寄件者: [redacted]
寄件日期: 2025年12月01日星期一 17:35
收件者: tpbpd/PLAND
副本: [redacted]

主旨: Fw: S. 16 Planning Application No. A/YL-KTN/1157 - Departmental Comments
附件: A-YL-KTN-1157 Drainage Proposal 28-11-2025.pdf

[redacted]

Please see the attachment for the further inforamtion on DSD. Please contact Mr. Tang via email [redacted] if you have any question regarding to the captioned application.

Yours sincerely,
Mr. Tang

A/YL-KTN/1157

Comments from Drainage Services Department

(Contact Person: Ms. Jessica KWAN; Tel.: 2300 1444)

1. The applicant should clarify location of the subject site shown in the marked-up sketch which indicates the proposed discharge path.

The location of the subject site is revised in the marked-up sketch.

2. The applicant should clarify why two different sets of hydraulic calculation were enclosed in the submission. Also, the applicant should clarify discrepancies of site area and external catchment area shown in the submitted catchment area plan, hydraulic calculation and application form.

Only one set of hydraulic calculation is enclosed. The discrepancies if revised accordingly.

3. Catchment area of the existing open channel at the south of the application site had not been considered in the submission. The applicant should review the hydraulic calculation.

Catchment area of the existing open channel at the south of the application site has been considered in the submission

4. Flow velocity of the existing open channel is suggested to be within a range, i.e. 0.75 m/s to 3.0 m/s. The applicant should review the hydraulic calculation.

Calculation is updated.

5. Please note that there is an existing watercourse at the east and south of the application site. The existing watercourse should not be disturbed or interfered with until any necessary diversion works, which have been accepted by this Division or the Town Planning Board, have been satisfactorily completed. Such agreed diversion works should be carried out by the applicant at the cost of his/her project. Moreover, the applicant should provide sufficient allowance for future maintenance of the existing watercourse.

Noted.

6. The proposed development should neither obstruct overland flow nor adversely affect any existing natural streams, village drains, ditches and the adjacent areas, etc.

Noted.

7. The existing watercourse, to which the applicant proposed to discharge the stormwater from the application site was not maintained by this office. The applicant should identify the owner of the existing watercourse and seek agreement from the owner prior to commencement of the proposed works. In the case that it is a local village drains, DO/YL should be consulted.

Noted.

8. 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.

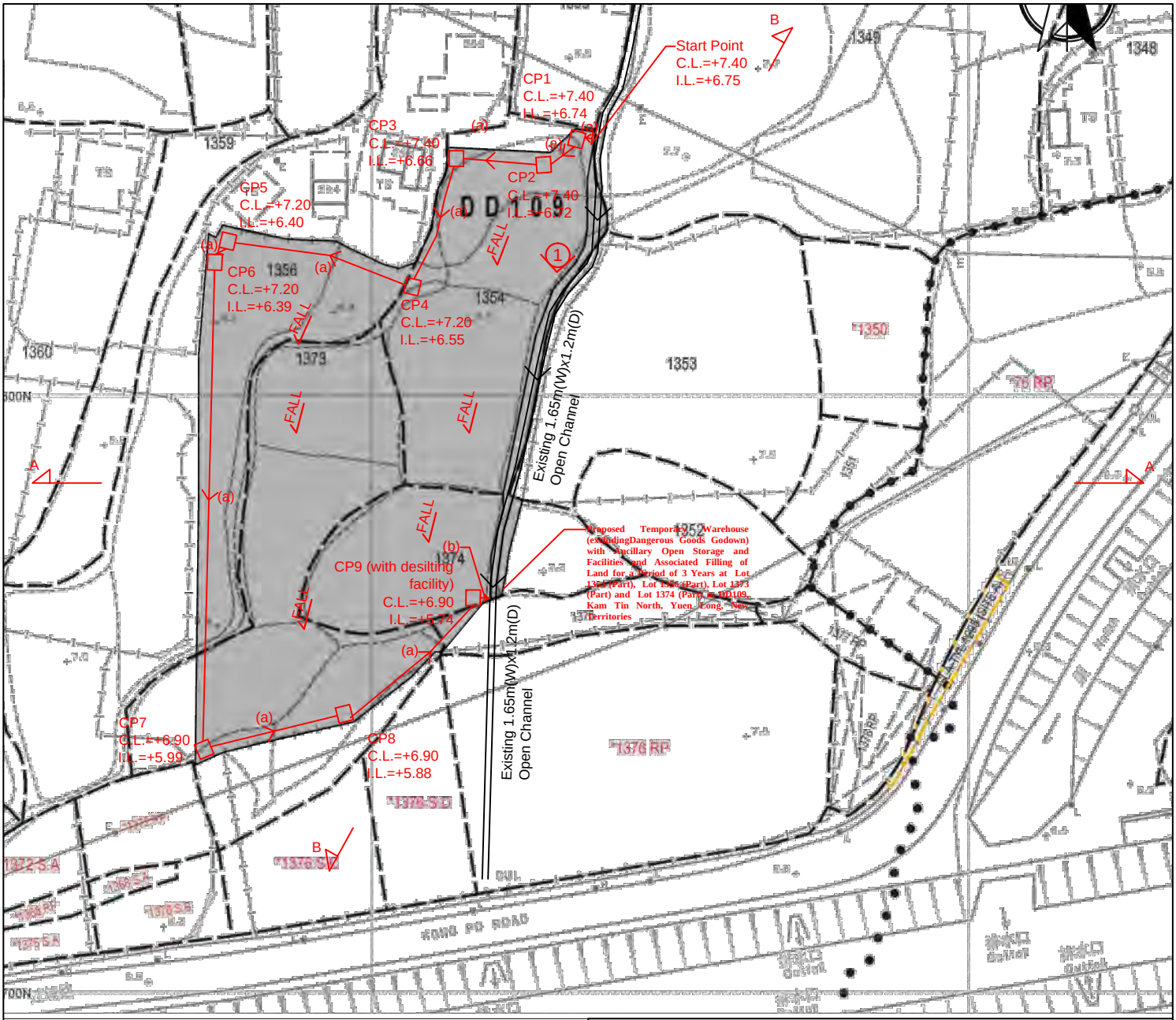
Noted.

9. The applicant should consult DLO/YL and seek consent from the relevant owners for any drainage works to be carried out outside his lot boundary before commencement of the drainage works.

Noted.

10. Connection of the proposed stormwater pipe to existing drainage facilities shall be designed and constructed such that there is no water leakage at the proposed connection.

Noted.

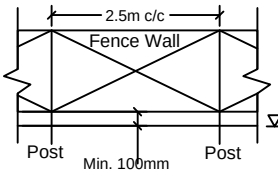


Note:

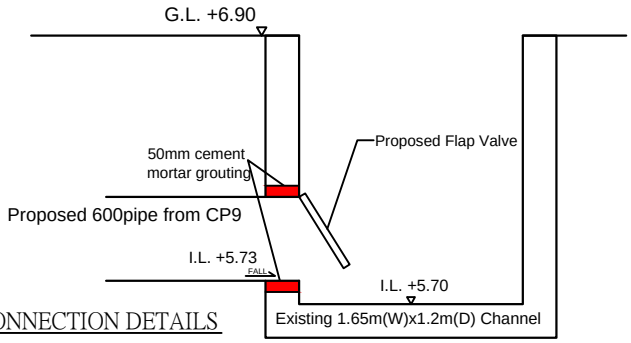
1. Catchpits (CP9) with desilting facility shall follow CEDD standard drawing No. C2406I.
2. Catchpit and UC shall follow CEDD standard drawing No.2405 and 2409J respectively.
3. Open-bottom type fence wall to be erected.
4. There is no site formation works. Filling works to be carried out to leveling the site.
5. The debris in the existing 1.65m(W)x1.2m(D) open channel shall be removed.

LEGEND

CP	Proposed CatchPit
(a)	Proposed 600UC (1:200) with Cast Iron Cover
(b)	Proposed 600mm dia. concrete pipe (1:100)
	Existing 1.65m(W)x1.2m(D) Open Channel
1	Photo Viewport



TYPICAL DETAIL OF OPEN-BOTTOM TYPE FENCE WALL



CONNECTION DETAILS

Title:

Drainage Proposal - LAYOUT

D01

Project:

Temporary Warehouse (Excluding Dangerous Goods Godown) with Ancillary Facilities and Associated Filling of Land for a Period of Three Years at Lots 1354 (Part), 1356 (Part), 1373 (Part), 1374 (Part) and 1375 (Part) in D.D. 109, Kam Tin North, Yuen Long, New Territories

