

## **Appendix 6-1**

# **Catalogue of Automatic Vehicle Washing Machine**



## Automatic Drive Through Vehicle Washing Systems

Wickham supply and install Automated Vehicle Washing systems to a wide range of industrial users. We have a large number of products that are tailor made to suit our client's exact requirements. At Wickham we believe in building long term relationships with our clients and fully understanding their needs.

### Why use Wickham?

All of our systems are built around brushless washing ensuring that your vehicles are as clean as they can possibly be. In turn this will allow for effective cleaning on vehicles of all shapes and sizes. Maintenance costs are lower than traditional brush washes and there is less risk to damage irregular shaped vehicles within your fleet.

Below is a brief overview of our product range:

### Jet Clense

The Jet Clense is the best selling commercial washer we offer and is designed to clean vehicles of all shapes and sizes. The Jet Clense has the following advantages:

- Cleans vehicles of all shapes and sizes
- Oscillating High Power Water Jets
- All jets index towards the Front and Rear of Vehicles
- Completely Automatic
- Brushless system for easy installation and low maintenance costs



### Jet Wash

The Jet Wash is a more simplified version of the Jet Clense and operates with fixed jets rather than oscillating jets. This is a much simpler design, it is easy to operate and again is a brushless system.

### Hurricane

The Hurricane is an automatic drive through under body and wheel wash that operates with oscillating booms, the first and only company to offer this type of system. We have either the single Hurricane or Double Hurricane for maximum effectiveness.



### Monsoon



The monsoon is an extra heavy duty under body wash and is designed to deal with particularly arduous conditions. It is designed around high power jets and a unique oscillating action to provide the ultimate in under body washing.



## Other

We also supply a number of pressure washing and hand held systems and can design specific systems tailored to a clients individual requirements. For more concise information and specifications of the above systems please refer to the full brochures, available on request.

## Recycling Systems

Installing a 'TOTAL' water reclaim system to your wash system can reduce your mains water costs by upto 95%, alleviate drainage issues, allow washing during drought restrictions, help with any planning permission and reduce impact on the environment.

We can also supply and install detergent recycling systems using a similar method, saving the use of detergent within the wash process.

