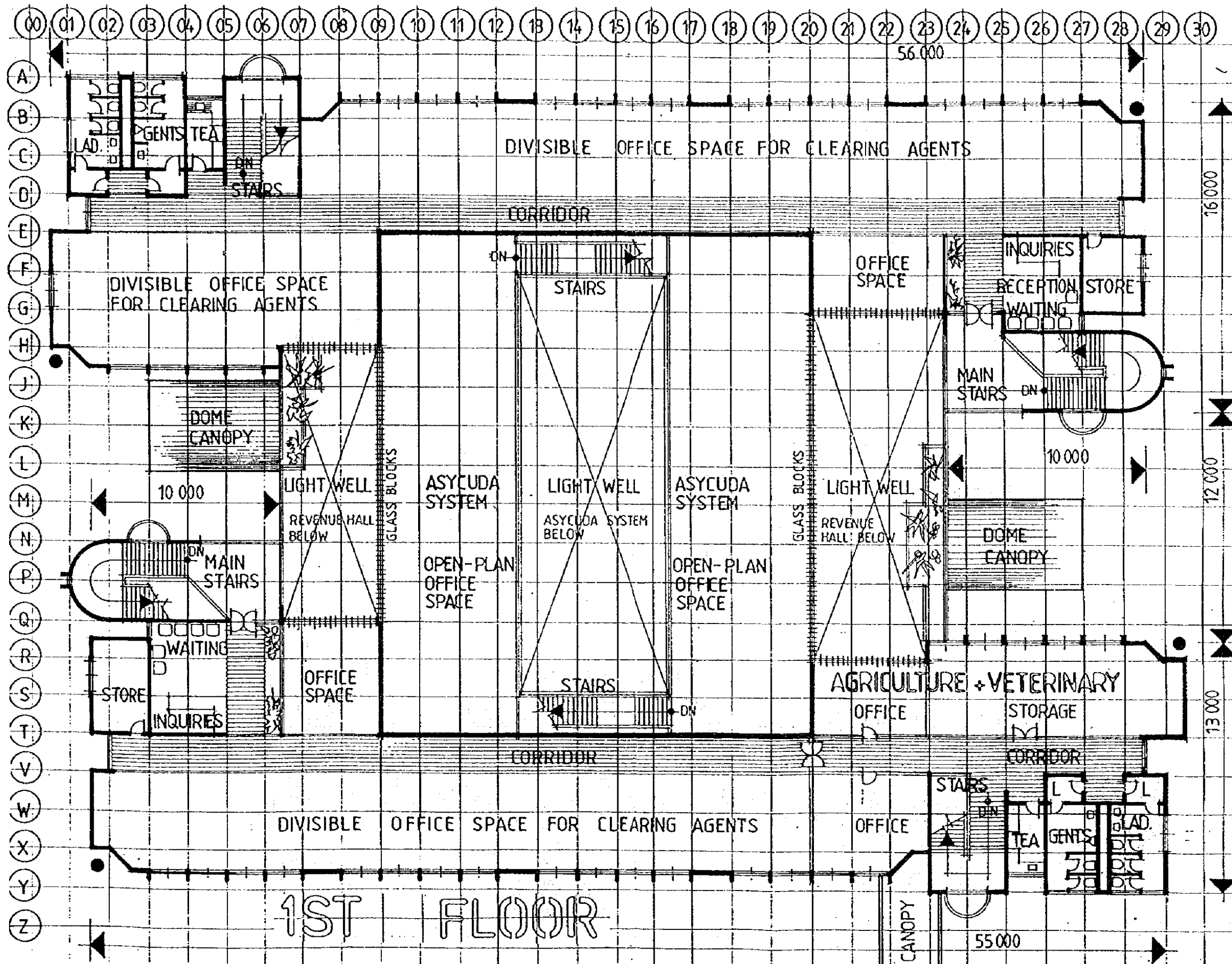
SECTION THRO ASYCUDA SYSTEM

FREIGHT TERMINAL BUILDING 2

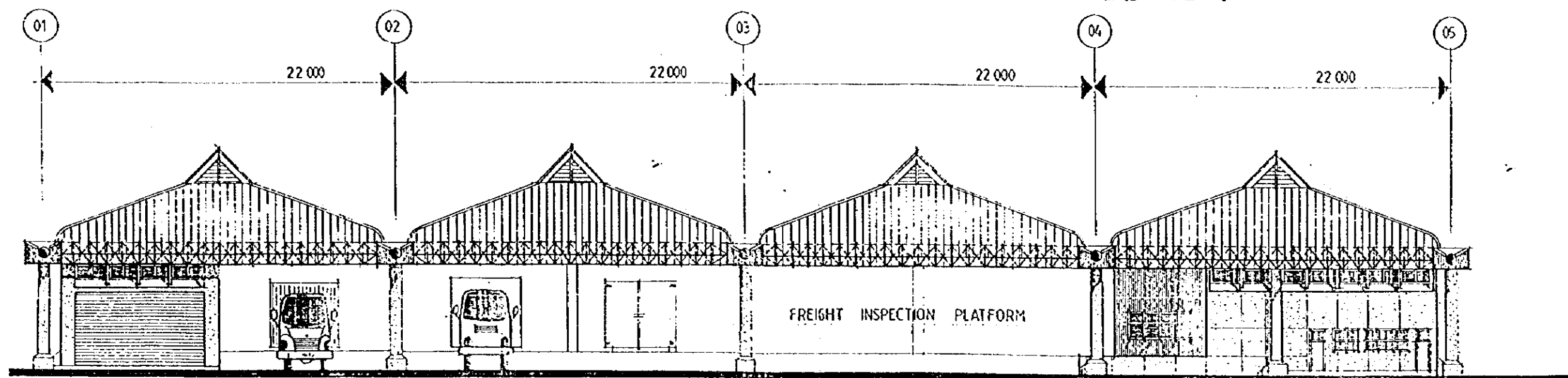


GROUND FLOOR