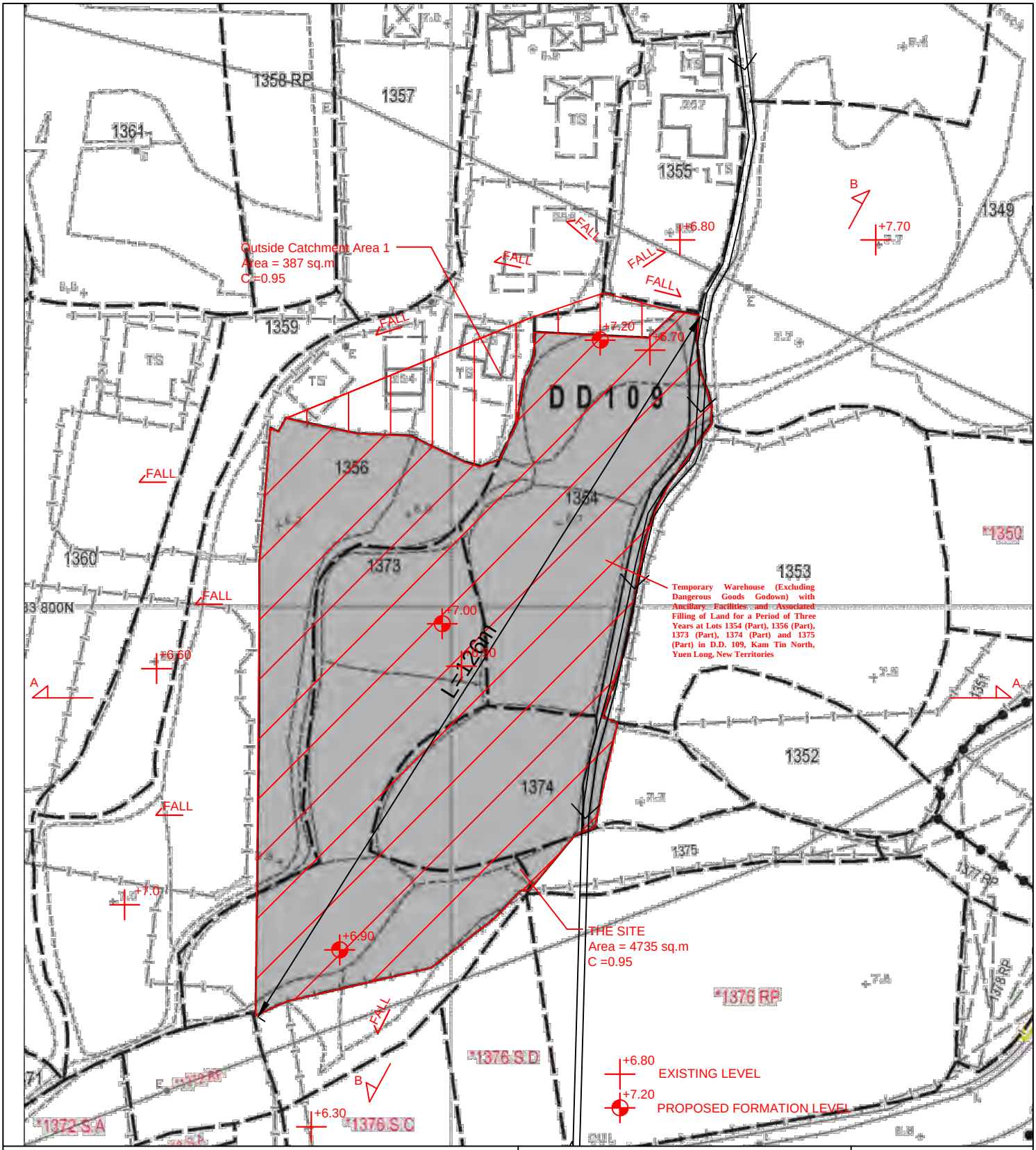
(Application Number: A/YL-KTN/1157)

Drawn by: DM

Date: 29–11–2025

正宏工程顧問公司

CHING WAN ENGINEERING CONSULTANT COMPANY



Project:

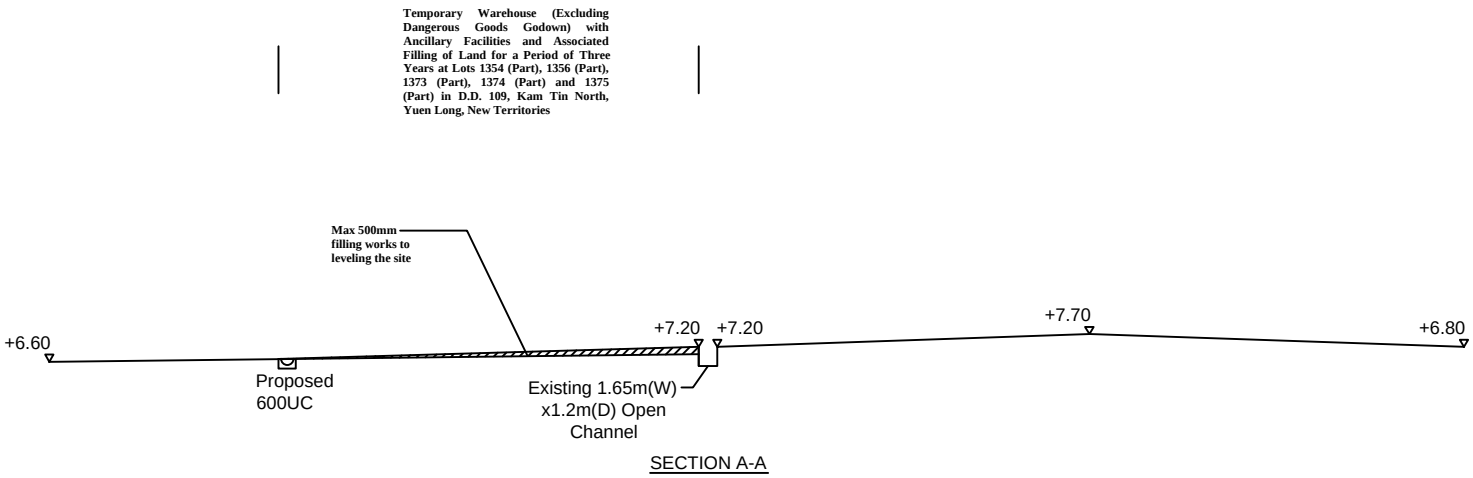
Temporary Warehouse (Excluding Dangerous Goods Godown) with Ancillary Facilities and Associated Filling of Land for a Period of Three Years at Lots 1354 (Part), 1356 (Part), 1373 (Part), 1374 (Part) and 1375 (Part) in D.D. 109, Kam Tin North, Yuen Long, New Territories

(Application Number: A/YL-KTN/1157)

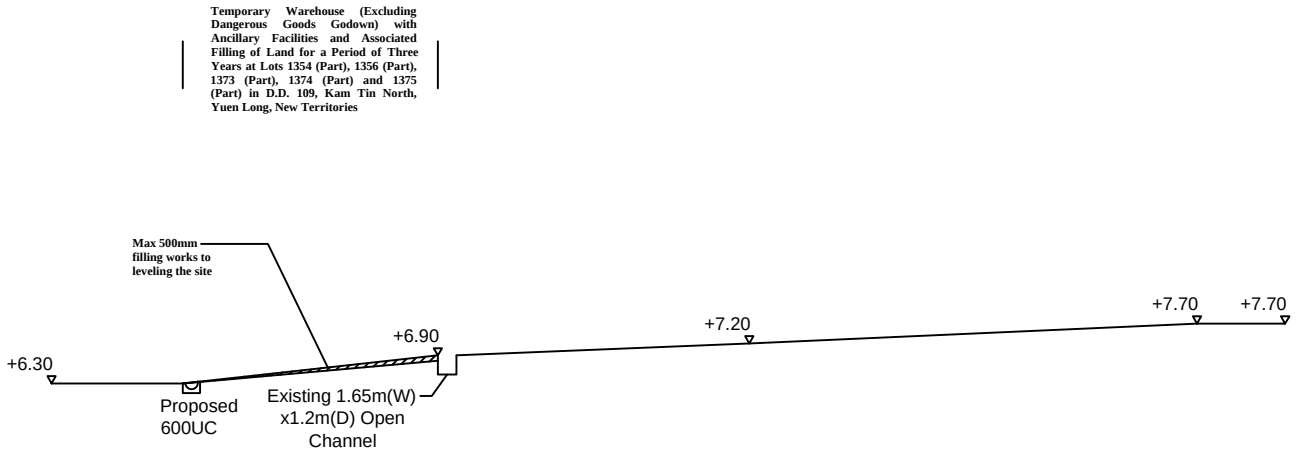
Title:	
Catchment Area Plan	D02
Drawn by: DM	Date: 29–11–2025

