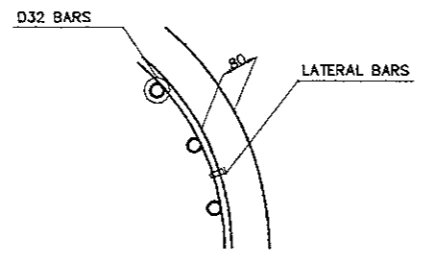
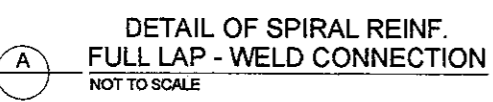
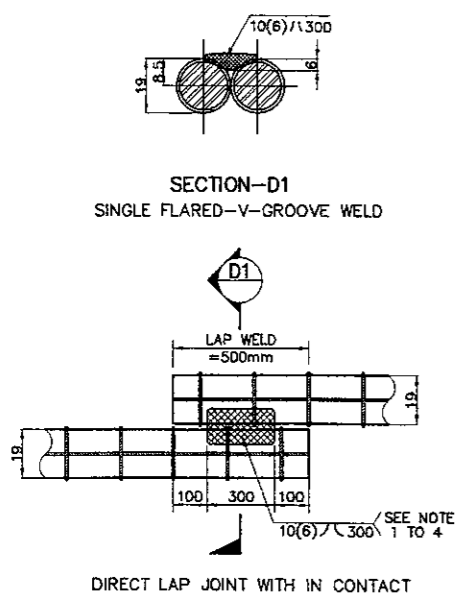


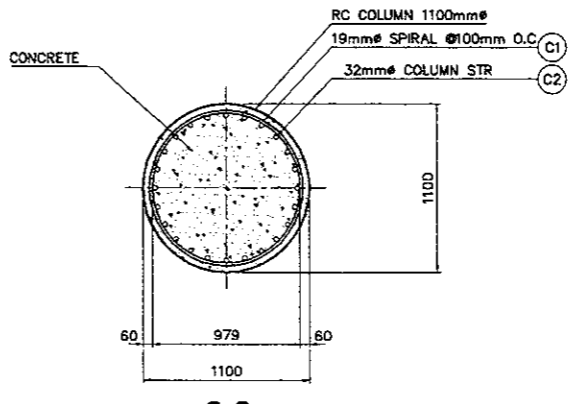
SCHEDULE OF REINFORCEMENT

LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION (mm) OUT TO OUT						LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (kg)	VOLUME OF CONCRETE (m ³)	
				a	b	c	d	e	f						
COPING PIER 6														48.96	
	CP1a	32	2	10050						10050	12	6.31	761		
	CP1b	32	2	12000						12000	4	6.31	303		
	CP2	19	2	7800						7800	52	2.23	904		
	CP2a	19	3	1280	1250					3780	52	2.23	438		
	CP3	25	2	8000						8000	14	3.85	431		
	CP4	19	2	7800						7800	5	2.23	87		
	CP4a	19	8	1580	800					2380	10	2.23	53		
	CP5	19	2	7800						7800	14	2.23	244		
	CP5a	19	8	1580	800					2380	28	2.23	149		
	CP6	32	3	7725	550					8825	10	6.31	557		
	CP6a	32	3	7525	550					8625	6	6.31	327		
	CP7	19	3	1100	1800					4700	30	2.23	543		
	CP8	25	1	2950	1450	200				9200	54	3.85	1913		
	CP8a	25	1	2880	720	200				7800	48	3.85	1404		
	CP9a	19	8	1800	450					2250	56	2.23	281		
	CP9b	19	8	1800	700					2500	56	2.23	312		
	CP10	19	4	1170	1250	1170	430			4450	54	2.23	536		
	CP11	19	6	2750	1250					4000	20	2.23	178		
	CP12a	25	3	200	1800					3800	32	3.85	458		
	CP12b	19	3	200	1800					3800	20	2.23	170		
	CP13	32	2	1100						1100	6	6.31	42		
	CP14a	13	3	200	1800					3800	96	1.04	380		
	CP14b	13	3	200	1800					3800	60	1.04	238		
	CP15	13	3	1300	200					1700	20	1.04	35		
	CP15a	13	3	1300	350					2000	34	1.04	71		
	CP16	19	5	2200	165	3000				5365	20	2.23	240		
	CP16a	19	5	2200	165	165				2530	12	2.23	68		
	CP17	13	9	350	165	165				680	28	1.04	20		
	CP18	19	5	400	1100	400				1900	24	2.23	102		
TOTAL WEIGHT FOR / COPING = 11,295 Kgs.															

THE REINFORCEMENT SHOWN ON THIS TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECKED AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.

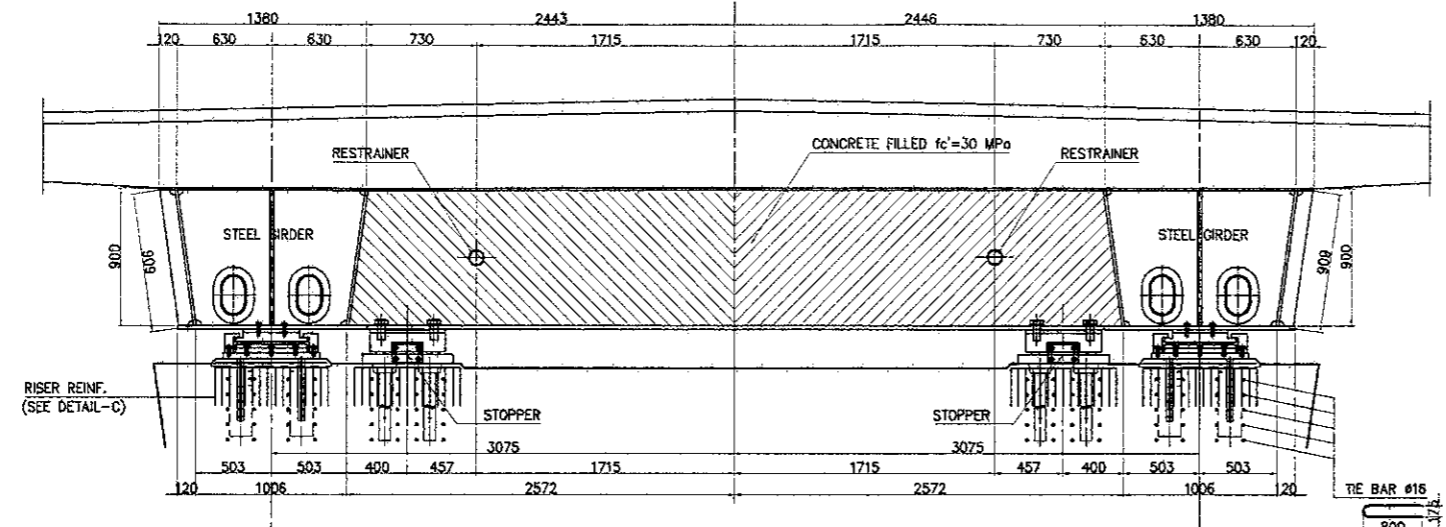


A ELEVATION
 SCALE: 1:25

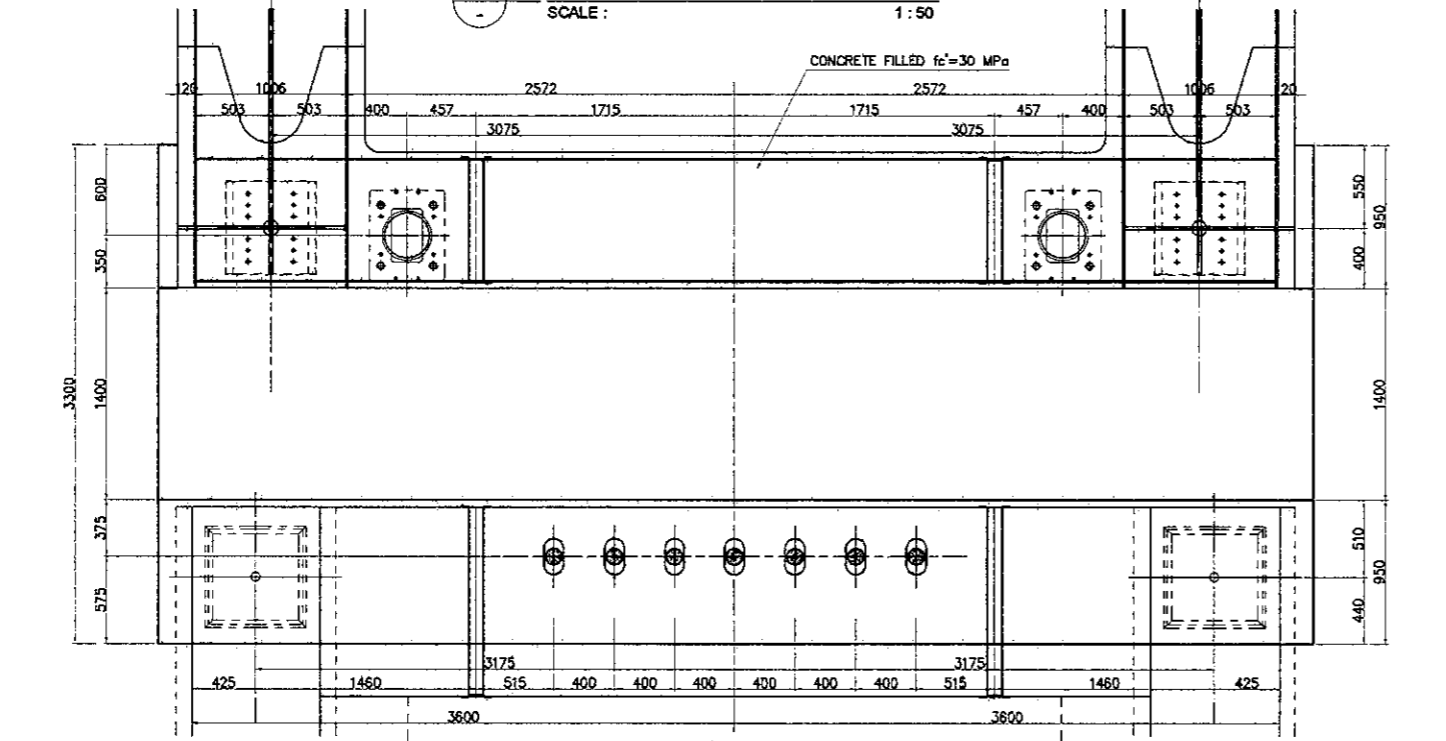


C SECTION DETAIL
 SCALE: 1:50

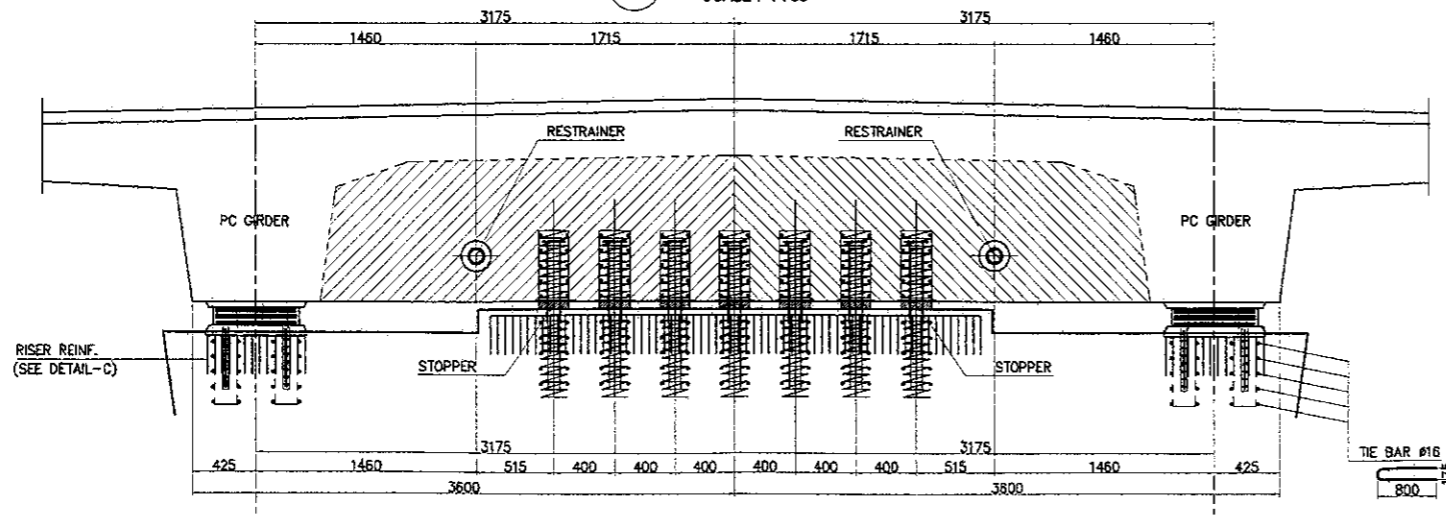
- NOTES ON LAP-WELD CONNECTION :**
1. SPIRAL REINFORCEMENT ARE LAP-WELD CONNECTED (FLARED-V-GROOVE TYPE)
 2. WELDING SHOULD CONFORM TO AWS (D1.4)
 STRUCTURAL WELDING CODE REINFORCED STEEL.
 3. USE ELECTRODE E90XX.
 4. CARE SHOULD BE TAKEN NOT TO DAMAGE THE COLUMN MAIN DURING WELDING.
- NOTE :**
1. ALL DIMENSION ARE IN MILIMETERS.



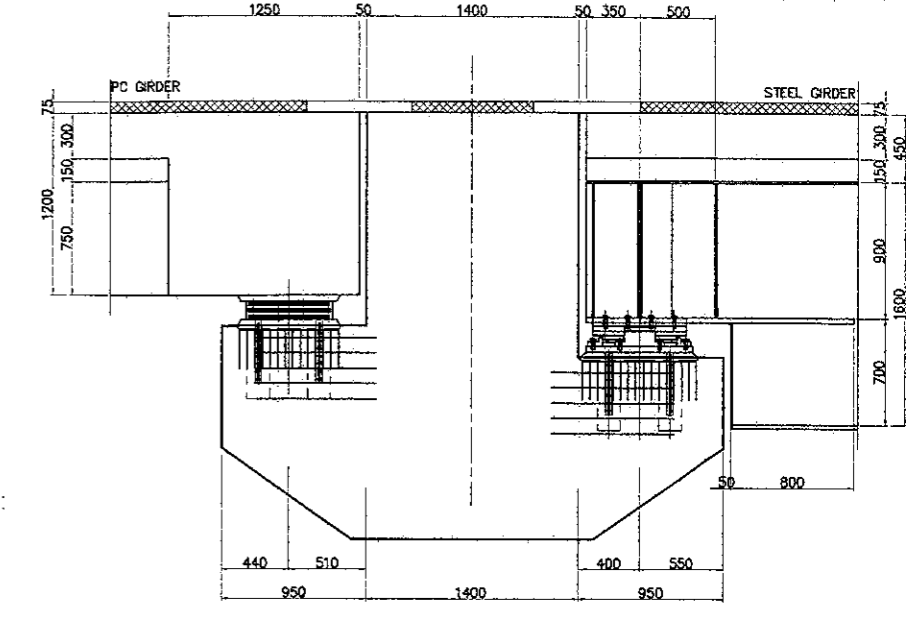
3 ELEVATION OF STEEL GIRDER
 SCALE: 1:50



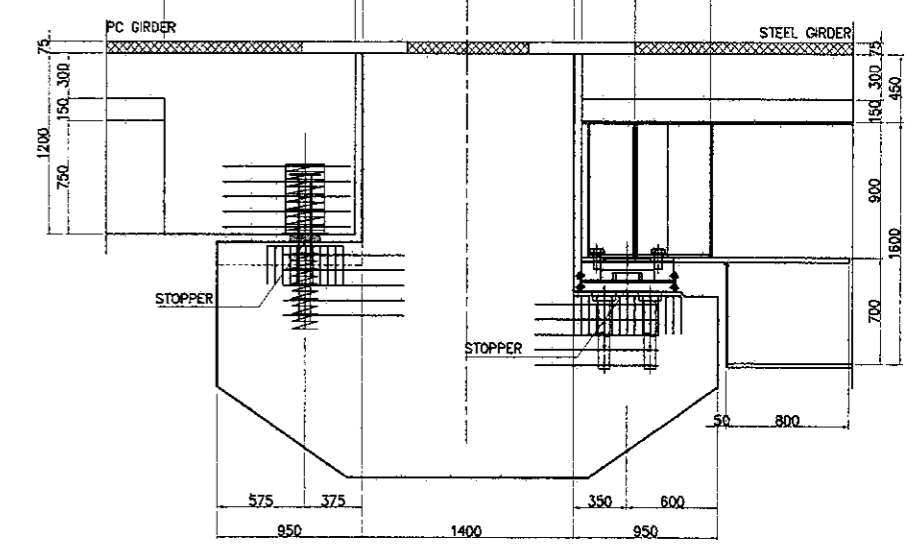
2 PLAN
 SCALE: 1:50



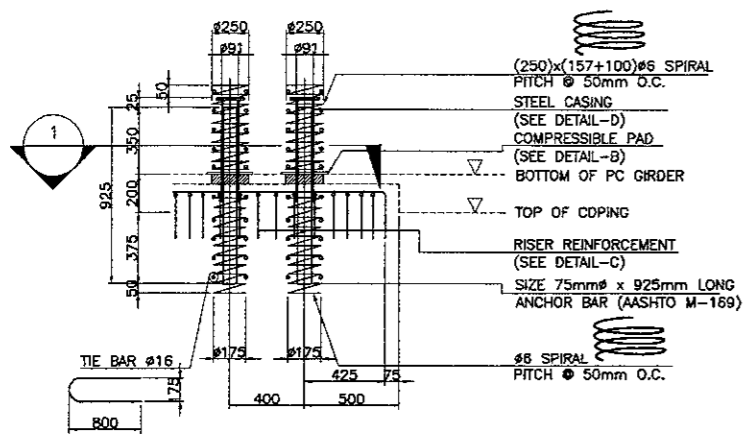
1 ELEVATION OF PC GIRDER
 SCALE: 1:50



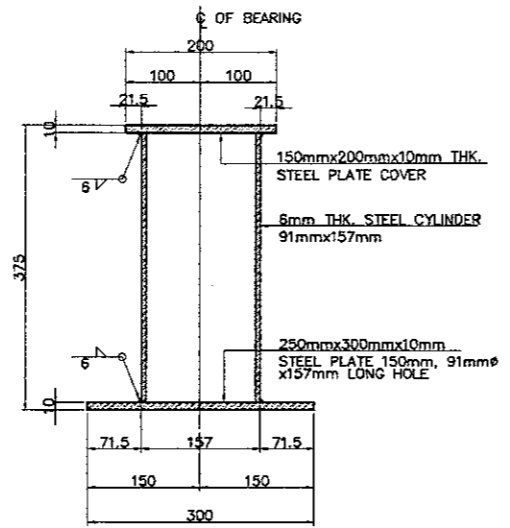
4 SECTION AT BEARING
 SCALE: 1:50



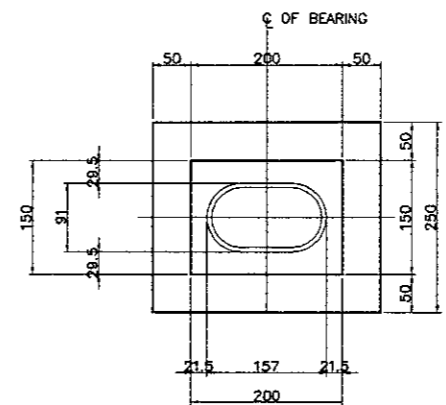
5 SECTION AT STOPPER
 SCALE: 1:50



A DOWEL BAR DETAILS
 SCALE : 1:40

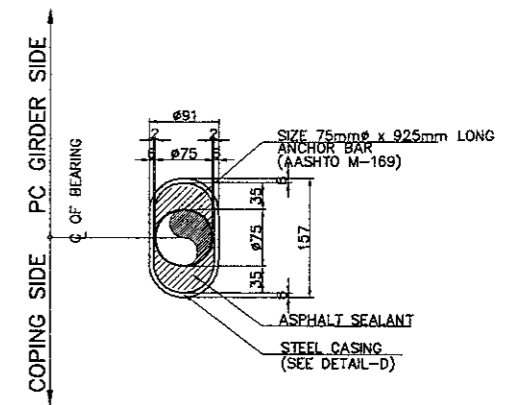


D1 ELEVATION
 SCALE : 1:10

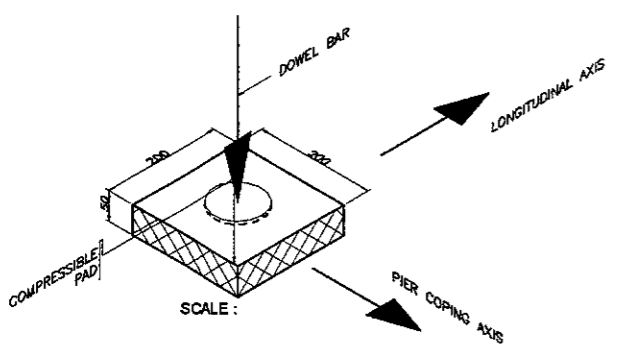


D2 PLAN
 SCALE : 1:10

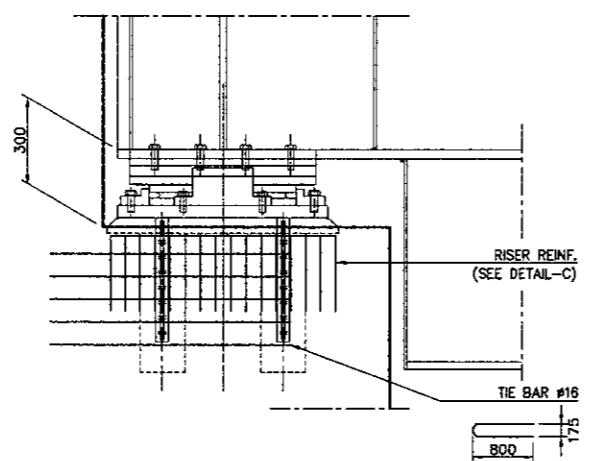
D STEEL CASING DETAILS
 SCALE : 1:10



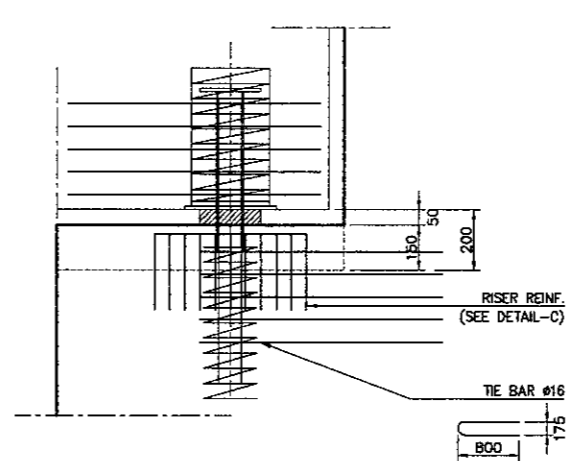
1 SECTION
 SCALE : 1:10



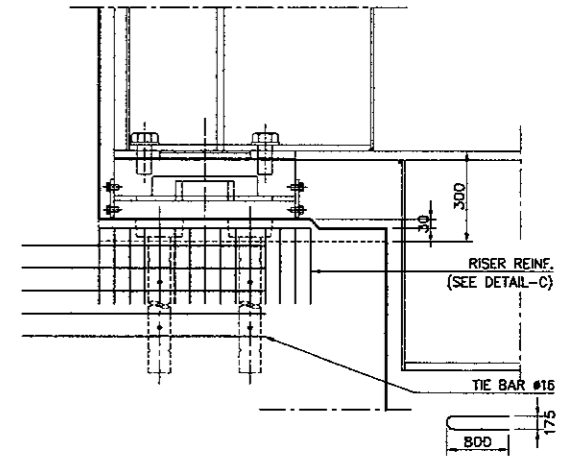
B COMPRESSIBLE PAD FOR DOWELS
 SCALE : 1:10



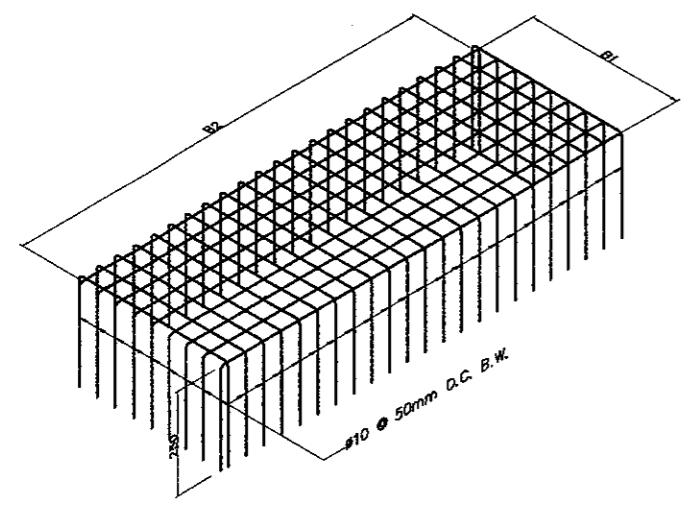
3 DETAIL AT BEARING (STEEL)
 SCALE : 1:25



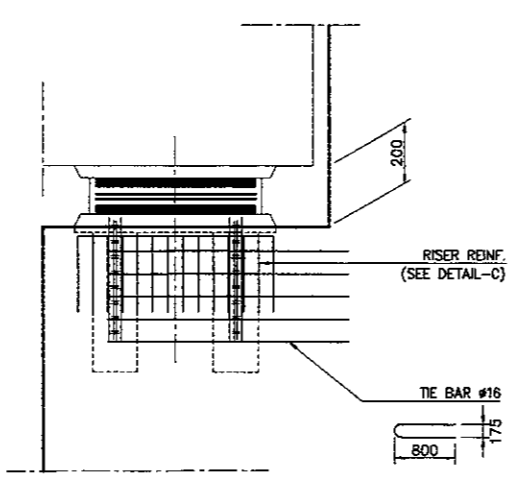
4 DETAIL AT STOPPER (PC)
 SCALE : 1:25



5 DETAIL AT STOPPER (STEEL)
 SCALE : 1:25



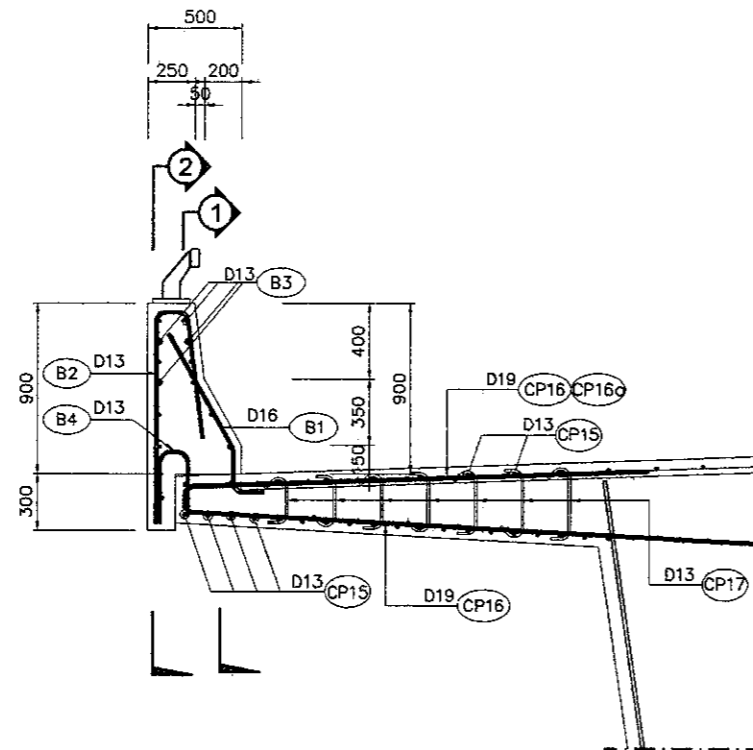
C RISER REINFORCEMENT
 NOT TO SCALE



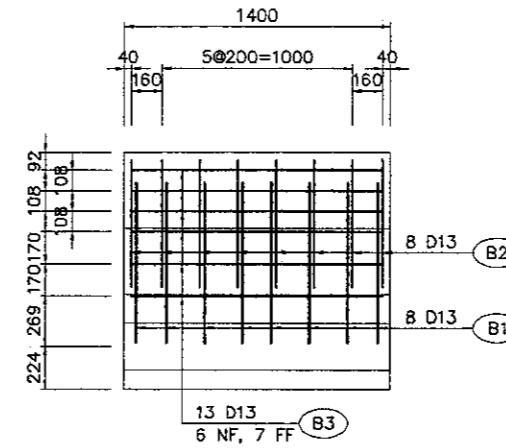
2 DETAIL AT BEARING (PC)
 SCALE : 1:25

PIER NO.		SCHEDULE OF RISER REINFORCEMENT & TIE BAR											
		RISER REINFORCEMENT								TIE BAR			
		BEARING				STOPPER				BEARING		STOPPER	
		LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT
B1 (mm)	B2 (mm)	B1 (mm)	B2 (mm)	B1 (mm)	B2 (mm)	B1 (mm)	B2 (mm)	QTY. (PCS.)	QTY. (PCS.)	QTY. (PCS.)	QTY. (PCS.)		
P3	PC CONC.	650	650	650	650	500	1625	500	1625	10	10	35	35
	STEEL GIRDER	800	750	800	750	700	700	700	700	10	10	10	10
P6	PC CONC.	650	650	650	650	500	1625	500	1625	10	10	35	35
	STEEL GIRDER	800	750	800	750	700	700	700	700	10	10	10	10

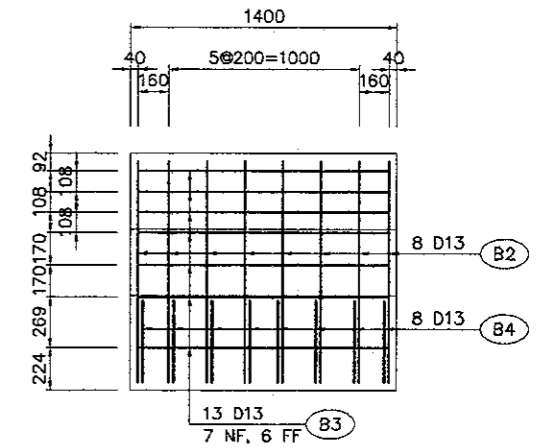
NOTE:
 ALL METALS SHALL BE HOT-DIPPED GALVANIZED CONFORMING TO LATEST ASTM REQUIREMENTS.



