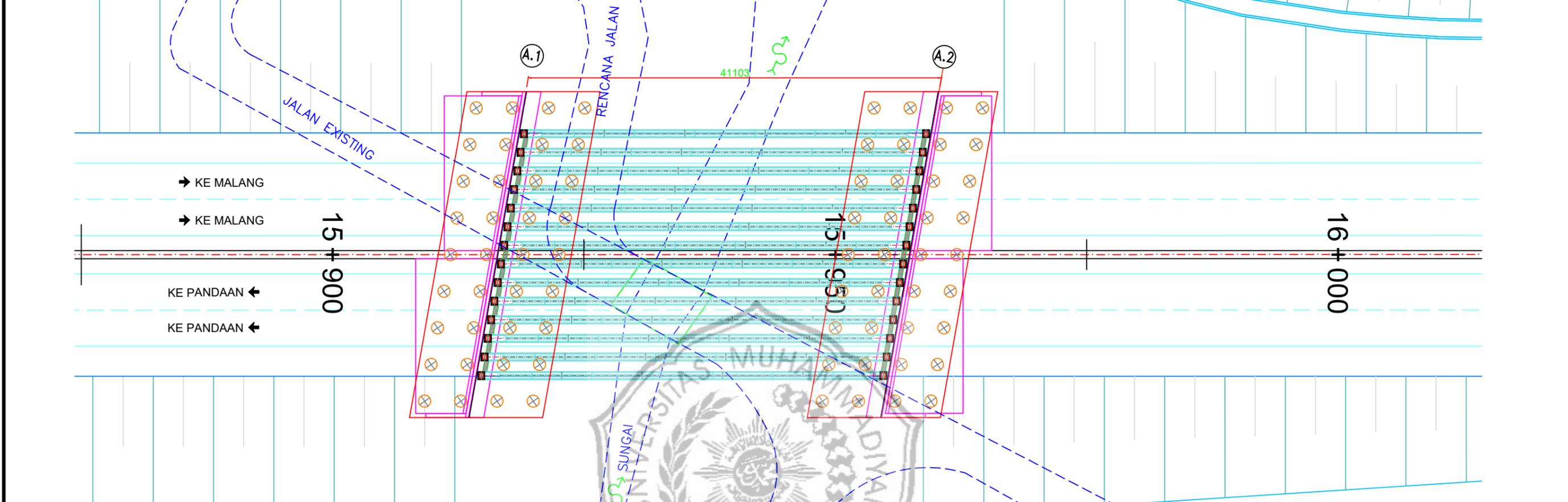
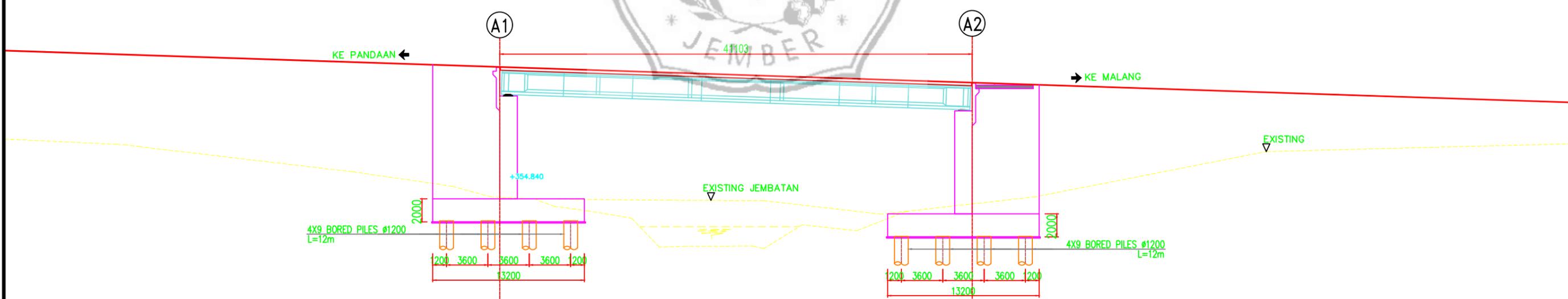


BUJT	NAMA PROYEK	KONTRAKTOR	KONSULTAN	DIRENCANAKAN		DISETUJUI	MENGETAHUI	Judul Gambar :	23 MEI 2017	PERUBAHAN TEBAL PILE CAP 1.75 M MENJADI 2.0 M	REV 1	No. Gambar :	
				PT WNB	PT WNB	PT PP	PT. JPM						HW-D-11-01
JASAMARGA PANDAAN MALANG	JALAN TOL PANDAAN - MALANG Jawa Timur	PP Construction & Investment PT. PP (Persero) Tbk.	PT WIRANUSANTARA BUMI Toll Road Development Consultant	Zain Rivani Highway Engineer	Bhudjono Team Leader	Yusdiantoro General Superintendent	Firmanda GM. Teknik	PLAN DAN POTONGAN MEMANJANG UNDER BRIDGE STA. 15+925	Tanggal	Keterangan	Revisi	Tanggal	Skala : SESUAI YANG TERTERA PADA GAMBAR



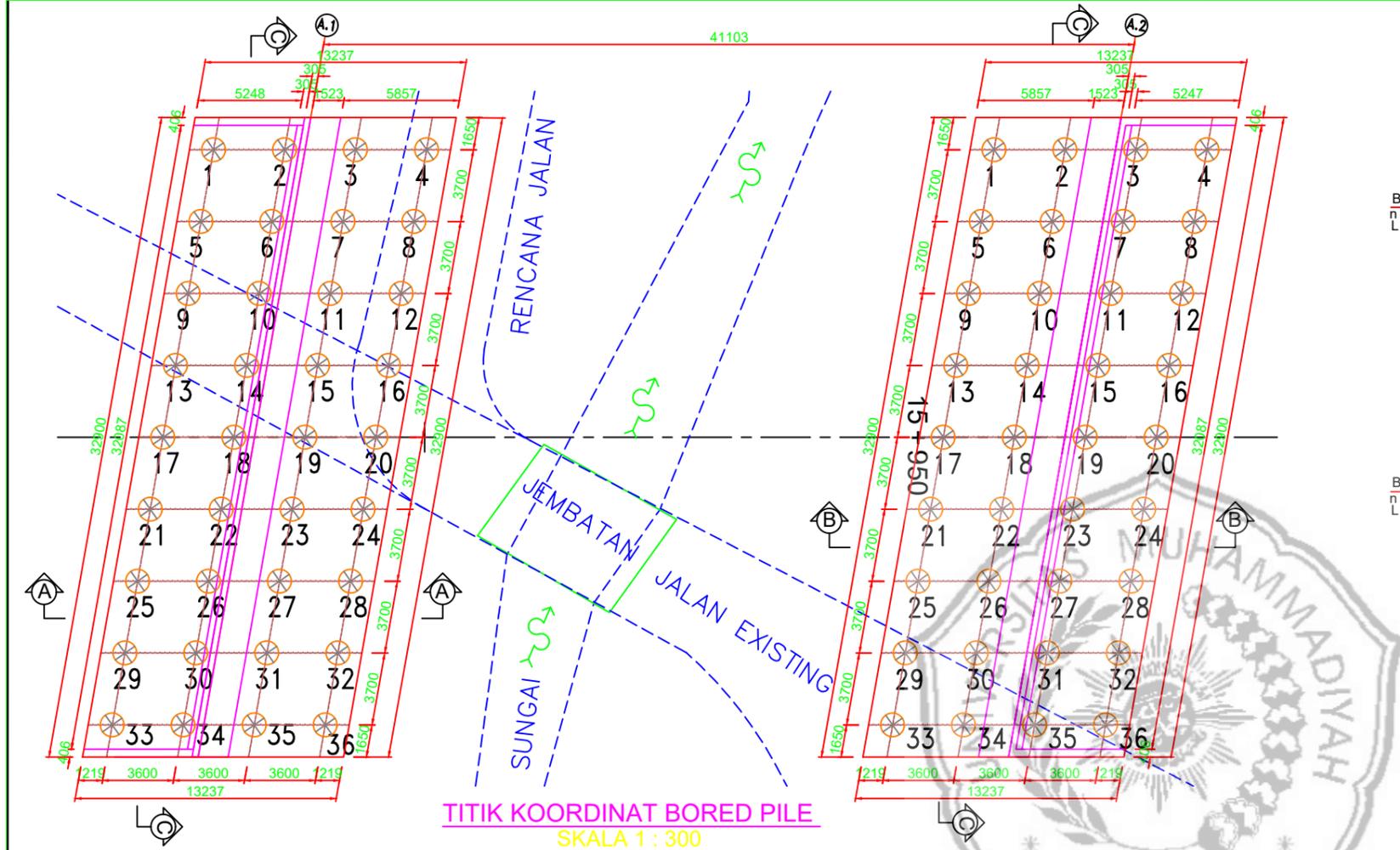
PLAN UNDER BRIDGE STA 15+925
SKALA 1 : 400



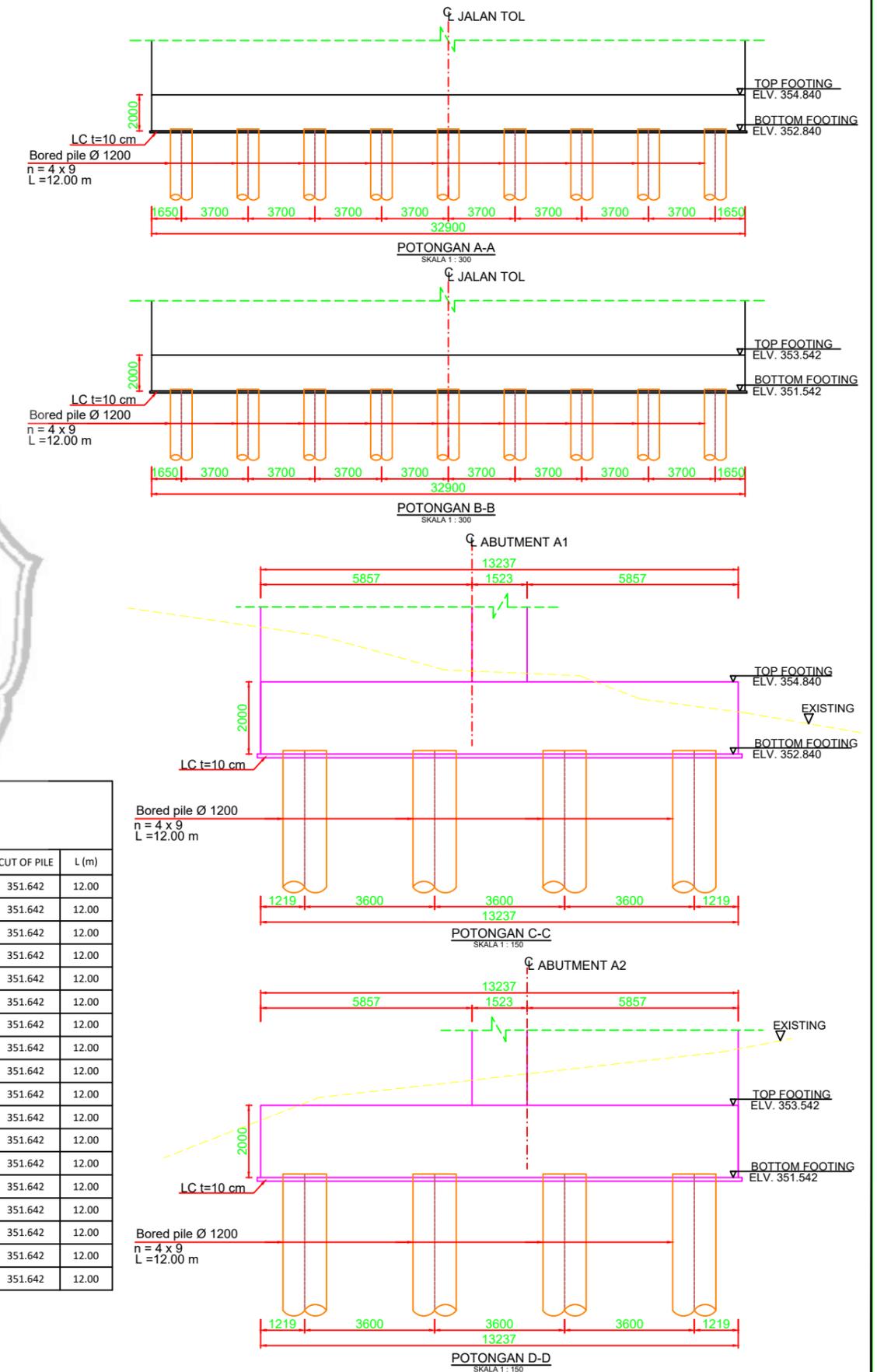
SETTING OUT	A1	A2
FINISH GRADE	366.332	364.975
TOP ABUTMENT	366.282	364.925
TOP FOOTING	354.840	353.542
BOTTOM FOOTING	352.840	351.542
EXISTING	354.943	354.321
STATION	15+916.362	15+957.465

POTONGAN MEMANJANG UNDER BRIDGE STA 15+925
SKALA 1 : 350

B U J T	NAMA PROYEK	KONTRAKTOR	KONSULTAN	DIRENCANAKAN		DISETUIJI		MENGETAHUI		Judul Gambar :	23 MEI 2017	PERUBAHAN TEBAL PILE CAP 1.75 M MENJADI 2.0 M	REV 1	No. Gambar :		
				PT WNB	PT WNB	PT PP	PT. JPM									
	JALAN TOL PANDAAN - MALANG Jawa Timur	 Construction & Investment PT. PP (Persero) Tbk.	 Toll Road Development Consultant	 Zain Rivani Highway Engineer	 Bhujono Team Leader	 Yusdiantoro General Superintendent	 Firmanda GM. Teknik	DENAH TITIK KOORDINAT BORED PILE Ø1200 UNDER BRIDGE STA. 15+925		Tanggal : Keterangan : Revisi :	Tanggal : Keterangan : Revisi :	Tanggal : Keterangan : Revisi :	Tanggal : Keterangan : Revisi :	No. Gambar : HW-D-11-02	Tanggal : Keterangan : Revisi :	Skala : SESUAI YANG TERtera PADA GAMBAR

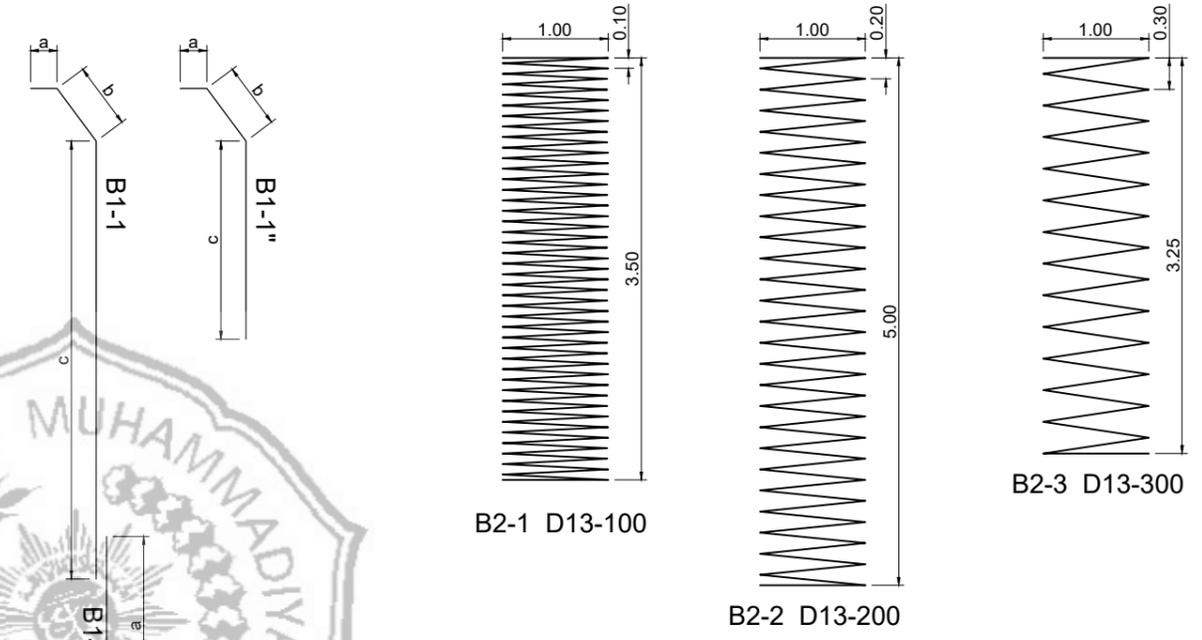
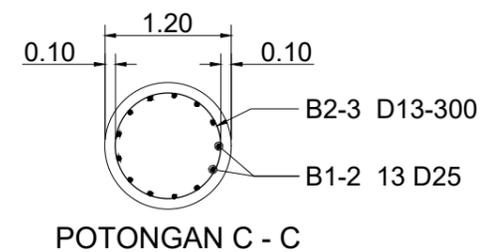
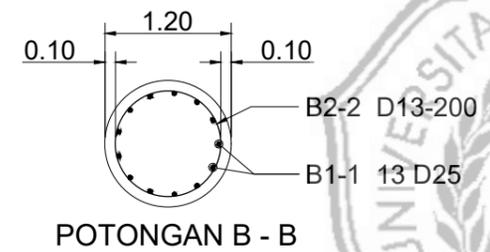
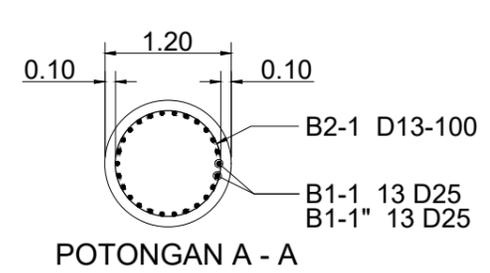
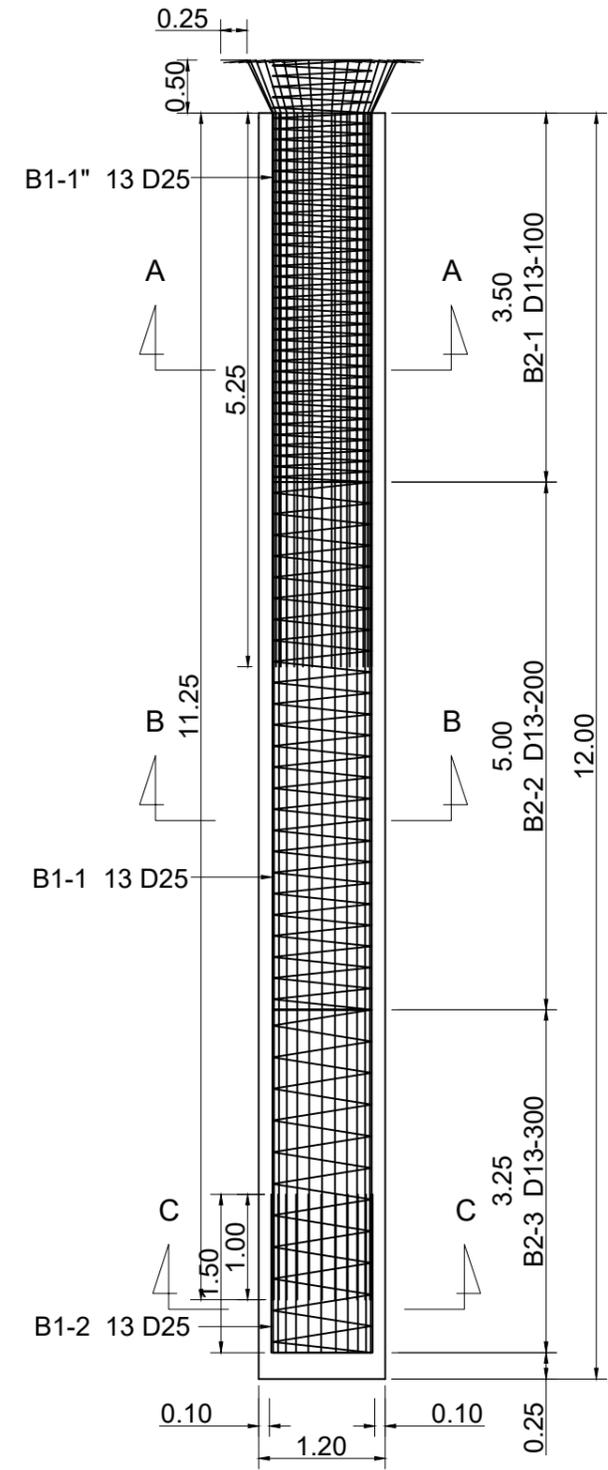


TITIK KOORDINAT BORED PILE
SKALA 1 : 300



TABEL KOORDINAT TITIK BORED PILE A1				TABEL KOORDINAT TITIK BORED PILE A2															
NO.	TITIK (X)	TITIK (Y)	CUT OF PILE	L (m)	NO.	TITIK (X)	TITIK (Y)	CUT OF PILE	L (m)	NO.	TITIK (X)	TITIK (Y)	CUT OF PILE	L (m)	NO.	TITIK (X)	TITIK (Y)	CUT OF PILE	L (m)
1	690505.300	9136146.401	352.940	12.00	19	690490.789	9136141.572	352.940	12.00	1	690505.841	9136106.835	351.642	12.00	19	690491.331	9136102.006	351.642	12.00
2	690505.349	9136142.802	352.940	12.00	20	690490.839	9136137.973	352.940	12.00	2	690505.890	9136103.235	351.642	12.00	20	690491.380	9136098.406	351.642	12.00
3	690505.398	9136139.202	352.940	12.00	21	690487.039	9136149.364	352.940	12.00	3	690505.940	9136099.635	351.642	12.00	21	690487.580	9136109.798	351.642	12.00
4	690505.448	9136135.602	352.940	12.00	22	690487.088	9136145.765	352.940	12.00	4	690505.989	9136096.036	351.642	12.00	22	690487.629	9136106.198	351.642	12.00
5	690501.648	9136146.994	352.940	12.00	23	690487.137	9136142.165	352.940	12.00	5	690502.189	9136107.427	351.642	12.00	23	690487.678	9136102.598	351.642	12.00
6	690501.697	9136143.394	352.940	12.00	24	690487.186	9136138.565	352.940	12.00	6	690502.238	9136103.828	351.642	12.00	24	690487.728	9136098.999	351.642	12.00
7	690501.746	9136139.795	352.940	12.00	25	690483.386	9136149.957	352.940	12.00	7	690502.287	9136100.228	351.642	12.00	25	690483.928	9136110.390	351.642	12.00
8	690501.795	9136136.195	352.940	12.00	26	690483.436	9136146.357	352.940	12.00	8	690502.337	9136096.628	351.642	12.00	26	690483.977	9136106.791	351.642	12.00
9	690497.995	9136147.586	352.940	12.00	27	690483.485	9136142.758	352.940	12.00	9	690498.537	9136108.020	351.642	12.00	27	690484.026	9136103.191	351.642	12.00
10	690498.045	9136143.987	352.940	12.00	28	690483.534	9136139.158	352.940	12.00	10	690498.586	9136104.420	351.642	12.00	28	690484.075	9136099.591	351.642	12.00
11	690498.094	9136140.387	352.940	12.00	29	690479.734	9136150.549	352.940	12.00	11	690498.635	9136100.821	351.642	12.00	29	690480.275	9136110.983	351.642	12.00
12	690498.143	9136136.787	352.940	12.00	30	690479.783	9136146.950	352.940	12.00	12	690498.684	9136097.221	351.642	12.00	30	690480.325	9136107.383	351.642	12.00
13	690494.343	9136148.179	352.940	12.00	31	690479.833	9136143.350	352.940	12.00	13	690494.884	9136108.613	351.642	12.00	31	690480.374	9136103.784	351.642	12.00
14	690494.392	9136144.579	352.940	12.00	32	690479.882	9136139.750	352.940	12.00	14	690494.934	9136105.013	351.642	12.00	32	690480.423	9136100.184	351.642	12.00
15	690494.442	9136140.980	352.940	12.00	33	690476.082	9136151.142	352.940	12.00	15	690494.983	9136101.413	351.642	12.00	33	690476.623	9136111.576	351.642	12.00
16	690494.491	9136137.380	352.940	12.00	34	690476.131	9136147.542	352.940	12.00	16	690495.032	9136097.814	351.642	12.00	34	690476.672	9136107.976	351.642	12.00
17	690490.691	9136148.772	352.940	12.00	35	690476.180	9136143.943	352.940	12.00	17	690491.232	9136109.205	351.642	12.00	35	690476.722	9136104.376	351.642	12.00
18	690490.740	9136145.172	352.940	12.00	36	690476.230	9136140.343	352.940	12.00	18	690491.281	9136105.605	351.642	12.00	36	690476.771	9136100.777	351.642	12.00

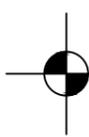
DIAGRAM BAR BENDING



BAR BENDING SCEDULE

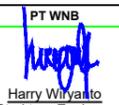
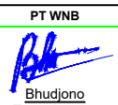
BOREPILE L = 12 M'

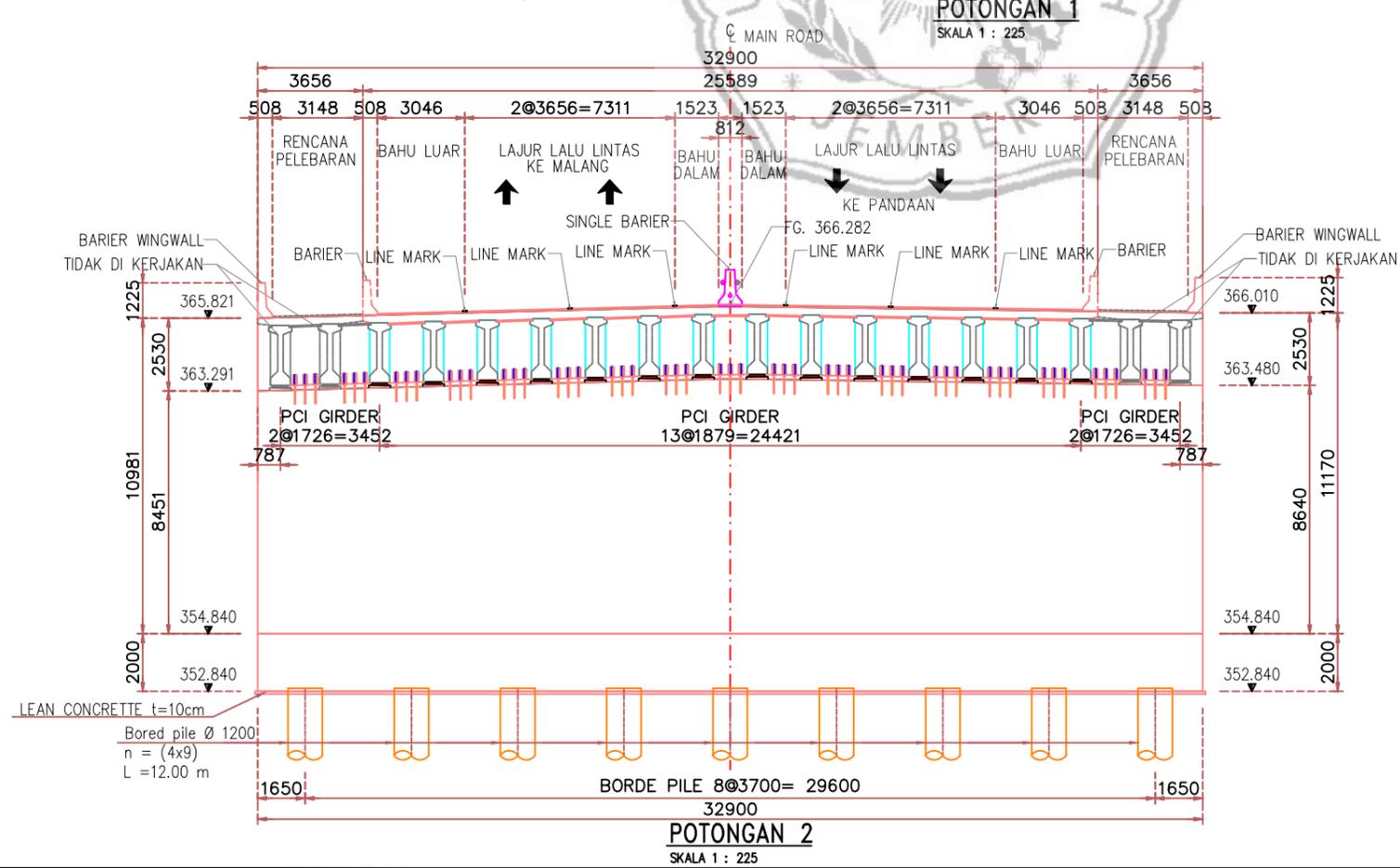
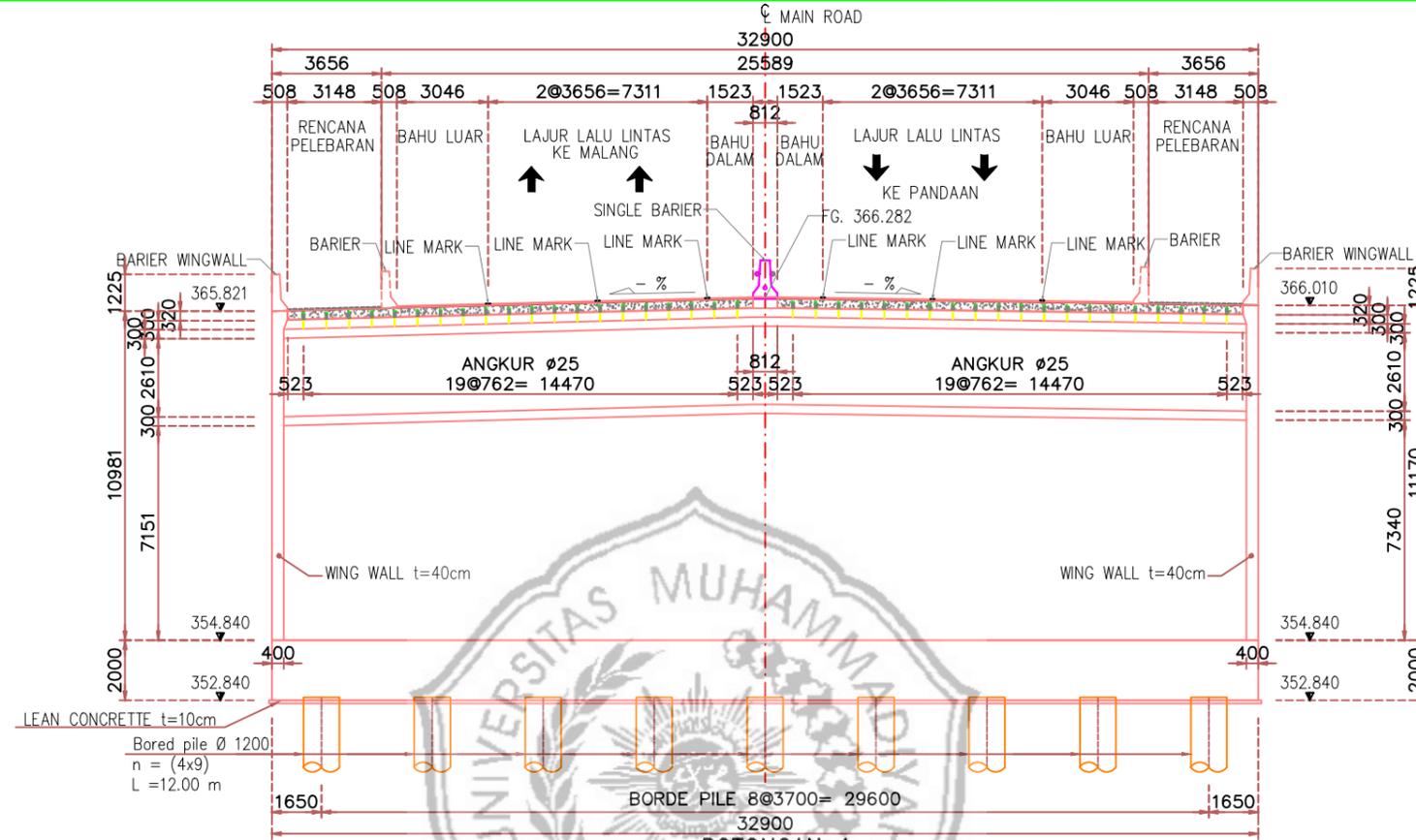
REINF. No.	DIA (mm)	DIMENSION (m')					Total Length (m')	Weight (kg/m')	Number	Total Weight (kg)
		a	b	c	d	e				
B1 - 1"	25	0.250	0.500	5.250			6.00	3.850	13	300.30
B1 - 1	25	0.250	0.500	11.250			12.00	3.850	13	600.60
B1 - 2	25	1.500					1.50	3.850	13	75.08
B2 - 1	13	114.636					114.64	1.040	1	119.22
B2 - 2	13	82.299					82.30	1.040	1	85.59
B2 - 3	13	35.212					35.21	1.040	1	36.62
Total Weight (kg)										1,217.41

