

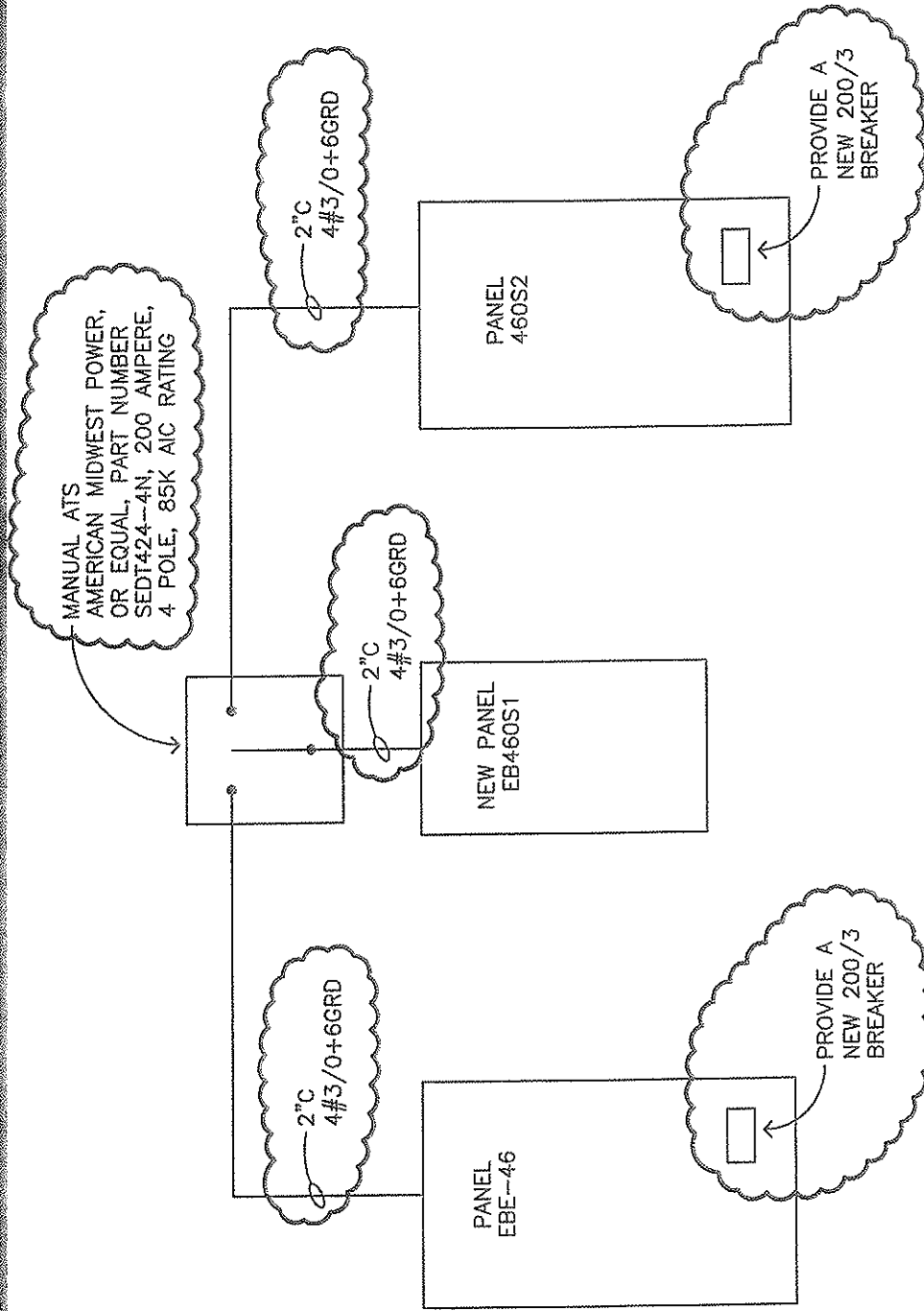
December 4, 2013

AMENDMENT NO. 1

Fargo VA Health Care System
Improve SPS/Logistics Storage Room HVAC Systems
Fargo, ND Image 1205.01/VA 437-13-103

