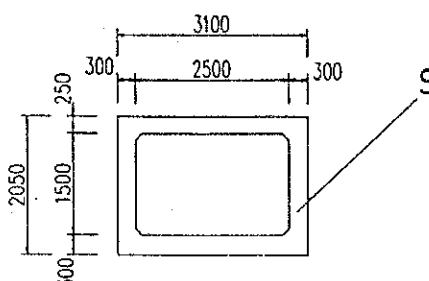
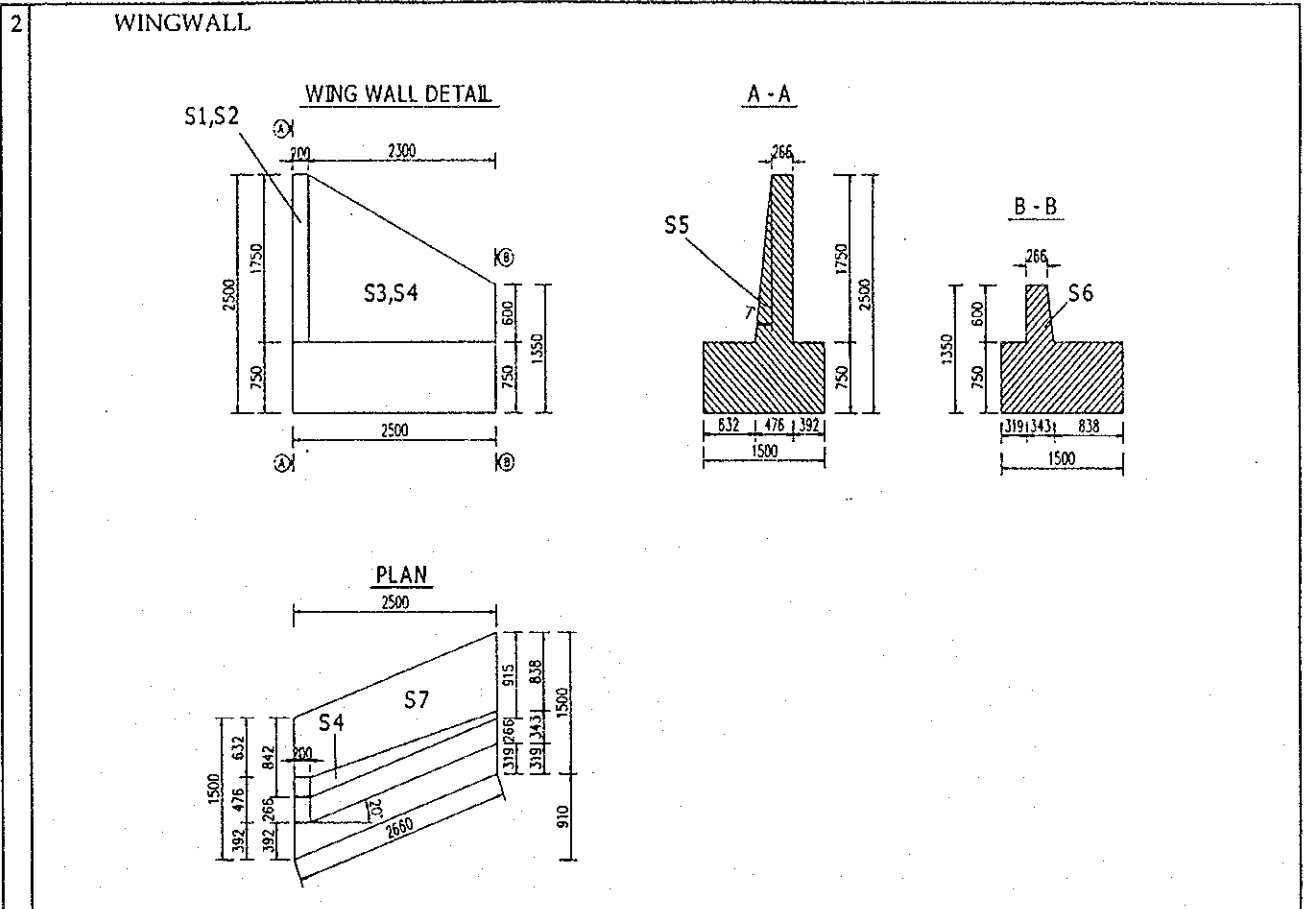


**2.16. Box culvert at interchang 2
- ramp "C" - station 0+240**

I	BOX CULVERT STATION L = 10.120	QUANTITIES
1 + S VOLUME	CULVERT CONCRETE (M3) $= 3.100 \times 2.050 - 2.500 \times 1.500 + 2 \times 0.100 \times 0.100 =$ $= S \times L + 3.100 \times 0.200 \times 0.300 \times 2 =$	2.625 <u>26.94</u>
<p><u>SINGLE BOX CULVERT</u></p>		
		
+ FORM (M2)		<u>104.77</u>
* INSIDE FORM (M2)		55.313
BOX BULWARK	$= (1.500 + 2 \times 0.100 \times (1:\text{SIN}45^\circ - 1)) \times 10.120 \times 2 =$	32.037
BOTTOM OF THE BOX	$= (2.500 - 0.100 \times 2) \times 10.120 \times 1 =$	23.276
* OUTSIDE FORM (M2)		49.462
BOX BULWARK	$= 2.050 \times 2 \times 10.120 + 4 \times 0.300 \times 0.200 =$	41.732
THE END OF CULVERT	$= S \times 2 + 3.100 \times 0.200 \times 4 =$	7.730
+ SCAFFOLDING (M2)	$= 2.050 \times 2.000 \times 10.120 + 4.000 \times 0.300 \times 0.200 =$	<u>41.732</u>
+ SUPPORT		
AREA (M2)	$= 3.100 \times 2.050 - S =$	3.730
VOLUME (M3)	$= \text{AREA} \times L =$	<u>37.75</u>

