



THE STATE
of **ALASKA**
GOVERNOR MIKE DUNLEAVY

**Department of Military and
Veterans' Affairs**

Alaska Army National Guard

P.O. Box 5169
JBER, AK 99505-5169
Main: 907.428.7158
Fax: 907.428.7191

Issue Date: June 10th, 2026

ATTN: Vendors

Email: greg.walker@alaska.gov

RE: Project Name: Fairbanks Armory – Fire Damage Repair Project
Project Number: 02B0526017
Project Location: 202 Wien Avenue, Fairbanks Alaska 99701

ADDENDUM #2

Contractors' Questions and Answers:

Question #1: There are four differing completion/liquidated damage date referenced in the ITB. What are the required dates for substantial completion and start of liquidated damages?

Answer: The Substantial completion date is September 30th, 2026. However, there are long lead items that will require contract extension requests, such as boilers, day tanks and perhaps permitting approval and stamped designed documents. DMVA will extend the substantial completion date with any long lead items to justify the extension. Building structures such as walls, ceilings, and roofs shall be in place and closed-in by September 30th, 2026.

Question #2: Replacement equipment has lead times ranging from 8-14 weeks. Designing, acquiring, and installing this equipment by 9/30/2026 is not feasible. Can the substantial completion date be appropriately extended?

Answer: Please refer to the answer in question #1

Question #3: The ITB does not indicate design requirements. Is there any design parameter that must be adhered to?

Answer: AME and ISO.



Question #4: It is understood this project is funded via an insurance claim. Will payment be contingent upon resolution of the Claim with the insurance adjustor?

Answer: No. Insurance claims have been promptly paid.

Question #5: Please confirm the successful low bid contractor is responsible for providing stamped structural, electrical, mechanical and life safety drawings for approval for all 4 disciplines?

Answer: Yes, contractor is responsible for providing stamped structural, electrical, mechanical and life safety drawings.

Question #6: Please confirm whether a City of Fairbanks Building, Electrical, and Mechanical permit will be required?

Answer: Yes. The contractor is responsible for all applicable building, electrical and mechanical permits.

Question #7: Given the long lead time of materials, especially the boilers, it is not possible to meet the posted substantial completion date of 9/30/2026. Please confirm a construction schedule based upon current lead times and construction activities will be negotiated between owner and the successful low bidder. If not acceptable, is a completion date in January 2027 acceptable?

Answer: Please refer to response in question #1.

Question #8: Can a copy of the Engineers structural report be made available to the bidders?

Answer: Yes. Please see **attachment 1 – Structural Engineer Report** of this document.



Question #9: please confirm the Contractor is expected to perform a Hazardous Material Survey before work begins as directed by Part – 3 #4 & #5?

a) If hazardous material is found above action limit, removal and disposal will be handled through RFP/ Contract Modification?

Answer: Yes. A Hazardous Material Survey is required and if mediation is required it will be handled through the RFP/Contract Change Order modification.

Question #10: If this project is a design build, with the requirement for the contractor to hire engineers to provide stamped drawings for Owner and City approval prior to construction. The completion date of 30 September 2026 is not possible. Is January 2027 acceptable.

Answer: Please refer to the Answer in Question #1.

Question #11: The building exterior insulated wall panels are no longer in production.

- a) Is an insulated panel in a similar but different color acceptable?
- b) Is a flat panel from a local supplier acceptable?
 - i) can it be a non-insulated panel?

Answer:

- a) Yes, an insulated panel in a similar but different color is acceptable. The DMVA project manager shall approve the color through the submittal process.
- b) The intention of the project is to replace like-for-like, matching what is currently on the building addition. Approval of a flat panel substitution could only be approved through the submittal process and review of the intended product.
 - i) The intention of the project is to replace like-for-like. The insulated panels should be replaced with insulated panels.

Question #12: What gauge siding/panel is required?

Answer: The intention of the project is to replace like-for-like. If the thickness of the existing siding cannot be determined, DMVA will require a minimum gauge thickness of 24ga.



Question #13: During the site walk it was mentioned that the goal is like for like to the greatest extent possible. Please confirm this understanding?

Answer: Yes. We are making every effort to rebuild the structure as it was prior to the explosion and fire. This project is being funded through an Insurance Claim and building modifications or upgrades will not be allowed unless original products are no longer available.

Question #14: There is no mention of the controls system in the RFP docs. During the site walk it was discovered that the controls system is a Siemens APOGEE system. Parts are still available for this system currently that will enable integration to the existing to remain controls. Please confirm that it is the DMVA's intent to do like for like in regard to the controls.

Answer: Yes. Like-for-like.

Question #15: It is our understanding that this facility had mechanical modification and other updates in about 2014 to 2015 our records show that the RFP/ITB for the project was "ITB – 80015 & 80018 DMVA Fairbanks Armory and OMS Renovation" link to the ITB is <https://aws.state.ak.us/OnlinePublicNotices/Notices/View.aspx?id-172764> – Please provide the as-built documentation from this past project for incorporation into this project.

Answer: Greatly, appreciate the information provided by SIEMENS to the link above. However, the link didn't work, please refer to **attachment #2 mechanical drawings** for some additional control information. Please note it is the contractor's responsibility to rebuild and restore all systems that were isolated due to the fire damage.

Question #16: During the site walk the exact condition of the DDC controls system could not be determined due to the removal of power transformers powering the systems. Electronic controllers that are existing to remain might have been damaged electrically during the incident. Because the exact limits of the damage are unknown. Please consider an investigative CLIN to determine the exact damage at the start of the project.

Answer: Existing electronic controllers (those controls that are in the Armory and that are outside of the systems that were bypassed and or isolated due to the fire damage in rooms 138A, 138B, 140 and room 141. Will be replaced through the RFI/change order process. All controllers, power transformers and powering systems located in the boiler room (138A, 138B, 140,141) are to be included in the base bid.



THE STATE
of **ALASKA**
GOVERNOR MIKE DUNLEAVY

Department of Military and Veterans' Affairs

Alaska Army National Guard

P.O. Box 5169
JBER, AK 99505-5169
Main: 907.428.7158
Fax: 907.428.7191

Question #17: No mechanical as-built drawings are provided in the RFP at this time, please consider extending the bid date to incorporate record documents.

Answer: Existing but limited As-builts were provided with the original solicitation as an attachment. DMVA has provided all mechanical As-built drawings currently on file. (OPN) Extending the bid date to provide additional mechanical drawings will not assist with reconstruction of the mechanical, electrical, or life safety systems. Extensive pre-fire pictures provided should assist with some reconstruction aspects of the project. The contractor is responsible for design and restoration of all systems affected.

Submitted By:

Greg Walker
Design and Construction Superintendent
Department of Military and Veterans Affairs
57024 Roosevelt Road
JBER, AK 99505



MARTIN ENGINEERING, INC.
1985 Gilmore Trail
Fairbanks, AK 99712

907-458-7013 mei6482.com

TCI Construction Co.
3680 South Lathrop Street
Fairbanks, Alaska 99701

24 March 2026

Attn: Chris Bunch

Re: Alaska Army National Guard Readiness Center –
Structural Evaluation of Fire Damaged Concrete Walls
202 Wien Street
Fairbanks, Alaska 99701

General:

Martin Engineering, Inc. (MEI) was contacted by you, Chris Bunch of TCI Construction Co. (TCI) concerning the structural integrity of exterior concrete walls that had been damaged by a fire originating in the building's boiler room on 23 January 2026. It is MEI's understanding that a natural gas line had been broken in the boiler room and was the cause of an explosion and fire in the boiler room. The local fire department was on site when the explosion occurred, and the fire was extinguished in a short period of time.

The original building was constructed around 1961 and consists of a concrete foundation, concrete tilt-up wall panels and concrete support columns to form the exterior walls. The roof of the original 1961 structure is a steel framed roof supported on the concrete columns. For the remainder of this report the original structure will be referred to as ORG.

A wood framed addition was added to the West exterior wall of the ORG around 1989 per City of Fairbanks Building Department records. For the remainder of the report the 1989 wood framed addition will be referred to as ADD.

The ADD is constructed of a concrete foundation, wood framed walls and Glu-Laminated Beams (GLB) that are supported on the west wall concrete columns of the ORG. The GLB supports the roof of the ADD.

Located in the north end of the ADD is the boiler room. The explosion and resulting fire caused the GLB in that room and an adjacent room to burn with enough intensity to damage the exterior face of two sections of concrete wall on the west face of the ORG. These walls will be referred to as Wall 'A' and Wall 'B'. Please see the attached annotated plan view of the ORG and ADD that reference the walls and shows the areas affected by the explosion/fire.

Wall 'A' has an existing steel door cut in at ground level as well as windows and insulated panels located on the upper height of its wall. Wall 'A' is a non-load bearing wall (does not support the roof) and serves as part of the system that encloses the building from the exterior elements (curtain wall).

Wall 'B' is a full height wall with no door or window penetrations. Wall 'B' was originally a curtain wall similar to Wall 'A' as can be seen in the original construction plans dated 1961. Wall 'B' had its windows/insulated panels removed, filled in with concrete and a cast-in-place concrete shear wall, which comprises part of the main lateral resisting element (MLR) for the West wall line of the ORG, during a building addition/renovation in 1997. The MLR serves to prevent the building from collapsing in a design seismic or wind event. Wall 'B' does not support the roof for gravity loads.

MEI performed 5 separate site visits to ascertain the damage to both Walls 'A' and 'B' and determine what, if any, repairs needed to be performed on each wall.

On-Site Investigation:

During the first two site visits, MEI used a steel hammer to initially survey the fire damaged walls 'A' and 'B'. Striking concrete with a steel hammer provides a tone that can identify whether or not concrete has sustained significant damage from a fire. MEI performed impact tests on the concrete columns that bracketed walls 'A' and 'B' as well as the walls 'A' and 'B'. The results of this initial testing on the first site visit resulted in confirmation that the concrete columns had not sustained any measurable damage. However, both walls 'A' and 'B' exhibited hollow or dead tones when struck with the steel hammer indicating some degree of damage by the fire. The extent of fire damage on wall 'A' starts about 10 feet above ground level and extends to approximately 12 feet above finish grade. The extent of fire damage on wall 'B' starts about 4 feet above ground level and extends to approximately 12 feet above finish grade.

MEI returned for a third site visit with a Schmidt Hammer. The Schmidt Hammer is a rebound hammer which allows testing of in-place concrete to determine the degree of hardness of a particular section of concrete. The hardness of the concrete can be correlated to a compressive strength of the in-place concrete.

MEI tested the outside face of the damaged walls 'A' and 'B', the inside and outside faces of the bracketing columns and the inside face of wall 'B'. The inside face of wall 'A' was mostly covered by insulation and was not accessible for testing. MEI also tested wall panels on the West walls that were constructed in the same way as walls 'A' and 'B' but were not subjected to any fire damage.

The Schmidt Hammer gave an average result of 46 units when tested on non-fire damaged sections of concrete floor, and faces of the concrete columns and the inside face of the wall 'B'. These results provide confirmation that the concrete columns that bracketed the affected walls were not significantly damaged by the fire.

The Schmidt Hammer gave an average result of 30 units when tested on non-fire damaged wall panels on the West wall. Testing of the outside face of Walls 'A' and 'B' in the fire damaged areas resulted in average result of 12 units.

MEI directed TCI to drill into a section of Wall 'B' that appeared to have sustained the most severe fire damage as indicated by the heavy charring on the exterior face of that wall. Application of a mechanical rotor hammer and drill bit cut through the first 1/2" of concrete. After passing through the initial concrete a void was discovered behind this veneer. The void was measured to be approximately 1.5 inches deep and consisted of loose rock and cement powder. The loose rock and cement powder are evidence that the temperature experienced by the concrete was sufficient to remove all of the moisture from the concrete and return it to its original elements of cement and aggregate (rock).

TCI did not encounter any reinforcing bar with this initial drilling into the fire damaged wall 'B'. TCI expanded the hole to approximately 3 inches in diameter. MEI tested the sound concrete found approximately 2" from the outside face of the concrete wall with the Schmidt Hammer and recorded an average result of approximately 42 units.

MEI directed TCI to expand the size of the test patch on Wall 'B' to a 2 foot by 2 foot area. TCI used power hand tools to remove the damaged concrete on the exterior face of Wall 'B' down to sound concrete. No reinforcing was encountered inside this 2 foot by 2 foot patch. MEI returned on-site for a fourth time and the surface of the exposed sound concrete was tested with a Schmidt Hammer and provided an average reading of 42 units. MEI can conclude from these results that the fire damage extends a maximum of 2 inches from the outside face of Wall 'B' towards the center of the original 5 inch thick concrete tilt-up wall panel. The 6 inch thick concrete shear wall remains undamaged from the fire.

During our final site visit, MEI had TCI drill several holes along the column to wall interface of wall 'A' and its adjacent column. Most of the holes that were drilled revealed a depth of approximately 1 inch of fire damaged concrete. Only about a 1 foot length of the wall (adjacent to the column) had damaged concrete that was 1 1/2" deep. MEI was able to ascertain from the drilling performed by TCI that this wall only had significant damage to the exterior face for approximately 2 feet horizontally from the 1 foot tall section of roof for a total of about 2 square feet of damaged wall adjacent to the column.

Conclusions & Recommendations:

MEI determined from our site visits that Wall 'A' has only about 3% of its total wall area affected from fire damage. MEI's concludes that Wall 'A' is not in need of any structural repair or reinforcement. From a structural perspective, Wall 'A' may be left in its As-Is condition and no structural reinforcement or improvements are needed.

A portion of the inside face of Wall 'A' (as well as an adjacent wall panel that was not affected by the fire) was removed during fire-fighting operations on 23 January 2026. MEI recommends that the inside wall finishes be repaired as close as practicable to match the adjacent wall finishes. The contractor who performs the repairs to the inside face of the finishes on these walls shall leave all of the existing insulation in place, replace the damaged insulation with rock wool insulation and only remove the plaster finish as needed to make square cuts over existing wood framing. The square cuts will facilitate installation of a Cementitious coated gypsum wall board and paint to match the existing wall color as close as practicable. Before removing any of the existing plaster, the contractor shall employ a company that is certified to test for Asbestos and then sample the existing plaster for Asbestos. If Asbestos is present in the existing wall plaster, the contractor shall follow the testing company's recommendations for removal of the plaster that contains Asbestos before implementing the remainder of the interior wall finish repair.

The ORG was expanded in 1997 to almost double its original size. Part of the construction for the 1997 addition included improvements to the ORG West wall as well as other parts of the ORG. One of the improvements made was the addition of a 6 inch thick, full height, cast in place concrete shear wall on the inside face of Wall 'B'. This improvement was made to improve the lateral force resistance of the ORG for design wind and seismic events.

MEI's on-site tests show that only the original concrete tilt-up Wall 'B' was damaged in the fire of January 2026. The shear wall added in 1997 was not damaged by the fire. MEI states that the damage done to the original Wall 'B' does not affect the overall structural integrity of the capacity of the ORG to develop the original design gravity loads or lateral shear loads in the area of Wall 'B'. No further structural reinforcement or repairs are required at this time to Wall 'B'.

The damaged exterior face of Wall 'B' may be left in-place as it currently exists. MEI recommends filling in the 2 ft x 2 ft test patch with Terrafluse TF Structural Repair Concrete Mortar or an approved equal. The patch repair will need to wait until ambient exterior temperatures exceed 50 degrees Fahrenheit or the installation temperature recommended by the manufacturer of the concrete repair mortar.

It is MEI's understanding that the next phase of this project will be to replace the fire destroyed portions of the ADD. MEI recommends that the replacement roof structure for the ADD is not directly supported on the outside face of the ORG columns. MEI recommends that the replacement roof is supported by wood framed walls that are supported by a thickened edge slab located adjacent to the existing West wall of the ORG.

Please note that this letter only addresses the two, fire damaged, tilt up concrete wall panels on the West wall of the ORG. This letter does not in any way address any other portion of any of the facilities on this property at the above-referenced address.

Please contact us if you require additional information concerning the structural capacity of the fire damaged concrete walls at the above referenced project location.

Respectfully Submitted,

Martin Engineering, Inc.



Mark M. Martin, P.E., S.E.
President

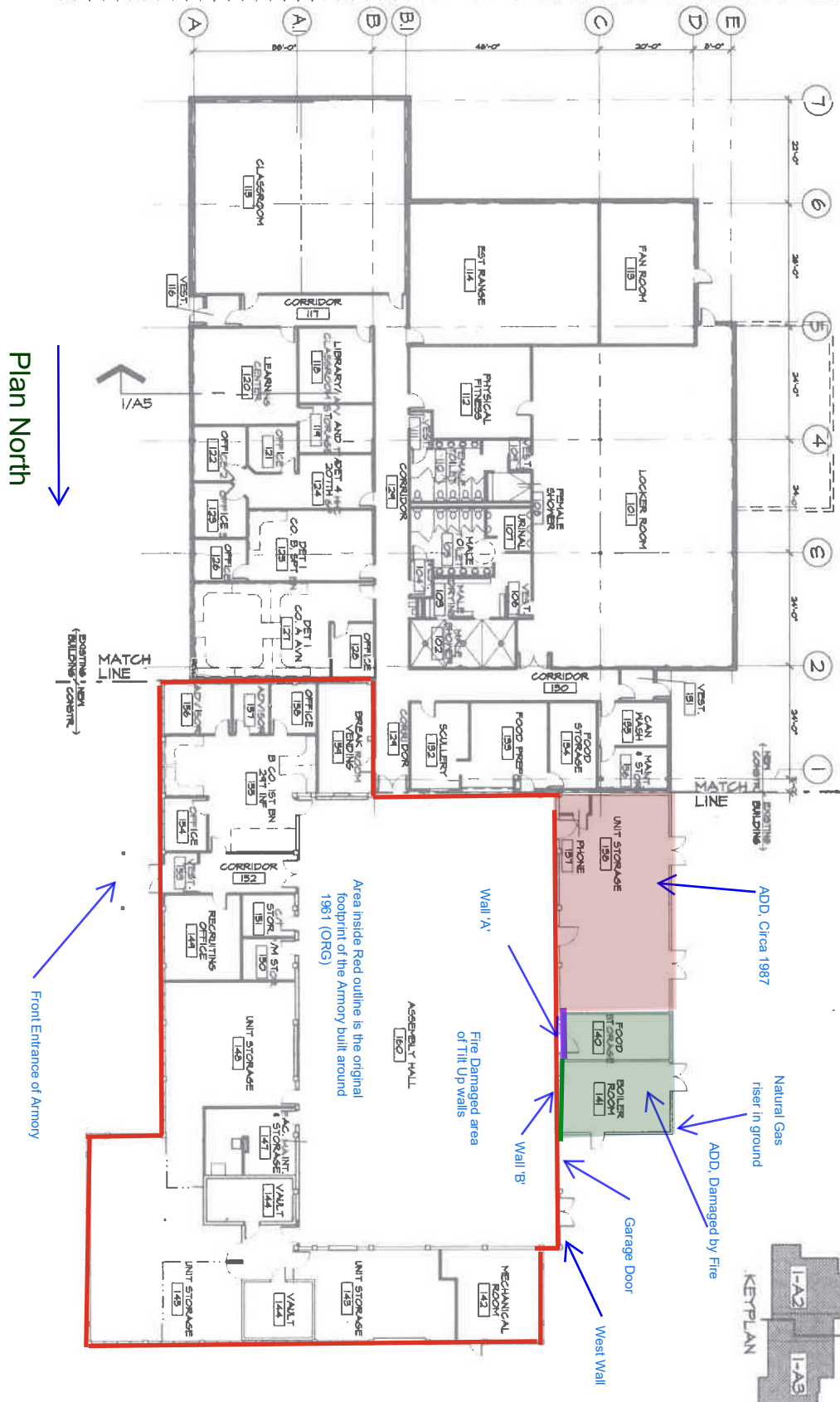


Attachments: Plan View of ORG and ADD with fire damaged areas located
Pictures of fire damaged areas and interior finishes

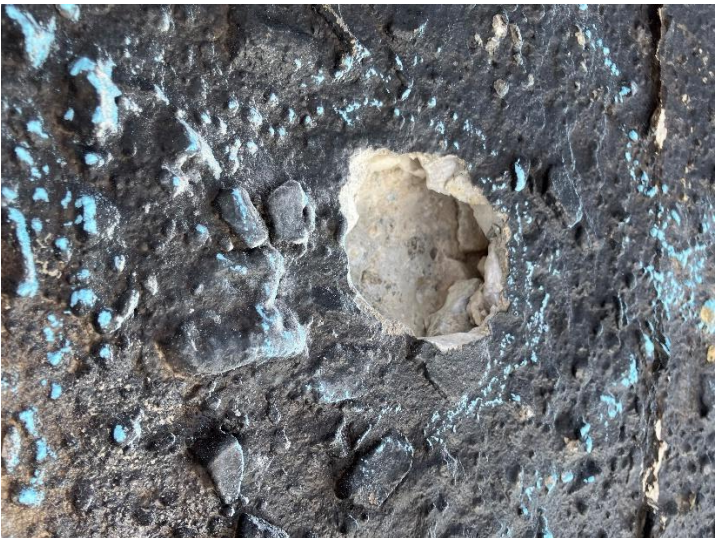
24 March 2026

ANALYSIS

Room	New Area	Over	Under	% Over	% Under
5.266	2.72	144	2.67	0.08	1.76
1.837	1.837	33	0.67	28.38	
4.83	3	369	0.67	28.38	
41	80	389	0.67	28.38	
86	301	389	0.67	28.38	
213	312	389	0.67	28.38	
182	224	389	0.67	28.38	
200	200	389	0.67	28.38	
75	1.73	47	3.85		
33	1.73	47	3.85		
816	816	39	15.60		
357	100	39	15.60		
382	289	39	15.60		
80	100	39	15.60		
100	499	69	17.25		
62	227	111	694	4.83	
756	756	6	0.80		
103	489	1	0.20		
583	389	1	0.20		
100	622	172	38.22		
101	125				
125	271				
145	763	63	9.00		
102	559				
102	151	1	0.6		
80	70				
073	4.120	120	3.00		
578	1.042				
171	1.290				
170	868				
2.942	285	47	10.71		
783	301	43	5.89		



WIEN STREET



Test Hole – Wall 'B'



Inside Face Wall 'A'



Test Patch – Wall 'B'



Wall 'A'



Wall 'B' Looking North with Garage Door



Wall 'B' with Test Patch and Wall 'A'



Wall 'B' and Wall 'A' Looking South

Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Field Mounted Devices					
ESW 1	1	GS105	NETGEAR	N/A	5 PORT ETHERNET SWITCH
PNL 1-2	2	EXISTING	N/A	N/A	EXISTING
PNL 3-4	2	PXA-ENC34	SIEMENS	149475	ENCLOSURE ASSY 34
PNL 3A	1	PXA-ENC19	SIEMENS	149475	ENCLOSURE ASSY 19"
SB 1-2	2	EXISTING	N/A	N/A	EXISTING
SB 3-4	2	PXA-SB115V192VA	SIEMENS	N/A	SERVICE BOX 115V, 24VAC, 192VA
UPS 1	1	EXISTING	N/A	N/A	EXISTING
UPS 3-4	2	PSH2RB10	FUNCTIONAL DEVICES	N/A	10A SW, 2 120VAC OUT, 120VAC IN

REVISION HISTORY

SIEMENS

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
PHONE: 907.479.7034
FAX: 907.479.3679

DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA		09/14/15

RISER BOM

440P-159367

000A

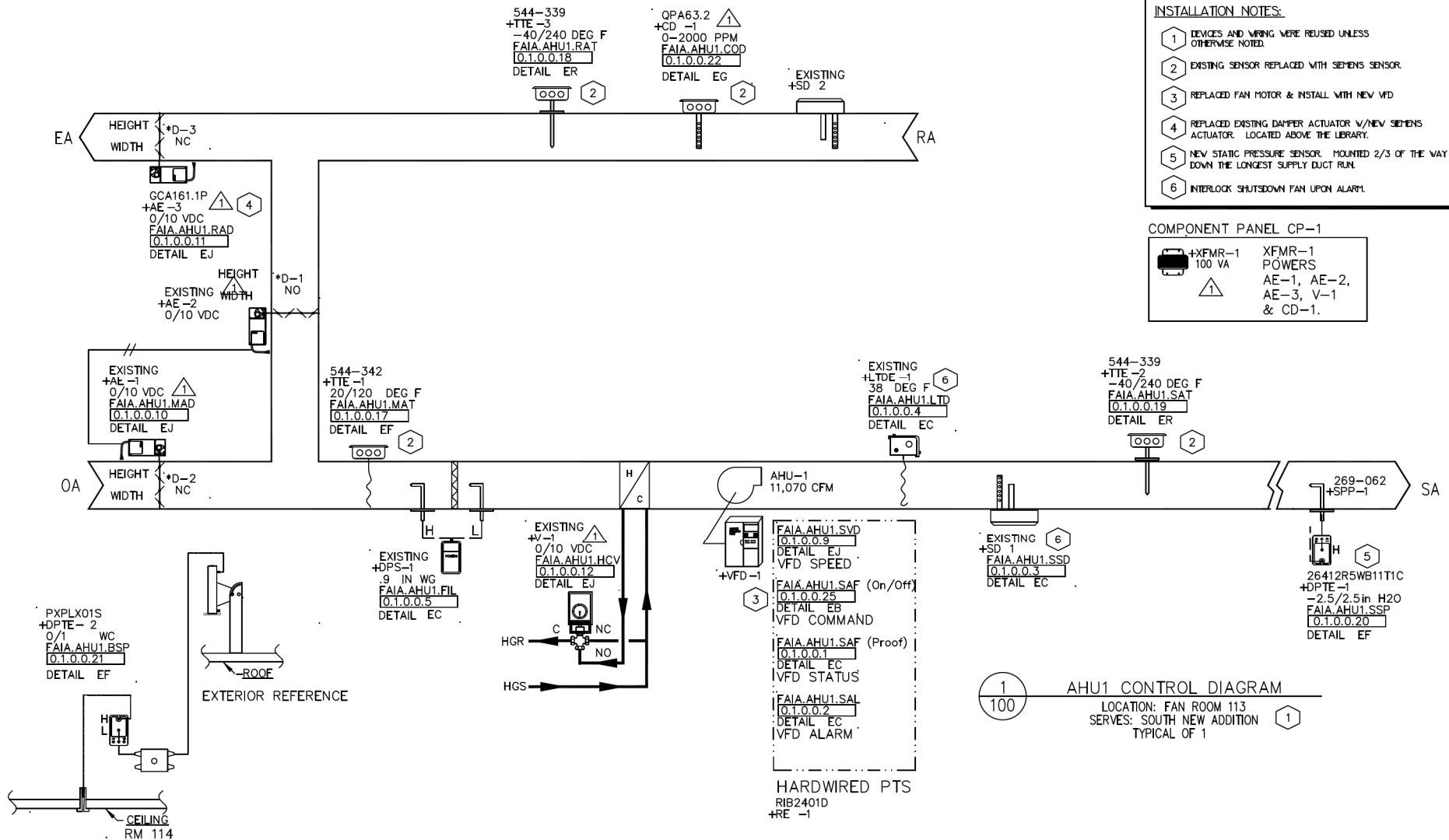
AIR HANDLER 1

INSTALLATION NOTES:

- 1 DEVICES AND WIRING WERE REUSED UNLESS OTHERWISE NOTED.
- 2 EXISTING SENSOR REPLACED WITH SIEMENS SENSOR.
- 3 REPLACED FAN MOTOR & INSTALL WITH NEW VFD
- 4 REPLACED EXISTING DAMPER ACTUATOR W/ NEW SIEMENS ACTUATOR. LOCATED ABOVE THE LIBRARY.
- 5 NEW STATIC PRESSURE SENSOR. MOUNTED 2/3 OF THE WAY DOWN THE LONGEST SUPPLY DUCT RUN.
- 6 INTERLOCK SHUTDOWN FAN UPON ALARM.

