



Rev	Detail	By	Date
Revisions			

Checked by:-  Digitally signed by
Simon Cartledge
Date: 2019.06.07
14:13:01 +01'00'

Approved by:- (Drawing **NOT** approved if this box is empty)

 Digitally signed by Mike Smith
Date: 2019.07.31 11:58:54 +01'00'



Project Name
Highway Works Details
Series 500

Drawing Title

Carrier Drain Pipe Schedules
(Specified Design Group)

Drawing No 05.01	Rev C0
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[illegible]

NOTES

1. Construction in trench unless stated otherwise.

2. Column 3B: abbreviations:-

VCL Vitrified Clay (Pipe Class L),
VC95 Vitrified Clay (Pipe Class 95),
VC120 Vitrified Clay (Pipe Class 120),
VC160 Vitrified Clay (Pipe Class 160),
VC200 Vitrified Clay (Pipe Class 200),
PC120 Precast Concrete (Pipe Class 120),
UPVC Unplasticized PVC,

Other abbreviations described in column 10.

3. Column 6;"S" denotes where the length of pipe is in side slopes of cutting or embankment

4. Column 10: "A" denotes where additional requirements are stated in Appendix 5/1. "B" denotes where backfilling requirements are described in Appendix 5/1

5. Column 4: see Highway Construction Details
Drq.No.F1,(MCHW3.1)

Rev	Detail	By	Date
Revisions			
Original Version		Preliminary	
		For comment	
Drawn: RL		For tender	
Design: RL		For construction	✓
		As constructed	
Date: Sept - 2017		Other	

Checked by:-  Digitally signed by Simon Cartledge
Date: 2019.06.17 10:16:15 +01'00'

Approved by:- (Drawing NOT approved if this box is empty)

 Digitally signed by Mike Smith
Date: 2019.07.31 12:15:18 +01'00'



Project Name

Highway Works Details
Series 500

Drawing Title

Carrier Drain Pipe Schedules (Particular Design)

Grid reference :	
Original Drawing Size : A4	Dimensions : mm
Scale : NA	Copyright © Amey SCC

Drawing No 05.03	Rev C0
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A4


6. Column 22: "M" denotes that a mesh requirements is specified in Appendix 5/1
"G" denotes that a geotextile membrane requirement is specified in Appendix 5/1.
"L" denotes that lightweight aggregate is specified in Appendix 5/1.

Drawing No 05.05	Rev C0
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[illegible]

1. Column 16: Type C Filter material is specified in Appendix 5/1.
2. Column 13B: abbreviations:-
VC160 Vitrified Clay (Pipe Class 160),
VC200 Vitrified Clay (Pipe Class 200),
UPVC Unplasticized PVC
3. Column 14: Trench types are shown on HCD Drg. No. F2.
4. Column 20: Pavement edge types are shown on HCD Drg. No. B15.
5. Column 21: Describes surface treatment i.e. "T150" denotes "topsoil 150mm thick".
6. Column 22: "M" denotes that a mesh requirements is specified in Appendix 5/1
"G" denotes that a geotextile membrane requirement is specified in Appendix 5/1.
"S" denotes that sub-base materials are described in Appendix 5/1.
"L" denotes that lightweight aggregate is specified in Appendix 5/1.

Rev	Detail	By	Date
Revisions			
Original Version		Preliminary	
		For comment	
Drawn: RL		For tender	
Design: RL		For construction	✓
		As constructed	
Date: Sept - 2017		Other	

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Date: 2019.06.18 11:22:29 +01'00'

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 Digitally signed by Mike Smith
Date: 2019.07.31 12:25:08 +01'00'



Project Name
Highway Works Details
Series 500

Drawing Title
Filter Drains
Filter Drain Pipe Schedules
(Particular Design)

Grid reference :	
Original Drawing Size : A4	Dimensions : mm
Scale : NA	Copyright © Amey SCC

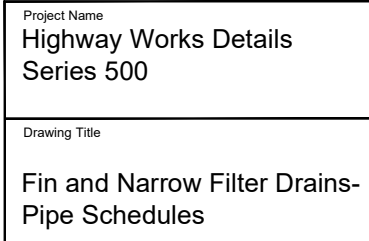
Drawing No 05.07	Rev C0
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A4

Rev	Detail	By	Date
Revisions			
Original Version		Preliminary	
		For comment	
Drawn: RL		For tender	
Design: RL		For construction	
		As constructed	
Date: Sept - 2017		Other	

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 Digitally signed by Mike Smith
Date: 2019.07.31 12:30:53 +01'00'



Drawing No 05.09	Rev C0
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[illegible]

NOTES

1. Dimensions are in millimetres. Levels are in metres.

2. Column 52: Reference numbers are explained in Appendix 5/1.

3. Column 53: Types references are listed in Appendix 5/1.


4. Column 56: refers to catchpits only

5. Column 57: References to covers and frames are scheduled in Appendix 5/1.

6. Column 59: "Yes" advises of relevant entry in pipe schedules.

Rev	Detail	By	Date
Revisions			

Original Version	Preliminary
	For comment
Drawn: RL	For tender
Design: RL	For construction
	As constructed
Date: Sept - 2017	Other

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Simon Cartledge
Date: 2019.06.18
11:33:06 +01'00'

Approved by:- (Drawing NOT approved if this box is empty)

 Digitally signed by Mike Smith
Date: 2019.07.31 12:50:12 +01'00'



Project Name

Project Name
Highway Works Details
Series 500

Drawing Title

Manholes and Catchpits-Chamber Schedules

Grid reference :	
Original Drawing Size : A4	Dimensions : mm
Scale : NA	Copyright © Amey SCC

Drawing No 05.11	Rev C0
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A4

1. Dimensions are in millimetres. Levels are in metres.
2. Column 73: Type references are defined in Appendix 5/1.
3. Column 74: T Trapped UT Untrapped
4. Column 75B: Depth measured from lowest point on paved area immediately adjacent to grating
5. Column 77: References to grating and frame are scheduled in Appendix 5/1.

Original Version	Preliminary
	For comment
Drawn: RL	For tender
Design: RL	For construction
	As constructed
Date: Sept - 2017	Other

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Date: 2019.07.31 12:51:21 +01'00'

Drawing Title

Street Gullies -
Gully Schedules

Drawing No 05.13	Rev C0
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A4

[illegible]

NOTES


1. Construction in trench unless stated otherwise.
2. Type references are described in Appendix 5/2.
3. Column 86: denotes the stated length to be in side slope of cutting or embankment.
4. Column 88: indicates duct end condition:
"M" denotes plug and marker block,
"D" denotes build into drawpit (+ref.no.)
5. Column 88: invert levels of duct ends (as second line entry) show where precise alignment is required.

Rev	Detail	By	Date
Revisions			

Original Version	Preliminary
	For comment
Drawn: RL	For tender
Design: RL	For construction
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Date: Sept - 2017	Other

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Date: 2019.07.31 12:52:52 +01'00'



Project Name	
Highway Works Details	
Series 500	
Drawing Title	
Service Ducts - Schedules	

Grid reference :	
Original Drawing Size : A4	Dimensions : mm
Scale : NA	Copyright © Amey SCC

Drawing No 05.21	Rev C0
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[illegible]

NOTES


1. Design Group and Type references are listed in Appendix 5/2 and referenced to detail drawings.
2. Cover and frame references are scheduled in Appendix 5/2.
3. Column 98B denotes bends required on draupit detail drawing.

Rev	Detail	By	Date
Revisions			

Original Version	Preliminary
	For comment
Drawn: RL	For tender
Design: RL	For construction
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Date: Sept - 2017	Other

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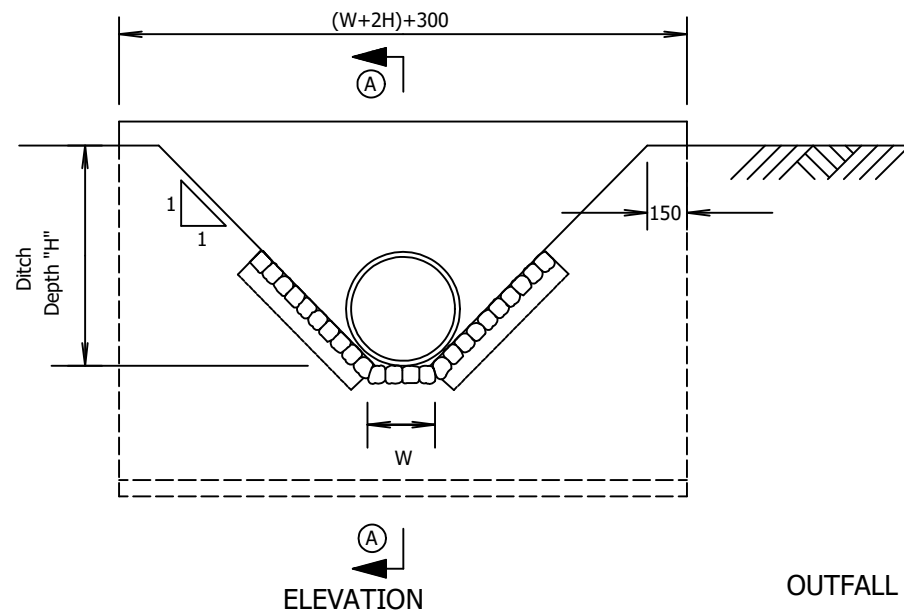
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Highway Works Details
Series 500