**BOXCULVERT AT INTERCHANGE 2-RAMP "C" 0+240
QUANTITIES TABLE OF REINFORCEMENT**

SYMBOL	UNIT LENGTH	SPACE	DIAMETER	NUMBER	UNIT WEIGHT	TOTAL LENGTH	TOTAL WEIGHT
OF BAR	(mm)	(mm)	(mm)	OF BAR	(kg/m)	(m)	(kg)
1	3660	250	12	82	0.888	300.12	266.5
2	1930	250	12	80	0.888	154.40	137.1
3	3648	250	16	40	1.578	145.92	230.3
4	3400	250	12	82	0.888	278.80	247.5
5	1970	250	12	82	0.888	161.54	143.4
6	5349	250	14	40	1.208	213.96	258.6
7	2350	250	12	82	0.888	192.70	171.1
8	1049	250	12	82	0.888	86.04	76.4
9	1120	250	12	82	0.888	91.84	81.5
10	1440	250	12	28	0.888	40.32	35.8
11	2980	180	12	4	0.888	11.92	10.6
12	10260	250	12	28	0.888	287.28	255.1
13	10360	250	12	52	0.888	538.72	478.3
14	1180	250	12	121	0.888	142.78	126.8
15	1280	250	12	121	0.888	154.88	137.5
REINFORCEMENT : D<=14				2426.0	TOTAL FOR SEGMENT 1 :		
REINFORCEMENT : 16=D<=25				230.3	REINFORCEMENT (KG): 2656.3		
REINFORCEMENT : 25<D=32					CONCRETE (M ³): 26.94		

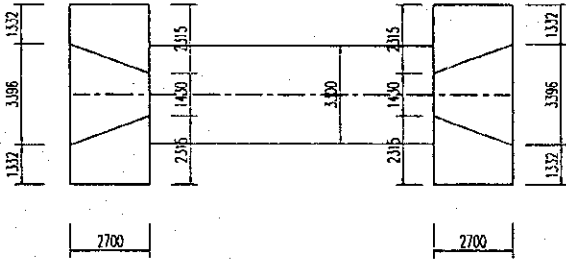
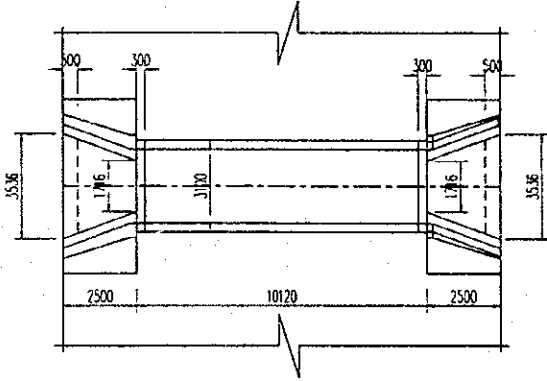


+ CONCRETE (M3)			
S7	= (1.500 + 1.500) :	2 x 2.500	= 3.750
* BASE OF THE WINGWALL	= S7 x 0.750		= 2.813
S5	= (0.476 + 0.266) :	2 x 1.750	= 0.649
S6	= (0.343 + 0.266) :	2 x 0.600	= 0.183
* WINGWALL	= 2.500 :	3 x (S5 + S6 + (S5xS6) ^{0.5})	= 0.980
SUM			= 3.79
+ FORM (M2)			
* BASE OF THE WINGWALL			= 6.240
BASE OF THE WINGWALL	= (2.660 + 1.500 + 1.5 + 2.660) x 0.750		= 6.240
* WINGWALL			= 7.305
S1+S2	= 0.200 x 1.750 x 2		= 0.700
S3	= (1.750 + 0.600) x 2.300 :	(2 x COS20 ^h)	= 2.876
S4	= 2.876 :	COS7 ^d	= 2.898
S5	= 0.649		= 0.649
S6	= 0.183		= 0.183
+ SCAFFOLDING (M2)			
* BASE OF THE WINGWALL			= 8.490
PERIMETER	= 2.660 + 1.000 + 1.500 + 1.000 + 1.500 + 1.000 + 2.66		= 11.320
AREA	= PERIMETER x 0.750		= 8.490
* WINGWALL	= S3 x 2 + 0.600 x (0.343 + 1)		= 6.558

