

Our Ref. : DD 109 Lot 1191
Your Ref. : TPB/A/YL-KTN/1184

The Secretary,
Town Planning Board,
15/F, North Point Government Offices,
333 Java Road,
North Point, Hong Kong

By E-mail

28 January 2026

Dear Sir,

3rd Further Information

Proposed Temporary Open Storage of Construction Materials and Machinery with Ancillary Facilities and Associated Filling of Land and Pond for a Period of 3 Years in "Agriculture" Zone, Lots 1191 (Part), 1194, 1195, 1196, 1197 S.A (Part), 1197 RP (Part), 1198 S.C (Part), 1198 RP (Part), 1205 RP (Part) and 1208 in D.D. 109 and Adjoining Government Land, Kam Tin, Yuen Long, New Territories

(S.16 Planning Application No. A/YL-KTN/1184)

We write to submit further information with a response-to-comment table and a revised drainage proposal in response to comments from the Chief Engineer/Mainland North, Drainage Services Department on the captioned application.

Should you require more information regarding the application, please contact our Mr. Danny NG at [REDACTED] or the undersigned at your convenience. Thank you for your kind attention.

Yours faithfully,

For and on behalf of
R-riches Planning Limited



Christian CHIM
Town Planner

cc DPO/FSYLE, PlanD

Response-to-Comment (RtC)

Proposed Temporary Open Storage of Construction Materials and Machinery with Ancillary Facilities and Associated Filling of Land and Pond for a Period of 3 Years in “Agriculture” Zone, Lots 1191 (Part), 1194, 1195, 1196, 1197 S.A (Part), 1197 RP (Part), 1198 S.C (Part), 1198 RP (Part), 1205 RP (Part) and 1208 in D.D. 109 and Adjoining Government Land, Kam Tin, Yuen Long, New Territories

(S.16 Application No. A/YL-KTN/1184)

(i) An RtC table:

1. Comments of the Chief Engineer/Mainland North, Drainage Services Department (CE/MN, DSD)		
A. Specific comments		
(a)	The ground to the north of the application site is generally higher. According to the topography around the subject site, external catchment area shall be greater than the one adopted in the submitted hydraulic calculation. The applicant should update hydraulic calculation.	<p>Site photos of the surroundings showing the general fall of external area are appended for your review. Please refer to the site photos enclosed at Annex 1.</p> <p>Kindly note that the topography has changed and the application site (the Site) is generally higher than the area to the north. The external catchment checked in the calculation is considered conservative for your perusal.</p>
(b)	Cross sections showing the proposed drainage facilities and existing and proposed ground levels of the captioned site with respect to the adjacent areas should be given.	<p>Please note that the existing level is proposed to be maintained and not more than 200 mm concrete in thickness will be used for the formation of circulation space and open storage space when required.</p> <p>The cross sections are shown in Figure 5 of the revised drainage proposal, which is enclosed at Annex 2.</p>
(c)	According to the topography, existing ground levels of the application site should be much lower than that mentioned in the submission. The applicant should clarify existing ground levels of the application site and depth of the proposed land filling works in the submission.	<p>Referring to (a) above, kindly note that topography has been changed and the Site is generally higher than the surrounding area. Please refer to the site photos at Annex 1.</p> <p>Under the current proposal, the applicant would only fill not more than 200 mm concrete in thickness for the formation of circulation space and open storage space when required.</p>

(d)	The proposal should indicate how the runoff (the flow direction) within the site and from the adjacent areas would be discharged to the proposed drainage system.	Please refer to the updated Figure 4 of the revised drainage proposal. For flow direction within the Site, please note the site catchment A1 is considered in calculation of all proposed drain.
(e)	Peripheral surface channels shall be provided along the site boundary to collect the surface runoff accrued on tire application site and to intercept the overland flow from the adjacent lands. It is noted that there is proposed land filling works for the development. Proper surface channels should be provided at the lower platform and wall toe to collect the overland flow to/from adjacent areas.	Referring to (a) above, kindly note that topography has been changed and the Site is generally higher than the surrounding area. Please refer to the site photos at Annex 1 . Under the current proposal, the applicant would only fill not more than 200 mm concrete in thickness for the formation of circulation space and open storage space when required. No major land filling work is anticipated.
(f)	The applicant should demonstrate with hydraulic calculation that the proposed drainage facilities are adequate to collect, convey and discharge the surface runoff accrued on the application site and the overland flow intercepted from the adjacent lands.	Please refer to the calculation at Appendix A of the revised drainage proposal.
(g)	The applicant should provide evidence to support design assumptions adopted for checking capacity of existing 15 m(W) open channel.	Kindly note that the existing nullah is a 15 m (W) trapezoidal government channel which is shown in the record plan. Roughness for concrete-lined channel in fair conditions and gradient of 1 in 500 are assumed.
(h)	The applicant should demonstrate the existing facilities to be discharged to have sufficient capacity to cater for any additional flow generated due to the subject application.	The checking of existing drainage facilities at Appendix A of the revised drainage proposal has been updated. The flow from the application site only occupies less than 0.25% of the capacity of the existing 15 m (W) open channel.
(i)	Deposition of sediment in drainage system should be considered in the hydraulic calculation as per the requirement in Stormwater Drainage Manual (Section 9.3).	The hydraulic calculation at Appendix A of the revised drainage proposal has been updated.
(j)	Standard details should be provided to indicate the sectional details of the proposed catchpits.	Standard details from CEDD standard drawings have been enclosed at Appendix C of the revised drainage proposal.

(k)	Catchpit should be provided where a proposed surface channel changes direction.	Noted.
(l)	Figure 3-2: The applicant should clarify type of the proposed drainage facilities i.e. 'E1'. shown in the schedule.	'E1' refer to standard manhole type E1. Standard drawings are enclosed at Appendix C of the revised drainage proposal.
(m)	The applicant should review hard paved area and unpaved area shown in the submitted hydraulic calculation. According to the topography, paved area should be more than that shown in the submission.	The catchment plan has been updated.
B. General comments		
(n)	The proposed development should neither obstruct overland flow nor adversely affect any existing natural streams, village drains, ditches and the adjacent areas etc.	Noted.
(o)	Where walls or hoarding are erected are laid along the site boundary, adequate openings should be provided to intercept the existing overland flow passing through the site.	100 mm opening from ground level along wall/hoarding or equivalent will be provided where it is erected.
(p)	The existing watercourse within/outside the application site should not be disturbed or interfered with until any necessary diversion works, which have been accepted by the owner of the existing watercourse, have been satisfactorily completed. Such diversion works should be carried out by the applicant at his/her own cost. Moreover, sufficient allowance for – future maintenance of the existing watercourse should be provided.	Noted.
(q)	The applicant is required to rectify the drainage system if they are found to be inadequate or ineffective during operation. The applicant shall also be liable for and shall indemnify claims and demands arising out of damage or nuisance caused by a failure of the drainage system.	Noted.
(r)	The applicant should submit form HBP1 to this Division for application of technical audit for any proposed connection to DSD's drainage facilities.	Noted.

(s)	The applicant should consult DLO/YL and seek consent from the relevant owners for any drainage works to be carried out outside Iris lot boundary before commencement of the drainage works.	Noted.
(t)	For the construction details of the proposed drainage facilities, reference should be made to current CEDD's standard drawings.	CEDD standard drawings are enclosed at Appendix C of the revised drainage proposal.

Annex 1

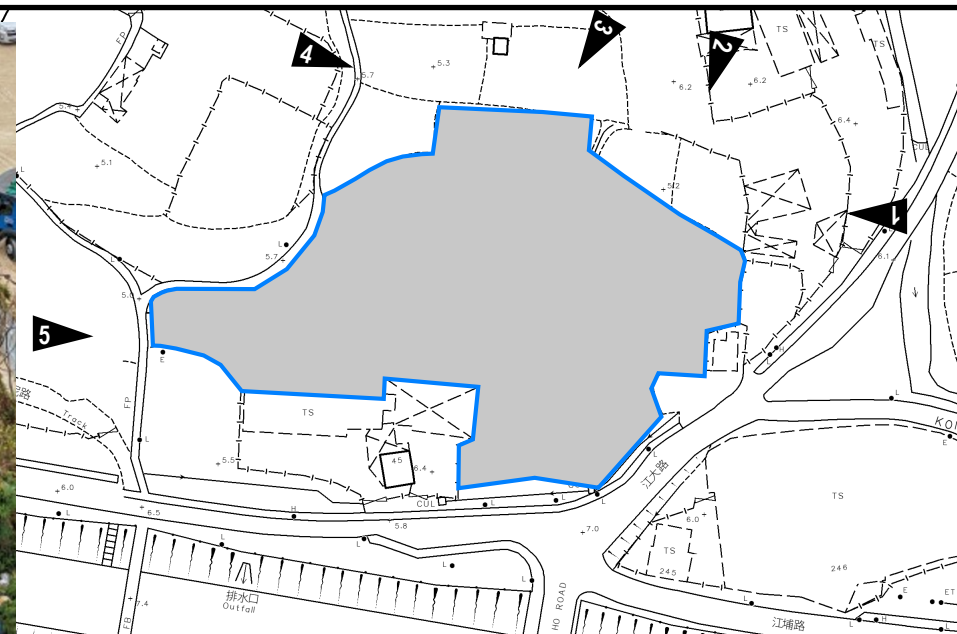
Site photos of the surrounding areas



VIEW 1



VIEW 2



VIEW 3



VIEW 4



VIEW 5

PROJECT:
Proposed Temporary Open Storage of Construction Materials and Machinery with Ancillary Facilities and Associated Filling of Land and Pond for a Period of 3 Years in “Agriculture” Zone

LOCATION:
Various Lots in D.D. 109, Kam Tin, Yuen Long, N.T.

Photos of Surroundings

VER	DESCRIPTION	DATE

Annex 2

Revised drainage proposal

Proposed Temporary Open Storage of Construction Materials and Machinery with Ancillary Facilities and Associated Filling of Land and Pond for a Period of 3 Years in “Agriculture” Zone, Various Lots in D.D. 109, Kam Tin, Yuen Long, N.T.

Drainage Proposal

Jan 2026

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1 Introduction

1.1 Background

- 1.1.1 The applicant seeks planning permission from the Town Planning Board (the Board) under Section (S.) 16 of the Town Planning Ordinance (Cap. 131) to use Various Lots in D.D. 109, Kam Tin, Yuen Long, New Territories (the Site) for 'Proposed Temporary Open Storage of Construction Materials and Machinery with Ancillary Facilities and Associated Filling of Land and Pond for a Period of 3 Years'.
- 1.1.2 This report aims to support the development in drainage aspect.

1.2 Application Site

- 1.2.1 The application site is situated at the north of Chi Ho Road. It has an area of approx. 6,087 m². The site location is shown in **Figure 1**.
- 1.2.2 The existing site is mostly unpaved. The existing site levels are approx. +6.5 to +7.1 mPD. For formation of circulation space and open storage purpose, minor site formation (not more than 200mm) concrete to be applied at south portion of the site.
- 1.2.3 According to DSD record, there is an existing 15m width trapezoidal channel connected to the site by existing 750mm pipes. **Figure 2** indicates the existing drainage system of the area.

2 Development Proposal

2.1 The Proposed Development

2.1.1 The total site area is approximately 6,087 m². The catchment plan is shown in **Figure 4**.

Proposed Development Area (Approx.)	
Total Site Area (m ²)	6,087
Paved Area after Development (m ²)	1,874
Unpaved Area after Development (m ²)	4,213
Assume all 6,087 m ² area to be paved for assessment purpose	

Table 1 – Site Development Area

3 Assessment Criteria

3.1.1 The Recommended Design Return Period based on Flood Level from SDM (Table 10) is adopted for this report. The recommendation is summarized in **Table 2** below.

Description	Design Return Periods
Intensively Used Agricultural Land	2 – 5 Years
Village Drainage Including Internal Drainage System under a polder Scheme	10 Years
Main Rural Catchment Drainage Channels	50 Years
Urban Drainage Trunk System	200 Years
Urban Drainage Branch System	50 Years

Table 2– Design Return Periods under SDM

3.1.2 The proposed drainage system intended to collect runoff from internal site and external catchment. 1 in 50 years return period is adopted for drainage design.

