

**ENVIRONMENTAL PROTECTION DEPARTMENT
PRACTICE NOTE FOR PROFESSIONAL PERSONS****Construction Site Drainage****Introduction**

(This Practice Note supersedes the ProPECC PN 2/23.)

The purpose of this practice note is to provide some basic environmental guidelines for handling discharge from construction sites, so as to prevent and minimize some of the pollution problems generally associated with construction activities, for example :

- (i) siltation in storm water drains caused by excessive sand and silt in the surface run-off;
- (ii) visual nuisance and hazard to aquatic life caused by discharge of muddy water into streams or the sea;
- (iii) pollution caused by improper handling and disposal of other types of wastewater from construction site such as sewage from site toilets.

A total of ten types of discharges from construction sites have been identified. Good practice for dealing with these discharges is provided in the following sections.

Surface Run-off

2. Surface run-off from construction sites should be discharged into storm water drains via adequately designed sand/silt removal facilities such as sand traps (see Appendix A1 for general reference), silt traps, sedimentation tanks and sediment basins. Channels or earth bunds or sand bag barriers should be provided on site to properly direct surface run-off to such silt removal facilities. Perimeter channels at site boundaries should be provided where necessary to intercept surface run-off from outside the site so that it will not wash across the site. Catchpits and perimeter channels should be constructed in advance of site formation works and earthworks.

3. Silt removal facilities, channels and manholes should be maintained and the deposited silt and grit should be removed regularly, at the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times.

4. Construction works should be programmed to minimize soil excavation works in rainy seasons (generally from April to September). If soil excavation works could not be avoided in these months or at any time of year when rainstorms are likely, for the purpose of preventing soil erosion, temporarily exposed slope surfaces should be covered (e.g. by tarpaulin), and temporary access roads should be protected by crushed stone or gravel, as excavation proceeds. Intercepting channels should be provided (e.g. along the crest/edge of excavation) to prevent surface run-off from washing across exposed soil surfaces. Arrangements should always be in place to ensure that adequate surface protection measures can be safely carried out well before the arrival of a rainstorm.

5. Earthworks final surfaces should be well compacted and the subsequent permanent works or surface protection works should be carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms. Appropriate drainage like intercepting channels should be provided where necessary.

6. Measures should be taken to minimize the ingress of rainwater into trenches. If excavation of trenches in the rainy season is necessary, they should be dug and backfilled in short sections of length. Rainwater pumped out from trenches or foundation excavations should be discharged into storm water drains via silt removal facilities.

7. Open stockpiles of construction materials (e.g. aggregates, sand and fill material) on sites should be covered with tarpaulin or similar impermeable fabric during rainstorms. Measures should be taken to prevent washing away construction materials, soil, silt or debris into any drainage system.

8. Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent surface run-off from getting into foul sewers. Discharge of surface run-off into foul sewers must always be prevented in order not to unduly overload the foul sewerage system.

9. Precautions to be taken at any time of year when rainstorms are likely, actions to be taken when a rainstorm is imminent or forecast and actions to be taken during or after rainstorms, are summarized in Appendix A2 for easy reference.

Groundwater

10. Groundwater pumped out of wells, etc. for lowering ground water level in basement or foundation construction, and groundwater seepage pumped out of tunnels or caverns under construction should be diverted to silt removal facilities for treatment before discharging into storm water drains.

Boring and Drilling Water

11. Water used in ground boring and drilling for site investigation or rock/soil anchoring should as far as practicable be recirculated after sedimentation. When there is a need for final disposal, the wastewater should be discharged into storm water drains via silt removal facilities.

Wastewater from Concrete Batching and/or Precast Concrete Casting

12. Wastewater generated from the washing down of mixer trucks and drum mixers and similar equipment should wherever practicable be recycled. The discharge of wastewater should be kept to a minimum.

13. To prevent pollution from wastewater overflow, the pump sump of any water recycling system should be provided with a standby pump of adequate capacity and with automatic alternating devices.

14. Under normal circumstances, surplus wastewater may be discharged into foul sewers after proper treatment (e.g. silt removal, pH adjustment to within the pH range of 6 to 10, etc.). Disposal of wastewater into storm water drains will require more elaborate treatment. Surface run-off should be segregated from the concrete batching plant and casting yard area as much as possible, and diverted to the storm water drainage system. Surface run-off contaminated by materials in a concrete batching plant or casting yard should be adequately treated before disposal into storm water drains.

Wheel Washing Water

15. All vehicles and plants should be cleaned before they leave a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. A wheel washing bay should be provided at every site exit if practicable and wash-water should have sand and silt settled out or removed before discharging into storm water drains. The section of

construction road between the wheel washing bay and the public road should be paved to reduce vehicle tracking of soil and to prevent site run-off from entering public road drains.

Bentonite Slurries

16. Bentonite slurries used in diaphragm wall and bored-pile construction should be reconditioned and reused wherever practicable. If the disposal of a certain residual quantity cannot be avoided, used bentonite slurry (if mixed with only inert fill materials) should be dewatered, and disposed of at a (i) public fill reception facility / area; or (ii) marine dumping ground (as the last resort) subject to obtaining a marine dumping licence from the Environmental Protection Department (EPD) on a case-by-case basis.

17. The water generated from the dewatering process should be treated to the respective effluent standards applicable to foul sewers, storm water drains or the receiving waters as set out in the “Technical Memorandum on Effluent Standards” (TM) issued under the Water Pollution Control Ordinance (WPCO) (Cap. 358) which is made available at the EPD’s website (<http://www.epd.gov.hk>).

Water for Testing and/or Sterilization of Water Retaining Structures and Water Pipes

18. Water used in water testing to check leakage of structures and pipes should be reused for other purposes as far as practicable. Surplus unpolluted water could be discharged into storm water drains.

19. Sterilization is commonly accomplished by chlorination. Specific advice from the EPD should be sought during the design stage of the works with regard to the disposal of the sterilizing water. The sterilizing water should be reused wherever practicable.

Wastewater from Building Construction

20. Before commencing any demolition works, all sewer and drainage connections should be sealed to prevent building debris, soil, sand etc. from entering public sewers/drains.

21. Wastewater generated from building construction activities including concreting, plastering, internal decoration, cleaning of works and similar activities should not be discharged into the storm water drainage system. If the wastewater is to be discharged into foul sewers, it should undergo the removal of settleable solids in a silt removal facility, and pH

adjustment as necessary.

Acid Cleaning, Etching and Pickling Wastewater

22. Acidic wastewater generated from acid cleaning, etching, pickling and similar activities should be neutralized to within the pH range of 6 to 10 before discharging into foul sewers. If there is no public foul sewer in the vicinity, the neutralized wastewater should be tankered off site for disposal into foul sewers or treated to a standard acceptable for discharge into storm water drains and the receiving waters.

Wastewater from Site Facilities

23. Sewage from toilets, kitchens and similar facilities should be discharged into a foul sewer. If there is no foul sewer in the vicinity, chemical toilets, a septic tank and soakaway system (see Appendix B for general reference) or for larger flows, a sewage treatment plant will have to be provided as appropriate.

24. Wastewater collected from canteen kitchens, including that from basins, sinks and floor drains, should be discharged into foul sewers via grease traps capable of providing at least 20 minutes retention during peak flow. Details of a typical grease trap should be referred to Appendix C for general reference. The EPD has also published “Grease Traps for Restaurants and Food Processors” which provides guidance on the design, operation and maintenance of grease traps and it is made available at the EPD’s website (<http://www.epd.gov.hk>).

25. Drainage serving an open oil filling point should be connected to storm water drains via a petrol interceptor with peak storm bypass. Typical details of such a petrol interceptor prepared by the Highways Department are attached at Appendix D and available at its website (<http://www.hyd.gov.hk>) for general reference.

26. Vehicle and plant servicing areas, vehicle wash bays and lubrication bays should as far as possible be located within roofed areas. The drainage in these covered areas should be connected to the foul sewer via petrol interceptor(s). (see Appendix E for general reference). Oil leakage or spillage should be contained and cleaned up immediately. Waste oil should be collected and stored for recycling or disposal in accordance with the Waste Disposal Ordinance (Cap. 354).

Licensing of Construction Site Discharges

27. All discharges into any drainage or sewerage systems, or inland or coastal waters, or into the ground (e.g. from septic tanks) are controlled under the Water Pollution Control Ordinance (WPCO) (Cap. 358), except the discharge of domestic sewage into foul sewers or the discharge of unpolluted water into storm water drains or into the waters of Hong Kong. Construction site discharges are controlled under the WPCO.

28. Discharges controlled under the WPCO must comply with the terms and conditions of a valid WPCO licence. It should be noted that compliance with the recommendations in this practice note does not necessarily imply compliance with the terms and conditions of a licence issued under the WPCO. Depending on actual site conditions, facilities in addition to those recommended in this practice note might be necessary.

29. The application form (Form A) for a WPCO licence is available at the Regional Offices of the EPD or can be downloaded from the EPD's website (<http://www.epd.gov.hk>). Also, on-line application for WPCO licence can be made at the EPD's website. The applicant should include in the application, inter alia, information on the various points of discharge of surface run-off and wastewater, and the corresponding maximum (or range of) volume of discharge expected on a dry day. The applicant, who shall either be (i) the person who makes or authorizes the discharge or (ii) the owner or occupier of the premises from which the discharge is made, should submit the licence application to the EPD as early as possible before the commencement of any discharge. In general, assuming adequate information has been provided together with the licence application, the EPD would generally need 14 days after the receipt of payment for the processing of a licence for a discharge. In the case of a discharge directly into any waters of Hong Kong, the licence processing would take a longer time to allow time for public notification as required by the WPCO. Enquiries can be directed to the Regional Offices of the EPD (Customer Service Hotline: 2838 3111).



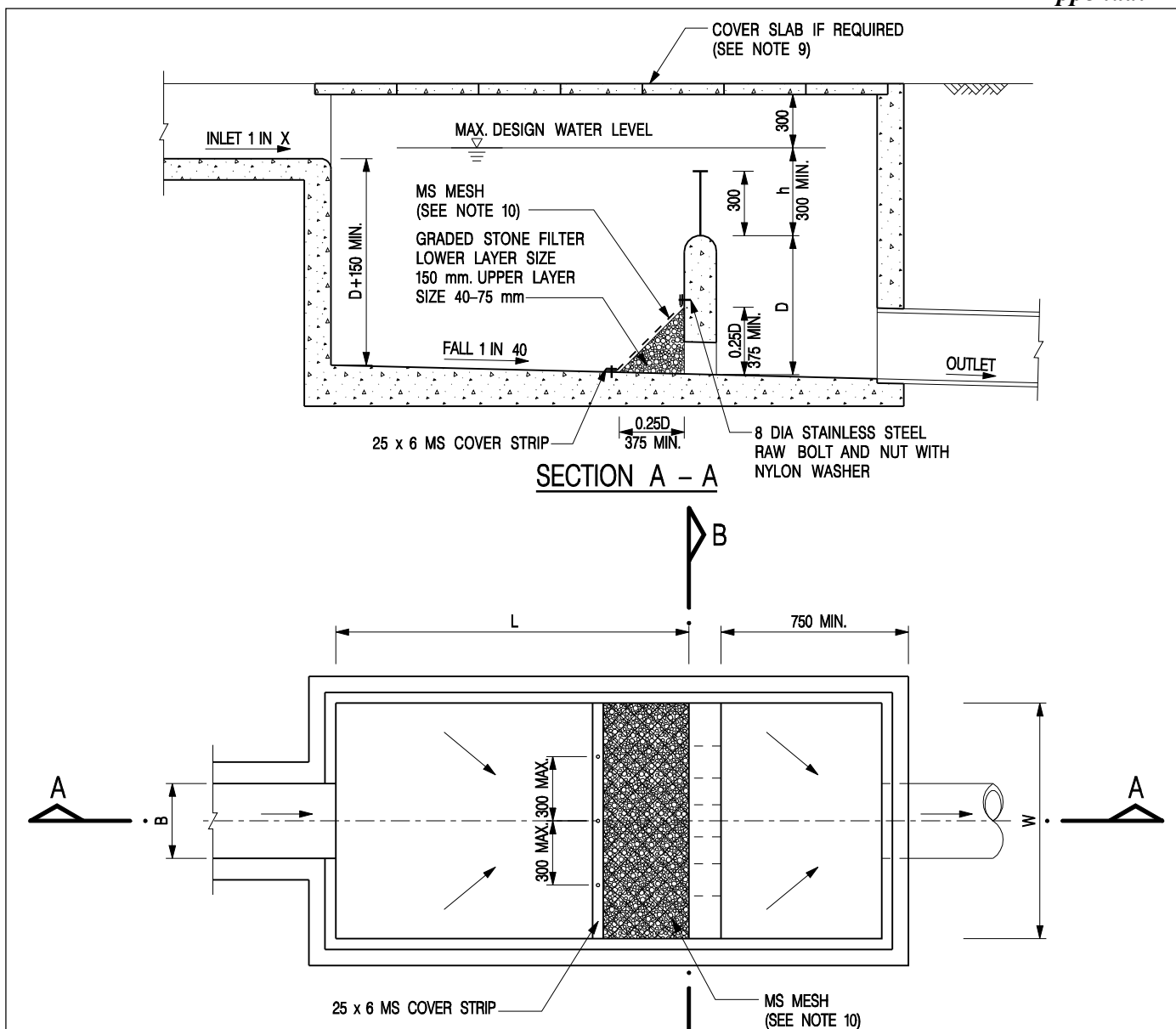
(Samuel H.K. Chui)
Director of Environmental Protection