- A. Refer to the DRAWINGS of the above project and make the following additions, deletions, corrections and/or interpretations.
1. Refer to Drawing Sheet EB.1 ELECTRICAL BASEMENT PLAN
 - a. Room BB-34: Data Drop at BACNET device to be 3 data jacks and 1 telephone jack. Connector modules to be equal to Panduit CJX88TGEI to match existing Fargo VA Health Care System standard. Modular face plate shall be Panduit Min-Com Executive Series plate. Four port, Panduit model CFPE4-IW. Data connectors to be orange in color, ivory for telephone. Cables to be Category 6 enhanced equal to Genspeed 6000E. Label data plate per Fargo VA Health Care System standard.
 - b. Provide 3/4 inch conduit from BACKNET data drop to corridor cable tray and cable to IRM Room BB-30.
 - c. Contractor to provide testing of cables with jacks per EIA/TIA TSB-65 and TSB-67.
 2. Refer to Drawing Sheet E5.1 ELECTRICAL SCHEDULES, ELECTRICAL ONE-LINE DIAGRAMS and REVISE the following per the attached Drawings:
 - a. REVISE Detail 1/E5.1.
 - b. REVISE Detail 2/E5.1.
 - c. REVISE Detail 3/E5.1.
 - d. REVISE Schedule EB460S1.
 - e. REVISE Schedule EB90W3.
 - f. REVISE Schedule EB10C2.
- B. Attachments:
1. Electrical Drawings R1/E5.1, R2/E5.1, R3/E5.1, R4/E5.1, R5/E5.1 and R6/E5.1 dated November 22, 2013.