Drawing Title

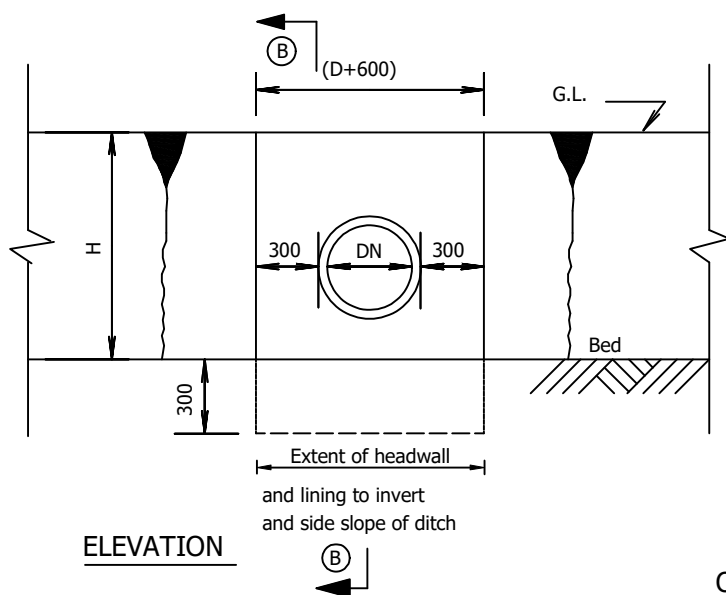
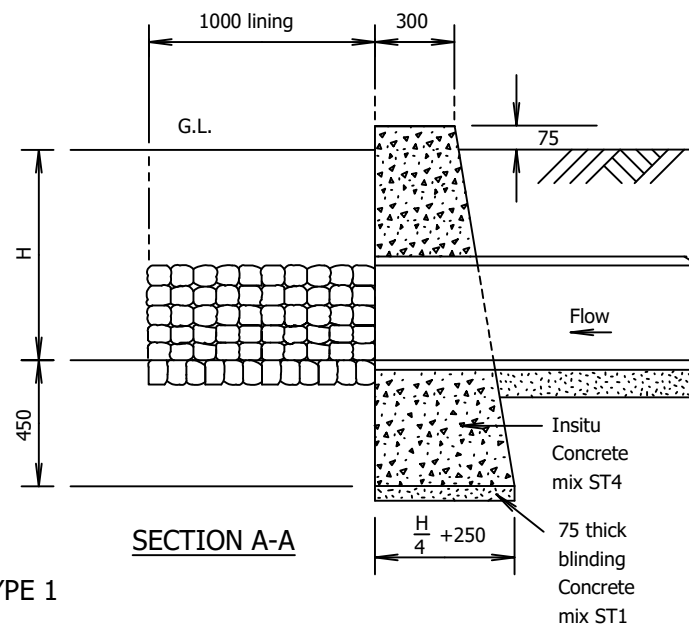
Drawpits and Duct Chambers-
Chamber Schedules

Grid reference :	
Original Drawing Size : A4	Dimensions : mm
Scale : NA	Copyright © Amey SCC

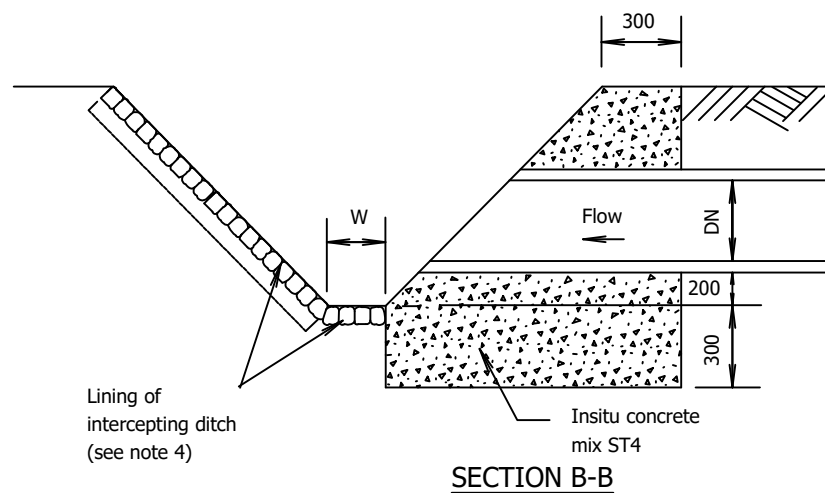
Drawing No 05.23	Rev C0
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OUTFALL TYPE 1
(Pipe and ditch in line)



OUTFALL TYPE 2
(Pipe discharging through side of ditch)



NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. Intercepting ditch profile as shown on Earthworks drawings,
H = 800max.
W = 250.
3. Pipe invert level and diameter as stated in pipe schedules.
4. Type and thickness of lining shall be as described in the Contract.
5. Exposed formed concrete surfaces to have Class F2 finish.
6. Unformed concrete surfaces to have Class U2 finish.

FOR PIPES 300MAX. DIAMETER
TO INTERCEPTING DITCH
MAX. DEPTH 800

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Drawn: RL		For comment	
Design: RL		For tender	
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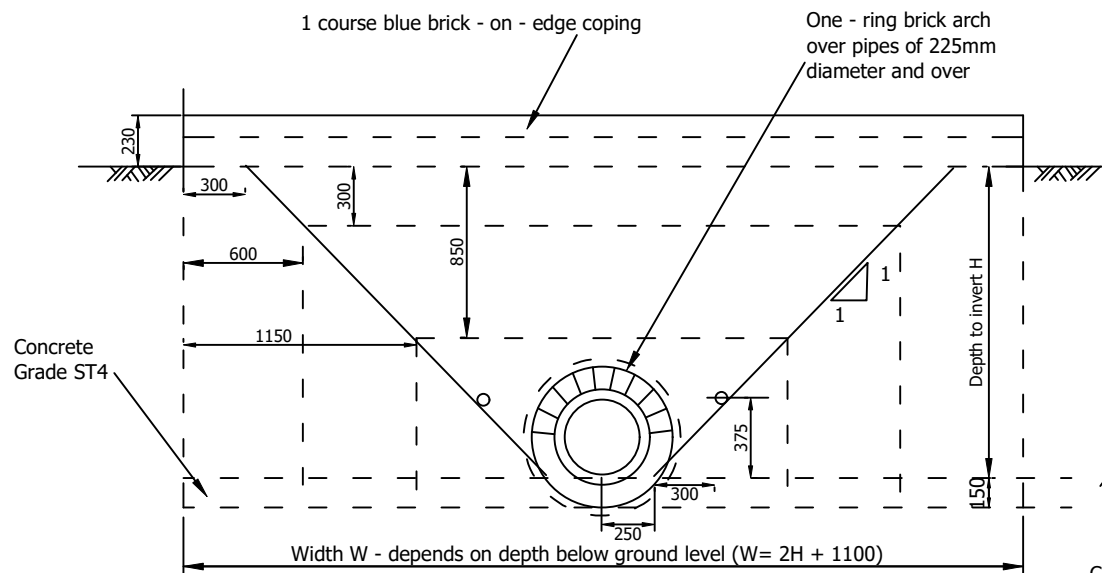
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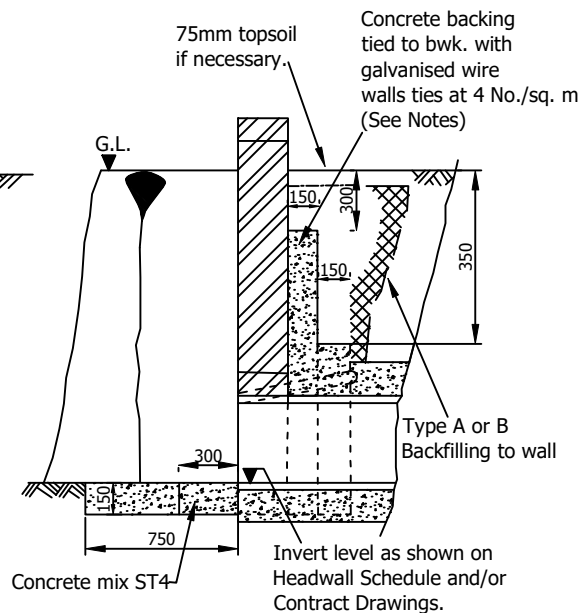
Project Name	Highway Works Details Series 500
Drawing Title	Small Headwall Outfall Types 1 and 2 (Insitu Concrete)

Grid reference :	
Original Drawing Size : A4	Dimensions : mm
Scale : NTS	Copyright © Amey SCC

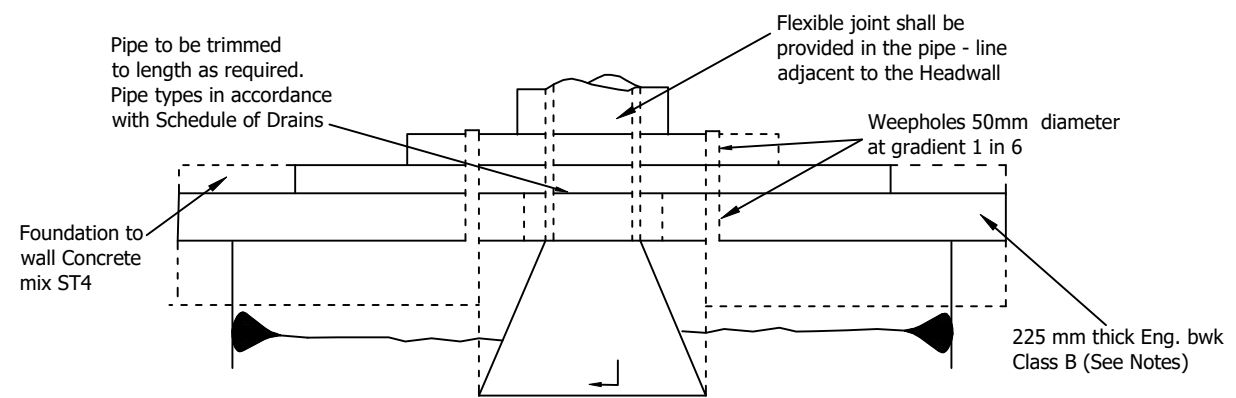
Drawing No	Rev
05.31	C0



ELEVATION OF HEADWALL
(Group C shown)



SECTION



PLAN
OUTFALL TYPE 3

NOTES

- All dimensions are in millimetres.
- Specified Groups;
3A - Depth to invert up to 0.5m
3B - Depth to invert 0.5m - 1.0m
3C - Depth to invert 1.0m - 1.5m
- Brickwork to headwall to be in Flemish bond with struck joints not exceeding 6mm. Mortar to be Class 2
- Concrete backing to wall
Group 3A - Backing omitted
Group 3B - 150mm Thick only
Group 3C - as shown
- Concrete mix ST4 to Groups B & C
Backfilling material to Groups A & B to specification Table 5/5

Rev	Detail	By	Date
Revisions			

Original Version	Preliminary	
Drawn: RL	For comment	
Design: RL	For tender	
	For construction	✓
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Date: Sept - 2017	Other	

Checked by:-	Digitally signed by Simon Cartledge Date: 2019.06.03 18:12:30 +01'00'
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Project Name	Highway Works Details Series 500
Drawing Title	Small Headwall Outfall Type 3

Grid reference :	
Original Drawing Size : A4	Dimensions : mm
Scale : NTS	Copyright © Amey SCC