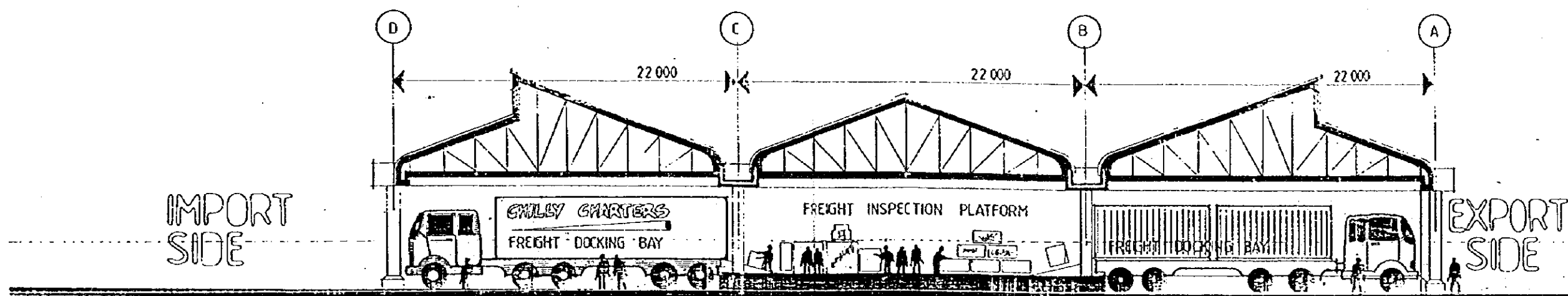
FREIGHT TERMINAL BUILDING 3



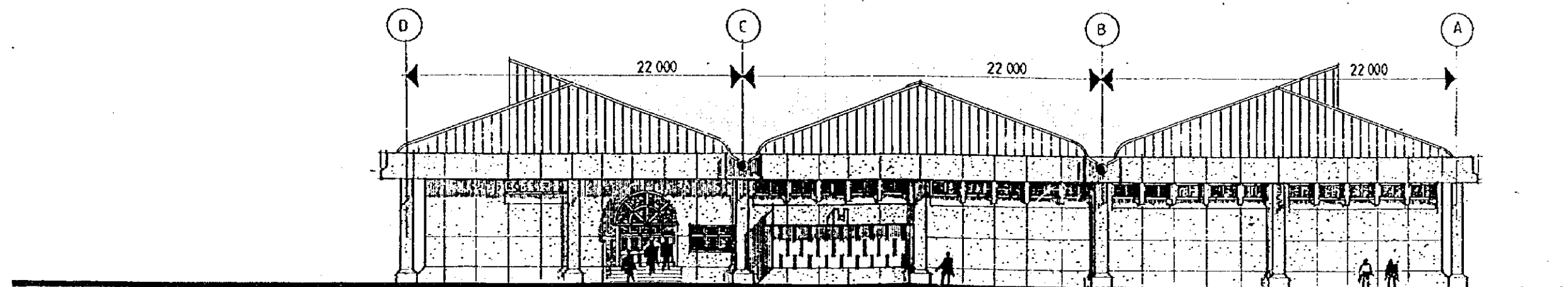
FREIGHT INSPECTION TERMINAL BUILDING 1



