

1 **TABLE OF CONTENTS TECHNICAL SPECIFICATIONS**

2 **VOLUME 3**

3
4 Division Project No. **21E2R**

Pages Thru

5
6 **TITLE PAGE**

1

7 **TABLE OF CONTENTS**

TC-3

8
9 **DIVISION 23 – HEATING, VENTILATING AND AIR CONDITIONING**

Section	Title	Pages
11	23 05 00 Common Work Results for HVAC	23 05 00-7
12	23 05 13 Common Motor Requirements for HVAC Equipment	23 05 13-4
13	23 05 14 Variable Frequency Drives	23 05 14-6
14	23 05 15 Piping Specialties	23 05 15-6
15	23 05 23 General Duty Valves for HVAC	23 05 23-7
16	23 05 29 Hangers and Supports for HVAC Piping and Equipment	23 05 29-6
17	23 05 48 Vibration and Seismic Controls for HVAC Piping and Equipment	23 05 48-5
18	23 05 93 Testing, Adjusting and Balancing for HVAC	23 05 93-6
19	23 07 00 HVAC Insulation	23 07 00-11
20	23 08 00 Commissioning of HVAC	23 08 00-150
21	23 09 14 Pneumatic and Electric Controls	23 09 14-20
22	23 09 15 Direct Digital Control Input/Output Point Summary Tables	23 09 15-10
23	23 09 24 Direct Digital Control System for HVAC (Informational Purposes Only)	23 09 24-15
24	23 09 93 Sequence of Operation for HVAC Controls	23 09 93-14
25	23 11 00 Facility Fuel Piping	23 11 00-7
26	23 21 13 Hydronic Piping	23 21 13-12
27	23 21 23 Hydronic Pumps	23 21 23-3
28	23 22 13 Steam and Condensate Heating Piping	23 22 13-8
29	23 22 23 Steam Condensate Pumps	23 22 23-3
30	23 25 00 HVAC Water Treatment	23 25 00-6
31	23 31 00 HVAC Ducts and Casings	23 31 00-9
32	23 33 00 Air Duct Accessories	23 33 00-5
33	23 34 00 HVAC Fans	23 34 00-3
34	23 36 00 Air Terminal Units	23 36 00-4
35	23 37 13 Diffusers, Registers and Grilles	23 37 13-2
36	23 41 00 Particulate Air Filtration	23 41 00-3
37	23 57 00 Heat Exchangers for HVAC	23 57 00-2
38	23 72 00 Air-To-Air Energy Recovery Equipment	23 72 00-4
39	23 73 12 Air Handling Unit Coils	23 73 12-3
40	23 73 13 Modular Central-Station Air-Handling Units	23 73 13-6
41	23 82 00 Heating and Cooling Terminal Units	23 82 00-4

42
43 **DRAWINGS – Bound Separately**

Title	Sheets Thru
44 Title Sheet	T000
46	
47 Civil	
48 Civil Notes & Details	C001
49 Existing Conditions	C100
50 Parking & Pedestrian Routing Plan	C101
51 Temporary Fencing and Removals Plan – South	C102
52 Temporary Fencing and Removals Plan – North	C103
53 Erosion Control Plan – South	C104
54 Erosion Control Plan – North	C105
55 Chilled Water Plan & Profile	C200
56 Site Restoration Plan – South	C400
57 Site Restoration Plan – South	C401

