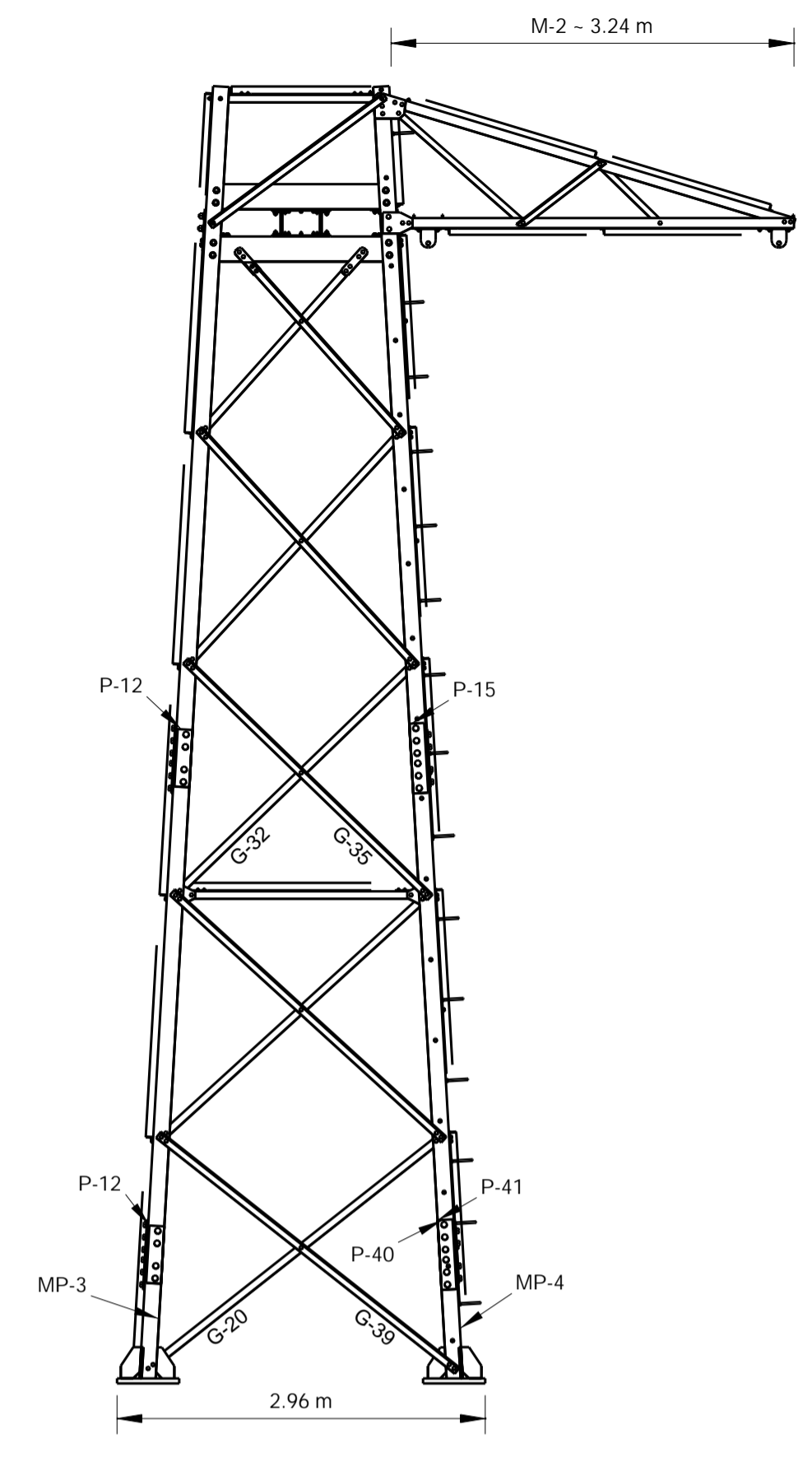
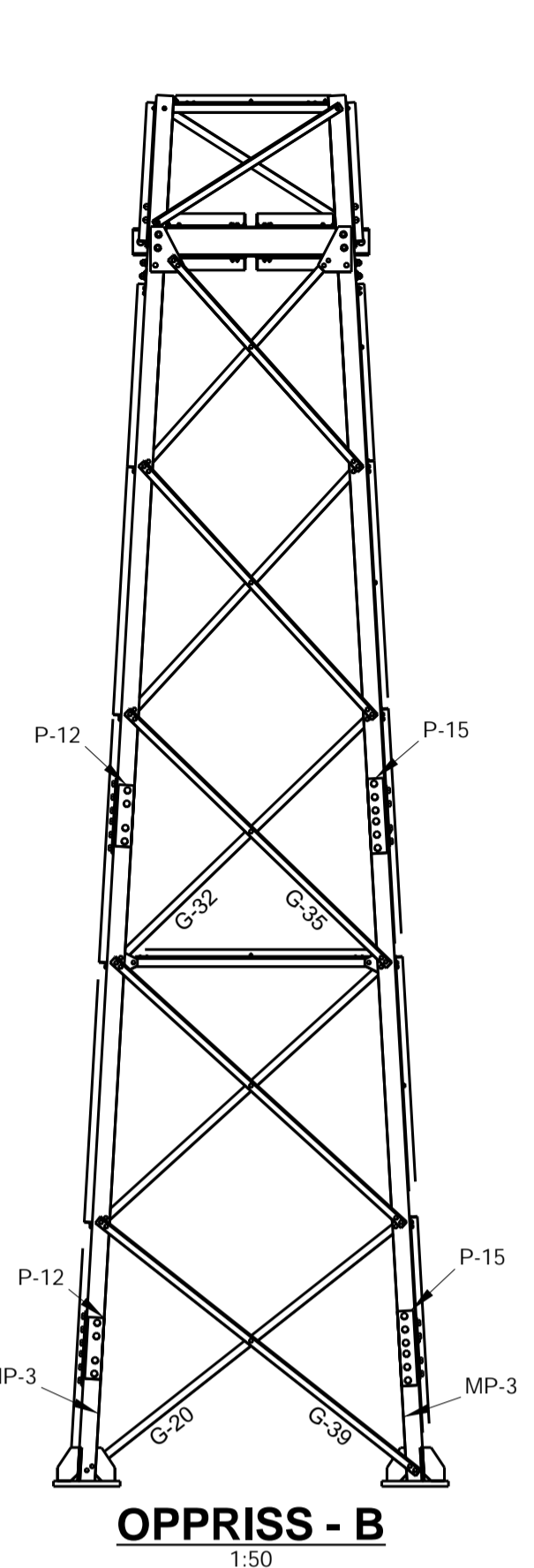


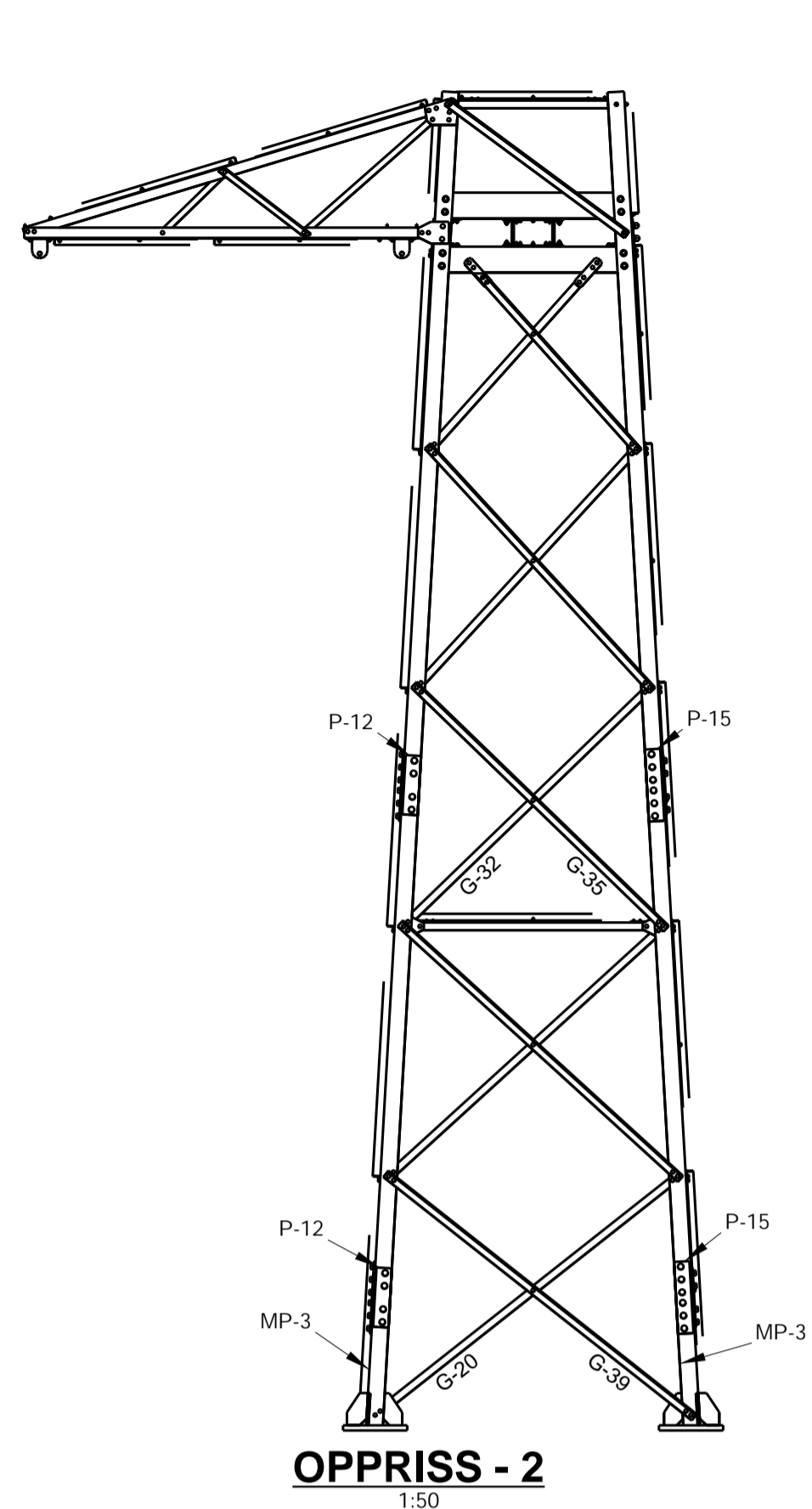
OPPISS - A
1:50



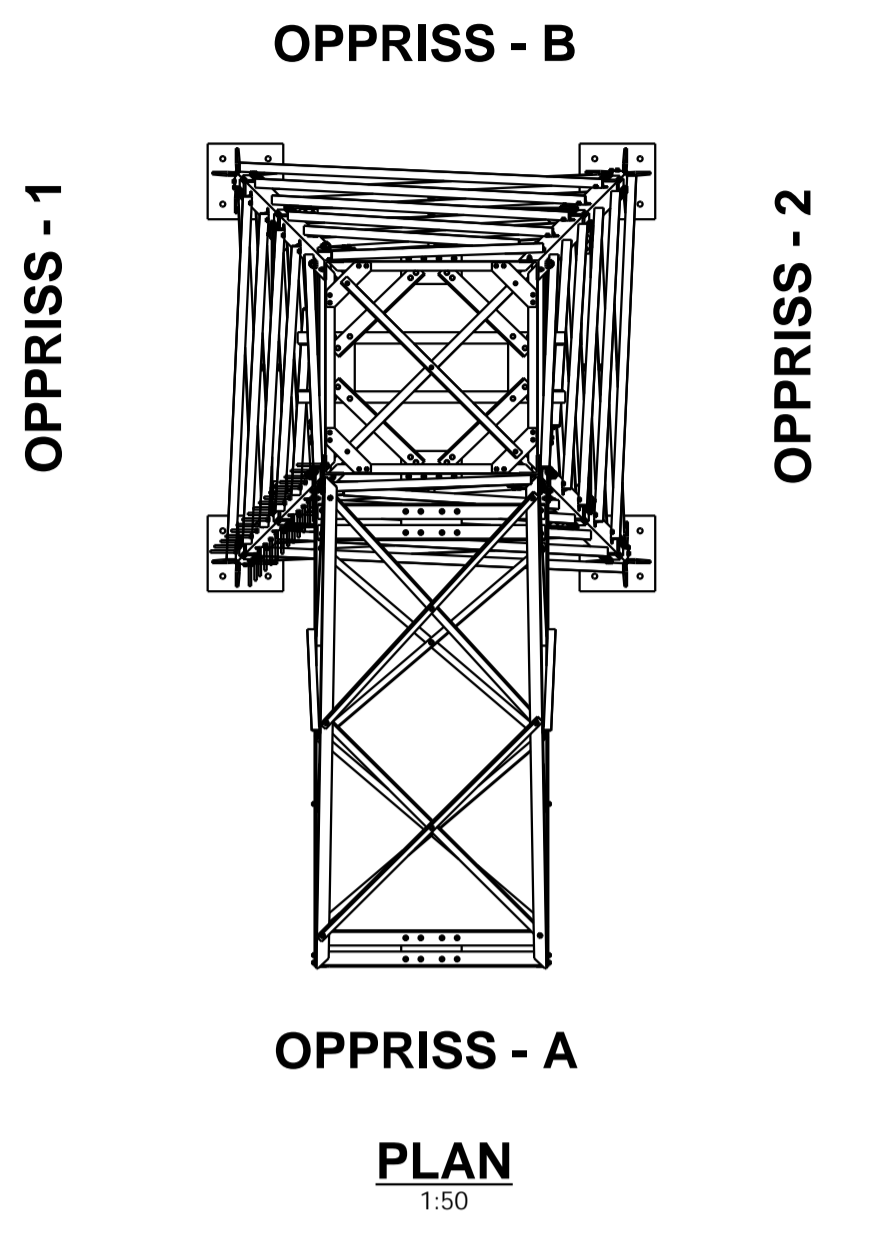
OPPISS - 1
1:50



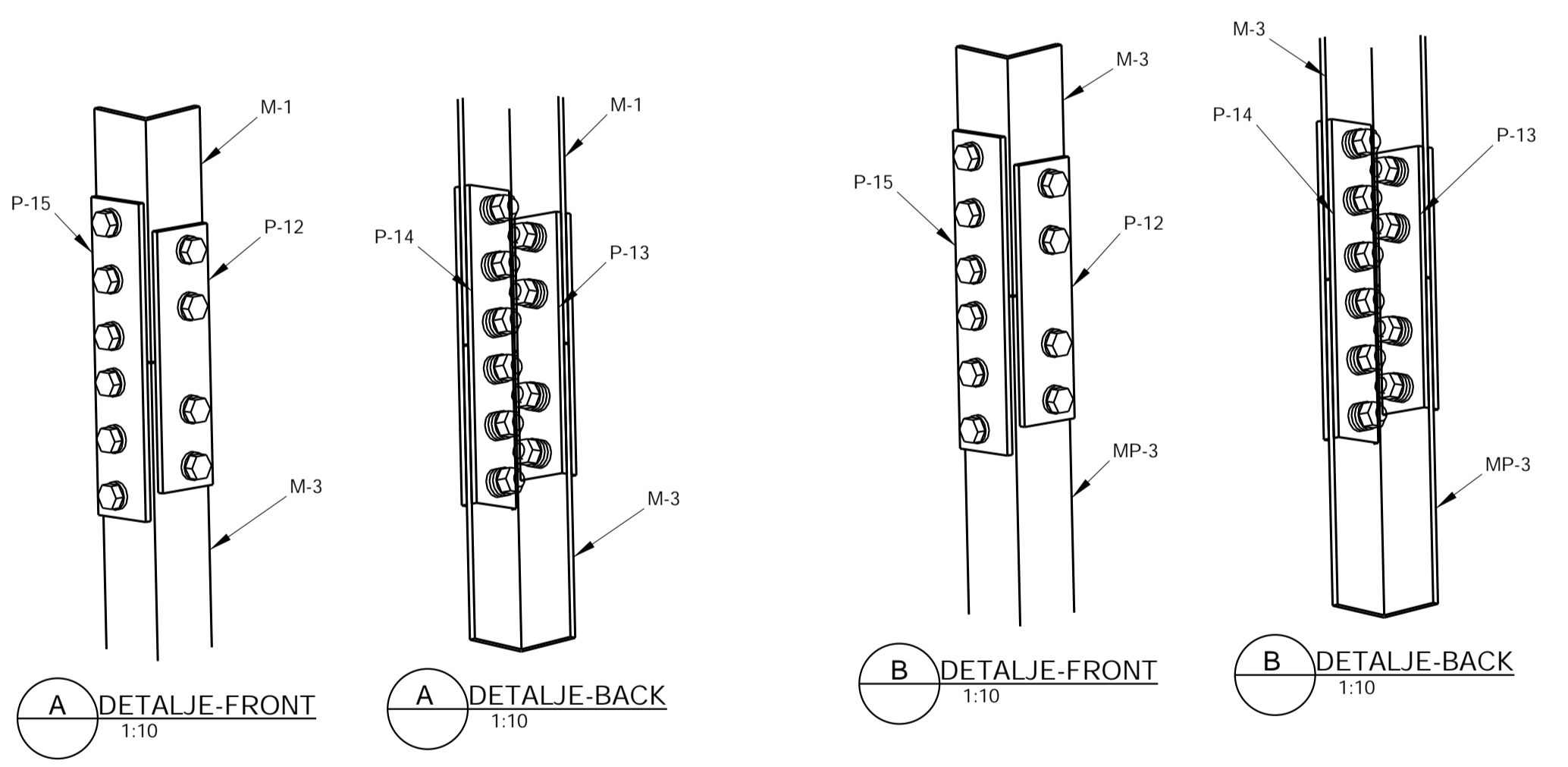
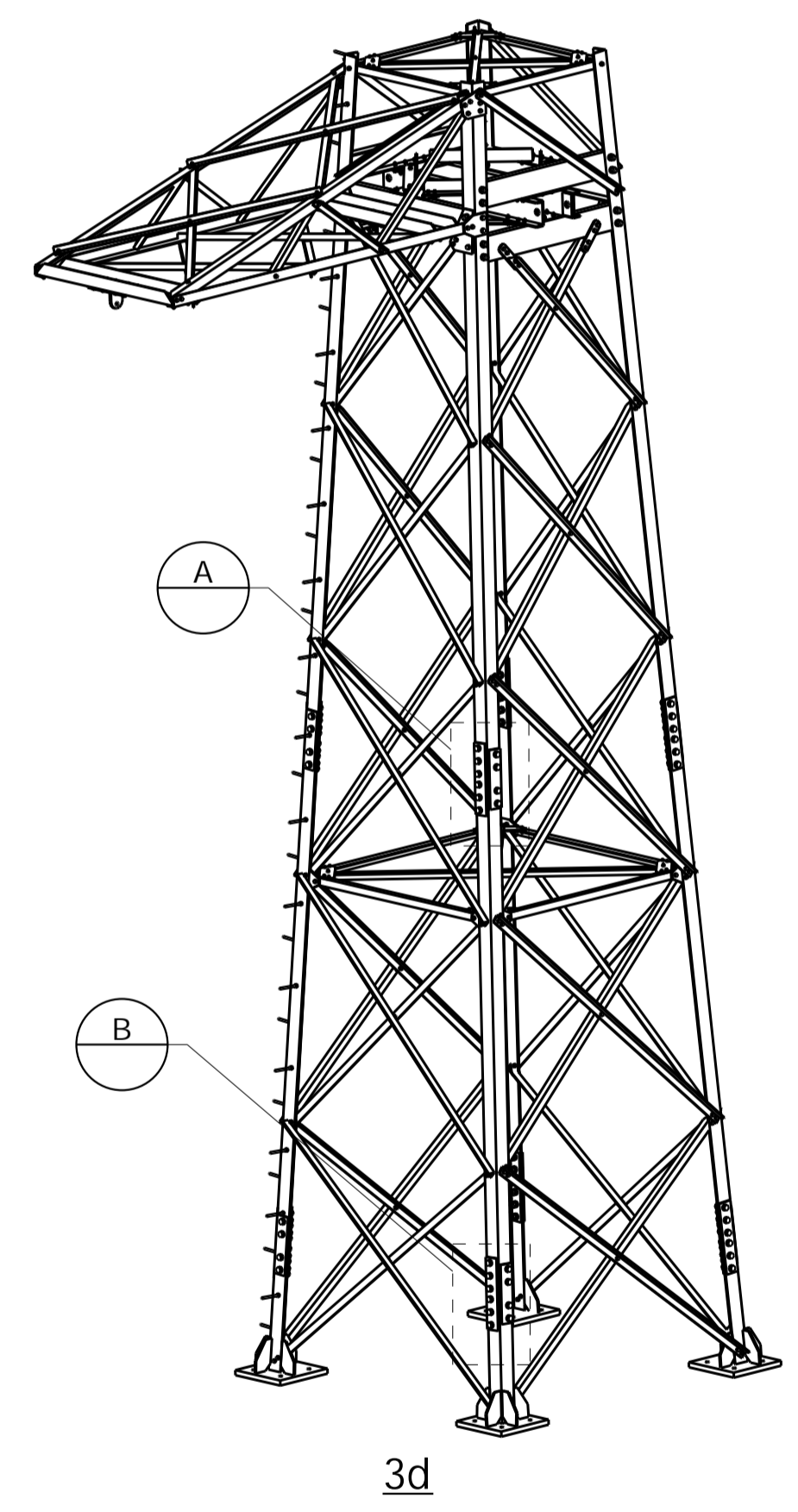
OPPISS - B
1:50



OPPISS - 2
1:50



PLAN
1:50



TOTAL BOLT LISTE FOR MONTASJE				MT-1
BOLTTYPE	KVALITET	ANTALL	KOMMENTAR	
M12x45	8.8	1		
M12x50	8.8	40		
M12x55	8.8	2		
M16x45	8.8	4		
M16x50	8.8	8		
M16x55	8.8	144		
M16x60	8.8	58		
M16x65	8.8	32		
M16x70	8.8	40		
M16x75	8.8	30		
M16x200	8.8	31	KLATREBOLTE	
M16x220	8.8	1		
M20x70	8.8	8		
M27x75	8.8	16		
M27x85	8.8	8		
M27x100	8.8	80		
TOTAL BOLTE VEKT =			105.7 kg	

NOTATER: HVIS IKKE ANNET FREMGÅR ER ALLE KILSVESER MED $\phi = 4$ mm

MATERIALE LIST FOR MONTASJE				MT-1	ANTALL:	4
MARK	PROFIL	KVALITET	ANTALL	LENGDE	AREA	VEKT
P-34	PL 12*40	S355J0	1	40	0.0	0.2
G-20	L60*8	S355J0	4	3060	0.7	21.7
G-32	L60*8	S355J0	4	2734	0.6	19.4
G-35	L60*8	S355J0	4	2734	0.6	19.4
G-39	L60*8	S355J0	4	3060	0.7	21.7
P-12	PL 12*120	S355J0	7	462	0.1	5.2
P-13	PL 12*100	S355J0	7	462	0.1	4.4
P-14	PL 12*100	S355J0	7	562	0.1	5.3
P-15	PL 12*120	S355J0	7	562	0.2	6.4
P-20	PL 12*40	S355J0	20	40	0.0	0.2
P-38	PL 12*120	S355J0	1	462	0.1	5.2
P-39	PL 12*100	S355J0	1	462	0.1	4.4
P-40	PL 12*100	S355J0	1	562	0.1	5.3
P-41	PL 12*120	S355J0	1	562	0.2	6.4
M-1	MONTASJE		1		37.3	1397.5
M-2	MONTASJE		1		11.3	328.0
M-3	MONTASJE		1		17.5	664.4
MP-3	MONTASJE		3		1.4	111.9
MP-4	MONTASJE		1		1.4	111.9
			86.5	SUM:	86.5	3338.8

VERSJON				
Rev.	Dato	Beskrivning	Prosjekt	Ansvarlig
01	17.08.2015	PROSJEKTTEGNING	pE	FH

Oppdragsgiver: **HELGELAND KRAFT**

Designert: **MANNVIT**

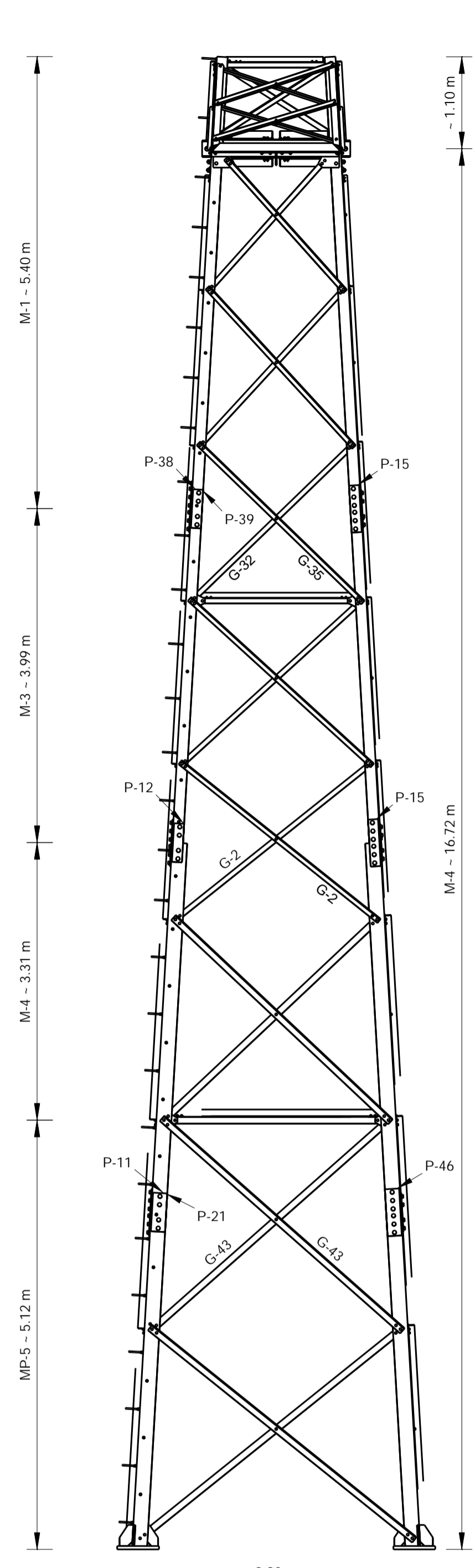
Sign. Dato: P.V. MANNVIT'S (Navn og persønnr.)

Prosjektnavn: **132 KV LUFTSPENN TOSENFJORDEN**

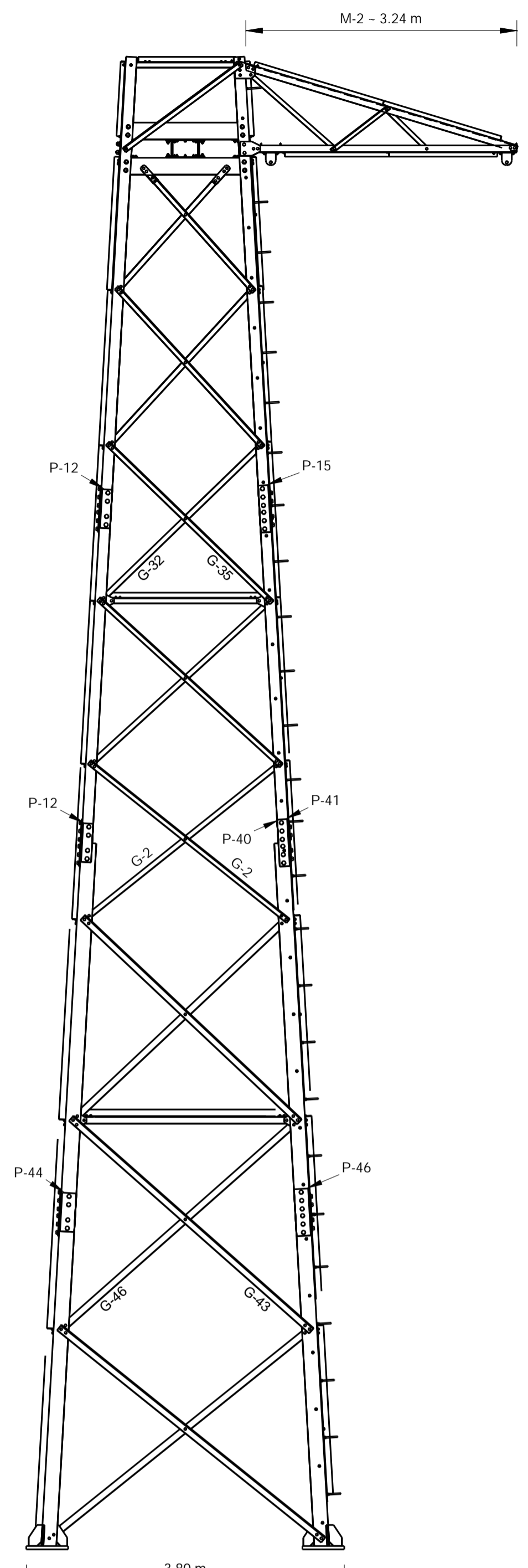
Tegningstype: **MT-1**

Prosjektnr.: **5.921.241** | Målestokk: | Format: **A1**

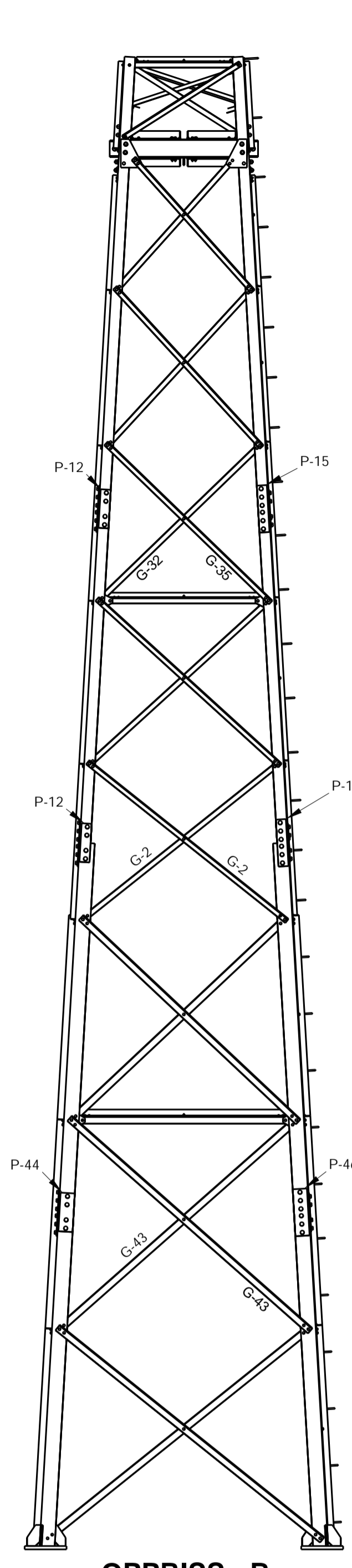
Tegningnr.: **MT-1** | Rev.: **01**



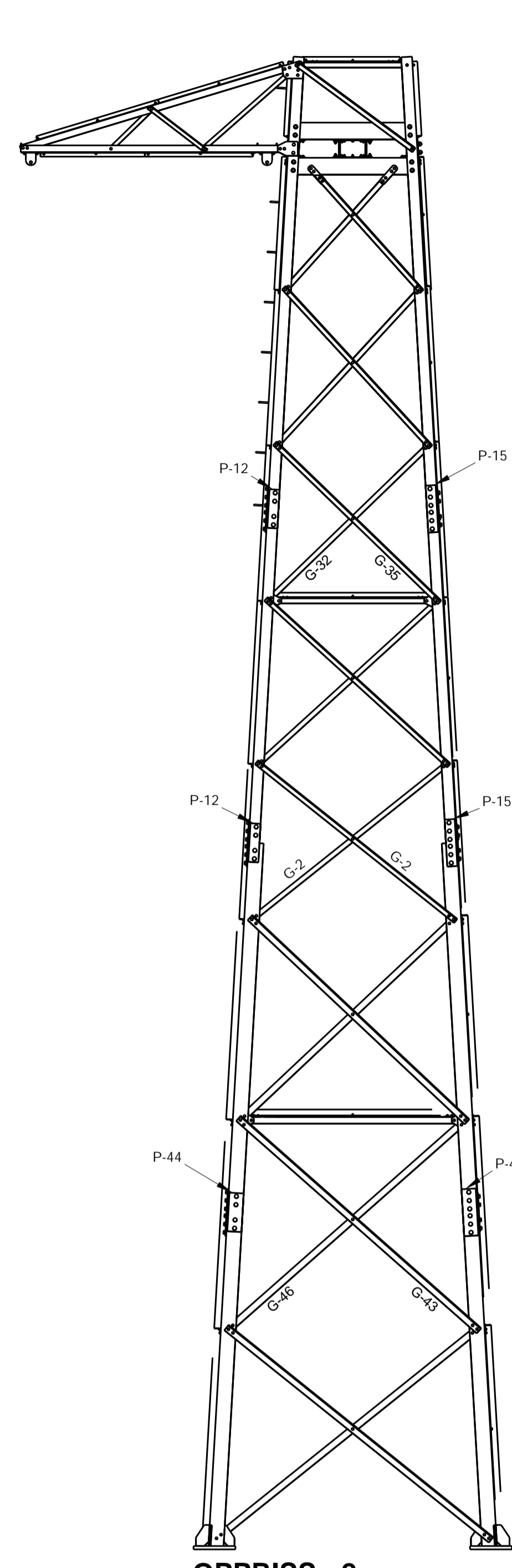
OPPRISS - A
1:50



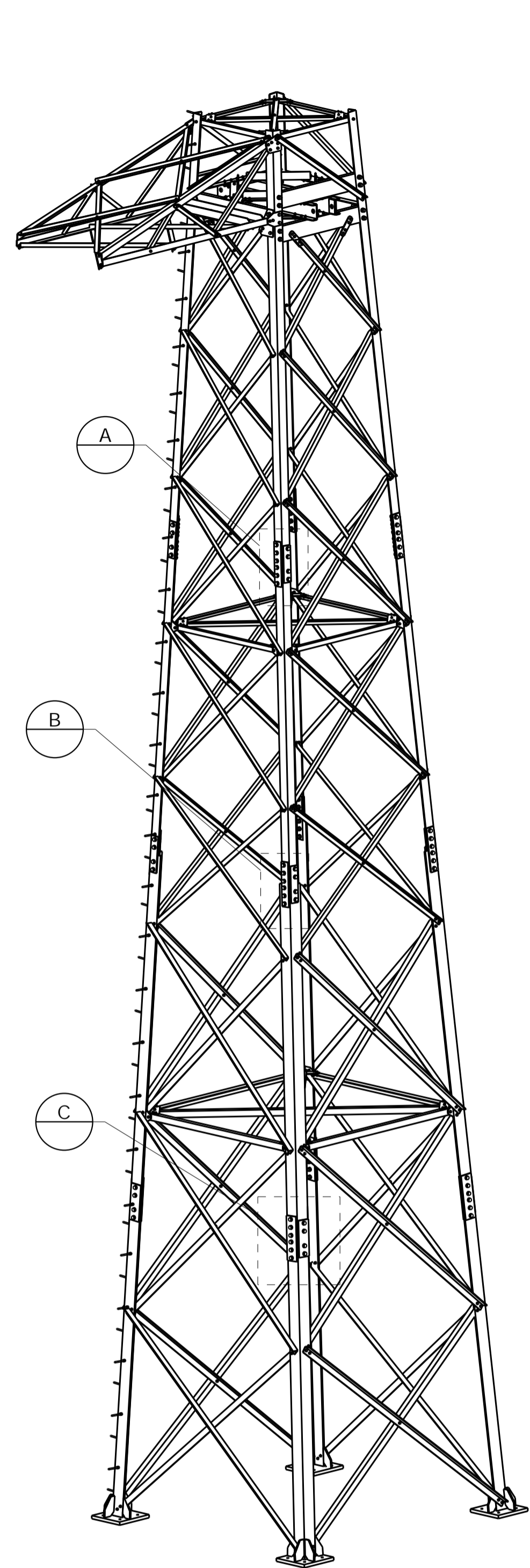
OPPRISS - 1
1:50



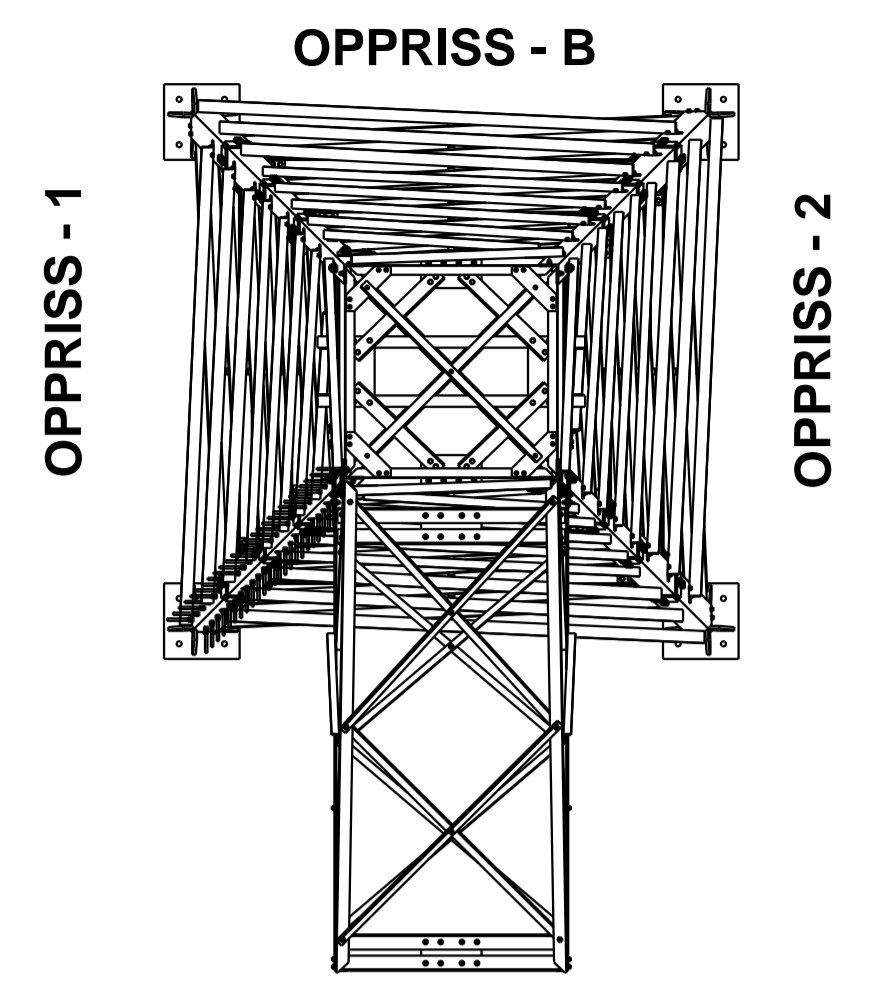
OPPRISS - B
1:50



OPPRISS - 2
1:50



3d



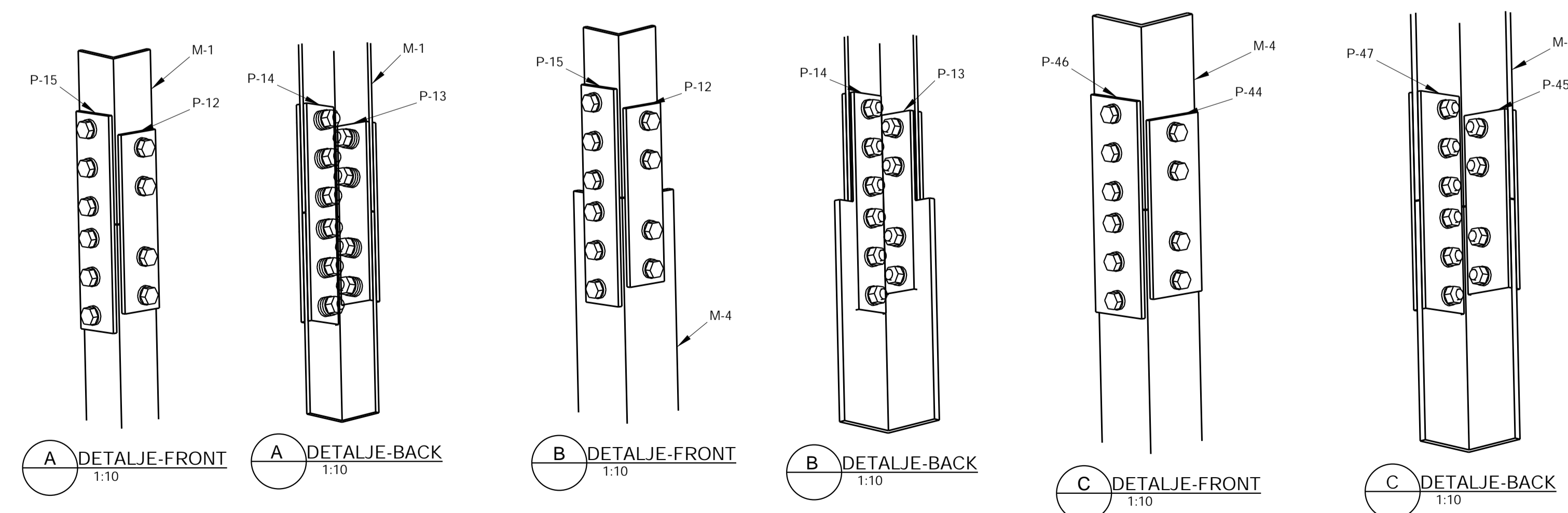
OPPRISS - A
OPPRISS - B
PLAN
1:50

TOTAL BOLT LISTE FOR MONTASJE				MT-2
BOLTYTYPE	KVALITET	ANTALL	KOMMENTAR	
M12x45	8.8	1		
M12x50	8.8	41		
M12x55	8.8	3		
M16x45	8.8	4		
M16x50	8.8	12		
M16x55	8.8	148		
M16x60	8.8	86		
M16x65	8.8	40		
M16x70	8.8	60		
M16x75	8.8	54		
M16x80	8.8	24		
M16x100	8.8	4		
M16x200	8.8	54		
M20x70	8.8	8		
M27x75	8.8	16		
M27x85	8.8	8		
M27x90	8.8	80		
M27x100	8.8	80		
TOTAL BOLTE VEKT =			143.1 kg	

MATERIE LIST FOR MONTASJE							MT-2		ANTALL: 2	
MARK	PROFIL	KVALITET	ANTALL	LENGDE	AREA	VEKT				
P-34	PL12*40	S355J0	1	40	0.0	0.2				
G-1	L60*8	S355J0	4	3041	0.7	21.6				
G-2	L60*8	S355J0	4	3041	0.7	21.6				
G-32	L60*8	S355J0	4	2734	0.6	19.4				
G-35	L60*8	S355J0	4	2734	0.6	19.4				
G-43	L80*8	S355J0	4	3833	1.2	37.0				
G-46	L80*8	S355J0	4	3833	1.2	37.0				
P-11	PL12*170	S355J0	1	462	0.2	7.4				
P-12	PL12*120	S355J0	7	462	0.1	5.2				
P-13	PL12*100	S355J0	7	462	0.1	4.4				
P-14	PL12*100	S355J0	7	562	0.1	5.3				
P-15	PL12*120	S355J0	7	562	0.2	6.4				
P-20	PL12*40	S355J0	27	40	0.0	0.2				
P-21	PL12*142	S355J0	1	462	0.1	6.2				
P-38	PL12*120	S355J0	1	462	0.1	5.2				
P-39	PL12*100	S355J0	1	462	0.1	4.4				
P-40	PL12*100	S355J0	1	562	0.1	5.3				
P-41	PL12*120	S355J0	1	562	0.2	6.4				
P-44	PL12*170	S355J0	3	462	0.2	7.4				
P-45	PL12*142	S355J0	3	462	0.1	6.2				
P-46	PL12*170	S355J0	4	562	0.2	9.0				
P-47	PL12*142	S355J0	4	562	0.2	7.5				
P-48	PL18*40	S355J0	8	40	0.0	0.2				
P-49	PL6*40	S355J0	8	40	0.0	0.1				
P-50	PL6*100	S355J0	4	230	0.0	1.1				
P-51	PL6*100	S355J0	4	280	0.1	1.3				
M-1	MONTASJE		1		37.3	1397.5				
M-2	MONTASJE		1		11.3	328.0				
M-3	MONTASJE		1		17.5	664.4				
M-4	MONTASJE		1		27.6	1334.1				
M-5	MONTASJE		1		24.8	1460.5				
			146.3	SUM:	146.3	6114.4				

NOTATER:

HVIS IKKE ANNET FREMGÅR ER ALLE KILSVEGER MED ≥ 4 mm



A DETALJE-FRONT
1:10

A DETALJE-BACK
1:10

B DETALJE-FRONT
1:10

B DETALJE-BACK
1:10

C DETALJE-FRONT
1:10

C DETALJE-BACK
1:10

VERSJON					
Rev.	Dato	Beskrivning	Prosjektør	Kontroll	Ansvarlig
01	17.08.2015	PROSJEKTTEGNING	ÞE	FH	DSH
02	09.10.2015	ENDRET ANTALL	ÞE	FG	DSH

Oppdragsgiver: **HELGELAND KRAFT**

Designert: **MANNVIT**

Sign. Dato: P.V. MANNVITS (Navn og personnr.)