FRONT ELEVATION - IMPORT SIDE 1:200

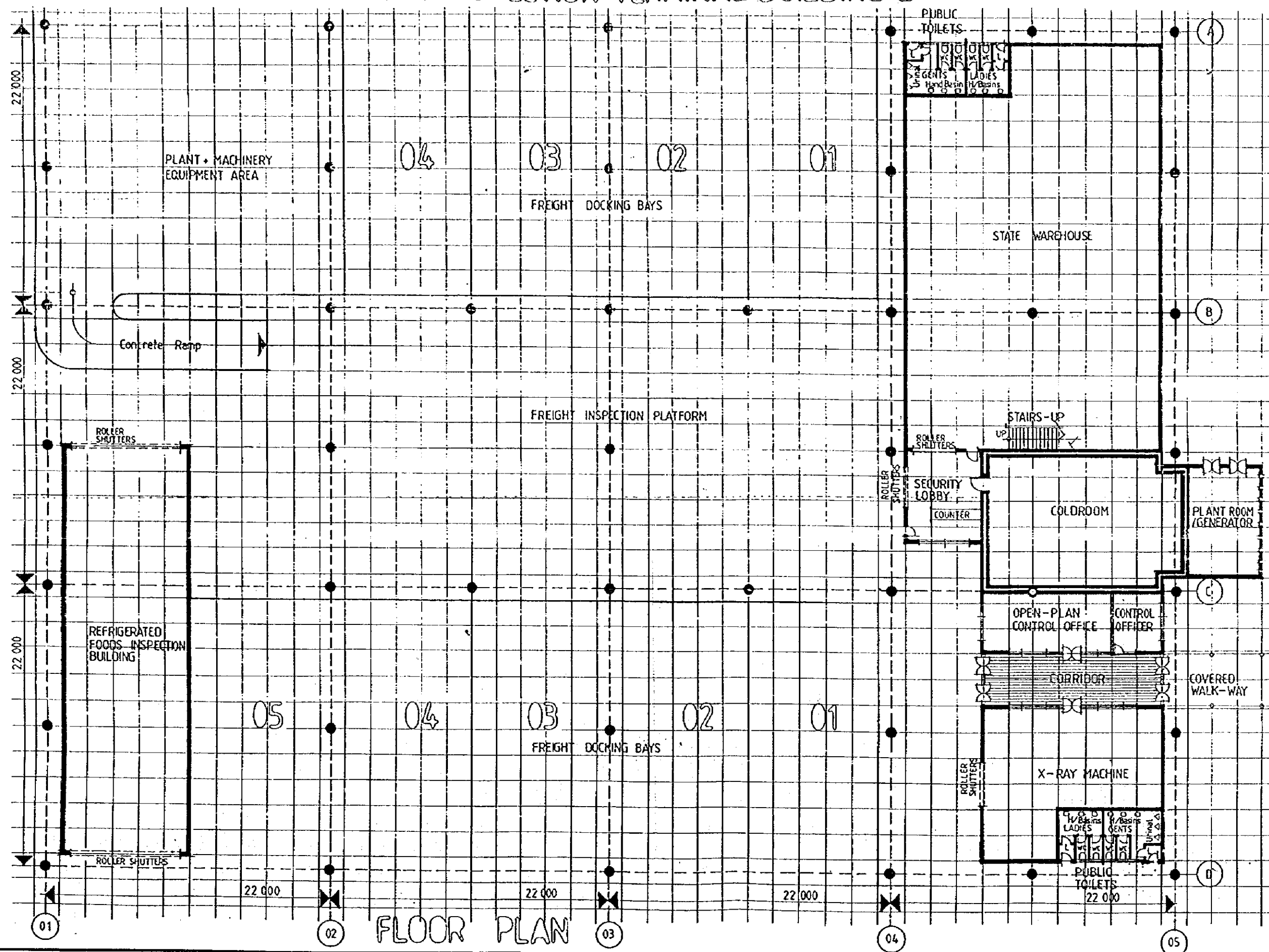


SECTION THRO INSPECTION PLATFORM 1:200

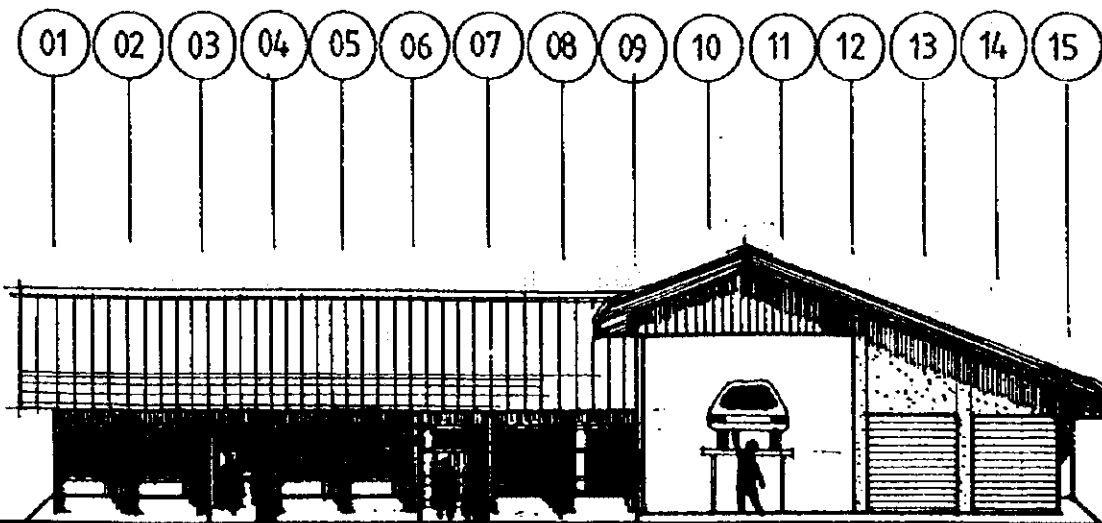


