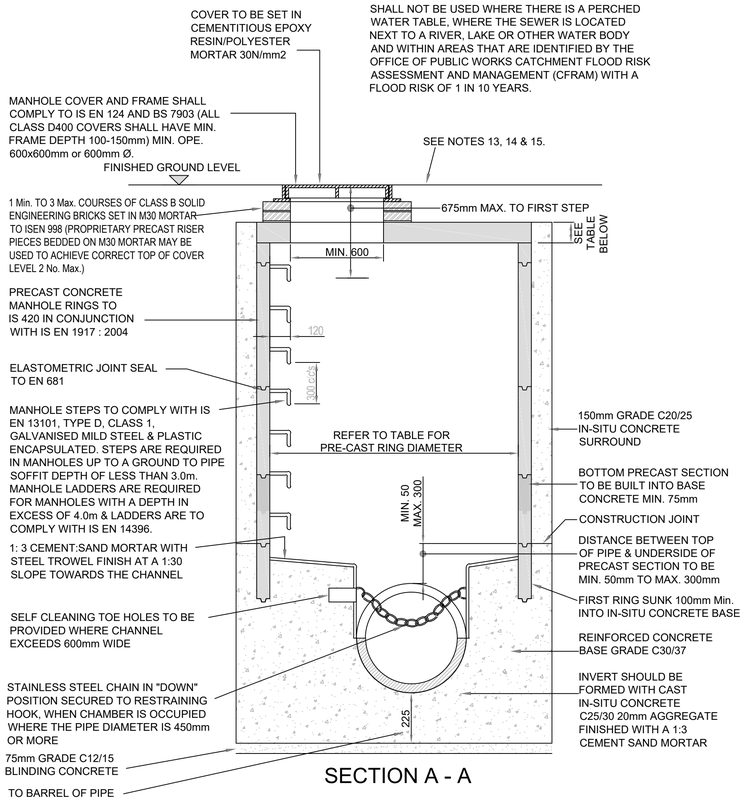
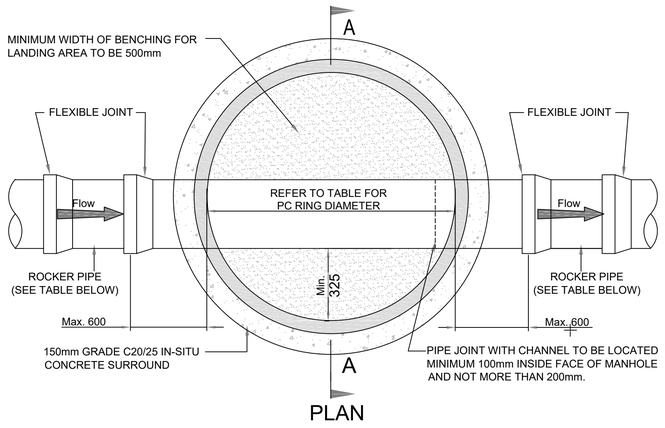
ISO A1 594mm x 841mm
Approved: LS
Checked: SG
Designer: KM
Project Management Initials:
Last saved by: KARL.MULLIGAN(2026-09-17) Last Plotted: 2026-10-01
Filename: C:\USERS\KARL.MULLIGAN\ONEDRIVE - AECOM\SDCC RATH - GENERAL\900_CAD_GIS\904_CE\01_WIP\02_SHEETS\RATH-ACM-XX-XX-DR-C-000512 - PROPOSED DRAINAGE DETAIL SHEET 3 OF 4.DWG

NOTE:
PRECAST CONCRETE MANHOLES SHALL ONLY BE USED WHERE THE WATER TABLE IS LOW. THEY SHALL NOT BE USED WHERE THERE IS A PERCHED WATER TABLE, WHERE THE SEWER IS LOCATED NEXT TO A RIVER, LAKE OR OTHER WATER BODY AND WITHIN AREAS THAT ARE IDENTIFIED BY THE OFFICE OF PUBLIC WORKS CATCHMENT FLOOD RISK ASSESSMENT AND MANAGEMENT (CFRAM) WITH A FLOOD RISK OF 1 IN 10 YEARS.