COMPONENT PANEL CP-1

	+XFMR-1 100 VA	XFMR-1 POWERS
	AE-1, AE-2, AE-3, V-1 & CD-1.	



REVISION HISTORY

1 9/12/2006 TCP AS-BUILT DRAWING

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
Phone: 907.479.7034
Fax: 907.479.3879

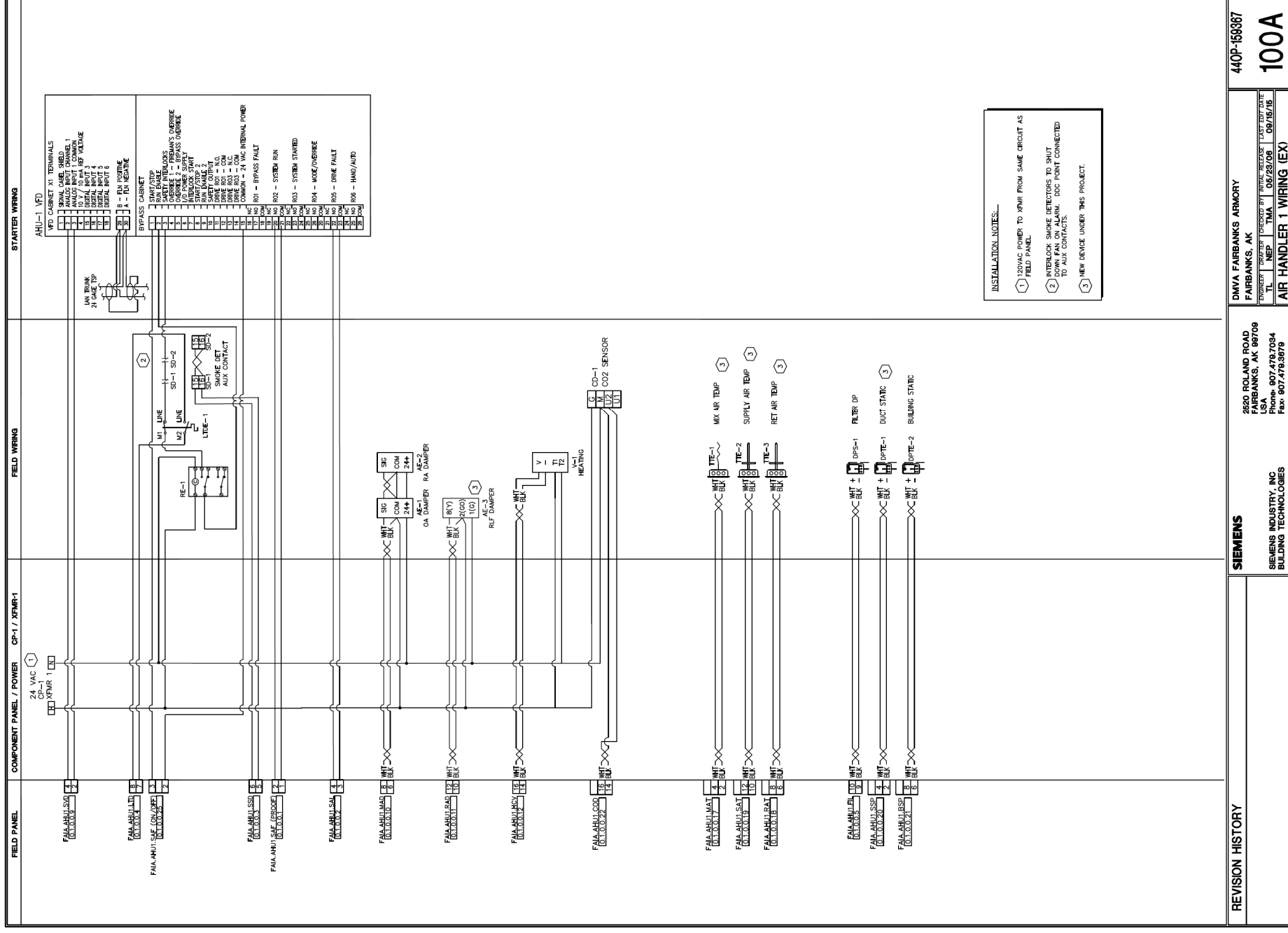
DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAWN	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/11/15

AIR HANDLER 1 (EX)

440P-159367
0

100



Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Existing Equipment To Remain					
AE 1-2	2	EXISTING	N/A	N/A	EXISTING
AE 3	1	GCA161.1P	SIEMENS	154001	MOD(V) SR,24V, MED. PLNM
CD 1	1	QPA63.2	SIEMENS	149399	O/RB QPA2002D
DPS 1	1	EXISTING	N/A	N/A	EXISTING
DPTE 1	1	26412R5WB11T1C	SETRA	0608cut003	DP TRAN AIR,1%,+/-2.5"
DPTE 2	1	PXPLX01S	VERIS INDU	N/A	PXPLX01S Pressure,Dry,Panel,LCD,0-1"WC
LTDE 1	1	EXISTING	N/A	N/A	EXISTING
RE 1	1	RIB2401D	FUNCTIONAL DEVICES	1208cut002	RIB 24VAC 24VAC/DC DPDT
SD 1-2	2	EXISTING	N/A	N/A	EXISTING
SPP 1	1	269-062	SIEMENS	N/A	PR269 ACCESSORY, SENSING TUBE
TTE 1	1	544-342	SIEMENS	149 261	OBS/BY 544-342-24,TEMP SENS RTD,-40/240F
TTE 2-3	2	544-339	SIEMENS	149 261	*OBS/BY 544-339-18* D/PT TEMP SENSOR,
V					SEE VALVE SUBMITTAL

SEQUENCE OF OPERATIONS:
FAIRBANKS DMVA ARMORY

EXISTING AIR HANDLING UNIT (AHU-1):

AIR HANDLING UNIT AHU-1 IS A VARIABLE VOLUME SYSTEM. THE SUPPLY FAN IS AUTOMATICALLY START/STOPPED ON TIME PROGRAM (ADJUSTABLE) THROUGH THE DDC PANEL.

SUPPLY STATUS IS MONITORED VIA A CURRENT SWITCH. AN ALARM IS GENERATED WHENEVER THERE IS A MISMATCH BETWEEN THE SUPPLY FAN STATUS AND THE DDC COMMAND SIGNAL.

A DIFFERENTIAL PRESSURE SWITCH IS PROVIDED ACROSS THE FILTER TO ALARM WHEN A PRESSURE INCREASE OVER SETPOINT (FIELD SET) IS DETECTED.
THE TEMPERATURE CONTROL SYSTEM IS SOFTWARE INTERLOCKED WITH THE UNIT. WHEN THE UNIT IS OFF, ALL CONTROL SYSTEMS WILL GO TO THEIR DISABLED OR SAFE POSITIONS. WHEN THE UNIT IS ON, ALL CONTROL SIGNALS ARE CONTROLLED AUTOMATICALLY THROUGH THE DDC CONTROL PANEL AS OUTLINED BELOW.

THERE ARE (3) MODES OF OPERATION FOR AUTOMATED CONTROL: NIGHT MODE OPERATION, MORNING WAR-UP OPERATION

AND DAY MODE OPERATION.

NIGHT MODE OPERATION:

DURING THE NIGHT MODE OPERATION, THE SUPPLY FAN WILL BE OFF, OSA DAMPER WILL BE FULLY CLOSED AND RA DAMPER WILL BE FULLY OPEN. THE HEATING COIL VALVE WILL MODULATE TO MAINTAIN SUPPLY AIR TEMPERATURE AT THE NIGHT SETBACK SETPOINT (ADJUSTABLE) EXCEPT UNDER FREEZE ALARM CONDITIONS AS DEFINED BELOW.

BUILDING RELIEF AIR CONTROL DAMPERS WILL BE CLOSED.

MORNING WARM-UP OPERATION:

AT THE THE BEGINNING OF THE DAY MODE, THE SUPPLY FAN WILL START, AND THE OSA DAMPER WILL BE FULLY CLOSED. THE HEATING COIL WILL MODULATE TO MAINTAIN THE SUPPLY AIR TEMPERATURE AT THE MORNING WARM-UP SETPOINT (DEFAULT: 80 DEG F-ADJUSTABLE) THE SYSTEM WILL SWITCH TO DAY MODE OPERATION AS OUTLINED BELOW.

BUILDING RELIEF AIR CONTROL DAMPERS WILL BE CLOSED.

DAY MODE OPERATION:

A SUPPLY AIR TEMPERATURE SENSOR WILL MODULATE OSA DAMPER AND HEATING COIL VALVE, IN SEQUENCE, TO MAINTAIN SUPPLY AIR TEMPERATURE AT SETPOINT. THE SUPPLY AIR TEMPERATURE SETPOINT WILL BE RESET BY THE OUTSIDE AIR TEMPERATURE SENSOR AS OUTLINED BELOW. ALL LIMITS ARE OPERATOR ADJUSTABLE.

OUTSIDE AIR TEMP	SUPPLY AIR TEMP
0.0	65.0
70.0	55.0

DURING DAY MODE OPERATION, A SOFTWARE MINIMUM POSITION WILL MAINTAIN OSA DAMPER AT MINIMUM POSITION (DEFAULT: 20%-ADJUSTABLE).

BUILDING RELIEF AIR CONTROL DAMPERS WILL MODULATE TO MAINTAIN 0.01" SP RELIEF.

A FREEZE STAT LOCATED IN THE DISCHARGE AIR PLENUM WILL SHUT DOWN THE AIR HANDLING UNIT, THROUGH HARDWARE, IF A FREEZE CONDITION IS DETECTED. AN ALARM WILL ALSO BE ISSUED THROUGH THE DDC PANEL, THE OSA DAMPERS WILL FULLY CLOSE AND THE HEATING VALVE WILL GO FULL OPEN. THE FREEZE STAT WILL RESET AUTOMATICALLY.

RA/SA SMOKE DETECTOR ALARM ARE MONITORED VIA SMOKE DETECTORS IN THE RETURN AND SUPPLY AIR DUCTS. AN ALARM IS GENERATED WHENEVER EITHER SMOKE DETECTION IS ACTIVATED. UPON SMOKE DETECTION, THE SUPPLY FAN WILL BE SHUT DOWN, THROUGH HARDWARE. THE DDC PANEL WILL COMMAND OSA DAMPER FULLY CLOSED. THE HEATING VALVE WILL CONTINUE TO MODULATE, THROUGH THE DDC PANEL, TO MAINTAIN SUPPLY AIR TEMPERATURE SETPOINT.

REVISION HISTORY

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
PHONE: 907.479.7034
FAX: 907.479.3679

DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA		09/14/15

AIR HANDLER 1 BOM & SEQ (EX)

440P-159367

100B

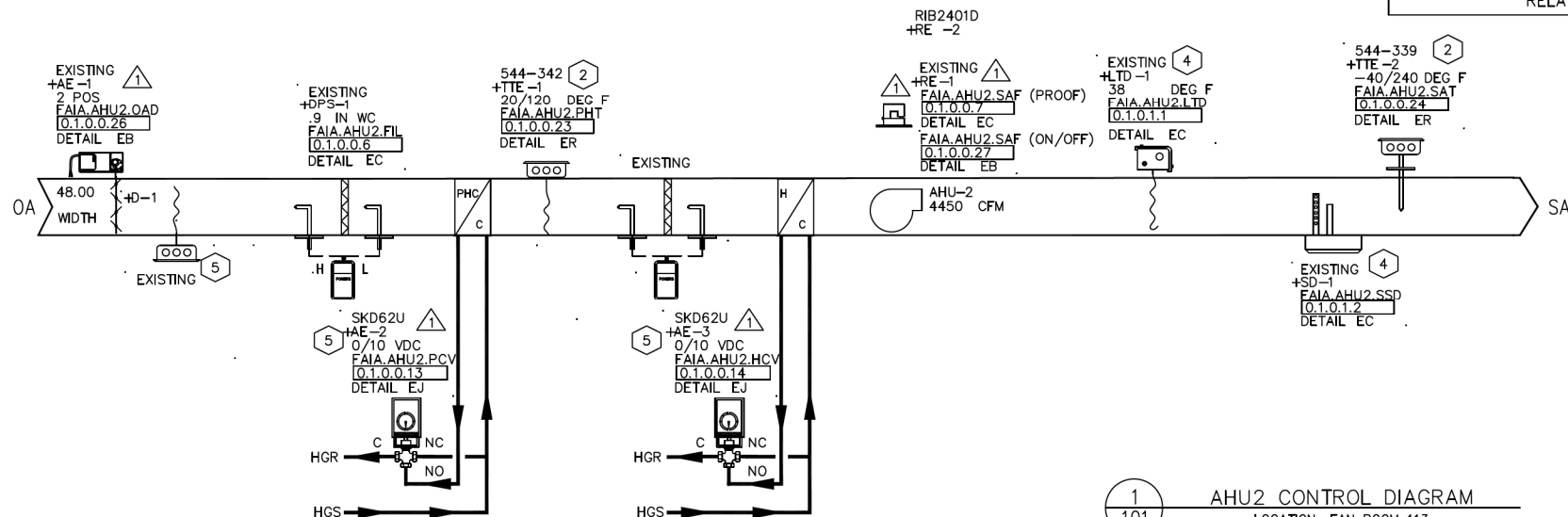
AIR HANDLER 2

INSTALLATION NOTES:

- 1 DEVICES AND WIRING WERE REUSED UNLESS OTHERWISE NOTED.
- 2 REPLACED EXISTING SENSOR WITH SIEMENS SENSOR.
- 3 VALVE BODY IS EXISTING, NEW ACTUATOR UNDER THIS PROJECT.
- 4 INTERLOCK SHUTDOWN FAN UPON ALARM.
- 5 EXISTING DEVICES TO REMAIN.

COMPONENT PANEL CP-1

	+XFMR-2 100 VA	XFMR-2 POWERS AE-1, V-1 & V-2 & RELAYS.
		



1
101
AHU2 CONTROL DIAGRAM
LOCATION: FAN ROOM 113
SERVES: SOUTH KITCHEN
TYPICAL OF 1

REVISION HISTORY

1	9/12/2006	TCP	AS-BUILT DRAWING
---	-----------	-----	------------------

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
Phone: 907.479.7034
Fax: 907.479.3679

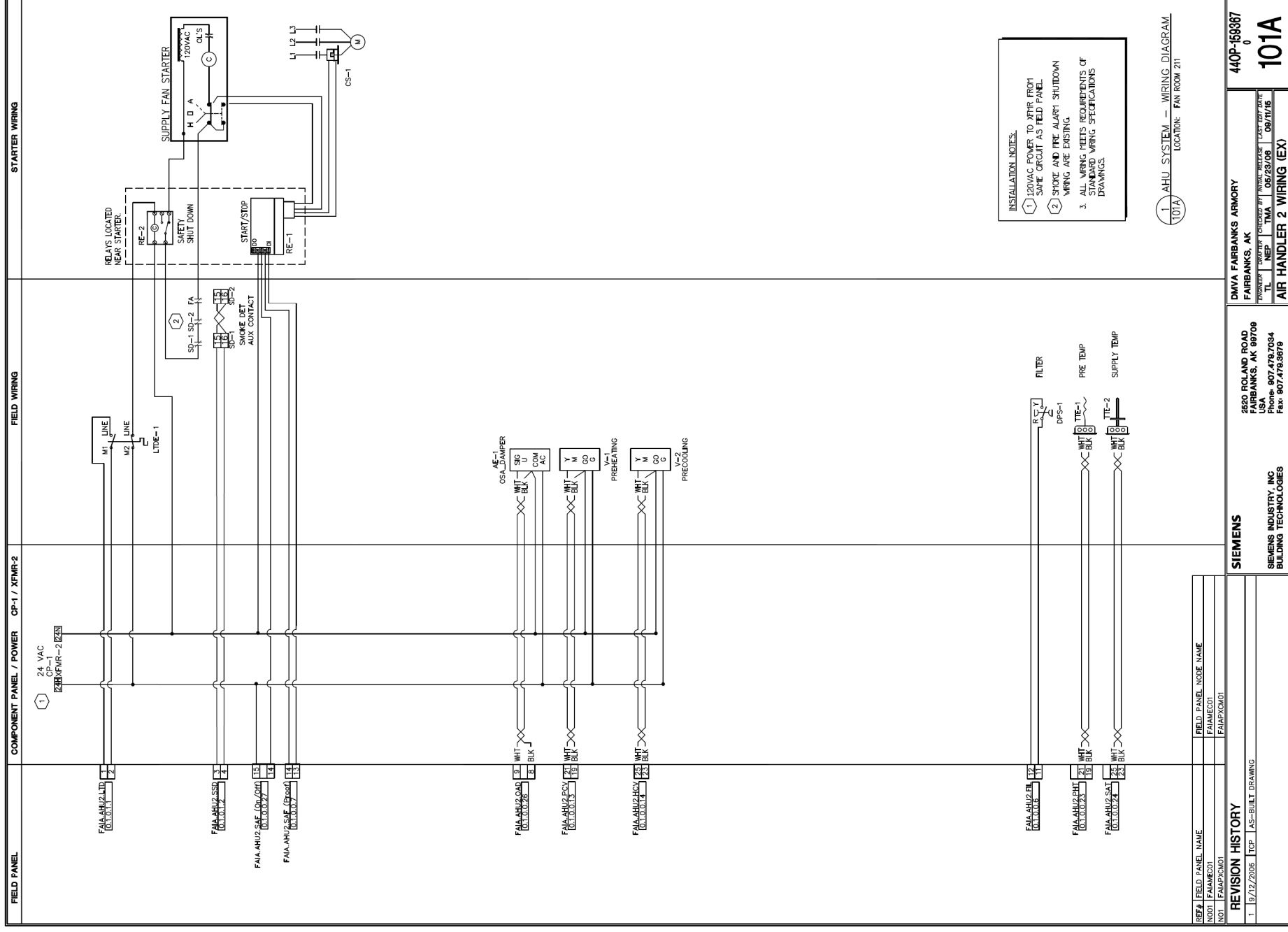
DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/11/15

AIR HANDLER 2 (EX)

440P-159367
0

101



Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Existing Equipment To Remain					
AE 1	1	EXISTING	N/A	N/A	EXISTING
AE 2-3	2	SKD62U	SIEMENS	155 180	ELEC/HYD ACT,24VAC,0-10VDC,SR
DPS 1	1	EXISTING	N/A	N/A	EXISTING
LTD 1	1	EXISTING	N/A	N/A	EXISTING
RE 1	1	EXISTING	N/A	N/A	EXISTING
RE 2	1	RIB2401D	FUNCTIONAL DEVICES	1208cut002	RIB 24VAC 24VAC/DC DPDT
SD 1	1	EXISTING	N/A	N/A	EXISTING
TTE 1	1	544-342	SIEMENS	149 261	OBS/BY 544-342-24,TEMP SENS RTD,-40/240F
TTE 2	1	544-339	SIEMENS	149 261	*OBS/BY 544-339-18* D/PT TEMP SENSOR,

DURING DAY MODE OPERATION, THE SUPPLY FAN WILL BE AUTOMATICALLY START/STOPPED BASED ON A TIME PROGRAM THROUGH THE DDC PANEL. THE OSA DAMPER WILL OPEN. THE PREHEAT COIL VALVE WILL MODULATE TO MAINTAIN PREHEAT TEMPERATURE AT SETPOINT (DEFAULT: 35.0° F-ADJUSTABLE).

THE HEATING COIL VALVE WILL MODULATE TO MAINTAIN SUPPLY AIR TEMPERATURE AT SETPOINT (DEFAULT 65.0° F-ADJUSTABLE).

PREHEAT AND HEATING COIL VALVES WILL BE LOCKED OUT WHEN OUTSIDE AIR TEMPERATURE IS ABOVE 55.0° F (ADJUSTABLE).

KITCHEN HOOD EXHAUST FAN IS SOFTWARE INTERLOCKED WITH THE SUPPLY FAN. WHEN KITCHEN HOOD EXHAUST FAN IS IN OPERATION, THE SUPPLY FAN WILL OPERATE AND THE OSA DAMPER WILL BE FULLY OPEN. PREHEAT AND HEATING COIL VALVES WILL MODULATE AS OUTLINED ABOVE IN DAY MODE OPERATION.

A FREEZE STAT LOCATED IN THE DISCHARGE AIR PLENUM, DOWNSTREAM OF THE PREHEAT COIL, WILL SHUT DOWN THE AIR HANDLING UNIT, THROUGH HARDWARE, IF A FREEZE CONDITION IS DETECTED. AN ALARM WILL ALSO BE ISSUED. THROUGH THE DDC PANEL THE OSA DAMPERS WILL FULLY CLOSE AND THE PREHEAT AND HEATING VALVES WILL GO FULL OPEN. THE FREEZE STAT WILL RESET AUTOMATICALLY.

SA SMOKE DETECTOR IS MONITORED VIA A SMOKE DETECTOR IN THE SUPPLY DUCT. AN ALARM IS GENERATED WHENEVER THE SMOKE DETECTOR IS ACTIVATED. UPON SMOKE DETECTION, THE SUPPLY FAN WILL BE SHUT DOWN, THROUGH HARDWARE. THE DDC PANEL WILL COMMAND THE OSA DAMPER FULLY CLOSED. THE PREHEAT AND HEATING VALVES WILL CONTINUE TO MODULATE, THROUGH THE DDC PANEL, TO MAINTAIN SUPPLY AIR TEMPERATURE SETPOINT.

SEQUENCE OF OPERATIONS:
FAIRBANKS DMVA ARMORY

EXISTING AIR HANDLING UNIT (AHU-2):

AIR HANDLING UNIT AHU-2 IS A CONSTANT VOLUME SYSTEM.

SUPPLY STATUS WILL BE MONITORED VIA A CURRENT SWITCH. AN ALARM IS GENERATED WHENEVER THERE IS A MISMATCH BETWEEN THE SUPPLY FAN STATUS AND THE DDC COMMAND SIGNAL.

A DIFFERENTIAL PRESSURE SWITCH IS PROVIDED ACROSS THE FILTER TO ALARM WHEN A PRESSURE INCREASE OVER SETPOINT (FIELD SET) IS DETECTED.

THE TEMPERATURE CONTROL SYSTEM IS SOFTWARE INTERLOCKED WITH THE UNIT. WHEN THE UNIT IS OFF, ALL CONTROL SYSTEMS WILL GO TO THEIR DISABLED OR SAFE POSITIONS. WHEN THE UNIT IS ON, ALL CONTROL SIGNALS ARE CONTROLLED AUTOMATICALLY THROUGH THE DDC CONTROL PANEL AS OUTLINED BELOW.

THERE ARE (2) MODES OF OPERATION FOR AUTOMATED CONTROL: NIGHT MODE OPERATION AND DAY MODE OPERATION.

NIGHT MODE OPERATION:

DURING THE NIGHT MODE OPERATION THE SUPPLY FAN WILL BE OFF, OSA DAMPER WILL BE FULLY CLOSED. THE HEATING COIL VALVE WILL MODULATE TO MAINTAIN SUPPLY AIR TEMPERATURE AT THE NIGHT SETBACK SETPOINT (ADJUSTABLE) EXCEPT UNDER FREEZE ALARM CONDITIONS AS DEFINED BELOW.

DAY MODE OPERATION:

REVISION HISTORY

SIEMENS

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
PHONE: 907.479.7034
FAX: 907.479.3679

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA		09/14/15

AIR HANDLER 2 BOM & SEQ (EX)

440P-159367

101B

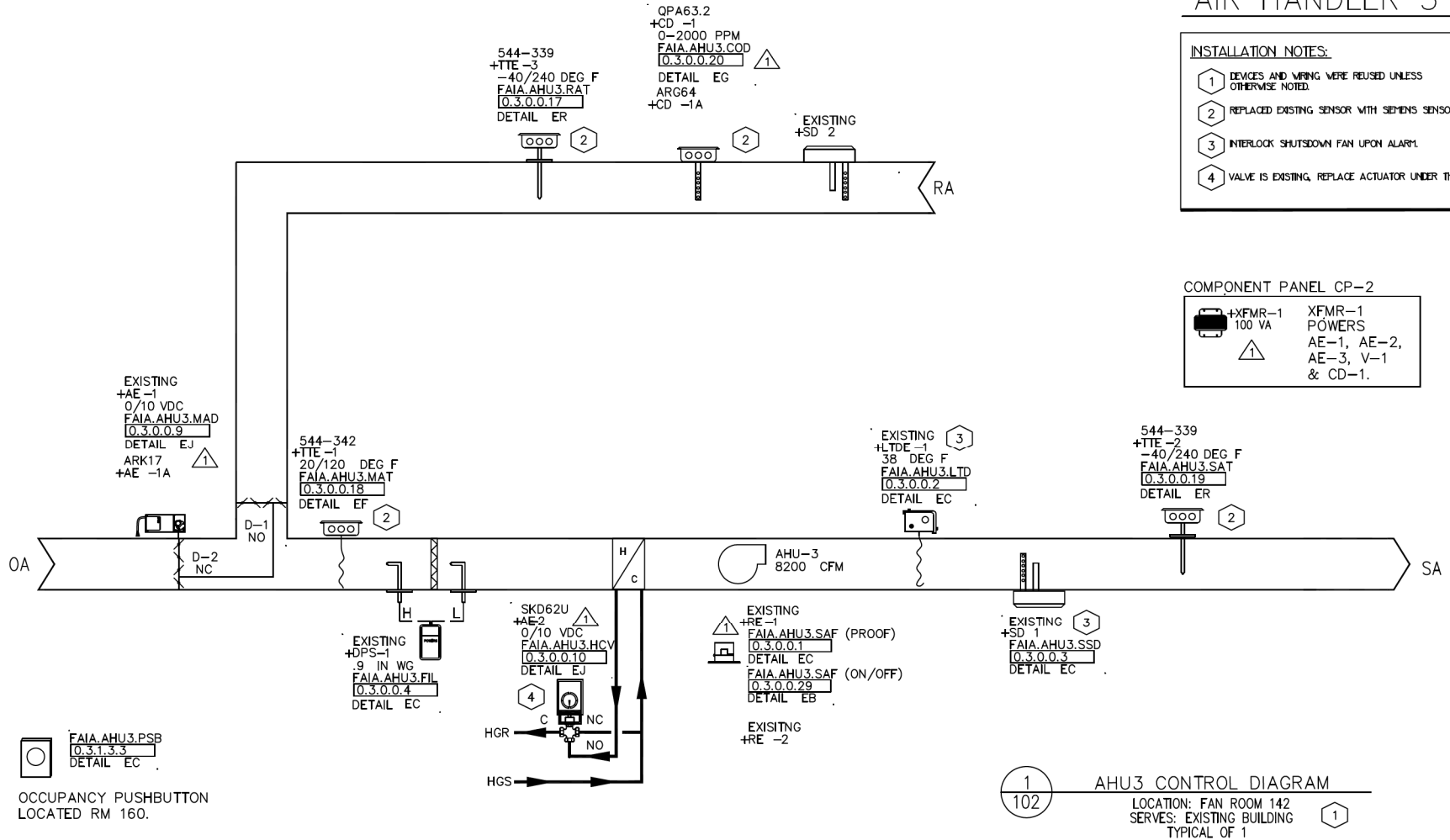
AIR HANDLER 3

INSTALLATION NOTES:

- 1 DEVICES AND WIRING WERE REUSED UNLESS OTHERWISE NOTED.
- 2 REPLACED EXISTING SENSOR WITH SIEMENS SENSOR.
- 3 INTERLOCK SHUTDOWN FAN UPON ALARM.
- 4 VALVE IS EXISTING. REPLACE ACTUATOR UNDER THIS PROJECT.