SIDE ELEVATION THRO COVERED WALK - WAY 1:200

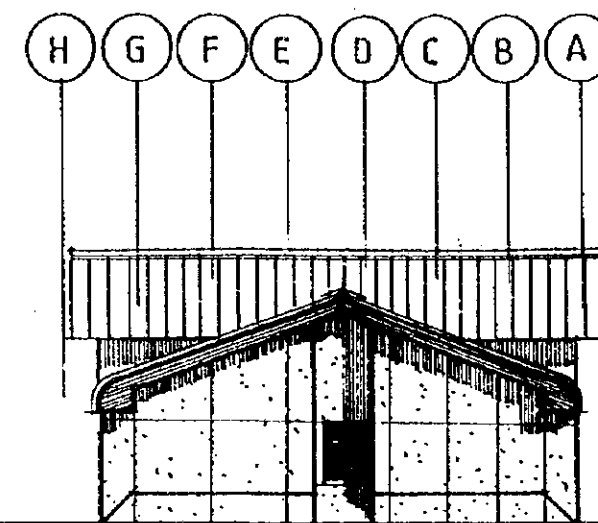
FREIGHT INSPECTION TERMINAL BUILDING 2



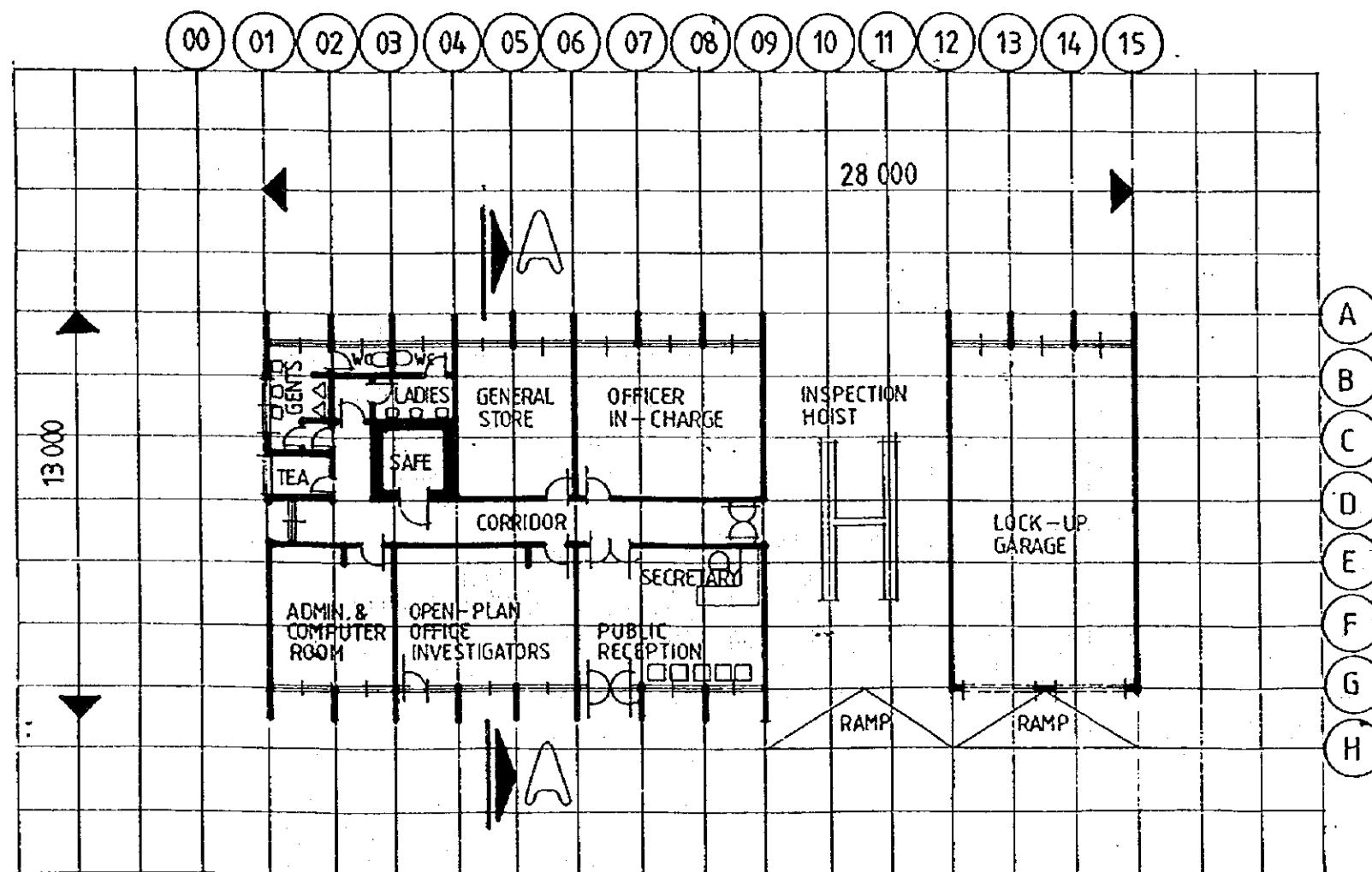
