



June 29, 2009

**Addendum No. 002  
9-090702**

To: Plans and Specifications Holders List for:

**Re: District – 4, Resident Engineer & Data Center Building, Lee’s Summit, Missouri**

The bid opening date and time is hereby changed to July 16, 2009 at 10:00 A.M. local time.

This addendum also incorporates attached Panel Board detail, 5-pages.

This addendum also incorporates attached Panel Board Drawings. 3-pages.

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**FAILURE TO ACKNOWLEDGE RECEIPT OF ADDENDUM MAY SUBJECT BIDDER TO DISQUALIFICATION.**

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**DRAWING REVISIONS**

DRAWING S-103

A. Add to the Foundation Plan Note 5:

. . .with civil drawings. Elevation 100'-0" = 904.0', refer to Drawing C-101.

DRAWING A-601

A. Revise Room Finish Schedule:

EF – Elevated Floor, refer to Data Center Drawings.

Under Notes for Room 112 Communication Closet: Install ½" AC fire treated plywood on south wall

DRAWING P-101

A. Revise mounting height for U-1 to 22"

## DRAWING E-001

A. Add paragraph 17 to read:

17. TEMPERATURE CONTROL WIRING

The electrical contractor shall furnish and install low voltage temperature control wiring as indicated on the drawings and as required for control of the HVAC equipment. Coordinate requirements with Mechanical Contractor. For temperature control wiring description see Mechanical specifications. Temperature control wiring shall be installed in metal conduit where routed concealed in walls and where routed exposed subject to damage or weather.

## DRAWING E-003

A. Panel schedule

1. Panel EP1A: Revise the branch circuit breakers to "1-3P, 100A 1-3P, 35A 14-1P, 20A"
2. Panel P1A: Revise the branch circuit breakers to "1-3P, 80A 1-3P, 35A 1-3P 20A 11-1P, 20A"

B. Electrical One Line: Revise the One Line as indicated by clouding on the attached sketch SKE-1

C. KEYED NOTES: Add keyed notes 16 thru 19 as follows:

16. 6#14, 1/2"C TO GENERATOR ENGINE START CIRCUIT FOR ENGINE START AND TRANSFER SWITCH POSITION INDICATION, FOR ROUTING SEE SHEETS E-103 AND E-104.
17. 4#14, 1/2"C FOR GENERATOR ENGINE START CIRCUIT AND TRANSFER SWITCH POSITION INDICATION, FOR ROUTING SEE SHEET E-104
18. SURGE SUPPRESSION DEVICE (TVSS) AND ASSOCIATED WIRING, FOR DESCRIPTION SEE EQUIPMENT SPECIFICATION SHEET E-201. WIRING SHALL BE IN ACCORDANCE WITH THE NEC TAP RULES. FOR LOCATION SEE SHEET E-104.
19. FOR GENERATOR BLOCK HEATERS, FOR LOCATION SEE SHEET E-103

## REFERENCE DRAWING E-102

### A. FIRST FLOOR PLAN – LIGHTING

1. Room 101: Add a 4#12, 1#12G, ¾"C home run from the light fixture designated EP1A-1,3,5
2. Room 121: Add a 3#12, 1#12G, ¾"C home run from the light fixture designated PMMA1-1,3

## REFERENCE DRAWING E-103

### A. FIRST FLOOR PLAN – POWER

1. Room 102: Revise circuit designation on the home run "L1A- 33, 35" to "L1A-10, 12"
2. Room 105: Add ground conductor to home run EL1A-25, 27, 29
3. Room 106: Add keynote 28 to Panel UP1A.
4. Room 107:
  - a. Revise the keynote for the motorized damper (2 total) from "24" to "25" and add circuit designation 14 to the associated home run
  - b. B. Revise home run "EL1A-17, 19, 21" to "EL1a- 10, 12, 14"
5. Room 109: Add 2#12, 1#12G ¾"C home run from the receptacle.
6. Room 111: Move the double duplex receptacles and associated home run to Room 112.
7. Room 112; Move the duplex receptacle to room 111, located on the west wall.
8. Room 114: On the two junction boxes designated UH, revise the circuit designation to "31"
9. Room 117:
  - a. Add 2#12, 1#12G home run designated L1A-13 from the switch on the south wall.
  - b. On the home run L1A-9, 11, revise the circuit breaker rating to "50A".
  - c. Revise the circuit designation on the junction box designated UH-2 to "31"
10. Room 119: Delete the home run from the junction box designated "WH" and add circuit designation "38, 40" . Add 2#12, 1#12G, ¾"C from junction box to junction box in room 118.
11. Room 121:

- a. Add a 4' x  $\frac{3}{4}$ " board designated TTB and keynote 36. Locate on the East wall approximately 5' from north wall.
  - b. Add double duplex receptacle on the south edge of board with 2#12, 1#12G,  $\frac{3}{4}$ "C home run to PMMB-8.
12. Room 122:
- a. On the conduit stub in the south wall add keynote 34.
  - b. Add a wall phone outlet keynoted 35 on the South wall
13. Room 123: Revise the keynote on the motorized damper from "24" to "25"
14. Building Exterior: On the North side of building, revise the home run designation on the home run from the junction box keynoted 2 to 'CDP-12, 13 2P, 30A 4#10, 1#10G.  $\frac{3}{4}$ "C'

B. Notes:

- 1. In note 5 delete "1P, 20A"
- 2. In note 11, revise "SINGLE GANG COVER AND 1-GANG COVERPLATE" TO "DOUBLE BGANG COVER AND 2-GANG COVERPLATE".
- 3. Note 12: Revise note to read "12 4" SQUARE BY 2-1/2" DEEP BOX BY E.C. WITH  $\frac{3}{4}$ " CONDUIT STUBBED TO SPACE ABOVE CEILING, TWO GANG COVER AND 2-GANG TWO PORT COVER PLATE FOR DATA CABLES, DATA CABLES BY E.C.
- 4. In notes 21 and 23 revise "FIRE ALARM CONTRACTOR" to "FIRE SUPPRESSION CONTRACTOR"
- 5. To note 26, add "INSTALL ABOVE CONTROL ROOM CEILING"
- 6. In note 31, revise "DUAL" to "TELEPHONE AND".
- 7. Add notes 34 thru 36 as follows
  - 34. 4" CONDUIT SLEEVE THRU WALL BELOW RAISED FLOOR FOR TELEPHONE AND DATA CABLING.
  - 35. OUTLET BE E.C. WITH  $\frac{3}{4}$ " CONDUIT STUBBED DOWN INTO SPACE BELOW RAISED CONTROL ROOM FLOOR FOR WALL PHONE.
  - 36. 4' X 4' X  $\frac{3}{4}$ " FIRE RETARDANT PLYWOOD BACKBOARD BY E.C. FOR TELEPHONE TERMINAL EQUIPMENT, TELEPHONE TERMINAL EQUIPMENT BY TELEPHONE UTILITY.

## REFERENCE DRAWING E-104

### A. COMPUTER ROOM

1. Room 120
  - a. Indicate a TVSS unit keynoted 12 on the north wall East of ATS-2
  - b. Indicate the battery charger keynoted 11 with conduit routed below grade to generator and 2#12, 1#12G, ¾"C home run to PMMB-6. Locate on the North wall adjacent to the TVSS unit.
2. Room 121:
  - a. Add keynote 26 to room.
3. Room 122: Add keynote 26 to room.

### B. Building Exterior

1. On the west side of the building
  - a. Indicated the location of the service TVSS unit adjacent to the 1200 Amp main service switch.

Add panelboard schedules per the attached schedules

Add communication wiring floor plan AND ASSOCIATED NOTES per the attached sketches SKE-2 AND SKE-3.

Add specification "SECTION 16700 – COMMUNICATION CABLING AND TERMINATION EQUIPMENT" per the attached.