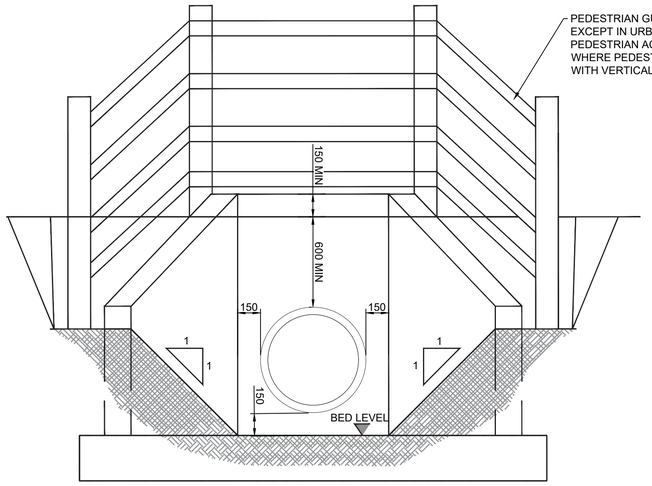
SECTION A - A



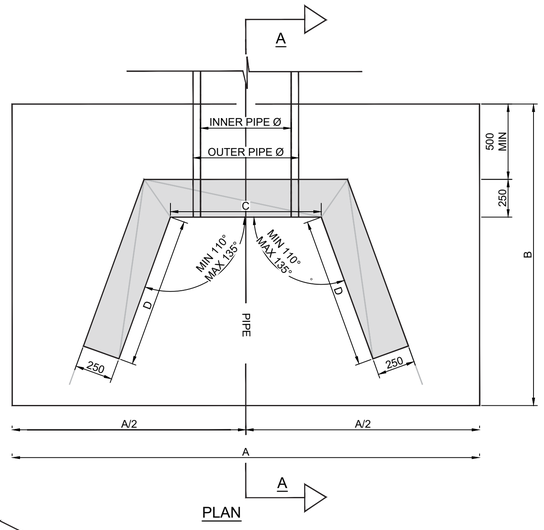
PLAN

MINIMUM MANHOLE DIAMETERS			
DIAMETER OF LARGEST PIPE IN MANHOLE (mm)	**INTERNAL DIAMETER OF MANHOLE (mm)**	**MIN. PRECAST ROOF SLAB EFFECTIVE THICKNESS (mm)**	**MIN. IN-SITU ROOF SLAB THICKNESS (mm)**
LESS THAN 375	1200	160	225
375 TO 450	1350	160	225
500 TO 750 *	1500	170	225

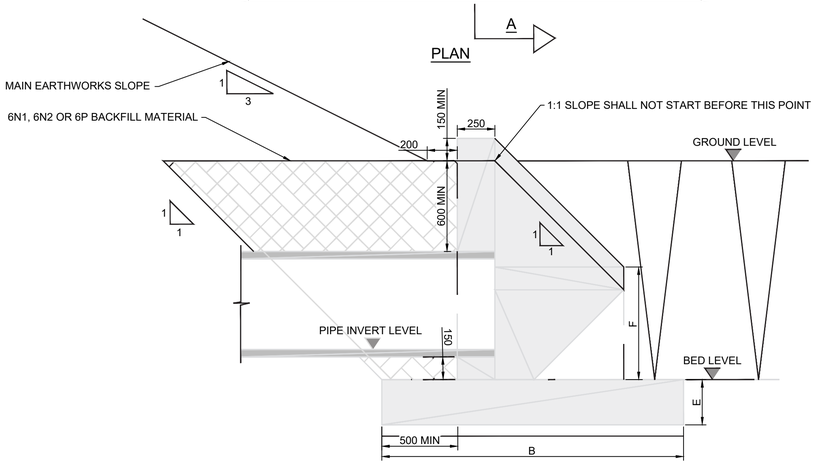
PRE-CAST CONCRETE MANHOLE
WITH CAST IN-SITU BASE
(STD-WW-10-03)
SCALE: NTS



ELEVATION



PLAN



SECTION A - A

SCHEDULE OF MINIMUM DIMENSIONS						
PIPE INNER Ø	A	B	C	D	E	F
<=300	2000	2000	PIPE OUTER Ø + 300	1000	400	500
301-600	2500	2500	PIPE OUTER Ø + 300	1250	400	600
601-900	3200	3200	PIPE OUTER Ø + 300	1550	500	700
901-1200	3900	3900	PIPE OUTER Ø + 300	1850	500	800
1201-1500	4700	4700	PIPE OUTER Ø + 300	2150	500	900
1501-1800	2000	2000	PIPE OUTER Ø + 300	1000	400	500

ALL DIMENSIONS CONTAINED IN THE TABLE ABOVE ARE MINIMUMS ONLY AND THE DESIGNER SHALL CONFIRM
DETAILS FOR SPECIFIC SITE CONDITIONS, THE DIMENSIONS CONTAINED IN THE TABLE ABOVE ARE BASED ON THE
FOLLOWING CONSTRAINS:

- ANGLE BETWEEN HEADWALL AND WINGWALL IS 110°;
- BACKFILL MATERIAL IS FREE DRAINING;
- THERE ARE NO LIVE LOAD EFFECT ON THE HEADWALL;
- CHARACTERISTIC VALUE OF INTERNAL FRICTION (Ω) OF THE BACKFILL MATERIAL =37.5°;
- 600mm COVER TO THE PIPE AT THE REAR OF THE HEADWALL, WITH A 200mm WIDE FLAT AREA BEFORE THE COMMENCEMENT OF THE MAIN EARTHWORKS SLOPE;
- SLOPE OF FILL MEASURED FROM THE REAR FACE OF THE WINGWALLS DOWNWARDS AND FROM BED LEVEL UPWARDS ARE BOTH TO BE 1:1