COMPONENT PANEL CP-2

	+XFMR-1 100 VA	XFMR-1 POWERS AE-1, AE-2, AE-3, V-1 & CD-1.
---	-------------------	---



1
102

AHU3 CONTROL DIAGRAM

LOCATION: FAN ROOM 142
SERVES: EXISTING BUILDING
TYPICAL OF 1

REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
N03	FAIAMEC03	FAIAMEC-03

REVISION HISTORY

1	9/12/2006	TCP	AS-BUILT DRAWING
---	-----------	-----	------------------

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
Phone: 907.479.7034
Fax: 907.479.3879

DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/14/15

AIR HANDLER 3 (EX)

440P-159367
0

102

Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Existing Equipment To Remain					
AE 1	1	EXISTING	N/A	N/A	EXISTING
AE 2	1	SKD62U	SIEMENS	155 180	ELEC/HYD ACT,24VAC,0-10VDC,SR
AE 1A	1	ARK17	SIEMENS	N/A	HONEYWELL V501XN (A,B,C,F,G,N)1/2"THRU 3
CD 1	1	QPA63.2	SIEMENS	149399	O/RB QPA2002D
CD 1A	1	ARG64	AIRTRON	149399	OBSOLETE R/BY QPM2102
DPS 1	1	EXISTING	N/A	N/A	EXISTING
LTDE 1	1	EXISTING	N/A	N/A	EXISTING
RE 1	1	EXISTING	N/A	N/A	EXISTING
RE 2	1	EXISTING	N/A	N/A	N/A
SD 1-2	2	EXISTING	N/A	N/A	EXISTING
TTE 1	1	544-342	SIEMENS	149 261	OBS/BY 544-342-24,TEMP SENS RTD,-40/240F
TTE 2-3	2	544-339	SIEMENS	149 261	*OBS/BY 544-339-18* D/PT TEMP SENSOR,

SEQUENCE OF OPERATIONS:
FAIRBANKS DMVA ARMORY

EXISTING AIR HANDLING UNIT AHU-3:

AIR HANDLING UNIT AHU-3 IS A CONSTANT VOLUME SYSTEM.

SUPPLY FAN STATUS WILL BE MONITORED VIA A CURRENT SWITCH. AN ALARM IS GENERATED WHENEVER THERE IS A MISMATCH BETWEEN THE SUPPLY FAN STATUS AND THE DDC COMMAND SIGNAL.

A DIFFERENTIAL PRESSURE SWITCH IS PROVIDED ACROSS THE FILTER TO ALARM WHEN A PRESSURE INCREASE OVER SETPOINT (FIELD SET) IS DETECTED.

THE TEMPERATURE CONTROL SYSTEM IS SOFTWARE INTERLOCKED WITH THE UNIT. WHEN THE UNIT IS OFF, ALL CONTROL SIGNALS WILL GO TO THEIR DISABLE OR SAFE POSITIONS. WHEN THE UNIT IS, ALL CONTROL SIGNALS ARE CONTROLLED AUTOMATICALLY THROUGH THE DDC CONTROL PANEL AS OUTLINED BELOW.

THERE ARE (3) MODES OF OPERATION FOR AUTOMATED CONTROL, NIGHT MODE OPERATION, MORNING WARM-UP OPERATION, AND DAY MODE OPERATION.

NIGHT MODE OPERATION:

DURING THE NIGHT MODE OPERATION THE SUPPLY FAN WILL BE OFF, OSA DAMPER WILL BE FULLY CLOSED AND THE RA DAMPER WILL BE FULLY OPEN. THE HEATING COIL VALVE WILL MODULATE TO MAINTAIN SUPPLY AIR TEMPERATURE AT THE NIGHT SETBACK SETPOINT (ADJUSTABLE) EXCEPT UNDER FREEZE ALARM CONDITIONS AS DEFINED BELOW.

MORNING WARM-UP OPERATION:

WHEN SCHEDULED VIA DDC, OR WHEN THE MANUAL OCCUPANCY SWITCH IS ACTIVATED BY THE USER, THE SUPPLY FAN WILL START, AND THE OSA DAMPER WILL BE FULLY CLOSED. THE HEATING COIL WILL MODULATE TO MAINTAIN THE SUPPLY AIR TEMPERATURE AT THE MORNING WARM-UP SETPOINT (DEFAULT: 80 DEG. F- ADJUSTABLE) WHEN THE RETURN AIR TEMPERATURE RISES TO THE DAY MODE START TEMPERATURE SETPOINT (DEFAULT: 60 DEG. F - ADJUSTABLE) THE SYSTEM WILL SWITCH TO DAY MODE OPERATION AS OUTLINED BELOW.

DAY MODE OPERATION:

AFTER WARM-UP THE SUPPLY AIR TEMPERATURE SENSOR WILL MODULATE OSA DAMPER AND HEATING COIL VALVE, IN SEQUENCE, TO MAINTAIN SUPPLY AIR TEMPERATURE AT SETPOINT. THE SUPPLY AIR TEMPERATURE SETPOINT WILL BE RESET BY THE OUTSIDE AIR TEMPERATURE SENSOR AS OUTLINED BELOW. ALL LIMITS ARE OPERATOR ADJUSTABLE.

OUTSIDE AIR TEMP.	SUPPLY TEMP
0.0	65.0
70.0	55.0

DURING DAY MODE OPERATION, A SOFTWARE MINIMUM POSITION WILL MAINTAIN OSA DAMPER AT MINIMUM POSITION (DEFAULT: 20% - ADJUSTABLE). HEATING COIL VALVE WILL BE DISABLED VIA PROGRAMMING WHEN OUTSIDE AIR TEMPERATURE IS ABOVE 70.0 DEG. F. (ADJUSTABLE).

A FREEZE STAT LOCATED IN THE MIX AIR PLENUM WILL SHUT DOWN THE AIR HANDLING UNIT, THROUGH HARDWIRE, IF A FREEZE CONDITION IS DETECTED. AN ALARM WILL ALSO BE ISSUED. THOUGH THE DDC PANEL THE OSA DAMPERS WILL FULLY CLOSE AND THE HEATING VALVE WILL GO FULL OPEN. THE FREEZE STAT WILL RESET AUTOMATICALLY.

RS/ SA SMOKE DETECTOR:

RS/ SA SMOKE DETECTOR ALARM ARE MONITORED VIA SMOKE DETECTORS IN THE RETURN AND SUPPLY AIR DUCTS. AN ALARM IS GENERATED WHENEVER EITHER SMOKE DETECTOR IS ACTIVATED. UPON SMOKE DETECTION, THE SUPPLY FAN WILL BE SHUT DOWN, THROUGH HARDWIRE. THE DDC PANEL WILL COMMAND THE OSA DAMPER TO FULLY CLOSED. THE HEATING VALVE WILL CONTINUE TO MODULATE, THROUGH THE DDC PANEL, TO MAINTAIN SUPPLY AIR TEMPERATURE SETPOINT. SMOKE DETECTORS MOUNTED AND WIRED BY OTHERS.

REVISION HISTORY

SIEMENS

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
PHONE: 907.479.7034
FAX: 907.479.3679

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA		09/14/15

AIR HANDLER 3 BOM & SEQ (EX)

440P-159367

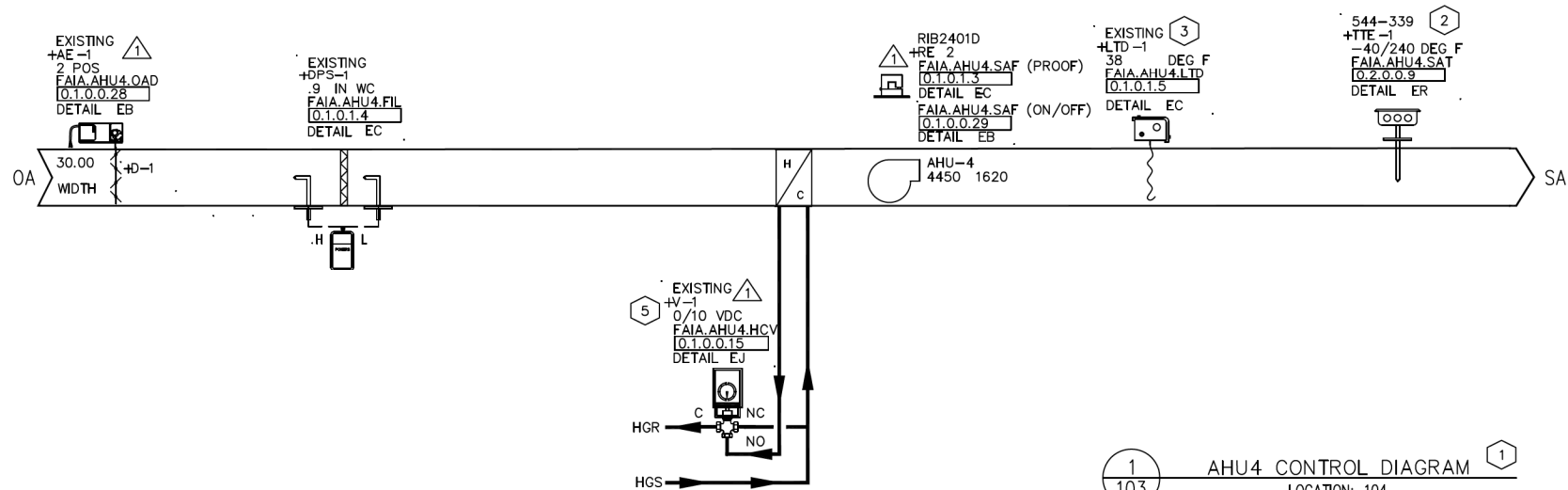
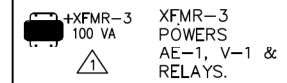
102B

AIR HANDLER 4

INSTALLATION NOTES:

- 1 DEVICES AND WIRING WERE REUSED UNLESS OTHERWISE NOTED.
- 2 REPLACED EXISTING SENSOR WITH SIEMENS SENSOR.
- 3 INTERLOCK SHUTDOWN FAN UPON ALARM.

COMPONENT PANEL CP-1



1
103 AHU4 CONTROL DIAGRAM 1
LOCATION: 104
SERVES: WORK BAY
TYPICAL OF 1

REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
N02	FAIAPXCC02	FAIAPXCC02
N001	FAIAMEC01	FAIAMEC01
N01	FAIAPXCM01	FAIAPXCM01

REVISION HISTORY

1	9/12/2006	TCP	AS-BUILT DRAWING
---	-----------	-----	------------------

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
Phone: 907.479.7034
Fax: 907.479.3879

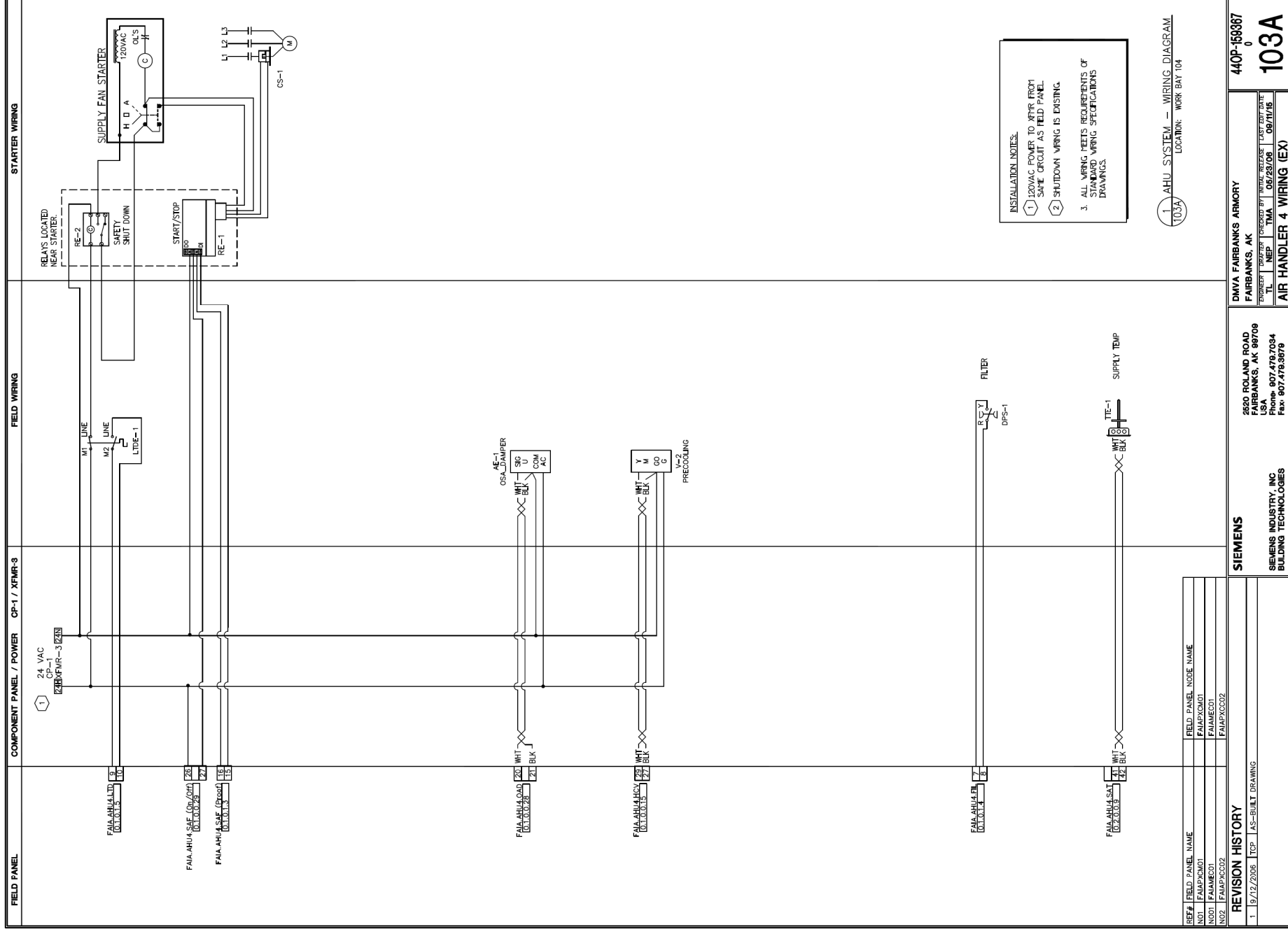
DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/11/15

AIR HANDLER 4 (EX)

440P-159367
0

103



Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Existing Equipment To Remain					
AE 1	1	EXISTING	N/A	N/A	EXISTING
D					SEE DAMPER SUBMITTAL
DPS 1	1	EXISTING	N/A	N/A	EXISTING
LTD 1	1	EXISTING	N/A	N/A	EXISTING
RE 2	1	RIB2401D	FUNCTIONAL DEVICES	1208cut002	RIB 24VAC 24VAC/DC DPDT
TTE 1	1	544-339	SIEMENS	149 261	*OBS/BY 544-339-18* D/PT TEMP SENSOR,
V					SEE VALVE SUBMITTAL

SEQUENCE OF OPERATIONS:
FAIRBANKS DMVA ARMORY

EXISTING AIR HANDLING UNIT (AHU-4):

AIR HANDLING UNIT AHU-4 IS A CONSTANT VOLUME SYSTEM.

SUPPLY STATUS WILL BE MONITORED VIA A CURRENT SWITCH. AN ALARM IS GENERATED WHENEVER THERE IS A MISMATCH BETWEEN THE SUPPLY FAN STATUS AND THE DDC COMMAND SIGNAL.

A DIFFERENTIAL PRESSURE SWITH IS PROVIDED ACROSS THE FILTER TO ALARM WHEN A PRESSURE INCREASE OVER SETPOINT (FIELD SET) IS DETECTED.

THE TEMPERATURE CONTROL SYSTEM IS SOFTWARE INTERLOCKED WITH THE UNIT. WHEN THE UNIT IS OFF, ALL CONTROL SYSTEMS WILL GO TO THEIR DISABLED OR SAFE POSITIONS. WHEN THE UNIT IS ON, ALL CONTROL SIGNALS ARE CONTROLLED AUTOMATICALLY THROUGH THE DDC CONTROL PANEL AS OUTLINED BELOW.

THERE ARE (2) MODES OF OPERATION FOR AUTOMATED CONTROL: NIGHT MODE OPERATION AND DAY MODE OPERATION.

NIGHT MODE OPERATION:

DURING THE NIGHT MODE OPERATION THE SUPPLY FAN WILL BE OFF, OSA DAMPER WILL BE FULLY CLOSED. THE HEATING COIL VALVE WILL BE CLOSED EXCEPT UNDER FREEZE ALARM CONDITION AS DEFINED BELOW.

DAY MODE OPERATION:

A SUPPLY AIR TEMPERATURE SENSOR WILL MODULATE HEATING COIL VALVE TO MAINTAIN SUPPLY AIR TEMPERATURE AT SETPOINT. THE SUPPLY AIR TEMPERATURE SETPOINT WILL BE RESET BY THE AVERAGE SPACE TEMPERATURE OF TWO SENSORS LOCATED IN WORK-BAY 104 AS OUTLINED BELOW. ALL LIMITS ARE OPERATOR ADJUSTABLE.

SPACE TEMP

SUPPLY TEMP

68.0
74.0

80.0
55.0

DURING DAY MODE OPERATION, THE OUTSIDE AIR DAMPER WILL BE FULLY OPEN. THE HEATING COIL VALVE WILL BE LOCKED OUT WHEN OUTSIDE AIR TEMPERATURE IS ABOVE 70.0 DEG F (ADJUSTABLE).

SHOP EXHAUST FAN EF-2 IS SOFTWARE INTERLOCKED WITH SUPPLY FAN. WHEN THE SHOP EXHAUST FAN IS IN OPERATION, THE SUPPLY FAN WILL OPERATE AND THE OSA DAMPER WILL GO FULL OPEN.

REVISION HISTORY

SIEMENS

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
PHONE: 907.479.7034
FAX: 907.479.3679

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA		09/14/15

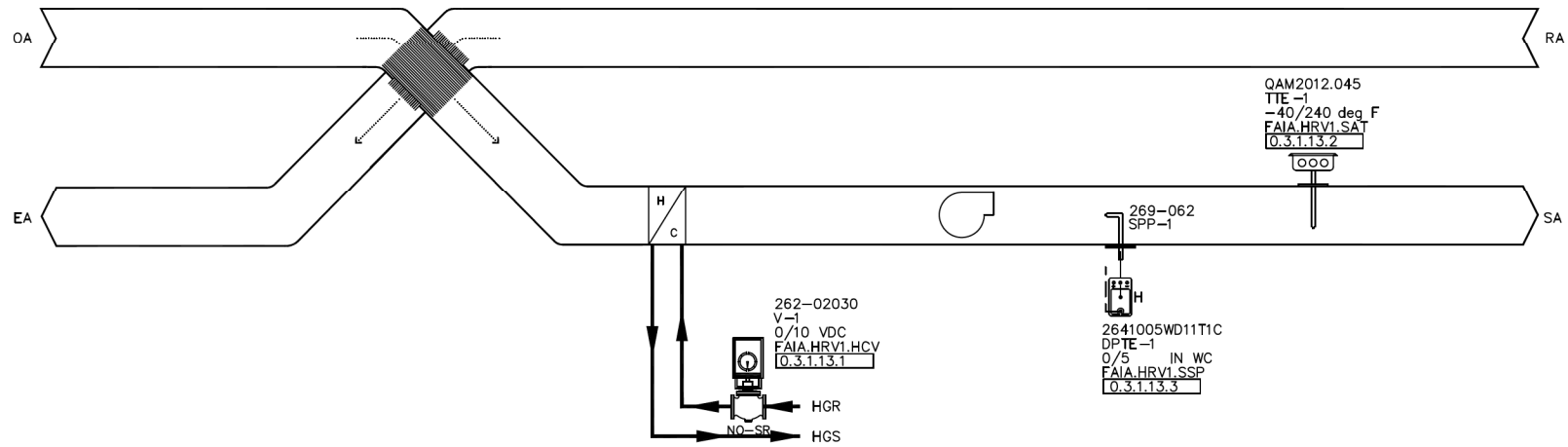
AIR HANDLER 4 BOM & SEQ (EX)

440P-159367

103B

NOTES:

- 1 OCCUPANCY SENSOR LOCATED IN ROOM 138A. SEE DRAWING 400.
- 2 OCCUPANCY SENSOR LOCATED IN ROOM 138B. SEE DRAWING 400A.



1
104

HEAT RECOVERY VENTILATION 1

LOCATED: ROOM 138
SERVES: ROOMS 138A & 138B VENTILATION

☐ FAIA.HRV1.ENABLE
IN03:0.6.4

HRV-1



REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
N03	FAIAPXCM03	FAIAPXCM03

REVISION HISTORY

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
Phone: 907.479.7034
Fax: 907.479.3679

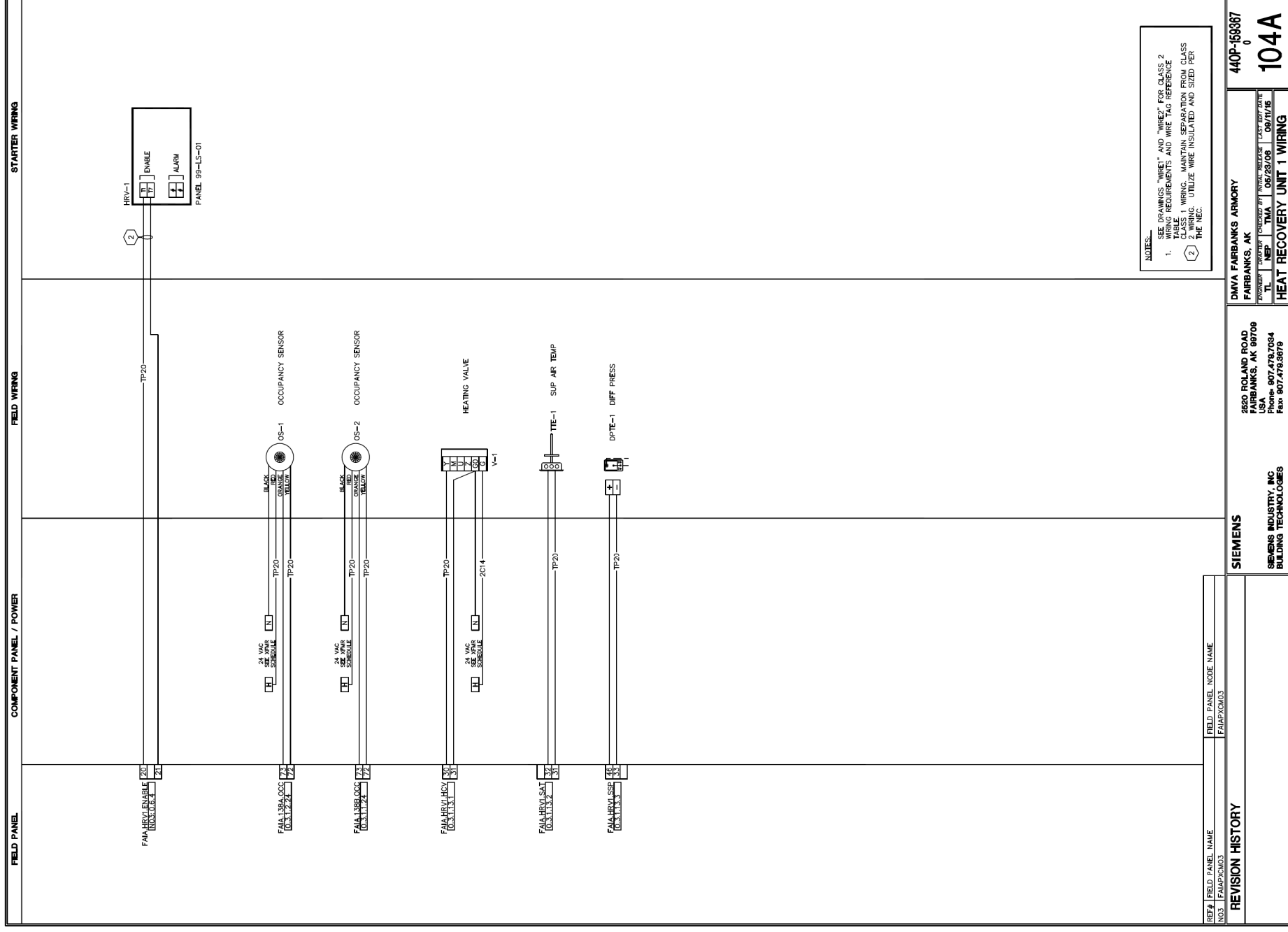
**DMVA FAIRBANKS ARMORY
FAIRBANKS, AK**

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/14/15

HEAT RECOVERY UNIT 1

440P-159367
0

104



Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Field Mounted Devices					
DPTE 1	1	2641005WD11T1C	SETRA	0608cut003	DP TRAN AIR,1%,5inch
SPP 1	1	269-062	SIEMENS	N/A	PR269 ACCESSORY, SENSING TUBE
TTE 1	1	QAM2012.045	SIEMENS	149915	DUCT PT SNSR, PT 1K OHM, (385), 18 IN
V					SEE VALVE SUBMITTAL

SEQUENCE OF OPERATIONS:

FAIRBANKS DMVA ARMORY

HEAT VENTILATIN UNIT 1 (HRV-1):?

A. OCCUPIED MODE

1. OPERATION

- THE UNIT IS CONTROLLED VIA MANUFACTURER PROVIDED CONTROLS.
- THE DDC SYSTEM ENABLES THE UNIT BASED ON OCCUPANCY DETECTION VIA AN OCCUPANCY SENSOR.
- THE HEATING COIL VALVE SHALL MODULATE TO MAINTAIN THE SUPPLY AIR TEMPERATURE SET POINT AT 70 DEGREES F (ADJUSTABLE).

B. UNOCCUPIED MODE

1. OPERATION

- THE UNIT SHALL BE OFF.
- HEATING COIL VALVE SHALL CLOSE.

C. SYSTEM SAFETIES & MONITORING

- UPON LOW SUPPLY AIR TEMPERATURE OF 40 DEGREES F (ADJUSTABLE), THE HRU WILL SHUT DOWN AFTER A TWO MINUTE DELAY AND AN ALARM WILL BE GENERATED.
- AN ALARM SHALL BE GENERATED IF THE FAN IS NOT OPERATING AS DETECTED BY A PRESSURE SENSOR.