VEHICLE THEFT UNIT



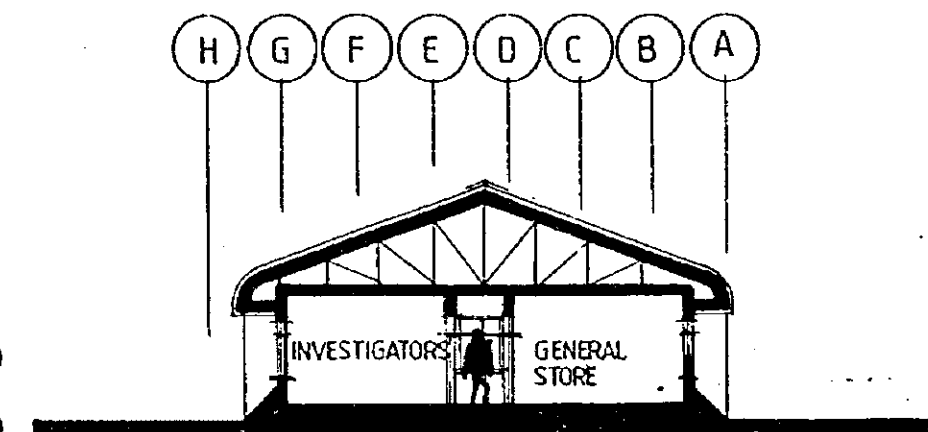
FRONT ELEVATION



SIDE ELEVATION

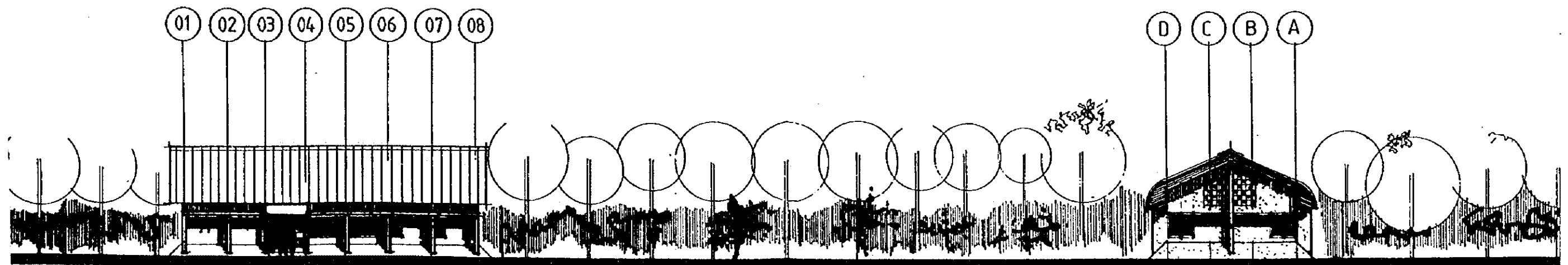


FLOOR PLAN