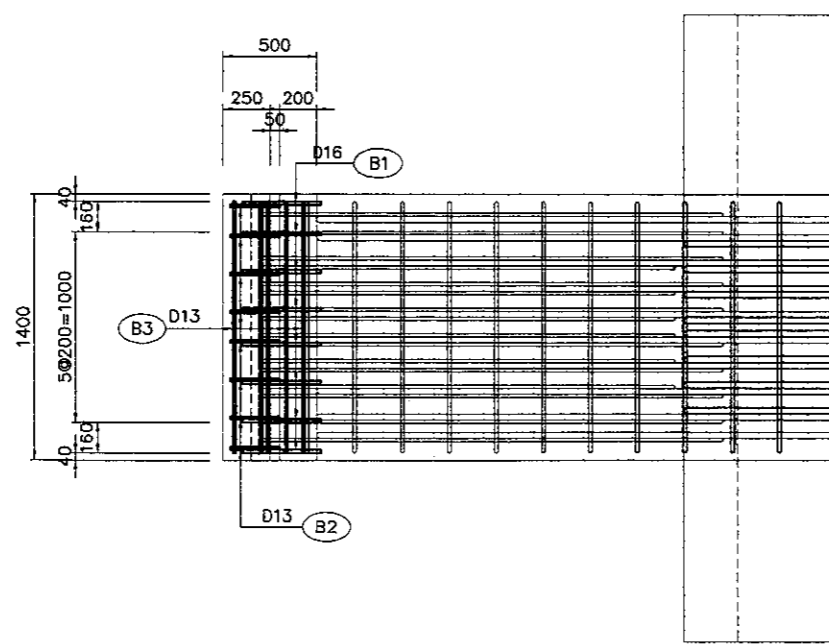
2 ELEVATION
 SCALE 1:40



3 SECTION 1-1
 SCALE 1:40



4 SECTION 2-2
 SCALE 1:40

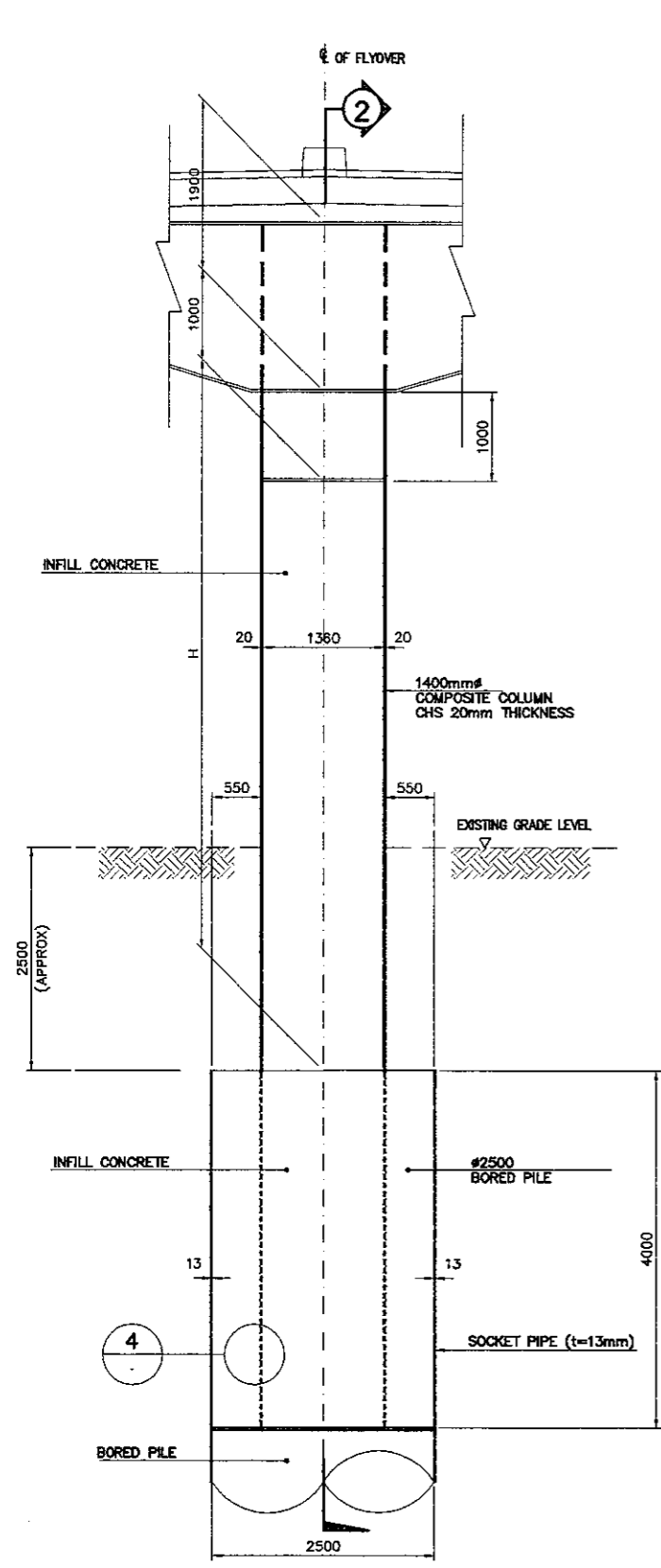


1 PLAN
 SCALE 1:40

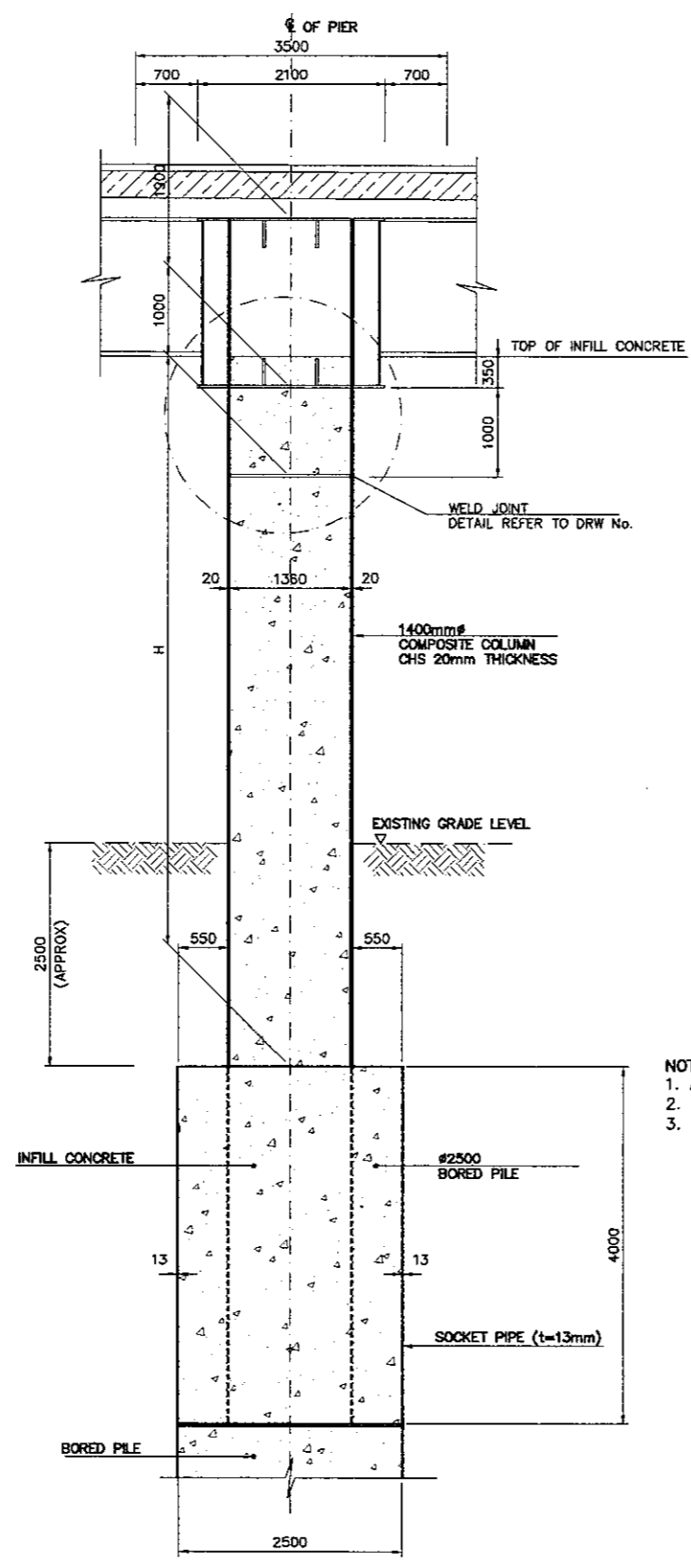
BAR BENDING DIAGRAM														
SCHEDULE OF REINFORCEMENT														
LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION (mm) OUT TO OUT						LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (kg.)	VOLUME OF CONCRETE (cu.m)
				a	b	c	d	e	f					
BARRIER PIER 3, PIER 6	BARRIER													
	B1	16	1	700	220	150				1070	8	1.58	14	0.378
	B2	13	2	1165	650	145				1960	8	1.04	16	
	B3	13	3	1320						1320	13	1.04	18	
B4	13	4	420	330	180				910	8	1.04	8		
TOTAL WEIGHT FOR / BARRIER = 56 Kgs.														

THE REINFORCEMENT SHOWN ON THIS TABLE IS FOR REFERENCE ONLY, THE CONTRACTOR SHOULD CHECKED AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.

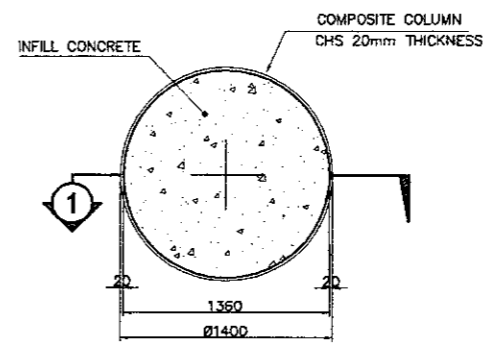
- NOTES :
- ALL DIMENSION ARE IN MILIMETERS.
 - CONCRETE : $f_c' = 30$ MPa
 - REINFORCING STEEL : YIELD STRENGTH = 390 N/mm²



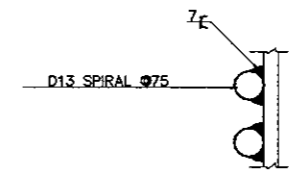
1 ELEVATION
 SCALE 1:80



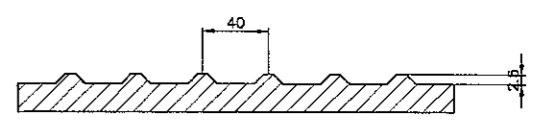
2 SECTION
 SCALE 1:80



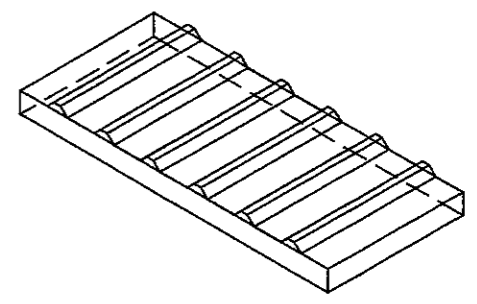
3 SECTION
 SCALE 1:50



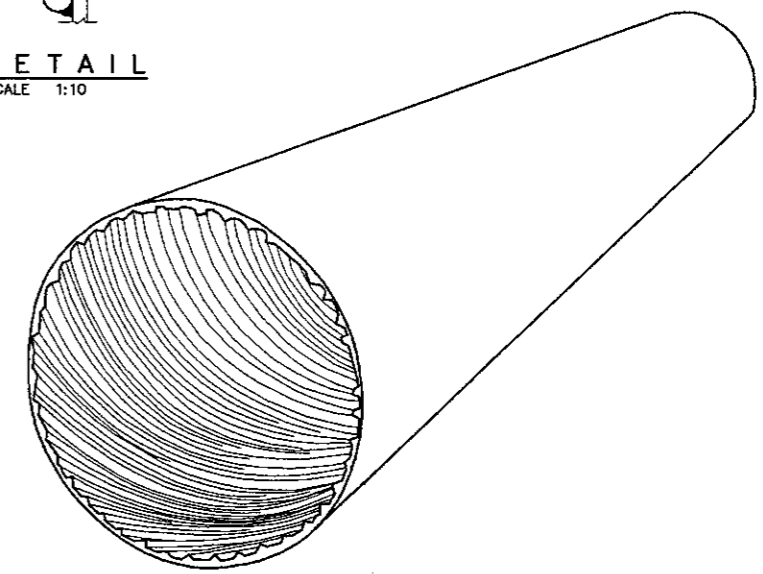
4 DETAIL
 SCALE 1:10



5 INNER RIB DETAIL
 NOT TO SCALE



ISOMETRIC VIEW



ISOMETRIC VIEW

- NOTES :
- ALL DIMENSIONS ARE IN MILLIMETERS
 - CONCRETE : $f_c' = 30 \text{ MPa}$
 - REINFORCING STEEL : YIELD STRENGTH = 390 N/mm^2

BAR BENDING DIAGRAM

SCHEDULE OF REINFORCEMENT

LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT						LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (kg)	
				a	b	c	d	e	f					
PIER P4 & P5		13	-	75	1400	450					248411	1	1.04	256
				TOTAL WEIGHT / COLUMN = 256 Kgs.										

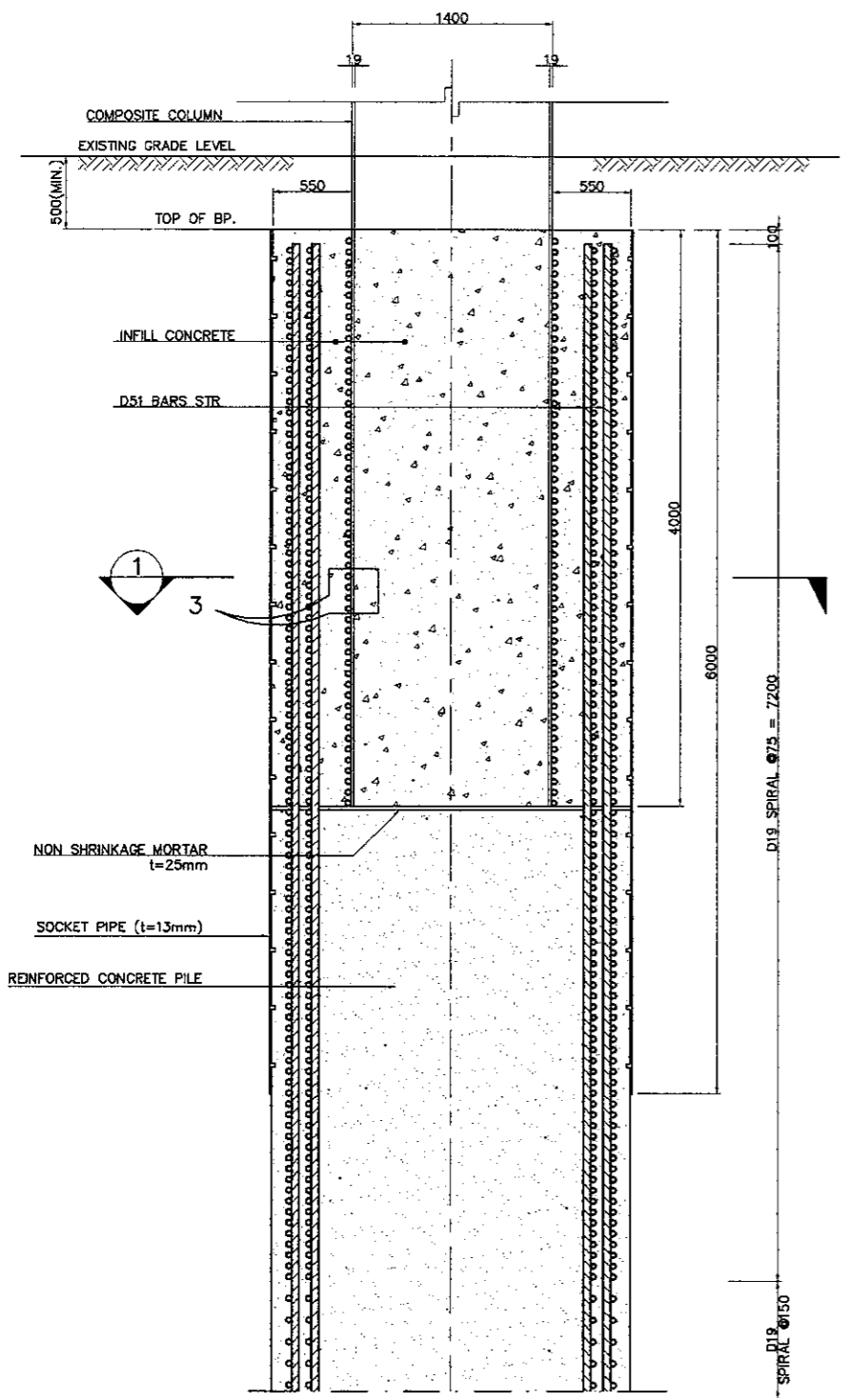
CONCRETE VOLUME (m³)

P4	16.488
P5	18.342

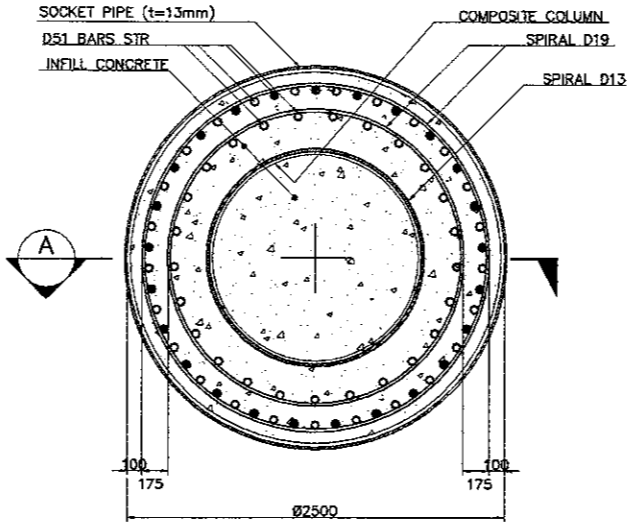
PIER NO.	NO. OF PCS.	DIMENSION(mm) OUT TO OUT			TOTAL LENGTH	REMARKS
		HEIGHT (H)	DIAMETER (MM)*	THICKNESS (MM)		
P4	1	6000	1400	19	10000	CORRUGATED
P5	1	5900	1400	19	9900	CORRUGATED

* OUTSIDE DIAMETER OF COMPOSITE COLUMN

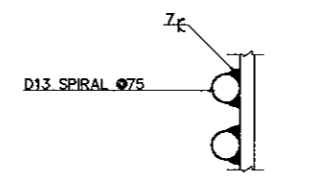
COMPOSITE COLUMN CASING DETAIL (P4 & P5)
 SCALE AS SHOWN



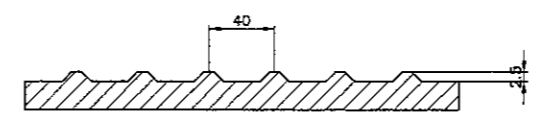
A SECTION
 SCALE 1:50



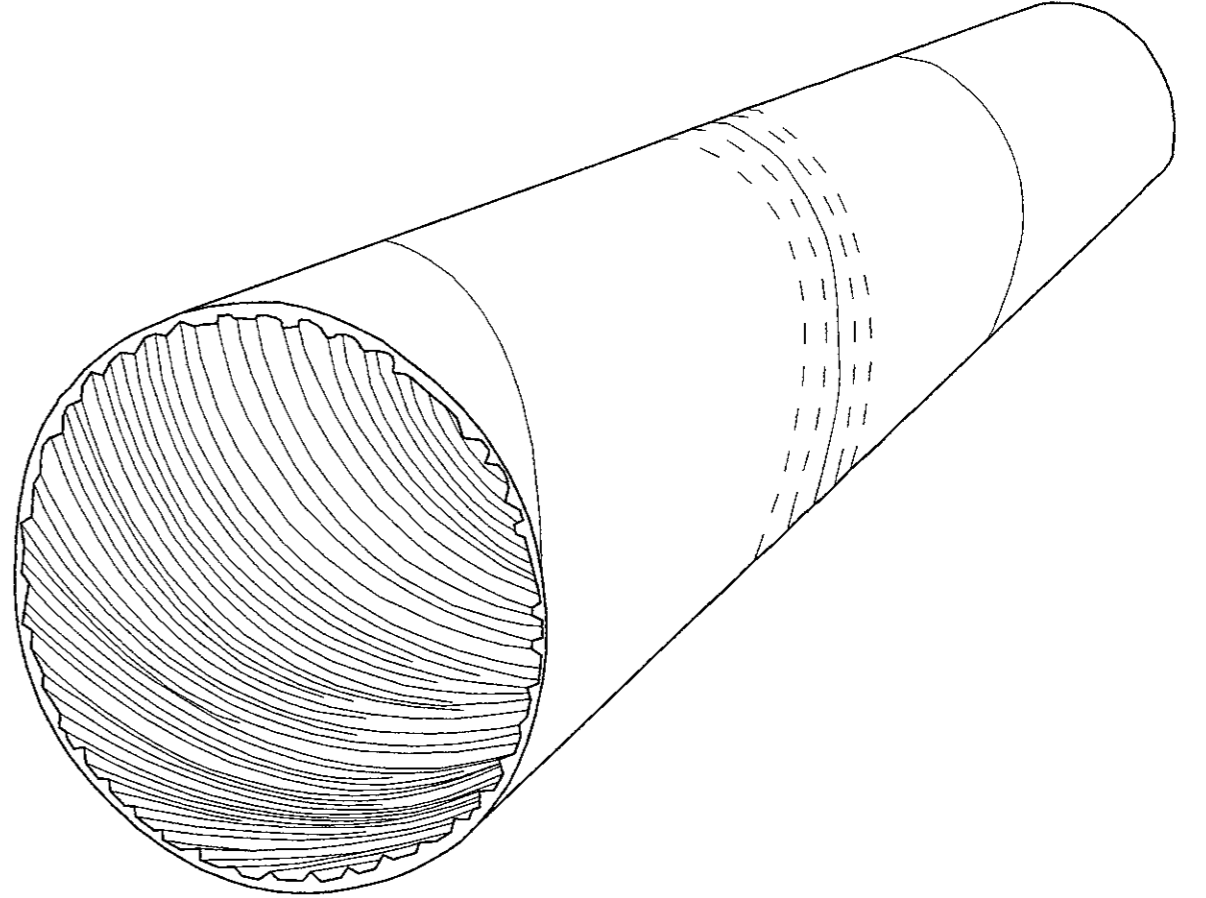
1 SECTION
 SCALE 1:50



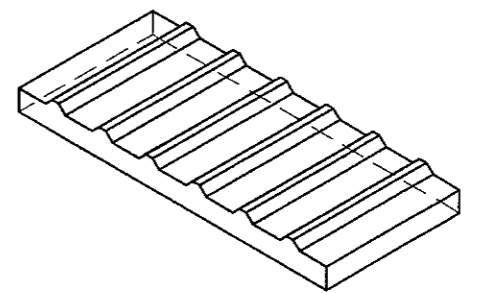
3 DETAIL
 SCALE 1:10



4 INNER RIB DETAIL
 NOT TO SCALE



ISOMETRIC VIEW



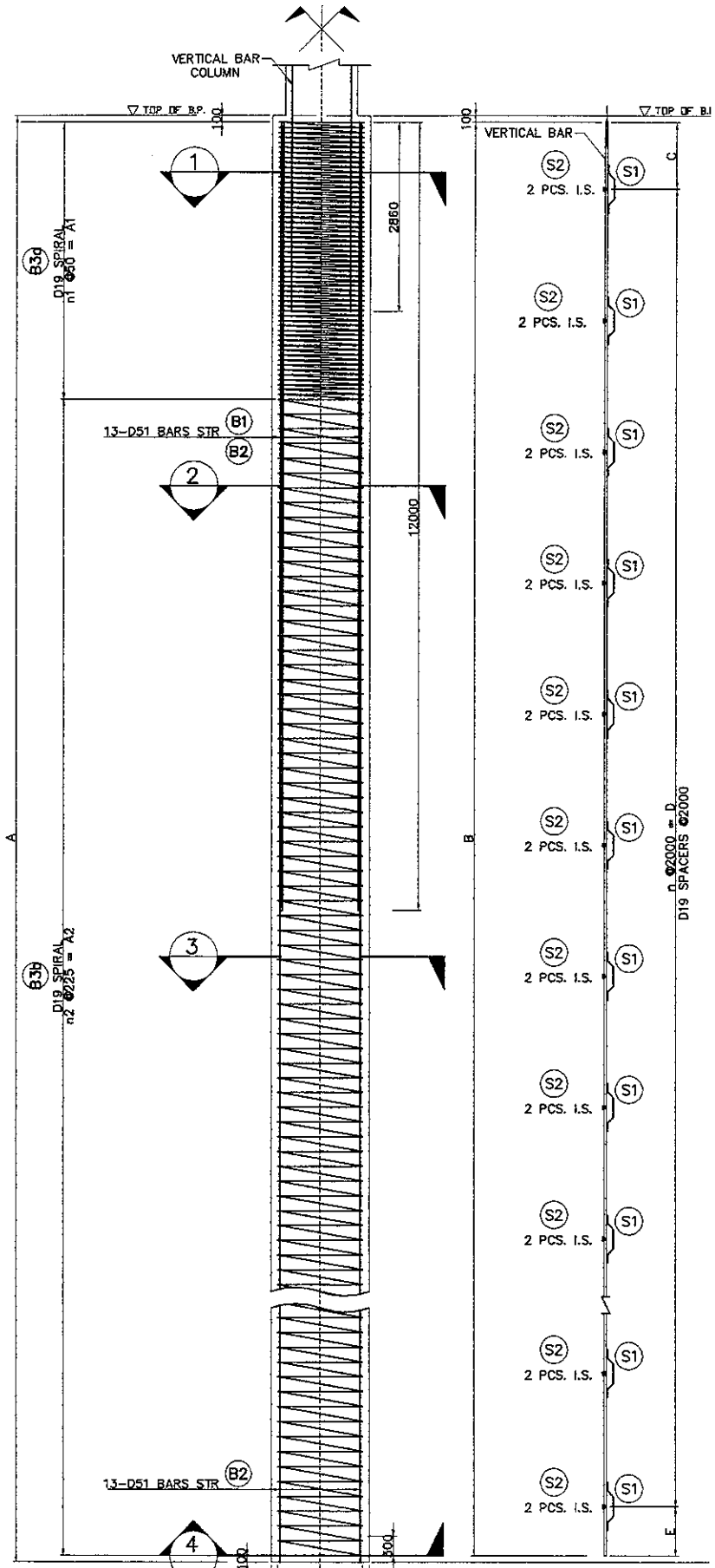
ISOMETRIC VIEW

PIER NO.	DIMENSION(mm) OUT TO OUT				REMARKS
	NO. OF PCS.	LENGTH (M)	DIAMETER (MM)*	THICKNESS (MM)	
P5	1	6	2500	13	CORRUGATED

* OUTSIDE DIAMETER OF CONCRETE PILE CAST-IN DRILLED HOLE

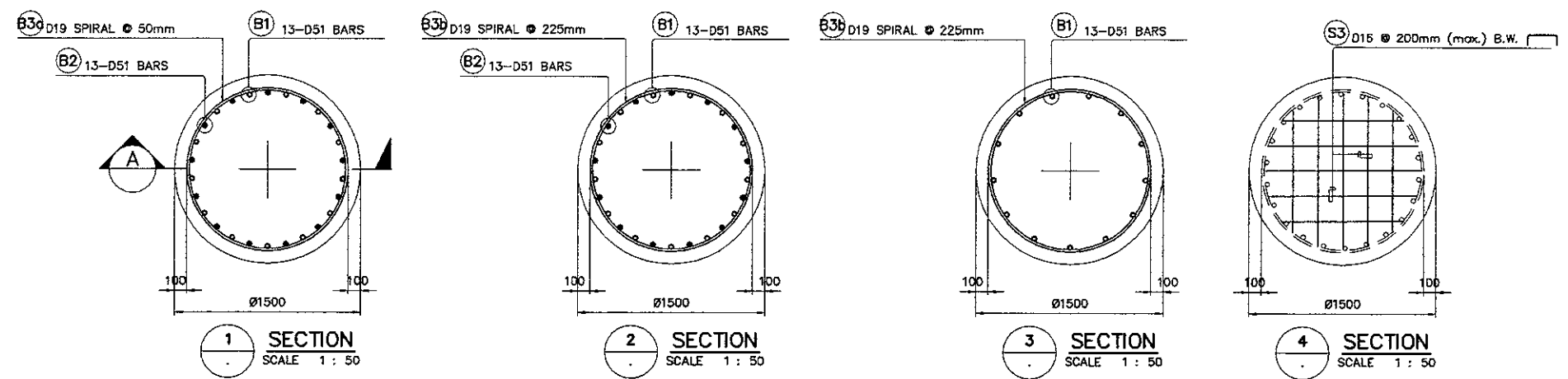
NOTE :
 1. ALL DIMENSION ARE IN MILLIMETERS.

COMPOSITE COLUMN SOCKET TYPE CONNECTION (PIER P4, P5)
 SCALE AS SHOWN

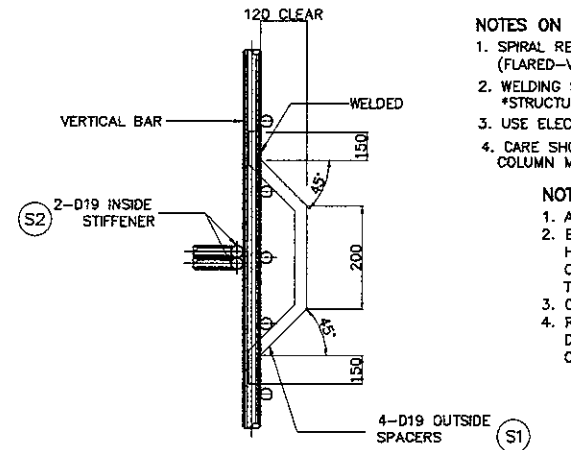


A SECTION
 SCALE 1 : 100

B LAYOUT OF STIFFENER/SPACER
 SCALE 1 : 100



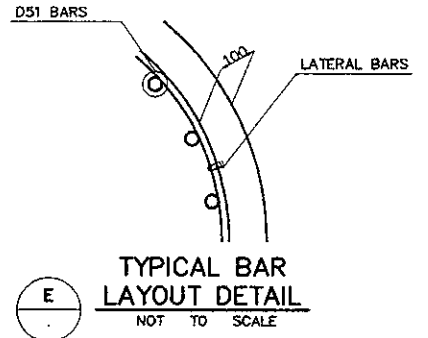
1 SECTION SCALE 1 : 50
2 SECTION SCALE 1 : 50
3 SECTION SCALE 1 : 50
4 SECTION SCALE 1 : 50



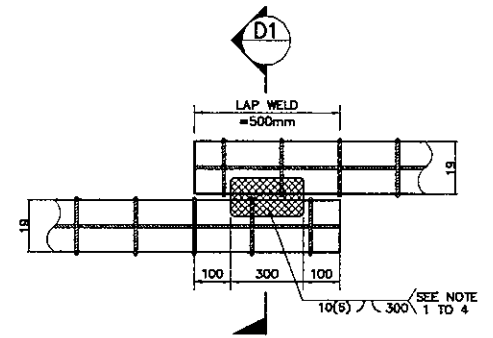
C DETAIL OF STIFFENER/SPACER
 NOT TO SCALE

- NOTES ON LAP-WELD CONNECTION :**
1. SPIRAL REINFORCEMENT ARE LAP-WELD CONNECTED (FLARED-V-GROOVE TYPE)
 2. WELDING SHOULD CONFORM TO AWS (D1.4)
 STRUCTURAL WELDING CODE REINFORCED STEEL
 3. USE ELECTRODE E90XX.
 4. CARE SHOULD BE TAKEN NOT TO DAMAGE THE COLUMN MAIN BARS DURING WELDING.

- NOTES :**
1. ALL DIMENSIONS ARE IN MILLIMETERS.
 2. BORED PILE MAIN BARS ARE PROVIDED WITHOUT ANY SPICE. HOWEVER SPLICING OF MAIN BARS BY MECHANICAL COUPLERS ARE ALLOWED WITH PERMISSION FROM THE STRUCTURAL ENGINEER.
 3. CONCRETE : $F_c' = 30MPa$
 4. REINFORCING STEEL =
 D51 : YIELD STRENGTH = 345 N/mm²
 OTHERS : YIELD STRENGTH = 390 N/mm²



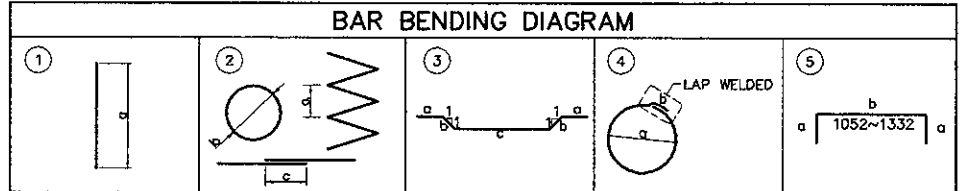
E TYPICAL BAR LAYOUT DETAIL
 NOT TO SCALE



D DETAIL OF SPIRAL REINF. FULL LAP-WELD CONNECTION
 NOT TO SCALE

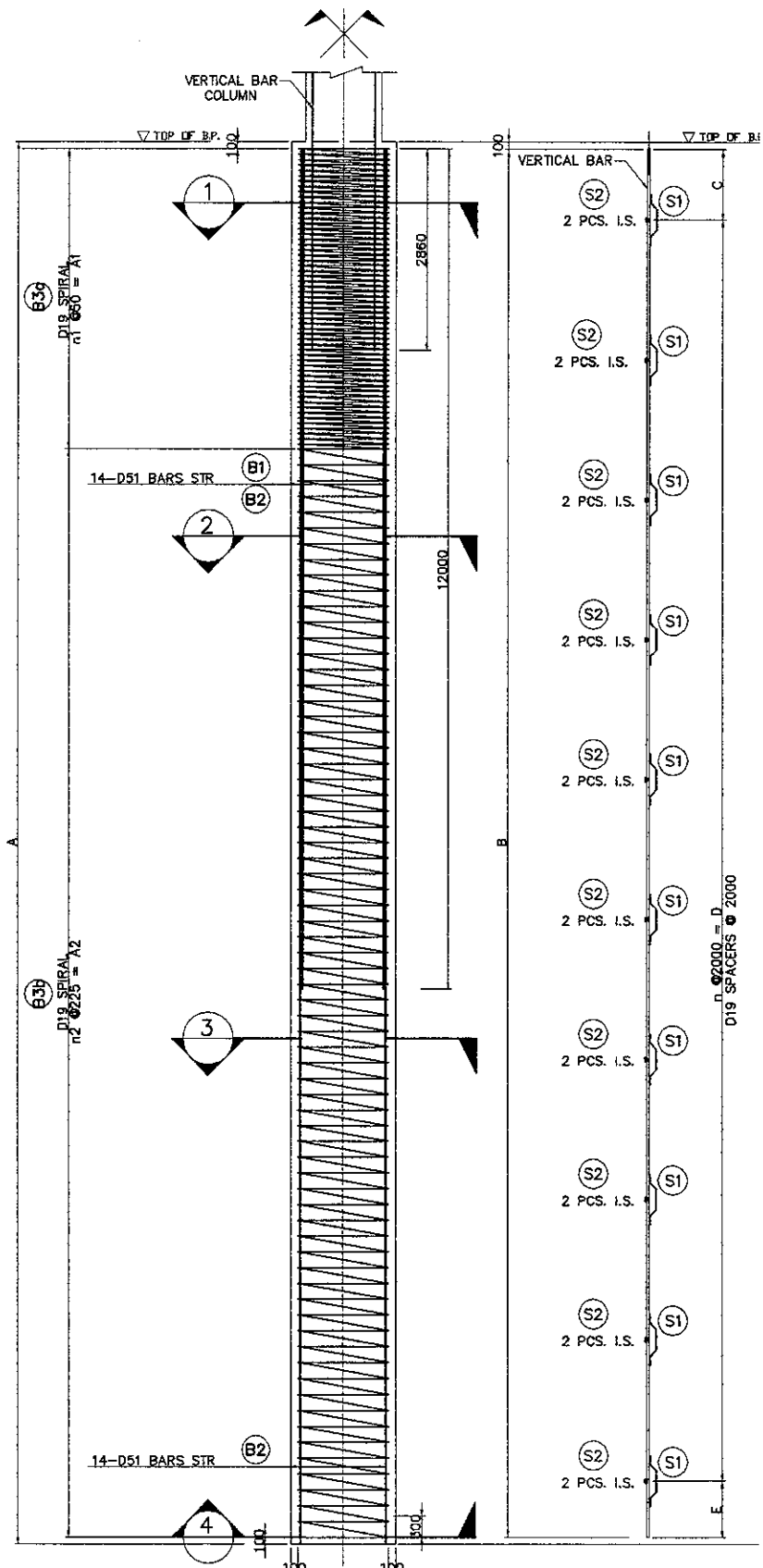
BORED PILE REINFORCEMENT DETAILS (PIER P1, P7, P8 & P9)
 SCALE AS SHOWN

DIMENSION										
LOCATION	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	A1 (mm)	A2 (mm)	n	n1	n2
P1, P8 & P9	20000	19800	1000	18000	800	4275	15525	9	57	69
P7	23000	22800	800	20000	0	4350	18450	11	58	82



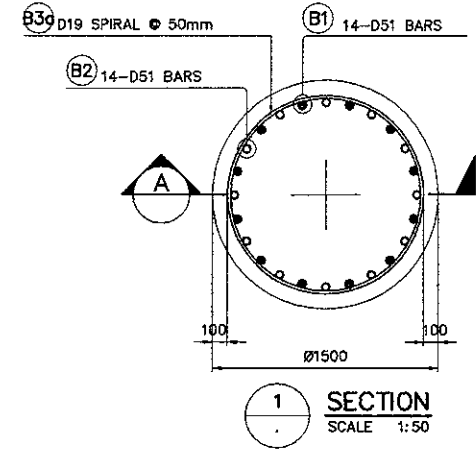
SCHEDULE OF REINFORCEMENT														
LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT						LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (kg)	
				a	b	c	d	e	f					
PIER P1, P8 & P9 DIA = 1500 mm L = 20000 mm	B1	51	1	19800							19800	13	15.90	4093
	B2	51	1	12000							12000	13	15.90	2480
	B3a	19	2	50	1300	500					242492	1	2.23	541
	B3b	19	2	225	1300	500					292543	1	2.23	652
	S1	19	3	150	170	250					890	40	2.23	79
	S2	19	4	1058	170						3492	20	2.23	156
	S3	16	5	150	1219						1519	10	1.58	24
TOTAL WEIGHT FOR / PILE = 8,025 Kgs.											VOLUME CONCRETE = 35.34 M3			
PIER P7 DIA = 1500 mm L = 23000 mm	B1	51	1	22800							22800	13	15.90	4713
	B2	51	1	12000							12000	13	15.90	2480
	B3a	19	2	50	1300	500					248745	1	2.23	550
	B3b	19	2	225	1300	500					348847	1	2.23	778
	S1	19	3	150	170	250					890	48	2.23	95
	S2	19	4	1058	170						3492	24	2.23	187
	S3	16	5	150	1865						1519	10	1.58	24
TOTAL WEIGHT FOR / PILE = 8,827 Kgs.											VOLUME CONCRETE = 40.64 M3			

THE SCHEDULE OF REINFORCEMENT SHOWN ON THE BAR BENDING DIAGRAM TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECK AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.