1		
2	Architectural	
3	Life Safety Plans	A000
4	Phasing Plan	A001
5	First Floor Demolition Plan	A101
6	First Floor Reflected Ceiling Demolition Plan	A111
7	Second Floor Reflected Ceiling Demolition Plan	A112
8	Third Floor Reflected Ceiling Demolition Plan	A113
9	First Floor New Work Plan	A201
10	Second Floor New Work Plan	A202
11	Third Floor New Work Plan	A203
12	Roof Plan	A204
13	Exterior Elevations	A205
14	First Floor Reflected Ceiling New Work Plan	A211
15	Second Floor Reflected Ceiling New Work Plan	A212
16	Third Floor Reflected Ceiling New Work Plan	A213
17	Enlarged Plans & Toilet Room Elevations	A400
18	Details	A500
19		
20	Structural	
21	Mechanical Support Framing Plan and Schedules	S1.01
22	Mechanical Duct and Pipe Support Framing Plans and Sections	S1.02
23		
24	Plumbing	
25	Symbols & Abbreviations, Details & Schedules – Plumbing	P000
26	Basement Demolition Plan – Plumbing	P100
27	First Floor Demolition Plan – Plumbing	P101
28	Second Floor Demolition Plan – Plumbing	P102
29	Third Floor Demolition Plan – Plumbing	P103
30	Basement Floor Plan – Plumbing	P200
31	First Floor Plan – Plumbing	P201
32	Second Floor Plan – Plumbing	P202
33	Third Floor Plan – Plumbing	P203
34		
35	HVAC	
36	Symbols & Abbreviations – HVAC	M000
37	First Floor Demolition Plan – Ductwork	M101
38	Second Floor Demolition Plan – Ductwork	M102
39	Third Floor Demolition Plan – Ductwork	M103
40	Roof Demolition Plan – Ductwork	M104
41	Basement Demolition Plan – Piping	M105
42	First Floor Demolition Plan – Piping	M106
43	Second Floor Demolition Plan – Piping	M107
44	Third Floor Demolition Plan – Piping	M108
45	Roof Demolition Plan – Piping	M109
46	First Floor New Work Plan – Ductwork	M201
47	Second Floor New Work Plan – Ductwork	M202
48	Third Floor New Work Plan – Ductwork	M203
49	Roof New Work Plan – Ductwork	M204
50	Basement New Work Plan – Piping	M205
51	First Floor New Work Plan – Piping	M206
52	Second Floor New Work Plan – Piping	M207
53	Third Floor New Work Plan – Piping	M208
54	Roof New Work Plan – Piping	M209
55	Sections 1 – HVAC	M401
56	Sections 2 – HVAC	M402
57	Sections 3 – HVAC	M403

1	Flow Diagram 1 – HVAC	M501
2	Flow Diagram 2 – HVAC	M502
3	Flow Diagram 3 – HVAC	M503
4	Schedules 1 – HVAC	M801
5	Schedules 2 – HVAC	M802
6	Details 1 – HVAC	M901
7	Details 2 – HVAC	M902
8	Details 3 – HVAC	M903
9	Details 4 – HVAC	M904
10		
11	Electrical	
12	Symbols, Abbreviations & Details – Electrical	E000
13	Site Plan – Electrical	E001
14	Basement Demolition Plan – Electrical	E100
15	First Floor Demolition Plan – Electrical	E101
16	Second Floor Demolition Plan – Electrical	E102
17	Third Floor Demolition Plan – Electrical	E103
18	Basement New Work Plan – Lighting	E200
19	First Floor New Work Plan – Lighting	E201
20	Second Floor New Work Plan – Lighting	E202
21	Third Floor New Work Plan – Lighting	E203
22	Basement New Work Plan - Power/Systems	E210
23	First Floor New Work Plan - Power/Systems	E211
24	Second Floor New Work Plan - Power/Systems	E212
25	Third Floor New Work Plan - Power/Systems	E213
26	Existing Electrical One-Line Diagram	E600A
27	Existing Electrical One-Line Diagram - Continued	E600B
28	Demolition One-Line Diagram - Project Area	E601
29	New Work One-Line Diagram - Project Area	E602
30	Equipment Schedules – Electrical	E800
31	Panel Schedules – Existing	E801
32	Panel Schedules – Existing	E802
33	Panel Schedules - New Work	E803
34	Panel Schedules - New Work	E804
35	Details – Electrical	E900
36	Details – Lighting	E901
37		
38		
39	***	