

STORMWATER & SEWERAGE DRAINAGE PLAN
(SCALE 1 : 200)

APPLICATION SITE

Lot 293 RP
D.D. 127
Hung Shui Kiu
Yuen Long, N.T.

DRAWING TITLE

STORMWATER &
SEWERAGE
DRAINAGE WORK

DRAWING NO.

STE-1C

DRAWING DATE

17 JAN 2024

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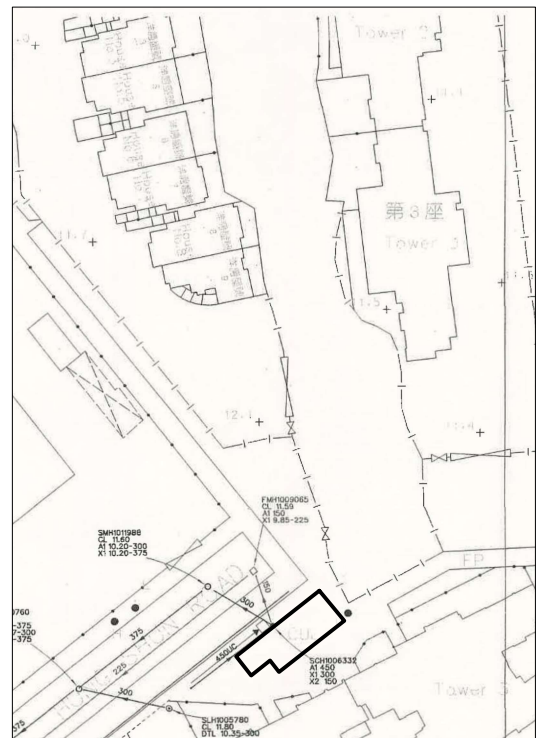
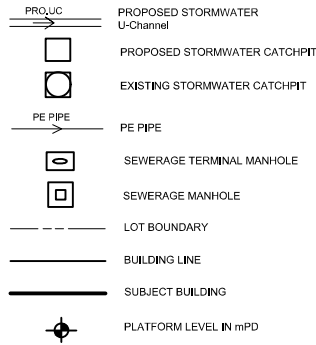
Solar-Iil Design Consulting Limited

景佑設計工程顧問有限公司

GENERAL NOTES

- ALL DIMENSIONS ARE IN MILLIMETERS
- FOUNDATION OF TERMINAL MANHOLE VARIES WITH SITE CONDITION AND SHOULD BE DETERMINED ON SITE BY THE ENGINEER.
- CONCRETE MIX TO BE 30D/20 AND COMPLY WITH CS1.
- BLINDING LAYER TO BE 15P MIX.
- ALL DRAINS FROM VILLAGE HOUSE TO MANHOLE TO BE 100Ø PVC PIPE WITH MIN. FALL IN 1 : 40.
- ALL DRAINS FROM TERMINAL MANHOLE TO MANHOLE TO BE 200Ø HDPE PIPE WITH MIN. FALL IN 1 : 70.
- ALL DRAINS FROM MANHOLE TO EXISTING MANHOLE TO BE 200Ø PE PIPE WITH MIN. FALL IN 1 : 70.
- ALL SEWERAGE TERMINAL MANHOLE SHALL BE PROVIDED WITH 100Ø PVC FRESH AIR INLET PIPE AND EXTENDED TO MIN. 2.5m ABOVE GROUND.
- THE PROPOSED SEWERAGE DRAINAGE SYSTEM TO BE MAINTAINED BY THE OWNER AT OWNER'S COST.
- A MINIMUM SOIL COVER OF 450MM AND 900MM SHOULD BE PROVIDED FOR THE CONNECTION PIPE CONSTRUCTED UNDER FOOTPATH AND CARRIAGEWAY RESPECTIVELY.
- ALL COVER LEVEL AND INVERT LEVEL OF EXISTING MANHOLE WAS CLARIFIED BY DSD'S PROJECT MANAGEMENT DIVISION.
- AFTER OUR CONSIDERATION, UPVC PIPE IS SUITABLE FOR OUR DRAINAGE WORK.
- THE APPLICANT WILL ENSURE THE RUNOFF WILL NOT BE DRAINED TO THE PUBLIC SEWAGE NETWORK. THE RUNOFF WITHIN THE SUBJECT PREMISES AND SMALL HOUSE WILL BE SERVED BY A DESIGNATED STORMWATER COLLECTION AND DISCHARGES SYSTEM.

LEGEND



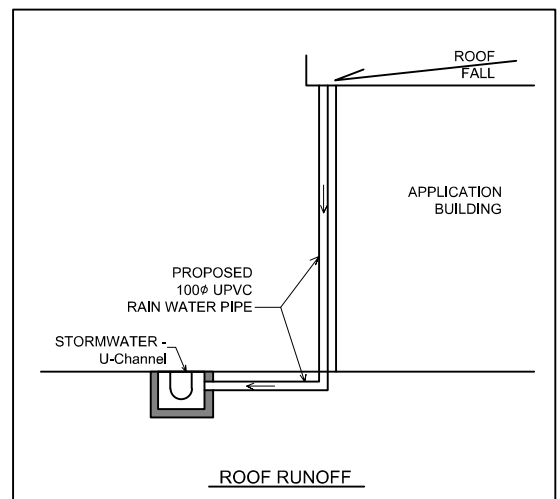
BLOCK PLAN
(SCALE 1 : 1000)