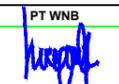

Borepile
 skala 1 : 150

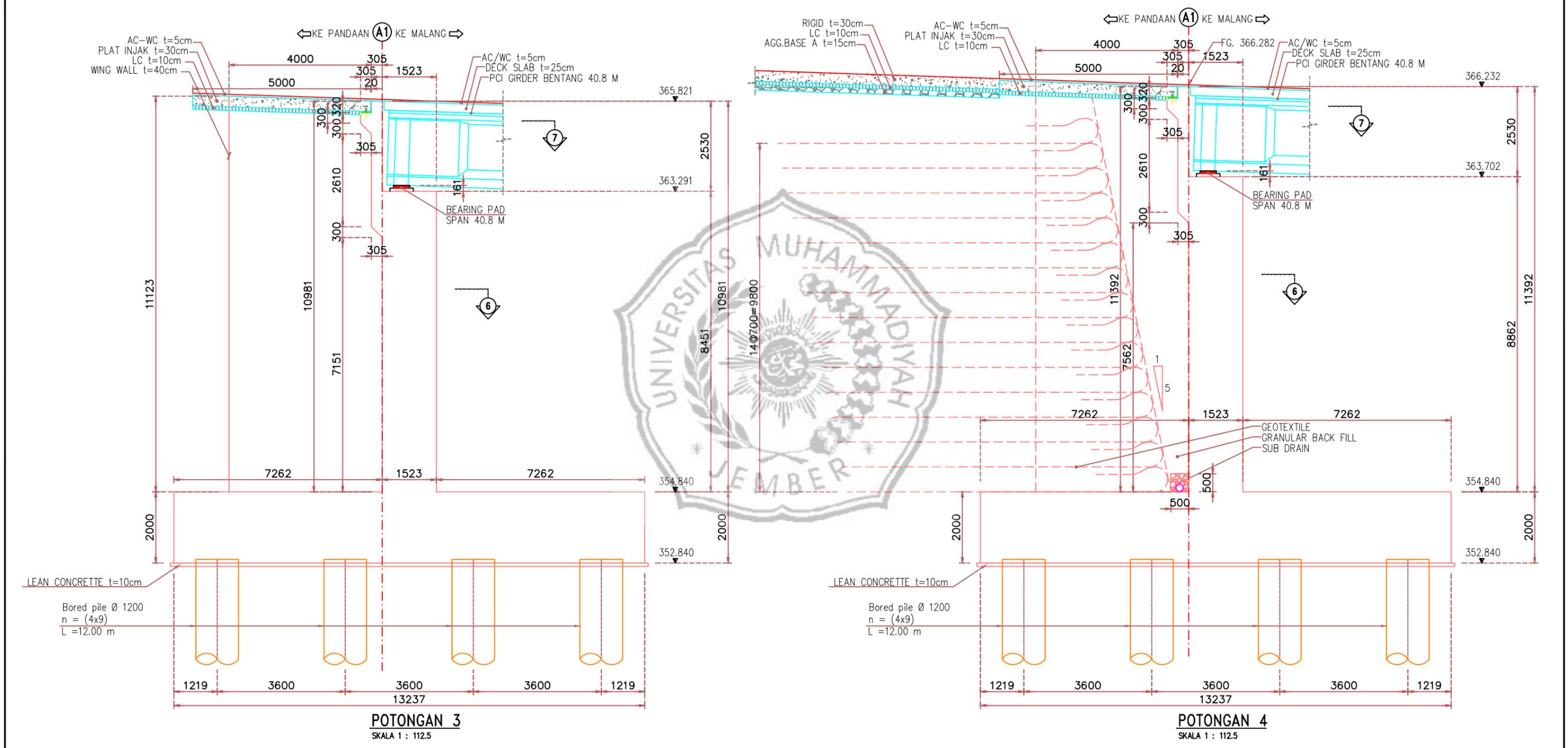
CATATAN :

1. MUTU BETON BORED PILE K-350
2. SELIMUT BETON BAWAH 25cm SAMPING 10cm
3. SEMUA UKURAN DALAM METER KECUALI DITENTUKAN LAIN

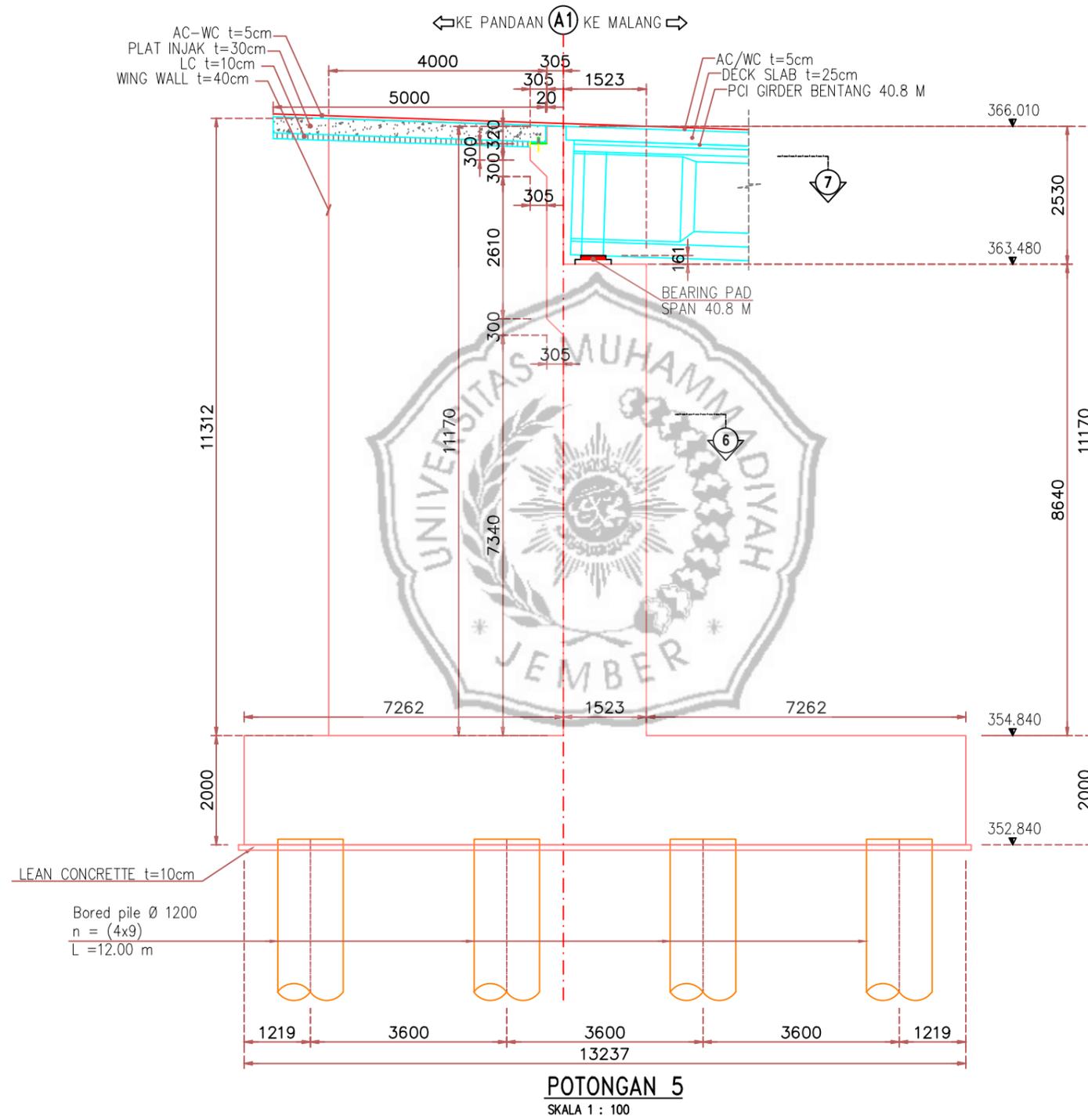
 JASAMARGA PANDAAN MALANG	NAMA PROYEK JALAN TOL PANDAAN - MALANG Jawa Timur	KONTRAKTOR  Construction & Investment PT. PP (Persero) Tbk.	KONSULTAN  PT WIRANUSANTARA BUMI Toll Road Development Consultant	DIRENCANAKAN	DISETUIJI	MENGETAHUI	Judul Gambar : DETAIL STRUKTUR (2) ABUTMENT A1 UNDER BRIDGE STA. 15+925	No. Gambar : HW-D-11-05
				PT WNB  Harry Wiryanto Strukture Engineer	PT WNB  Bhudjono Team Leader	PT PP Yudiantoro General Suprintendent		
Tanggal : Keterangan : Revisi :								



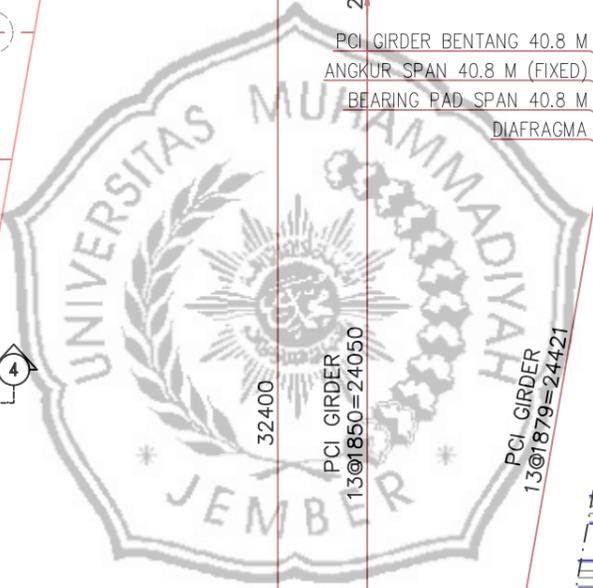
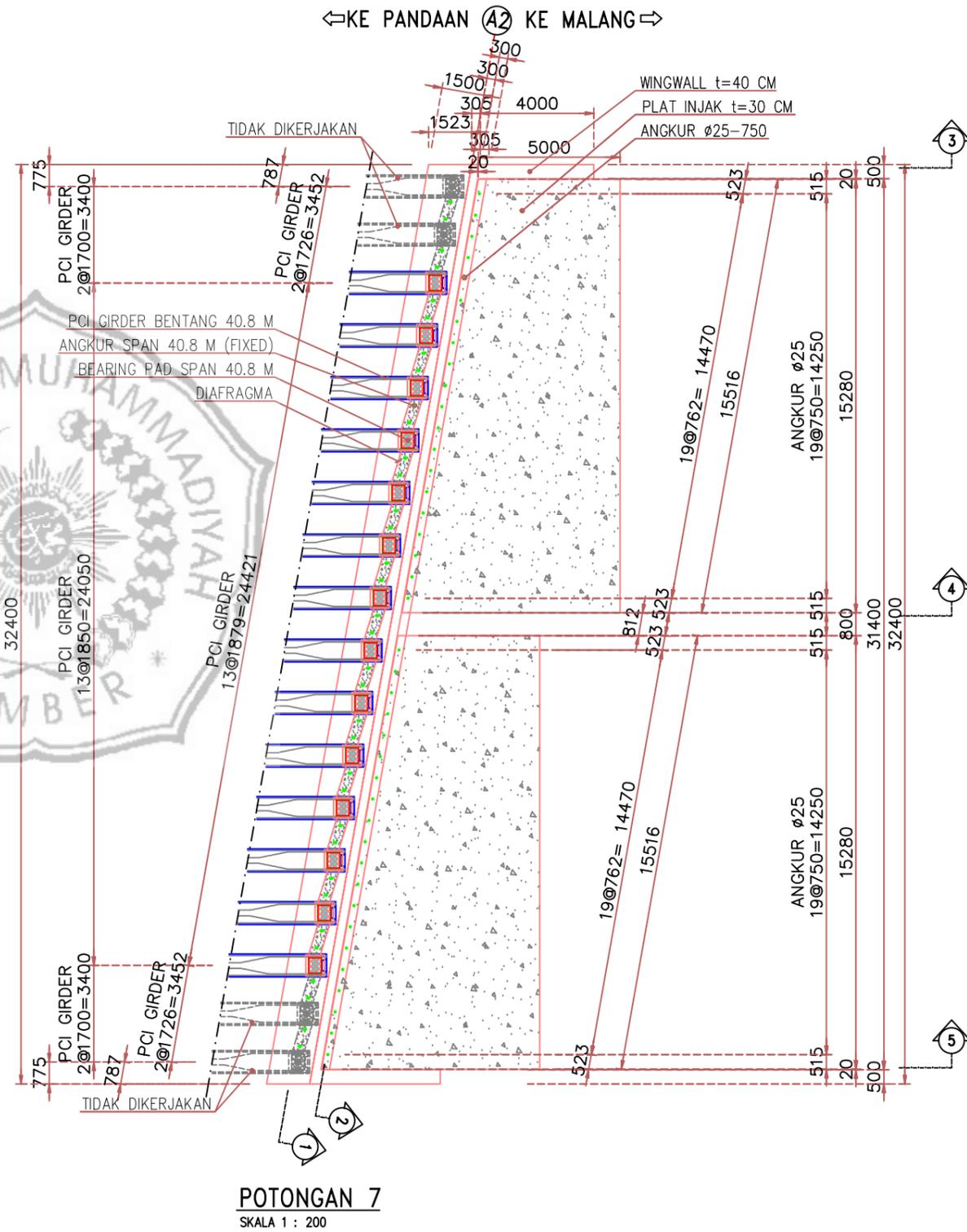
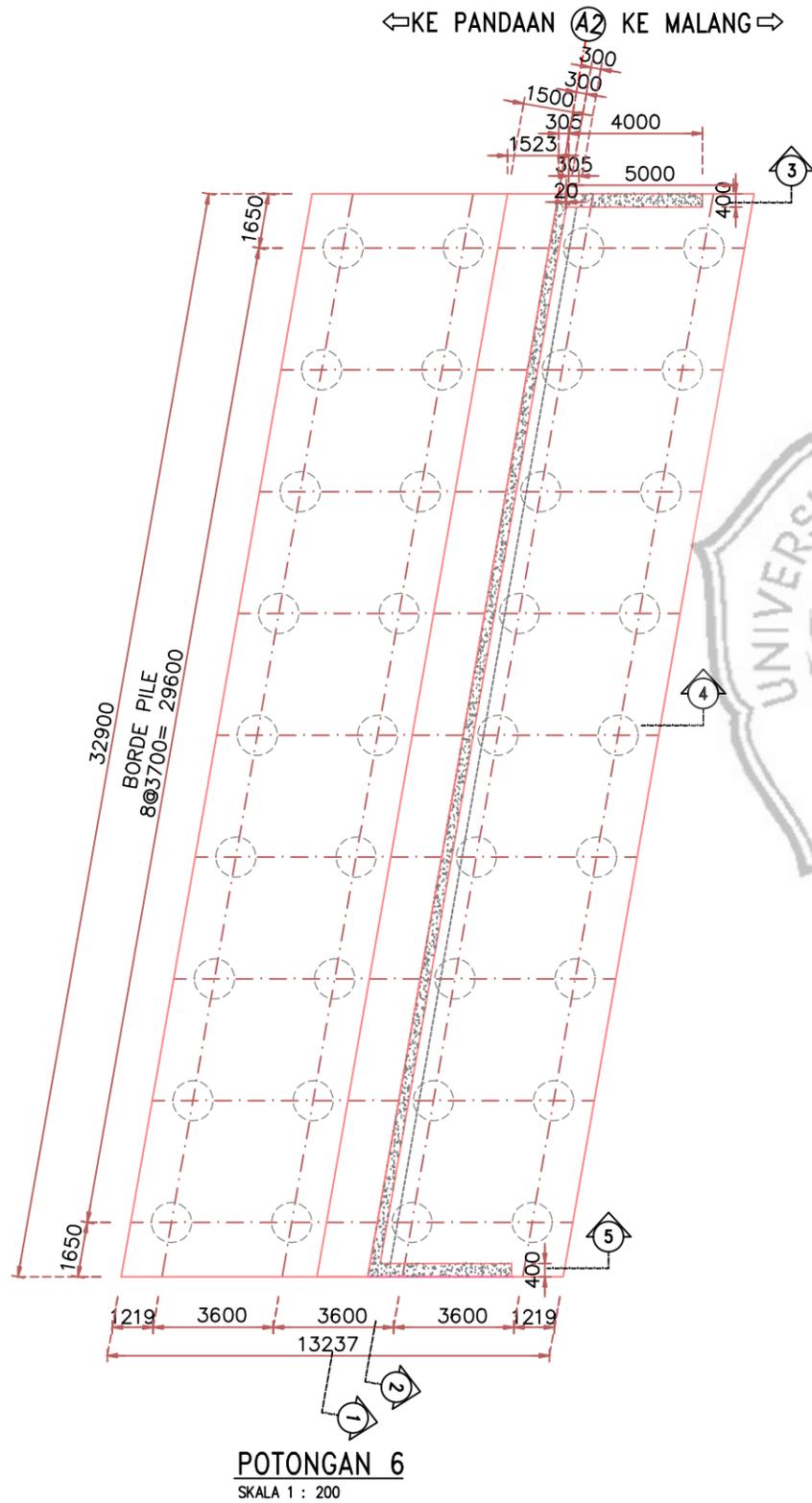
 JALAN TOL PANDAAN - MALANG Jawa Timur	 Construction & Investment PT. PP (Persero) Tbk.	 PT WIRANUSANTARA BUMI Toll Road Development Consultant	DIREKANAKAN PT WNB  Harry Wiryanto Struktire Engineer	DIREKANAKAN PT WNB  Bhudjono Team Leader	DISETUJUI PT PP Yusdiantoro General Suprintendent	MENGETAHUI PT. JPM Firmanda GM. Teknik	Judul Gambar : DETAIL STRUKTUR (3) ABUTMENT A1 UNDER BRIDGE STA. 15+925	No. Gambar : HW-D-11-06	Tanggal : -	Skala : SESUAI YANG TELAMPIR PADA GAMBAR
			Tanggal : -	Keterangan : -	Revisi : -					

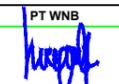


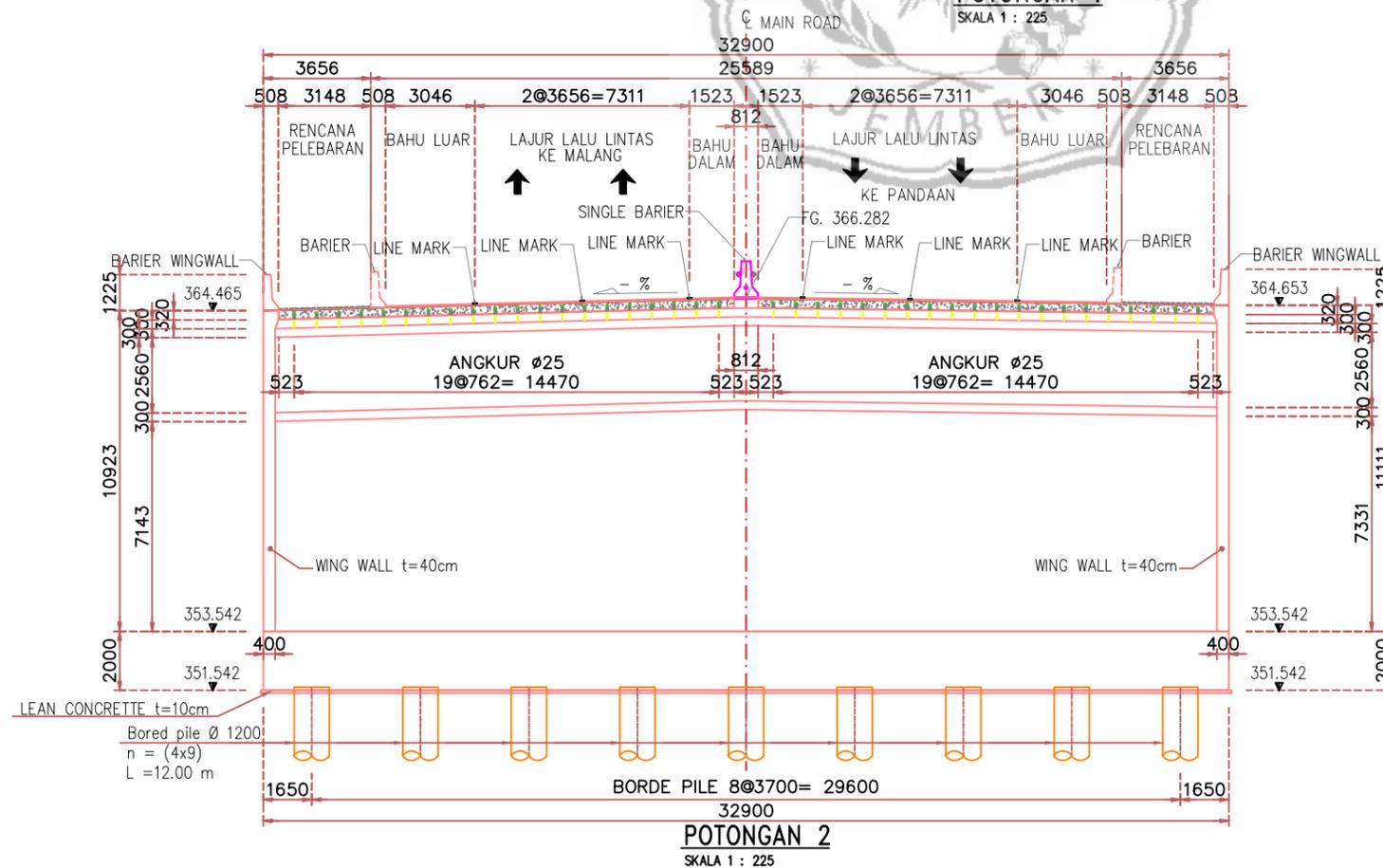
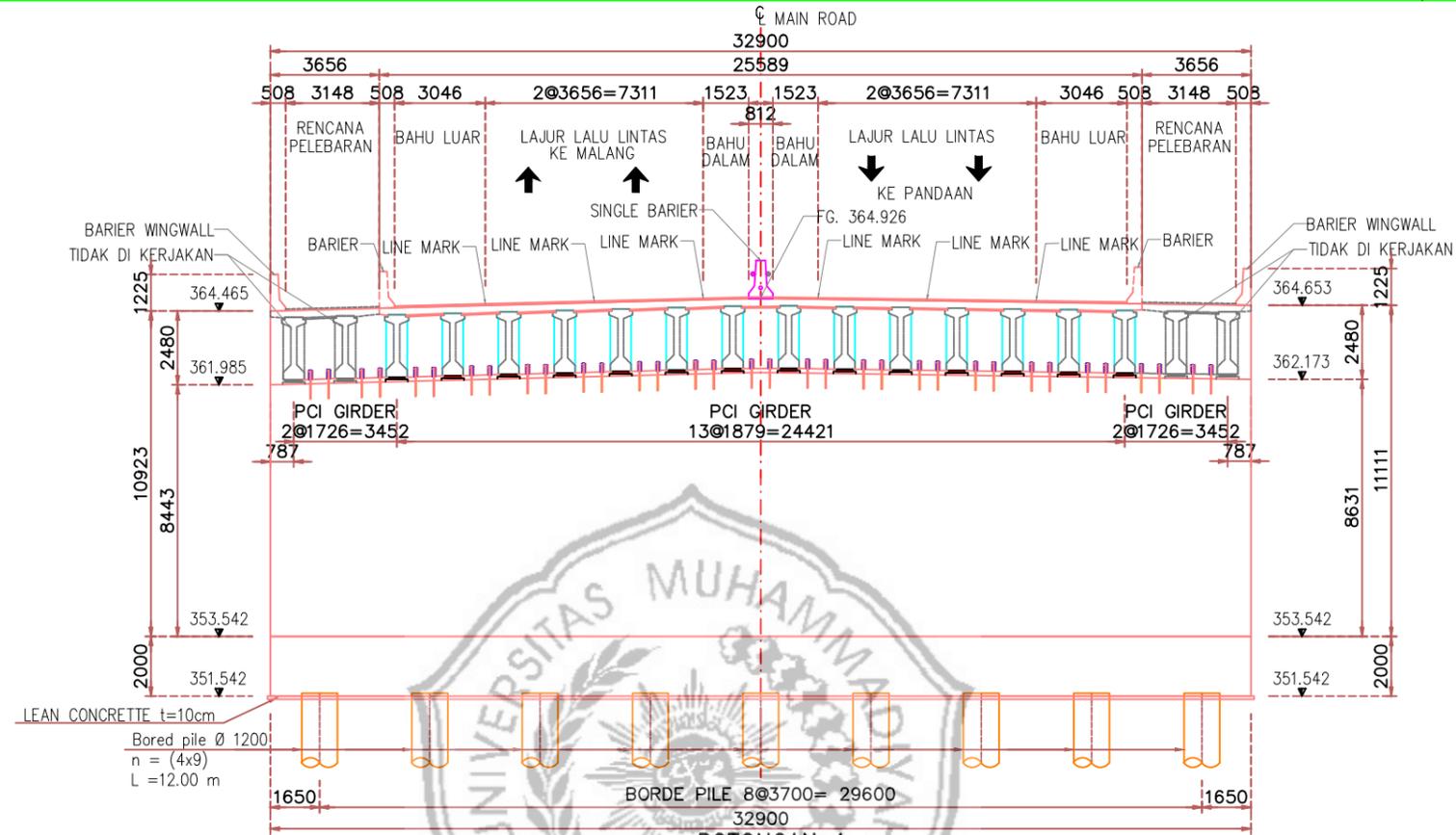
 JASAMARGA PANDAAN MALANG	NAMA PROYEK JALAN TOL PANDAAN - MALANG Jawa Timur	 KONTRAKTOR Construction & Investment PT. PP (Persero) Tbk.	 KONSULTAN PT WIRANUSANTARA BUMI Toll Road Development Consultant	DIRENCANAKAN PT WNB Harry Wiyanto Struktire Engineer		PT WNB Bhudjono Team Leader		DISETUJUI PT PP Yudiantoro General Suprintendent		MENGETAHUI PT. JPM Firmanda GM. Teknik		Judul Gambar : DETAIL STRUKTUR (4) ABUTMENT A1 UNDER BRIDGE STA. 15+925			No. Gambar : HW-D-11-07		
				Tanggal : -			Skala : SESUAI YANG TELAMPIR PADA GAMBAR			Tanggal Keterangan Revisi							



