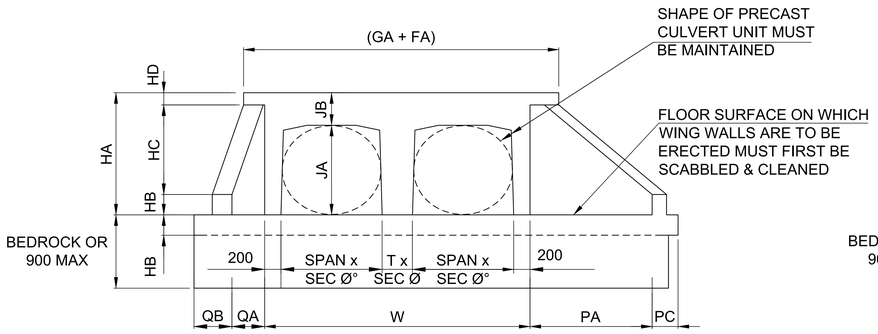
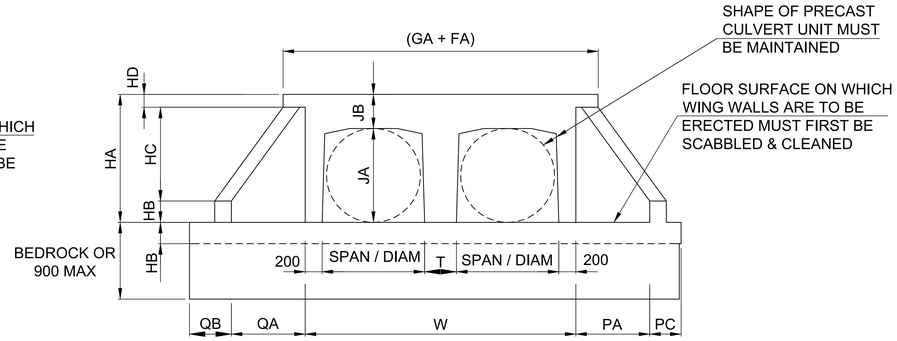


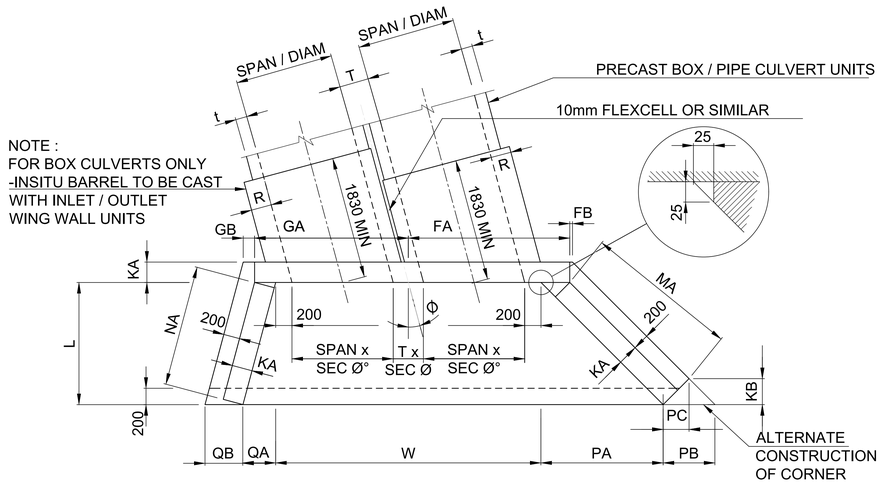
TYPICAL ELEVATION OF INLET / OUTLET WING WALLS - MAX Ø = 30°

N.T.S.



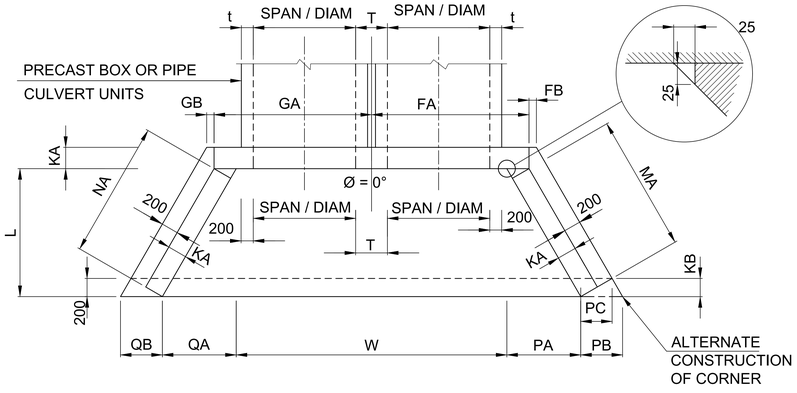
TYPICAL ELEVATION OF INLET / OUTLET WING WALLS - Ø = 0° (SQUARE)

N.T.S.