- END OF AMENDMENT NO. 1 -



1 PARTIAL ELECTRICAL ONE-LINE DIAGRAM - BUILDING 46

E5.1 NO SCALE

MBN JOB #: 13-027
REVISION DATE: 11-22-13

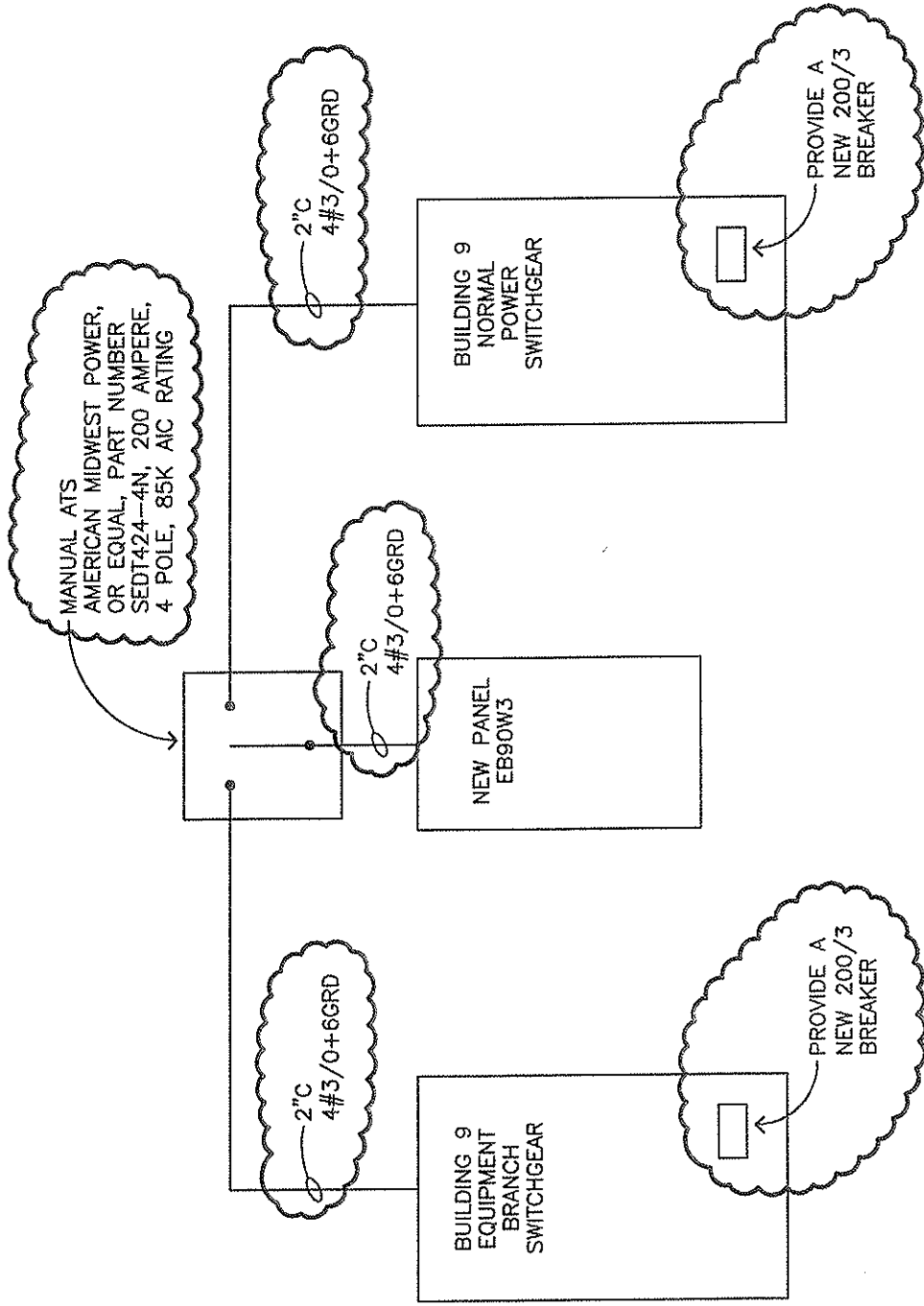
R1
E5.1

IMPROVE SPS/LOGISTICS
STORAGE ROOM HVAC
SYSTEMS
FARGO, ND

503 7TH ST. N
SUITE 200
FARGO, ND 58102
PHONE: 701.478.6336
FAX: 701.478.6340

MBN
ENGINEERING

MECHANICAL • ELECTRICAL • CIVIL



2 E5.1

PARTIAL ELECTRICAL ONE-LINE DIAGRAM - BUILDING 9

NO SCALE

MBN JOB #: 13-027
REVISION DATE: 11-22-13

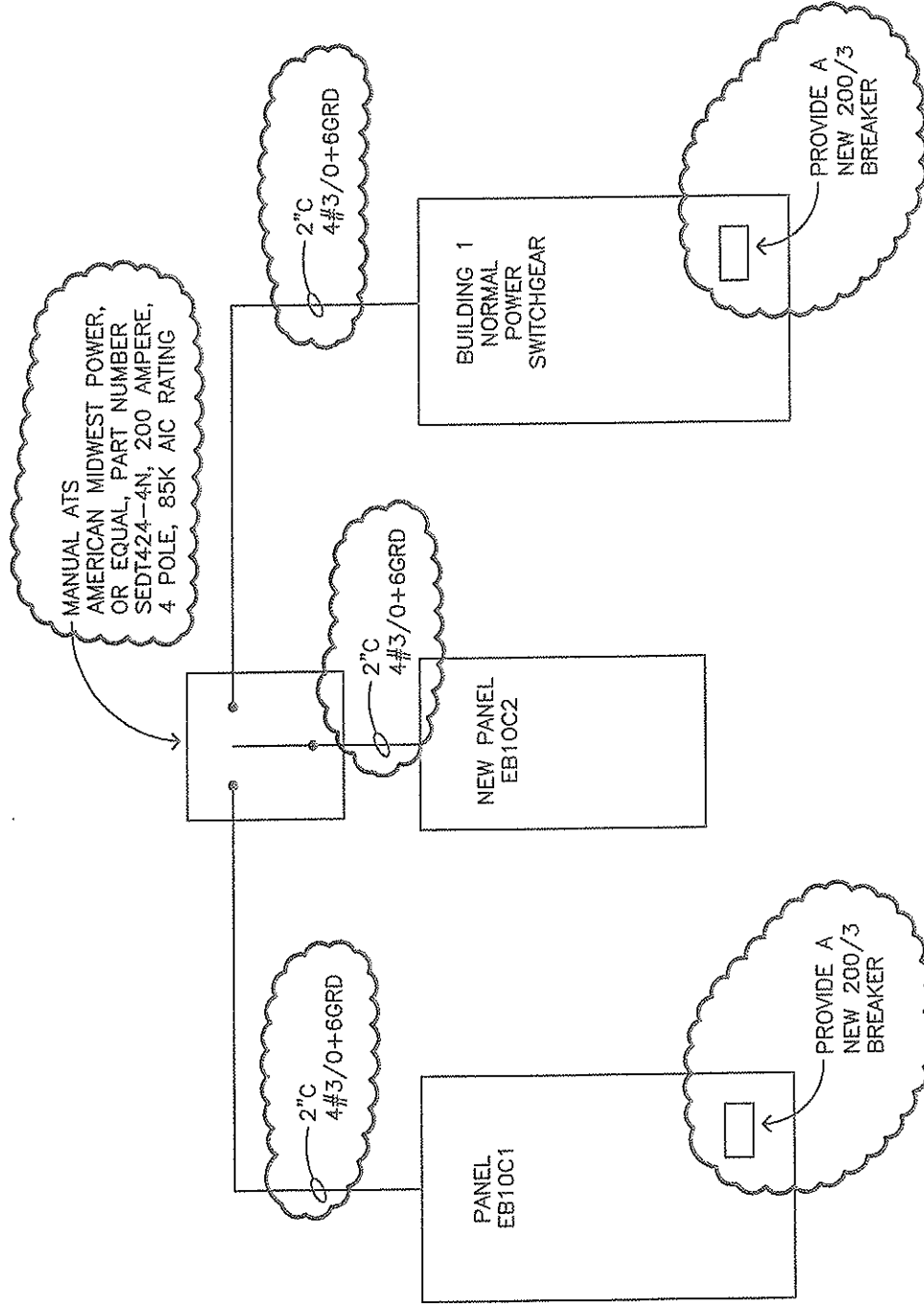
R2
E5.1

IMPROVE SPS/LOGISTICS
STORAGE ROOM HVAC
SYSTEMS
FARGO, ND

503 7TH ST. N
SUITE 200
FARGO, ND 58102
PHONE: 701.478.6336
FAX: 701.478.6340

MBN
ENGINEERING

MECHANICAL • ELECTRICAL • CIVIL



3 PARTIAL ELECTRICAL ONE-LINE DIAGRAM - BUILDING 1

E5.1 NO SCALE

MBN JOB #: 13-02Z
REVISION DATE: 11-22-13

R3
E5.1

IMPROVE SPS/LOGISTICS
STORAGE ROOM HVAC
SYSTEMS
FARGO, ND

503.7TH ST. N
SUITE 200
FARGO, ND 58102
PHONE: 701.478.6336
FAX: 701.478.6340

MBN
ENGINEERING

MECHANICAL * ELECTRICAL * CIVIL