REVISION HISTORY

SIEMENS

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
PHONE: 907.479.7034
FAX: 907.479.3679

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

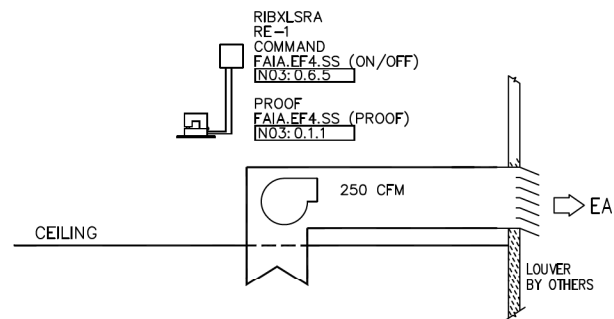
DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA		09/14/15

HEAT RECOVERY 1 BOM & SEQ

440P-159367

104B



QAA2235.EWSN
TTE -1
55/95 DEG F
FAIA.EF4.RMT
NO3: 0.4.3

1
105 EXHAUST FAN 4
(REFERENCED AS EF-1 ON CONTRACT DWGS)
LOCATION/SERVES: SERVER ROOM 150

REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO3	FAIAPXCM03	FAIAPXCM03

REVISION HISTORY

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
Phone: 907.479.7034
Fax: 907.479.3679

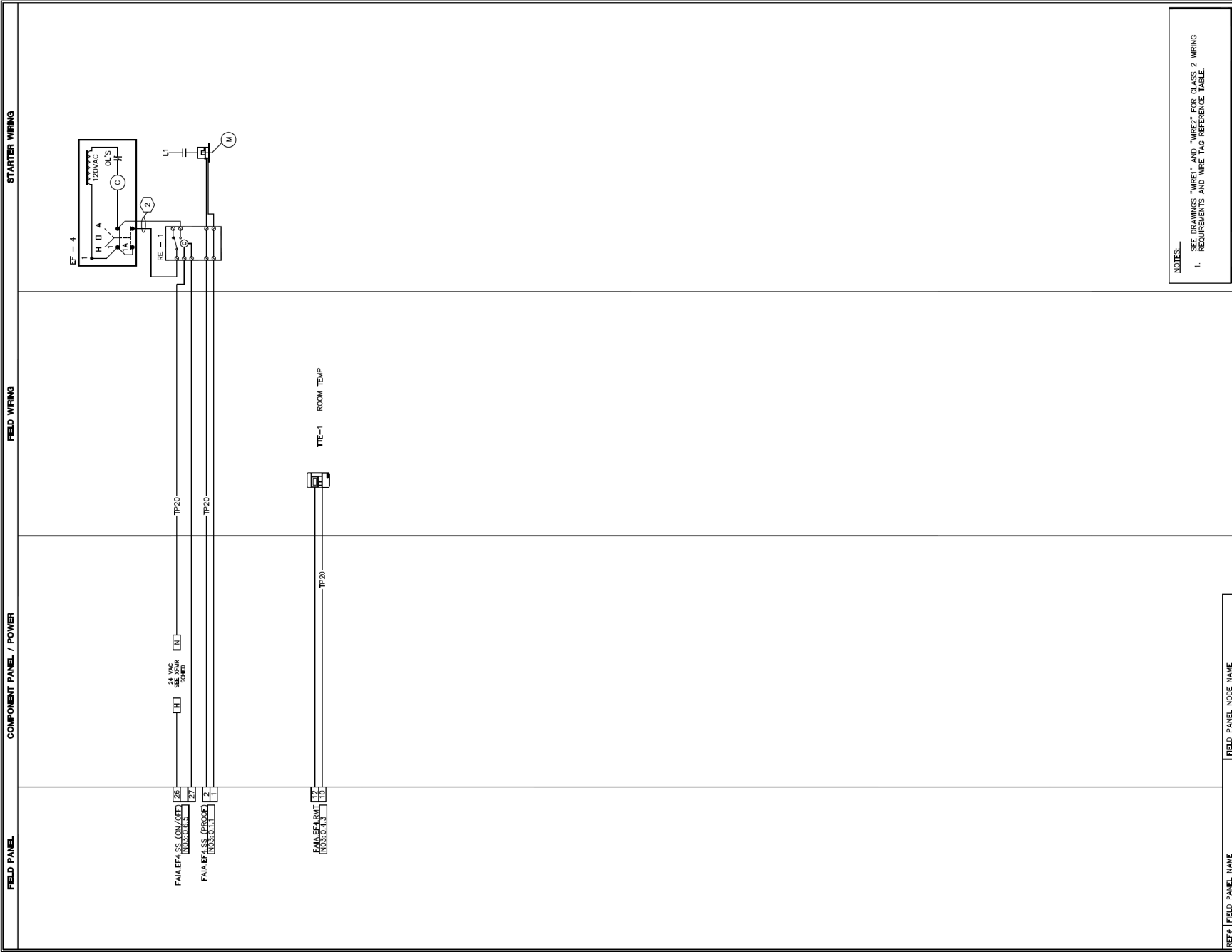
DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/11/15

EXHAUST FAN 4 (EF-1 ROOM 150)

440P-159367
0

105



Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Field Mounted Devices					
RE 1	1	RIBXLSRA	FUNCTIONAL DEVICES	1208cut137	CS ENC RM ADJ 1.25-150A REL,OV
TTE 1	1	QAA2235.EWSN	SIEMENS	149708	RTS, BAU HSNG, 100K , NC

SEQUENCE OF OPERATIONS:

FAIRBANKS DMVA ARMORY

EXHAUST FAN 4 (NEW EF-1 SERVING SERVER ROOM 150):

- A. OPERATION
 1. THE EXHAUST FAN SHALL START AND STOP TO MAINTAIN ROOM TEMPERATURE SET POINT OF 75 DEGREES F (ADJUSTABLE).
- B. SYSTEM SAFETIES & MONITORING
 1. AN ALARM SHALL BE GENERATED IF THE ROOM TEMPERATURE SET POINT EXCEEDS 80 DEGREES F (ADJUSTABLE).

REVISION HISTORY

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
PHONE: 907.479.7034
FAX: 907.479.3679

DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA		09/14/15

EXHAUST FAN 4 BOM & SEQ

440P-159367

105B

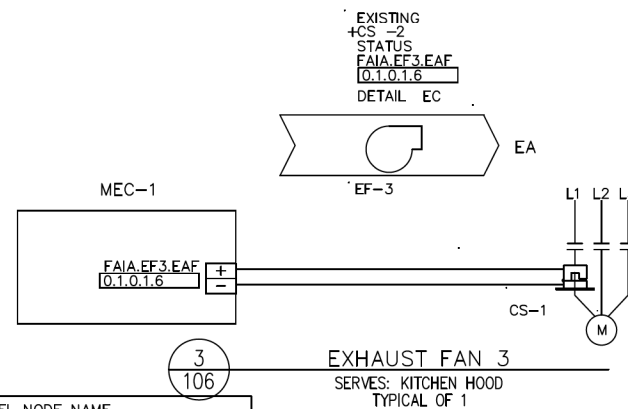
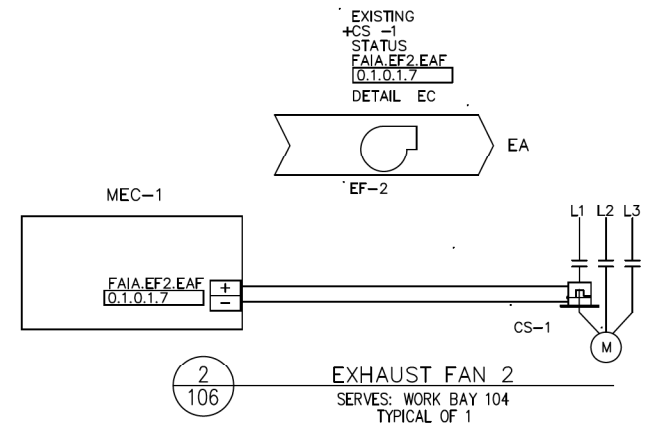
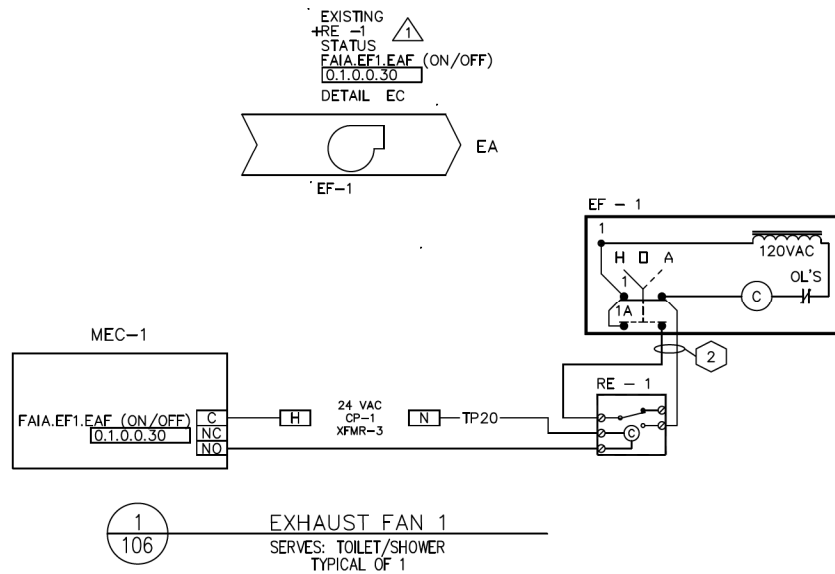
EXHAUST FANS 1-3

INSTALLATION NOTES:

1 DEVICES AND WIRING WERE REUSED UNLESS OTHERWISE NOTED.

COMPONENT PANEL CP-1

XFMR-3 100 VA
XFMR-3 POWERS RELAYS.



REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
N01	FAIAPXCM01	FAIAPXCM01
N001	FAIAMEC01	FAIAMEC01

REVISION HISTORY

1 9/12/2006 TCP AS-BUILT DRAWING

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
Phone: 907.479.7034
Fax: 907.479.3679

DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/11/15

EXHAUST FANS 1-3 (EX)

440P-159367
0

106

Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Existing Equipment To Remain					
CS 1-2	2	EXISTING	N/A	N/A	EXISTING
RE 1	1	EXISTING	N/A	N/A	EXISTING

SEQUENCE OF OPERATIONS:
FAIRBANKS DMVA ARMORY
EXHAUST FAN 1 (EF-1):

THE EXHAUST FAN WILL BE AUTOMATICALLY START/STOPPED BASED ON A TIME PROGRAM (ADJUSTABLE) THROUGH THE DDC CONTROL PANEL.

THERE ARE (2) MODES OF OPERATION FOR AUTOMATED CONTROL: NIGHT MODE OPERATION AND DAY MODE OPERATION.

NIGHT MODE OPERATION:
DURING NIGHT MODE OPERATION THE SUPPLY FAN WILL BE OFF.

DAY MODE OPERATION:
DURING DAY MODE OPERATION THE SUPPLY FAN WILL BE ON.

EXHAUST FAN 2 (EF-2):

SHOP EXHAUST FAN EF-2 IS MANUALLY ENABLE BY THE USER AND IS SOFTWARE INTERLOCKED WITH AHU-4. WHEN THE SHOP EXHAUST FAN IS IN OPERATION, THE AHU-4 SUPPLY FAN WILL OPERATE AND THE AHU-4 OSA DAMPER WILL GO FULL OPEN.

EXHAUST FAN 3 (EF-3):

KITCHEN HOOD EXHAUST FAN EF-3 IS MANUALLY ENABLED BY THE USER AND IS SOFTWARE INTERLOCKED WITH AHU-2. WHEN KITCHEN HOOD EXHAUST FAN IS IN OPERATION, THE SUPPLY FAN FOR AHU-2 WILL OPERATE AND THE AHU-2 OSA DAMPER WILL BE FULLY OPEN. AHU-2 PREHEAT AND HEATING COIL VALVES WILL MODULATE IN DAY MODE OPERATION (REFERENCE AHU-2 SEQUENCE OF OPERATIONS).

REVISION HISTORY

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
PHONE: 907.479.7034
FAX: 907.479.3679

DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA		09/14/15

EXHAUST FANS 1-3 BOM & SEQ (EX)

440P-159367

106A

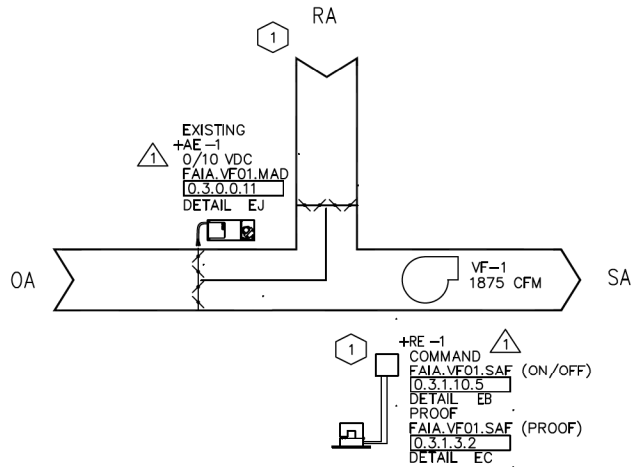
VENTILATION FAN 1

INSTALLATION NOTES:

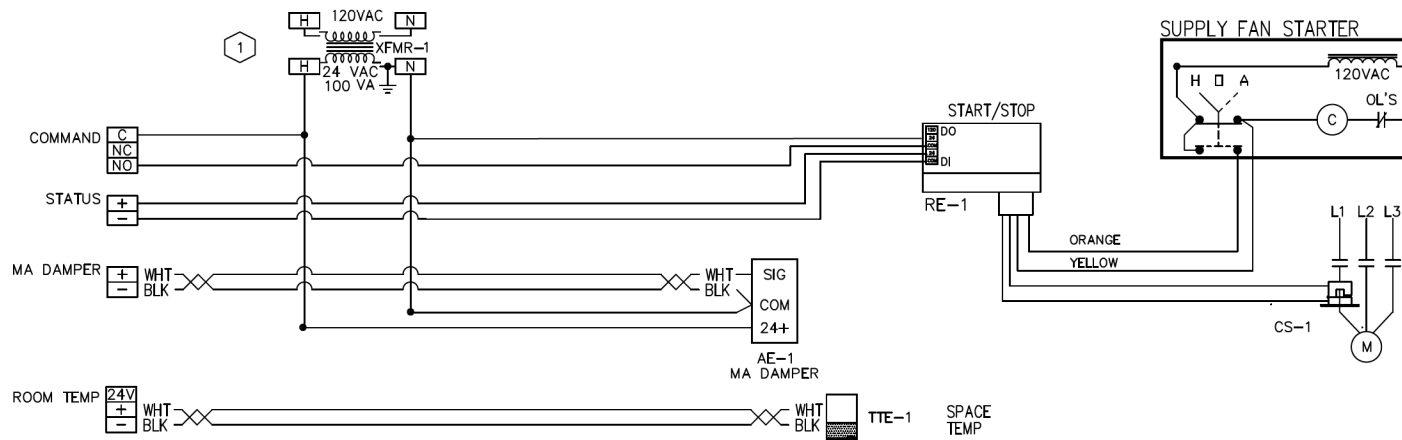
1 DEVICES ARE EXISTING UNLESS OTHERWISE INDICATED.

COMPONENT PANEL CP-C2

+XFMR-2 100 VA
XFMR-2 POWERS
AE-1 & RELAY.



544-760A
TTE -1
55/95 DEG F
FAIA.RM141.RMT
0.3.1.7.7
DETAIL ER
LOCATED BOILER ROOM



1
107

VF-1 SYSTEM DIAGRAM

LOCATION: BOILER ROOM 114
SERVES: BOILER ROOM

REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO3	FAIAMEC03	FAIAMEC-03

REVISION HISTORY

1	9/12/2006	TCP	AS-BUILT DRAWING
---	-----------	-----	------------------

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
Phone: 907.479.7034
Fax: 907.479.3879

DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/11/15

BOILER VENT FAN (EX)

440P-159367
0

107

Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Field Mounted Devices					
TTE 1	1	544-760A	SIEMENS	149168	ROOM SENSOR,DST BEIGE

SEQUENCE OF OPERATIONS:
FAIRBANKS DMVA ARMORY
BOILER VENT FAN 1 (VF-1):

THIS UNIT WILL RUN BASED ON ROOM COOLING NEEDS. THE SPACE THERMOSTAT WILL ENABLE FAN AND MODULATE MIXING DAMPERS TO MAINTAIN SPACE TEMPERATURE AT SETPOINT (ADJUSTABLE).

REVISION HISTORY

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
PHONE: 907.479.7034
FAX: 907.479.3679

DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA		09/14/15

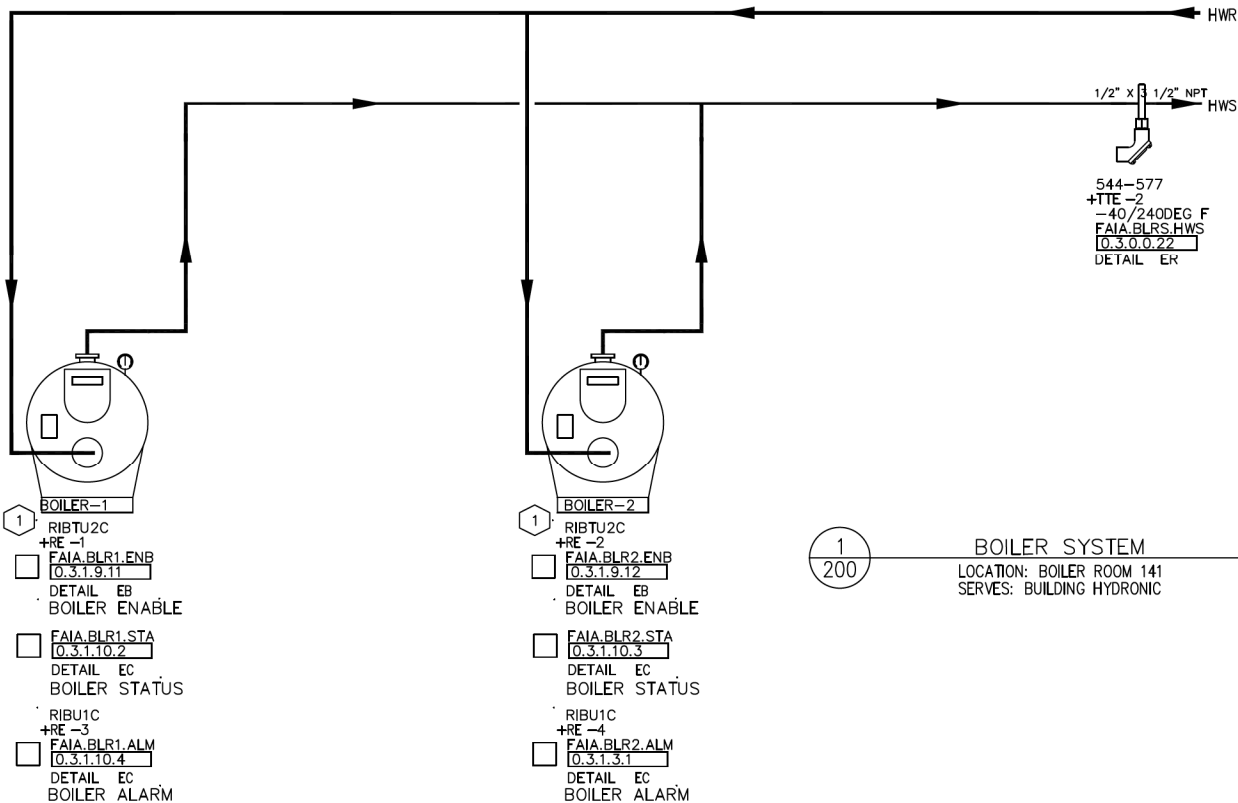
BOILER VENT FAN BOM & SEQ (EX)

440P-159367

107A

NORTH
WALL

536-768
+TTE -1
-58/122DEG F
FAIA.OSAT
[0.3.0.0.21]
DETAIL ER



BOILERS

INSTALLATION NOTES:

1 DEVICES AND WIRING WERE REUSED UNLESS OTHERWISE NOTED.

COMPONENT PANEL CP-2



+XFMR-2
100 VA



XFMR-2
POWERS
RELAYS.

1

BOILER-1
RIBTU2C
+RE -1
FAIA.BLR1.ENB
[0.3.1.9.11]
DETAIL EB
BOILER ENABLE

FAIA.BLR1.STA
[0.3.1.10.2]
DETAIL EC
BOILER STATUS

RIBU1C
+RE -3
FAIA.BLR1.ALM
[0.3.1.10.4]
DETAIL EC
BOILER ALARM

1

BOILER-2
RIBTU2C
+RE -2
FAIA.BLR2.ENB
[0.3.1.9.12]
DETAIL EB
BOILER ENABLE

FAIA.BLR2.STA
[0.3.1.10.3]
DETAIL EC
BOILER STATUS

RIBU1C
+RE -4
FAIA.BLR2.ALM
[0.3.1.10.1]
DETAIL EC
BOILER ALARM

1
200

BOILER SYSTEM

LOCATION: BOILER ROOM 141
SERVES: BUILDING HYDRONIC

REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
N03	FAIAMEC03	FAIAMEC-03

REVISION HISTORY

1	9/12/2006	TCP	AS-BUILT DRAWING
---	-----------	-----	------------------

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
Phone: 907.479.7034
Fax: 907.479.3679

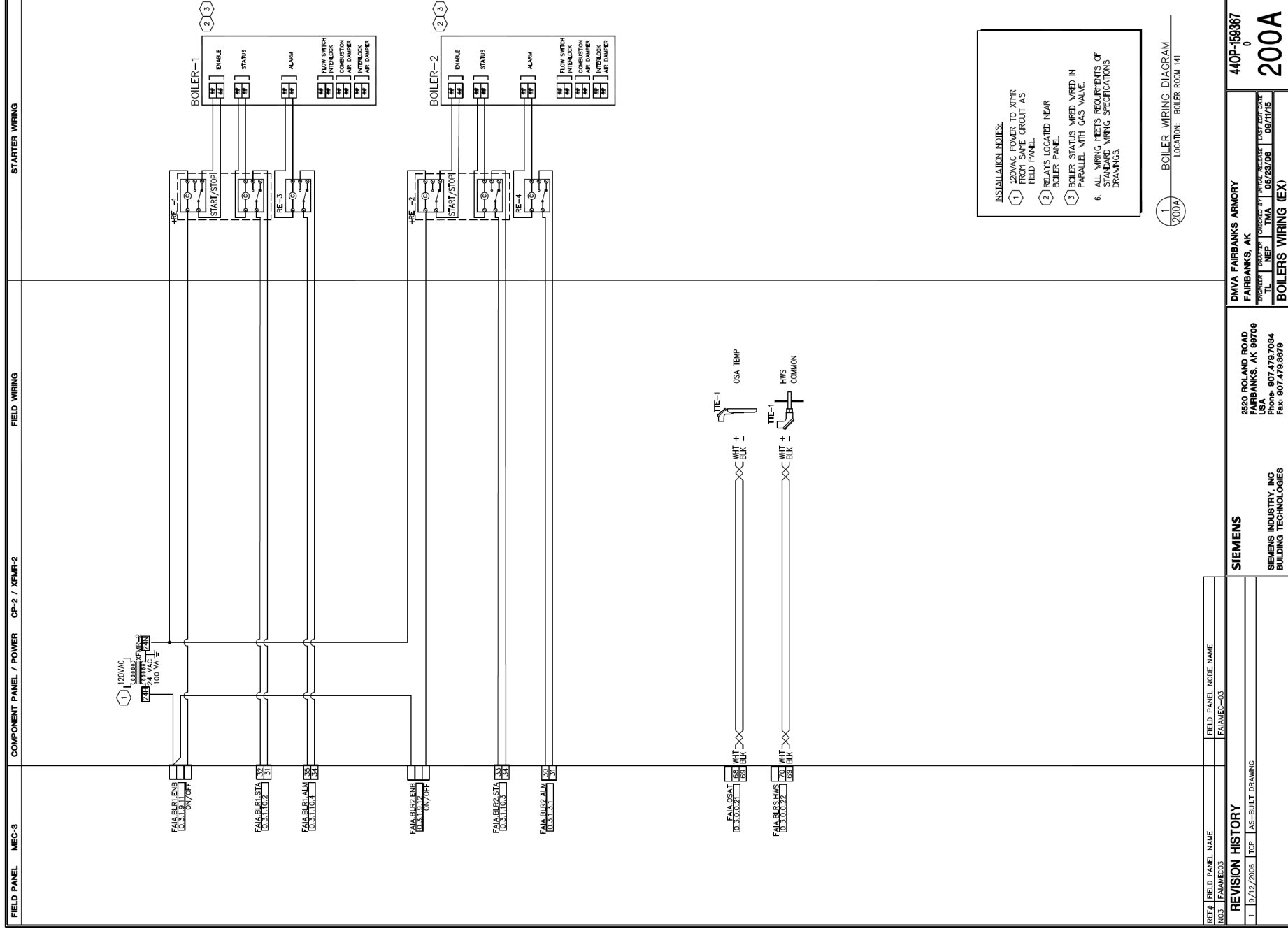
DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/11/15

BOILERS (EX)

440P-159367
0

200



Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Existing Equipment To Remain					
AE 1	1	EXISTING	N/A	N/A	EXISTING
RE 1-2	2	RIBTU2C	FUNCTIONAL DEVICES	1208cut012	T-10A 2 SPDT 10-30VAC/DC120VAC
RE 3-4	2	RIBU1C	FUNCTIONAL DEVICES	1208cut013	RIB 120VAC 24VAC/DC SPDT
TTE 1	1	536-768	SIEMENS	149 263	MRIR TEMP SENS PLAT -58/122F
TTE 2	1	544-577	SIEMENS	149 261	*OBS/BY 544-577-25* IMM TEMP SENS (-40/2

SEQUENCE OF OPERATIONS:
FAIRBANKS DMVA ARMORY

BOILERS (BOILERS):

THE HOT WATER SYSTEM CONSISTS OF TWO HOT WATER BOILERS AND DEDICATED HOT WATER DISTRIBUTION PUMPS.

THE SYSTEM OPERATES AS FOLLOWS (ALL SUGGESTED SET POINTS AND SETTINGS ARE ADJUSTABLE.):

HEATING CONTROL

BOILERS RUN CONTINUOUSLY FOR HEATING AND DOMESTIC HOT WATER.

IF A BOILER GOES INTO ALARM, THE BOILER IS TURNED OFF AND THE NEXT BOILER COMBINATION IN SEQUENCE TAKES OVER.

THE BOILER CONTROL SYSTEM, PROVIDED BY THE BOILER MANUFACTURER, IS FACTORY WIRED EXCEPT FOR FIELD INSTALLED DEVICES (COMBUSTION AIR DAMPER INTERLOCKS, FLOW SWITCHES, LOW WATER CUT OFF, ETC.). FLAME SAFEGUARD CONTROLS ARE INCLUDED WITH THE BOILER.

THE DDC SYSTEM MONITORS THE BOILER CONTROLS FOR A COMMON ALARM CONDITION (I.E. LOW WATER CUT OFF, FLAME FAILURE, ETC.).

REVISION HISTORY

SIEMENS

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
PHONE: 907.479.7034
FAX: 907.479.3679

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA		09/14/15

BOILERS BOM & SEQ (EX)

440P-159367

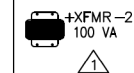
200B

3 PHASE PUMPS

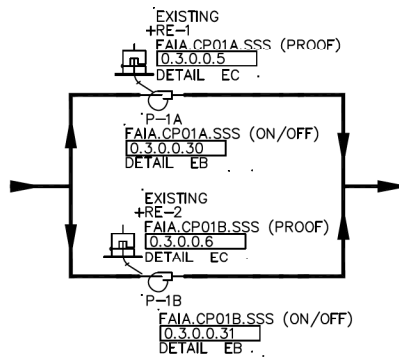
INSTALLATION NOTES:

1 DEVICES AND WIRING WERE REUSED
UNLESS OTHERWISE NOTED.

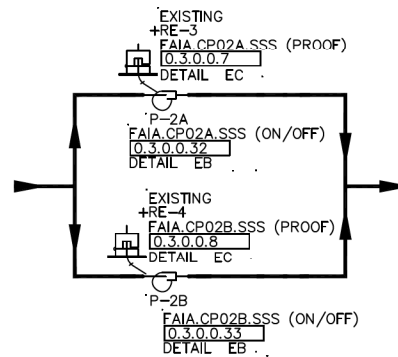
COMPONENT PANEL CP-2



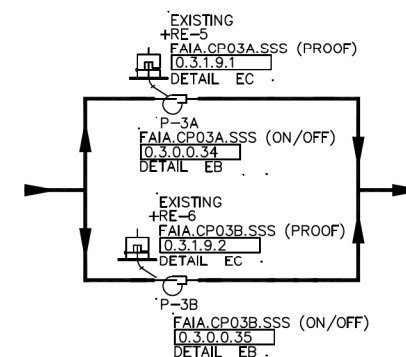
XFMR-2
POWERS
RELAYS.