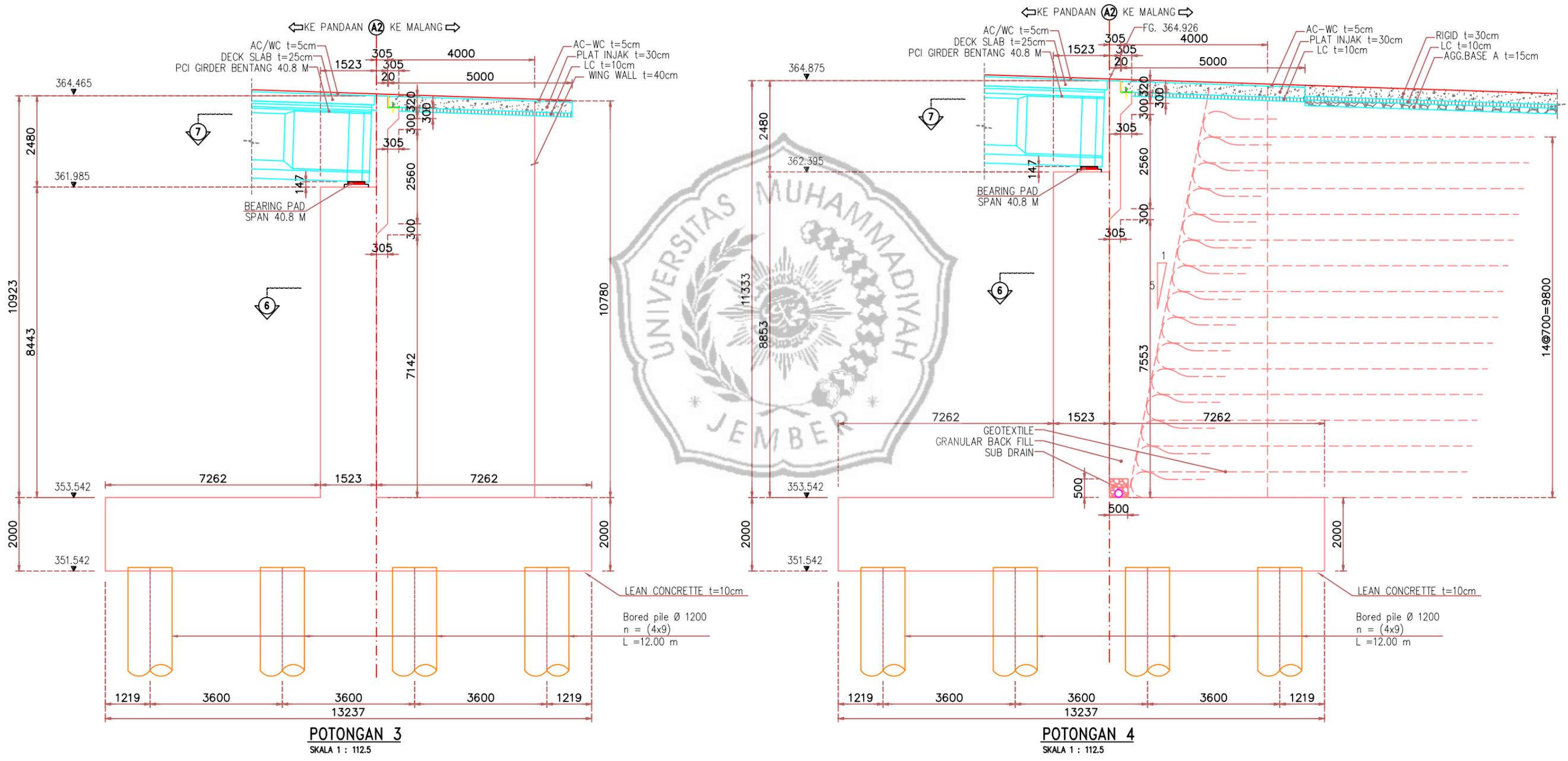
 JASAMARGA PANDAAN MALANG	NAMA PROYEK JALAN TOL PANDAAN - MALANG Jawa Timur	KONTRAKTOR  Construction & Investment PT. PP (Persero) Tbk.	KONSULTAN  PT WIRANUSANTARA BUMI Toll Road Development Consultant	DIRENCANAKAN	DIRENCANAKAN	DISETUJUI	DISETUJUI	MENGETAHUI PT. JPM Firmanda GM. Teknik	Judul Gambar : DETAIL STRUKTUR (1) ABUTMENT A2 UNDER BRIDGE STA. 15+925	No. Gambar : HW-D-11-08	Tanggal : -	Revisi : -	Skala : SESUAI YANG TELAMPIR PADA GAMBAR
				PT WNB Harry Wiyanto Struktire Engineer	PT WNB Bhudjono Team Leader	PT PP Yusdiantoro General Suprintendent	PT. JPM						



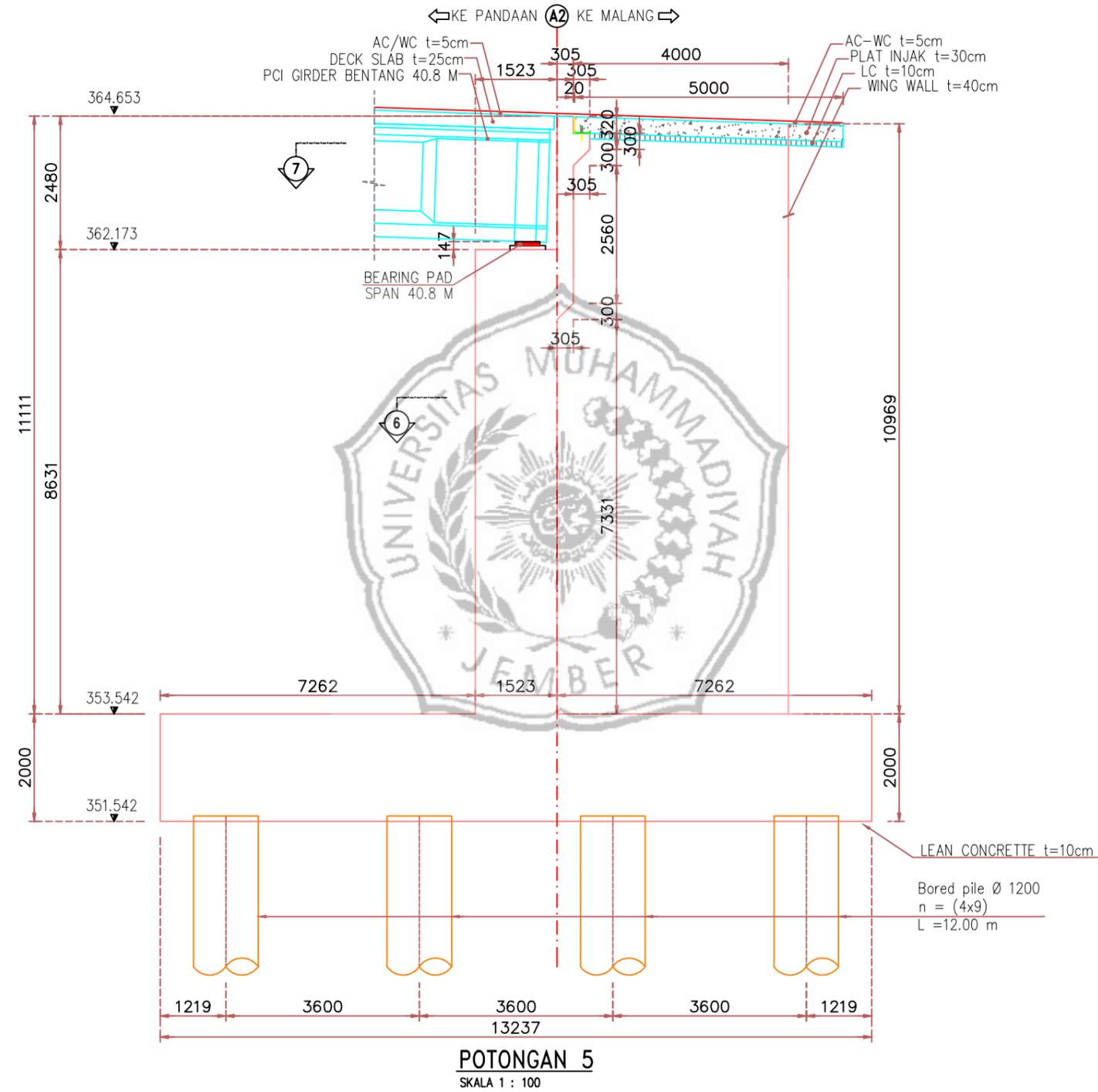
 JASAMARGA PANDAAN MALANG	B U J T NAMA PROYEK JALAN TOL PANDAAN - MALANG Jawa Timur	KONTRAKTOR  Construction & Investment PT. PP (Persero) Tbk.	KONSULTAN  PT WIRANUSANTARA BUMI Toll Road Development Consultant	DIRENCANAKAN	DISETUJUI	MENGETAHUI	Judul Gambar : DETAIL STRUKTUR (2) ABUTMENT A2 UNDER BRIDGE STA. 15+925	No. Gambar : HW-D-11-09		
				PT WNB  Harry Wiyanto Struktire Engineer	PT WNB  Bhudjono Team Leader	PT PP Yudiantoro General Suprintendent			PT. JPM Firmanda GM. Teknik	Tanggal : -
								Tanggal	Keterangan	Revisi



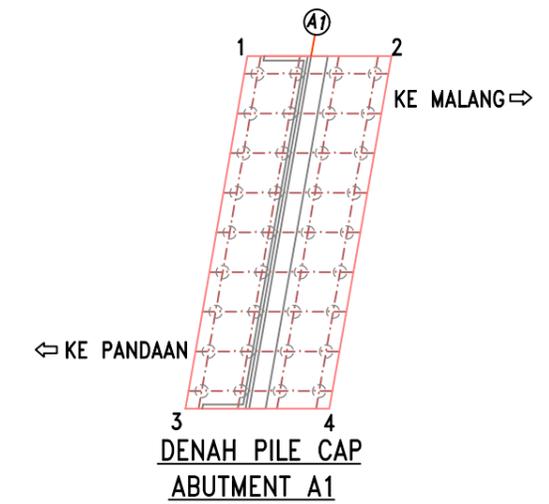
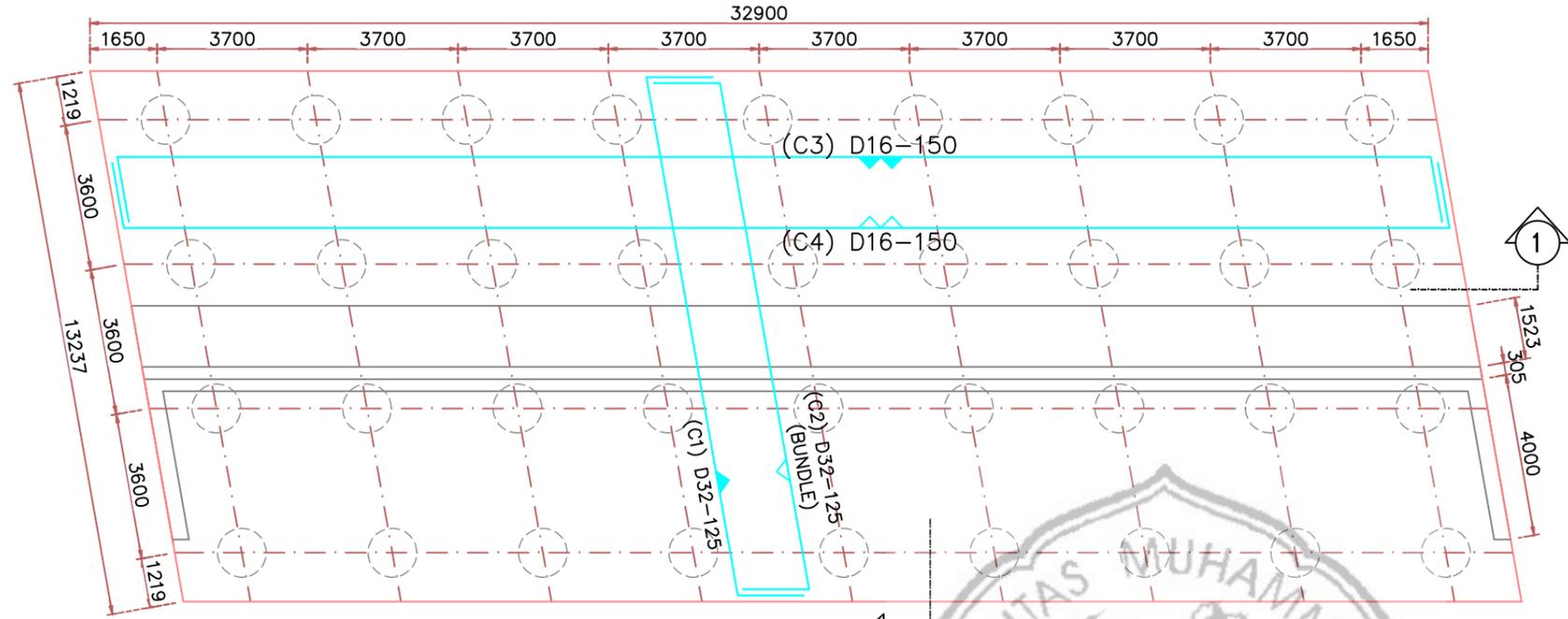
B U J T	NAMA PROYEK	KONTRAKTOR	KONSULTAN	DIRENCANAKAN	DISETUJUI	MENGETAHUI	Judul Gambar :	No. Gambar :
	JALAN TOL PANDAAN - MALANG Jawa Timur	 Construction & Investment PT. PP (Persero) Tbk.	 PT WIRANUSANTARA BUMI Toll Road Development Consultant	PT WNB Harry Wiryanto Strukture Engineer	PT WNB Bhudjono Team Leader	PT PP Yusdiantoro General Suprintendent	PT. JPM Firmanda GM. Teknik	HW-D-11-10
							DETAIL STRUKTUR (3) ABUTMENT A2 UNDER BRIDGE STA. 15+925	Tanggal : -
								Skala : SESUAI YANG TELAMPIR PADA GAMBAR
								Tanggal
								Keterangan
								Revisi



BUJT	NAMA PROYEK JALAN TOL PANDAAN - MALANG Jawa Timur	KONTRAKTOR PP Construction & Investment PT. PP (Persero) Tbk.	KONSULTAN PT WIRANUSANTARA BUMI Toll Road Development Consultant	DIRENCANAKAN	DISETUJUI	MENGETAHUI	Judul Gambar : DETAIL STRUKTUR (4) ABUTMENT A2 UNDER BRIDGE STA. 15+925	No. Gambar : HW-D-11-11	
				PT WNB Harry Wiyanto Strukture Engineer	PT PP Yusdiantoro General Suprintendent	PT. JPM Firmanda GM. Teknik			Tanggal : -
Tangal								Keterangan	Revisi



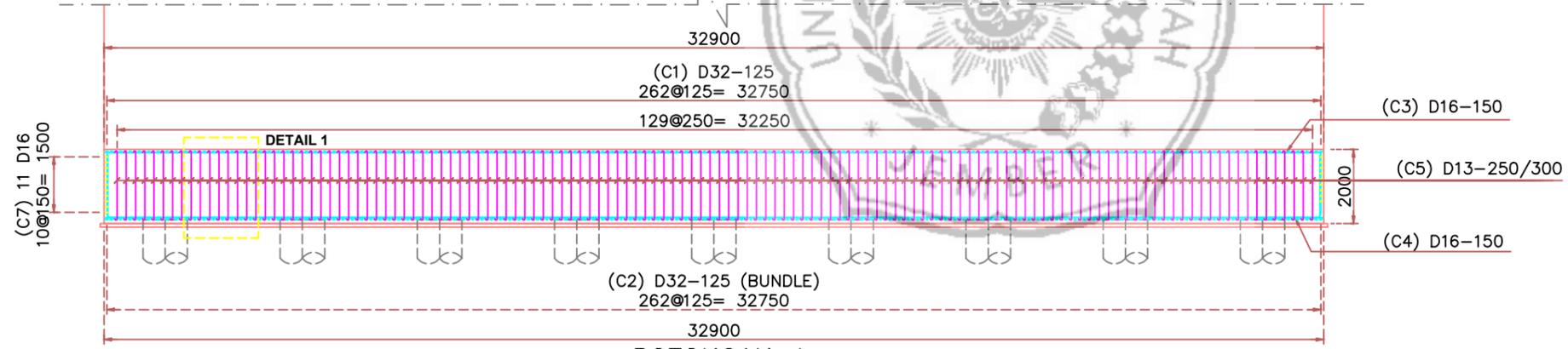
B U J T	NAMA PROYEK JALAN TOL PANDAAN - MALANG Jawa Timur	KONTRAKTOR PP Construction & Investment PT. PP (Persero) Tbk.	KONSULTAN PT WIRANUSANTARA BUMI Toll Road Development Consultant	DIRENCANAKAN	DISETUJUI	MENGETAHUI	Judul Gambar : PENULANGAN (1) PILE CAP ABUTMENT A1 UNDER BRIDGE STA. 15+925	No. Gambar : HW-D-11-12		
				PT WNB Harry Wiryanto Strukture Engineer	PT PP Yusdiantoro General Suprintendent	PT. JPM Firmanda GM. Teknik			Tanggal : -	Skala : SESUAI YANG TERTERA PADA GAMBAR
JASAMARGA PANDAAN MALANG								Tanggal	Keterangan	Revisi



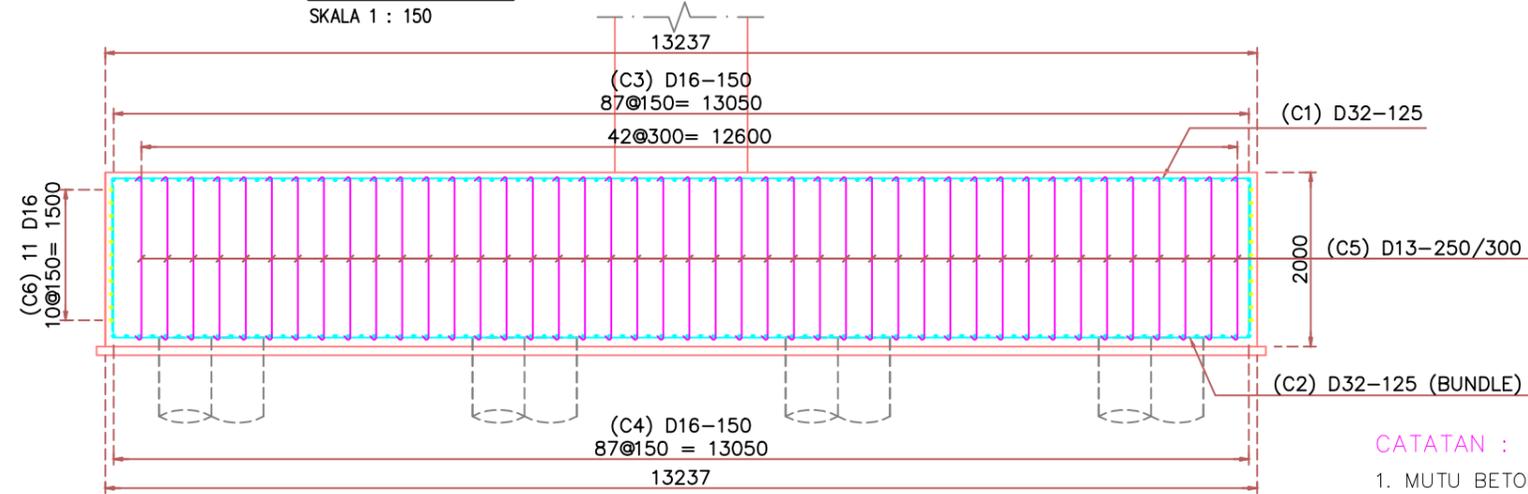
TABEL KOORDINAT TITIK LC DAN PILE CAP ABUTMENT A1

KET	NO.	TITIK (X)	TITIK (Y)
LC	1	690507.011	9136147.441
	2	690507.194	9136134.002
	3	690474.335	9136152.743
	4	690474.519	9136139.304
PILE CAP	1	690506.912	9136147.355
	2	690507.093	9136134.120
	3	690474.437	9136152.625
	4	690474.618	9136139.389

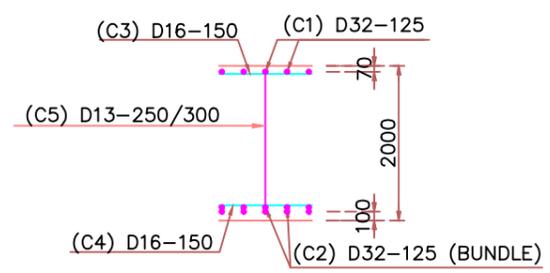
DETAIL TULANGAN PILECAP ABUTMENT A1
SKALA 1 : 150



POTONGAN 1
SKALA 1 : 150



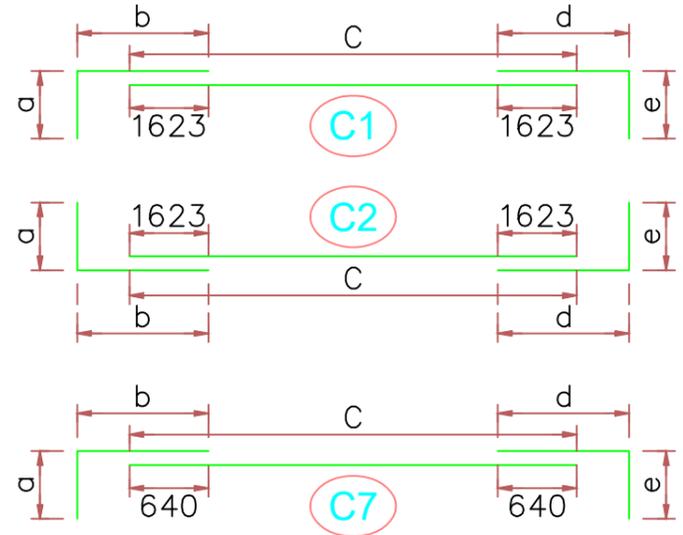
POTONGAN 2
SKALA 1 : 75



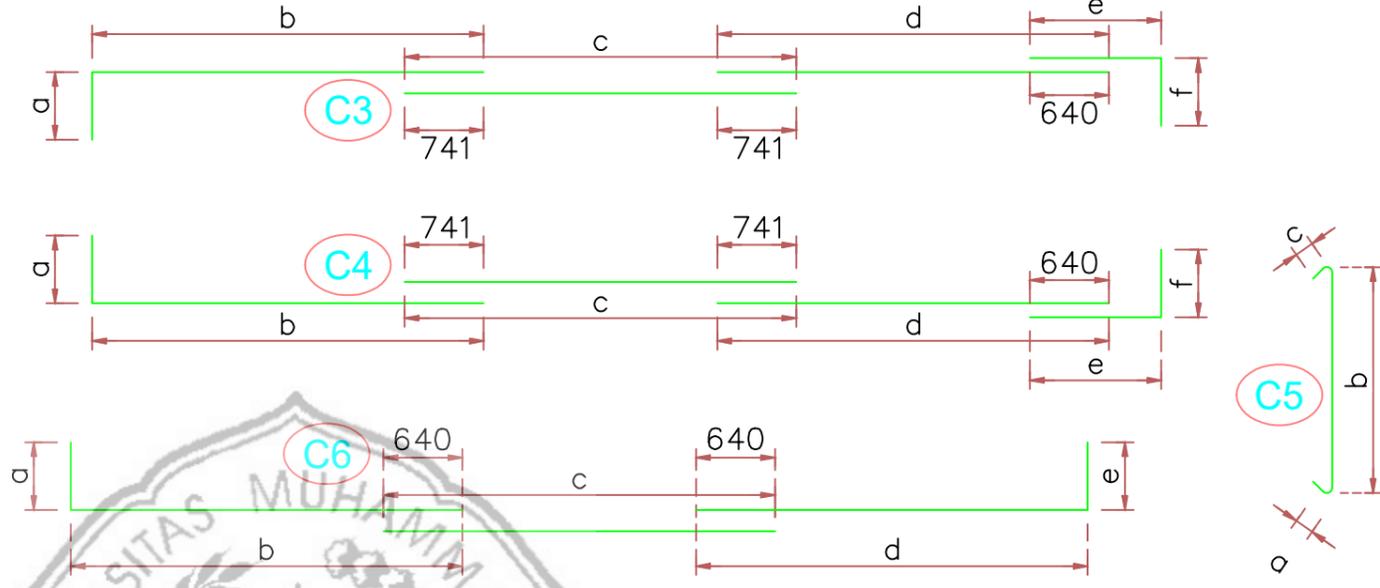
DETAIL 1

- CATATAN :**
- MUTU BETON FOOTING KELAS C1
 - SELIMUT BETON BAWAH 10cm, ATAS 7 cm, SAMPING 7 cm
 - SEMUA UKURAN DALAM MILIMETER KECUALI DITENTUKAN LAIN

B U J T	NAMA PROYEK	KONTRAKTOR	KONSULTAN	DIREKANAKAN	DISETUJUI	MENGETAHUI	Judul Gambar :				No. Gambar :
	JALAN TOL PANDAAN - MALANG Jawa Timur	Construction & Investment PT. PP (Persero) Tbk.	PT WIRANUSANTARA BUMI Toll Road Development Consultant	PT WNB Harry Wiryanto Strukture Engineer	PT WNB Bhujono Team Leader	Yusdiantoro General Suprintendent	Firmanda GM. Teknik	PENULANGAN (2) PILE CAP ABUTMENT A1 UNDER BRIDGE STA. 15+925			HW-D-11-13
								Tanggal :	-		Skala :
								Tanggal	Keterangan	Revisi	SESUAI YANG TERTERA PADA GAMBAR



**SKETSA TULANGAN
PILE CAP ABUTMENT A1**

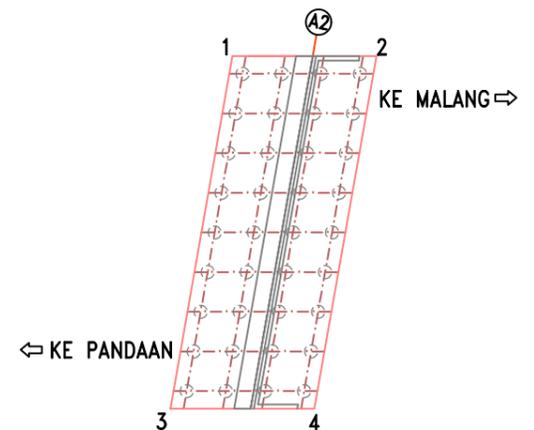
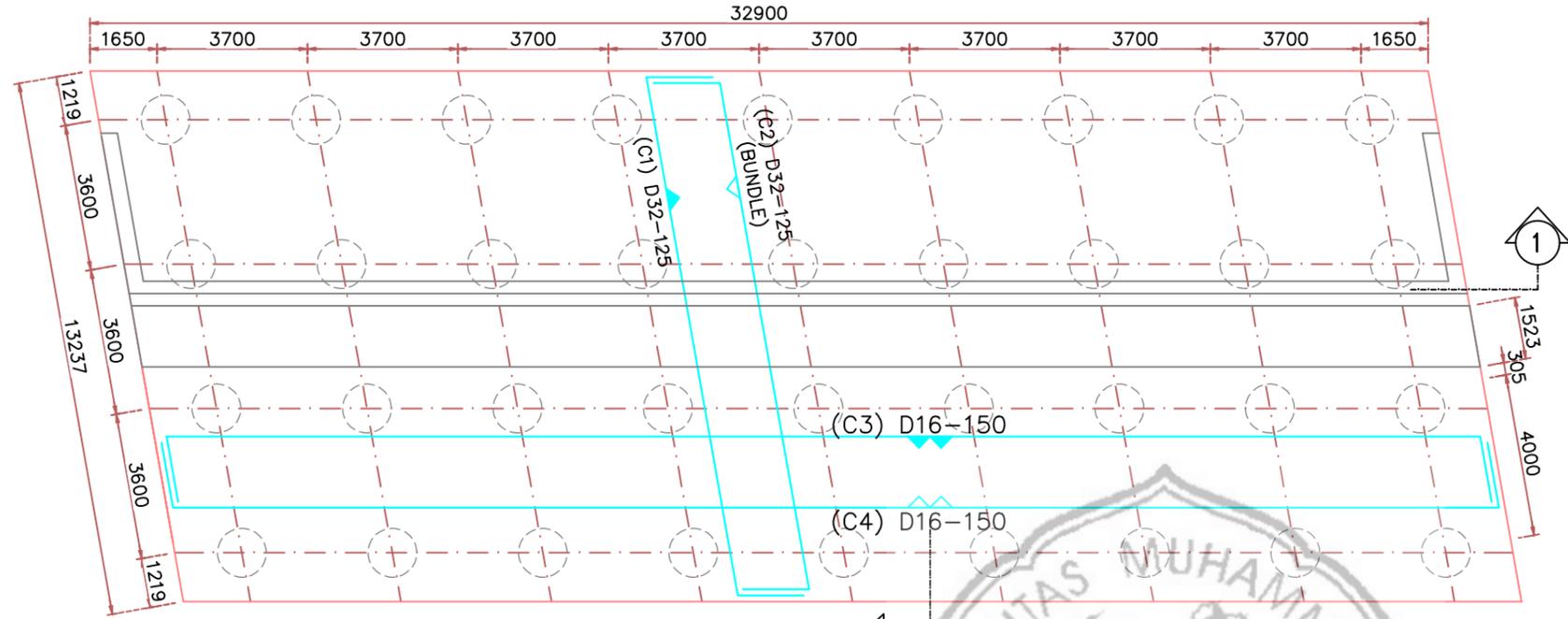