HEADWALL NOTES

1. ALL DIMENSIONS ARE MILLIMETERS.
2. THIS RCD IS ONLY TO BE USED IN ASSOCIATION WITH UNIQUE STRUCTURAL DESIGN. THIS DESIGN IS TO CARRIED OUT IN ACCORDANCE WITH THE NRA REQUIREMENTS FOR THE USE OF EUROCODES FOR THE DESIGN OF ROAD STRUCTURES.
3. REINFORCED CONCRETE SHALL BE A MINIMUM GRADE OF C32/40, ALL STRUCTURAL CONCRETE SHALL BE SPECIFIED IN ACCORDANCE WITH SERIES 1700 OF THE NRA MCDRW.
4. ALL BLINDING CONCRETE SHALL BE ST2 IN ACCORDANCE WITH IS EN 206.
5. THE MINIMUM COVER TO REINFORCEMENT FOR DURABILITY SHALL BE IN ACCORDANCE WITH NRA BD 57, MINIMUM EXPOSURE CLASS TO BE XC4.
6. ANY RESULTING VOID BETWEEN THE OUTSIDE OF PIPE AND THE OPE IN THE HEADWALL SHALL BE FILLED WITH NON-COMPRESSIBLE HIGH STRENGTH GROUT.
7. ALL EXPOSED CONCRETE SURFACES FROM 100mm BELOW GROUND LEVEL TO BE CLASS U4/F4 FINISH. ALL OTHER CONCRETE SURFACES TO BE CLASS I1/F1 FINISH UNLESS OTHERWISE SPECIFIED.
8. HEADWALL WINGWALLS TO BE SLOPED AND SHALL MAINTAIN A MINIMUM HEIGHT OF 150mm ABOVE ADJACENT BACKFILL LEVEL.
9. RENDERED CONCRETE BLOCKWORK MAY BE USED AS AN ALTERNATIVE TO IN-SITU OR PRECAST CONCRETE FOR PIPES UP TO 300mm INNER DIAMETER.
10. ALL HEADWALLS SHALL BE BACKFILLED WITH CLASS 6N1, 6N2 OR 6P BACKFILL MATERIAL, HEADWALLS SHALL BE FOUNDED ON A MINIMUM 75mm LAYER OF ST2 BLINDING CONCRETE, DETAILS OF THE SUB-BASE LAYER TO BE CONFIRMED BASED ON SITE CONDITIONS.

TYPICAL FORMED HEADWALL DETAILS FOR
SURFACE WATER OUTFALL TO/FROM
EXISTING DRAINAGE DITCH
SCALE 1:20

A	PROPOSED DRAINAGE DETAILS SHEET 3 OF 4	
000512	Scale: AS SHOWN	

ORDNANCE SURVEY IRELAND LICENCE NO **CYAL50533676**
©ORDNANCE SURVEY IRELAND / GOVERNMENT OF IRELAND

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT
SDCC RATHCOOLE

CLIENT
SOUTH DUBLIN COUNTY COUNCIL

CONSULTANT
AECOM
One Burlington Plaza,
Burlington Road,
Dublin 4, D04 RH96
Tel:+353 (0)1 6966220
www.aecom.com

NOTES
1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ARCHITECTURAL AND ENGINEERING DRAWINGS, ANY DISCREPANCIES, ERRORS OR OMISSIONS TO BE BROUGHT TO THE ATTENTION OF THE DESIGNER.
2. ALL DIMENSIONS TO BE CHECKED BY THE CONTRACTOR ON SITE PRIOR TO COMMENCEMENT OF WORKS.
3. AECOM LIMITED TO BE INFORMED BY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO THE COMMENCEMENT OF WORKS ON SITE.
4. DIMENSIONS OF ALL BOUNDARIES AND ADJOINING ROADS TO BE CHECKED ON SITE PRIOR TO COMMENCEMENT OF WORKS.
5. DO NOT SCALE, ALL MEASUREMENTS AND COORDINATES TO BE CHECKED ON SITE.

AECOM
PLANNING

ISSUE/REVISION

I/R	DATE	DESCRIPTION
0	01.10.2026	PLANNING ISSUE

PROJECT NUMBER
60739527

SHEET TITLE
PROPOSED DRAINAGE DETAILS
SHEET 3 OF 4

SHEET NUMBER
RATH-ACM-XX-XX-DR-C-000512

Printed on ___% Post-Consumer Recycled Content Paper