GENERAL NOTES

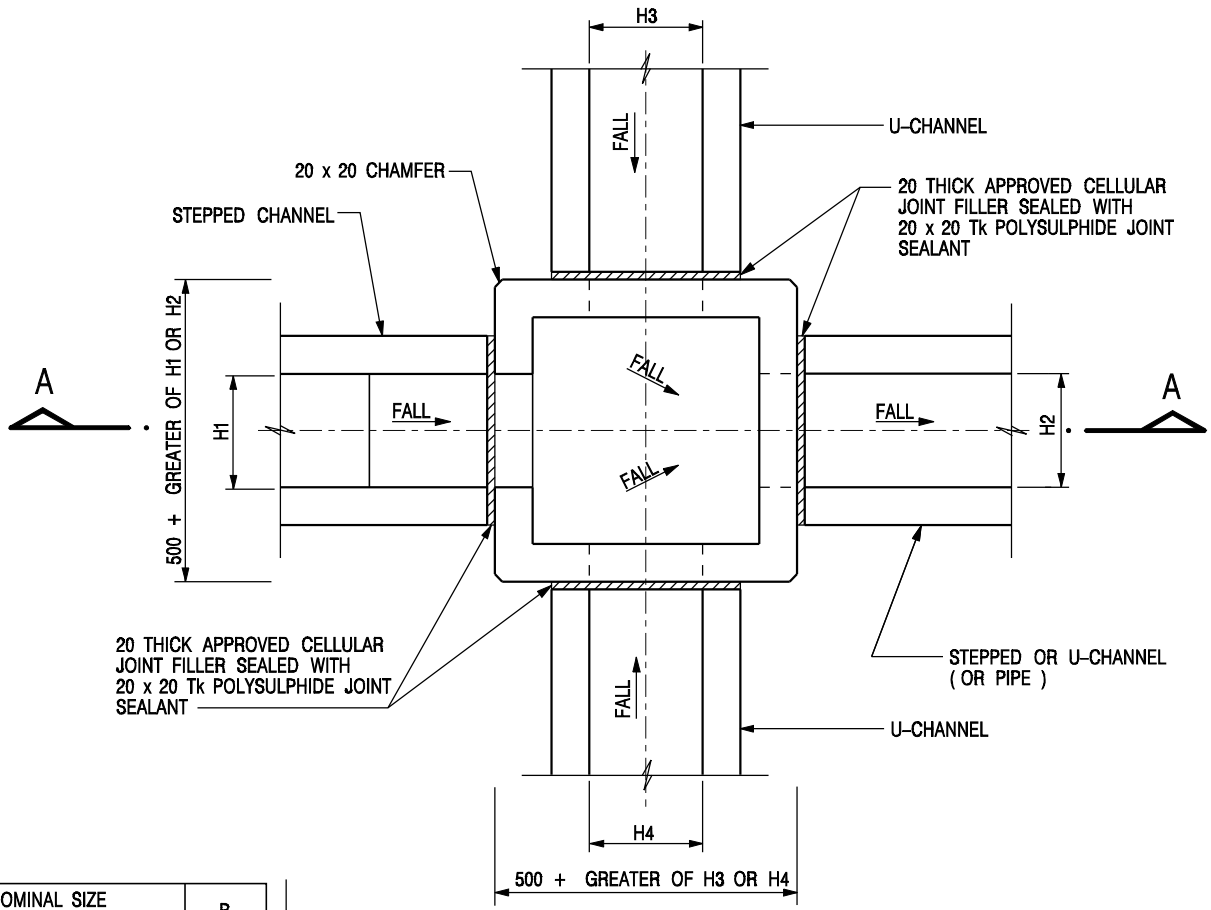
- ALL DIMENSIONS ARE IN MILLIMETERS
- CONCRETE MIX TO BE 30D/20 AND COMPLY WITH CS1.
- BLINDING LAYER TO BE 15P MIX.
- ALL NEW 225 CHANNEL ARE OF FALL GRADIENT 1:100
- PROPOSED CONNECTION UNDERGROUND PIPE IS TO BE CONSTRUCTED UNDER FOOTPATH AND THE UPVC PIPE PROVIDED CONCRETE SURROUND MIN. 150MM THICK.

| STORMWATER DRAINAGE | | | | |
|--|-------|-------|-------|-------|
| CATCHPIT | C L | A 1 | A 2 | X 1 |
| CP01 (WITH TRAP) (CEDD DRAWING NO. C2406/1) | 11.80 | 11.30 | 11.44 | 11.30 |
| CP02 (CEDD DRAWING NO. C2405/1) | 11.80 | 11.53 | ----- | 11.53 |
| CP03 (WITH TRAP) (CEDD DRAWING NO. C2406/1) | 11.80 | 11.47 | ----- | 11.47 |
| EX. CP (SCH1006332) | 11.80 | 11.18 | 11.39 | 11.18 |

| SEWERAGE DRAINAGE | | | | |
|----------------------------------|-------|-------|-------|------|
| MANHOLE | C L | IL | D T L | |
| TER.MH1 (DSD DRAWING DS-1090) | 11.80 | 10.72 | 10.54 | |
| MANHOLE | C L | A1 | A2 | X1 |
| EXMH (FMH1009065) | 11.59 | ----- | 10.44 | 9.85 |

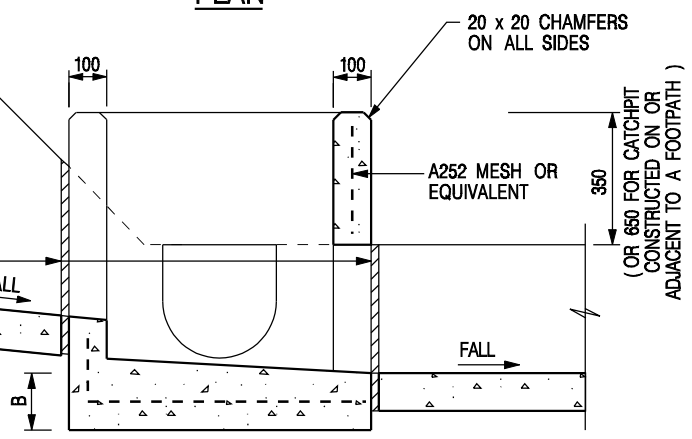


| | | | | |
|---|---|------------------------------------|---|--|
| APPLICATION SITE Lot 293 RP D.D. 127 Hung Shui Kiu Yuen Long, N.T. (Planning Application No. A/YL-TYST/1250) | DRAWING TITLE STORMWATER & SEWERAGE DRAINAGE WORK | DRAWING NO. STE-2C | This drawings and all related information are property of Solar-Iil Design Consulting Limited, any use must be approved by the company. | Solar-Iil Design Consulting Limited 景佑設計工程顧問有限公司 |
| | | DRAWING DATE 17 JAN 2024 | | |