PANELBOARD LOAD SCHEDULE													
PANEL: EB460S1				MAIN ENCLOSURE: NEMA 1		LOCATION: BA-01A							
RATING: 225 AMP				VOLTS: 208Y/120, 4W.		MOUNTING: SURFACE		FED FROM: EBE-46					
				AIC RATING: 35,000									
CKT #	TRIP	POLE	LIGHTING	RECP	MTRS&EQUIP	KITCHEN	HEAT/AC	LOAD DESCRIPTION	PH	LOAD	LOAD IN VOLT-AMPERES	TRIP	POLE
1	20	1			1900			1C-45 EH-2	A	1C-45A SS	42	15	2
3	20	1			1900			4C-40 EH-2	B		42		4
5	50				7740			AC-2	C	2C-49 SS	42	15	6
7					7740				A		42		2
9		3			7740				B	4C-47 SS	42	15	8
11	20	1			1900			2C-49 EH-2	C		42		10
13	35				3600			AC-3	A	3C-62 SS	42	15	12
15					3600			ON ROOF	B		42		14
17					3056				C	3C-62 EH-2	1900	20	16
19	15							SPARE	A	SPARE		20	18
21		2						SPARE	B			20	20
23	15							SPARE	C			20	22
25		2						SPARE	A			20	24
27	15							SPARE	B			20	26
29		2						SPARE	C			20	28
31	50							SPARE	A			35	30
33								SPARE	B				32
35		3						SPARE	C				34
37	20	1						SPARE	A			20	36
39	20	1						SPARE	B			20	38
41	20	1						SPARE	C			20	40
												20	42