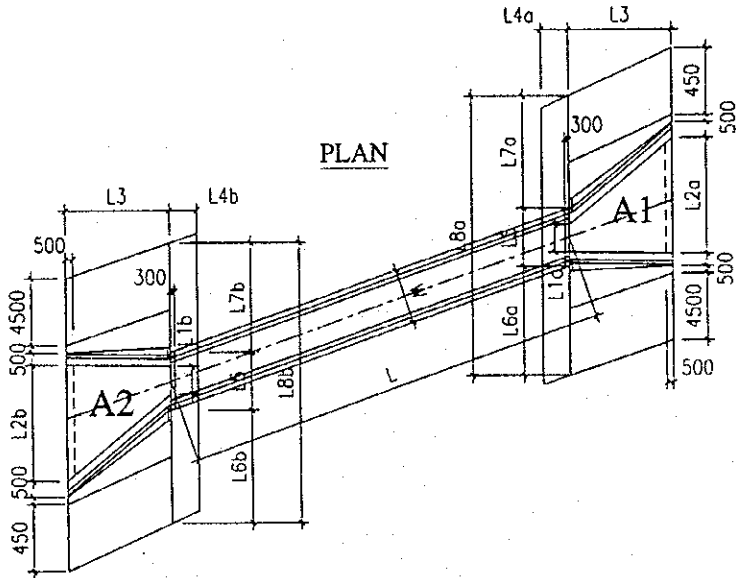
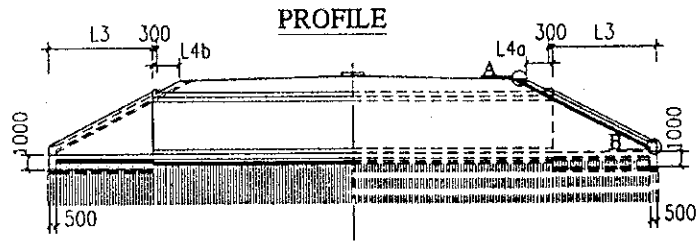
**BOX CULVERT AT INTERCHANG 2-RAMP "C" 0+240
REINFORCEMENT OF WINGWALL**

BAR MARK	UNIT LENGTH	DIAMETER	NUMBER OF BAR	UNIT WEIGHT (KG/M)	TOTAL LENGTH (M)	TOTAL WEIGHT (KG)
	(MM)	(MM)				
1a	2011	12	15	0.888	30.2	26.8
1b	2060	14	15	1.208	30.9	37.3
2a	2651	12	6	0.888	15.9	14.1
2b	1552	12	12	0.888	18.6	16.5
2c	582	12	15	0.888	8.7	7.8
3	3005	12	2	0.888	6.0	5.3
4	3378	12	16	0.888	54.0	48.0
5a	3824	12	11	0.888	42.1	37.3
5b	1867	12	4	0.888	7.5	6.6
5c	3248	20	11	2.466	35.7	88.1
5d	1291	20	4	2.466	5.2	12.7
6	2444	14	8	1.208	19.6	23.6
7	1814	12	4	0.888	7.3	6.4
8	1814	12	4	0.888	7.3	6.4
9	2554	12	4	0.888	10.2	9.1
10	1304	14	5	1.208	6.5	7.9
11	724	12	9	0.888	6.5	5.8
12	1791	12	1	0.888	1.8	1.6
REINFORCEMENT :					D=<14	260.7 KG
REINFORCEMENT :					14< D<=25	100.8 KG
TOTAL REINFORCEMENT :						361.5 KG

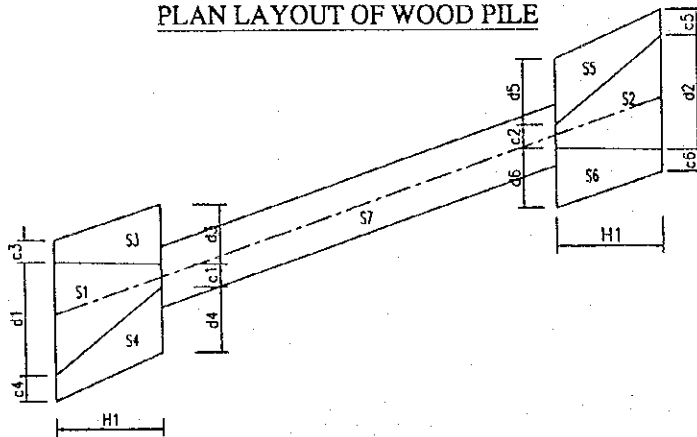
BOX CULVERT FOR DRAINAGE
 (STATION 0+240 RAMP "C" INTERCHANGE 2)