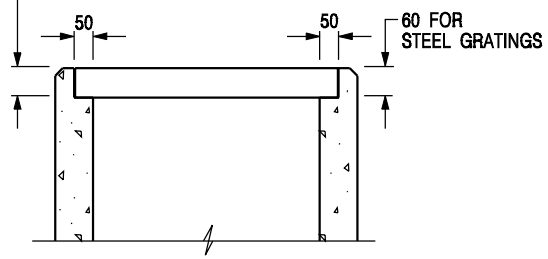


| | |
|--|-----|
| NOMINAL SIZE (LARGEST OF H1, H2, H3 & H4) | B |
| 300 - 600 | 150 |
| 675 - 900 | 175 |

20 THICK APPROVED CELLULAR JOINT FILLER SEALED WITH 20 x 20 Tk POLYSULPHIDE JOINT SEALANT



DEPTH OF RECESS AND DETAILS OF PRECAST CONCRETE COVERS (SEE STD. DRG. NO. C2407)

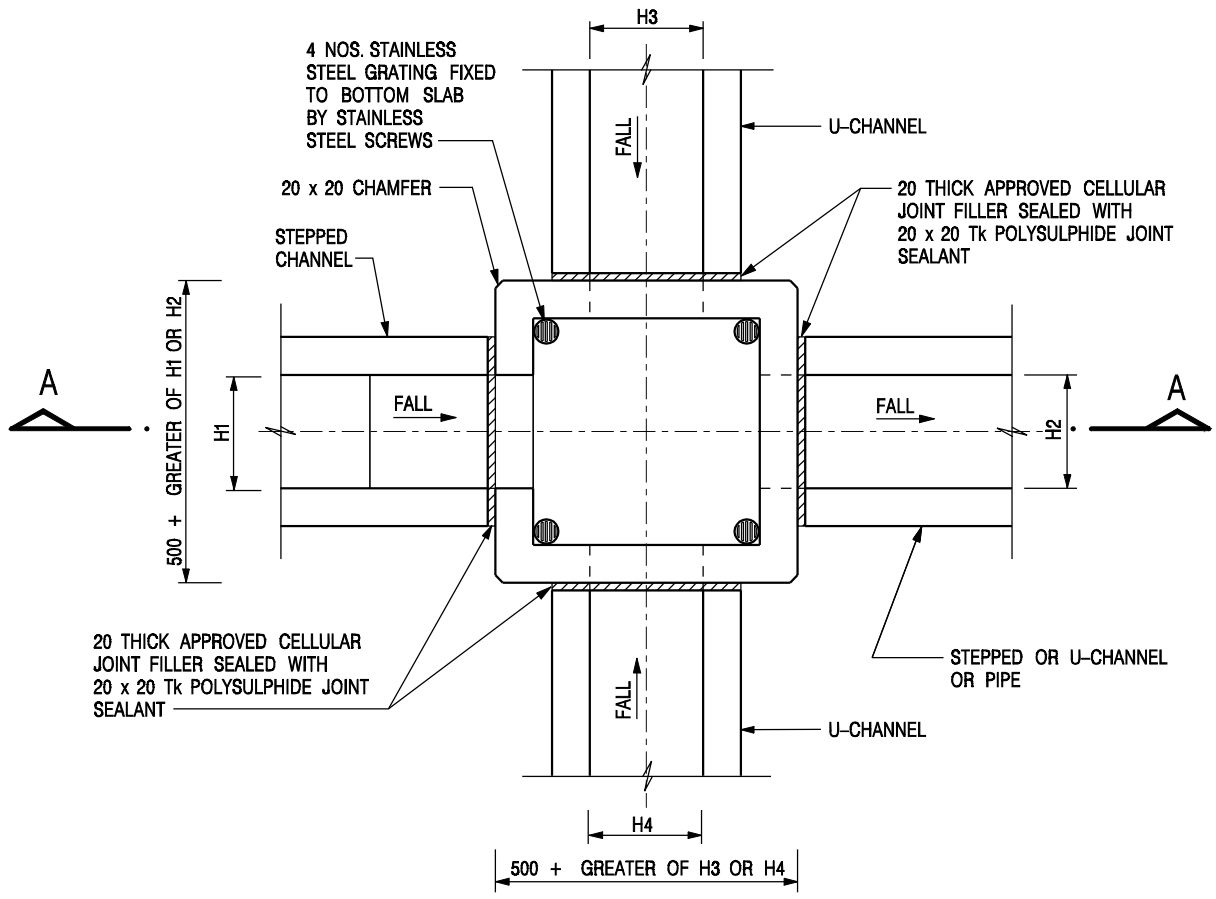


- NOTES:**
1. ALL DIMENSIONS ARE IN MILLIMETRES.
 2. REFER TO SHEET 5 FOR OTHER NOTES.

ALTERNATIVE TOP SECTION FOR PRECAST CONCRETE COVERS / GRATINGS

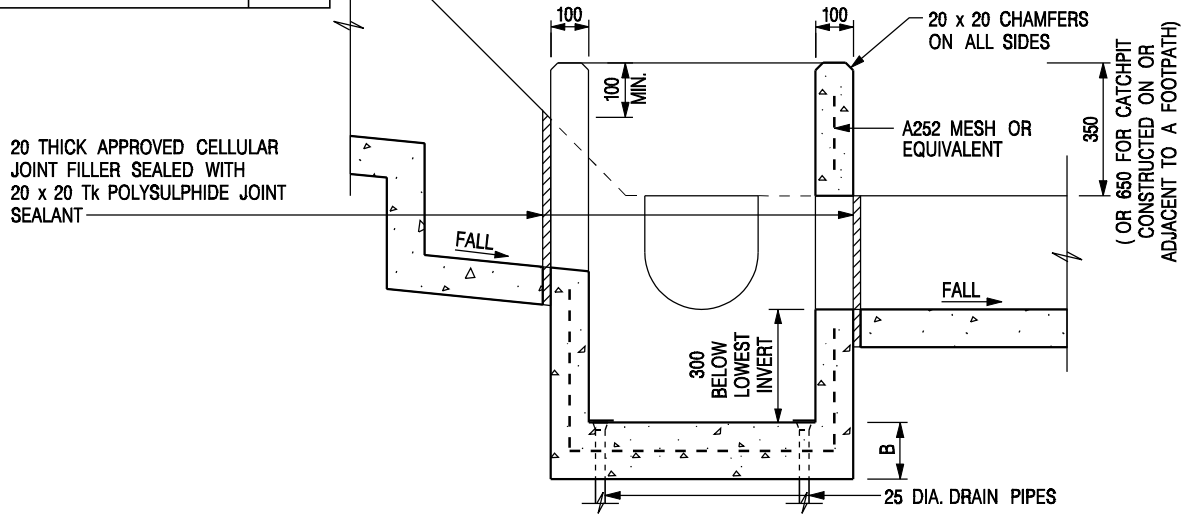
STANDARD CATCHPIT DETAILS (SHEET 1 OF 5)