3.1.3 Stormwater drainage design will be carried out in accordance with the criteria set out in the Stormwater Drainage Manual published by DSD. The proposed design criteria to be adopted for design of this stormwater drainage system and factors which have been considered are summarised below.

1. Intensity-Duration-Frequency Relationship – The Recommended Intensity-Duration-Frequency relationship is used to estimate the intensity of rainfall. It can be expressed by the following algebraic equation.

$$i = \frac{a}{(t_d + b)^c}$$

The site is located within the HKO Zone. Therefore, for 50 years return period, the following values are adopted.

a	=	505.5
b	=	3.29
c	=	0.355

(Corrigendum No.1/2024)

The development is proposed for temporary use for a period of 3 years. 11.1% rainfall increase due to climate change is considered.

2. The peak runoff is calculated by the Rational Method
i.e. $Q_p = 0.278CiA$

where	Q_p	=	peak runoff in m ³ /s
	C	=	runoff coefficient (dimensionless)
	i	=	rainfall intensity in mm/hr
	A	=	catchment area in km ²

3. The run-off coefficient (C) of surface runoff are taken as follows:

1. Paved Area: C = 0.95
2. Unpaved Area: C = 0.35

4. Manning's Equation is used for calculation of velocity of flow inside the channels:

$$\text{Manning's Equation: } v = \frac{R^{\frac{1}{6}}}{n} R^{\frac{1}{2}} S_f^{\frac{1}{2}}$$

Where,

V = velocity of the pipe flow (m/s)

S_f = hydraulic gradient

n = manning's coefficient

R = hydraulic radius (m)

5. Colebrook-White Equation is used for calculation of velocity of flow inside the pipes:

$$\text{Colebrook-White Equation: } \underline{v} = -\sqrt{32gRS} \log \log \left(\frac{k_s}{14.8R} + \frac{1.255v}{R\sqrt{32gRS_f}} \right)$$

where,

V	=	velocity of the pipe flow (m/s)
S _f	=	hydraulic gradient
k _f	=	roughness value (m)
v	=	kinematics viscosity of fluid
D	=	pipe diameter (m)
R	=	hydraulic radius (m)

4 Proposed Drainage System

4.1. Proposed Channels

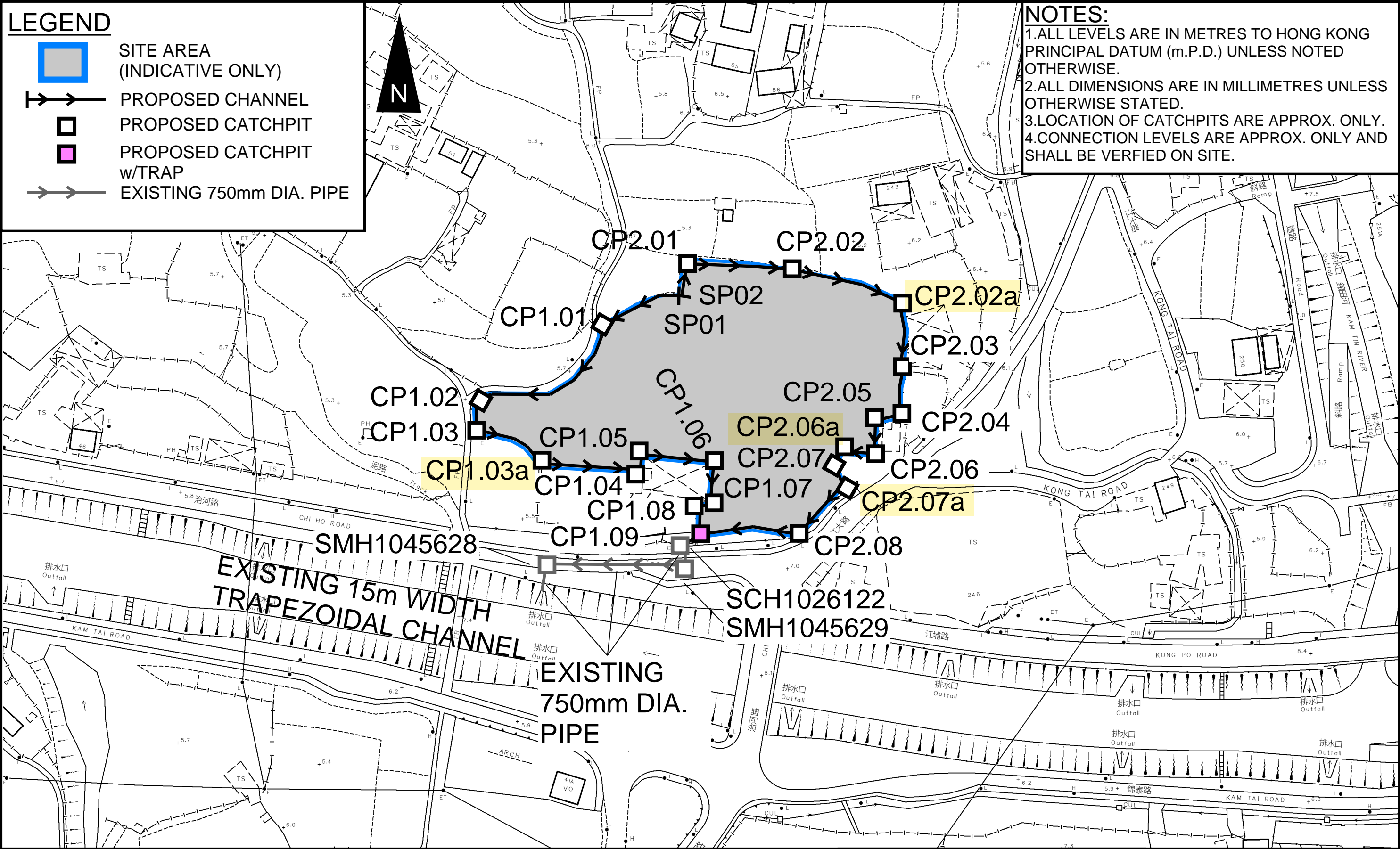
- 4.1.1 Proposed Channels are designed for collection of runoff for internal and external catchment. They are proposed to discharge to existing 15 m trapezoidal channel by existing 750mm pipes in between. The 15 m trapezoidal channel would eventually discharge to Kam Tin River. The utilization of the existing 15 m trapezoidal channel due to the development is about 0.21% according to checking in **Appendix A**.
- 4.1.2 The design calculations of proposed UChannel are shown in **Appendix A**.
- 4.1.3 The alignment, size, gradient and details of the proposed drains are shown in **Figure 3**. The catchment plan is shown in **Figure 4**.
- 4.1.4 Reference Drawings are shown in **Appendix B** for reference.

5 Conclusion

- 4.1.1 Drainage review has been conducted for the Proposed Development. The surface runoff will be collected by the proposed drains and discharged to existing trapezoidal channel and eventually to Kam Tin River.
- 4.1.2 With implementation of the above drainage system, no unacceptable drainage impact is anticipated.

- End of Text -

FIGURES



DRAINAGE SCHEDULE

US MH/PIT	DS MH/PIT	US GL	DS GL	Size mm	Gradient 1 in	Type	US IL	DS IL	U/S MH/PIT TYPE #	Remark
SP01	CP1.01	6.5	6.5	750	400	UC	5.75	5.69	SP	#SP: Start Point
CP1.01	CP1.02	6.5	6.5	750	400	UC	5.69	5.57	CP	
CP1.02	CP1.03	6.5	6.5	750	300	UC	5.57	5.54	CP	
CP1.03	CP1.03a	6.5	6.5	750	300	UC	5.54	5.47	CP	
CP1.03a	CP1.04	6.5	6.5	750	300	UC	5.47	5.37	CP	
CP1.04	CP1.05	6.5	6.5	750	300	UC	5.37	5.35	CP	
CP1.05	CP1.06	6.5	6.5	750	300	UC	5.35	5.28	CP	
CP1.06	CP1.07	6.5	7.1	750	200	UC	5.28	5.22	CP	
CP1.07	CP1.08	7.1	7.1	750	200	UC	5.22	5.21	E1	
CP1.08	CP1.09	7.1	7.1	750	200	UC	5.21	5.17	E1	
CP1.09	SCH1026122	7.1	6.5	750	95	UC	5.17	5.11	E1	
SCH1026122	SMH1045629	6.5	6.1	750	95	UC	4.19	4.14	Existing	
SMH1045629	SMH1045628	6.1	6.0	750	95	UC	4.11	3.69	Existing	
SMH1045628	Existing Trapezoidal Channel	6.0	6.0	750	95	UC	3.69	3.60	Existing	
SP02	CP2.01	6.5	6.5	750	400	UC	5.75	5.73	SP	
CP2.01	CP2.02	6.5	6.5	750	400	UC	5.73	5.65	CP	
CP2.02	CP2.02a	6.5	6.5	750	350	UC	5.65	5.56	CP	
CP2.02a	CP2.03	6.5	6.5	750	350	UC	5.56	5.50	CP	
CP2.03	CP2.04	6.5	6.5	750	350	UC	5.50	5.46	CP	
CP2.04	CP2.05	6.5	6.5	750	350	UC	5.46	5.44	CP	
CP2.05	CP2.06	6.5	6.5	750	350	UC	5.44	5.41	CP	
CP2.06	CP2.06a	6.5	7.1	750	350	UC	5.41	5.39	CP	
CP2.06a	CP2.07	7.1	7.1	750	350	UC	5.39	5.37	CP	
CP2.07	CP2.07a	7.1	7.1	750	350	UC	5.37	5.36	E1	
CP2.07a	CP2.08	7.1	7.1	750	350	UC	5.36	5.30	E1	
CP2.08	CP1.09	7.1	7.1	750	350	UC	5.30	5.22	E1	

E1: MANHOLE TYPE E1 AS PER DSD STANDARD DRAWING DS 1080

PROJECT:

Proposed Temporary Open Storage of Construction Materials and Machinery with Ancillary Facilities and Associated Filling of Land and Pond for a Period of 3 Years in "Agriculture" Zone

