DATE: January 24, 2025

DEPARTMENT OF GENERAL SERVICES
BUREAU OF CAPITAL PROJECT DESIGN MANAGEMENT
1800 HERR STREET
HARRISBURG, PENNSYLVANIA

ADDENDUM NO. 9

on

PROJECT NO. DGS C-0503-0027 PHASE 001
PROJECT TITLE - Danville State Hospital - Replace Steam Generation Equipment
PROFESSIONAL:
CJL Engineering
232 Horner St
Johnstown, Pennsylvania, 15902

If you submitted a bid prior to this Addendum being issued, your bid has been discarded and you must re-submit your bid(s) prior to the bid opening date and time.

ADMINISTRATIVE CHANGES – 4 ELECTRICAL CONSTRUCTION CONTRACT

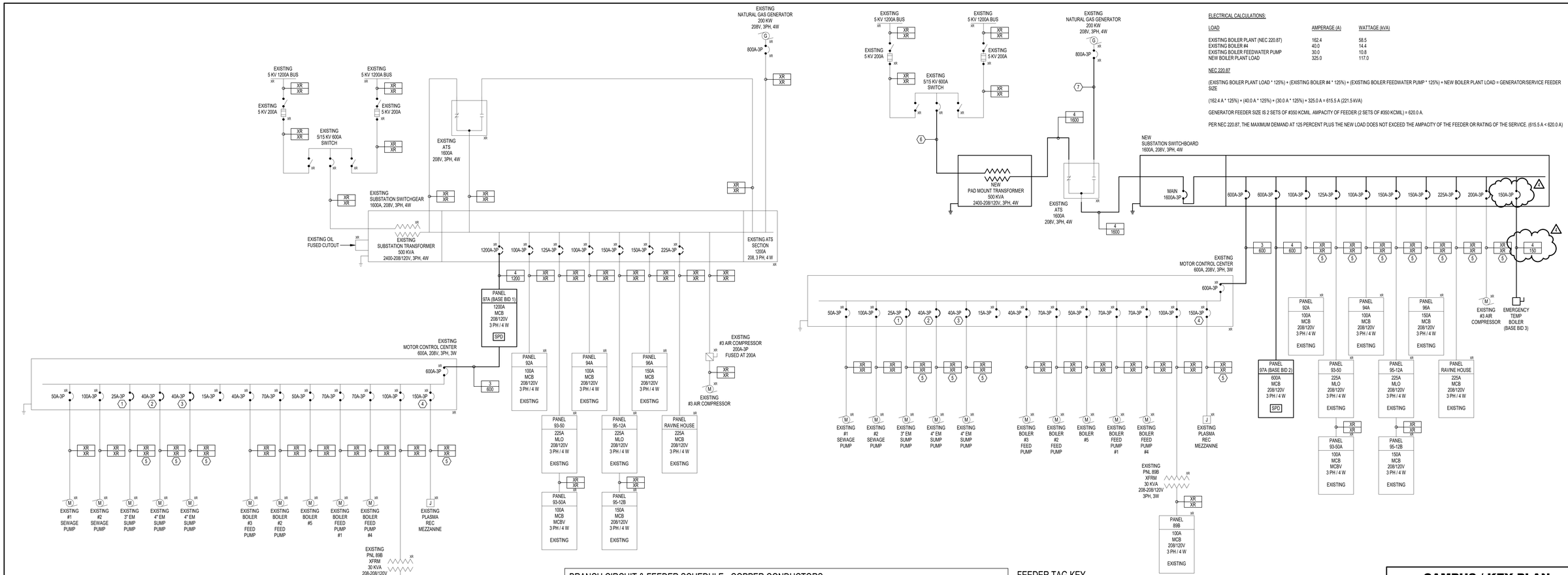
Item 1 - Drawing E-7, Riser Diagram – New (Base Bid 2) breaker and wire/conduit feeder sizing has been updated from 100A to 150A to match fused disconnect ratings of Temp Boiler Disconnect on sheet E-4. Drawing E-8, Switchboard: Substation Switchboard Schedule breaker frame and trip rating have been updated from 100A to 150A (trip rating) and 125A to 225A (frame size) to match fused disconnect ratings of Temp Boiler Disconnect on sheet E-4.

SPECIFICATION CHANGES – ALL CONTRACTS

Item 1 - N/A

DRAWING CHANGES – .4 ELECTRICAL CONSTRUCTION CONTRACT

Item 1 - E-7
Item 2 - E-8



1 E-7 RISER DIAGRAM - NEW (BASE BID 1)
1/8" = 1'-0"

ELECTRICAL CALCULATIONS:

LOAD	AMPERAGE (A)	WATTAGE (kVA)
EXISTING BOILER PLANT (NEC 220.87)	162.4	58.5
EXISTING BOILER #4	40.0	14.4
EXISTING BOILER FEEDWATER PUMP	30.0	10.8
NEW BOILER PLANT LOAD	325.0	117.0

NEC 220.87

(EXISTING BOILER PLANT LOAD * 125%) + (EXISTING BOILER #4 * 125%) + (EXISTING BOILER FEEDWATER PUMP * 125%) + NEW BOILER PLANT LOAD = GENERATOR/SERVICE FEEDER SIZE

(162.4 A * 125%) + (40.0 A * 125%) + (30.0 A * 125%) + 325.0 A = 615.5 A (221.5 kVA)

GENERATOR FEEDER SIZE IS 2 SETS OF #350 KCMIL. AMPACITY OF FEEDER (2 SETS OF #350 KCMIL) = 620.0 A.