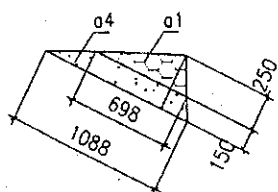
NOTATIONS FOR QUANTITY CALCULATION OF BOX CULVERT FOR DRAINAGE



PLAN LAYOUT OF WOOD PILE



DETAIL A



DETAIL B

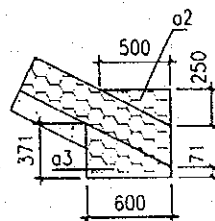


TABLE OF EXPLAINING QUANTITIES OF CULVERT

CULVERT KM0+240 RAMP"C" INTERCHANGE 2

S1=	(	c1	)	+	d1	)	x	H1	:	2	=	
=	(	1.430	)	+	3.396	)	x	2,700	:	2	=	6.515 (m2)
S2=	(	c2	)	+	d2	)	x	H1	:	2	=	
=	(	1.430	)	+	3.396	)	x	2,700	:	2	=	6.515 (m2)
S3=	(	c3	)	+	d3	)	x	H1	:	2	=	
=	(	1.713	)	+	1.713	)	x	2,700	:	2	=	4.625 (m2)
S4=	(	c4	)	+	d4	)	x	H1	:	2	=	
=	(	1.713	)	+	1.713	)	x	2,700	:	2	=	4.625 (m2)
S5=	(	c5	)	+	d5	)	x	H1	:	2	=	
=	(	1.713	)	+	1.713	)	x	2,700	:	2	=	4.625 (m2)
S6=	(	c6	)	+	d6	)	x	H1	:	2	=	
=	(	1.713	)	+	1.713	)	x	2,700	:	2	=	4.625 (m2)
S7=		L		x	(W+0.2)	=						
=		10.120		x	3.300	=		33.396				(m2)
<u>1. APRON CONCRETE:</u>												
A1=	(	L1a	)	+	L2a	)	x	L3	:	2	=	
=	(	1.716	)	+	3.536	)	x	2,500	:	2	=	6.565 (m2)
A2=	(	L1b	)	+	L2b	)	x	L3	:	2	=	
=	(	1.716	)	+	3.536	)	x	2,500	:	2	=	6.565 (m2)
	(	A1	)	+	A2	)	x	0.3	+	(	L2a	+
=	(	6.565	)	+	6.565	)	x	0.3	+	(	3.536	+
											L2b	) x 0.45 x 0.5
											3.536	) x 0.45 x 0.5
											=	5.53 (m3)
											=	

2. CONCRETE FOUNDATION OF CULVERT:

$$L \times (W + 0.2) \times 0.2 = 10.120 \times 3.300 \times 0.2 = 6.68 \text{ (m}^3\text{)}$$

3. LEAN CONCRETE:

$$\begin{aligned}
 &= (S1 + S2 + S3 + S4 + S5 + S6) \times 0.1 = \\
 &= (6.515 + 6.5151 + 4.625 + 4.625 + 4.625 + 4.625) \times 0.1 = \underline{3.15} \quad (m^3) \\
 \\
 &= (S3 + S4 + S5 + S6) \times 25 \times 5 : 100 = \\
 &= (4.625 + 4.625 + 4.625 + 4.625) \times 25 \times 5 : 100 = \underline{64.87} \quad (100m)
 \end{aligned}$$

4. WOOD PILE:

* L=5M

$$\begin{aligned}
 W5 &= (S3 + S4 + S5 + S6) \times 25 \times 5 : 100 = \\
 &= (4.625 + 4.625 + 4.625 + 4.625) \times 25 \times 5 : 100 = \\
 \\
 * L=3M \\
 W3 &= (S1 + S2 + S3 + S4 + S5 + S6) \times 25 \times 3 : 100 = \\
 &= (6.515 + 6.5151 + 4.625 + 4.625 + 4.625 + 4.625) \times 25 \times 3 : 100 = \underline{9.77} \quad (100m)
 \end{aligned}$$

NOTE: S=0.8 x 4.5 x 4 IS AREA WOOD PILE TOE OF SLOPE

5. SAND BEDDING:

$$\begin{aligned}
 &= (S1 + S2 + S3 + S4 + S5 + S6) \times 0.15 = \\
 &= (6.515 + 6.515 + 4.625 + 4.625 + 4.625 + 4.625) \times 0.15 = \underline{9.74} \quad (m^3)
 \end{aligned}$$

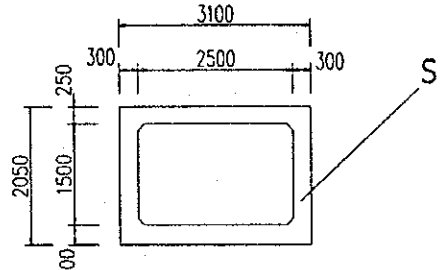
6. FORM

$$\begin{aligned}
 &= (L2a + L2b) \times 0.75 \times 2 = \\
 &= (3.536 + 3.536) \times 0.75 \times 2 = \underline{10.608} \quad (m^2)
 \end{aligned}$$