TITLE

DRAINAGE SCHEDULE

FIGURE NUMBER

FIGURE 3-2

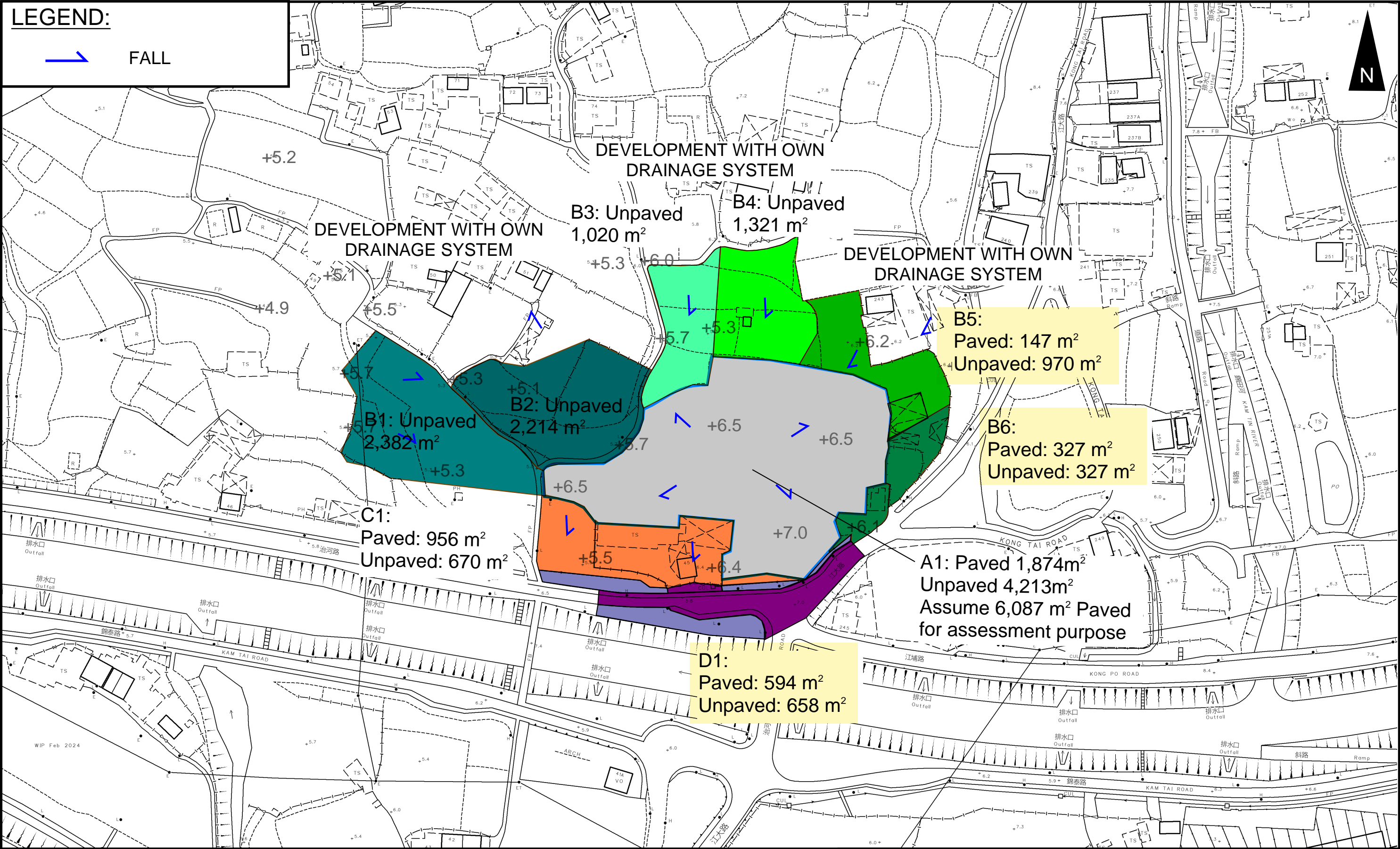
LOCATION:

Various Lots in D.D. 109, Kam Tin, Yuen Long, N.T.

VER

DESCRIPTION

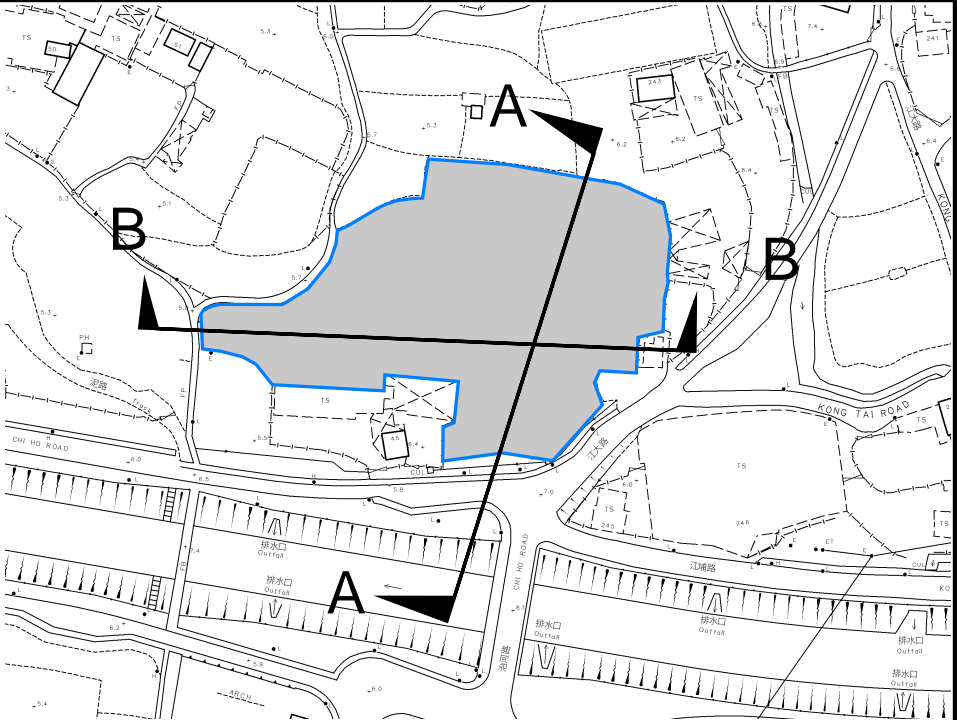
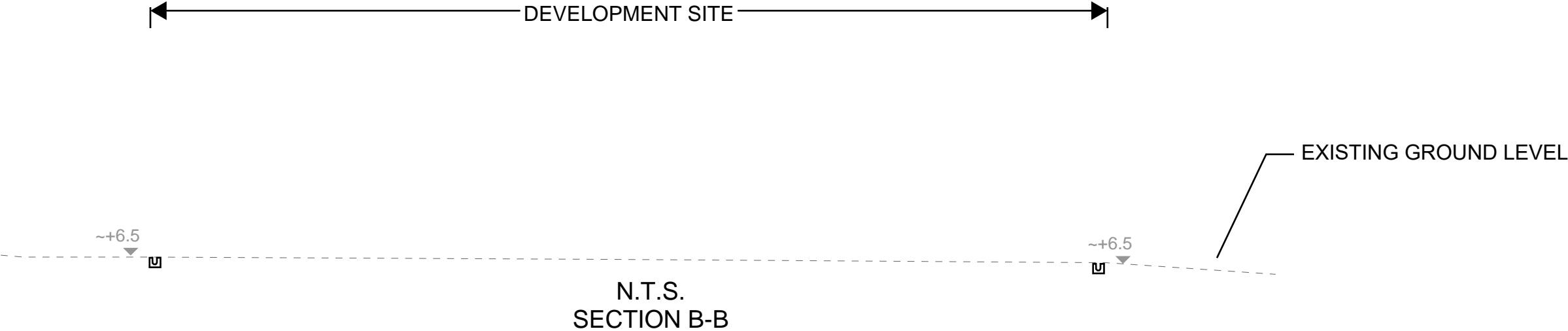
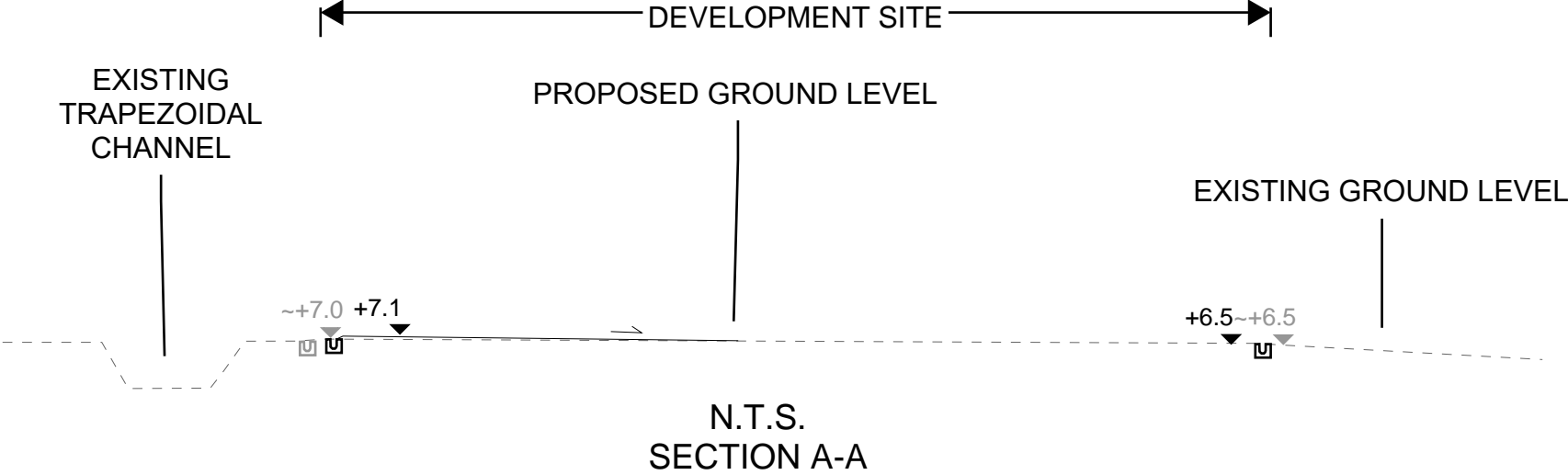
DATE



PROJECT: Proposed Temporary Open Storage of Construction Materials and Machinery with Ancillary Facilities and Associated Filling of Land and Pond for a Period of 3 Years in “Agriculture” Zone	TITLE CATCHMENT PLAN	FIGURE NUMBER FIGURE 4		
LOCATION: Various Lots in D.D. 109, Kam Tin, Yuen Long, N.T.				
		VER	DESCRIPTION	DATE

LEGEND

SITE AREA
(INDICATIVE ONLY)



<div>PROJECT:</div> <div>Proposed Temporary Open Storage of Construction Materials and Machinery with Ancillary Facilities and Associated Filling of Land and Pond for a Period of 3 Years in “Agriculture” Zone</div>	<div>TITLE</div> <div>SECTIONS</div>	<div>FIGURE NUMBER</div> <div>FIGURE 5</div>		
<div>LOCATION:</div> <div>Various Lots in D.D. 109, Kam Tin, Yuen Long, N.T.</div>		VER	DESCRIPTION	DATE

APPENDIX

Appendix A: Design Calculation

Zone	HKO	Return Period	1 in	50	years	n	0.014	Storm Constant	HKO a	505.5
						Ks	0.15		HKO b	3.29
						Viscosity	0.000001		HKO c	0.355

Catchment	A1	B1	B2	B3	B4	B5	B6	C1	D1										
Total Area	6087	2382	2214	1020	1321	1117	654	1626	1612										
Hard Paved Area	6087	0	0	0	0	147	327	956	954										
Unpaved Area	0	2382	2214	1020	1321	970	327	670	658										
Equival. Area	5782.65	833.7	774.9	357	462.35	479.15	425.1	1142.7	1136.6										