PER NEC 220.87, THE MAXIMUM DEMAND AT 125 PERCENT PLUS THE NEW LOAD DOES NOT EXCEED THE AMPACITY OF THE FEEDER OR RATING OF THE SERVICE. (615.5 A < 620.0 A)

BRANCH CIRCUIT & FEEDER SCHEDULE - COPPER CONDUCTORS

SERVICE OCP RATING (AMPS)	TYPE 2 (1 PHASE- 3W)	TYPE 3 (3 PHASE - 3W)	TYPE 4 (3 PHASE - 4W)
20	2 #12, 1 #12 GND - 3/4"C	3 #12, 1 #12 GND - 3/4"C	4 #12, 1 #12 GND - 3/4"C
25	2 #10, 1 #10 GND - 3/4"C	3 #10, 1 #10 GND - 3/4"C	4 #10, 1 #10 GND - 3/4"C
30	2 #10, 1 #10 GND - 3/4"C	3 #10, 1 #10 GND - 3/4"C	4 #10, 1 #10 GND - 3/4"C
35	2 #8, 1 #10 GND - 3/4"C	3 #8, 1 #10 GND - 3/4"C	4 #8, 1 #10 GND - 1"C
40	2 #8, 1 #10 GND - 3/4"C	3 #8, 1 #10 GND - 3/4"C	4 #8, 1 #10 GND - 1"C
45	2 #6, 1 #10 GND - 3/4"C	3 #6, 1 #10 GND - 1"C	4 #6, 1 #10 GND - 1"C
50	2 #6, 1 #10 GND - 3/4"C	3 #6, 1 #10 GND - 1"C	4 #6, 1 #10 GND - 1"C
60	2 #4, 1 #10 GND - 3/4"C	3 #4, 1 #10 GND - 1"C	4 #4, 1 #10 GND - 1 1/4"C
70	2 #4, 1 #8 GND - 1"C	3 #4, 1 #8 GND - 1"C	4 #4, 1 #8 GND - 1 1/4"C
80	2 #3, 1 #8 GND - 1"C	3 #3, 1 #8 GND - 1 1/4"C	4 #3, 1 #8 GND - 1 1/4"C
90	2 #2, 1 #8 GND - 1"C	3 #2, 1 #8 GND - 1 1/4"C	4 #2, 1 #8 GND - 1 1/2"C
100	2 #1, 1 #8 GND - 1 1/4"C	3 #1, 1 #8 GND - 1 1/4"C	4 #1, 1 #8 GND - 1 1/2"C
110	2 #1, 1 #6 GND - 1 1/4"C	3 #1, 1 #6 GND - 1 1/4"C	4 #1, 1 #6 GND - 1 1/2"C
125	2 #1, 1 #6 GND - 1 1/4"C	3 #1, 1 #6 GND - 1 1/4"C	4 #1, 1 #6 GND - 1 1/2"C
150	2 #1/0, 1 #6 GND - 1 1/4"C	3 #1/0, 1 #6 GND - 1 1/2"C	4 #1/0, 1 #6 GND - 2"C
175	2 #2/0, 1 #6 GND - 1 1/2"C	3 #2/0, 1 #6 GND - 2"C	4 #2/0, 1 #6 GND - 2"C
200	2 #3/0, 1 #6 GND - 1 1/2"C	3 #3/0, 1 #6 GND - 2"C	4 #3/0, 1 #6 GND - 2"C
225	2 #4/0, 1 #4 GND - 2"C	3 #4/0, 1 #4 GND - 2"C	4 #4/0, 1 #4 GND - 2 1/2"C
250	2-250 KCMIL, 1 #4 GND - 2"C	3-250 KCMIL, 1 #4 GND - 2 1/2"C	4-250 KCMIL, 1 #4 GND - 2 1/2"C
300	2-350 KCMIL, 1 #4 GND - 2 1/2"C	3-350 KCMIL, 1 #4 GND - 3"C	4-350 KCMIL, 1 #4 GND - 3"C
350	2-500 KCMIL, 1 #3 GND - 3"C	3-500 KCMIL, 1 #3 GND - 3"C	4-500 KCMIL, 1 #3 GND - 3 1/2"C
400	2-600 KCMIL, 1 #3 GND - 3"C	3-600 KCMIL, 1 #3 GND - 3"C	3-600 KCMIL, 1 #3 GND - 4"C
450	2 SETS EACH: 2 #4/0, 1 #2 GND - 2"C	2 SETS EACH: 3 #4/0, 1 #2 GND - 2"C	2 SETS EACH: 4 #4/0, 1 #2 GND - 2 1/2"C
500	2 SETS EACH: 2-250 KCMIL, 1 #2 GND - 2"C	2 SETS EACH: 3-250 KCMIL, 1 #2 GND - 2 1/2"C	2 SETS EACH: 4-250 KCMIL, 1 #2 GND - 2 1/2"C
600	2 SETS EACH: 2-350 KCMIL, 1 #1 GND - 3"C	2 SETS EACH: 3-350 KCMIL, 1 #1 GND - 3"C	2 SETS EACH: 4-350 KCMIL, 1 #1 GND - 3 1/2"C
700	2 SETS EACH: 2-500 KCMIL, 1 #1/0 GND - 3"C	2 SETS EACH: 3-500 KCMIL, 1 #1/0 GND - 3"C	2 SETS EACH: 4-500 KCMIL, 1 #1/0 GND - 3 1/2"C
800	2 SETS EACH: 2-600 KCMIL, 1 #1/0 GND - 3"C	2 SETS EACH: 3-600 KCMIL, 1 #1/0 GND - 3 1/2"C	2 SETS EACH: 4-600 KCMIL, 1 #1/0 GND - 4"C
1000	3 SETS EACH: 2-500 KCMIL, 1 #2/0 GND - 3"C	3 SETS EACH: 3-500 KCMIL, 1 #2/0 GND - 3"C	3 SETS EACH: 4-500 KCMIL, 1 #2/0 GND - 3 1/2"C
1200	3 SETS EACH: 2-600 KCMIL, 1 #3/0 GND - 3"C	3 SETS EACH: 3-600 KCMIL, 1 #3/0 GND - 3 1/2"C	3 SETS EACH: 4-600 KCMIL, 1 #3/0 GND - 4"C
1600	4 SETS EACH: 2-600 KCMIL, 1 #4/0 GND - 3"C	4 SETS EACH: 3-600 KCMIL, 1 #4/0 GND - 3 1/2"C	4 SETS EACH: 4-600 KCMIL, 1 #4/0 GND - 4"C
2000	5 SETS EACH: 2-600 KCMIL, 1-250 KCMIL GND - 3"C	5 SETS EACH: 3-600 KCMIL, 1-250 KCMIL GND - 3 1/2"C	5 SETS EACH: 4-600 KCMIL, 1-250 KCMIL GND - 4"C
2500	6 SETS EACH: 2-600 KCMIL, 1-350 KCMIL GND - 3"C	6 SETS EACH: 3-600 KCMIL, 1-350 KCMIL GND - 3 1/2"C	6 SETS EACH: 4-600 KCMIL, 1-350 KCMIL GND - 4"C
3000	8 SETS EACH: 2-500 KCMIL, 1-500 KCMIL GND - 3"C	8 SETS EACH: 3-500 KCMIL, 1-500 KCMIL GND - 3"C	8 SETS EACH: 4-500 KCMIL, 1-500 KCMIL GND - 4"C
3500	9 SETS EACH: 2-600 KCMIL, 1 #3 GND - 3"C	9 SETS EACH: 3-600 KCMIL, 1 #3 GND - 3 1/2"C	9 SETS EACH: 4-600 KCMIL, 1 #3 GND - 4"C
4000	10 SETS EACH: 2-600 KCMIL, 1-500 KCMIL GND - 3"C	10 SETS EACH: 3-600 KCMIL, 1-500 KCMIL GND - 3 1/2"C	10 SETS EACH: 4-600 KCMIL, 1-500 KCMIL GND - 4"C