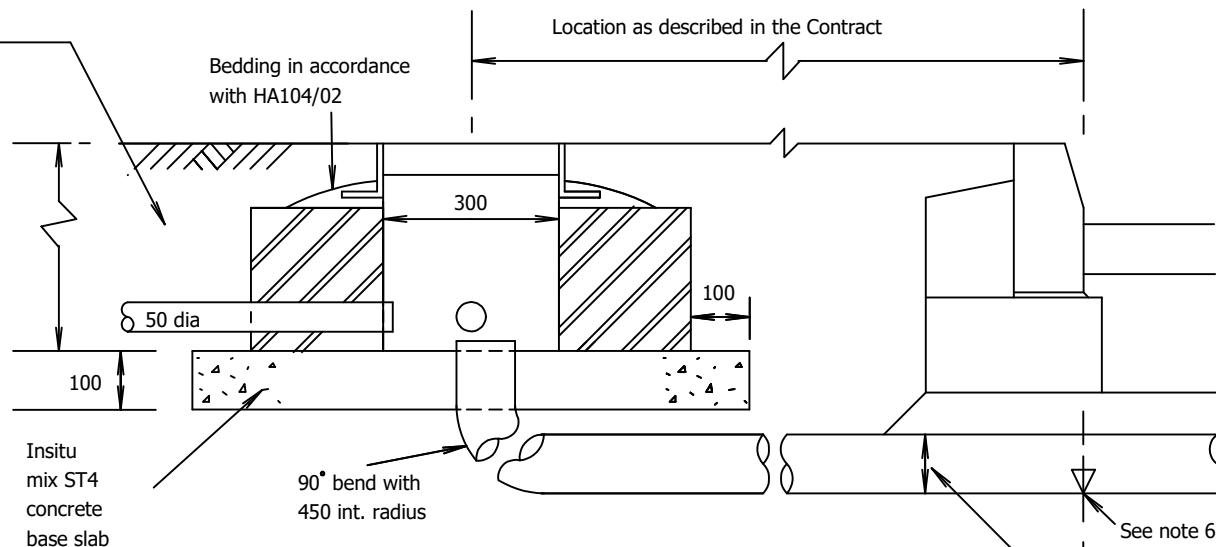
Drawing No	Rev
05.32	C0

Paved Area or
Footway construction
or verge

As stated in chamber
schedule
(≤ 600)

Bedding in accordance
with HA104/02

Location as described in the Contract



SECTION

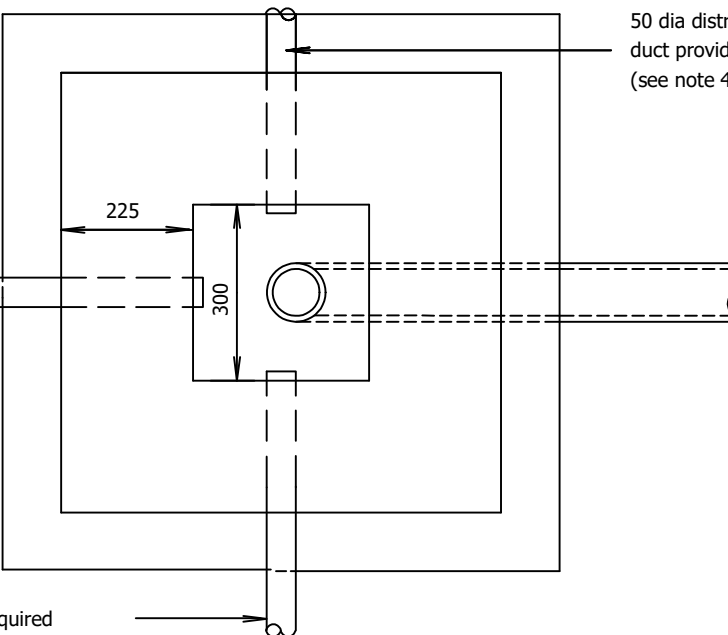
(plugs and bellmouths not shown)

50 dia distribution
duct provided where required
(see note 4)

Duct type 9 or 10.

Duct
where required

Duct where required



PLAN

(cover and frame not shown)

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. Main road-crossing duct shall be checked before fitting bend.
3. Chamber walls to be constructed in HD clay engineering bricks (conforming to BS EN 771-1:2011 + A1:2015 Class B) with mortar designation (i), or insitu concrete mix ST4.
4. Ducts to equipment bases are described in the chamber schedules, and shown on the layout drawings.
5. Cover and frame requirements are as described in the contract
6. Duct schedules shall specify invert levels where ducts under carriageways are required.
7. For insitu concrete chambers, wall finish shall be:
internal Class F2
external Class F1
top surfaces Class U1.
8. Drawpit type D1 shall not be installed at both ends of a duct under a carriageway.

Rev	Detail	By	Date
Revisions			
Original Version		Preliminary	
Drawn: RL		For comment	
Design: RL		For tender	
		For construction	✓
		As constructed	
Date: Sept - 2017		Other	

Checked by:-

S.J. Lott

Digitally signed by
Simon Cartledge
Date: 2019.10.04
13:45:23 +01'00'

Approved by:- (Drawing **NOT** approved if this box is empty)

Michael Smith

Digitally signed by Mike Smith
Date: 2019.10.24 03:09:46 +01'00'



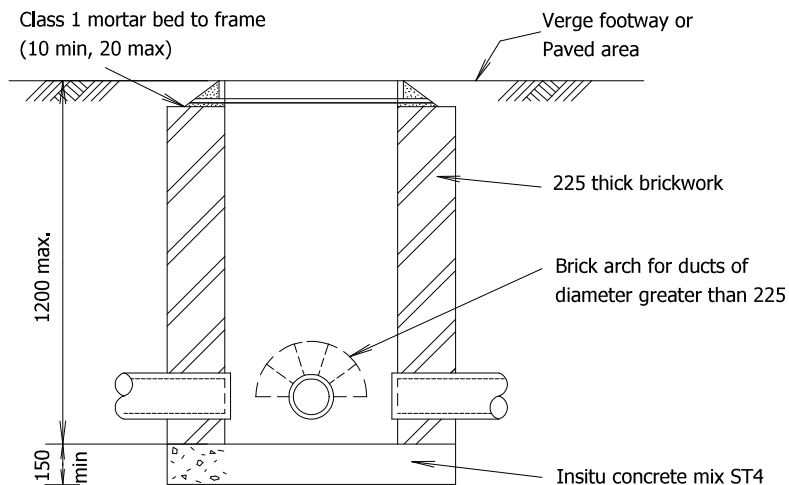
Project Name
**Highway Works Details
Series 500**

Drawing Title
**Duct Chamber
Type D1 Chamber**

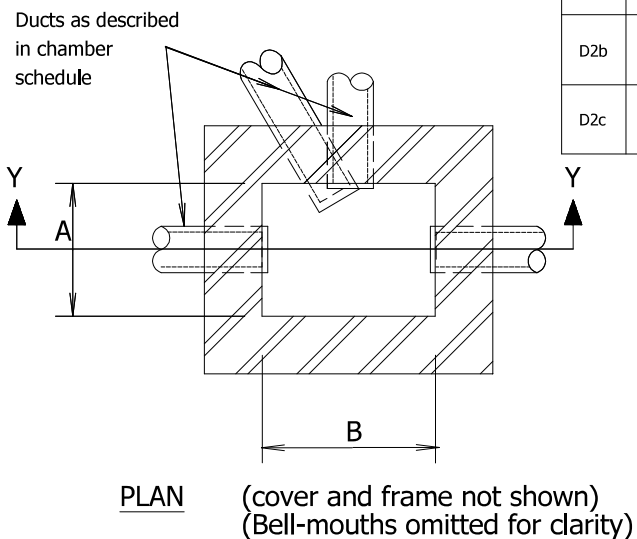
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Drawing No
05.41

Rev
C0



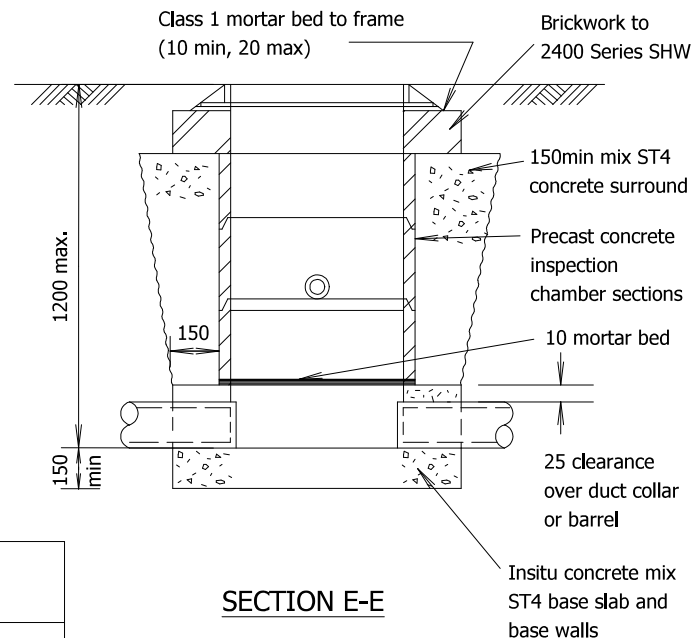
SECTION Y-Y



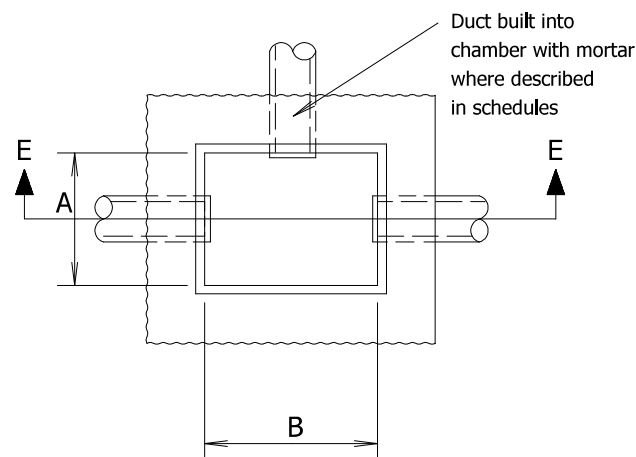
PLAN

(cover and frame not shown)
(Bell-mouths omitted for clarity)

Chamber Sub Types	Internal Plan Dimensions	Depth to base slab	Cover
D2a	A=610 B=610	≤700	Single access cover B125
D2b	A=760 B=760	>700	Single access cover B125
D2c	A=610 B=1180	>700	Double access cover B125



SECTION E-E



PLAN

(cover and frame not shown)

NOTES

1. ALL DIMENSIONS IN MILLIMETRES UNLESS SHOWN OTHERWISE.
2. Chamber walls to be constructed in HD clay engineering bricks (conforming to BS EN 771-1:2011 + A1:2015 Class B) with mortar designation (i), or precast concrete to BS 5911-4:2002 + A2:2010.
3. For number of ducts, see chamber schedules.
4. For duct invert levels, see pipe schedules.
5. Step Irons to BS EN 13101:2002 to be provided at 300 centres vertically where depth to base slab exceeds 900.
6. This type of drawpit shall not be constructed in carriageways.
7. Brickwork at top of chamber walls to be corbelled as necessary to suit opening dimensions of cover and frame.