正宏工程顧問公司

CHING WAN ENGINEERING CONSULTANT COMPANY



SECTION A-A



SECTION B-B

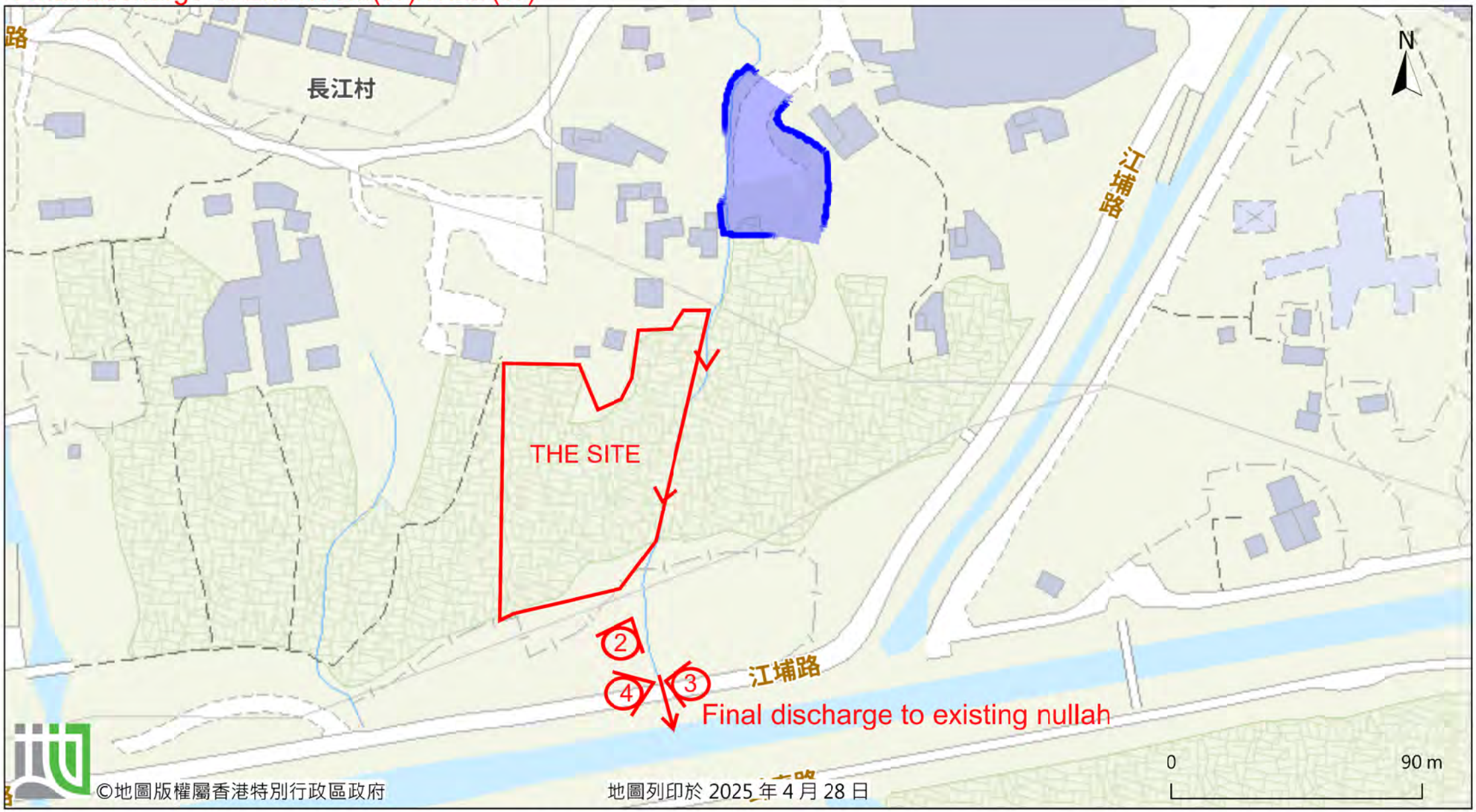
Project: **Temporary Warehouse (Excluding Dangerous Goods Godown) with Ancillary Facilities and Associated Filling of Land for a Period of Three Years at Lots 1354 (Part), 1356 (Part), 1373 (Part), 1374 (Part) and 1375 (Part) in D.D. 109, Kam Tin North, Yuen Long, New Territories** **(Application Number: A/YL-KTN/1157)**	Title: SECTIONS	D03
	Drawn by: DM	Date: 29–11–2025
	正宏工程顧問公司 CHING WAN ENGINEERING CONSULTANT COMPANY	

Photo 1

GEOINFO MAP
地理資訊地圖

前往地圖: https://www.map.gov.hk/gm/geo:22.4436,114.0735?z=2257

Final discharge of Ex. 1.65m(W)x1.2D(W)



由「地理資訊地圖」網站提供: https://www.map.gov.hk

Photo 2

Photo 3

Photo 4

Outside Catchment Area 1, Area	=	387	m^2	(C=	0.95	)
THE SITE, Area	=	4735	m^2	(C=	0.95	)

Calculation of Design Runoff of the Proposed Development,
For the design of drains inside the site, Catchment Area 1 + The Site

$\Sigma Q = \Sigma 0.278\ C\ i\ A$

$A = 387+4735 = 5122 = 0.005122$ m^2 / km^2

$t = 0.14465\ L/\ H^{0.2}A^{0.1}$
$= 0.14465*126/1^{0.2}*5122^{0.1}$
$= 7.758$ min

$i = 1.16*a/(t+b)^c$ (50 yrs return period, Table 3a, Corrigendum 2024, SDM) and (16% increase due to climate change)
$= 1.16*505.5/(7.758+3.29)^{0.355}$
$= 249.9$ mm/hr

Therefore, $Q = 0.278*0.95*249.9*0.005122$
$= 0.3381$ m^3/sec
$= \underline{20285}$ lit/min

Provide 600UC (1:200) is OK

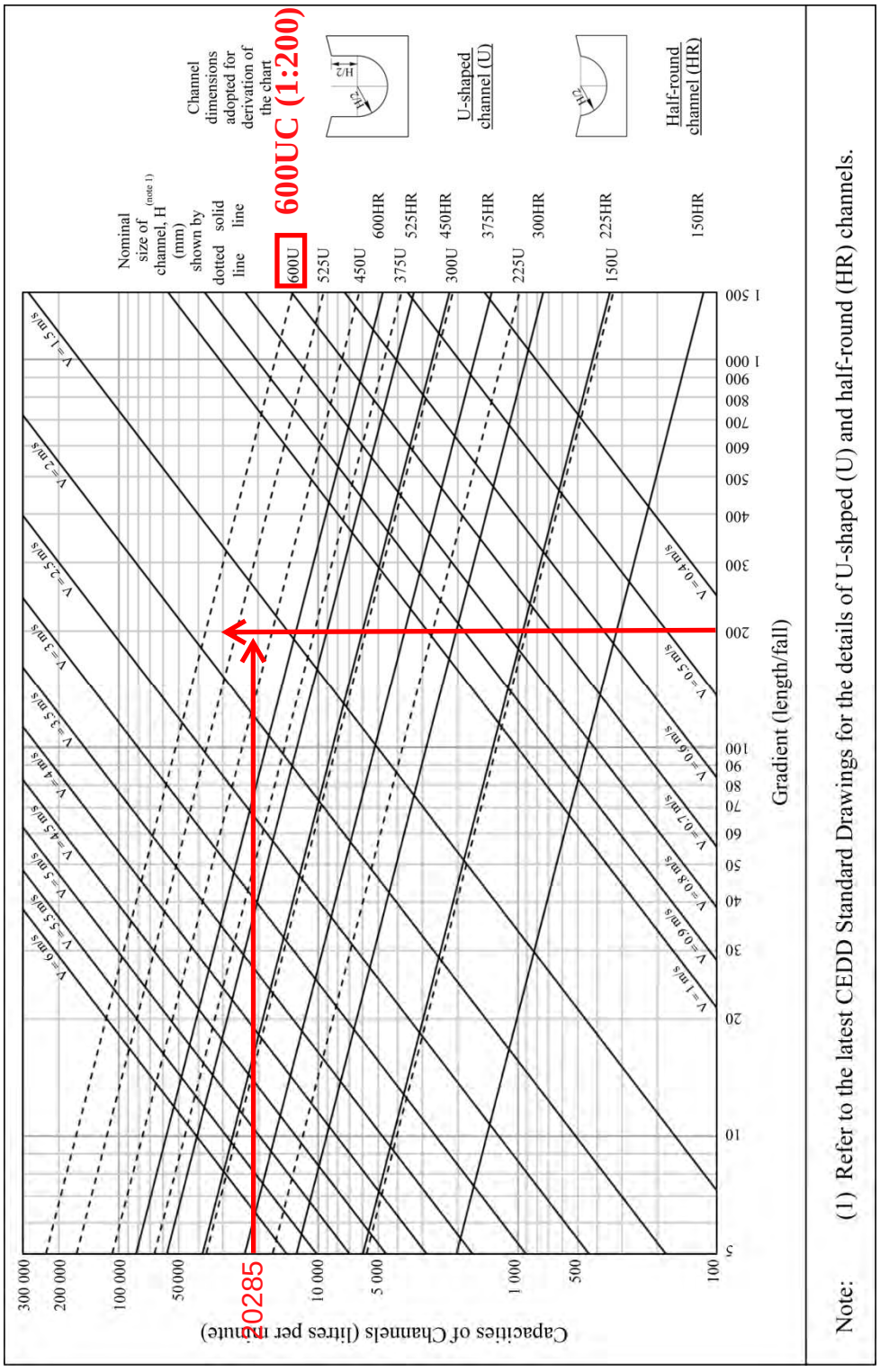


Figure 1 - Chart for the rapid design of U-shaped and half-round channels up to 600 mm

Note: (1) Refer to the latest CEDD Standard Drawings for the details of U-shaped (U) and half-round (HR) channels.

Check 600mm dia. Pipes by Colebrook-White Equation

$$V = -\sqrt{(8gDs)}\log\left(\frac{ks}{3.7D} + \frac{2.51v}{D\sqrt{(2gDs)}}\right)$$

where :

V	=			mean velocity (m/s)	
g	=	9.81	m/s2	gravitational acceleration (m/s2)	
D	=	0.6	m	internal pipe diameter (m)	
ks	=	0.00015	m	hydraulic pipeline roughness (m)	(Table14, from DSD SDM 2018, concrete pipe)
v	=	1.14E-06	m2/s	kinematic viscosity of fluid (m2/s)	
s	=	0.01		hydraulic gradient	