FEEDER TAG KEY

4 — NUMBER OF WIRES
0100 — WIRE AMPS

2 E-7 RISER DIAGRAM - NEW (BASE BID 2)
NO SCALE

GENERAL NOTES

1. CONFIRM ALL EXISTING FUSE SIZES IN EXISTING SUBSTATION SWITCHBOARD. MATCH NEW BREAKER SIZES TO EXISTING FUSE SIZES PRIOR TO SUBMISSION OF SUBSTATION SWITCHBOARD SUBMITTAL.

NUMBERED NOTES

1. DISCONNECT AND REMOVE EXISTING 15A-3P BREAKER. REPLACE EXISTING 15A-3P BREAKER WITH A NEW 25A-3P BREAKER. CONNECT EXISTING 3" EM SUMP PUMP TO NEW 25A-3P BREAKER.
2. DISCONNECT AND REMOVE EXISTING 50A-3P BREAKER. REPLACE EXISTING 50A-3P BREAKER WITH A NEW 40A-3P BREAKER. CONNECT EXISTING 4" EM SUMP PUMP TO NEW 40A-3P BREAKER.
3. PROVIDE NEW 40A-3P BREAKER IN EXISTING SPACE. CONNECT EXISTING 4" EM SUMP PUMP TO NEW 40A-3P BREAKER.
4. CONNECT EXISTING PLASMA MEZZANINE REC TO EXISTING 150A-3P BREAKER.
5. PROVIDE CONDUCTOR AND CONDUIT EXTENSIONS TO EXTEND EXISTING CIRCUIT TO NEW CIRCUIT BREAKER LOCATION. MATCH EXISTING CONDUCTOR AND CONDUIT SIZES. PROVIDE CORE DRILLING OF EXISTING FLOOR TO STUB CONDUITS INTO EXISTING MOTOR CONTROL CENTER OR NEW SUBSTATION SWITCHBOARD.
6. PROVIDE CONDUIT AND CONDUCTOR EXTENSIONS FROM EXISTING G&W SWITCH TO NEW EXTERIOR SUBSTATION TRANSFROMER. MATCH EXISTING CONDUCTOR AND CONDUIT SIZES. PROVIDE DUCTBANK AS INDICATED ON DUCTBANK DETAIL.
7. PROVIDE CONDUIT AND CONDUCTOR EXTENSIONS FROM EXISTING GENERATOR TO EXISTING AUTOMATIC TRANSFER SWITCH. MATCH EXISTING CONDUCTOR AND CONDUIT SIZES.