**END ADDENDUM NUMBER 2**

PANELBOARD: EL1A SECTION: 1

VOLTS (L-L): 208  
 VOLTS (L-N): 120  
 PHASE: 3  
 WIRE: 4  
 MLO: 150  
 MCB: \_\_\_\_\_  
 SOURCE: EP1A

MOUNTING: SURFACE  
 TYPE: NEMA 1  
 FEED THRU LUGS (Y/N): NO  
 SERIES RATED (Y/N): NO  
 SHUNT TRIP MAIN (Y/N): NO  
 MINIMUM AIC RATING: 10,000  
 SOURCE FEEDER AMPS: 150

BUS MATERIAL: ALUMINUM  
 TOP OR BOTTOM FEED?: BOTTOM  
 GROUND BUS: YES  
 BRANCH BKRS.: BOLT-ON  
 S. E. RATED (Y/N): NO  
 NEUTRAL RATING (%): 100  
 LOCATION: \_\_\_\_\_

CKT #	CIRCUIT BREAKER		LOAD SERVED	VA	PHASE LOADS			VA	LOAD SERVED	CIRCUIT BREAKER		CKT. #
	AMP	POLES			øA	øB	øC			POLES	AMP	
1	20	1	RECEPT.	1260	2520.0			1260	RECEPT.	1	20	2
3	20	1	RECEPT.	900		1800.0		900	RECEPT.	1	20	4
5	20	1	RECEPT.	900			1800.0	900	RECEPT.	1	20	6
7	20	1	RECEPT.	1260	2520.0			1260	RECEPT.	1	20	8
9	20	1	SPARE	0		1200.0		1200	MICROWAVE	1	20	10
11	20	1	RECEPT.	1260			1760.0	500	VEND.	1	20	12
13	20	1	RECEPT.	1080	1580.0			500	VEND.	1	20	14
15	20	1	RECEPT.	180		1380.0		1200	MICROWAVE	1	20	16
17	20	1	KITCHEN RECEPT.	1000			2440.0	1440	REFRIDGERATOR	1	20	18
19	20	1	KITCHEN RECEPT.	1000	2440.0			1440	REFRIDGERATOR	1	20	20
21	20	1	KITCHEN RECEPT.	1000		1696.0		696	EF 1 & CORE PUMP	1	20	22
23	20	1	RECEPT.	1440			1980.0	540	RECEPT.	1	20	24
25	20	1	COPIER	1200	3250.0			2050	EUH	2	20	26
27	20	1	COPIER	1200		3250.0		2050	-			28
29	20	1	PRINT/SCAN	300			2350.0	2050	EUH	2	20	30
31	15	1	UNIT HEATERS	804	2854.0			2050	-			32
33	20	1	SPARE	0		1550.0		1550	WALL HEATER	2	20	34
35	20	1	SPARE	0			1550.0	1550	-			36
57	20	1	SPARE	0	1550.0			1550	WALL HEATER	2	30	38
39	20	1	SPARE	0		1550.0		1550	-			40
41	20	1	SPARE	0			5.0	5	SPARE			42

CONNECTED VA: \_\_\_\_\_  
 CONNECTED AMPS: \_\_\_\_\_

øA	øB	øC
16714	12426	11885
139.3	103.6	99.0

DEMAND VA 41250  
 DEMAND AMPS 114.5

PANELBOARD: EPIA SECTION: 1

VOLTS (L-L): 480  
 VOLTS (L-N): 277  
 PHASE: 3  
 WIRE: 4  
 MLO: 100  
 MCB: \_\_\_\_\_  
 SOURCE: SERV. SW

MOUNTING: SURFACE  
 TYPE: NEMA 1  
 FEED THRU LUGS (Y/N): NO  
 SERIES RATED (Y/N): YES  
 SHUNT TRIP MAIN (Y/N): NO  
 MINIMUM AIC RATING: 14000  
 SOURCE FEEDER AMPS: 100