**DAFTAR TULANGAN
PILE CAP ABUTMENT A1**

NO	DIAMETER (mm)	DIMENSI (mm)						TOTAL PANJAN G (m)	BERAT (Kg/m)	JUMLAH UNIT	BERAT (Kg)	KET
		a	b	c	d	e	f					
PENULANGAN PILE CAP ABUTMENT - A1												
C1	D32-125	1830	2170	12000	2170	1830	20.00	6.313	263	33,206.38		
C2	D32-125 (BUNDLE)	1830	2170	12000	2170	1830	20.00	6.313	526	66,412.76		
C3	D16-150	1760	10240	12000	12000	640	38.40	1.578	88	5,332.38		
C4	D16-150	1760	10240	12000	12000	640	38.40	1.578	88	5,332.38		
C5	D13-300/250	85	1830	85			2.00	1.040	5590	11,627.20		
C6	11 D16	980	11020	12000	11020	980	36.00	1.578	22	1,249.78		
C7	11 D16	815	1185	12000	1185	815	16.00	1.578	22	555.46		
										JUMLAH =	123,716.33	
										D13 =	11,627.20	KG
										D16 =	12,469.99	KG
										D25 =	99,619.14	KG
										TOTAL =	123,716.33	KG

- CATATAN :**
- MUTU BETON FOOTING KELAS C1
 - SELIMUT BETON BAWAH 10cm, ATAS 7 cm, SAMPING 7 cm
 - SEMUA UKURAN DALAM MILIMETER KECUALI DITENTUKAN LAIN

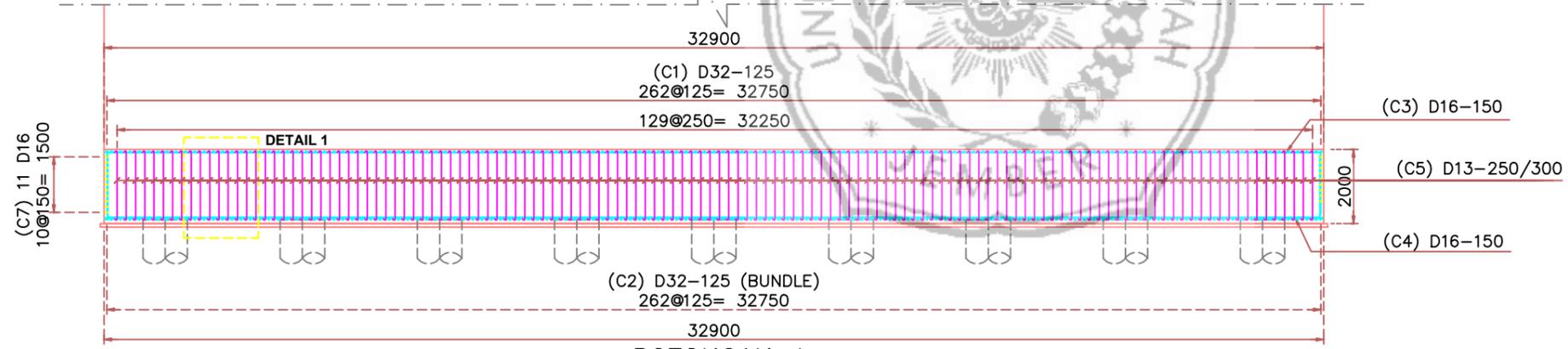
B U J T	NAMA PROYEK JALAN TOL PANDAAN - MALANG Jawa Timur	KONTRAKTOR PP Construction & Investment PT. PP (Persero) Tbk.	KONSULTAN PT WIRANUSANTARA BUMI Toll Road Development Consultant	DIRENCANAKAN	DISETUJUI	MENGETAHUI	Judul Gambar : PENULANGAN (1) PILE CAP ABUTMENT A2 UNDER BRIDGE STA. 15+925	No. Gambar : HW-D-11-14	
				PT WNB Harry Wiryanto Strukture Engineer	PT PP Yusdiantoro General Suprintendent	PT. JPM Firmanda GM. Teknik			Tanggal : -
Tanggal								Keterangan	Revisi



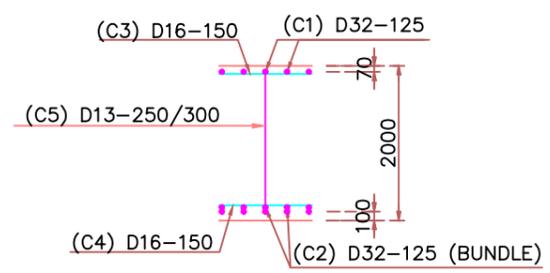
TABEL KOORDINAT TITIK LC DAN PILE CAP ABUTMENT A2

KET	NO.	TITIK (X)	TITIK (Y)
LC	1	690507.552	9136107.874
	2	690507.736	9136094.435
	3	690474.876	9136113.176
	4	690475.060	9136099.737
PILE CAP	1	690507.453	9136107.789
	2	690507.634	9136094.553
	3	690474.978	9136113.058
	4	690475.159	9136099.822

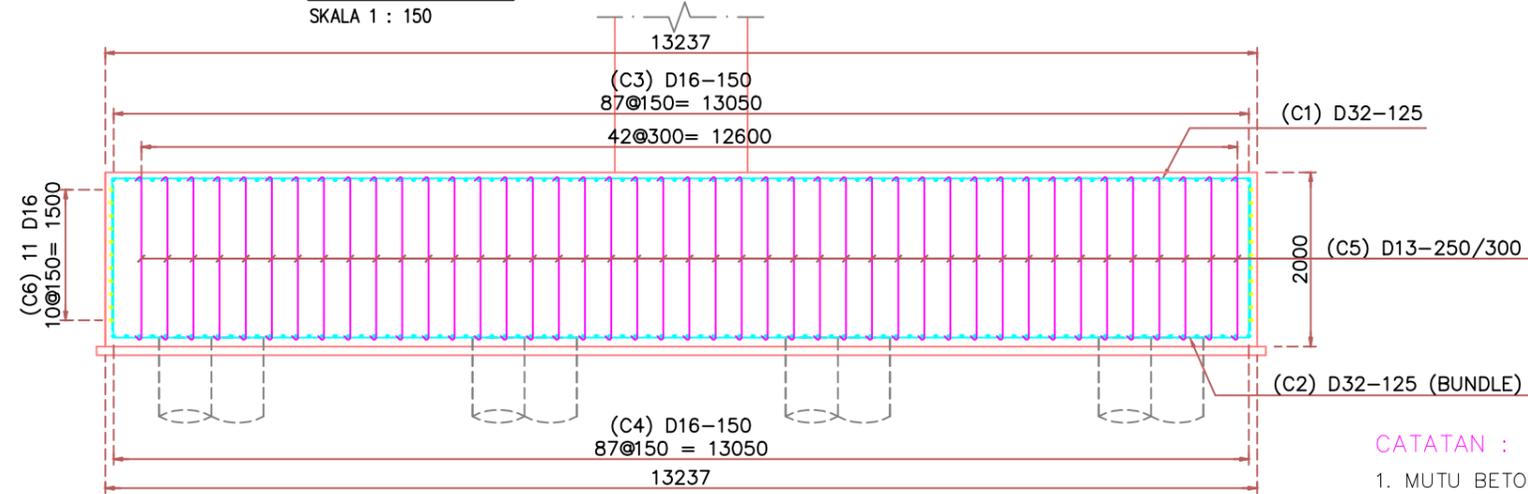
DETAIL TULANGAN PILECAP ABUTMENT A2
SKALA 1 : 150



POTONGAN 1
SKALA 1 : 150



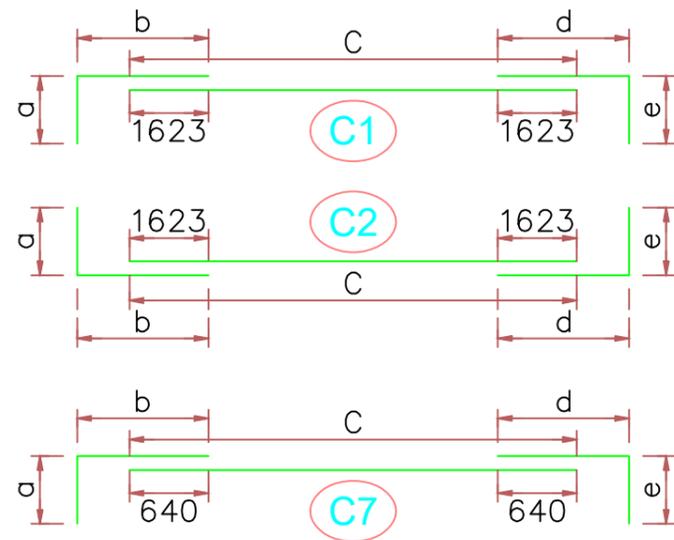
DETAIL 1



POTONGAN 2
SKALA 1 : 75

- CATATAN :**
- MUTU BETON FOOTING KELAS C1
 - SELIMUT BETON BAWAH 10cm, ATAS 7 cm, SAMPING 7 cm
 - SEMUA UKURAN DALAM MILIMETER KECUALI DITENTUKAN LAIN

BUJT	NAMA PROYEK JALAN TOL PANDAAN - MALANG Jawa Timur	KONTRAKTOR PP Construction & Investment PT. PP (Persero) Tbk.	KONSULTAN PT WIRANUSANTARA BUMI Toll Road Development Consultant	DIRENCANAKAN	DISETUJUI	MENGETAHUI	Judul Gambar : PENULANGAN (2) PILE CAP ABUTMENT A2 UNDER BRIDGE STA. 15+925	No. Gambar : HW-D-11-15	
				PT WNB Harry Wiryanto Strukture Engineer	PT PP Yusdiantoro General Suprintendent	PT. JPM Firmanda GM. Teknik			Tanggal : -
TANGGAL								KETERANGAN	REVISI



**SKETSA TULANGAN
PILE CAP ABUTMENT A2**



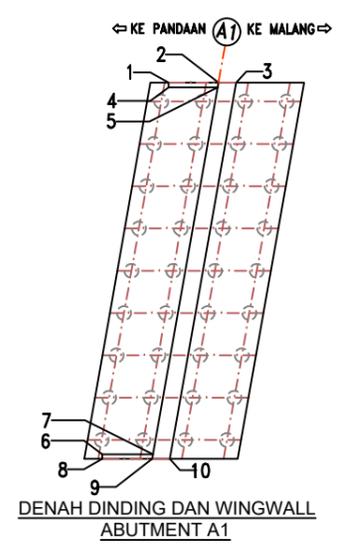
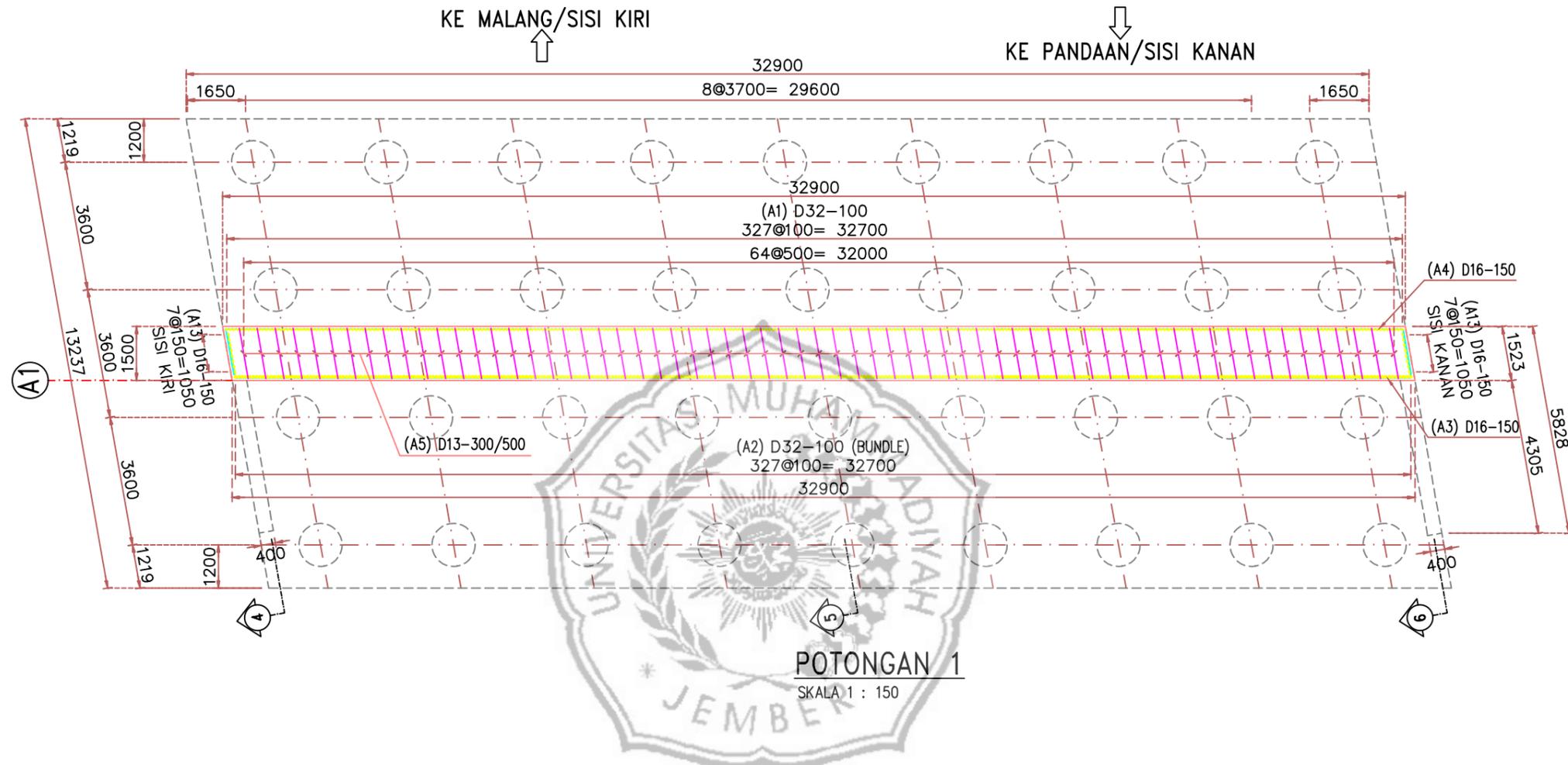
**DAFTAR TULANGAN
PILE CAP ABUTMENT A2**

NO	DIAMETER (mm)	DIMENSI (mm)						TOTAL PANJAN G (m)	BERAT (Kg/m)	JUMLAH UNIT	BERAT (Kg)	KET
		a	b	c	d	e	f					
PENULANGAN PILE CAP ABUTMENT - A2												
C1	D32-125	1830	2170	12000	2170	1830	20.00	6.313	263	33,206.38		
C2	D32-125 (BUNDLE)	1830	2170	12000	2170	1830	20.00	6.313	526	66,412.76		
C3	D16-150	1760	10240	12000	12000	640	38.40	1.578	88	5,332.38		
C4	D16-150	1760	10240	12000	12000	640	38.40	1.578	88	5,332.38		
C5	D13-300/250	85	1830	85			2.00	1.040	5590	11,627.20		
C6	11 D16	980	11020	12000	11020	980	36.00	1.578	22	1,249.78		
C7	11 D16	815	1185	12000	1185	815	16.00	1.578	22	555.46		
										JUMLAH =	123,716.33	
										D13 =	11,627.20	KG
										D16 =	12,469.99	KG
										D25 =	99,619.14	KG
										TOTAL =	123,716.33	KG

CATATAN :

- MUTU BETON FOOTING KELAS C1
- SELIMUT BETON BAWAH 10cm, ATAS 7 cm, SAMPING 7 cm
- SEMUA UKURAN DALAM MILIMETER KECUALI DITENTUKAN LAIN

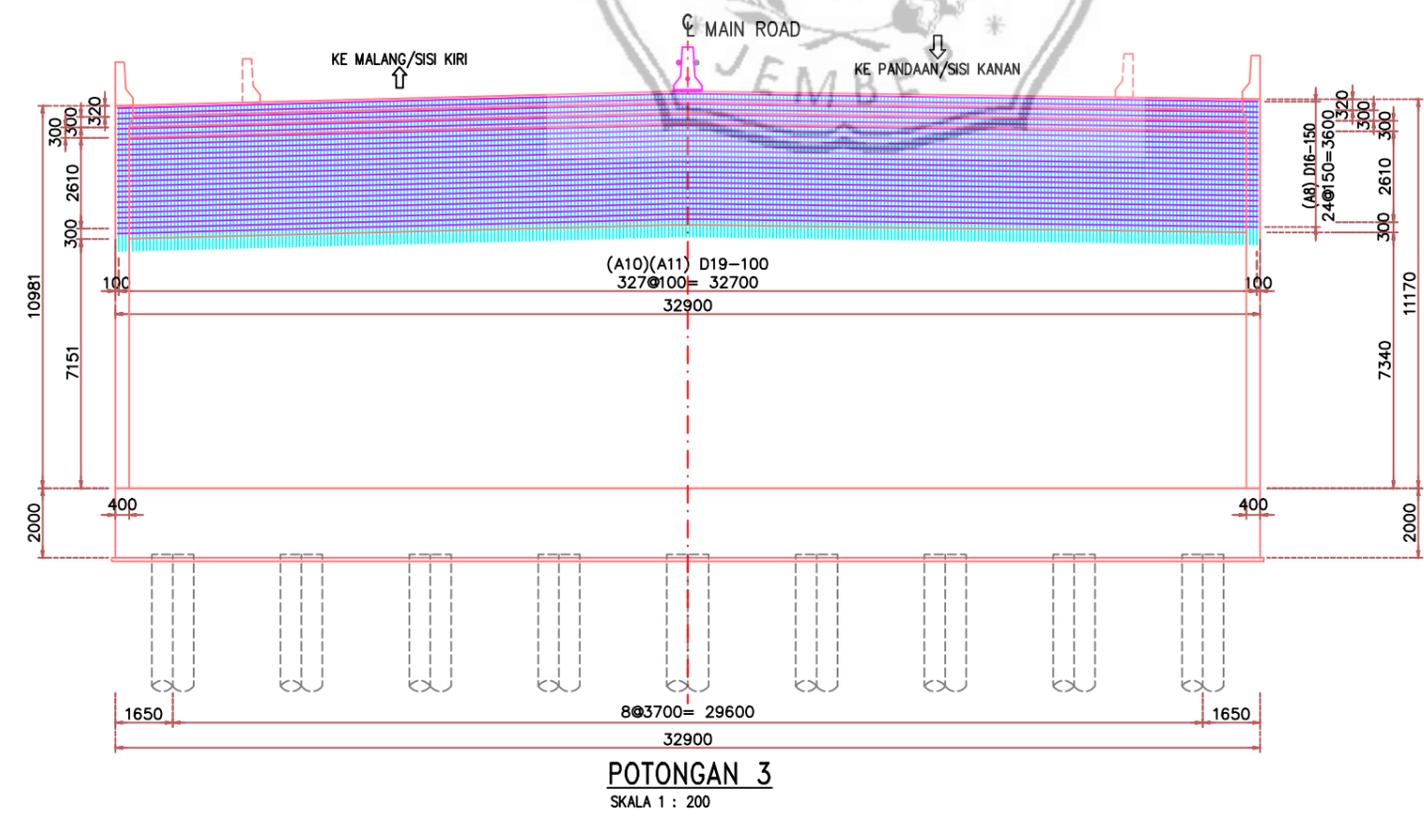
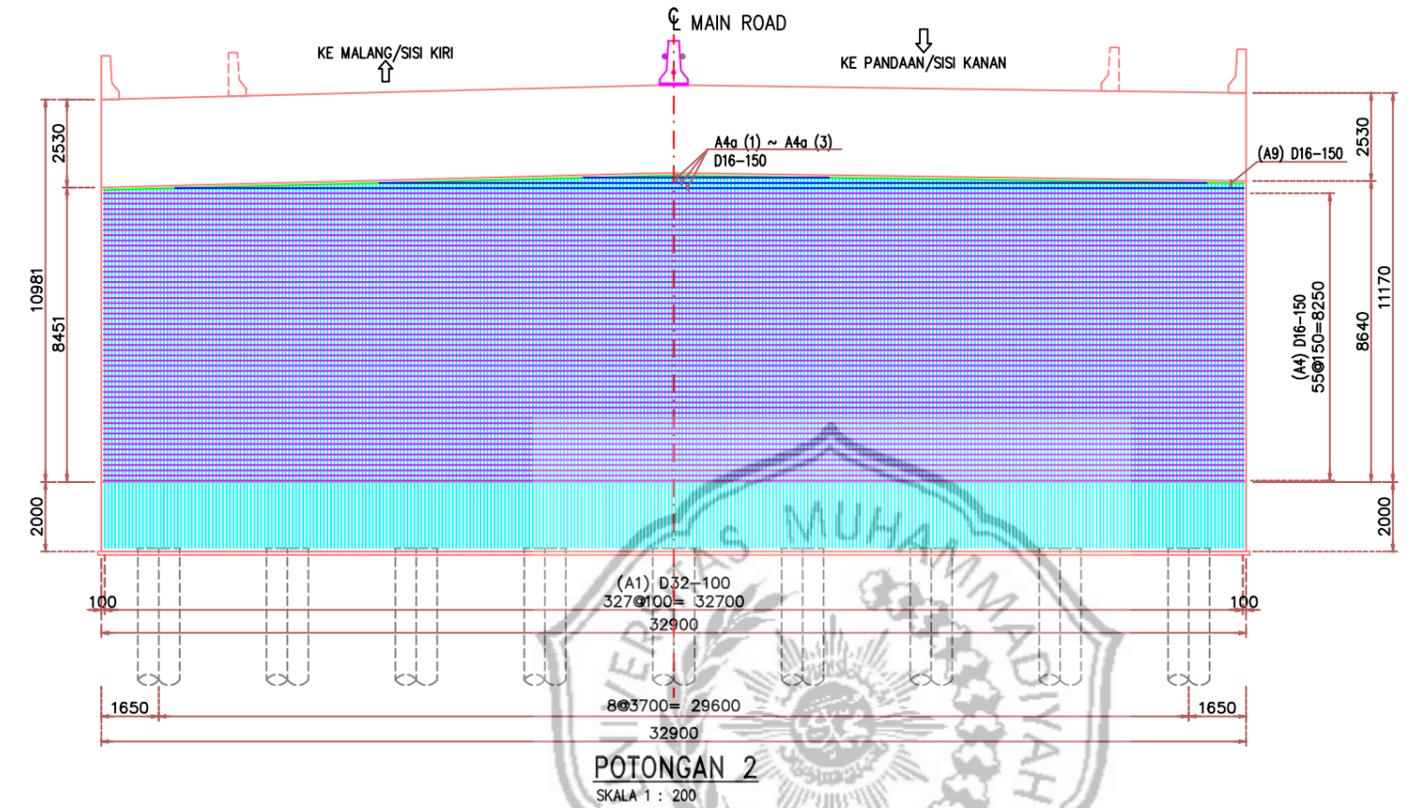
BUJT JASAMARGA PANDAAN MALANG	NAMA PROYEK JALAN TOL PANDAAN - MALANG Jawa Timur	KONTRAKTOR PP Construction & Investment PT. PP (Persero) Tbk.	KONSULTAN PT WIRANUSANTARA BUMI Toll Road Development Consultant	DIRENCANAKAN	DISETUJUI	MENGETAHUI	Judul Gambar : PENULANGAN (1) DINDING ABUTMENT A1 UNDER BRIDGE STA. 15+925	No. Gambar : HW-D-11-16		
				PT WNB Zain Rivani Highway Engineer	PT PP Yusdiantoro General Suprintendent	PT. JPM Firmanda GM. Teknik			Tanggal : -	Skala : SESUAI YANG TERLAMPIR PADA GAMBAR
								Tanggal	Keterangan	Revisi



KET	NO.	TITIK (X)	TITIK (Y)
DINDING DAN WINGWALL	1	690506.933	9136145.803
	2	690506.992	9136141.499
	3	690507.013	9136139.976
	4	690506.533	9136145.798
	5	690506.591	9136141.564
	6	690474.858	9136151.078
	7	690474.918	9136146.703
	8	690474.458	9136151.073
	9	690474.517	9136146.768
	10	690474.538	9136145.245

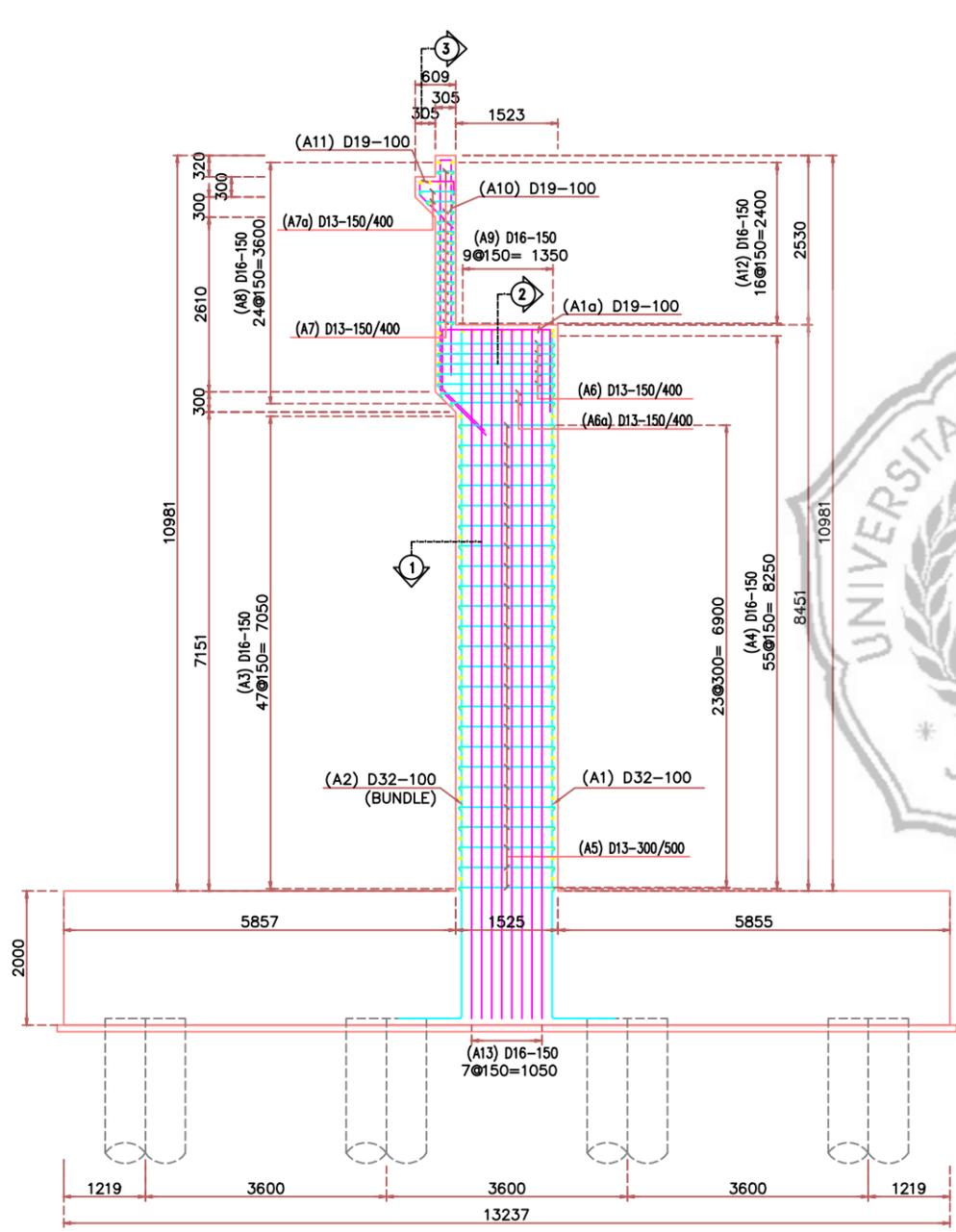
CATATAN :
1. MUTU BETON DINDING ABUTMENT C-1
2. SELIMUT BETON SAMPING 7 cm
3. SEMUA UKURAN DALAM MILIMETER KECUALI DITENTUKAN LAIN

BUJT	NAMA PROYEK JALAN TOL PANDAAN - MALANG Jawa Timur	KONTRAKTOR PP Construction & Investment PT. PP (Persero) Tbk.	KONSULTAN PT WIRANUSANTARA BUMI Toll Road Development Consultant	DIRENCANAKAN		DISETUJUI	MENGETAHUI	Judul Gambar : PENULANGAN (2) DINDING ABUTMENT A1 UNDER BRIDGE STA. 15+925	No. Gambar : HW-D-11-17
				PT WNB Zain Rivani Highway Engineer	PT WNB Bhudjono Team Leader	PT PP Yusdiantoro General Suprintendent	PT. JPM Firmanda GM. Teknik		
								Tanggal	Keterangan
								Revisi	