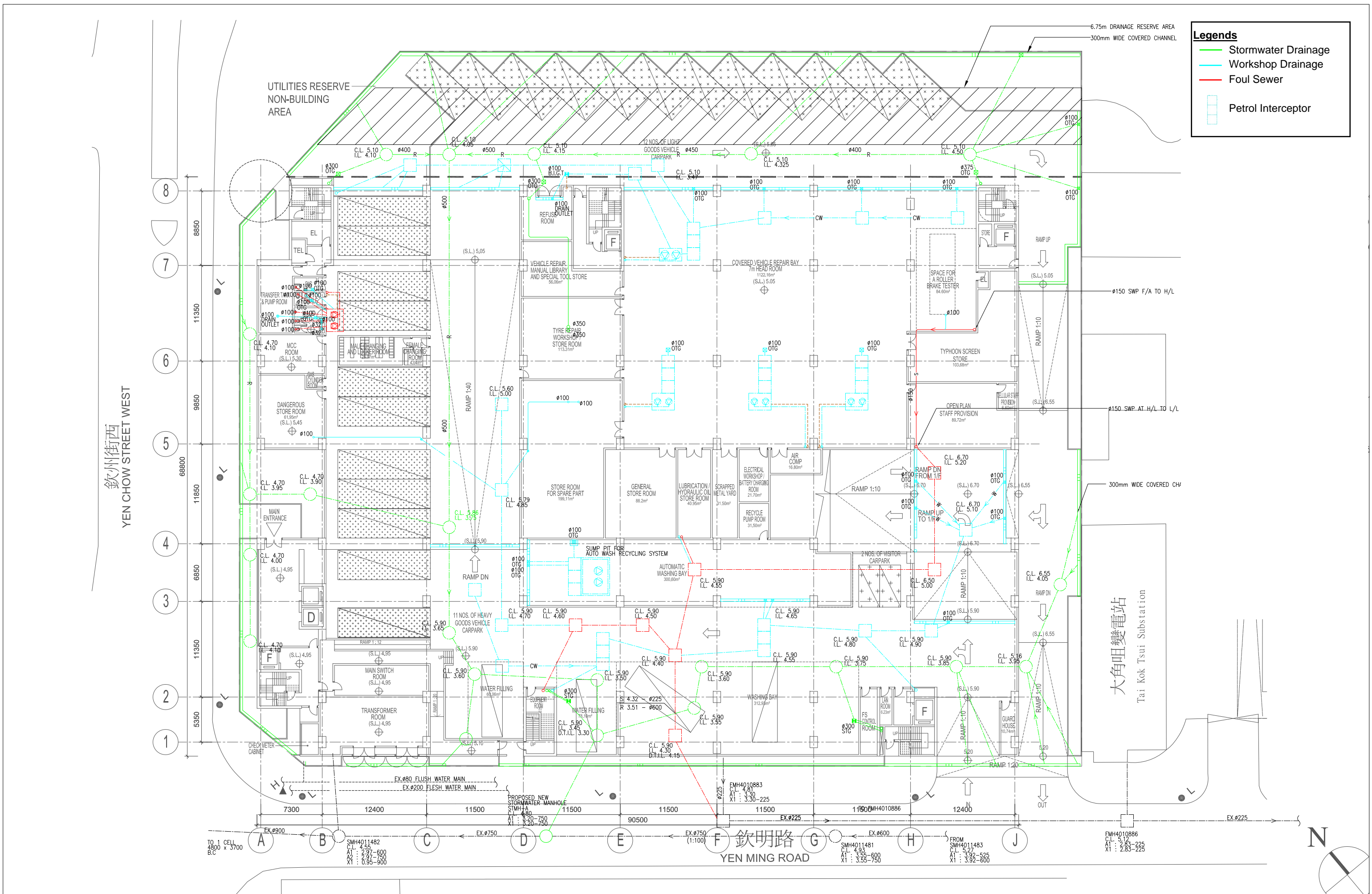


Machine selection process for Underbody washing systems

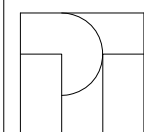
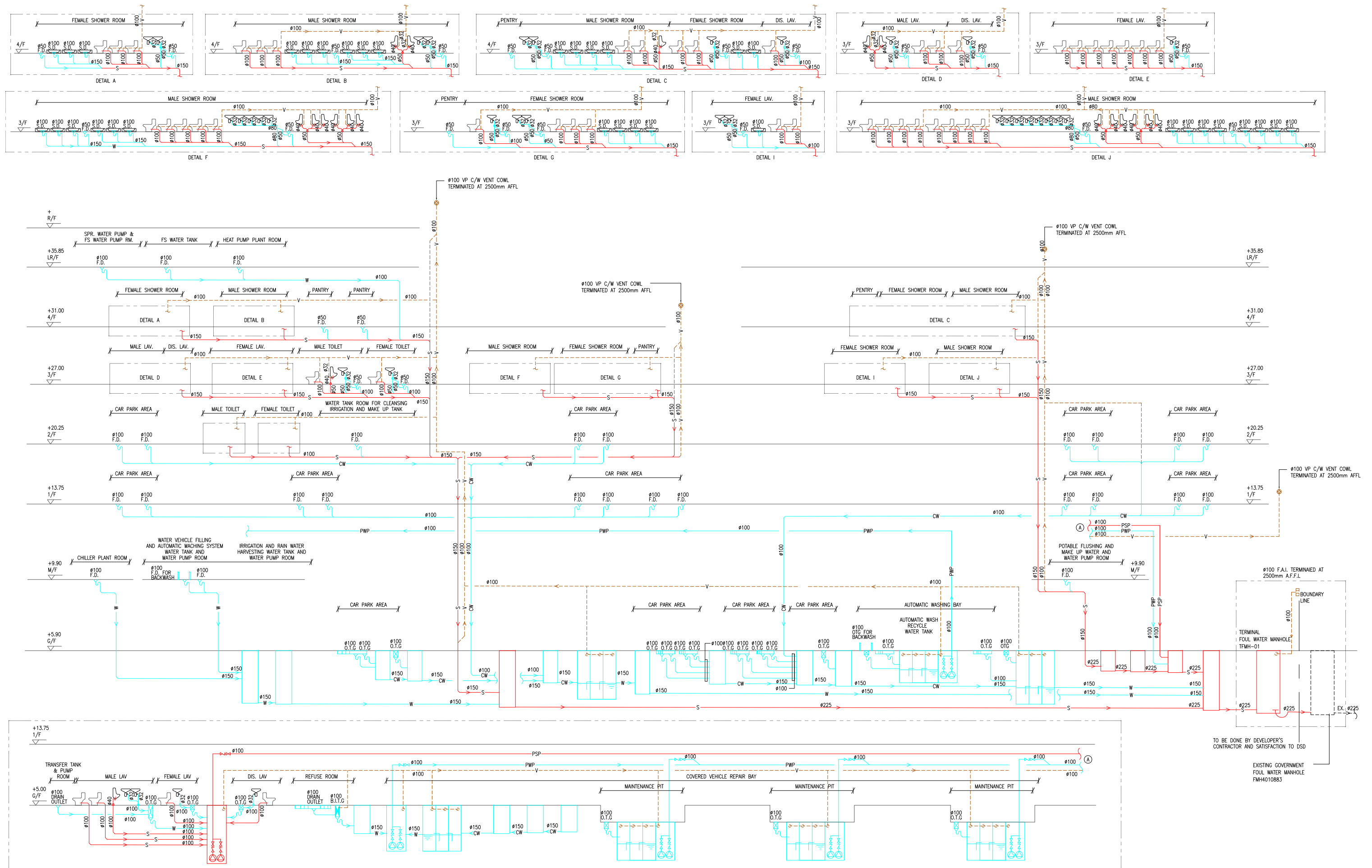
Machine Type	Type of soil to be removed from vehicle	No vehicles leaving site each day	
Hurricane	Sand, light or contaminated soil	Upto 100	
Double Hurricane	As above plus landfill waste deposits and quarry residue	Upto 200	
Monsoon	As above plus clay	Over 200	
Typhoon	As above	Portable above ground structure	