BUS MATERIAL: ALUMINUM  
 TOP OR BOTTOM FEED?: BOTTOM  
 GROUND BUS: YES  
 BRANCH BKRS.: BOLT-ON  
 S. E. RATED (Y/N): NO  
 NEUTRAL RATING (%): 100  
 LOCATION: RM 110

CKT #	CIRCUIT BREAKER		LOAD SERVED	VA	PHASE LOADS			VA	LOAD SERVED	CIRCUIT BREAKER		CKT #
	AMP	POLES			øA	øB	øC			POLES	AMP	
1	20	1	LIGHTING	2646	2646.0			0.0	SPARE	1	20	2
3	20	1	LIGHTING	3460		3460.0		0.0	SPARE	1	20	4
5	20	1	EGRESS LIGHTING	1282			1282.0	0.0	SPARE	1	20	6
7	20	1	SPARE	0	0.0			0.0	SPARE	1	20	8
9	20	1	SPARE	0		0.0		0.0	SPARE	1	20	10
11	20	1	SPARE	0			0.0	0.0	SPARE	1	20	12
13	100	3	PANEL EL1A	15027	22888.0			7861.0	AC-2	3	35	14
15	-	-	-	15027		22888.0		7861.0	-	-	-	16
17	-	-	-	15027			22888.0	7861.0	-	-	-	18
19	20	1	SPARE	0	0.0			0	SPARE	1	20	20

CONNECTED VA: 25534    26348    24170  
 CONNECTED AMPS: 92.2    95.1    87.3

DEMAND VA 44629  
 DEMAND CURRENT 62.0

PANELBOARD: L1A SECTION: 1

VOLTS (L-L): 208  
 VOLTS (L-N): 120  
 PHASE: 3  
 WIRE: 4  
 MLO: 100  
 MCB: \_\_\_\_\_  
 SOURCE: P1A

MOUNTING: SURFACE  
 TYPE: NEMA 1  
 FEED THRU LUGS (Y/N): NO  
 SERIES RATED (Y/N): NO  
 SHUNT TRIP MAIN (Y/N): NO  
 MINIMUM AIC RATING: 10,000  
 SOURCE FEEDER AMPS: 60

BUS MATERIAL: ALUMINUM  
 TOP OR BOTTOM FEED?: BOTTOM  
 GROUND BUS: YES  
 BRANCH BKRS.: BOLT-ON  
 S. E. RATED (Y/N): NO  
 NEUTRAL RATING (%): 100  
 LOCATION: RM 110

CIRCUIT BREAKER			PHASE LOADS								CIRCUIT BREAKER		
CKT #	AMP	POLES	LOAD SERVED	VA	∅A	∅B	∅C	VA	LOAD SERVED	POLES	AMP	CKT #	
1	20	1	WET SAW	1000	2656.0			1656	GARAGE DOOR	1	20	2	
3	20	1	RECEPT.	1080		2736.0		1656	GARAGE DOOR	1	20	4	
5	20	1	RECEPT.	900			2556.0	1656	GARAGE DOOR	1	20	6	
7	20	1	RECEPT.	900	2556.0			1656	GARAGE DOOR	1	20	8	
9	50	2	OVEN	6000		7550.0		1550	WALL HEATER	2	20	10	
11	-	-	-	6000			7550.0	1550	-	-	-	12	
13	20	1	EF-3	1176	1476.0			300	DAMPER	1	15	14	
15	20	1	SPARE	0		0.0		0	SPARE	1	20	16	
17	20	1	SPARE	0			0.0	0	SPARE	1	20	18	
19	20	1	SPARE	0	0.0			0	SPARE	1	20	20	

CONNECTED VA: 6688  
 CONNECTED AMPS: 55.7    85.7    84.2

DEMAND VA 17492  
 DEMAND CURRENT 48.6

PANELBOARD: PIA SECTION: 1

VOLTS (L-L): 480  
 VOLTS (L-N): 277  
 PHASE: 3  
 WIRE: 4  
 MLO: 100  
 MCB: \_\_\_\_\_  
 SOURCE: SERV. SW

MOUNTING: SURFACE  
 TYPE: NEMA 1  
 FEED THRU LUGS (Y/N): NO  
 SERIES RATED (Y/N): YES  
 SHUNT TRIP MAIN (Y/N): NO  
 MINIMUM AIC RATING: 14000  
 SOURCE FEEDER AMPS: 100