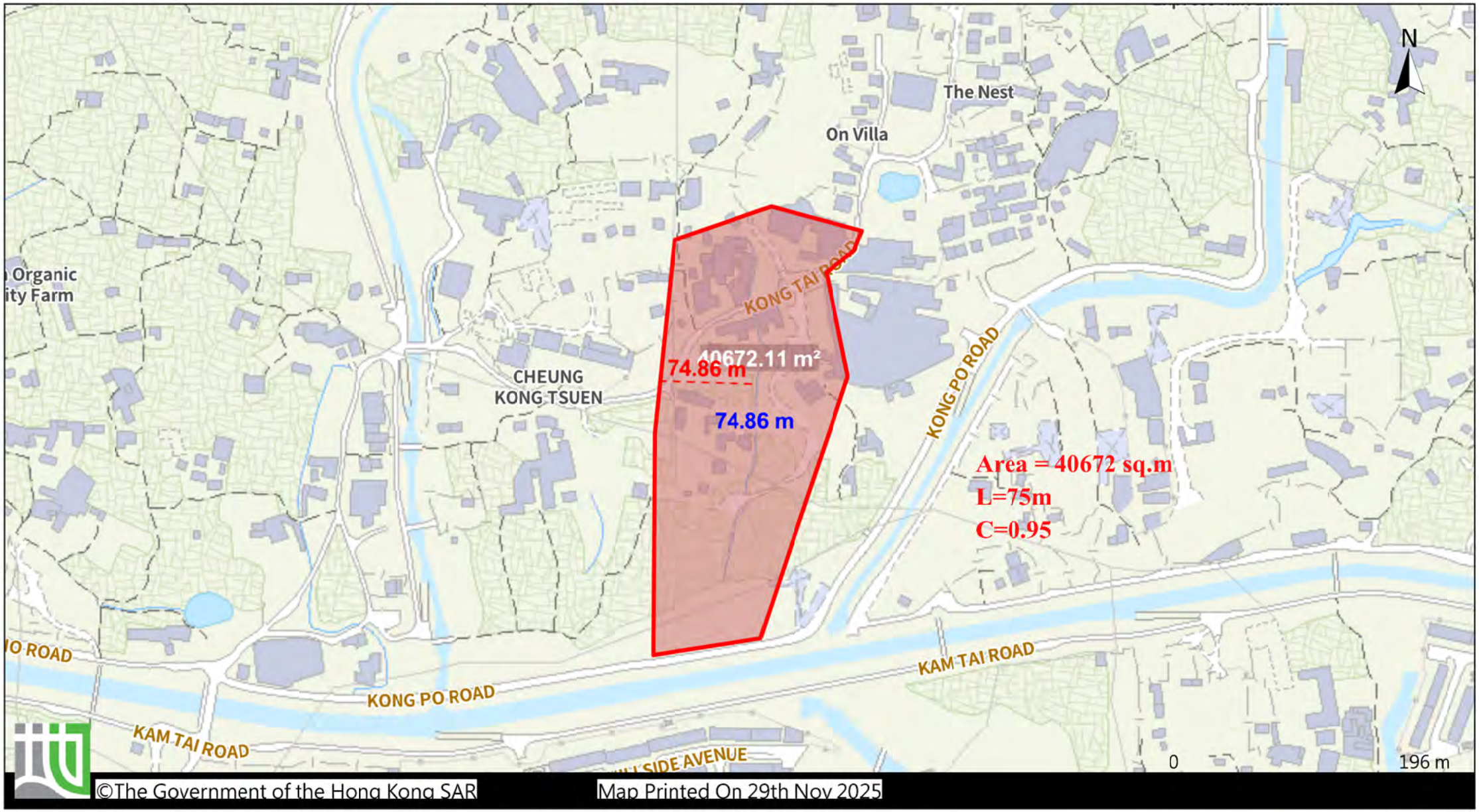
Therefore, design V of pipe capacity = 2.8059 m/s

Q= 0.8VA (0.8 factor for sedimentation)
= 0.635 m3/s
= 38081 lit/min
> 20285 lit/min Ok

GEOINFO MAP
地理資訊地圖

Go to map: https://www.map.gov.hk/gm/geo:22.4445,114.0745?z=4514

Catchment Area Plan for Existing 1.65m(W)x1.2m(D) Open Channel



Powered by GeoInfo Map: https://www.map.gov.hk

Catchment Area = 40672 m^2 (C= 0.95)

Calculation of Design Runoff

For checking the existing 1.65m(W)x1.2m(D) Open Channel

$\Sigma Q = \Sigma 0.278\ C\ i\ A$

A = 40672 m^2
= 40672
= 0.040672 km^2

t = $0.14465\ L/\ H^{0.2}A^{0.1}$
= $0.14465*75/1^{0.2}*40672^{0.1}$
= 3.754 min

i = $1.16*a/(t+b)^c$ (50 yrs return period, Table 3a, Corrigendum 2024, SDM) and (16% increase due to climate change)
= $1.16*505.5/(3.754+3.29)^{0.355}$
= 293.2 mm/hr

Therefore, Q = 0.278*0.95*290.8*0.040672
= 3.1497 m^3/sec
= 188985 lit/min

Calculation Maximum Capacity of Existing 1.65m(W)x1.2m(D) Open Channel

Manning Equation $V = R^{2/3}*S_f^{0.5}/n$

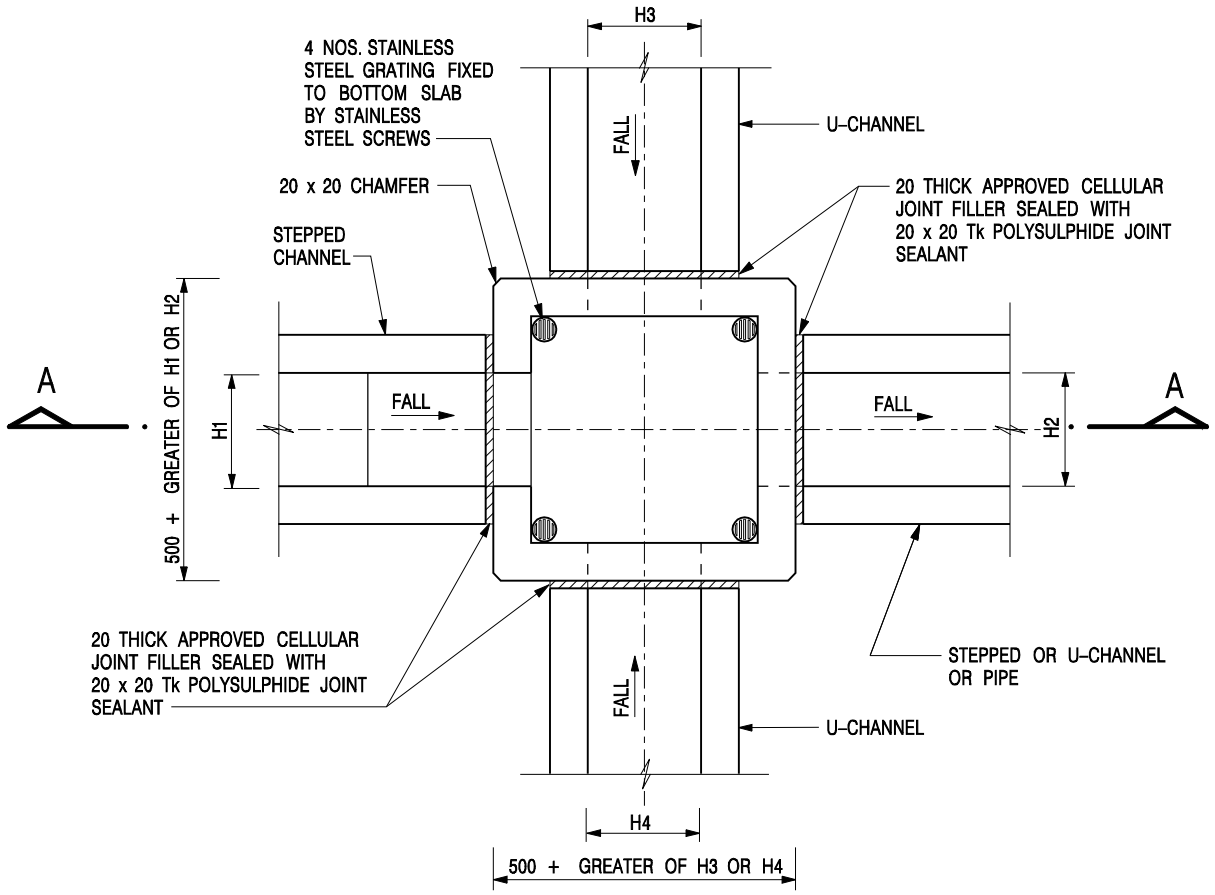
where R = WD/(W+2D) W= 1.65 m
= 0.4521 m D= 1 m (200mm freeboard considered)
Area=WD= 1.65 m2

n = 0.012 $s/m^{1/3}$ (Talbe 13 of Stormwater Drainage Manual)

S_f = 0.003

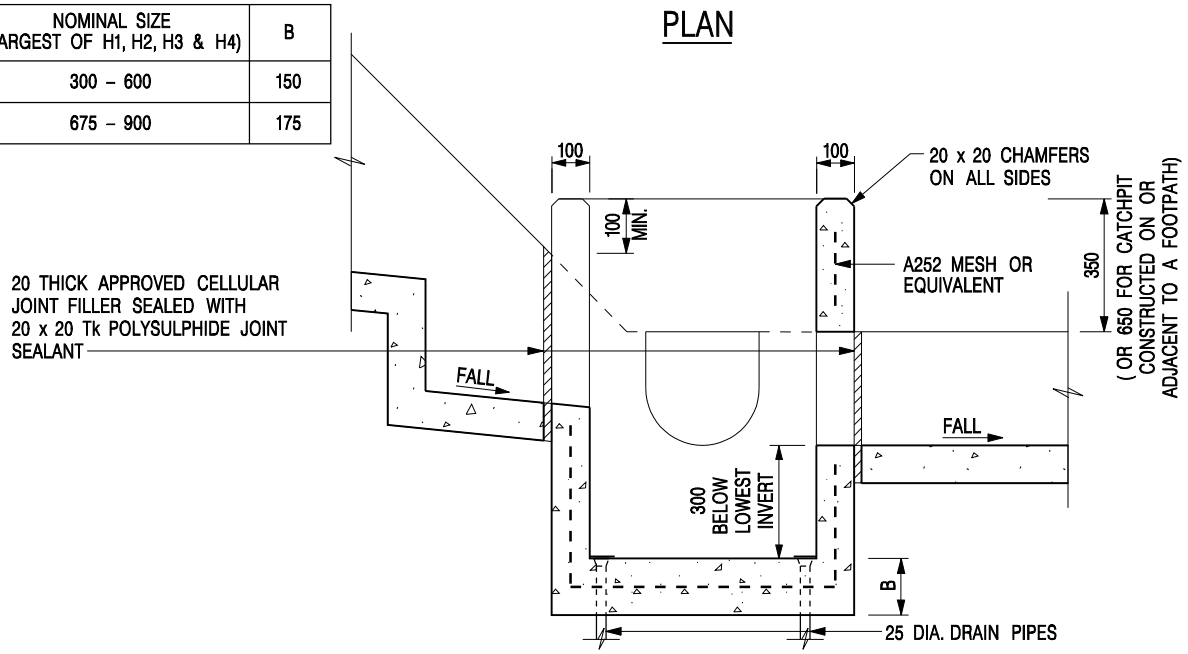
Therefore, V = $0.4521^{2/3}*0.003^{0.5}/0.012$
= 2.83 m/sec

Maximum Capacity (Q_{max}) = V*A
= 4.68 m^3/sec
= 280557 lit/min
> 188985 lit/min OK



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.