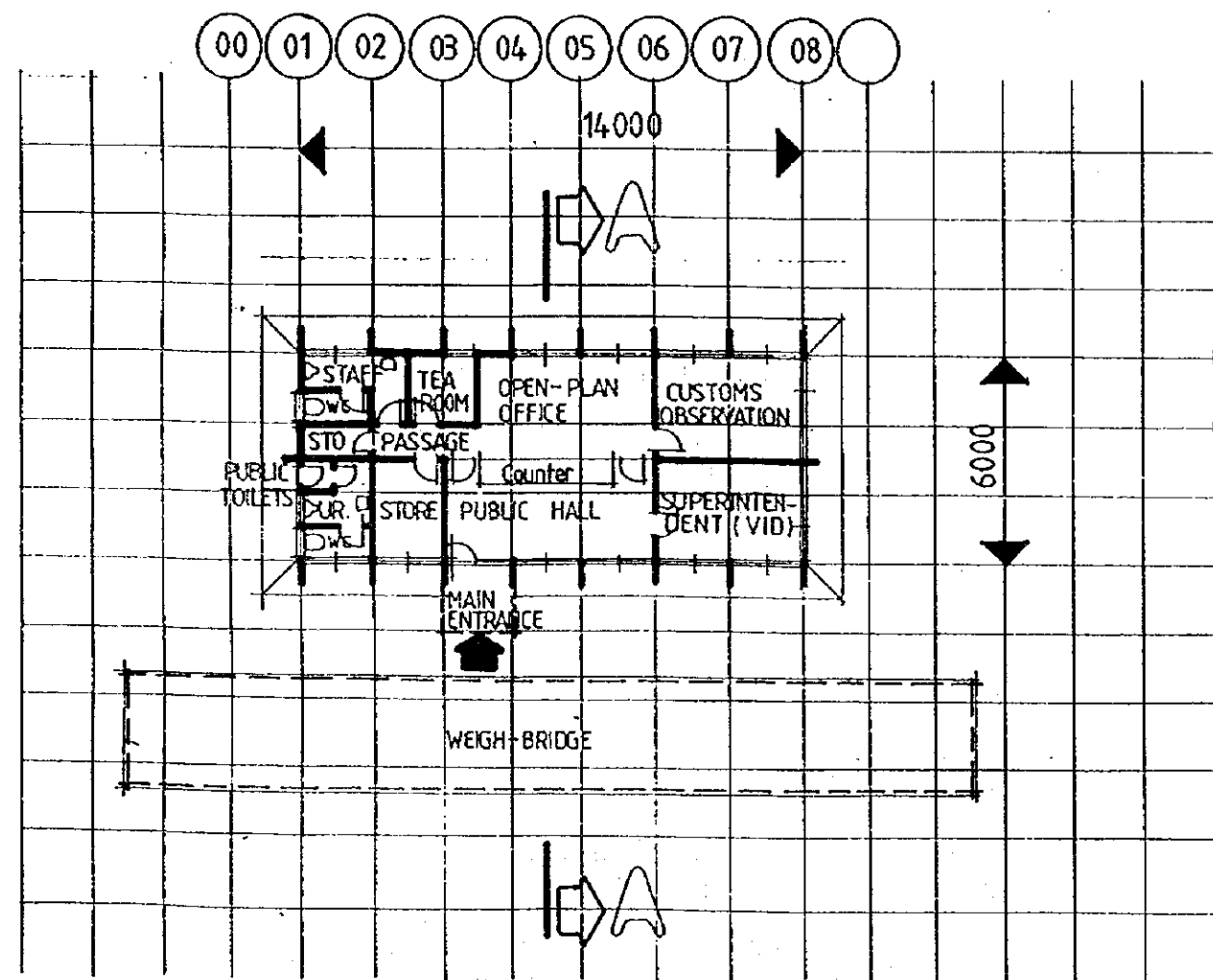
SECTION AA

VID BUILDING + WEIGH-BRIDGE

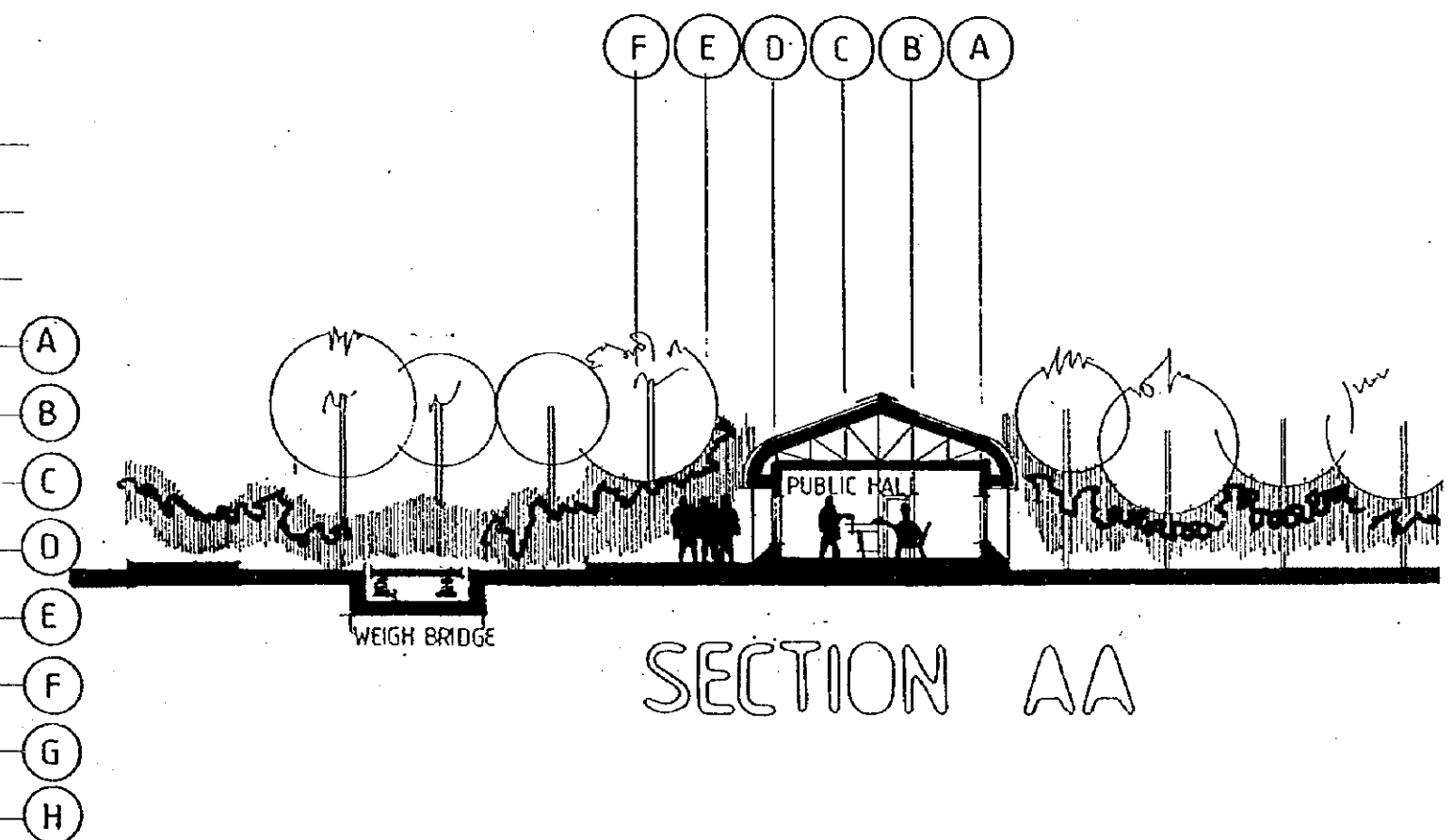


FRONT ELEVATION

SIDE ELEVATION