Environmental Protection Department

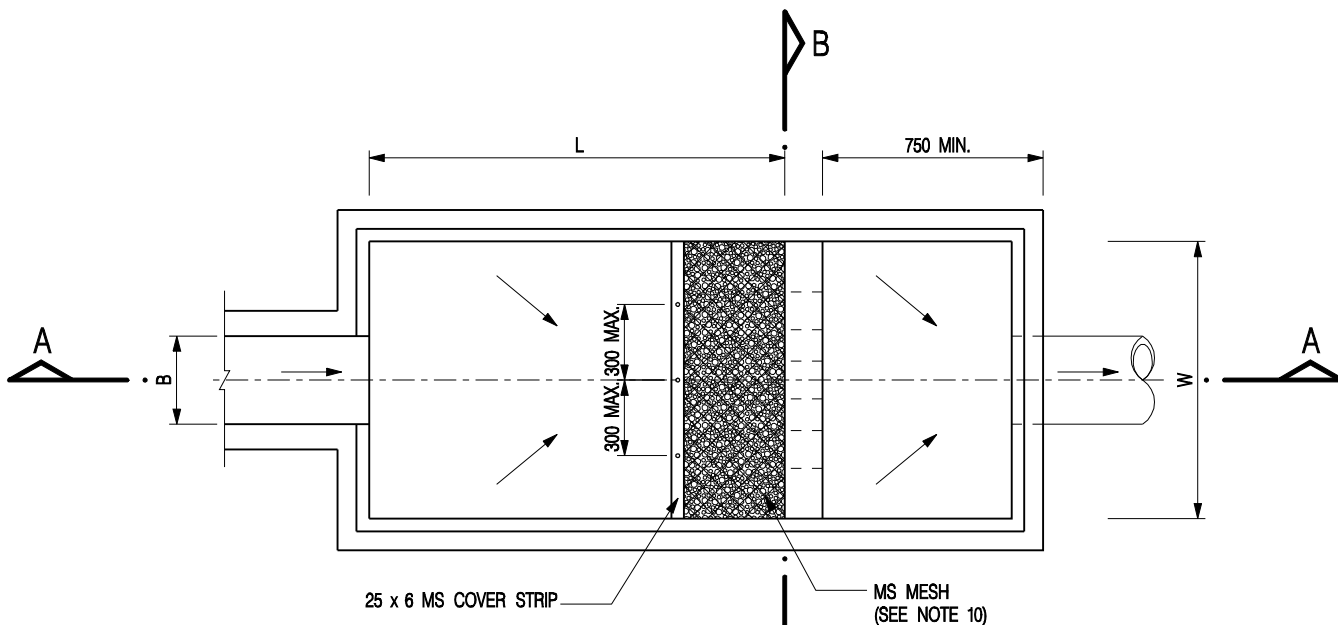
Issued: December 2024

LIST OF APPENDICES

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Appendix A2	Precautions / Actions relating to Rainstorms
Appendix B	Septic Tank and Soakaway
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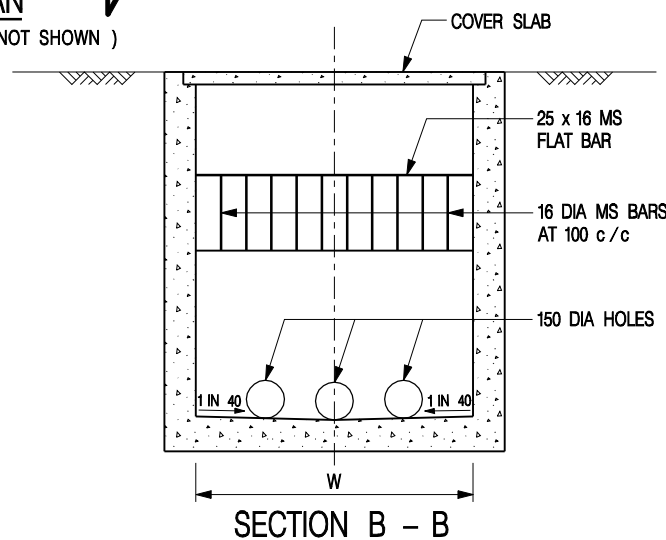


SECTION A - A



PLAN

(COVER SLAB NOT SHOWN)



SECTION B - B

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. NORMALLY FOR DRAINS OF 900 mm DIA AND BELOW. FOR BIGGER DRAINS AND STEEP TERRAIN, SAND TRAP SHALL BE SPECIALLY DESIGNED.
3. SIZE: -
 DEPTH $D < 750$; WIDTH $W \geq 3B$
 LENGTH $L = 4.8 D^{0.87} h^{0.5} \times^{-0.5} \geq 4B$
4. GRADED STONE FILTER SHALL BE CRUSHER RUN GRANITE AGGREGATE.
5. CAPACITY: - D.W.L. SHALL BE ACCORDING TO SIZE AND NATURE OF CATCHMENT, PROVIDING DETENTION TIME NOT LESS THAN 5 MINUTES FOR MAX. DESIGN FLOW OF INLET.
6. ALL MILD STEEL STRUCTURES SHALL BE HOT DIP GALVANIZED.
7. REINFORCEMENT SHALL BE SPECIFIED.
8. WALL AND SLAB THICKNESSES SHALL BE SPECIFIED.
9. DETAILS OF PRECAST CONCRETE COVERS SHALL BE REFERRED TO STD. DRG. NO. C2407.
10. THE OPENINGS OF MS MESH SHALL BE LESS THAN 40 mm OR AS SPECIFIED BY THE ENGINEER.

A	GENERAL REVISION.	Original Signed	04.2005
-	NEW ISSUE.	Original Signed	07.2003
REF.	REVISION	SIGNATURE	DATE



CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
 GEOTECHNICAL ENGINEERING OFFICE

SCALE DIAGRAMMATIC
 DATE JUL 2003

SKETCH NO.
 R1034A

SAND TRAP

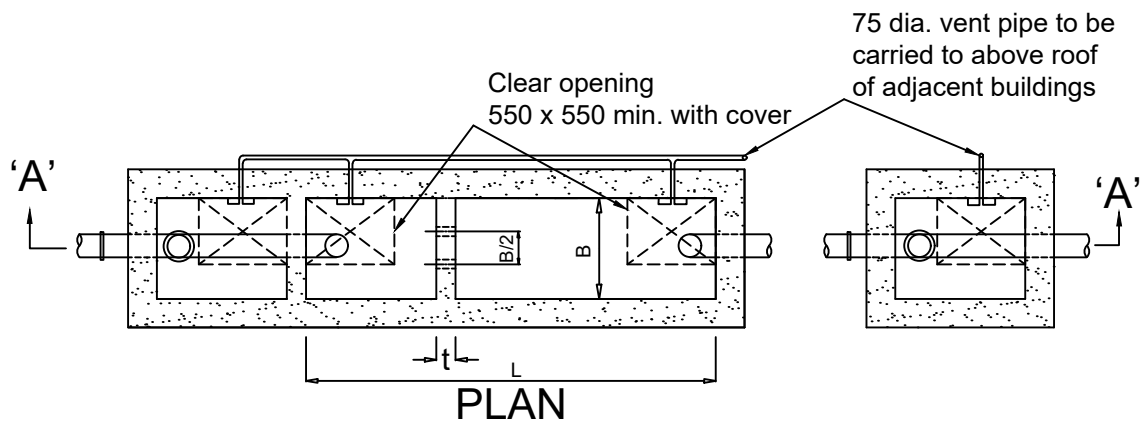
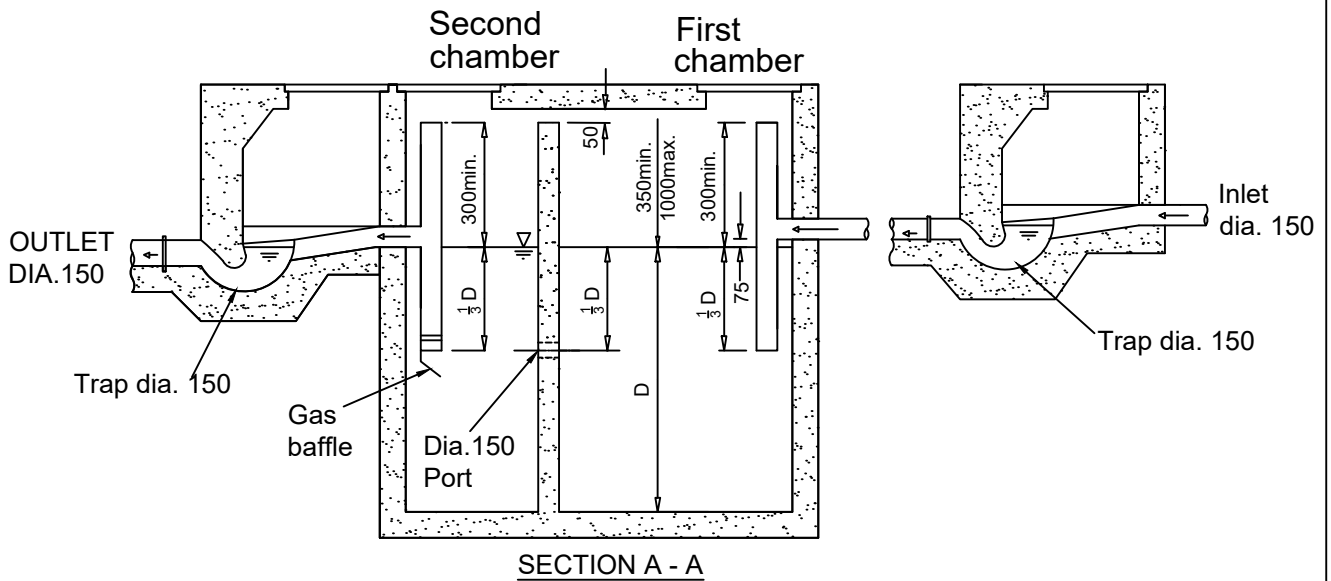
Precautions/Actions relating to Rainstorms

The following are extracted from the main text to highlight the specific precautions or actions concerned with rainstorms. For general precautions to be taken at all times in relation to surface run-off, please refer to Section 2 of the main text.