BASE BID 1:

1. INSTALLATION OF POWER TO NEW BOILERS B-2, B-3, & B-6 WITH ASSOCIATED WIRING AND CONDUIT.
2. INSTALLATION OF POWER TO NEW BOILER FEED PUMPS AND NEW CONDENSATE TRANSFER PUMPS WITH ASSOCIATED WIRING AND CONDUIT.
3. DEMOLITION OF EXISTING BOILER CONTROL PANELS AND INSTALLATION OF POWER TO NEW BOILER CONTROL PANELS.
4. INSTALLATION OF POWER TO NEW ROLLUP GARAGE DOORS TO SERVE NEW BOILERS B-2&3.
5. INSTALLATION OF AN UNITERRUPTIBLE POWER SUPPLY (UPS) TO BACK UP THE MASTER CONTROL PANEL, BOILER CONTROL PANEL, NETWORK COMPUTER SYSTEM.
6. DEMOLITION OF EXISTING MOTOR CONTROL CENTER (MCC) AND EXTENSION OF EXISTING CIRCUITS TO NEW PANELBOARD AND/OR EXISTING MCC THAT IS TO REMAIN.

BASE BID 2:

1. ALL WORK DESCRIBED IN BASE BID 1.
2. DEMOLITION OF EXISTING SUBSTATION SWITCHBOARD AND INSTALLATION OF NEW SUBSTATION SWITCHBOARD, INCLUDING EXTENSION OF EXISTING CIRCUITS PREVIOUSLY FED FROM EXISTING SUBSTATION SWITCHBOARD.
3. DEMOLITION OF EXISTING SUBSTATION TRANSFORMER AND INSTALLATION OF NEW LIQUID FILLED PAD MOUNTED TRANSFROMER.

BASE BID 3:

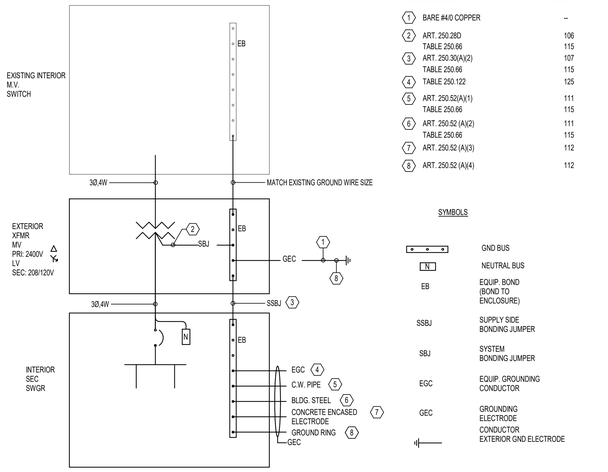
1. ALL WORK DESCRIBED IN BASE BID 2.
2. INSTALLATION OF EMERGENCY PORT (FUSED DISCONNECT SWITCH) FOR TEMPORARY BOILER.

BASE BID 4:

1. ALL WORK DESCRIBED IN BASE BID 3.
2. WIRING AND CONNECTION OF NEW CONTROL PANELS WITH HIGH LEVEL ALARM FOR SEWER PUMPS IN BASEMENT.
3. WIRING AND CONNECTION OF NEW VFDS FOR EXISTING BOILER FEED PUMPS.
4. DEMOLITION OF EXISTING FIRE ALARM SYSTEM AND INSTALLATION OF NEW FIRE ALARM SYSTEM.

BASE BID 5:

1. ALL WORK DESCRIBED IN BASE BID 4.
2. DEMOLITION OF POWER TO EXISTING FUEL PUMP ASSEMBLY AND INSTALLATION OF POWER TO NEW FUEL PUMP ASSEMBLY.



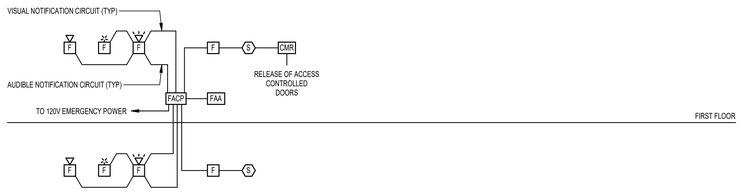
NOTES-NEC 2011

		PAGE
1	BARE #4/0 COPPER	--
2	ART. 250.28D	106
	TABLE 250.66	115
3	ART. 250.30(A)(2)	107
	TABLE 250.66	115
4	TABLE 250.122	125
5	ART. 250.52(A)(1)	111
	TABLE 250.66	115
6	ART. 250.52 (A)(2)	111
	TABLE 250.66	115
7	ART. 250.52 (A)(3)	112
8	ART. 250.52 (A)(4)	112