7. SCAFFOLDING

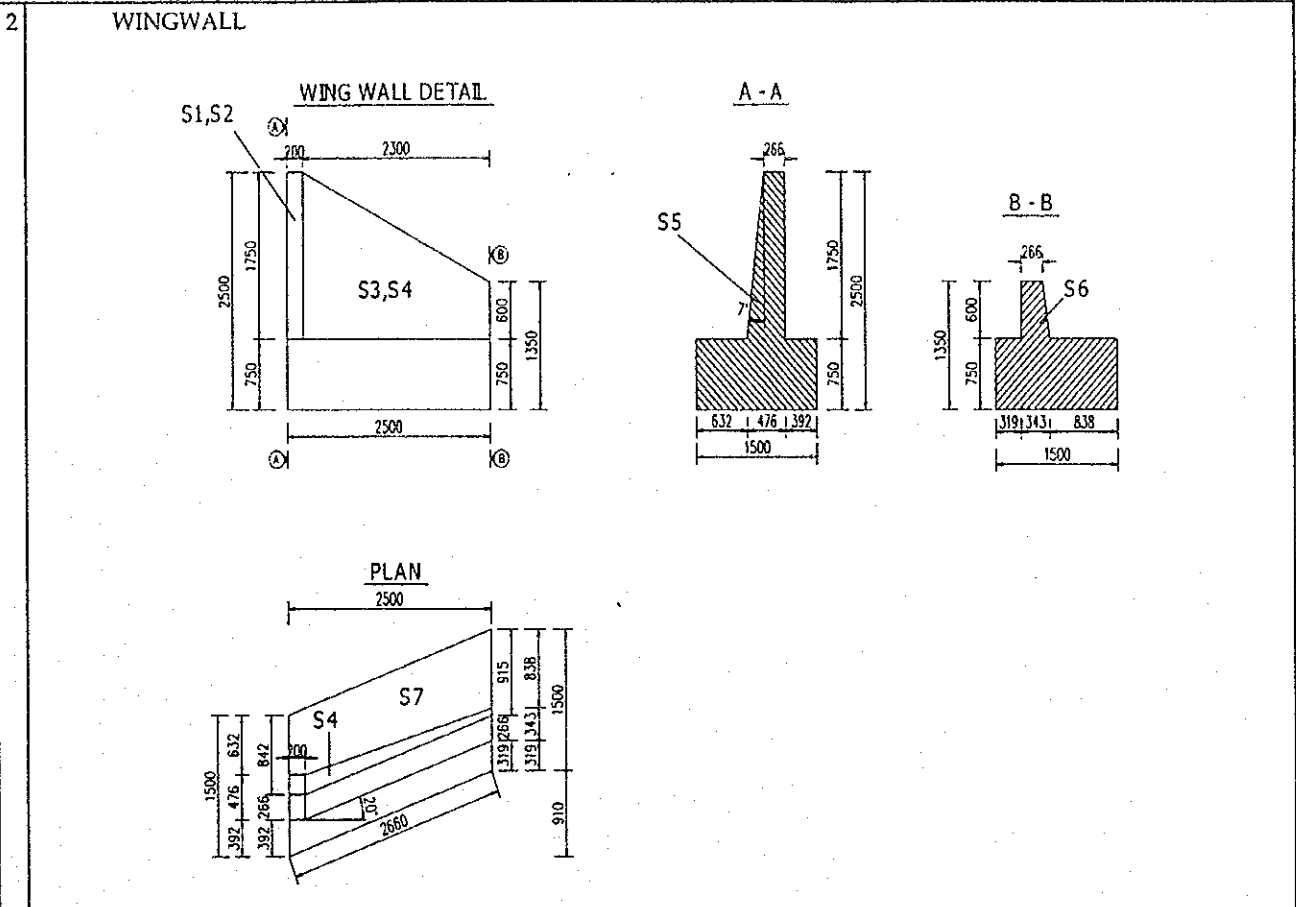
$$\begin{aligned}
 &= (L2a + L2b) \times 0.75 \times 2 = \\
 &= (3.536 + 3.536) \times 0.75 \times 2 = \underline{10.608} \quad (m^2)
 \end{aligned}$$

**2.17. Box culvert at interchang 2
- ramp "D" - station 0+300**

I	BOX CULVERT STATION L =	0+300 RAMP D 10.120	QUANTITIES
1 + S	CULVERT CONCRETE (M3)	$= 3.100 \times 2.050 - 2.500 \times 1.500 + 2 \times 0.100 \times 0.100 =$ $= S \times L + 3.100 \times 0.200 \times 0.300 \times 2 =$	2.625 <u>26.94</u>
SINGLE BOX CULVERT			
			
+	FORM (M2)		<u>104.77</u>
*	INSIDE FORM (M2)		55.313
	BOX BULWARK BOTTOM OF THE BOX	$= (1.500 + 2 \times 0.100 \times (1:\text{SIN}45^\circ - 1)) \times 10.120 \times 2 =$ $= (2.500 - 0.100 \times 2) \times 10.120 \times 1 =$	32.037 23.276
*	OUTSIDE FORM (M2)		49.462
	BOX BULWARK THE END OF CULVERT	$= 2.050 \times 2 \times 10.120 + 4 \times 0.300 \times 0.200 =$ $= S \times 2 + 3.100 \times 0.200 \times 4 =$	41.732 7.730
+	SCAFFOLDING (M2)	$= 2.050 \times 2.000 \times 10.120 + 4.000 \times 0.300 \times 0.200 =$	<u>41.73</u>
+	SUPPORT AREA (M2)	$= 3.100 \times 2.050 - S =$	3.730
	VOLUME (M3)	$= \text{AREA} \times L =$	<u>37.75</u>

BOXCULVERT AT INTERCHANGE 2-RAMP "D" 0+300
QUANTITIES TABLE OF REINFORCEMENT

SYMBOL	UNIT LENGTH	SPACE	DIAMETER	NUMBER	UNIT WEIGHT	TOTAL LENGTH	TOTAL WEIGHT
OF BAR	(mm)	(mm)	(mm)	OF BAR	(kg/m)	(m)	(kg)
1	3660	250	12	82	0.888	300.12	266.5
2	1930	250	12	80	0.888	154.40	137.1
3	3648	250	16	40	1.578	145.92	230.3
4	3400	250	12	82	0.888	278.80	247.5
5	1970	250	12	82	0.888	161.54	143.4
6	5349	250	14	40	1.208	213.96	258.6
7	2350	250	12	82	0.888	192.70	171.1
8	1049	250	12	82	0.888	86.04	76.4
9	1120	250	12	82	0.888	91.84	81.5
10	1440	250	12	28	0.888	40.32	35.8
11	2980	180	12	4	0.888	11.92	10.6
12	10260	250	12	28	0.888	287.28	255.1
13	10360	250	12	52	0.888	538.72	478.3
14	1180	250	12	121	0.888	142.78	126.8
15	1280	250	12	121	0.888	154.88	137.5
REINFORCEMENT : D<=14				2426.0	TOTAL FOR SEGMENT 1 :		
REINFORCEMENT : 16=D<=25				230.3	REINFORCEMENT (KG):		2656.3
REINFORCEMENT : 25<D=32					CONCRETE (M ³):		26.94