- (I) Precautions to be taken at any time of year when rainstorms are likely
 - (a) Silt removal facilities, channels and manholes should be maintained and the deposited silt and grit should be removed regularly.
 - (b) Temporarily exposed slope surfaces should be covered e.g. by tarpaulin.
 - (c) Temporary access roads should be protected by crushed stone or gravel.
 - (d) Intercepting channels should be provided (e.g. along the crest/edge of excavation) to prevent storm runoff from washing across exposed soil surfaces.
 - (e) Trenches should be dug and backfilled in short sections. Measures should be taken to minimize the ingress of rainwater into trenches.

- (II) Actions to be taken when a rainstorm is imminent or forecast
 - (a) Silt removal facilities, channels and manholes should be checked to ensure that they can function properly.
 - (b) Open stockpiles of construction materials (e.g. aggregates, sand and fill materials) on site should be covered with tarpaulin or similar fabric.
 - (c) All temporary covers to slopes and stockpiles should be secured.

- (III) Actions to be taken during or after rainstorms
 - (a) Silt removal facilities, channels and manholes should be checked and maintained to ensure satisfactory working conditions. Attention should be given to safety when carrying out this work.



Notes:-

1. All dimensions in millimetres (mm) unless otherwise stated.
2. Size
 - (a) $4B \geq L > 3B$
 - (b) $1800 \text{ mm} \geq D > 1200 \text{ mm}$
 - (c) Ratio of volumes of first and second chambers = 2:1
3. Capacity (Subject to note 2)
 - (a) Capacity, $C = (L - t) \times B \times D$
 - (b) Not less than 2.3 m^3 but not more than 41 m^3
 - (c) Not less than QN where N is the number of persons served and Q is the estimated ultimate per capita daily water consumption.
 - (d) Surface water must not be connected to the tank
 - (e) Tank to be desludged every 6 months
4. No overflow or bypass pipe is allowed.
5. Please refer to the booklet "Guidance Notes on Discharges from Village Houses" published by EPD for further guidelines on operation and maintenance of septic tank system.

SEPTIC TANK

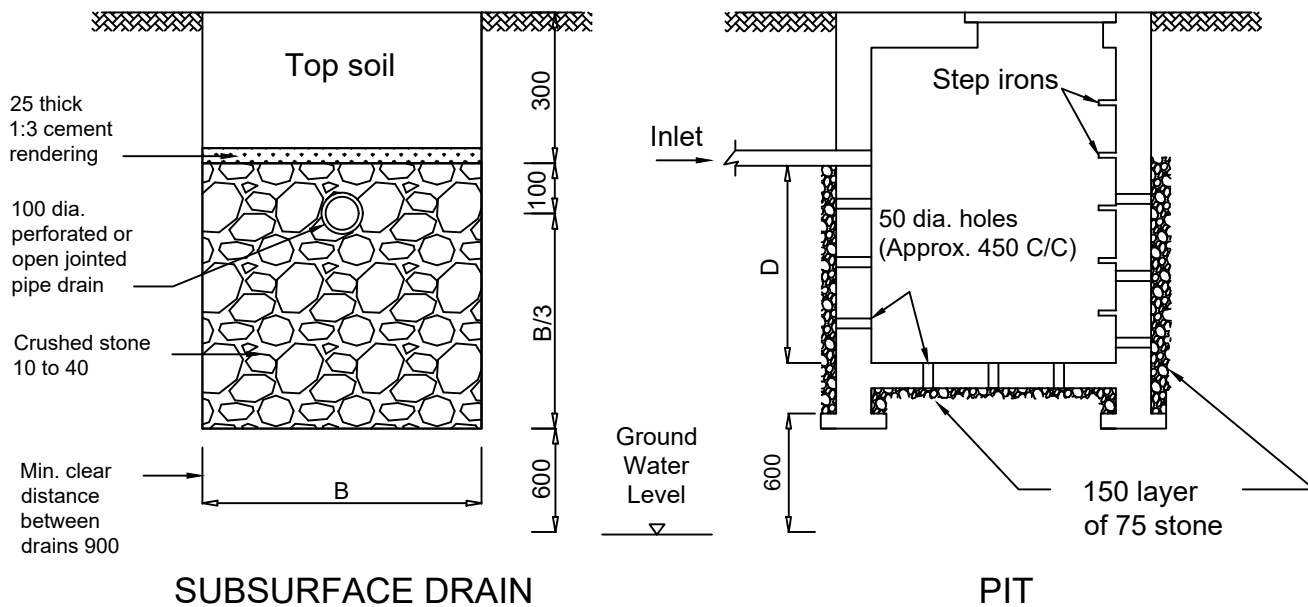
DRAWING NO.:
EP 50/D1/5/01

DATE
1/23

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HONG KONG





Notes:-

F[±] All dimensions in millimetres (mm) unless otherwise stated

G[±] Percolation test for determining absorption capacity of soil

- G[±] D Excavate a hole 300 mm² to the same depth of the pit or trench.
- G[±] D Fill the hole with approximately 150 mm of water and allow to seep away completely.
- G[±] D Refill the hole with water to a depth of 150 mm and observe the time, in minutes, for water to seep completely away.
- G[±] D Divide the time by 6 to give time taken to fall 25 mm for use in table below.

H[±] Allowable loading of soakaway systems

Time in minutes for water to fall 25 mm in test pit	Allowable loading in litres per m ² per day	
	Drain Trench Bottom Area	Pit Percolation Area
1 or less	163	216
2	130	175
5	98	130
10	69	94
30	33	45

The total allowable loading per day should equate with the daily incoming flow

4. Minimum clearance requirements for soakaway systems

Water Bodies	Distance from Soakaway Systems (m)	
Wells	50	
Stream (where the bed is lower than invert of soakaway system)	15 (30)*	* These distances should be increased to distances shown in brackets if the water from the stream or pool is used or likely to be used for drinking or domestic purposes
Pools	7.5 (30)*	
Beaches	100	(From boundaries of gazetted beaches or bathing beach subzones of Water Control Zones)
	30	(From H.W.M. and from nearest watercourses for other cases)
Ground water table	0.6	(Below invert)
Structures		
Building	3	
Retaining walls	6	
Cuts or embankments	30	
Paths	1.5	

5. Engineering measures, such as: (i) soil replacement to help improve the soil absorption capacity through changing the characteristics and associated composition of soil; (ii) mound system or diversion of soakaway path, etc., may be used to address site constraints (e.g. inadequate absorption capacity of soil, high ground water table, etc.).

SOIL SOAKAWAY SYSTEM

DRAWING NO.
EP 50/D1/5/02

DATE
1/23

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NTS

ENVIRONMENTAL PROTECTION DEPARTMENT HONG KONG



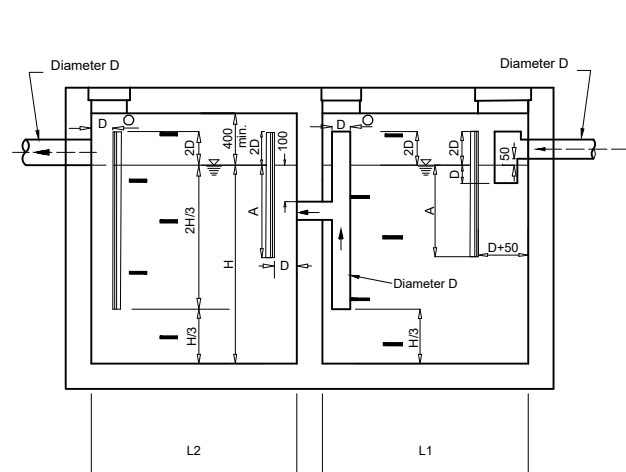
Grease Traps

(See Drawing no. EP/50/L1/1/01A for typical details of a grease trap)

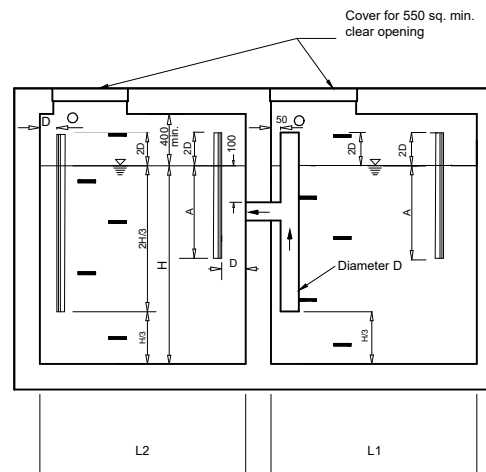
<u>Kitchen Floor Area</u> (m ²)	<u>Peaking Factor</u>	<u>Minimum Required Grease Trap Retention Volume</u> (m ³)
12	5.5	0.7
24	4.3	1.1
50	3.0	1.6
100	2.4	2.5
150		3.3
200	1.85	4.0
250		4.7
300		5.4
350		6.1
400	1.62	6.7
450		7.3
500		7.8
550		8.3
600	1.38	8.7
650		9.1
700		9.4
750		9.7
800	1.15	10.0
850		10.2
900	1.03	10.3
1000	1.0	10.4

Notes

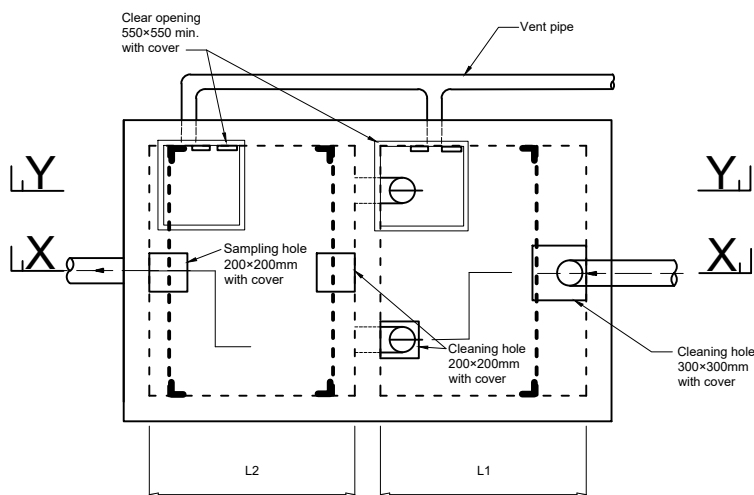
1. The minimum required grease trap retention volume tabulated above is based on an average water consumption of 0.5 m³ per day per m² of kitchen floor area, and an average working day of 16 working hours. A larger grease trap should be provided if a higher water discharge intensity is anticipated.
2. For kitchen floor areas in between the listed values, the minimum required grease trap retention volume can be calculated pro-rata.
3. For kitchen floor areas smaller than 12 m², a grease trap with retention volume 0.7 m³ should be provided unless the adequacy of a smaller grease trap can be demonstrated.
4. Depending on the actual operation of the proposed food premises, additional installations might be required to meet the standards given in the Technical Memorandum on Effluent Standards issued under section 21 of the Water Pollution Control Ordinance Cap.358.



