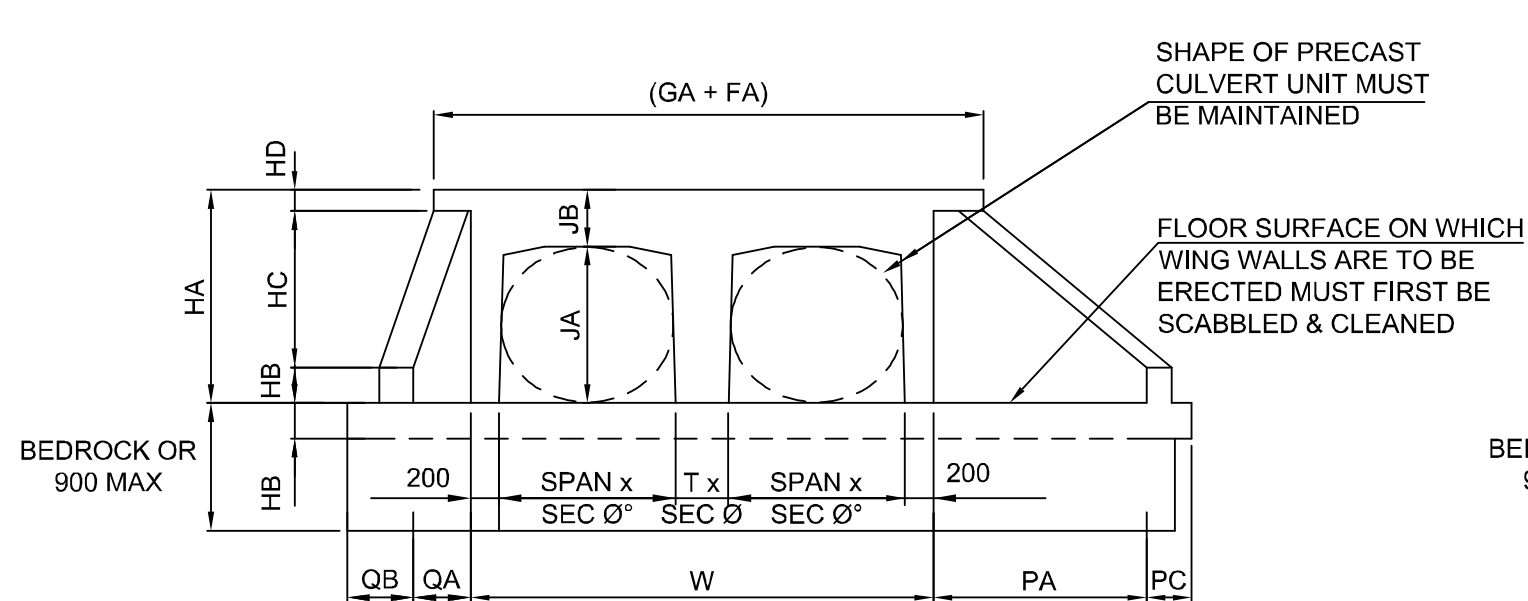
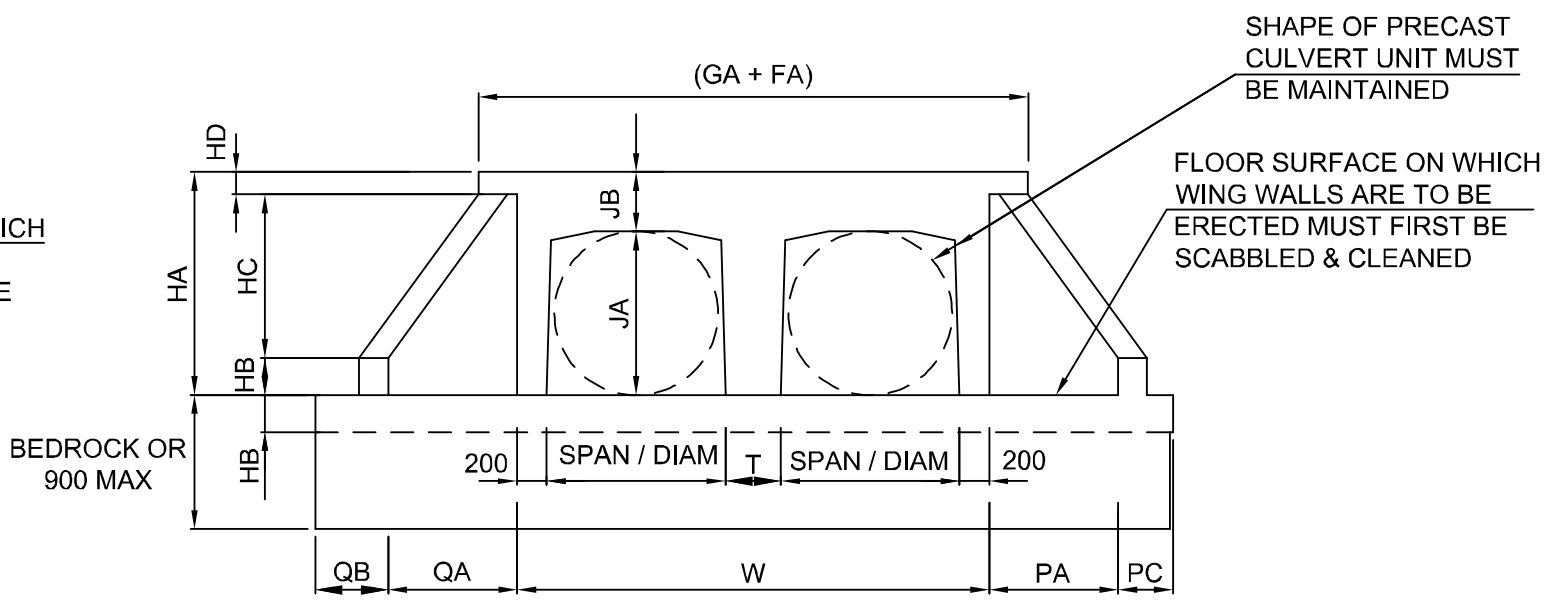