## **Appendix 6-2**

# **Preliminary Layout and Schematic for Foul Water Drainage System**



	P&T(M&E) Ltd.	Project REPROVISIONING OF FEHD SAI YEE STREET ENVIRONMENTAL HYGIENE OFFICES-CUM-VEHICLE DEPOT AT YEN MING ROAD, WEST KOWLOON RECLAMATION AREA	Title DRAINAGE LAYOUT PLAN FOR G/F	Scale 1:400	Designed YKW	Drawn By SLT	Drawing No. 8568/PD/SDR201
				Date 11/2012	Checked KPY	Approved CM	



P&T(M&E) Ltd.

Project  
REPROVISIONING OF FEHD SAI YEE STREET  
ENVIRONMENTAL HYGIENE OFFICES-CUM-VEHICLE DEPOT  
AT YEN MING ROAD, WEST KOWLOON RECLAMATION AREA

Title  
SCHEMATIC DIAGRAM FOR  
FOULWATER DRAINAGE SYSTEM

Scale

Date  
11/2012

Designed

Checked  
KP

Drawn By

Approved  
CM

Drawing No.

8568/PD/SDR101

## **Appendix 6-3**

# **Estimate of Sewage Flow and Hydraulics of Sewerage**

**Estimate of Sewage Generation**

Sewage Source	Approx. No.	Unit Flow Factor (m <sup>3</sup> /d/person)	Estimated Consumption (m <sup>3</sup> /veh)	Average Dry Weather Flow (m <sup>3</sup> /d)	References
Population (Staff and Public) in the Depot (ie. general office and transportation depot use)	850	0.18	/	153	- Population: conservative estimation - Unit Flow Factor: 0.08 for commercial and 0.1 for transportation trade activities from Table T-2 of EPD's Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning v1.0 (2005)
Vehicle Washing (by Automatic Machine) Daily	95	/	1.00	100	- No. of vehicles: FEHD operational need - Estimated consumption: by potential supplier
Vehicle Washing (Manual) Daily	54	/	0.17	9.2	- No. of vehicles: FEHD operational need - Estimated consumption: estimate by E&M engineer
Total ADWF (m <sup>3</sup> /d)				262	
Peaking Factor				8	- Table T-5 of EPD's Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning v1.0 (2005)
Peak Wet Weather Flows (PWWF) (m <sup>3</sup> /d)				2,097	
PWWF (L/s)				24.3	

**Estimate of Hydraulic of Sewerage**

Upstream M/H	Downstream M/H	Pipe Size (mm)	Length (m)	US IL (mPD)	DS IL (mPD)	Gradient (1:x)	Pipe Capacity (L/s)	Contribution by the Project (%)	Sufficient Capacity?
FMH4010883	FMH4010886	225	49	3.30	2.83	104.3	39.8	61.0	Yes
FMH4010886	FMH4010884	225	28	2.83	2.38	62.2	51.6	47.0	Yes
FMH4010885	FMH4010849	375	49	2.95	2.70	196.0	113.7	21.4	Yes
FMH4010849	FMH4010850	375	31	2.70	2.20	62.0	202.4	12.0	Yes
FMH4010850	FMH4010851	375	14	1.30	0.91	35.9	266.1	9.1	Yes
FMH4010851	FMH4010852	600	9	0.90	0.81	100.0	555.6	4.4	Yes
FMH4010852	FGJ4004100	600	4.5	0.80	0.75	90.0	585.7	4.1	Yes
FGJ4004100	FMH4046600	600	114	0.75	0.26	232.7	363.9	6.7	Yes
FMH4046600	FMH4046601	600	48	0.26	0.01	192.0	400.7	6.1	Yes
FMH4046601	FMH4046602	600	43	0.01	-0.38	110.3	529.1	4.6	Yes
FMH4046602	FMH4046603	600	26	-0.38	-0.62	108.3	533.8	4.5	Yes
FMH4046603	FMH4010843	600	6	-0.62	-4.20	1.7	4,298.4	0.6	Yes
FMH4010843	West Kowloon No.1 Pumping Station	2,100	-----	-----	-----	-----	-----	-----	Yes