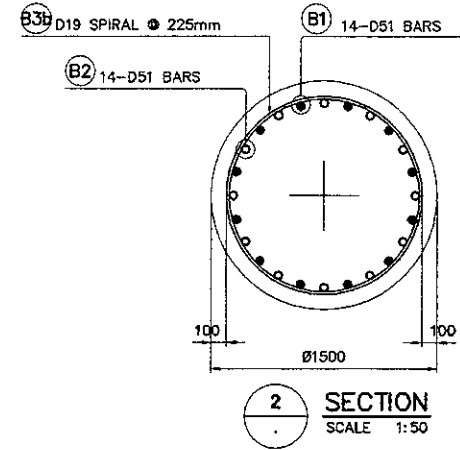


A SECTION
SCALE 1:100

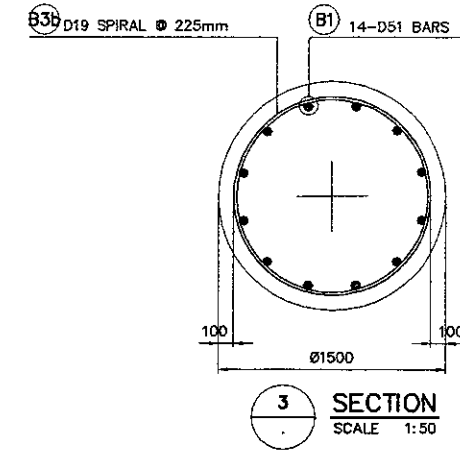
B LAYOUT OF STIFFENER/SPACER
SCALE 1:100



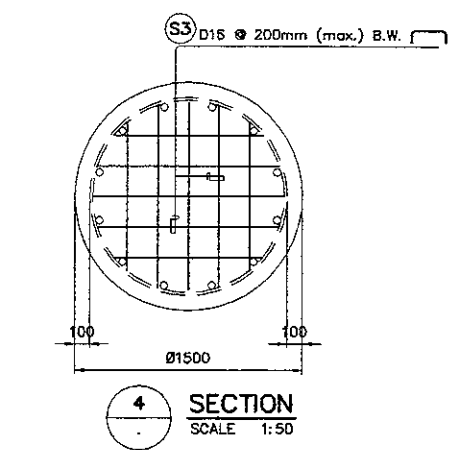
1 SECTION
SCALE 1:50



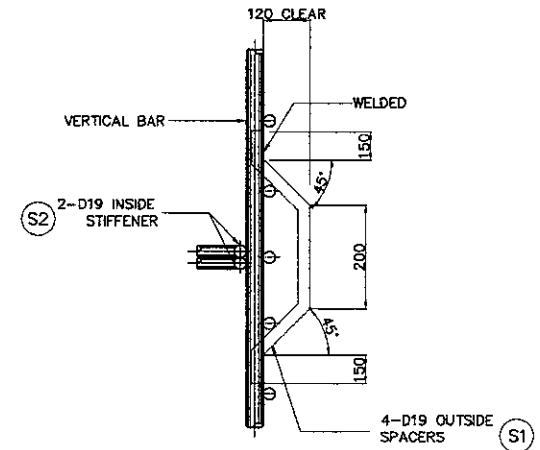
2 SECTION
SCALE 1:50



3 SECTION
SCALE 1:50



4 SECTION
SCALE 1:50

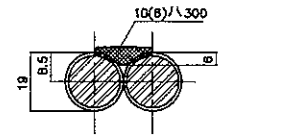


C DETAIL OF STIFFENER/SPACER
NOT TO SCALE

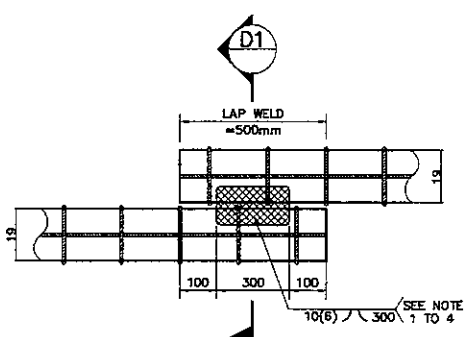
BORED PILE TYPE		-
SIZE (mm)		Ø1500
MAIN BARS	SIZE (mm)	51
	NO. OF LAYERS	1.0
	NO. OF PCS.	24
SPIRAL	SIZE (mm)	19
	NO. / SET	

LOCATION	DIMENSION					
	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	n
P2	20000	19800	1000	18000	800	9
P6	18000	17775	1000	16000	775	8

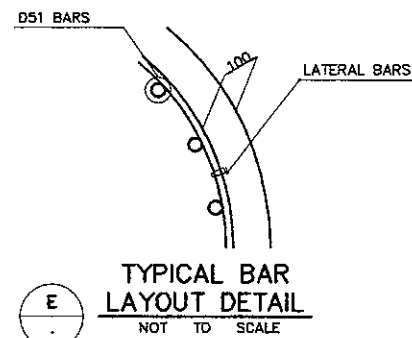
LOCATION	DIMENSION			
	A1 (mm)	A2 (mm)	n1	n2
P2	4275	15525	57	69
P6	4500	13275	60	59



SECTION-D1
SINGLE FLARED-V-GROOVE WELD



D DETAIL OF SPIRAL REINF. FULL LAP-WELD CONNECTION
NOT TO SCALE

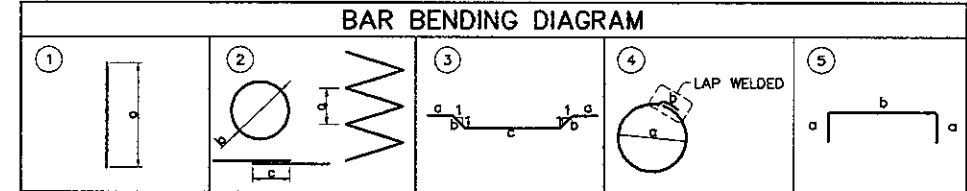


E TYPICAL BAR LAYOUT DETAIL
NOT TO SCALE

BORED PILE REINFORCEMENT DETAILS (PIER P2 & P6)
SCALE AS SHOWN

- NOTES ON LAP-WELD CONNECTION :**
- SPIRAL REINFORCEMENT ARE LAP-WELD CONNECTED (FLARED-V-GROOVE TYPE)
 - WELDING SHOULD CONFORM TO AWS (D1.4) *STRUCTURAL WELDING CODE REINFORCED STEEL*
 - USE ELECTRODE E90XX.
 - CARE SHOULD BE TAKEN NOT TO DAMAGE THE COLUMN MAIN BARS DURING WELDING.

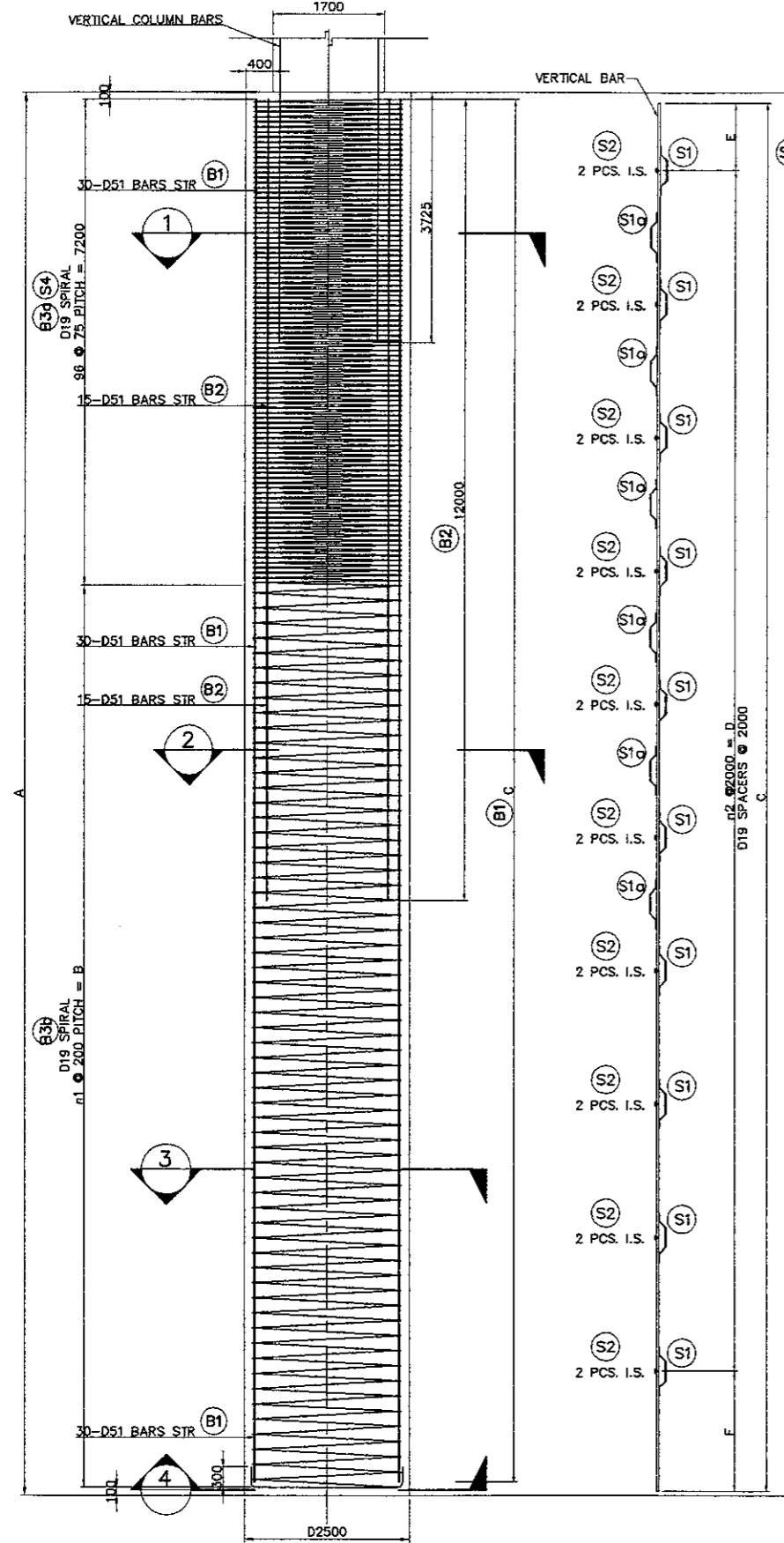
- NOTES :**
- ALL DIMENSIONS ARE IN MILLIMETERS.
 - BORED PILE MAIN BARS ARE PROVIDED WITHOUT ANY SPLICE. HOWEVER SPlicing OF MAIN BARS BY MECHANICAL COUPLERS ARE ALLOWED WITH PERMISSION FROM THE STRUCTURAL ENGINEER.
 - CONCRETE : $F_c' = 30MPa$
 - REINFORCING STEEL-
D51 : YIELD STRENGTH = 345 N/mm²
OTHERS : YIELD STRENGTH = 390 N/mm²



BAR BENDING DIAGRAM

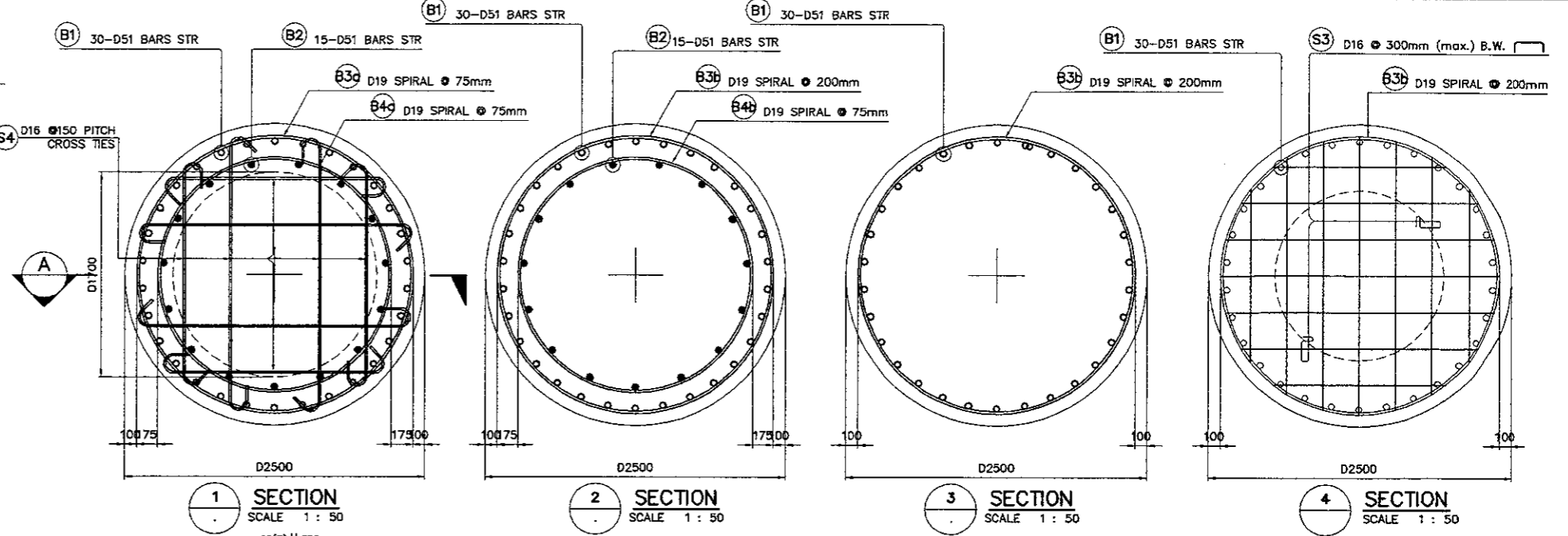
LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT						LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (kg)
				a	b	c	d	e	f				
PIER P2 DIA = 1500 mm L = 20000 mm	B1	51	1	19800						19800	14	15.90	4407
	B2	51	1	12000						12000	14	15.90	2671
	B3a	19	2	50	1300	500				242492	1	2.23	541
	B3b	19	2	225	1300	500				293543	1	2.23	655
	S1	19	3	150	170	250				890	36	2.23	71
	S2	19	4	1058	170					3492	18	2.23	140
	S3	16	5	150	1865					2185	10	1.58	34
TOTAL WEIGHT FOR / PILE = 8,519 Kgs.											VOLUME CONCRETE = 35.34 M ³		
PIER P6 DIA = 1800 mm L = 18000 mm	B1	51	1	17775						17775	14	15.90	3957
	B2	51	1	12000						12000	14	15.90	2671
	B3a	19	2	50	1300	500				25254	1	2.23	589
	B3b	19	2	225	1300	500				251000	1	2.23	580
	S1	19	3	150	170	250				890	36	2.23	71
	S2	19	4	1058	170					3492	18	2.23	140
	S3	16	5	150	1219					1519	10	1.58	24
TOTAL WEIGHT FOR / PILE = 7,993 Kgs.											VOLUME CONCRETE = 31.81 M ³		

THE SCHEDULE OF REINFORCEMENT SHOWN ON THE BAR BENDING DIAGRAM TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECK AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.



A SECTION
 SCALE 1 : 100

B LAYOUT OF STIFFENER/SPACER
 SCALE 1 : 100

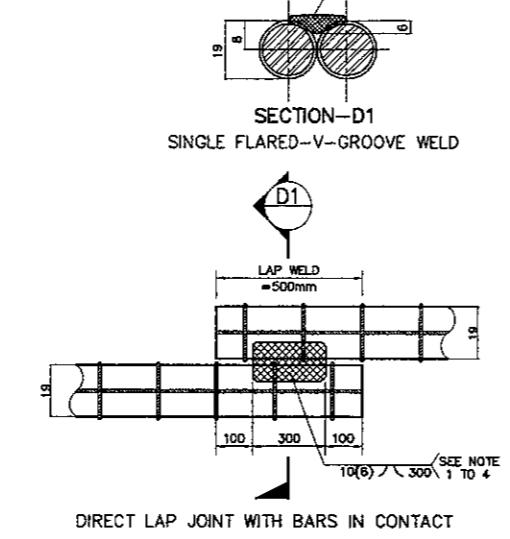


1 SECTION
 SCALE 1 : 50

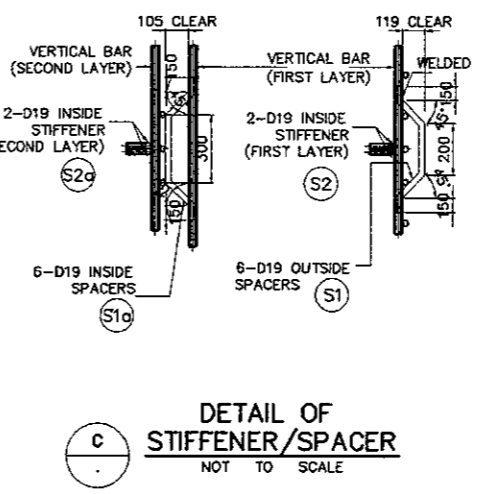
2 SECTION
 SCALE 1 : 50

3 SECTION
 SCALE 1 : 50

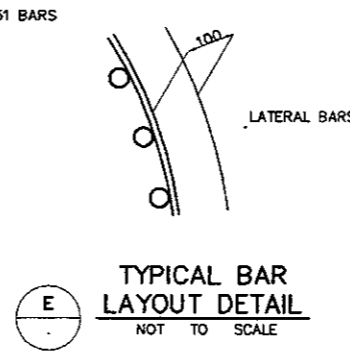
4 SECTION
 SCALE 1 : 50



D LAYOUT OF SPIRAL REINF. FULL LAP-WELD CONNECTION
 NOT TO SCALE



C DETAIL OF STIFFENER/SPACER
 NOT TO SCALE



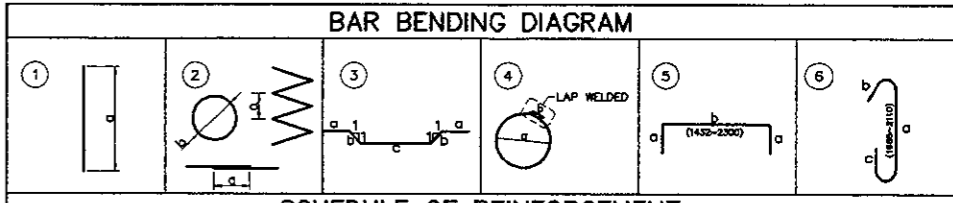
E TYPICAL BAR LAYOUT DETAIL
 NOT TO SCALE

BORED PILE TYPE	BP- BF2
SIZE (mm)	D2500
MAIN BARS	
SIZE (mm)	51
NO. OF LAYERS	2.0
NO. OF PCS.(1)	30
NO. OF PCS.(2)	15
SPIRAL	
SIZE (mm)	19
NO. / SET	

LOCATION	DIMENSION						n1	n2
	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)		
P3	21000	13600	20800	18000	1000	1800	68	9

- NOTES ON LAP-WELD CONNECTION :**
- SPIRAL REINFORCEMENT ARE LAP-WELD CONNECTED (FLARED-V-GROOVE TYPE)
 - WELDING SHOULD CONFORM TO AWS (D1.4) *STRUCTURAL WELDING CODE REINFORCED STEEL*
 - USE ELECTRODE E90XX.
 - CARE SHOULD BE TAKEN NOT TO DAMAGE THE COLUMN MAIN BARS DURING WELDING.

- NOTES :**
- ALL DIMENSIONS ARE IN MILLIMETERS.
 - BORED PILE MAIN BARS ARE PROVIDED WITHOUT ANY SPLICE. HOWEVER SPLICING OF MAIN BARS BY MECHANICAL COUPLERS ARE ALLOWED WITH PERMISSION FROM THE STRUCTURAL ENGINEER.
 - CONCRETE : $F_c' = 30MPa$
 - REINFORCING STEEL=
 D51 : YIELD STRENGTH = 345 N/mm²
 OTHERS : YIELD STRENGTH = 390 N/mm²

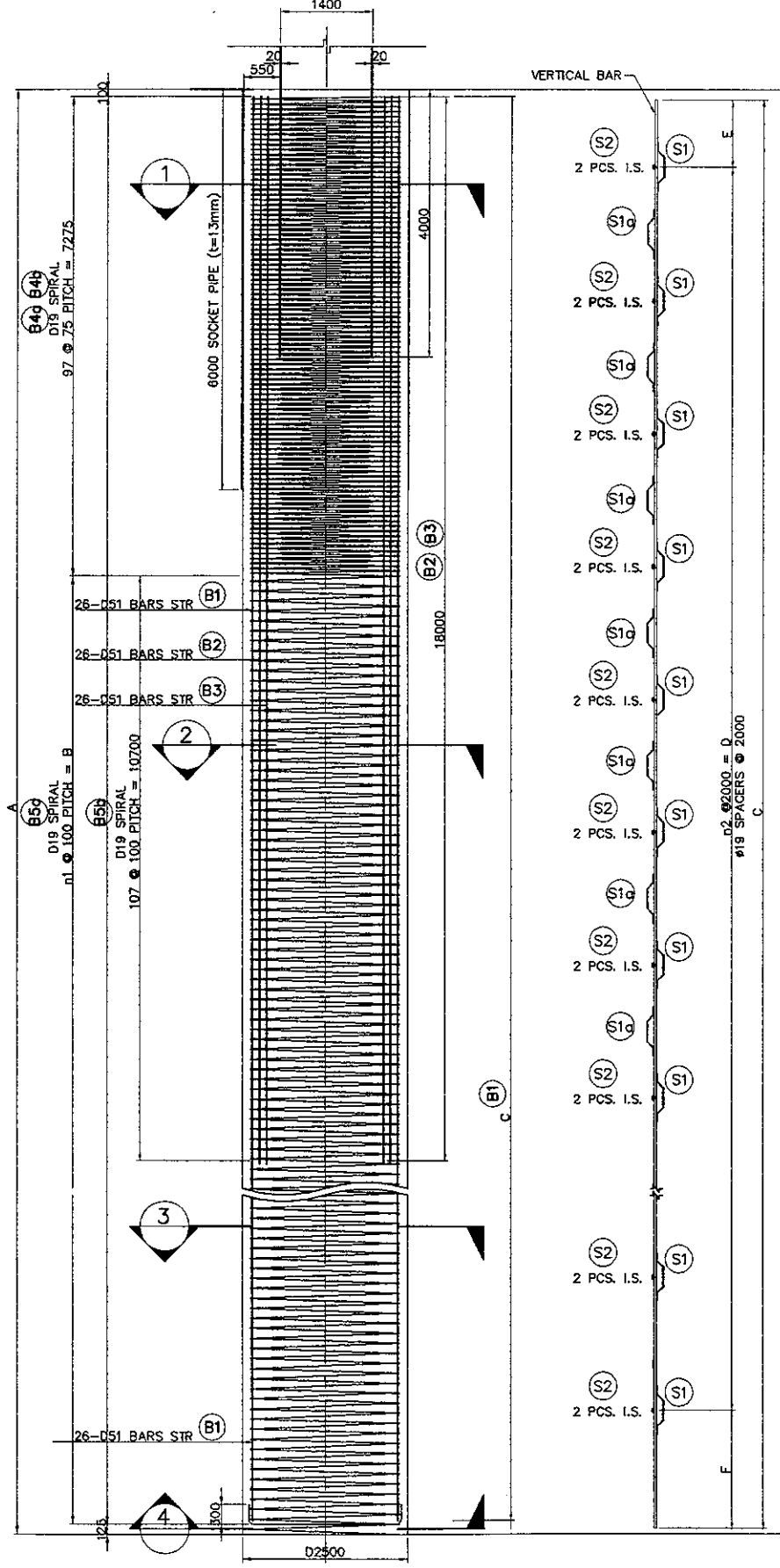


BAR BENDING DIAGRAM

LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT						LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (kg)
				a	b	c	d	e	f				
PIER P3, DIA = 2500 mm L = 21000 mm	B1	51	1	20800						20800	30	15.90	9922
	B2	51	1	12000						12000	15	15.90	2862
	B3a	19	2	75	2300	500				722312	1	2.23	1611
	B3b	19	2	200	2300	500				512096	1	2.23	1142
	B4a	19	2	75	1950	500				618931	1	2.23	1380
	B4b	19	2	200	1950	500				171075	1	2.23	381
	S1	19	3	150	170	250				890	60	2.23	119
	S1a	19	3	150	150	350				950	36	2.23	76
	S2	19	4	2160	170					6952	20	2.23	310
	S2a	19	4	1810	170					5853	12	2.23	157
	S3	16	5	150	1865					2165	14	1.58	48
	S4	16	6	1895	316	380				4106	392	1.58	2543
TOTAL WEIGHT FOR / PILE = 20,551 Kgs.													
VOLUME CONCRETE = 103.08 M3													

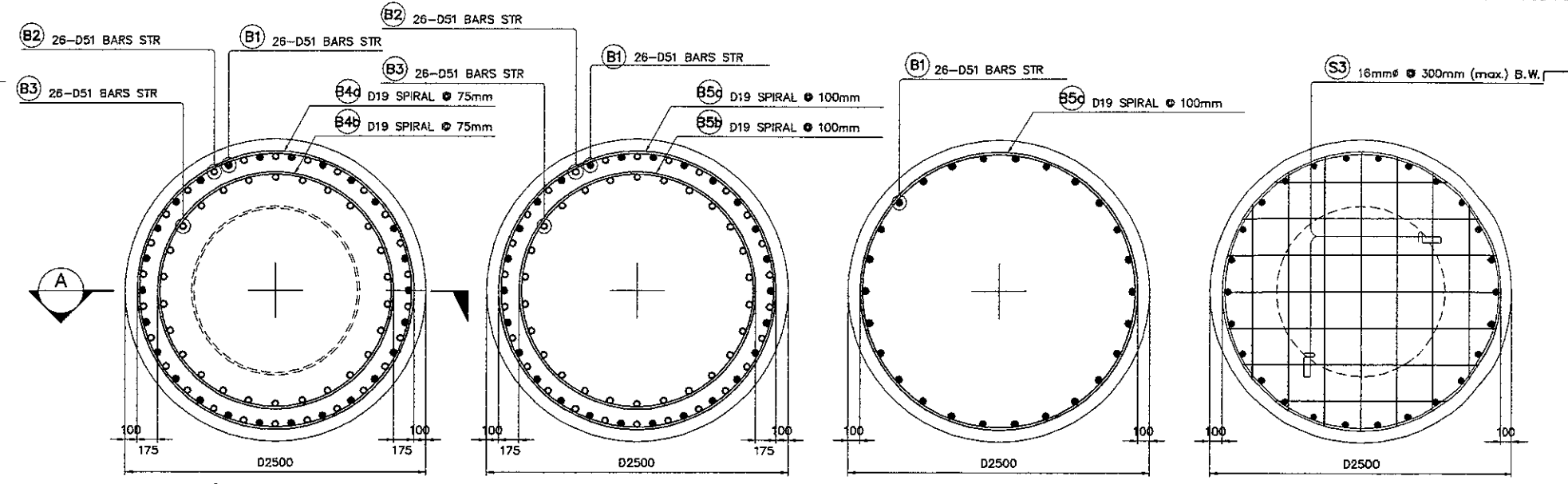
THE SCHEDULE OF REINFORCEMENT SHOWN ON THE BAR BENDING DIAGRAM TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECK AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.

BORED PILE REINF. DETAILS (PIER P3)
 SCALE AS SHOWN



A SECTION
 SCALE 1:100

B LAYOUT OF STIFFENER/SPACER
 SCALE 1:100

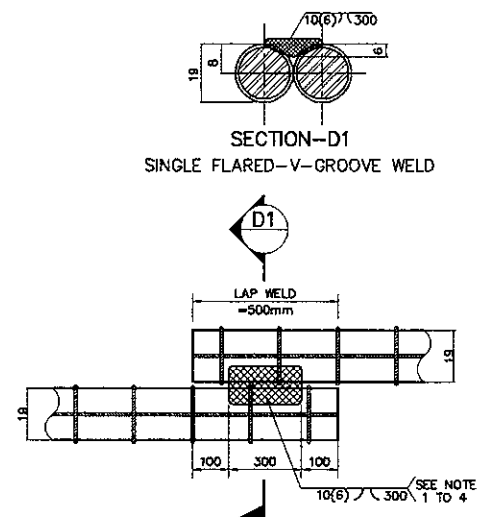


1 SECTION
 SCALE 1:50

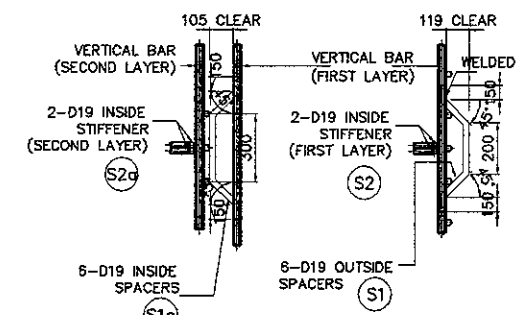
2 SECTION
 SCALE 1:50

3 SECTION
 SCALE 1:50

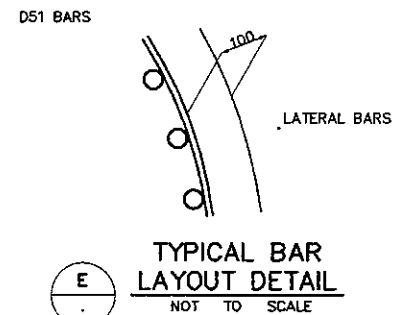
4 SECTION
 SCALE 1:50



D DETAIL OF SPIRAL REINF. FULL LAP-WELD CONNECTION
 NOT TO SCALE



C DETAIL OF STIFFENER/SPACER
 NOT TO SCALE



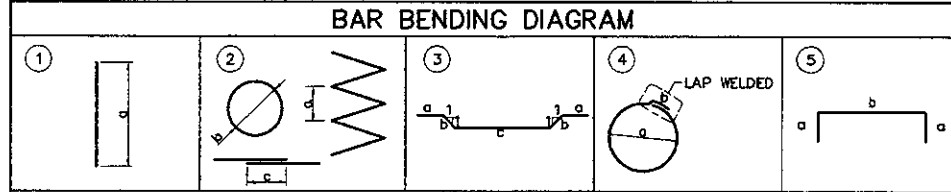
E TYPICAL BAR LAYOUT DETAIL
 NOT TO SCALE

BORED PILE TYPE		BP-BF3
SIZE (mm)		D2500
MAIN BARS	SIZE (mm)	51
	NO. OF LAYERS	2.0
	NO. OF PCS. (1)	52
	NO. OF PCS. (2)	26
SPIRAL	SIZE (mm)	19
	NO. / SET	

LOCATION	DIMENSION							n1	n2
	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)			
P4, P5	29000	21500	28775	26000	1000	1775		215	13

- NOTES ON LAP-WELD CONNECTION :**
- SPIRAL REINFORCEMENT ARE LAP-WELD CONNECTED (FLARED-V-GROOVE TYPE)
 - WELDING SHOULD CONFORM TO AWS (D1.4) *STRUCTURAL WELDING CODE REINFORCED STEEL*
 - USE ELECTRODE E90XX.
 - CARE SHOULD BE TAKEN NOT TO DAMAGE THE COLUMN MAIN BARS DURING WELDING.