1
201 CP 1A & 1B
LOCATED: BOILER ROOM 114
TYPICAL OF 1



2
201 CP 2A & 2B
LOCATED: BOILER ROOM 114
TYPICAL OF 1



3
201 CP 3A & 3B
LOCATED: BOILER ROOM 114
TYPICAL OF 1

REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
N03	FAIAMEC03	FAIAMEC-03

REVISION HISTORY

1	9/12/2006	TCP	AS-BUILT DRAWING
---	-----------	-----	------------------

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
Phone: 907.479.7034
Fax: 907.479.3679

DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/11/15

BUILDING PUMPS (EX)

440P-159367
0

201

120 VAC PUMPS

INSTALLATION NOTES:



DEVICES AND WIRING WERE REUSED
UNLESS OTHERWISE NOTED.

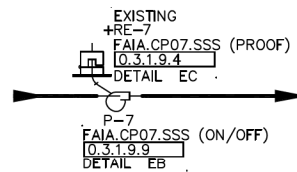
COMPONENT PANEL CP-2



+XFMR-2
100 VA

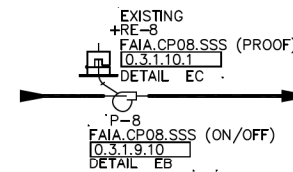


XFMR-2
POWERS
RELAYS.



1
201A

CP-7
LOCATED: MECHANICAL ROOM 142
TYPICAL OF 1



2
201A

CP-8
LOCATED: MECHANICAL ROOM 142
TYPICAL OF 1

REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
N03	FAIAMEC03	FAIAMEC-03

REVISION HISTORY

1	9/12/2006	TCP	AS-BUILT DRAWING
---	-----------	-----	------------------

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
Phone: 907.479.7034
Fax: 907.479.3679

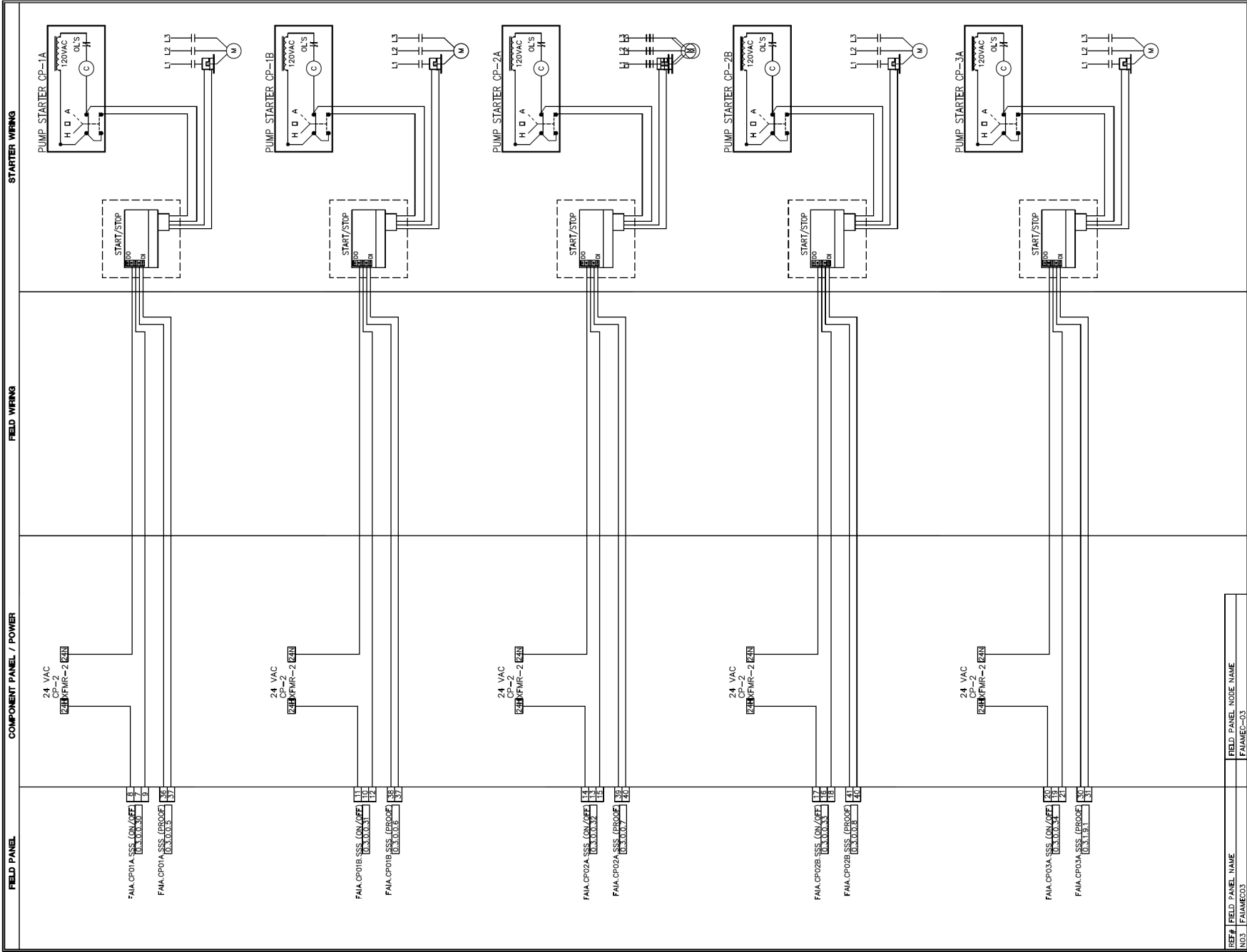
DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/11/15

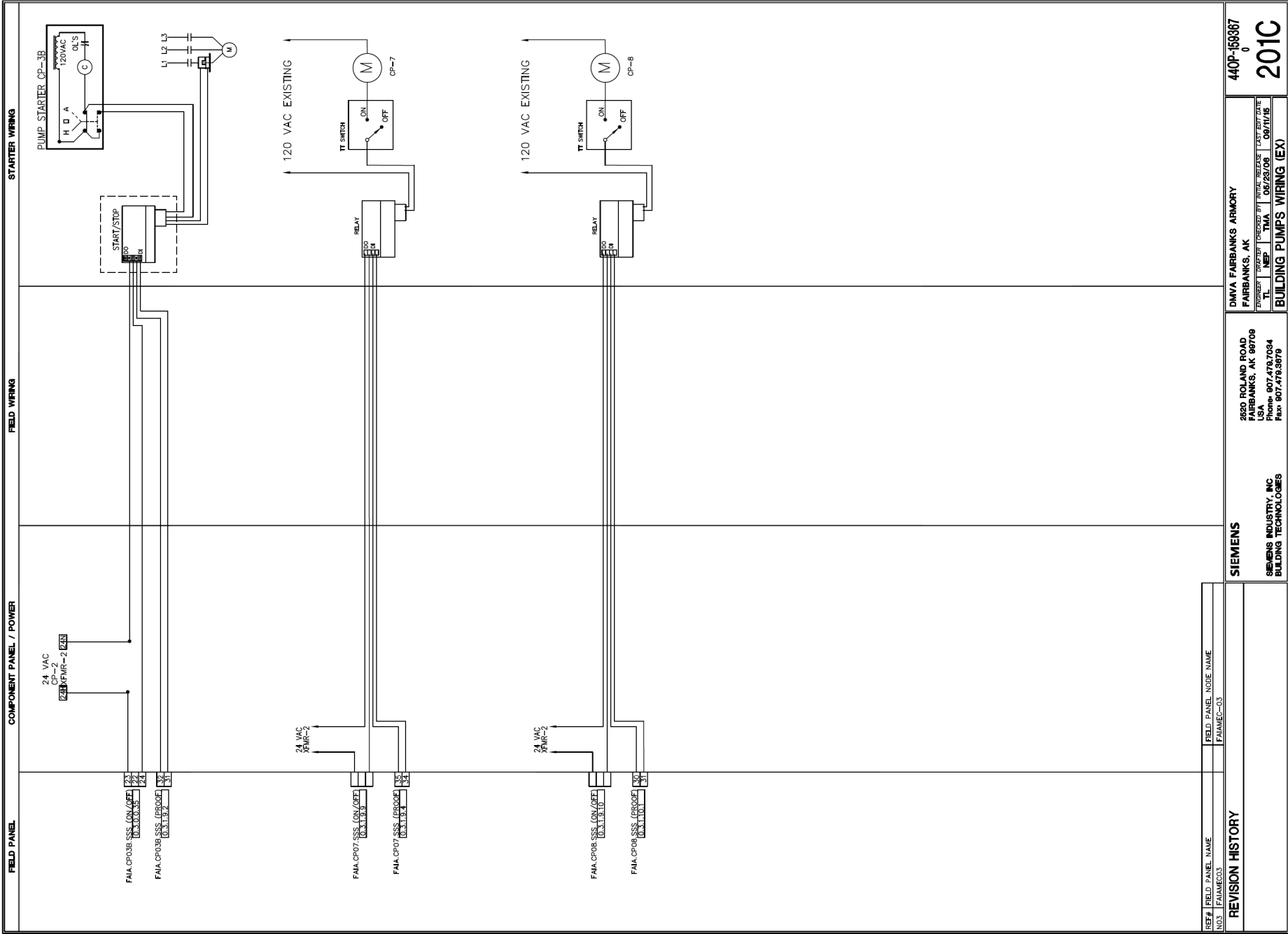
BUILDING PUMPS WIRING (EX)

440P-159367
0

201A



REVISION HISTORY		SIEMENS		2520 ROLAND ROAD FAIRBANKS, AK 99709 USA Phone: 907.479.7034 Fax: 907.479.3879		DWA FAIRBANKS ARMORY FAIRBANKS, AK		440P-159367 0	
REF#	FIELD PANEL NAME	FIELD PANEL NO	FIELD PANEL NO	FIELD PANEL NO	FIELD PANEL NO	FIELD PANEL NO	FIELD PANEL NO	FIELD PANEL NO	FIELD PANEL NO
NO.	FAIRMEC03	FAIRMEC03	FAIRMEC03	FAIRMEC03	FAIRMEC03	FAIRMEC03	FAIRMEC03	FAIRMEC03	FAIRMEC03
440P-159367		0		201B		BUILDING PUMPS WIRING (EX)		09/11/15	
PROJECT		TIA		TIA		TIA		TIA	
DESIGNED BY		TIA		TIA		TIA		TIA	
CHECKED BY		TIA		TIA		TIA		TIA	
APPROVED BY		TIA		TIA		TIA		TIA	
DATE		06/23/06		06/23/06		06/23/06		06/23/06	



Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Existing Equipment To Remain					
RE 1-8	8	EXISTING	N/A	N/A	EXISTING

SEQUENCE OF OPERATIONS:
FAIRBANKS DMVA ARMORY

HEATING HOT WATER PUMPS (CP-3A/B):

THE LEAD PUMP WILL OPERATE CONTINUOUSLY TO PROVIDE HEATING TO DOMESTIC HOT WATER SYSTEMS AND BUILDING HEAT SYSTEMS.

UPON FAILURE OF THE LEAD PUMP, THE LAG PUMP WILL OPERATE AS NEEDED.

LEAD/LAG OPERATION WILL ALTERNATE AUTOMATICALLY EVERY 200 HOURS (ADJUSTABLE) OF USE.

CIRCULATING PUMPS (CP-7, CP-8):

DOMESTIC HOT WATER RE-CIRCULATION PUMP (CP-7) WILL OPERATE DURING SCHEDULED OCCUPIED TIMES.

UTILITY WATER MAIN RE-CIRCULATION PUMP (CP-8) WILL BE ENABLED BASED ON OUTDOOR AIR TEMPERATURE. PUMP WILL BE ON WHEN OUTSIDE AIR TEMPERATURE IS BELOW 35DEG (ADJUSTABLE) AND OFF OTHERWISE.

BOILER PUMPS (CP-1A & B, CP-2A & B):

THESE PUMPS WILL OPERATE AS PART OF THE BOILER SYSTEM IN A LEAD LAG CONFIGURATION.

UPON FAILURE OF THE LEAD PUMP, THE LAG PUMP WILL OPERATE AS NEEDED.

LEAD/LAG OPERATION WILL ALTERNATE AUTOMATICALLY EVERY 200 HOURS (ADJUSTABLE) OF USE.

REVISION HISTORY

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
PHONE: 907.479.7034
FAX: 907.479.3679

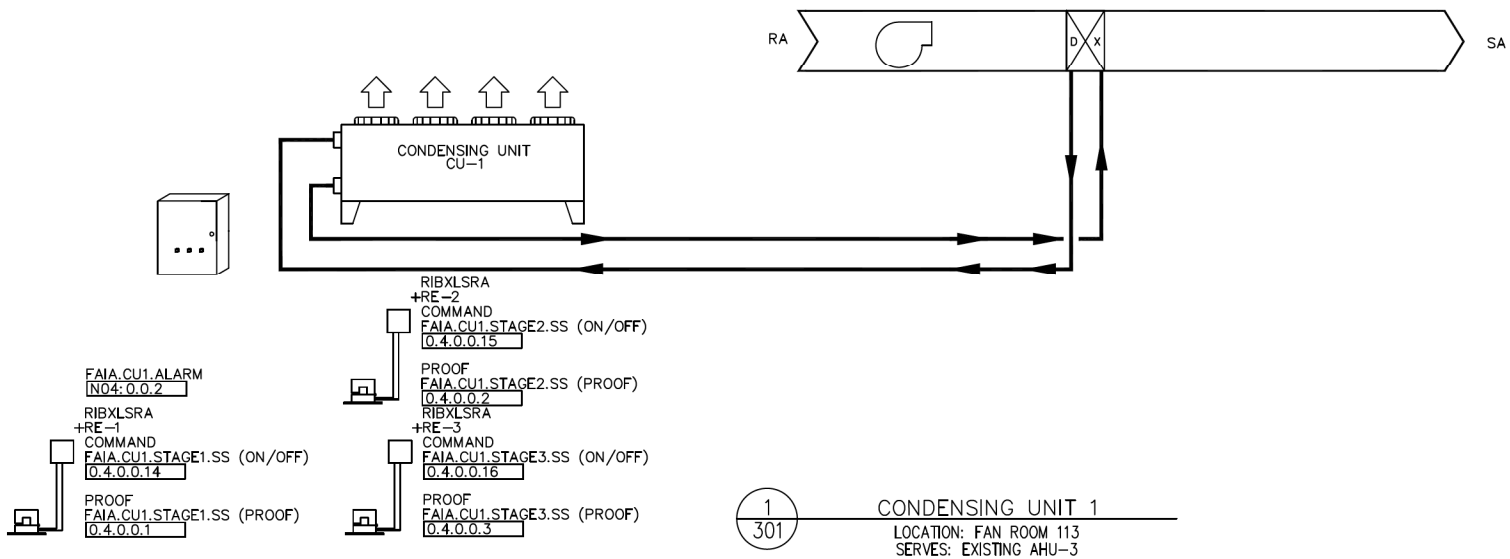
DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA		09/14/15

BUILDING PUMPS BOM & SEQ (EX)

440P-159367

201D



REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO4	FAIAPXCC01	FAIAPXCC01

REVISION HISTORY

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
Phone: 907.479.7034
Fax: 907.479.3679

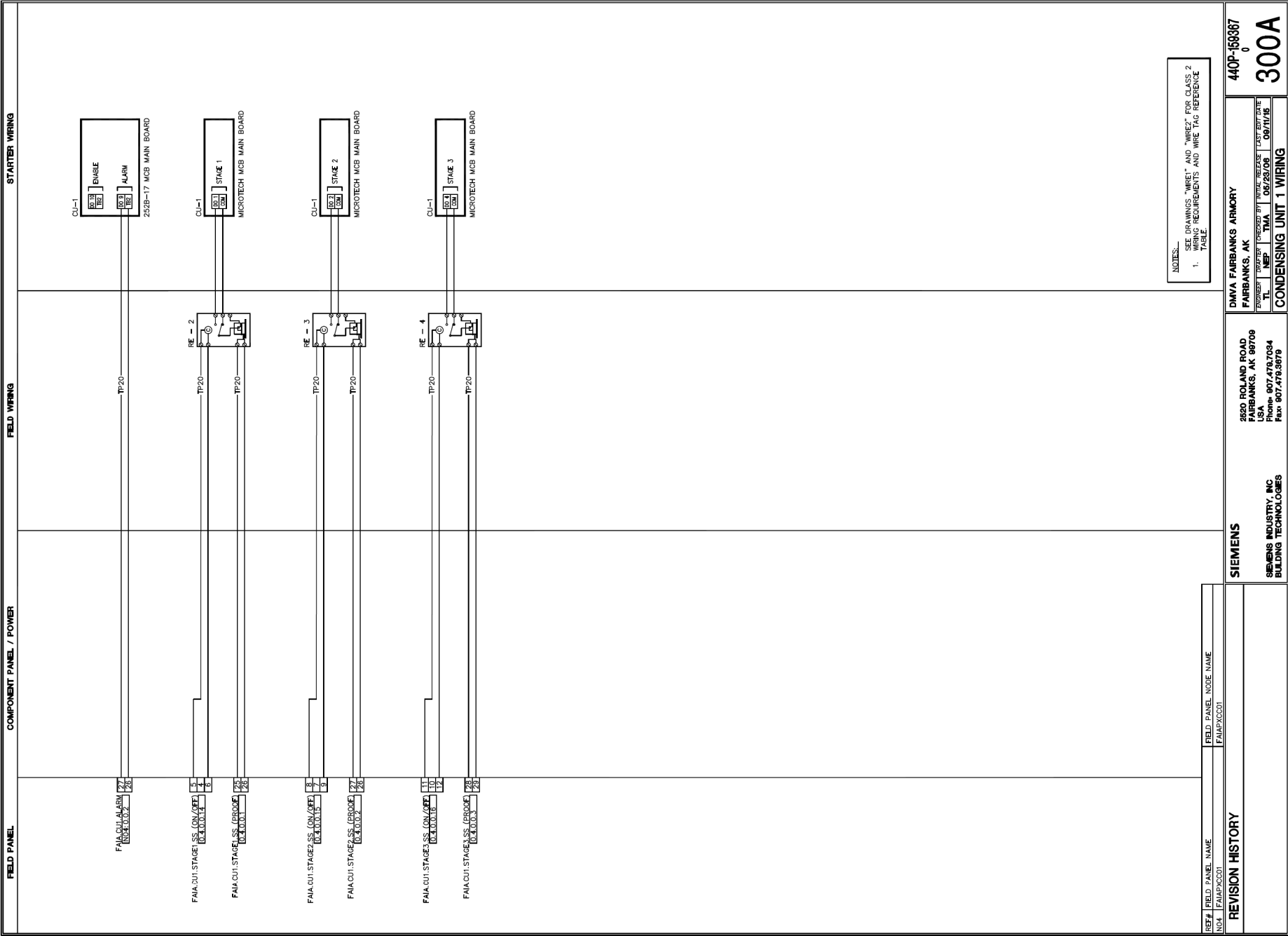
DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/11/15

CONDENSING UNIT 1

440P-159367
0

300



Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Existing Equipment To Remain					
RE 1-3	3	RIBXLSRA	FUNCTIONAL DEVICES	1208cut137	CS ENC RM ADJ 1.25-150A REL,OV

SEQUENCE OF OPERATIONS:

FAIRBANKS DMVA ARMORY

CONDENSING UNIT 1 (CU-1):?

A. OPERATION

1. THE CONDENSING UNIT SHALL ENABLE ON A CALL FOR COOLING.
2. THE UNIT SHALL OPERATE IN STAGES TO MEET COOLING CONDITIONS REQUIRED BY THE SUPPLY AIR TEMPERATURE SET POINT. IF STAGE 1 DOES NOT MEET THE COOLING REQUIREMENT, THEN THE FOLLOWING STAGES SHALL ENABLE UNTIL THE COOLING SET POINT IS SATISFIED:

STAGE	MOTORS/COMPRESSORS
1	2
2	1
3	1 & 4
4	1, 2 & 4

3. THE CONDENSING VALVE SHALL CYCLE ON WHEN THE OUTSIDE AIR TEMPERATE IS ABOVE 65 DEGREES F. THE VALVE SHALL MAINTAIN THE SUPPLY AIR TEMPERATURE SET POINT OF 55 DEGREES F (ADJUSTABLE).

B. SYSTEM SAFETIES & MONITORING

1. AN ALARM IS GENERATED WHEN THE CONDENSING UNIT GOES INTO ALARM MODE.

REVISION HISTORY

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
PHONE: 907.479.7034
FAX: 907.479.3679

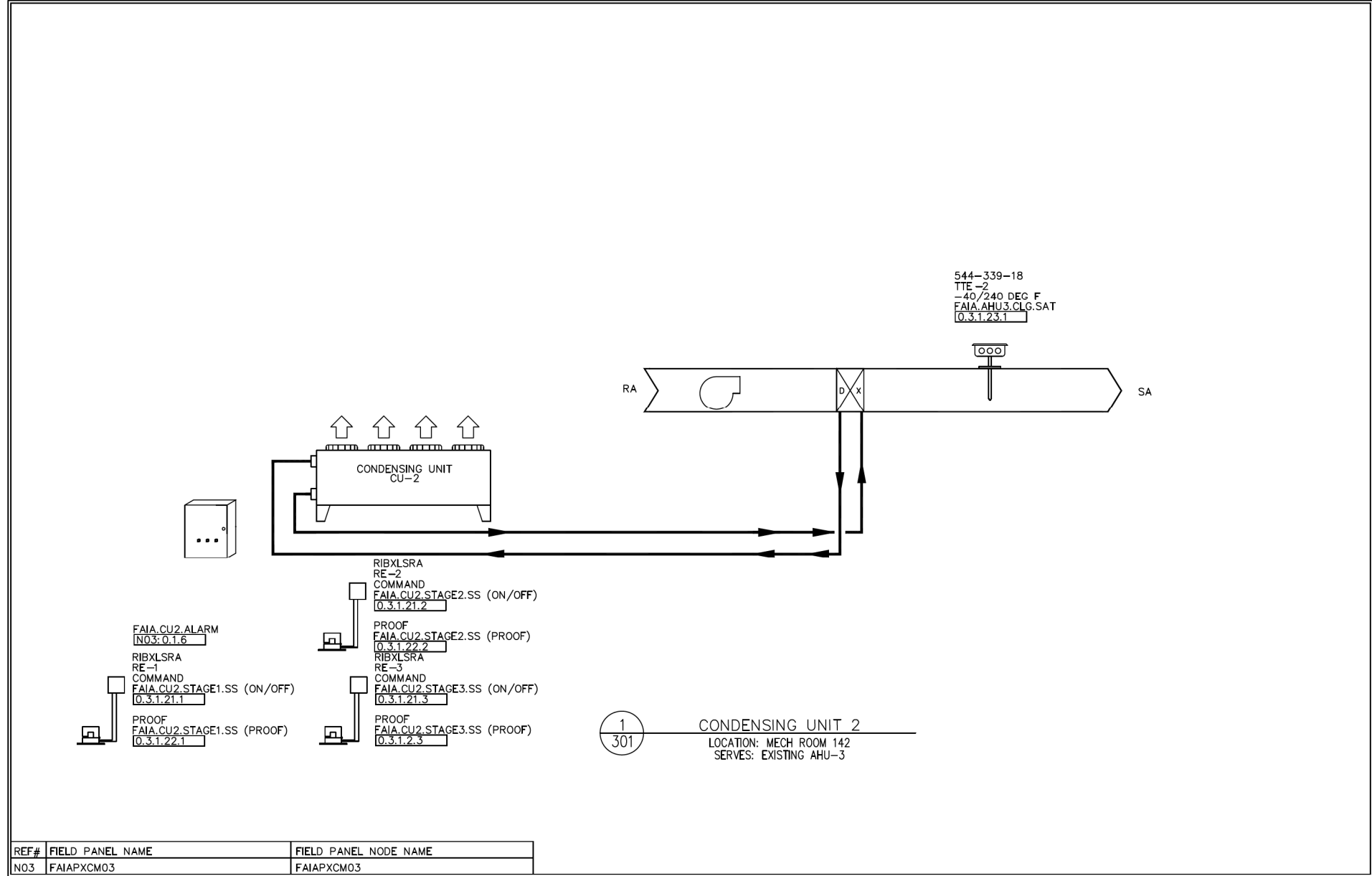
DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA		09/14/15

CONDENSING UNIT 1 BOM & SEQ

440P-159367

300B



REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO3	FAIAPXCM03	FAIAPXCM03

REVISION HISTORY

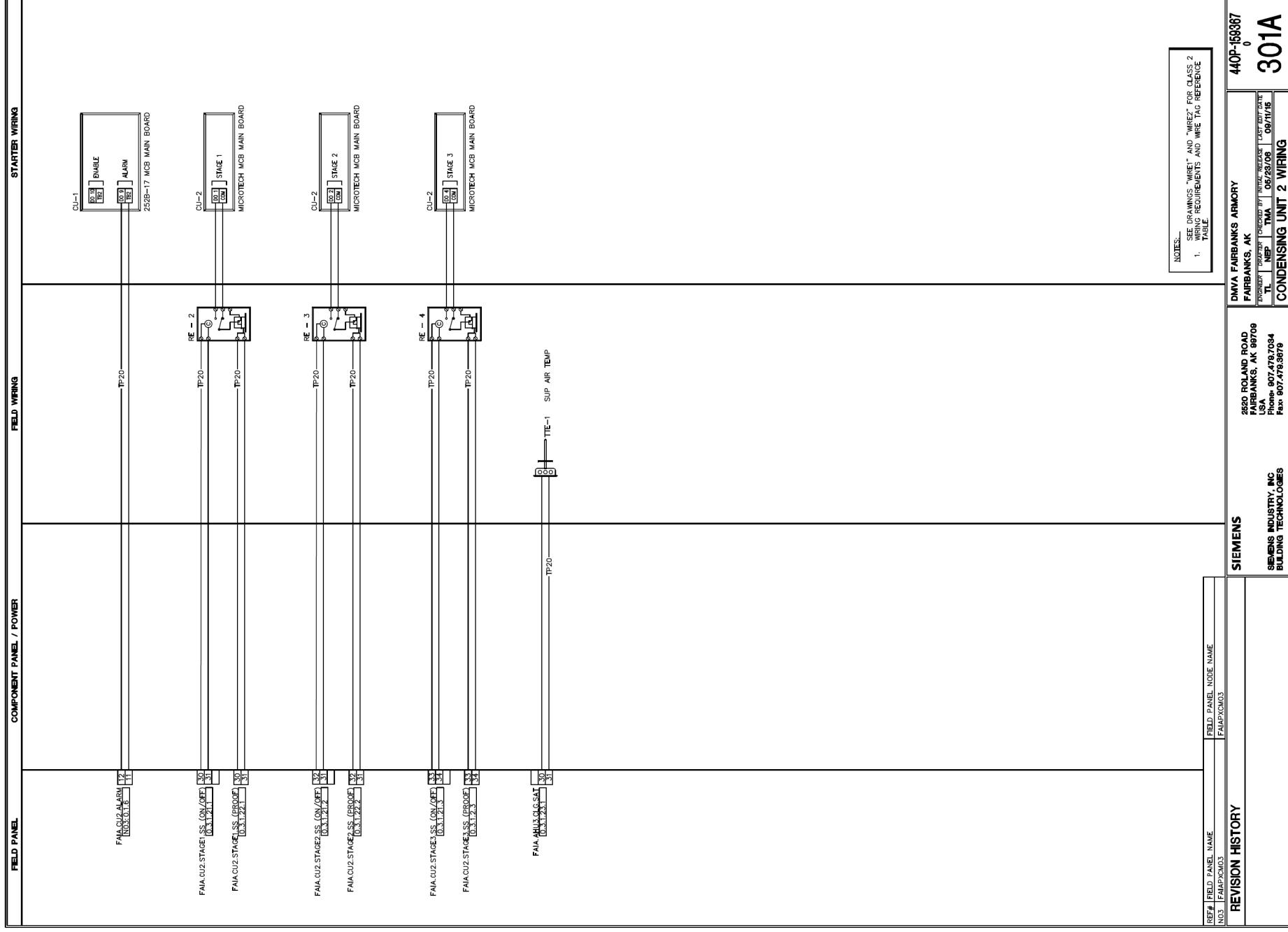
SIEMENS

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
Phone: 907.479.7034
Fax: 907.479.3679

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

DMVA FAIRBANKS ARMORY FAIRBANKS, AK				
ENGINEER TL	DRAFTER NEP	CHECKED BY TMA	INITIAL RELEASE 05/23/06	LAST EDIT DATE 09/14/15
CONDENSING UNIT 2				

440P-159367
0
301



Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Field Mounted Devices					
RE 1-3	3	RIBXLSRA	FUNCTIONAL DEVICES	1208cut137	CS ENC RM ADJ 1.25-150A REL,OV
TTE 1	1	EXISTING	N/A	N/A	EXISTING
TTE 2	1	544-339-18	SIEMENS	149261	DCT PT SNSR, PT 1K OHM, (375), 18" PROBE

SEQUENCE OF OPERATIONS:

FAIRBANKS DMVA ARMORY

CONDENSING UNIT 2 (CU-2): ?