Prosjektnavn: **132 KV LUFTSPENN TOSENFJORDEN**

Tegningstype: _____

Prosjektnr.: 5.921.241

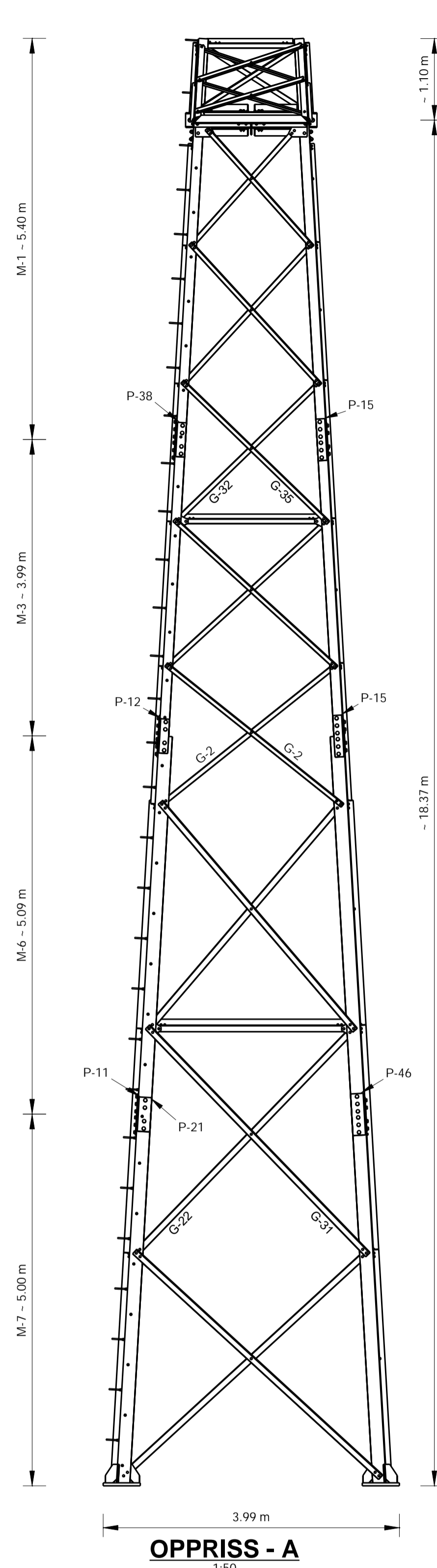
Målestokk: _____

Format: **A1**

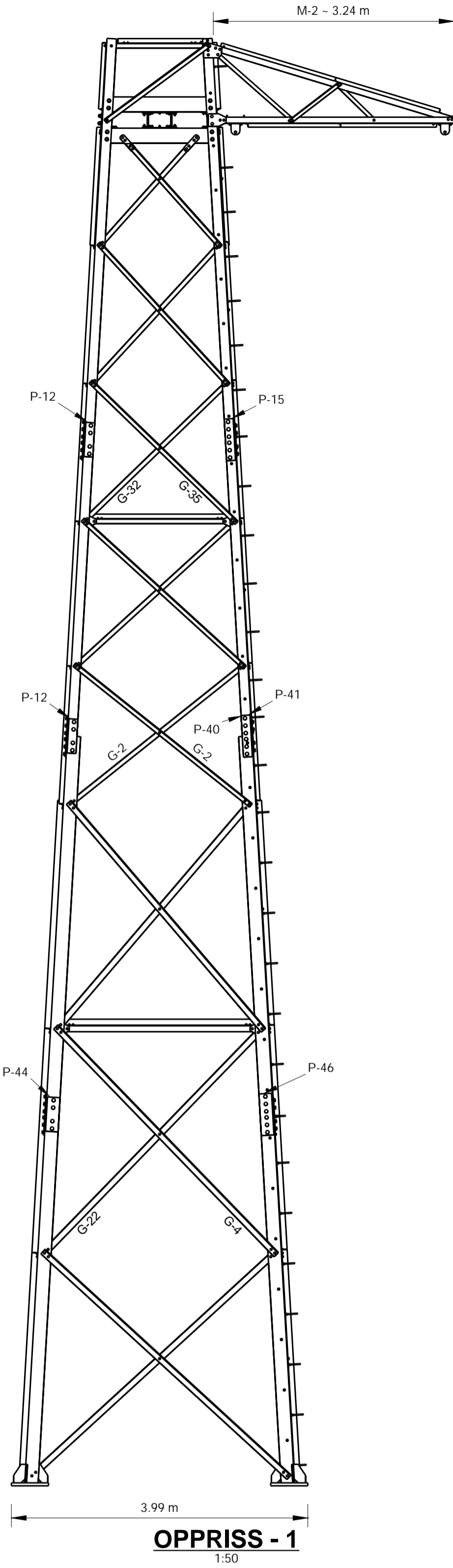
Tegning: **MT-2**

Rev.: **02**

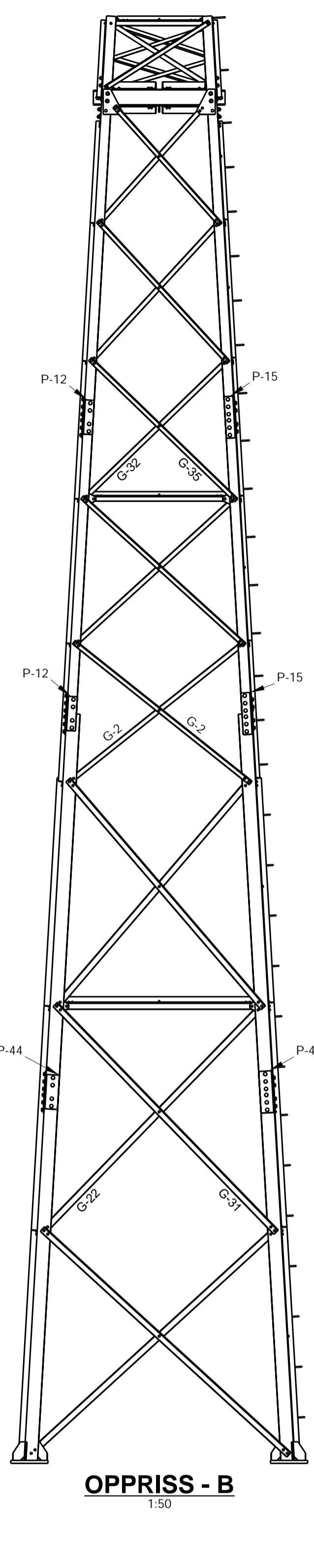
PRENTAB: 21. februar 2011 11:56:40
 TOLVUSR&C S/S-VNR821 Ethers vnr61241 132 KV Jordspenn Tosenfjorden/TosengrafRamm&A-F (Mannvit, L&H&V&K&S&P&S&G&D&E&F&G&H)



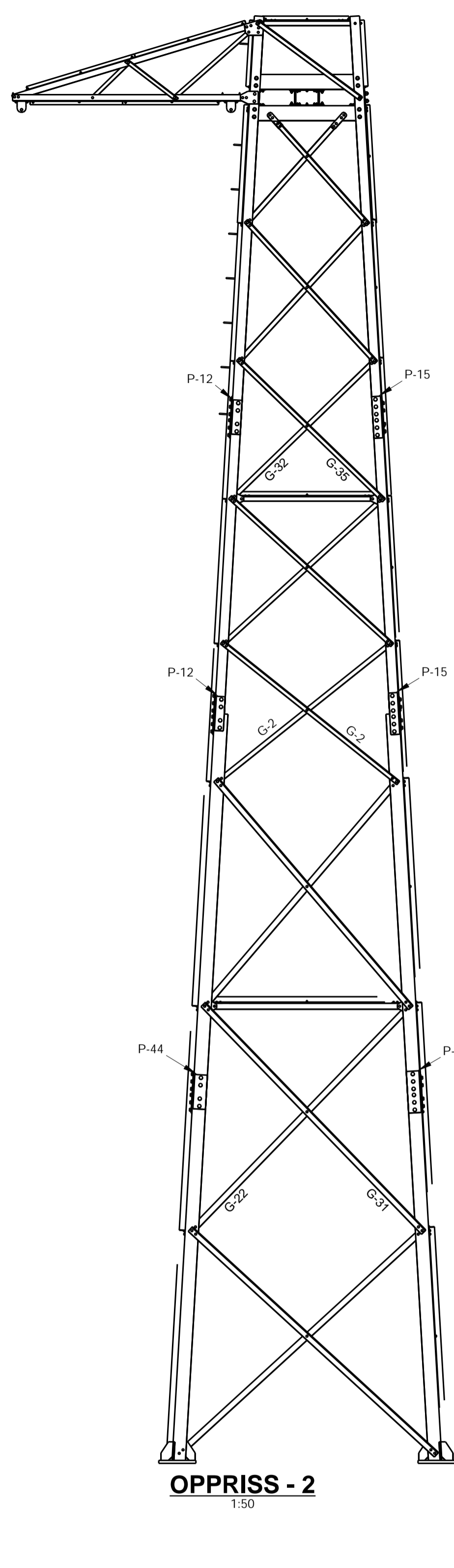
OPRISS - A
1:50



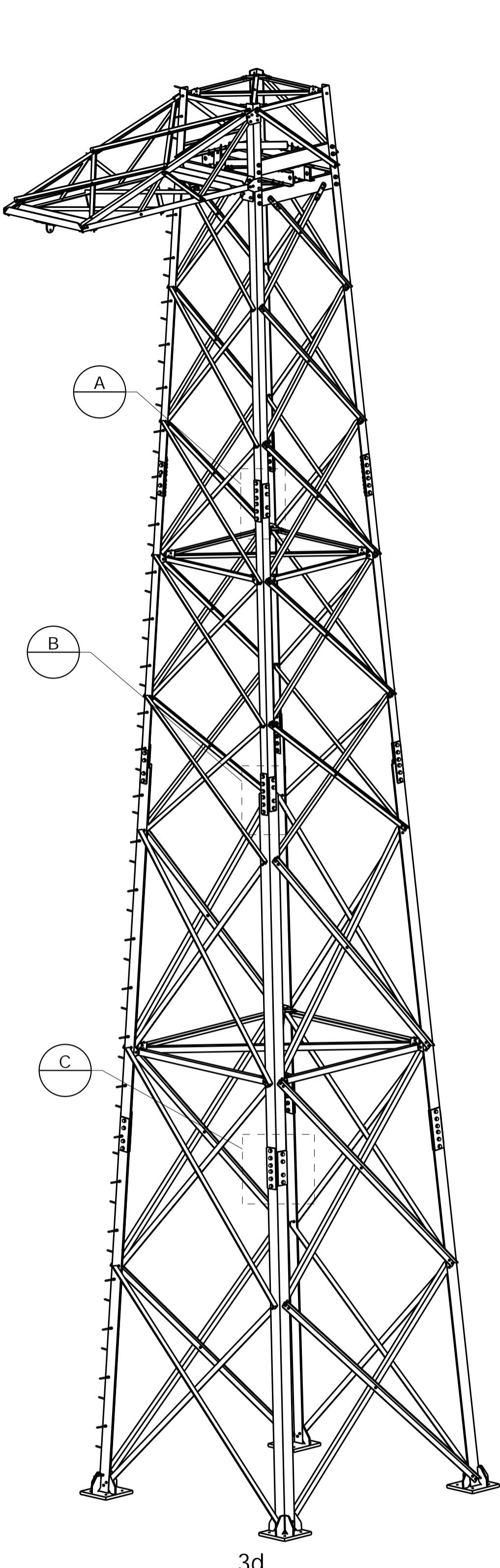
OPRISS - 1
1:50



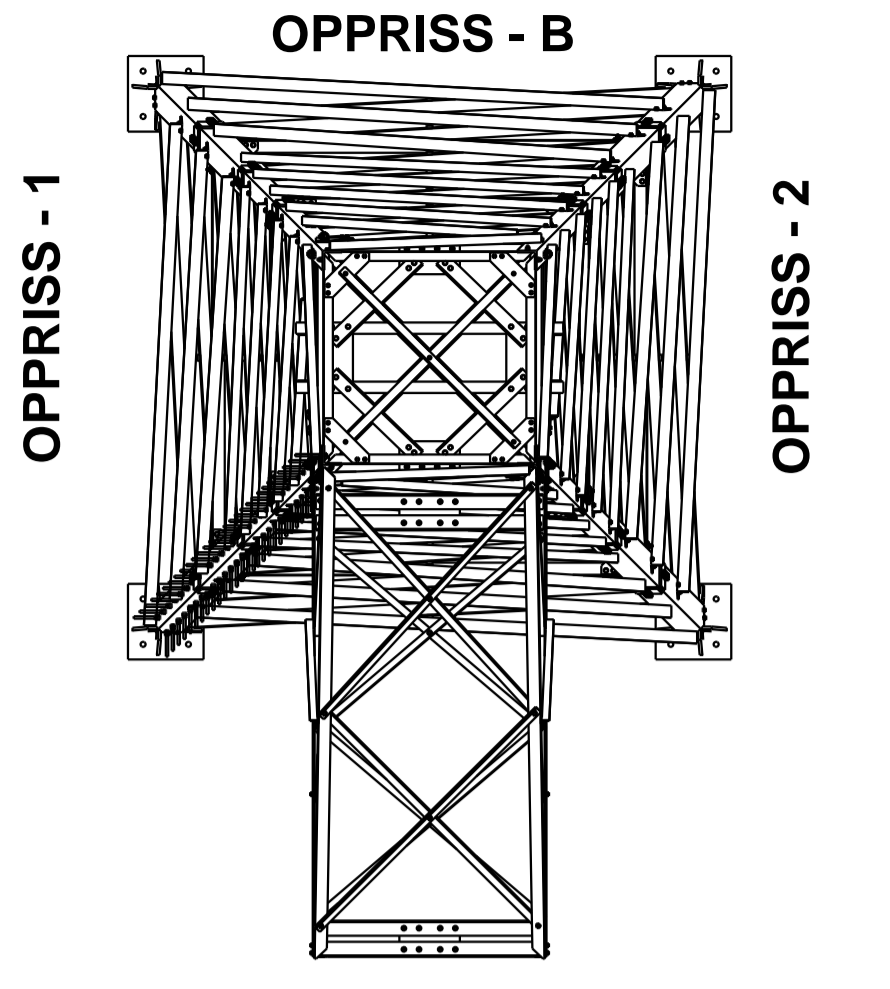
OPRISS - B
1:50



OPRISS - 2
1:50



3d

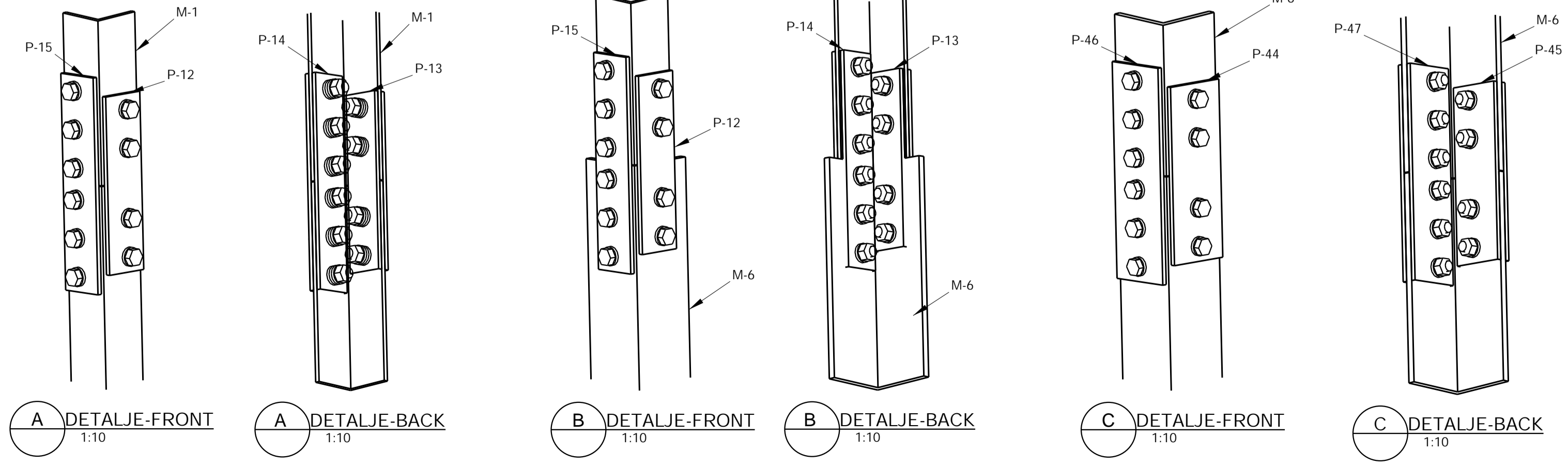


OPRISS - A
1:50

TOTAL BOLT LISTE FOR MONTASJE				MT-3
BOLTYTYPE	KVALITET	ANTALL	KOMMENTAR	
M12x45	8.8	1		
M12x50	8.8	41		
M12x55	8.8	3		
M16x45	8.8	4		
M16x50	8.8	12		
M16x55	8.8	148		
M16x60	8.8	86		
M16x65	8.8	40		
M16x70	8.8	60		
M16x75	8.8	54		
M16x80	8.8	24		
M16x100	8.8	6		
M16x200	8.8	59		
M20x70	8.8	8		KLATREBOLTE
M27x75	8.8	16		
M27x85	8.8	8		
M27x90	8.8	80		
M27x100	8.8	40		
TOTAL BOLTE VEKT =				143.4 kg

NOTATER:

MATERIALE LIST FOR MONTASJE						MT-3	ANTALL:	1
MARK	PROFIL	KVALITET	ANTALL	LENGDE	AREA	VEKT		
P-34	PL12*40	S355J0	1	40	0.0	0.2		
G-1	L60*8	S355J0	4	3041	0.7	21.6		
G-2	L60*8	S355J0	4	3041	0.7	21.6		
G-4	L80*8	S355J0	1	4269	1.3	41.2		
G-22	L80*8	S355J0	4	4269	1.3	41.2		
G-31	L80*8	S355J0	3	4269	1.3	41.2		
G-32	L60*8	S355J0	4	2734	0.6	19.4		
G-35	L60*8	S355J0	4	2734	0.6	19.4		
P-11	PL12*170	S355J0	1	462	0.2	7.4		
P-12	PL12*120	S355J0	7	462	0.1	5.2		
P-13	PL12*100	S355J0	7	462	0.1	4.4		
P-14	PL12*100	S355J0	7	562	0.1	5.3		
P-15	PL12*120	S355J0	7	562	0.2	6.4		
P-20	PL12*40	S355J0	27	40	0.0	0.2		
P-21	PL12*142	S355J0	1	462	0.1	6.2		
P-38	PL12*120	S355J0	1	462	0.1	5.2		
P-39	PL12*100	S355J0	1	462	0.1	4.4		
P-40	PL12*100	S355J0	1	562	0.1	5.3		
P-41	PL12*120	S355J0	1	562	0.2	6.4		
P-44	PL12*170	S355J0	3	462	0.2	7.4		
P-45	PL12*142	S355J0	3	462	0.1	6.2		
P-46	PL12*170	S355J0	4	562	0.2	9.0		
P-47	PL12*142	S355J0	4	562	0.2	7.5		
P-48	PL18*40	S355J0	8	40	0.0	0.2		
P-49	PL6*40	S355J0	8	40	0.0	0.1		
P-50	PL6*100	S355J0	4	230	0.0	1.1		
P-51	PL6*100	S355J0	4	280	0.1	1.3		
M-1	MONTASJE		1		37.3	1397.5		
M-2	MONTASJE		1		11.3	328.0		
M-3	MONTASJE		1		17.5	664.4		
M-6	MONTASJE		1		30.9	1507.9		
M-7	MONTASJE		1		28.6	1684.6		
SUM:						154.5	6546.0	



VERSJON				
Rev.	Dato	Beskrivning	Prosjekt	Kontroll
01	17.08.2015	PROSJEKTTEGNING	bE	FH

Oppdragsgiver: **HELGELAND KRAFT**

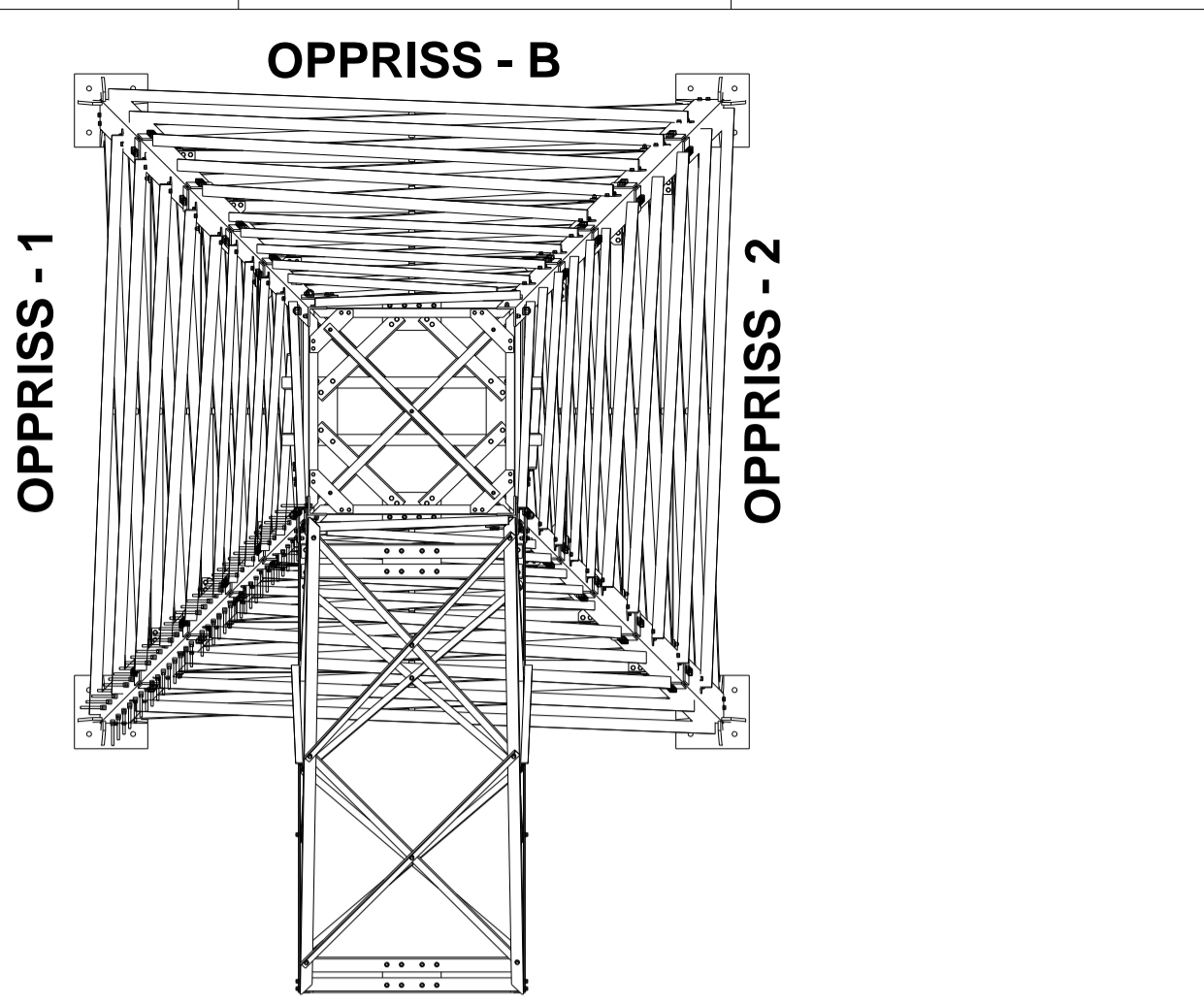
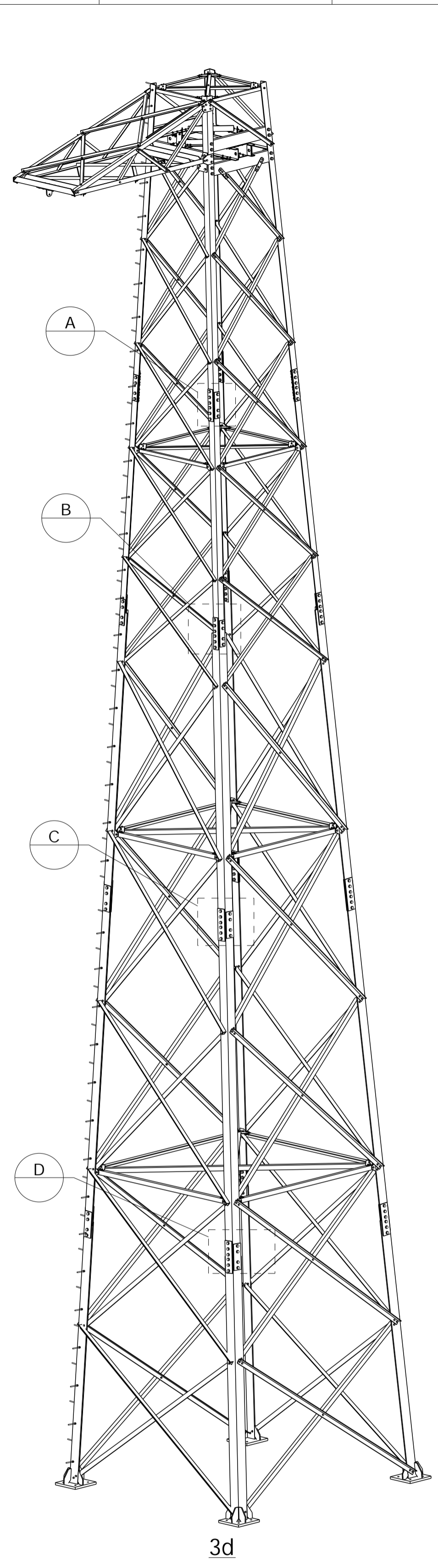
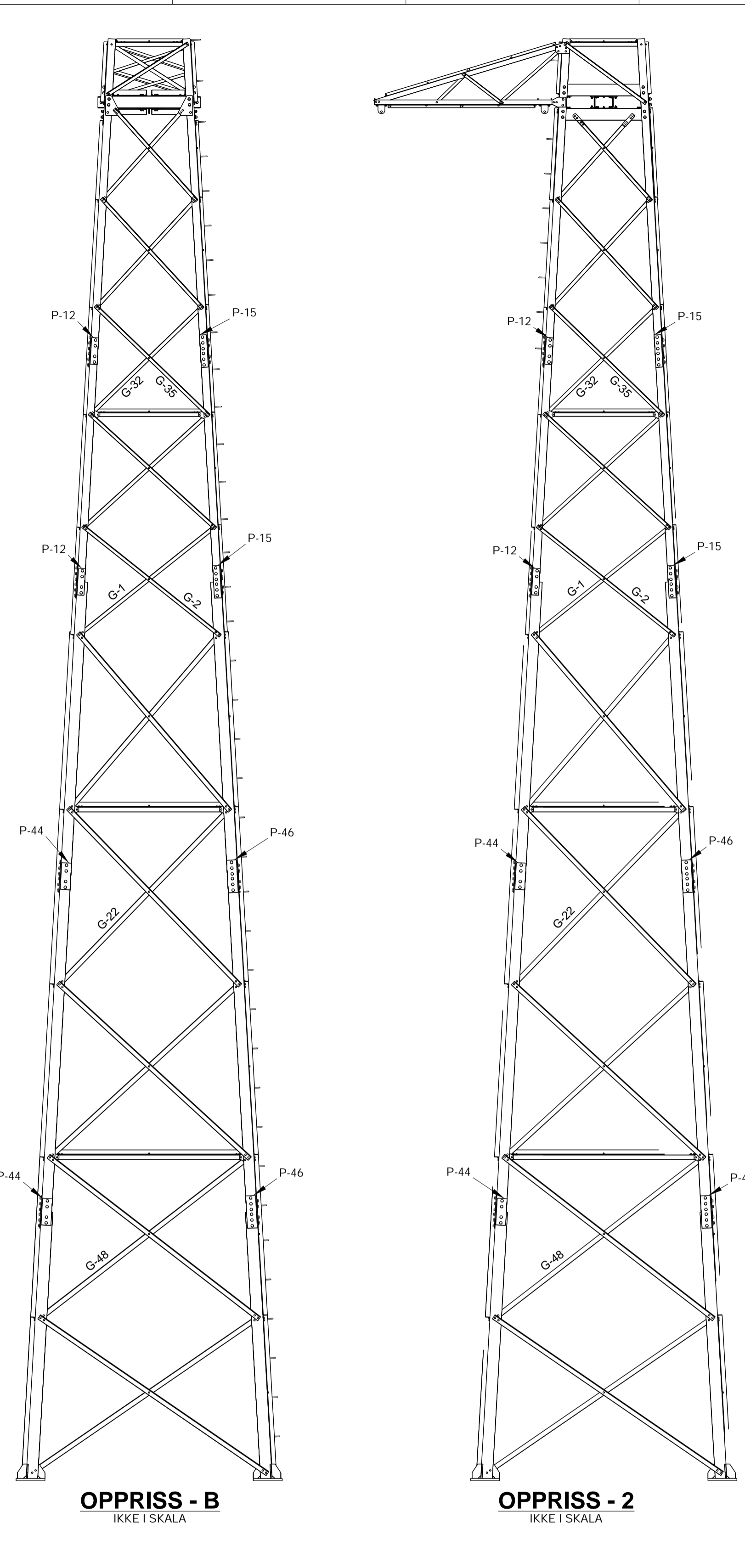
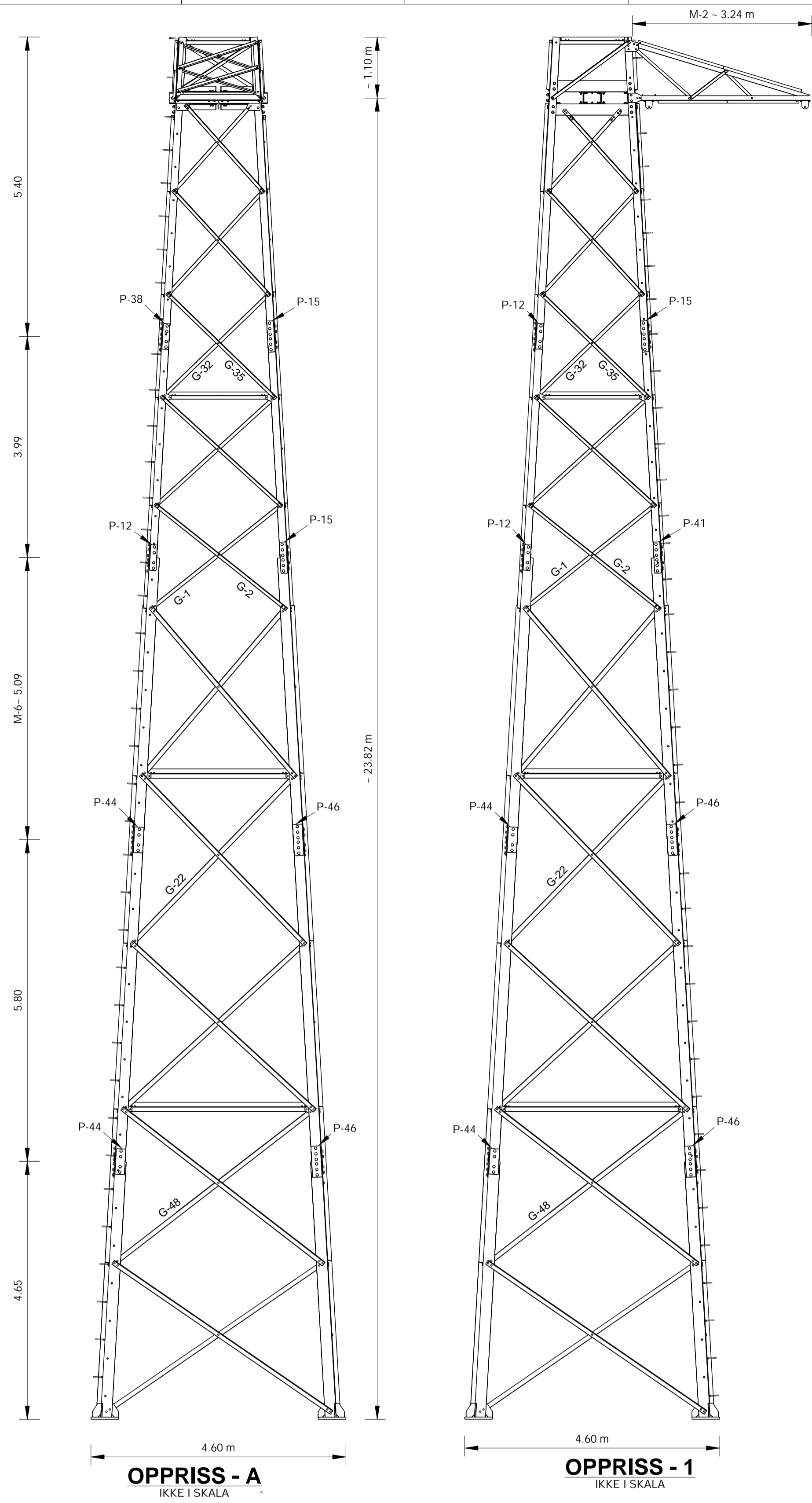
Prosjekt: **132 KV LUFTSPENN TOSENFJORDEN**

Designert: **MANNVIT**

Sign. Dato: P.V. MANNVIT'S (Navn og personnr.)