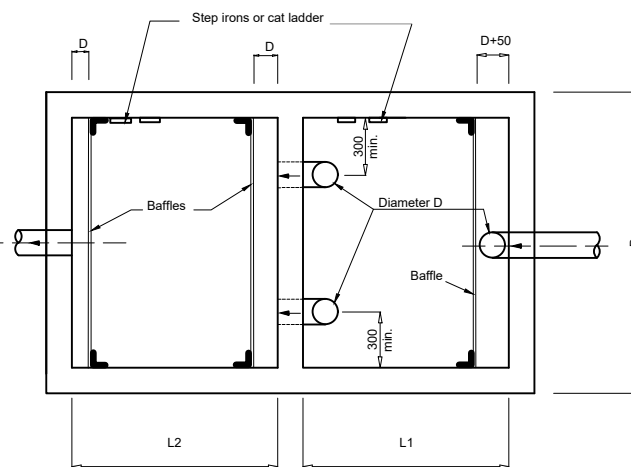
SECTION X-X



SECTION Y-Y



PLAN



SECTIONAL PLAN

TYPICAL DETAILS OF A GREASE TRAP

Notes:

1. All dimensions are in millimeters unless otherwise stated
2. $Volume = B (L_1 + L_2) H$
3. $750 \leq B \leq L_1 \leq L_2 \leq 1800$
4. $600 \leq H \leq 1200$
For kitchen floor areas $\geq 50m^2$, H should be 900 minimum
5. $L_1 + L_2 = L_T$
 $2.0 \leq L_T / H \leq 3.0$
 $1500 \leq B \times L_T / H \leq 4000$
6. $A = H/2$ but not greater than 450
7. No. of pipes through the middle partition wall should be such that the velocity inside the pipes is not greater than 0.2 m/s
8. Gradient of inlet pipe > 1 in 10
9. Horizontal pipe between the last drainage fitment and the grease trap should not be longer than 10m. Where this cannot be achieved, the gradient of the pipe should be increased and rodding eyes should also be provided
10. Minimum diameter of inlet pipes 100mm
11. Minimum diameter of vent pipes 75mm
12. Reinforced concrete grease traps should be designed as liquid retaining structure with maximum surface crack widths 0.2 mm
13. Grease traps should be easily accessible, allowing covers to be lifted and accumulated materials removed
14. A prominent sign should be erected adjacent to the grease trap to signify the location of the grease trap and should also contain the following information:
 - a) overall depth of the grease trap
 - b) liquid depth of the grease trap
 - c) the grease trap needs cleaning when the top 200mm of liquid depth is occupied by grease
 - d) warning signs and safety barriers should be erected around the manhole openings during cleaning and maintenance of the grease trap

DRAWING NO.
EP50/L1/1/01A

DATE
1/23

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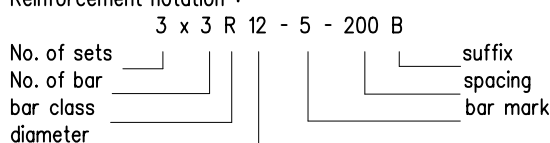
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Hong Kong



GENERAL NOTES :

1. The petrol interceptor is designed to provide at least 20 minutes retention to 5-10% of the maximum runoff collected by the transport interchange in a 1 in 2 year rainstorm.
2. All dimensions are in millimetres.
3. Concrete to be grade 30/20.
4. Reinforcement shall comply to BS4449 and shall be bent in accordance with BS8666.
5. Cover to reinforcement to be 50mm unless otherwise specified.

6. Reinforcement notation :



bar class : R = GRADE 250 PLAIN ROUND STEEL BAR

suffix : T = TOP

B = BOTTOM

NF = NEAR FACE

FF = FAR FACE

EF = EACH FACE

7. Minimum lap length : 40 diameter of bar for mild steel plain bar.
8. Structural steelwork shall be grade S275 to BS EN 10025 unless otherwise specified.
9. All fillet welds to be 6mm unless otherwise specified.
10. Stainless steel access ladder to be of minimum grade 1.4401 to BS EN 10088.
11. For RSJ connections, see DSD Standard Drawing DS1031.
12. For details of treatment to the top of petrol interceptor, see DSD Standard Drawing DS1032 for flexible roadsurface and Highway Standard Drawing H1111 & H1112 for concrete road slab.
13. For details of cover to access opening and desilting opening, see DSD standard drawing DS1034.

B	General revision		Oct 22
A	General revision		Nov 02
	Former drg. no. H3028/1A with general revision		Jun 94
REF.	REVISION	SIGNATURE	DATE

**PETROL INTERCEPTOR
FOR OPEN PUBLIC
TRANSPORT INTERCHANGE
(SHEET 1 OF 11)**

HIGHWAYS DEPARTMENT

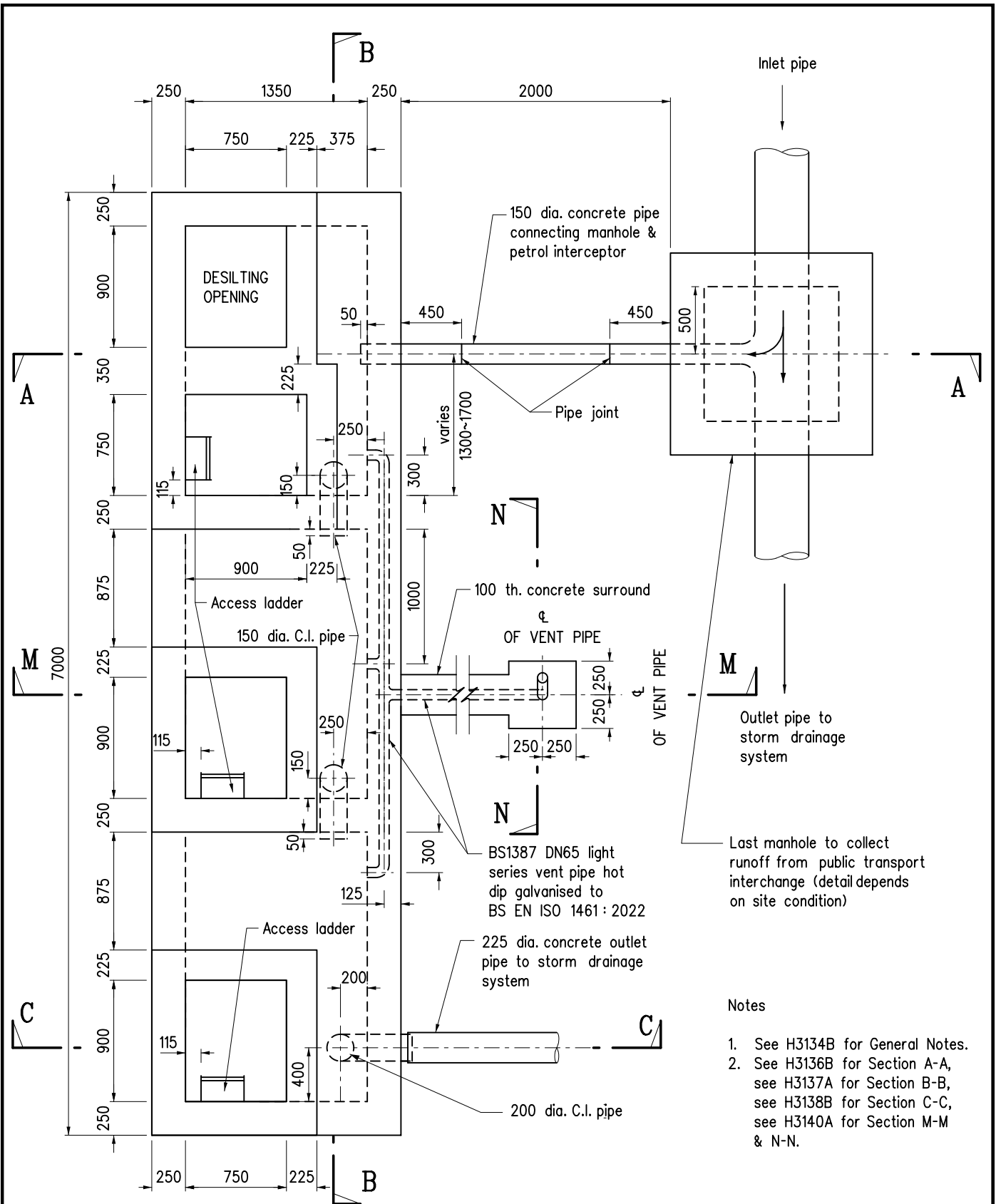
REFERENCE

DRAWING No.

CAD

SCALE

H 3134B



PLAN

3 compartment petrol interceptor shown, for required no. of compartments, see table 1 in drg. no. H3136B

Notes

1. See H3134B for General Notes.
2. See H3136B for Section A-A, see H3137A for Section B-B, see H3138B for Section C-C, see H3140A for Section M-M & N-N.

C	General revision		Oct 22
B	Standard for hot dip galvanising updated		Sep 07
A	General revision		Nov 02
	Former drg. no. H3028/2A with general revision		Jun 94
REF.	REVISION	SIGNATURE	DATE

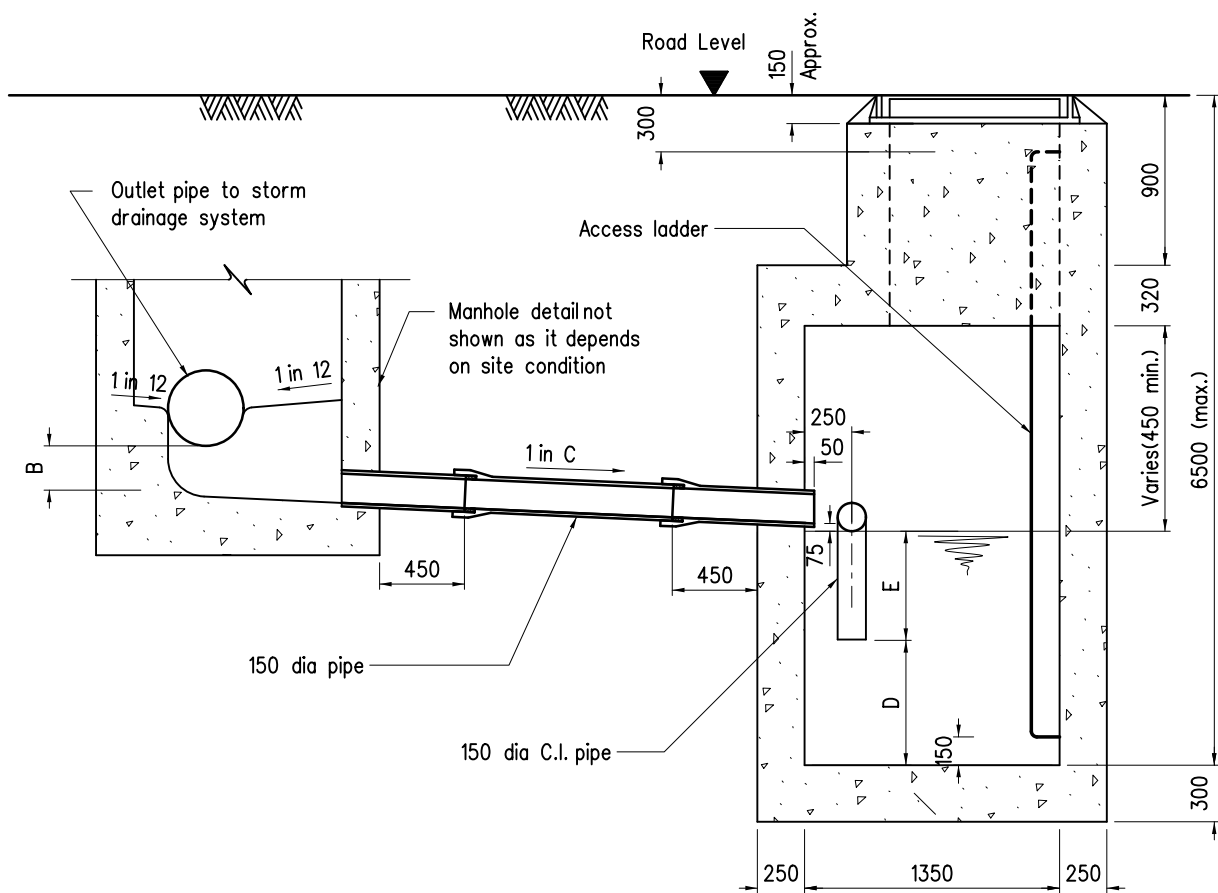
**PETROL INTERCEPTOR
FOR OPEN PUBLIC
TRANSPORT INTERCHANGE
(SHEET 2 OF 11)**

HIGHWAYS DEPARTMENT

REFERENCE	DRAWING No.	CAD
SCALE	H 3135C	
Diagrammatic		

CATCHMENT AREA OF THE PUBLIC TRANSPORT INTERCHANGE A (m ²)	LEVEL DIFFERENCE OF THE 2 OUTLET PIPES IN THE LAST MANHOLE B (mm)	FALL OF INLET AND OUTLET PIPE OF PETROL INTERCEPTOR C	D (mm)	E (mm)	NO. OF COMPARTMENT
$A \leq 1000$	60	200	500	400	2
$1000 < A \leq 2000$	90	200	600	400	3
$2000 < A \leq 3000$	150	200	550	600	4
$3000 < A \leq 4000$	150	100	725	600	4

TABLE 1



SECTION A - A

Note :

See H3134B for general notes.