BUS MATERIAL: ALUMINUM  
 TOP OR BOTTOM FEED?: BOTTOM  
 GROUND BUS: YES  
 BRANCH BKRS.: BOLT-ON  
 S. E. RATED (Y/N): NO  
 NEUTRAL RATING (%): 100  
 LOCATION: RM 110

CKT #	CIRCUIT BREAKER		LOAD SERVED	VA	PHASE LOADS			VA	LOAD SERVED	CIRCUIT BREAKER		CKT #
	AMP	POLES			øA	øB	øC			POLES	AMP	
1	35	3	AC-1	7861	7861.0			0	LTS	1	20	2
3	-	-	-	7861		7861.0		0	SPARE	1	20	4
5	-	-	-	7861			7861.0	0	SPARE	1	20	6
7	20	3	EF-2	443	443.0			0	SPARE	1	20	8
9	-	-	-	443		443.0		0	SPARE	1	20	10
11	-	-	-	443			443.0	0	SPARE	1	20	12
13	20	1	SPARE	0	6845.0			6845	SPARE	1	20	14
15	20	1	SPARE	0		6845.0		6845	PANEL L1A	3	80	16
17	20	1	SPARE	0			6845.0	6845	-	-	-	18
19	20	1	SPARE	0	0.0			0	-	-	-	20

CONNECTED VA: 15149    15149    15149  
 CONNECTED AMPS: 54.7    54.7    54.7

DEMAND VA 44629  
 DEMAND CURRENT 53.7

PANELBOARD: UP1A SECTION: 1

VOLTS (L-L): 208  
 VOLTS (L-N): 120  
 PHASE: 3  
 WIRE: 4  
 MLO: 100  
 MCB: \_\_\_\_\_  
 SOURCE: P1A

MOUNTING: SURFACE  
 TYPE: NEMA 1  
 FEED THRU LUGS (Y/N): NO  
 SERIES RATED (Y/N): NO  
 SHUNT TRIP MAIN (Y/N): NO  
 MINIMUM AIC RATING: 10,000  
 SOURCE FEEDER AMPS: 60

BUS MATERIAL: ALUMINUM  
 TOP OR BOTTOM FEED?: BOTTOM  
 GROUND BUS: YES  
 BRANCH BKRS.: BOLT-ON  
 S. E. RATED (Y/N): NO  
 NEUTRAL RATING (%): 100  
 LOCATION: RM 110

CIRCUIT BREAKER			PHASE LOADS								CIRCUIT BREAKER		
CKT #	AMP	POLES	LOAD SERVED	VA	∅A	∅B	∅C	VA	LOAD SERVED	POLES	AMP	CKT #	
1	20	1	RECEPT.	360	720.0			360	RECEPT.	1	20	2	
3	20	1	RECEPT.	360		720.0		360	RECEPT.	1	20	4	
5	20	1	RECEPT.	360			720.0	360	COMM. CLOSET RECEPT.	1	20	6	
7	20	1	RECEPT.	360	1360.0			1000	COMM. CLOSET RECEPT.	1	20	8	
9	20	1	RECEPT.	360		720.0		360	COMM. CLOSET RECEPT.	1	20	10	
11	20	1	SPARE	6000			7550.0	1550	SPARE	1	20	12	
13	20	1	SPARE	0	300.0			300	SPARE	1	20	14	
15	20	1	SPARE	0		0.0		0	SPARE	1	20	16	
17	20	1	SPARE	0			0.0	0	SPARE	1	20	18	
19	20	1	SPARE	0	0.0			0	SPARE	1	20	20	

CONNECTED VA: 2380  
 CONNECTED AMPS: 19.8

DEMAND VA 4240  
 DEMAND CURRENT 11.8