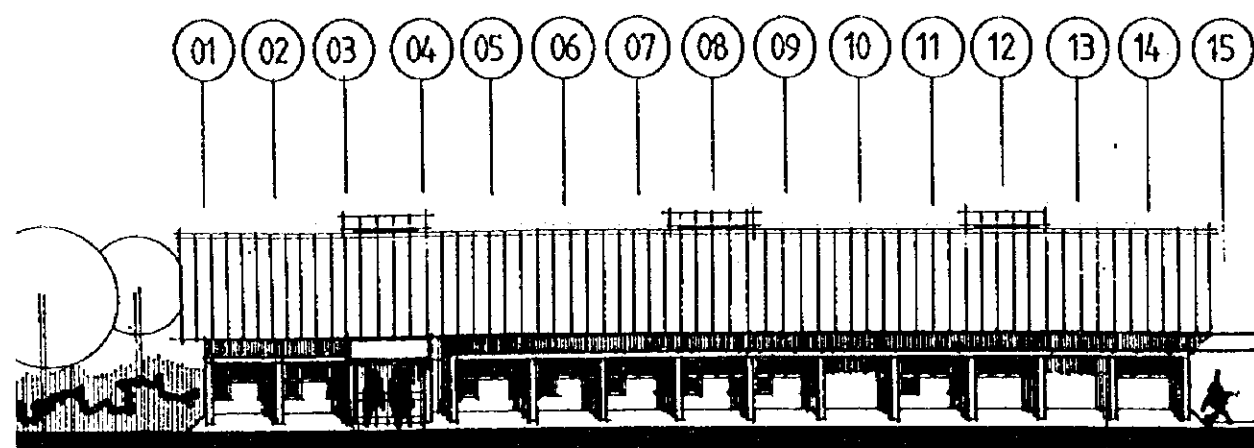


FLOOR PLAN

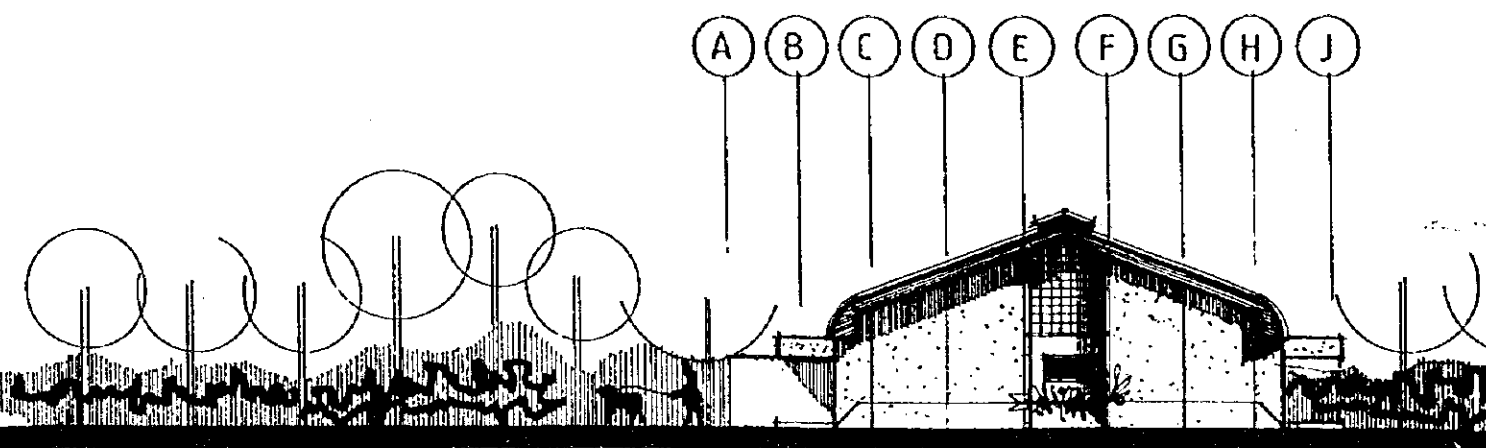


SECTION AA

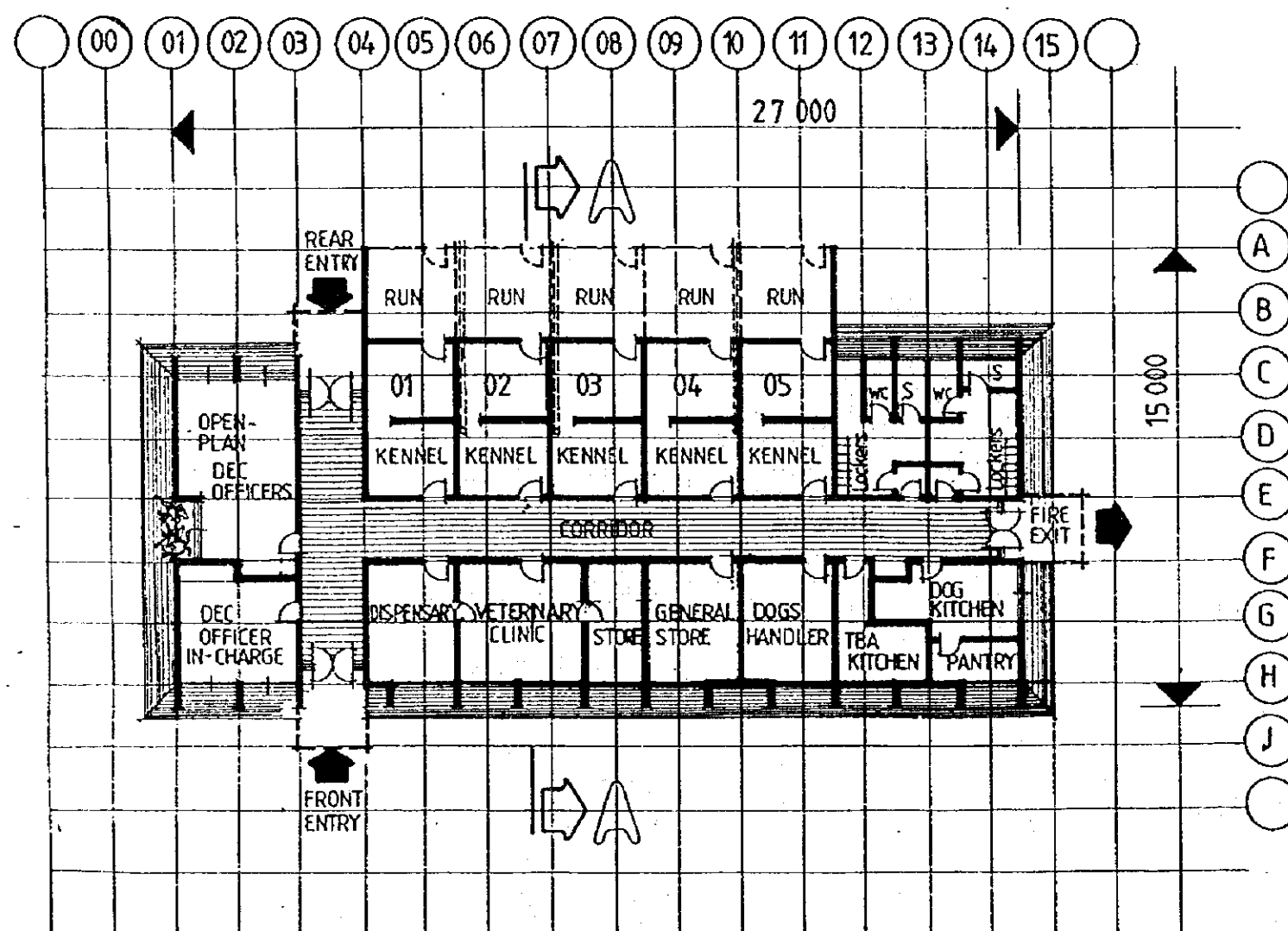
DEC OFFICES + SNIFFER DOG KENNELS