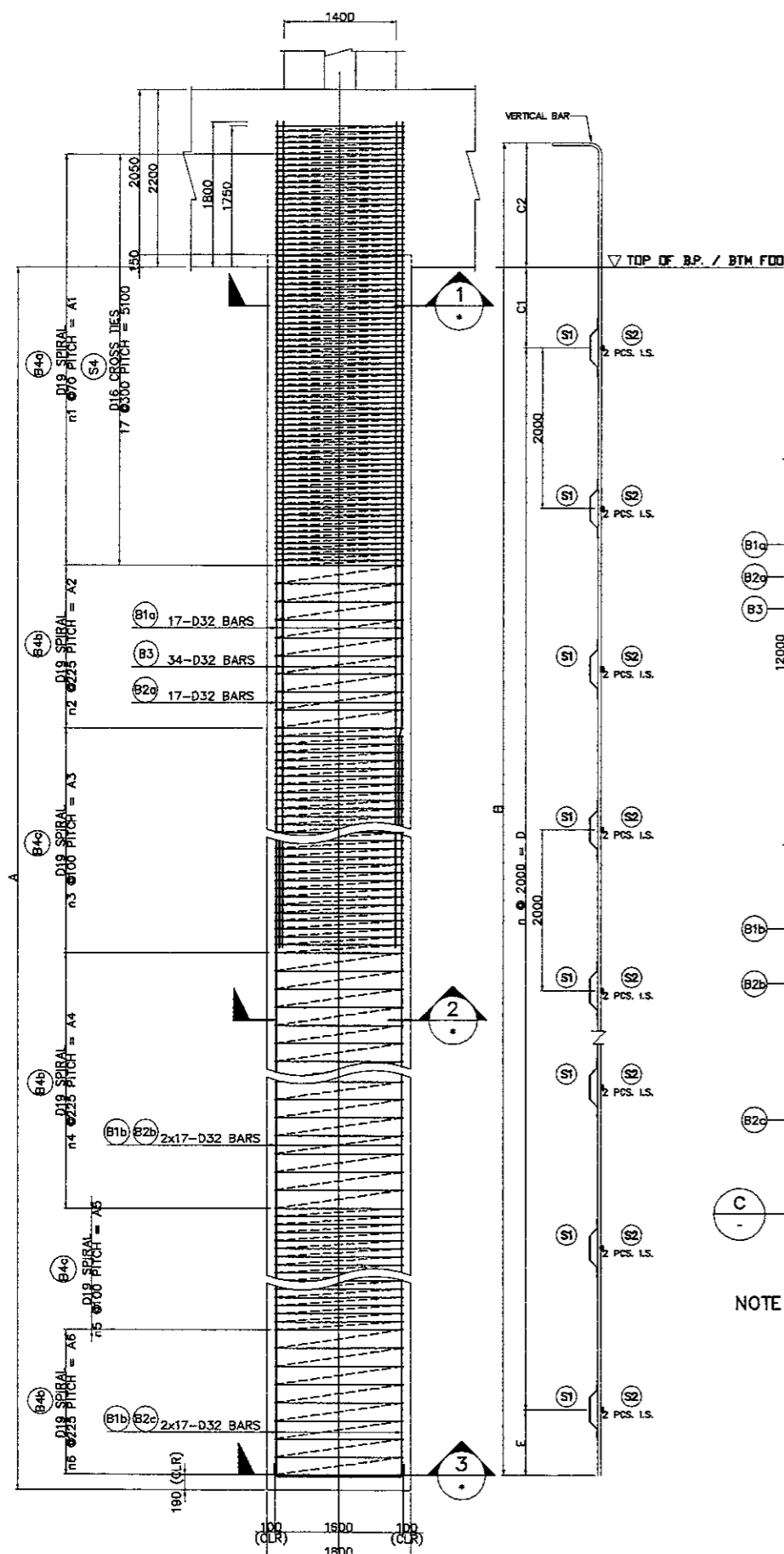
- NOTES :**
- ALL DIMENSIONS ARE IN MILLIMETERS.
 - BORED PILE MAIN BARS ARE PROVIDED WITHOUT ANY SPLICE. HOWEVER SPlicing OF MAIN BARS BY MECHANICAL COUPLERS ARE ALLOWED WITH PERMISSION FROM THE STRUCTURAL ENGINEER.
 - COMPOSITE COLUMN SOCKET TYPE CONNECTION SEE DWG. NO. BSB-036
 - CONCRETE : $F_c' = 30\text{MPa}$
 - REINFORCING STEEL =
 D51 : YIELD STRENGTH = 345 N/mm²
 OTHERS : YIELD STRENGTH = 390 N/mm²



LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT						LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (kg)
				a	b	c	d	e	f				
PIER P4, P5, DIA = 2500 mm L = 26000 mm	B1	51	1	28775						28775	26	15.90	11896
	B2	51	1	18000						18000	26	15.90	7441
	B3	51	1	18000						18000	26	15.90	7441
	B4a	19	2	75	2300	500				730034	1	2.23	1628
	B4b	19	2	75	2058	500				651826	1	2.23	1454
	B5a	19	2	100	2300	500				617730	1	2.23	3608
	B5b	19	2	100	2058	500				720562	1	2.23	1607
	S1	19	3	150	170	250				890	84	2.23	167
	S1a	19	3	150	150	350				950	54	2.23	114
	S2	19	4	2160	170					6952	28	2.23	434
	S2a	19	4	1810	170					5853	18	2.23	235
	S3	16	5	150	1979					2279	14	1.58	50
	TOTAL WEIGHT FOR / PILE = 36,075 Kgs.											TOTAL VOLUME CONCRETE = 142.35 m³	

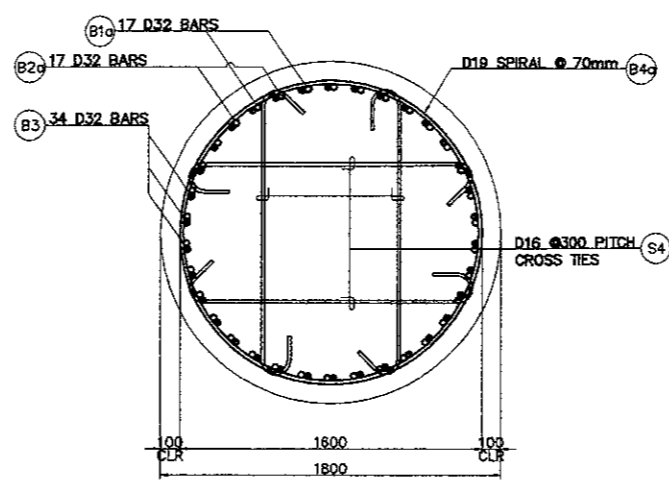
THE SCHEDULE OF REINFORCEMENT SHOWN ON THE BAR BENDING DIAGRAM TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECK AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.

BORED PILE REINF. DETAILS (PIER P4, P5)
 SCALE AS SHOWN

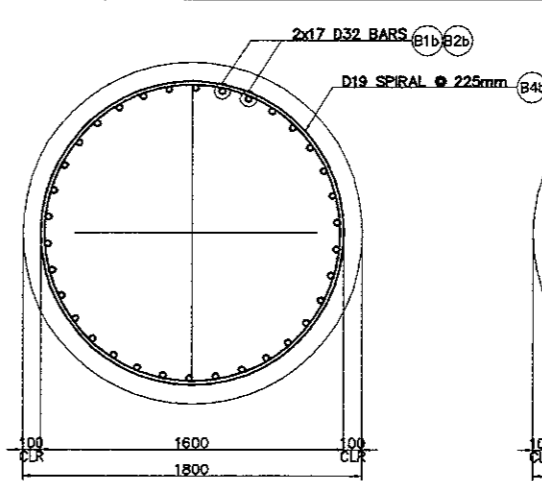


A ELEVATION
 SCALE 1 : 80

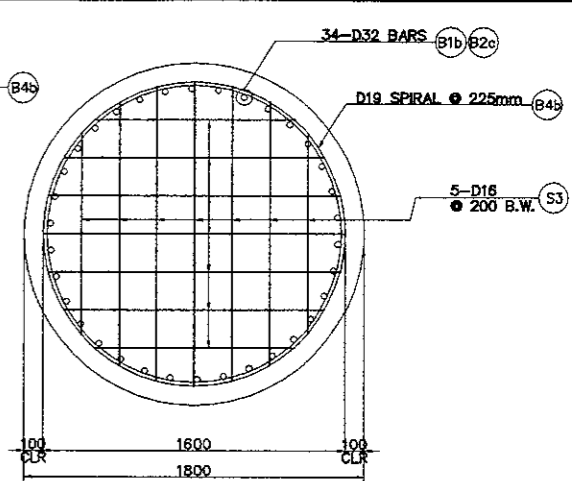
B LAYOUT OF STIFFENER
 SCALE 1 : 80



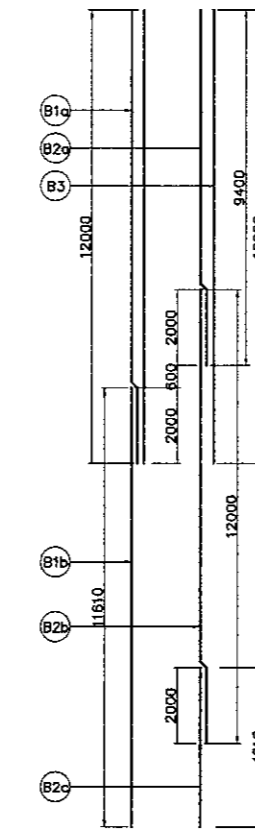
1 SECTION
 SCALE 1 : 40



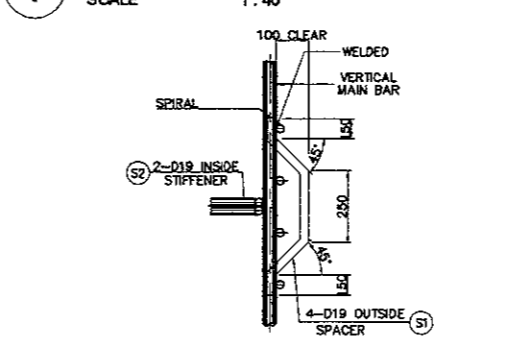
2 SECTION
 SCALE 1 : 40



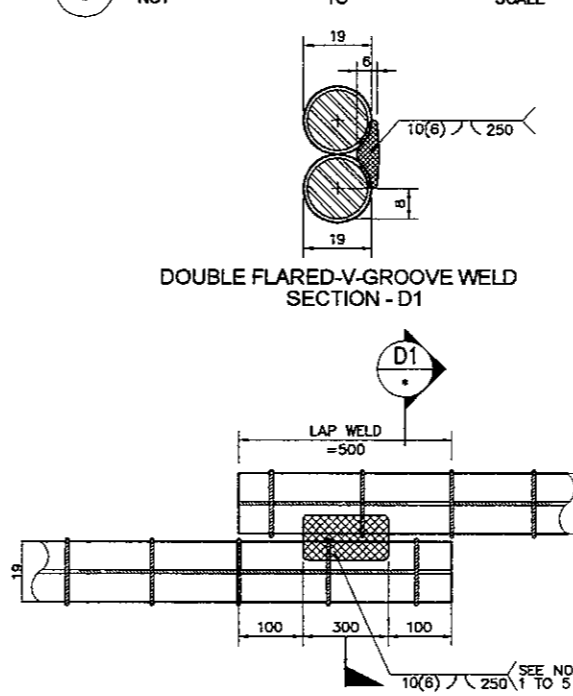
3 SECTION
 SCALE 1 : 40



C SCHEMATIC DETAIL
 NOT TO SCALE



E DETAIL OF STIFFENER/SPACER
 NOT TO SCALE

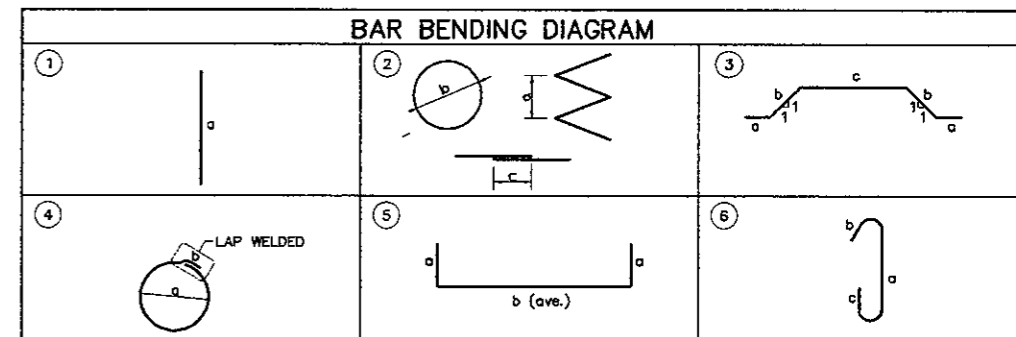


D DETAILS OF SPIRAL REINF.
 FULL LAP-WELD CONNECTION
 NOT TO SCALE

- NOTES ON LAP-WELD CONNECTION :**
- SPIRAL REINFORCEMENT ARE LAP-WELD CONNECTED (FLARED-V-GROOVE TYPE)
 - WELDING SHOULD CONFORM TO AWS (D1.4) *STRUCTURAL WELDING CODE REINFORCED STEEL*
 - USE ELECTRODE E90XX.
 - CARE SHOULD BE TAKEN NOT TO DAMAGE THE COLUMN MAIN BARS DURING WELDING.
- NOTES :**
- ALL DIMENSIONS ARE IN MILLIMETERS.
 - BORED PILE MAIN BARS ARE PROVIDED WITHOUT ANY SPLICE. HOWEVER SPLICING OF MAIN BARS BY MECHANICAL COUPLERS ARE ALLOWED WITH PERMISSION FROM THE STRUCTURAL ENGINEER.
 - CONCRETE : $F_c' = 30\text{MPa}$
 - REINFORCING STEEL = D51 : YIELD STRENGTH = 345 N/mm²
 OTHERS : YIELD STRENGTH = 390 N/mm²

LOCATION	DIMENSION						n (S1)
	A (mm)	B (mm)	C1 (mm)	C2 (mm)	D (mm)	E (mm)	
A1	20000	21610	1000	1800	18000	810	9

LOCATION	DIMENSION						n1	n2	n3	n4	n5	n6
	A1 (mm)	A2 (mm)	A3 (mm)	A4 (mm)	A5 (mm)	A6 (mm)						
A1	5460	2025	4800	5175	2300	1800	78	9	48	23	23	8

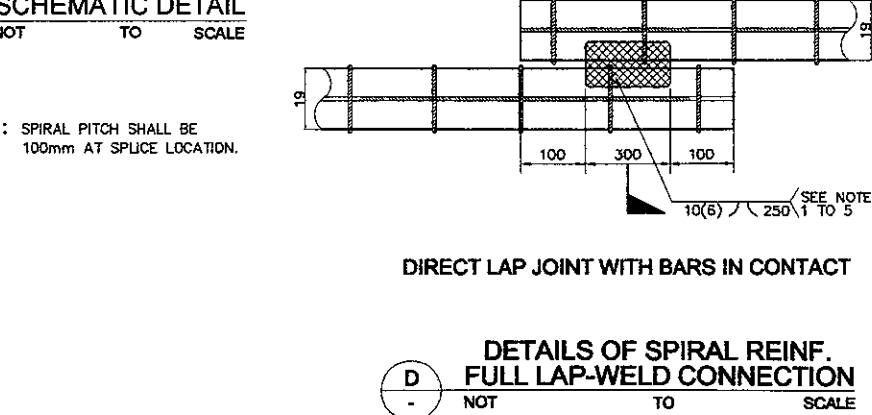
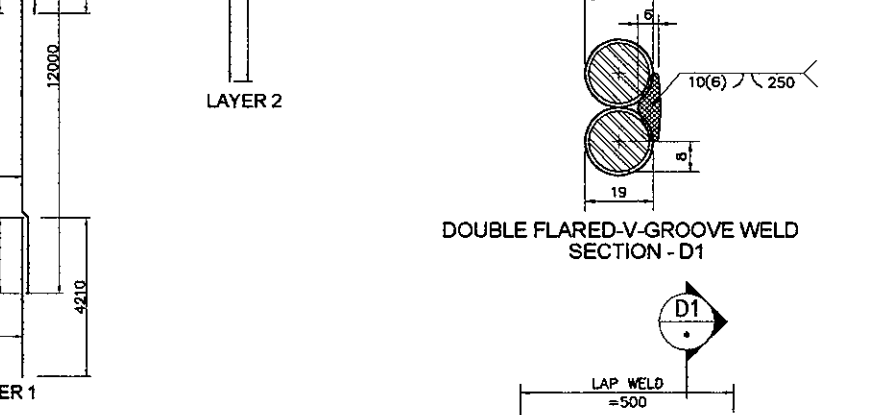
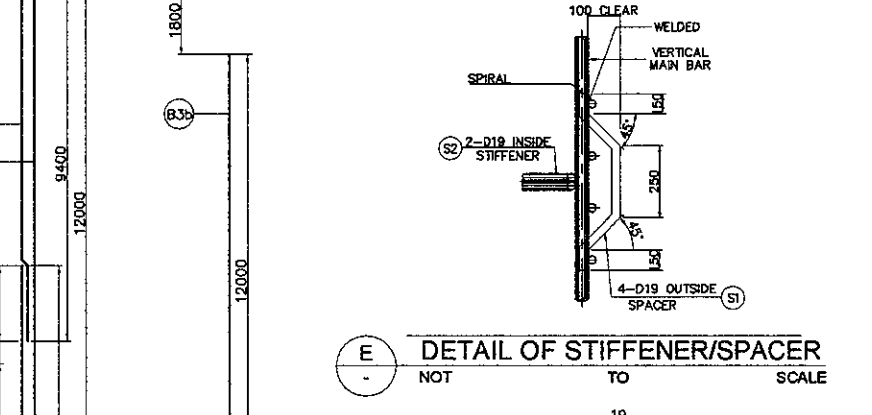
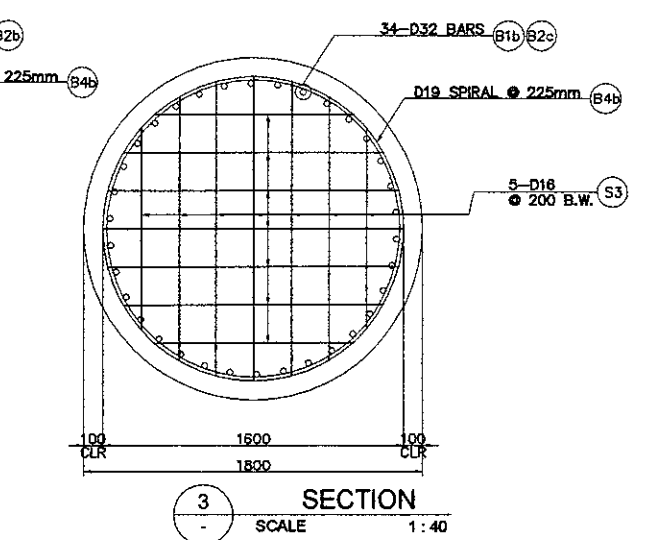
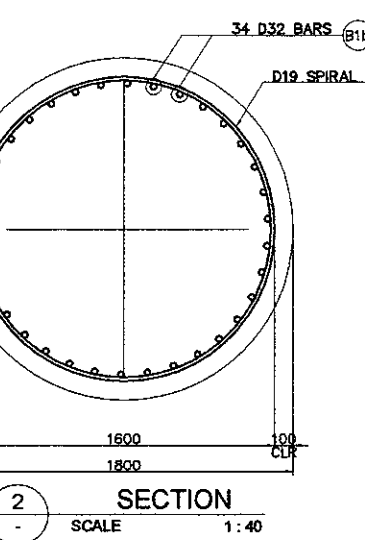
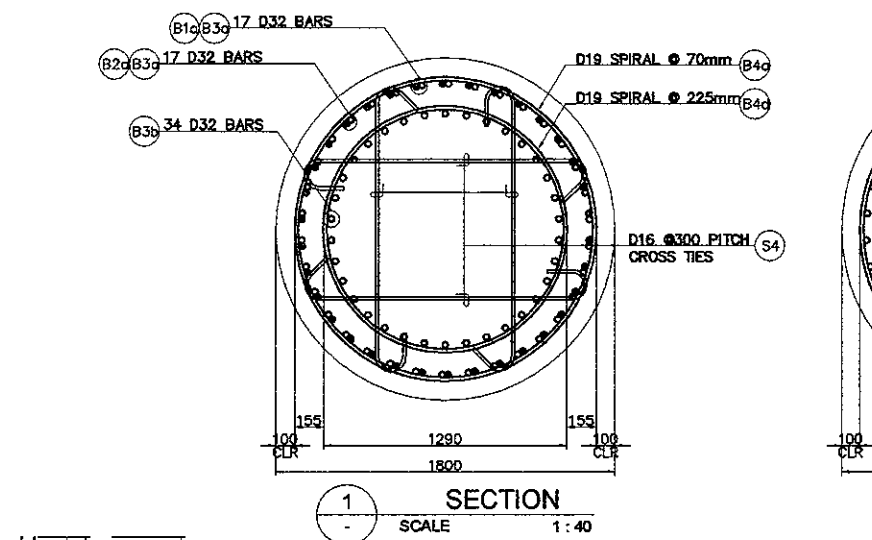
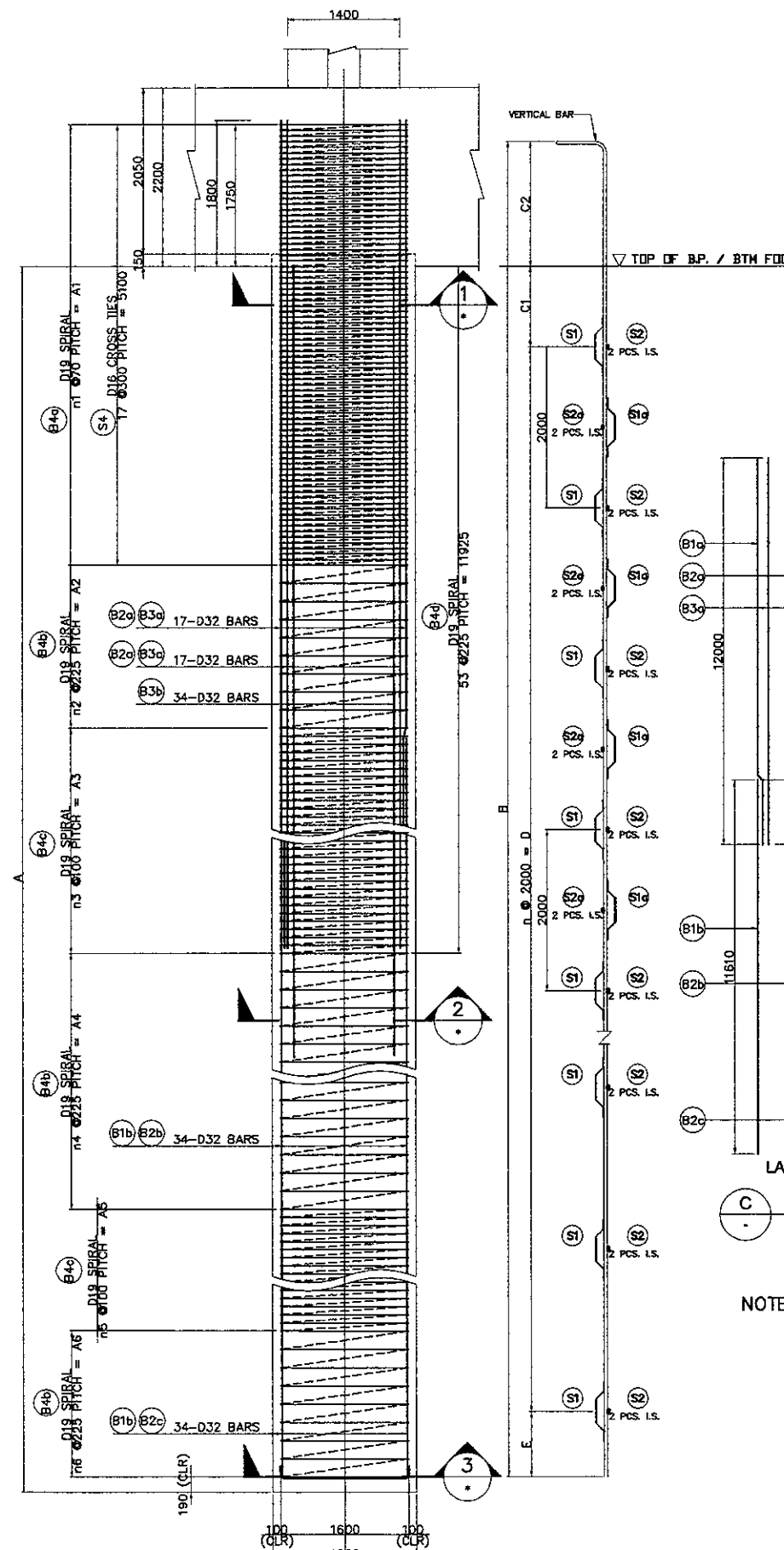


LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT						LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	TOTAL WEIGHT (kg)	VOLUME CONCRETE (kg)
				a	b	c	d	e	f					
ABUTMENT A1	B1a	32	1	12000						12000	17	6.31	1287	50.90
	B1b	32	1	11610						11610	17	6.31	1245	
	B2a	32	1	9400						9400	17	6.31	1008	
	B2b	32	1	12000						12000	17	6.31	1287	
	B2c	32	1	4210						4210	17	6.31	452	
	B3	32	1	12000						12000	34	6.31	2574	
	B4a	19	2	70	1800	500				382227	1	2.23	852	
	B4b	19	2	225	1600	500				209439	1	2.23	467	
	B4c	19	2	100	1800	500				371755	1	2.23	829	
	S1	19	3	150	170	250				890	40	2.23	79	
	S2	19	4	1498	170					4876	20	2.23	217	
	S3	16	5	150	1395					1695	14	1.58	37	
	S4	16	6	1345	316	380				2041	76	1.58	232	
	TOTAL WEIGHT PER PILE =												10,510 Kgs	

THE REINFORCEMENT SHOWN ON THIS TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECK AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.

1 BORED PILE REINF. DETAILS FOR ABUT. A1 (Ø1800mm)
 SCALE AS SHOWN

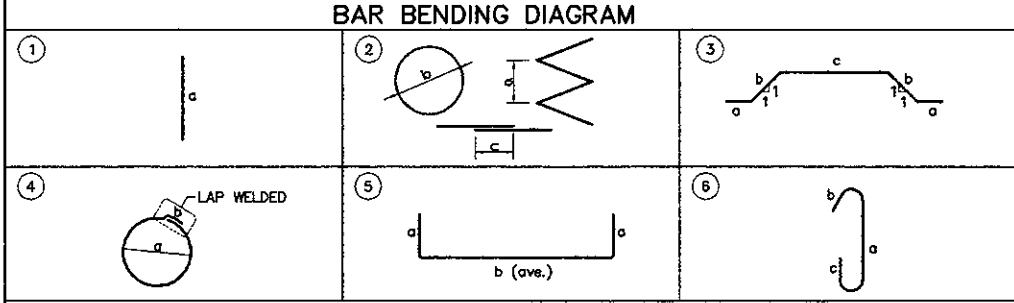
DESIGNED BY	CHECKED BY	SUBMITTED BY
Name A. GOURLEY	Name T. OKUMURA	Name M. KIUCHI
Sign	Sign	Sign
Date	Date	Date



- NOTES ON LAP-WELD CONNECTION :**
- SPIRAL REINFORCEMENT ARE LAP-WELD CONNECTED (FLARED-V-GROOVE TYPE)
 - WELDING SHOULD CONFORM TO AWS (D1.4) *STRUCTURAL WELDING CODE REINFORCED STEEL*
 - USE ELECTRODE E90XX.
 - CARE SHOULD BE TAKEN NOT TO DAMAGE THE COLUMN MAIN BARS DURING WELDING.
- NOTES :**
- ALL DIMENSIONS ARE IN MILLIMETERS.
 - BORED PILE MAIN BARS ARE PROVIDED WITHOUT ANY SPLICE. HOWEVER SPLICING OF MAIN BARS BY MECHANICAL COUPLERS ARE ALLOWED WITH PERMISSION FROM THE STRUCTURAL ENGINEER.
 - CONCRETE : $F_c' = 30\text{MPa}$
 - REINFORCING STEEL= D51 : YIELD STRENGTH = 345 N/mm²
 OTHERS : YIELD STRENGTH = 390 N/mm²

LOCATION	DIMENSION						
	A (mm)	B (mm)	C1 (mm)	C2 (mm)	D (mm)	E (mm)	n (S1)
A2	20000	21610	1000	1800	18000	810	9

LOCATION	DIMENSION										
	A1 (mm)	A2 (mm)	A3 (mm)	A4 (mm)	A5 (mm)	A6 (mm)	n1	n2	n3	n4	n5
A2	5460	2025	4800	5175	2300	1800	78	9	48	23	23



LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT						LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	TOTAL WEIGHT (kg)	VOLUME CONCRETE (kg)
				a	b	c	d	e	f					
				ABUTMENT A2	B1a	32	1	12000						
	B1b	32	1	11610						11610	17	6.31	1245	
	B2a	32	1	9400						9400	17	6.31	1008	
	B2b	32	1	12000						12000	17	6.31	1287	
	B2c	32	1	4210						4210	17	6.31	452	
	B3a	32	1	12000						12000	34	6.31	2574	
	B3b	32	1	12000						12000	34	6.31	2574	
	B4a	19	2	70	1600	500				382227	1	2.23	852	
	B4b	19	2	225	1600	500				209439	1	2.23	467	
	B4c	19	2	100	1600	500				371755	1	2.23	829	
	B4d	19	2	225	1290	500				223740	1	2.23	499	
	S1	19	3	150	170	250				890	40	2.23	79	
	S1a	19	C	150	150	350				950	24	2.23	51	
	S2	19	4	1498	170					4876	20	2.23	217	
	S2a	19	D	1188	170					3900	12	2.23	104	
	S3	16	5	150	1395					1895	14	1.58	37	
	S4	16	6	1345	316	380				2041	76	1.58	232	
TOTAL WEIGHT PER PILE =											13,737 Kgs			

THE REINFORCEMENT SHOWN ON THIS TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECK AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.