Pavement Type	Hard Paved	Unpaved
Runoff Coefficient	0.95	0.35

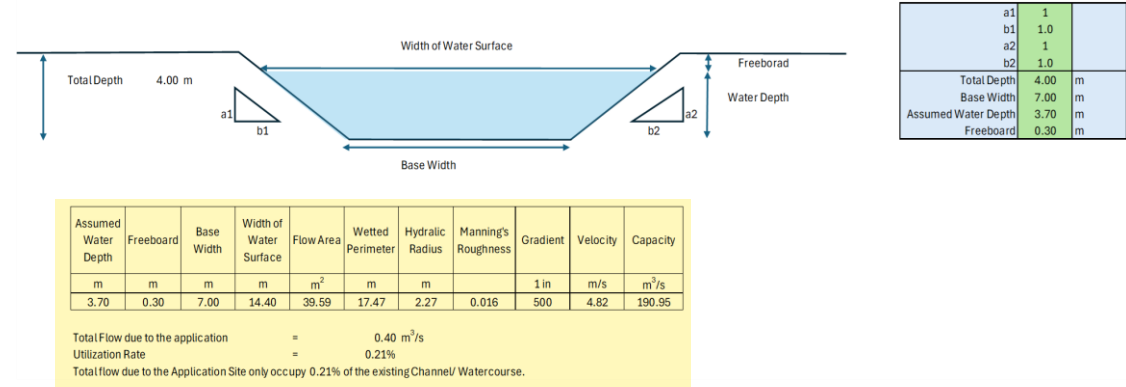
Calculation Table of Drainage System

US MH/PIT	DS MH/PIT	US GL	DS GL	Size mm	Gradient 1 in	Type	US IL	DS IL	U/S MH/PIT TYPE #	Length m	V m/s***	Capacity m³/s	Catchments	Total Equivalent Area m²	ToC min	Intensity mm/hr**	Total Discharge m³/s	Utilizatio n	Remark
SP01	CP1.01	6.50	6.50	750	400	UC	5.75	5.69	SP	24.4	1.36	0.61	A1,B3	6139.65	4.40	272	0.46	75.7%	
CP1.01	CP1.02	6.50	6.50	750	400	UC	5.69	5.57	CP	47.7	1.36	0.61	A1,B2,B3	6914.55	4.70	269	0.52	84.1%	
CP1.02	CP1.03	6.50	6.50	750	300	UC	5.57	5.54	CP	9.2	1.57	0.71	A1,B1,B2,B3	7748.25	5.29	262	0.56	79.6%	
CP1.03	CP1.03a	6.50	6.50	750	300	UC	5.54	5.47	CP	22	1.57	0.71	A1,B1,B2,B3	7748.25	5.38	261	0.56	79.3%	
CP1.03a	CP1.04	6.50	6.50	750	300	UC	5.47	5.37	CP	29.1	1.57	0.71	A1,B1,B2,B3	7748.25	5.62	258	0.56	78.6%	
CP1.04	CP1.05	6.50	6.50	750	300	UC	5.37	5.35	CP	4.5	1.57	0.71	A1,B1,B2,B3	7748.25	5.93	255	0.55	77.6%	
CP1.05	CP1.06	6.50	6.50	750	300	UC	5.35	5.28	CP	21.1	1.57	0.71	A1,B1,B2,B3	7748.25	5.97	255	0.55	77.5%	
CP1.06	CP1.07	6.50	7.10	750	200	UC	5.28	5.22	CP	12	1.92	0.87	A1,B1,B2,B3	7748.25	6.20	253	0.54	62.7%	
CP1.07	CP1.08	7.10	7.10	750	200	UC	5.22	5.21	E1	3.2	1.92	0.87	A1,B1,B2,B3	7748.25	6.30	252	0.54	62.5%	
CP1.08	CP1.09	7.10	7.10	750	200	UC	5.21	5.17	E1	7.8	1.92	0.87	A1,B1,B2,B3	7748.25	6.33	251	0.54	62.4%	
CP1.09	SCH1026122	7.10	6.50	750	95	UC	5.17	5.11	E1	5.1	2.79	1.26	A1,B1,B2,B3,B4,B5,B6,C1	10257.55	6.63	249	0.71	56.3%	
SCH1026122	SMH1045629	6.50	6.08	750	95	UC	4.19	4.14	Existing	5	2.79	1.26	A1,B1,B2,B3,B4,B5,B6,C1	10257.55	6.66	248	0.71	56.3%	Existing
SMH1045629	SMH1045628	6.08	5.96	750	95	UC	4.11	3.69	Existing	40	2.79	1.26	A1,B1,B2,B3,B4,B5,B6,C1	10257.55	6.69	248	0.71	56.2%	Existing
SMH1045628	Existing Trapezoidal Channel	5.96	5.96	750	95	UC	3.69	3.60	Existing	8	2.79	1.26	A1,B1,B2,B3,B4,B5,B6,C1,D1	11394.15	6.93	246	0.78	61.9%	Existing
SP02	CP2.01	6.50	6.50	750	400	UC	5.75	5.73	SP	9.5	1.36	0.61	A1,B3	6139.65	4.40	272	0.46	75.7%	
CP2.01	CP2.02	6.50	6.50	750	400	UC	5.73	5.65	CP	30.6	1.36	0.61	A1,B3,B4	6602.00	4.52	271	0.50	81.0%	
CP2.02	CP2.02a	6.50	6.50	750	350	UC	5.65	5.56	CP	32.8	1.45	0.66	A1,B3,B4,B5	7081.15	4.89	266	0.52	79.9%	
CP2.02a	CP2.03	6.50	6.50	750	350	UC	5.56	5.50	CP	18.7	1.45	0.66	A1,B3,B4,B5	7081.15	5.27	262	0.52	78.7%	
CP2.03	CP2.04	6.50	6.50	750	350	UC	5.50	5.46	CP	14.5	1.45	0.66	A1,B3,B4,B5,B6	7506.25	5.48	260	0.54	82.6%	
CP2.04	CP2.05	6.50	6.50	750	350	UC	5.46	5.44	CP	7.2	1.45	0.66	A1,B3,B4,B5,B6	7506.25	5.65	258	0.54	82.1%	
CP2.05	CP2.06	6.50	6.50	750	350	UC	5.44	5.41	CP	9.6	1.45	0.66	A1,B3,B4,B5,B6	7506.25	5.73	257	0.54	81.8%	
CP2.06	CP2.06a	6.50	7.10	750	350	UC	5.41	5.39	CP	9.8	1.45	0.66	A1,B3,B4,B5,B6	7506.25	5.84	256	0.53	81.5%	
CP2.06a	CP2.07	7.10	7.10	750	350	UC	5.39	5.37	CP	4.2	1.45	0.66	A1,B3,B4,B5,B6	7506.25	5.96	255	0.53	81.1%	
CP2.07	CP2.07a	7.10	7.10	750	350	UC	5.37	5.36	E1	6.2	1.45	0.66	A1,B3,B4,B5,B6	7506.25	6.00	255	0.53	81.0%	
CP2.07a	CP2.08	7.10	7.10	750	350	UC	5.36	5.30	E1	19.4	1.45	0.66	A1,B3,B4,B5,B6	7506.25	6.07	254	0.53	80.8%	
CP2.08	CP1.09	7.10	7.10	750	350	UC	5.30	5.22	E1	28.7	1.45	0.66	A1,B3,B4,B5,B6	7506.25	6.30	252	0.53	80.1%	

Flow From Proposed Development	A1	5782.65	6.93	246	0.40
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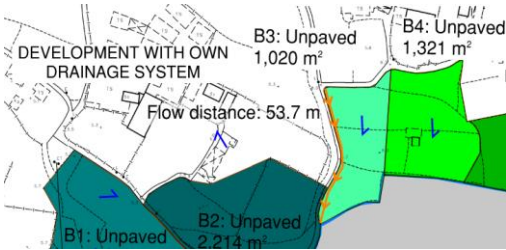
#SP: Start Point
: With 11.1% rainfall increase as per Table 28 of SDM Corrigendum No. 1/2022.
###: 10% reduction of flow area is considered for deposition of sediment (Section 9.3 of SDM)

Capacity Checking of existing 15m (W) Trapezoidal Channel for flow from Proposed Development Area



Time of Concentration Checking

Catchment	Flow Distance	Highest Level	Lowest Level	Gradient (per 100m) = (H1-H2)/L x 100	to (min) = 0.14465L / (H¹²A¹.⁴)	tc = to + tf
A	L	H1	H2		(min)	(min)
(m2)	(m)	(mPD)	(mPD)		(min)	(min)
1020	53.7	6	5.7	0.559	4.4	4.4

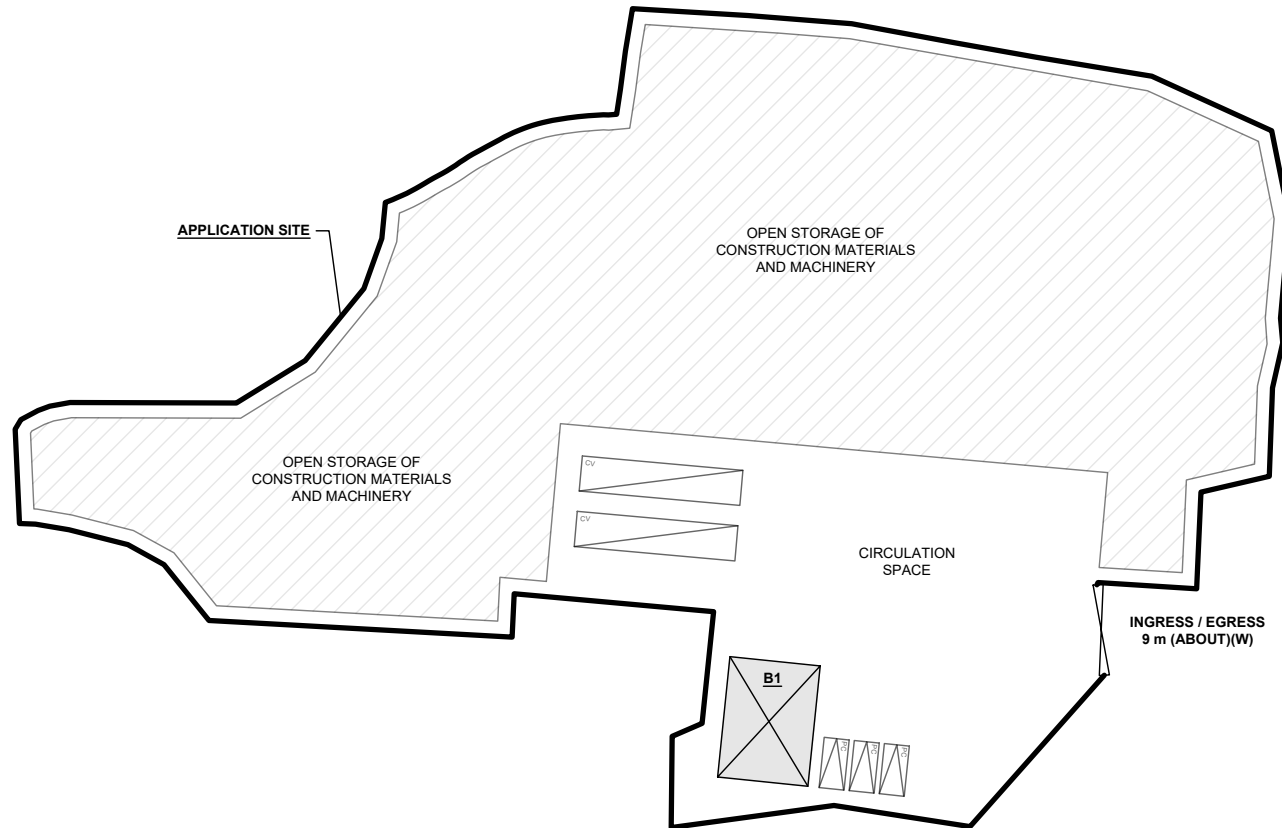
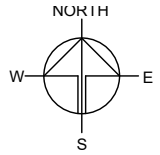


APPENDIX B - PROPOSED SITE LAYOUT PLAN

DEVELOPMENT PARAMETERS

APPLICATION SITE AREA	: 6,087 m ²	(ABOUT)
COVERED AREA	: 108 m ²	(ABOUT)
UNCOVERED AREA	: 5,979 m ²	(ABOUT)
PLOT RATIO	: 0.02	(ABOUT)
SITE COVERAGE	: 2%	(ABOUT)
NO. OF STRUCTURE	: 1	
DOMESTIC GFA	: NOT APPLICABLE	
NON-DOMESTIC GFA	: 108 m ²	(ABOUT)
TOTAL GFA	: 108 m ²	(ABOUT)
BUILDING HEIGHT	: 4 m	(ABOUT)
NO. OF STOREY	: 1	
OPEN STORAGE AREA	: 4,069 m ²	(ABOUT)
STACKING HEIGHT	: NOT MORE THAN 3 m	

STRUCTURE	USE	COVERED AREA	GROSS FLOOR AREA	BUILDING HEIGHT
B1	SITE OFFICE AND WASHROOM	108 m ² (ABOUT)	108 m ² (ABOUT)	4 m (ABOUT)(1-STOREY)
TOTAL		108 m ² (ABOUT)	108 m ² (ABOUT)	



PARKING PROVISIONS

NO. OF PRIVATE CAR PARKING SPACE	: 3
DIMENSION OF PARKING SPACE	: 5 m (L) x 2.5 m (W)

LOADING / UNLOADING (L/UL) PROVISIONS

NO. OF L/UL SPACE FOR CONTAINER VEHICLE	: 2
DIMENSION OF L/UL SPACE	: 16 m (L) x 3.5 m (W)

*SITE BOUNDARY FOR IDENTIFICATION PURPOSE ONLY.

