Alpha
Engineering Consultant
2 ALEXANDRA ROAD, #03-03 DELTA HOUSE, SINGAPORE 159919.
TELEPHONE: (65) 276 2228 FACSIMILE: (65) 276 9929

Our Ref: OM-DE/077

23 September 1997

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MEMORANDUM

To : All Engineering Staff

From : Andrew Loh

Subject: **DESIGN CONTROL**
ADDENDUM NO. 1 (SEPTEMBER 1997) TO CODE OF PRACTICE ON SANITARY PLUMBING AND DRAINAGE SYSTEM (3RD EDITION - FEBRUARY 1990 AND 4TH REPRINT - MAY 1997)

Attached is the Addendum to the Code of Practice on Sanitary Plumbing and Drainage System issued by ENV on 5 September 1997.

This Addendum shall be read in conjunction with the current Code of Practice on Sanitary Plumbing and Drainage System **(3rd Edition - February 1990 and 4th Reprint - May 1997)** and shall form part of the Code of Practice.

The changes are to be implemented with immediate effect.

ANDREW LOH

cc TLS/RT]
cc Notice Board] with encl
cc Memo File]

encl

LCT/rr

CODE OF PRACTICE
ON
SANITARY PLUMBING AND DRAINAGE SYSTEM
(3rd Edition -Feb 90 and 4th Reprint - May 97)

ADDENDUM NO. 1
(Sep 1997)

This addendum shall be read in conjunction with the Code of Practice on Sanitary Plumbing and Drainage System (3rd Edition- Feb 90 and 4th Reprint - May 97) and shall form part of the Code of Practice.

S/No.	Part/Page No.	Clause / Appendix / Drawing No	Amendments /corrections
1	Part I /page 1	Clause 1.2	*Insert new* **Clause 1.2** *after Clause 1.1* **-Sanitary drainage system shall be designed to convey only sewage. Rain-water is to be channelled to surface storm-water drain.** ok
2	Part I/ page 4	Clause 6.3	*Replace the existing Clauses 6.3 with the following :* **-Every floor/gully trap intended to receive sullage water shall be located within covered areas and designed such that it will not allow ingress of rain-water into the sanitary drainage system. The floor/gully trap shall be fixed with a frame and a grating at least 5 mm below the paved floor. The floor surrounding such gully trap shall be sloped towards the trap.**
3	Part I/page 4	Clause 6.9	*Replace the existing Clause 6.9 with the following:* **- In accordance with the Vector Control & Research Department's requirement for prevention of mosquito breeding, every floor/ gully trap fixed with perforated cover shall be provided with an approved anti-mosquito device so as to prevent mosquitoes from gaining access to breed in the water seal in the floor/ gully through the holes at the perforated cover.**
4	Part I /page 7	Clause 11.2	*Replace the existing Clause 11.2 with the following:* **- Every wash area shall be constructed in concrete not less than 75mm thick with a curb 75mm by 75mm all round. Rain-water from the surrounding shall not discharge into it.**

s/No.	Part /Page No	Clause / Appendix Drawing No	Amendments /corrections
5	Part I/ page 8	Clause 13.1	*Replace the existing Clause 13.1 with the following:* (a)-All sullage water from covered wash areas, refuse chutes, bin centres, markets, basement car parks and other like places of any building shall be discharged into the sewerage system. Floor/gully trap shall be provided in such areas and connected to an inspection chamber. For basement car parks, the area shall be laid in falls to floor/gully trap so that the run is not more than 5 metres to each floor/gully trap. Where additional drainage outlets are required, floor wastes may be provided. In such cases, the floor wastes shall be connected to floor traps before connection to the sanitary plumbing and drainage system. At the entrance to the areas as mentioned above, a ramp shall be provided to prevent ingress of rain-water from the surrounding floor into the sewerage system. (b)-The drainage system serving common corridors, common verandahs, covered play areas/ void decks (except wash areas), multi-storey car parks (except car washing areas), open car park ramp, pump islands at petrol stations, open shower points in public and private swimming pools, open areas in back-yards/courtyards/airwells and other uncovered paved areas within premises where rain-water flows are expected shall be connected to surface storm-water drains.
6	Part II / page 10	Clause 1.3	*Replace* " fourteen storeys" *with* "twenty five storeys"
7	Part II / page 11	Clause 2.3.1	*Replace* " fourteen storeys" *with* "twenty five storeys"
8	Part II/ page 11	Clause 2.3.5	*Insert* "fifteenth, eighteenth and twenty-first " *after* "twelfth"
9	Part II/ page 13	Clause 3.2.13	*Insert new* Clause 3.2.13 *after Clause 3.2.13* - Every discharge pipe shall also not be located in places where it can give rise to nuisance conditions during maintenance. In particular, for buildings under the Land Titles (Strata) Act, discharge pipes shall not run above bedrooms, living room, dining room or kitchen areas of the strata unit below. Where such routing cannot be avoided, suitably designed service duct to allow access for maintenance shall be provided.
10	Part II/ page 13	Clause 3.3.5	*Insert new* Clause 3.3.5 *after Clause 3.3.4* -In the case of multi-storey buildings of 7 storeys or higher, an additional cross venting pipe shall be provided between the main and secondary discharge stack at a position of at least 300mm above the finished first storey floor level.