SCHEDULE OF BORED PILE

BP-BF1 PIER P1, P7, P8 & P9

BORED PILE TYPE		BP-BF1
SIZE (mm)		1500
MAIN BARS	SIZE (mm)	32
	NO. LAYERS	1
	NO. OF PCS.	26
SPIRAL	SIZE (mm)	19
	NO. / SET	

BP-BF2 PIER P3

BORED PILE TYPE		BP-BF2
SIZE (mm)		2500
MAIN BARS	SIZE (mm)	51
	NO. LAYERS	2
	NO. OF PCS.(1)	30
	NO. OF PCS.(2)	15
SPIRAL	SIZE (mm)	19
	NO. / SET	

BP-BF3 PIER P4, P5

BORED PILE TYPE		BP-BF4
SIZE (mm)		2500
MAIN BARS	SIZE (mm)	51
	NO. LAYERS	2
	NO. OF PCS.(1)	52
	NO. OF PCS.(2)	26
SPIRAL	SIZE (mm)	19
	NO. / SET	

BP-BF4 PIER P2, P6

BORED PILE TYPE		BP-BF5
SIZE (mm)		1500
MAIN BARS	SIZE (mm)	51
	NO. LAYERS	1
	NO. OF PCS.	28
SPIRAL	SIZE (mm)	19
	NO. / SET	

BP-BF5 ABUTMENT A1

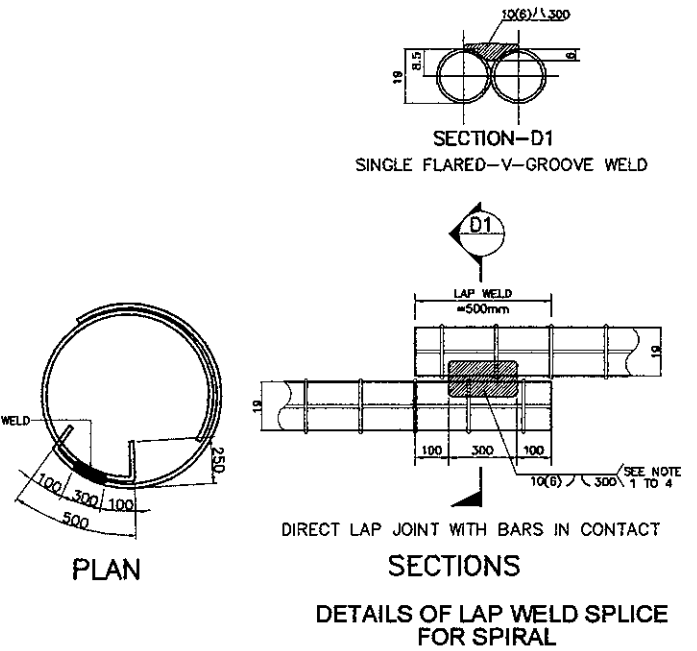
D16 CROSS TIES
 @ 300 MM O.C.
 DISTRIBUTED OVER UPPER
 1.4 M. OF PILE

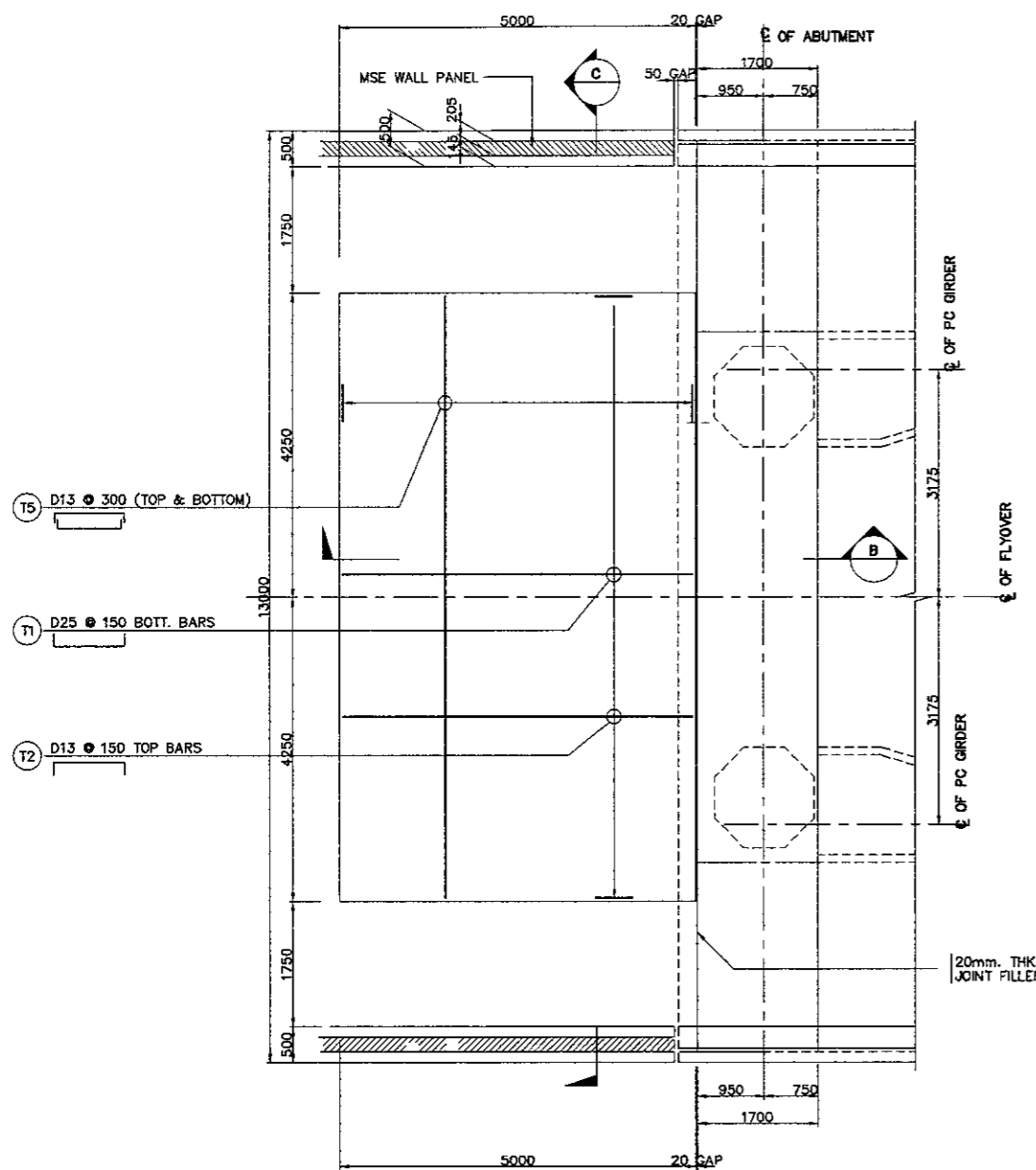
BORED PILE TYPE		BP-NF7
SIZE (mm)		1800
MAIN BARS	SIZE (mm)	32
	NO. LAYERS	1
	NO. OF PCS.(1)	34
	NO. OF PCS.(2)	19
SPIRAL	SIZE (mm)	19
	NO. / SET	

BP-NF6 ABUTMENT A2

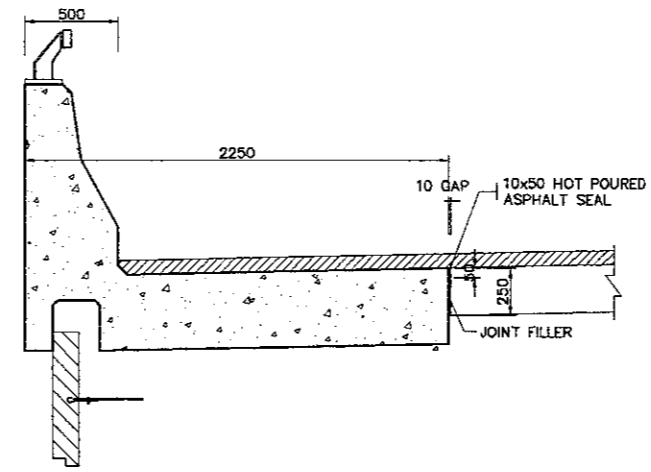
D16 CROSS TIES
 @ 300 MM O.C.
 DISTRIBUTED OVER UPPER
 1.4 M. OF PILE

BORED PILE TYPE		BP-NF7
SIZE (mm)		1800
MAIN BARS	SIZE (mm)	32
	NO. LAYERS	2
	NO. OF PCS.(1)	34
	NO. OF PCS.(2)	34
SPIRAL	SIZE (mm)	19
	NO. / SET	

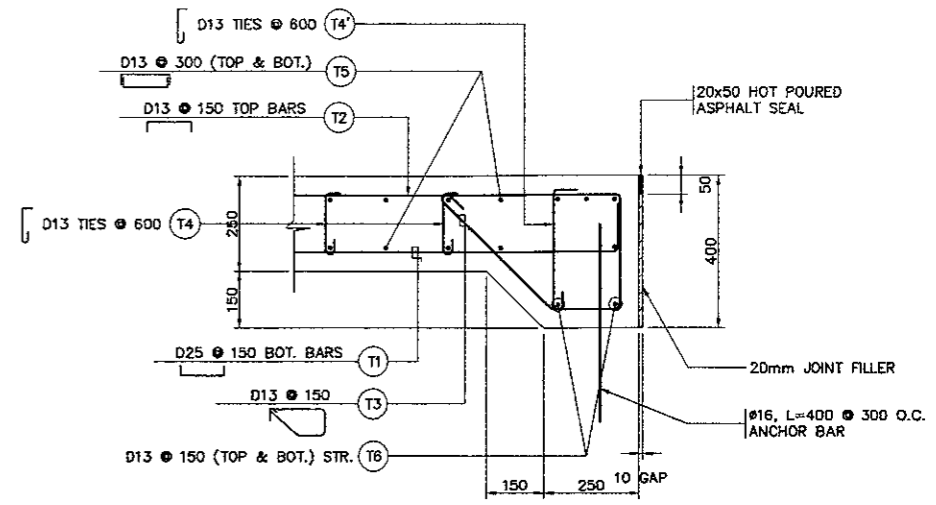




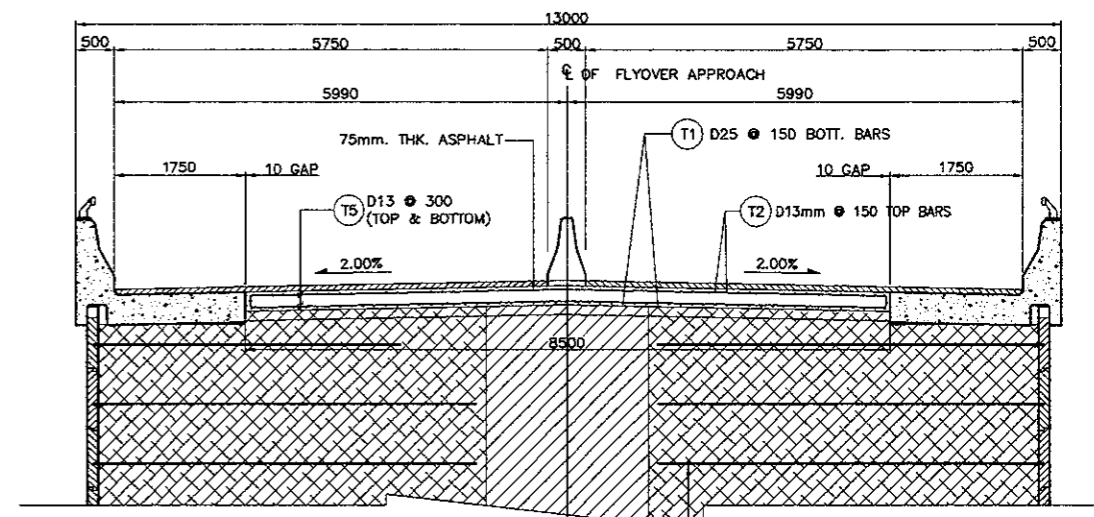
A PLAN
SCALE 1:100



2 DETAIL
SCALE 1:40



1 DETAIL
SCALE 1:20



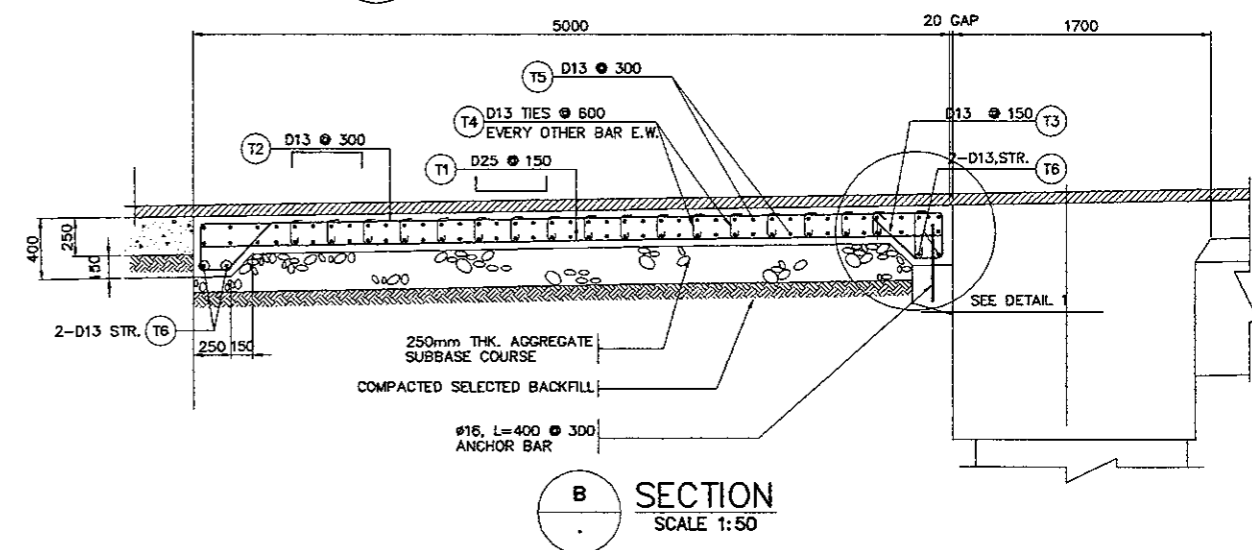
C SECTION @ APPROACH SLAB
SCALE 1:100

- NOTES :
- ALL DIMENSION ARE IN MILLIMETERS.
 - CONCRETE : $f_c' = 24 \text{ MPa}$
 - REINFORCING STEEL : YIELD STRENGTH = 390 N/mm^2
 - QUANTITY SHOWN ON TABLE IS FOR ONE APPROACH SLAB ONLY

ESTIMATE OF QUANTITIES (PER APPROACH SLAB)

BAR BENDING DIAGRAM		SCHEDULE OF REINFORCEMENT														
NO.	DIAGRAM	LOCATION	BAR MARK	D (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT					LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m.)	WEIGHT (kg)		
						a	b	c	d	e					f	
TRANSITION SLAB		TRANSITION SLAB	T1	25	1	100	4900					5100	57	3.85	1119	
			T2	13	1	100	4900					5100	57	1.04	302	
			T3	13	2	150	300	250	300	550	150	1700	114	1.04	202	
			T4	13	3	150	150	200				500	126	1.04	66	
			T4'	13	3	150	300	200				650	30	1.04	20	
			T5	13	1	100	8400					8800	34	1.04	304	
VOLUME OF CONCRETE		VOLUME OF CONCRETE	APPROACH SLAB													
TOTAL WEIGHT												= 2,048 kg.				
TOTAL VOLUME A1 + A2												= 11.454 cu.m.				
TOTAL VOLUME A1 + A2												= 22.908 cu.m.				

THE REINFORCEMENT SHOWN ON THIS TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECK AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.



B SECTION
SCALE 1:50



JAPAN INTERNATIONAL
COOPERATION AGENCY



DIRECTORATE GENERAL OF HIGHWAY
MINISTRY OF PUBLIC WORKS
REPUBLIC OF INDONESIA

M. S. E. WALL



KATAHIRA & ENGINEERS INTERNATIONAL

MECHANICALLY STABILIZED EARTH WALL

NOTES :

1. THE MECHANICALLY STABILIZED EARTH WALL SHOWN IN THIS SET OF DRAWINGS SHALL COMPLY WITH THE REQUIREMENTS OF AASHTO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DIVISION I AND II."
 THE CONTRACTOR MAY PROPOSE WALL TYPES OTHER THAN THAT SHOWN IN THE DRAWINGS AND APPROVED BY THE ENGINEER.
 DESIGN LIFE = 75 YEARS

2. MATERIALS

2.1 PRECAST CONCRETE PANELS

28TH DAY COMPRESSIVE STRENGTH OF CONCRETE = 30 MPa
 THE EXTERIOR FACE OF THE PANELS MUST BE UNIFORM AND MUST NOT SHOW SIGNIFICANT VARIATIONS FROM ONE PANEL TO ANOTHER. PANELS SHOULD CONFORM TO THE DIMENSIONS SHOWN AND BE FREE OF HONEYCOMBS, STRAINS OR DEEP CRACKS IN THE FACE.

2.2 STEEL REINFORCING STRIPS

STEEL REINFORCING STRIPS SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A 123 AND HAVE A CORROSION-RESISTANCE DURABILITY IN ACCORDANCE WITH AASHTO REQUIREMENTS. A MINIMUM AVERAGE ZINC COATING MASS OF 600 GRAMS PER METER SQUARE AS PER ISO 1460 SHALL BE ADAPTED.
 THE STEEL REINFORCING STRIPS(60mm x 4mm) SHALL BE RIBBED FLATS OF GRADE 350 ($F_y=350MPa$) AND CONFORMING TO THE LATEST AASHTO REQUIREMENTS. STEEL REINFORCING STRIPS MUST EXHIBIT A MAX. TENSILE LOAD OF 32.05 KN PER STRIP.
 THE REINFORCING STRIPS SHALL HAVE A MINIMUM APPARENT COEFFICIENT OF FRICTION, f^* , OF 2.0 AT GROUND LEVEL.

2.3 STRUCTURE BACKFILL

THE STRUCTURE BACKFILL FOR MECHANICALLY STABILIZED EARTH WALL SHALL CONFORM TO THE FOLLOWING GRADING REQUIREMENTS.

SIEVE SIZE	PERCENT PASSING
4"	100
NO. 40	0-60
NO. 200	0-15

OTHER REQUIREMENTS FOR BACKFILL SHALL BE IN ACCORDANCE WITH THE LATEST AASHTO REQUIREMENTS OR AS PER MANUFACTURER'S / SUPPLIER'S RECOMMENDATIONS.

2.4 JOINT FILLER

FILLER FOR VERTICAL JOINTS SHALL BE FLEXIBLE OPEN CELL POLYURETHANE FOAM STRIPS OF 40mm SQUARE CROSS-SECTION OR EQUIVALENT. THE VERTICAL JOINT SHALL BE ENCLOSED WITH GEOTEXTILE MEMBRANE AS SHOWN IN THE DRAWINGS. HORIZONTAL JOINT FILLER SHALL BE RESIN BONDED CORK FILLER BOARD CONFORMING TO ASTM D 1752 AND RUBBER PAD WITH SHORE HARDNESS OF 85 +0, -5.

2.5 CONCRETE LEVELING PAD

CONCRETE LEVELING PAD SHALL HAVE A 28TH DAY COMPRESSIVE STRENGTH OF 21MPa.

3. ALLOWABLE SOIL BEARING CAPACITY

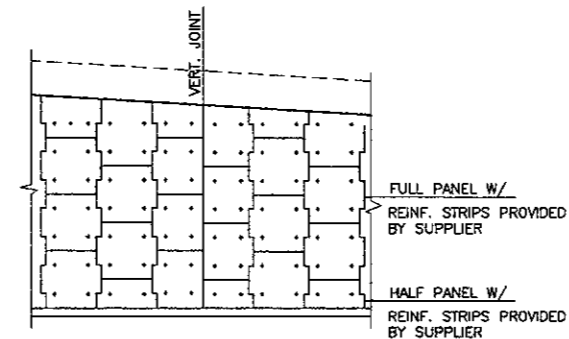
THE CONTRACTOR SHALL VERIFY THAT THE ALLOWABLE SOIL BEARING CAPACITY AT FOUNDATION LEVEL SHALL BE SUFFICIENT FOR M. S. E. WALL.

4. FOUNDATION TREATMENT

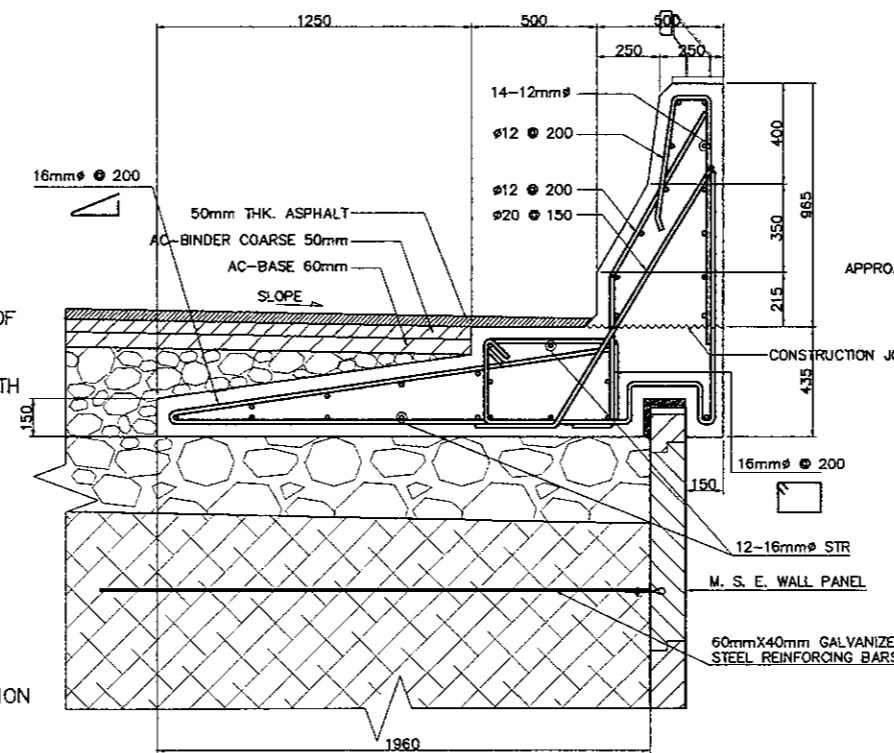
THE CONTRACTOR SHALL PREPARE THE FOUNDATION FOR MECHANICALLY STABILIZED EARTH WALL (M.S.E.W) IN ACCORDANCE WITH THE PLANS AND SHALL VERIFY IF THE EXISTING FOUNDATION IS SUITABLE TO SUPPORT THE M.S.E.W. IN AREAS WHERE EXCAVATION OF FOUNDATION MATERIAL IS NECESSARY, THE CONTRACTOR SHALL PERFORM SUCH EXCAVATION TO THE LIMITS SHOWN IN THE DRAWINGS. THE EXCAVATED MATERIALS SHALL BE REPLACED WITH STRUCTURE BACKFILL MATERIAL MEETING THE REQUIREMENTS OF THE EARTH RETAINING SYSTEM.

5. CONSTRUCTION

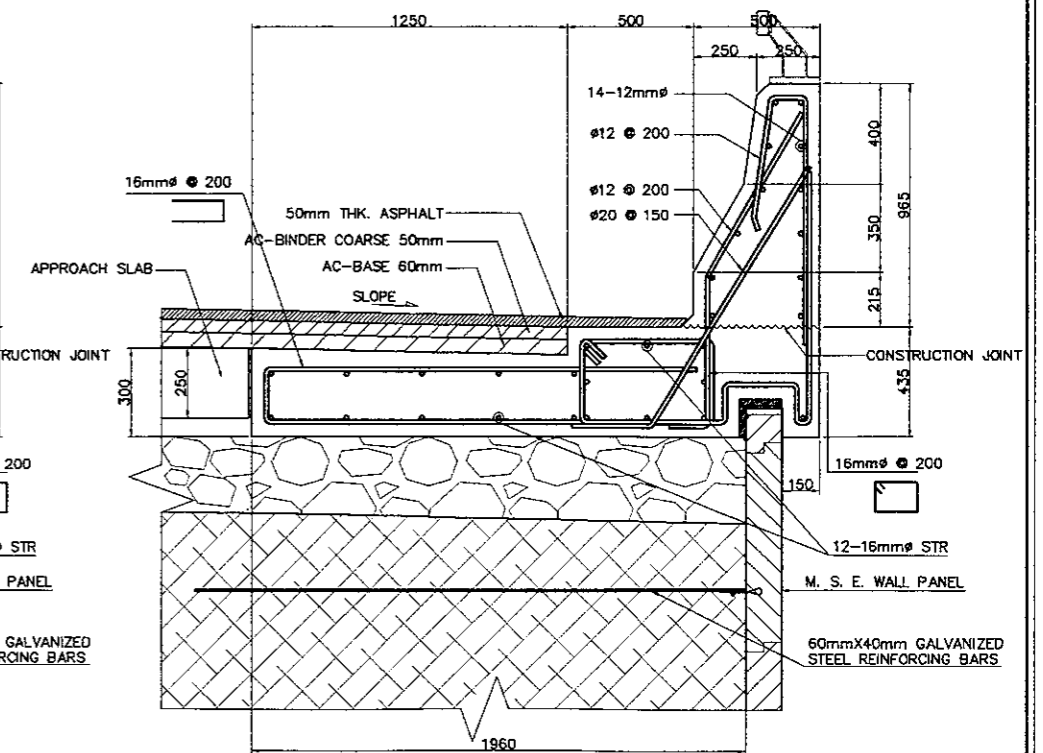
THE MECHANICALLY STABILIZED EARTH WALL SHALL BE CONSTRUCTED IN ACCORDANCE WITH AASHTO REQUIREMENTS OR RECOMMENDED BY THE MANUFACTURER / SUPPLIER.
 THE CONTRACTOR SHALL SUBMIT, FOR THE APPROVAL OF THE ENGINEER, WORKING PLAN AND DRAWINGS OF CONSTRUCTION METHOD, SEQUENCE, SAFETY AND QUALITY ASSURANCE.



TYPICAL WALL PANELS

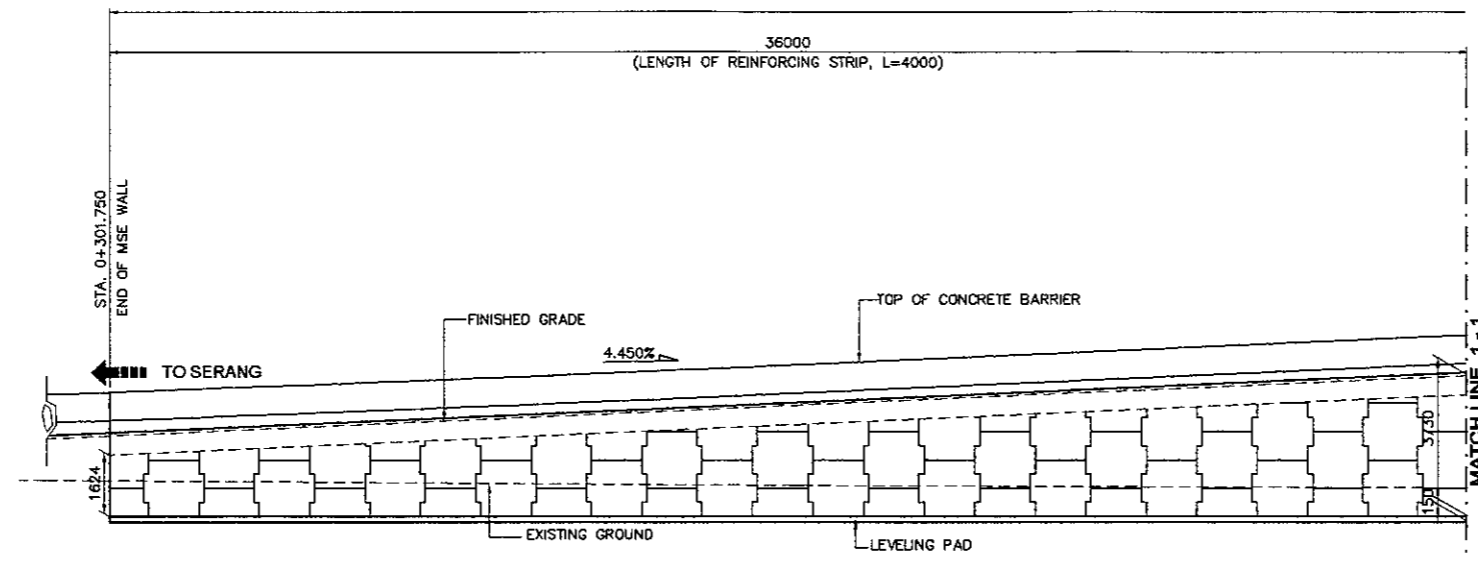


STANDARD DETAIL OF CONCRETE RAILING
 AT M. S. E. WALL



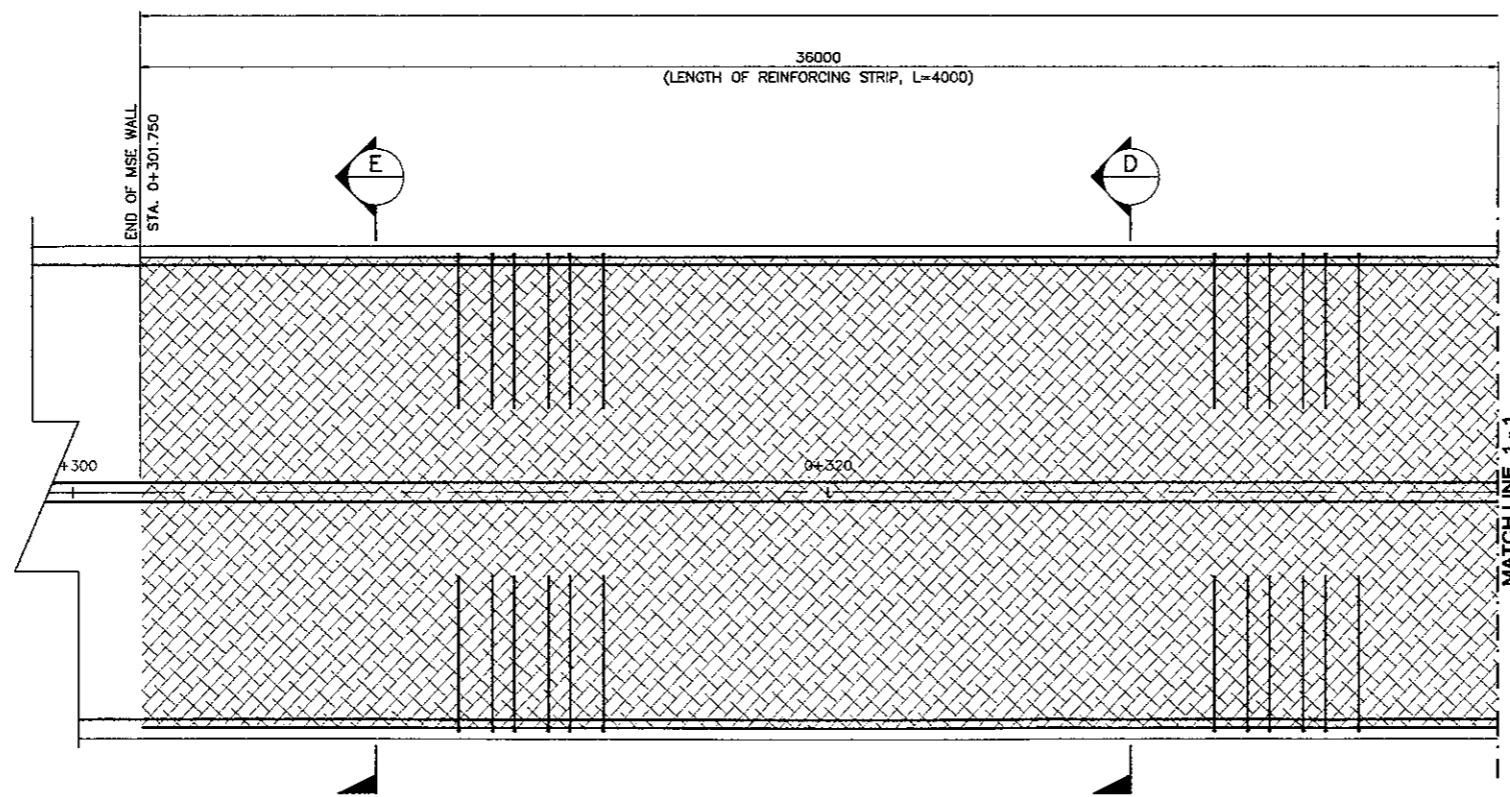
STANDARD DETAIL OF CONCRETE RAILING
 AT APPROACH SLAB

DESIGNED BY		CHECKED BY		SUBMITTED BY	
Name	T. OKUMURA	Name	T. OKUMURA	Name	M. KIUCHI
Sign		Sign		Sign	
Date		Date		Date	



2 ELEVATION

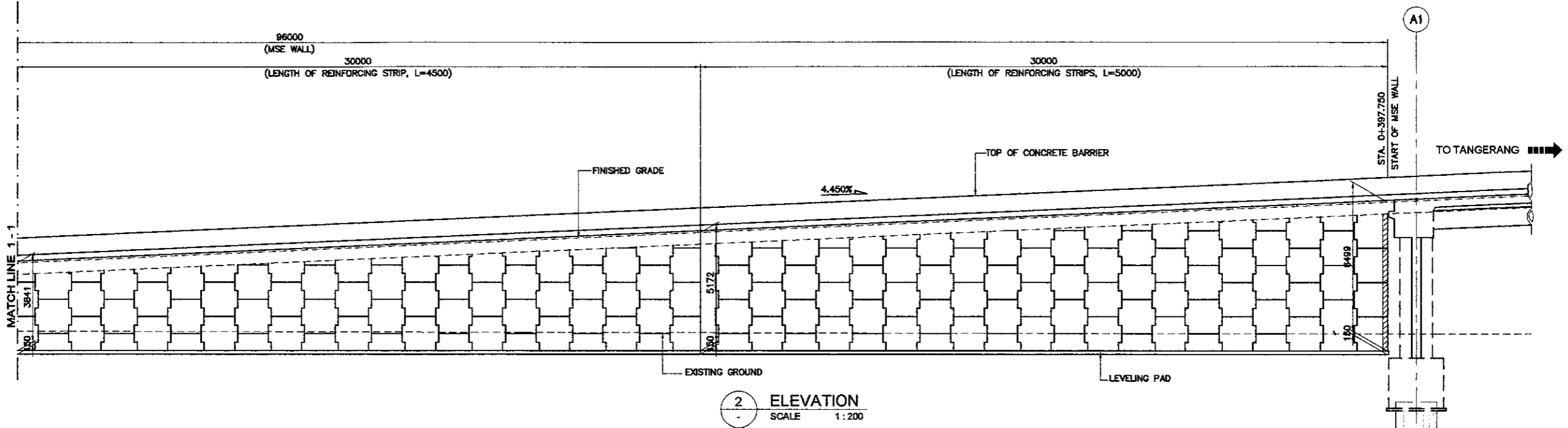
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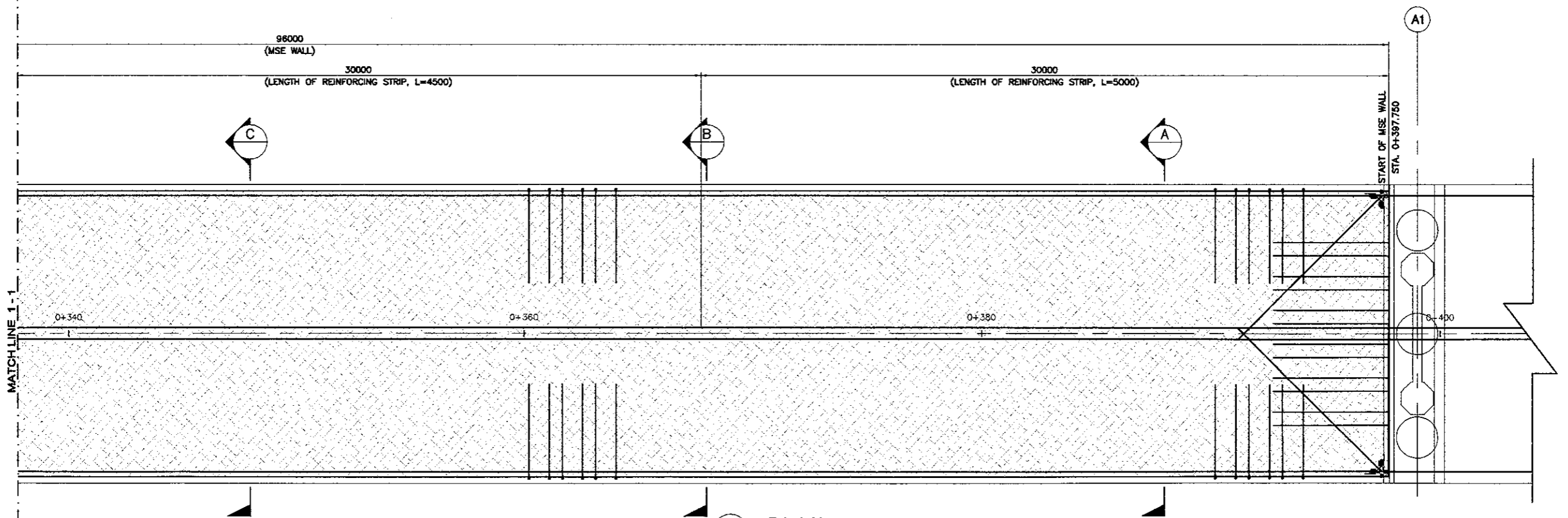
1 PLAN