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

CATCHPIT WITH TRAP

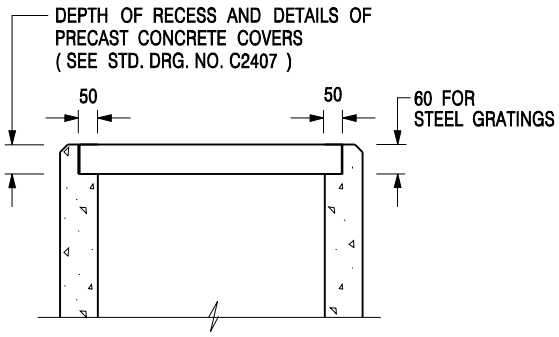
(SHEET 1 OF 2)

CEDD 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.

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

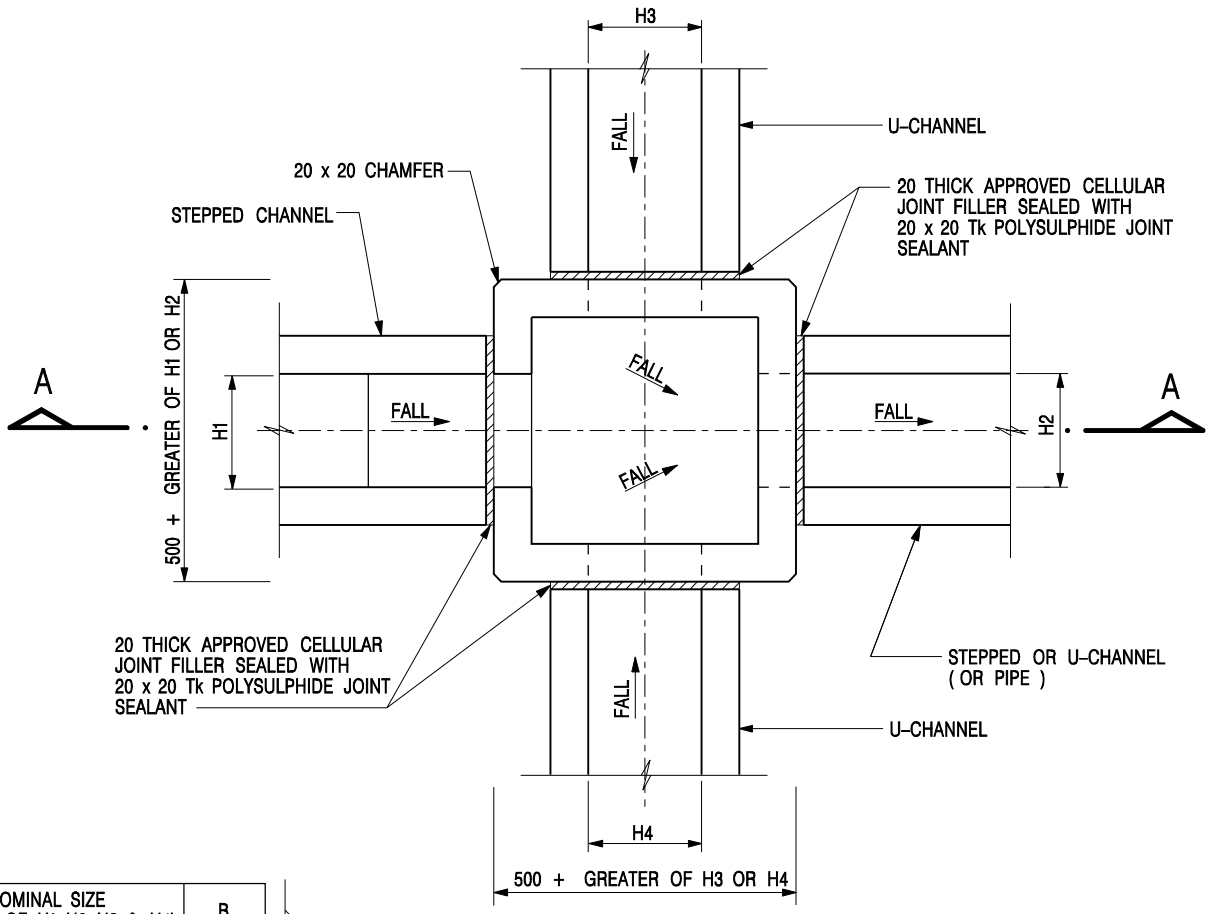
CATCHPIT WITH TRAP
(SHEET 2 OF 2)

CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

SCALE 1 : 20

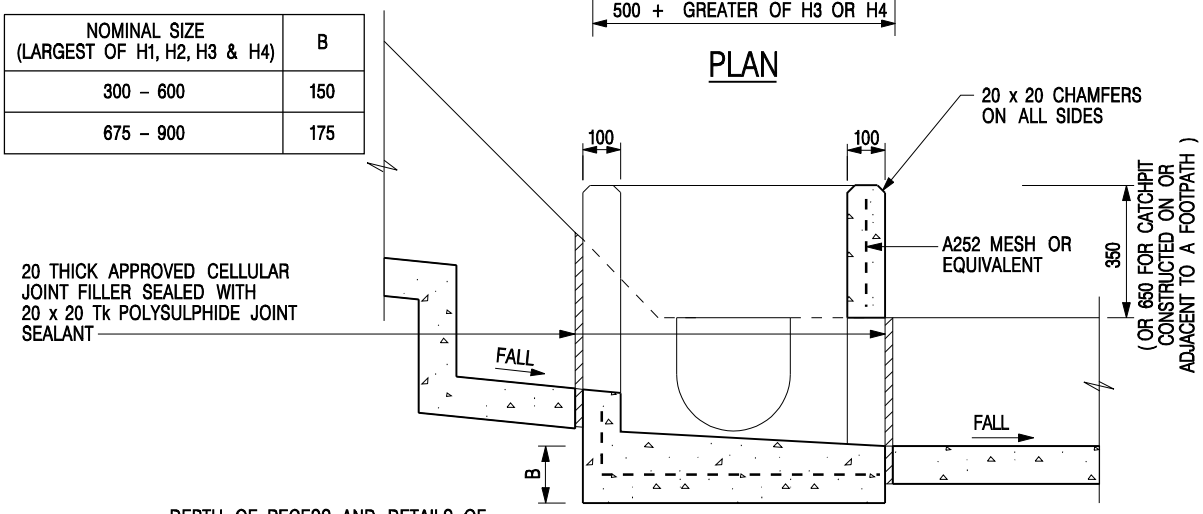
DATE JAN 1991

DRAWING NO. C2406 /2A

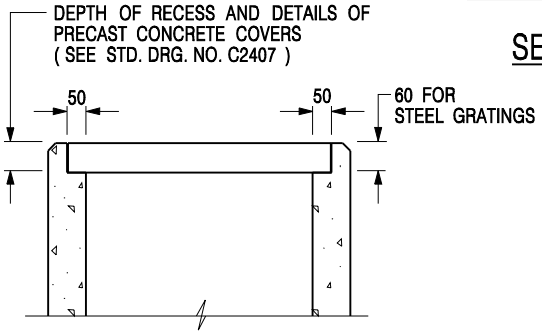


PLAN

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 5 FOR OTHER NOTES.