SYMBOLS

- GND BUS
- N — NEUTRAL BUS
- EB — EQUIP. BOND (BOND TO ENCLOSURE)
- SSBJ — SUPPLY SIDE BONDING JUMPER
- SBJ — SYSTEM BONDING JUMPER
- EGC — EQUIP. GROUNDING CONDUCTOR
- GEC — GROUNDING ELECTRODE CONDUCTOR
- EXTERIOR GND ELECTRODE

3 E-7 GROUNDING SYSTEM DETAIL
NO SCALE



NOTES

1. REFER TO FLOOR PLAN FOR QUANTITY AND LOCATION OF SYSTEM COMPONENTS. EXACT ARRANGEMENT AND QUANTITY OF DEVICES SHALL BE INDICATED ON THE SHOP DRAWINGS. PROVIDE COMPLETE RISER DIAGRAM AS PART OF SHOP DRAWINGS. COORDINATE WITH OWNER'S REPRESENTATIVE AND FIRE MARSHALL.
2. PROVIDE WIRING PER MANUFACTURER'S RECOMMENDATION.
3. CANDELA RATING SHALL BE PER NFPA 72 / ADAAG REQUIREMENTS.
4. ALL FIRE ALARM WIRING SHALL BE IN 3/4"C (MINIMUM) OR MC CABLE.
5. DO NOT LOAD ANY CIRCUIT BEYOND 80% OF RATED CAPACITY. SUBMIT CALCULATIONS TO SUBSTANTIATE. ADD ADDITIONAL CIRCUITS AS NECESSARY.
6. PROVIDE CONDUIT SLEEVES WITH ESCUTCHEON PLATES WHERE WIRING PASSES THROUGH WALLS, FLOORS, OR CEILINGS.
7. ALL VISUAL AND AUDIO DEVICES SHALL BE SYNCHRONIZED.
8. PROVIDE EXTENDER PANELS AND BOOSTER PANELS AS REQUIRED TO SUPPLEMENT THE FIRE ALARM SYSTEM.

4 E-7 FIRE ALARM RISER DIAGRAM
NO SCALE

CAMPUS / KEY PLAN

4	ADDENDUM 9 - 1/23/2025		

RECORD REVISIONS

CONSTRUCTION DOCUMENTS

COMMONWEALTH OF PENNSYLVANIA — TIMOTHY C. BERTOLINO — ENGINEER — PE-082514 — PROFESSIONAL

SIGNATURE 10-14-2024 DATE

CJL ENGINEERING
232 Horner Street
Johnstown, PA 15902
ph: (814) 536-1651, fax: (814) 536-5732

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF GENERAL SERVICES
HARRISBURG, PENNSYLVANIA

D.G.S. PROJECT No.
DGS C-0503-0027 Phase 001

Danville State Hospital
Replace Steam Generation Equipment

RISER DIAGRAM - NEW

VERIFY SCALE

BAR IS ONE (1) INCH LONG ON ORIGINAL DRAWING.

IF BAR IS NOT ONE (1) INCH LONG ADJUST SCALE ACCORDINGLY.

CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS. VARIANCE FROM CONTRACT DOCUMENTS NOT PERMITTED WITHOUT PROFESSIONAL & BUREAU OF CONSTRUCTION APPROVAL.

DRAWN BY	DATE	SHEET No.
D. BOYER	10-14-2024	E-7
CHECKED BY	SCALE	
T. BERTOLINO	As indicated	

1/23/2025 8:26:12 AM

SWITCHBOARD: SUBSTATION SWITCHBOARD

LOCATION:
SUPPLIED FROM: EXISTING AUTOMATIC TRANSFER SWITCH

VOLTAGE: 120/208 WYE
PHASES: 3
WIRES: 4

A.I.C. RATING: 65,000
MCB RATING: 1600 A

BASE BID 2

CKT	CIRCUIT DESCRIPTION	# OF POLES	FRAME SIZE	TRIP RATING	LOAD	WIRE SIZE	Remarks
1	EXISTING MOTOR CONTROL CENTER	3	600 A	600 A	0.00	SEE RISER DIAGRAM	
2	NEW PNL 97A	3	600 A	600 A	117.11	SEE RISER DIAGRAM	
3	EXISTING PNL 92A	3	125 A	100 A	2.00	SEE RISER DIAGRAM	
4	EXISTING PNL 93-50	3	125 A	125 A	0.00	SEE RISER DIAGRAM	
5	EXISTING PNL 94A	3	125 A	100 A	0.00	SEE RISER DIAGRAM	
6	EXISTING PNL 95-12A	3	225 A	150 A	0.00	SEE RISER DIAGRAM	
7	EXISTING PNL 96A	3	225 A	150 A	0.00	SEE RISER DIAGRAM	
8	EXISTING PNL RAVINE HOUSE	3	225 A	225 A	0.00	SEE RISER DIAGRAM	
9	EXISTING #3 AIR COMPRESSOR	3	225 A	200 A	0.00	SEE RISER DIAGRAM	
10	NEW EMERGENCY TEMP BOILER DISCONNECT	3	225 A	150 A	0.00	SEE RISER DIAGRAM	BASE BID 3
11	SPARE	1	125 A	100 A	0.00		
12	SPARE	1	125 A	100 A	0.00		
13	SPARE	1	60 A	60 A	0.00		
14	SPARE	1	60 A	60 A	0.00		
15	SPACE	1	--	--	--		
16	SPACE	1	--	--	--		
17	SPACE	1	--	--	--		
18	SPACE	1	--	--	--		
				TOTAL CONNECTED LOAD:	119.11 kVA		
				TOTAL AMPS:	331 A		