 SCALE 1:200

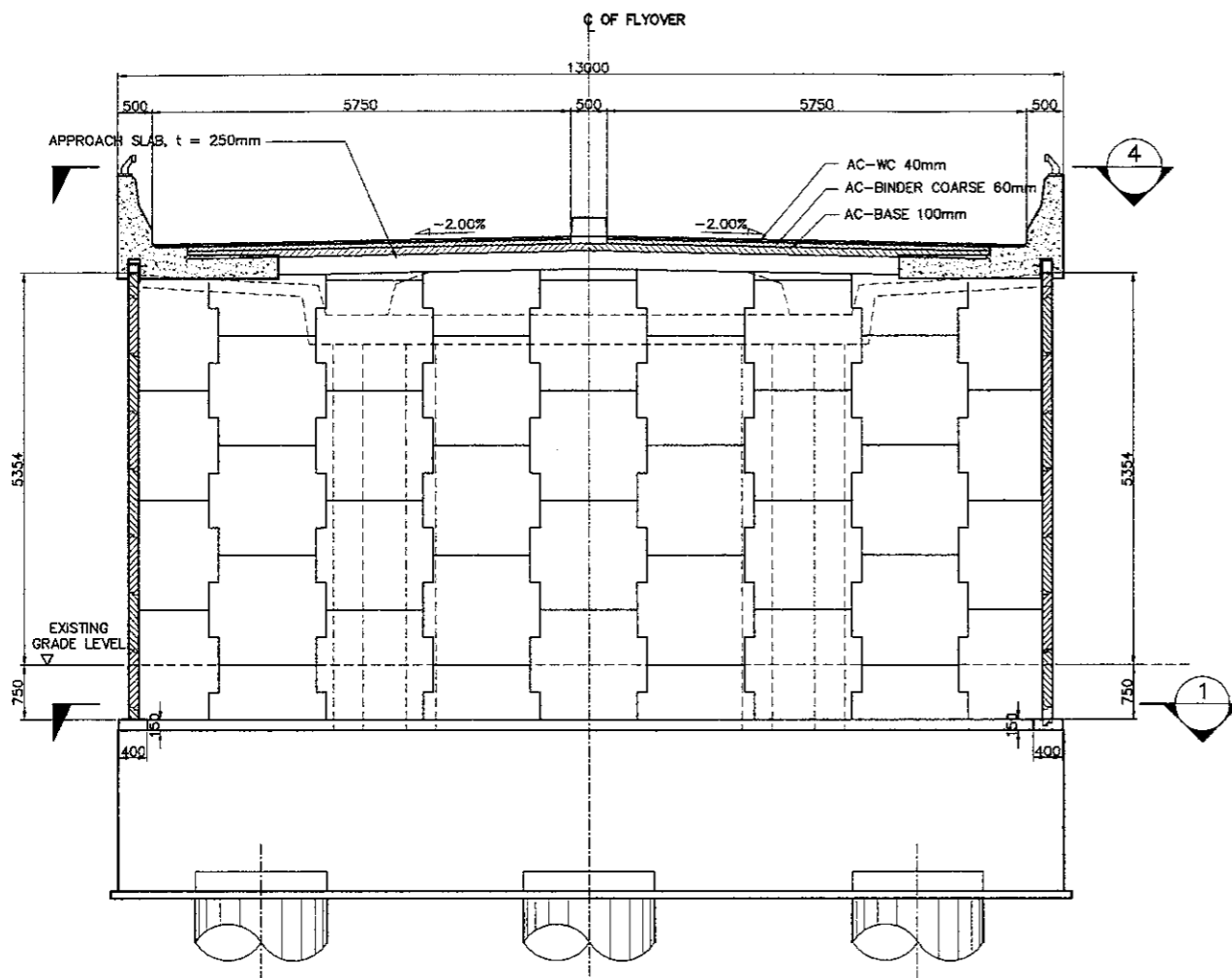
DESIGNED BY		CHECKED BY		SUBMITTED BY	
Name	T. OKUMURA	Name	T. OKUMURA	Name	M. KIUCHI
Sign		Sign		Sign	
Date		Date		Date	



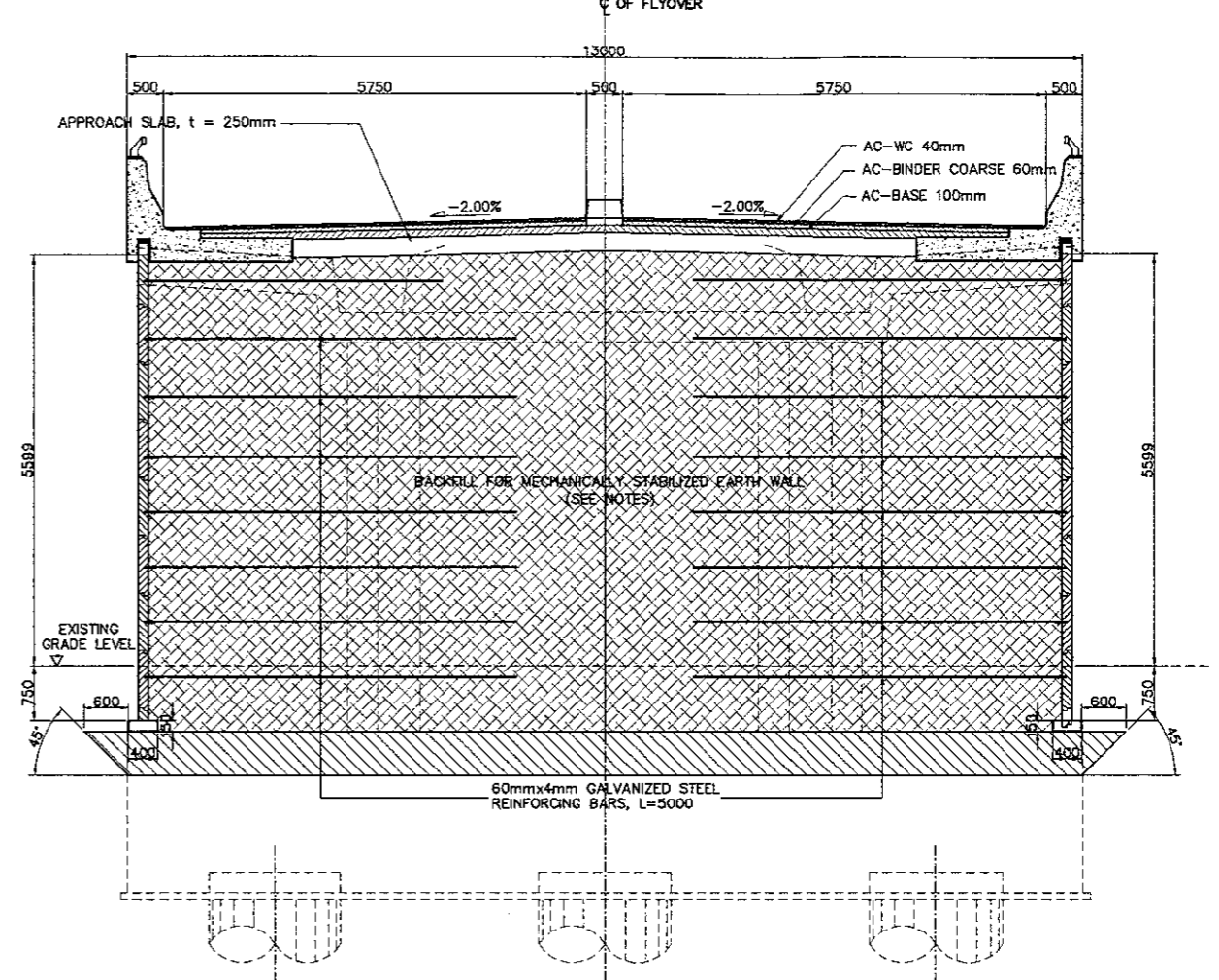
2 ELEVATION
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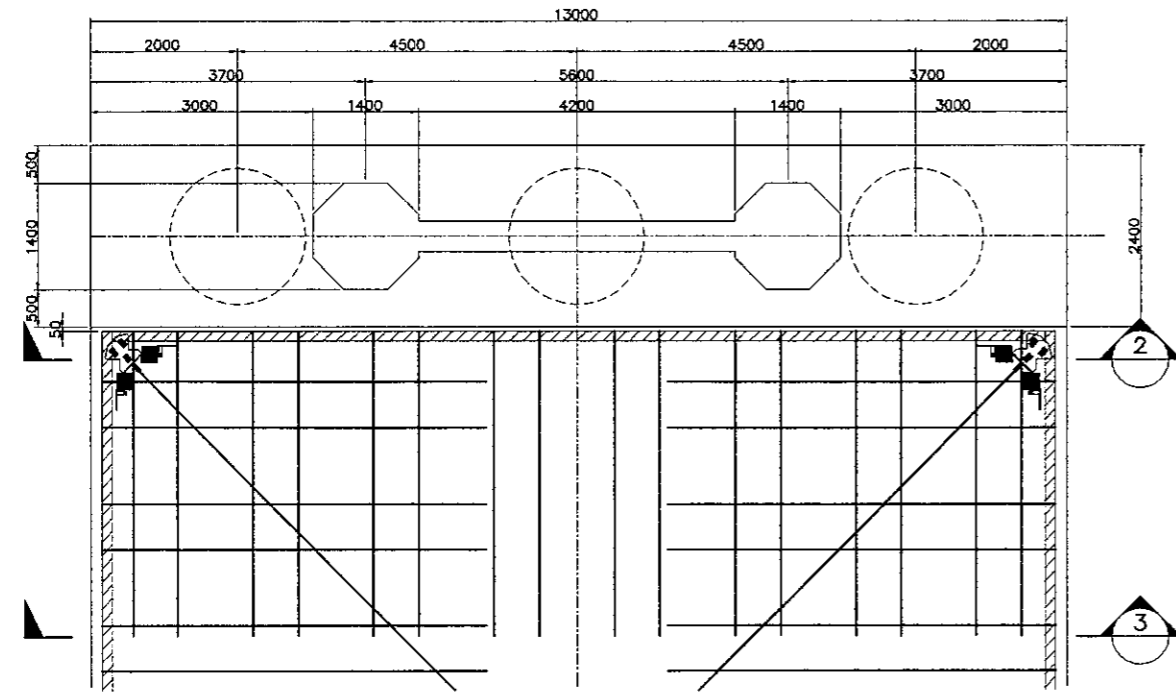
1 PLAN
 SCALE 1 : 200



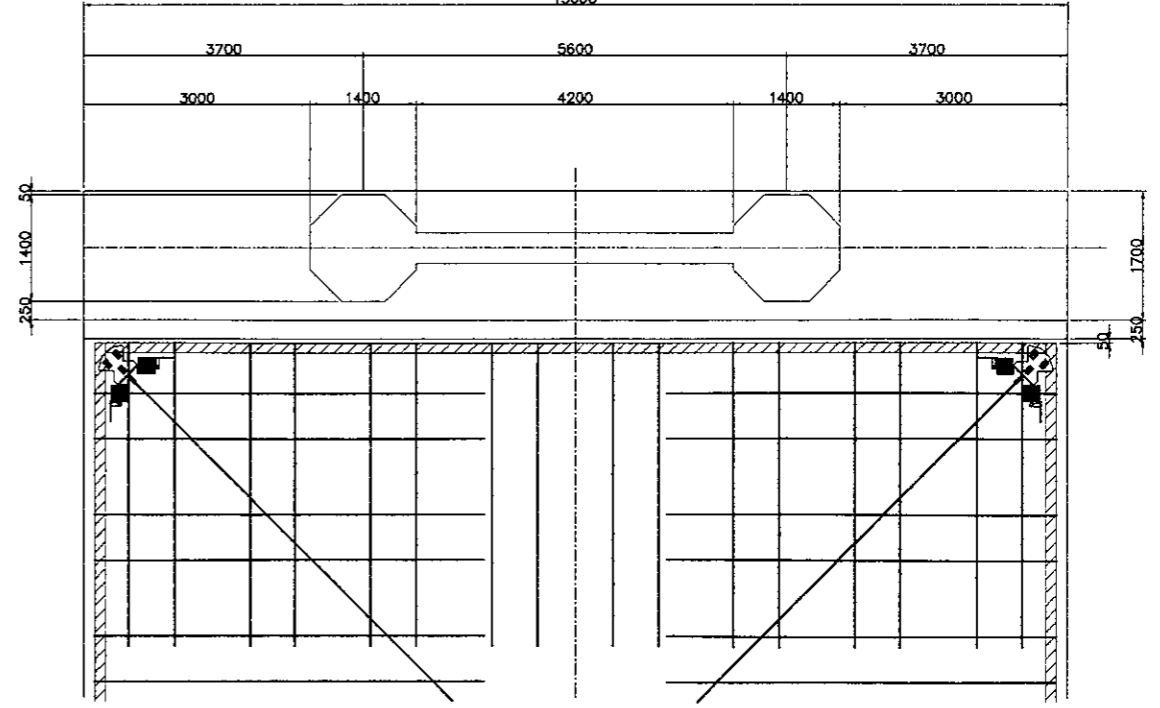
2 SECTION
 SCALE 1:100



3 SECTION
 SCALE 1:100

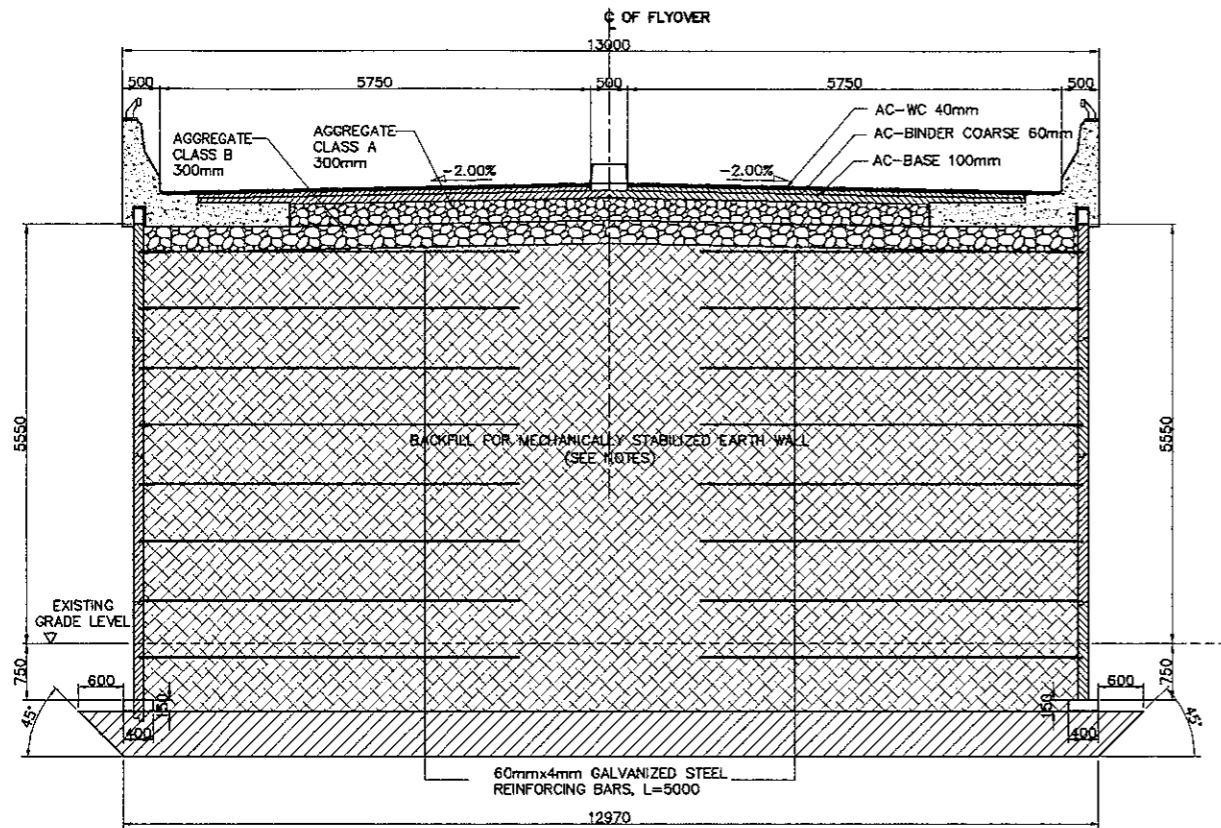


1 SECTION
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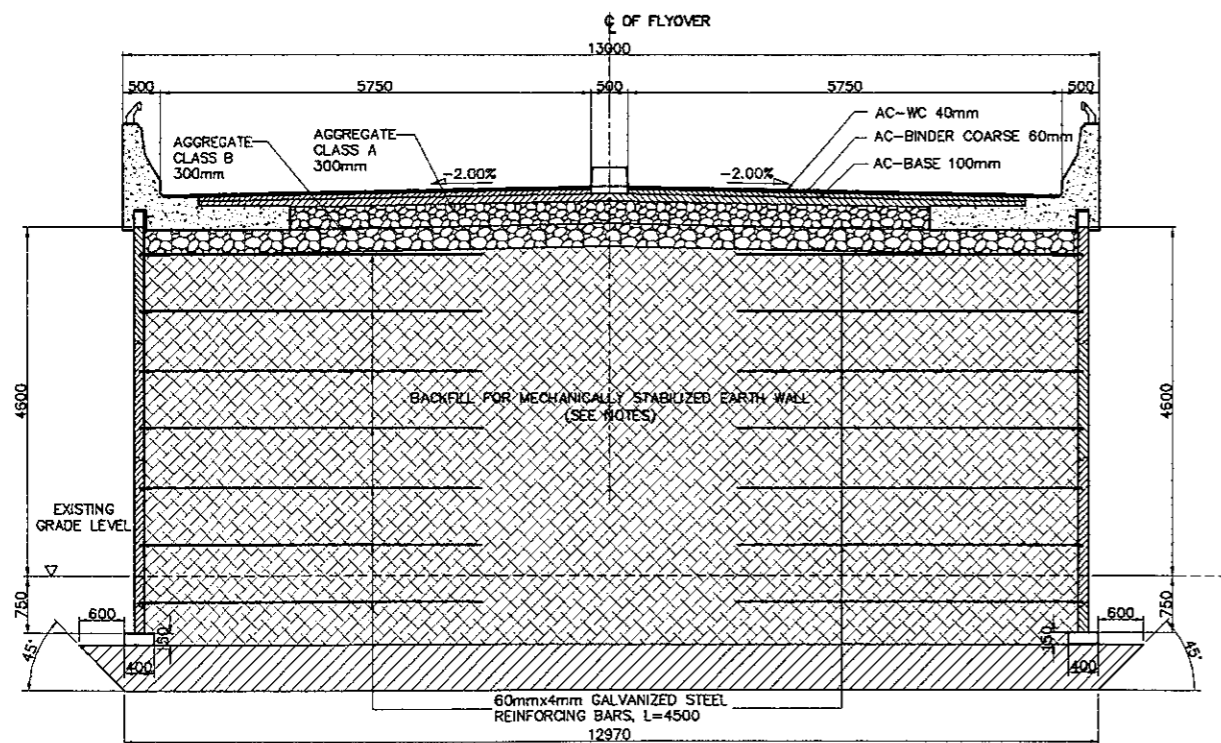


4 SECTION
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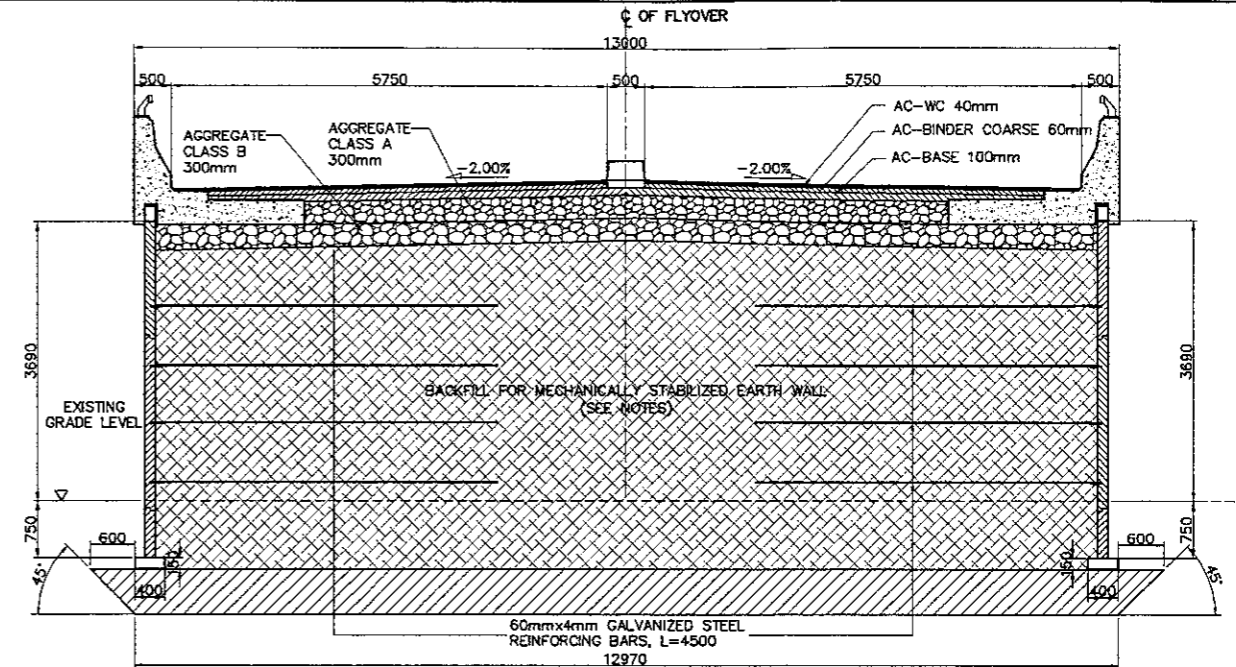
DESIGNED BY	CHECKED BY	SUBMITTED BY
Name T. OKUMURA	Name T. OKUMURA	Name M. KIUCHI
Sign	Sign	Sign
Date	Date	Date



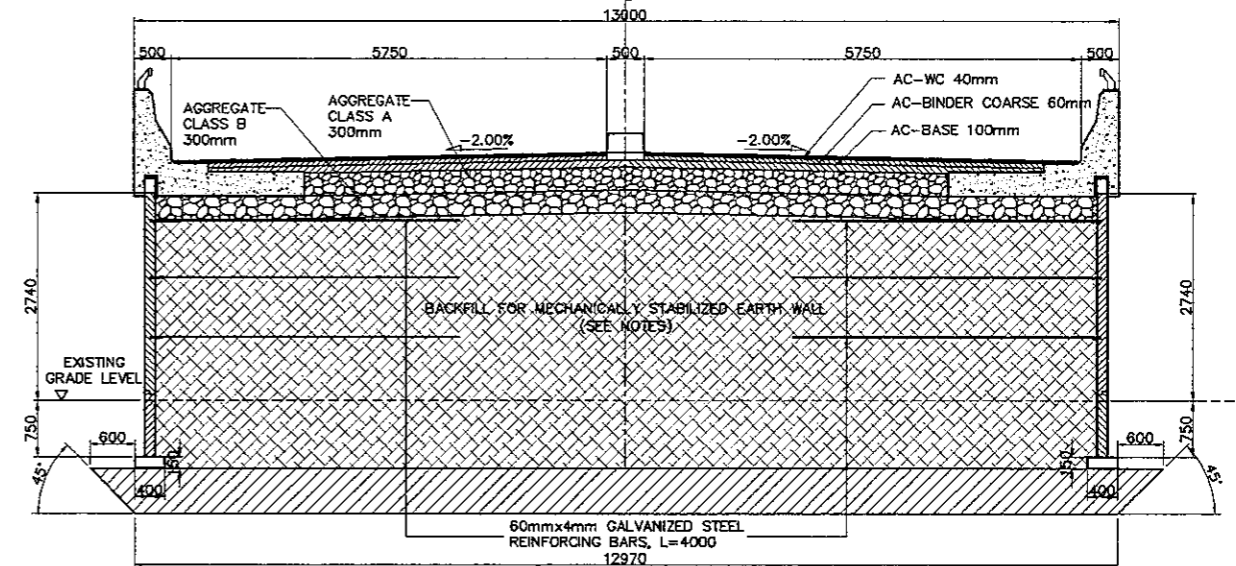
A SECTION
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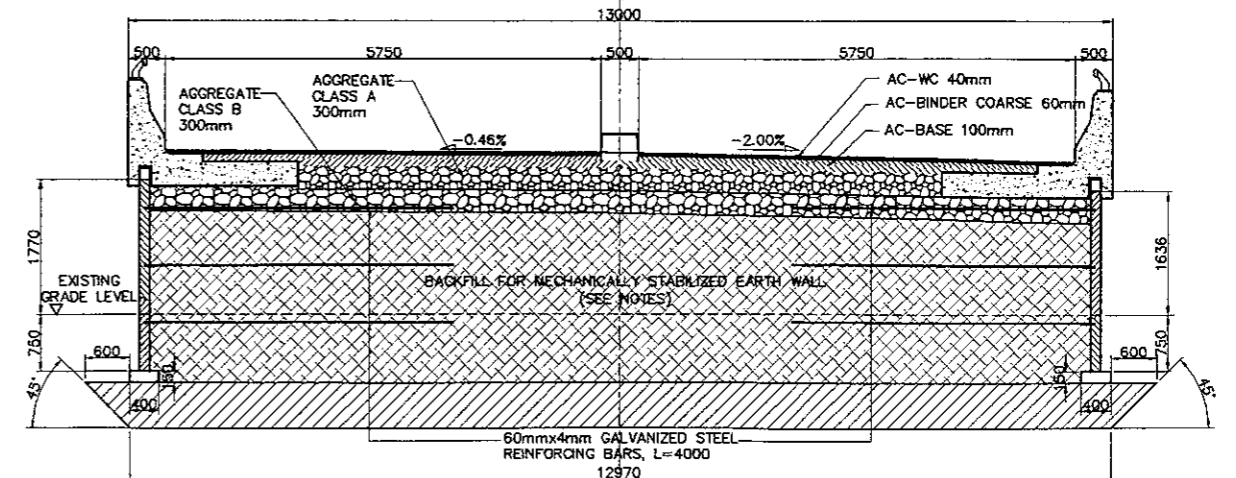
B SECTION
 SCALE 1:100



C SECTION
 SCALE 1:100

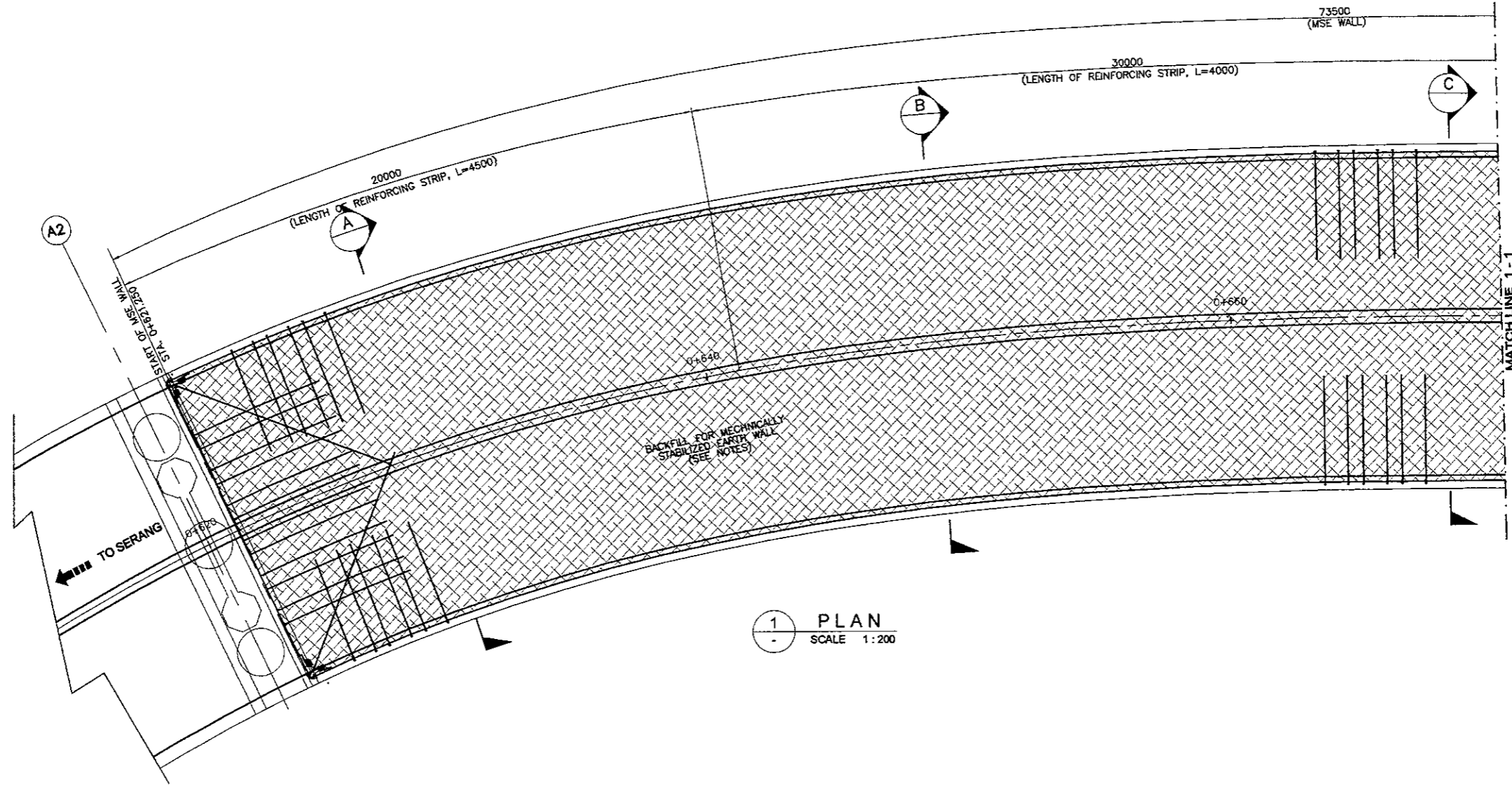
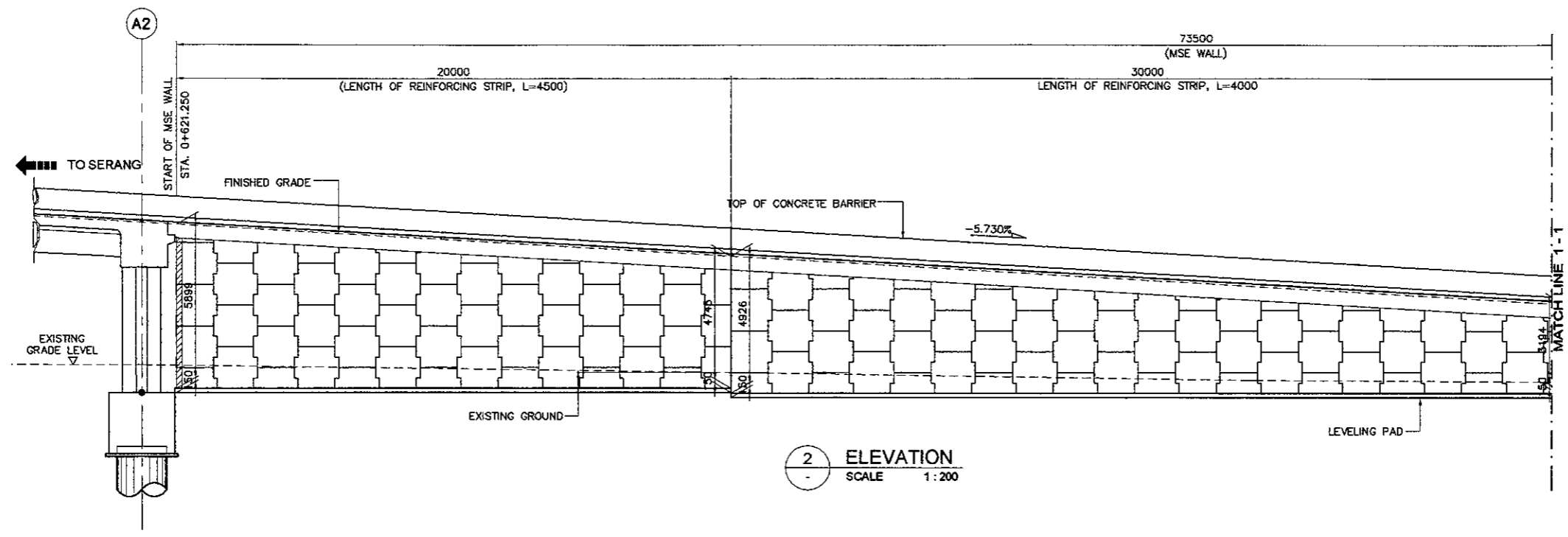