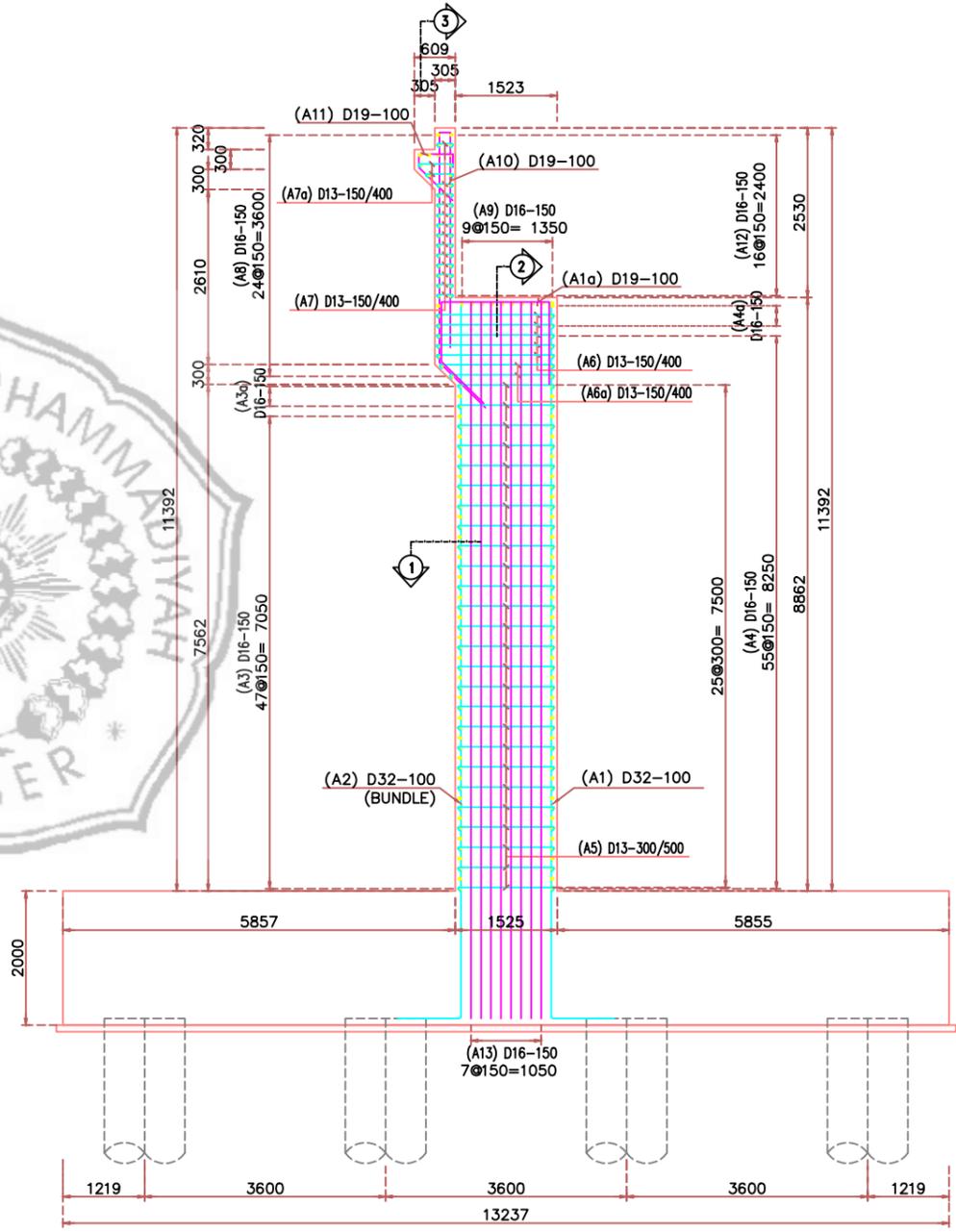


- CATATAN :**
- MUTU BETON DINDING ABUTMENT C-1
 - SELIMUT BETON SAMPING 7 cm
 - SEMUA UKURAN DALAM MILIMETER KECUALI DITENTUKAN LAIN

B U J T	NAMA PROYEK	KONTRAKTOR	KONSULTAN	DIRENCANAKAN		DISETUJUI	MENGETAHUI	Judul Gambar :				No. Gambar :
				PT WNB	PT WNB	PT PP	PT. JPM					
JASAMARGA PANDAAN MALANG	JALAN TOL PANDAAN - MALANG Jawa Timur	PP Construction & Investment PT. PP (Persero) Tbk.	PT WIRANUSANTARA BUMI Toll Road Development Consultant	Zain Rivani Highway Engineer	Bhujono Team Leader	Yusdiantoro General Suprintendent	Firmanda GM. Teknik	HW-D-11-18	BESUI YANG TERLAMPIR PADA GAMBAR			



POTONGAN 4
SKALA 1 : 100

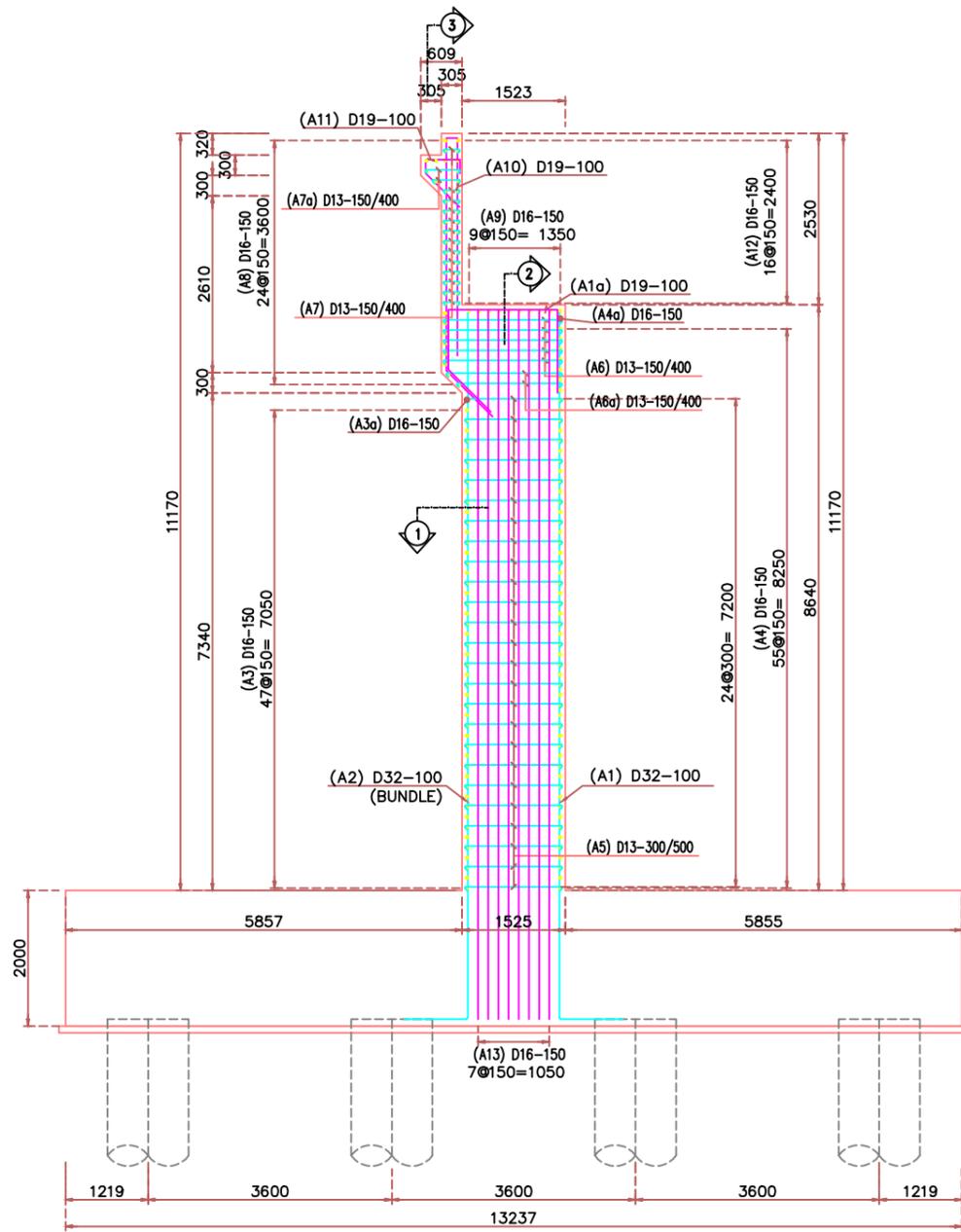
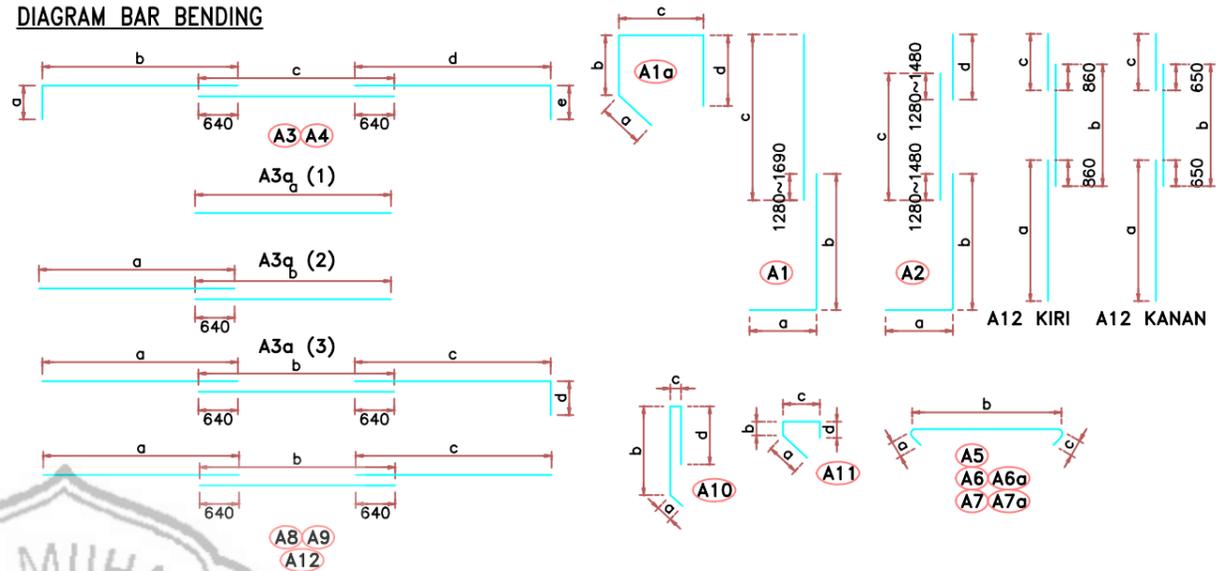


POTONGAN 5
SKALA 1 : 100

- CATATAN :**
- MUTU BETON DINDING ABUTMENT C-1
 - SELIMUT BETON SAMPING 7 cm
 - SEMUA UKURAN DALAM MILIMETER KECUALI DITENTUKAN LAIN

B U J T	NAMA PROYEK JALAN TOL PANDAAN - MALANG Jawa Timur	KONTRAKTOR PP Construction & Investment PT. PP (Persero) Tbk.	KONSULTAN PT WIRANUSANTARA BUMI Toll Road Development Consultant	DIRENCANAKAN	DISETUJUI	MENGETAHUI	Judul Gambar : PENULANGAN (4) DINDING ABUTMENT A1 UNDER BRIDGE STA. 15+925	No. Gambar : HW-D-11-19		
				PT WNB <i>Zain Rivani</i> Highway Engineer	PT PP <i>Yudiantoro</i> General Suprintendent	PT. JPM <i>Firmanda</i> GM. Teknik		Tanggal : -	Keterangan	Revisi

DIAGRAM BAR BENDING



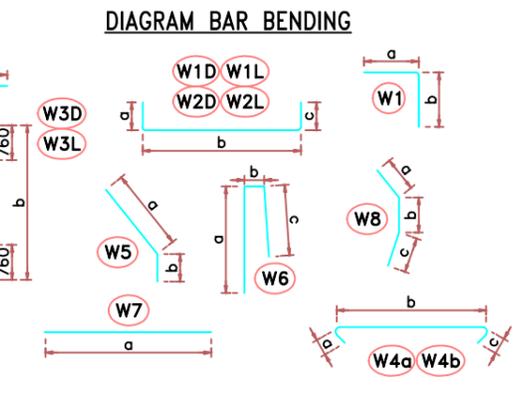
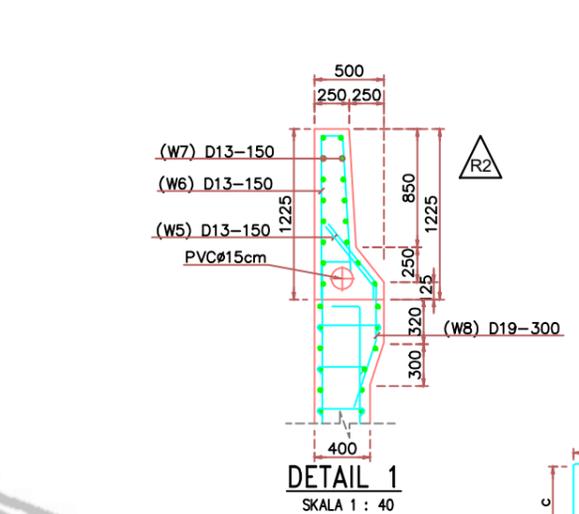
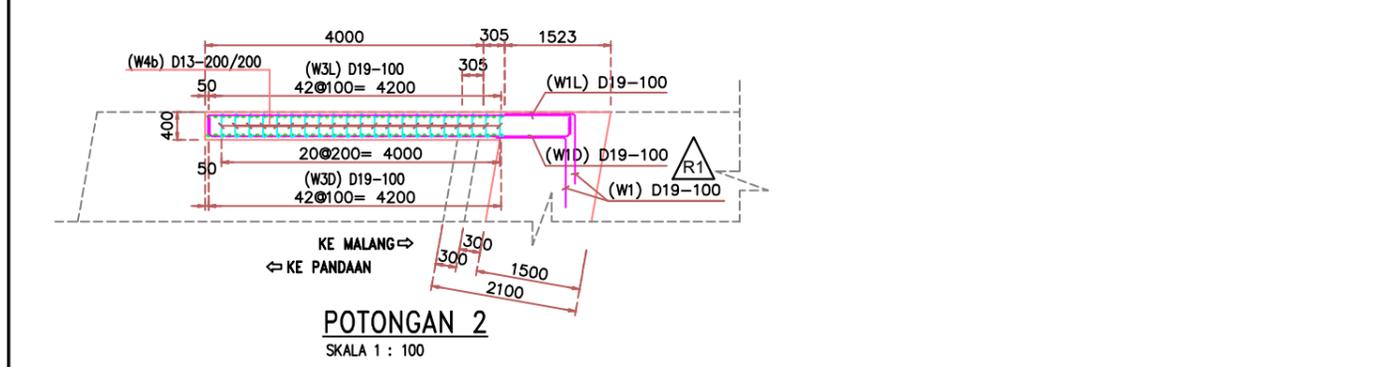
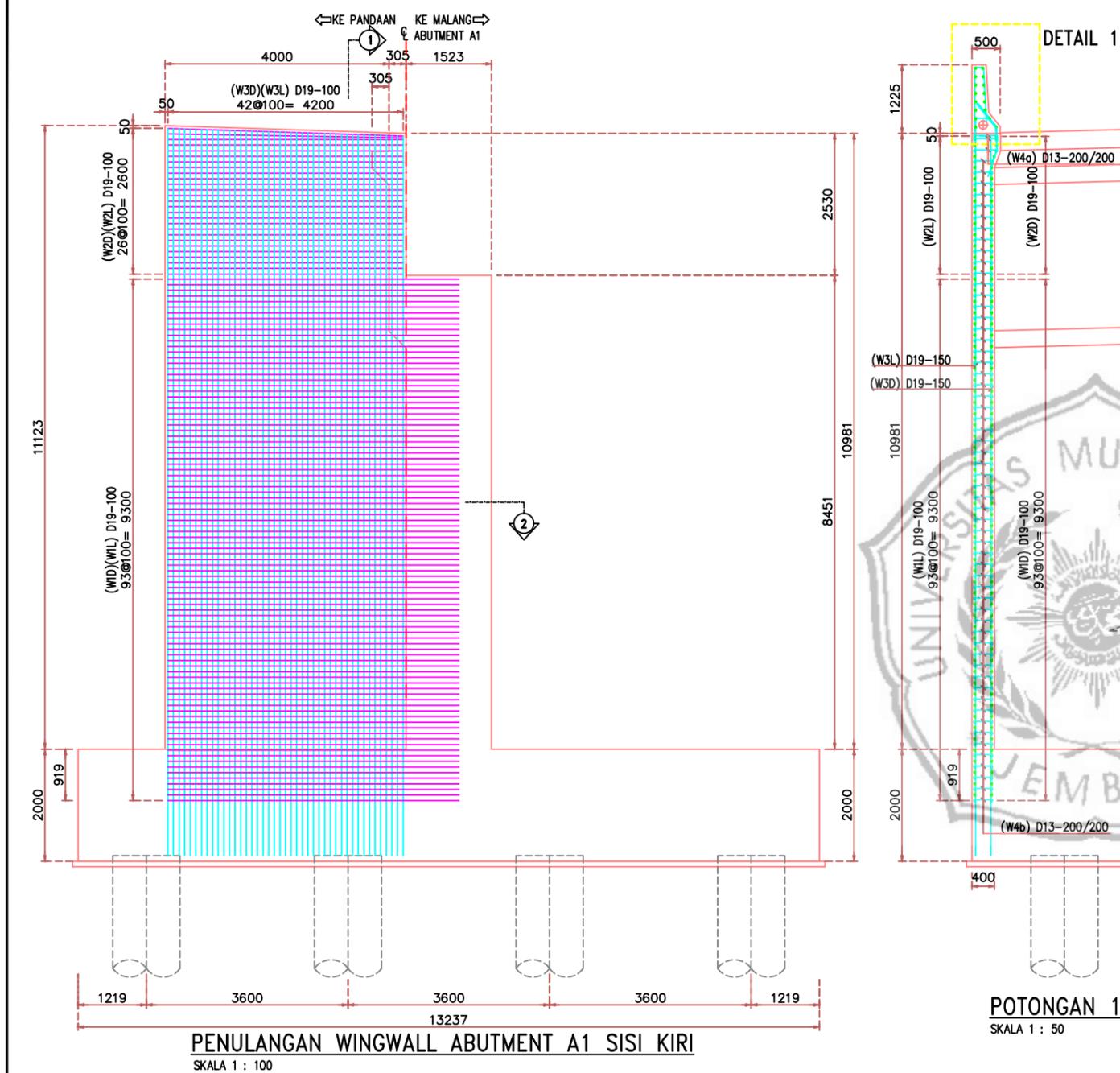
POTONGAN 6
SKALA 1 : 100

NO	DIAMETER (mm)	DIMENSI (mm)						TOTAL PANJANG (m)	BERAT (Kg/m)	JUMLAH UNIT	BERAT (Kg)	KET
		a	b	c	d	e	f					
PENULANGAN DINDING ABUTMENT - A1												
A1	D32-100	1250	4750	7200				13.20	6.313	328	27,332.76	
A1a	D19-100	740	860	1640	760			4.00	2.230	328	2,925.76	
A2	D32-100 (BUNDLE)	1150	4850	6000	2400			14.40	6.313	656	59,635.12	
A3	D16-150	980	11020	12000	11020	980		36.00	1.578	48	2,726.78	
A3a (1)	D16-150	7000						7.00	1.578	1	11.05	
A3a (2)	D16-150	12000	12000					24.00	1.578	1	37.87	
A3a (3)	D16-150	12000	12000	7620	1380			33.00	1.578	1	52.07	
A4	D16-150	980	11020	12000	11020	980		36.00	1.578	56	3,181.25	
A4a (1)	D16-150	7000						7.00	1.578	1	11.05	
A4a (2)	D16-150	12000	12000					24.00	1.578	1	37.87	
A4a (3)	D16-150	12000	12000	7620	1380			33.00	1.578	1	52.07	
A5	D13-300/500	150	1415	150				1.72	1.040	1625	2,898.35	
A6	D13-150/400	140	1715	140				2.00	1.040	410	850.67	
A6a (1)	D13-150/400	155	1685	155				2.00	1.040	82	170.13	
A6a (2)	D13-150/400	95	1530	95				1.72	1.040	82	146.68	
A7	D13-150/400	100	195	100				0.40	1.040	1066	437.91	
A7a (1)	D13-150/400	150	500	150				0.80	1.040	82	68.22	
A7a (2)	D13-150/400	100	400	100				0.60	1.040	82	51.17	
A8	D16-150	12000	12000	10000				34.00	1.578	27	1,448.60	
A9	D16-150	12000	12000	10000				34.00	1.578	10	536.52	
A10	D19-100	1270	3400	130	3200			8.00	2.230	328	5,851.52	
A11	D19-100	600	200	500	200			1.50	2.230	328	1,097.16	
A12	D16-150	12000	12000	10000				34.00	1.578	17	912.08	
A13 (KIRI)	D16-150	6000	2000	4000				12.00	1.578	8	151.49	
A13 (KANAN)	D16-150	6000	2000	4000				12.00	1.578	8	151.49	
JUMLAH =										110,775.67		
D13 =										4,623.14	KG	
D16 =										9,310.20	KG	
D19 =										9,874.44	KG	
D32 =										86,967.89	KG	
TOTAL =										110,775.67	KG	

CATATAN :

- MUTU BETON DINDING ABUTMENT C-1
- SELIMUT BETON SAMPING 7 cm
- SEMUA UKURAN DALAM MILIMETER KECUALI DITENTUKAN LAIN

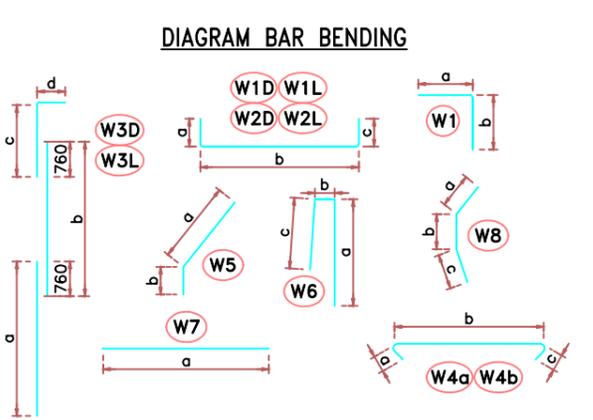
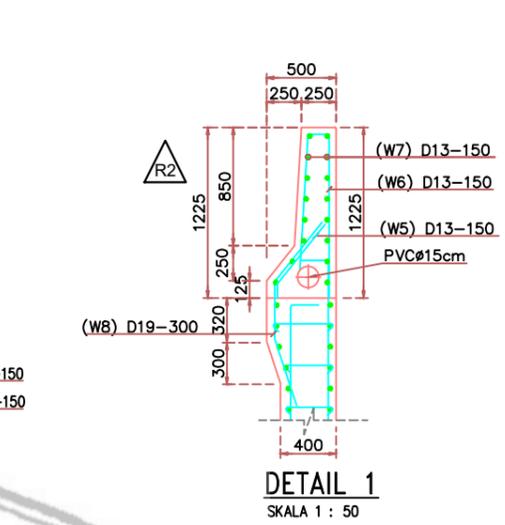
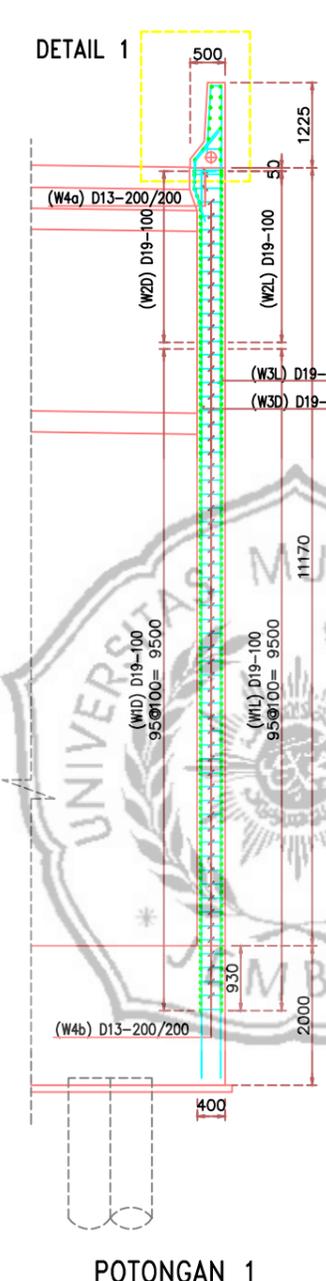
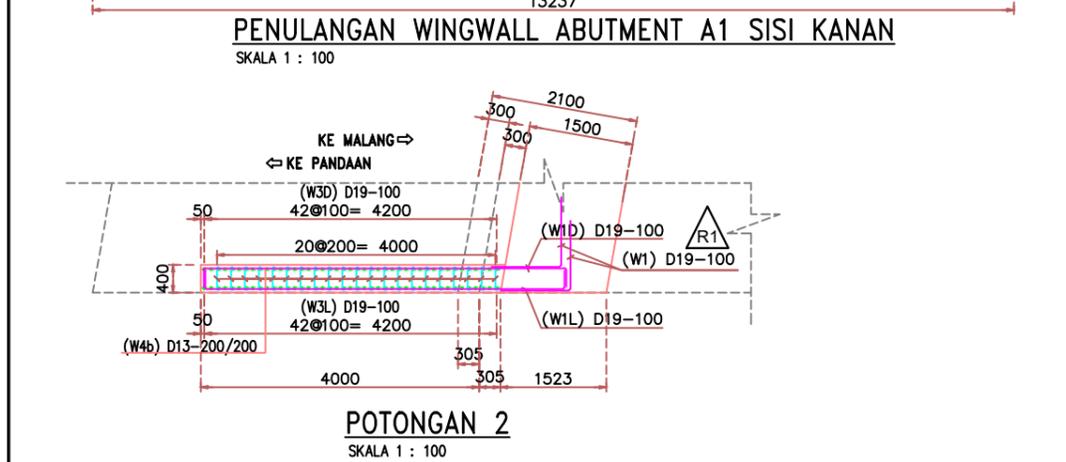
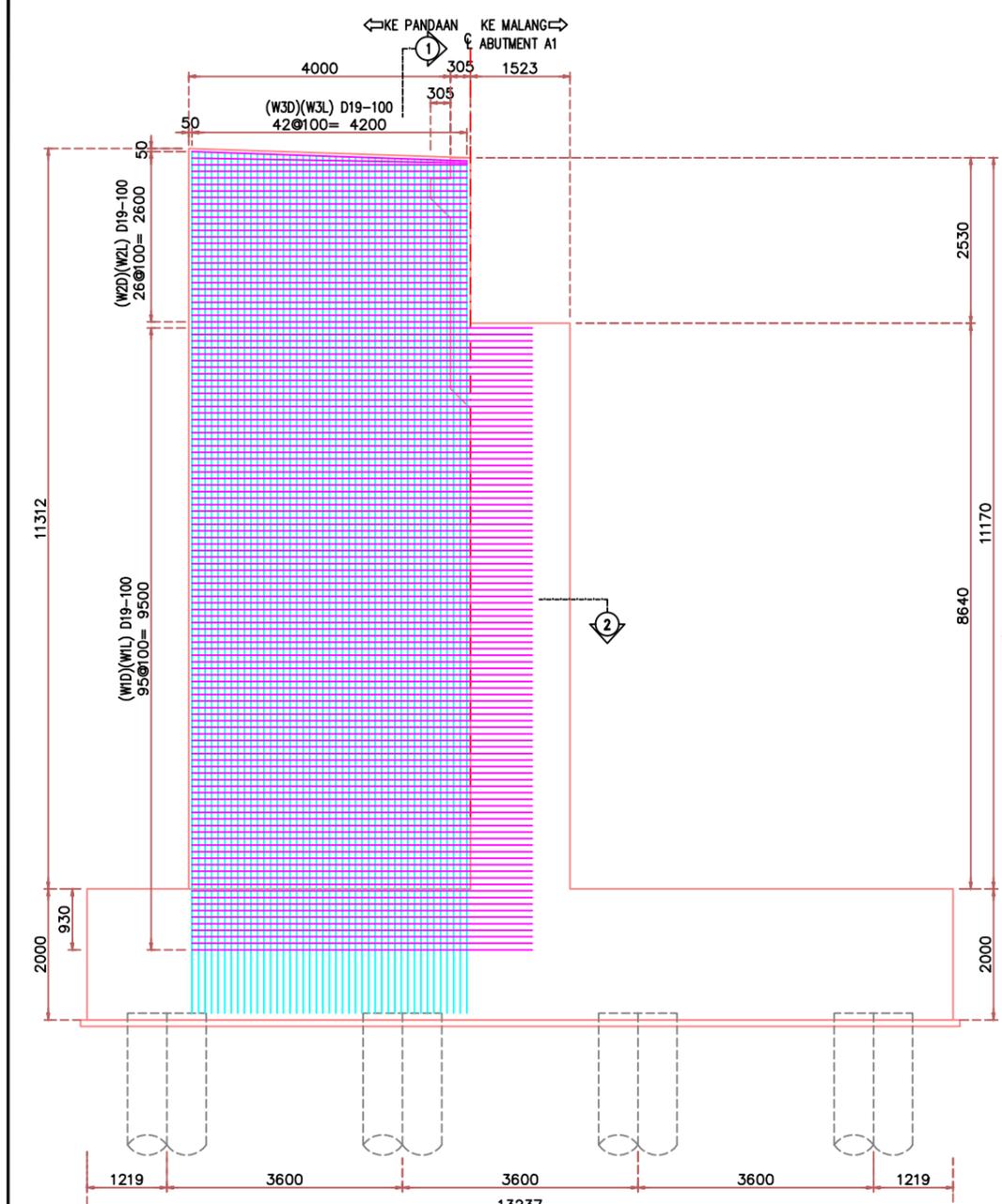
 JASAMARGA PANDAAN MALANG	B U J T NAMA PROYEK JALAN TOL PANDAAN - MALANG Jawa Timur	KONTRAKTOR  Construction & Investment PT. PP (Persero) Tbk.	KONSULTAN  PT WIRANUSANTARA BUMI Toll Road Development Consultant	DIREKANAKAN		DISETUJUI	MENGETAHUI	Judul Gambar : PENULANGAN WINGWALL SISI KIRI ABUTMENT A1 UNDER BRIDGE STA. 15+925	19 Juni 2017 Revisi kekuatan wingwall dengan menambah stek besi (W1) pada persinggungan wingwall dengan dinding abutment	No. Gambar : HW-D-11-20
				PT WNB	PT WNB	PT PP	PT. JPM			
				Zain Rivani Highway Engineer	Bhudjono Team Leader	Yusdiantoro General Superintendent	Firmanda GM. Teknik	Tanggal	Keterangan	Revisi