Prosjekt:	5.921.241	Målestokk:	Format:	A1
Tegningstype:	MT-3	Rev.:	01	

PRENTAB: 21. februar 2011 11:56:40
 TOLVUSRÅD: S:\S\NR921 Eternit vevier\241 132 KV Jordspenn Tosenfjorden\Tosenfjorden\RAMM\A1-F (Mannvit_Lettvev+vevkaug).dwg



OPPRISS - A PLAN 1:50

TOTAL BOLT LISTE FOR MONTASJE

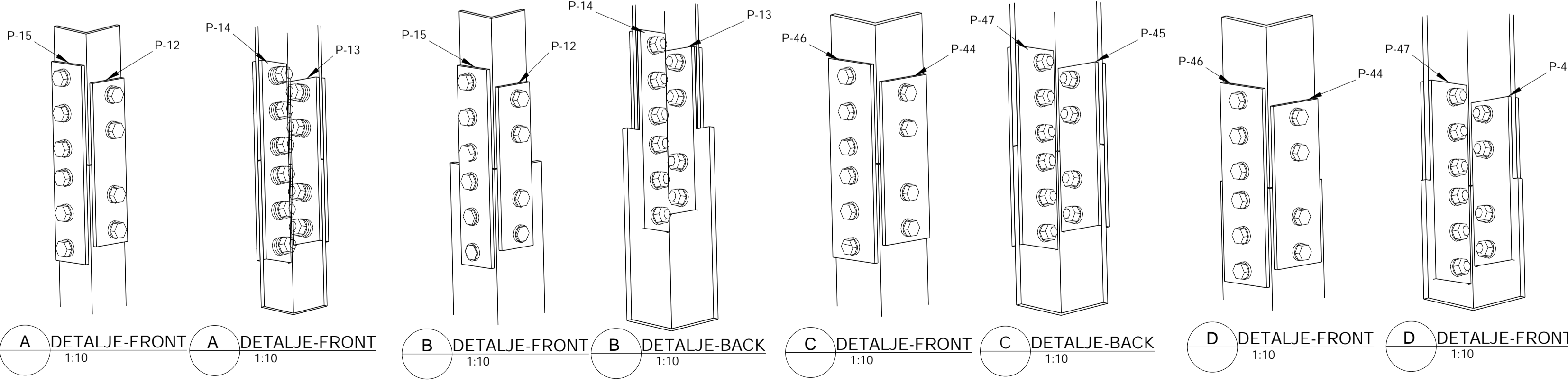
BOLTYTYPE	KVALITET	ANTALL	KOMMENTAR
M12x45	8.8	1	
M12x50	8.8	41	
M12x55	8.8	4	
M16x45	8.8	4	
M16x50	8.8	16	
M16x55	8.8	172	
M16x60	8.8	8	
M16x65	8.8	78	
M16x65	8.8	4	
M16x65	8.8	44	
M16x70	8.8	4	
M16x75	8.8	56	
M16x75	8.8	4	
M16x75	8.8	74	
M16x80	8.8	4	
M16x80	8.8	40	
M16x85	8.8	4	
M16x100	8.8	6	
M16x200	8.8	74	KLATREBOLTE
M20x70	8.8	8	
M27x75	8.8	16	
M27x85	8.8	8	
M27x90	8.8	120	
M27x100	8.8	40	
TOTAL BOLT VEKT =			177.9 kg

NOTATER:

HVIS IKKE ANNET FREMGÅR ER ALLE HILSVESER MED $\delta = 4 \text{ mm}$

MATERIALE LIST FOR MONTASJE

MARK	PROFIL	KVALITET	ANTALL	LENGDE	AREA	VEKT
P-34	PL12*40	S355J0	1	40	0.0	0.2
G-1	L60*8	S355J0	4	3041	0.7	21.6
G-2	L60*8	S355J0	4	3041	0.7	21.6
G-4	L80*8	S355J0	1	4269	1.3	41.2
G-22	L80*8	S355J0	4	4269	1.3	41.2
G-31	L80*8	S355J0	3	4269	1.3	41.2
G-32	L60*8	S355J0	4	2734	0.6	19.4
G-35	L60*8	S355J0	4	2734	0.6	19.4
G-48	L90*8	S355J0	4	4606	1.4	44.5
G-51	L80*8	S355J0	4	4601	1.4	44.4
P-12	PL12*120	S355J0	7	462	0.1	5.2
P-13	PL12*100	S355J0	7	462	0.1	4.4
P-14	PL12*100	S355J0	7	562	0.1	5.3
P-15	PL12*120	S355J0	7	562	0.2	6.4
P-20	PL12*40	S355J0	28	40	0.0	0.2
P-38	PL12*120	S355J0	1	462	0.1	5.2
P-39	PL12*100	S355J0	1	462	0.1	4.4
P-40	PL12*100	S355J0	1	562	0.1	5.3
P-41	PL12*120	S355J0	1	562	0.2	6.4
P-44	PL12*170	S355J0	8	462	0.2	7.4
P-45	PL12*142	S355J0	8	462	0.1	6.2
P-46	PL12*170	S355J0	8	562	0.2	9.0
P-47	PL12*142	S355J0	8	562	0.2	7.5
P-48	PL18*40	S355J0	12	40	0.0	0.2
P-49	PL6*40	S355J0	8	40	0.0	0.1
P-50	PL6*100	S355J0	4	230	0.0	1.1
P-51	PL6*100	S355J0	4	280	0.1	1.3
M-1	MONTASJE		1		37.3	1397.5
M-2	MONTASJE		1		11.3	328.0
M-3	MONTASJE		1		17.5	664.4
M-6	MONTASJE		1		30.9	1507.9
M-8	MONTASJE		1		35.5	1727.7
M-9	MONTASJE		1		29.8	1742.6
205.5				SUM:	205.5	8808.8



VERSJON

Rev.	Dato	Beskrivning	Prosjektør	Kontroll	Ansvarlig
01	09.10.2015	PROSJEKTTEGNING	ÞE	FG	DSH
02	03.05.2016	ENDRET ANTALL AV G-51	ÞE	FG	DSH

Oppdragsgiver: **HELGELAND KRAFT**

Designert: **MANNVIT**

Sign. Dato: P.V. MANNVIT'S (Navn og personnr.)

Prosjekt: **132 KV LUFTSPENN TOSENFJORDEN**

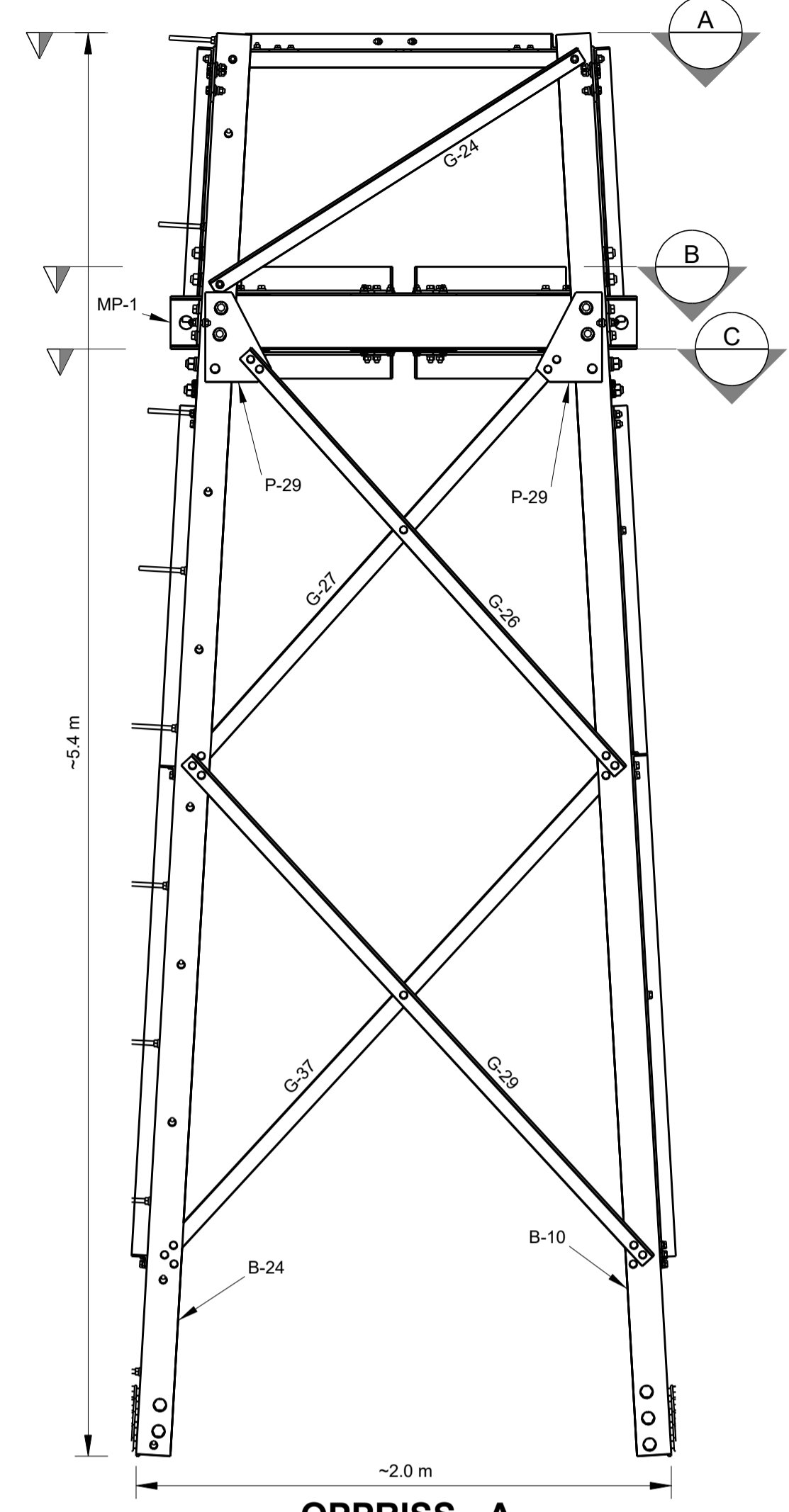
Tegningstype: **MT-4**

Prosjekt: **5.921.241**

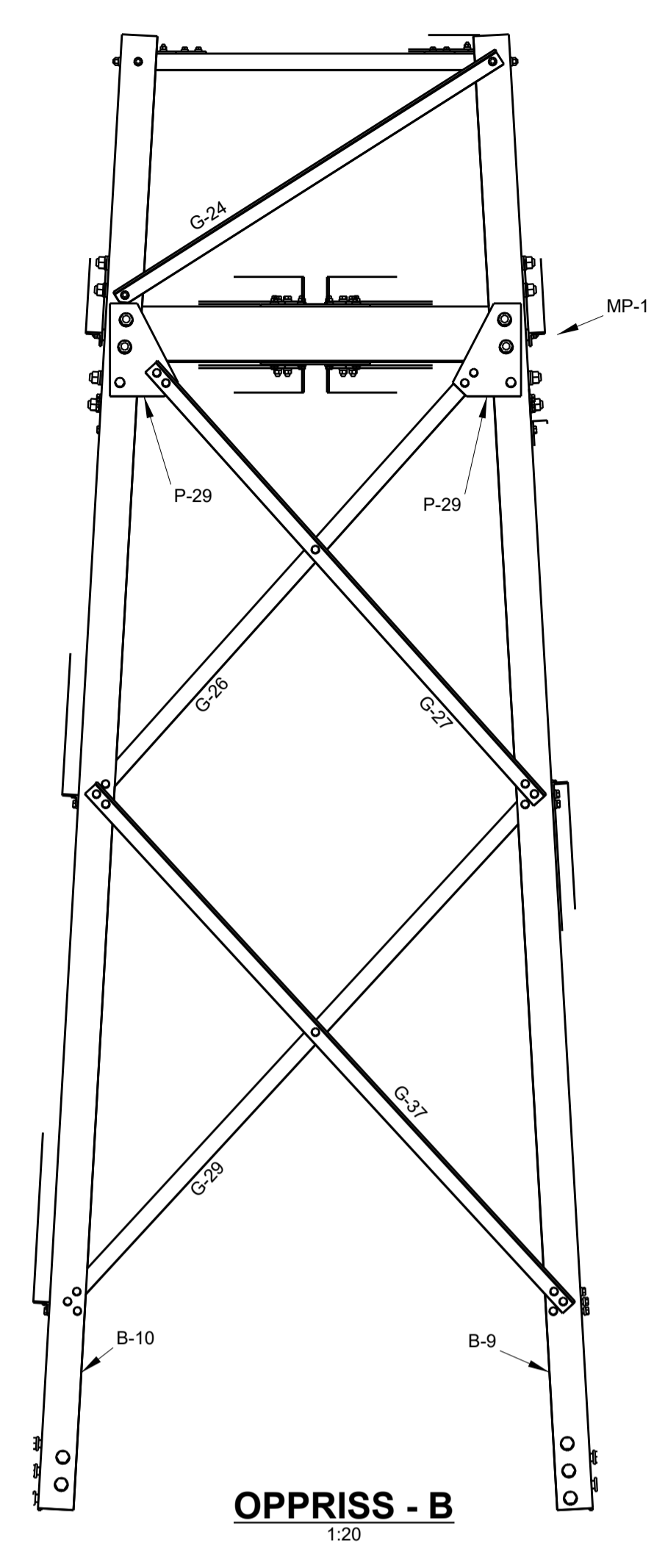
Målestokk: **A1**

Tegning: **MT-4**

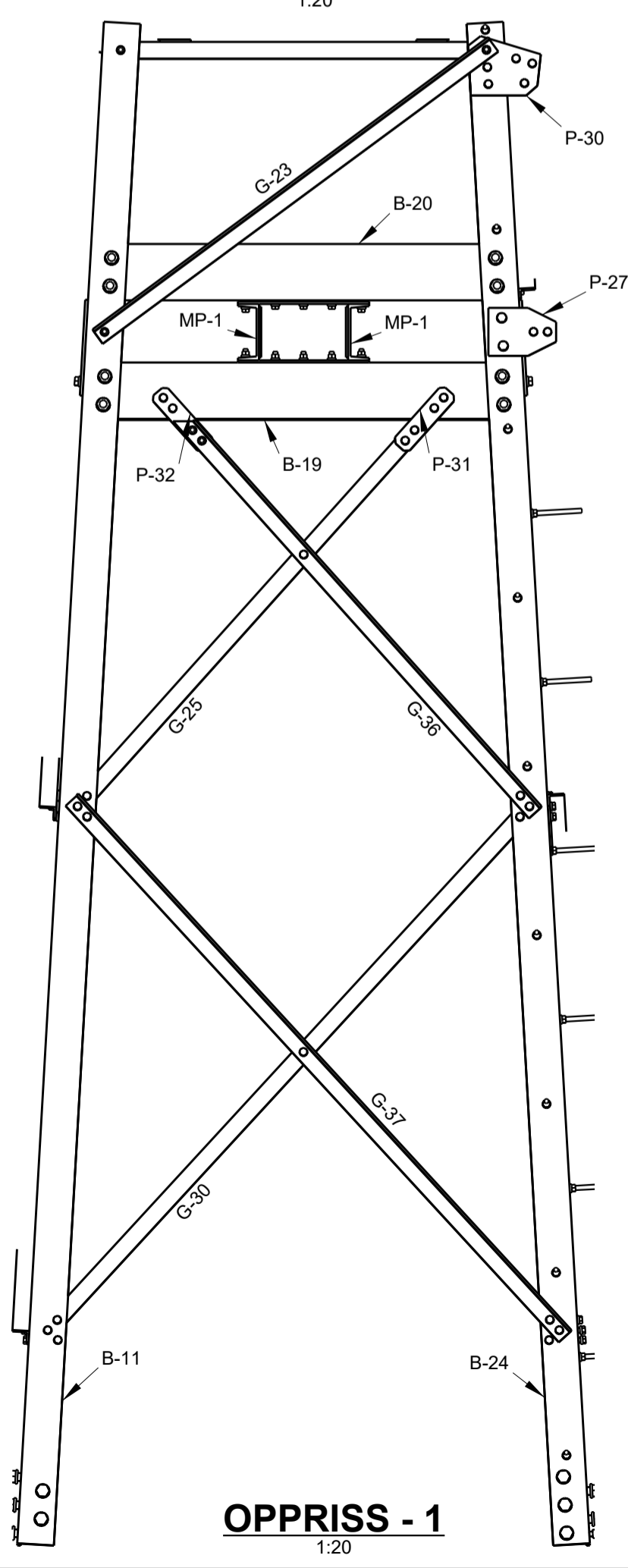
Rev.: **02**



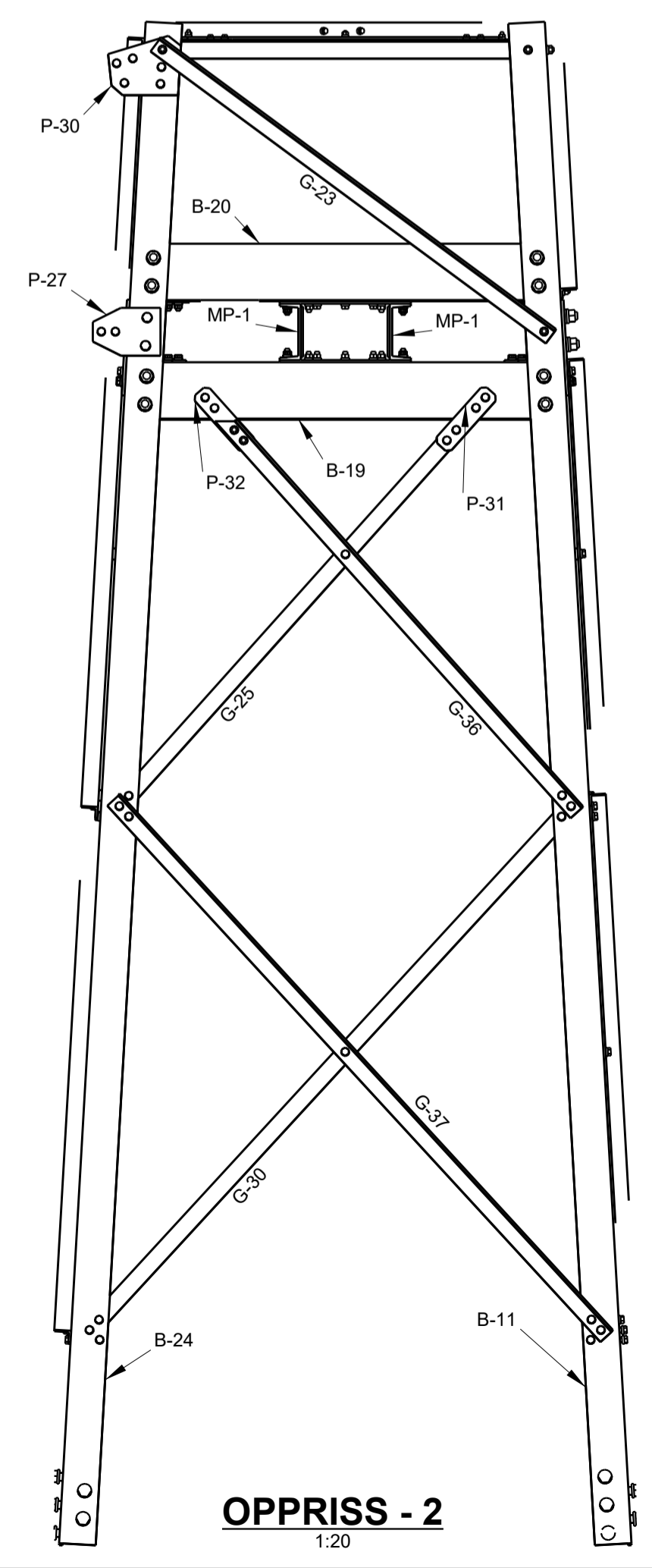
OPPRISS - A
1:20



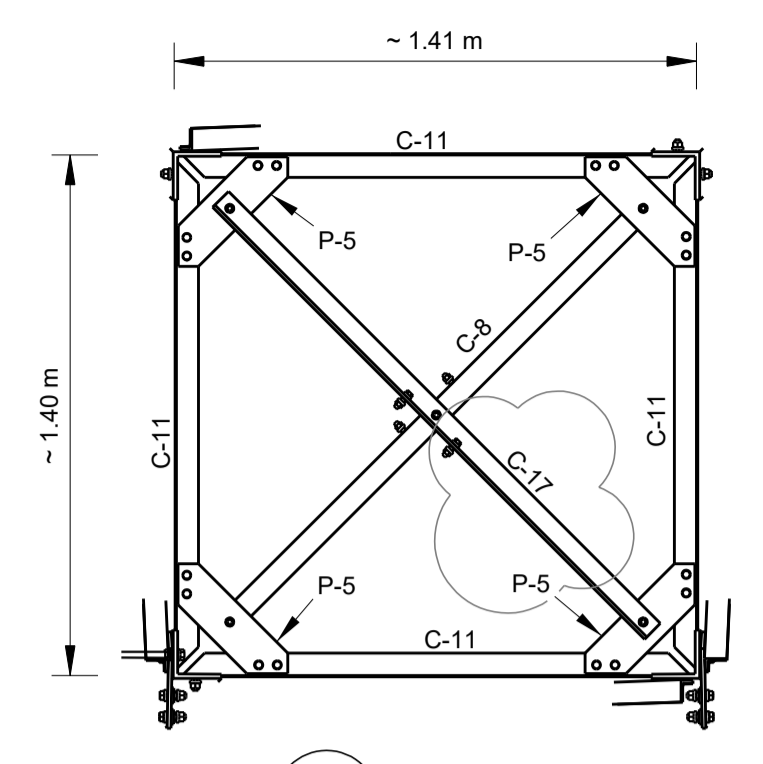
OPPRISS - B
1:20



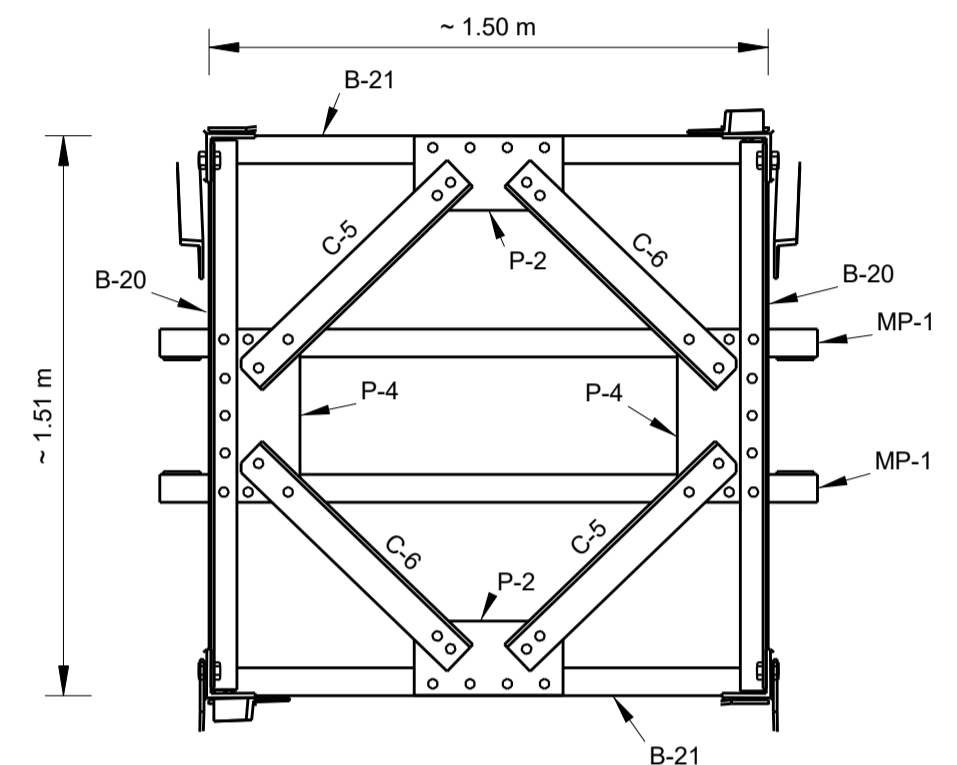
OPPRISS - 1
1:20



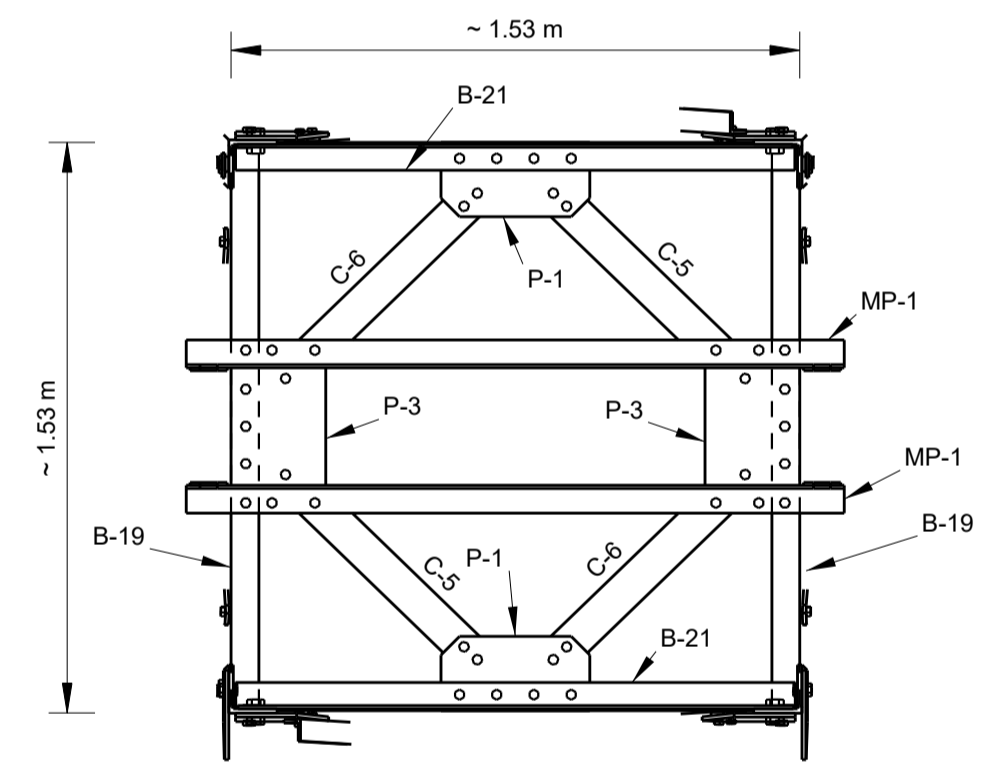
OPPRISS - 2
1:20



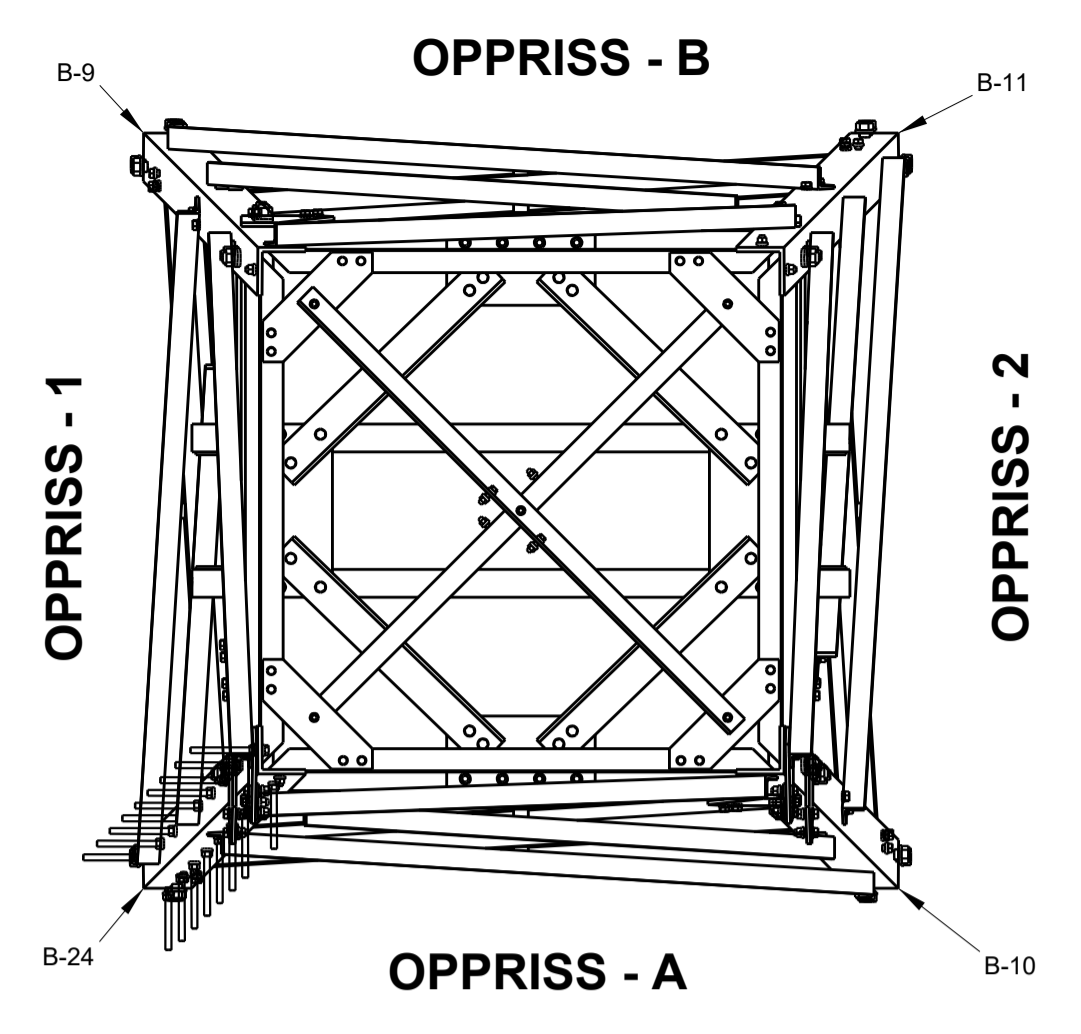
A SNITT
1:20



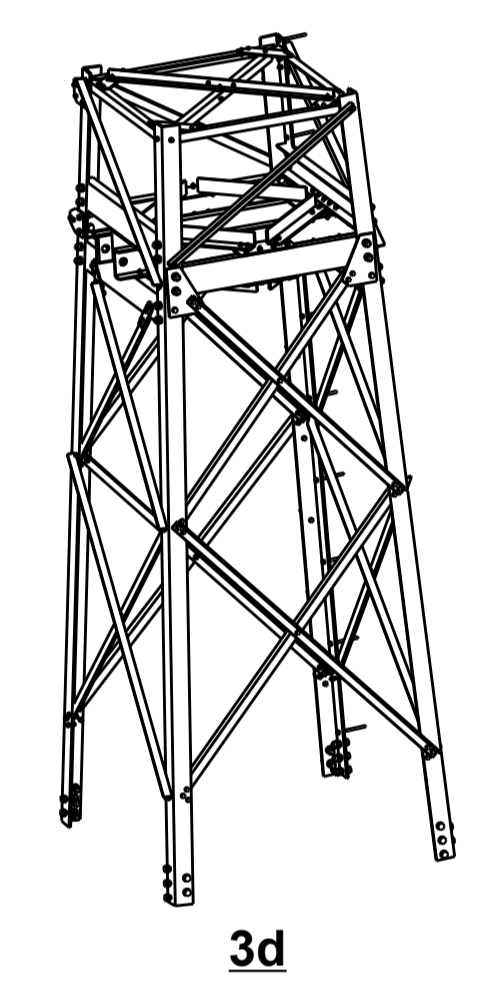
B SNITT
1:20



C SNITT
1:20



PLAN
1:20



3d

TOTAL BOLT LISTE FOR MONTASJE				M-1
BOLTTYPE	KVALITET	ANTALL	KOMMENTAR	
M12x50	8.8	20		
M12x55	8.8	1		
M16x55	8.8	85		
M16x60	8.8	40		
M16x65	8.8	23		
M16x70	8.8	16		
M16x75	8.8	10		
M16x200	8.8	16	KLATREBOLTE	
M20x70	8.8	8		
M27x75	8.8	16		
M27x85	8.8	8		
TOTAL BOLTE VEKT =				37.4 kg

NOTATER:

MATERIALE LIST FOR MONTASJE							M-1		ANTALL:		B	
MARK	PROFIL	KVALITET	ANTALL	LENGDE	AREA	VEKT						
P-5	PL8*295	S355JO	1	295	0.1	2.6						
B-9	L130*12	S355JO	1	5411	2.7	127.4						
B-10	L130*12	S355JO	1	5411	2.7	127.4						
B-11	L130*12	S355JO	1	5411	2.7	127.4						
B-19	UNP200	S355JO	2	1522	1.0	38.5						
B-20	UNP200	S355JO	2	1479	1.0	37.4						
B-21	UNP200	S355JO	2	1507	1.0	38.1						
B-24	L130*12	S355JO	1	5411	2.7	127.4						
C-5	L100*10	S355JO	4	788	0.3	11.9						
C-6	L100*10	S355JO	4	788	0.3	11.9						
C-8	L60*8	S355JO	1	1643	0.4	11.6						
C-11	L60*8	S355JO	4	1367	0.3	9.7						
C-17	L60*8	S355JO	1	1643	0.4	11.6						
G-23	L60*8	S355JO	2	1745	0.4	12.4						
G-24	L60*8	S355JO	2	1656	0.4	11.7						
G-25	L60*8	S355JO	2	1891	0.4	13.4						
G-26	L60*8	S355JO	2	2132	0.5	15.1						
G-27	L60*8	S355JO	2	2132	0.5	15.1						
G-29	L60*8	S355JO	2	2586	0.6	18.3						
G-30	L60*8	S355JO	2	2586	0.6	18.3						
G-36	L60*8	S355JO	2	1892	0.4	13.4						
G-37	L60*8	S355JO	4	2586	0.6	18.3						
P-1	PL8*200	S355JO	2	400	0.2	4.9						
P-2	PL8*200	S355JO	2	400	0.2	4.9						
P-3	PL8*255	S355JO	2	466	0.2	7.5						
P-4	PL8*245	S355JO	2	466	0.2	7.2						
P-5	PL8*295	S355JO	3	295	0.1	2.6						
P-6	PL8*40	S355JO	6	40	0.0	0.1						
P-8	PL8*40	S355JO	1	40	0.0	0.1						
P-16	PL12*40	S355JO	4	40	0.0	0.2						
P-20	PL12*40	S355JO	6	40	0.0	0.2						
P-27	PL10*170	S355JO	2	240	0.1	2.8						
P-29	PL10*250	S355JO	4	340	0.1	4.9						
P-30	PL10*212	S355JO	2	276	0.1	3.5						
P-31	PL10*70	S355JO	2	265	0.0	1.4						
P-32	PL10*70	S355JO	2	266	0.0	1.4						
P-33	PL10*40	S355JO	4	40	0.0	0.1						
P-35	PLT40*40	S355JO	2	10	0.0	0.1						
P-37	PL22*40	S355JO	2	40	0.0	0.3						
MP-1	MONTASJE		2		1.2	46.8						
			37.3	SUM:	37.3	1397.5						

VERSJON				
Rev.	Dato.	Beskrivning	Prosjektør	Ansvarlig
01	17.08.2015	PROSJEKTTEGNING	DE	FH DSH
02	09.10.2015	ENDRET ANTALL	DE	FG DSH
03	25.11.2016		FG	DE DSH

Oppdragsgiver: **HELGELAND KRAFT**

Designer: **MANNVIT**

Sign. Dato: _____ P.V. MANNVITS (Navn og personnr.): _____

Prosjektavn: **132 kV LUFTSPENN TOSENFJORDEN**

Tagningstype: **MONTASJETEGNING**

Prosjekt nr.: **5.921.241** Målestokk: _____ Format: **A1**

Tagning nr.: **M-1** Rev.: **03**

21. februar 2011 11:56:40

PRENTAB:

B

C

D

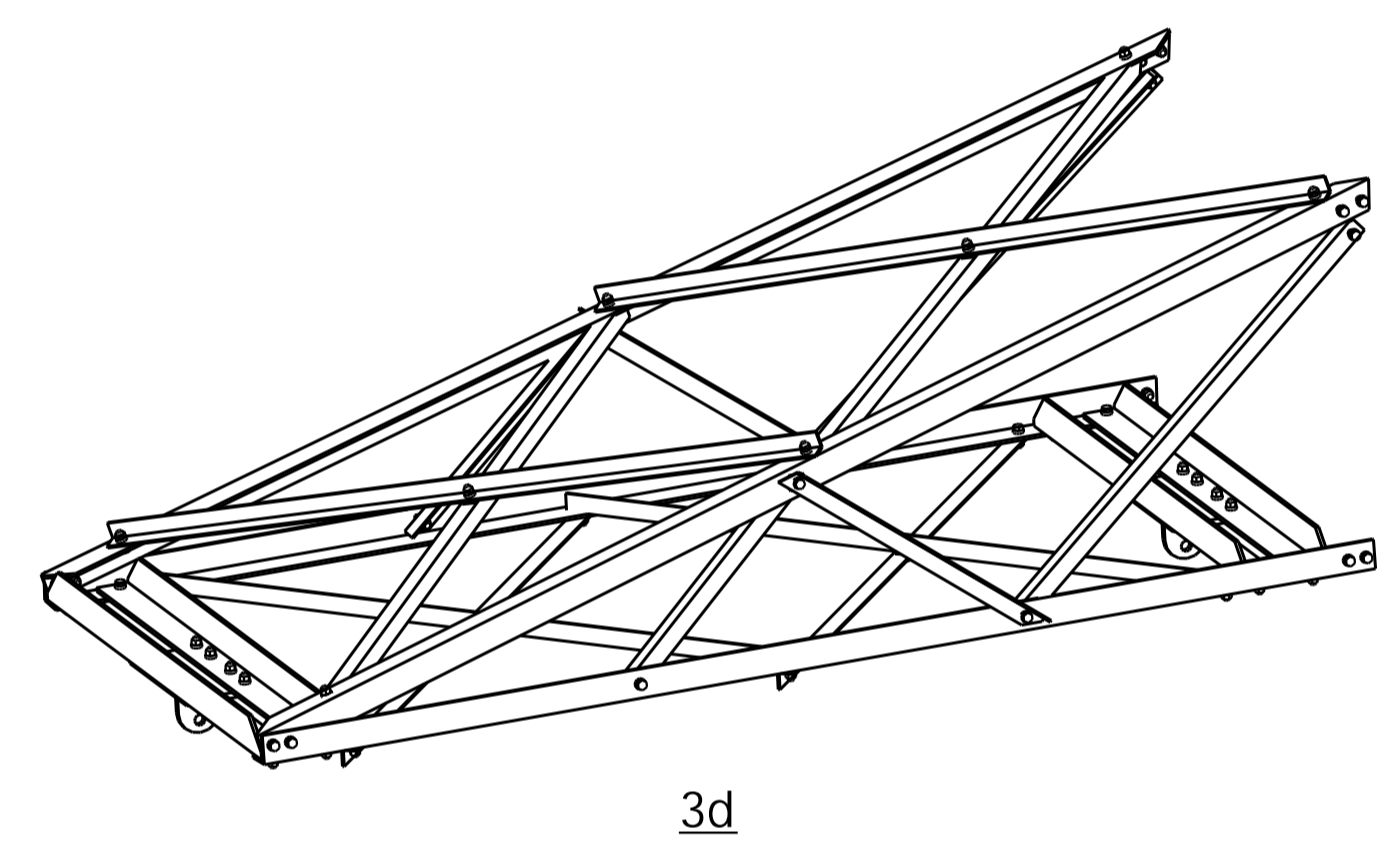
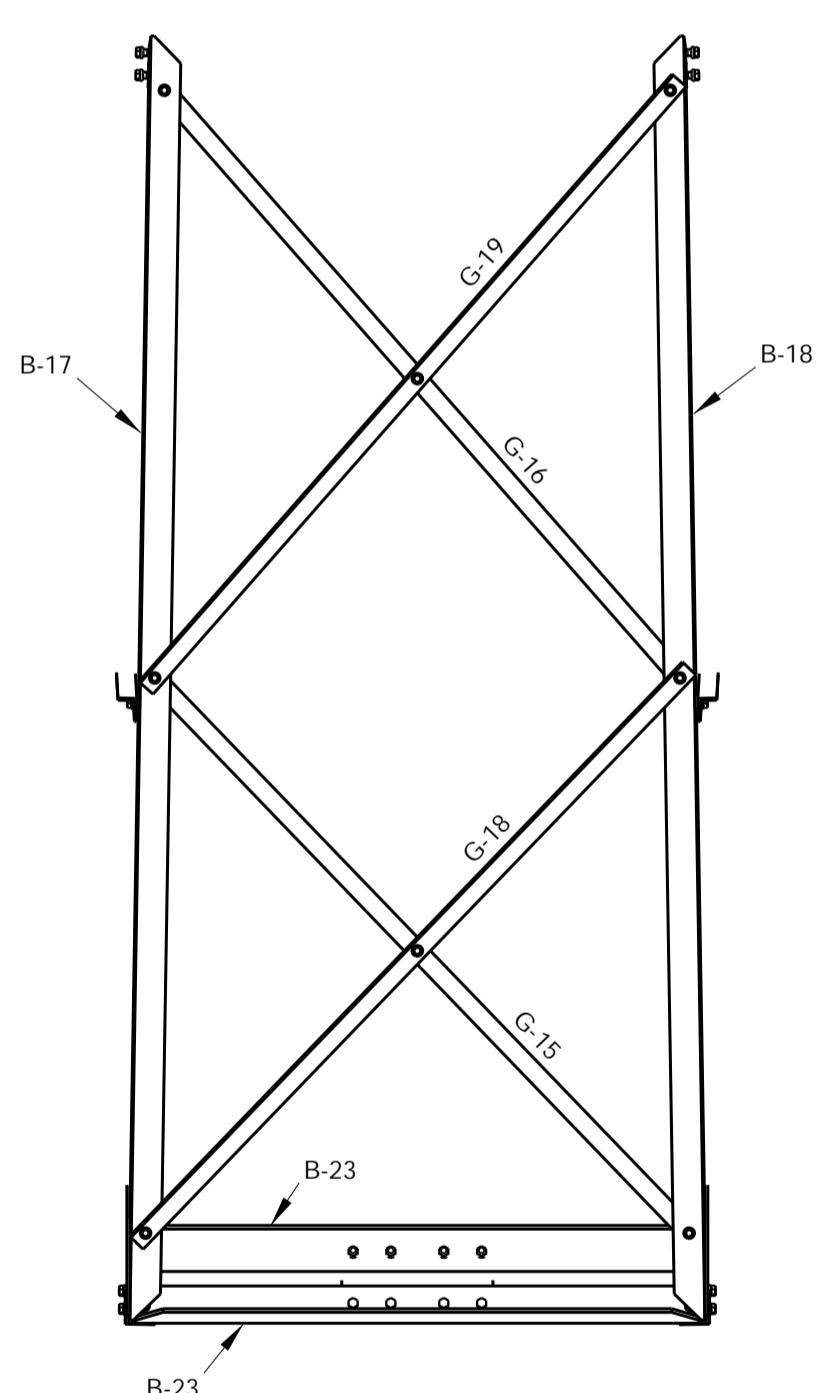
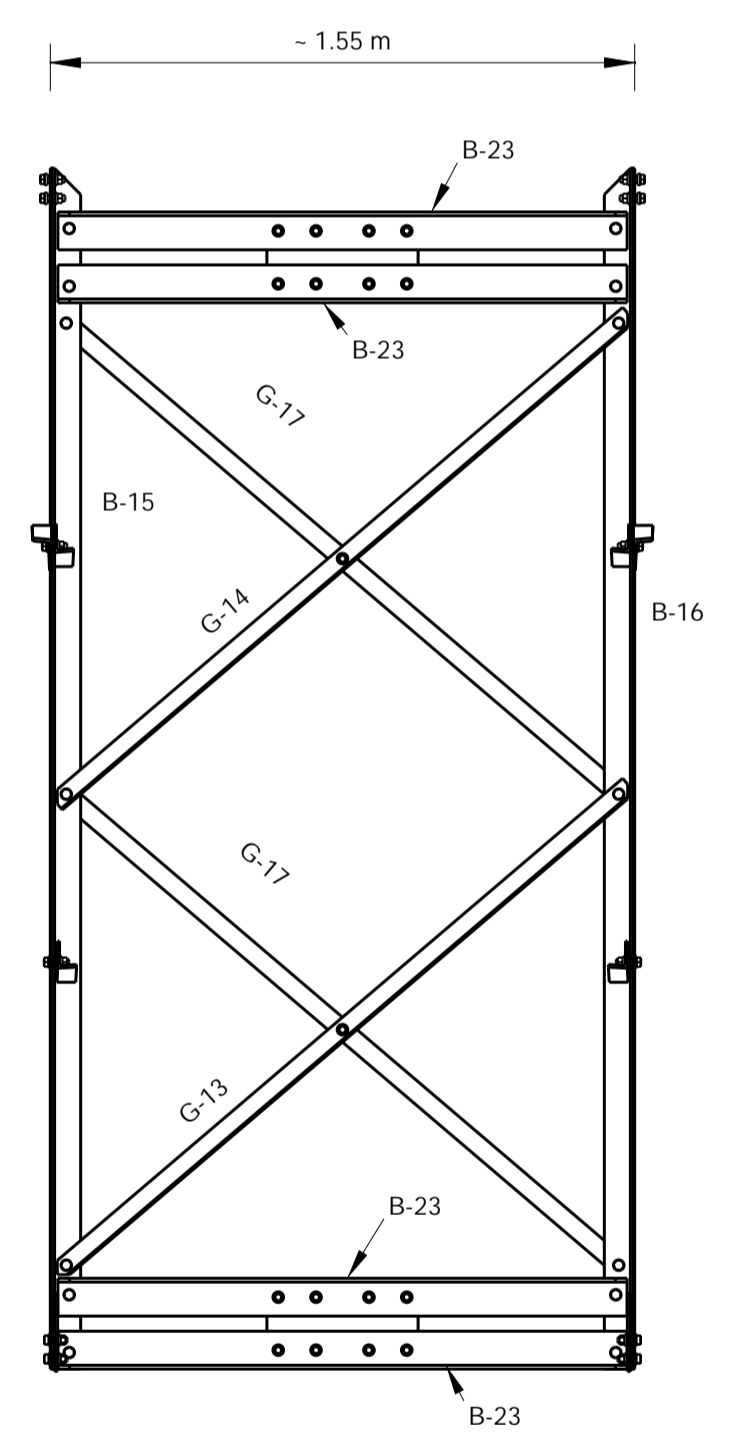
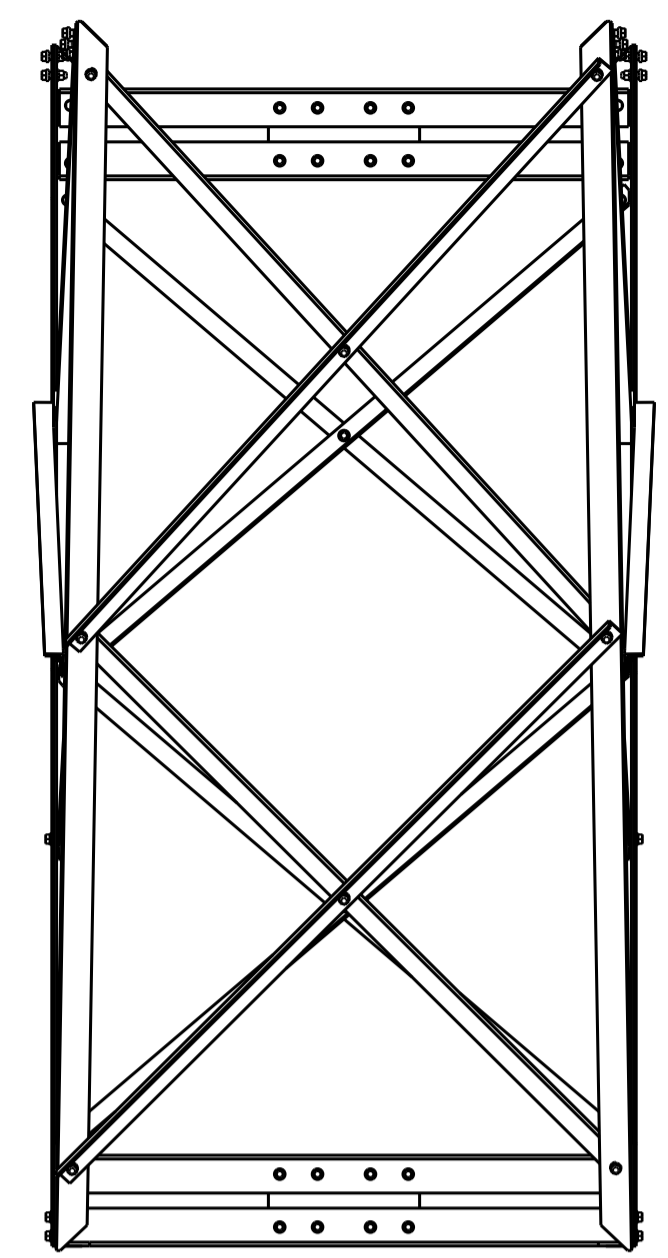
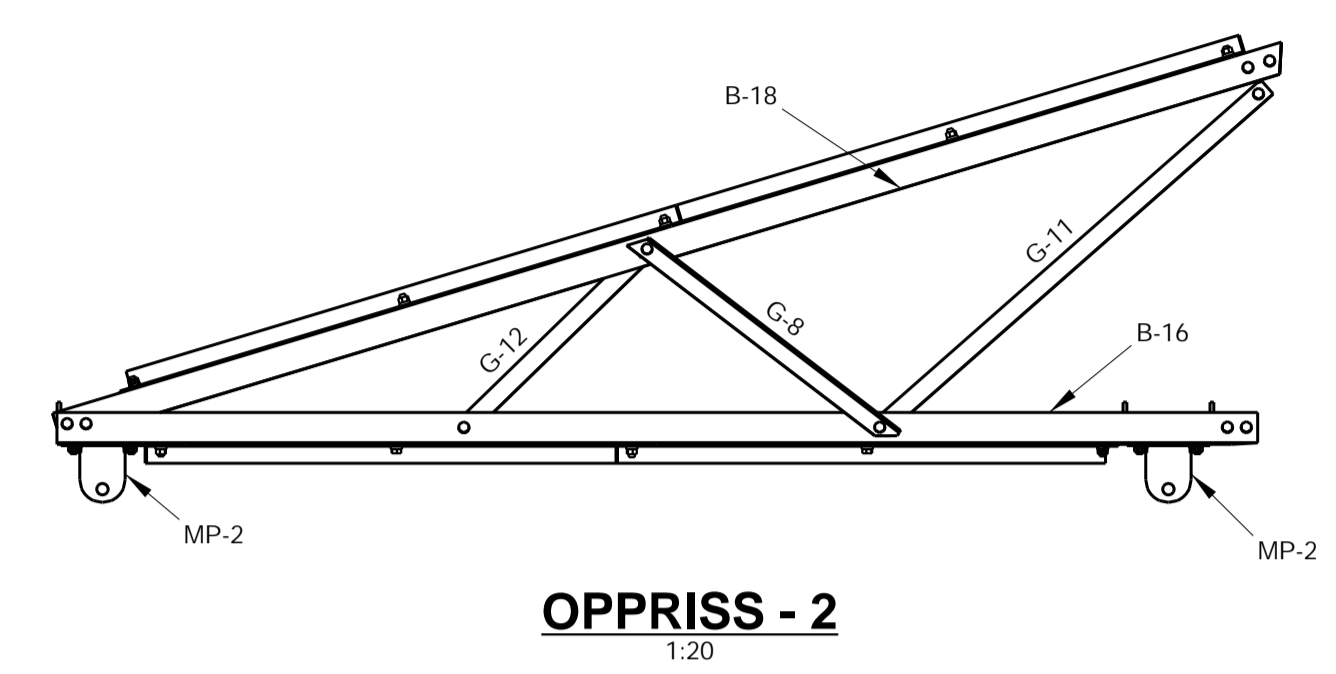
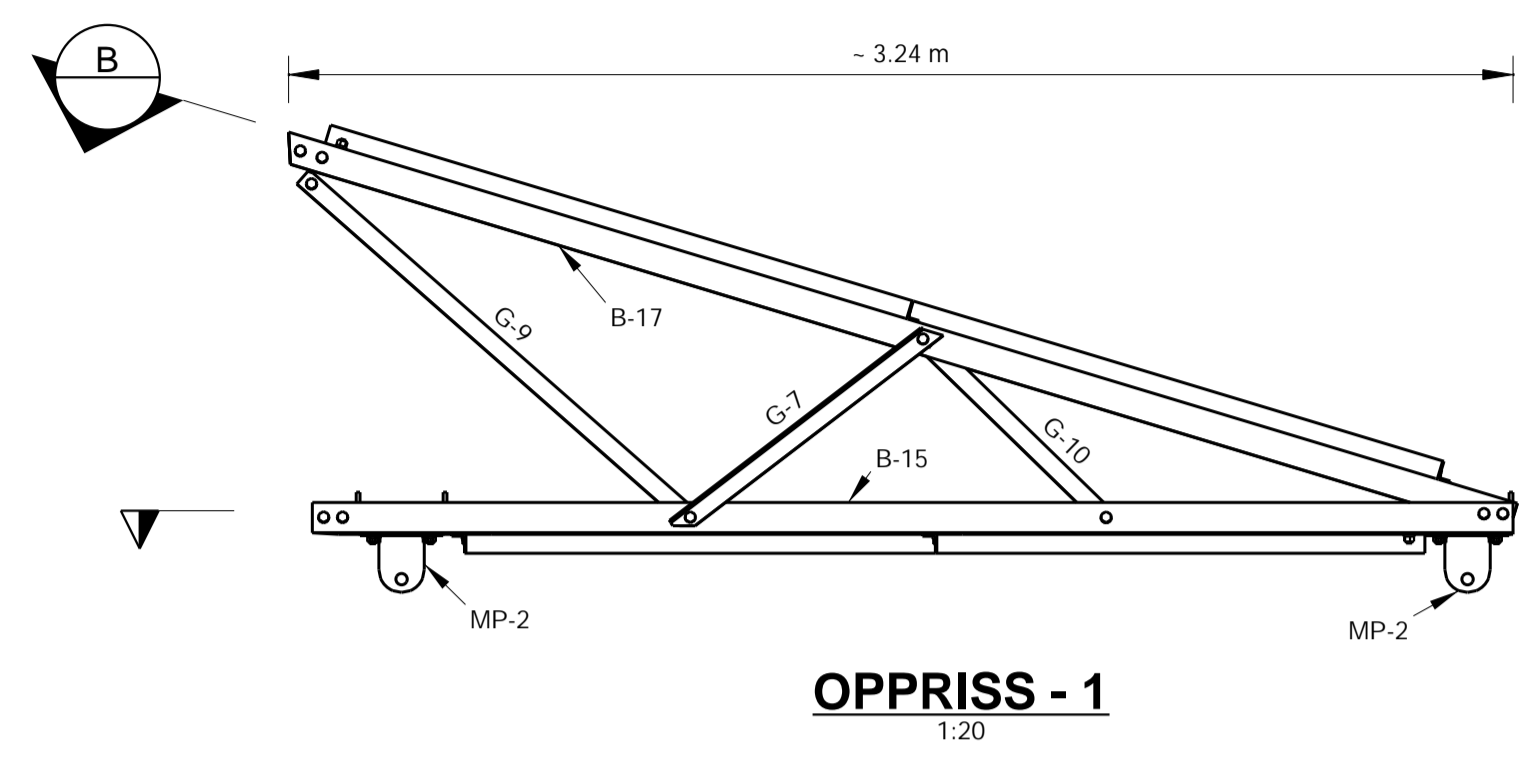
F

F

G

H

TOLVUSBRÅE_SIS-VNR927_Etlers vnefm241_132 KV Jordspenn Tosenfjorden/Tekning/Rammek1-F (Mannvit\kjetil\verksgang).dwg



TOTAL BOLT LISTE FOR MONTASJE M-2			
BOLTETYPPE	KVALITET	ANTALL	KOMMENTAR
M16x45	8.8	4	
M16x50	8.8	8	
M16x55	8.8	20	
M16x60	8.8	18	
TOTAL BOLTE VEKT =			5.9 kg

MATERIALE LIST FOR MONTASJE M-2						
MARK	PROFIL	KVALITET	ANTALL	LENGDE	AREA	VEKT
B-23	L100*10	S355J0	1	1506	0.6	22.7
B-15	L80*8	S355J0	1	3176	1.0	30.7
B-16	L80*8	S355J0	1	3176	1.0	30.7
B-17	L80*8	S355J0	1	3396	1.1	32.8
B-18	L80*8	S355J0	1	3396	1.1	32.8
B-23	L100*10	S355J0	3	1506	0.6	22.7
G-7	L50*5	S355J0	1	875	0.2	3.3
G-8	L50*5	S355J0	1	875	0.2	3.3
G-9	L50*5	S355J0	1	1416	0.3	5.3
G-10	L50*5	S355J0	1	777	0.2	2.9
G-11	L50*5	S355J0	1	1416	0.3	5.3
G-12	L50*5	S355J0	1	777	0.2	2.9
G-13	L50*5	S355J0	1	1990	0.4	7.5
G-14	L50*5	S355J0	1	1990	0.4	7.5
G-15	L50*5	S355J0	1	2108	0.4	7.9
G-16	L50*5	S355J0	1	2138	0.4	8.1
G-17	L50*5	S355J0	2	1990	0.4	7.5
G-18	L50*5	S355J0	1	2108	0.4	7.9
G-19	L50*5	S355J0	1	2138	0.4	8.1
P-6	PL8*40	S355J0	6	40	0.0	0.1
P-19	PL8*40	S355J0	2	40	0.0	0.1
MP-2	MONTASJE		2		0.2	12.2
			11.3	SUM:	11.3	328.0

NOTATER:

HVIS IKKE ANNET FREMGÅR ER ALLE RILSVESER MED $\phi = 4$ mm

VERSJON				
Rev.	Dato	Beskrivning	Prosjektør	Kontroll
01	17.08.2015	PROSJEKTTEGNING	pE	FH
02	09.10.2015	ENDRET ANTALL	pE	FG

Oppdragsgiver

 Designert

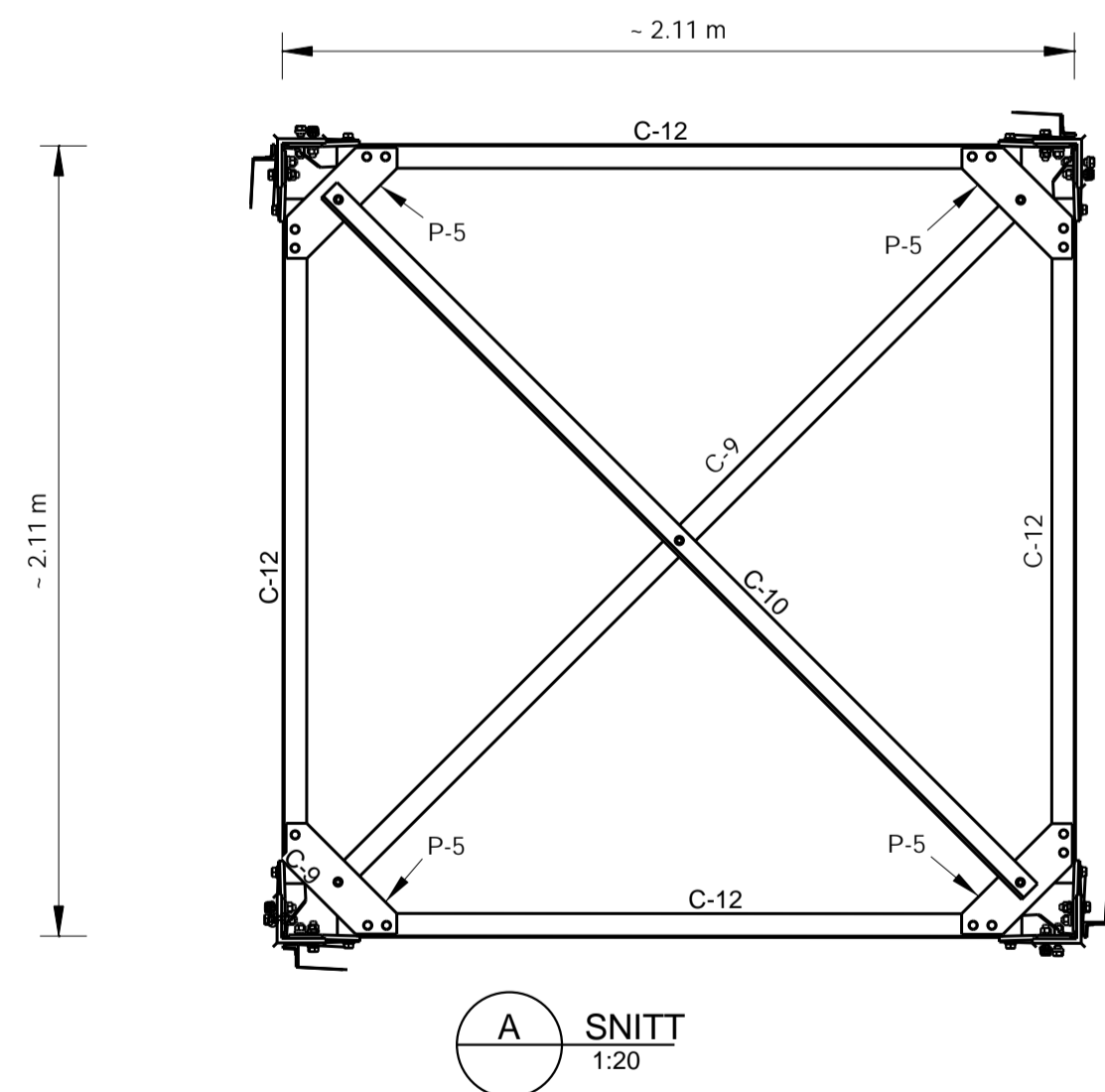
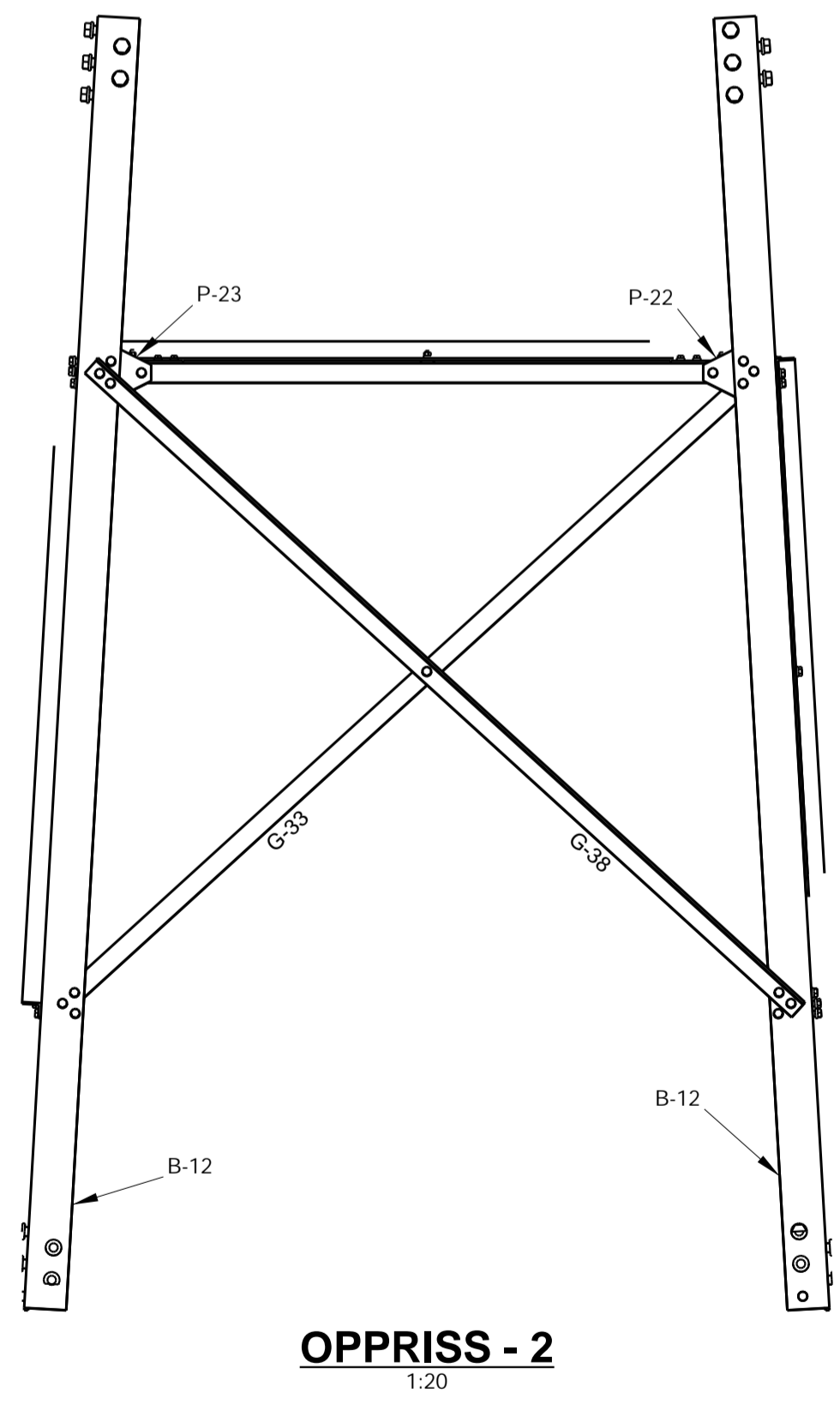
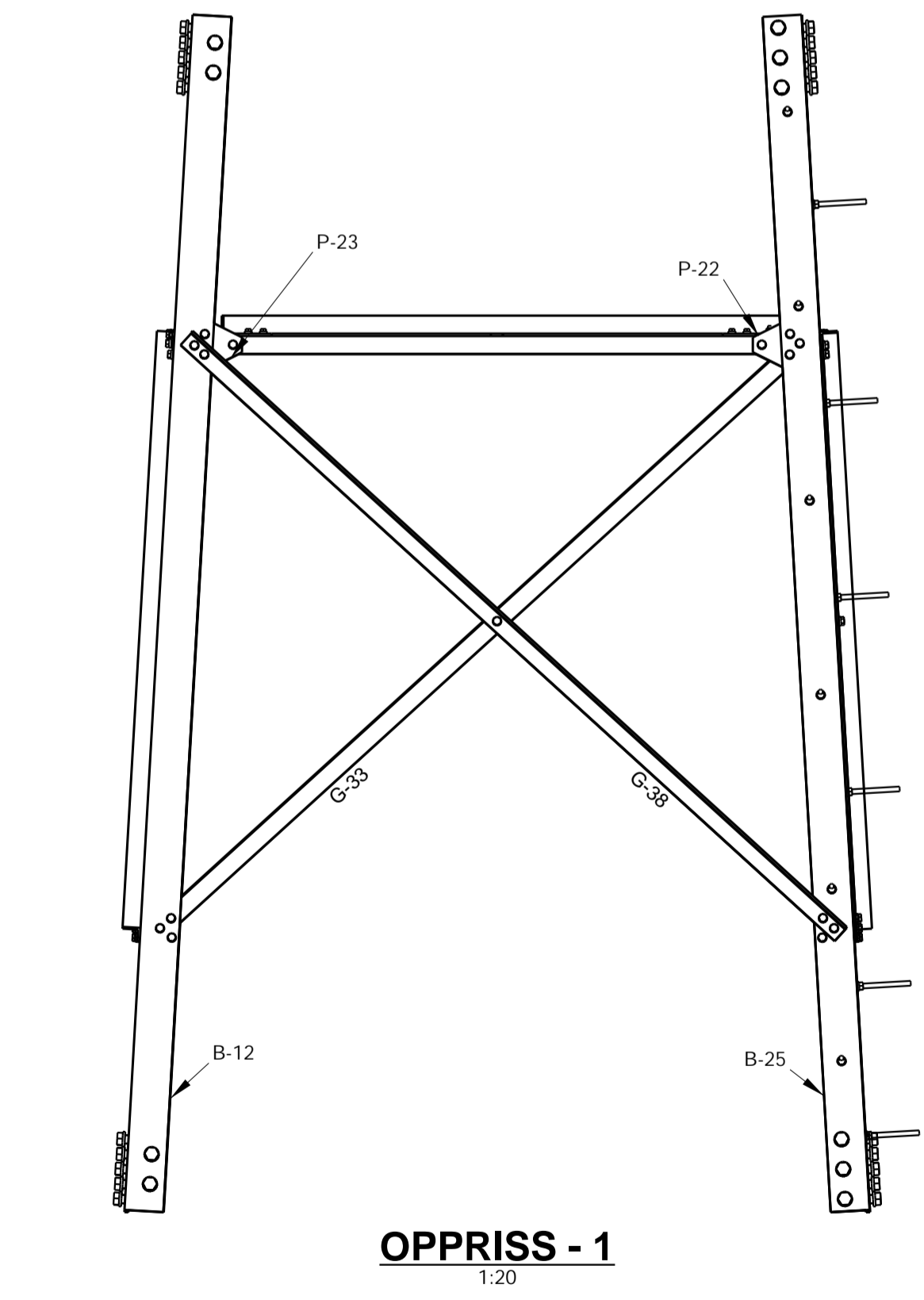
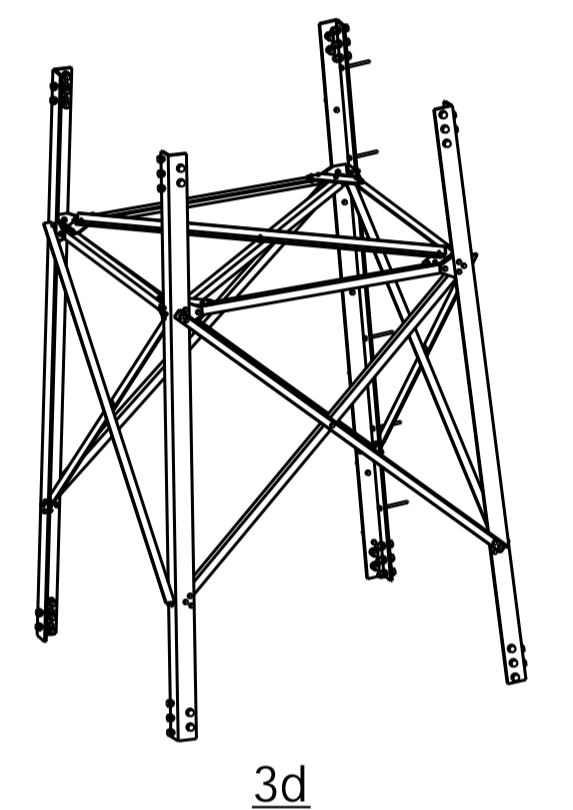
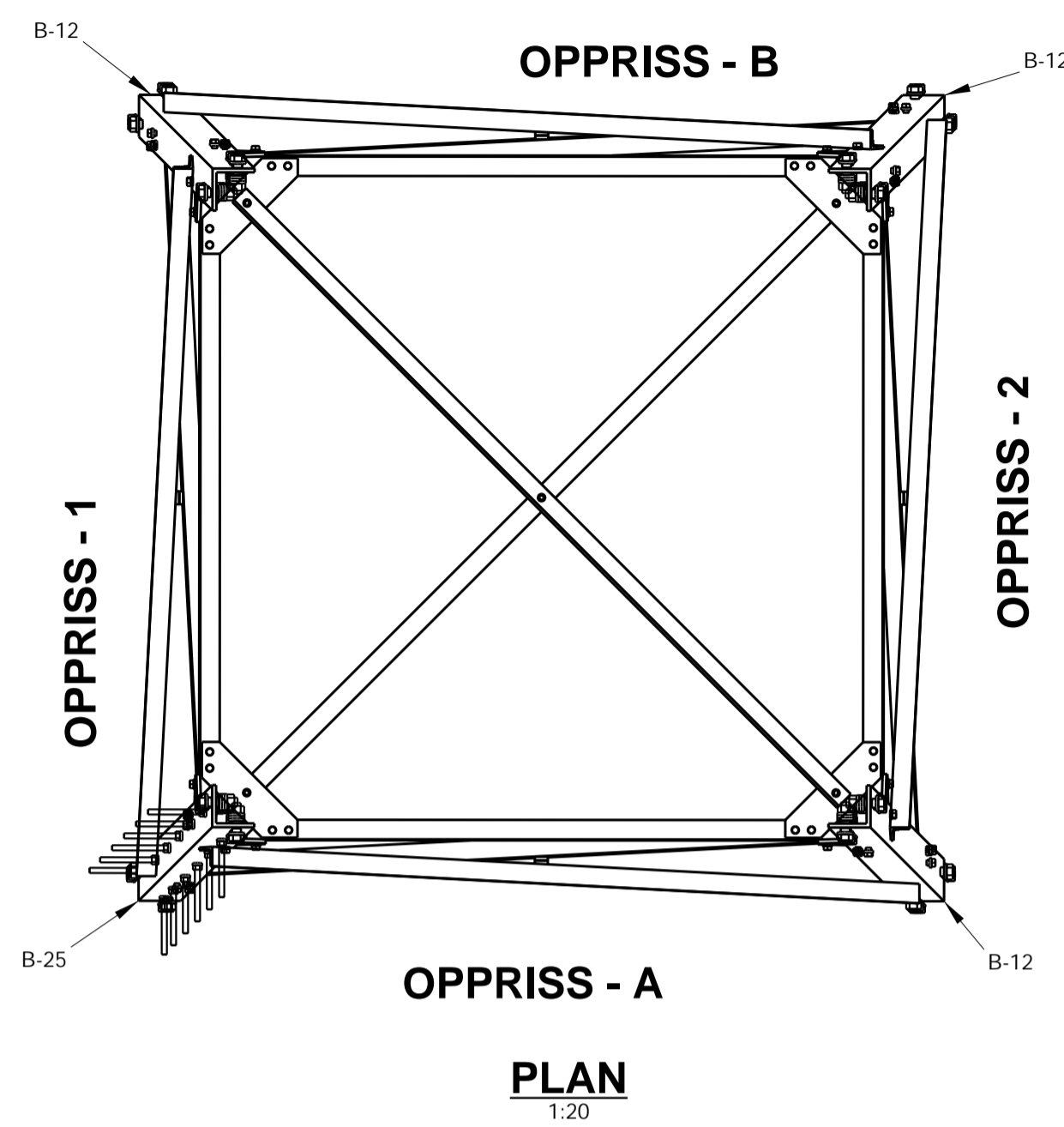
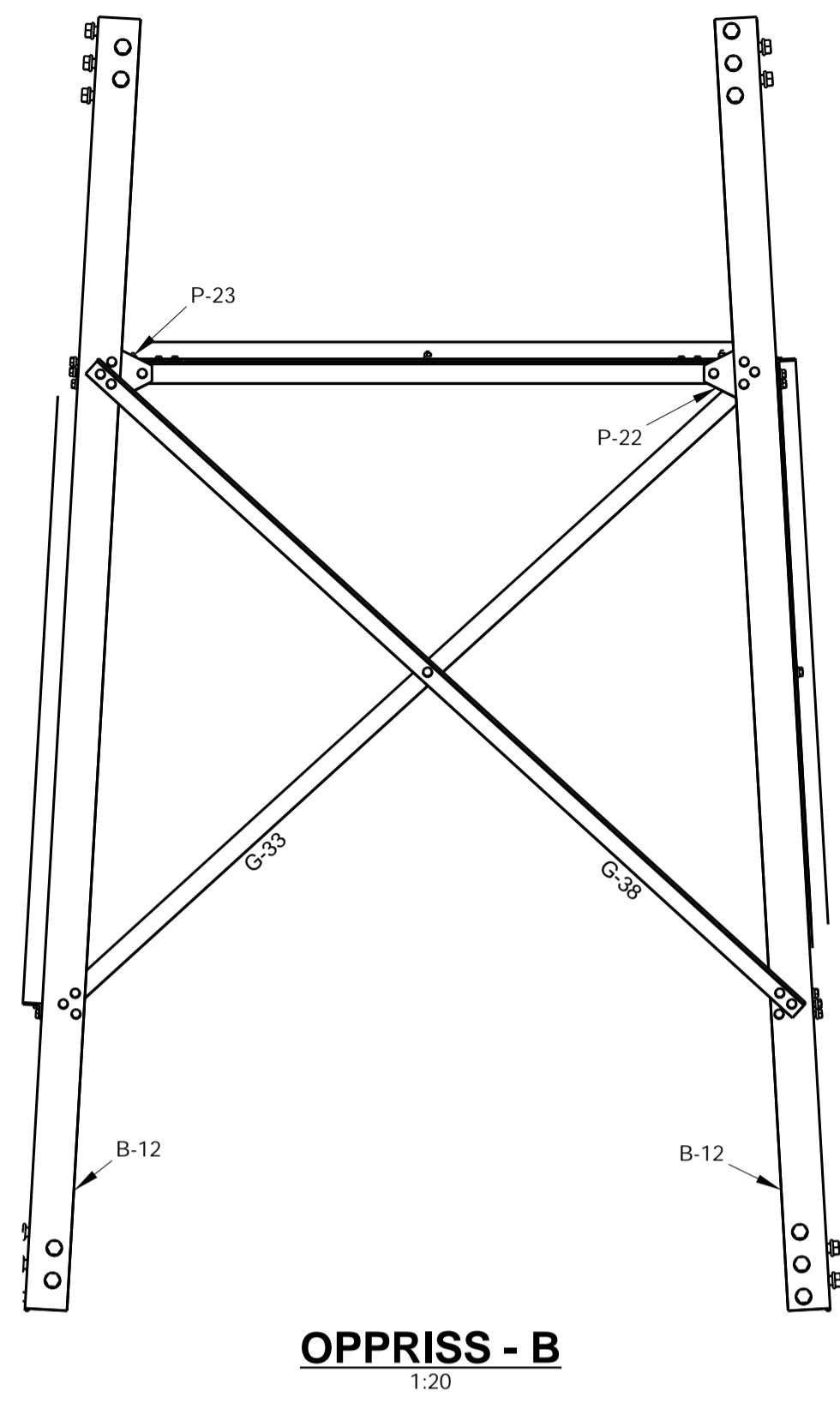
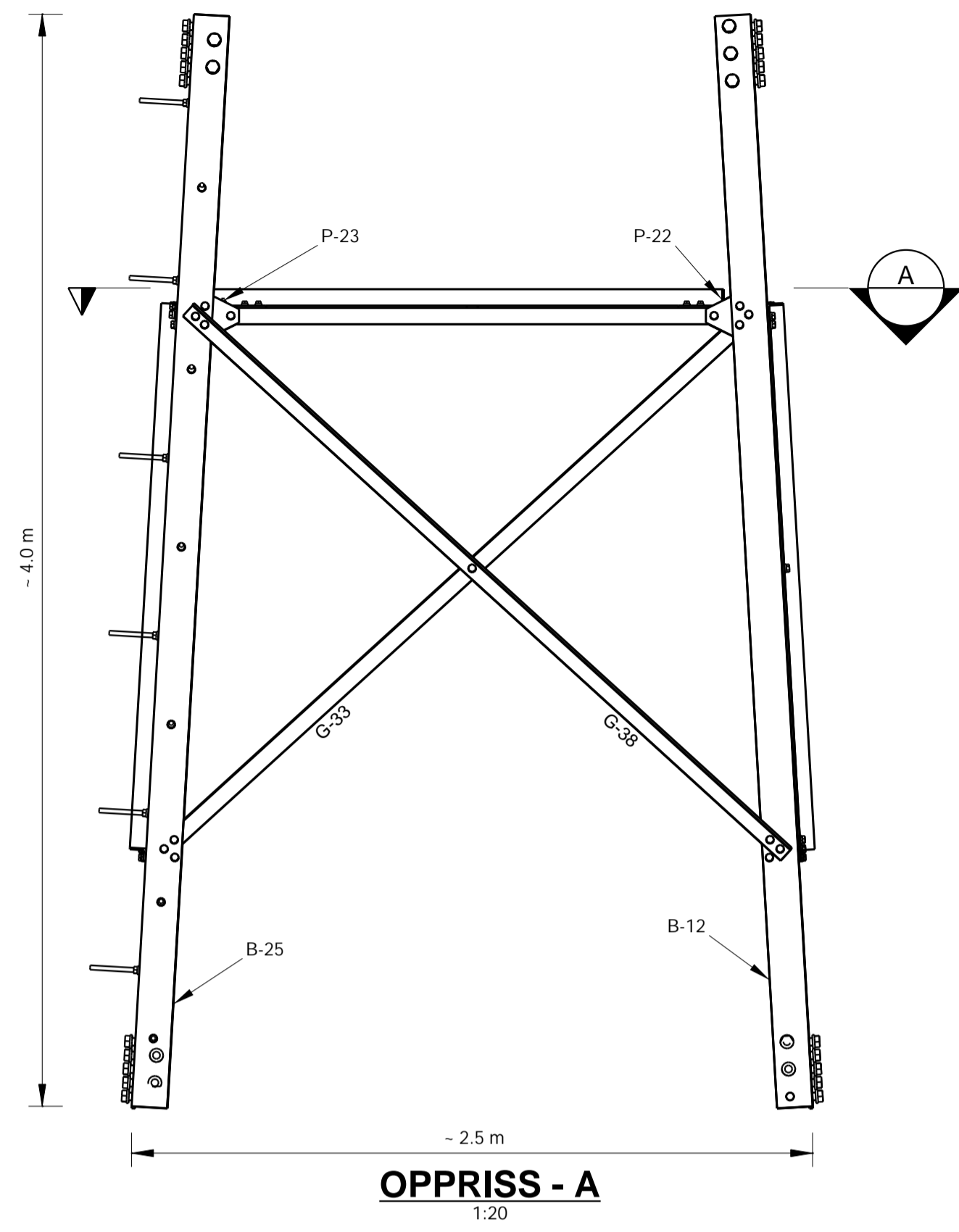
 Sign. Date
 P.V. MANNVIT'S (Navn og personnr.)