D SECTION
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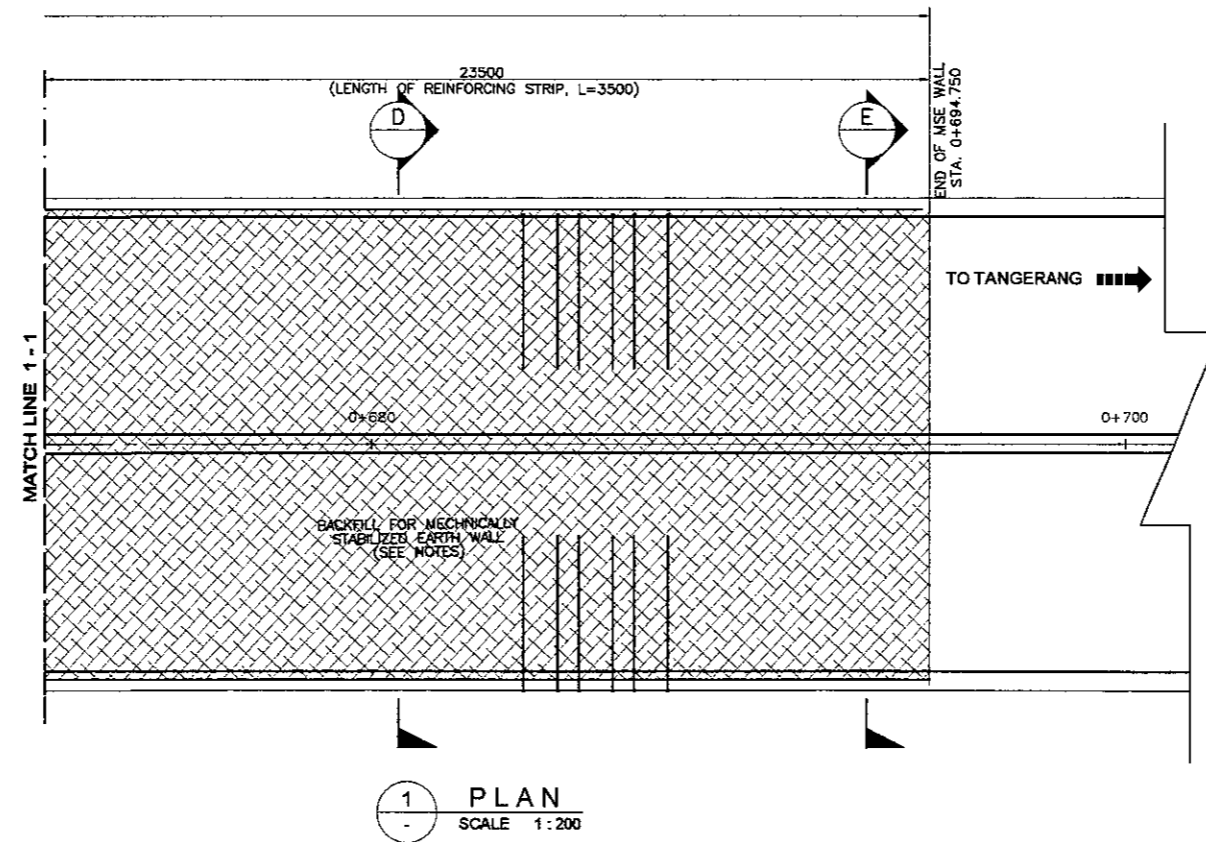
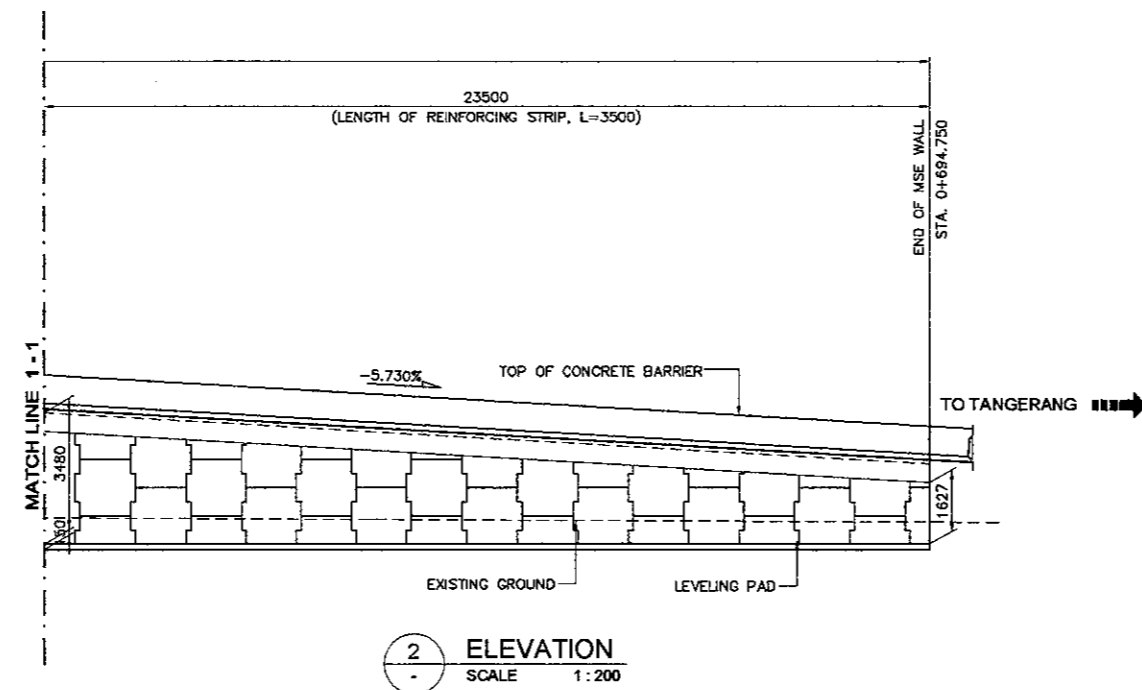


E SECTION
 SCALE 1:100

DESIGNED BY	CHECKED BY	SUBMITTED BY
Name: T. OKUMURA	Name: T. OKUMURA	Name: M. KIUCHI
Sign: _____	Sign: _____	Sign: _____
Date: _____	Date: _____	Date: _____

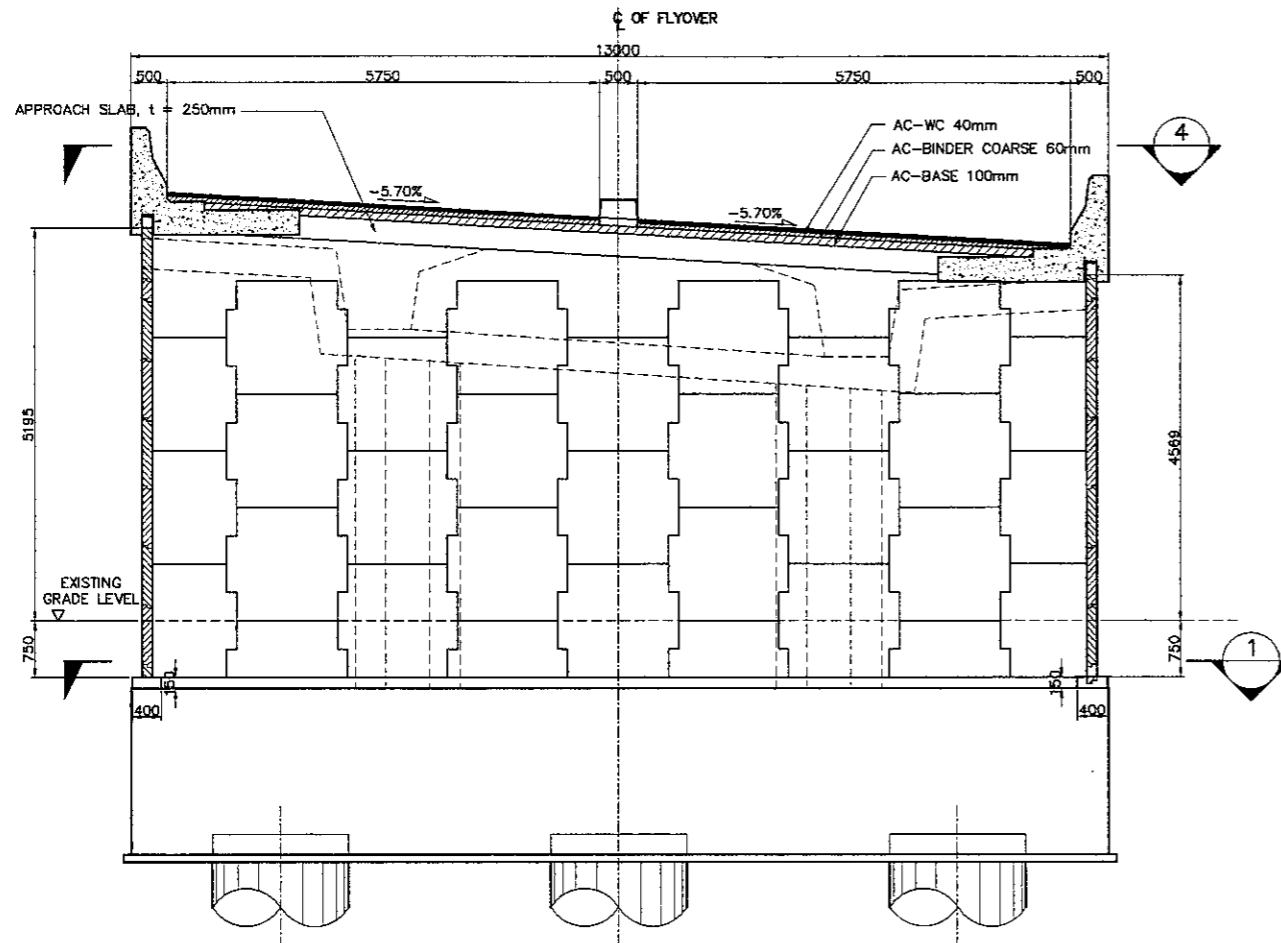


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Name	T. OKUMURA	Name	T. OKUMURA	Name	M. KIUCHI
Sign		Sign		Sign	
Date		Date		Date	

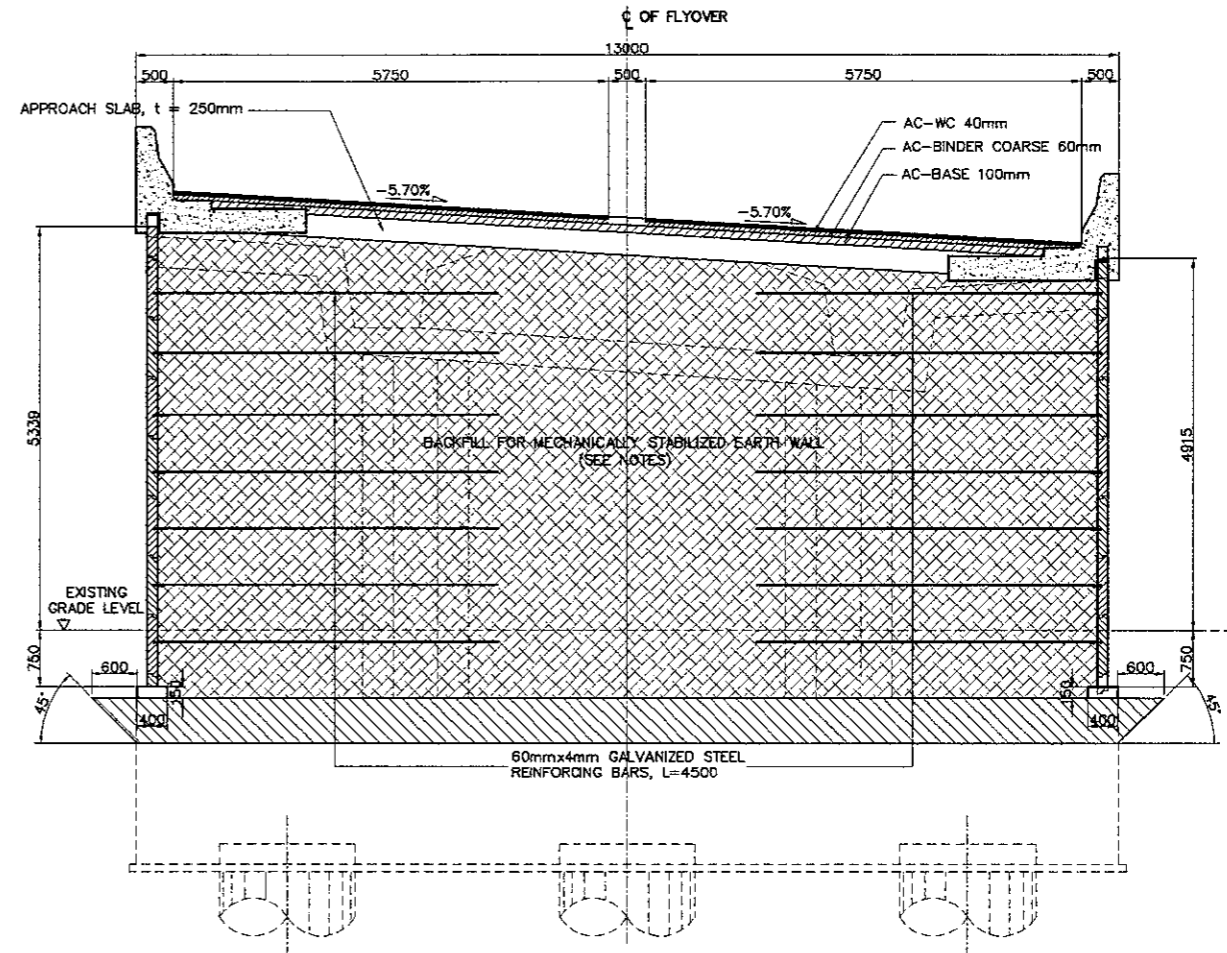


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Name T. OKUMURA	Name T. OKUMURA	Name M. KIUCHI
Sign	Sign	Sign
Date	Date	Date

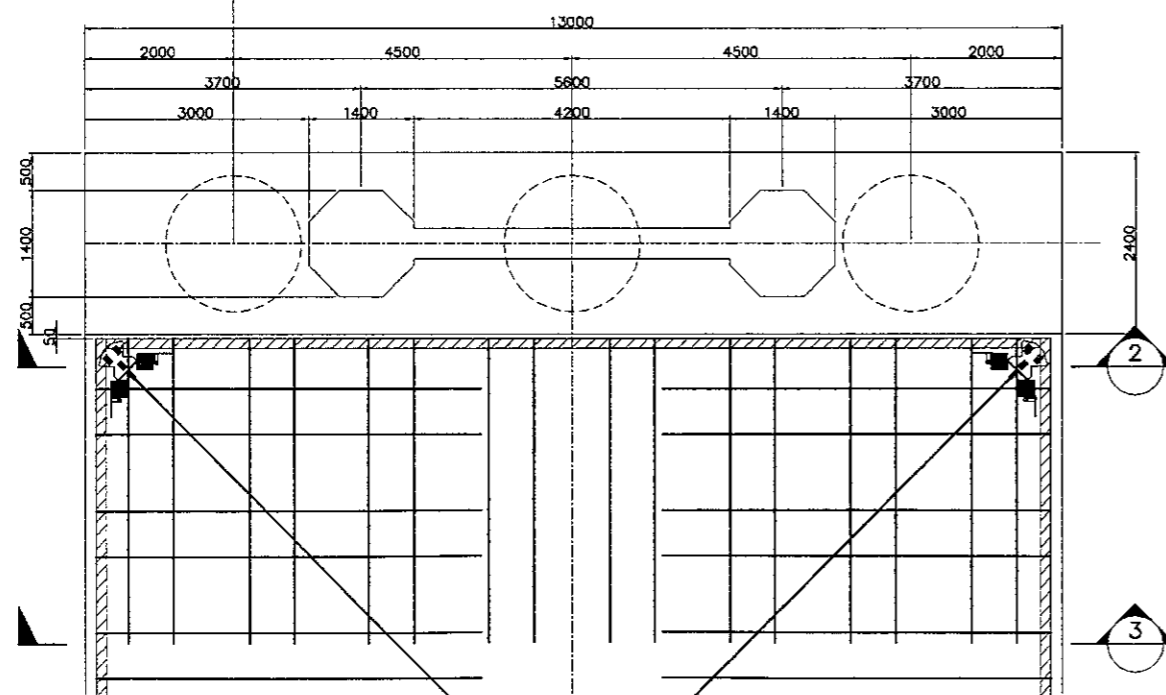
APPROVED BY: Ir. HERRY VAZA M,Eng.Sc
 NIP. : 110038400



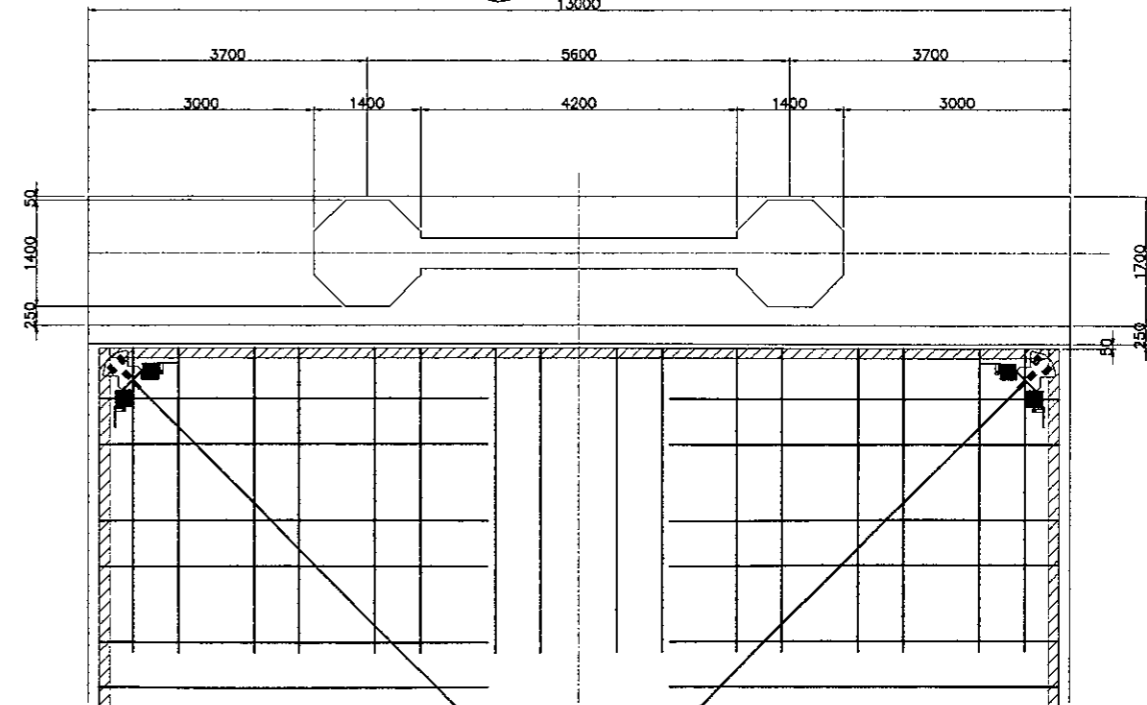
2 SECTION
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3 SECTION
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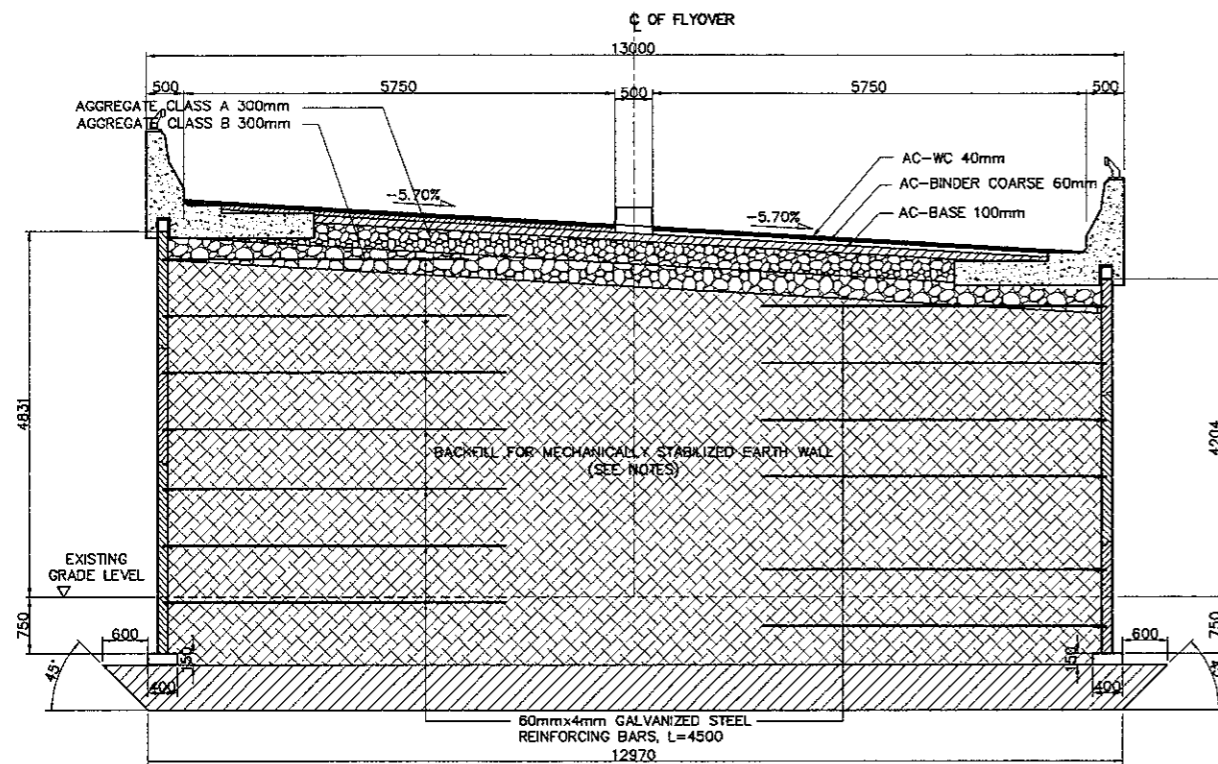
1 SECTION
 SCALE 1:100



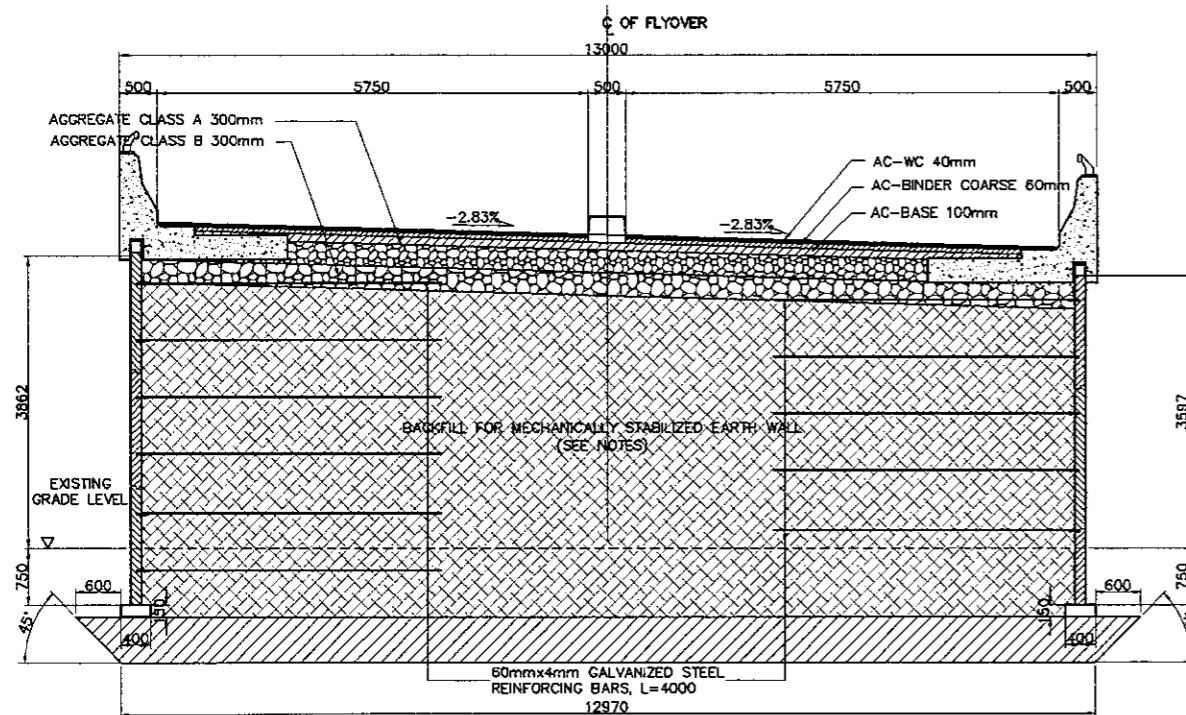
4 SECTION
 SCALE 1:100

DESIGNED BY	CHECKED BY	SUBMITTED BY
Name T. OKUMURA	Name T. OKUMURA	Name M. KIUCHI
Sign	Sign	Sign
Date	Date	Date

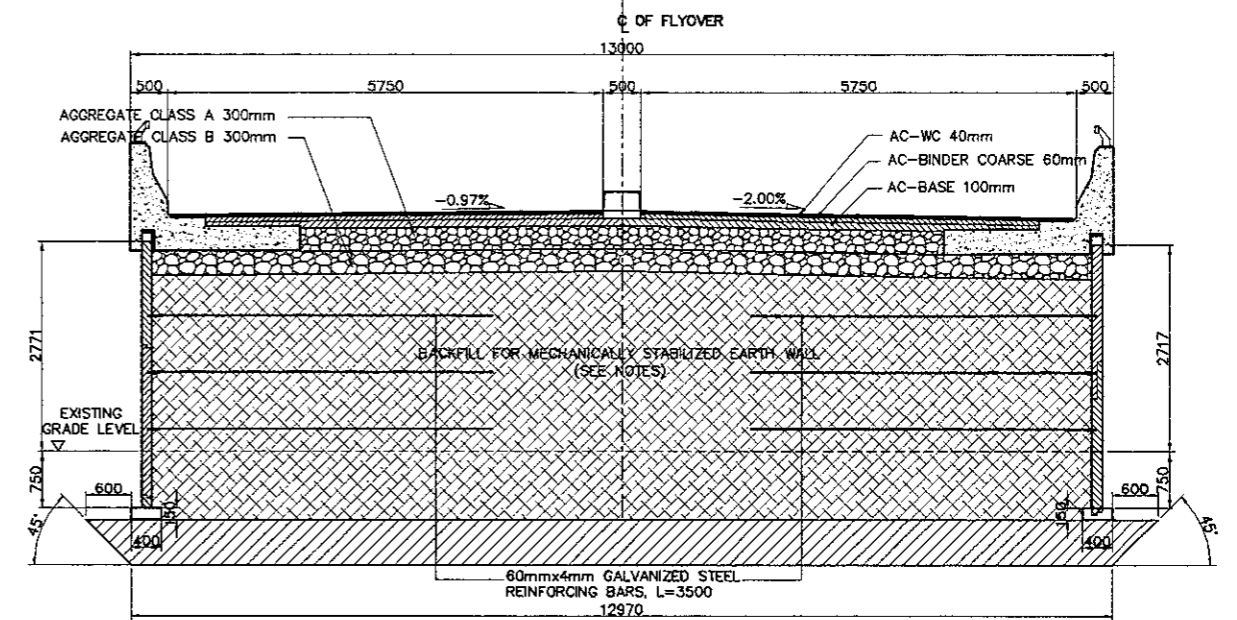
APPROVED BY
 Ir. HERRY VAZA M,Eng.Sc
 NIP. : 110038400



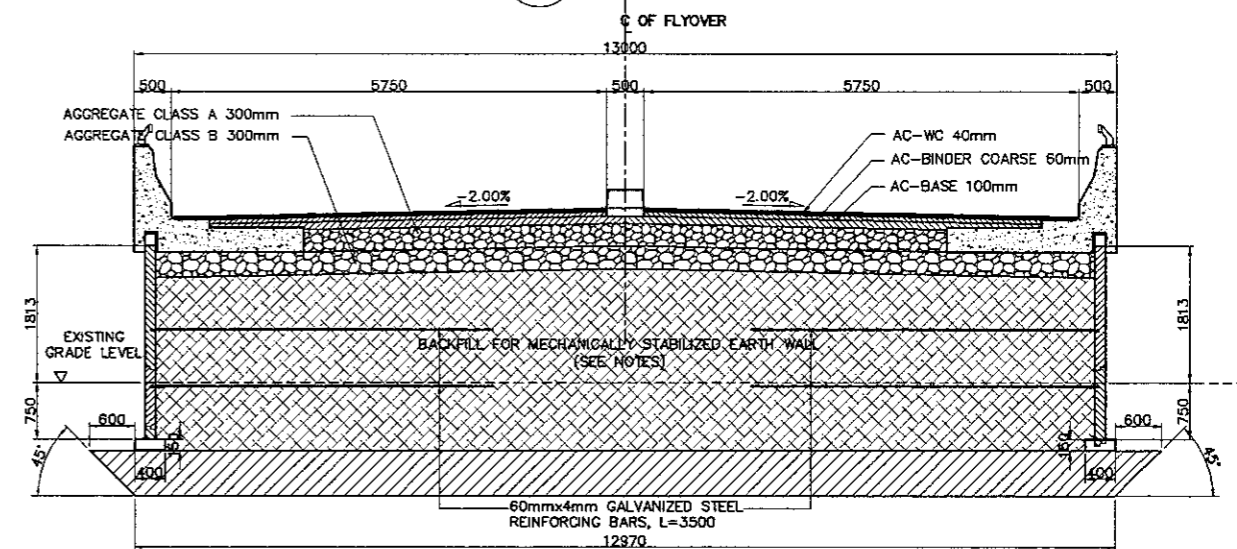
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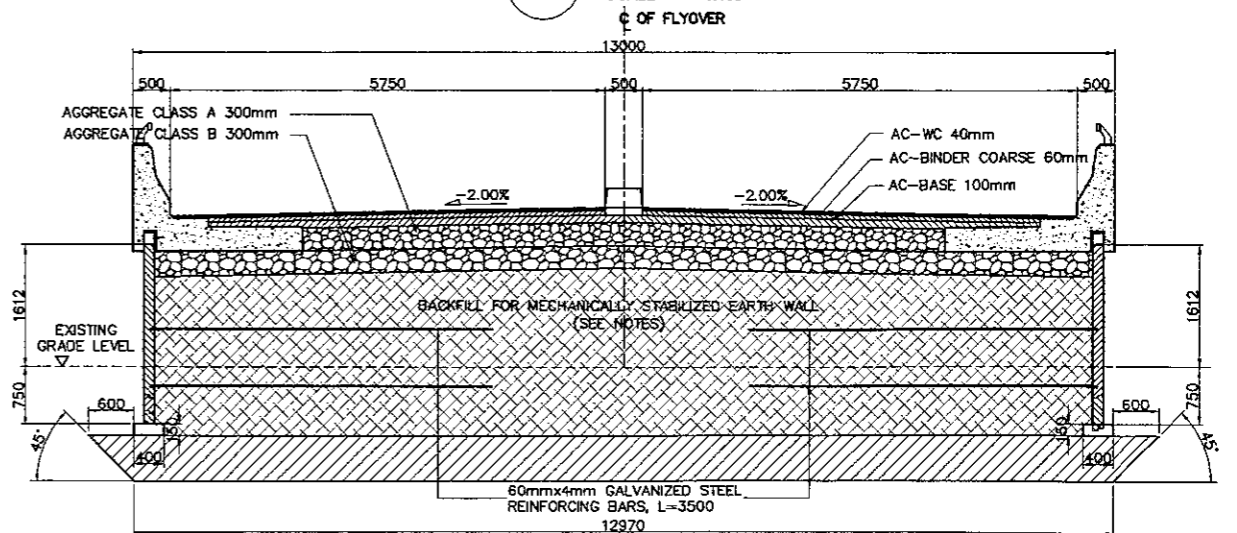
B SECTION
 SCALE 1:100