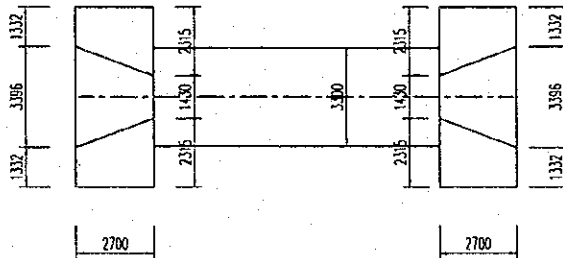
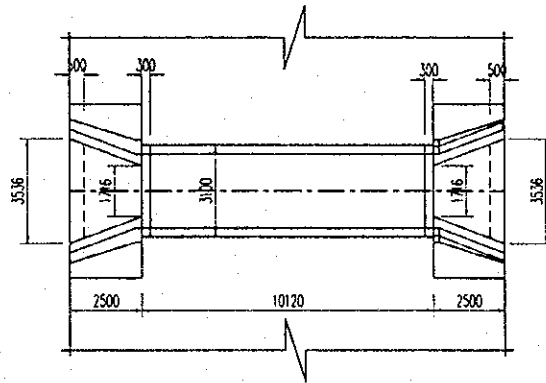


+ CONCRETE (M3)				
S7	=	(1.500 + 1.500) :	2 x 2.500	= 3.750
* BASE OF THE WINGWALL	=	S7 x 0.750		= 2.813
S5	=	(0.476 + 0.266) :	2 x 1.750	= 0.649
S6	=	(0.343 + 0.266) :	2 x 0.600	= 0.183
* WINGWALL	=	2.500 :	3 x (S5 + S6 + (S5xS6) ^{0.5})	= 0.980
SUM				= <u>3.793</u>
+ FORM (M2)				<u>13.545</u>
* BASE OF THE WINGWALL				= 6.240
BASE OF THE WINGWALL	=	(2.660 + 1.500 + 1.5 + 2.660) x 0.750		= 6.240
* WINGWALL				7.305
S1+S2	=	0.200 x 1.750 x 2		= 0.700
S3	=	(1.750 + 0.600) x 2.300 :	(2 x COS20°)	= 2.876
S4	=	2.876 :	COS7°	= 2.898
S5	=	0.649		= 0.649
S6	=	0.183		= 0.183
+ SCAFFOLDING (M2)				<u>11.058</u>
* BASE OF THE WINGWALL				4.500
PERIMETER	=	2.660 + 1.000 + 1.500 + 1.000 + 1.500 + 1.000 + 2.660		= 6.000
AREA	=	PERIMETER x 0.750		= 4.500
* WINGWALL	=	S3 x 2 + 0.600 x (0.343 + 1)		= 6.558

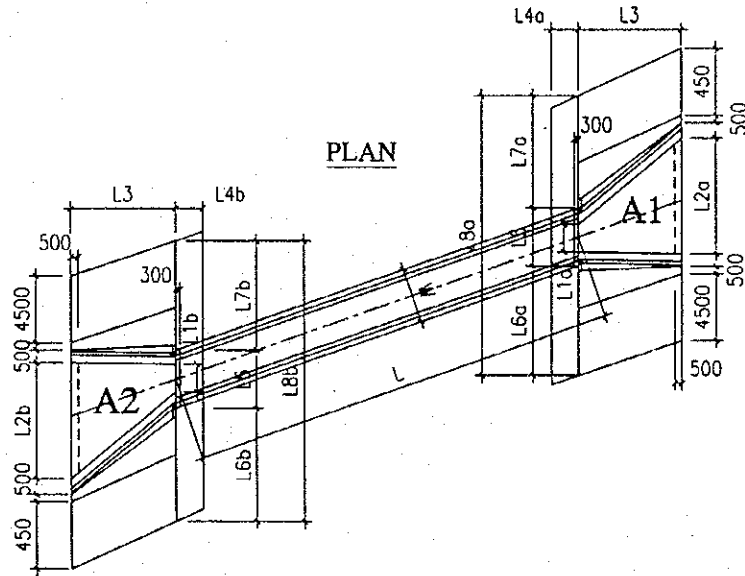
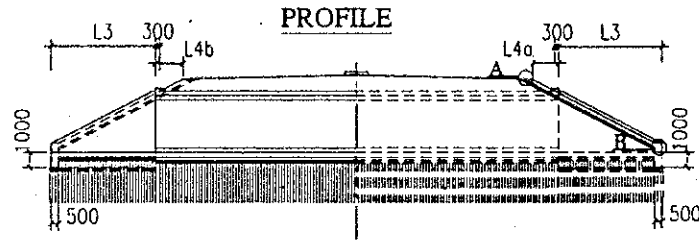
**BOX CULVERT AT INTERCHANG 2-RAMP "D" 0+300
REINFORCEMENT OF WINGWALL**

BAR MARK	UNIT LENGTH	DIAMETER (MM)	NUMBER OF BAR	UNIT WEIGHT (KG/M)	TOTAL LENGTH (M)	TOTAL WEIGHT (KG)
	(MM)					
1a	2011	12	15	0.888	30.2	26.8
1b	2060	14	15	1.208	30.9	37.3
2a	2651	12	6	0.888	15.9	14.1
2b	1552	12	12	0.888	18.6	16.5
2c	582	12	15	0.888	8.7	7.8
3	3005	12	2	0.888	6.0	5.3
4	3378	12	16	0.888	54.0	48.0
5a	3824	12	11	0.888	42.1	37.3
5b	1867	12	4	0.888	7.5	6.6
5c	3248	20	11	2.466	35.7	88.1
5d	1291	20	4	2.466	5.2	12.7
6	2444	14	8	1.208	19.6	23.6
7	1814	12	4	0.888	7.3	6.4
8	1814	12	4	0.888	7.3	6.4
9	2554	12	4	0.888	10.2	9.1
10	1304	14	5	1.208	6.5	7.9
11	724	12	9	0.888	6.5	5.8
12	1791	12	1	0.888	1.8	1.6
REINFORCEMENT :				D=<14	260.7	KG
REINFORCEMENT :				14< D<=25	100.8	KG
TOTAL REINFORCEMENT :					361.5	KG