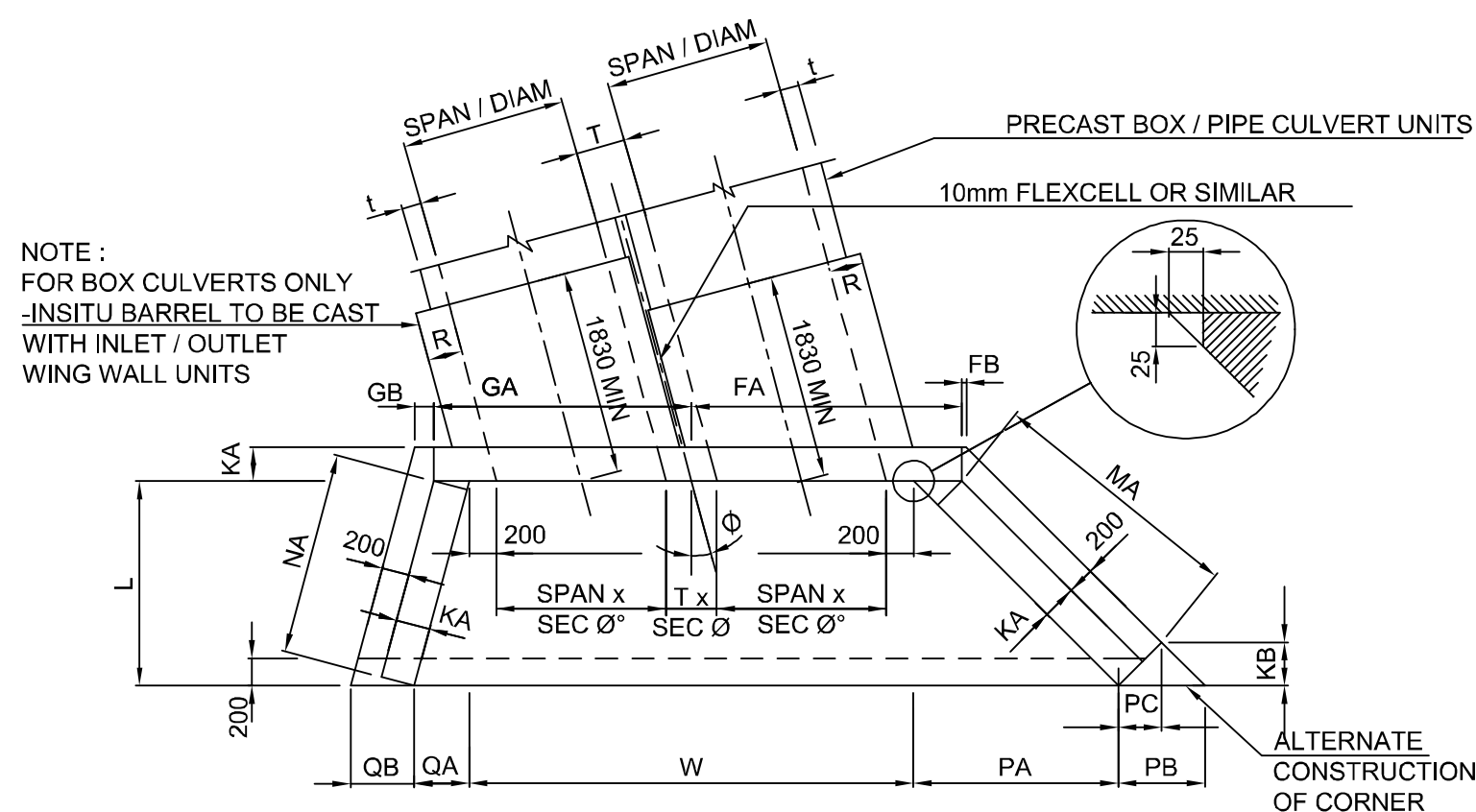




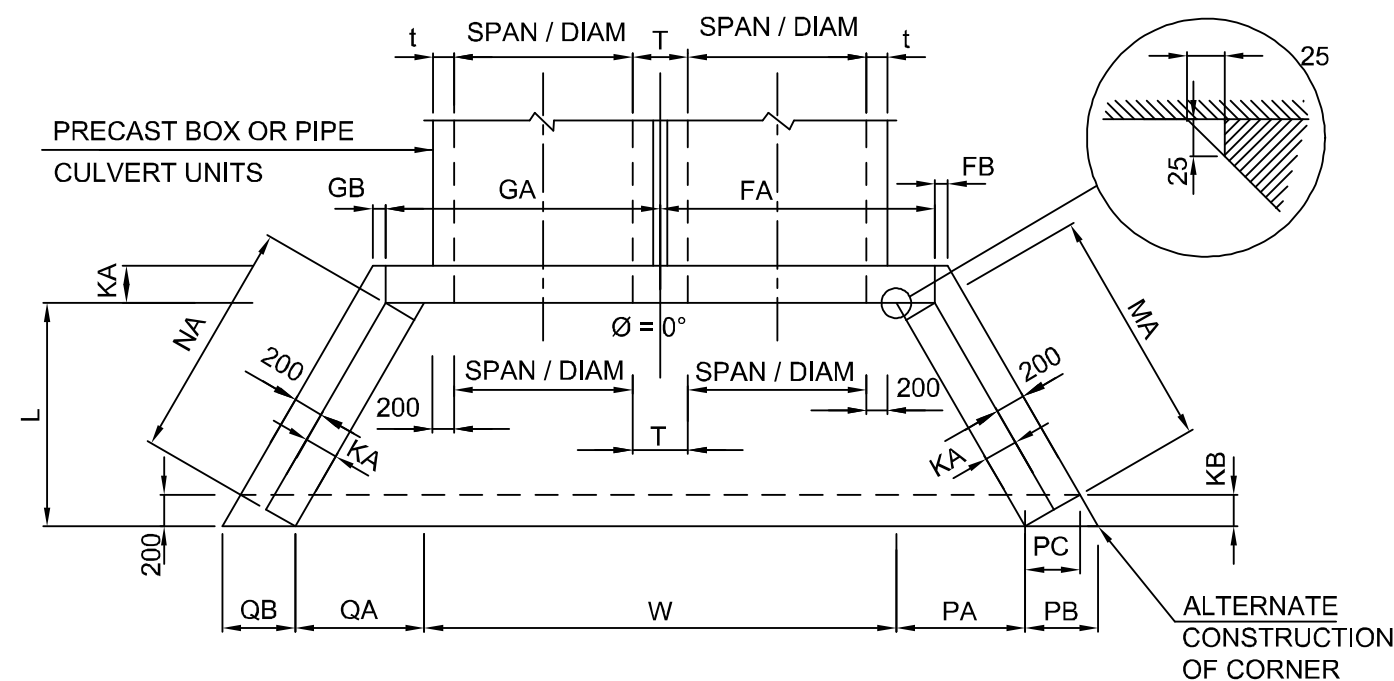
TYPICAL ELEVATION OF INLET / OUTLET WING WALLS - MAX Ø = 30°
N.T.S.