| | | | |
|---|-------------------------|------------------------------|---------|
| - | FORMER DRG. NO. C2405J. | Original Signed | 03.2015 |
| REF. | REVISION | SIGNATURE | DATE |
| CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT | | SCALE 1 : 20 | |
| | | DATE JAN 1991 | |
| | | DRAWING NO. C2405 / 1 | |



PLAN

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



SECTION A - A

NOTES:

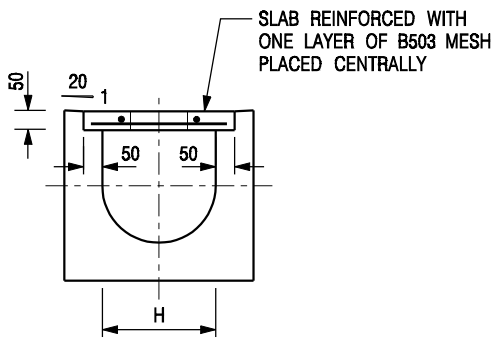
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. REFER TO SHEET 2 FOR OTHER NOTES.

CATCHPIT WITH TRAP
(SHEET 1 OF 2)

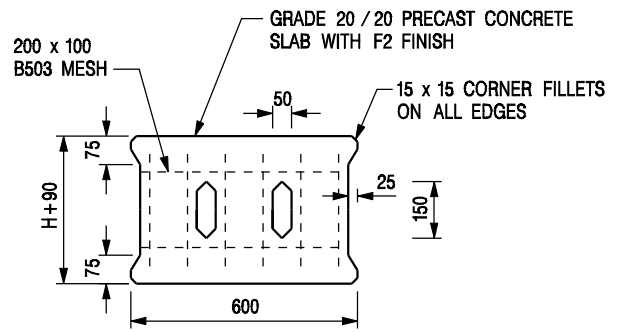
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| REF. | REVISION | SIGNATURE | DATE |

CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

SCALE 1 : 20 DRAWING NO. C2406 /1
DATE JAN 1991



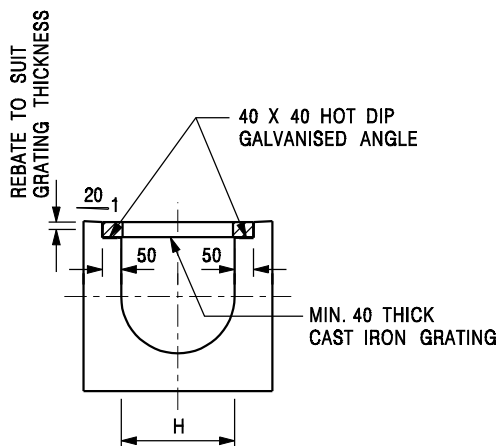
TYPICAL SECTION



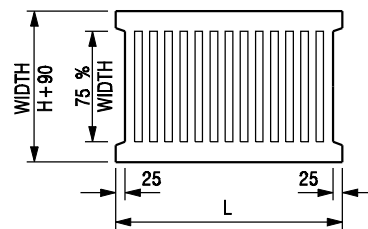
PLAN OF SLAB

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:

- ALL DIMENSIONS ARE IN MILLIMETRES.
- H=NOMINAL CHANNEL SIZE.
- ALL CAST IRON FOR GRATINGS SHALL BE GRADE EN-GJL-150 COMPLYING WITH BS EN 1561.
- 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**



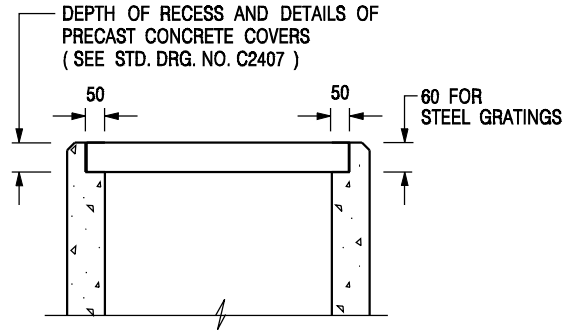
**CIVIL ENGINEERING AND
DEVELOPMENT DEPARTMENT**

SCALE 1 : 20

DRAWING NO.

DATE JAN 1991

C2412E




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

NOTES:

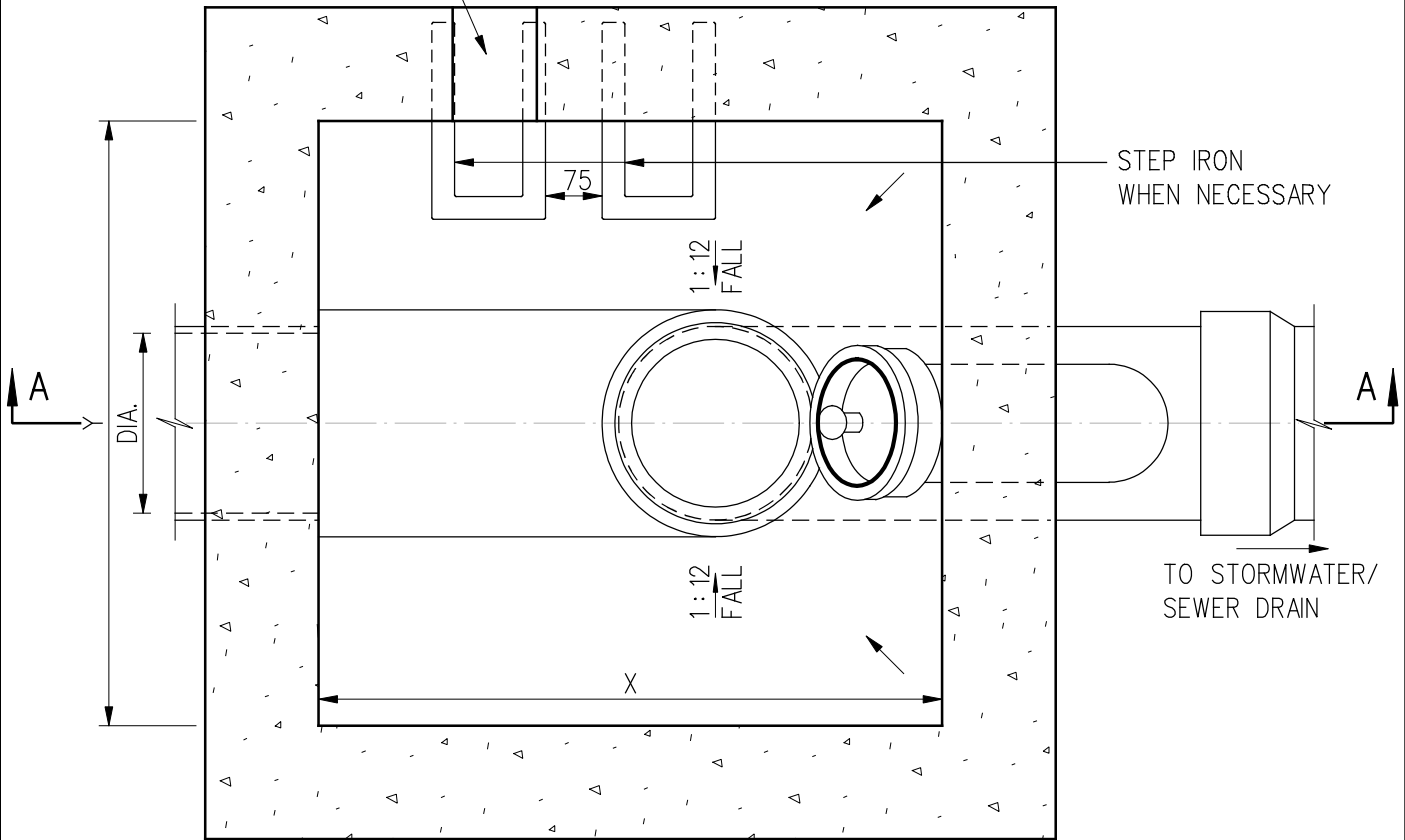
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL CONCRETE SHALL BE GRADE 20 /20.
3. CONCRETE SURFACE FINISH SHALL BE CLASS U2 OR F2 AS APPROPRIATE.
4. FOR DETAILS OF JOINT, REFER TO STD. DRG. NO. C2413.
5. CONCRETE TO BE COLOURED AS SPECIFIED.
6. UNLESS REQUESTED BY THE MAINTENANCE PARTY AND AS DIRECTED 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 |

OPENING FOR F.A.I.
(FOR SEWER MANHOLE ONLY)



SECTIONAL PLAN

| | | |
|------------------------------------|--------------|--|
| MANHOLE COVER OPENING SIZE (mm) | 450 | 675 |
| X (mm) | 600 (min) | 825 (min) |
| Y (mm) | (DIA. + 500) | (DIA. + 500) OR 675, WHICHEVER IS GREATER |

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. CONCRETE IS TO BE GRADE 30/20.
3. PIPE DIAMETER OF PIPE TO BE LESS THAN OR EQUAL TO 450 mm.

| | | | |
|------|-------------|-----------------|-----------|
| REV. | NEW ISSUE | ORIGINAL SIGNED | 13.1.2016 |
| | DESCRIPTION | SIGNATURE | DATE |