Rev	Detail	By	Date
Revisions			
Original Version		Preliminary	
Drawn: RS		For comment	
Design: RS		For tender	
Date: Aug 2019		For construction	✓
		As constructed	
		Other	

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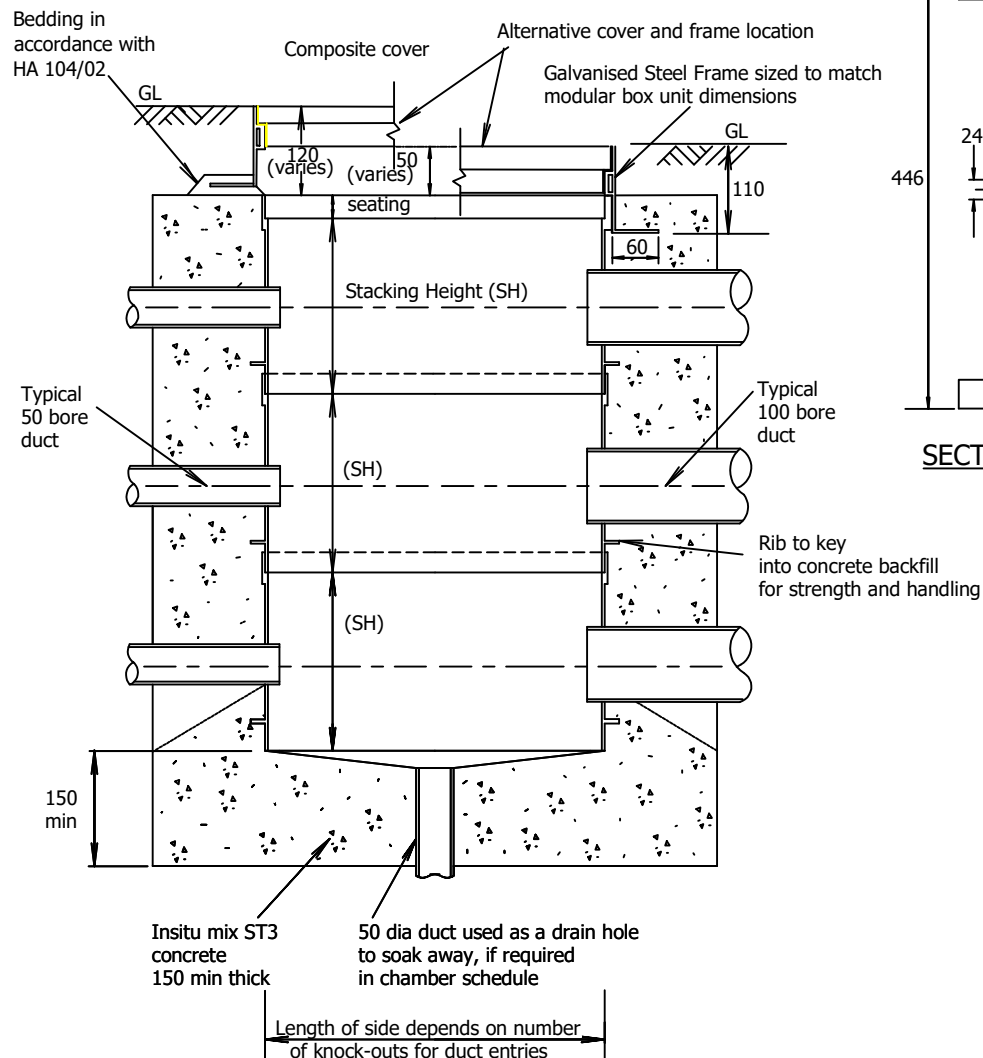
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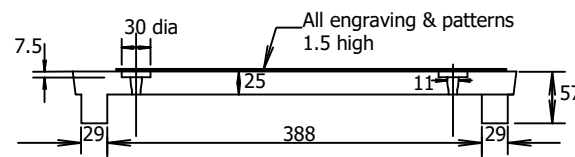
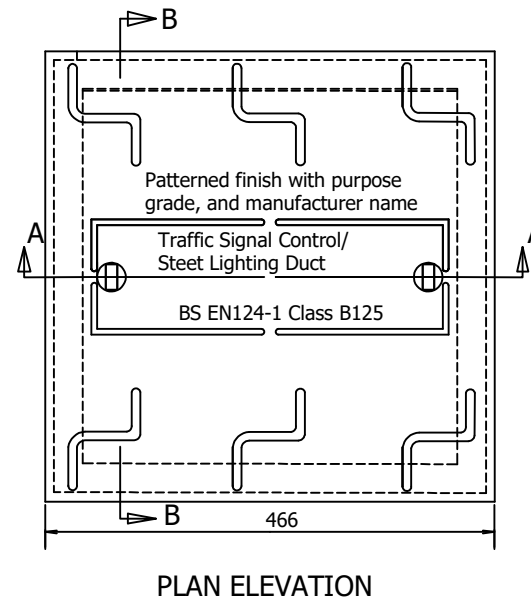
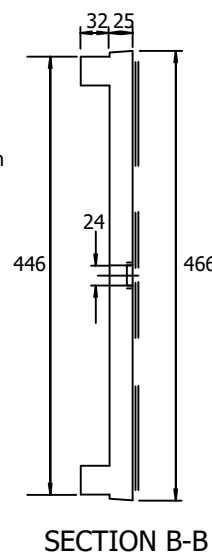
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Drawing Title	Duct Chamber Type D2 Chamber

Grid reference :	
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Scale : NTS	Copyright © Amey SCC

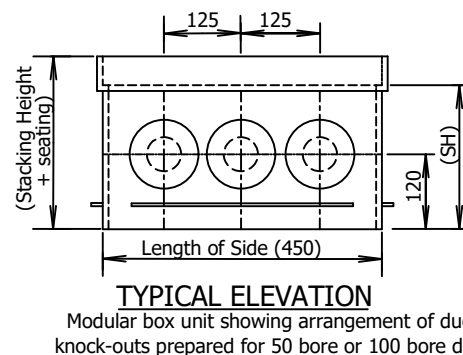
Drawing No	Rev
05.42	C0



TYPICAL SECTION THROUGH MODULAR BOX CONSTRUCTION OF DRAWPIT



SECTION A-A
Typical Composite Cover Detail for a 450 square (o/a) chamber module and suited steel frame



NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. Chamber shall be formed of proprietary modular box sections, stackable in square or rectangular plan sizes with prepared points for duct entries.
3. Chamber material shall be black 8 thick min. high density polyethylene. Tensile strength 22N/mm. Puncture strength 50MV/m. Temperature stability range -50deg C. to +80 deg C. Resistivity 10/14 ohms.
4. Matching steel frames shall have been hot dip galvanised after fabrication.
5. High strength reinforced polyester composite cover shall exceed the EN124-1:2015 and BS 124-6:2015 Class B125 loading, be temperature resistant, rust proof, non metallic, lightweight, U.V. stabilised, and be self coloured in black, red or buff.
6. Schedules of draw pits giving sizes, duct entries, depths etc, together with further fitness for purpose requirements are described in the contract.
7. Proprietary details to be submitted as required by Appendix 1/4.

Rev	Detail	By	Date
Revisions			
Original Version	Preliminary		
Drawn: RL	For comment		
Design: RL	For tender		
	For construction		
	As constructed		
Date: May 2019	Other		

Checked by: *S.J. Little* Digitally signed by Simon Cartledge Date: 2019.09.27 14:48:23 +01'00'

Approved by: (Drawing NOT approved if this box is empty) *Michael Smith* Digitally signed by Mike Smith Date: 2019.10.24 03:15:30 +01'00'



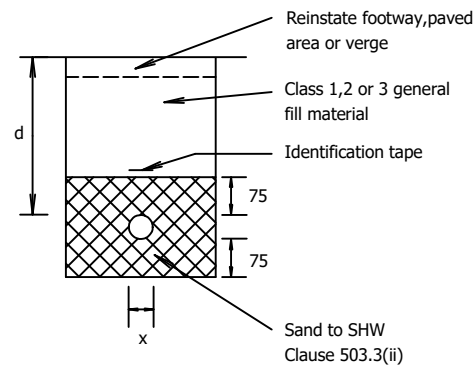
Project Name
Highway Works Details Series 500

Drawing Title
Duct Chamber Type D3 Proprietary Plastics Drawpit

Grid reference :
Original Drawing Size : A4 Dimensions : mm
Scale : NTS Copyright © Amey SCC

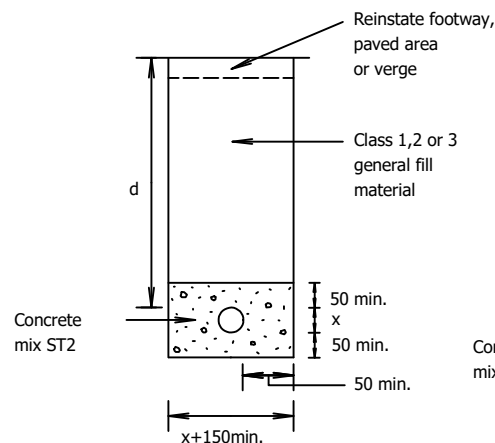
Drawing No
05.43

Rev
C0



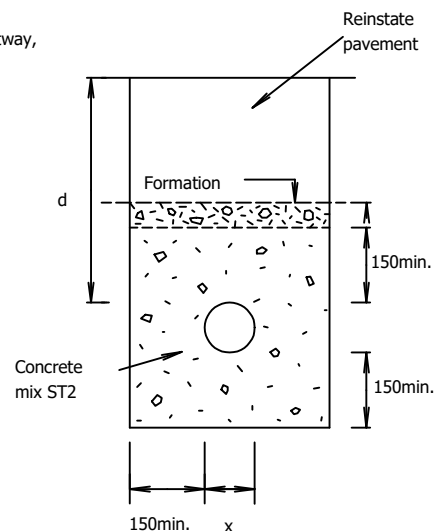
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d=300 and as described in the contract

TYPE 6



int.dia.=50
d=500 and as described in the contract

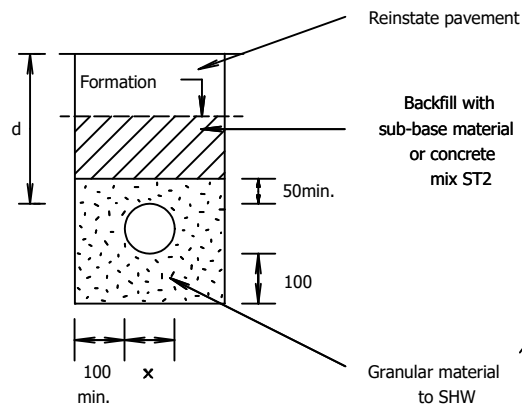
TYPE 7



int.dia.=100
d=500,<750,as described in the contract

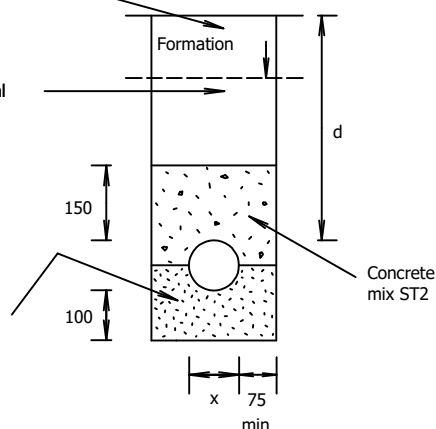
TYPE 8

Scheme specific designs (as per drainage pipe design) when depth of cover >1200.
As described in the contract