LEGEND

	APPLICATION SITE
	STRUCTURE
	OPEN STORAGE AREA
	PARKING SPACE (PC)
	L/UL SPACE (CV)
	INGRESS / EGRESS

PLANNING CONSULTANT



PROJECT

PROPOSED TEMPORARY OPEN STORAGE OF CONSTRUCTION MATERIALS AND MACHINERY WITH ANCILLARY FACILITIES AND ASSOCIATED FILLING OF LAND AND POND FOR A PERIOD OF 3 YEARS

SITE LOCATION

VARIOUS LOTS IN D.D. 109 AND ADJOINING GOVERNMENT LAND, KAM TIN, YUEN LONG, NEW TERRITORIES

SCALE

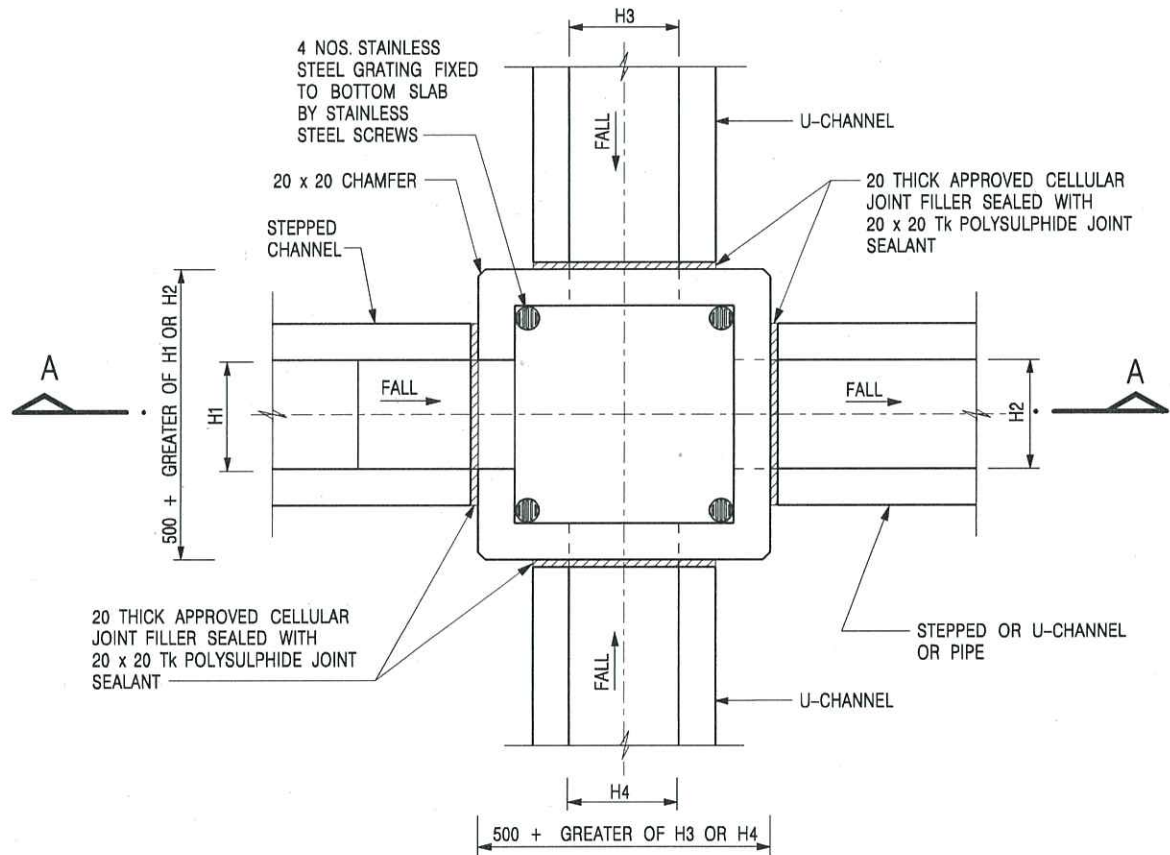
1 : 750 @ A4

DRAWN BY	DATE
MN	2.10.2025
REVISED BY	DATE
APPROVED BY	DATE

DWG. TITLE
LAYOUT PLAN

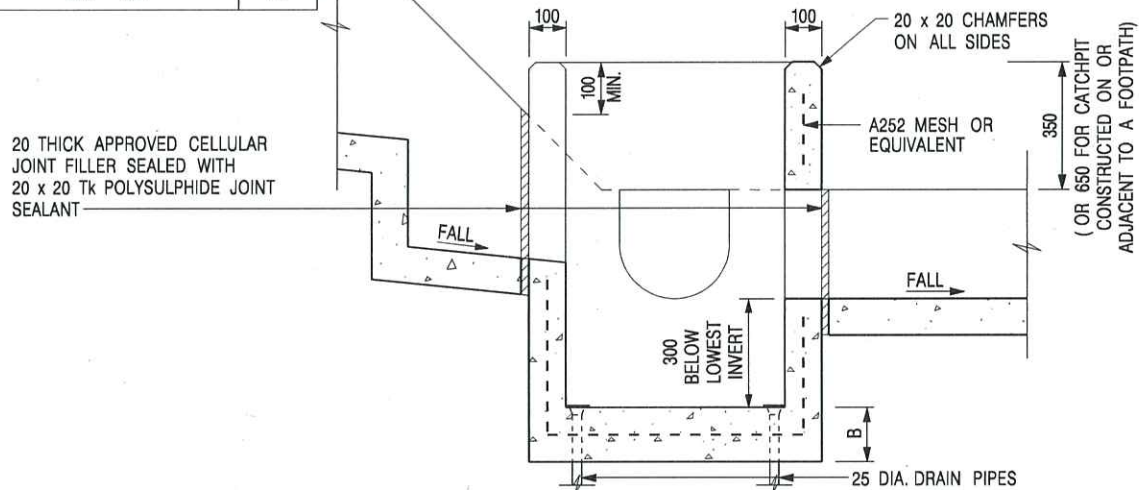
DWG NO. PLAN 9	VER. 001
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Appendix C - Reference Drawings



PLAN

NOMINAL SIZE (LARGEST OF H1, H2, H3 & H4)	B
300 - 600	150
675 - 900	175



SECTION A - A

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. REFER TO SHEET 2 FOR OTHER NOTES.

CATCHPIT WITH TRAP
(SHEET 1 OF 2)

-	FORMER DRG. NO. C2406J.	Original Signed	03.2015
REF.	REVISION	SIGNATURE	DATE



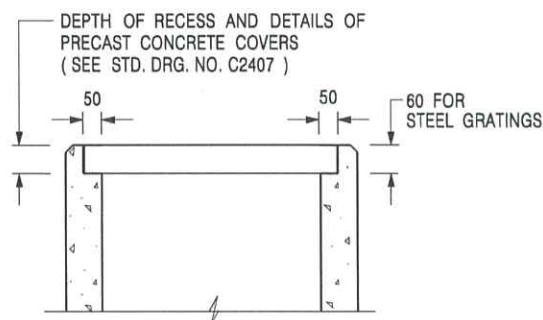
CIVIL ENGINEERING AND
DEVELOPMENT DEPARTMENT

SCALE 1 : 20

DATE JAN 1991

DRAWING NO.

C2406 /1



**ALTERNATIVE TOP SECTION
FOR PRECAST CONCRETE COVERS / GRATINGS**

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL CONCRETE SHALL BE GRADE 20 /20.
3. CONCRETE SURFACE FINISH SHALL BE CLASS U2 OR F2 AS APPROPRIATE.
4. FOR DETAILS OF JOINT, REFER TO STD. DRG. NO. C2413.
5. CONCRETE TO BE COLOURED AS SPECIFIED.
6. UNLESS REQUESTED BY THE MAINTENANCE PARTY AND AS DIRECTED BY THE ENGINEER, CATCHPIT WITH TRAP IS NORMALLY NOT PREFERRED DUE TO PONDING PROBLEM.
7. UPON THE REQUEST FROM MAINTENANCE PARTY, DRAIN PIPES AT CATCHPIT BASE CAN BE USED BUT THIS IS FOR CATCHPITS LOCATED AT SLOPE TOE ONLY AND AS DIRECTED BY THE ENGINEER.
8. FOR CATCHPITS CONSTRUCTED ON OR ADJACENT TO A FOOTPATH, STEEL GRATINGS (SEE DETAIL 'A' ON STD. DRG. NO. C2405 /2) OR CONCRETE COVERS (SEE STD. DRG. NO. C2407) SHALL BE PROVIDED AS DIRECTED BY THE ENGINEER.
9. IF INSTRUCTED BY THE ENGINEER, HANDRAILING (SEE DETAIL 'J' ON STD. DRG. NO. C2405 /5; EXCEPT ON THE UPSLOPE SIDE) IN LIEU OF STEEL GRATINGS OR CONCRETE COVERS CAN BE ACCEPTED AS AN ALTERNATIVE SAFETY MEASURE FOR CATCHPITS NOT ON A FOOTPATH NOR ADJACENT TO IT. TOP OF THE HANDRAILING SHALL BE 1 000 mm MIN. MEASURED FROM THE ADJACENT GROUND LEVEL.
10. MINIMUM INTERNAL CATCHPIT WIDTH SHALL BE 1 000 mm FOR CATCHPITS WITH A HEIGHT EXCEEDING 1 000 mm MEASURED FROM THE INVERT LEVEL TO THE ADJACENT GROUND LEVEL. AND, STEP IRONS (SEE DSD STD. DRG. NO. DS1043) AT 300 c/c STAGGERED SHALL BE PROVIDED. THICKNESS OF CATCHPIT WALL FOR INSTALLATION OF STEP IRONS SHALL BE INCREASED TO 150 mm.
11. FOR RETROFITTING AN EXISTING CATCHPIT WITH STEEL GRATING, SEE DETAIL 'G' ON STD. DRG. NO. C2405 /4.
12. SUBJECT TO THE APPROVAL OF THE ENGINEER, OTHER MATERIALS CAN ALSO BE USED AS COVERS / GRATINGS.

A	MINOR AMENDMENT.	Original Signed	04.2016
-	FORMER DRG. NO. C2406J.	Original Signed	03.2015
REF.	REVISION	SIGNATURE	DATE