Prosjektnavn:
**132 KV LUFTSPENN
 TOSENFJORDEN**

 Tegningstype:
MONTASJETEGNING

 Prosjektnr.: 5.921.241
 Målestokk:
 Format: A1
 Tegningnr.: M-2
 Rev.: 02

21. februar 2011 11:56:40
 PRENTABD:
 TOLVUSBRÅE_SIS-VNR827_Eierens_varefaktura_132 KV luftspenn_TosenfjordenRammek14-F (Mannvit_Lettre+Vektsang).dwg



TOTAL BOLT LISTE FOR MONTASJE				M-3
BOLTETYPE	KVALITET	ANTALL	KOMMENTAR	
M12x50	8.8	20		
M12x55	8.8	1		
M16x55	8.8	16		
M16x65	8.8	4		
M16x70	8.8	16		
M16x75	8.8	8		
M16x200	8.8	12	KLATREBOLTE	
TOTAL BOLTE VEKT =			7.1 kg	

MATERIALE LIST FOR MONTASJE								M-3	ANTALL:	8
MARK	PROFIL	KVALITET	ANTALL	LENGDE	AREA	VEKT				
P-5	PL8*295	S355J0	1	295	0.1	2.6				
B-12	L130*12	S355J0	3	3998	2.0	94.2				
B-25	L130*12	S355J0	1	3998	2.0	94.2				
C-9	L60*8	S355J0	1	2641	0.6	18.7				
C-10	L60*8	S355J0	1	2641	0.6	18.7				
C-12	L60*8	S355J0	4	1824	0.4	12.9				
G-33	L60*8	S355J0	4	2953	0.7	20.9				
G-38	L60*8	S355J0	4	2953	0.7	20.9				
P-5	PL8*295	S355J0	3	295	0.1	2.6				
P-8	PL8*40	S355J0	1	40	0.0	0.1				
P-20	PL12*40	S355J0	16	40	0.0	0.2				
P-22	PL12*196	S355J0	4	156	0.1	2.3				
P-23	PL12*196	S355J0	4	156	0.1	2.3				
SUM:			17.5		17.5	664.4				

NOTATER:
 HVIS IKKE ANNET FREMGÅR ER ALLE KILSVESER MED a = 4 mm

VERSJON					
Rev.	Dato	Beskrivning	Prosjektør	Kontroll	Ansvarlig
01	17.08.2015	PROSJEKTTEGNING	pE	FH	DSH
02	09.10.2015	ENDRET ANTALL	pE	FG	DSH

Oppdragsgiver
HELGELAND KRAFT

Designert
MANNVIT

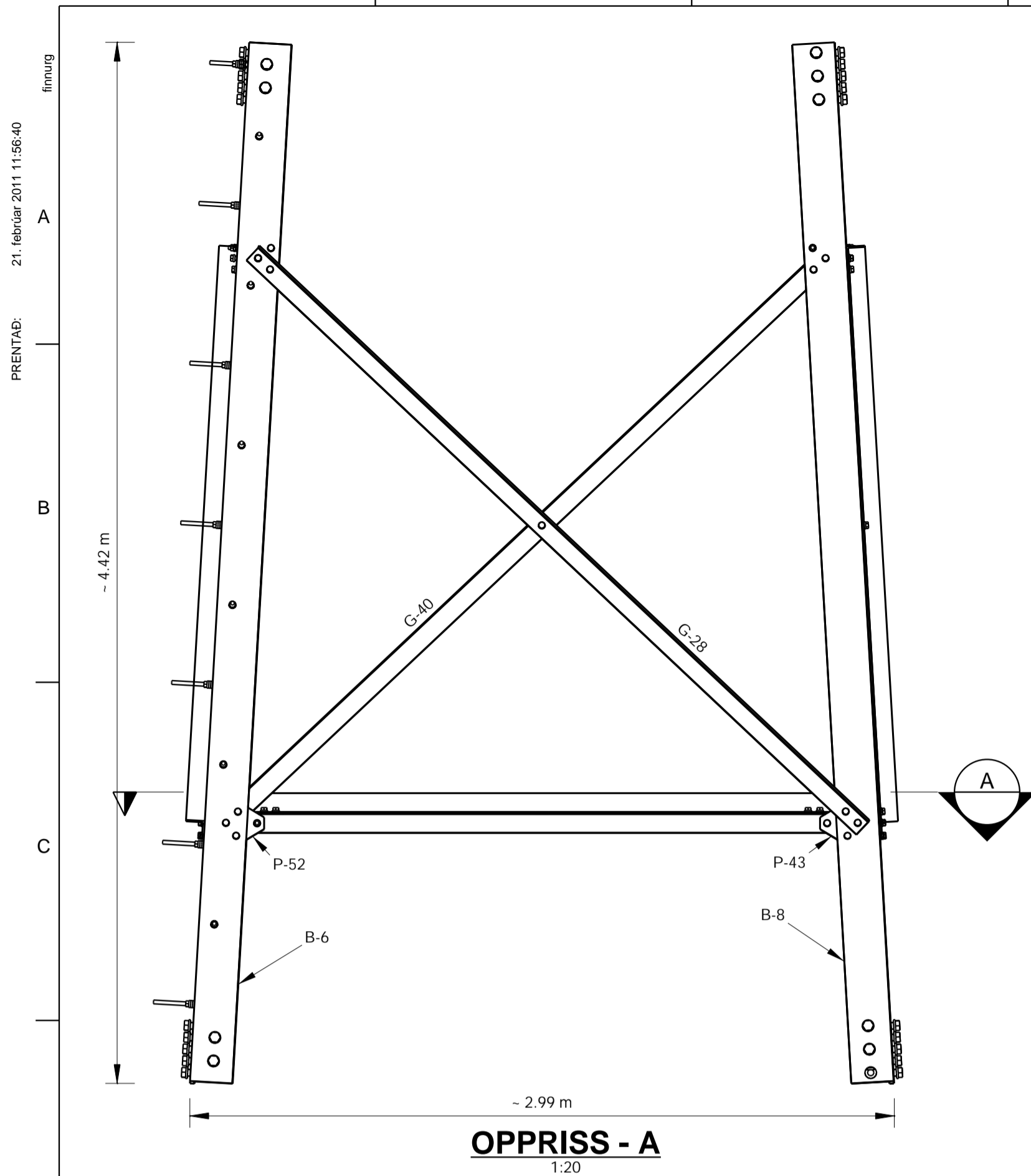
Sign. Date: P.V. MANNVITS (Navn og persønnr.)

Prosjektnavn:
132 KV LUFTSPENN TOSENFJORDEN

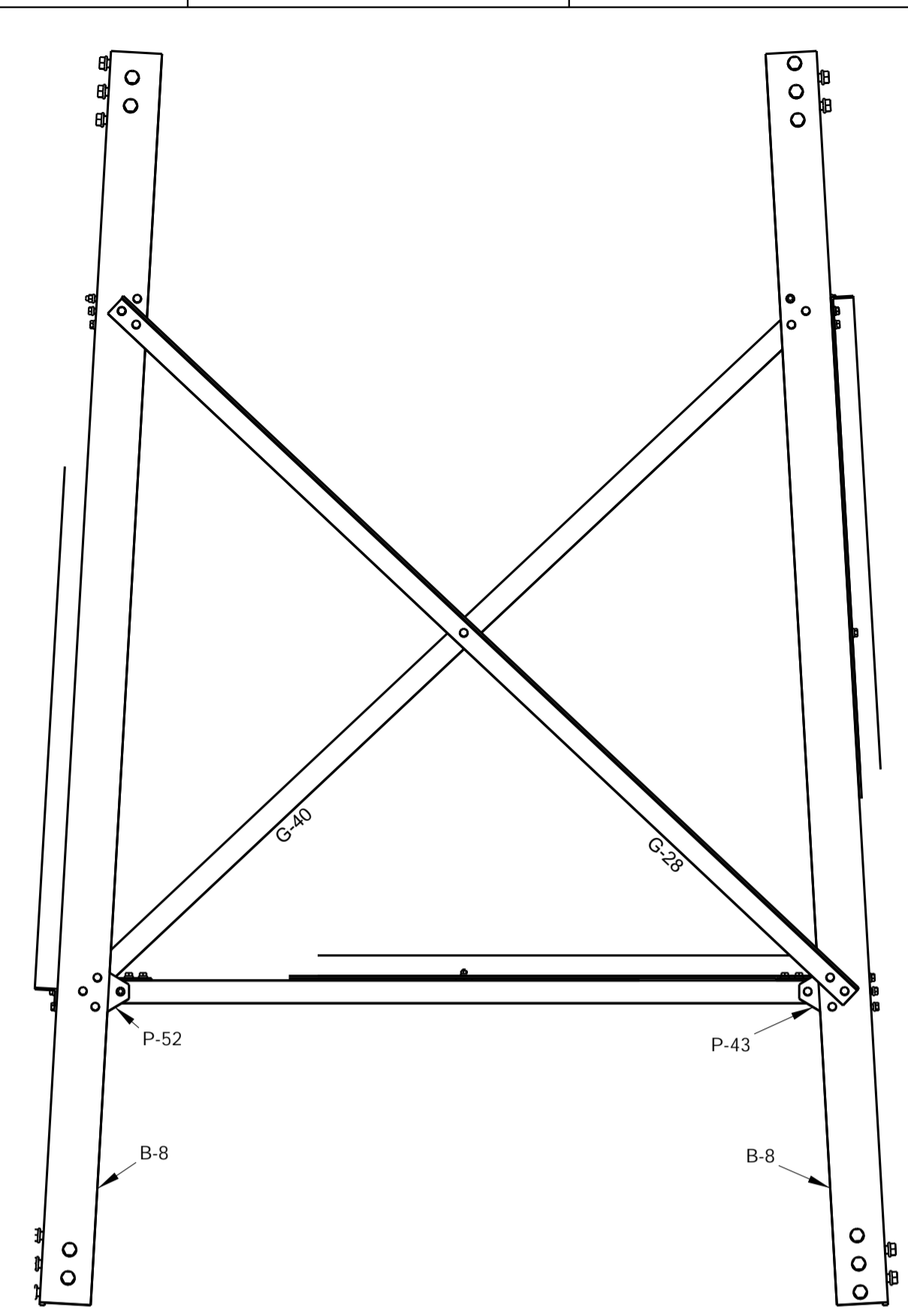
Tegningstype:
MONTASJETEGNING

Prosjektnr.: 5.921.241
 Målestokk: Form: A1

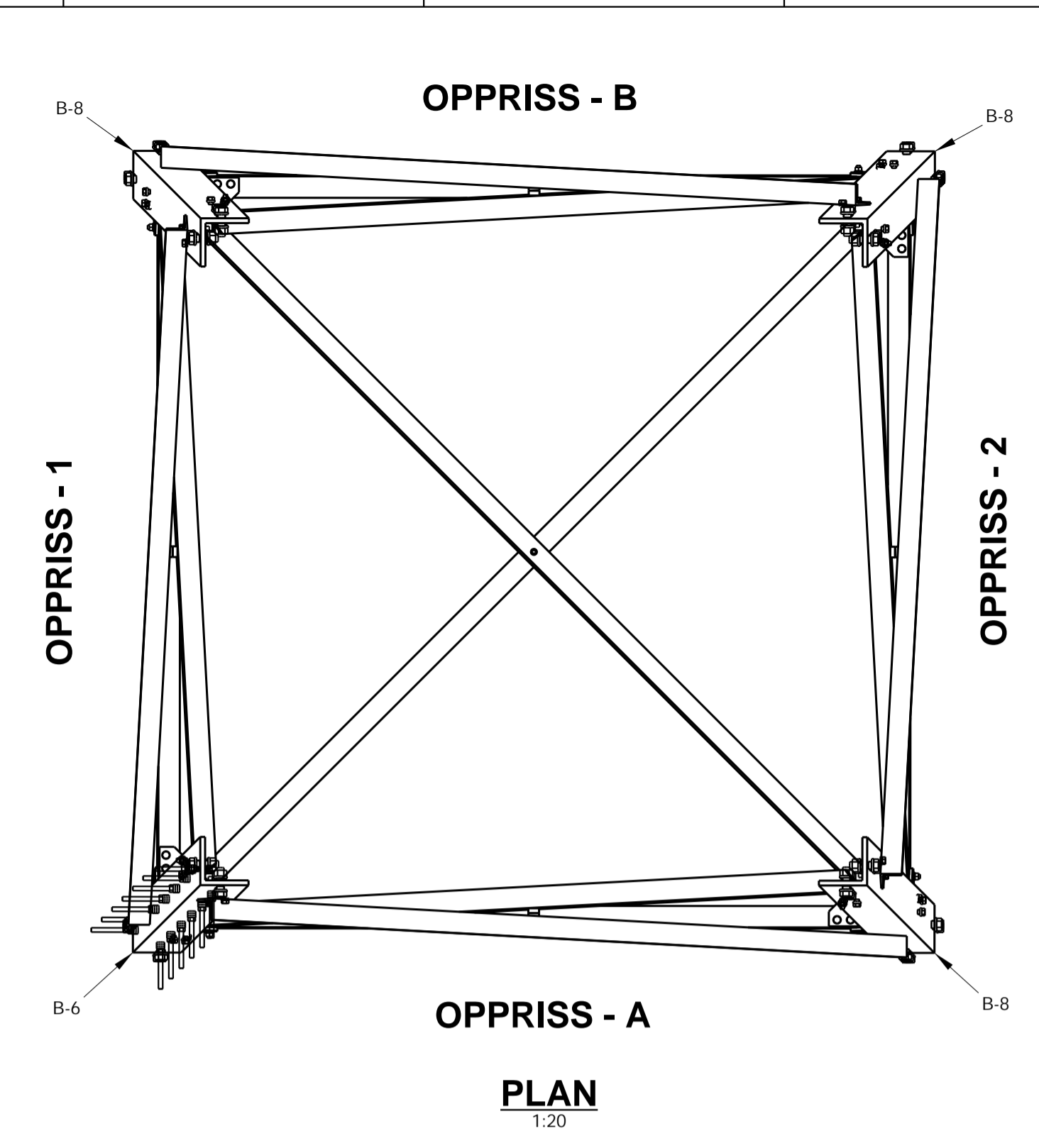
Tegningnr.: M-3
 Rev.: 02



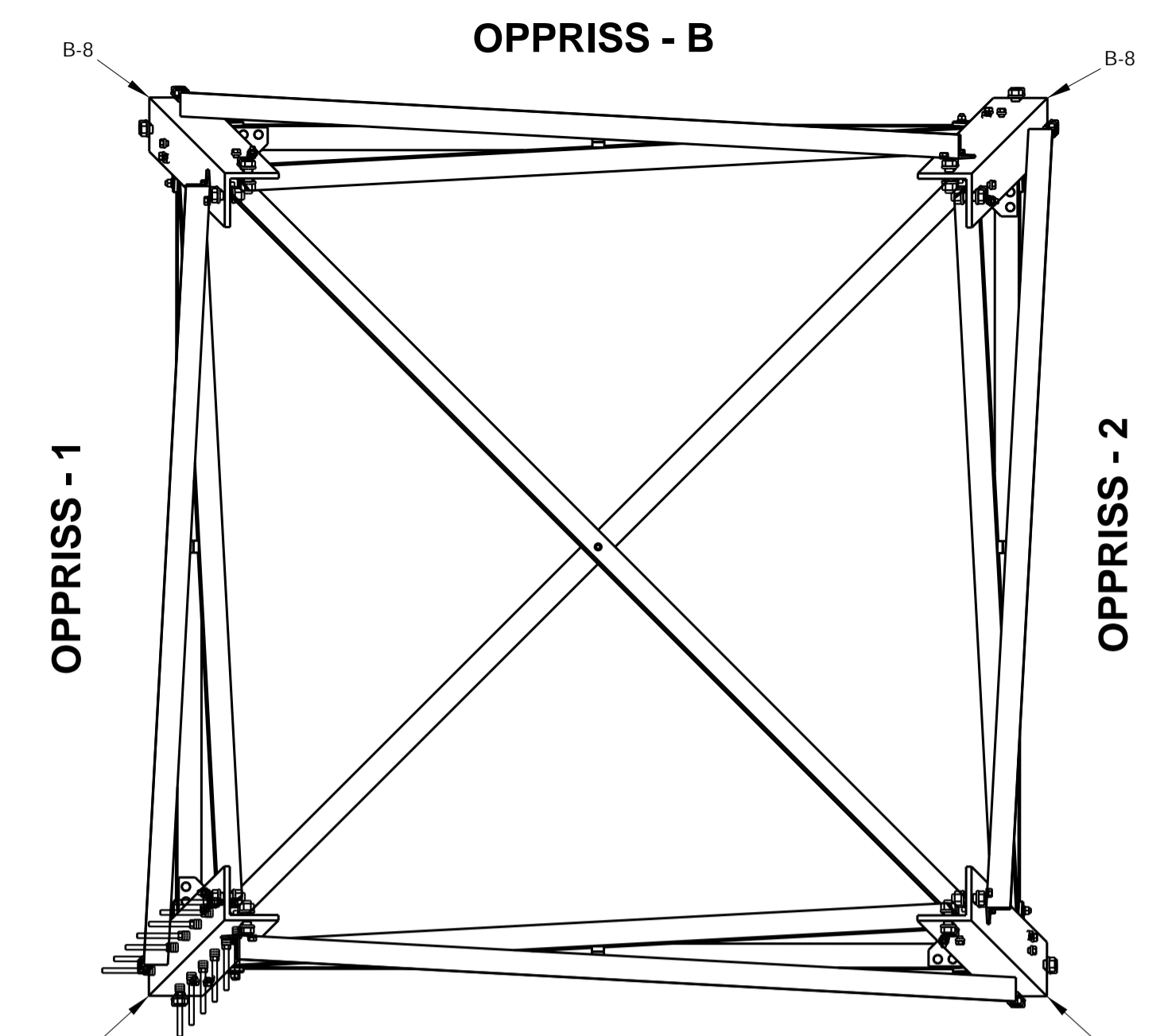
OPPRISS - A
1:20



OPPRISS - B
1:20

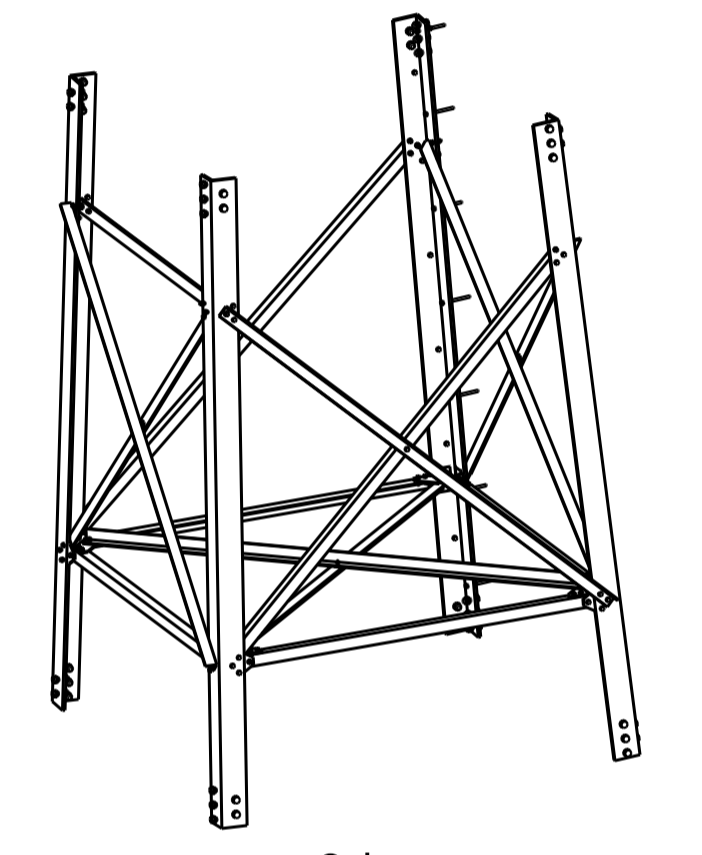


OPPRISS - A
PLAN
1:20

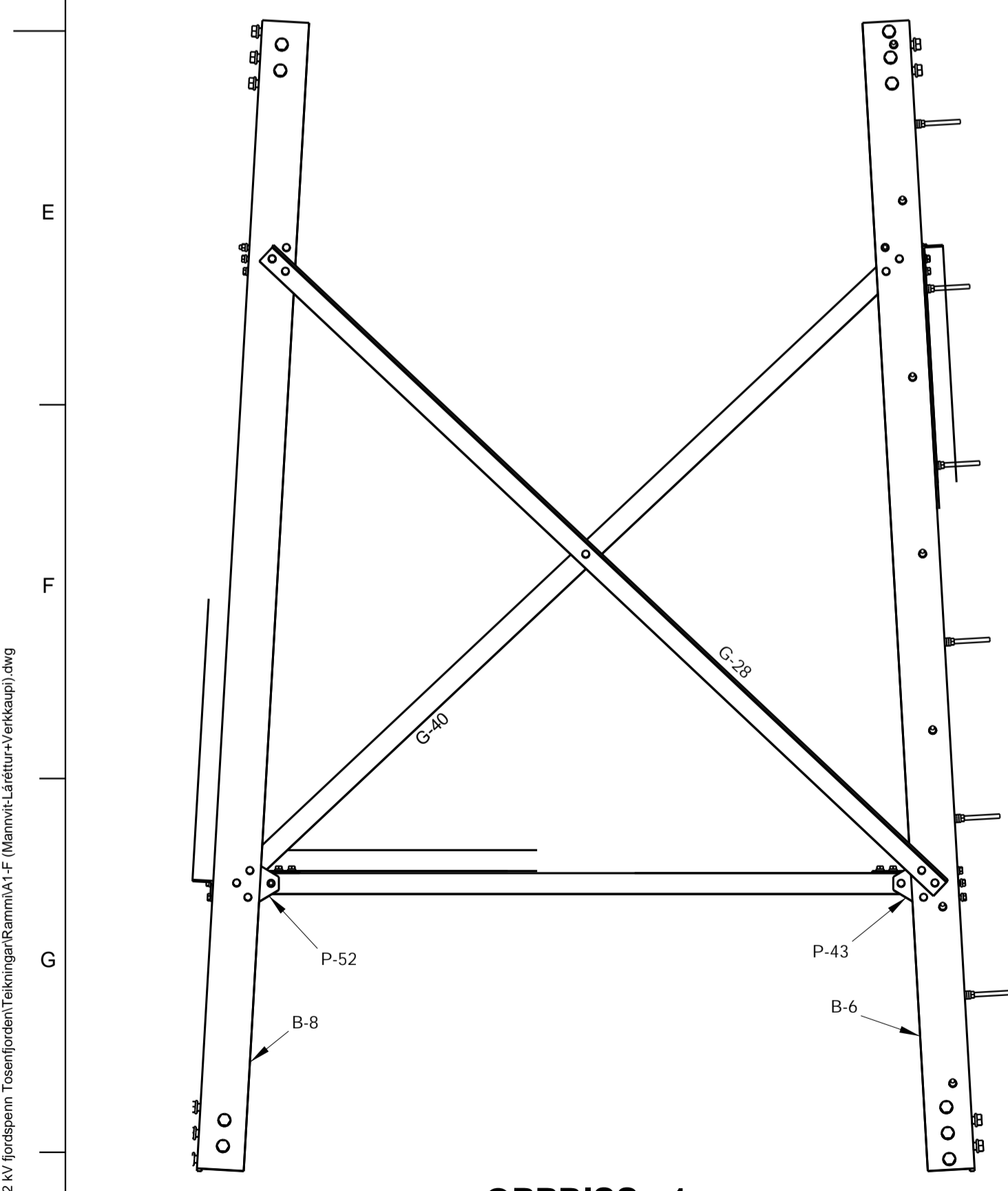


OPPRISS - 1

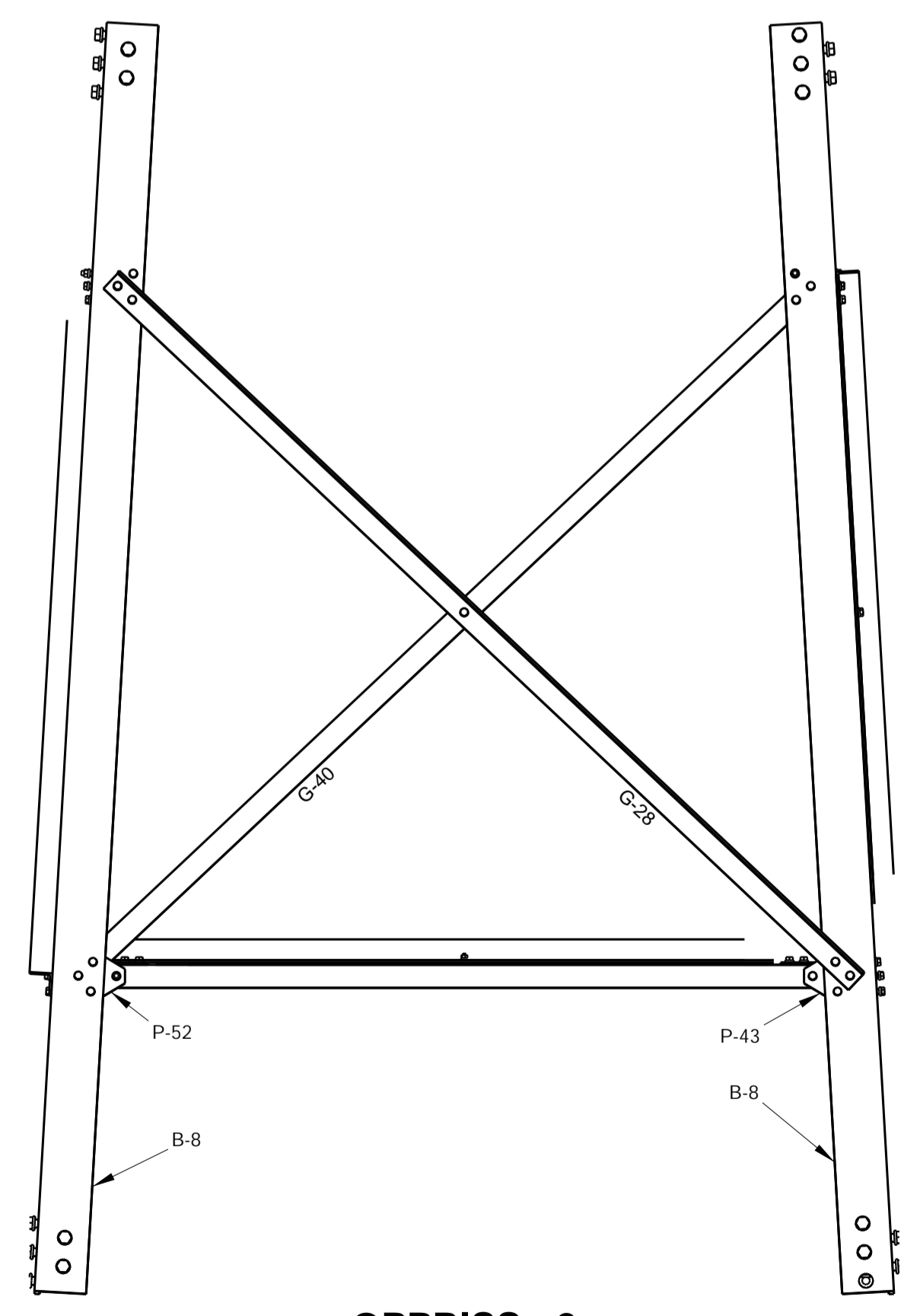
OPPRISS - 2



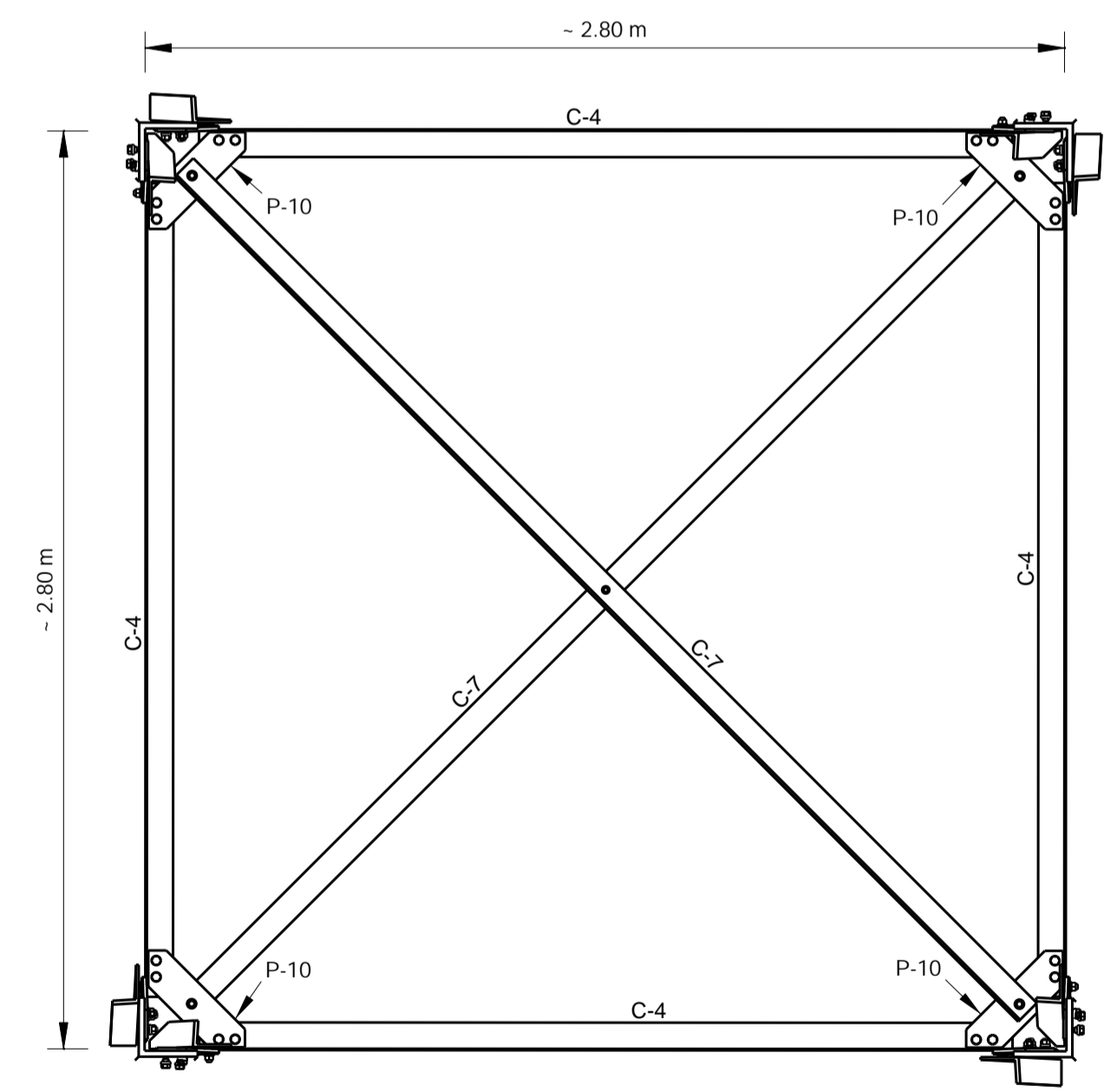
3d



OPPRISS - 1
1:20



OPPRISS - 2
1:20



A SNITT
1:20

TOTAL BOLT LISTE FOR MONTASJE				M-4
BOLTETYPE	KVALITET	ANTALL	KOMMENTAR	
M12x55	8.8	1		
M16x50	8.8	4		
M16x55	8.8	24		
M16x65	8.8	4		
M16x70	8.8	4		
M16x75	8.8	20		
M16x80	8.8	16		
M16x100	8.8	4		
M16x200	8.8	12	KLATREBOLTE	
TOTAL BOLTE VEKT =				10.7 kg

MATERIALE LIST FOR MONTASJE						M-4	ANTALL:	2
MARK	PROFIL	KVALITET	ANTALL	LENGDE	AREA	VEKT		
P-10	PL8*295	S355J0	1	295	0.1	2.6		
B-6	L180*18	S355J0	1	4422	3.1	214.9		
B-8	L180*18	S355J0	3	4422	3.1	214.9		
C-4	L80*8	S355J0	4	2481	0.8	24.0		
C-7	L80*8	S355J0	2	3641	1.1	35.2		
G-28	L80*8	S355J0	4	3559	1.1	34.4		
G-40	L80*8	S355J0	4	3559	1.1	34.4		
P-8	PL8*40	S355J0	1	40	0.0	0.1		
P-10	PL8*295	S355J0	3	295	0.1	2.6		
P-20	PL12*40	S355J0	12	40	0.0	0.2		
P-43	PL12*196	S355J0	4	176	0.1	2.6		
P-48	PL18*40	S355J0	4	40	0.0	0.2		
P-52	PL12*196	S355J0	4	176	0.1	2.6		
27.6						SUM:	27.6	1334.1

NOTATER:

HVIS IKKE ANNET FREMGÅR ER ALLE KILSVEISER MED a = 4 mm

VERSJON				
Rev.	Dato	Beskrivning	Prosjektør	Kontroll
01	17.08.2015	PROSJEKTTEGNING	pE	FH
02	09.10.2015	ENDRET ANTALL	pE	FG

Oppdragsgiver
HELGELAND KRAFT

Designert
MANNVIT

Sign. Dato: P.V. MANNVIT'S (Navn og persønnr.)