ALTERNATIVE TOP SECTION FOR PRECAST CONCRETE COVERS / GRATINGS

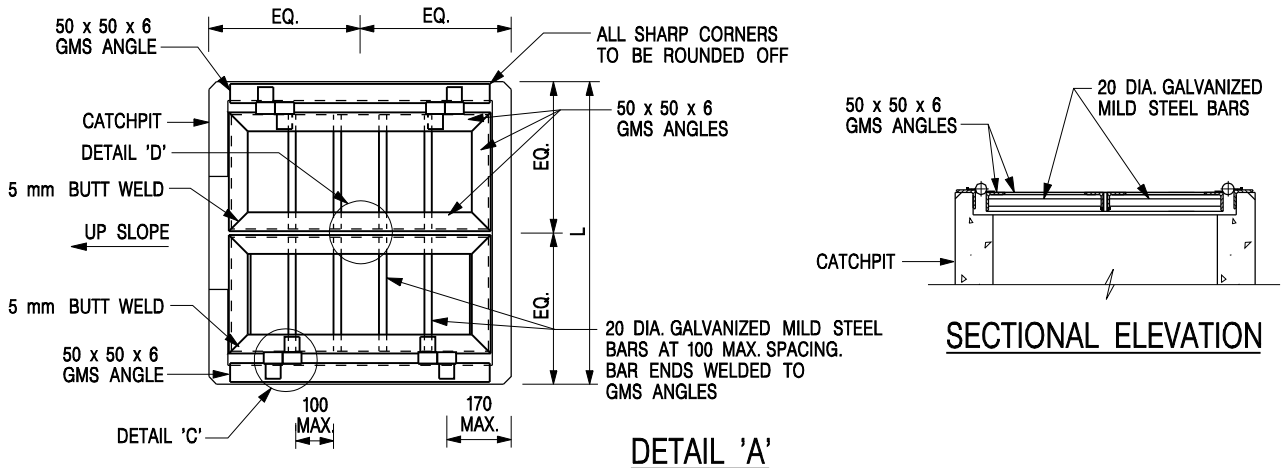
REF.	REVISION	SIGNATURE	DATE
–	FORMER DRG. NO. C2405J.	Original Signed	03.2015

STANDARD CATCHPIT DETAILS

(SHEET 1 OF 5)

CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

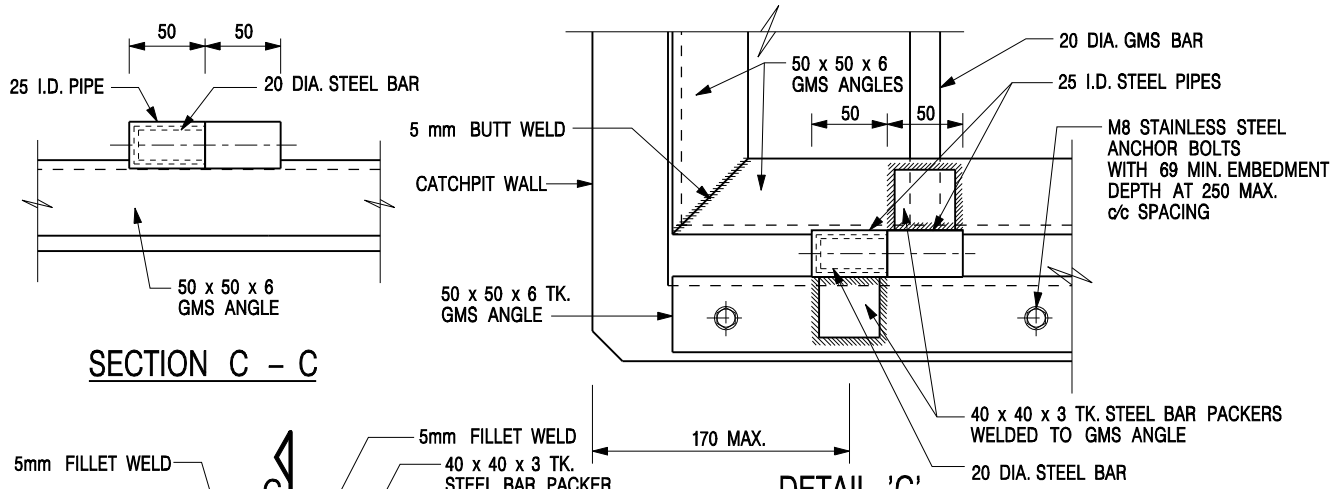
SCALE	1 : 20	DRAWING NO.
DATE	JAN 1991	C2405 /1



DETAIL 'A'

(DETAILS OF DOUBLE SIDE OPENING STEEL GRATING FOR L>900mm)

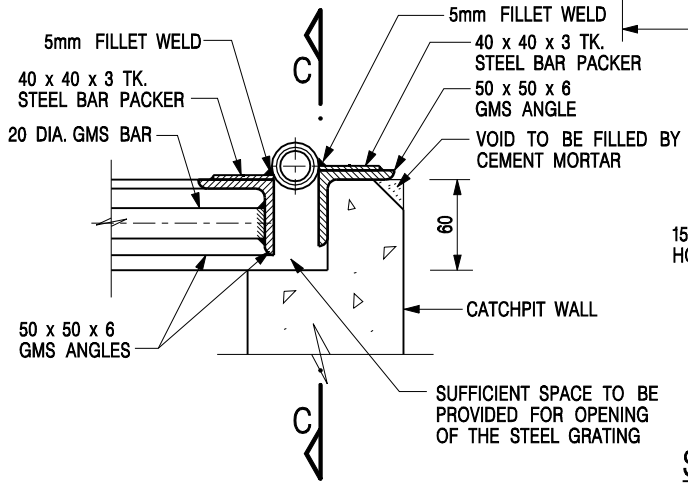
SCALE 1 : 20



DETAIL 'C'

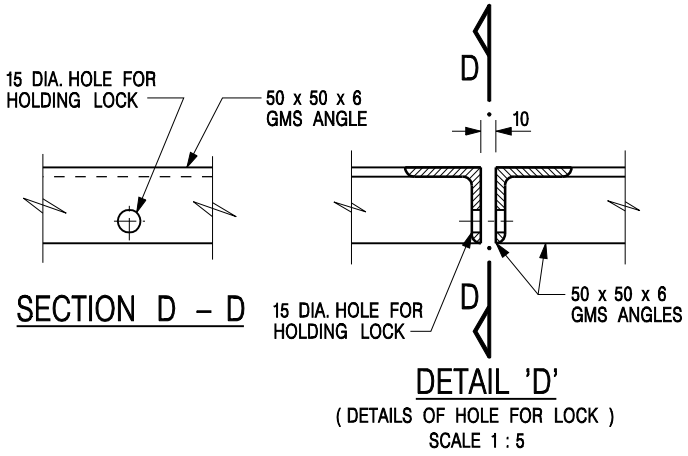
(DETAILS OF HINGE)

SCALE 1 : 5



SECTIONAL ELEVATION

(DETAIL 'C')



DETAIL 'D'

(DETAILS OF HOLE FOR LOCK)

SCALE 1 : 5

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. REFER TO SHEET 5 FOR OTHER NOTES.

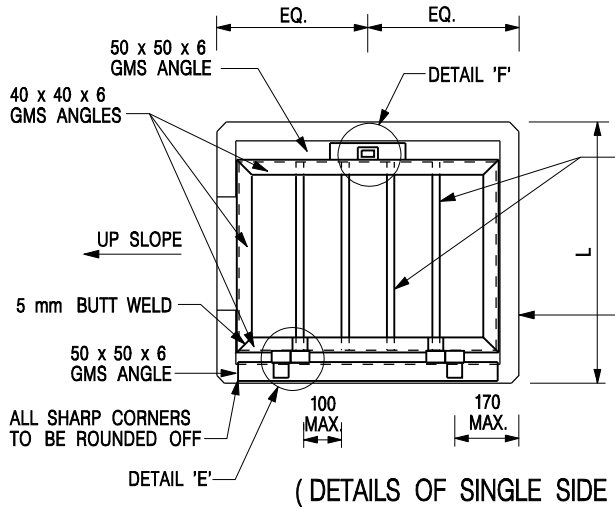
REF.	REVISION	SIGNATURE	DATE
–	FORMER DRG. NO. C2405J.	Original Signed	03.2015

STANDARD CATCHPIT DETAILS

(SHEET 2 OF 5)

CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

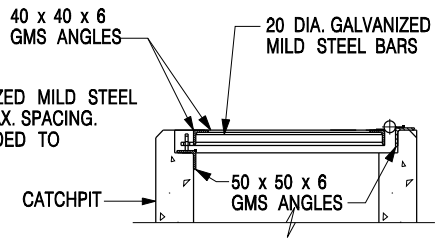
SCALE	AS SHOWN	DRAWING NO.
DATE	JAN 1991	C2405 /2



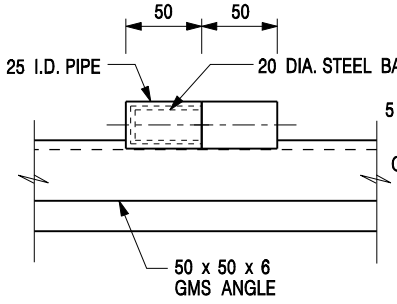
DETAIL 'B'

(DETAILS OF SINGLE SIDE OPENING STEEL GRATING FOR L≤900mm)

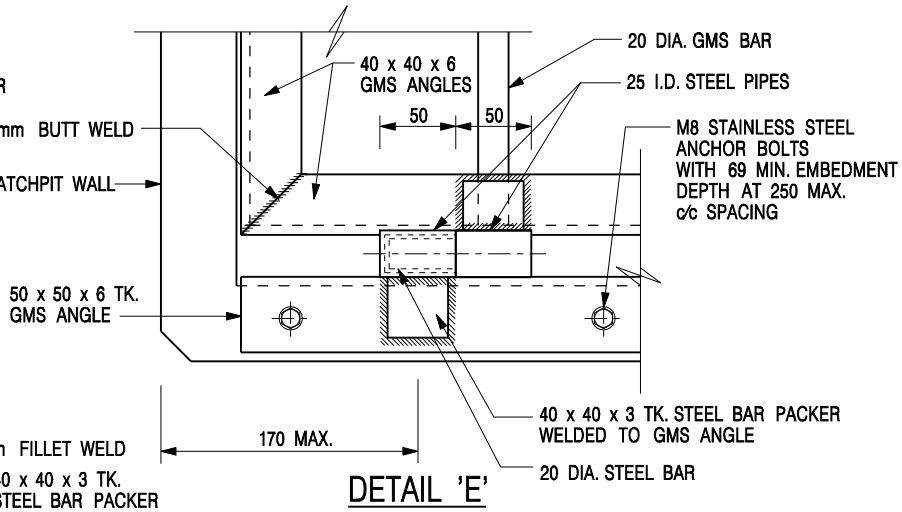
SCALE 1 : 20



SECTIONAL ELEVATION



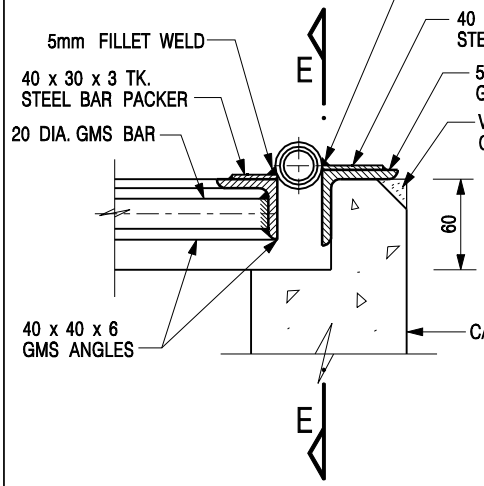
SECTION E – E



DETAIL 'E'