750<d<1200
(for vitrified clay pipes)
int. dia. = 100, or as described in the contract

TYPES 9



750<d<1200
(for UPVC pipes)

TYPES 10

Type Ref.	Permitted Types to SHW Table 5/2
6	UPVC
7	UPVC
8	Clayware to BS 65:1991 "ES"; UPVC
9	Clayware to BS 65:1991 "ES"; UPVC
10	As described in the Contract

NOTES

- All dimensions are in millimetres.
- This drawing refers to single ducts in trench in all-purpose roads and shall be read in conjunction with Appendix 5/2 and the pipe schedules.
- The concrete cover to ducts Type 8 and 9 shall extend to the sides of the trench.
- For ducts Type 10 provide table of trench and bedding details in the contract.
- Ducts under carriageways (Type 8 and 9) shall be fitted with bellmouths.
- Ducts under carriageways (Type 8 and 9) shall be provided with precast concrete marker blocks at finished surface level.
- Slack in drawrope min. 1000 to be coiled under marker block.
- Identification tape shall be 150 wide x 100 micron thick, colour yellow with black inscription, as described in the Appendix 5/2.
- Except for Type 7, trench widths shall be min.(x+300), max.(x+600) applied on and below a line 300 above the outside top of the duct.
- For Type 7 the adjacent cable-in-trench max. trench widths shall apply throughout the ducted length.
- Reinstatement requirements are as stated in Appendix 7/2.
- Ducts 'purpose' inscriptions and self-colouring requirements shall be as described in Appendix 5/2.

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Revisions			
Original Version		Preliminary	
Drawn: RL		For comment	
Design: RL		For tender	
		For construction	✓
		As constructed	
		Other	
Date:	Sept - 2019		

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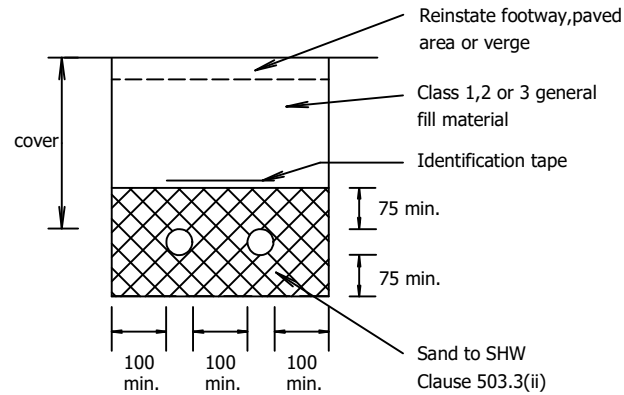
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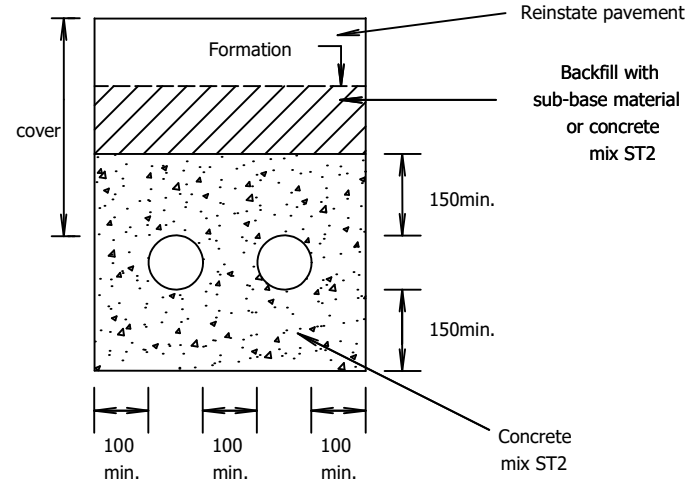
Project Name	Highway Works Designs Series 500
Drawing Title	Service Ducts Duct Trench & Bedding

Grid reference :	
Original Drawing Size : A4	Dimensions : mm
Scale : NTS	Copyright © Amey SCC

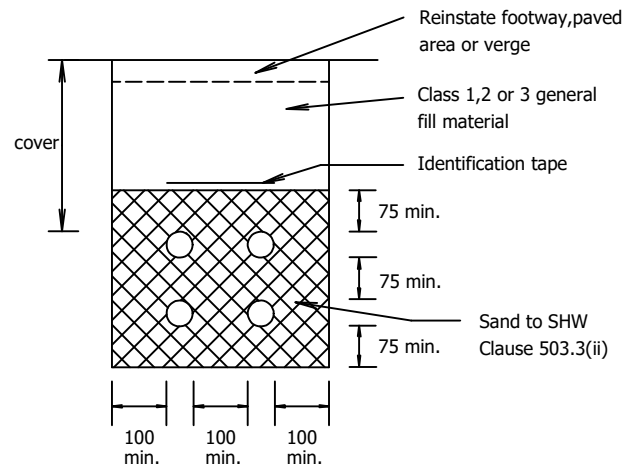
Drawing No	Rev
05.52	C0



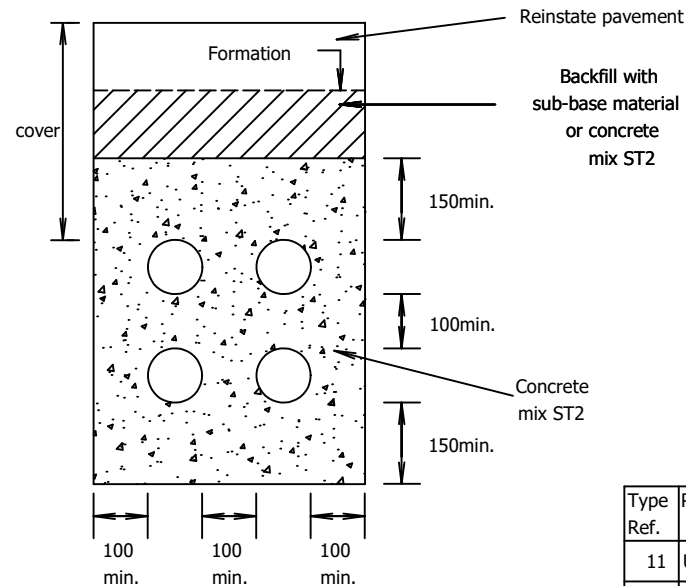
TYPE 11



TYPE 13



TYPE 12



TYPE 14

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. This drawing refers to single ducts in trench in all-purpose roads and shall be read in conjunction with Appendix 5/2 and the pipe schedules.
3. The concrete cover to ducts Type 13 and 14 shall extend to the sides of the trench.
4. Ducts under carriageways shall be fitted with bellmouths.
5. Ducts under carriageways shall be provided with precast concrete marker blocks at finished surface level, except where they terminate in chambers.
6. Slack in drawrope min. 1000 to be coiled under marker block.
7. Identification tape shall be 150 wide x 100 micron thick, colour yellow with black inscription, as described in the Appendix 5/2.
8. Reinstatement requirements are as stated in Appendix 7/2.
9. Ducts 'purpose' inscriptions and self-colouring requirements shall be as described in Appendix 5/2.
10. For required diameter of ducts and minimum cover see Appendix 5/2.

Rev	Detail	By	Date
Revisions			
Original Version		Preliminary	
Drawn: RS		For comment	
Design: RS		For tender	
		For construction	✓
		As constructed	
		Other	
Date:	Jan 2018		

Checked by:-	Digitally signed by Simon Cartledge Date: 2019.09.27 14:54:38 +01'00'
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Approved by:- (Drawing NOT approved if this box is empty)	Digitally signed by Mike Smith Date: 2019.10.24 03:21:19 +01'00'
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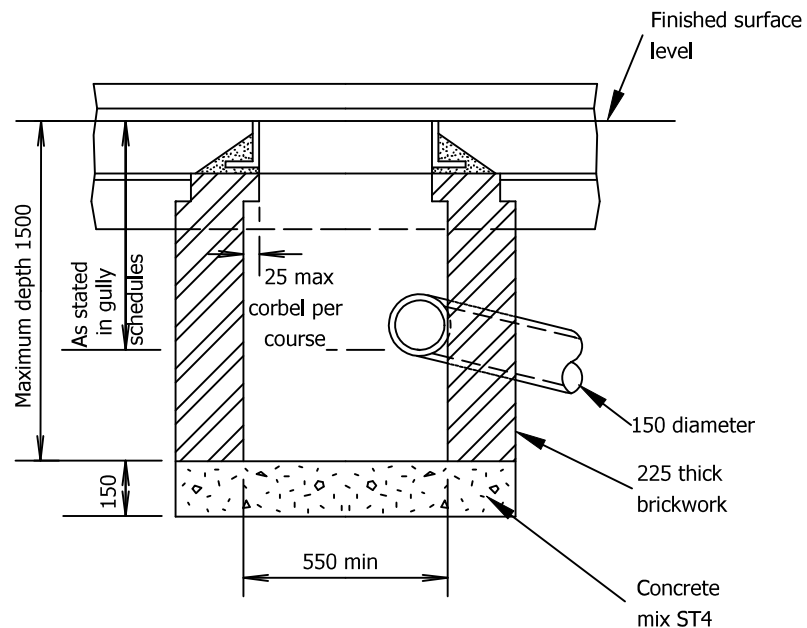
Project Name	Highway Works Designs Series 500
Drawing Title	Service Ducts - Multi-way Duct Trench & Bedding

Grid reference :	
Original Drawing Size : A4	Dimensions : mm
Scale : NTS	Copyright © Amey SCC