A. OPERATION

1. THE CONDENSING UNIT SHALL ENABLE ON A CALL FOR COOLING.
2. THE UNIT SHALL OPERATE IN STAGES TO MEET COOLING CONDITIONS REQUIRED BY THE SUPPLY AIR TEMPERATURE SET POINT. IF STAGE 1 DOES NOT MEET THE COOLING REQUIREMENT, THEN THE FOLLOWING STAGES SHALL ENABLE UNTIL THE COOLING SET POINT IS SATISFIED:

STAGE	MOTORS/COMPRESSORS
1	2
2	1
3	1 & 4
4	1, 2 & 4

3. THE CONDENSING VALVE SHALL CYCLE ON WHEN THE OUTSIDE AIR TEMPERATE IS ABOVE 65 DEGREES F. THE VALVE SHALL MAINTAIN THE SUPPLY AIR TEMPERATURE SET POINT OF 55 DEGREES F (ADJUSTABLE).

B. SYSTEM SAFETIES & MONITORING

1. AN ALARM IS GENERATED WHEN THE CONDENSING UNIT GOES INTO ALARM MODE.

REVISION HISTORY

SIEMENS

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
PHONE: 907.479.7034
FAX: 907.479.3679

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

440P-159367

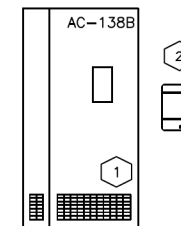
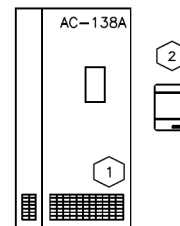
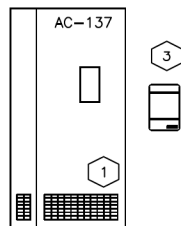
ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA		09/14/15

CONDENSING UNIT 2 BOM & SEQ

301B

NOTES:

- 1 AC UNIT SYSTEM BY OTHERS.
- 2 TEMPERATURE SENSOR CONTROLLING THE BASEBOARD IN THE SAME ROOM IS USED TO MONITOR THE HIGH TEMPERATURE ALARM FOR THE AC UNIT. SEE DRAWING 400.
- 3 TEMPERATURE SENSOR WIRED TO TEC-138A SERVING BASEBOARD IN ROOM 138A. SEE DRAWING 400.



1
302 AC UNIT 137
LOCATION/SERVES: SERVER ROOM 137
CONDENSING UNIT LOCATION: ASSEMBLY HALL 160

2
302 AC UNIT 138A
LOCATION/SERVES: SERVER ROOM 138A
CONDENSING UNIT LOCATION: ASSEMBLY HALL 160

3
302 AC UNIT 138B
LOCATION/SERVES: SERVER ROOM 138B
CONDENSING UNIT LOCATION: ASSEMBLY HALL 160

REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
N03	FAIAPXCM03	FAIAPXCM03

REVISION HISTORY

SIEMENS
2520 ROLAND ROAD FAIRBANKS, AK 99709 USA Phone: 907.479.7034 Fax: 907.479.3679
SIEMENS INDUSTRY, INC BUILDING TECHNOLOGIES

DMVA FAIRBANKS ARMORY FAIRBANKS, AK			
ENGINEER TL	DRAFTER NEP	CHECKED BY TMA	INITIAL RELEASE 05/23/06
LAST EDIT DATE 09/14/15			
AIR CONDITIONING UNIT			

440P-159367 0
302

Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Field Mounted Devices					
TTE 1	1	QAA2235.EWSN	SIEMENS	149708	RTS, BAU HSNG, 100K , NC

SEQUENCE OF OPERATIONS:

FAIRBANKS DMVA ARMORY

AIR CONDITIONING UNITS (AC):-?

A. OPERATION

1. AC UNIT PACKAGED CONTROLS SHALL CYCLE THE UNIT ON AND OFF AS REQUIRED TO MAINTAIN ROOM TEMPERATURE.

B. SYSTEM SAFETIES & MONITORING

1. AN ALARM IS GENERATED WHEN THE ROOM TEMPERATURE EXCEEDS THE TEMPERATURE SET POINT.

REVISION HISTORY

SIEMENS

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
PHONE: 907.479.7034
FAX: 907.479.3679

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

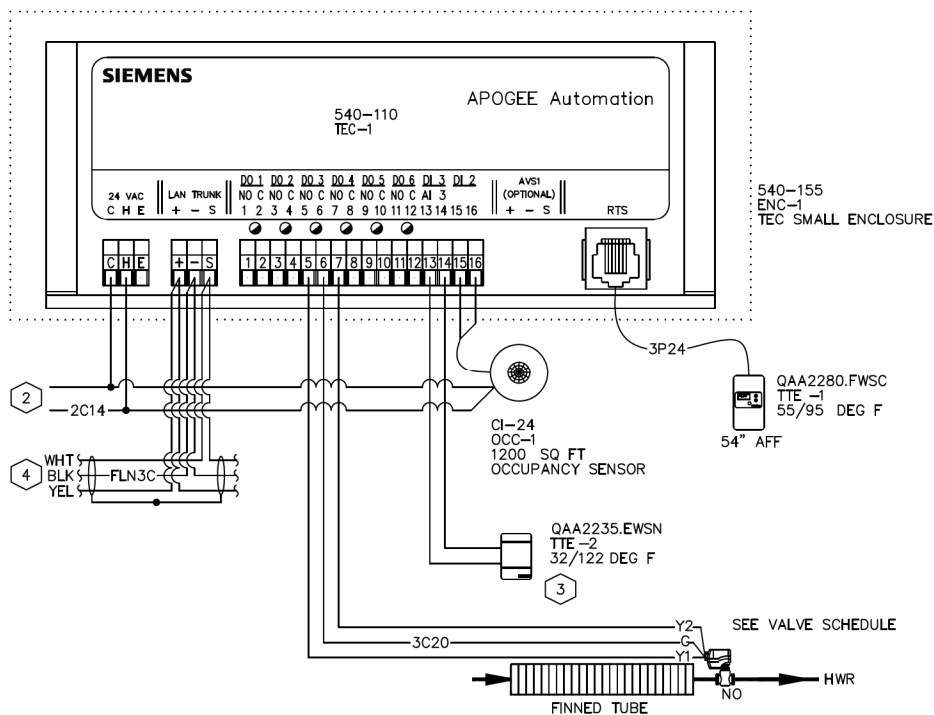
DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA		09/14/15

AIR CONDITIONING BOM & SEQ

440P-159367

302A



NOTES:

- SEE DRAWINGS "WIRE1" AND "WIRE2" FOR CLASS 2 WIRING REQUIREMENTS AND WIRE TAG REFERENCE TABLE.
- SEE TRANSFORMER SCHEDULE UNDER THE SCHEDULES TAB FOR 24VAC POWER.
- ROOM TEMP SENSOR SERVING AC-137.
- SEE FLN SCHEDULE IN THE SCHEDULES SECTION OF THIS DOCUMENT FOR NETWORK CONNECTIONS AND WIRING ORDER.

1
400 BASEBOARD 138A
APPLICATION: 2543
TYPICAL OF 1
LOCATION/SERVES: 138A

REVISION HISTORY

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
PHONE: 907.479.7034
FAX: 907.479.3879

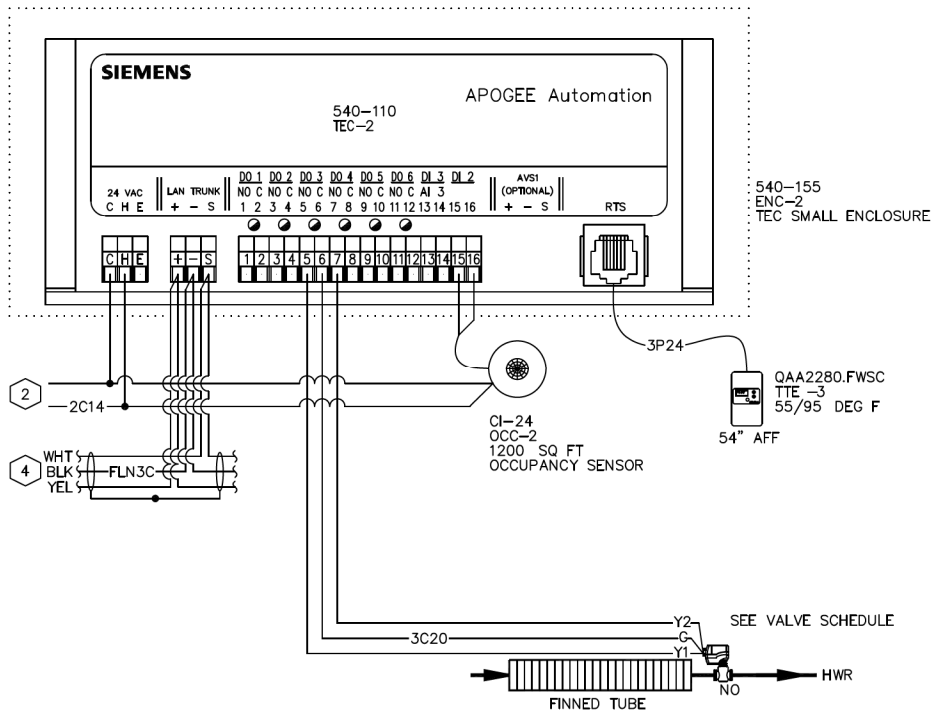
DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/08	09/14/15

BASEBOARD 138A

440P-159367
0

400



NOTES:

- SEE DRAWINGS "WIRE1" AND "WIRE2" FOR CLASS 2 WIRING REQUIREMENTS AND WIRE TAG REFERENCE TABLE.
- SEE TRANSFORMER SCHEDULE UNDER THE SCHEDULES TAB FOR 24VAC POWER.
- ROOM TEMP SENSOR SERVING AC-137.
- SEE FLN SCHEDULE IN THE SCHEDULES SECTION OF THIS DOCUMENT FOR NETWORK CONNECTIONS AND WIRING ORDER.

1
400A

BASEBOARD 138B

APPLICATION: 2543
TYPICAL OF 1
LOCATION/SERVES: 138A

REVISION HISTORY

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
Phone: 907.479.7034
Fax: 907.479.3679

DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/14/15

BASEBOARD 138B

440P-159367

400A

Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Field Mounted Devices					
D					SEE DAMPER SUBMITTAL
ENC 1	1	540-155	SIEMENS	N/A	TEC ENCL CTLR ONLY
OCC 1	1	CI-24	WATT STOPPER	1011cut029	OCCUPANCY SENS CEILING MT 24VAC
TEC 1	1	540-110	SIEMENS	149 181	UNIT COND CTLR ELEC OUT
TTE 1	1	QAA2280.FWSC	SIEMENS	149820	RTS, TEC DIG., F-F, SL
TTE 2	1	QAA2235.EWSN	SIEMENS	149708	RTS, BAU HSNG, 100K , NC

SEQUENCE OF OPERATIONS:

FAIRBANKS DMVA ARMORY

BASEBOARD (BB-1): ?

A. OPERATION

1. DAY MODE

a. DDC SHALL CYCLE THE CONTROL VALVE TO MAINTAIN SET POINT OF 70 DEGREES F (ADJUSTABLE) BASED ON ROOM TEMPERATURE.

2. NIGHT MODE

a. DDC SHALL CYCLE THE CONTROL VALVE TO MAINTAIN SET POINT OF 65 DEGREES F (ADJUSTABLE) BASED ON ROOM TEMPERATURE.

B. SYSTEM SAFETIES & MONITORING

1. AN ALARM IS GENERATED WHEN THE TEMPERATURE EITHER FALLS BELOW OR EXCEEDS THE ROOM TEMPERATURE SET POINT (ADJUSTABLE).

REVISION HISTORY

SIEMENS

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
PHONE: 907.479.7034
FAX: 907.479.3679

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA		09/14/15

BASEBOARD BOM & SEQ

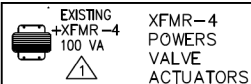
440P-159367

400B

INSTALLATION NOTES:

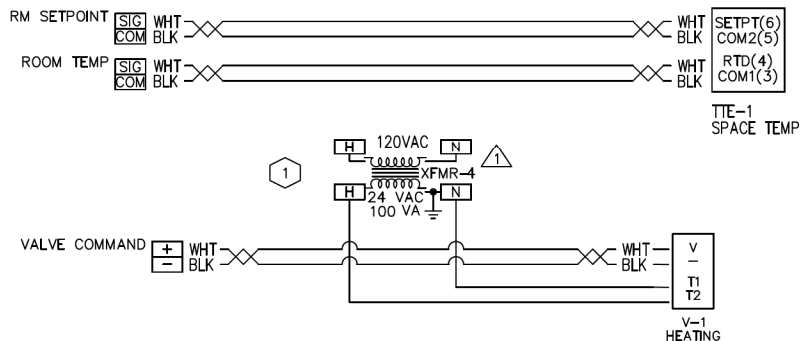
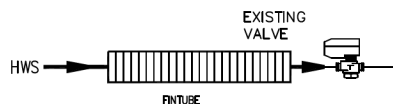
- 1 RELOCATED SOUTH LOOKER ROOM (101) STAT FROM CENTRAL COLUMN TO SOUTH WALL.
- 2 REPLACED EXISTING SENSORS WITH SIEMENS SENSORS. VALVE ACTUATORS ARE EXISTING.

COMPONENT PANEL CP-1



544-764A
+TTE-1 4
55/95 DEG F
544-782A
+TTE-1A 4

ROOM TEMPERATURE



1
401 ROOM THERMOSTATS
LOCATION: VARIOUS ROOMS
TYPICAL OF 13 STATS (15 VALVES)

ROOM THERMOSTATS

ROOM TEMP	ROOM SETPOINT	FINTUBE VALVES
FAIA.RM136.RMT DETAIL ER	FAIA.RM136.RMV DETAIL ER	FAIA.RM136.RV1 DETAIL EJ
FAIA.RM114.RMT DETAIL ER	FAIA.RM114.RMV DETAIL ER	FAIA.RM114.RV1 DETAIL EJ
FAIA.RM123.RMT DETAIL ER	FAIA.RM123.RMV DETAIL ER	FAIA.RM123.RV1 DETAIL EJ
FAIA.RM101N.RMT DETAIL ER	FAIA.RM101N.RMV DETAIL ER	FAIA.RM101N.RV1 DETAIL EJ
FAIA.RM101S.RMT DETAIL ER	FAIA.RM101S.RMV DETAIL ER	FAIA.RM101S.RV1 DETAIL EJ
FAIA.RM115W.RMT DETAIL ER	FAIA.RM115W.RMV DETAIL ER	FAIA.RM115W.RV1 DETAIL EJ
FAIA.RM115E.RMT DETAIL ER	FAIA.RM115E.RMV DETAIL ER	FAIA.RM115E.RV1 DETAIL EJ
FAIA.RM126.RMT DETAIL ER	FAIA.RM126.RMV DETAIL ER	FAIA.RM126.RV1 DETAIL EJ
FAIA.RM127.RMT DETAIL ER	FAIA.RM127.RMV DETAIL ER	FAIA.RM127.RV1 DETAIL EJ
FAIA.RM120.RMT DETAIL ER	FAIA.RM120.RMV DETAIL ER	FAIA.RM120.RV1 DETAIL EJ
FAIA.RM122.RMT DETAIL ER	FAIA.RM122.RMV DETAIL ER	FAIA.RM122.RV1 DETAIL EJ
FAIA.RM112.RMT DETAIL ER	FAIA.RM112.RMV DETAIL ER	FAIA.RM112.RV1 DETAIL EJ

REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
N001	FAIAMECO1	FAIAMECO1
N02	FAIAPXCC02	FAIAPXCC02

REVISION HISTORY

1 9/12/2006 TCP AS-BUILT DRAWING

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
PHONE: 907.479.7034
FAX: 907.479.3879

DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/08	09/08/15

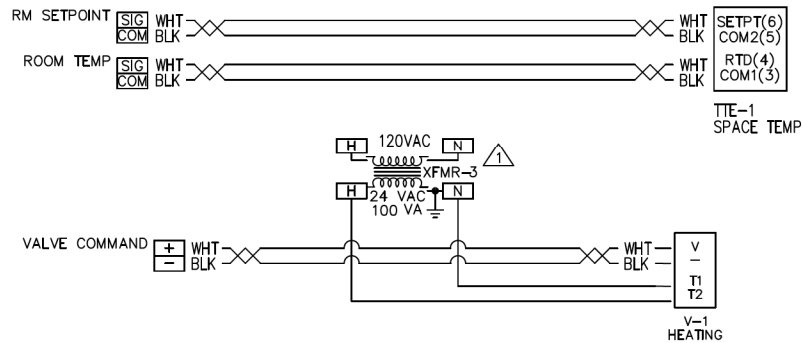
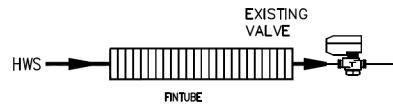
FIN TUBE THERMOSTATS (EX)

440P-159367
0

401

FIN TUBE THERMOSTATS— EXISTING BUILDING

544-764A
 +TTE-2 4
 55/95 DEG F
 544-782A
 +TTE-2A 4
 ROOM TEMPERATURE



1
 401A
 ROOM THERMOSTATS
 LOCATION: VARIOUS ROOMS
 TYPICAL OF 4 STATS (4 VALVES)

INSTALLATION NOTES:

1 REPLACED EXISTING SENSORS WITH SIEMENS SENSORS.
 VALVE ACTUATORS ARE EXISTING TO REMAIN.

COMPONENT PANEL CP-2

EXISTING
 +XFMR-3
 100 VA
 XFMR-3
 POWERS
 VALVE
 ACTUATORS

ROOM TEMP	ROOM SETPOINT	FIN TUBE VALVES
FAIA.RM149.RMT DETAIL ER	FAIA.RM149.RMV DETAIL ER	FAIA.RM149.RV1 DETAIL EJ
FAIA.RM154.RMT DETAIL ER	FAIA.RM154.RMV DETAIL ER	FAIA.RM154.RV1 DETAIL EJ
FAIA.RM155.RMT DETAIL ER	FAIA.RM155.RMV DETAIL ER	FAIA.RM155.RV1 DETAIL EJ
FAIA.RM156.RMT DETAIL ER	FAIA.RM155.RMV DETAIL ER	FAIA.RM156.RV1 DETAIL EJ

REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
N03	FAIA MEC03	FAIA MEC-03

REVISION HISTORY

1 9/12/2006 TCP AS-BUILT DRAWING

SIEMENS

SIEMENS INDUSTRY, INC
 BUILDING TECHNOLOGIES

2520 ROLAND ROAD
 FAIRBANKS, AK 99709
 USA
 PHONE: 907.479.7034
 FAX: 907.479.3879

DMVA FAIRBANKS ARMORY
 FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/08	09/08/15

FIN TUBE THERMOSTATS (EX)

440P-159367
 0

401A

Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Existing Equipment To Remain					
TTE 1-2	8	544-764A	SIEMENS	149168	OBS, R/B 544-770A; RM SNSR W/STPT-DST
TTE 1A	4	544-782A	SIEMENS	149 359	SINGLE GOOF MOUNTING PLATE KIT BEIGE
TTE 2A	4	544-782A	SIEMENS	149 359	SINGLE GOOF MOUNTING PLATE KIT BEIGE
XFMR 3-4	2	EXISTING	N/A	N/A	EXISTING

SEQUENCE OF OPERATIONS:
FAIRBANKS DMVA ARMORY

FINTUBES (FINTUBE STATS):

BASEBOARD UNIT VALVE WILL MODULATE, THROUGH THE DDC CONTROL PANEL, TO MAINTAIN SPACE TEMPERATURE AT SETPOINT. THE SPACE TEMPERATURE SETPOINT IS ADJUSTABLE FROM THE WALL MODULE IN THE SPACE. SPACE TEMPERATURE AND SETPOINT WILL BE MONITORED THROUGH THE DDC CONTROL PANEL.

REVISION HISTORY

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
PHONE: 907.479.7034
FAX: 907.479.3679

DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA		09/14/15

FIN TUBE T-STATS BOM & SEQ (EX)

440P-159367

401B

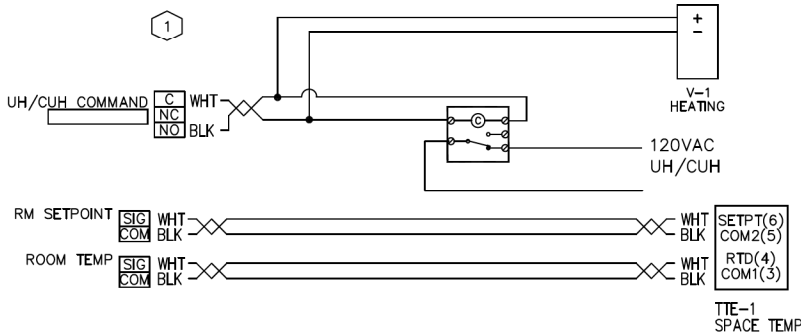
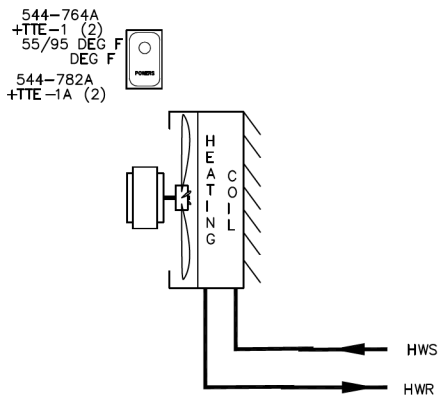
NEW BLDG UH

INSTALLATION NOTES:

1 REPLACED EXISTING SENSORS WITH SIEMENS SENSORS. VALVE ACTUATORS ARE EXISTING TO REMAIN.

COMPONENT PANEL CP-1

EXISTING +XFMR-5 100 VA
XFMR-5 POWERS ACTUATORS & RELAYS.



1
402

UNIT HEATERS
LOCATION: VARIOUS ROOMS
TYPICAL OF 4

ROOM TEMP	ROOM SETPOINT	ENABLE 1	ENABLE 2
FAIA.RM113.RMT 0.2.0.0.1 DETAIL PH	FAIA.RM113.RMV 0.2.0.0.2 DETAIL PH	FAIA.RM113.UH1 0.2.0.0.20 DETAIL PB	
FAIA.RM100.RMT 0.2.0.0.3 DETAIL PH	FAIA.RM100.RMV 0.2.0.0.4 DETAIL PH	FAIA.RM100N.UH3 0.2.0.0.21 DETAIL PB	FAIA.RM100S.UH2 0.2.0.0.22 DETAIL PB
FAIA.RM135.RMT 0.2.0.0.5 DETAIL PH	FAIA.RM135.RMV 0.2.0.0.6 DETAIL PH	FAIA.RM135.UH4 0.2.0.0.23 DETAIL PB	

REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
N02	FAIAPXCC02	FAIAPXCC02

REVISION HISTORY

1	9/12/2006	TCP	AS-BUILT DRAWING
---	-----------	-----	------------------

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
Phone: 907.479.7034
Fax: 907.479.3679

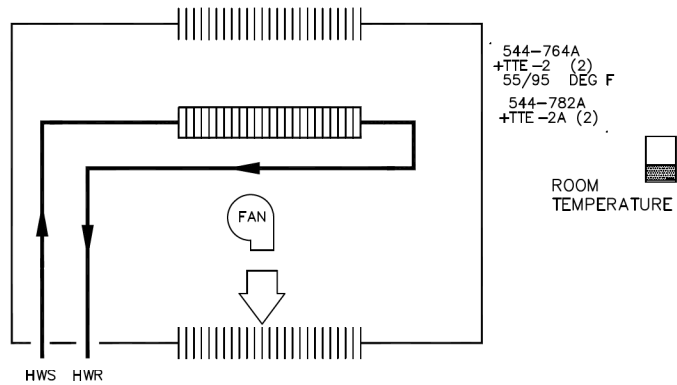
DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/15/15

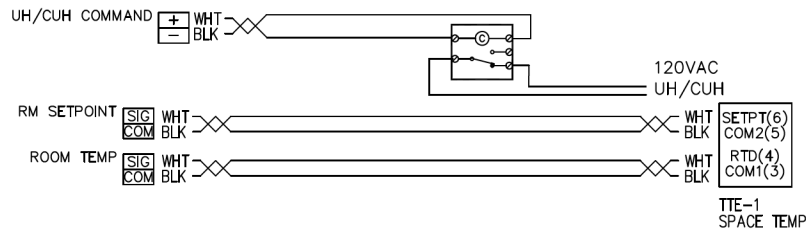
UH (EX)

440P-159367
0

402



1
402A CABINET UNIT HEATERS
LOCATION: 152
TYPICAL OF 1



ROOM TEMP	HWS HWR	ROOM SETPOINT	ENALBE
FAIA.RM130.RMT [0.1.0.8.3] DETAIL ER		FAIA.RM130.RMV [0.1.0.8.4] DETAIL ER	FAIA.RM130.CUH [0.1.0.0.31] DETAIL EJ
FAIA.RM117.RMT [0.2.0.0.7] DETAIL ER		FAIA.RM117.RMV [0.2.0.0.8] DETAIL ER	FAIA.RM117.CUH [0.1.0.0.32] DETAIL EJ

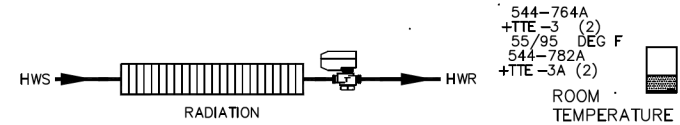
NEW BUILDING – CUH AND RP

INSTALLATION NOTES:

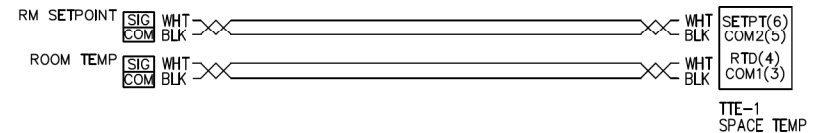
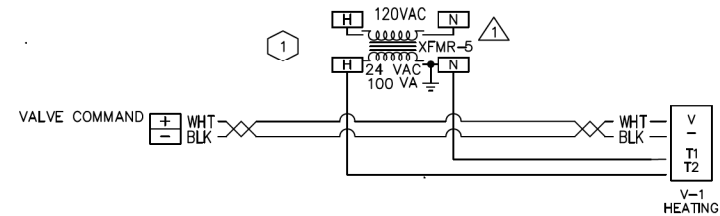
- 1 REPLACED EXISTING SENSORS WITH SIEMENS SENSORS. VALVE ACTUATORS ARE EXISTING TO REMAIN.