Prosjektname: **132 KV LUFTSPENN TOSENFJORDEN**

Tegningstype: **MONTASJETEGNING**

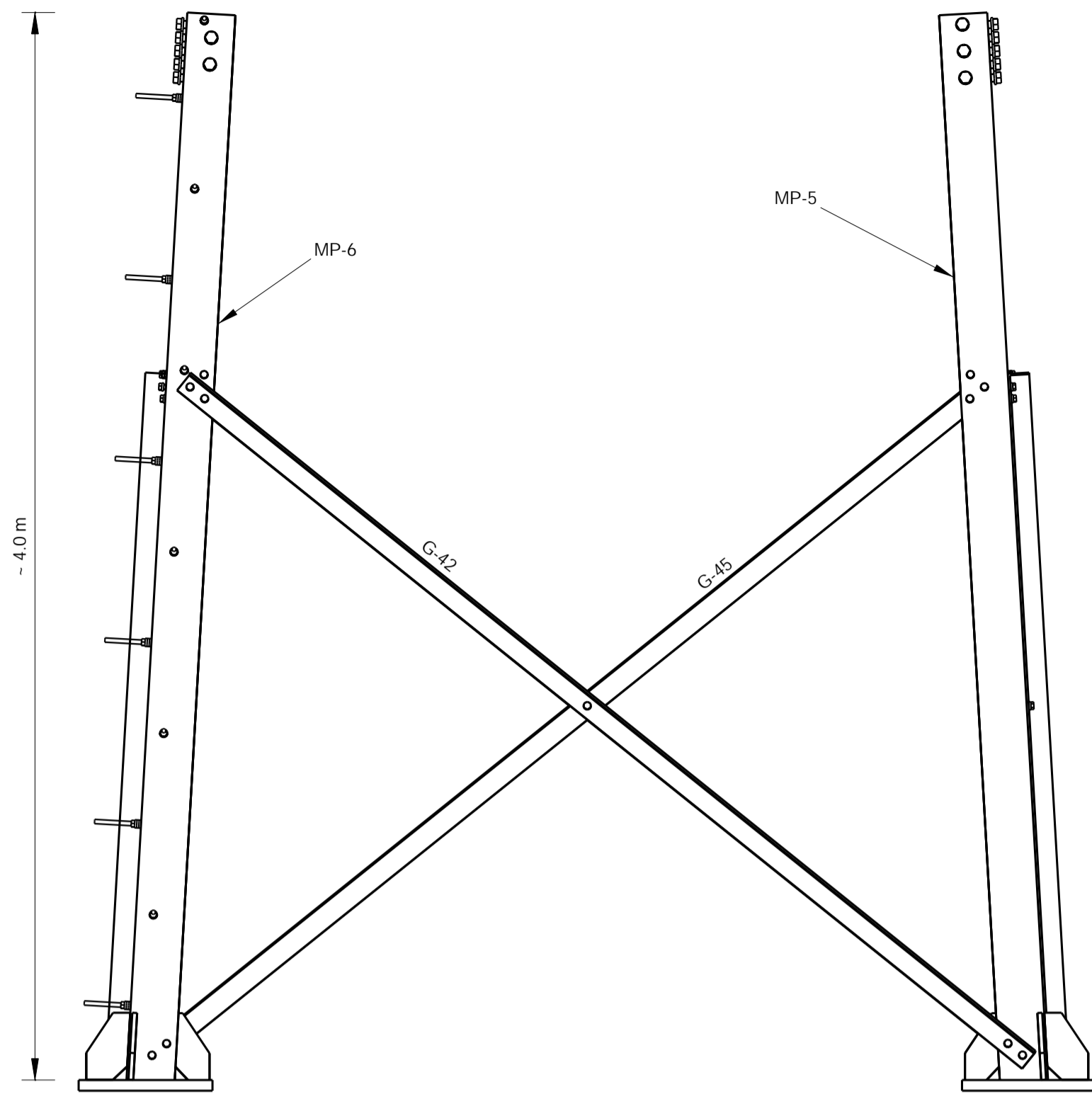
Prosjektnr.: **5.921.241** | Målestokk: | Format: **A1**

Tegningnr.: **M-4** | Rev.: **02**

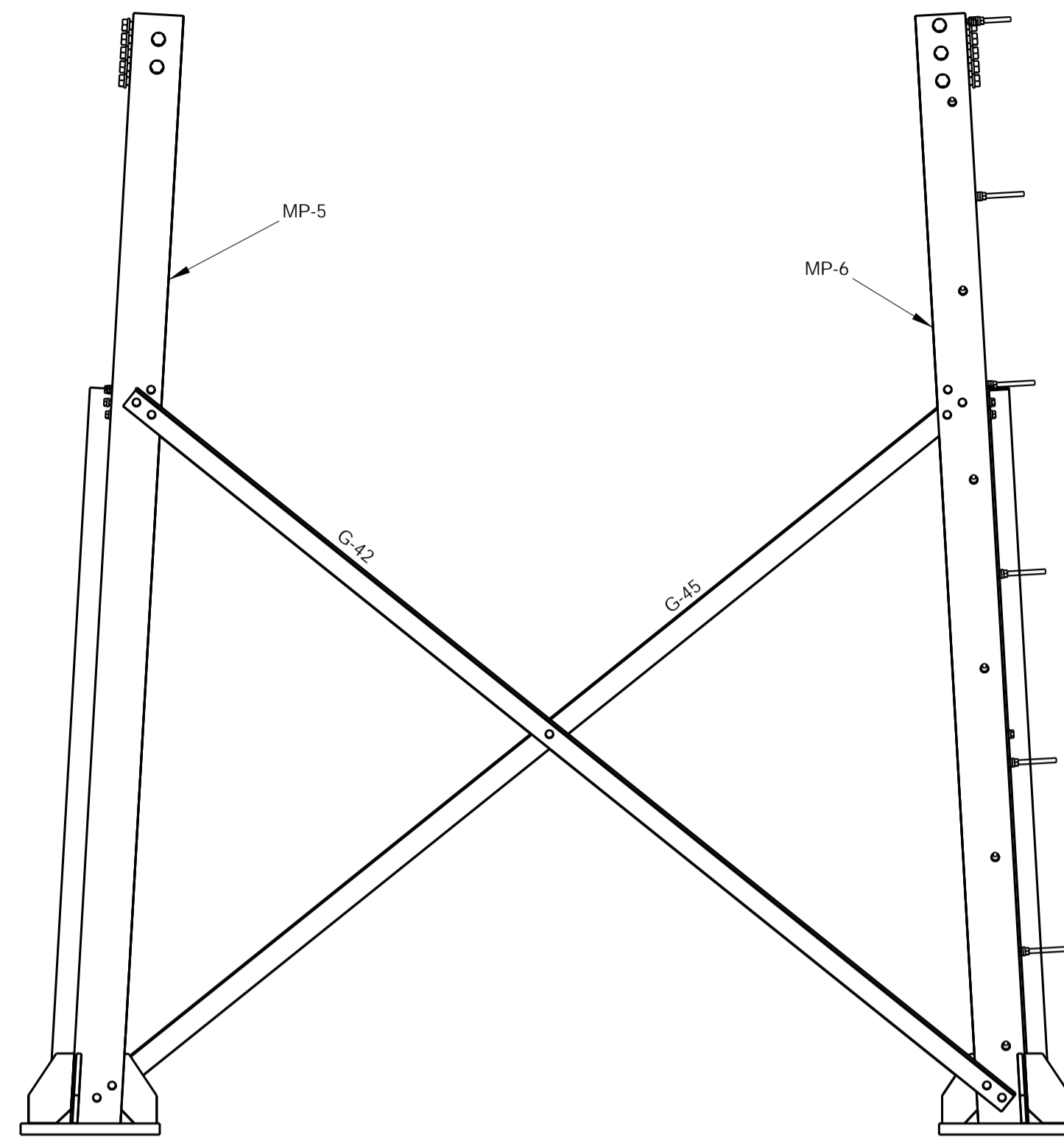
TOLVUSBRÅE_SIS-VNR827_Eierens versjon 04 132 KV luftspenn Tosenfjorden\Tegninger\Rammek1-F (Mannvit_Lettvekt+vektspenn).dwg

PRENTAD: 21. februar 2011 11:56:40

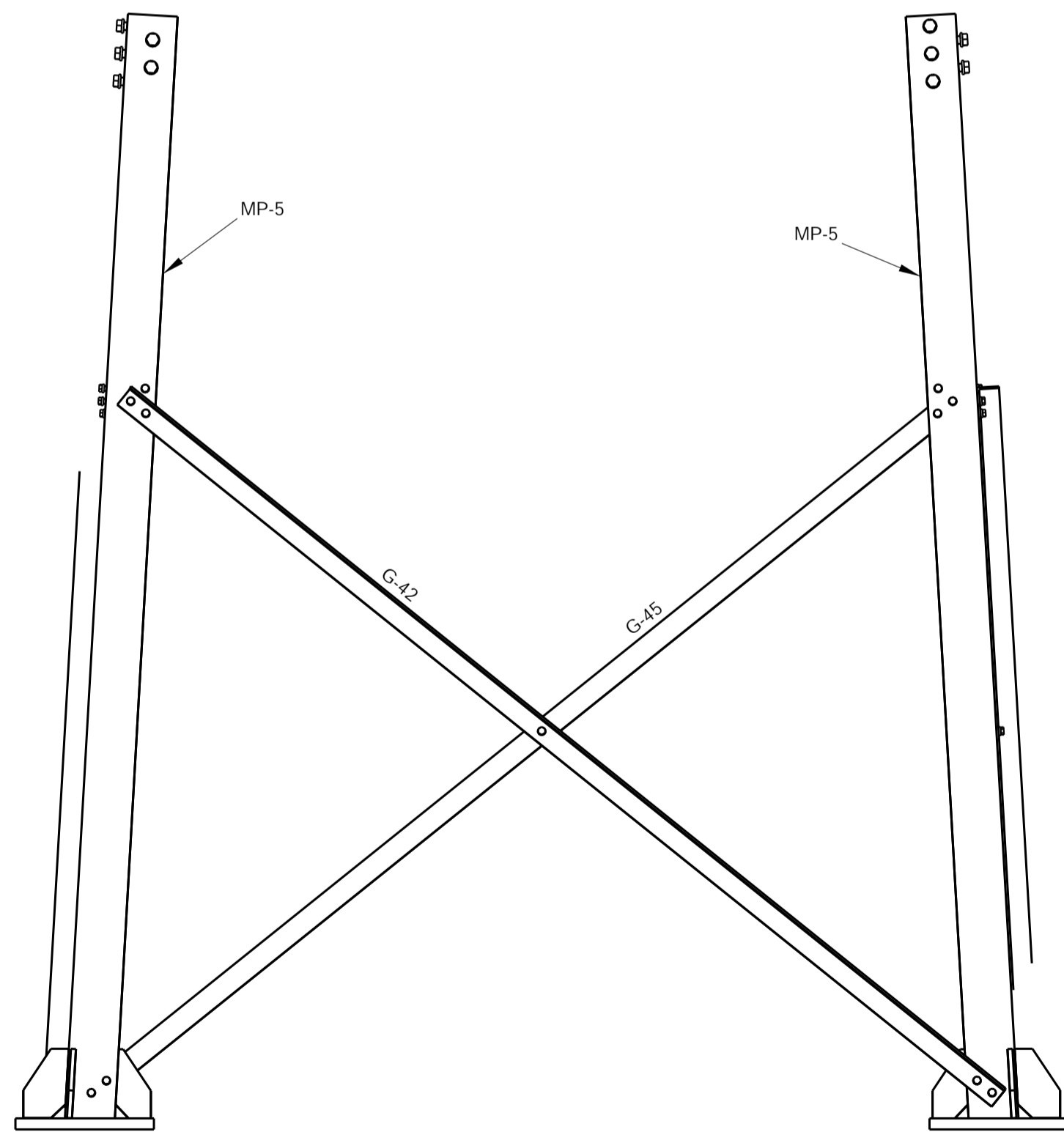
21. februar 2011 11:56:40
 PRENTABD:
 TOLVUSBRÅE_SIS-VNR927_Elhens vnerim241_132 KV luftspenn Tosenfjorden\Tekninger\RAMM\A1-F (Mannvit_Lettre+Vekstap).dwg



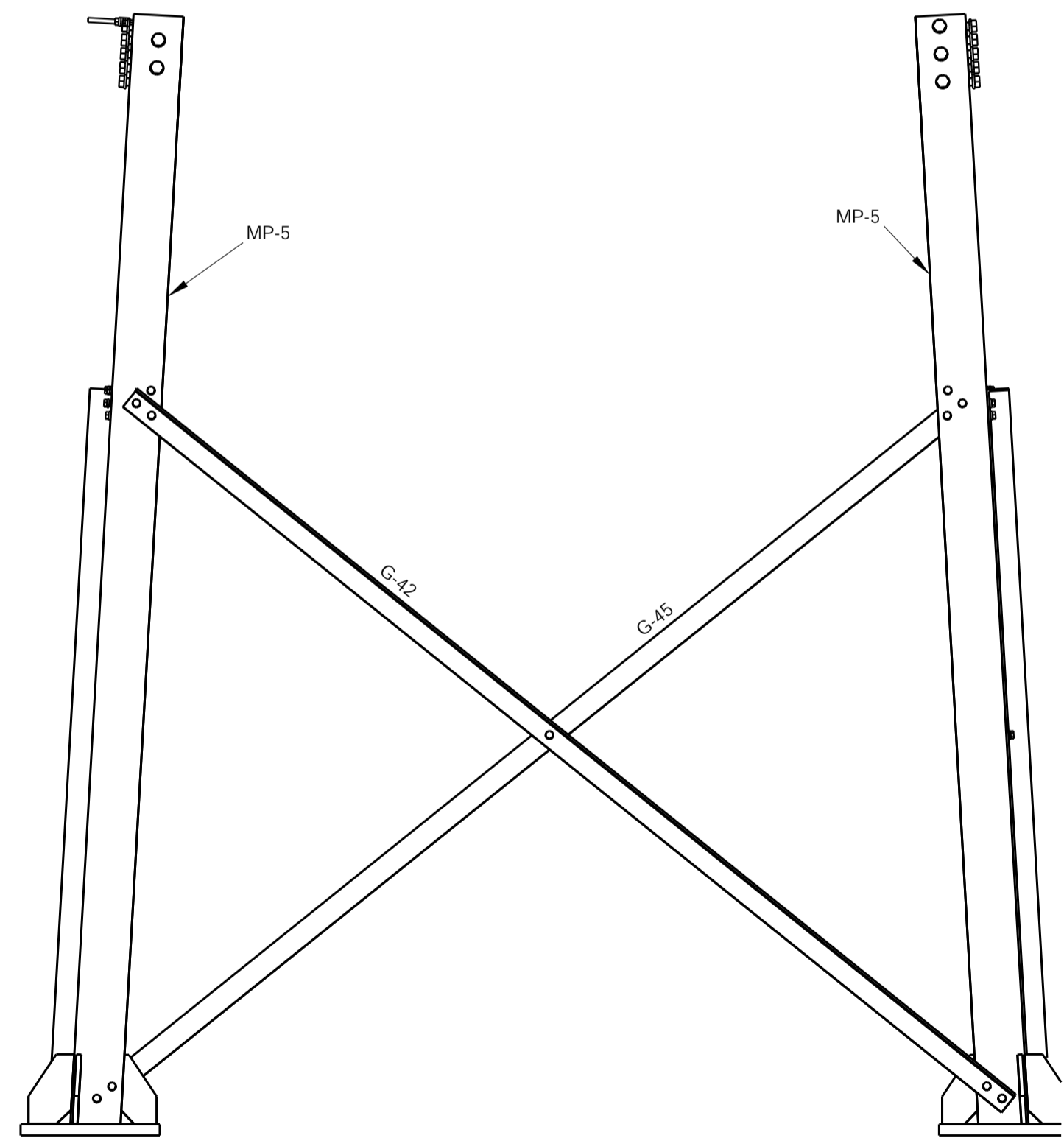
OPPRISS - A
1:20



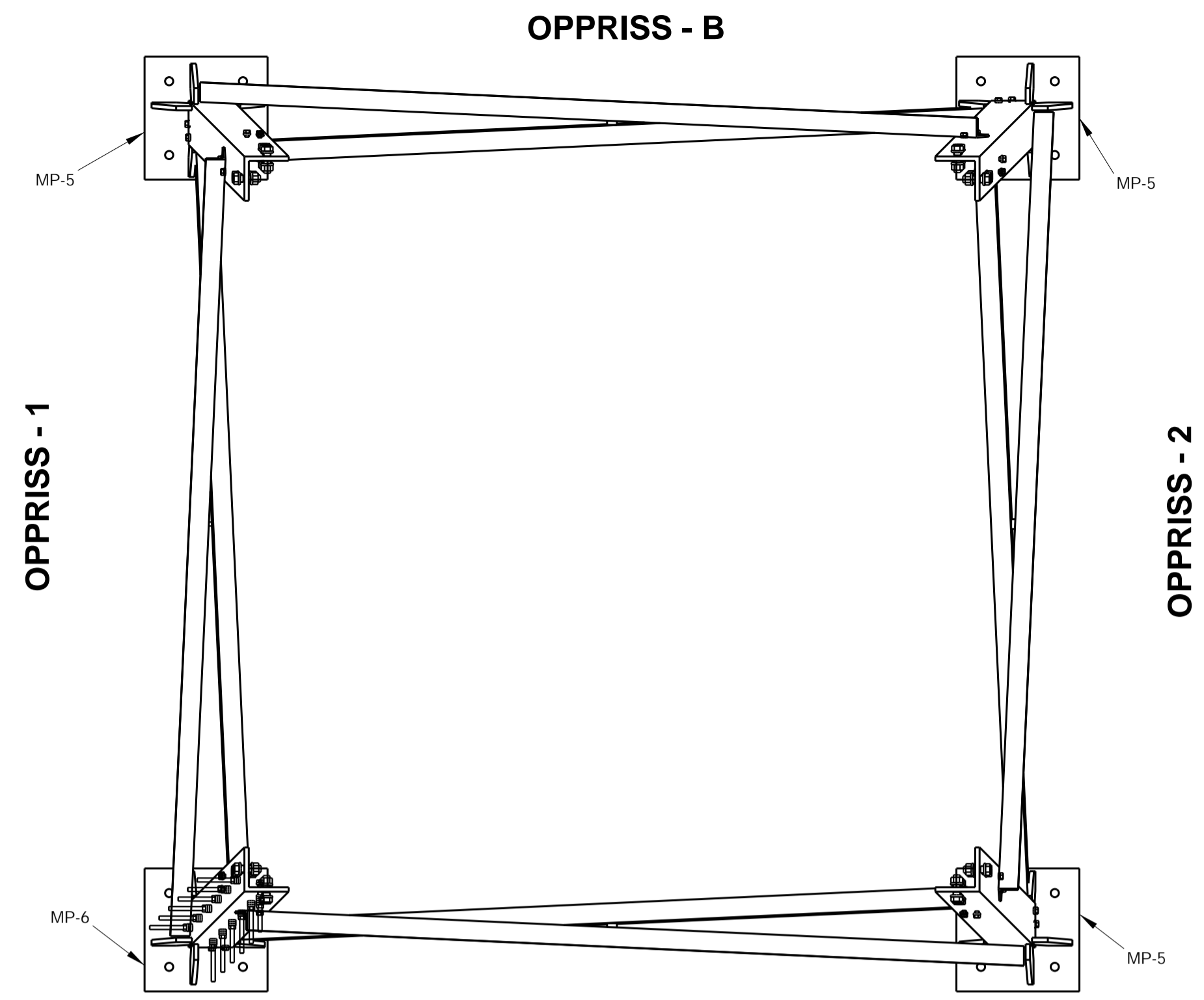
OPPRISS - 1
1:20



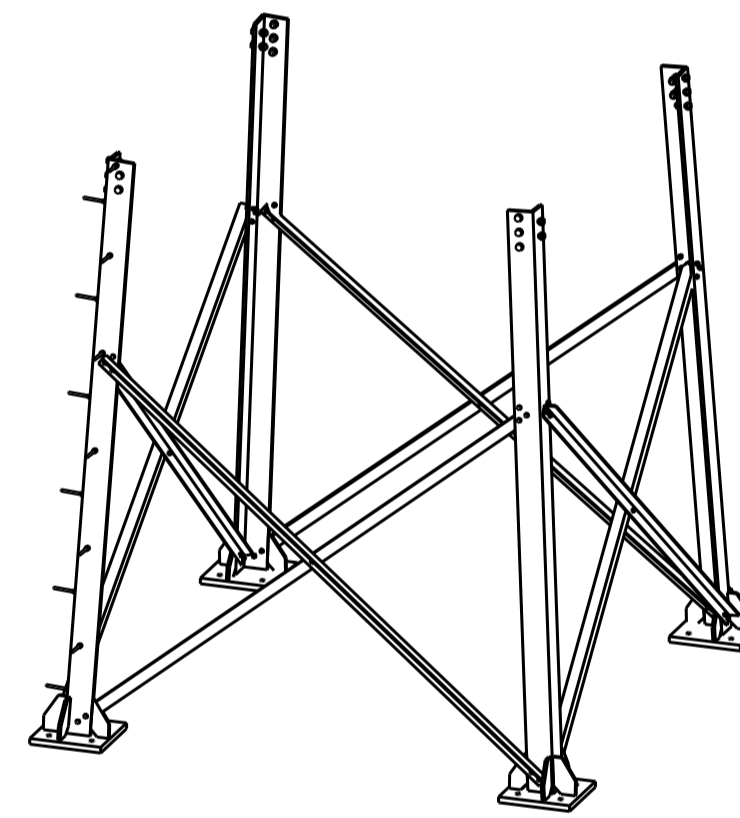
OPPRISS - B
1:20



OPPRISS - 2
1:20



**OPPRISS - A
PLAN**
1:20



3d

TOTAL BOLT LISTE FOR MONTASJE			
BOLTE TYPE	KVALITET	ANTALL	KOMMENTAR
M12x50	8.8	1	
M16x60	8.8	20	
M16x65	8.8	8	
M16x70	8.8	8	
M16x75	8.8	4	
M16x80	8.8	4	
M16x200	8.8	11	KLATREBOLTE
TOTAL BOLTE VEKT =			6.0 kg

MATERIALE LIST FOR MONTASJE						
MARK	PROFIL	KVALITET	ANTALL	LENGDE	AREA	VEKT
P-53	PL18*40	S355J0	1	40	0.0	0.2
G-42	L80*8	S355J0	4	4050	1.3	39.1
G-45	L80*8	S355J0	4	4050	1.3	39.1
P-48	PL18*40	S355J0	3	40	0.0	0.2
MP-5	MONTASJE		3		3.7	286.7
MP-6	MONTASJE		1		3.7	286.7
			24.8	SUM:	24.8	1460.5

NOTATER:
HVIS IKKE ANNET FREMGÅR ER ALLE KILSVEISER MED s = 4 mm

VERSJON					
Rev.	Dato	Beskrivning	Prosjektør	Kontroll	Ansvarlig
01	17.08.2015	PROSJEKTTEGNING	pE	FH	DSH
02	09.10.2015	ENDRET ANTALL	pE	FG	DSH

Oppdragsgiver: **HELGELAND KRAFT**

Prosjektname: **132 KV LUFTSPENN TOSENFJORDEN**

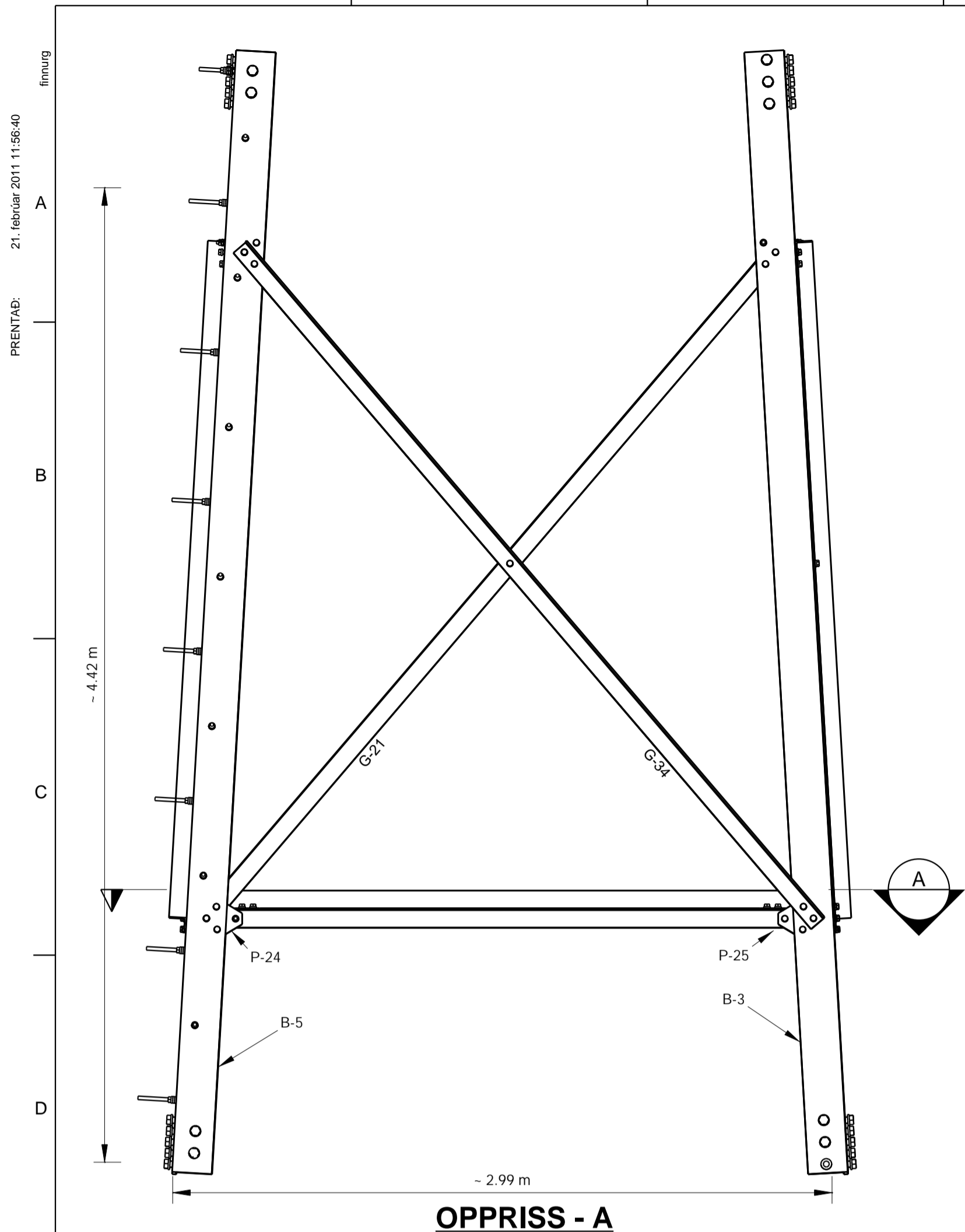
Designert: **MANNVIT**

Tegningstype: **MONTASJETEGNING**

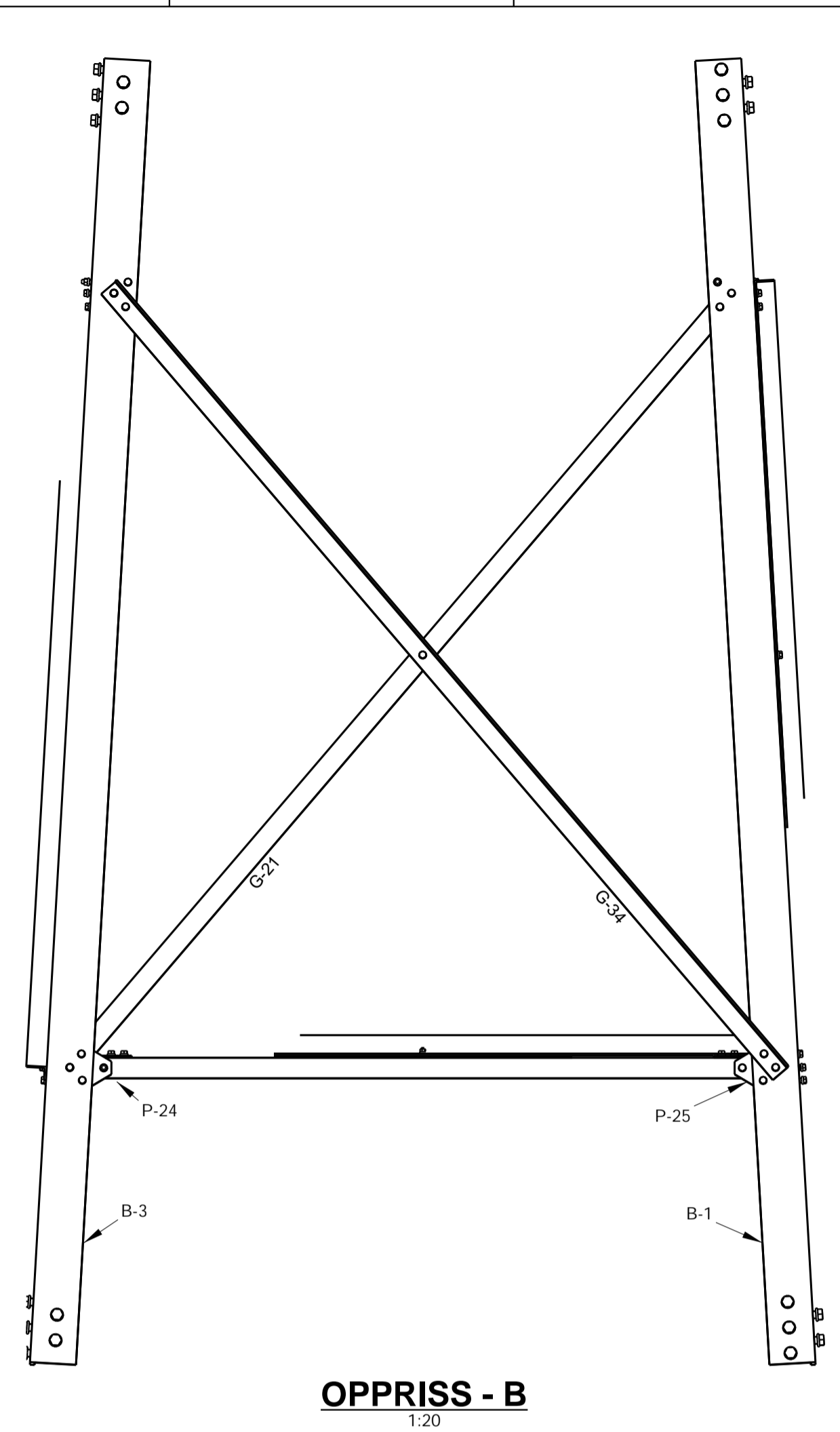
Prosjektnr.: 5.921.241 | Målestokk: | Format: **A1**

Sign. Date: | P.V. MANNVIT'S (Navn og personnr.)

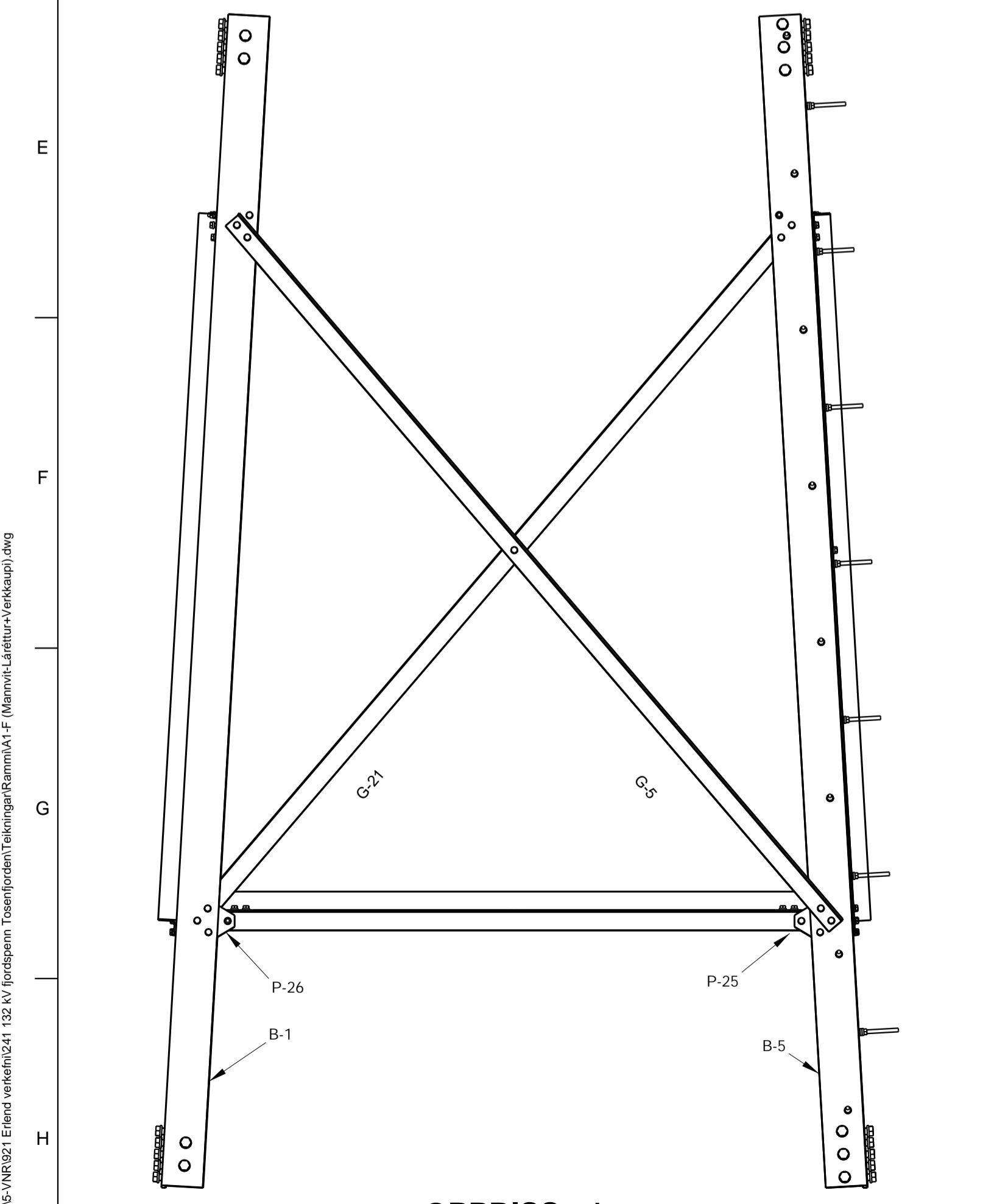
Tegningnr.: **M-5** | Rev.: **02**



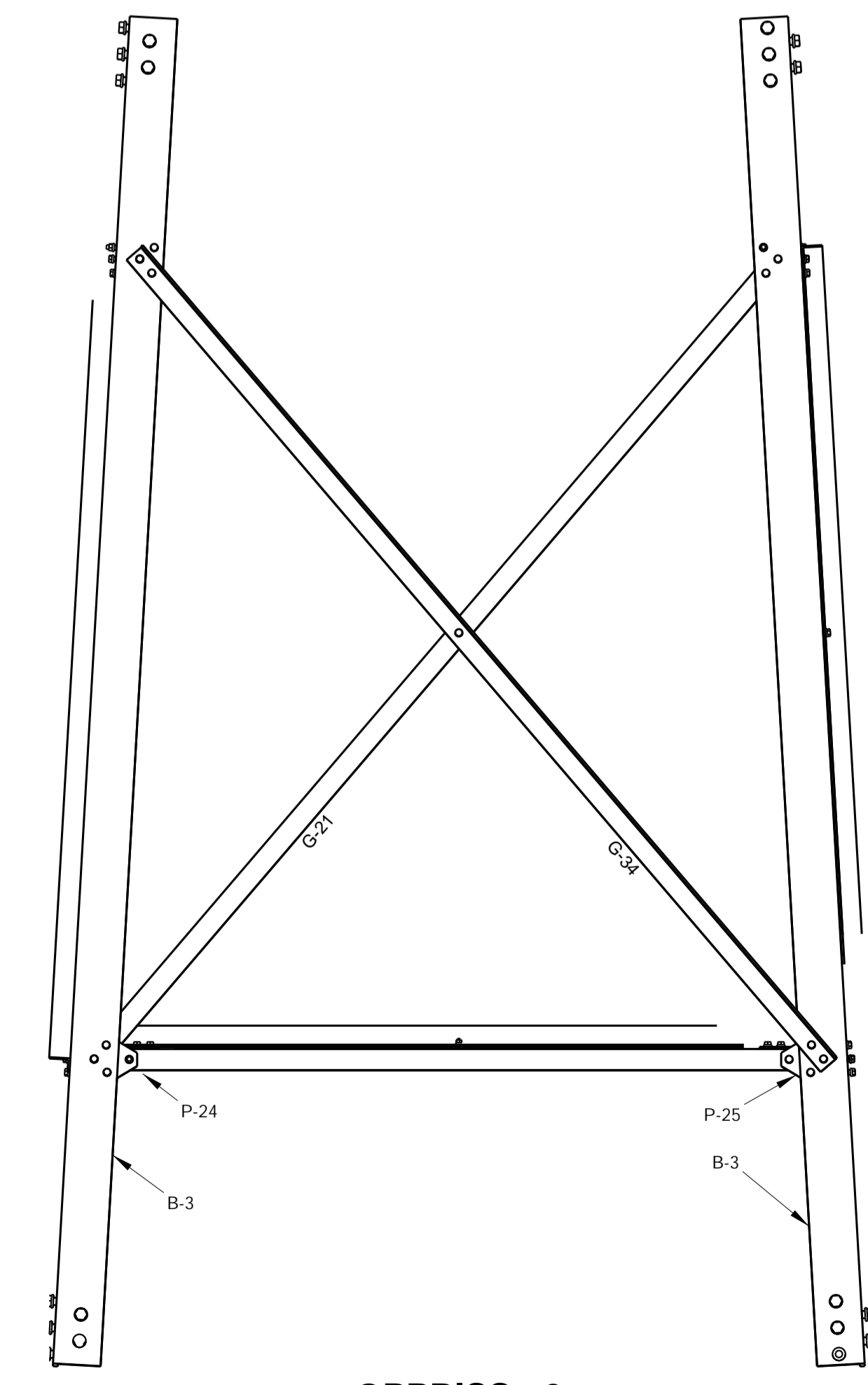
OPPRISS - A
1:20



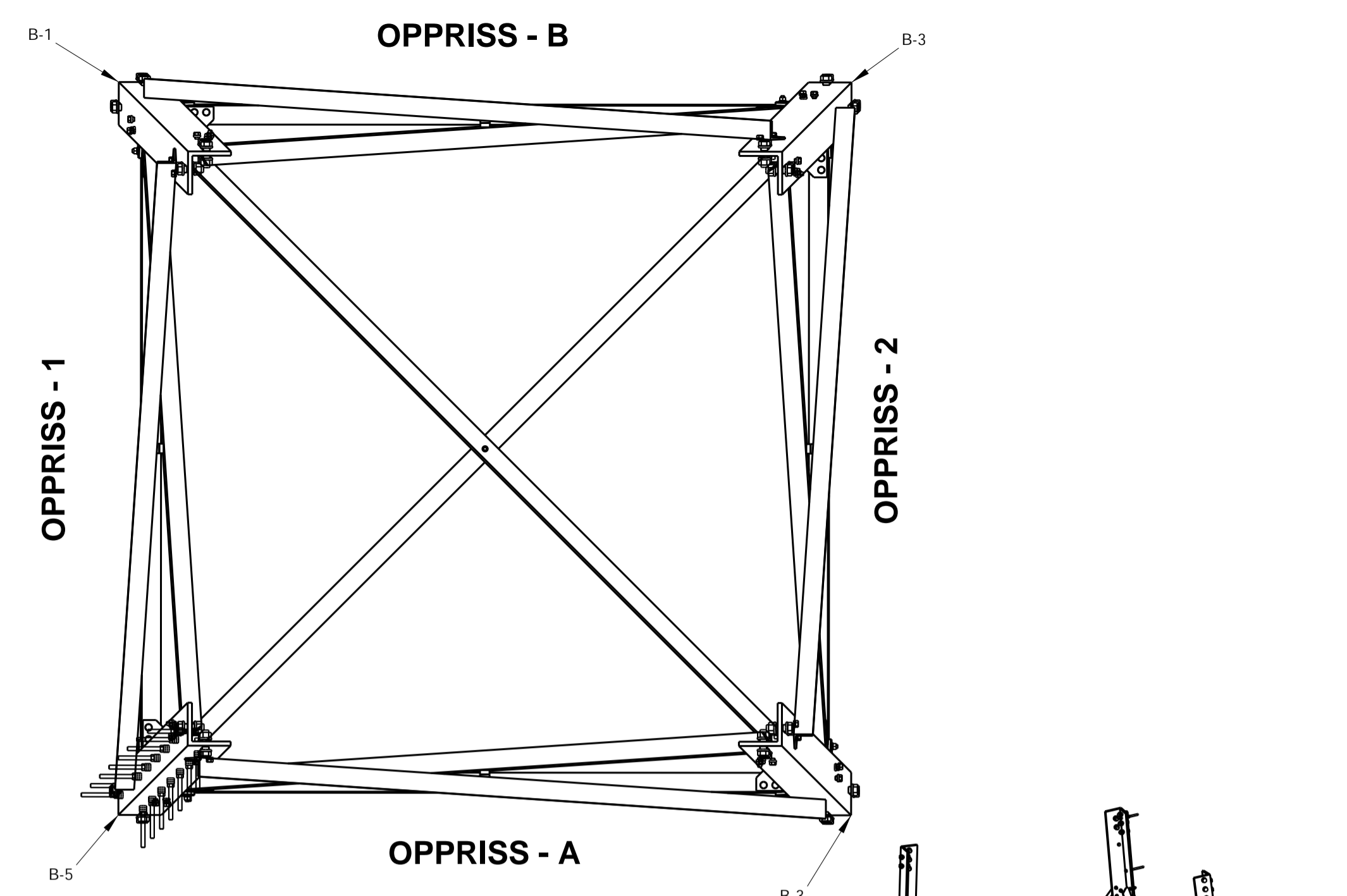
OPPRISS - B
1:20



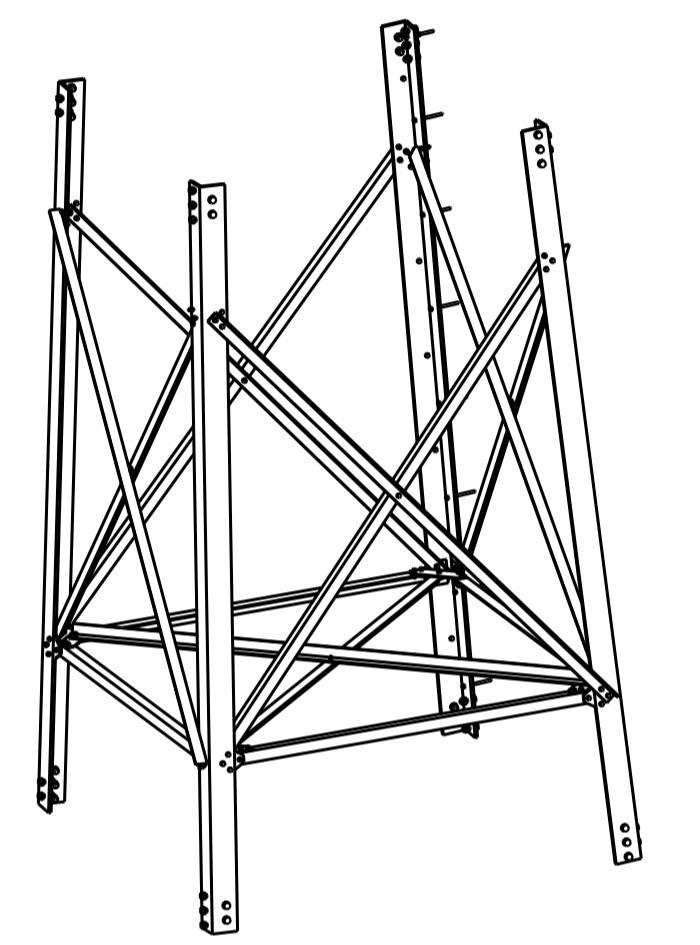
OPPRISS - 1
1:20



OPPRISS - 2
1:20

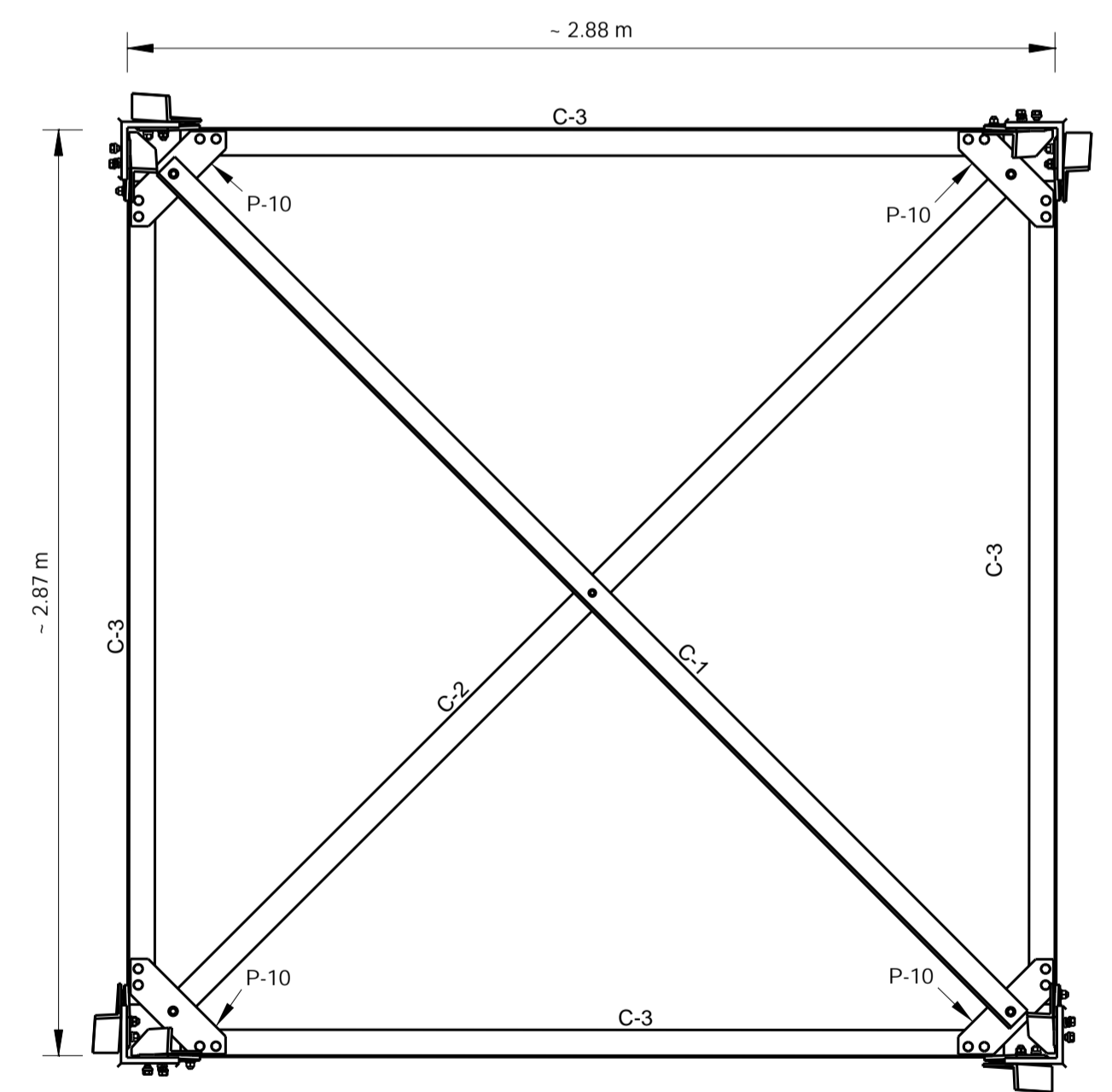


PLAN
1:20



3d

TOTAL BOLT LISTE FOR MONTASJE			
BOLTE TYPE	KVALITET	ANTALL	KOMMENTAR
M12x55	8.8	1	
M16x50	8.8	4	
M16x55	8.8	24	
M16x65	8.8	4	
M16x70	8.8	4	
M16x75	8.8	20	
M16x80	8.8	16	
M16x100	8.8	3	
M16x200	8.8	14	KLATREBOLTE
TOTAL BOLTE VEKT =			10.5 kg