**TERMINAL MANHOLE
TYPE T1_1**

DRAINAGE SERVICES DEPARTMENT

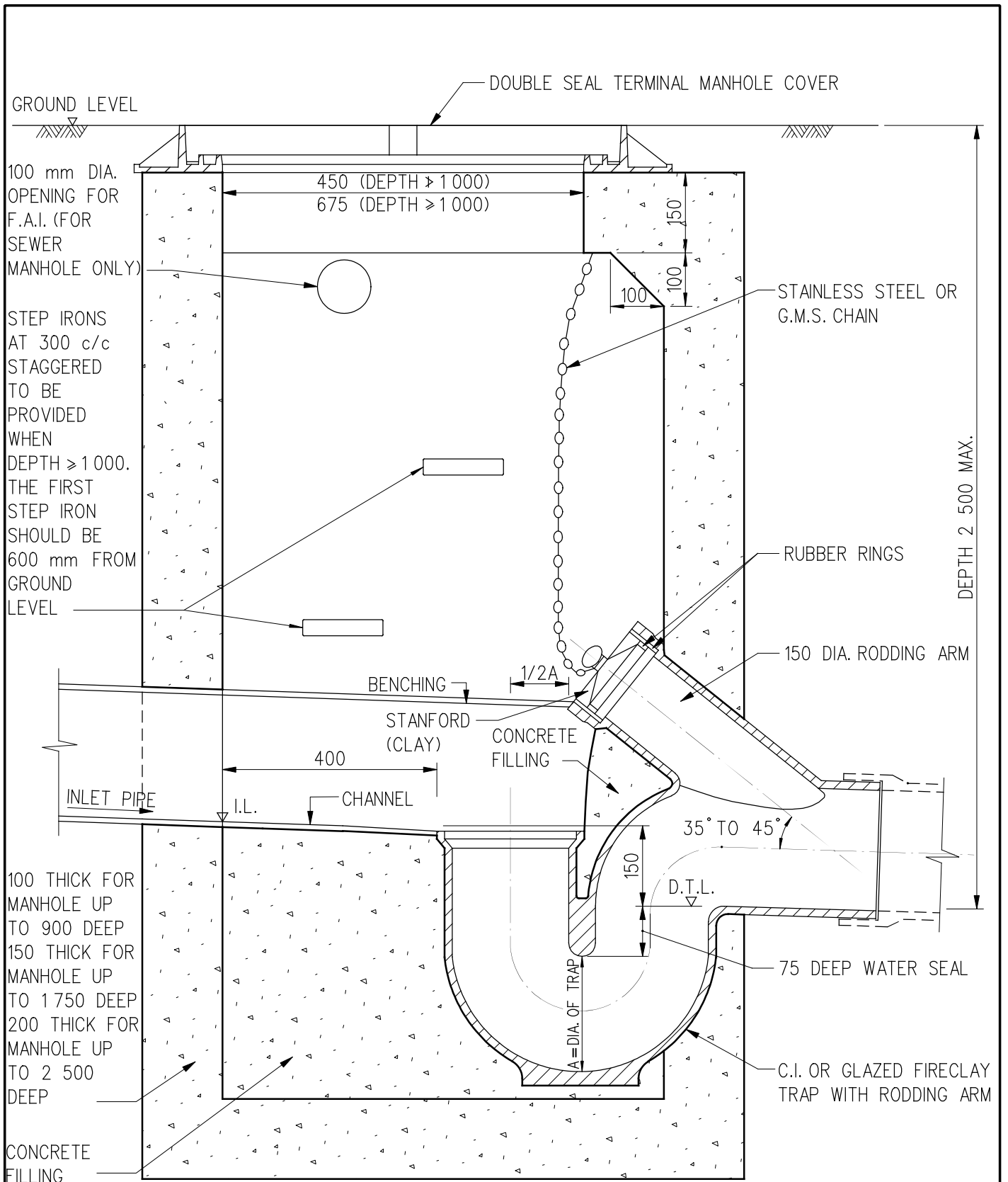
REFERENCE

DRAWING No.

SCALE

1 : 10

DS 1090
(SHEET 1 OF 2)

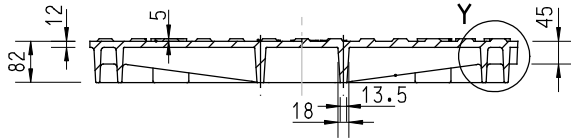


SECTION A-A

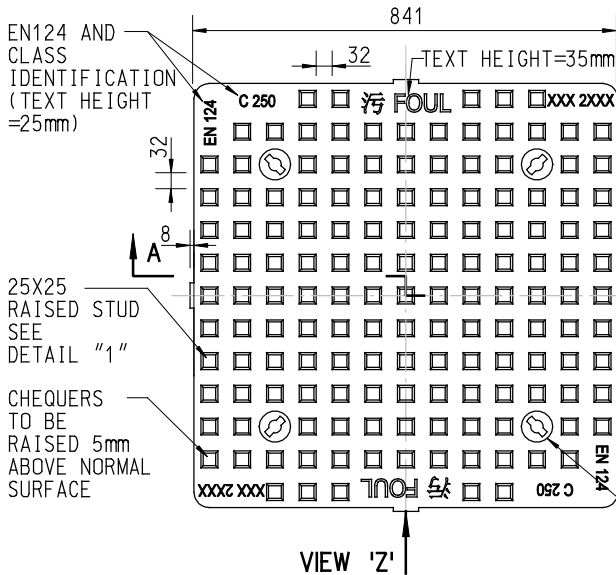
**TERMINAL MANHOLE
TYPE T1_1**

| | | | |
|-------------------------------------|------------------|-----------------|-----------|
| | NEW ISSUE | ORIGINAL SIGNED | 13.1.2016 |
| REV. | DESCRIPTION | SIGNATURE | DATE |
| DRAINAGE SERVICES DEPARTMENT | | | |
| REFERENCE | DRAWING No. | | |
| SCALE | DS 1090 | | |
| | (SHEET 2 OF 2) | | |

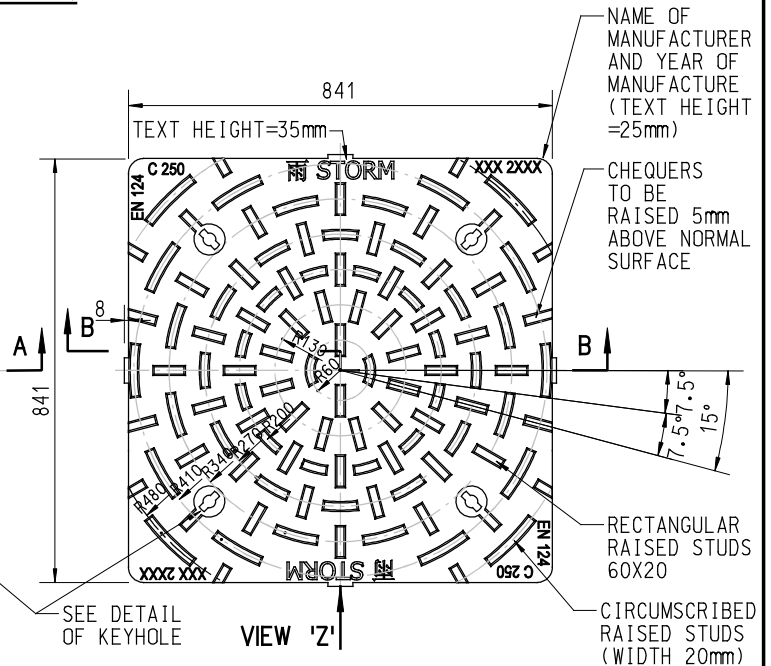
1 : 10



SECTION A - A = SECTION B - B



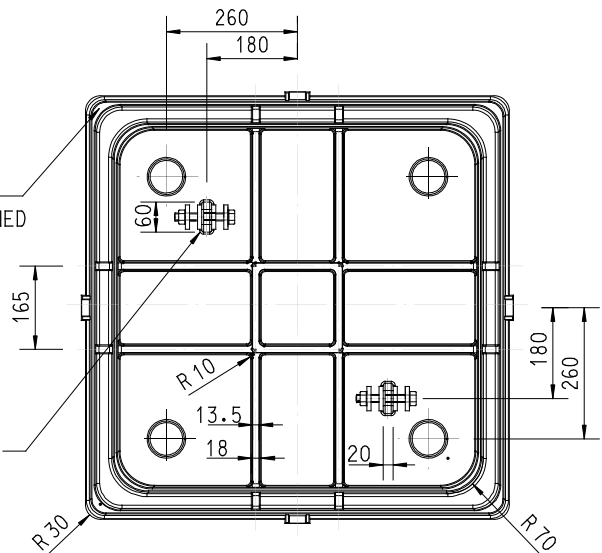
**PLAN OF SEWER
MANHOLE COVER
(CLASS C250)**