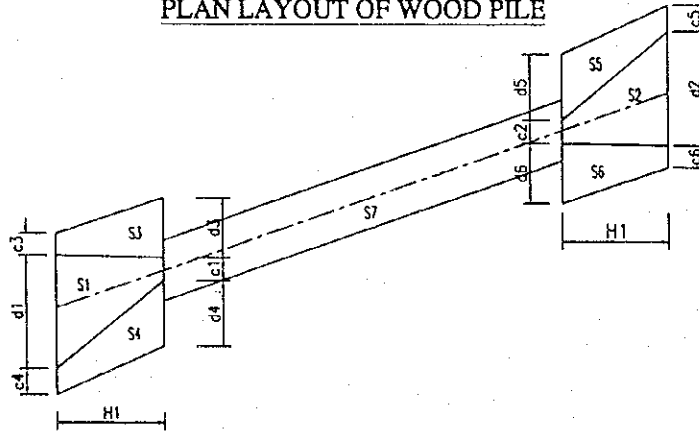
BOX CULVERT FOR DRAINAGE
 (STATION 0+300 RAMP "D" INTERCHANGE 2)



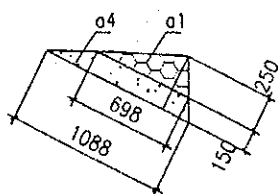
NOTATIONS FOR QUANTITY CALCULATION OF BOX CULVERT FOR DRAINAGE



PLAN LAYOUT OF WOOD PILE



DETAIL A



DETAIL B

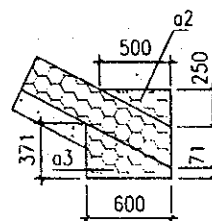


TABLE OF EXPLAINING QUANTITIES OF CULVERT

CULVERT KM0+300 RAMP"D" INTERCHANGE 2

S1=	(	c1	+	d1	)	x	H1	:	2	=	
=	(	1.430	+	3.396	)	x	2.700	:	2	=	6.515 (m2)
S2=	(	c2	+	d2	)	x	H1	:	2	=	
=	(	1.430	+	3.396	)	x	2.700	:	2	=	6.515 (m2)
S3=	(	c3	+	d3	)	x	H1	:	2	=	
=	(	1.713	+	1.713	)	x	2.700	:	2	=	4.625 (m2)
S4=	(	c4	+	d4	)	x	H1	:	2	=	
=	(	1.713	+	1.713	)	x	2.700	:	2	=	4.625 (m2)
S5=	(	c5	+	d5	)	x	H1	:	2	=	
=	(	1.713	+	1.713	)	x	2.700	:	2	=	4.625 (m2)
S6=	(	c6	+	d6	)	x	H1	:	2	=	
=	(	1.713	+	1.713	)	x	2.700	:	2	=	4.625 (m2)
S7=	L	x	(W+0.2)	=							
=	10.120	x	3.300	=			33.396				(m2)

1. APRON CONCRETE:

A1=	(	L1a	+	L2a	)	x	L3	:	2	=	
=	(	1.716	+	3.536	)	x	2.500	:	2	=	6.565 (m2)
A2=	(	L1b	+	L2b	)	x	L3	:	2	=	
=	(	1.716	+	3.536	)	x	2.500	:	2	=	6.565 (m2)
	(	A1	+	A2	)	x	0.3	+	(	L2a	+
=	(	6.565	+	6.565	)	x	0.3	+	(	3.536	+
										L2b	) x 0.45 x 0.5
										3.536	) x 0.45 x 0.5
										=	<u>5.53</u> (m3)

2. CONCRETE FOUNDATION OF CULVERT:

L x (W+0.2) x 0.2 = 10.120 x 3.300 x 0.2 = 6.68 (m3)

3. LEAN CONCRETE:

$$= (S1 + S2 + S3 + S4 + S5 + S6) \times 0.1 = 3.15 \text{ (m3)}$$

$$= (6.515 + 6.5151 + 4.625 + 4.625 + 4.625 + 4.625) \times 0.1 = 3.15 \text{ (m3)}$$

4. WOOD PILE:

* L=5M

$$W5 = (S3 + S4 + S5 + S6 + S7) \times 25 \times 5 : 100 = 64.87 \text{ (100m)}$$

$$= (4.625 + 4.625 + 4.625 + 4.625 + 33.396) \times 25 \times 5 : 100 = 64.87 \text{ (100m)}$$

* L=3M

$$W3 = (S1 + S2 + 0 + 0.000) \times 25 \times 3 : 100 = 9.77 \text{ (100m)}$$

$$= (6.515 + 6.5151 + 0 + 0.000) \times 25 \times 3 : 100 = 9.77 \text{ (100m)}$$