LOAD CALCULATIONS

LOAD TYPE	VA / PHASE			TOTAL VA	DEMAND FACTOR	DIVERSIFIED LOAD
	A	B	C			
LIGHTING	0	0	0	0	1.00	0
RECEPTACLES	0	0	0	0	0.50	0
MOTORS & EQUIP	13366	13366	15224	41956	0.90	37760
KITCHEN EQUIP	0	0	0	0	0.65	0
HEAT / AC	0	0	0	0	0.90	0
LARGEST MOTOR					0.25	0
TOTAL AMPS:	105			TOTAL VA:		37,760

NOTES:

MBN JOB #: 13-027
REVISION DATE: 11-22-13

IMPROVE SPS/LOGISTICS
STORAGE ROOM HVAC
SYSTEMS
FARGO, ND

503 7TH ST, N
SUITE 200
FARGO, ND 58102
PHONE: 701.478.6336
FAX: 701.478.6340

MBN
ENGINEERING

MECHANICAL * ELECTRICAL * CIVIL

R4
E5.1

PANELBOARD LOAD SCHEDULE																
PANEL:		EB90W3		MAIN MLO		ENCLOSURE: NEMA 1		LOCATION: BB-34								
RATING:		225 AMP		VOLTS: 208V, 3 PH, 4W.		AIC RATING: 22,000		MOUNTING: SURFACE		FED FROM: BLDG 9 SWBD						
CKT #	TRIP AMPS	POLE	LOAD IN VOLT-AMPERES			LOAD DESCRIPTION	PH	LOAD DESCRIPTION	HEAT/AC	KITCHEN	MTRS&EQUIP	RECP	LIGHTING	TRIP AMPS	POLE	CKT #
1	15				300		A	2B-80 EH-2			1900			20	1	2
3		2			300		B	2B-80 SS			600			15		4
5	35				3600		C	AC-1 ROOF			900				2	6
7					3600		A	AC-1 ROOF			3600			35		8
9		3			3600		B				3600					10
11	15				85		C	3B-33 SS			3600				3	12
13		2			85		A	AC-1 ROOF			3600			35		14
15	20	1			1900		B	3B-31 EH-2			3600					16
17					3600		C	SPARE			3600				3	18
19	15						A	SPARE						20		20
21		2					B	SPARE						20		22
23	15						C	SPARE						20		24
25		2					A	SPARE						20		26
27	15						B	SPARE						20		28
29		2					C	SPARE						35		30
31	50						A	SPARE								32
33							B	SPARE								34
35		3					C	SPARE							3	36
37	20	1					A	SPARE						20	1	38
39	20	1					B	SPARE						20	1	40
41	20	1					C	SPARE						20	1	42

LOAD CALCULATIONS

NOTES:

LOAD TYPE	VA / PHASE			TOTAL VA	DEMAND FACTOR	DIVERSIFIED LOAD	TOTAL VA
LIGHTING	A	B	C				
RECEPTACLES	0	0	0	0	1.00	0	
MOTORS & EQUIP	0	0	0	0	0.50	0	
KITCHEN EQUIP.	13085	13600	13385	40070	0.90	35063	
HEAT / AC	0	0	0	0	0.65	0	
LARGEST MOTOR	0	0	0	0	0.90	0	
TOTAL AMPS	100			TOTAL VA:	0.25	36.063	