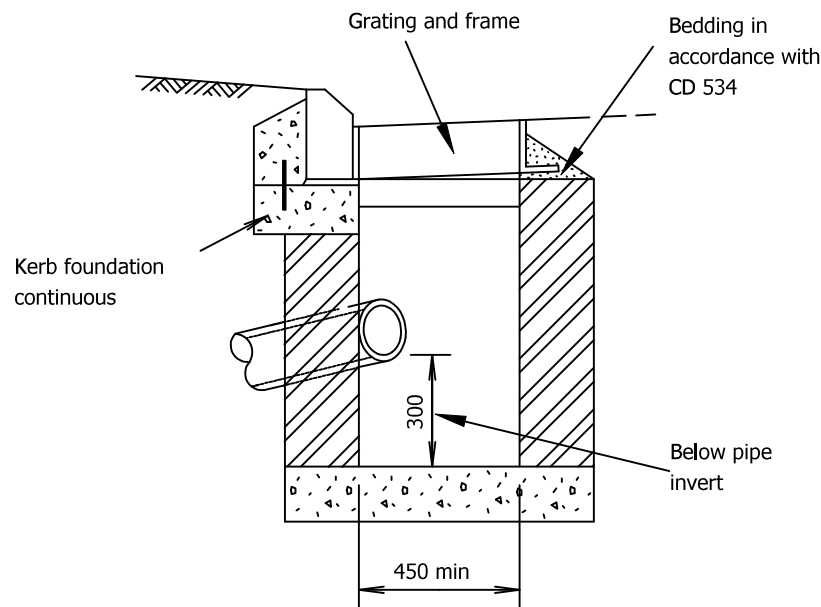
Drawing No	Rev
05.53	C0

Type Ref.	Permitted Types to SHW Table 5/2
11	UPVC
12	UPVC
13	Clayware to BS 65:1991 "ES"; UPVC
14	Clayware to BS 65:1991 "ES"; UPVC

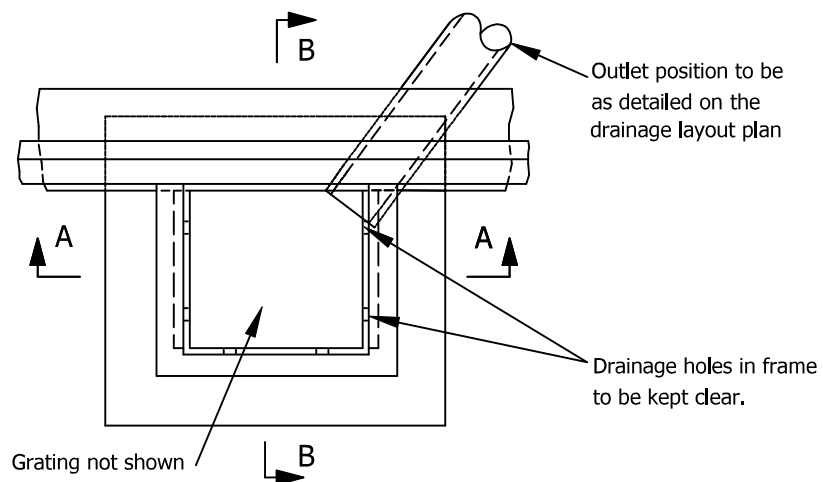
A4



Section A-A



Section B-B



BRICK UNTRAPPED STREET GULLY

NOTES

1. All dimensions are in millimetres.
2. Gully walls to be constructed with Class B clay engineering bricks to BSEN 771-1:2011+A1:2015 with designation (i) mortar.
3. Brickwork adjustment course if required shall be below any corbelling.
4. For details of gully grating and frame see the gully schedules.
5. For use only in particular locations where precast concrete gully cannot be constructed.
6. Backfilling shall be to Clause 508.6.

C1	Amended reference HA 104/09 to CD 534	MM	16/08/2022
C0	Original Drawing	RL	04/10/2019
Rev	Detail	By	Date

Revisions

Original Version	Preliminary	
Drawn: RL	For comment	
Design: RL	For tender	
	For construction	✓
	As constructed	
Date: Sept - 2017	Other	

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Date: 2022.09.09
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Approved by:- (Drawing NOT approved if this box is empty)

Digitally signed by Smith, Michael S (Place)
Date: 2022.09.27 16:17:00 +01'00'



Project Name

Highway Works Details
Series 500

Drawing Title

Brick Gully - Type 3

Grid reference :

Original Drawing Size : A4 Dimensions : mm
Scale : NTS Copyright © Amey SCC

Drawing No

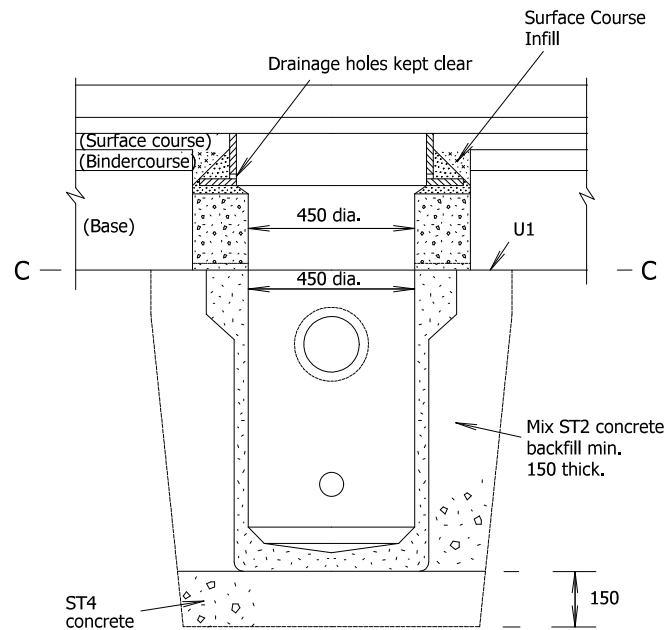
05.65

Rev

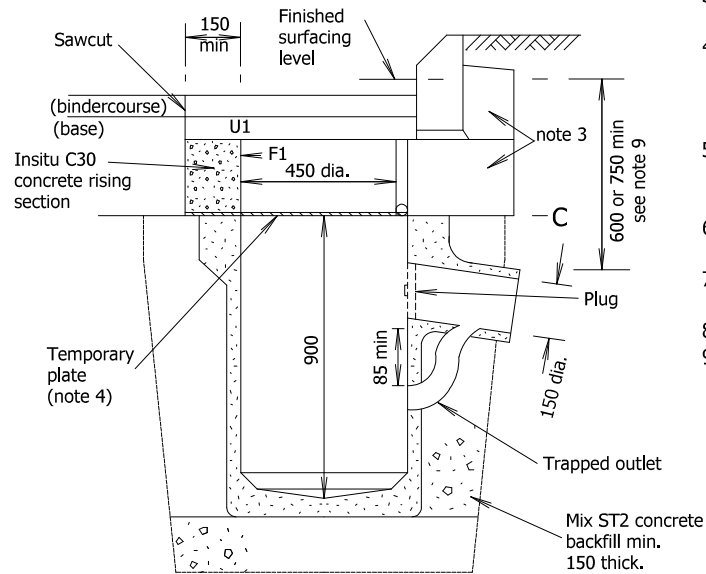
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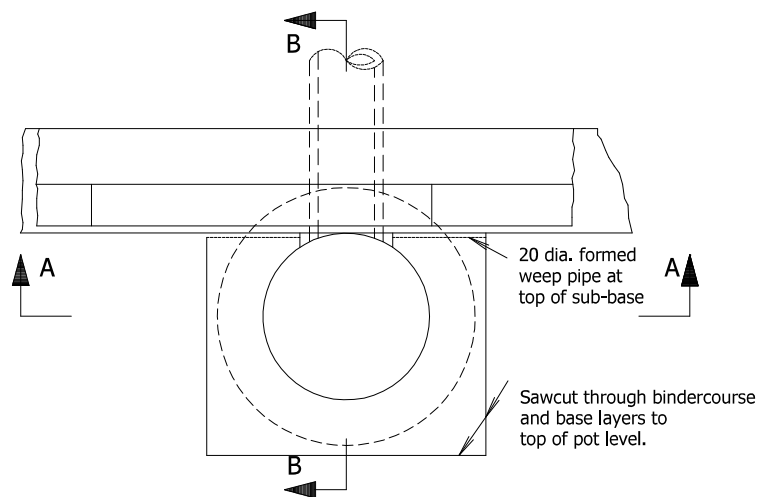
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SECTIONAL ELEVATION A-A.
(completed installation)



SECTIONAL ELEVATION B-B
(during construction)



PLAN
(at top of basecourse - prior to installing grating and frame)

SUB-TYPE	APPLICATION
2A	New gully construction
2B	Existing gully pot, renewal of construction above level C-C.

C1	Replaced ref HA 104/09 with CD 534. Removed previous notes 3 and 8. New note 9 & minimum depth requirements added. Trapped outlet & plug details added.	MM	27/09/2022
C0	Original Drawing	RL	24/10/2019
Rev	Detail	By	Date
Revisions			

NOTES

1. All dimensions are in millimetres.
2. For details of gully grating and frame see the gully schedules.
3. Construction at kerb either side of gully position as per Highway Works Detail Drg. No. 11.01.
4. Temporary plate 10 thick mild steel to be fixed on top of gully pot prior to laying base and binder course layers continuous over gully position. Plate shall be removed before casting rising section.
5. Temporary plate, pavement materials over plated area, and the removal works shall be deemed to be Temporary Works for measurement purposes.
6. Precast concrete gully pot shall be to BS 5911-6:2004 + A1:2010.
7. Surface course material infill outside of frame shall be compacted with pneumatic tools.
8. Frames shall be bedded in accordance with CD 534.
9. The minimum depth from the top of the grating to the top of the gully outlet is to be 750mm when the connection is under the carriageway and 600mm elsewhere.