B	General revision		Oct 22
A	General revision		Nov 02
	Former drg. no. H3028/3A with general revision		Jun 94
REF.	REVISION	SIGNATURE	DATE

PETROL INTERCEPTOR
FOR OPEN PUBLIC
TRANSPORT INTERCHANGE
(SHEET 3 OF 11)

HIGHWAYS DEPARTMENT

REFERENCE

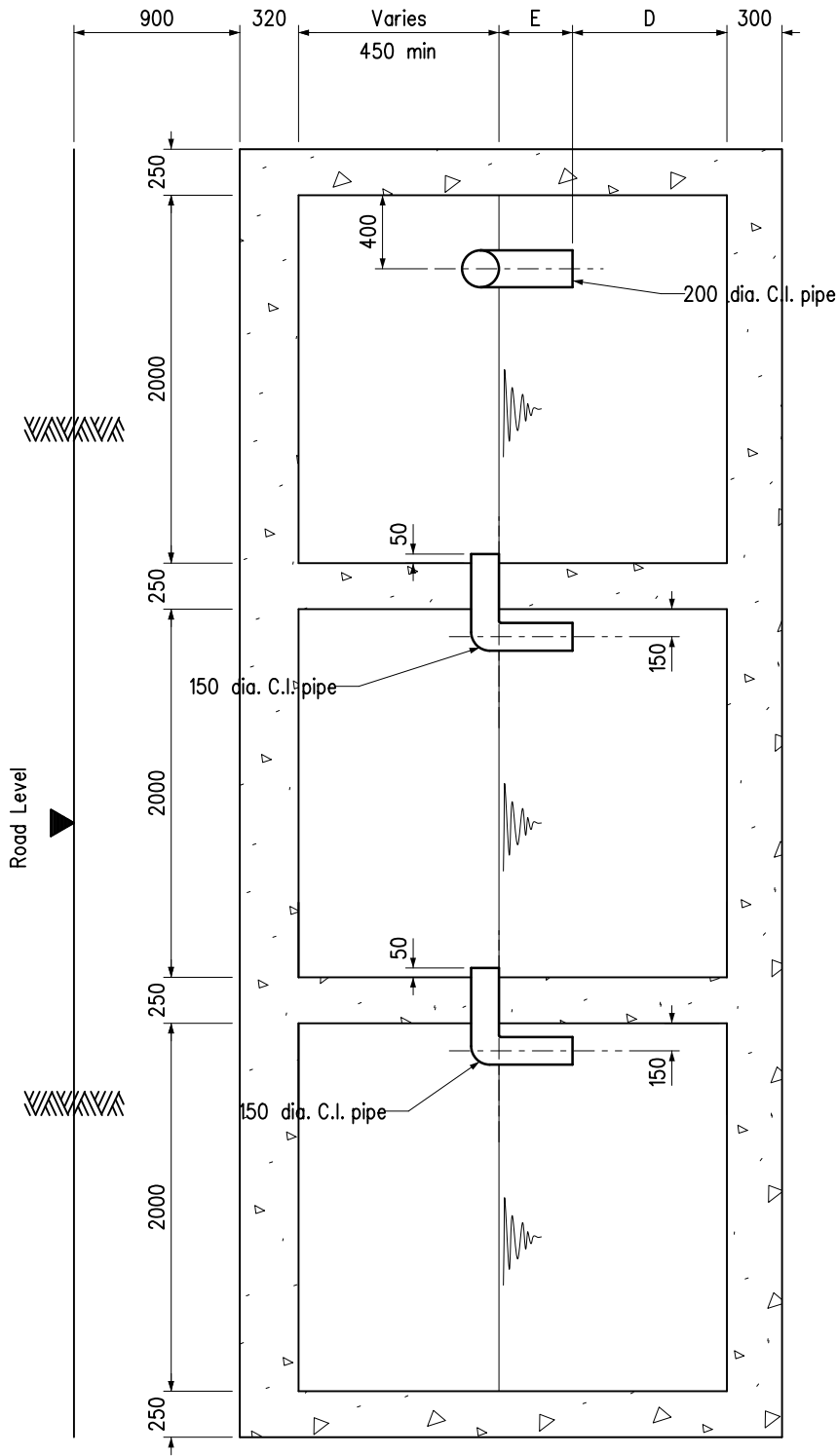
DRAWING No.

CAD

SCALE

Diagrammatic

H 3136B



SECTION B - B

(3 compartment petrol interceptor shown)

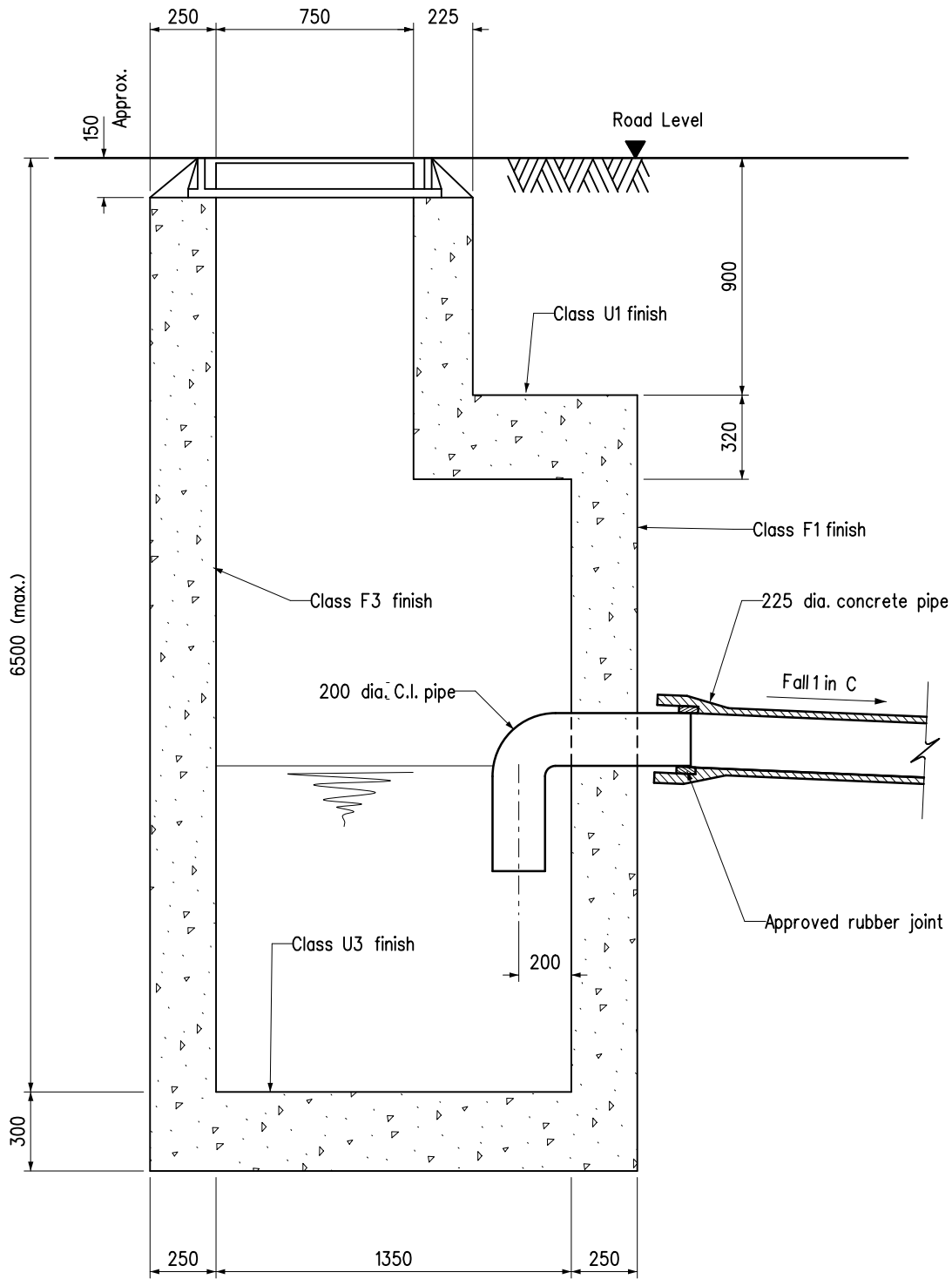
Note :
See H3134B for general notes.

A	General revision		Oct 22
	Former drg. no. H3028/4A with general revision		Jun 94
REF.	REVISION	SIGNATURE	DATE

**PETROL INTERCEPTOR
FOR OPEN PUBLIC
TRANSPORT INTERCHANGE
(SHEET 4 OF 11)**

HIGHWAYS DEPARTMENT

REFERENCE	DRAWING No.	CAD
SCALE Diagrammatic	H 3137A	



SECTION C - C

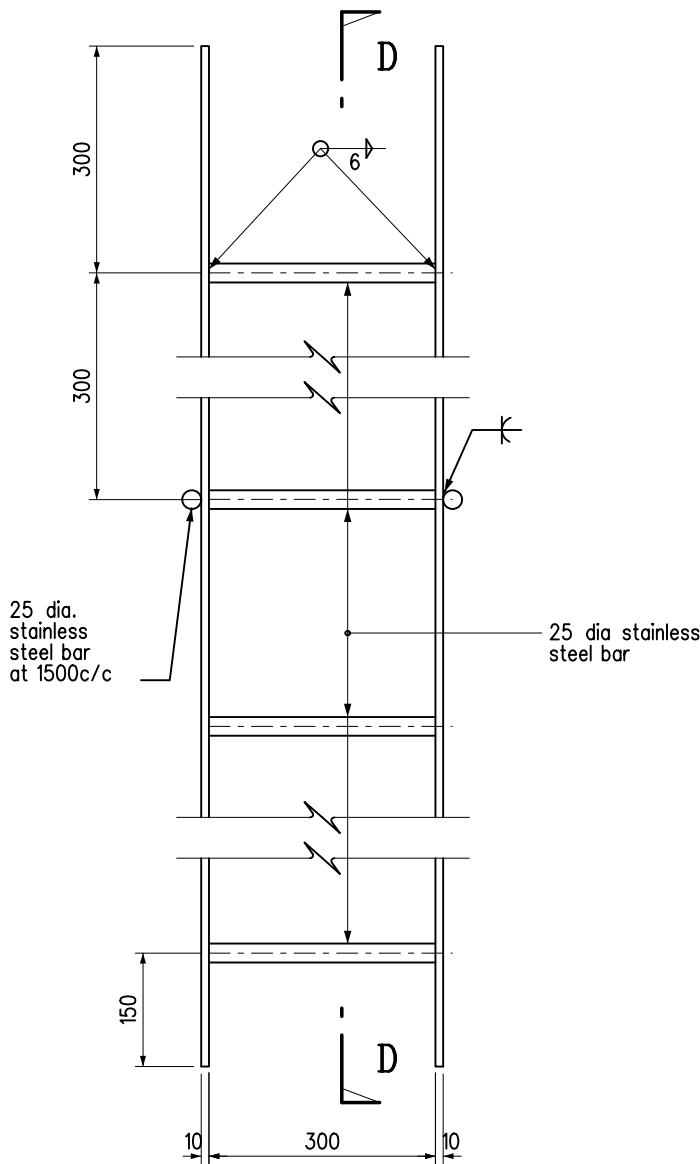
Note :
See H3134B for general notes.