LOAD CALCULATIONS

LOAD TYPE	VA / PHASE			TOTAL VA	DEMAND FACTOR	DIVERSIFIED LOAD
LIGHTING	A	B	C	0	1.00	0
RECEPTACLES	0	0	0	0	0.50	0
MOTORS & EQUIP	13085	13600	13385	40070	0.90	36063
KITCHEN EQUIP.	0	0	0	0	0.65	0
HEAT / AC	0	0	0	0	0.90	0
LARGEST MOTOR					0.25	0
TOTAL AMPS:	100			TOTAL VA:		36,063

NOTES:

MSB JOB #: 13-027
REVISION DATE: 11-22-13

IMPROVE SPS/LOGISTICS
STORAGE ROOM HVAC
SYSTEMS
FARGO, ND

503 7TH ST. N
SUITE 200
FARGO, ND 58102
PHONE: 701.478.6336
FAX: 701.478.6340

MBN
ENGINEERING

MECHANICAL * ELECTRICAL * CIVIL

R5
E5.1

PANELBOARD LOAD SCHEDULE																		
PANEL:		EB10C2		MAIN		MLO		VOLTS: 208Y/120, 4W.		ENCLOSURE:		NEHA 1		LOCATION:		BE-99		
RATING:		225 AMP		AIC RATING:		35,000		MOUNTING:		SURFACE		FED FROM:		EB10C1				
CKT #	TRIP AMPS	POLE	LOAD IN VOLT-AMPERES			LOAD IN VOLT-AMPERES			PH	LOAD DESCRIPTION	HEAT/AC	KITCHEN	MTRS&EQUIP	RECP	LIGHTING	TRIP AMPS	POLE	CKT #
1	15								A	BE-09 EH-1			1300			20	2	2
3		2							B				1300				2	4
5	15								C	2C-90 EH-2			1900			20	1	6
7		2							A	2C-90 SS			42			15	8	8
9	15								B	SPARE							2	10
11		2							C	SPARE						20	12	12
13	15								A	SPARE							2	14
15		2							B	SPARE						20	16	16
17	15								C	SPARE							2	18
19		2							A	SPARE						20	20	20
21	15								B	SPARE							2	22
23		2							C	SPARE						20	24	24
25	15								A	SPARE							2	26
27		2							B	SPARE						20	28	28
29	50								C	SPARE							2	30
31									A	SPARE						35	32	32
33		3							B	SPARE								34
35	20	1							C	SPARE							3	36
37	20	1							A	SPARE						20	1	38
39	20	1							B	SPARE						20	1	40
41	20	1							C	SPARE						20	1	42

LOAD CALCULATIONS

LOAD TYPE	VA / PHASE			TOTAL VA	DEMAND FACTOR	DIVERSIFIED LOAD
LIGHTING	A	B	C	0	1.00	0
RECEPTACLES	0	0	0	0	0.50	0
MOTORS & EQUIP	1702	1532	2070	5304	0.90	4774
KITCHEN EQUIP.	0	0	0	0	0.65	0
HEAT / AC	0	0	0	0	0.90	0
LARGEST MOTOR						0
TOTAL VA:						4,774

NOTES:

NOTES:

LOAD CALCULATIONS

LOAD TYPE	VA / PHASE			TOTAL VA	DEMAND FACTOR	DIVERSIFIED LOAD
LIGHTING	A	B	C	0	1.00	0
RECEPTACLES	0	0	0	0	0.50	0
MOTORS & EQUIP	1702	1532	2070	5304	0.90	4774
KITCHEN EQUIP.	0	0	0	0	0.65	0
HEAT / AC	0	0	0	0	0.90	0
LARGEST MOTOR					0.25	0
TOTAL AMPS:	13			TOTAL VA:		4,774

503 7TH ST. N
SUITE 200
FARGO, ND 58102
PHONE: 701.478.6336
FAX: 701.478.6340

MBN
ENGINEERING

MECHANICAL * ELECTRICAL * CIVIL

IMPROVE SPS/LOGISTICS
STORAGE ROOM HVAC
SYSTEMS
FARGO, ND

MBN JOB #: 13-027
REVISION DATE: 11-22-13

R6
E5.1