NO	DIAMETER (mm)	DIMENSI (mm)				TOTAL PANJANG (m)	BERAT (Kg/m)	JUMLAH UNIT	BERAT (Kg)	KET
		a	b	c	d					
PENULANGAN WINGWALL SISI KIRI ABUTMENT - A1										
W1	D19-100	760	760			1.52	2.230	242	820.28	
W1D	D19-100	300	5400	300		6.00	2.230	94	1,257.72	
W1L	D19-100	300	5400	300		6.00	2.230	94	1,257.72	
W2D	D19-100	300	4200	300		4.80	2.230	27	289.01	
W2L	D19-100	300	4200	300		4.80	2.230	27	289.01	
W3D	D19-100	6000	6000	2350 ~ 2490	300	14.72	2.230	43	1,411.50	
W3L	D19-100	6000	6000	2670 ~ 2810	300	15.04	2.230	43	1,442.19	
W4a	D13-200/200	80	440	80		0.60	1.040	63	39.31	
W4b	D13-200/200	135	330	135		0.60	1.040	1218	760.03	
W5	D13-150	680	120			0.80	1.040	29	24.13	
W6	D13-150	1175	150	1070		2.40	1.040	29	72.23	
W7	D13-150	4200				4.20	1.040	16	69.89	
W8	D19-300	500	410	590		1.50	2.230	15	50.18	
								JUMLAH =	7,783.19	
								D13 =	965.59	KG
								D19 =	6,817.60	KG
								TOTAL =	7,783.19	KG

CATATAN :
 1. MUTU BETON WINGWALL ABUTMENT KELAS C
 2. SELIMUT BETON SAMPING 5 cm
 3. SEMUA UKURAN DALAM MILIMETER KECUALI DITENTUKAN LAIN

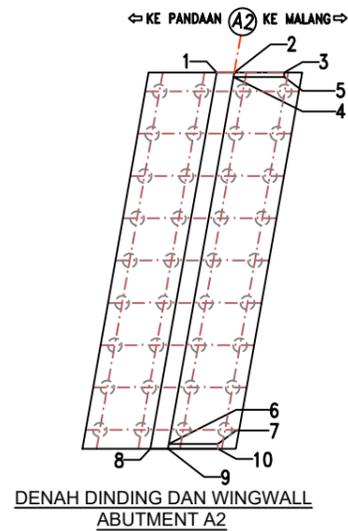
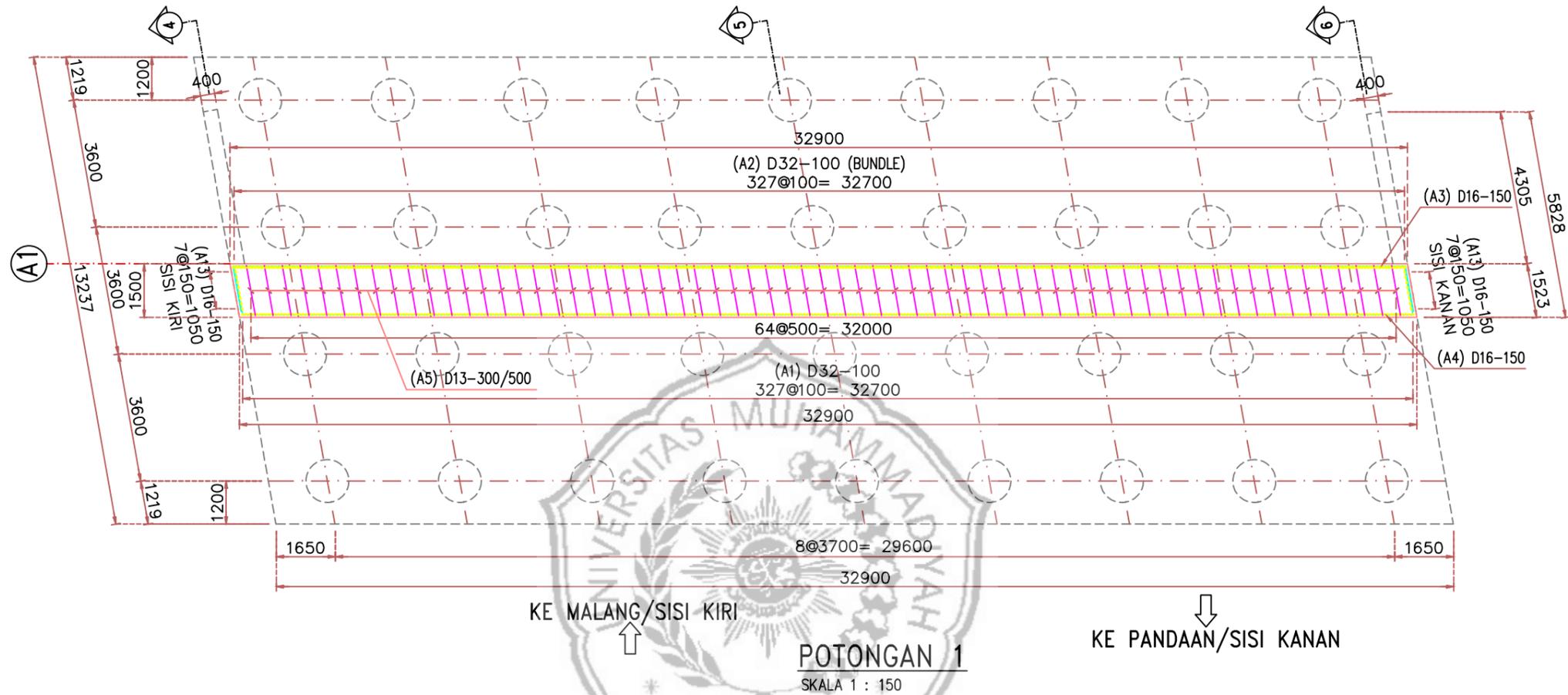
B U J T	NAMA PROYEK JALAN TOL PANDAAN - MALANG Jawa Timur	KONTRAKTOR PP Construction & Investment PT. PP (Persero) Tbk.	KONSULTAN PT WIRANUSANTARA BUMI Toll Road Development Consultant	DIRENCANAKAN	DISETUJUI	MENGETAHUI	Judul Gambar : PENULANGAN WINGWALL SISI KANAN ABUTMENT A1 UNDER BRIDGE STA. 15+925	19 Juni 2017	Revisi kekuatan wingwall dengan menambah stek besi (W1) pada persinggungan wingwall dengan dinding abutment	No. Gambar : HW-D-11-21
				PT WNB <i>Zain Rivani</i> Highway Engineer	PT PP	PT. JPM <i>Firmanda</i> GM. Teknik		20 Juni 2017	Revisi desain barrier tepi dari tinggi 1250 mm menjadi 1225 mm	
								Tanggal	Keterangan	Revisi



NO	DIAMETER (mm)	DIMENSI (mm)				TOTAL PANJANG (m)	BERAT (Kg/m)	JUMLAH UNIT	BERAT (Kg)	KET
		a	b	c	d					
PENULANGAN WINGWALL SISI KANAN ABUTMENT - A1										
W1	D19-100	760	760			1.52	2.230	246	833.84	
W1D	D19-100	300	5400	300		6.00	2.230	96	1,284.48	
W1L	D19-100	300	5400	300		6.00	2.230	96	1,284.48	
W2D	D19-100	300	4200	300		4.80	2.230	27	289.01	
W2L	D19-100	300	4200	300		4.80	2.230	27	289.01	
W3D	D19-100	6000	6000	2540 ~ 2680	300	14.91	2.230	43	1,429.72	
W3L	D19-100	6000	6000	2860 ~ 3000	300	15.23	2.230	43	1,460.40	
W4a	D13-200/200	80	440	80		0.60	1.040	63	39.31	
W4b	D13-200/200	135	330	135		0.60	1.040	1239	773.14	
W5	D13-150	680	120			0.80	1.040	29	24.13	
W6	D13-150	1175	150	1070		2.40	1.040	29	72.23	
W7	D13-150	4200				4.20	1.040	16	69.89	
W8	D19-300	500	410	590		1.50	2.230	15	50.18	
								JUMLAH =	7,899.81	
								D13 =	978.70	KG
								D19 =	6,921.12	KG
								TOTAL =	7,899.81	KG

CATATAN :
1. MUTU BETON WINGWALL ABUTMENT KELAS C
2. SELIMUT BETON SAMPING 5 cm
3. SEMUA UKURAN DALAM MILIMETER KECUALI DITENTUKAN LAIN

BUJT	NAMA PROYEK JALAN TOL PANDAAN - MALANG Jawa Timur	KONTRAKTOR PP Construction & Investment PT. PP (Persero) Tbk.	KONSULTAN PT WIRANUSANTARA BUMI Toll Road Development Consultant	DIRENCANAKAN		DISETUJUI	MENGETAHUI	Judul Gambar : PENULANGAN (1) DINDING ABUTMENT A2 UNDER BRIDGE STA. 15+925	No. Gambar : HW-D-11-22	
				PT WNB Zain Rivani Highway Engineer	PT WNB Bhudjono Team Leader	PT PP Yudiantoro General Superintendent	PT. JPM Firmanda GM. Teknik			Tanggal : -
								Tanggal	Keterangan	Revisi

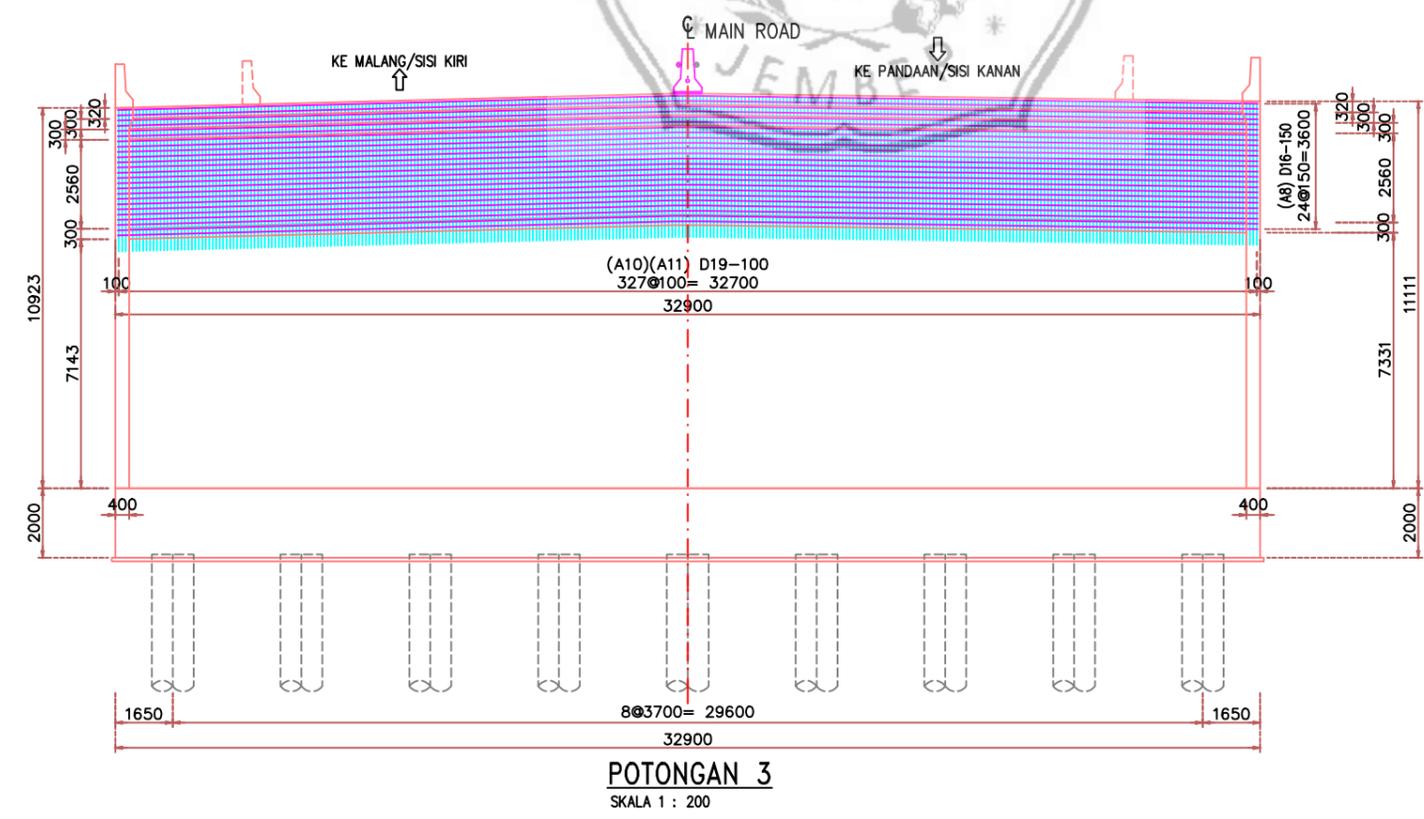
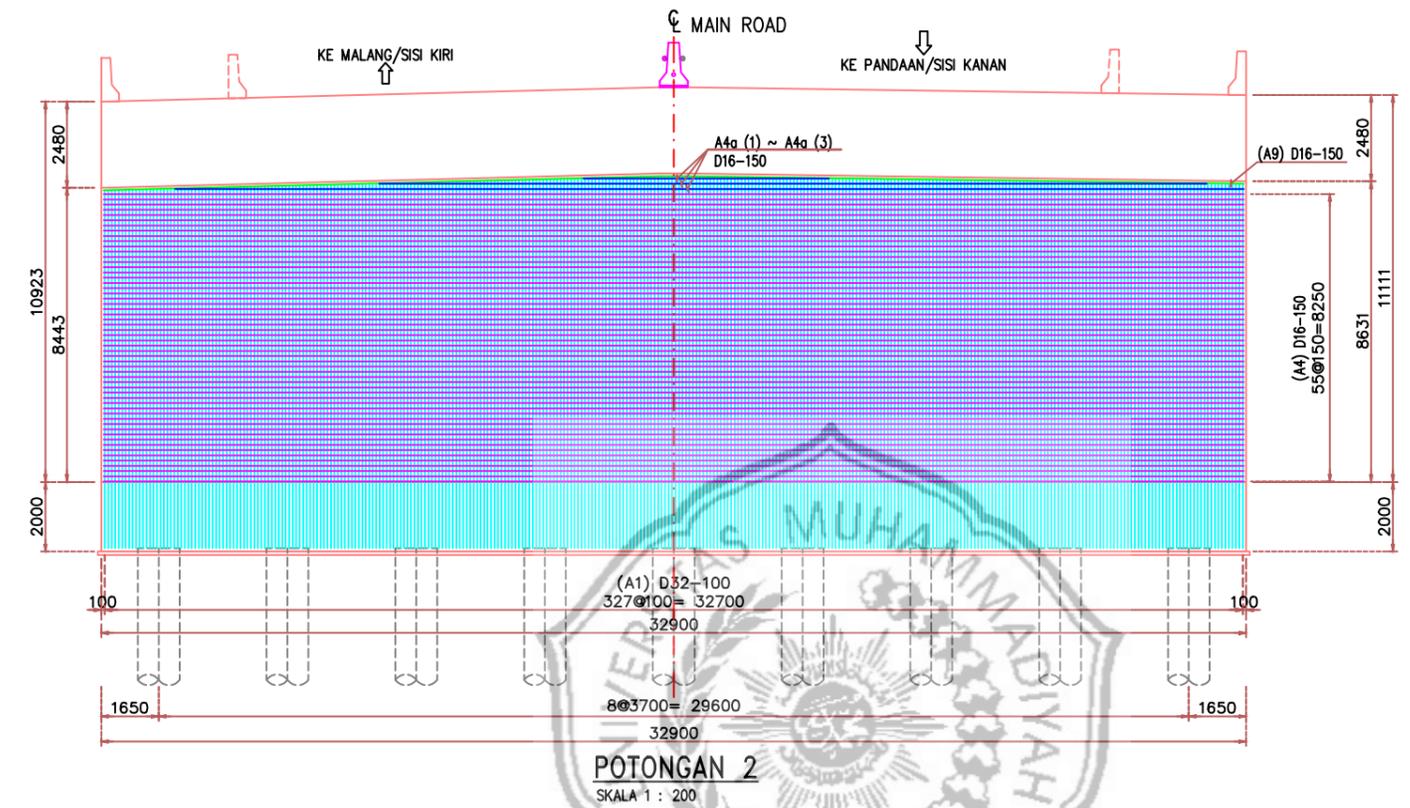


KET	NO.	TITIK (X)	TITIK (Y)
DINDING DAN WINGWALL	1	690507.533	9136101.932
	2	690507.554	9136100.409
	3	690507.613	9136096.105
	4	690507.153	9136100.475
	5	690507.213	9136096.100
	6	690475.480	9136105.614
	7	690475.538	9136101.380
	8	690475.058	9136107.202
	9	690475.079	9136105.679
	10	690475.138	9136101.375

CATATAN :

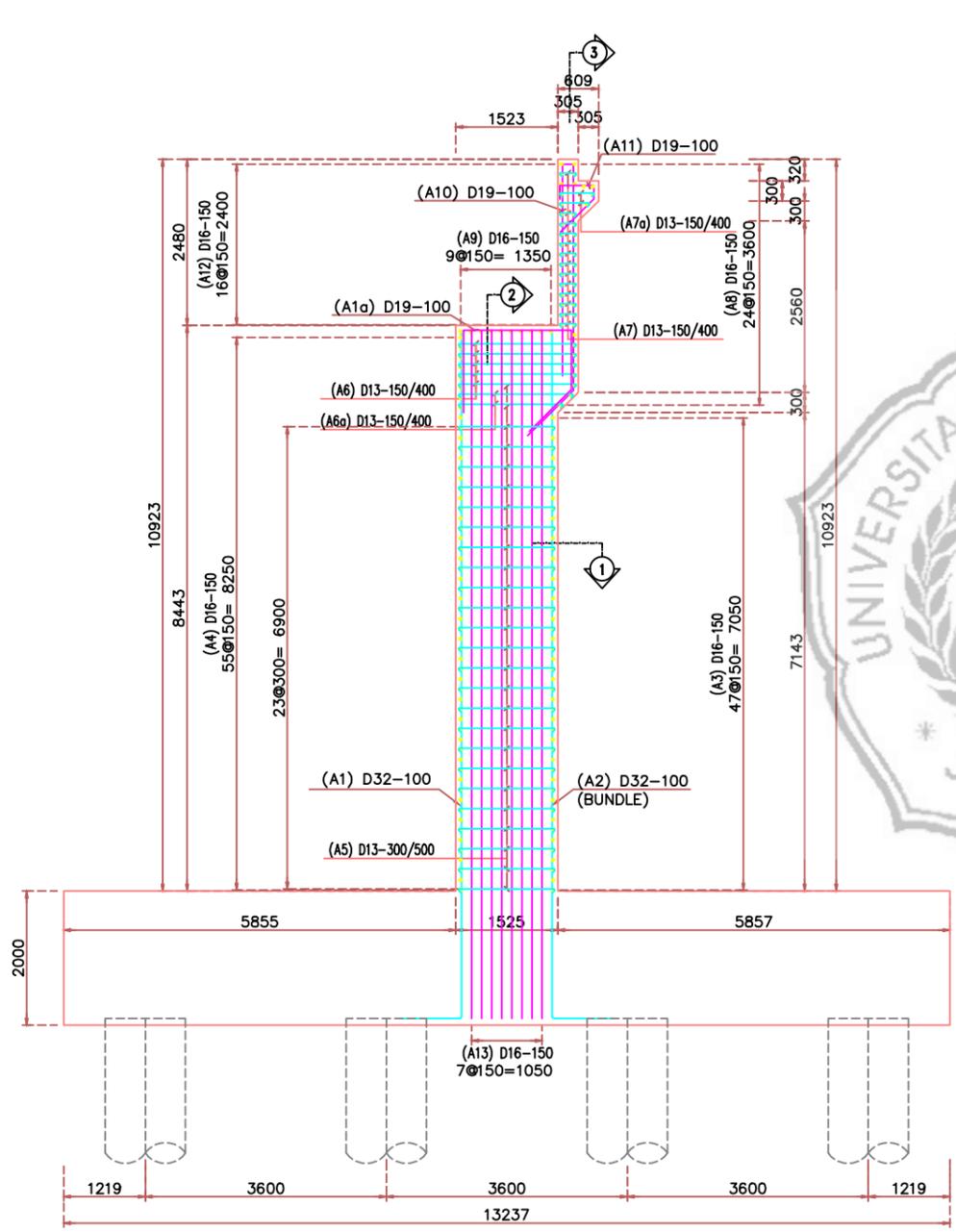
- MUTU BETON DINDING ABUTMENT C-1
- SELIMUT BETON SAMPING 7 cm
- SEMUA UKURAN DALAM MILIMETER KECUALI DITENTUKAN LAIN

BUJT	NAMA PROYEK JALAN TOL PANDAAN - MALANG Jawa Timur	KONTRAKTOR  Construction & Investment PT. PP (Persero) Tbk.	KONSULTAN  PT WIRANUSANTARA BUMI Toll Road Development Consultant	DIRENCANAKAN		DISETUJUI	MENGETAHUI	Judul Gambar : PENULANGAN (2) DINDING ABUTMENT A2 UNDER BRIDGE STA. 15+925	No. Gambar : HW-D-11-23
				PT WNB  Zain Rivani Highway Engineer	PT WNB  Bhudjono Team Leader	PT PP Yusdiantoro General Suprintendent	PT. JPM Firmanda GM. Teknik		
Tanggal									
Keterangan									
Revisi									

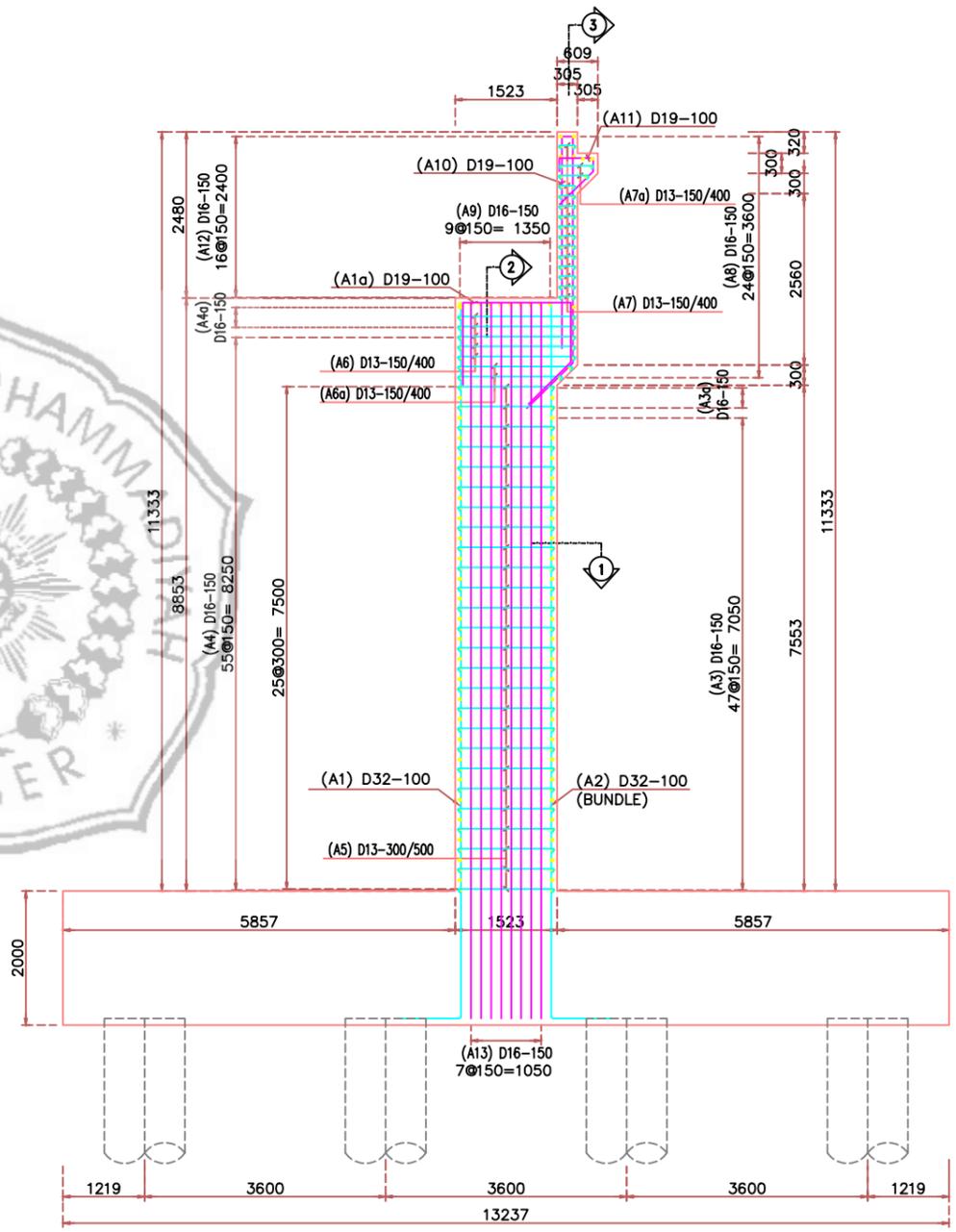


- CATATAN :**
- MUTU BETON DINDING ABUTMENT C-1
 - SELIMUT BETON SAMPING 7 cm
 - SEMUA UKURAN DALAM MILIMETER KECUALI DITENTUKAN LAIN

B U J T	NAMA PROYEK	KONTRAKTOR	KONSULTAN	DIRENCANAKAN		DISETUJUI	MENGETAHUI	Judul Gambar :				No. Gambar :	
				PT WNB	PT WNB	PT PP	PT. JPM						PENULANGAN (3) DINDING ABUTMENT A2 UNDER BRIDGE STA. 15+925
JASAMARGA PANDAAN MALANG	JALAN TOL PANDAAN - MALANG Jawa Timur	PP Construction & Investment PT. PP (Persero) Tbk.	PT WIRANUSANTARA BUMI Toll Road Development Consultant	Zain Rivani Highway Engineer	Bhudjono Team Leader	Yusdiantoro General Suprintendent	Firmanda GM. Teknik	Tanggal :	Tanggal	Keterangan	Revisi	Skala :	
													BESUI YANG TERLAMPIR PADA GAMBAR