**CATCHPIT WITH TRAP
(SHEET 2 OF 2)**



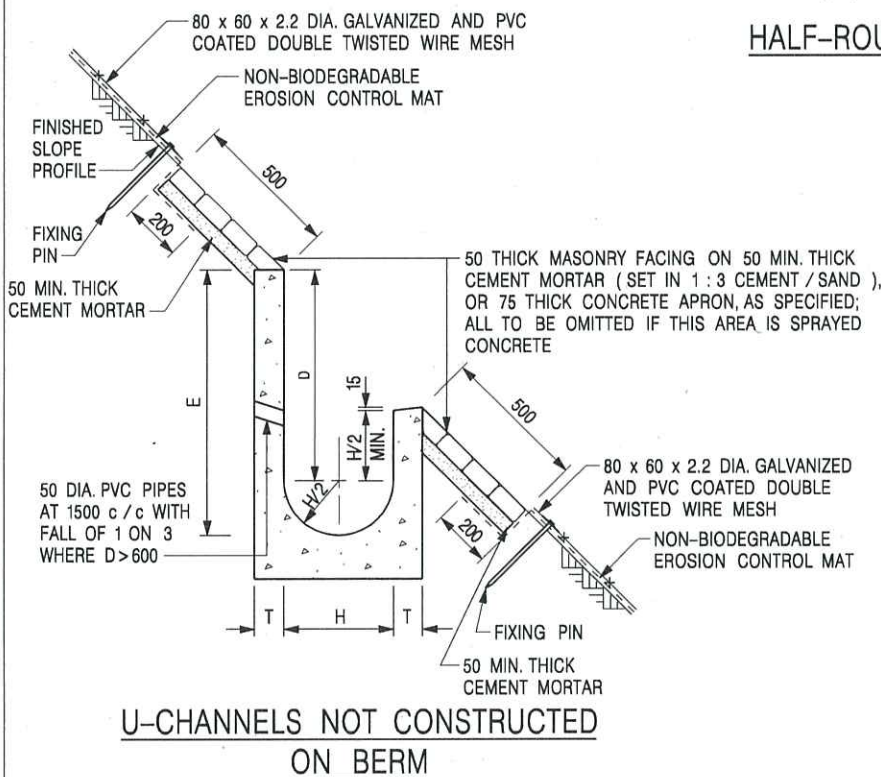
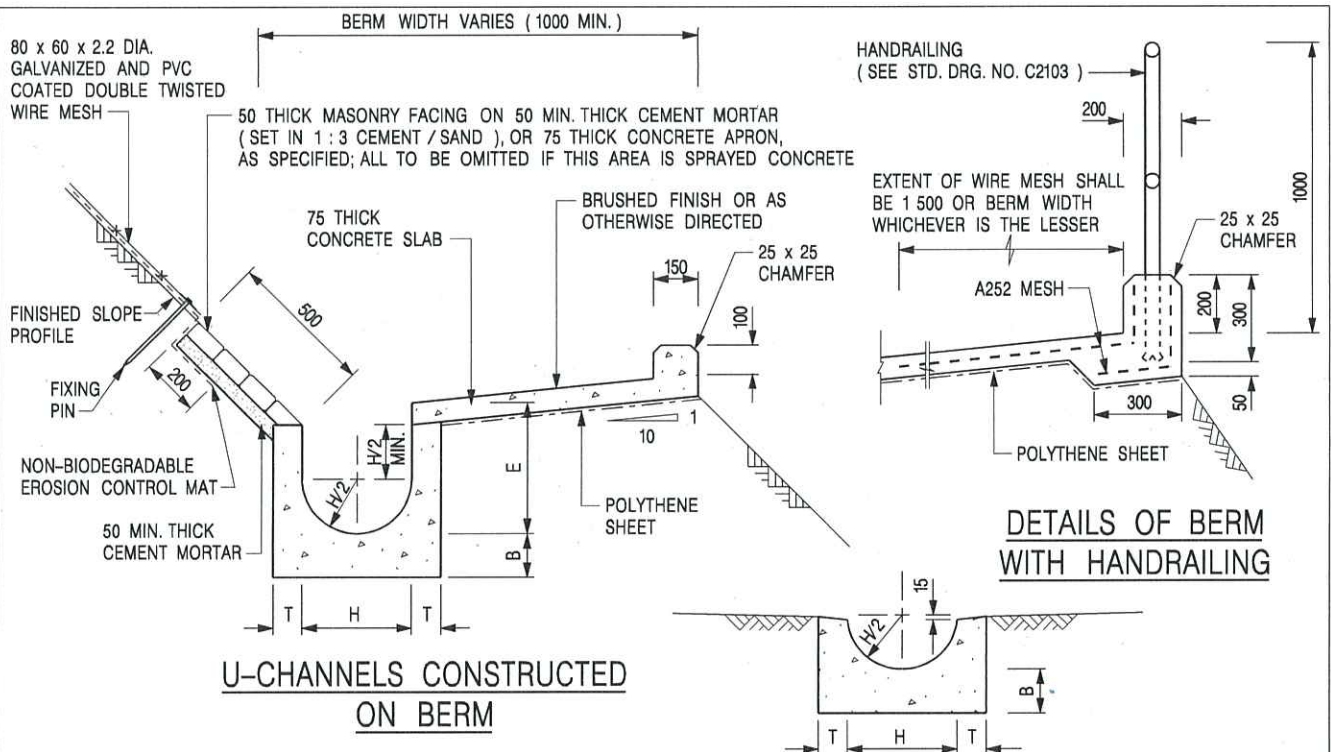
**CIVIL ENGINEERING AND
DEVELOPMENT DEPARTMENT**

SCALE 1 : 20

DRAWING NO.

DATE JAN 1991

C2406 /2A



HALF-ROUND CHANNEL

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL CONCRETE TO BE GRADE 20 / 20.
3. CONCRETE SURFACE FINISH SHALL BE CLASS U2, F2 OR BRUSHED FINISH AS DIRECTED.
4. SPACING OF EXPANSION JOINT IN CHANNELS, BERM SLABS AND APRONS TO BE 10 METRES MAXIMUM, SEE STD. DRG. NO. C2413 FOR DETAILS.
5. JOINTS FOR CHANNELS, BERM SLABS, APRONS AND WALLS, ETC. TO BE ON THE SAME ALIGNMENT.
6. FOR DIMENSIONS T, H, & B, SEE TABLE BELOW.
7. BIODEGRADABLE EROSION CONTROL MAT IF REQUIRED, SEE STD. DRG. NO. C2511/E.
8. CONCRETE TO BE COLOURED AS SPECIFIED.
9. CONCRETE U-CHANNEL CAN BE CAST IN-SITU OR PRECAST CONCRETE SUBJECT TO THE ENGINEER'S AGREEMENT ON THE DETAILS.
10. DETAILS OF EROSION CONTROL MAT AND WESH MESH ON BERM. (SEE STD DRG. NO. C2511/E)

NOMINAL SIZE H	T	B	REINFORCEMENT
300	80	100	A252 MESH PLACED CENTRALLY AND T=100 WHEN E > 650
375 - 600	100	150	
675 - 900	125	175	A252 MESH PLACED CENTRALLY

I	MINOR AMENDMENT.	Original Signed	07.2018
H	THICKNESS OF MASONRY FACING AMENDED.	Original Signed	01.2005
G	MINOR AMENDMENT.	Original Signed	01.2004
F	GENERAL REVISION.	Original Signed	12.2002
E	DRAWING TITLE AMENDED.	Original Signed	11.2001
D	MINOR AMENDMENT.	Original Signed	08.2001
C	150 x 100 UPSTAND ADDED AT BERM.	Original Signed	6.99
B	MINOR AMENDMENTS.	Original Signed	3.94
REF.	REVISION	SIGNATURE	DATE

DETAILS OF HALF-ROUND AND U-CHANNELS (TYPE A - WITH MASONRY APRON)



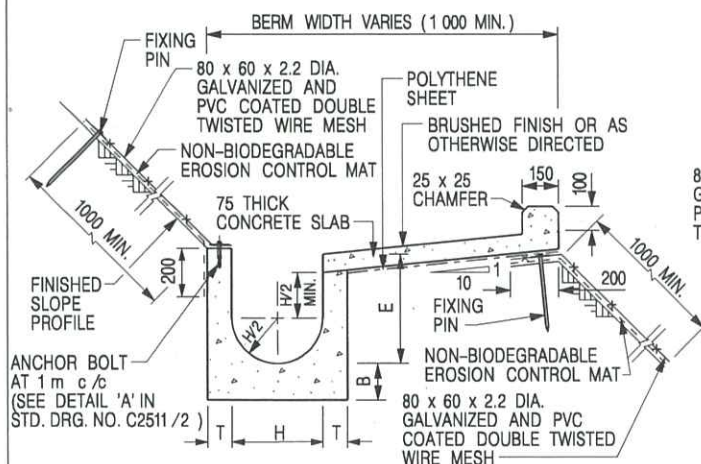
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

SCALE 1 : 25

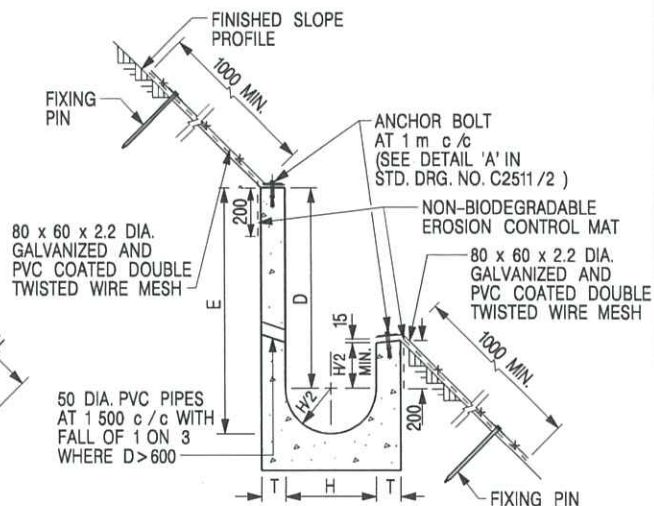
DRAWING NO.

DATE JAN 1991

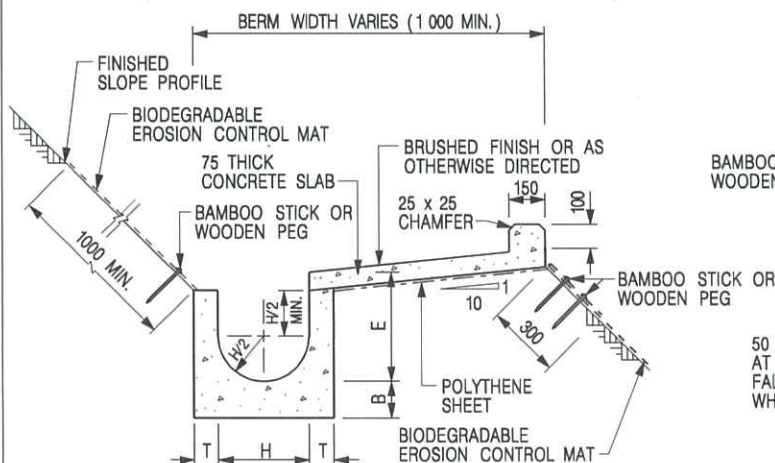
C2409I



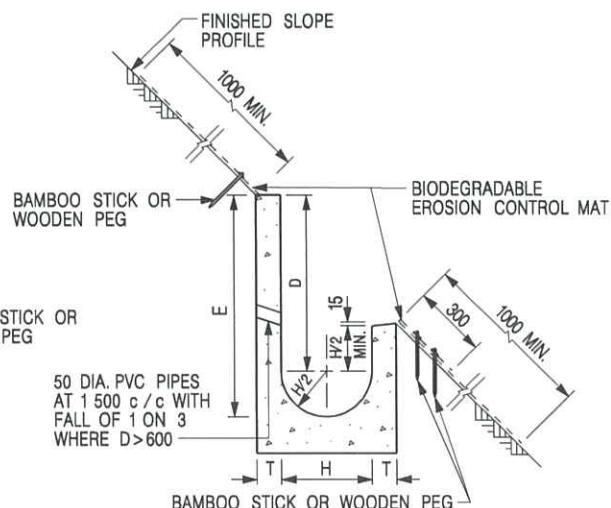
**U-CHANNELS CONSTRUCTED ON BERM
WITH NON-BIODEGRADABLE
EROSION CONTROL MAT**



**U-CHANNELS NOT CONSTRUCTED ON BERM
WITH NON-BIODEGRADABLE
EROSION CONTROL MAT**



**U-CHANNELS CONSTRUCTED ON BERM
WITH BIODEGRADABLE
EROSION CONTROL MAT**



**U-CHANNELS NOT CONSTRUCTED ON BERM
WITH BIODEGRADABLE
EROSION CONTROL MAT**

NOTES:

- ALL DIMENSIONS ARE IN MILLIMETRES.
- ALL CONCRETE TO BE GRADE 20 /20.
- CONCRETE SURFACE FINISH SHALL BE CLASS U2, F2 OR BRUSHED FINISH AS DIRECTED.
- SPACING OF EXPANSION JOINT IN CHANNELS, BERM SLABS AND APRONS TO BE 10 METRES MAXIMUM, SEE STD. DRG. NO. C2413 FOR DETAILS.
- JOINTS FOR CHANNELS, BERM SLABS, APRONS AND WALLS, ETC. TO BE ON THE SAME ALIGNMENT.
- FOR DIMENSIONS T, H, & B, SEE TABLE BELOW.
- FOR TYPICAL FIXING PIN DETAILS, SEE STD. DRG. NO. C2511/2.
- MINIMUM SIZE OF 25 x 50 x 300mm SHALL BE PROVIDED FOR WOODEN PEG.
- MINIMUM SIZE OF 10mm DIAMETER WITH 200mm LONG SHALL BE PROVIDED FOR BAMBOO STICK.
- THE FIXING DETAILS OF NON-BIODEGRADABLE AND BIODEGRADABLE EROSION CONTROL MATS ON EXISTING BERM SHALL REFER TO STD. DRG. NO. C2511/1.