NOTE: S=0.8 x 4.5 x 4 IS AREA WOOD PILE TOE OF SLOPE

5. SAND BEDDING:

$$= (S1 + S2 + S3 + S4 + S5 + S6 + S7) \times 0.15 = 9.74 \text{ (m3)}$$

$$= (6.515 + 6.515 + 4.625 + 4.625 + 4.625 + 4.625 + 33.396) \times 0.15 = 9.74 \text{ (m3)}$$

6. FORM

$$= (L2a + L2b) \times 0.75 \times 2 = 10.608 \text{ (m2)}$$

$$= (3.536 + 3.536) \times 0.75 \times 2 = 10.608 \text{ (m2)}$$

7. SCAFFOLDING

$$= (L2a + L2b) \times 0.75 \times 2 = 10.608 \text{ (m2)}$$

$$= (3.536 + 3.536) \times 0.75 \times 2 = 10.608 \text{ (m2)}$$

2.18. Summary of quantities for Culverts - Package I

GENERAL QUANTITIES TABLE OF CULVERTS - PACKAGE I

No	STATION	DIMENSION W x H (M)	LENGTH (M)	REINFORCEMENT		CONCRETE			FORM (M ²)	SCAFFOLDING (M ²)	SUPPORT (M)	WOOD PILE		SAND		CONNECTION		PATH		PROTECTION SLOPE			NOTE		
				D (<14) (KG)	14-D (<25) (KG)	CLASS E (KG)	CLASS F (M)	CLASS G (M)				L-5 M (100MM)	L-3 M (100MM)	JOINT (M)	LATERITE (M)	SAND FILL (M)	STONE MASONRY (M)	BASE BEDDING (M)	PVC Pipe (M)						
I MAIN ROUTE																									
1	Km 0-51.8	(Ø 1.5)	46.73	5360.54	403.20	50.00	38.00	2.91	791.22	78.32		141.51	5.72	18.13											
2	Km 0-183.7	(3.0 x 3.2)	43.79	18237.30	4389.30	303.50	52.77	12.63	973.23	528.68	412.46	313.05	45.78	46.72			41.25				61.22	35.30	5.60		
3	Km 0-369.5	(3.0 x 3.2)	52.05	21149.10	4980.90	349.82	60.31	13.59	1113.23	594.45	490.34	361.39	48.10	52.99			41.25				72.92	42.36	5.60		
4	Km 1-63.2	(5.0 x 4.5)	27.83	16190.28	21730.83	473.33	45.27	23.06	1148.48	687.58	604.84	459.82	53.95	65.97			20.55				64.18	224.63	52.47	5.60	
5	Km 1-300	(2.5 x 1.5 x 2)	26.70	12487.09	1728.40	139.53	43.56	4.67	474.08	169.82	112.54	236.71	21.11	31.43			16.53								NO
6	Km 1-560	(3.0 x 3.5)	26.84	12940.69	3890.65	237.80	42.16	13.86	721.11	438.12	276.99	236.45	51.40	38.65			14.35								
7	Km 2-150	(2.5 x 2.0 x 2)	26.70	14582.36	1783.60	164.46	47.91	7.38	592.51	228.82	179.29	244.28	41.75	37.66			18.03				64.33	112.57	45.44	5.60	
8	Km 2-835	(5.0 x 3.8)	29.71	14402.79	20493.87	411.08	47.71	18.59	1049.21	639.74	547.95	418.29	58.33	61.86			18.03								
9	Km 3-170	(2.5 x 2.0 x 2)	38.88	20410.70	2390.50	226.37	62.77	7.40	813.26	291.01	216.05	337.36	41.75	48.83			16.53								
10	Km 4-125	(2.5 x 1.5 x 2)	27.19	12094.64	1753.17	141.81	44.16	4.67	481.82	171.87	114.65	230.42	21.11	31.87			16.53								
11	Km 4-318	(5.0 x 4.5 x 2)	37.56	22594.30	44344.30	714.91	161.01	36.61	1812.89	712.89	1440.05	723.71	173.09	121.31			36.23								
12	Km 4-640	(6.5 x 4.5)	34.64	22167.10	41090.60	701.82	82.50	29.21	1570.69	861.71	1088.17	653.28	80.40	94.47			23.75				64.33	112.57	45.44	5.60	
TOTAL			451.41	206556.29	150806.80	4083.71	774.26	179.25	12047.91	5582.61	5604.80	4588.00	853.40	483.24			282.18								
II INTERCHANGE 2																									
1	Ramp 'A' - Km 0-300	(2.5 x 1.5)	10.12	3468.80	633.50	42.11	12.21	3.15	158.96	101.92	37.75	64.87	9.77	9.74											
2	Ramp 'B' - Km 0-220	(2.5 x 1.5)	10.12	3468.80	633.50	42.11	12.21	3.27	158.96	101.92	37.75	65.54	9.77	9.82											
3	Ramp 'C' - Km 0-240	(2.5 x 1.5)	10.12	3468.80	633.50	42.11	12.21	3.27	158.96	101.92	37.75	65.54	9.77	9.82											
4	Ramp 'D' - Km 0-300	(2.5 x 1.5)	10.12	3468.80	633.50	42.11	12.21	3.27	158.96	101.92	37.75	65.54	9.77	9.82											
TOTAL			40.48	13875.20	2534.00	168.45	48.84	12.96	635.82	407.70	150.99	261.49	39.08	39.20			282.18								
TOTAL				220431.49	153340.80	4232.16	823.10	192.21	12483.73	5990.31	5755.79	4845.49	892.68	722.44			282.18					621.67	384.35	50.40	

JICA