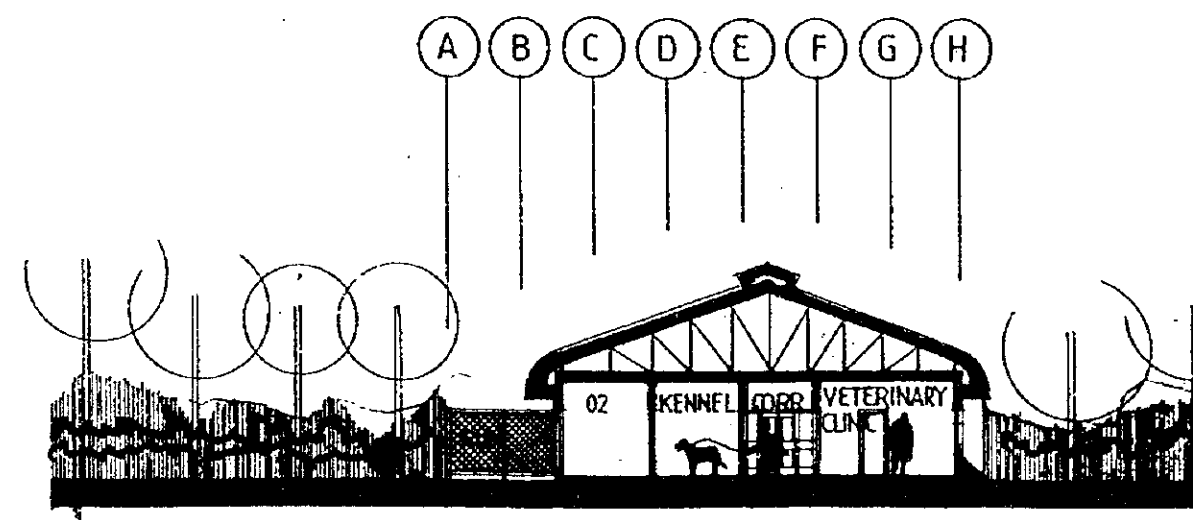
FRONT ELEVATION



SIDE ELEVATION



FLOOR PLAN



SECTION AA

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