B	General revision		Oct 22
A	General revision		Nov 02
	Former drg. no. H3028/5A with general revision		Jun 94
REF.	REVISION	SIGNATURE	DATE

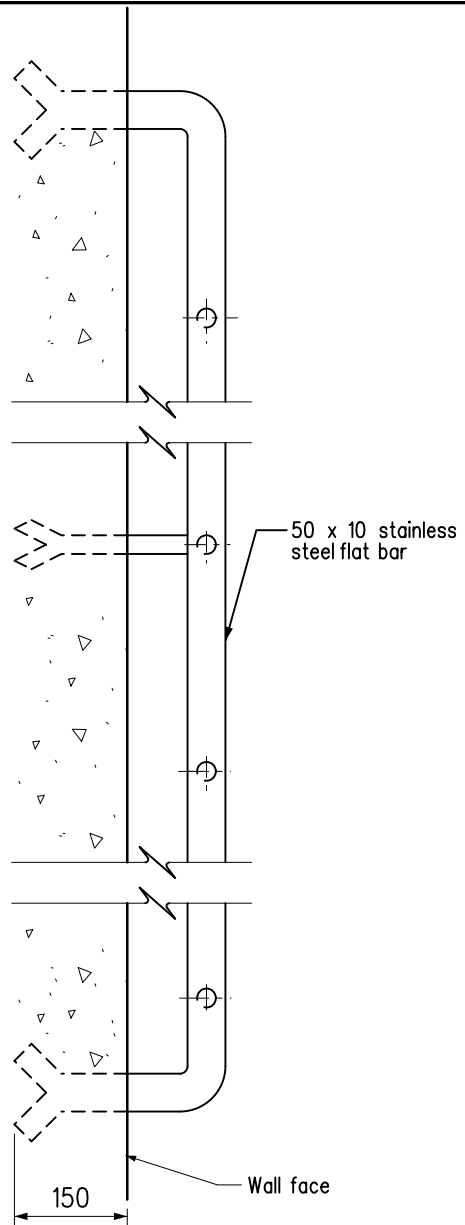
PETROL INTERCEPTOR
FOR OPEN PUBLIC
TRANSPORT INTERCHANGE
(SHEET 5 OF 11)

HIGHWAYS DEPARTMENT

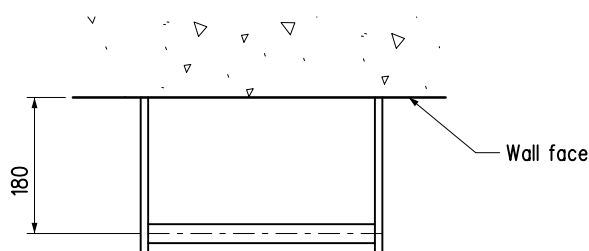
REFERENCE	DRAWING No.	CAD
SCALE 1: 25	H 3138B	



ELEVATION



SECTION D - D



PLAN

ACCESS LADDER

Note :

See H3134B for general notes

B	General revision		Oct 22
A	General revision		Nov 02
	Former drg. no. H3028/6A with general revision		Jun 94
REF.	REVISION	SIGNATURE	DATE

PETROL INTERCEPTOR
FOR OPEN PUBLIC
TRANSPORT INTERCHANGE
(SHEET 6 OF 11)

HIGHWAYS DEPARTMENT

REFERENCE

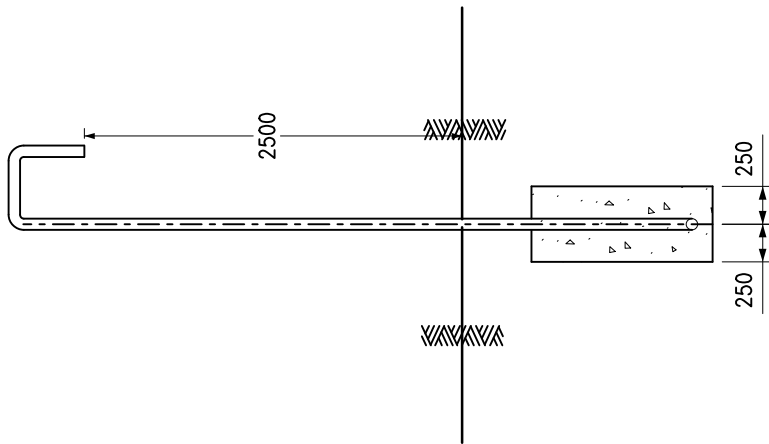
DRAWING No.

CAD

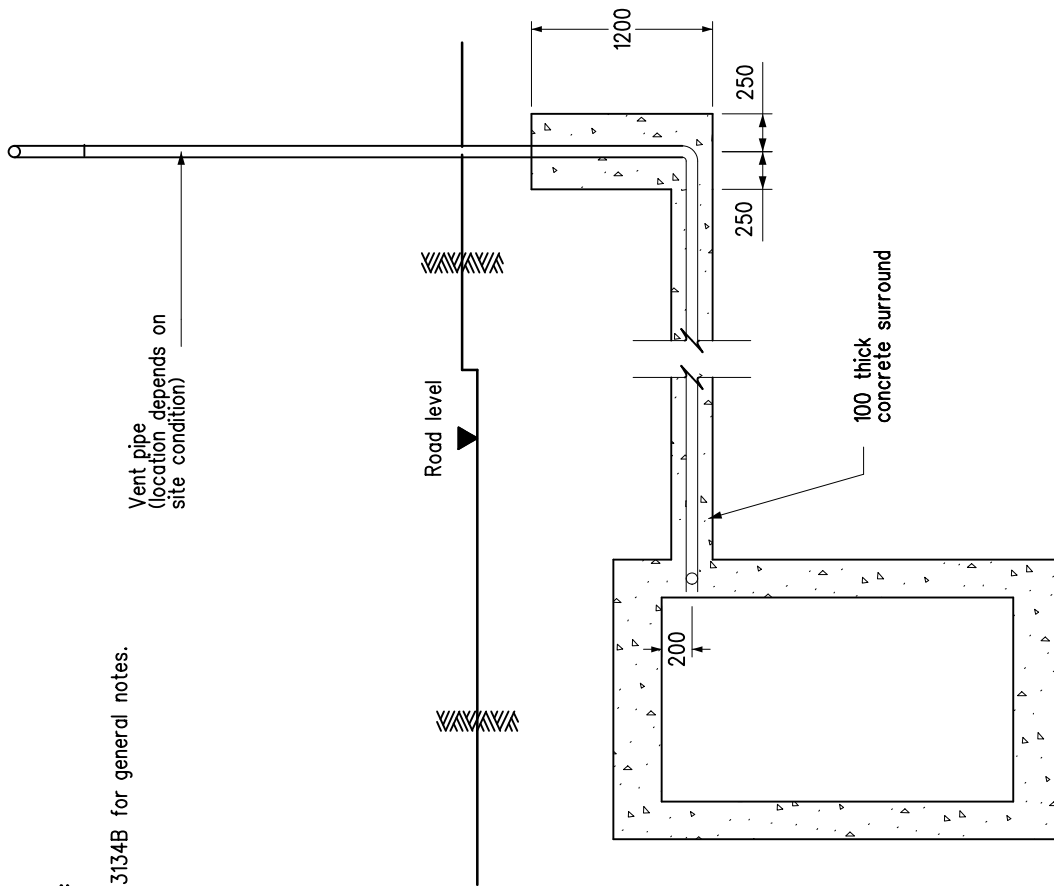
SCALE

1 : 10

H 3139B



SECTION N - N



SECTION M - M

Note :
See H3134B for general notes.

Vent pipe
(location depends on
site condition)

Road level

100 thick
concrete surround

A	General revision		Oct 22
	Former drg. no. H3028/7A with general revision		Jun 94
REF.	REVISION	SIGNATURE	DATE

PETROL INTERCEPTOR
FOR OPEN PUBLIC
TRANSPORT INTERCHANGE
(SHEET 7 OF 11)

HIGHWAYS DEPARTMENT

REFERENCE

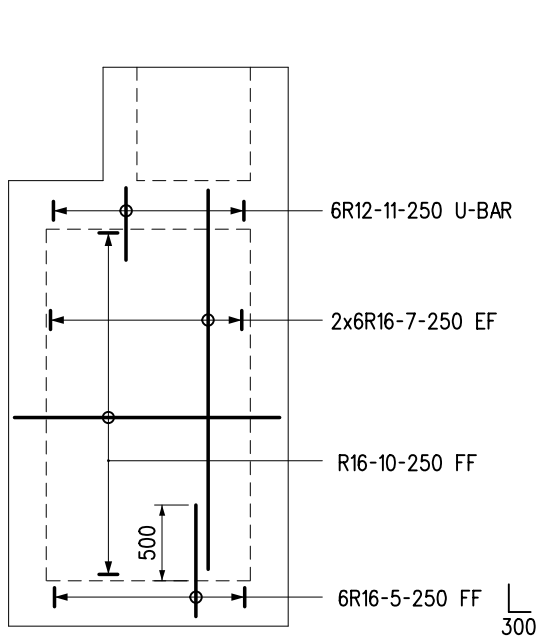
DRAWING No.