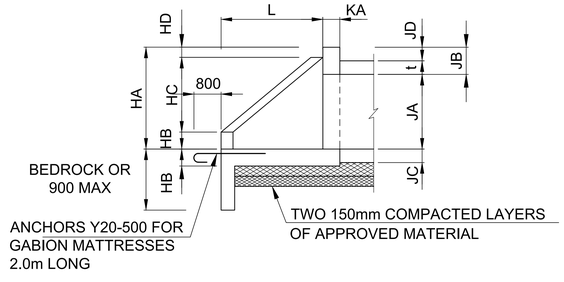
TYPICAL PLAN OF INLET / OUTLET WING WALLS - MAX Ø = 30°

N.T.S.



TYPICAL PLAN OF INLET / OUTLET WING WALLS - Ø = 0° (SQUARE)

N.T.S.



TYPICAL END-ELEVATION OF INLET / OUTLET WING WALLS - MAX Ø = 30°

N.T.S.

DATA SHEET AND FORMULAE

VERTICAL HEIGHT OF CULVERT	HB	HD	KA	JB
JA < 900	150	150	225	300
JA > 900	250	150	250	400

INSITU FLOOR SLAB (JC) AND PRECAST UNIT DECK THICKNESS (t)

	JC	t
900mm SPAN	150mm	110mm
1200mm SPAN	160mm	125mm
1500mm SPAN	175mm	145mm
1800mm SPAN	190mm	150mm
2100mm SPAN	220mm	155mm
2400mm SPAN	260mm	170mm

All dimensions in mm

FORMULAE

L = HC x S (min.1500mm) S = BATTER SLOPE

QA = L x TAN(Ø-30) Ø = CULVERT SKEW ANGLE

PA = L x TAN(Ø+30) t = PRECAST WALL THICKNESS

NA = L x SEC(Ø-30) - KA x TAN(Ø-30)

MA = L x SEC(Ø+30) - KA x TAN(Ø+30)

T = t x 2 + 80

QB = (KA + 200) x SEC(Ø - 30)

PB = (KA + 200) x SEC(Ø + 30)

KB = (KA + 200) x SIN(Ø + 30)

PC = (KA + 200) x COS(Ø + 30)

GA = W/2 + KA x SEC(Ø -30)

GB = {[200 x COSEC(Ø - 30)] - KA} x TAN(Ø - 30)

FA = W/2 + KA x SEC(Ø +30)

FB = {[200 x COSEC(Ø + 30)] - KA} x TAN(Ø + 30)

R = t + 100 (INSITU BARREL SLAB THICKNESS)

No.	DATE	REVISION
V1	08/03/2024	ORIGINAL VERSION

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ACCEPTANCE

THIS ACCEPTANCE IS FOR PROCEDURAL AND ADMINISTRATIVE REVIEW PURPOSES ONLY AND DOES NOT ATTRACT LEGAL LIABILITY OR LIABILITY OF ANY KIND FROM WHATSOEVER CAUSE OR HOWEVER ARISING

for the SA NATIONAL ROADS AGENCY SOC LTD.

Date:

PROJECT DESCRIPTION

THE CAPACITY IMPROVEMENT OF NATIONAL ROUTE 1 SECTION 1 FROM OLD OAK INTERCHANGE (KM 18.90) TO KOELENHOF INTERCHANGE (KM 33.00)

PRECAST CULVERT WING WALLS DIMENSIONS SHEET 1 OF 2

SCALE @ A0: AS SHOWN SHEET 1 OF 2

PROJECT NUMBER	N001-010-2021/1	
DRAWING LOCATION DATA	START	END
ROUTE	N01	N01
SECTION	01	01
DRAWING km DISTANCE	18.900	33.000
DRAWING TYPE	DRAINAGE - WING WALLS	
BRIDGE/STRUCTURE No.	N/A	
CONSULTANT DRAWING No.	312-00827-01-TD69	VER
SANRAL DOCUMENT #	XXXXXX	V1

312-00827-01-TD69