**PLAN OF STORMWATER
MANHOLE COVER
(CLASS C250)**

FACES IN CONTACT WITH SUPPORTING PADS MACHINED TO THE SAME LEVEL

Ø20 ANCHOR HOLES IN COVER (SEE DETAIL "2") LOOSELY COUPLED BY GRADE 8.8 M16 BOLTS WITH WASHERS / NUTS AND ANCHORED TO THE MANHOLE WALL VIA GRADE 80 CHAIN (REFER TO DRG. NO. DS1086 (2 SHEETS) FOR FULL SET OF ANCHOR AND CHAIN ARRANGEMENT)



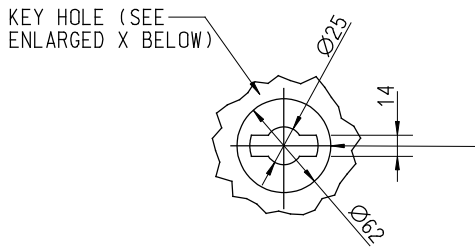
BOTTOM VIEW

NOTES:

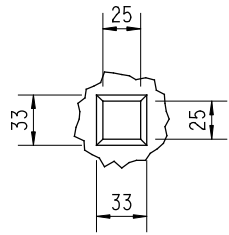
- FOR GENERAL NOTES OF DUCTILE IRON MANHOLE COVER & FRAME, REFER TO DRG. NO. DS1076 (2 SHEETS)
- FILLETS FOR BOTTOM ENDS OF THE COVER EDGES AND RIBS ARE R1, OTHER UNSPECIFIED FILLETS ARE R2

**STANDARD 675 SQUARE ONE - PIECE
DUCTILE IRON DOUBLE SEAL
TERMINAL MANHOLE COVER & FRAME,
(CLASS C250)**

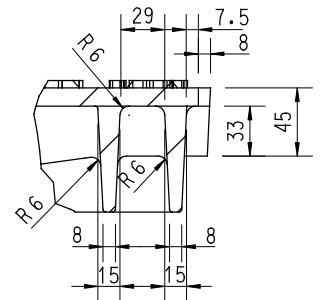
| REV. | DESCRIPTION | SIGNATURE | DATE |
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| | NEW ISSUE | ORIGINAL SIGNED | 10.5.2010 |
| DRAINAGE SERVICES DEPARTMENT | | | |
| REFERENCE | DRAWING No. | | |
| SCALE | DS 1089 | | |
| | (SHEET 2 OF 4) | | |



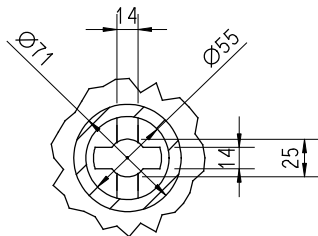
DETAIL OF KEY HOLE



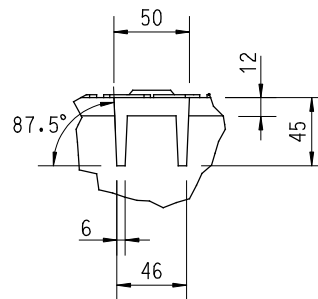
RAISED STUD
DETAIL "1"



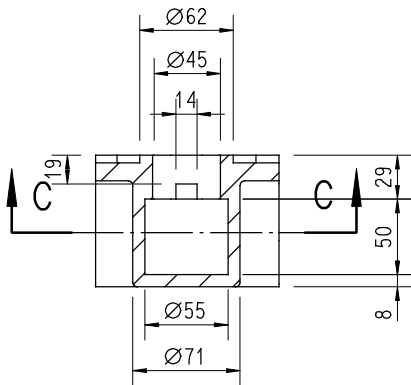
ENLARGED Y



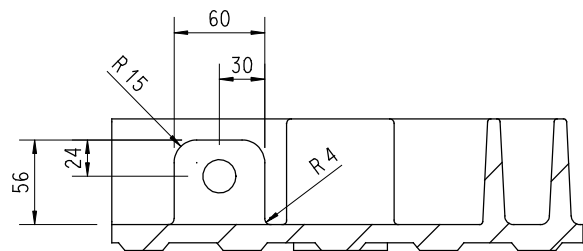
SECTION C - C



VIEW "Z"



ENLARGED X (KEY HOLE)



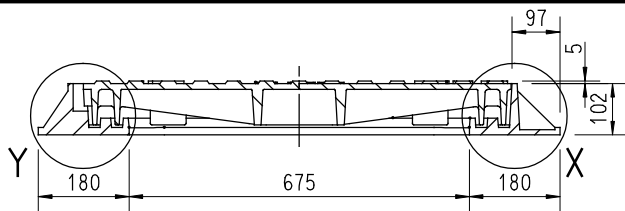
ANCHOR HOLE DETAIL "2"

NOTES:

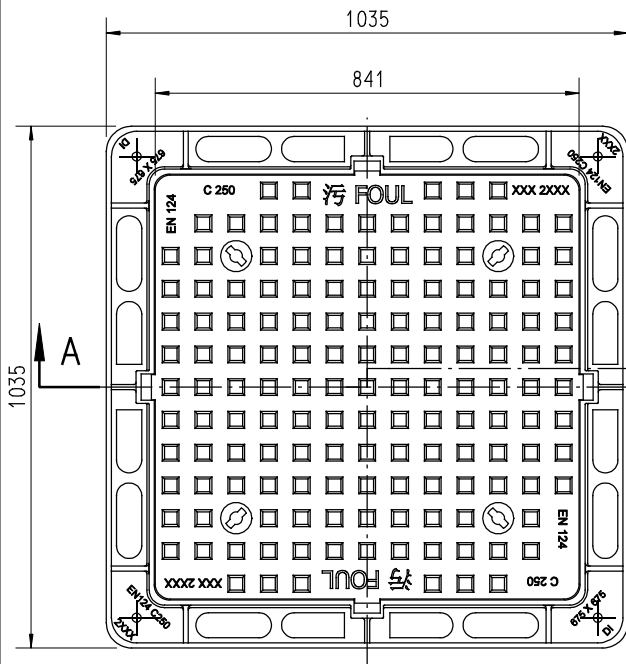
1. FOR GENERAL NOTES OF DUCTILE IRON MANHOLE COVER & FRAME, REFER TO DRG. NO. DS1076 (2 SHEETS)
2. FILLETS FOR BOTTOM ENDS OF THE COVER EDGES AND RIBS ARE R1, OTHER UNSPECIFIED FILLETS ARE R2