CAD

SCALE

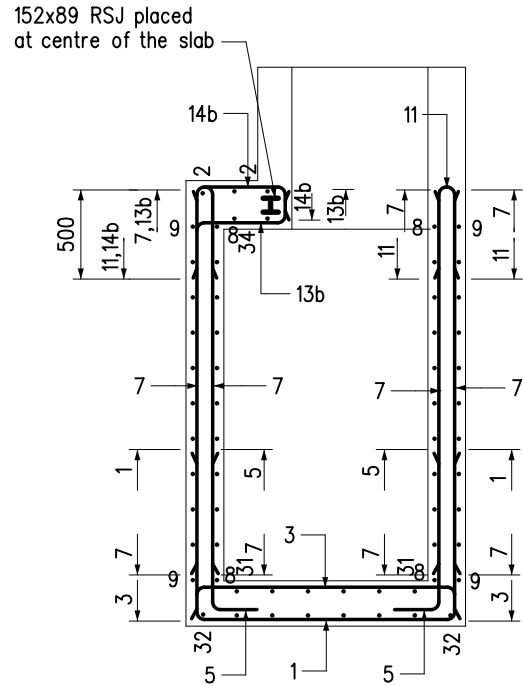
Diagrammatic

H 3140A

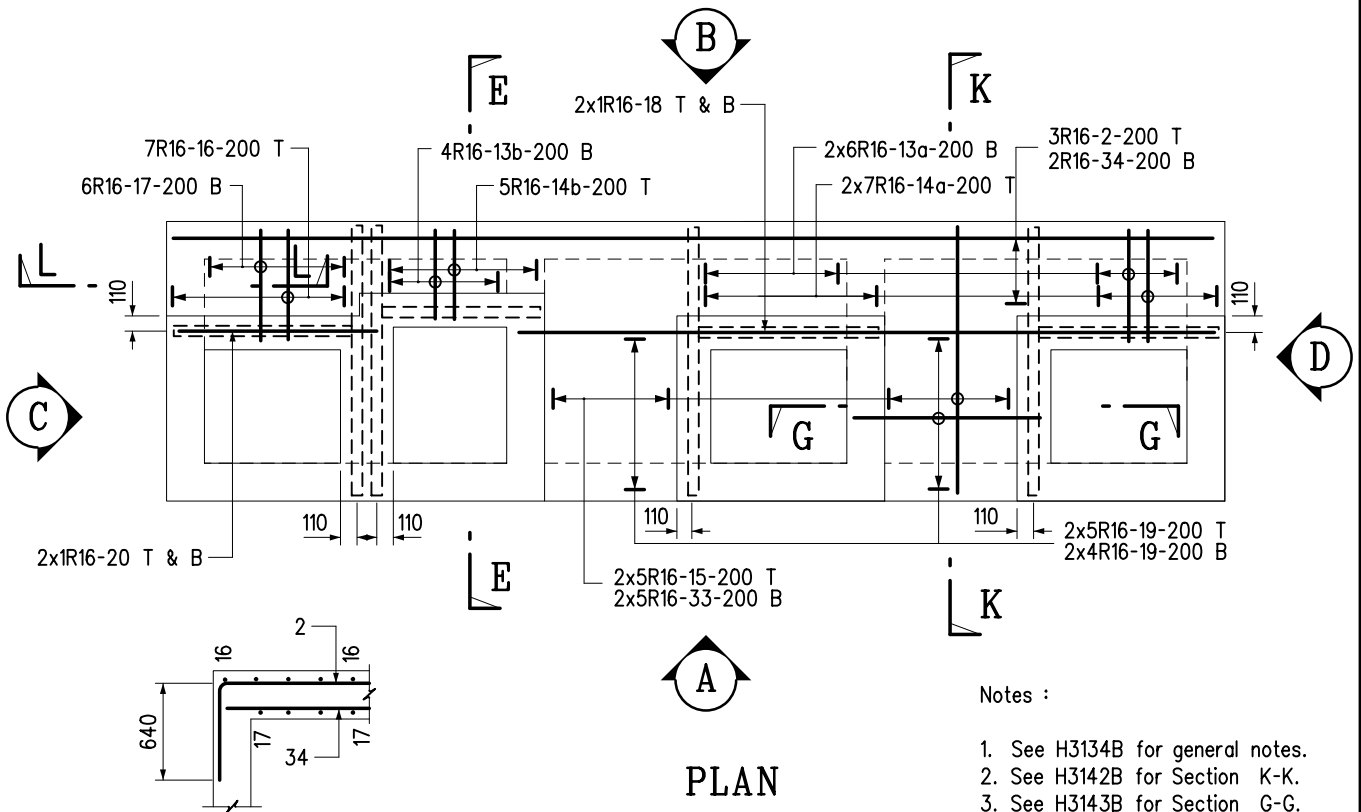


VIEW C

view D similar but opp. handed



SECTION E - E



PLAN

Notes :

1. See H3134B for general notes.
2. See H3142B for Section K-K.
3. See H3143B for Section G-G.

SECTION L - L

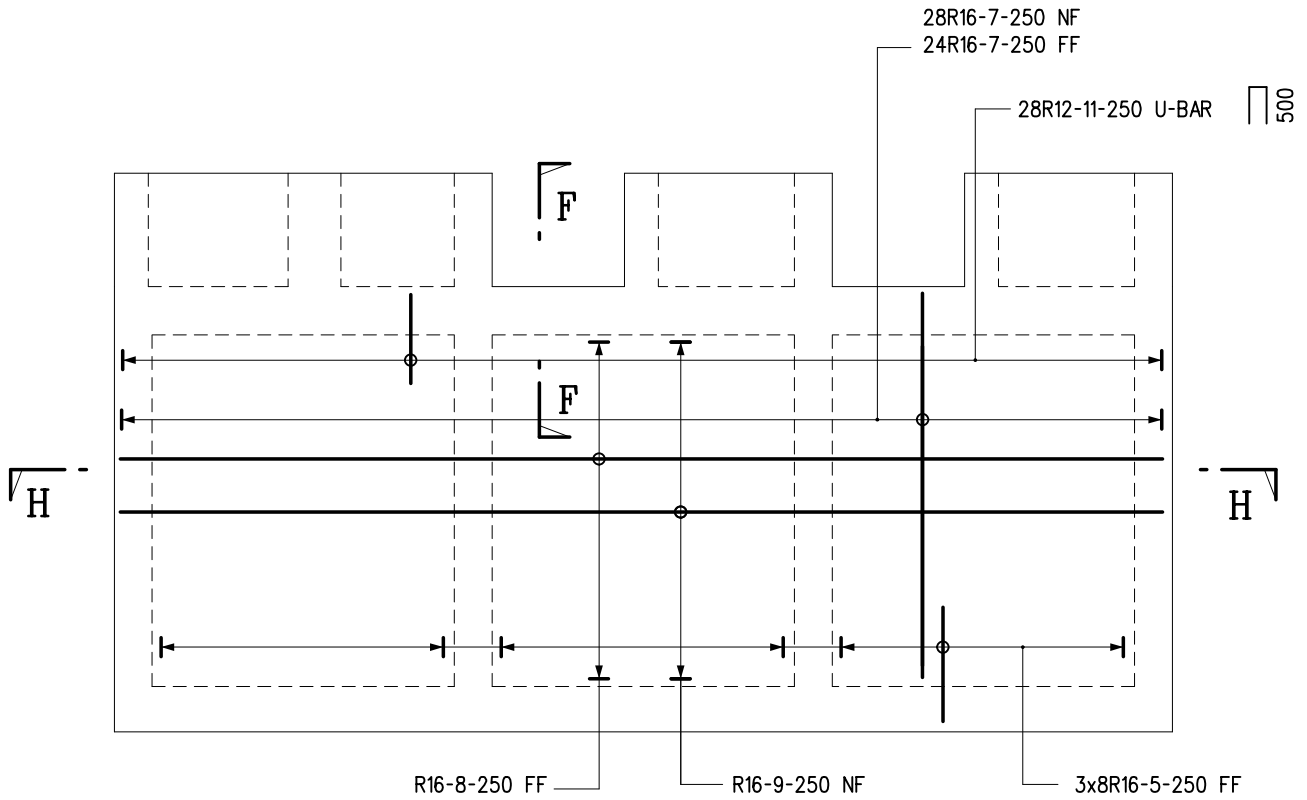
wall bars not shown for clarity

B	General revision		Oct 22
A	General revision		Nov 02
	Former drg. no. H3028/8A with general revision		Jun 94
REF.	REVISION	SIGNATURE	DATE

**PETROL INTERCEPTOR
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TRANSPORT INTERCHANGE
(SHEET 8 OF 11)**

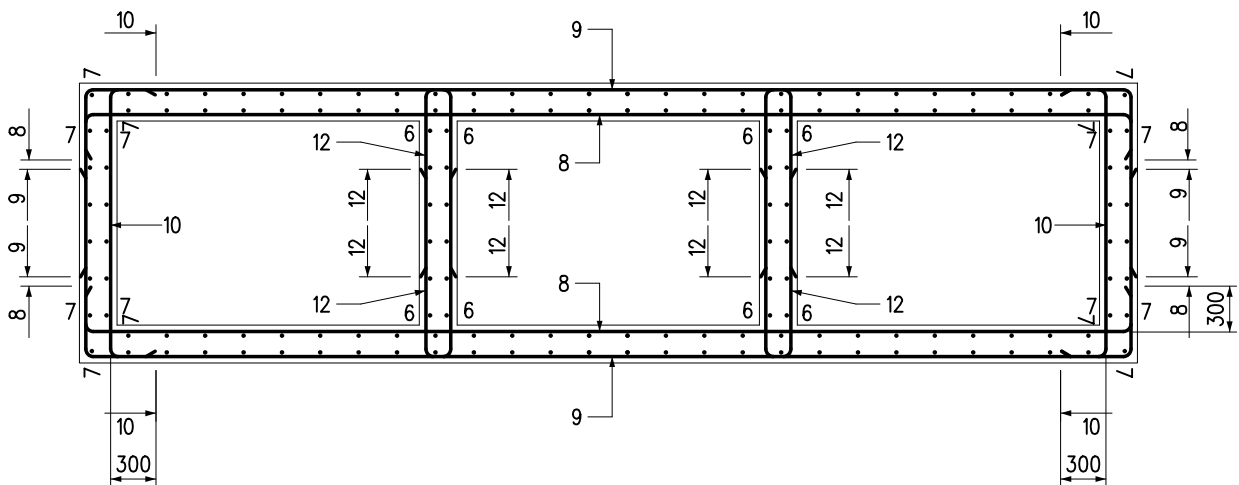
HIGHWAYS DEPARTMENT

REFERENCE	DRAWING No.	CAD
SCALE	H 3141B	
1:50		

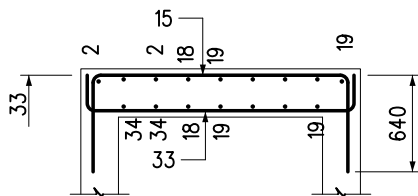


VIEW A

view B similar but opp. handed



SECTION H - H



SECTION K - K

wall bars not shown for clarity

Notes :

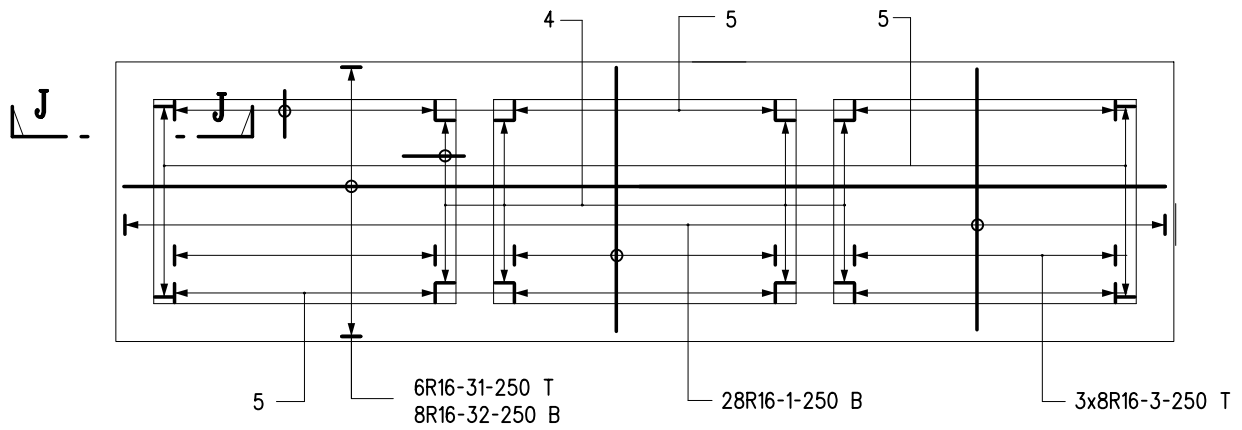
1. See H3134B for general notes.
2. See H3143B for Section F-F.