A SNITT
1:20

NOTATER: HVIS IKKE ANNET FREMGÅR ER ALLE KILSVISER MED $\alpha = 4$ mm

MATERIALE LIST FOR MONTASJE						
MARK	PROFIL	KVALITET	ANTALL	LENGDE	AREA	VEKT
P-10	PL8*295	S355J0	1	295	0.1	2.6
B-1	L180*18	S355J0	1	5102	3.6	247.9
B-3	L180*18	S355J0	2	5102	3.6	247.9
B-5	L180*18	S355J0	1	5102	3.6	247.9
C-1	L80*8	S355J0	1	3742	1.2	36.1
C-2	L80*8	S355J0	1	3742	1.2	36.1
C-3	L80*8	S355J0	4	2552	0.8	24.6
G-5	L80*8	S355J0	1	4037	1.3	39.0
G-21	L80*8	S355J0	4	4037	1.3	39.0
G-34	L80*8	S355J0	3	4037	1.3	39.0
P-8	PL8*40	S355J0	1	40	0.0	0.1
P-10	PL8*295	S355J0	3	295	0.1	2.6
P-20	PL12*40	S355J0	12	40	0.0	0.2
P-24	PL12*196	S355J0	3	176	0.1	2.6
P-25	PL12*196	S355J0	4	176	0.1	2.6
P-26	PL12*196	S355J0	1	176	0.1	2.6
P-48	PL18*40	S355J0	4	40	0.0	0.2
			30.9	SUM:	30.9	1507.9

VERSJON				
Rev.	Dato	Beskrivelse	Prosjektør	Kontroll
01	17.08.2015	PROSJEKTTEGNING	pE	FH DSH
02	09.10.2015	ENDRET ANTALL	pE	FG DSH

Oppdragsgiver: **HELGELAND KRAFT**

Designert: **MANNVIT**

Sign. Dato: P.V. MANNVIT'S (Navn og personnr.)

Prosjektnavn: **132 KV LUFTSPENN TOSENFJORDEN**

Tegningstype: **MONTASJETEGNING**

Prosjektnr.: 5.921.241

Målestokk: M-6

Format: A1

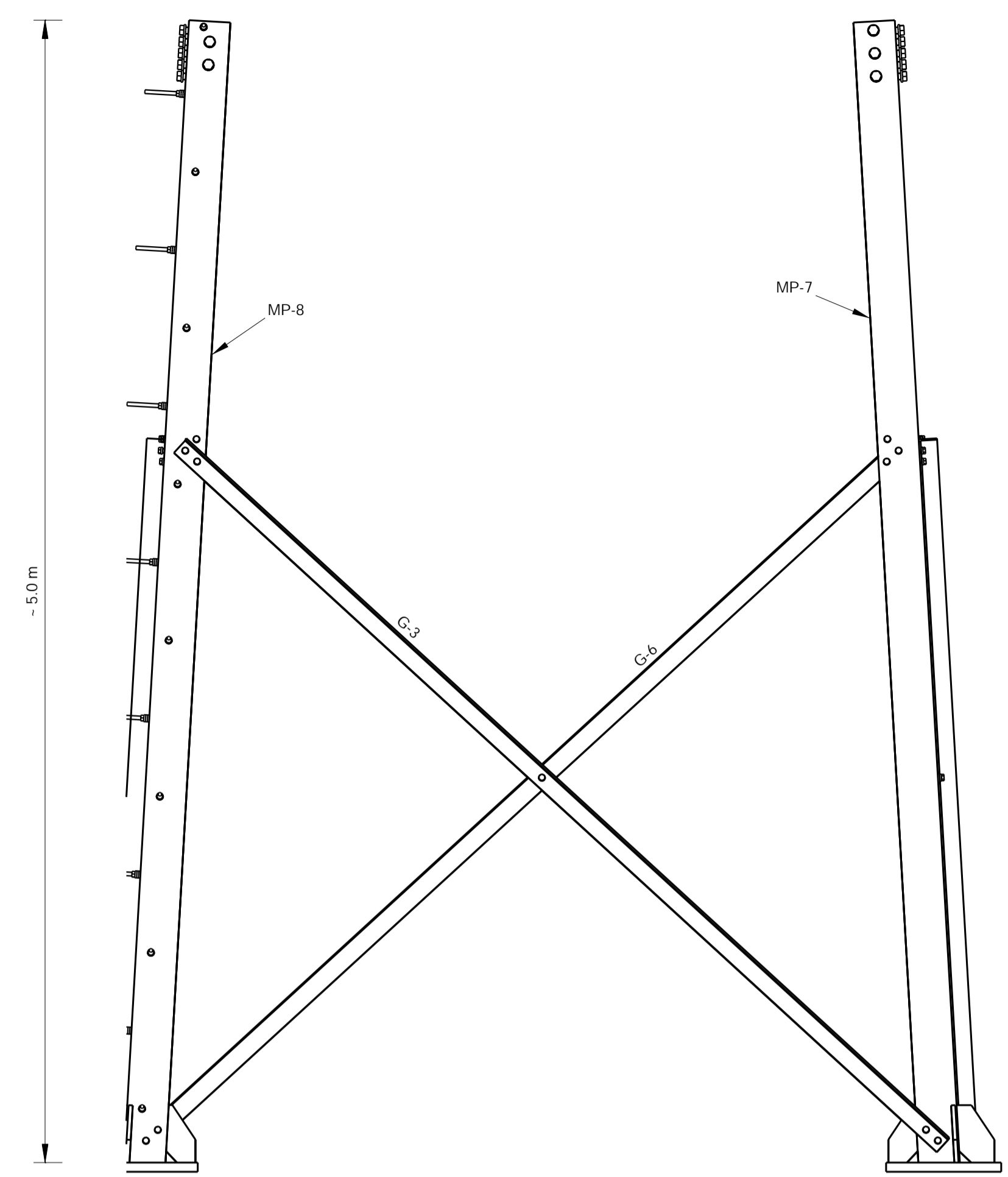
Tegningnr.: M-6

Rev.: 02

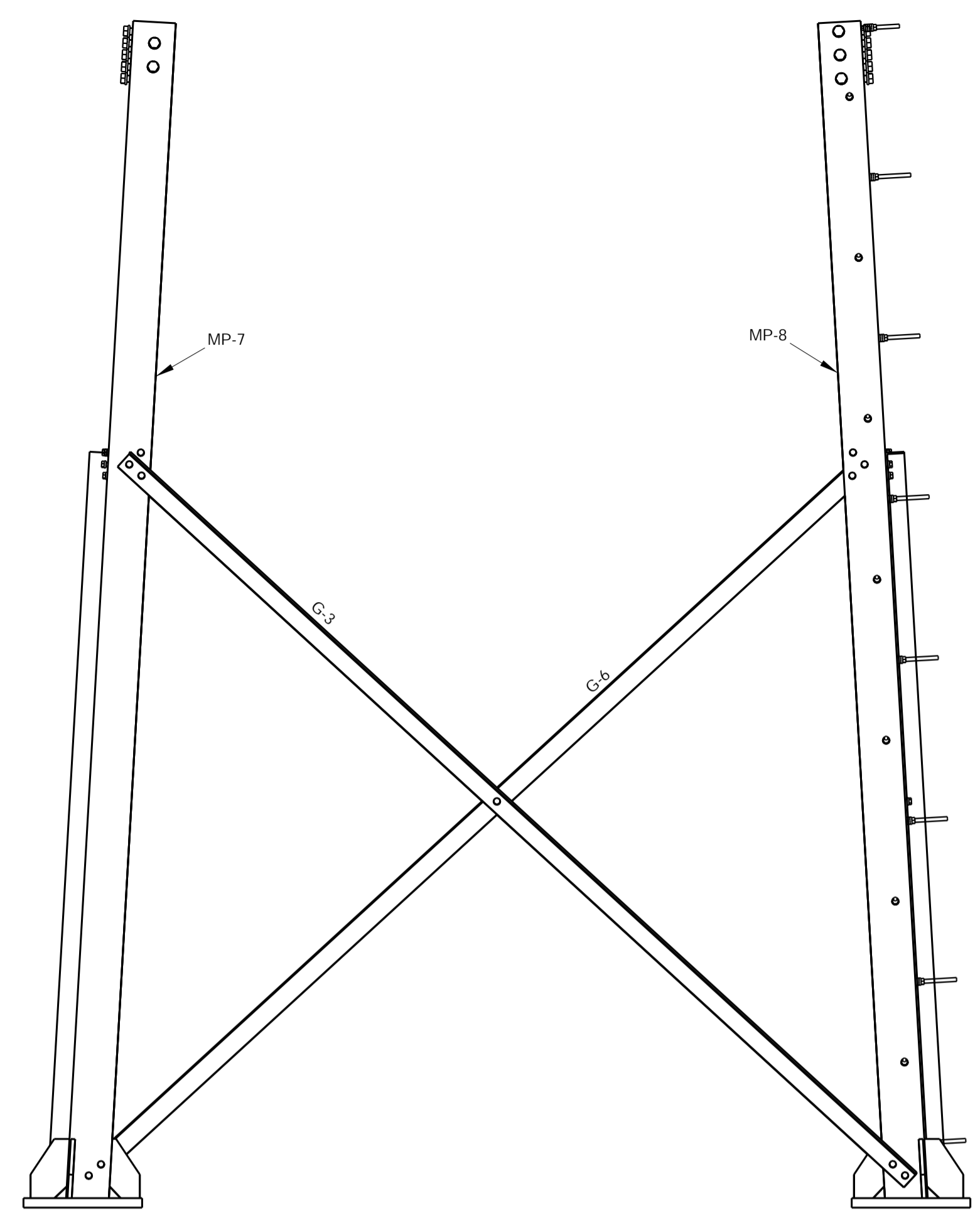
TOLVUSBRÅ, S/S-VN821, Eiers vnr/m241, 132 KV luftspenn, Tosenfjorden/TosenfjordenRammek1-F (Mannvit_Lettte+Vektsaag).dwg

PRENTAD: 21. februar 2011 11:56:40

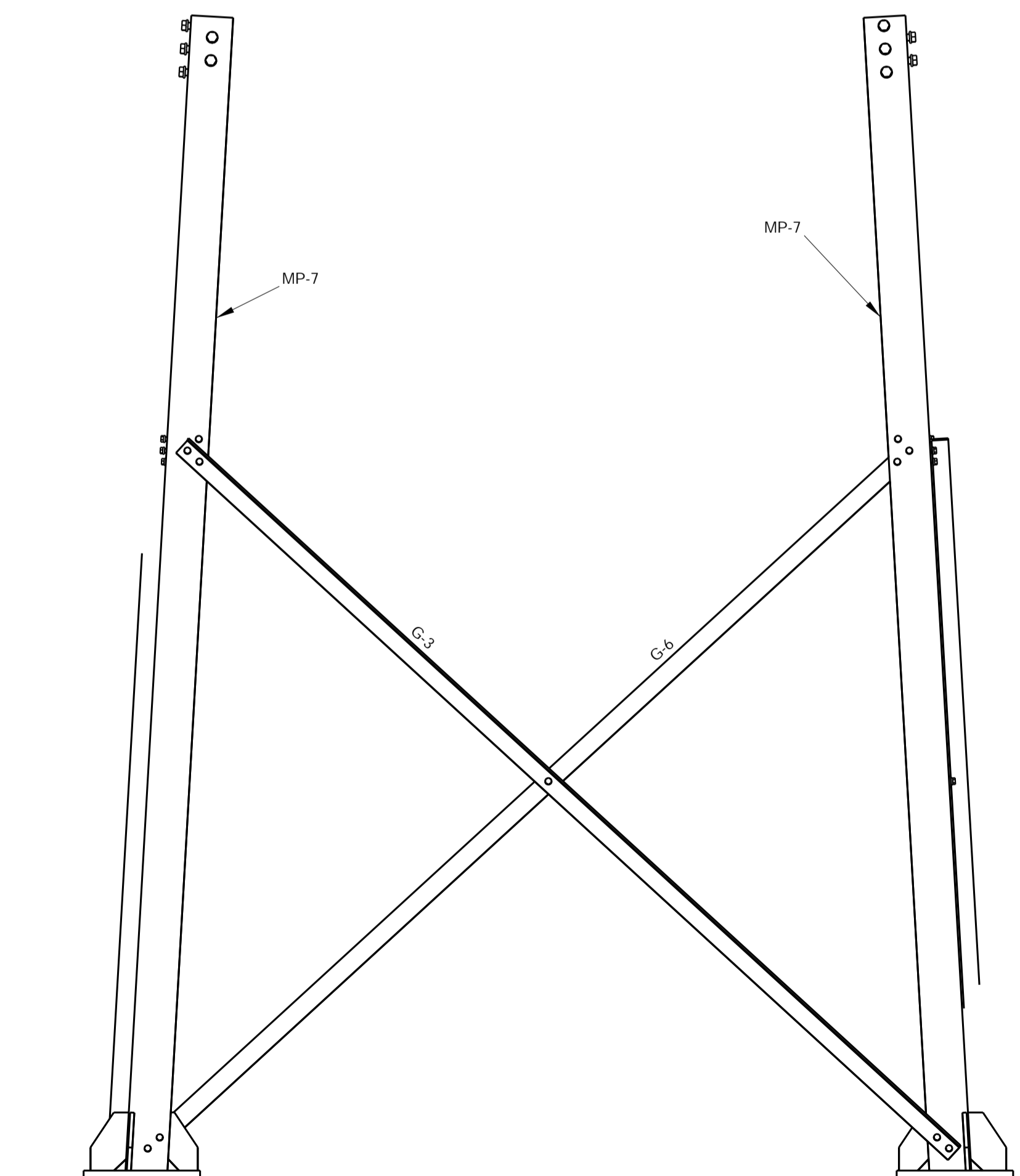
21. februar 2011 11:56:40
 PRENTAB: 21. februar 2011 11:56:40
 TOLVUSR&E_SIS-VNR927_Eierne_varef&id=241_132_KV_ford&spenn_Tosenfjorden&Ramm&A1-F (Mannvit_L&etter+V&er&ang).dwg



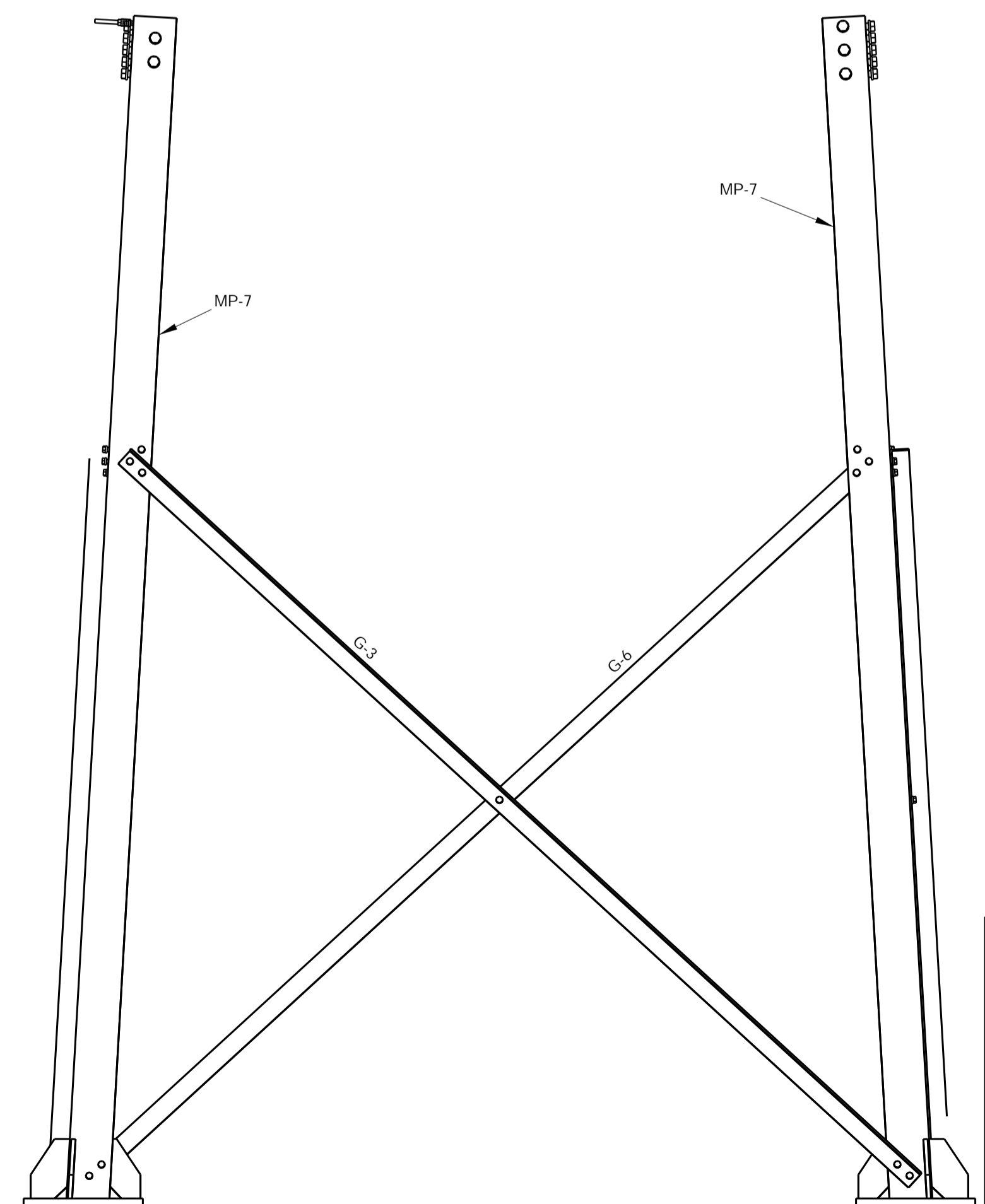
OPPRISS - A
1:20



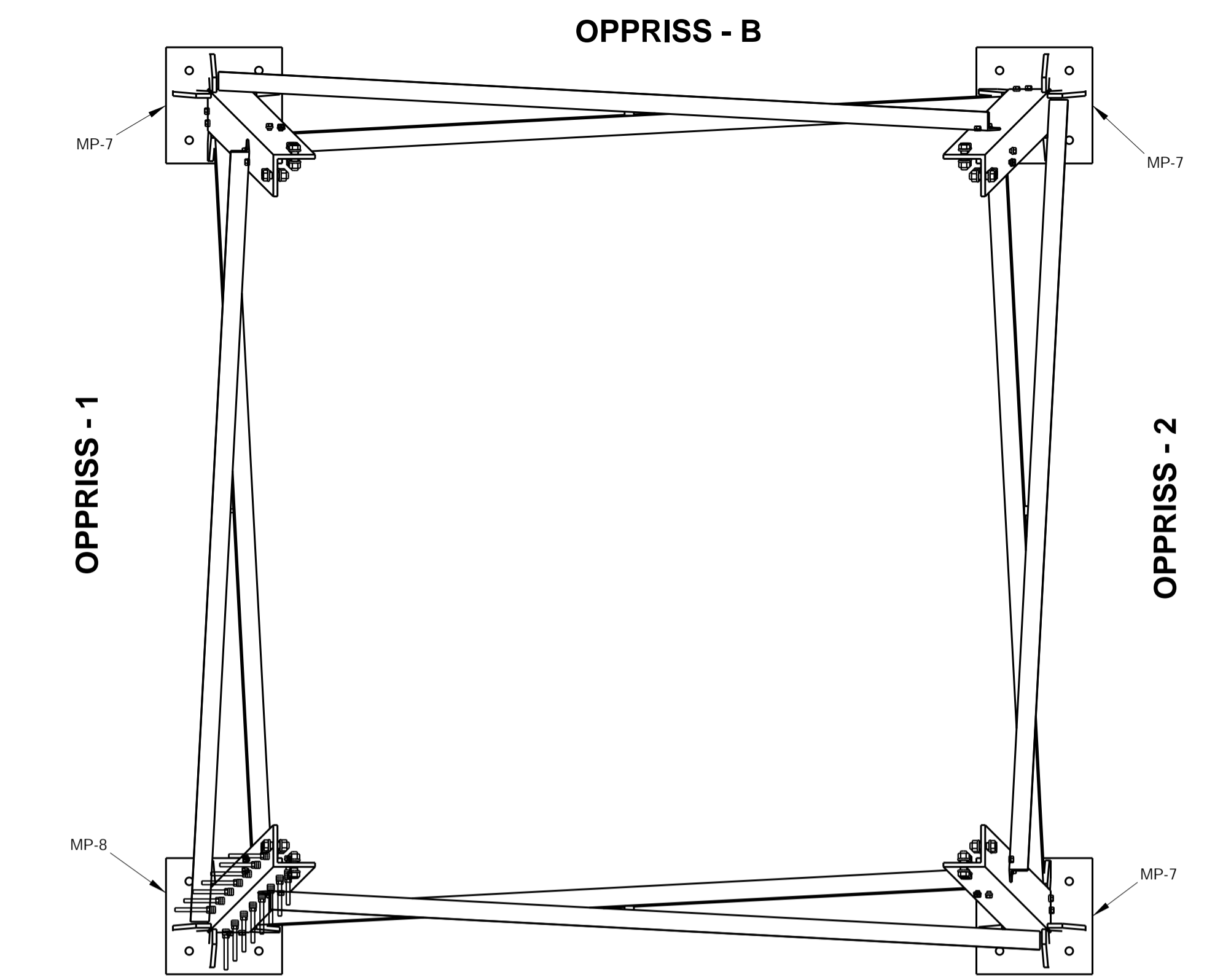
OPPRISS - 1
1:20



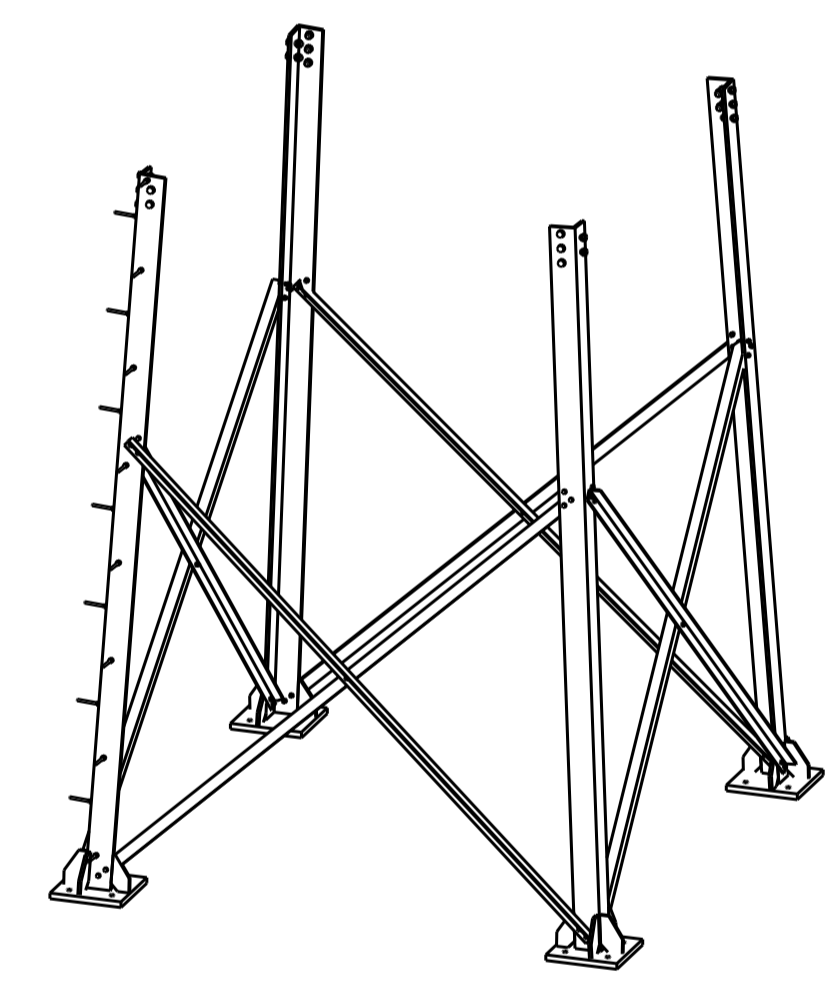
OPPRISS - B
1:20



OPPRISS - 2
1:20



OPPRISS - A
PLAN
1:20



3d

TOTAL BOLT LISTE FOR MONTASJE			
BOLTE TYPE	KVALITET	ANTALL	KOMMENTAR
M12x50	8.8	1	
M16x60	8.8	20	
M16x65	8.8	8	
M16x70	8.8	8	
M16x75	8.8	4	
M16x80	8.8	4	
M16x200	8.8	14	KLATREBOLTE
TOTAL BOLTE VEKT =			6.0 kg

MATERIALE LIST FOR MONTASJE						
MARK	PROFIL	KVALITET	ANTALL	LENGDE	AREA	VEKT
P-53	PL18*40	S355J0	1	40	0.0	0.2
G-3	L80*8	S355J0	4	4497	1.4	43.4
G-6	L80*8	S355J0	4	4497	1.4	43.4
P-48	PL18*40	S355J0	3	40	0.0	0.2
MP-7	MONTASJE		3		4.4	334.1
MP-8	MONTASJE		1		4.4	334.1
SUM:			28.6		28.6	1684.6

NOTATER:

HVIS IKKE ANNET FREMGAR ER ALLE KILSVEISER MED a = 4 mm

VERSJON				
Rev.	Dato	Beskrivning	Prosjektor	Kontroll
01	17.08.2015	PROSJEKTTEGNING	p&E	FH

Oppdragsgiver

 Designert

 Sign. Dato
 P.V. MANNVIT'S (Navn og pers.oppn.)

Prosjektnavn:
**132 KV LUFTSPENN
 TOSENFJORDEN**

 Tegningstype:
MONTASJETEGNING

 Prosjektnr.: 5.921.241
 M&lest&kk: M-7
 Format: A1
 Rev.: 01

21. februar 2011 11:56:40

PRENTAB:

B

C

D

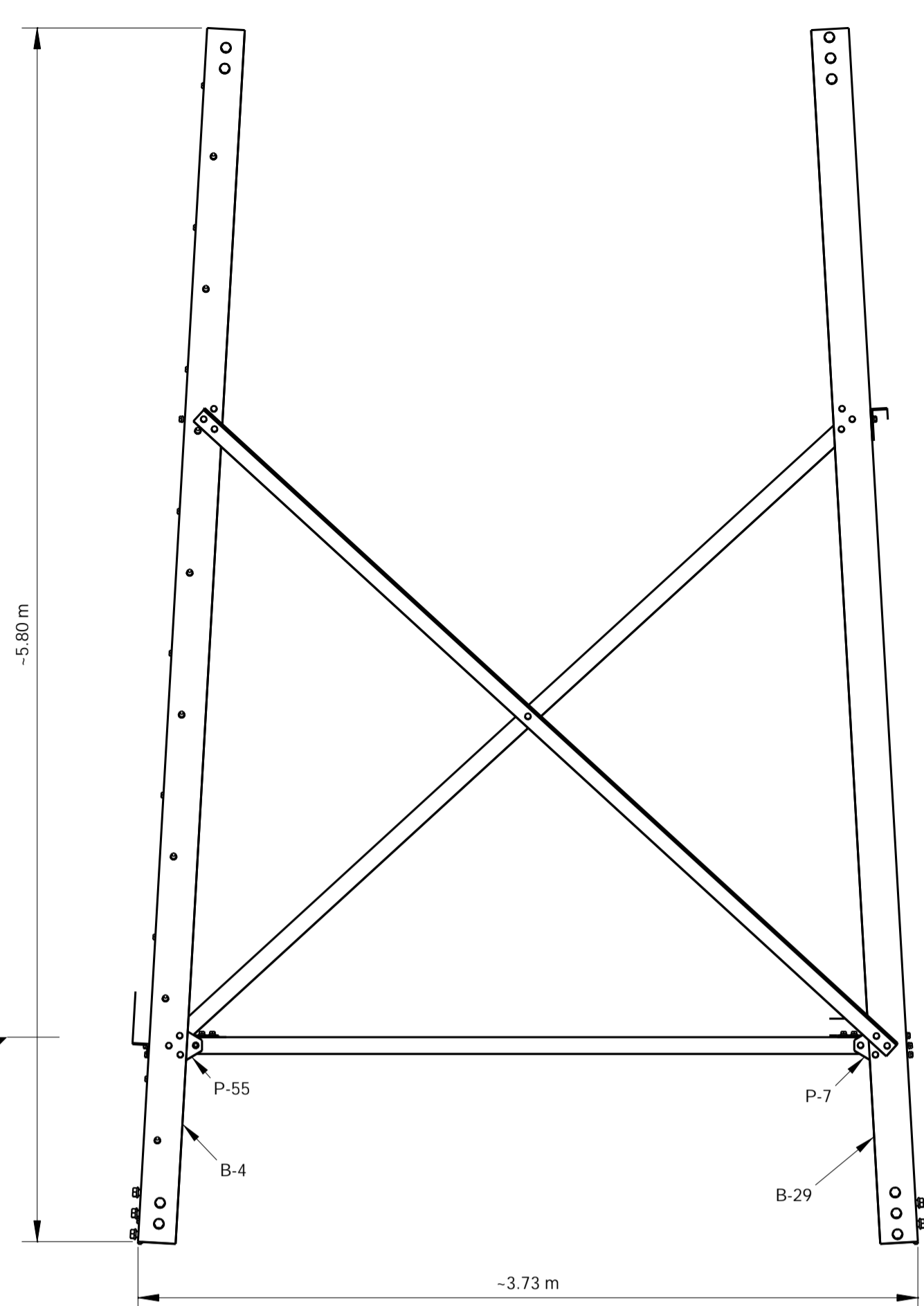
F

F

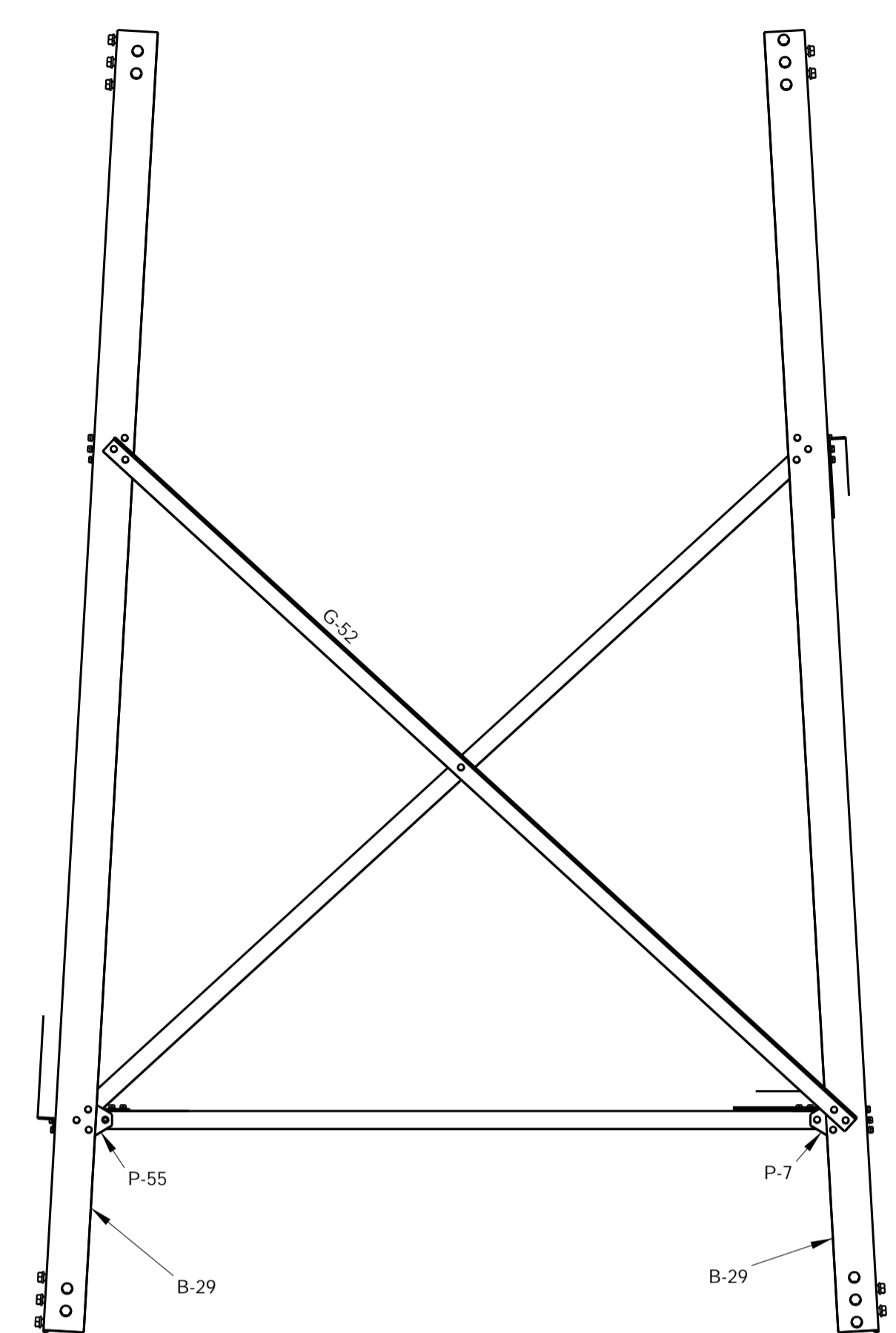
G

H

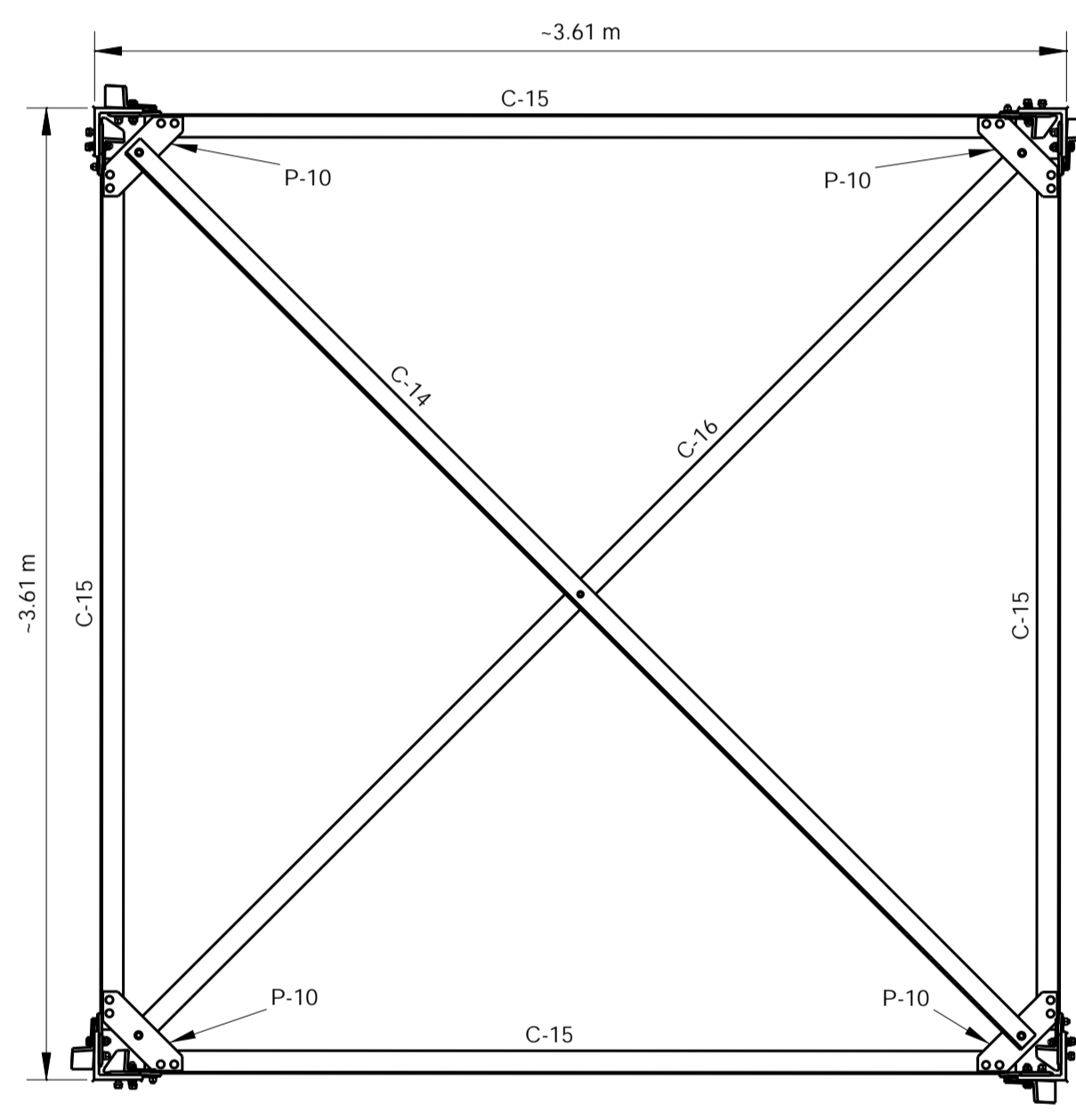
TOLVSRÅE_SIS-VNR927_Eierne_vnr61241_132 KV Jordspenn Tosenfjorden/TosenfjordenRammA1-F (Mannvit_Lettre+Vektsang).dwg