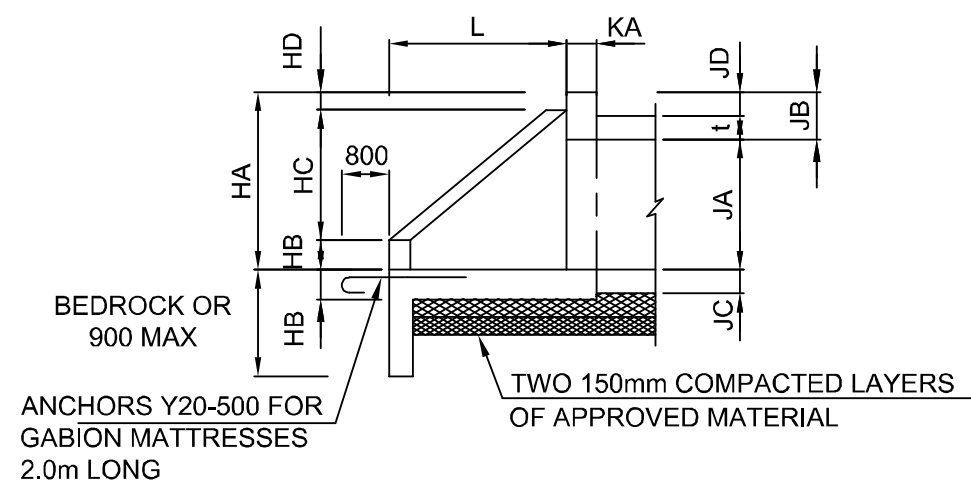
TYPICAL ELEVATION OF INLET / OUTLET WING WALLS - Ø = 0° (SQUARE)
N.T.S.



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				
<u>FORMULAE</u>				
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)				

CONSTRUCTION RECORD (AS BUILT)				DESIGNED BY		CONSULTANT APPROVAL		HEAD OFFICE 48 Tambotie Avenue Val de Grace Pretoria 0184 P.O. Box 415 Pretoria 0001 South Africa Tel: +27 (0) 12 844 8000	SOUTHERN REGION 20 Shoreward Drive Baywest Port Elizabeth 6025 P.O.Box 24210 Baywest Port Elizabeth 6034 Tel: (041) 398 3200	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 BY ORDER: SA NATIONAL ROADS AGENCY LTD. Date: _____	PROJECT DESCRIPTION THE SPECIAL MAINTENANCE ON NATIONAL ROUTE 62 SECTION 6 BETWEEN LOUWERWATER (KM 58.60) AND JOUBERTINA (KM 79.00)		PROJECT NUMBER SANRAL R.062-060-2021/2F	
No.	DATE	REVISION	CONSULT. ENG.	Name: _____ Prof. Reg. No.: _____ Date: _____	Name: _____ Prof. Reg. No.: _____ Date: _____	Name: _____ Prof. Reg. No.: _____ Date: _____	Name: _____ Prof. Reg. No.: _____ Date: _____				DRAWING NAME PRECAST CULVERT WING WALLS: DIMENSIONS		DRAWING LOCATION DATA	
V1	SEP 2023	ORIGINAL VERSION									ROUTE		START	
											SECTION		END	

FOR TENDER PURPOSES ONLY