COMPONENT PANEL CP-2

EXISTING +XFMR-3 100 VA
XFMR-3 POWERS ACTUATORS & RELAYS.



2
402A RADIANT PANEL
LOCATION: 105
TYPICAL OF 1



ROOM TEMP	ROOM SETPOINT	FINTUBE VALVES
FAIA.RM110.RMT [0.1.0.7.3] DETAIL ER	FAIA.RM110.RMV [0.1.0.7.4] DETAIL ER	FAIA.RM110.RP1 [0.1.0.6.8] DETAIL EJ
FAIA.RM105.RMT [0.1.0.8.1] DETAIL ER	FAIA.RM105.RMV [0.1.0.8.2] DETAIL ER	FAIA.RM105.RP2 [0.1.0.7.5] DETAIL EJ

REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
N01	FAIAPXCM01	FAIAPXCM01
N02	FAIAPXCC02	FAIAPXCC02
N001	FAIAMEC01	FAIAMEC01

REVISION HISTORY

1	9/26/2006	TCP	AS-BUILT DRAWING
---	-----------	-----	------------------

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
FAIRBANKS, AK 99706
USA
Phone: 907.479.7034
Fax: 907.479.3679

DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER TL DRAFTER NEP CHECKED BY TMA INITIAL RELEASE 05/23/06 LAST EDIT DATE 09/15/15

CUH & RADIANT PANELS (EX)

440P-159367
0

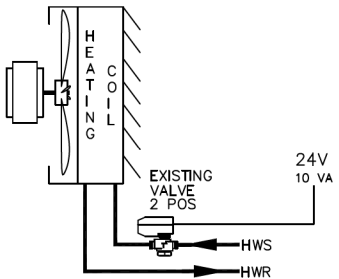
402A

EXISTING BUILDING – UH

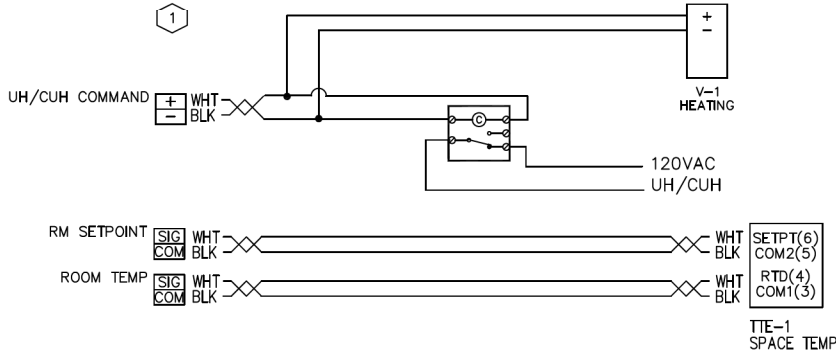
1 REPLACED EXISTING SENSORS WITH SIEMENS SENSORS. VALVE ACTUATORS ARE EXISTING TO REMAIN.

COMPONENT PANEL CP-2

EXISTING +XFMR-3 100 VA
XFMR-3 POWERS ACTUATORS & RELAYS.



544-764A
+TTE -4 (10)
55/95 DEG F
544-782A
+TTE -4A (10)
ROOM TEMPERATURE



ROOM TEMP	ROOM SETPOINT	ENABLE	ENABLE 2
FAIA.RM142.RMT [0.3.1.6.1] DETAIL ER	FAIA.RM142.RMV [0.3.1.6.2] DETAIL ER	FAIA.RM142.UH5 [0.3.1.10.6] DETAIL EB	
FAIA.RM148.RMT [0.3.1.6.3] DETAIL ER	FAIA.RM148.RMV [0.3.1.6.4] DETAIL ER	FAIA.RM148.UH7 [0.3.1.10.7] DETAIL EB	
FAIA.RM147.RMT [0.3.1.6.5] DETAIL ER	FAIA.RM147.RMV [0.3.1.6.6] DETAIL ER	FAIA.RM147.UH10 [0.3.1.10.8] DETAIL EB	
FAIA.RM143.RMT [0.3.1.6.7] DETAIL ER	FAIA.RM143.RMV [0.3.1.6.8] DETAIL ER	FAIA.RM143.UH6 [0.3.1.3.5] DETAIL EB	
FAIA.RM145.RMT [0.3.1.7.1] DETAIL ER	FAIA.RM145.RMV [0.3.1.7.2] DETAIL ER	FAIA.RM145.UH8 [0.3.1.3.6] DETAIL EB	FAIA.RM148.UH9 [0.3.1.3.7] DETAIL EB
FAIA.RM138.RMT [0.3.1.7.3] DETAIL ER	FAIA.RM138.RMV [0.3.1.7.4] DETAIL ER	FAIA.RM138.UH1 [0.3.1.3.8] DETAIL EB	FAIA.RM138.UH2 [0.3.1.3.9] DETAIL EB
FAIA.RM140.RMT [0.3.1.7.5] DETAIL ER	FAIA.RM140.RMV [0.3.1.7.6] DETAIL ER	FAIA.RM140.UH2 [0.3.1.3.10] DETAIL EB	
FAIA.RM141.RMT [0.3.1.7.7] DETAIL ER		FAIA.RM141.UH4 [0.3.1.3.11] DETAIL EB	
FAIA.RM160E.RMT [0.3.1.8.1] DETAIL ER	FAIA.RM160E.RMV [0.3.1.8.2] DETAIL ER	FAIA.RM160E.UH2 [0.3.1.3.12] DETAIL EB	
FAIA.RM160W.RMT [0.3.1.8.3] DETAIL ER	FAIA.RM160W.RMV [0.3.1.8.4] DETAIL ER	FAIA.RM160W.UH4 [0.3.1.3.13] DETAIL EB	

1 402B
UNIT HEATERS
LOCATION: VARIOUS ROOMS
TYPICAL OF 10

REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO3	FAIAMEC03	FAIAMEC-03

REVISION HISTORY			
1	9/12/2006	TCP	AS-BUILT DRAWING

SIEMENS

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
Phone: 907.479.7034
Fax: 907.479.3679

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

DMVA FAIRBANKS ARMORY FAIRBANKS, AK				
ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/15/15
UH (EX)				

440P-159367
0
402B

EXISTING BUILDING – CUH

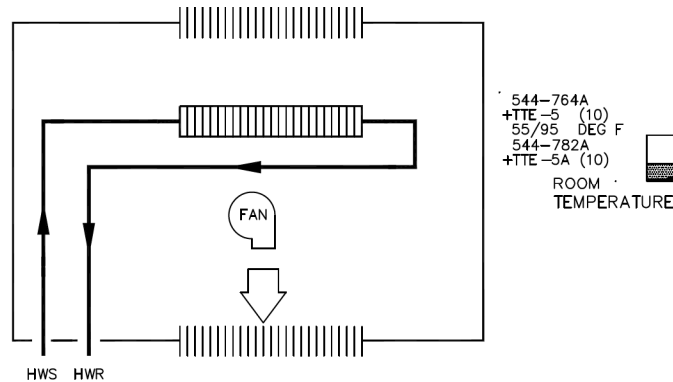
INSTALLATION NOTES:

- 1 REPLACED EXISTING SENSORS WITH SIEMENS SENSORS. VALVE ACTUATORS ARE EXISTING TO REMAIN.

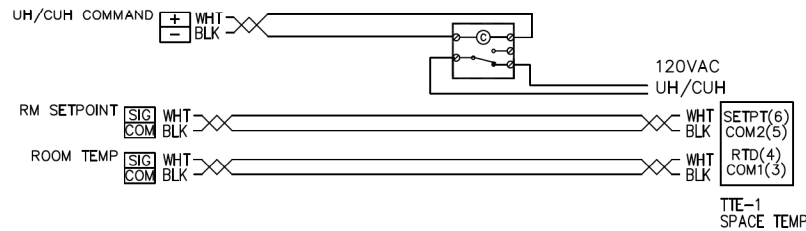
COMPONENT PANEL CP-2



XFMR-3
POWERS
ACTUATORS
& RELAYS.



1
402C CABINET UNIT HEATERS
LOCATION: 152
TYPICAL OF 1



ROOM TEMP	ROOM SETPOINT	ENABLE
FAIA.RM152.RMT 0.3.1.8.5 DETAIL ER	FAIA.RM152.RMV 0.3.1.8.6 DETAIL ER	FAIA.RM152.CUH 0.3.1.4.8 DETAIL EJ

REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
N03	FAIAMEC03	FAIAMEC-03

REVISION HISTORY

1	9/26/2006	TCP	AS-BUILT DRAWING
---	-----------	-----	------------------

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
Phone: 907.479.7034
Fax: 907.479.3679

DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/15/15

CUH (EX)

440P-159367
0

402C

Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Existing Equipment To Remain					
TTE 1-5	26	544-764A	SIEMENS	149168	OBS, R/B 544-770A; RM SNSR W/STPT-DST BE
TTE 1A	2	544-782A	SIEMENS	149 359	SINGLE GOOF MOUNTING PLATE KIT BEIGE
TTE 2A	2	544-782A	SIEMENS	149 359	SINGLE GOOF MOUNTING PLATE KIT BEIGE
TTE 3A	2	544-782A	SIEMENS	149 359	SINGLE GOOF MOUNTING PLATE KIT BEIGE
TTE 4A	10	544-782A	SIEMENS	149 359	SINGLE GOOF MOUNTING PLATE KIT BEIGE
TTE 5A	10	544-782A	SIEMENS	149 359	SINGLE GOOF MOUNTING PLATE KIT BEIGE
XFMR 3	1	EXISTING	N/A	N/A	EXISTING
XFMR 5	1	EXISTING	N/A	N/A	EXISTING

SEQUENCE OF OPERATIONS:
FAIRBANKS DMVA ARMORY

CABINET/UNIT HEATERS, RADIANT PANELS (CUH-UH-RP):

UNIT HEATERS:

THE FAN AND VALVE (WHERE INSTALLED) WILL CYCLE TO MAINTAIN SPACE TEMPERATURE AT SETPOINT. THE SPACE TEMPERATURE SETPOINT IS ADJUSTABLE FROM THE WALL MODULE IN THE SPACE. SPACE TEMPERATURE AND SETPOINT WILL BE MONITORED THROUGH THE DDC CONTROL PANEL.

CABINET UNIT HEATERS:

THE FAN WILL CYCLE TO MAINTAIN SPACE TEMPERATURE AT SETPOINT. THE SPACE TEMPERATURE SETPOINT IS ADJUSTABLE FROM THE WALL MODULE IN THE SPACE. SPACE TEMPERATURE AND SETPOINT WILL BE MONITORED THROUGH THE DDC CONTROL PANEL.

RADIANT PANELS:

THE CONTROL VALVE SHALL OPEN/CLOSE TO MAINTAIN SPACE TEMPERATURE AT SETPOINT. SPACE TEMPERATURE AND SETPOINT WILL BE MONITORED THROUGH THE DDC CONTROL PANEL.

REVISION HISTORY

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
PHONE: 907.479.7034
FAX: 907.479.3679

DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

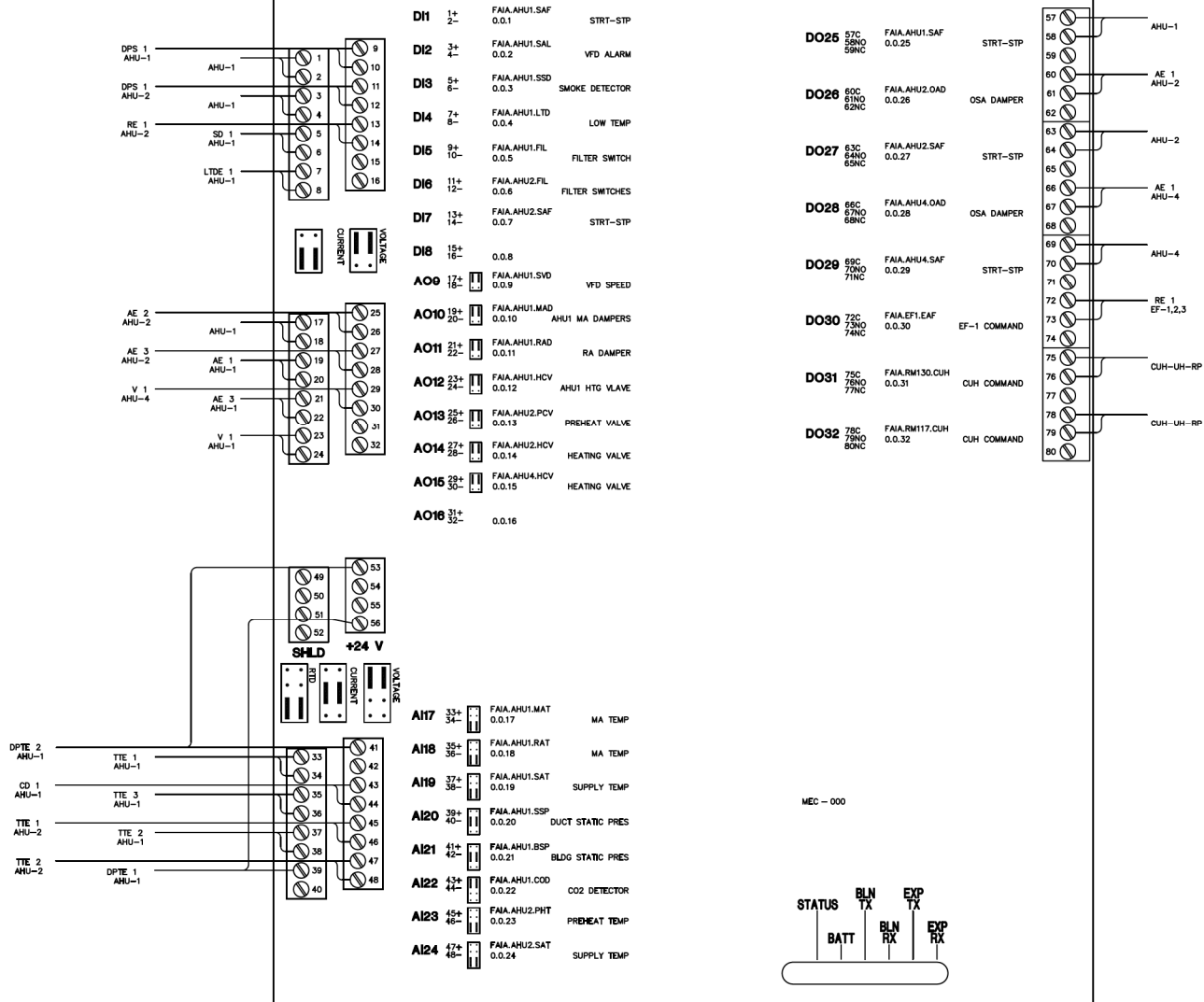
ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA		09/14/15

CUH, UH & RADIAN BOM & SEQ (EX)

440P-159367

402D

SIEMENS



REVISION HISTORY

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
PHONE: 907.479.7034
FAX: 907.479.3679

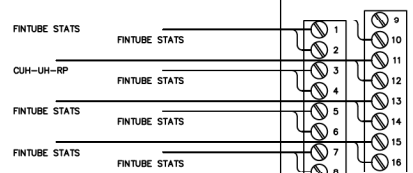
DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAWER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	12/02/14

FAIAMEC-01 FAN ROOM 113 (EX)

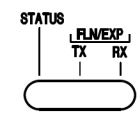
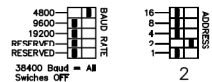
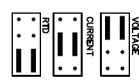
440P-159367
0

N01



SIEMENS

- AI1 1+ 2- FAIA.RM123.RMT 0.2.1 ROOM TEMP
- AI2 3+ 4- FAIA.RM123.RMV 0.2.2 ROOM SETPOINT
- AI3 5+ 6- FAIA.RM114.RMT 0.2.3 ROOM TEMP
- AI4 7+ 8- FAIA.RM114.RMV 0.2.4 ROOM SETPOINT
- AI5 9+ 10- FAIA.RM136.RMV 0.2.5 ROOM SETPOINT
- AI6 11+ 12- FAIA.RM130.RMT 0.2.6 ROOM TEMP
- AI7 13+ 14- FAIA.RM101S.RMT 0.2.7 ROOM TEMP
- AI8 15+ 16- FAIA.RM101S.RMV 0.2.8 ROOM SETPOINT



REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO01	FAIAMEC01	FAIAMEC01

REVISION HISTORY

SIEMENS

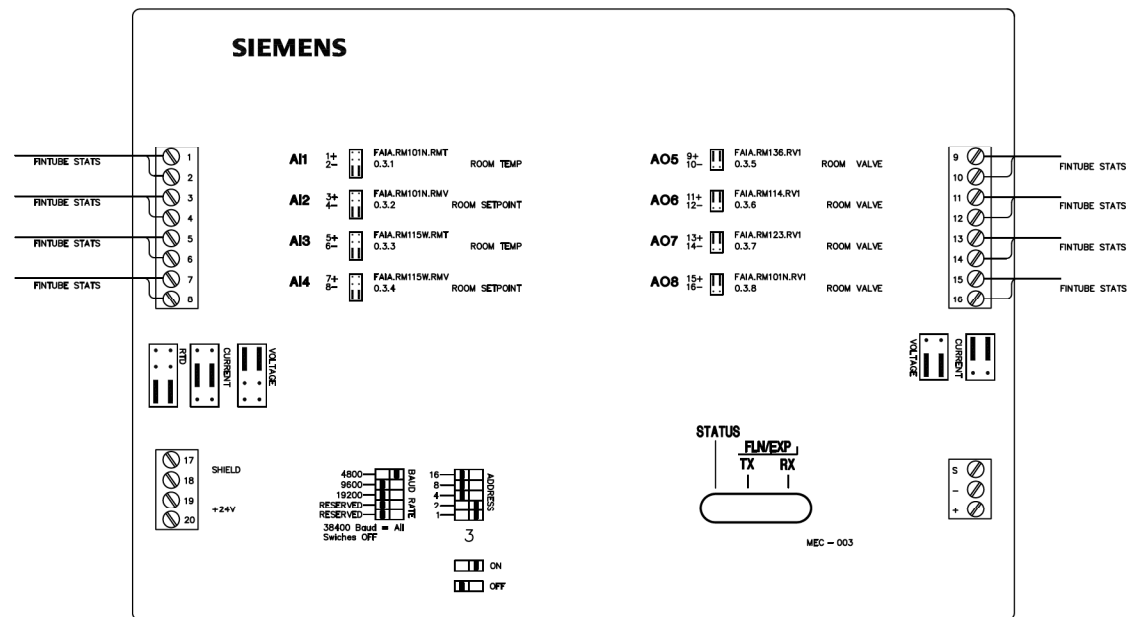
2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
PHONE: 907.479.7034
FAX: 907.479.3679

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

DMVA FAIRBANKS ARMORY FAIRBANKS, AK				
ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	12/02/14
FAIAPXCM01-MECX2 (EX)				

440P-159367
0

N01B



REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO01	FAIAMEC01	FAIAMEC01

REVISION HISTORY

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
PHONE: 907.479.7034
FAX: 907.479.3679

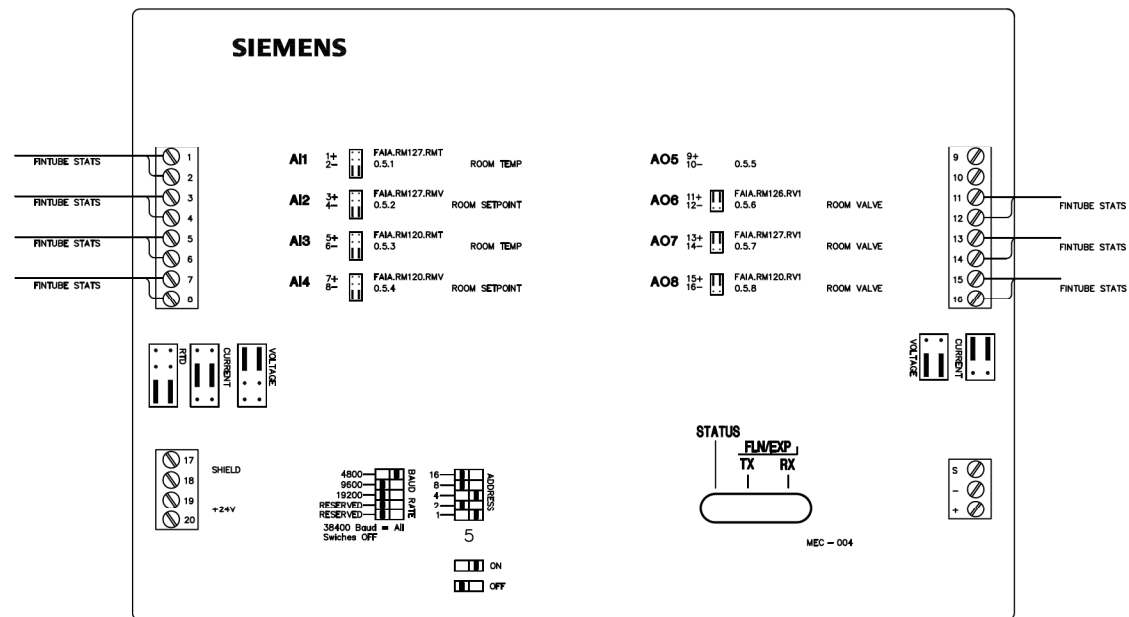
DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	12/02/14

FAIAPXCM01-MECX3 (EX)

440P-159367
0

N01C



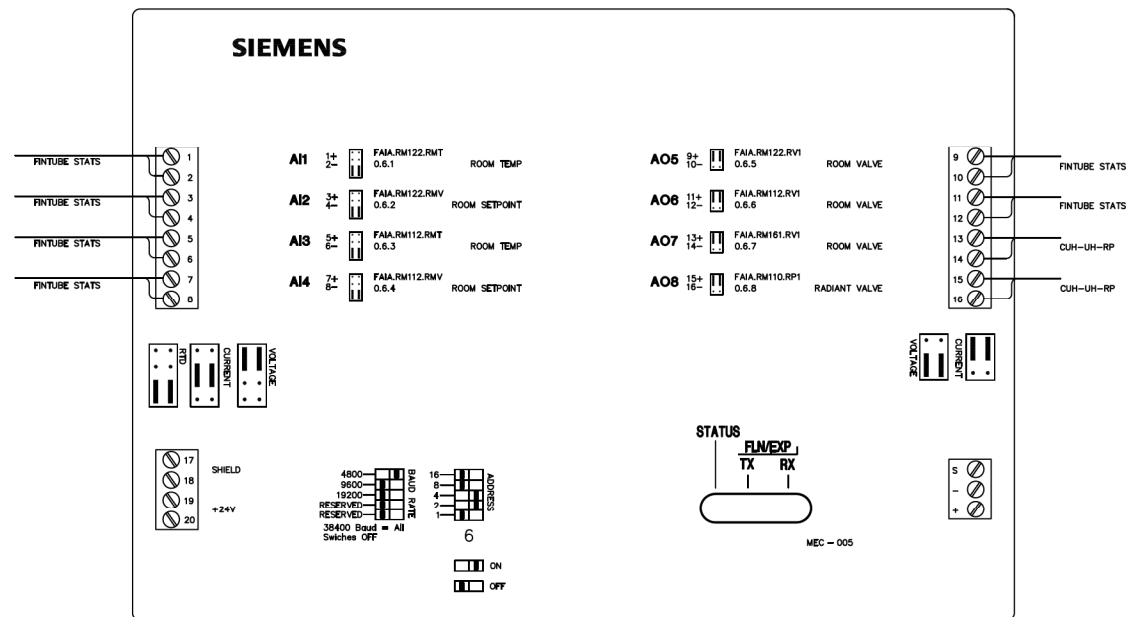
REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO01	FAIAMEC01	FAIAMEC01

REVISION HISTORY

SIEMENS
2520 ROLAND ROAD FAIRBANKS, AK 99709 USA PHONE: 907.479.7034 FAX: 907.479.3679
SIEMENS INDUSTRY, INC BUILDING TECHNOLOGIES

DMVA FAIRBANKS ARMORY FAIRBANKS, AK			
ENGINEER TL	DRAWER NEP	CHECKED BY TMA	INITIAL RELEASE 05/23/06
LAST EDIT DATE 12/02/14			
FAIAPXCM01-MECX4 (EX)			

440P-159367 0 N01D



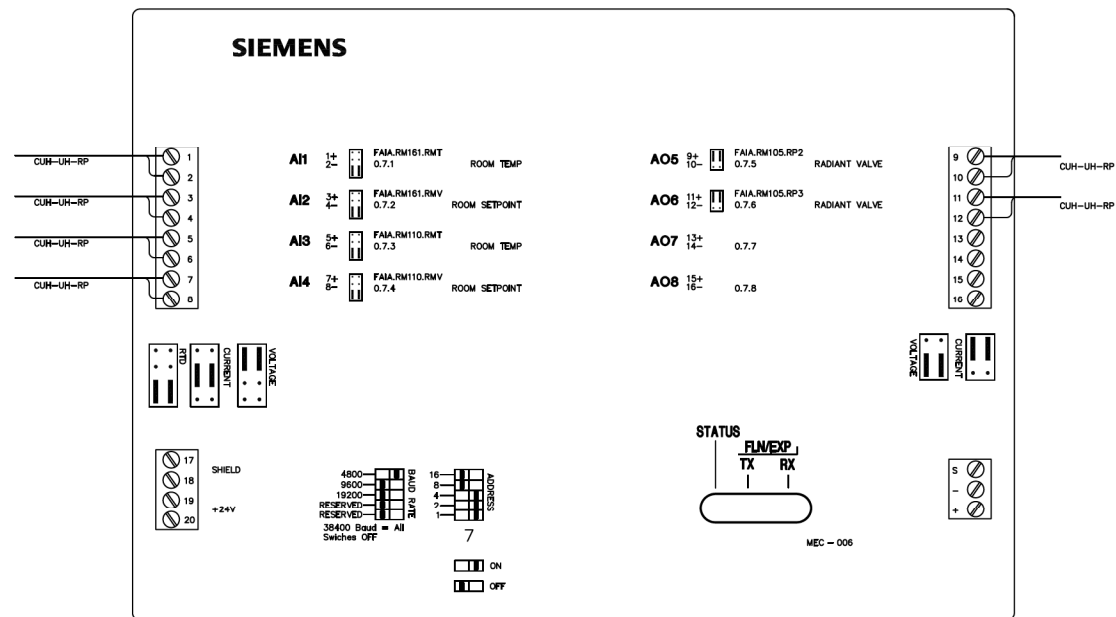
REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO01	FAIAMEC01	FAIAMEC01

REVISION HISTORY

SIEMENS
2520 ROLAND ROAD FAIRBANKS, AK 99709 USA PHONE: 907.479.7034 FAX: 907.479.3679
SIEMENS INDUSTRY, INC BUILDING TECHNOLOGIES

DMVA FAIRBANKS ARMORY FAIRBANKS, AK			
ENGINEER TL	DRAWER NEP	CHECKED BY TMA	INITIAL RELEASE 05/23/06
FAIAPXCM01-MECX5 (EX)		LAST EDIT DATE 12/02/14	