C SECTION
 SCALE 1:100



D SECTION
 SCALE 1:100



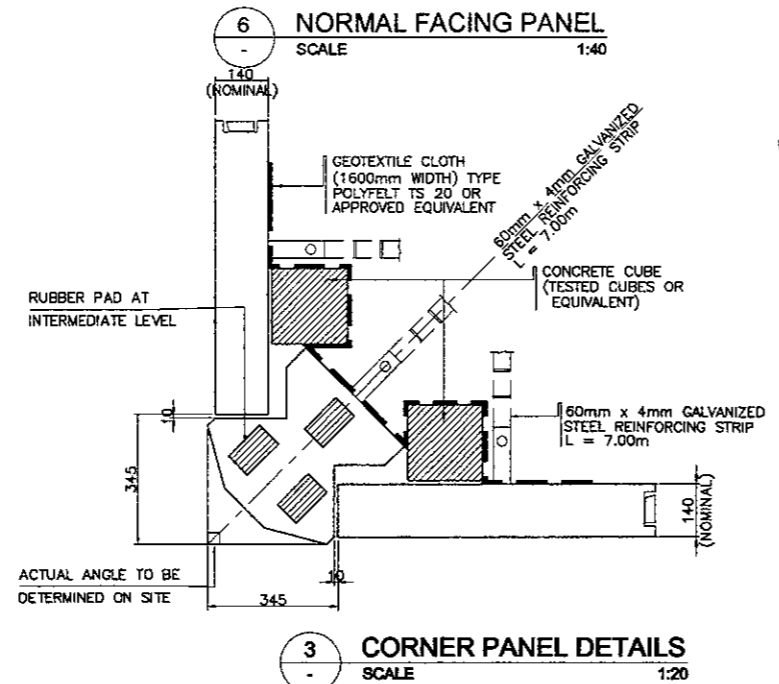
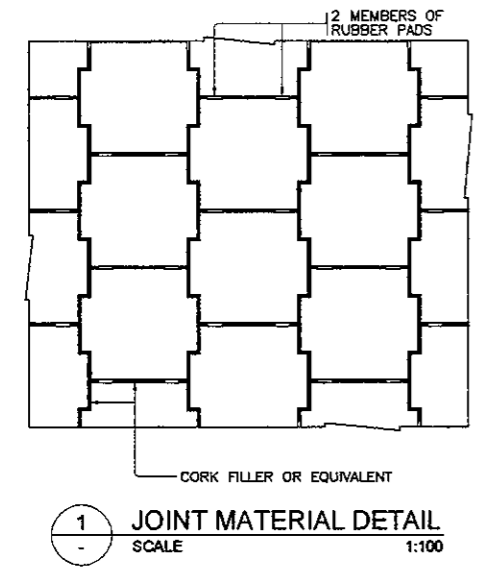
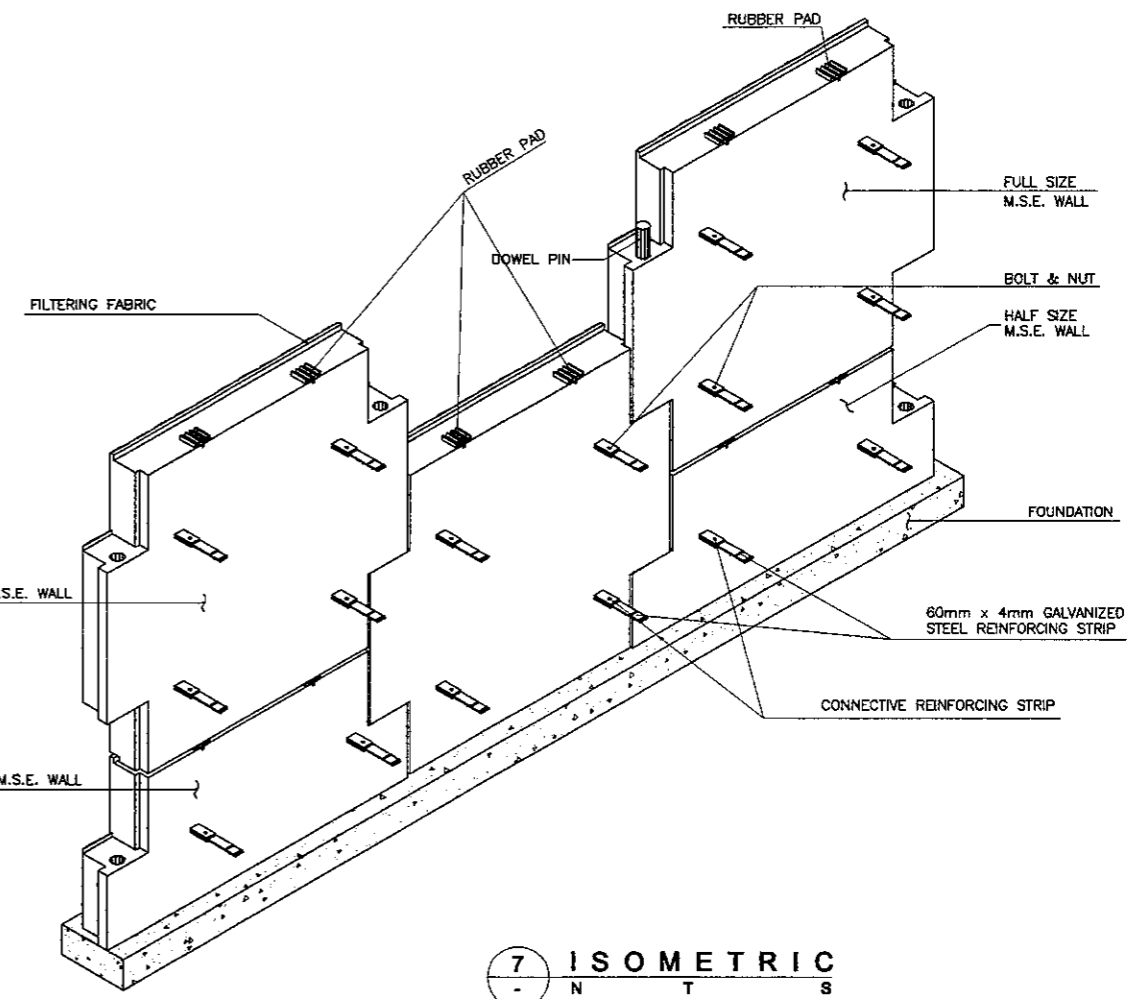
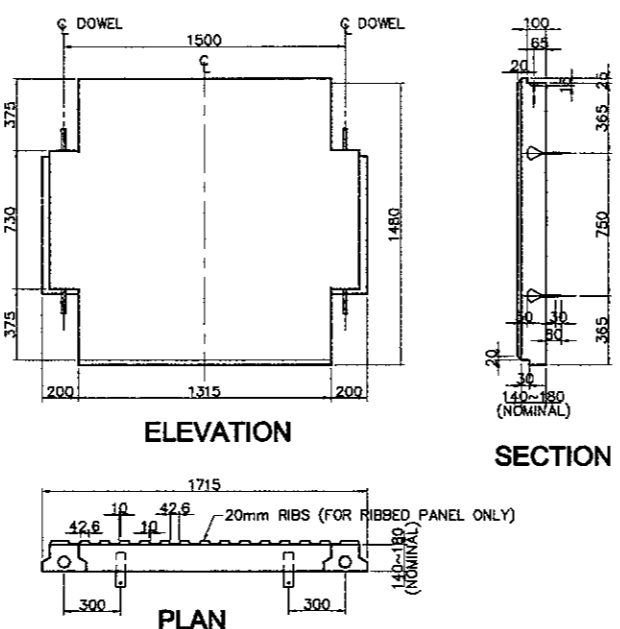
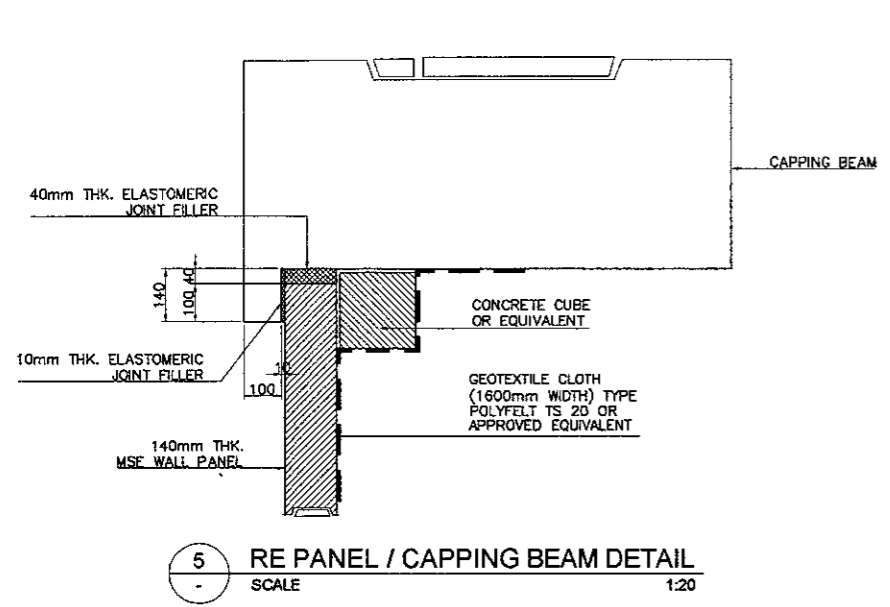
E SECTION
 SCALE 1:100

DESIGNED BY	CHECKED BY	SUBMITTED BY
Name: T. OKUMURA	Name: T. OKUMURA	Name: M. KIUCHI
Sign:	Sign:	Sign:
Date:	Date:	Date:

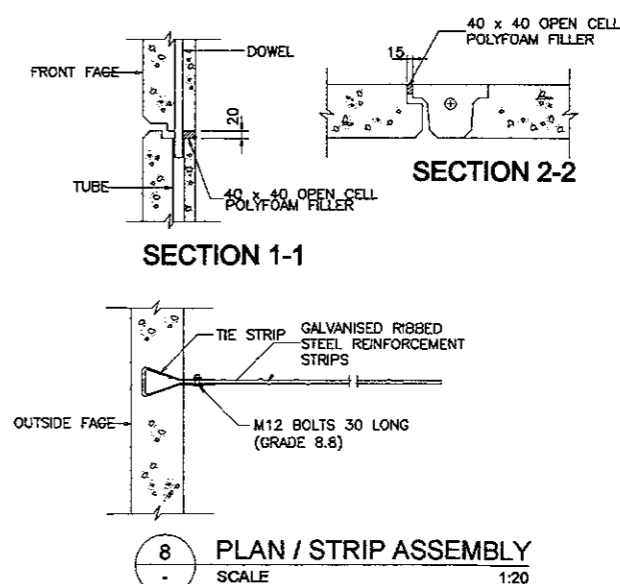
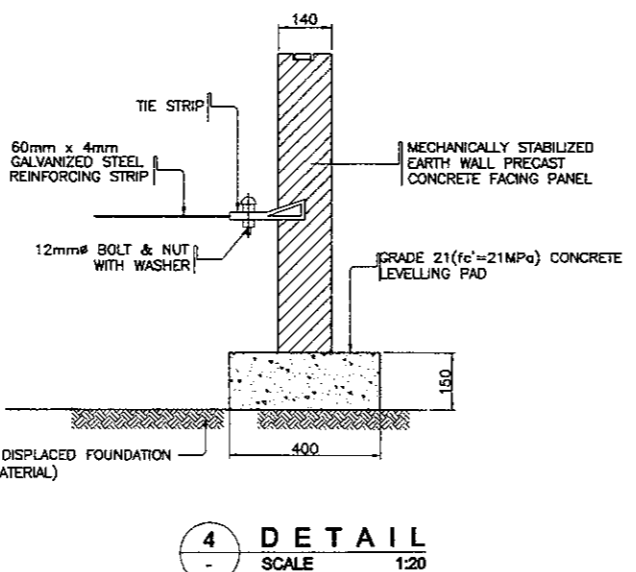
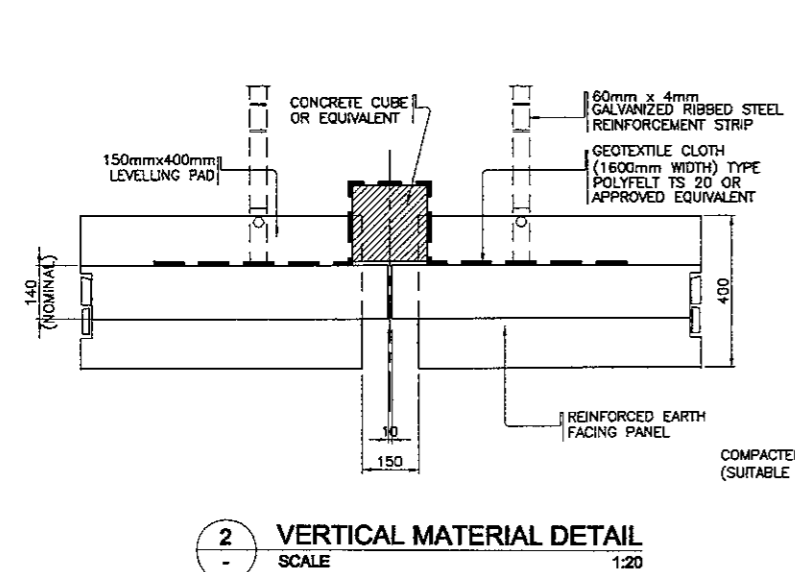
SCALE :
 AS SHOWN
 FULL SIZE A3

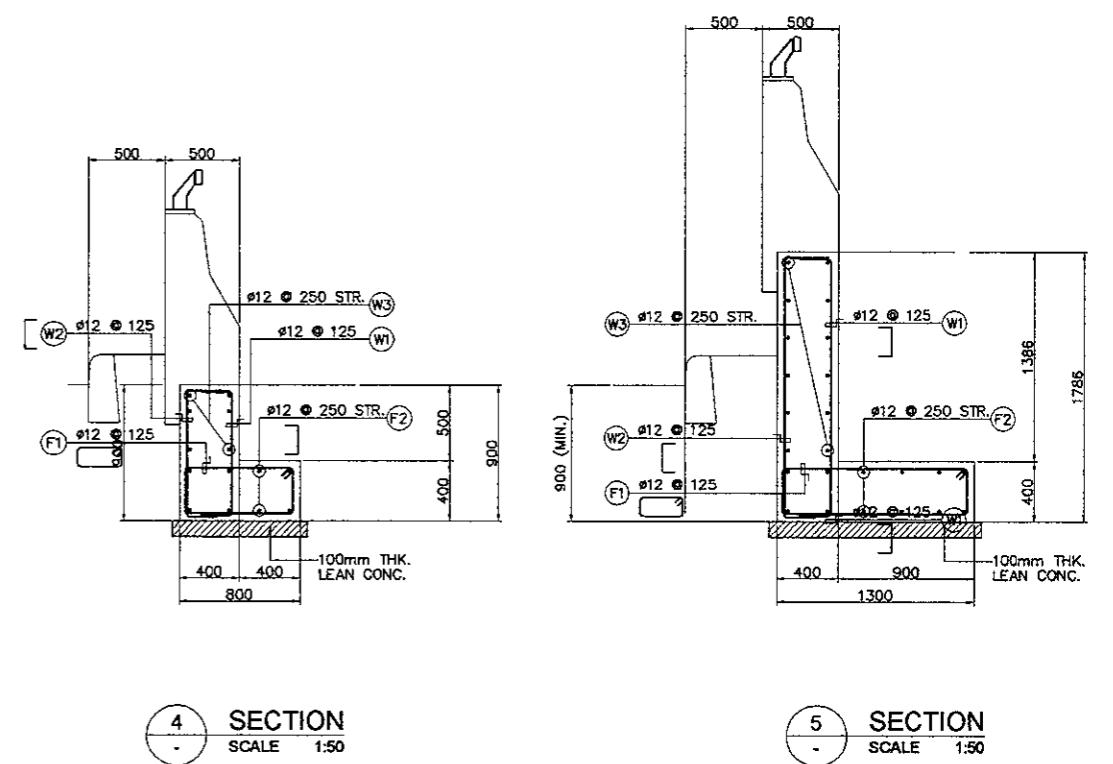
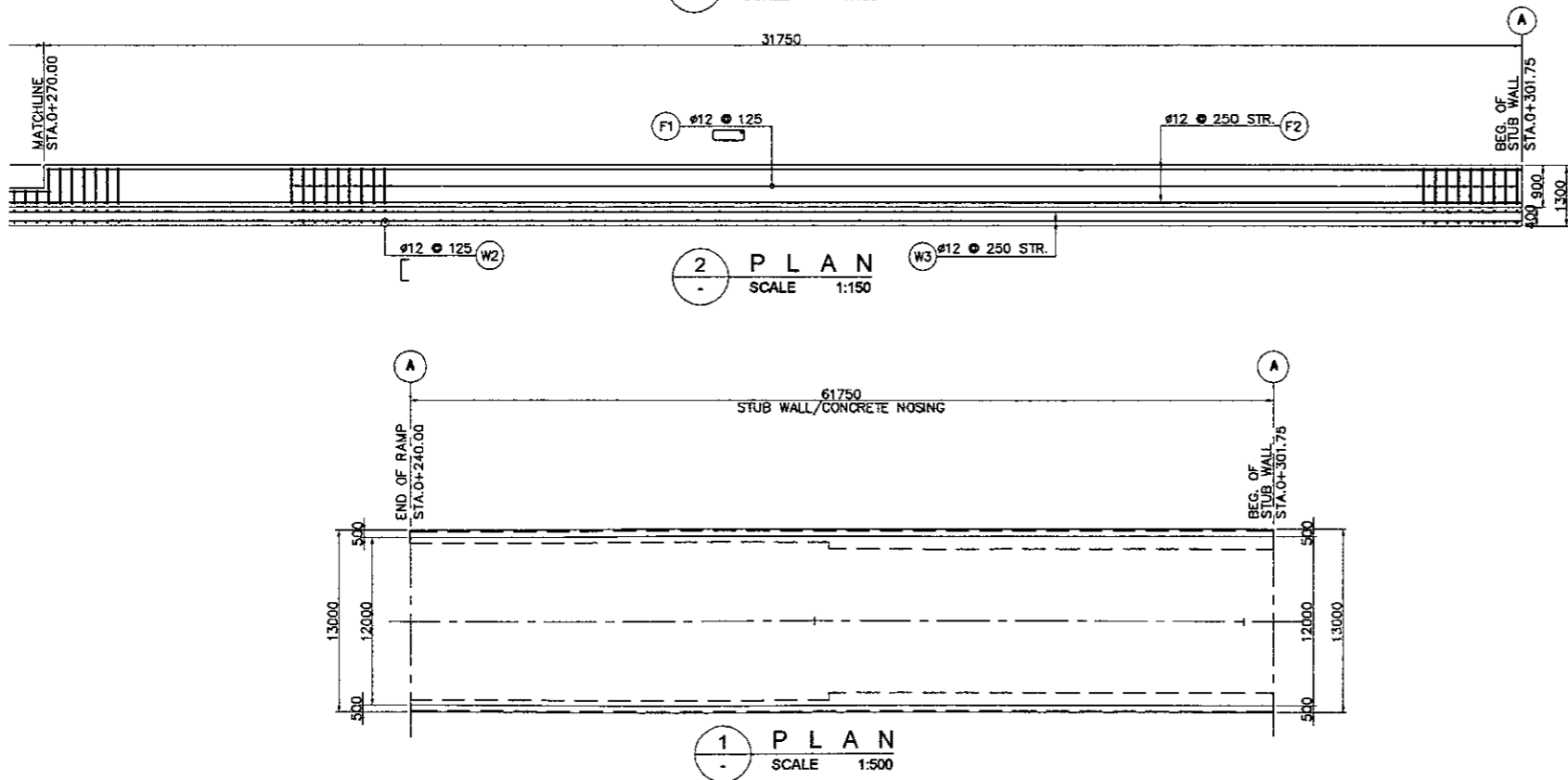
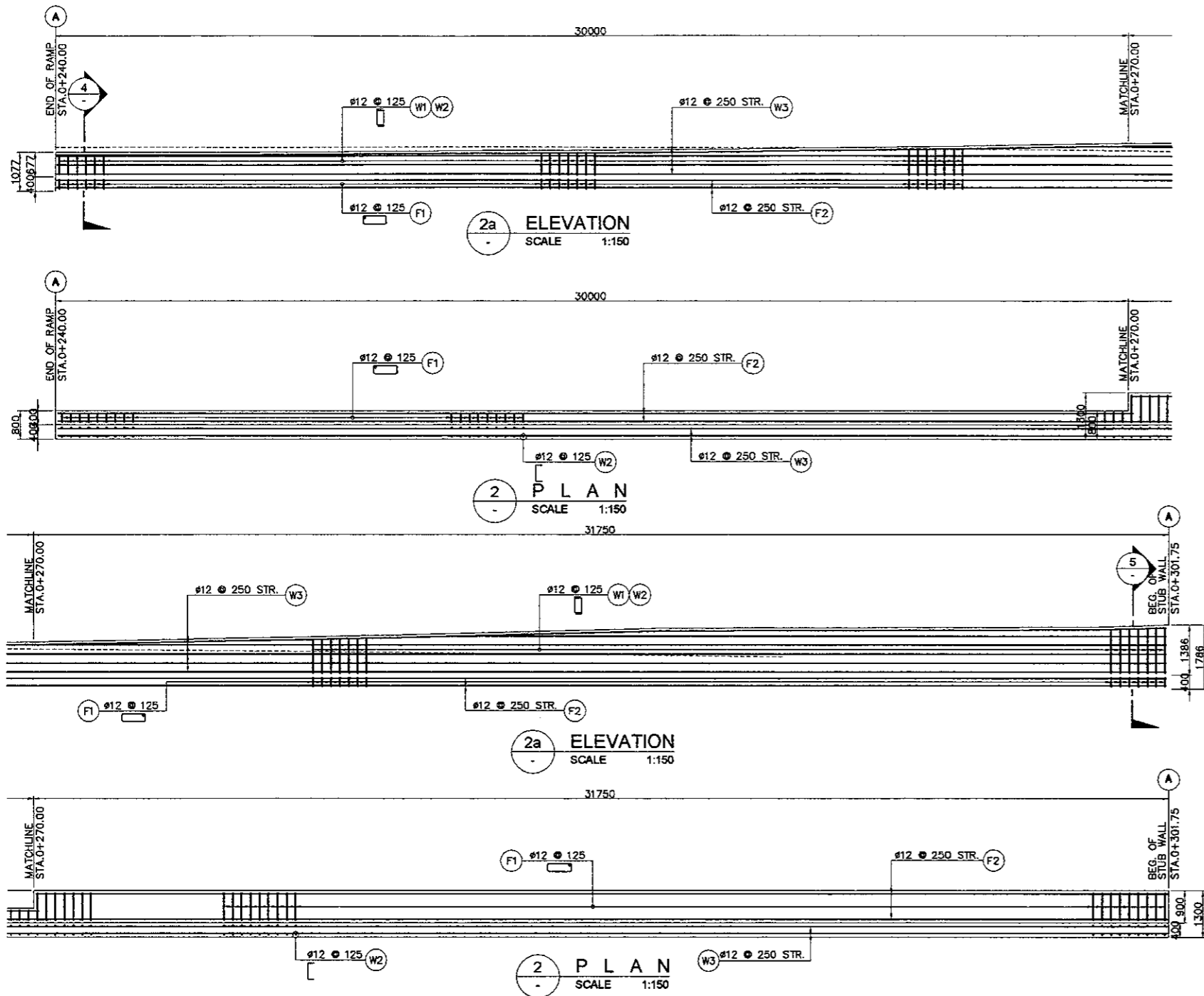
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BMS-010

SHEET NO :
 10 / 12



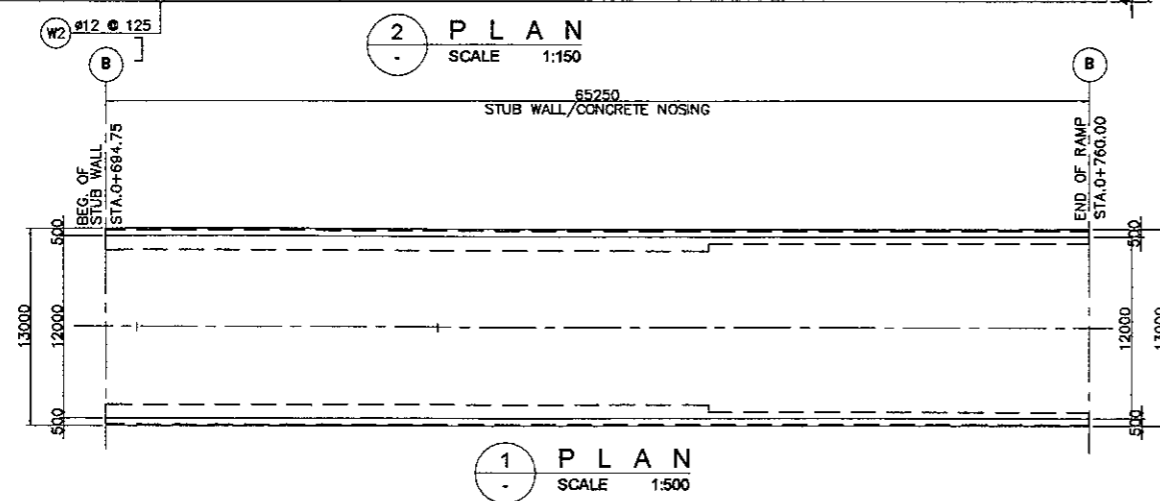
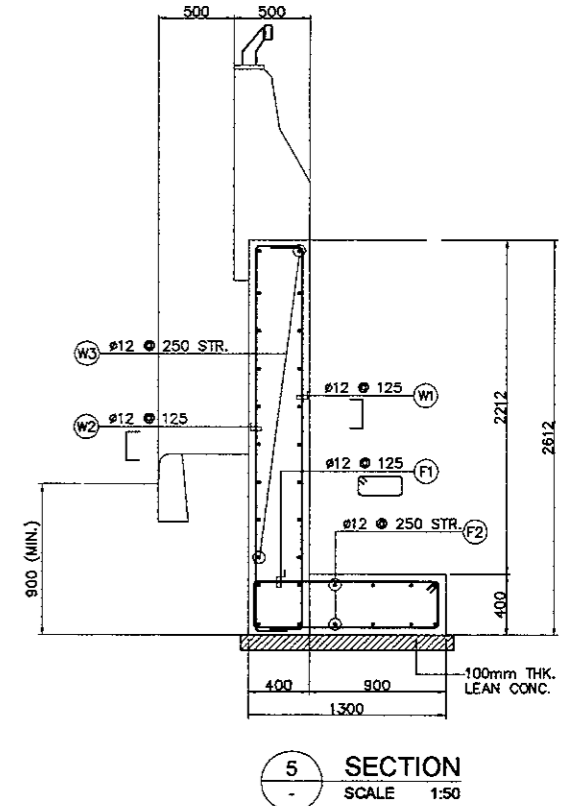
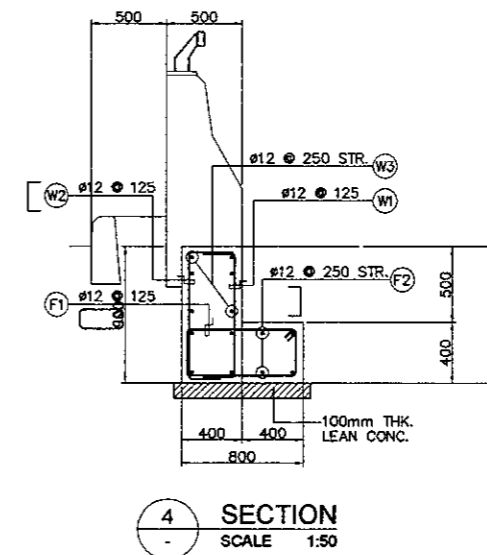
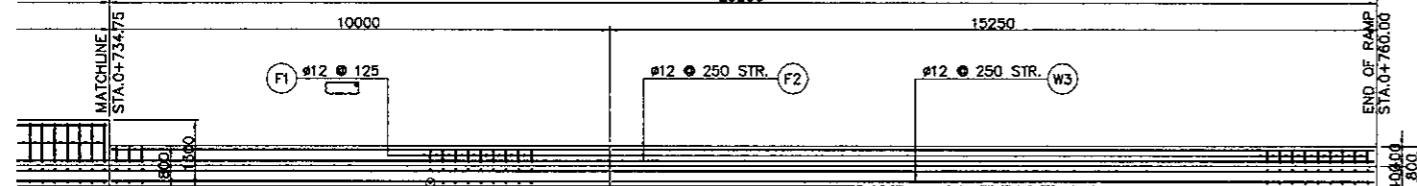
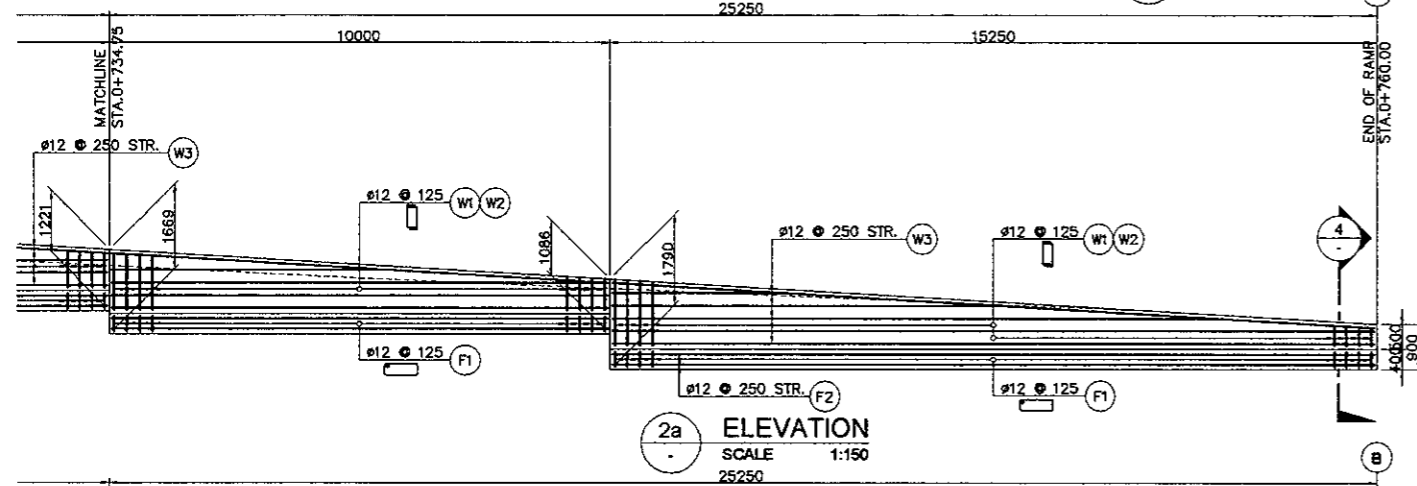
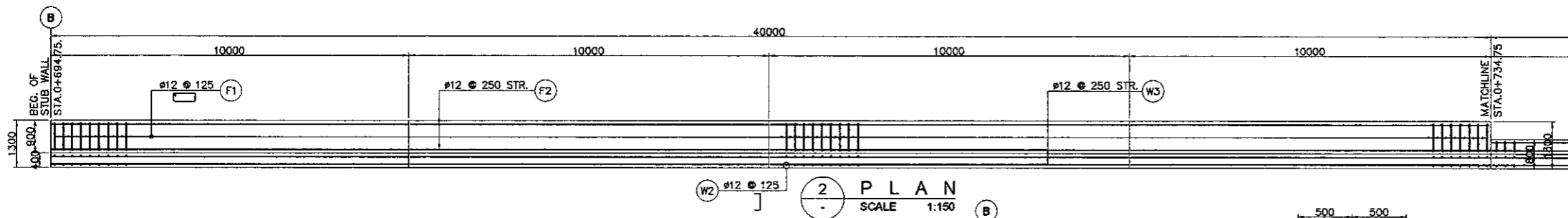
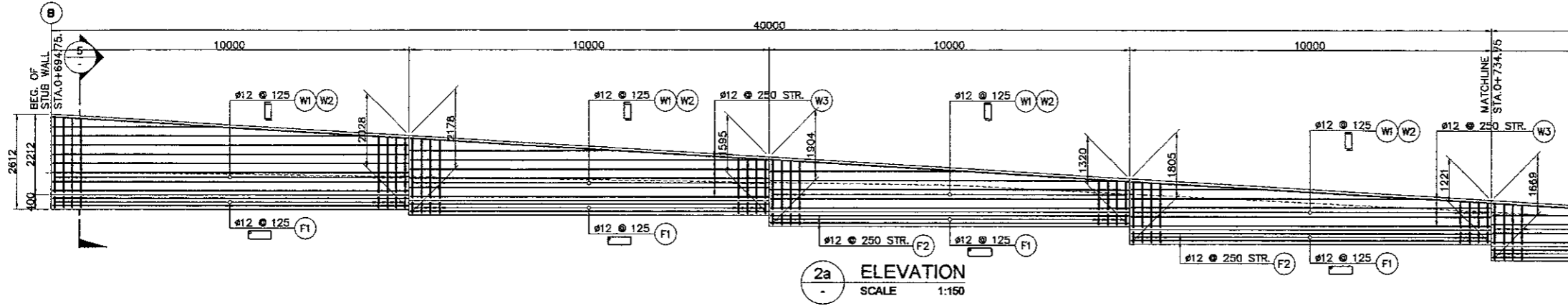
NOTES:
 1. REINFORCING BARS FOR THE PC-PANELS SHALL BE PROVIDED / DESIGN BY THE MANUFACTURER / SUPPLIER FOR APPROVAL OF THE ENGINEER PRIOR TO CASTING AND / OR FABRICATION.





BAR BENDING DIAGRAM														
SCHEDULE OF REINFORCEMENT														
LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION (mm) OUT TO OUT						LENGTH (mm)	NO. REQ'D.	UNIT WT (kg/m)	WEIGHT (kg)	REMARKS
				a	b	c	d	e	f					
STUBWALL (STA.0+240.00-STA.0+301.75) LEFT & RIGHT	W1	12	2	300	958	300				1558	990	0.888	1,370.00	b is ave.
	W2	12	2	300	958	300				1558	990	0.888	1,370.00	b is ave.
	W3	12	1	12000						12000	80	0.888	852.00	b is ave.
	W3a	12	1	3170						3170	16	0.888	45.00	
	F1	12	3	150	150	720	320	720	320	2380	482	0.888	1019.00	
	F1a	12	3	150	150	1220	320	720	320	3380	510	0.888	1531.00	
	F2	12	1	12000						12000	16	0.888	170.00	
	F2a	12	1	6860						6860	8	0.888	49.00	
	F3	12	1	12000						12000	24	0.888	256.00	
	F3a	12	1	8610						8610	12	0.888	92.00	
TOTAL WEIGHT = 6,754.00														

THE REINFORCEMENT SHOWN ON THIS TABLE IS FOR REFERENCE ONLY, THE CONTRACTOR SHOULD CHECKED AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.



BAR BENDING DIAGRAM														
SCHEDULE OF REINFORCEMENT														
LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION (mm) OUT TO OUT						LENGTH (mm)	NO. REQ'D.	UNIT WT (kg/m)	WEIGHT (kg)	REMARKS
				a	b	c	d	e	f					
STUBWALL (STA. 0+684.75 TO STA. 0+760.00) LEFT & RIGHT	W1	12	2	300	1372	300				1972	1046	0.888	1,832.00	b is ave.
	W2	12	2	300	1372	300				1972	1046	0.888	1,832.00	b is ave.
	W3	12	1	12000						12000	100	0.888	1,066.00	b is ave.
	W3a	12	1	6670						6670	20	0.888	118.00	
	F1	12	3	150	150	720	320	720	320	2380	406	0.888	858.00	
	F1a	12	3	150	150	1220	320	720	320	3380	406	0.888	1219.00	
	F2	12	1	12000						12000	32	0.888	341.00	
	F2a	12	1	2070						2070	16	0.888	29.00	
	F3	12	1	12000						12000	120	0.888	1279.00	
	F3a	12	1	6670						6670	24	0.888	142.00	
TOTAL WEIGHT = 8,716.00														

THE REINFORCEMENT SHOWN ON THIS TABLE IS FOR REFERENCE ONLY, THE CONTRACTOR SHOULD CHECKED AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.