POTONGAN 4
SKALA 1 : 100

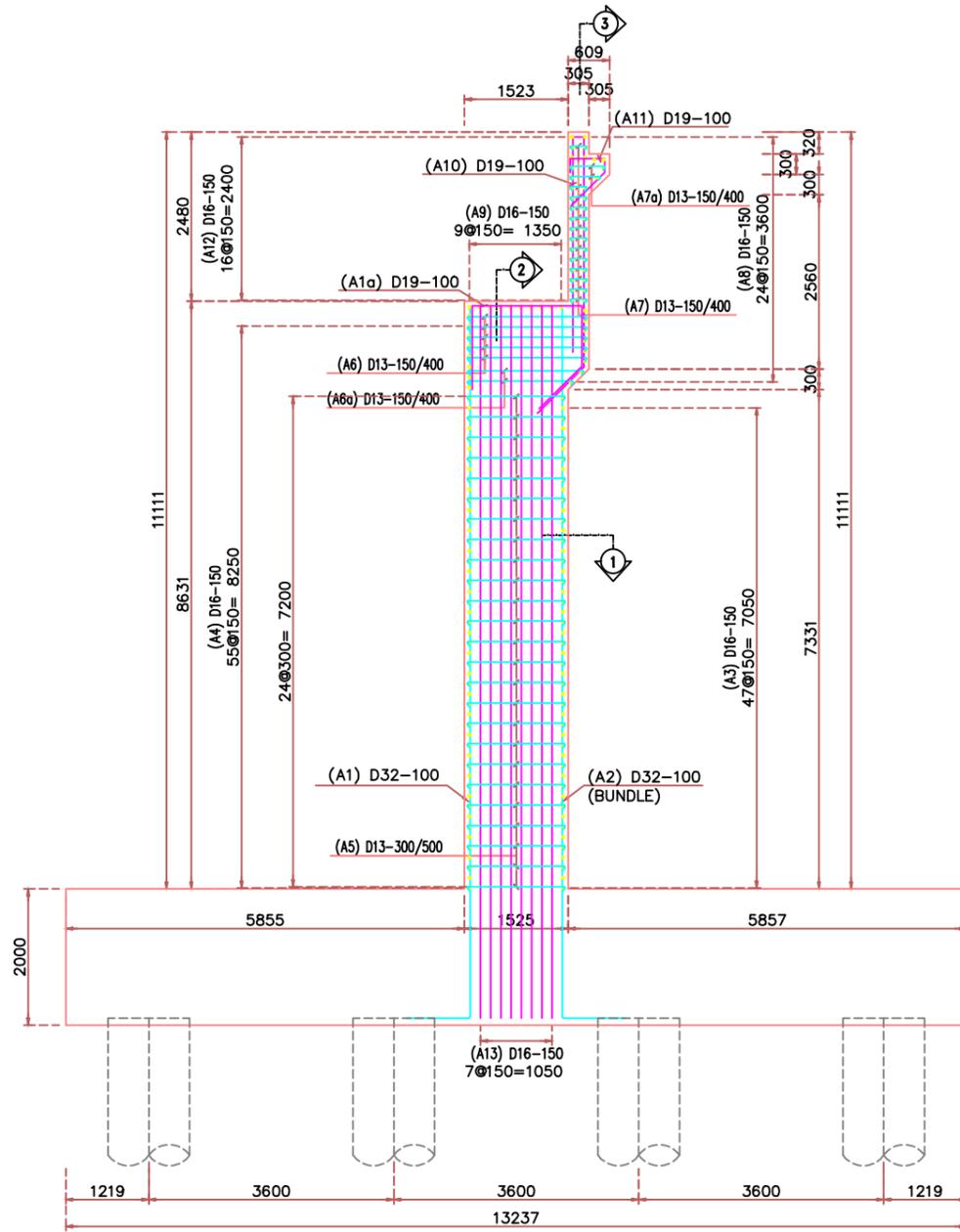
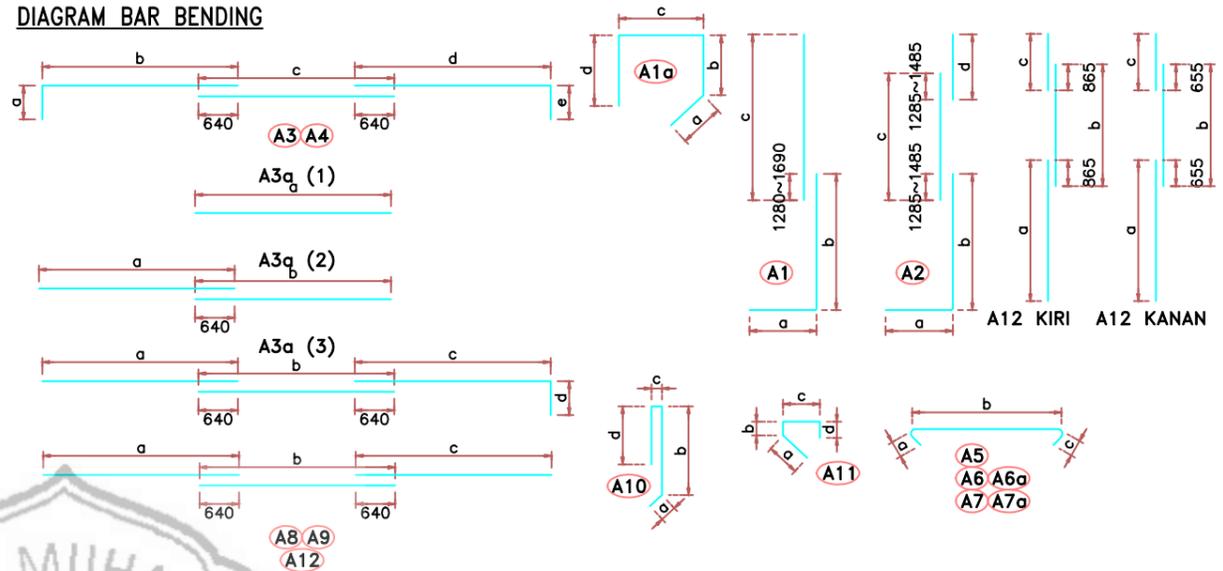


POTONGAN 5
SKALA 1 : 100

- CATATAN :**
- MUTU BETON DINDING ABUTMENT C-1
 - SELIMUT BETON SAMPING 7 cm
 - SEMUA UKURAN DALAM MILIMETER KECUALI DITENTUKAN LAIN

B U J T	NAMA PROYEK	KONTRAKTOR	KONSULTAN	DIREKANAKAN	DISETUJUI	MENGETAHUI	Judul Gambar :	No. Gambar :		
	JALAN TOL PANDAAN - MALANG Jawa Timur			PT WNB	PT PP	PT. JPM	PENULANGAN (4) DINDING ABUTMENT A2 UNDER BRIDGE STA. 15+925	HW-D-11-25		
JASAMARGA PANDAAN MALANG		Construction & Investment PT. PP (Persero) Tbk.	PT WIRANUSANTARA BUMI Toll Road Development Consultant	Zain Rivani Highway Engineer	Bhujono Team Leader	Yudiantoro General Superintendent	Firmanda GM. Teknik	Tanggal	Keterangan	Revisi
								Skala : SESUAI YANG TERLAMPIR PADA GAMBAR		

DIAGRAM BAR BENDING



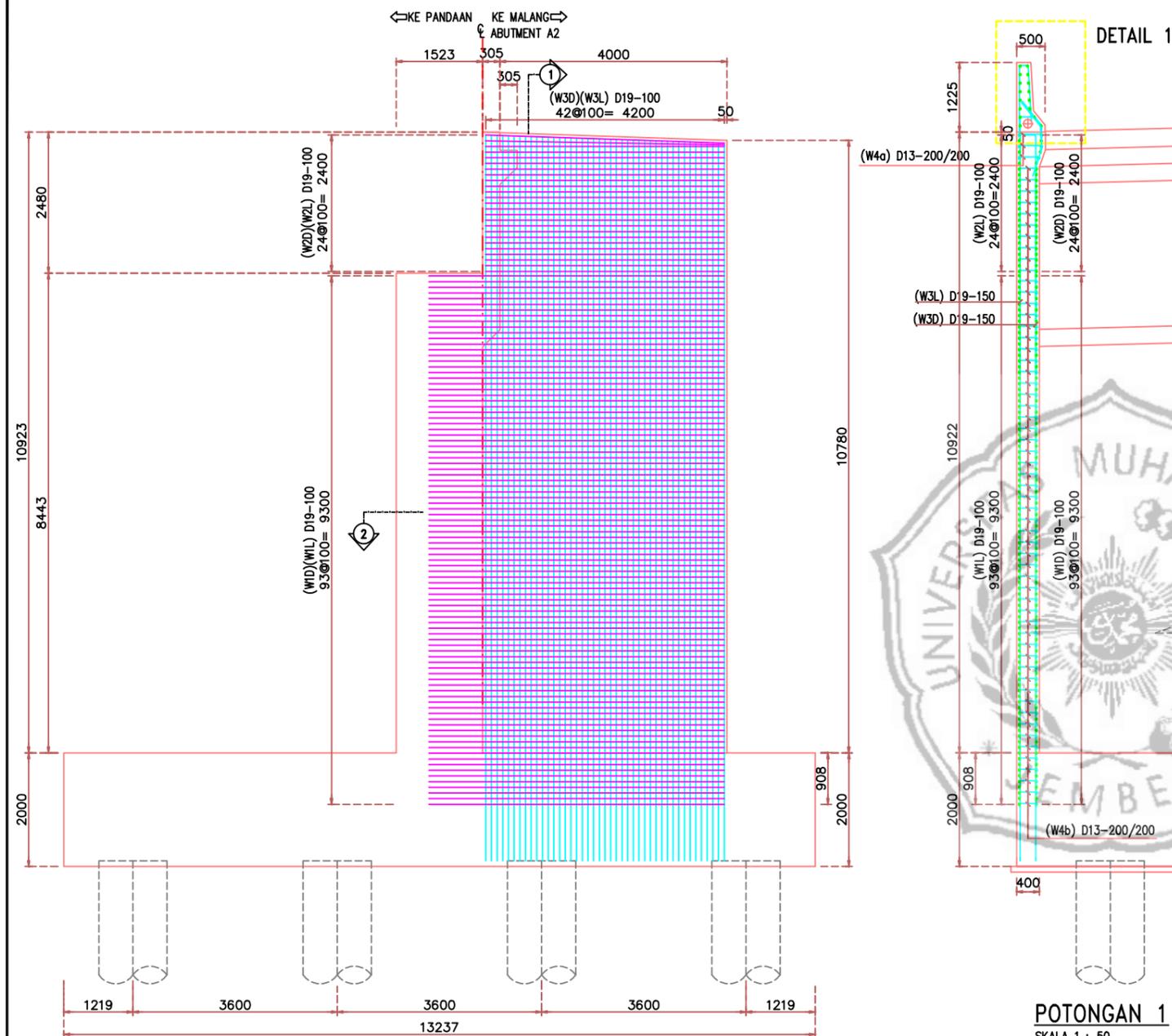
POTONGAN 6
SKALA 1 : 100

NO	DIAMETER (mm)	DIMENSI (mm)						TOTAL PANJANG (m)	BERAT (Kg/m)	JUMLAH UNIT	BERAT (Kg)	KET
		a	b	c	d	e	f					
PENULANGAN DINDING ABUTMENT - A2												
A1	D32-100	1250	4750	7200				13.20	6.313	328	27,332.76	
A1a	D19-100	740	860	1640	760			4.00	2.230	328	2,925.76	
A2	D32-100 (BUNDLE)	1150	4850	6000	2400			14.40	6.313	656	59,635.12	
A3	D16-150	980	11020	12000	11020	980		36.00	1.578	48	2,726.78	
A3a (1)	D16-150	7000						7.00	1.578	1	11.05	
A3a (2)	D16-150	12000	12000					24.00	1.578	1	37.87	
A3a (3)	D16-150	12000	12000	7620	1380			33.00	1.578	1	52.07	
A4	D16-150	980	11020	12000	11020	980		36.00	1.578	56	3,181.25	
A4a (1)	D16-150	7000						7.00	1.578	1	11.05	
A4a (2)	D16-150	12000	12000					24.00	1.578	1	37.87	
A4a (3)	D16-150	12000	12000	7620	1380			33.00	1.578	1	52.07	
A5	D13-300/500	150	1415	150				1.72	1.040	1625	2,898.35	
A6	D13-150/400	140	1715	140				2.00	1.040	410	850.67	
A6a (1)	D13-150/400	155	1685	155				2.00	1.040	82	170.13	
A6a (2)	D13-150/400	95	1530	95				1.72	1.040	82	146.68	
A7	D13-150/400	100	195	100				0.40	1.040	1066	437.91	
A7a (1)	D13-150/400	150	500	150				0.80	1.040	82	68.22	
A7a (2)	D13-150/400	100	400	100				0.60	1.040	82	51.17	
A8	D16-150	12000	12000	10000				34.00	1.578	27	1,448.60	
A9	D16-150	12000	12000	10000				34.00	1.578	10	536.52	
A10	D19-100	1270	3350	130	3250			8.00	2.230	328	5,851.52	
A11	D19-100	600	200	500	200			1.50	2.230	328	1,097.16	
A12	D16-150	12000	12000	10000				34.00	1.578	17	912.08	
A13 (KIRI)	D16-150	6000	2000	4000				12.00	1.578	8	151.49	
A13 (KANAN)	D16-150	6000	2000	4000				12.00	1.578	8	151.49	
JUMLAH =										110,775.67		
D13 =										4,623.14	KG	
D16 =										9,310.20	KG	
D19 =										9,874.44		
D32 =										86,967.89	KG	
TOTAL =										110,775.67	KG	

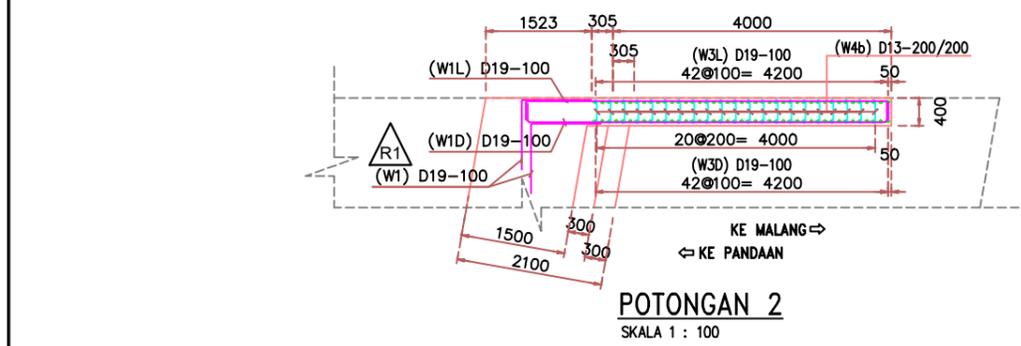
CATATAN :

- MUTU BETON DINDING ABUTMENT C-1
- SELIMUT BETON SAMPING 7 cm
- SEMUA UKURAN DALAM MILIMETER KECUALI DITENTUKAN LAIN

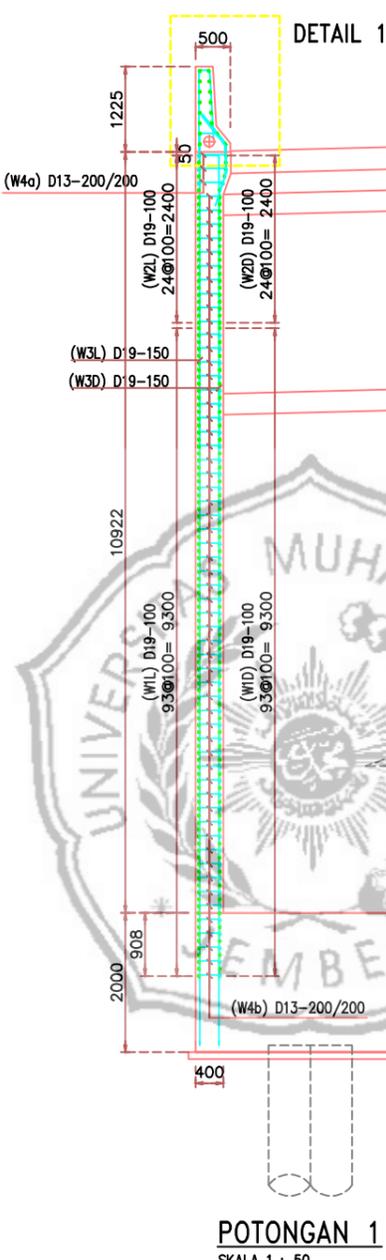
B U J T	NAMA PROYEK	KONTRAKTOR	KONSULTAN	DIREKANAKAN	DISETUJUI	MENGETAHUI	Judul Gambar :	19 Juni 2017	Revisi kekuatan wingwall dengan menambah stek besi (W1) pada persinggungan wingwall dengan dinding abutment	▲	No. Gambar :
	JALAN TOL PANDAAN - MALANG Jawa Timur			PT WNB <i>Zain Rivani</i> Highway Engineer	PT PP <i>Yudiantoro</i> General Superintendent	PT. JPM <i>Firmanda</i> GM. Teknik	PENULANGAN WINGWALL SISI KIRI ABUTMENT A2 UNDER BRIDGE STA. 15+925	20 Juni 2017	Revisi desain barrier tepi dari tinggi 1250 mm menjadi 1225 mm	▲	HW-D-11-26
	Construction & Investment PT. PP (Persero) Tbk.	PT WIRANASANTARA BUMI Toll Road Development Consultant						Tanggal :			Skala :
								Tanggal	Keterangan	Revisi	SESUAI DENGAN YANG TERCANTUM



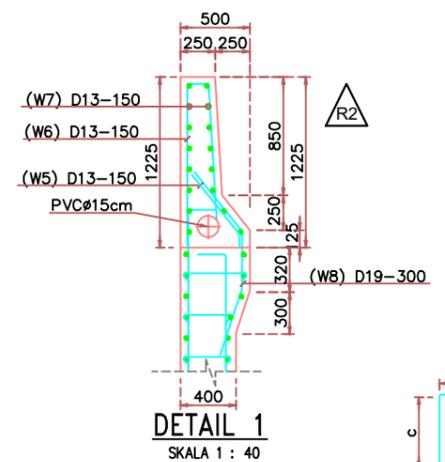
PENULANGAN WINGWALL ABUTMENT A2 SISI KIRI
SKALA 1 : 100



POTONGAN 2
SKALA 1 : 100

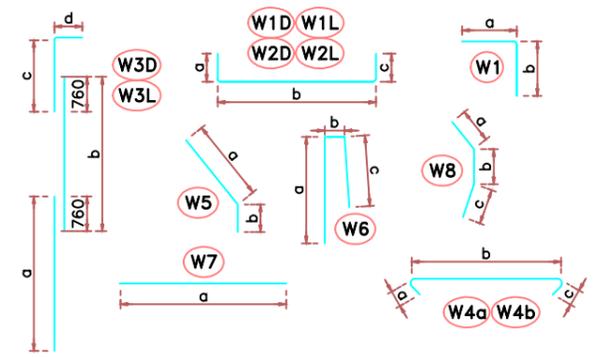


POTONGAN 1
SKALA 1 : 50



DETAIL 1
SKALA 1 : 40

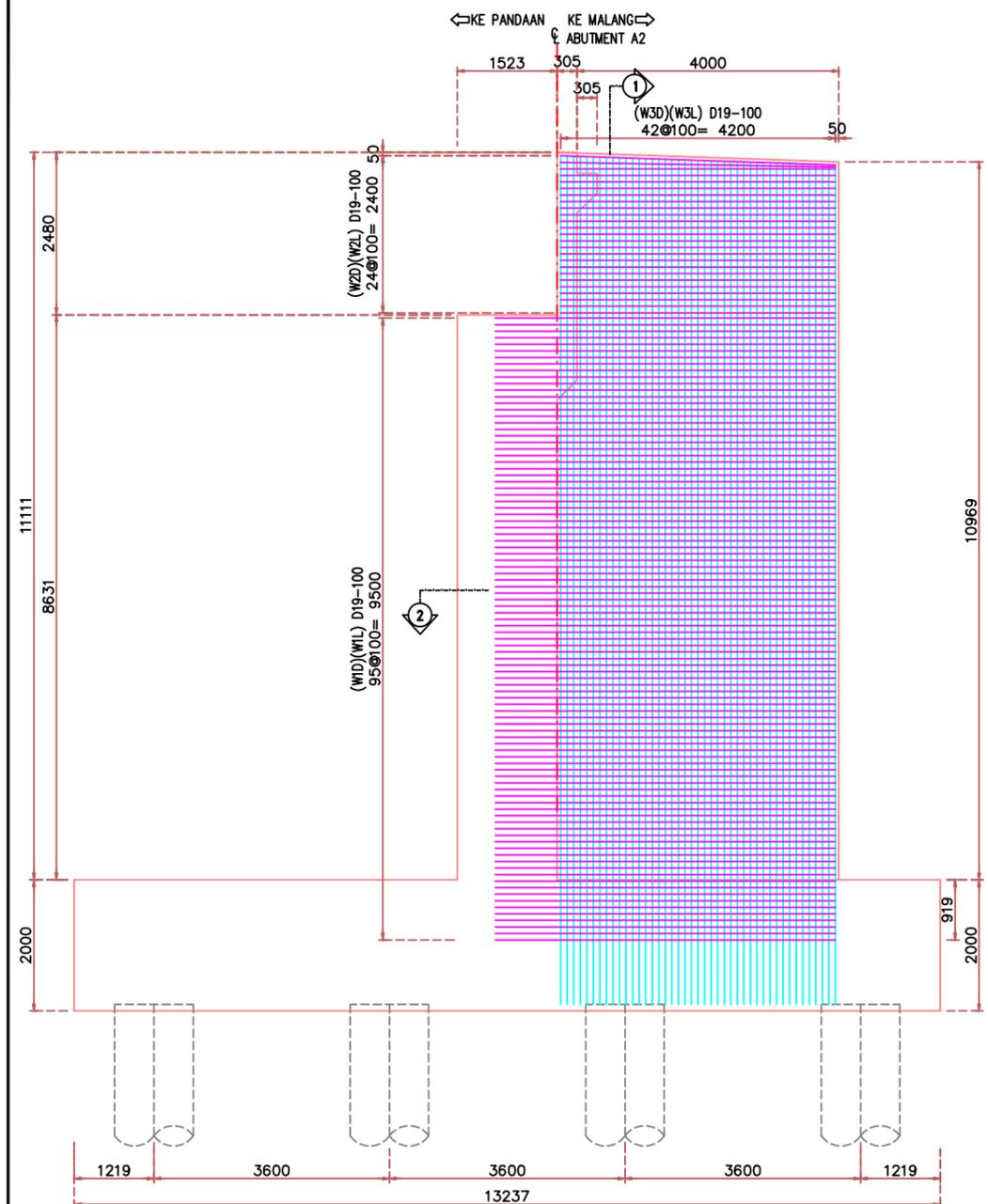
DIAGRAM BAR BENDING



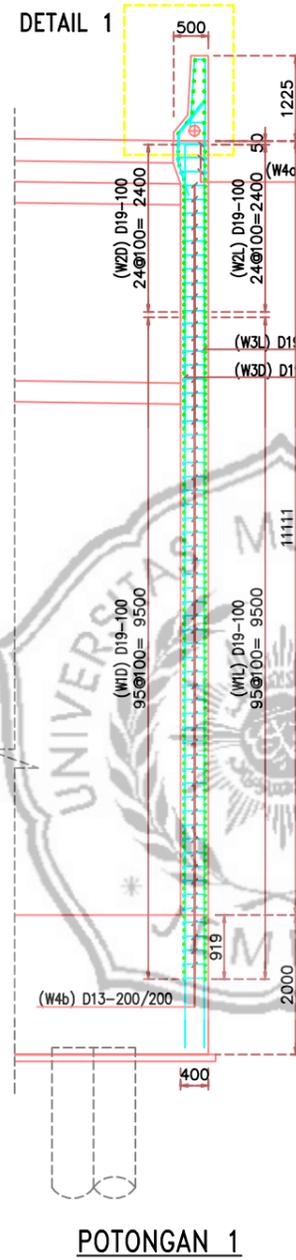
NO	DIAMETER (mm)	DIMENSI (mm)				TOTAL PANJANG (m)	BERAT (Kg/m)	JUMLAH UNIT	BERAT (Kg)	KET
		a	b	c	d					
PENULANGAN WINGWALL SISI KIRI ABUTMENT - A2										
W1	D19-100	760	760			1.52	2.230	238	806.72	
W1D	D19-100	300	5400	300		6.00	2.230	94	1,257.72	
W1L	D19-100	300	5400	300		6.00	2.230	94	1,257.72	
W2D	D19-100	300	4200	300		4.80	2.230	25	267.60	
W2L	D19-100	300	4200	300		4.80	2.230	25	267.60	
W3D	D19-100	6000	6000	2150 ~ 2290	300	14.52	2.230	43	1,392.32	
W3L	D19-100	6000	6000	2470 ~ 2610	300	15.04	2.230	43	1,442.19	
W4a	D13-200/200	80	440	80		0.60	1.040	63	39.31	
W4b	D13-200/200	135	330	135		0.60	1.040	1197	746.93	
W5	D13-150	680	120			0.80	1.040	29	24.13	
W6	D13-150	1175	150	1070		2.40	1.040	29	72.23	
W7	D13-150	4200				4.20	1.040	16	69.89	
W8	D19-300	500	410	590		1.50	2.230	15	50.18	
								JUMLAH =	7,694.54	
								D13 =	952.49	KG
								D19 =	6,742.05	KG
								TOTAL =	7,694.54	KG

CATATAN :
1. MUTU BETON WINGWALL ABUTMENT KELAS C
2. SELIMUT BETON SAMPING 5 cm
3. SEMUA UKURAN DALAM MILIMETER KECUALI DITENTUKAN LAIN

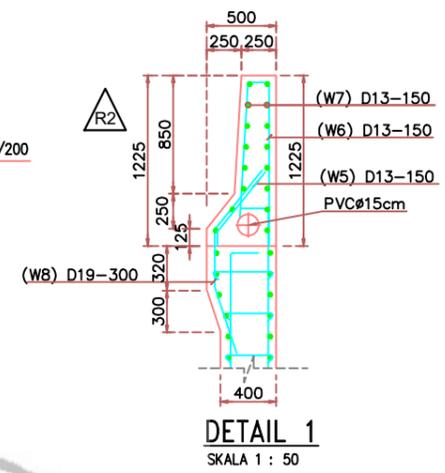
	JALAN TOL PANDAAN - MALANG Jawa Timur			DIRENCANAKAN		DISETUJUI	MENGETAHUI	Judul Gambar : PENULANGAN WINGWALL SISI KANAN ABUTMENT A2 UNDER BRIDGE STA. 15+925	19 Juni 2017	Revisi kekuatan wingwall dengan menambah stek besi (W1) pada persinggungan wingwall dengan dinding abutment	No. Gambar : HW-D-11-27
				PT WNB	PT WNB	PT PP	PT. JPM		20 Juni 2017	Revisi desain barrier tepi dari tinggi 1250 mm menjadi 1225 mm	
	Construction & Investment PT. PP (Persero) Tbk.	PT WIRANUSANTARA BUMI Toll Road Development Consultant	Zain Rivani Highway Engineer	Bhudjono Team Leader	Yudiantoro General Superintendent	Firmanda GM. Teknik					



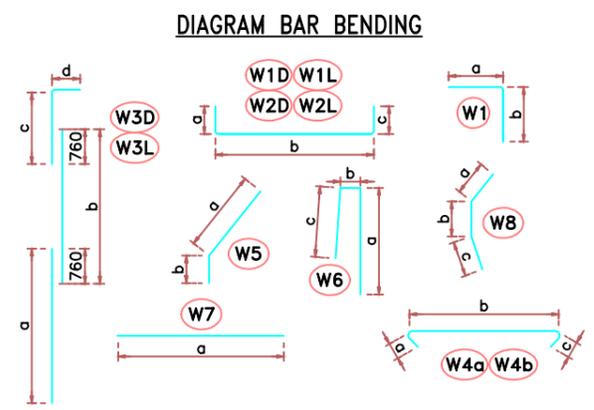
PENULANGAN WINGWALL ABUTMENT A2 SISI KANAN
 SKALA 1 : 100



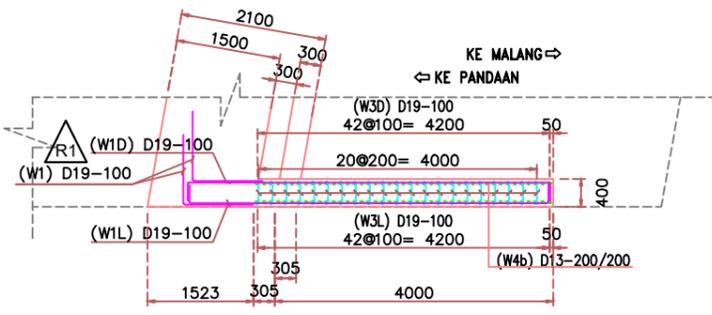
POTONGAN 1
 SKALA 1 : 75



DETAIL 1
 SKALA 1 : 50



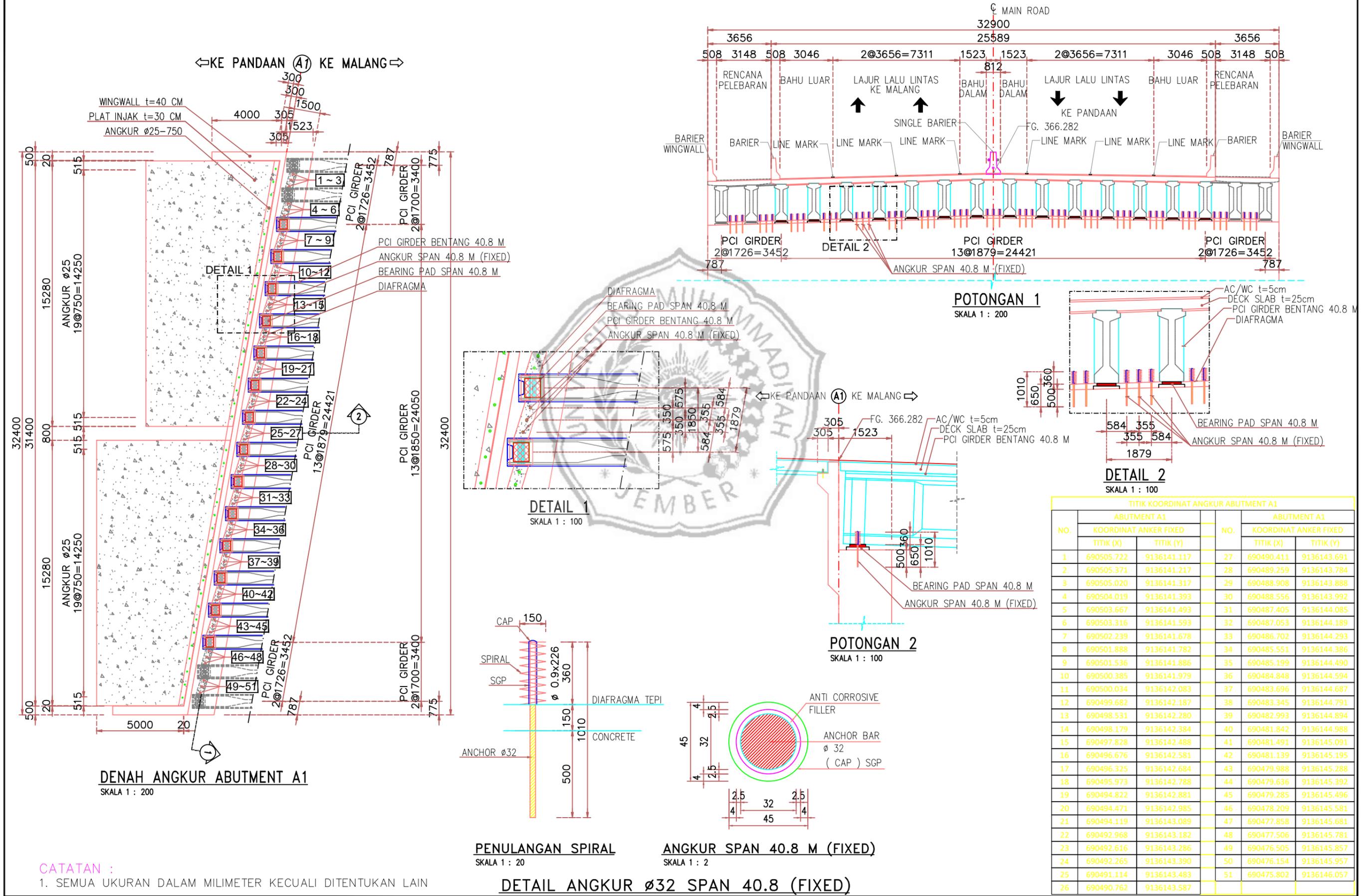
NO	DIAMETER (mm)	DIMENSI (mm)				TOTAL PANJANG (m)	BERAT (Kg/m)	JUMLAH UNIT	BERAT (Kg)	KET
		a	b	c	d					
PENULANGAN WINGWALL SISI KANAN ABUTMENT - A2										
W1	D19-100	760	760			1.52	2.230	242	820.28	
W1D	D19-100	300	5400	300		6.00	2.230	96	1,284.48	
W1L	D19-100	300	5400	300		6.00	2.230	96	1,284.48	
W2D	D19-100	300	4200	300		4.80	2.230	25	267.60	
W2L	D19-100	300	4200	300		4.80	2.230	25	267.60	
W3D	D19-100	6000	6000	2340 ~ 2480	300	14.71	2.230	43	1,410.54	
W3L	D19-100	6000	6000	2660 ~ 2800	300	15.03	2.230	43	1,441.23	
W4a	D13-200/200	80	440	80		0.60	1.040	63	39.31	
W4b	D13-200/200	135	330	135		0.60	1.040	1218	760.03	
W5	D13-150	680	120			0.80	1.040	29	24.13	
W6	D13-150	1175	150	1070		2.40	1.040	29	72.23	
W7	D13-150	4200				4.20	1.040	16	69.89	
W8	D19-300	500	410	590		1.50	2.230	15	50.18	
JUMLAH =									7,791.98	
D13 =									965.59	KG
D19 =									6,826.39	KG
TOTAL =									7,791.98	KG