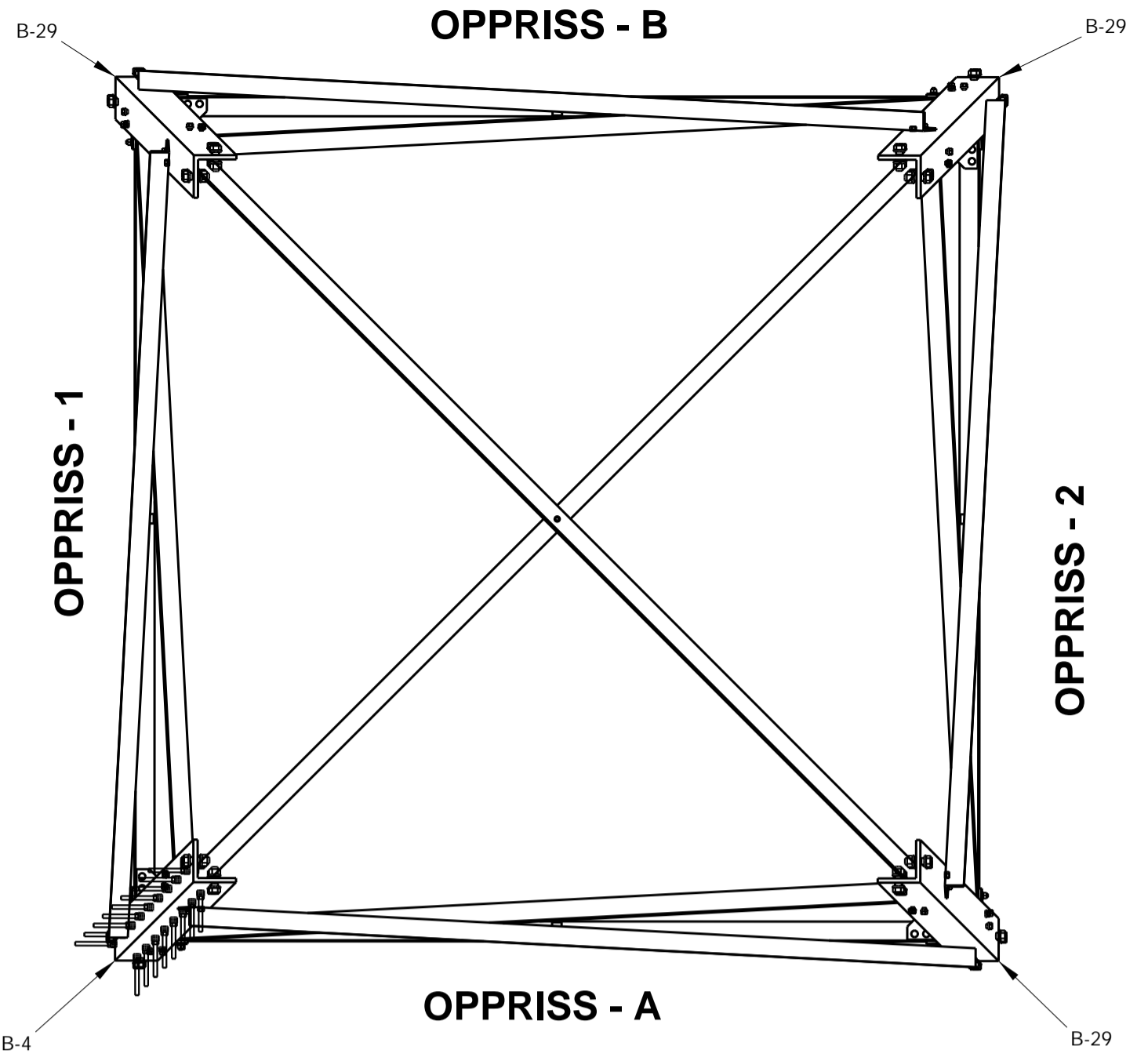
OPPISS - A
IKKE I SKALA



OPPISS - B
IKKE I SKALA

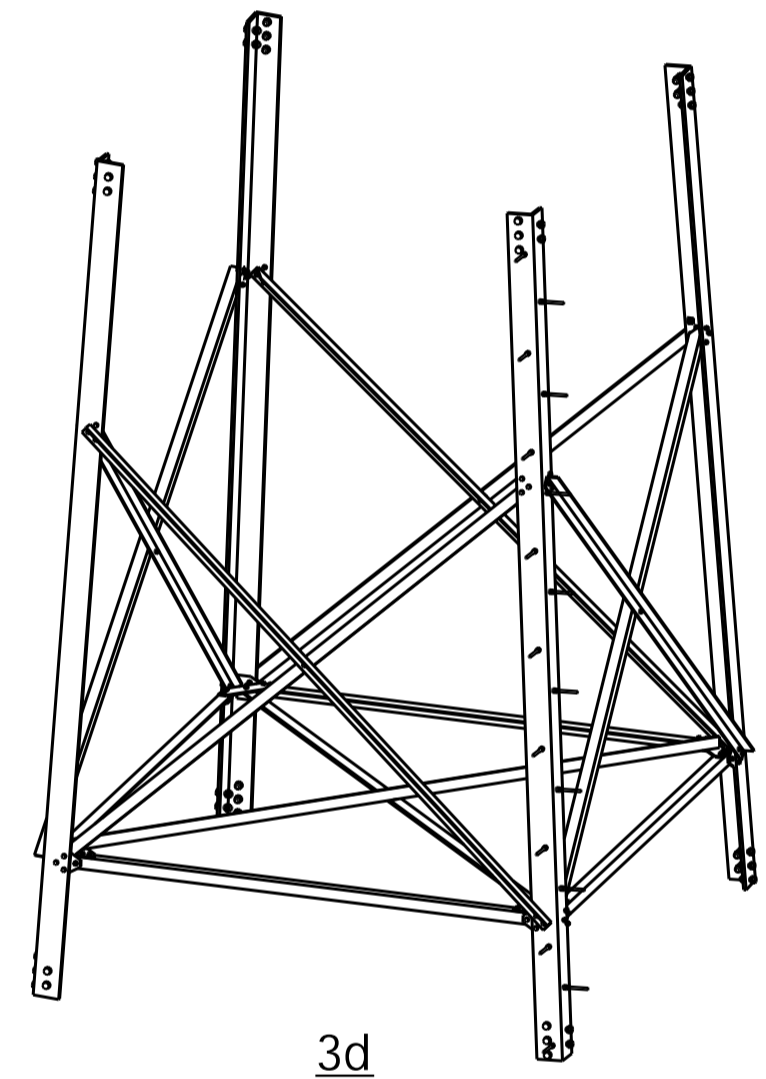


A SNITT
IKKE I SKALA



OPPISS - A

PLAN
IKKE I SKALA



TOTAL BOLT LISTE FOR MONTASJE				M-8
BOLTETYPE	KVALITET	ANTALL	KOMMENTAR	
M12x55	8.8	1		
M16x50	8.8	4		
M16x55	8.8	24		
M16x65	8.8	8		
M16x75	8.8	20		
M16x80	8.8	20		
M16x200	8.8	17	KLATREBOLTE	
M27x90	8.8	15		
TOTAL BOLTE VEKT =				19.0 kg

NOTATER:

MATERIALE LIST FOR MONTASJE						M-8	ANTALL:	1
MARK	PROFIL	KVALITET	ANTALL	LENGDE	AREA	VEKT		
P-10	PL8*295	S355JO	1	295	0.1	2.6		
B-4	L180*18	S355JO	1	5816	4.1	282.6		
B-29	L180*18	S355JO	3	5816	4.1	282.6		
C-14	L80*8	S355JO	1	4709	1.5	45.5		
C-15	L80*8	S355JO	4	3236	1.0	31.2		
C-16	L80*8	S355JO	1	4709	1.5	45.5		
G-41	L80*8	S355JO	4	4497	1.4	43.4		
G-52	L80*8	S355JO	4	4493	1.4	43.4		
P-7	PL12*196	S355JO	4	176	0.1	2.6		
P-8	PL8*40	S355JO	1	40	0.0	0.1		
P-10	PL8*295	S355JO	3	295	0.1	2.6		
P-20	PL12*40	S355JO	16	40	0.0	0.2		
P-48	PL18*40	S355JO	4	40	0.0	0.2		
P-55	PL12*196	S355JO	4	176	0.1	2.6		
			35.5	SUM:	35.5	1727.7		

VERSJON				
Rev.	Dato.	Beskrivning	Prosjektør	Arsvarelig
01	09.10.2015	PROSJEKTTEGNING	bE	FG DSH

Oppdragsgiver

 Designert

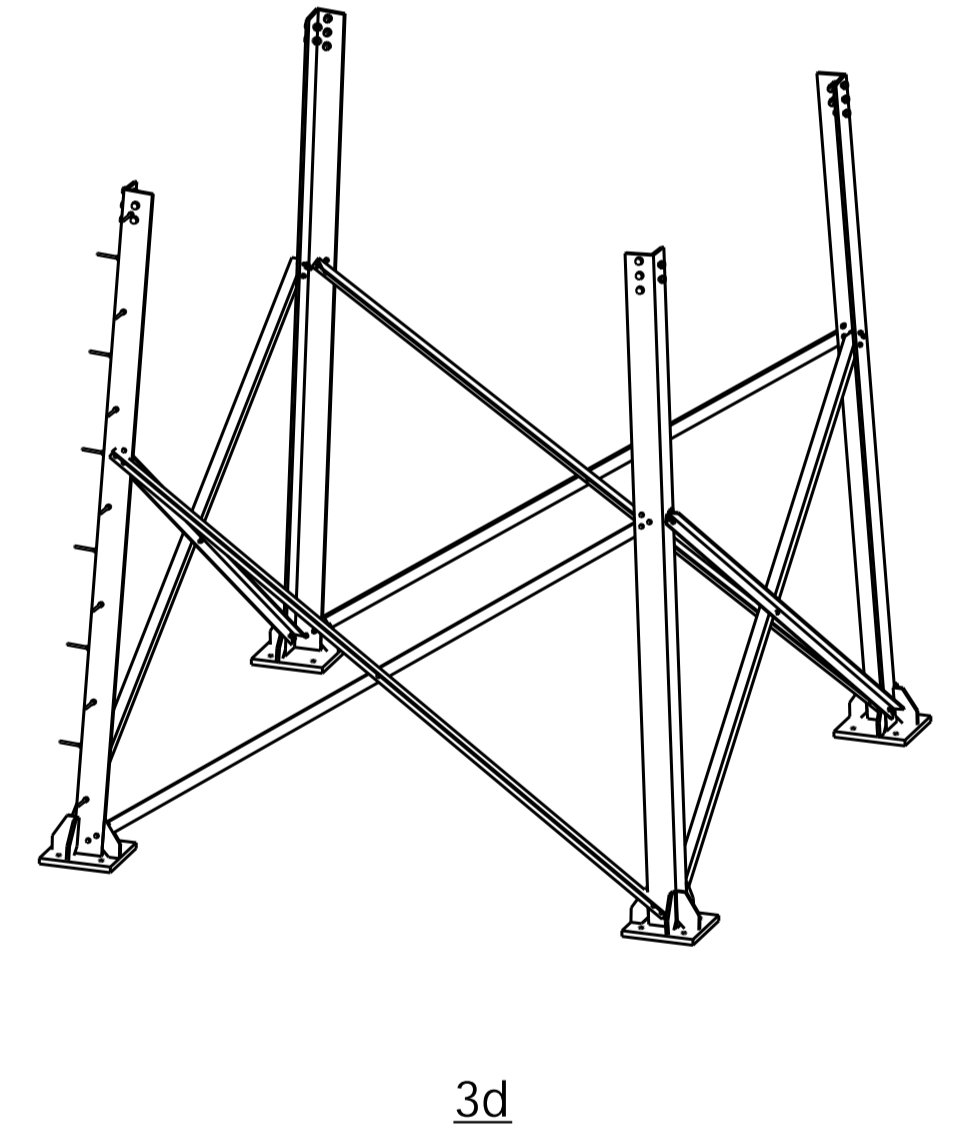
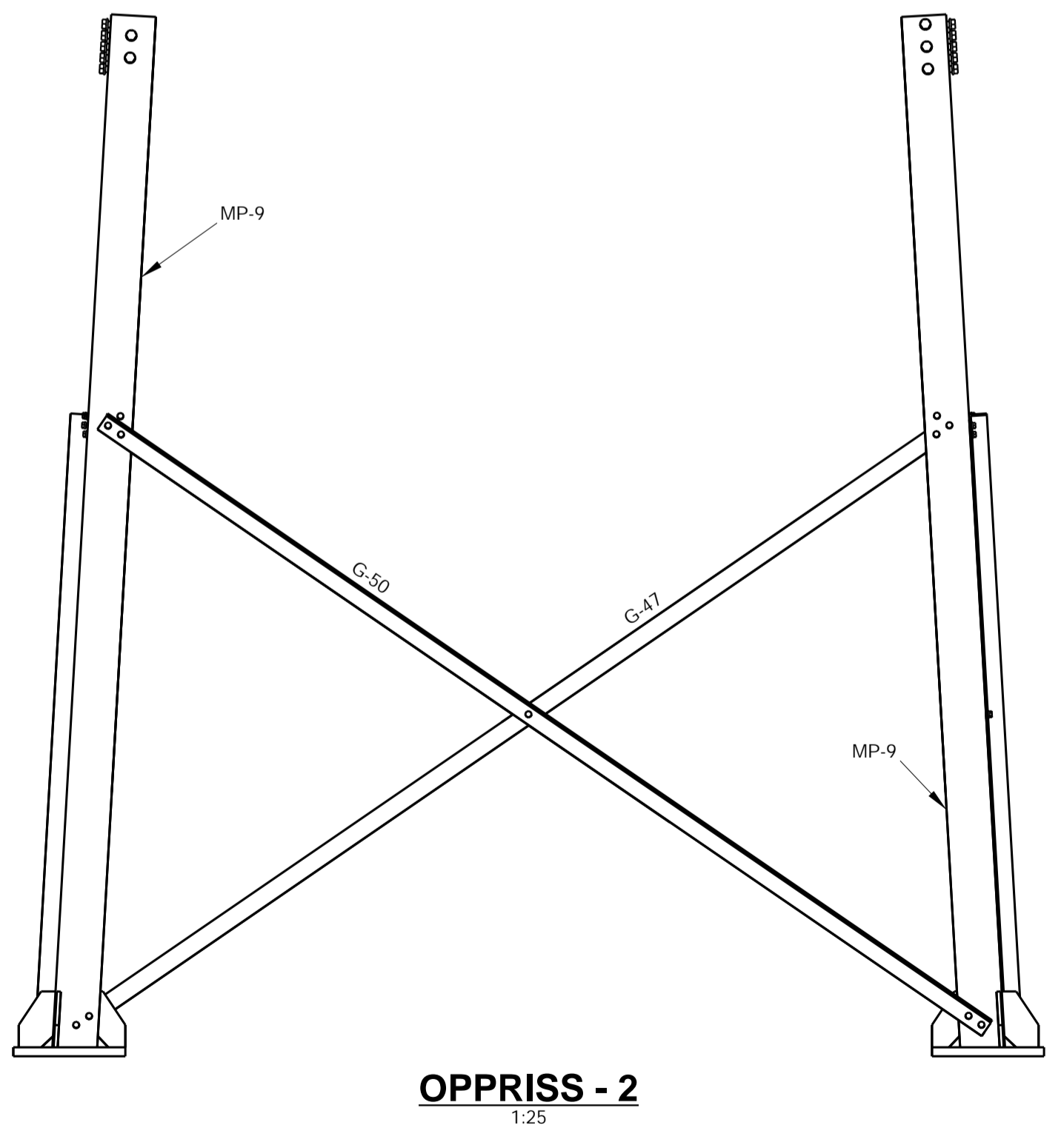
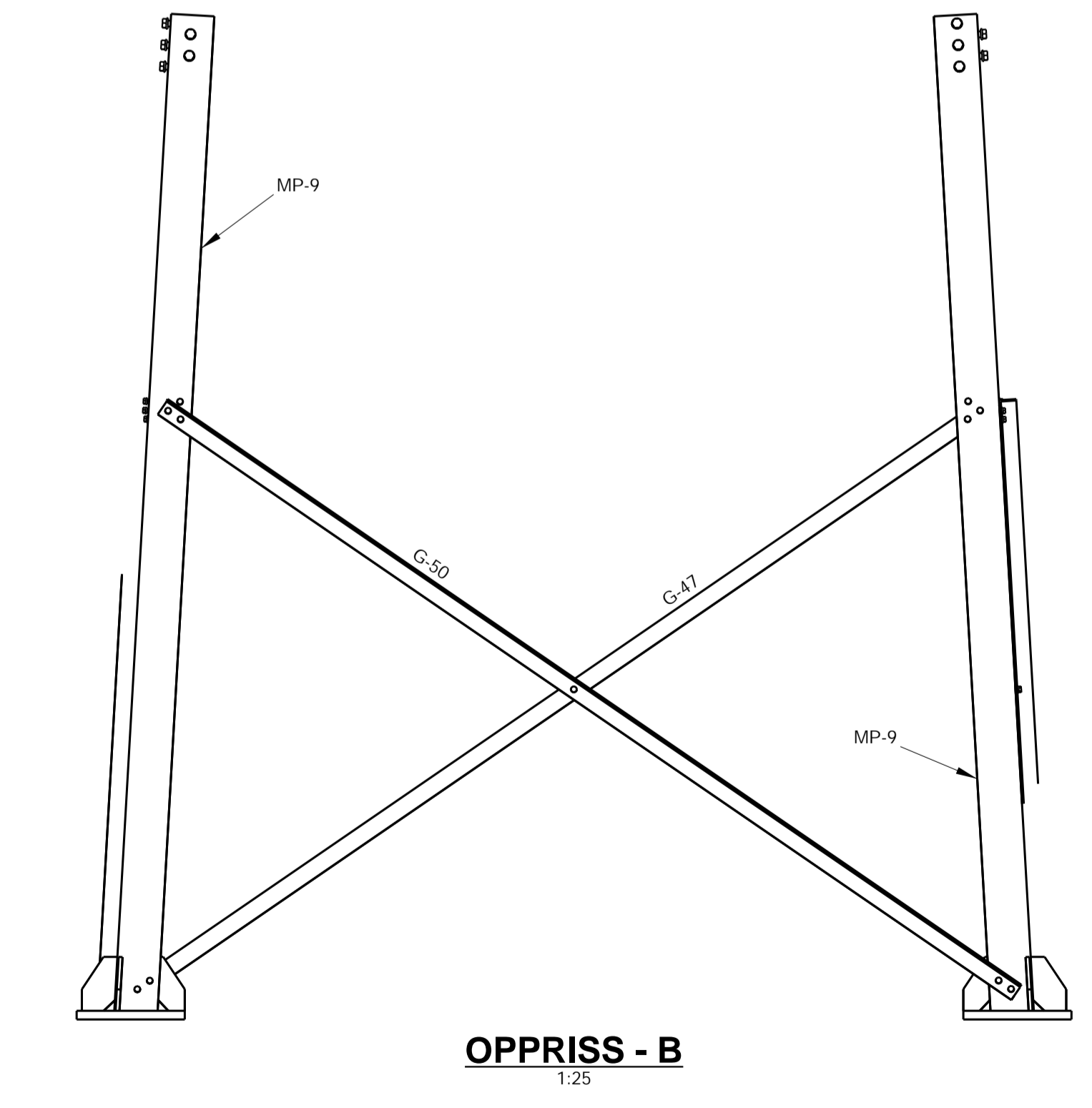
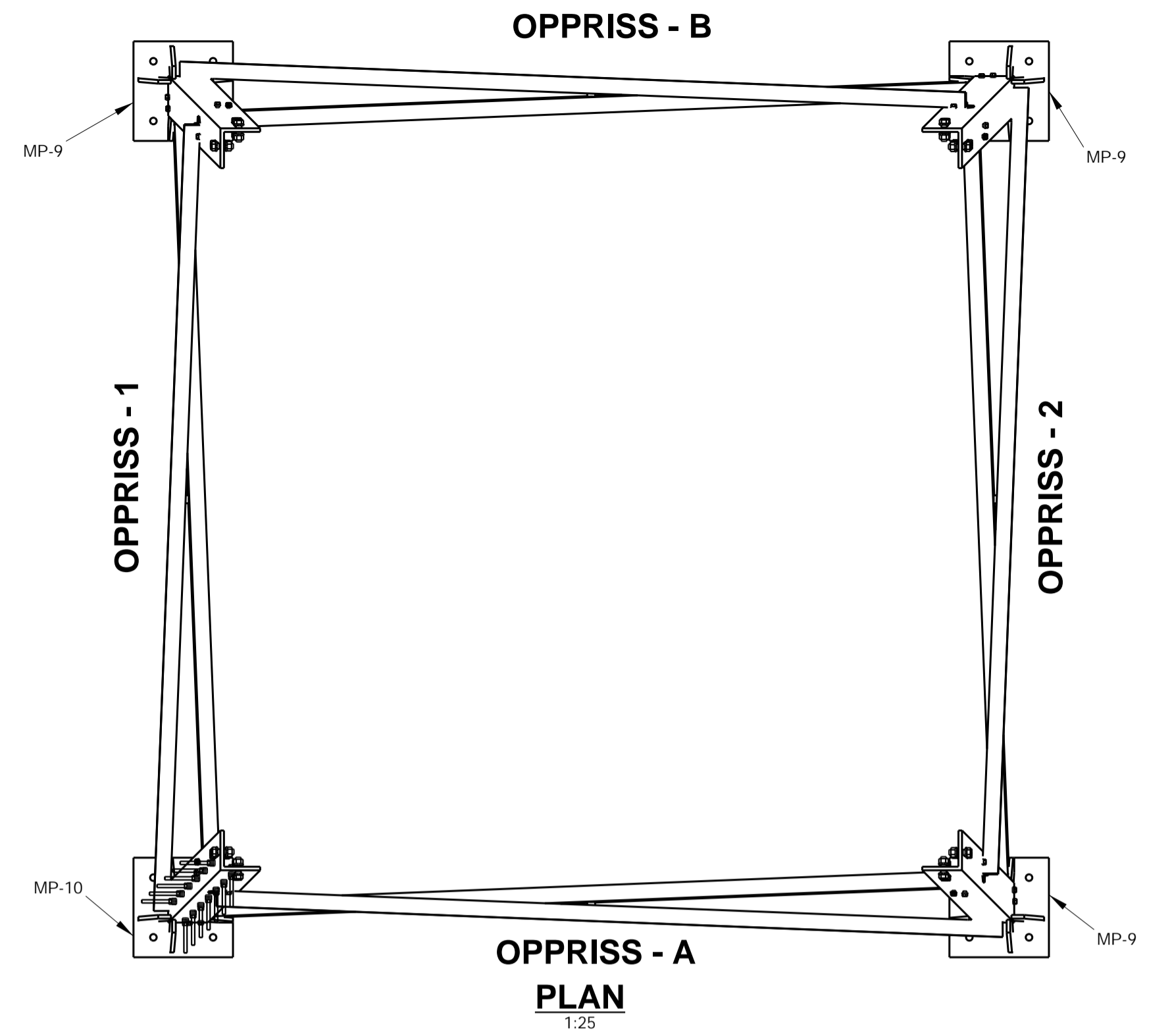
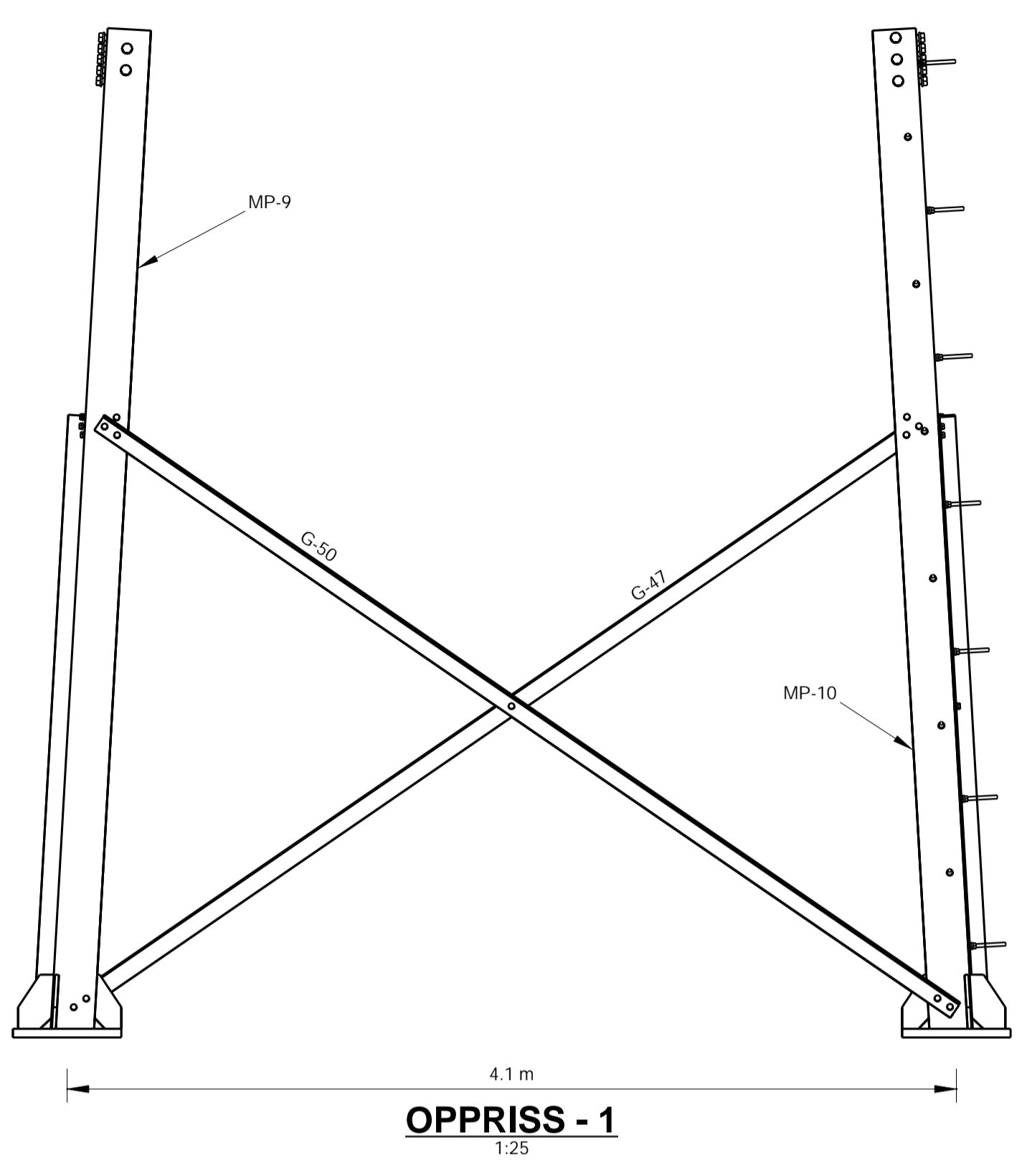
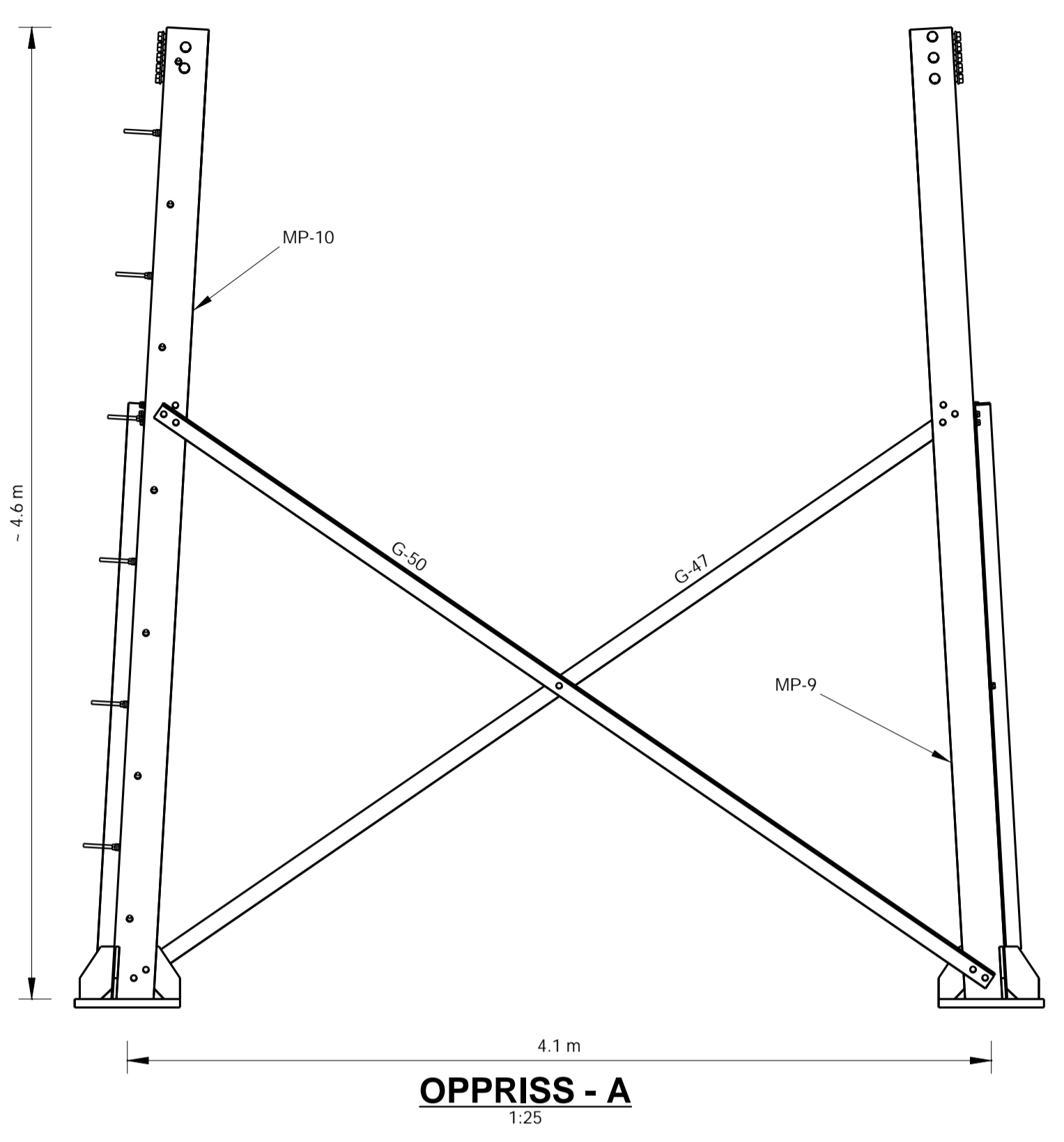
 Sign. Dato
 P.V. MANNVIT'S (Navn og personnr.)

Prosjektnavn:
**132 KV LUFTSPENN
 TOSENFJORDEN**

 Tegningstype:
MONTASJETEGNING

 Prosjektnr.: 5.921.241
 Tegningnr.: M-8
 Format: A1
 Rev.: 01

PRENTAB: 21. februar 2011 11:56:40
 TOLVSRÅE_SIS-VNR927_Eierne_vareidn241_132_kV_fordjupem_Tosenfjorden/Tekninge/RammnA1-F (Mannvit_Latitru+Vektsang).dwg



TOTAL BOLT LISTE FOR MONTASJE				M-9
BOLTETYPE	KVALITET	ANTALL	KOMMENTAR	
M12x50	8.8	1		
M16x60		8		
M16x60	8.8	12		
M16x65		4		
M16x65	8.8	4		
M16x70		4		
M16x70	8.8	4		
M16x85		4		
M16x200	8.8	13	KLATREBOLTE	
M27x90	8.8	20		
TOTAL BOLTE VEKT =				16.8 kg

NOTATER:
 HVIS IKKE ANNET FREMGÅR ER ALLE KILSVESER MED s = 4 mm

MATERIALE LIST FOR MONTASJE				M-9			ANTALL:	1
MARK	PROFIL	KVALITET	ANTALL	LENGDE	AREA	VEKT		
P-53	PL18*40	S355J0	1	40	0.0	0.2		
G-47	L80*8	S355J0	4	4790	1.5	46.3		
G-50	L80*8	S355J0	4	4789	1.5	46.2		
P-48	PL18*40	S355J0	4	40	0.0	0.2		
MP-9	MONTASJE		3		4.5	342.9		
MP-10	MONTASJE		1		4.5	342.9		
			29.8	SUM:	29.8	1742.6		

VERSJON					
Rev.	Dato	Beskrivning	Prosjekt	Kontroll	Ansvarlig
01	09.10.2015	PROSJEKTEGNING	pE	FG	DSH

Oppdragsgiver
HELGELAND KRAFT

Designert
MANNVIT

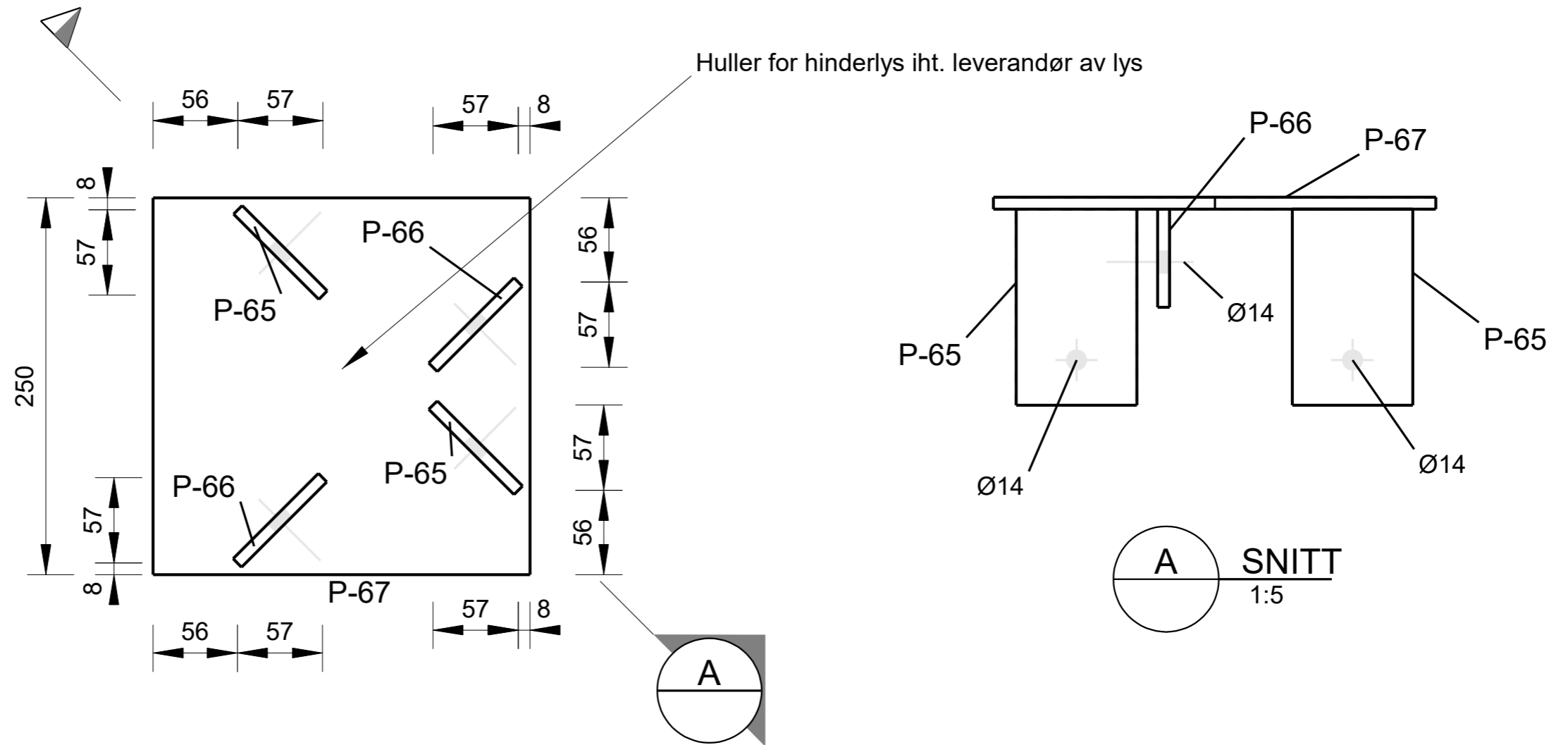
Sign. Dato: P.V. MANNVIT'S (Navn og persønnr.)

Prosjektnavn:
132 KV LUFTSPENN TOSENFJORDEN

Tegningstype:
MONTASJETEGNING

Prosjektnr.: **5.921.241** | Målestokk: | Format: **A1**

Tegningnr.: **M-9** | Rev.: **01**



NOTATER: HVIS IKKE ANNET FREMGÅR ER ALLE KILSVEISER MED a = 4 mm

MATERIALE LIST FOR MONTASJE				MP-11	ANTALL:	2
MARK	PROFIL	KVALITET	ANTALL	LENGDE	AREA	VEKT
P-67	PL8*250	S355J0	1	250	0.1	3.9
P-65	PL8*80	S355J0	2	130	0.0	0.7
P-66	PL8*65	S355J0	2	80	0.0	0.3
			0.2	SUM:	0.2	5.9

REV.	DATO	BESKRIVNING	PROSJEKTER	KONTROLL	ANSVARLIG
01	25.11.2016	PROSJEKTTEGNING	FG	PE	DSH

Oppdragsgiver		Tegningsnr.:	MP-11		
Designer		Prosjektnr.:	5.921.241	Målestokk/Format	1:5 A4
		Prosjektnavn:	132 kV LUFTSPENN	Utgivelsesdato:	
		Revisjon:	01	Revisjonsdato:	25.11.2016