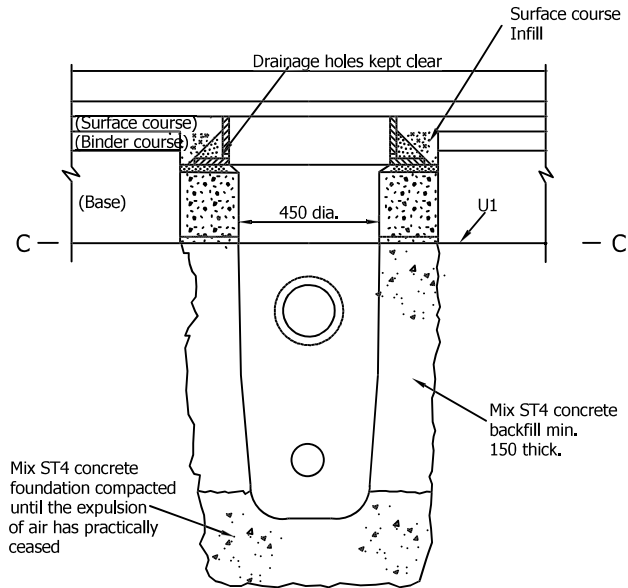
Original Version	Preliminary
Drawn: RL	For comment
Design: RL	For tender
Date: Sept - 2017	For construction
	As constructed
	Other

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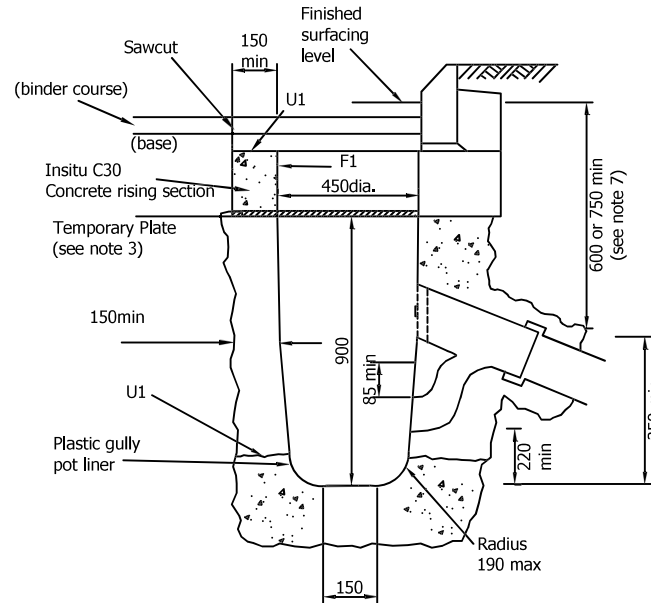
Approved by:- (Drawing NOT approved if this box is empty)	Digitally signed by Smith, Michael S (Place) Date: 2022.09.28 11:01:02 +01'00'
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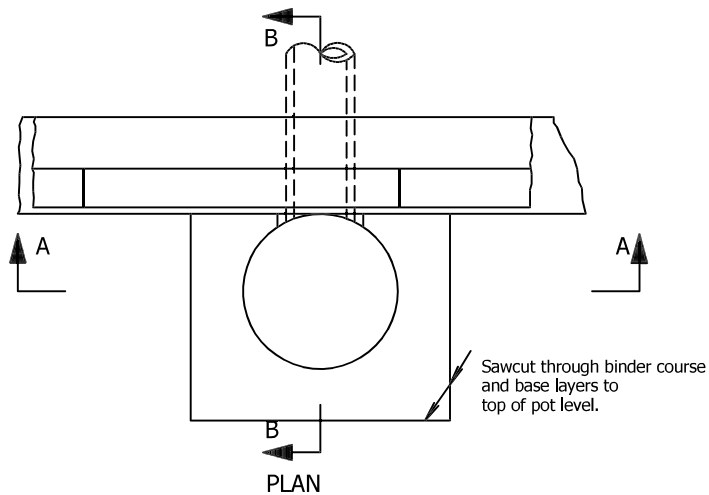
Project Name	Highway Works Details Series 500
Drawing Title	Precast Concrete Gully - Type 2
Grid reference :	
Original Drawing Size : A4	Dimensions : mm
Scale : NTS	Copyright © Amey SCC
Drawing No	Rev
05,67	C1



SECTIONAL ELEVATION A-A.
(completed installation)



SECTIONAL ELEVATION B-B
(during construction)



PLAN
(at top of bindercourse - prior to installing grating and frame)

SUB-TYPE	APPLICATION
4A	New gully construction
4B	Existing gully pot, renewal of construction above level C-C.

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. Requirements for gully grating and frame - see the gully schedules.
3. Temporary plate 10 thick mild steel to be fixed on top of gully pot prior to laying base and binder course layers continuous over gully position. Plate shall be removed before casting rising section.
4. Temporary plate, pavement materials over plated area, and the removal works shall be deemed to be Temporary Works for measurement purposes.
5. Surface course material infill outside of frame shall be compacted with pneumatic tools.
6. Frames shall be bedded in accordance with CD 534.
7. The minimum depth from the top of the grating to the top of the gully outlet is to be 750 when the connecting pipe is under a carriageway or a hard shoulder and 600 elsewhere.

C1	Amended reference HA 104 to CD 534, Pot depth increased from 750mm to 900mm.	MM	27/09/2022
C0	Original Drawing	RL	02/07/2019
Rev	Detail	By	Date
Revisions			
Original Version		Preliminary	
Drawn: RL		For comment	
Design: RL		For tender	
		For construction	✓
		As constructed	
Date: Sept - 2017		Other	

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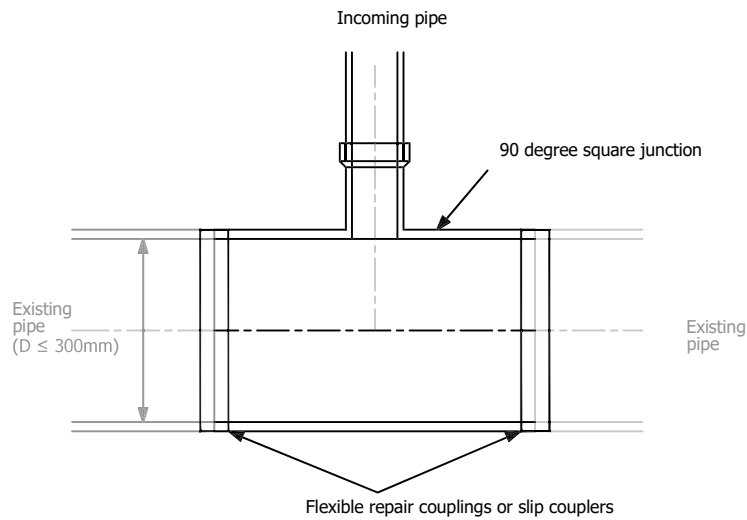
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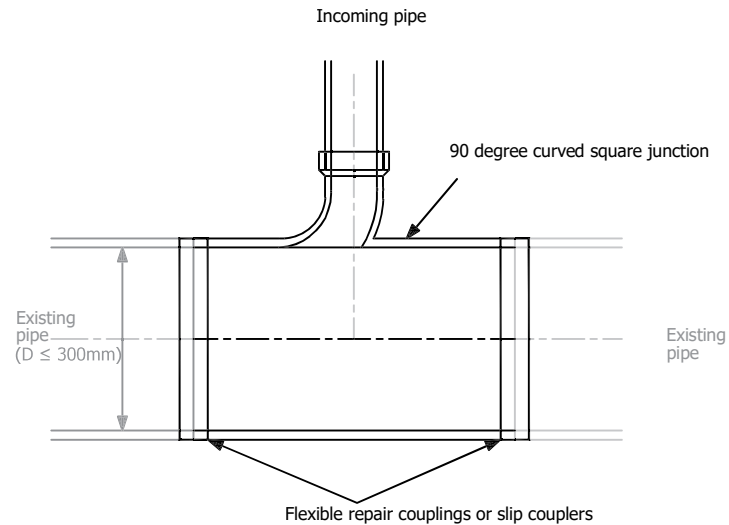
Project Name	Highway Works Details Series 500
Drawing Title	Insitu Concrete Gully - Type 4

Grid reference :	
Original Drawing Size : A4	Dimensions : mm
Scale : NTS	Copyright © Amey SCC

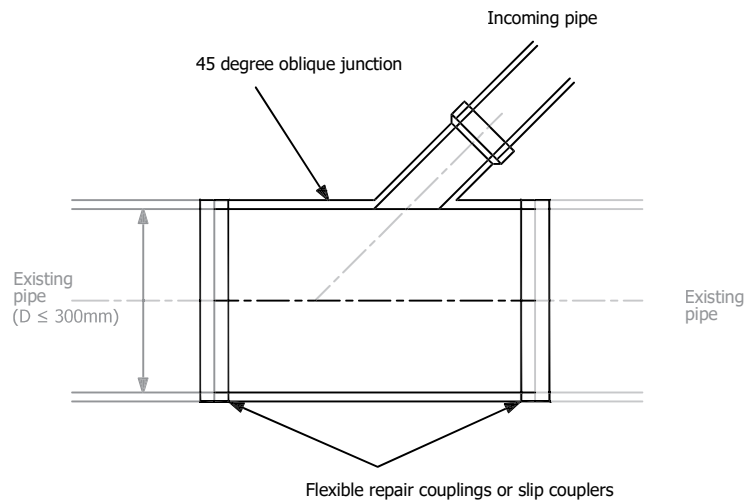
Drawing No	Rev
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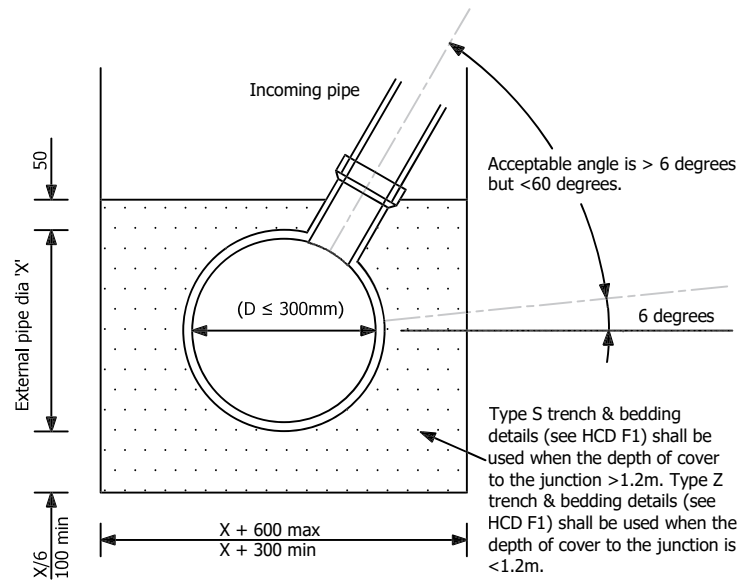
Plan through connection made by inserting a 90 degree square junction into the existing drain



Plan through connection made by inserting a 90 degree curved square junction into the existing drain



Plan through connection made by inserting a 45 degree oblique junction into the existing drain



Cross-section through existing drain

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. Connections to existing pipes with diameter less than or equal to 300mm shall be made by the insertion of a 45 degree oblique or 90 degree square or 90 degree curved square junction into the existing drain pipeline.
3. The section of existing drain shall be removed by cutting with pipe cutter or disc saw.
4. The inserted junction shall be connected with flexible repair couplings or slip couplers.
5. The junction strength classification shall match that of the existing pipe.