SWITCHBOARD: EXISTING MOTOR CONTROL...

LOCATION:
SUPPLIED FROM: SUBSTATION SWITCHBOARD

VOLTAGE: 120/208 WYE
PHASES: 3
WIRES: 4

A.I.C. RATING: EXISTING
MCB RATING: 600 A

Notes: EXISTING TO REMAIN

CKT	CIRCUIT DESCRIPTION	# OF POLES	FRAME SIZE	TRIP RATING	LOAD	WIRE SIZE	Remarks
1	EXISTING #1 SEWAGE PUMP	3	60 A	50 A	0.00	SEE RISER DIAGRAM	
2	EXISTING #2 SEWAGE PUMP	3	125 A	100 A	0.00	SEE RISER DIAGRAM	
3	EXISTING 3" EM SUMP PUMP	3	30 A	25 A	0.00	SEE RISER DIAGRAM	
4	EXISTING 4" EM SUMP PUMP	3	60 A	40 A	0.00	SEE RISER DIAGRAM	
5	EXISTING 4" EM SUMP PUMP	3	60 A	40 A	0.00	SEE RISER DIAGRAM	
6	SPARE	3	15 A	15 A	0.00		
7	EXISTING BOILER #3 FEED PUMP	3	60 A	40 A	0.00	SEE RISER DIAGRAM	
8	EXISTING BOILER #2 FEED PUMP	3	125 A	70 A	0.00	SEE RISER DIAGRAM	
9	EXISTING BOILER #5	3	60 A	50 A	0.00	SEE RISER DIAGRAM	
10	EXISTING BOILER FEED PUMP #1	3	125 A	70 A	0.00	SEE RISER DIAGRAM	
11	EXISTING BOILER FEED PUMP #4	3	125 A	70 A	0.00	SEE RISER DIAGRAM	
12	EXISTING PNL 89B TRANSFROMER	3	125 A	100 A	0.00	SEE RISER DIAGRAM	
13	EXISTING PLASMA REC MEZZANINE	3	225 A	150 A	0.00	SEE RISER DIAGRAM	
				TOTAL CONNECTED LOAD:	0.00 kVA		
				TOTAL AMPS:	0 A		

PANEL SCHEDULE
PNL 97A

BASE BID 2

LOCATION:
MOUNTING: SURFACE
SUPPLY FROM: SUBSTATION SWITCHBOARD
ENCLOSURE: TYPE 1
POLE SPACES: 42

VOLTAGE: 120/208 WYE
PHASES: 3
WIRES: 4
AIC RATING: 42,000
MAIN TYPE: MCB
BUS RATING: 600 A
MCB RATING: 600 A

CKT	CIRCUIT DESCRIPTION	WIRE SIZE	RATING	# OF POLES	A		B		C		# OF POLES	RATING	WIRE SIZE	CIRCUIT DESCRIPTION	CKT
1					8.97	8.97									2
3	NEW BOILER - 2	4 #1, 1 #8 EGC - 1 1/2"C	100 A	3			8.97	8.97			3	100 A	4 #1, 1 #8 EGC - 1 1/2"C	NEW BOILER - 3	4
5									8.97	8.97					6
7					2.00	5.54									8
9	NEW BOILER - 6	(4) #10, (1) #10 EGC - 3/4"C	30 A	3			2.00	5.54			3	60 A	(4) #4, (1) #10 EGC - 1 1/4"C	NEW FEED WATER PUMP #1	10
11									2.00	5.54					12
13					5.54	5.54									14
15	NEW FEED WATER PUMP #2	(4) #4, (1) #10 EGC - 1 1/4"C	60 A	3			5.54	5.54			3	60 A	(4) #4, (1) #10 EGC - 1 1/4"C	NEW FEED WATER PUMP #3	16
17									5.54	5.54					18
19					0.90	0.90									20
21	NEW TRANSFER PUMP #1	(4) #12, (1) #12 EGC - 3/4"C	20 A	3			0.90	0.90			3	20 A	(4) #12, (1) #12 EGC - 3/4"C	NEW TRANSFER PUMP #2	22
23									0.90	0.90					24
25	NEW GARAGE DOOR #2	(2) #12, (1) #12 EGC - 3/4"C	20 A	1	1.00	1.00					1	20 A	(2) #12, (1) #12 EGC - 3/4"C	NEW GARAGE DOOR #1	26
27							0.00	0.00							28
29	SPARE	--	20 A	3					0.00	0.00	3	20 A	--	SPARE	30
31					0.00	0.00									32
33							0.00	0.00							34
35	SPARE	--	20 A	3					0.00	0.00	3	20 A	--	SPARE	36
37					0.00	0.00									38
39	SPACE	--	--	1			--	--			1	--	--	SPACE	40
41	SPACE	--	--	1					--	--	1	--	--	SPACE	42
			TOTAL CONNECTED APPARENT LOAD:		40.37 kVA		38.37 kVA		38.37 kVA						
			TOTAL CONNECTED AMPS:		336 A		320 A		320 A						
			TOTAL CONNECTED AMPS:		325 A										