POTONGAN 2
 SKALA 1 : 100

CATATAN :
 1. MUTU BETON WINGWALL ABUTMENT KELAS C
 2. SELIMUT BETON SAMPING 5 cm
 3. SEMUA UKURAN DALAM MILIMETER KECUALI DITENTUKAN LAIN

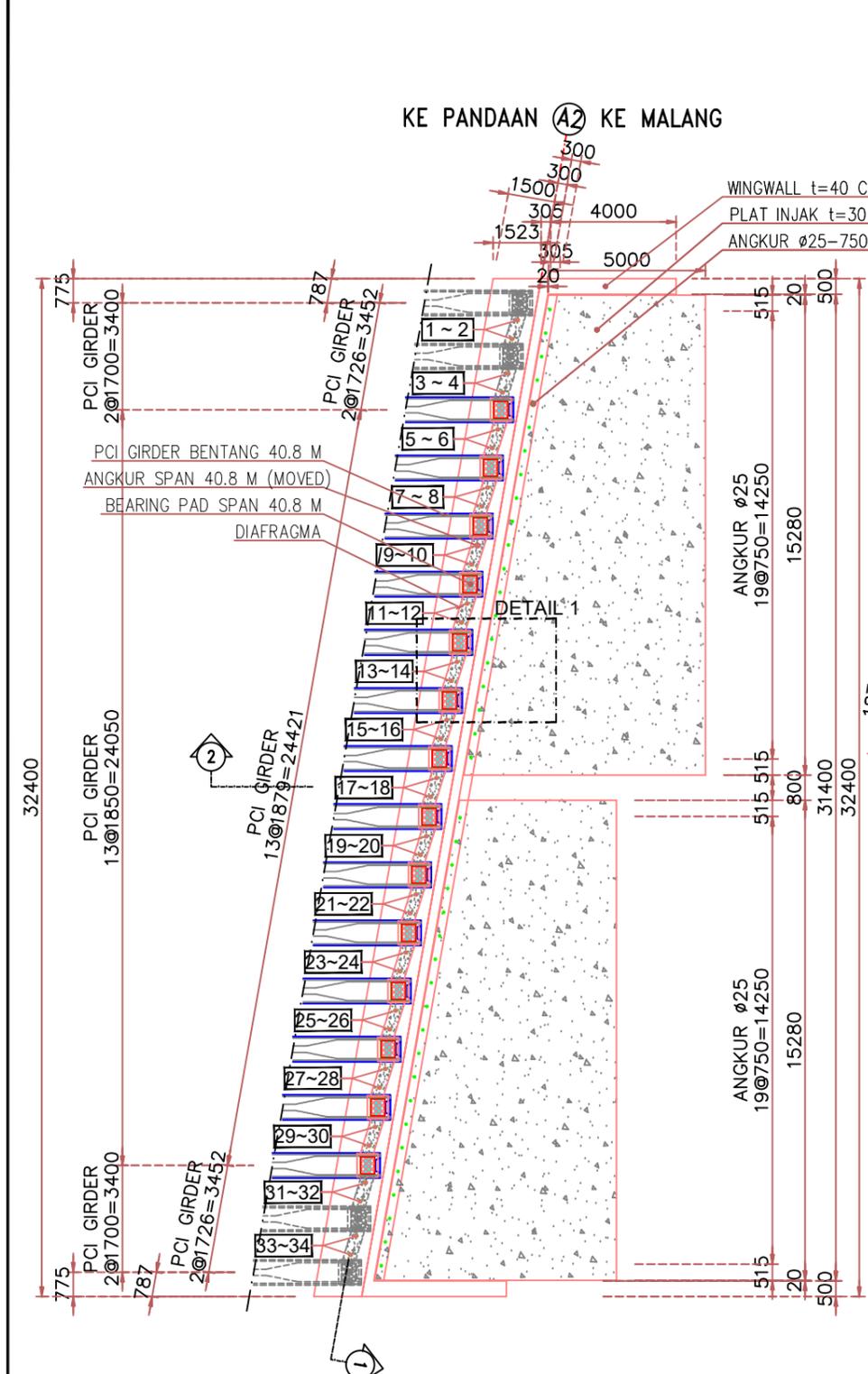
B U J T	NAMA PROYEK	KONTRAKTOR	KONSULTAN	DIRENCANAKAN	DISETUJUI	MENGETAHUI	Judul Gambar :	No. Gambar :		
	JALAN TOL PANDAAN - MALANG Jawa Timur			PT WNB	PT PP	PT. JPM	DENAH DAN DETAIL ANGKUR ABUTMENT A1 UNDER BRIDGE STA. 15+925	HW-D-11-42		
JASAMARGA PANDAAN MALANG	Construction & Investment PT. PP (Persero) Tbk.	PT WIRANUSANTARA BUMI Toll Road Development Consultant	Harry Wiyanto Struktire Engineer	Bhudjono Team Leader	Yusdiantoro General Suprintendent	Firmanda GM. Teknik	Tanggal :	Keterangan :	Revisi :	Skala : SESUAI YANG TELAMPIL PADA GAMBAR



TITIK KOORDINAT ANGKUR ABUTMENT A1					
NO.	ABUTMENT A1		NO.	ABUTMENT A1	
	KOORDINAT ANKER FIXED	TITIK (X)		TITIK (Y)	KOORDINAT ANKER FIXED
1	690505.722	9136141.117	27	690490.411	9136143.691
2	690505.371	9136141.217	28	690489.259	9136143.784
3	690505.020	9136141.317	29	690488.908	9136143.888
4	690504.019	9136141.393	30	690488.556	9136143.992
5	690503.667	9136141.493	31	690487.405	9136144.085
6	690503.316	9136141.593	32	690487.053	9136144.189
7	690502.239	9136141.678	33	690486.702	9136144.293
8	690501.888	9136141.782	34	690485.551	9136144.386
9	690501.536	9136141.886	35	690485.199	9136144.490
10	690500.385	9136141.979	36	690484.848	9136144.594
11	690500.034	9136142.083	37	690483.696	9136144.687
12	690499.682	9136142.187	38	690483.345	9136144.791
13	690498.531	9136142.280	39	690482.993	9136144.894
14	690498.179	9136142.384	40	690481.842	9136144.988
15	690497.828	9136142.488	41	690481.491	9136145.091
16	690496.676	9136142.581	42	690481.139	9136145.195
17	690496.325	9136142.684	43	690479.988	9136145.288
18	690495.973	9136142.788	44	690479.636	9136145.392
19	690494.822	9136142.881	45	690479.285	9136145.496
20	690494.471	9136142.985	46	690478.209	9136145.581
21	690494.119	9136143.089	47	690477.858	9136145.681
22	690492.968	9136143.182	48	690477.506	9136145.781
23	690492.616	9136143.286	49	690476.505	9136145.857
24	690492.265	9136143.390	50	690476.154	9136145.957
25	690491.114	9136143.483	51	690475.802	9136146.057
26	690490.762	9136143.587			

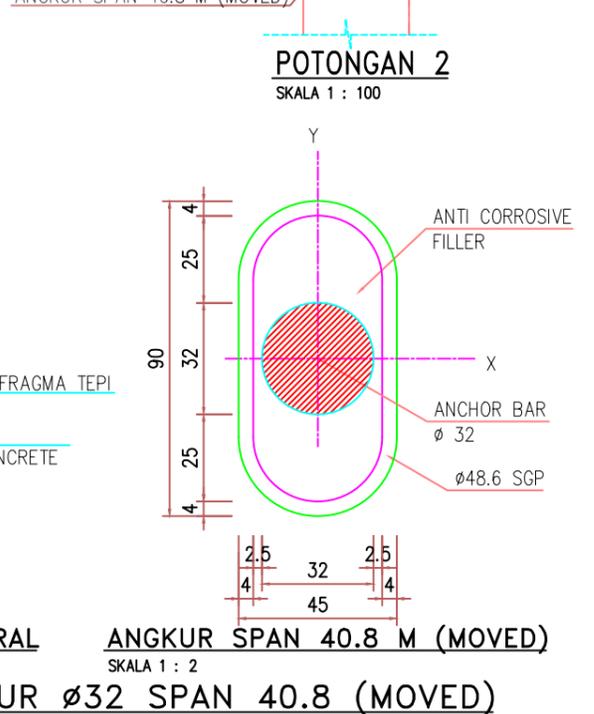
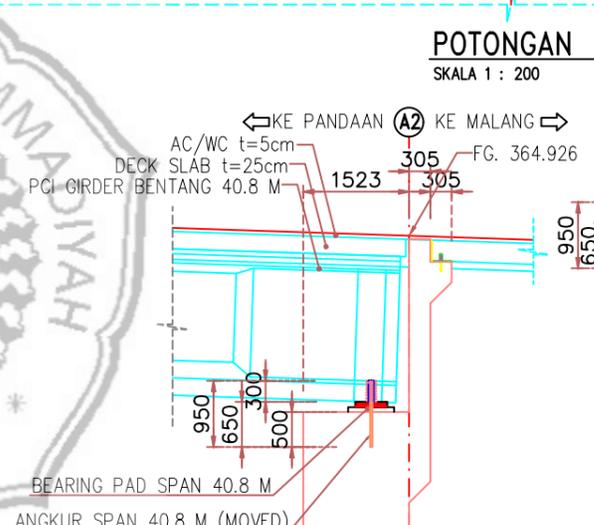
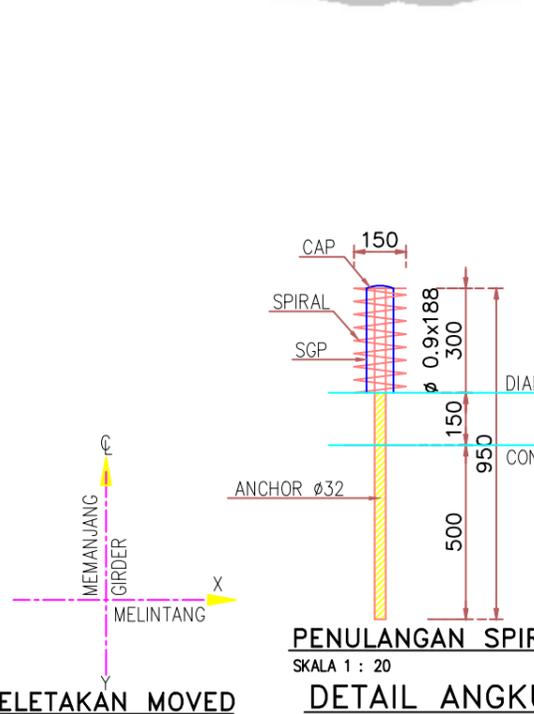
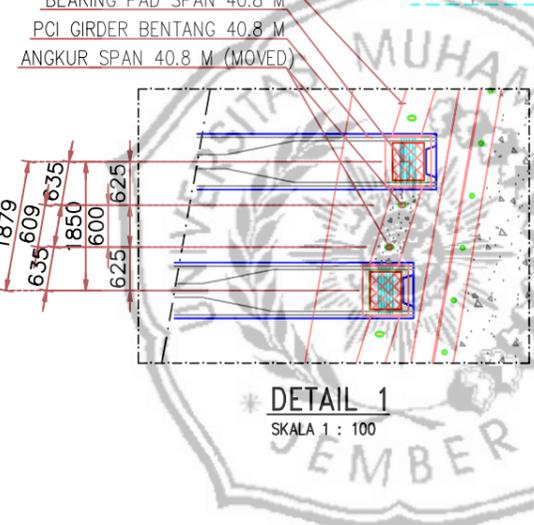
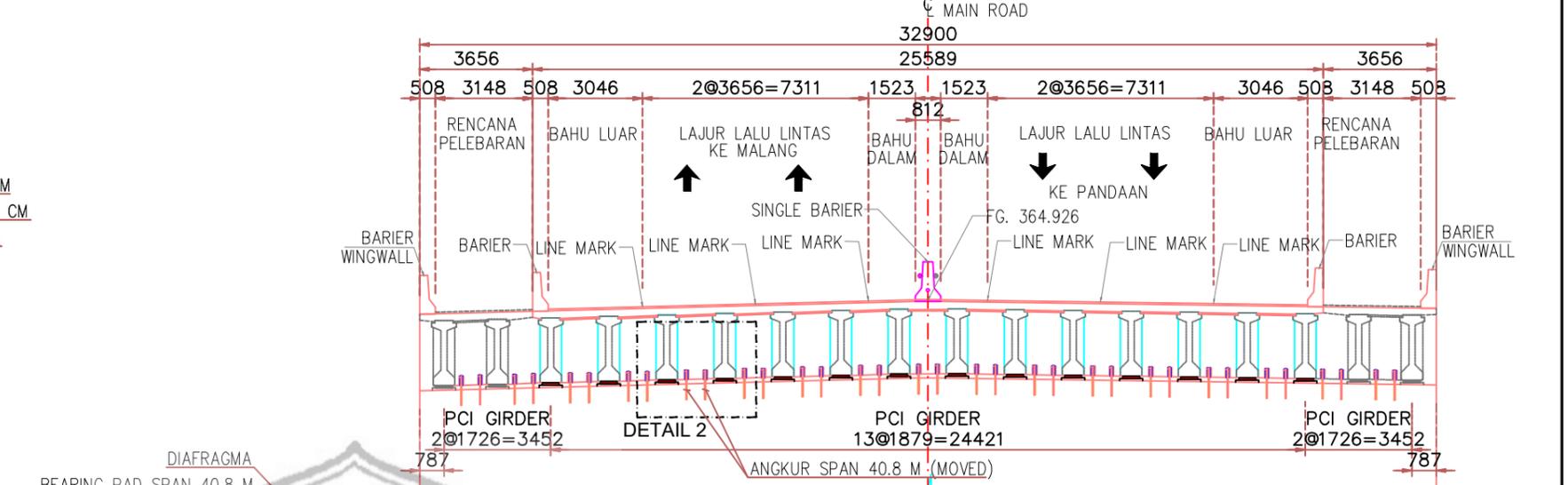
CATATAN :
1. SEMUA UKURAN DALAM MILIMETER KECUALI DITENTUKAN LAIN

 JALAN TOL PANDAAN - MALANG Jawa Timur	 Construction & Investment PT. PP (Persero) Tbk.	 PT WIRANANTARA BUMI Toll Road Development Consultant	DIRENCANAKAN	DISETUJUI	MENGETAHUI	Judul Gambar : DENAH DAN DETAIL ANGKUR ABUTMENT A2 UNDER BRIDGE STA. 15+925	No. Gambar : HW-D-11-43	
			PT WNB Harry Wiryanto Struktire Engineer	PT PP Yudiantoro General Suprintendent	PT. JPM Firmanda GM. Teknik			Tanggal : -
						Tanggal	Keterangan	Revisi



DENAH ANGKUR ABUTMENT A2
SKALA 1 : 200

CATATAN :
1. SEMUA UKURAN DALAM MILIMETER KECUALI DITENTUKAN LAIN



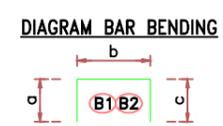
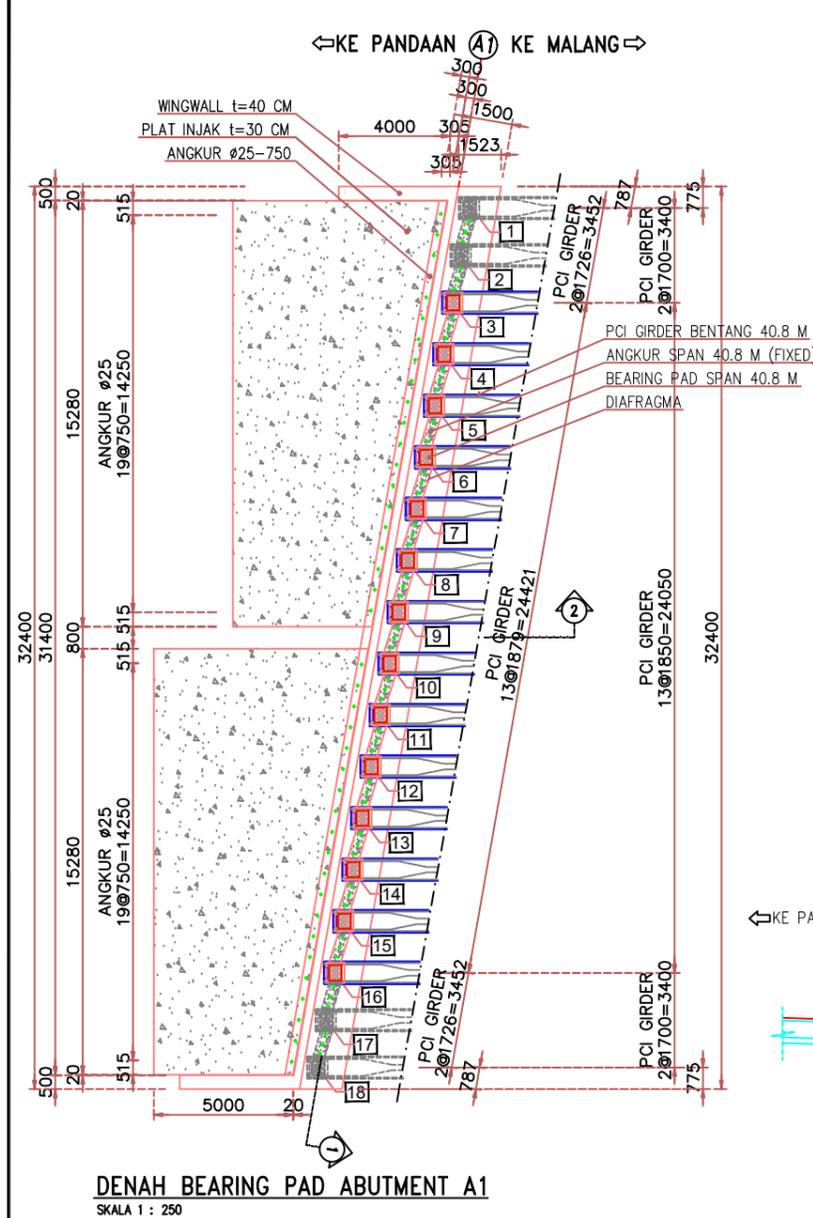
TITIK KOORDINAT ANGKUR ABUTMENT A2					
NO.	ABUTMENT A2		ABUTMENT A2		
	KOORDINAT ANKER MOVED		KOORDINAT ANKER MOVED		
	TITIK (X)	TITIK (Y)	TITIK (X)	TITIK (Y)	
1	690506.219	9136101.135	27	690482.338	9136105.022
2	690505.616	9136101.306	28	690481.736	9136105.200
3	690504.515	9136101.411	29	690480.484	9136105.322
4	690503.912	9136101.583	30	690479.881	9136105.501
5	690502.735	9136101.712	31	690478.705	9136105.598
6	690502.133	9136101.890	32	690478.102	9136105.770
7	690500.881	9136102.013	33	690477.001	9136105.875
8	690500.279	9136102.191	34	690476.398	9136106.046
9	690499.027	9136102.314			
10	690498.424	9136102.492			
11	690497.172	9136102.615			
12	690496.570	9136102.793			
13	690495.318	9136102.916			
14	690494.716	9136103.094			
15	690493.464	9136103.216			
16	690492.861	9136103.395			
17	690491.610	9136103.517			
18	690491.007	9136103.695			
19	690489.755	9136103.818			
20	690489.153	9136103.996			
21	690487.901	9136104.119			
22	690487.299	9136104.297			
23	690486.047	9136104.420			
24	690485.444	9136104.598			
25	690484.192	9136104.721			
26	690483.590	9136104.899			



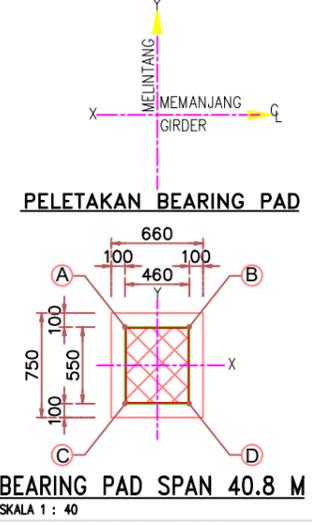
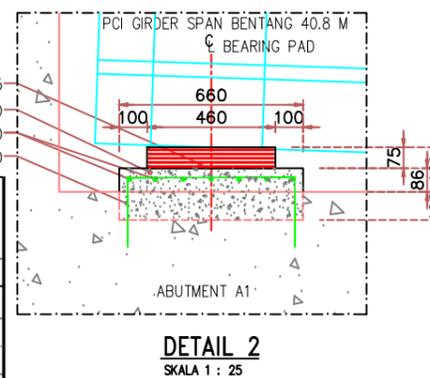
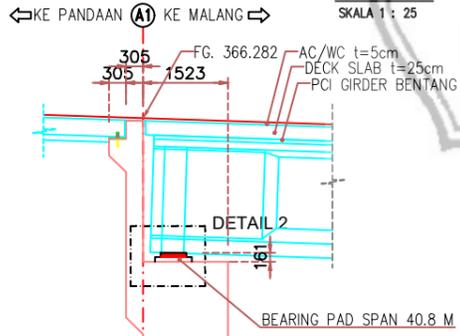
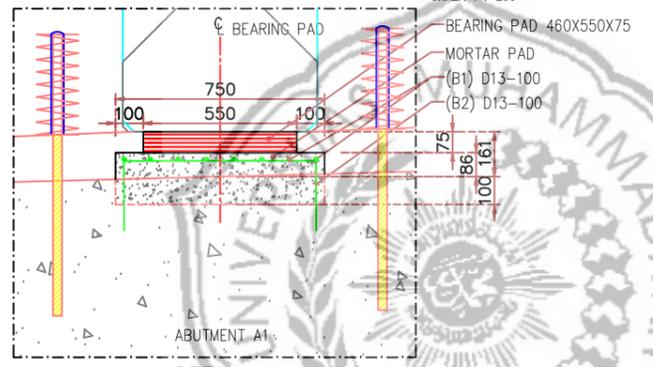
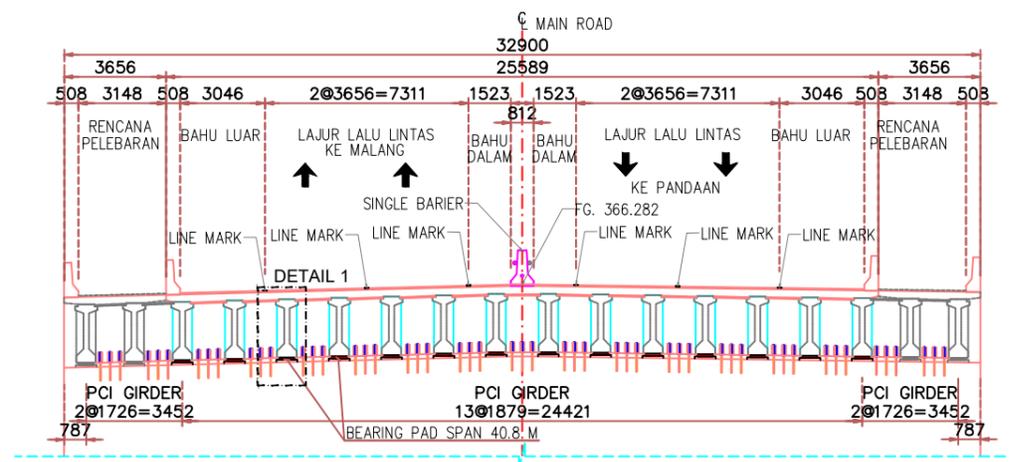
PENULTANGAN SPIRAL
SKALA 1 : 20

ANGKUR SPAN 40.8 M (MOVED)
SKALA 1 : 2

DETAIL ANGKUR Ø32 SPAN 40.8 (MOVED)



NO	DIAMETER (mm)	DIMENSI (mm)			TOTAL PANJANG (m)	BERAT (Kg/m)	JUMLAH UNIT	BERAT (Kg)	KET
		a	b	c					
PENULANGAN BEARING PAD SPAN 40.8 M ABUTMENT A1									
B1	D13-100	250	600	250	1.10	1.040	8	9.15	
B2	D13-100	255	690	255	1.20	1.040	7	8.74	
							JUMLAH =	17.89	
							D13 =	17.89	KG
							TOTAL =	17.89	
							TOTAL 18 BUAH =	321.98	KG



KERERANGAN	ELEVASI DAN TITIK KOORDINAT BEARING PAD SPAN 40.8 M ABUTMENT A1									
	NO.	ELEVASI	KODE	KOORDINAT		NO.	ELEVASI	KODE	KOORDINAT	
				TITIK (X)	TITIK (Y)				TITIK (X)	TITIK (Y)
TOP BEARING PAD	1	363.472	A	690506.495	9136141.312	10	363.855	A	690490.107	9136143.971
TOP LEVELING		363.397	B	690506.501	9136140.852		363.780	B	690490.113	9136143.511
			690505.945	9136141.305	690489.557		9136143.964			
			690505.951	9136140.845	690489.564		9136143.504			
TOP BEARING PAD	2	363.516	A	690504.791	9136141.589	11	363.829	A	690488.253	9136144.272
TOP LEVELING		363.441	B	690504.797	9136141.129		363.754	B	690488.259	9136143.812
			690504.241	9136141.581	690487.703		9136144.265			
			690504.247	9136141.121	690487.709		9136143.805			
TOP BEARING PAD	3	363.561	A	690503.087	9136141.865	12	363.803	A	690486.399	9136144.573
TOP LEVELING		363.486	B	690503.093	9136141.405		363.728	B	690486.405	9136144.113
			690502.537	9136141.858	690485.849		9136144.565			
			690502.543	9136141.398	690485.855		9136144.105			
TOP BEARING PAD	4	363.609	A	690501.233	9136142.166	13	363.777	A	690484.544	9136144.874
TOP LEVELING		363.534	B	690501.239	9136141.706		363.702	B	690484.551	9136144.414
			690500.683	9136142.158	690483.994		9136144.866			
			690500.689	9136141.699	690484.001		9136144.406			
TOP BEARING PAD	5	363.657	A	690499.378	9136142.467	14	363.751	A	690482.690	9136145.175
TOP LEVELING		363.582	B	690499.385	9136142.007		363.676	B	690482.696	9136144.715
			690498.829	9136142.459	690482.140		9136145.167			
			690498.835	9136141.999	690482.146		9136144.707			
TOP BEARING PAD	6	363.705	A	690497.524	9136142.768	15	363.725	A	690480.836	9136145.476
TOP LEVELING		363.630	B	690497.531	9136142.308		363.650	B	690480.842	9136145.016
			690496.974	9136142.760	690480.286		9136145.468			
			690496.981	9136142.300	690480.292		9136145.008			
TOP BEARING PAD	7	363.753	A	690495.670	9136143.069	16	363.699	A	690478.982	9136145.776
TOP LEVELING		363.678	B	690495.676	9136142.609		363.624	B	690478.988	9136145.316
			690495.120	9136143.061	690478.432		9136145.769			
			690495.126	9136142.601	690478.438		9136145.309			
TOP BEARING PAD	8	363.801	A	690493.816	9136143.369	17	363.675	A	690477.278	9136146.053
TOP LEVELING		363.726	B	690493.822	9136142.909		363.600	B	690477.284	9136145.593
			690493.266	9136143.362	690476.728		9136146.045			
			690493.272	9136142.902	690476.734		9136145.585			
TOP BEARING PAD	9	363.849	A	690491.961	9136143.670	18	363.652	A	690475.574	9136146.329
TOP LEVELING		363.774	B	690491.968	9136143.210		363.577	B	690475.580	9136145.869
			690491.412	9136143.663	690475.024		9136146.322			
			690491.418	9136143.203	690475.030		9136145.862			

CATATAN :
1. SEMUA UKURAN DALAM MILIMETER KECUALI DITENTUKAN LAIN