Rev	Detail	By	Date
Revisions			
Original Version		Preliminary	
Drawn: SJC		For comment	
Design: SJC		For tender	
		For construction	✓
		As constructed	
Date: June - 2019		Other	

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Approved by: (Drawing NOT approved if this box is empty)	Digitally signed by Mike Smith Date: 2019.08.16 15:00:17 +01'00'
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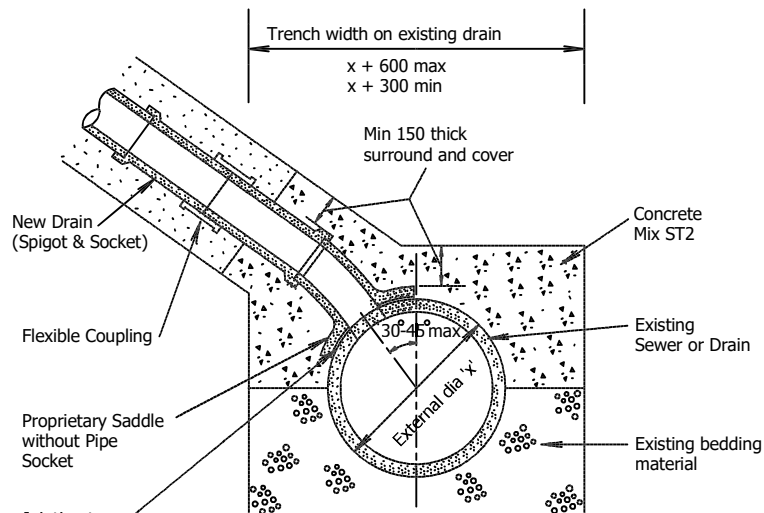
Project Name	Highway Works Details Series 500
Drawing Title	Connecting to Existing Piped Drain with diameter equal to or less than 300mm

Grid reference :	
Original Drawing Size : A4	Dimensions : mm
Scale : NTS	Copyright © Amey SCC

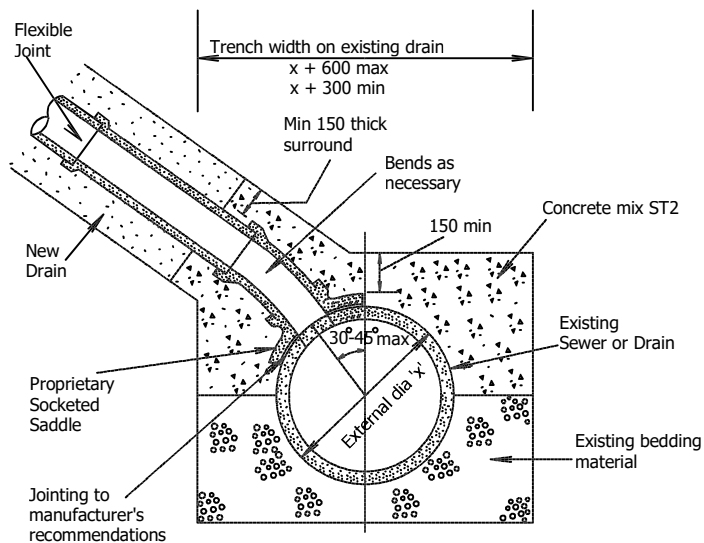
Drawing No	Rev
05.70	C0

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A4



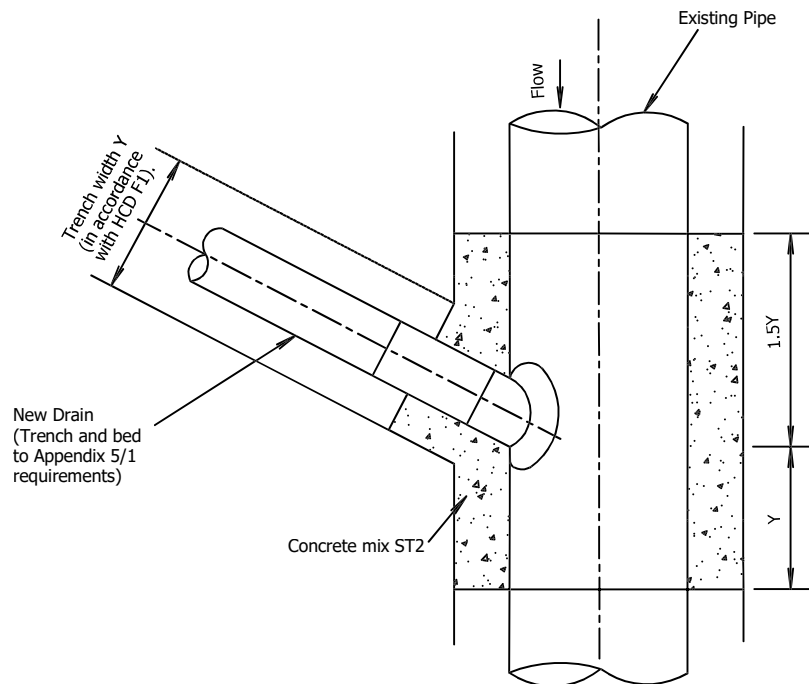
EXAMPLE OF SPIGOTT SADDLE CONNECTION FIG 'A'



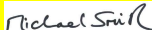


EXAMPLE OF SOCKETED SADDLE CONNECTION FIG 'B'

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. Saddle connections can only be used on existing drains with diameters >300mm and when the connecting pipe's diameter is \leq half the dia of the existing drain. Where a connection is required onto a 3rd party drainage asset, the method and type of connection is to be determined through consultation with the asset owner prior to the commencement of works on site. New saddle connections must be compatible with the size and types of pipe being connected.
3. Connections made with saddle fittings should be made by cutting and safely removing a core from the existing pipe and joining the saddle fitting to the pipe, in accordance with the manufacturers instructions, to ensure a watertight joint. The connecting pipe should not protrude into the bore of the existing drain.
4. Oblique saddle preferred.
5. Bends as stated in pipe schedules.
6. New drain pipe trench and bedding alternatives are described in Appendix 5/1.
7. New drain pipes using beds Type Z shall have flexible joint in concrete bed and surround to the Overseeing Organisation's approval, positioned as directed.

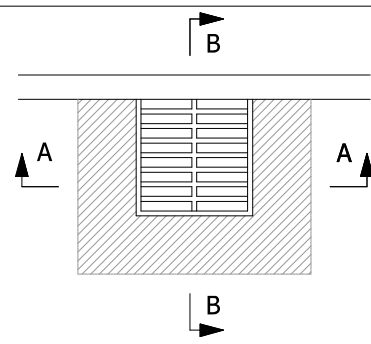


PLAN DIAGRAM - EXAMPLE OF OBLIQUE SADDLE CONNECTION SHOWING LENGTH OF CONCRETE HAUNCH AND COVER TO EXISTING PIPES ABOUT THE CONNECTION

Rev	Detail	By	Date
Revisions			
Original Version		Preliminary	
Drawn: SJC		For comment	
Design: SJC		For tender	
		For construction	
		As constructed	
Date: June - 2019		Other	
Checked by: 		Digitally signed by Geoff Walker Date: 2019.08.01 13:39:55 +01'00'	
Approved by: (Drawing NOT approved if this box is empty) 			
		Digitally signed by Mike Smith Date: 2019.08.16 15:01:37 +01'00'	
 Staffordshire County Council working with 			
www.staffordshire.gov.uk www.amey.co.uk			
Project Name			
Highway Works Details Series 500			
Drawing Title			
Connecting to Existing Piped Drain with diameter greater than 300mm			
Grid reference :			
Original Drawing Size : A4		Dimensions : mm	
Scale : NTS		Copyright © Amey SCC	
Drawing No			Rev
05.71			C0

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PLAN VIEW

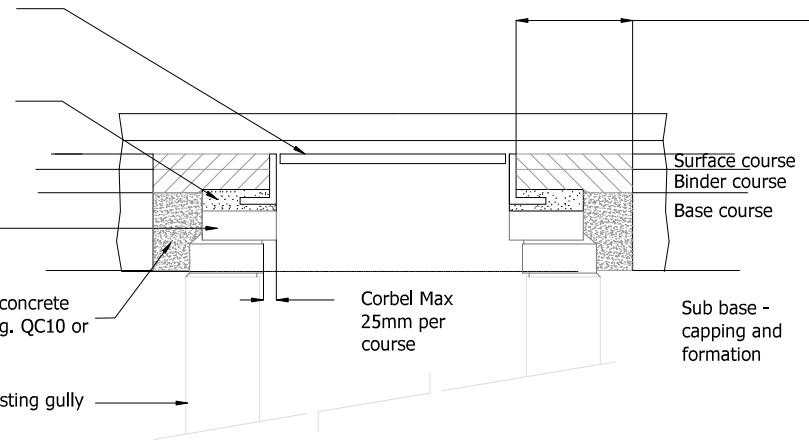
150mm deep D400 gully cover to comply with BS EN 124-2:2015 and CD 534.

Cover to be seated on Envirobed or similar approved. Flanges to be covered by 10mm and floated off parallel.

Class B brick work to be adjusted or concrete ring sections to be used.

Rapid hardening concrete reinstatement, e.g. QC10 or similar approved

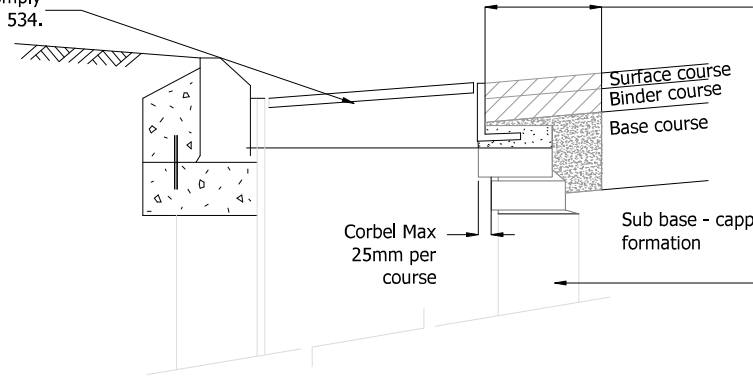
Existing gully



SECTION A - A

Suggested saw cut 300mm (further where required) from the edge of the frame to allow access with compaction equipment. Bituminous layers to be reinstated to engineers specification.

150mm deep D400 gully cover comply with BS EN 124-2:2015 and CD 534.



SECTION B - B

Suggested saw cut 300mm (further where required) from the edge of the frame to allow access with compaction equipment. Bituminous layers to be reinstated to engineers specification.

NOTES

1. Existing pavement to be saw-cut.
2. Vertical faces of pavement and ironwork shall be painted with either bond coat or approved edge sealant as described in Appendix 7/2 and 7/4.

C1	Amended reference HA104/09 to CD534	MM	29/09/2023
Rev	Detail	By	Date

Revisions			
Original Version		Preliminary	
Drawn: RS		For comment	
Design: RS		For tender	
		For construction	✓
		As constructed	
Date: Aug 2019		Other	

Checked by:-

[Signature]

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Date: 2023.10.20 15:28:46 +01'00'

Approved by:- (Drawing **NOT** approved if this box is empty)

Michael Swift

Digitally signed by Smith, Michael S (Place)
Date: 2023.10.24 09:31:25 +01'00'

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Project Name	Highway Works Details Series 500
Drawing Title	Gully Cover Reinstatement

Grid reference :	
Original Drawing Size : A4	Dimensions : mm
Scale : NTS	Copyright © Amey SCC

Drawing No	05.72	Rev	C1
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