PANEL SCHEDULE
PNL 92A

EXISTING TO REMAIN

LOCATION:
MOUNTING: SURFACE
SUPPLY FROM: SUBSTATION SWITCHBOARD
ENCLOSURE: TYPE 1
POLE SPACES: 30

VOLTAGE: 120/208 WYE
PHASES: 3
WIRES: 4
AIC RATING: EXISTING
MAIN TYPE: MCB
BUS RATING: 225 A
MCB RATING: 225 A

CKT	CIRCUIT DESCRIPTION	WIRE SIZE	RATING	# OF POLES	A		B		C		# OF POLES	RATING	WIRE SIZE	CIRCUIT DESCRIPTION	CKT
1					0.00	0.00									2
3	EXISTING WELDER RECEPT. WORK SHOP	--	50 A	3			0.00	0.00			3	20 A	--	EXISTING DRILL LOCAL DISCONNECT #92-A-4	4
5									0.00	0.00					6
7					0.00	0.00									8
9	EXISTING MILLING MACHINE LOCAL DISCONNECT #92-A-3	--	20 A	3			0.00	0.00			3	20 A	--	EXISTING HENDEY LATHE LOCAL DISCONNECT #92-A-4	10
11									0.00	0.00					12
13					0.00	0.00					1	20 A	--	EXISTING PWR STRIP FRONT OFF	14
15	EXISTING OVERHEAD GARAGE DOOR RM 1002	--	20 A	3			0.00	0.00			2	20 A	--	EXISTING OFFICE AC REC	16
17									0.00	0.00					18
19	EXIST. REC ON SIDE OF PNL/MW	--	20 A	1	0.00	0.00					1	20 A	--	EXISTING CONTROL PNL OFFICE	20
21	EXISTING LIGHT AT LATHE	--	20 A	1			0.00	0.00			2	50 A	--	EXISTING ELECTRIC RANGE	22
23	EXISTING CONTROL PNL OFFICE	--	20 A	1					0.00	0.00					24
25	EXISTING SECURITY CAMERAS	--	20 A	1	0.00	0.00									26
27	EXISTING RECS BY OFF WINDOW	--	20 A	1			0.00	0.00			3	100 A	--	EXISTING POWER PLANT STORAGE PANEL	28
29	UPS	(2) #10, (1) #10 EGC - 3/4"C	30 A	1					2.00	0.00					30
		TOTAL CONNECTED APPARENT LOAD:			0.00 kVA		0.00 kVA		2.00 kVA						
		TOTAL CONNECTED AMPS:			0 A		0 A		17 A						
		TOTAL CONNECTED AMPS:			6 A										

PANEL SCHEDULE
PNL 97A

BASE BID 1

LOCATION:
MOUNTING: SURFACE
SUPPLY FROM:
ENCLOSURE: TYPE 1
POLE SPACES: 42

VOLTAGE: 120/208 WYE
PHASES: 3
WIRES: 4
AIC RATING: 42,000
MAIN TYPE: MCB
BUS RATING: 1200 A
MCB RATING: 1200 A

CKT	CIRCUIT DESCRIPTION	WIRE SIZE	RATING	# OF POLES	A		B		C		# OF POLES	RATING	WIRE SIZE	CIRCUIT DESCRIPTION	CKT
1					8.97	8.97									2
3	NEW BOILER - 2	4 #1, 1 #8 EGC - 1 1/2"C	100 A	3			8.97	8.97			3	100 A	4 #1, 1 #8 EGC - 1 1/2"C	NEW BOILER - 3	4
5									8.97	8.97					6
7					2.00	5.54									8
9	NEW BOILER - 6	(4) #10, (1) #10 EGC - 3/4"C	30 A	3			2.00	5.54			3	60 A	(4) #4, (1) #10 EGC - 1 1/4"C	NEW FEED WATER PUMP #1	10
11									2.00	5.54					12
13					5.54	5.54									14
15	NEW FEED WATER PUMP #2	(4) #4, (1) #10 EGC - 1 1/4"C	60 A	3			5.54	5.54			3	60 A	(4) #4, (1) #10 EGC - 1 1/4"C	NEW FEED WATER PUMP #3	16
17									5.54	5.54					18
19					0.90	0.90									20
21	NEW TRANSFER PUMP #1	(4) #12, (1) #12 EGC - 3/4"C	20 A	3			0.90	0.90			3	20 A	(4) #12, (1) #12 EGC - 3/4"C	NEW TRANSFER PUMP #2	22
23									0.90	0.90					24
25	NEW GARAGE DOOR #2	(2) #12, (1) #12 EGC - 3/4"C	20 A	1	1.00	1.00					1	20 A	(2) #12, (1) #12 EGC - 3/4"C	NEW GARAGE DOOR #1	26
27							0.00	0.00							28
29	SPARE	--	20 A	3					0.00	0.00	3	20 A	--	SPARE	30
31					0.00	0.00									32
33							0.00	0.00							34
35	SPARE	--	20 A	3					0.00	0.00	3	600 A	SEE RISER DIAGRAM	EXISTING MOTOR CONTROL CENTER	36
37					0.00	0.00									38
39	SPACE	--	--	1			--	--			1	--	--	SPACE	40
41	SPACE	--	--	1					--	--	1	--	--	SPACE	42
		TOTAL CONNECTED APPARENT LOAD:			40.37 kVA		38.37 kVA		38.37 kVA						
		TOTAL CONNECTED AMPS:			336 A		320 A		320 A						
		TOTAL CONNECTED AMPS:			325 A										