NOMINAL SIZE H	T	B	REINFORCEMENT
300	80	100	A252 MESH PLACED CENTRALLY AND T=100 WHEN E > 650
375 - 600	100	150	
675 - 900	125	175	A252 MESH PLACED CENTRALLY

REF.	REVISION	SIGNATURE	DATE
I	MINOR AMENDMENT.	Original Signed	07.2018
H	FIXING DETAILS OF BIODEGRADABLE EROSION CONTROL MAT ADDED.	Original Signed	12.2017
G	DIMENSION TABLE AMENDED.	Original Signed	01.2005
F	MINOR AMENDMENT.	Original Signed	01.2004
E	GENERAL REVISION.	Original Signed	12.2002
D	MINOR AMENDMENT.	Original Signed	08.2001
C	150 x 100 UPSTAND ADDED AT BERM.	Original Signed	6.99
B	MINOR AMENDMENT.	Original Signed	3.94
A	MINOR AMENDMENT.	Original Signed	10.92

**DETAILS OF HALF-ROUND AND
U-CHANNELS (TYPE B - WITH
EROSION CONTROL MAT APRON)**



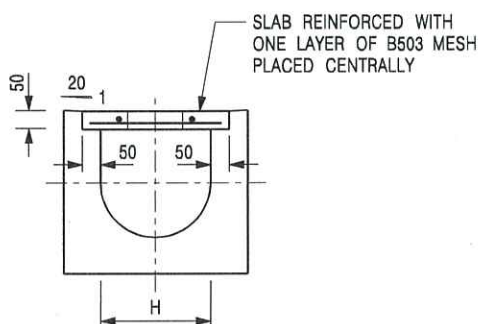
**CIVIL ENGINEERING AND
DEVELOPMENT DEPARTMENT**

SCALE DIAGRAMMATIC

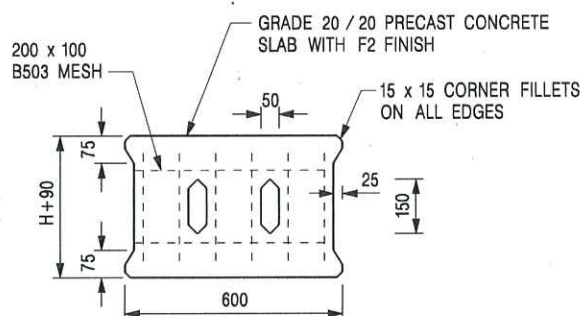
DRAWING NO.

DATE JAN 1991

C24101



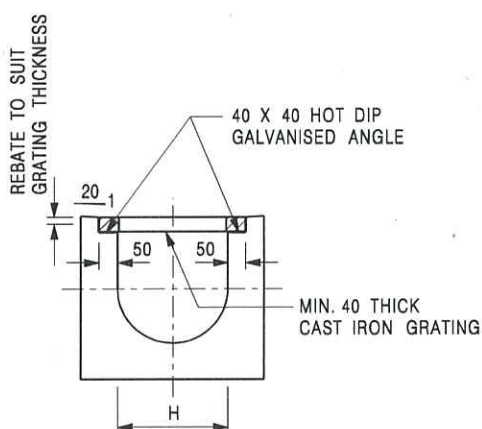
TYPICAL SECTION



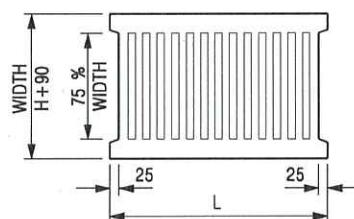
PLAN OF SLAB

U-CHANNELS WITH PRECAST CONCRETE SLABS

(UP TO H OF 525)



TYPICAL SECTION



L = 600mm FOR H ≤ 375mm
L = 400mm FOR H > 375mm

CAST IRON GRATING

(DIMENSIONS ARE FOR GUIDANCE ONLY, CONTRACTOR MAY SUBMIT EQUIVALENT TYPE)

U-CHANNEL WITH CAST IRON GRATING

(UP TO H OF 525)

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. H = NOMINAL CHANNEL SIZE.
3. ALL CAST IRON FOR GRATINGS SHALL BE GRADE EN-GJL-150 COMPLYING WITH BS EN 1561.
4. FOR COVERED CHANNELS TO BE HANDED OVER TO HIGHWAYS DEPARTMENT FOR MAINTENANCE, THE GRATING DETAILS SHALL FOLLOW THOSE AS SHOWN ON HyD STD. DRG. NO. H3156.

E	NOTES 3 & 4 AMENDED.	Original Signed	12.2014
D	NOTE 4 ADDED.	Original Signed	06.2008
C	MINOR AMENDMENT. NOTE 3 ADDED.	Original Signed	12.2005
B	NAME OF DEPARTMENT AMENDED.	Original Signed	01.2005
A	CAST IRON GRATING AMENDED.	Original Signed	12.2002
REF.	REVISION	SIGNATURE	DATE

COVER SLAB AND CAST IRON
GRATING FOR CHANNELS



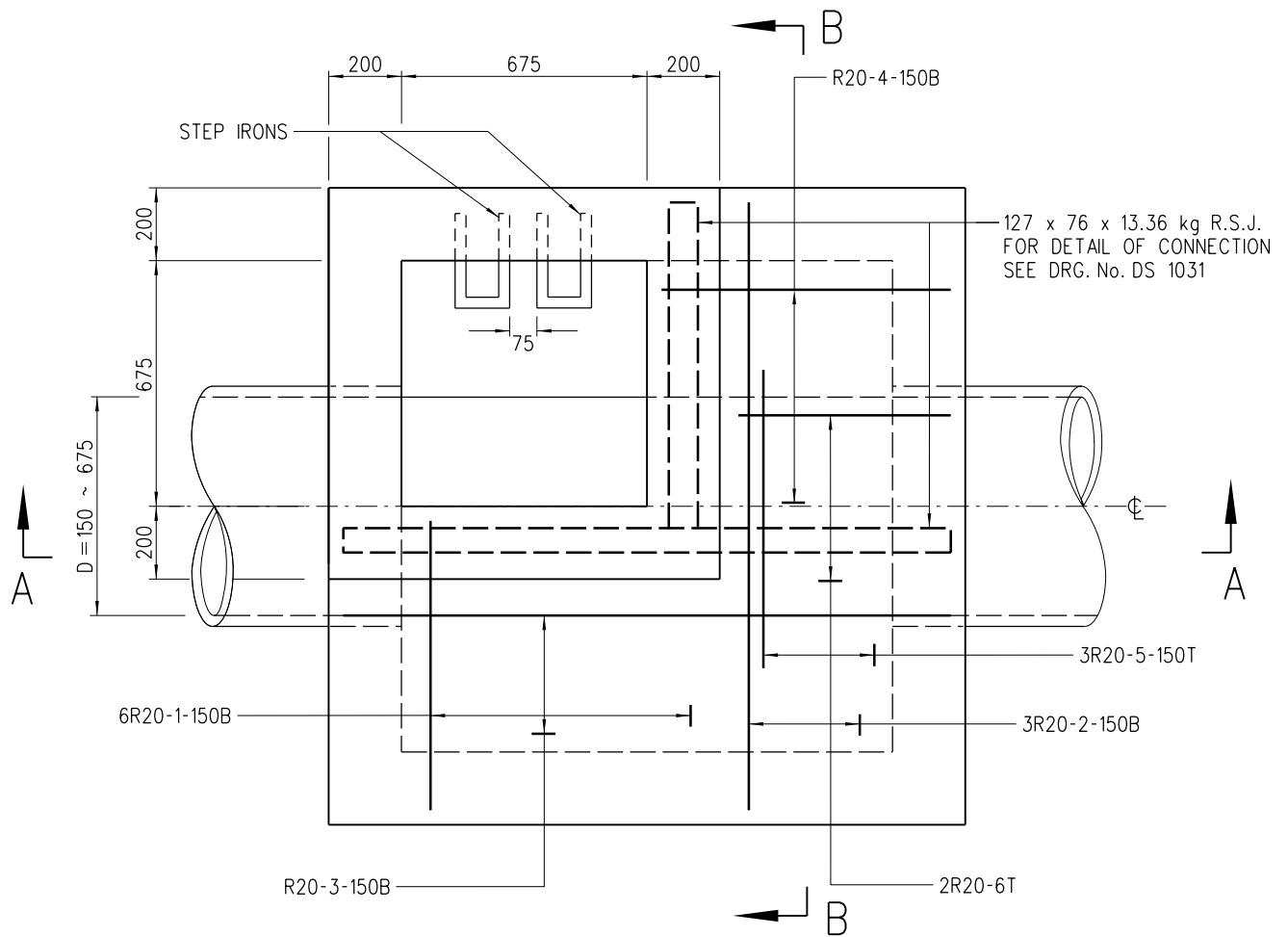
**CIVIL ENGINEERING AND
DEVELOPMENT DEPARTMENT**

SCALE 1 : 20

DATE JAN 1991

DRAWING NO.

C2412E



PLAN

NOTES:

- ALL DIMENSIONS ARE IN MILLIMETRES.
- NOTATION OF REINFORCEMENT : THE SEQUENCE OF DESCRIPTION OF IDENTIFICATION MARKS ON DRAWINGS FOR STEEL REINFORCING BARS FOR CONCRETE WORK IS AS FOLLOWS (NUMBER, TYPE, SIZE, MARK, SPACING, LOCATION OR COMMENT)
- B DENOTES GRADE 500B RIBBED REINFORCEMENT.
- R DENOTES GRADE 250 PLAIN REINFORCEMENT.
- PIPE DIAMETER : 150 TO 675 mm
- NORMAL RANGE OF DEPTH : 1500 TO 3 000 mm (MEASURED FROM ROAD LEVEL TO LOWEST INVERT)
- USED IN : STORMWATER DRAIN AND SEWER
- JUNCTION : POSITION OF JUNCTION TO BE DETERMINED IN EACH INDIVIDUAL CASE. CHANNELS IMMEDIATELY UNDER ACCESS TO MANHOLE SHOULD BE AVOIDED.
- TOP TREATMENT : SEE DRG. No. DS 1032
- FOUNDATION : FOUNDATION OF MANHOLE VARIES WITH SITE CONDITION. THEREFORE, IT SHOULD BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE : GRADE 30/20
- ALL BAR MARKS APPEARED HEREON ARE USED FOR REFERENCE IN THIS DRAWING ONLY.
- MINIMUM COVER AT END OF BARS 40 mm
- COVER AND FRAME NOT SHOWN ON PLAN FOR CLARITY.
- RECESS WITH SQUARE STEEL ROD SHALL BE PROVIDED AT TOP OF MANHOLE CHAMBER FOR INSTALLING MONITORING DEVICE(S). DETAILS REFER TO DSD STANDARD DRAWING NO. DS 1099.