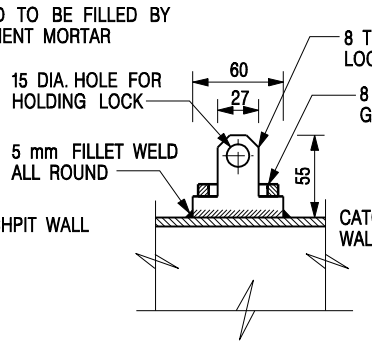
(DETAILS OF HINGE)

SCALE 1 : 5

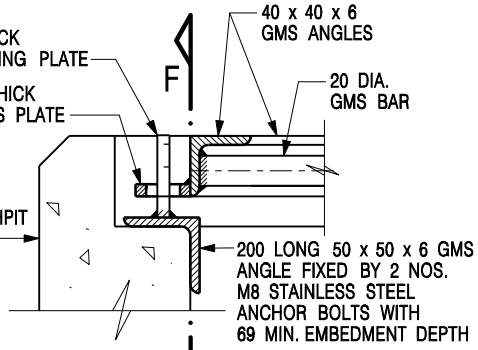


SECTIONAL ELEVATION

(DETAIL 'E')



SECTION F – F



DETAIL 'F'

(DETAILS OF LOCKING PLATE)

SCALE 1 : 5

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. REFER TO SHEET 5 FOR OTHER NOTES.

REF.	REVISION	SIGNATURE	DATE
–	FORMER DRG. NO. C2405J.	Original Signed	03.2015

STANDARD CATCHPIT DETAILS

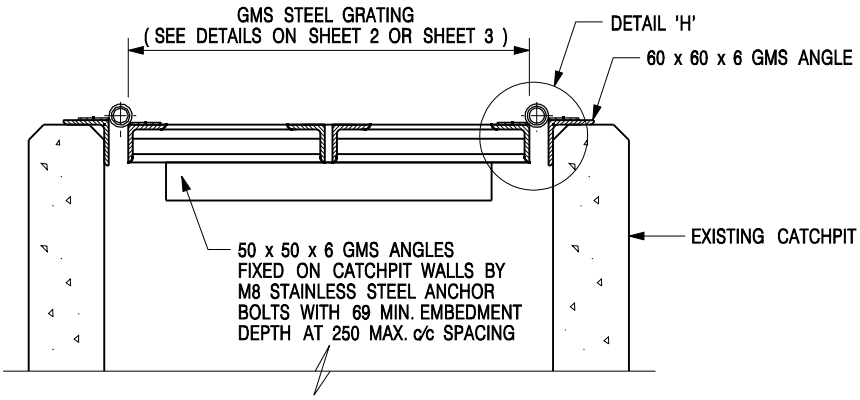
(SHEET 3 OF 5)

CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

SCALE AS SHOWN

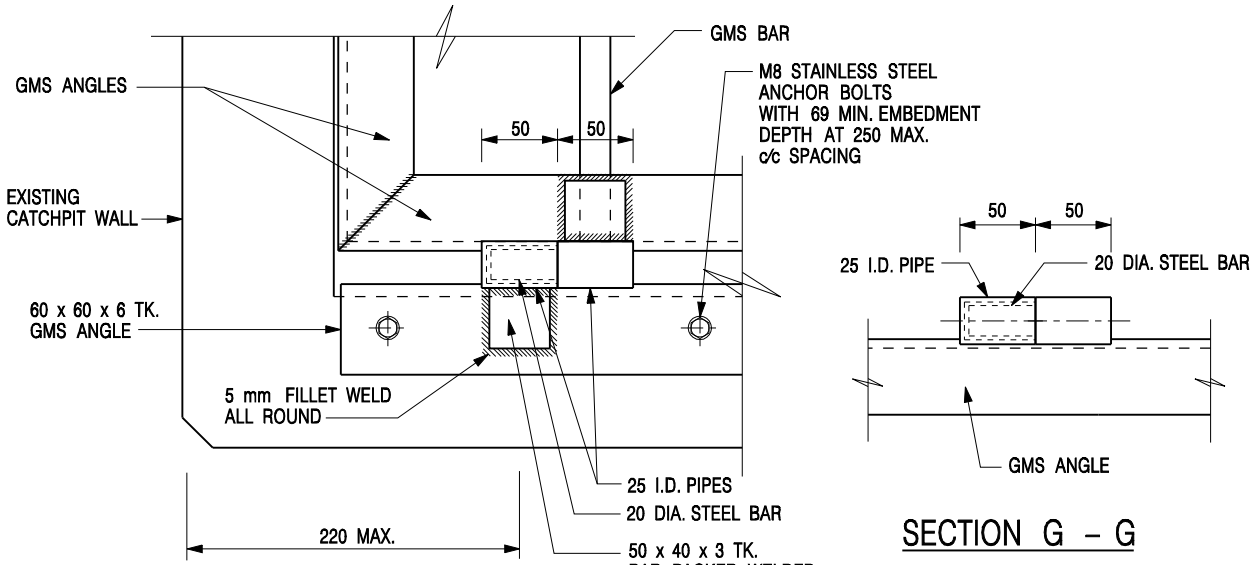
DATE JAN 1991

DRAWING NO. C2405 /3



DETAIL 'G' – DETAILS OF STEEL GRATING CONSTRUCTED ON EXISTING CATCHPIT

SCALE 1 : 10

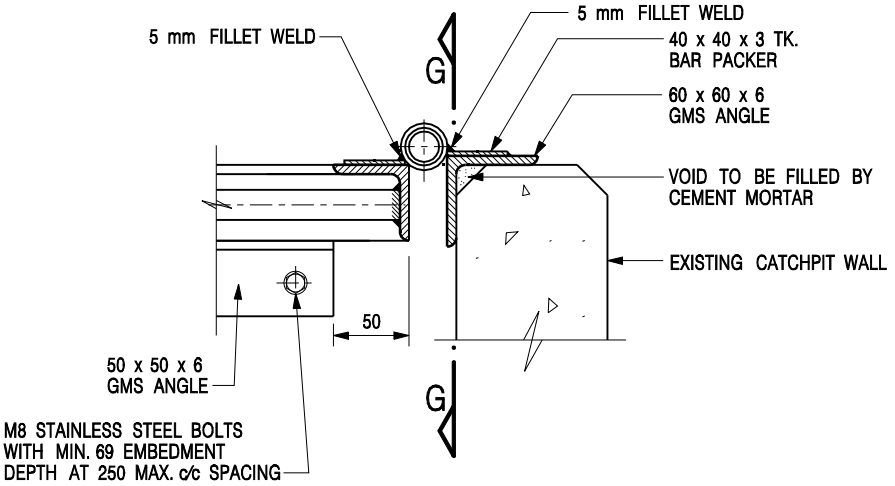


DETAIL 'H'

(DETAILS OF HINGE)

SCALE 1 : 5

SECTION G – G



SECTIONAL ELEVATION

(DETAIL 'H')

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. REFER TO SHEET 5 FOR OTHER NOTES.

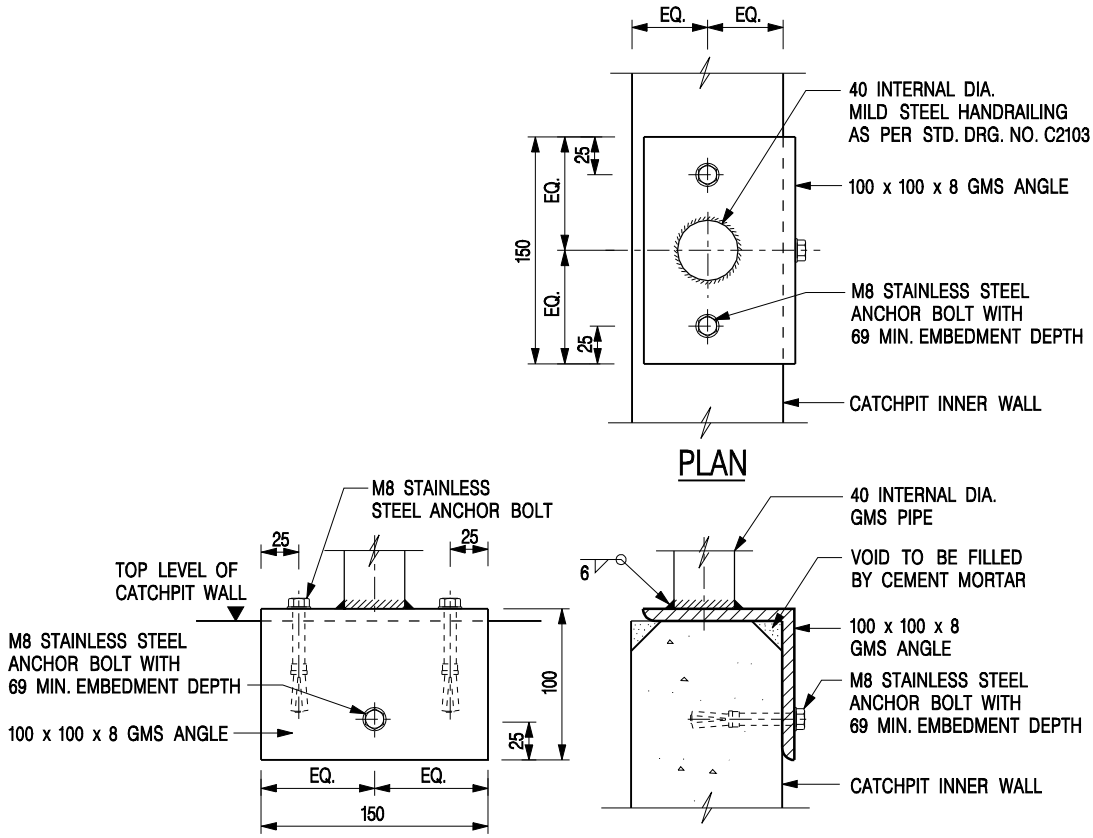
REF.	REVISION	SIGNATURE	DATE
–	FORMER DRG. NO. C2405J.	Original Signed	03.2015