STANDARD 675 SQUARE ONE - PIECE
DUCTILE IRON DOUBLE SEAL
TERMINAL MANHOLE COVER & FRAME,
(CLASS C250)

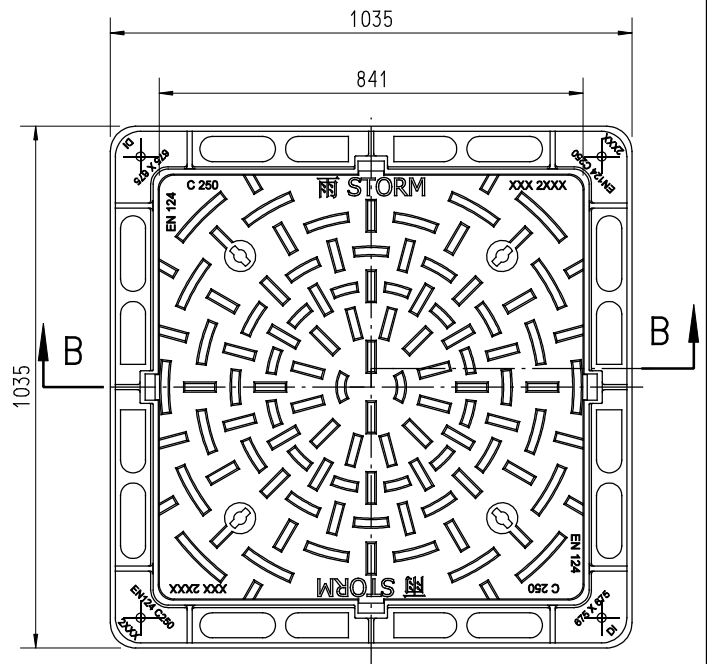
| REV. | DESCRIPTION | SIGNATURE | DATE |
|-------------------------------------|----------------|-----------------|-----------|
| | NEW ISSUE | ORIGINAL SIGNED | 10.5.2010 |
| DRAINAGE SERVICES DEPARTMENT | | | |
| REFERENCE | DRAWING No. | | |
| SCALE | DS 1089 | | |
| (SHEET 3 OF 4) | | | |



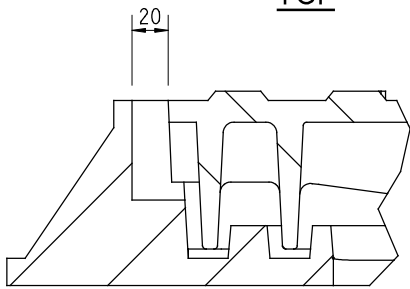
SECTION A - A = SECTION B - B



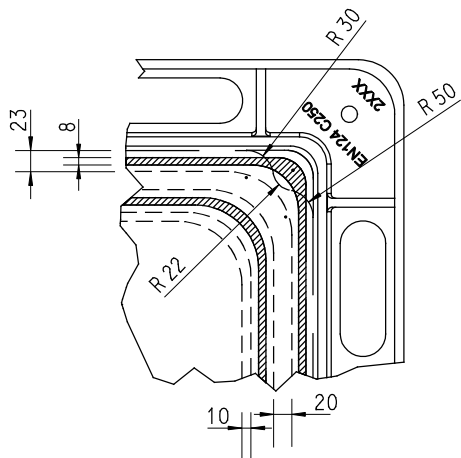
TOP



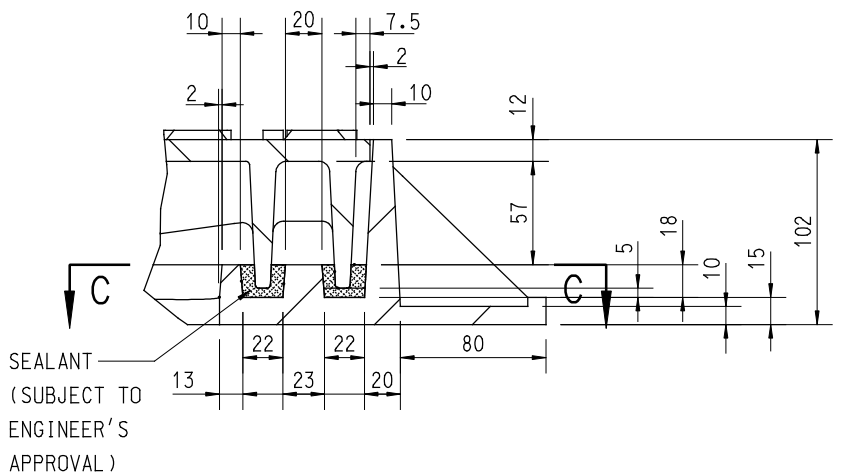
TOP



ENLARGED Y (1:5)



SECTION C - C (1:10)



ENLARGED X (1:5)

NOTES:

- FOR GENERAL NOTES OF DUCTILE IRON MANHOLE COVER & FRAME, REFER TO DRG. NO. DS1076 (2 SHEETS)
- FILLETES FOR BOTTOM ENDS OF THE COVER EDGES AND RIBS ARE R1, OTHER UNSPECIFIED FILLETES ARE R2

| | | | |
|------|-------------|-----------------|-----------|
| | NEW ISSUE | ORIGINAL SIGNED | 10.5.2010 |
| REV. | DESCRIPTION | SIGNATURE | DATE |

STANDARD 675 SQUARE ONE - PIECE
DUCTILE IRON DOUBLE SEAL
TERMINAL MANHOLE COVER & FRAME,
(CLASS C250)

DRAINAGE SERVICES DEPARTMENT

REFERENCE

DRAWING No.

SCALE

DS 1089

(SHEET 4 OF 4)