C	NOTE 15 ADDED	ORIGINAL SIGNED	2.8.2022
B	NOTE 11 DELETED NOTES 2, 3 & 4 ADDED	ORIGINAL SIGNED	29.4.2015
A	NOTE 11 REVISED	ORIGINAL SIGNED	24.11.2014
	NEW ISSUE	ORIGINAL SIGNED	15.8.2007
REV.	DESCRIPTION	SIGNATURE	DATE

STANDARD MANHOLE
TYPE E1

DRAINAGE SERVICES DEPARTMENT

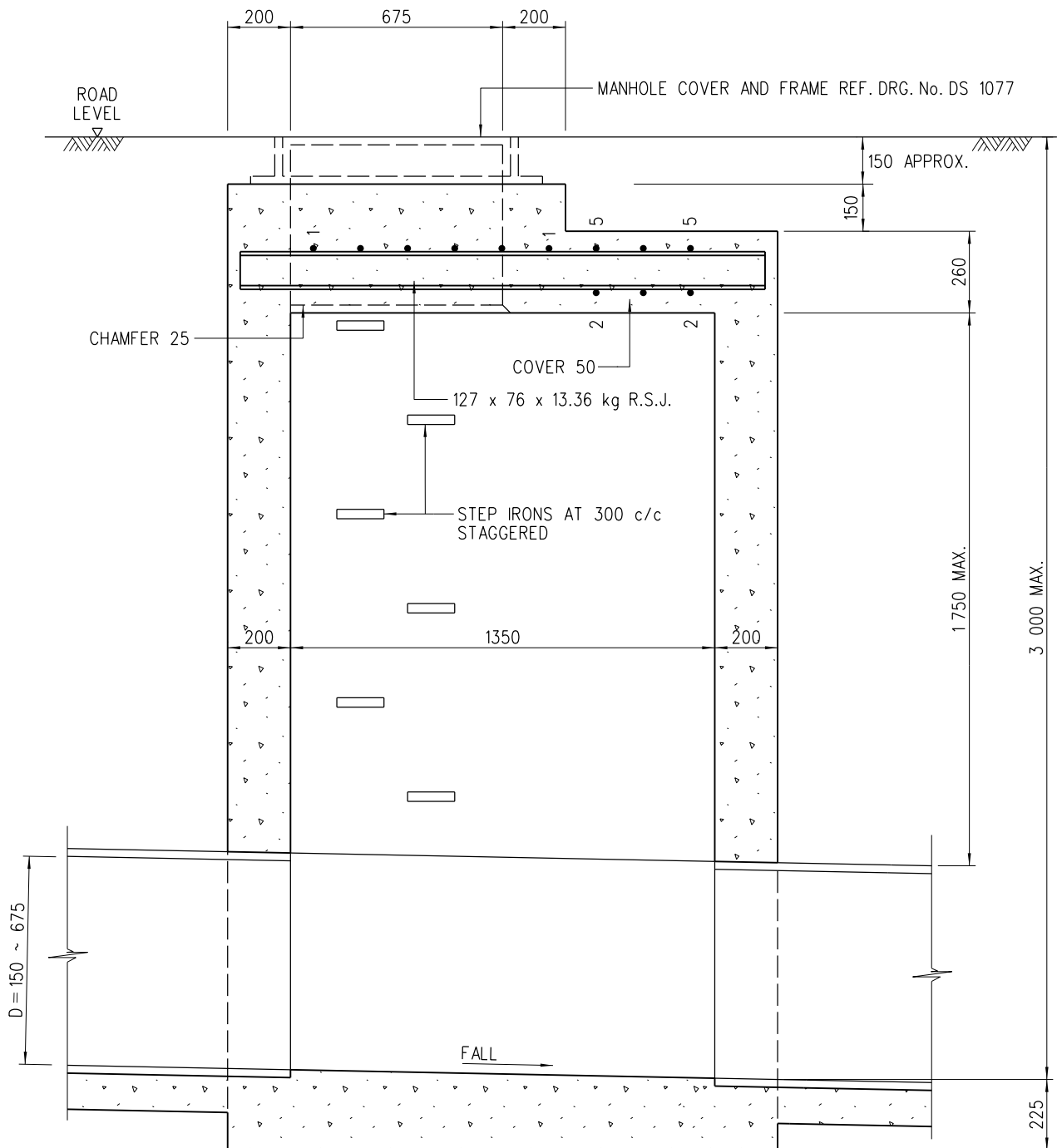
REFERENCE

DRAWING No.

SCALE

1 : 20

DS 1080C
(SHEET 1 OF 3)



SECTION A-A

BAR MARKS	SHAPE CODE ○
1 & 4	(99)
2, 3 & 6	(35)
5	(20)

C	NOTE 15 ADDED	ORIGINAL SIGNED	2.8.2022
B	NOTE 11 DELETED NOTES 2, 3 & 4 ADDED	ORIGINAL SIGNED	29.4.2015
A	NOTE 11 REVISED	ORIGINAL SIGNED	24.11.2014
	NEW ISSUE	ORIGINAL SIGNED	15.8.2007
REV.	DESCRIPTION	SIGNATURE	DATE

STANDARD MANHOLE
TYPE E1

DRAINAGE SERVICES DEPARTMENT

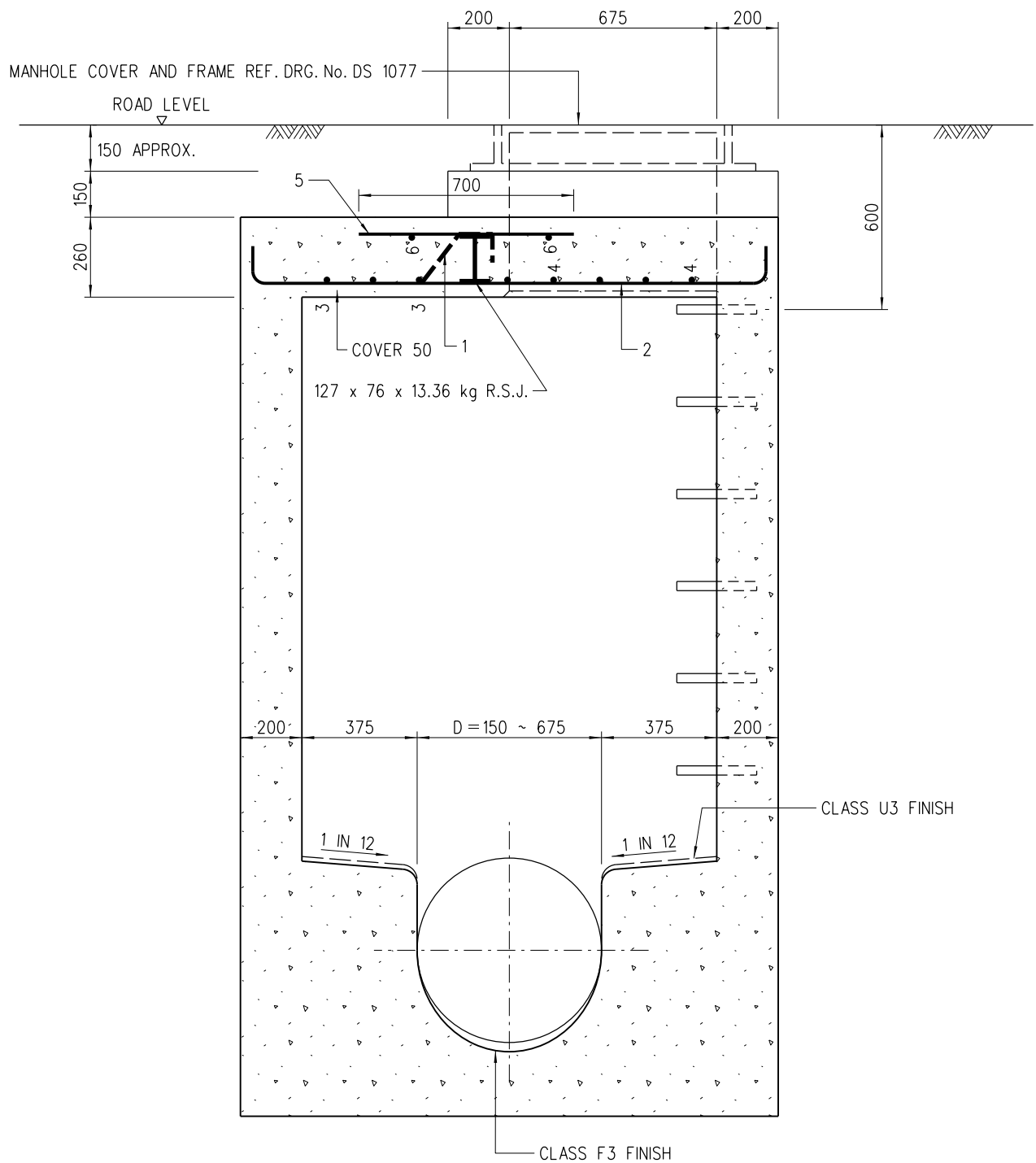
REFERENCE

DRAWING No.

SCALE

1 : 20

DS 1080C
(SHEET 2 OF 3)



C	NOTE 15 ADDED	ORIGINAL SIGNED	2.8.2022
B	NOTE 11 DELETED NOTES 2, 3 & 4 ADDED	ORIGINAL SIGNED	29.4.2015
A	NOTE 11 REVISED	ORIGINAL SIGNED	24.11.2014
	NEW ISSUE	ORIGINAL SIGNED	15.8.2007
REV.	DESCRIPTION	SIGNATURE	DATE

STANDARD MANHOLE
TYPE E1

DRAINAGE SERVICES DEPARTMENT

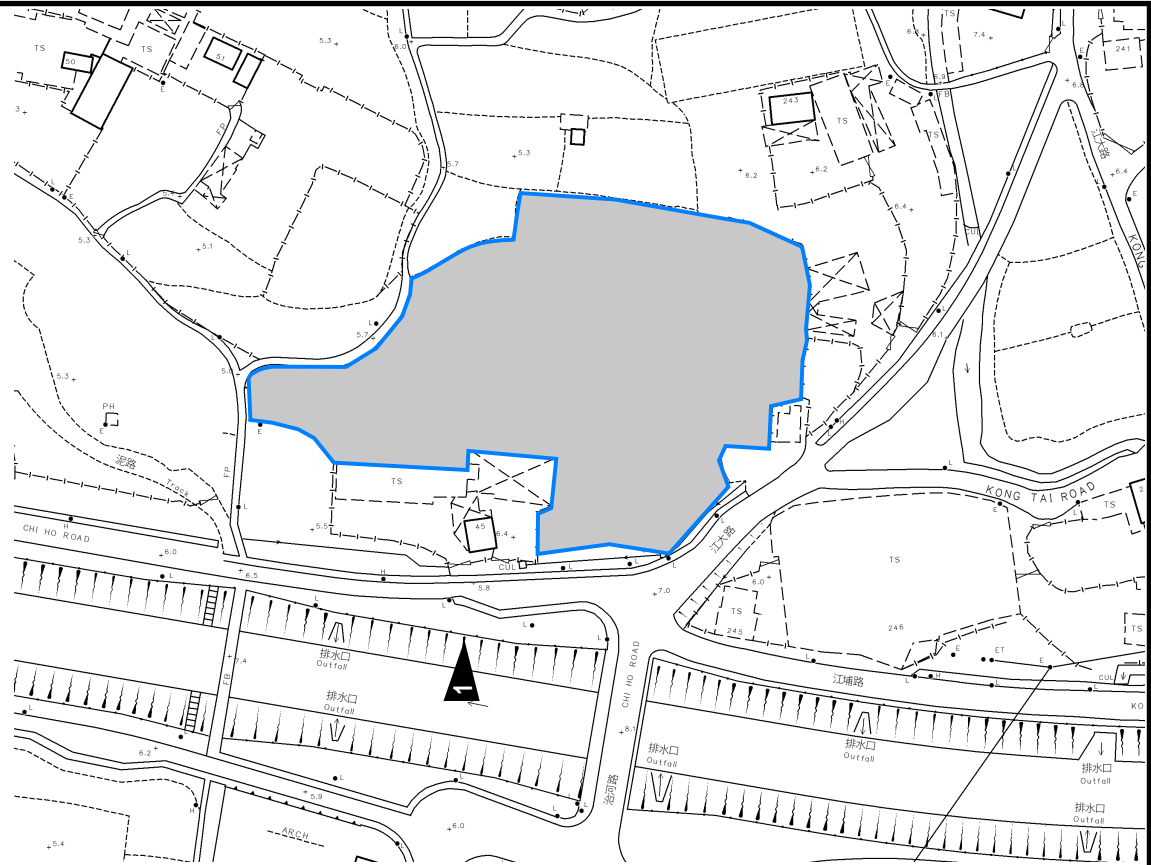
REFERENCE

DRAWING No.

SCALE

1 : 20

DS 1080C
(SHEET 3 OF 3)



PROJECT:
Proposed Temporary Open Storage of Construction Materials and Machinery with Ancillary Facilities and Associated Filling of Land and Pond for a Period of 3 Years in “Agriculture” Zone

SITE PHOTO

APPENDIX D

LOCATION:
Various Lots in D.D. 109, Kam Tin, Yuen Long, N.T.

VER	DESCRIPTION	DATE
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