STANDARD CATCHPIT DETAILS

(SHEET 4 OF 5)

CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

SCALE AS SHOWN	DRAWING NO. C2405 /4
DATE JAN 1991	



DETAIL 'J' – FIXING DETAILS FOR HANDRAILING ON TOP OF CATCHPIT WALL

SCALE 1 : 5

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. FOR CATCHPITS CONSTRUCTED ON OR ADJACENT TO A FOOTPATH, STEEL GRATINGS (SEE DETAILS ON SHEET 2 OR SHEET 3) OR CONCRETE COVERS (SEE STD. DRG. NO. C2407) SHALL BE PROVIDED AS DIRECTED BY THE ENGINEER.
7. IF INSTRUCTED BY THE ENGINEER, HANDRAILING (SEE DETAIL 'J' ON SHEET 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.
8. 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 mm c/c STAGGERED SHALL BE PROVIDED. THICKNESS OF CATCHPIT WALL FOR INSTALLATION OF STEP IRONS SHALL BE INCREASED TO 150 mm.
9. FOR RETROFITTING AN EXISTING CATCHPIT WITH STEEL GRATING, SEE DETAIL 'G' ON SHEET 4.
10. ALL STEEL ANGLES SHALL COMPLY WITH BS EN 10025 AND BS EN 10056.
11. UNLESS OTHERWISE SPECIFIED, ALL WELDS SHALL BE 5 mm CONTINUOUS FILLET WELDS.
12. ALL WELDS SHALL BE CHIPPED, GROUND SMOOTH, BRUSHED TO REMOVE SLAG PRIOR TO HOT-DIP GALVANIZATION.
13. ALL STEELWORK SHALL BE HOT-DIP GALVANIZED TO BS EN ISO 1461. ALL EXPOSED STEELWORK SURFACES SHALL BE TREATED AND PAINTED IN ACCORDANCE WITH THE GENERAL SPECIFICATION.
14. SUBJECT TO THE APPROVAL OF THE ENGINEER, OTHER MATERIALS CAN ALSO BE USED AS COVERS / GRATINGS.

REF.	REVISION	SIGNATURE	DATE
–	FORMER DRG. NO. C2405J.	Original Signed	03.2015

STANDARD CATCHPIT DETAILS

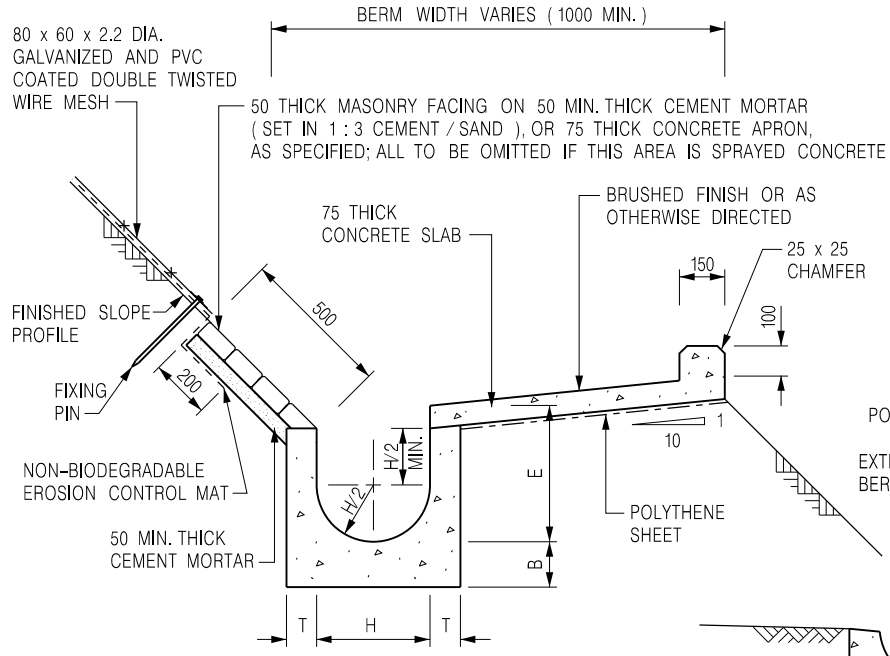
(SHEET 5 OF 5)

CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

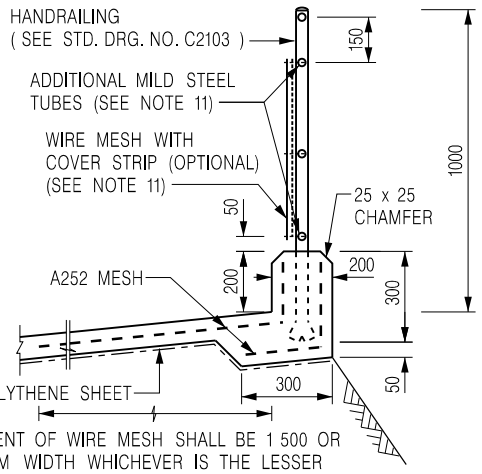
SCALE AS SHOWN

DATE JAN 1991

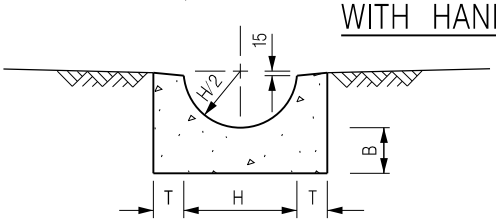
DRAWING NO. C2405 /5



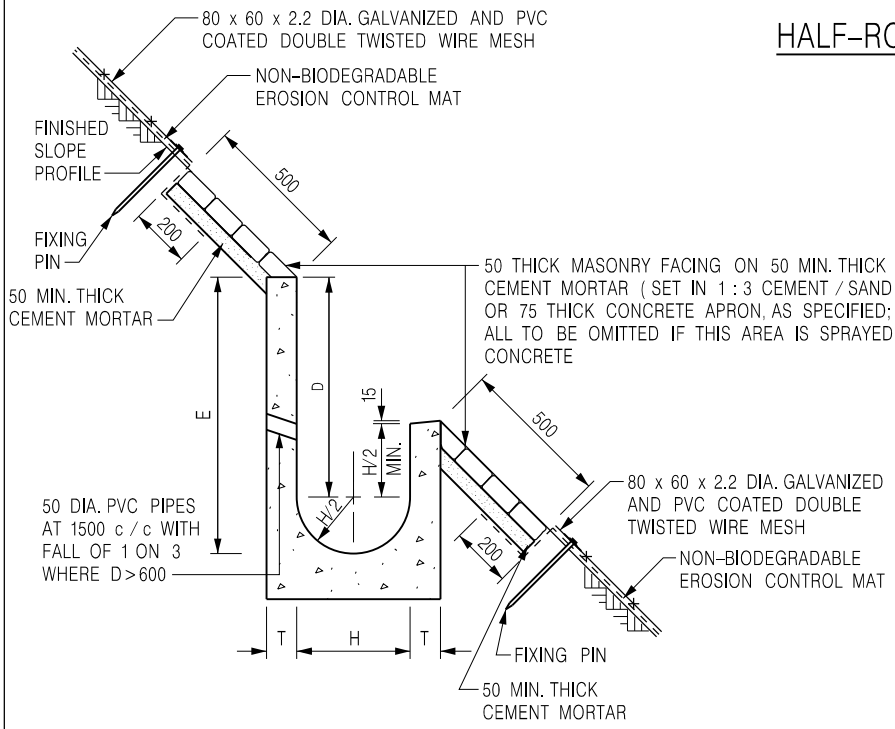
U-CHANNELS CONSTRUCTED ON BERM



DETAILS OF BERM WITH HANDRAILING



HALF-ROUND CHANNEL



U-CHANNELS NOT CONSTRUCTED ON BERM

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. C2511/1E.
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. C2511/1E)
11. THE WIRE MESH ON HANDRAILING IS OPTIONAL. THE COVER STRIP AND ADDITIONAL MILD STEEL TUBES ARE NEEDED ONLY IF WIRE MESH IS PROVIDED. (SEE STD. DRG. NO. C2103)

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
J	DETAILS OF HANDRAILING AMENDED.	Original Signed	08.2024
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

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

CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

SCALE 1 : 25

DATE JAN 1991

DRAWING NO. C2409J