BASE BID 1:

1. INSTALLATION OF POWER TO NEW BOILERS B-2, B-3, & B-6 WITH ASSOCIATED WIRING AND CONDUIT.
2. INSTALLATION OF POWER TO NEW BOILER FEED PUMPS AND NEW CONDENSATE TRANSFER PUMPS WITH ASSOCIATED WIRING AND CONDUIT.
3. DEMOLITION OF EXISTING BOILER CONTROL PANELS AND INSTALLATION OF POWER TO NEW BOILER CONTROL PANELS.
4. INSTALLATION OF POWER TO NEW ROLLUP GARAGE DOORS TO SERVE NEW BOILERS B-2&3.
5. INSTALLATION OF AN UNITERRUPTIBLE POWER SUPPLY (UPS) TO BACK UP THE MASTER CONTROL PANEL, BOILER CONTROL PANEL, NETWORK COMPUTER SYSTEM.
6. DEMOLITION OF EXISTING MOTOR CONTROL CENTER (MCC) AND EXTENSION OF EXISTING CIRCUITS TO NEW PANELBOARD AND/OR EXISTING MCC THAT IS TO REMAIN.

BASE BID 2:

1. ALL WORK DESCRIBED IN BASE BID 1.
2. DEMOLITION OF EXISTING SUBSTATION SWITCHBOARD AND INSTALLATION OF NEW SUBSTATION SWITCHBOARD, INCLUDING EXTENSION OF EXISTING CIRCUITS PREVIOUSLY FED FROM EXISTING SUBSTATION SWITCHBOARD.
3. DEMOLITION OF EXISTING SUBSTATION TRANSFORMER AND INSTALLATION OF NEW LIQUID FILLED PAD MOUNTED TRANSFROMER.

BASE BID 3:

1. ALL WORK DESCRIBED IN BASE BID 2.
2. INSTALLATION OF EMERGENCY PORT (FUSED DISCONNECT SWITCH) FOR TEMPORARY BOILER.

BASE BID 4:

1. ALL WORK DESCRIBED IN BASE BID 3.
2. WIRING AND CONNECTION OF NEW CONTROL PANELS WITH HIGH LEVEL ALARM FOR SEWER PUMPS IN BASEMENT.
3. WIRING AND CONNECTION OF NEW VFDS FOR EXISTING BOILER FEED PUMPS.
4. DEMOLITION OF EXISTING FIRE ALARM SYSTEM AND INSTALLATION OF NEW FIRE ALARM SYSTEM.

BASE BID 5:

1. ALL WORK DESCRIBED IN BASE BID 4.
2. DEMOLITION OF POWER TO EXISTING FUEL PUMP ASSEMBLY AND INSTALLATION OF POWER TO NEW FUEL PUMP ASSEMBLY.

CAMPUS / KEY PLAN

4	ADDENDUM 9 - 1/23/2025	

RECORD REVISIONS

CONSTRUCTION DOCUMENTS

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF GENERAL SERVICES
TIMOTHY C. BERTOLINO
ENGINEER
PE-062314
PROFESSIONAL
PENNSYLVANIA

Timothy C. Bertolino 10-14-2024
SIGNATURE DATE

CJL ENGINEERING
232 Horner Street
Johnstown, PA 15902
ph: (814) 536-1651, fax: (814) 536-5732

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF GENERAL SERVICES
HARRISBURG, PENNSYLVANIA

D.G.S. PROJECT No.
DGS C-0503-0027 Phase 001

Danville State Hospital
Replace Steam Generation Equipment

SCHEDULES

VERIFY SCALE

BAR IS ONE (1) INCH LONG ON ORIGINAL DRAWING.
0 1
IF BAR IS NOT ONE (1) INCH LONG ADJUST SCALE ACCORDINGLY.

CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS. VARIANCE FROM CONTRACT DOCUMENTS NOT PERMITTED WITHOUT PROFESSIONAL & BUREAU OF CONSTRUCTION APPROVAL

DRAWN BY D. BOYER	DATE 10-14-2024	SHEET No. E-8
CHECKED BY T. BERTOLINO	SCALE NO SCALE	

1/23/2025 8:26:12 AM