B	General revision		Oct 22
A	General revision		Nov 02
	Former drg. no. H3028/9A with general revision		Jun 94
REF.	REVISION	SIGNATURE	DATE

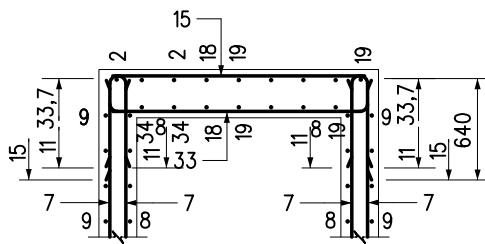
**PETROL INTERCEPTOR
FOR OPEN PUBLIC
TRANSPORT INTERCHANGE
(SHEET 9 OF 11)**

HIGHWAYS DEPARTMENT

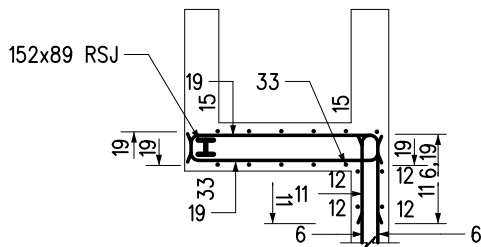
REFERENCE	DRAWING No.	CAD
SCALE	H 3142B	
1 : 50		



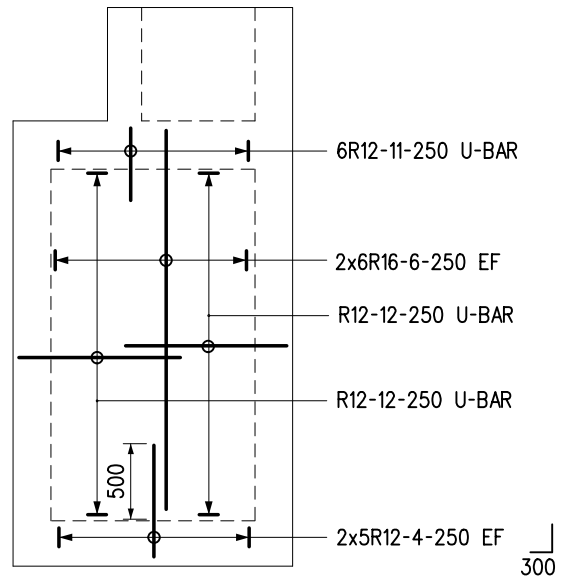
BASE SLAB



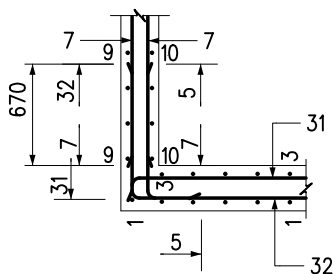
SECTION F - F



SECTION G - G



INTERNAL WALL



SECTION J - J

Notes :

See H3134B for general notes.

B	General revision		Oct 22
A	General revision		Nov 02
	Former drg. no. H3028/10A with general revision		Jun 94
REF.	REVISION	SIGNATURE	DATE

PETROL INTERCEPTOR
FOR OPEN PUBLIC
TRANSPORT INTERCHANGE
(SHEET 10 OF 11)

HIGHWAYS DEPARTMENT

REFERENCE

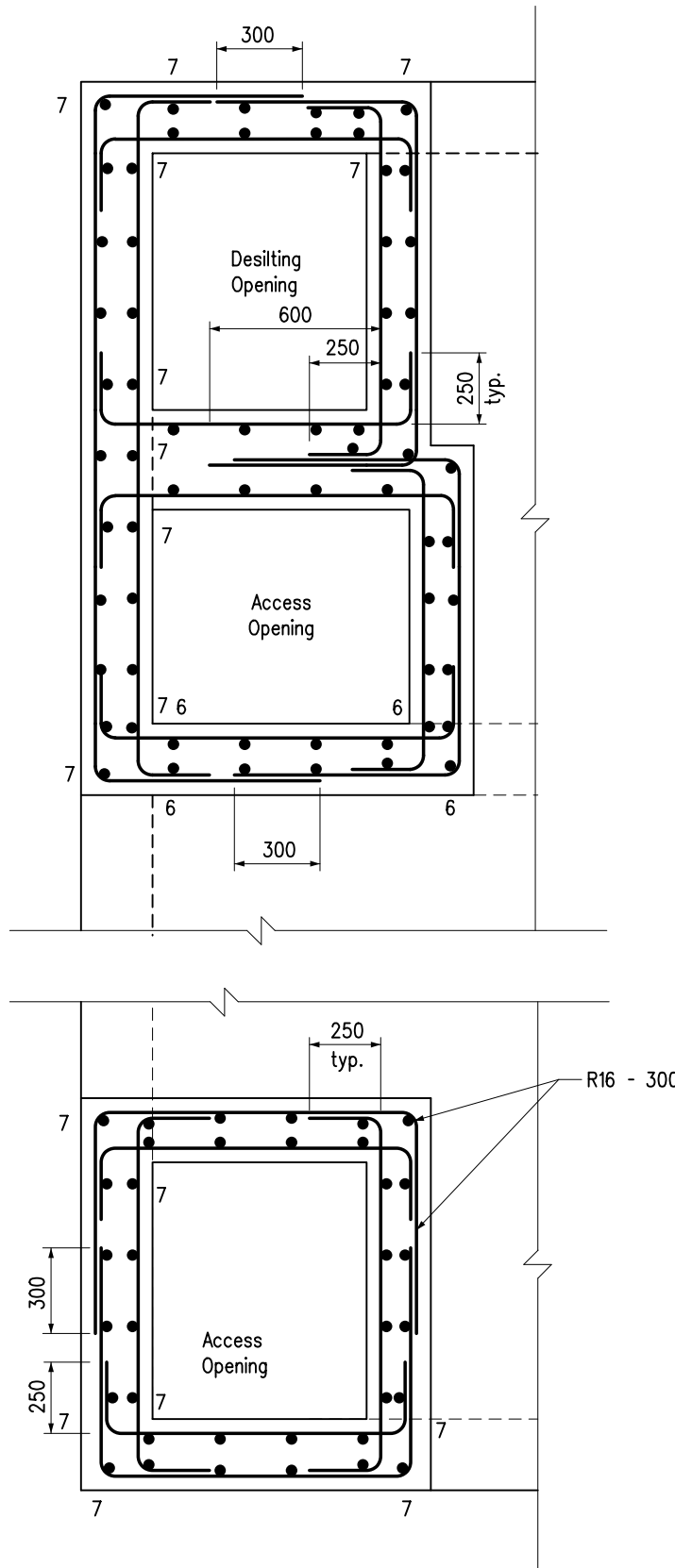
DRAWING No.

CAD

SCALE

1:50

H 3143B



Notes :

1. See H3134B for general notes.
2. All horizontal and vertical bars are R16 at 300 c/c except otherwise specified.
3. Bars with mark 6 and 7 are bars from walls in chambers below shafts (see Sect. H-H drg. no. H3142B)

SECTIONAL PLANS

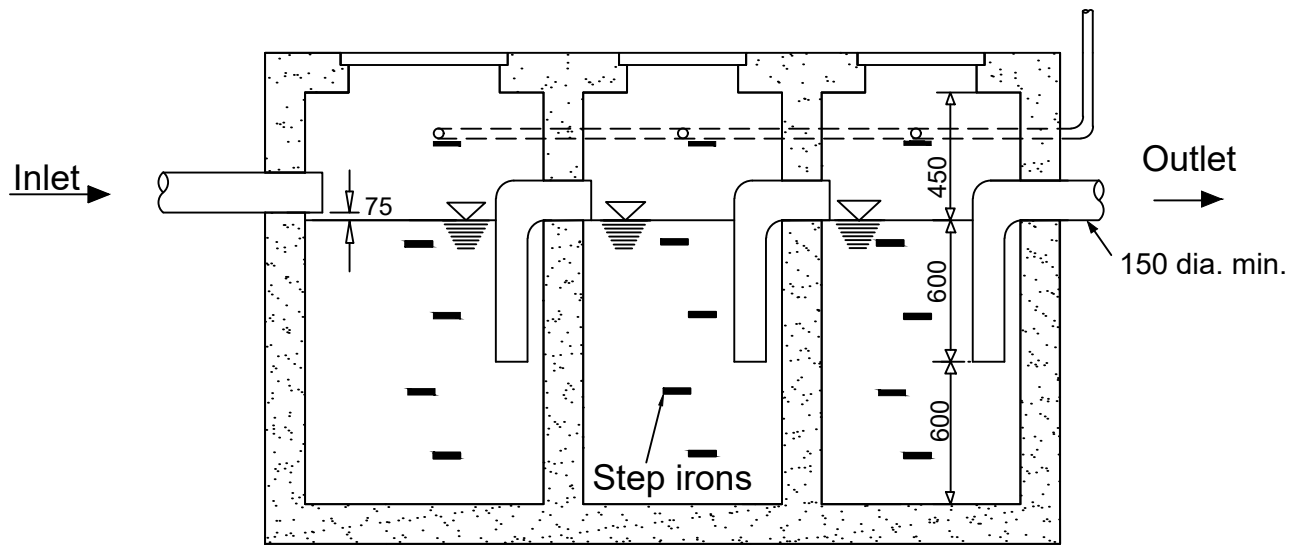
reinforcement details for access shafts

B	General revision		Oct 22
A	General revision		Nov 02
	New issue		Jun 94
REF.	REVISION	SIGNATURE	DATE

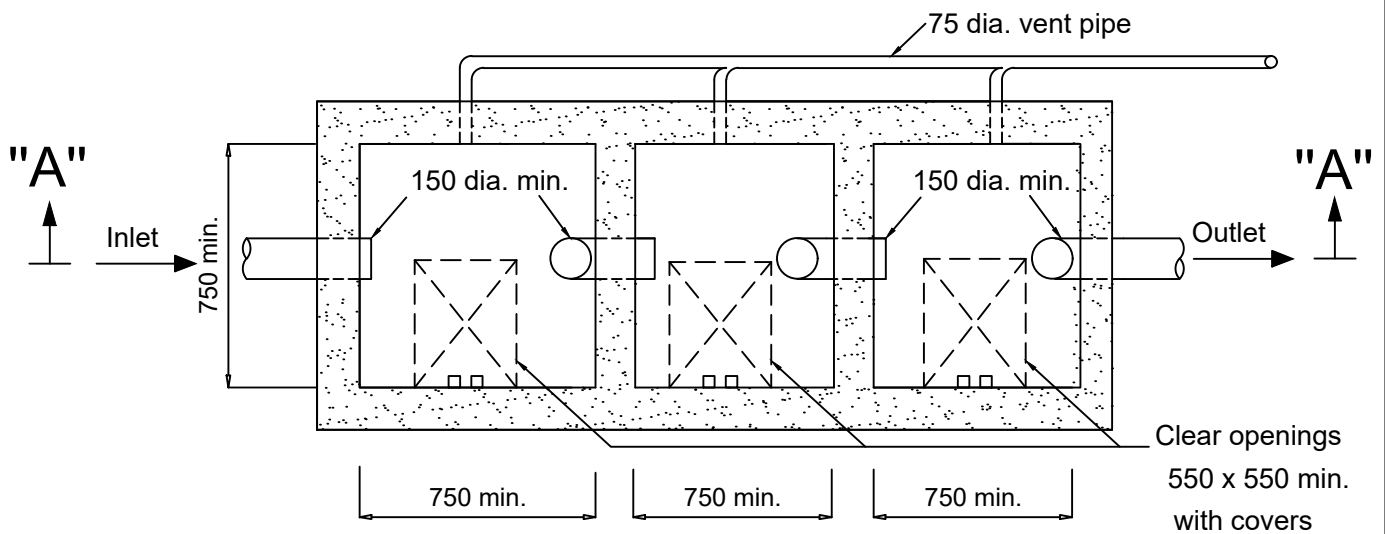
**PETROL INTERCEPTOR
FOR OPEN PUBLIC
TRANSPORT INTERCHANGE
(SHEET 11 OF 11)**

HIGHWAYS DEPARTMENT

REFERENCE	DRAWING No.	CAD
SCALE	H 3144B	
1 : 25		



SECTION A-A



PLAN

Note:

1. All dimensions are in millimetres (mm)

TYPICAL DETAILS OF
A PETROL INTERCEPTOR

DRAWING NO.
EP 50/D1/1/01

DATE
1/23

SCALE
NTS

ENVIRONMENTAL
PROTECTION
DEPARTMENT
HONG KONG