No.	Part /Page No	Clause / Appendix Drawing No	Amendments /corrections
11	Part II / page 14	Clause 3.5.3	*Insert* " of 7-storey or higher " *after* "multi-storey buildings"
12	Part III/ page 17	Clause 3.1.1	*Replace the existing* Clause 3.1.1 *with the following:* -Every water closet pan shall be of a design suitable for use with low capacity WC flushing cisterns of up to 4.5 litres maximum capacity and shall conform to the functional requirements and tests in the relevant Singapore Standards.
13	Part III / page 18	Clause 3.4.2	*Insert new* Clause 3.4.2 *after Clause 3.4.1* -Every wall hung water closet pans for use in public toilets shall be of a design suitable for use with 6-litre flush valves and shall conform to the functional requirements and tests in the relevant Singapore Standards.
14	Part III / page 19	Clause 4.1.7	*Amend* "750 mm" *to* "600 mm"
15	Part III / page 19	Clause 4.1.8	*Replace the existing* Clause 4.1.8 *with the following:* -Every individual urinal shall be operated by flush valve which must be adjusted to give a flush of not less than 1.5 litres and not more than 2.5 litres.
16	Part III / page 19	Clause 4.1.12	*Insert new* Clause 4.1.12 *after Clause 4.1.11* -Individual urinal shall be more than 300 mm wide and the collection area shall project from the wall by at least 300 mm.
17	Part III/ page 20	Clause 5.1.1	*Replace the existing* Clause 5.1.1 *with the following:* -Every flushing cistern serving a water closet pan shall be of the low capacity type capable of delivering an effective flush of volume not more than 4.5 litres and shall conform to the specifications, tests and installation requirements in the relevant Singapore Standards.
18	Part III / page 20	Clause 5.1.3	*Insert* " except when it is of a self supporting close-coupled water closet suite" *after* "Every flushing cistern"
19	Part III / page 20	Clause 5.3.1	*Delete* Clause 5.3.1
20	Part III/ page 21	Clause 6.2.3	*Replace the existing* Clause 6.2.3 *with the following:* -Every flush valve must be so adjusted to give a flush of not less than 1.5 litres and not more than 2.5 litres of water for individual urinal and not more than 6 litres of water for water closet pan. The flush volume for each water closet pan shall be adjusted to the minimum required for effective cleansing of the pan.

...o.	Part/Page No	Clause / Appendix Drawing No	Amendments /corrections
21	Part III/ page 22	Clause 6.2.11	*Insert the following new clauses after Clause 6.2.10* - All automatic flushing devices shall be activated by sensors. Automatic flushing devices that can be used are either : a) Sensor devices/mechanisms that can activate an approved manual flush valve; or b) A fully integral sensor-operated flush valve.
		Clause 6.2.12	- Each sensor unit shall only operate one flushing device for a sanitary appliance. The sensor unit when installed shall not be affected by the operation of adjacent sensor unit.
		Clause 6.2.13	-The sensor unit shall be firmly installed on the wall fronting the appliance. It should not be supported by the water pipe.
		Clause 6.2.14	-The recommended height of sensor unit shall be at 750 mm above the rim level for oriental water closet pan and at 500 mm above the rim level for other types of water closet pan and it shall not be affected by the WC seat and cover when they are at raised position.
22	Part III / page25	Clause 10.12	*Insert new* Clause 10.12 *after Clause 10.11:* - In accordance with the Vector Control & Research Department's requirement for prevention of mosquito breeding, every floor/ gully trap fixed with perforated cover shall be provided with an approved anti-mosquito device so as to prevent mosquitoes from gaining access to breed in the water seal in the floor/ gully through the holes at the perforated cover.
23	Part III / page 25	Clause 11.2	*Replace the existing* Clause 11.2 *with the following:* - The minimum internal diameter of the floor waste shall be 50 mm. However, where the floor waste also serve a waste sanitary appliance, the minimum internal diameter shall be 75 mm.