440P-159367 0 N01E



REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO01	FAIAMEC01	FAIAMEC01

REVISION HISTORY

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
PHONE: 907.479.7034
FAX: 907.479.3679

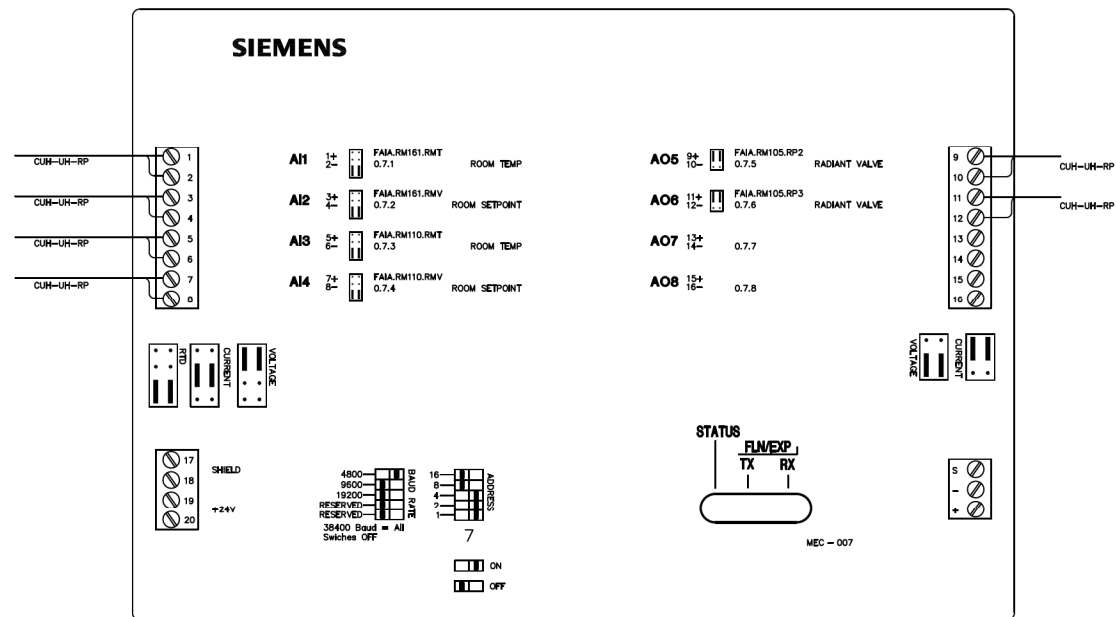
DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	12/02/14

FAIAPXCM01-MECX6 (EX)

440P-159367
0

N01F



REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO01	FAIAMEC01	FAIAMEC01

REVISION HISTORY

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
PHONE: 907.479.7034
FAX: 907.479.3679

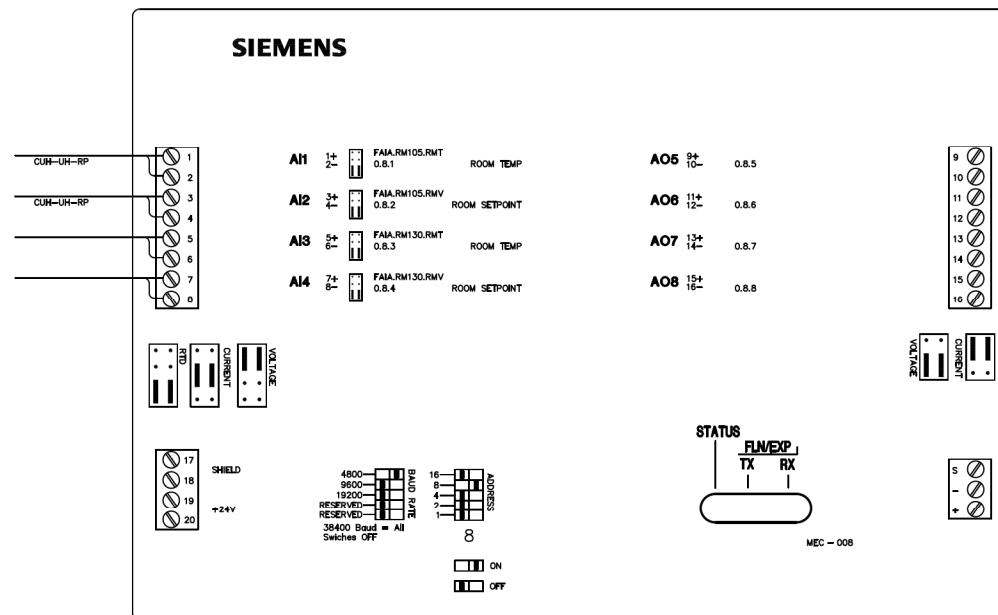
DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	12/02/14

FAIAPXCM01-MECX7 (EX)

440P-159367
0

N01G



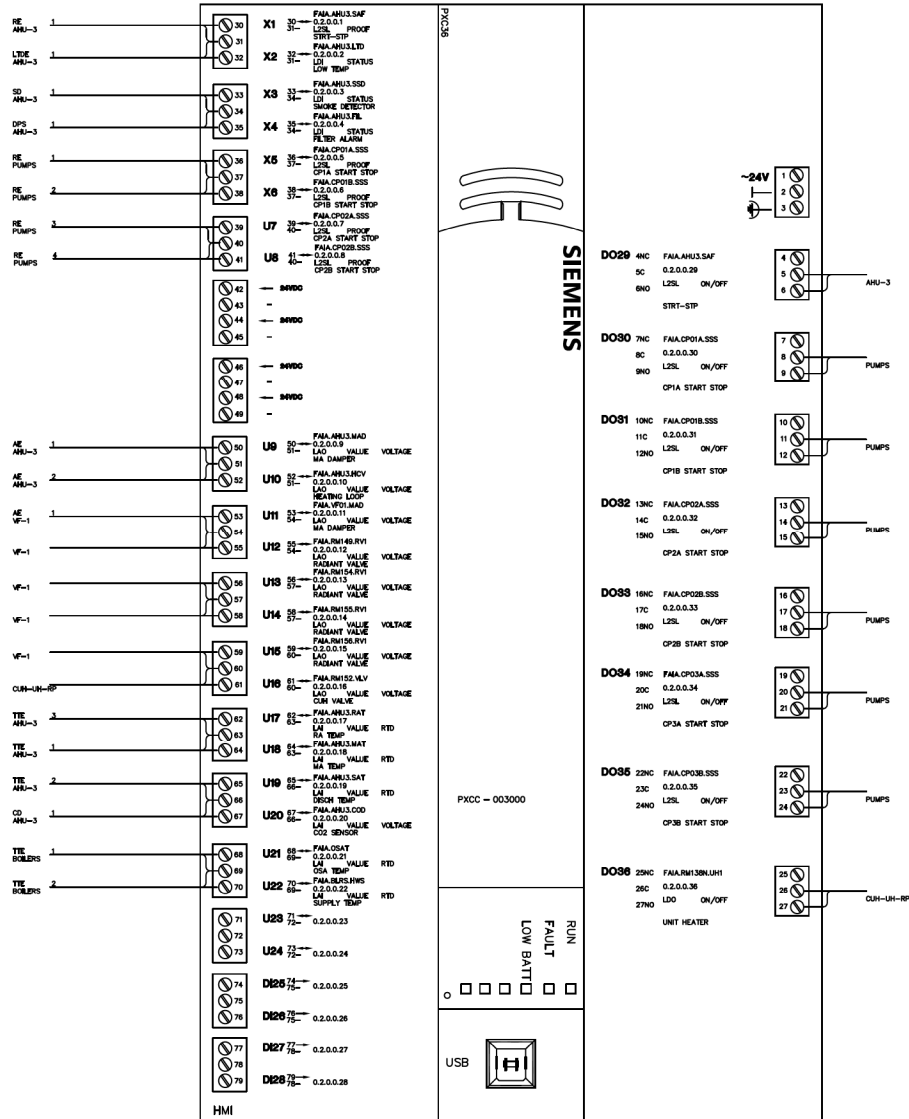
REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO01	FAIAMEC01	FAIAMEC01

REVISION HISTORY

SIEMENS
SIEMENS INDUSTRY, INC BUILDING TECHNOLOGIES
2520 ROLAND ROAD FAIRBANKS, AK 99709 USA PHONE: 907.479.7034 FAX: 907.479.3679

DMVA FAIRBANKS ARMORY FAIRBANKS, AK				
ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	12/02/14
FAIAPXCM01-MECX8 (EX)				

440P-159367 0
N01H



REVISION HISTORY

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
PHONE: 907.479.7034
FAX: 907.479.3679

DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAWER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/14/15

FAIA-EBLN FAIAPXC-02 FAN RM 113

440P-159367
0

N02

Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Panel Mounted Devices					
PXCC 1	1	PXC24.2-P.A	SIEMENS	149454	APOGEE 24PT, RS-485 ALN

REVISION HISTORY**SIEMENS**

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
PHONE: 907.479.7034
FAX: 907.479.3679

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

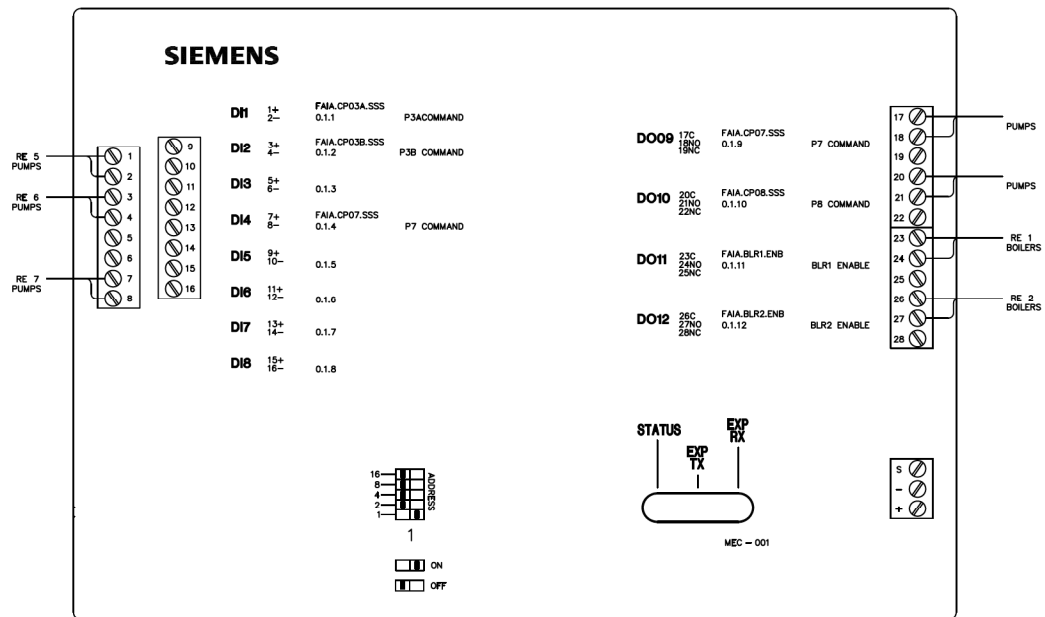
DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/14/15

FAIA-EBLN FAIAPXC-02 BOM

440P-159367
0

N02A



REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO3	FAIAMEC03	FAIAMEC-03

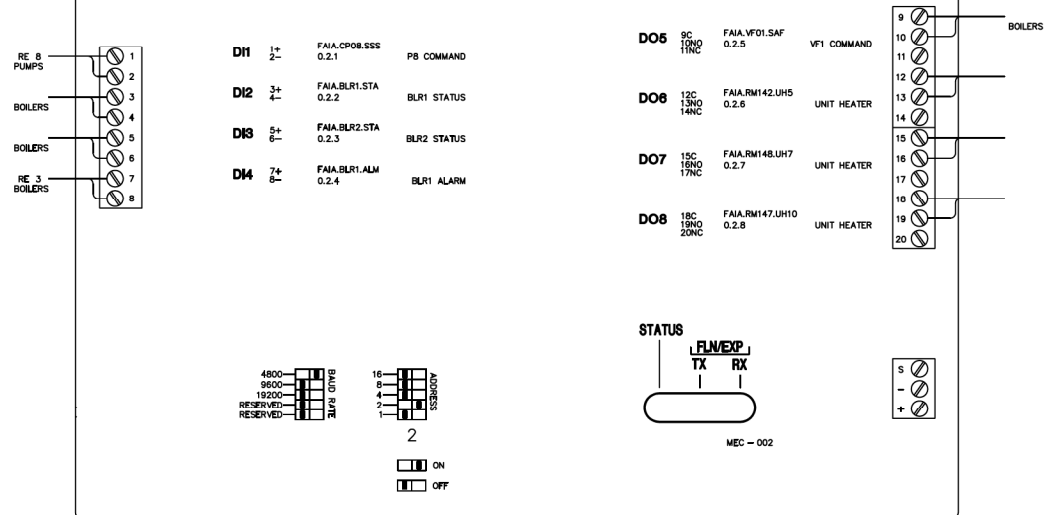
REVISION HISTORY

SIEMENS
2520 ROLAND ROAD FAIRBANKS, AK 99709 USA PHONE: 907.479.7034 FAX: 907.479.3679
SIEMENS INDUSTRY, INC BUILDING TECHNOLOGIES

DMVA FAIRBANKS ARMORY FAIRBANKS, AK				
ENGINEER TL	DRAWER NEP	CHECKED BY TMA	INITIAL RELEASE 05/23/06	LAST EDIT DATE 09/14/15
FAIAMEC03-X1 (EX)				

440P-159367 0 N03A

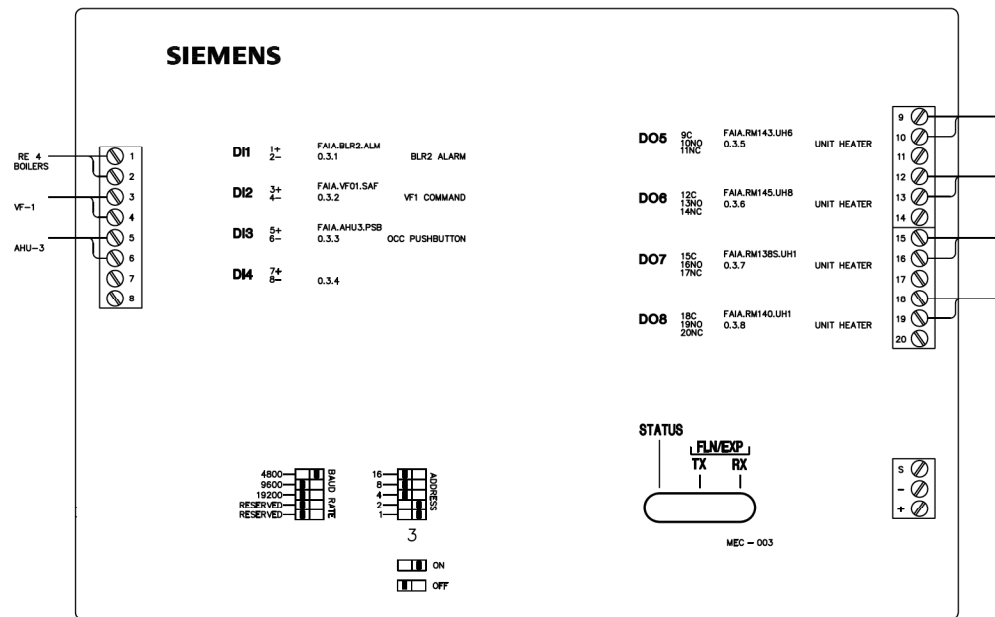
SIEMENS



REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
N03	FAIAMEC03	FAIAMEC-03

REVISION HISTORY

SIEMENS SIEMENS INDUSTRY, INC BUILDING TECHNOLOGIES	2520 ROLAND ROAD FAIRBANKS, AK 99709 USA PHONE: 907.479.7034 FAX: 907.479.3679	DMVA FAIRBANKS ARMORY FAIRBANKS, AK					440P-159367 0
		ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE	N03B
		TL	NEP	TMA	05/23/06	09/14/15	
		FAIAMEC03-X2 (EX)					

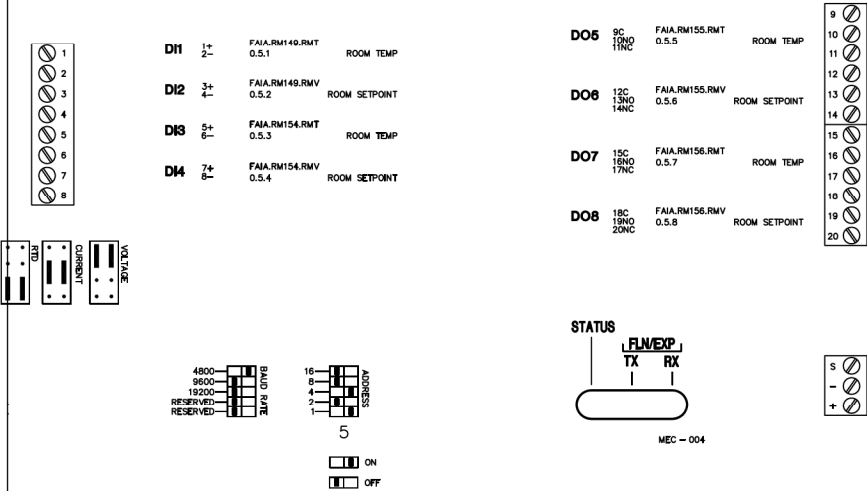


REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
N03	FAIAMEC03	FAIAMEC-03

REVISION HISTORY

SIEMENS SIEMENS INDUSTRY, INC BUILDING TECHNOLOGIES	2520 ROLAND ROAD FAIRBANKS, AK 99709 USA PHONE: 907.479.7034 FAX: 907.479.3679	DMVA FAIRBANKS ARMORY FAIRBANKS, AK					440P-159367 0
		ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE	N03C
		TL	NEP	TMA	05/23/06	09/14/15	
		FAIAMEC03-X3 (EX)					

SIEMENS



REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
N03	FAIAMEC03	FAIAMEC-03

REVISION HISTORY

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
PHONE: 907.479.7034
FAX: 907.479.3679

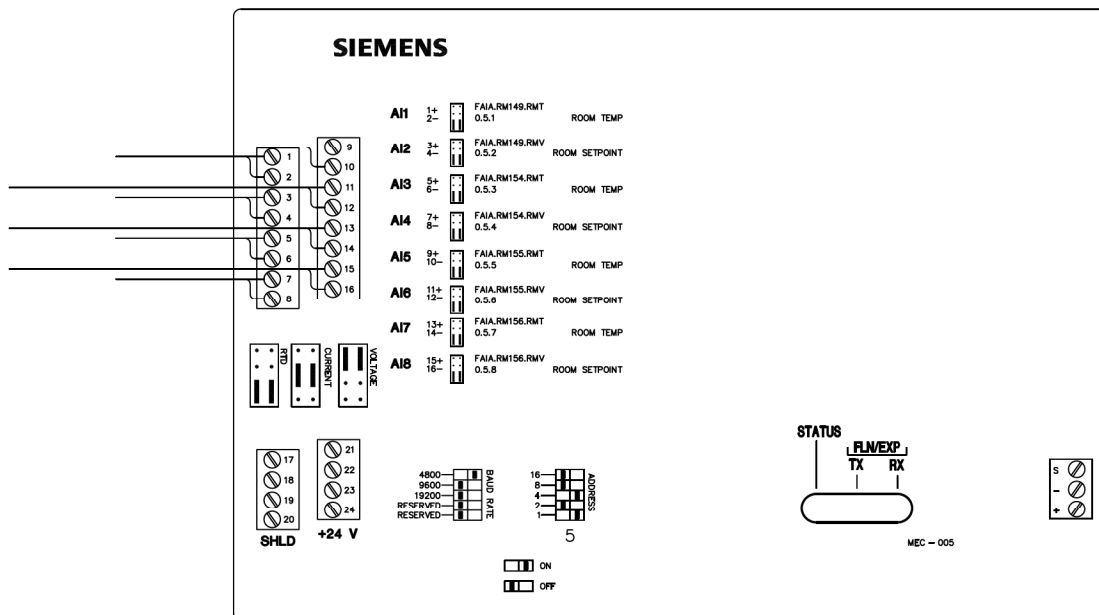
DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/14/15

FAIAMEC03-X4 (EX)

440P-159367
0

N03D



REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
N03	FAIAMEC03	FAIAMEC-03

REVISION HISTORY

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
PHONE: 907.479.7034
FAX: 907.479.3679

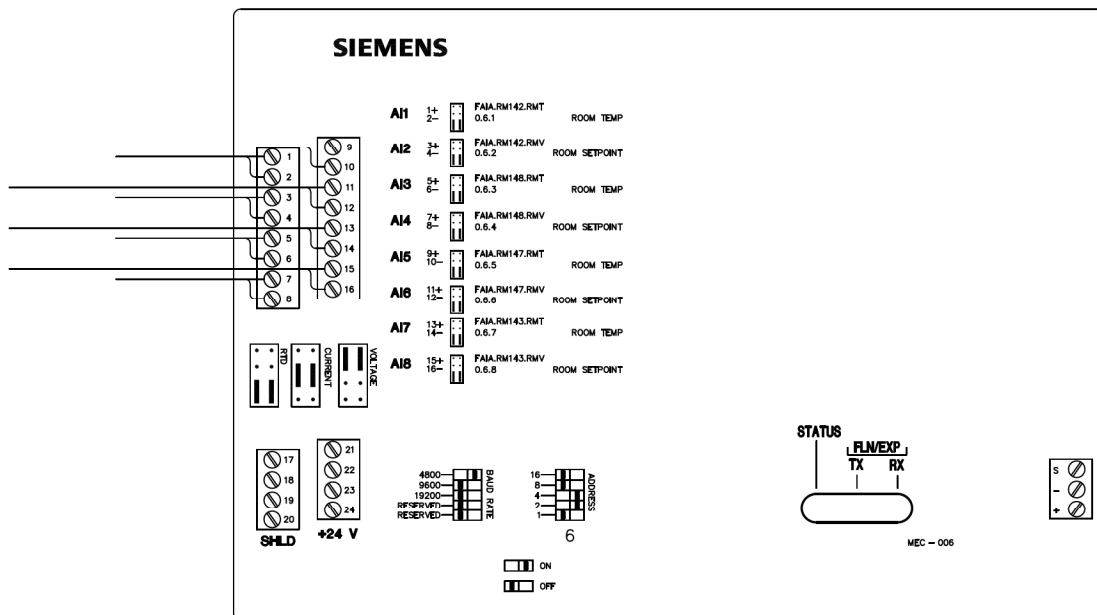
DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/14/15

FAIAMEC03-X5 (EX)

440P-159367
0

N03E



REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
N03	FAIAMEC03	FAIAMEC-03

REVISION HISTORY

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
PHONE: 907.479.7034
FAX: 907.479.3679

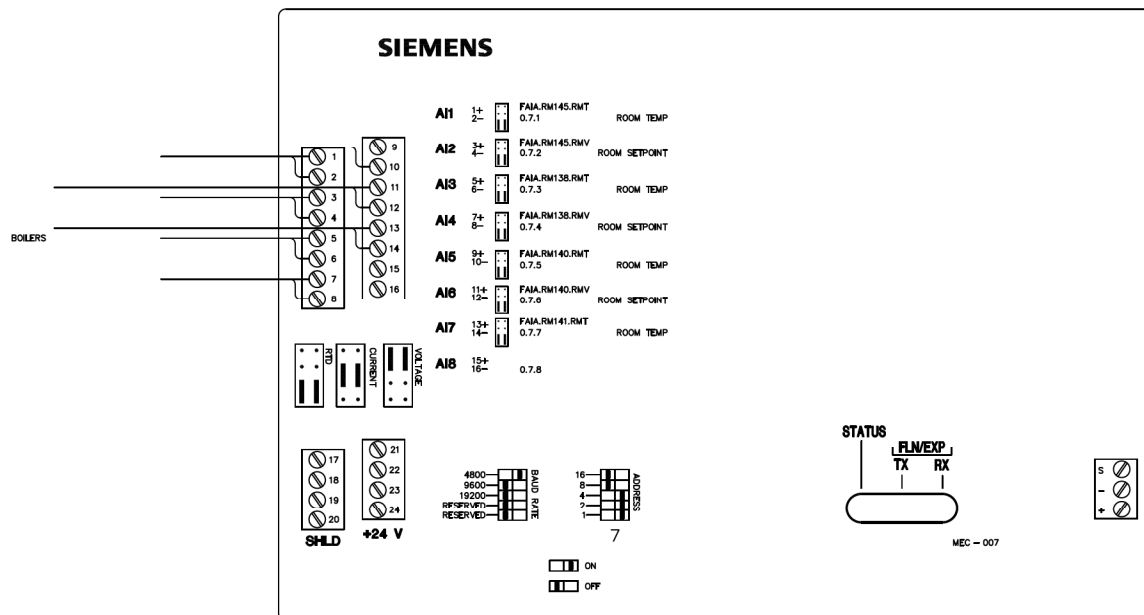
DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/14/15

FAIAMEC03-X6 (EX)

440P-159367
0

N03F



REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
N03	FAIAMEC03	FAIAMEC-03

REVISION HISTORY

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
PHONE: 907.479.7034
FAX: 907.479.3679

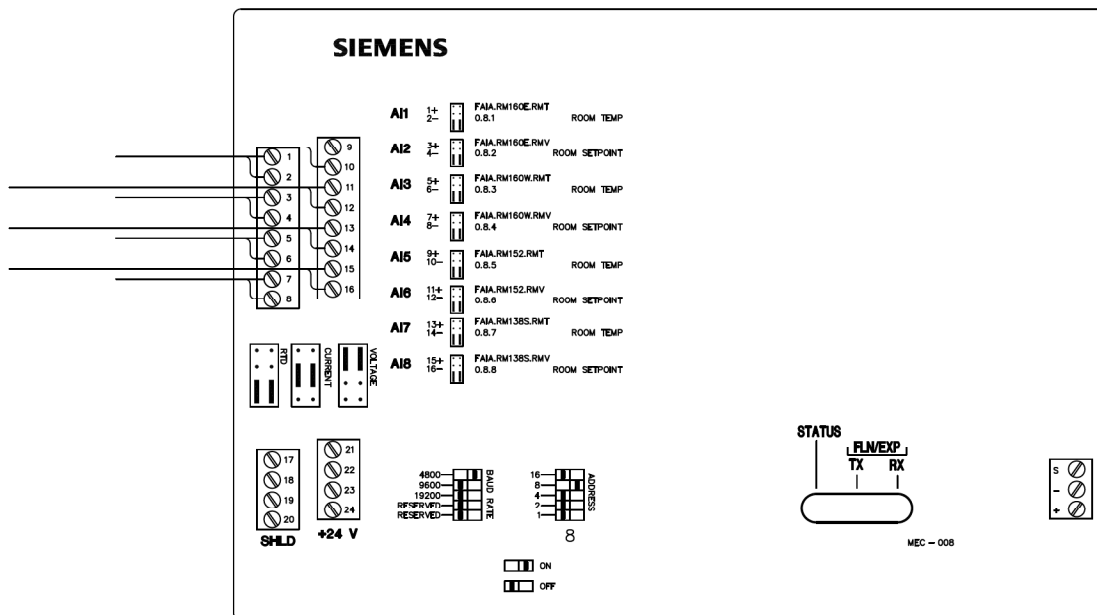
DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/14/15

FAIAMEC03-X7 (EX)

440P-159367
0

N03G



REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO3	FAIAMEC03	FAIAMEC-03

REVISION HISTORY

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
PHONE: 907.479.7034
FAX: 907.479.3679

DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/14/15

FAIAMEC03-X8 (EX)

440P-159367
0

N03H

REVISION HISTORY

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
PHONE: 907.479.7034
FAX: 907.479.3679

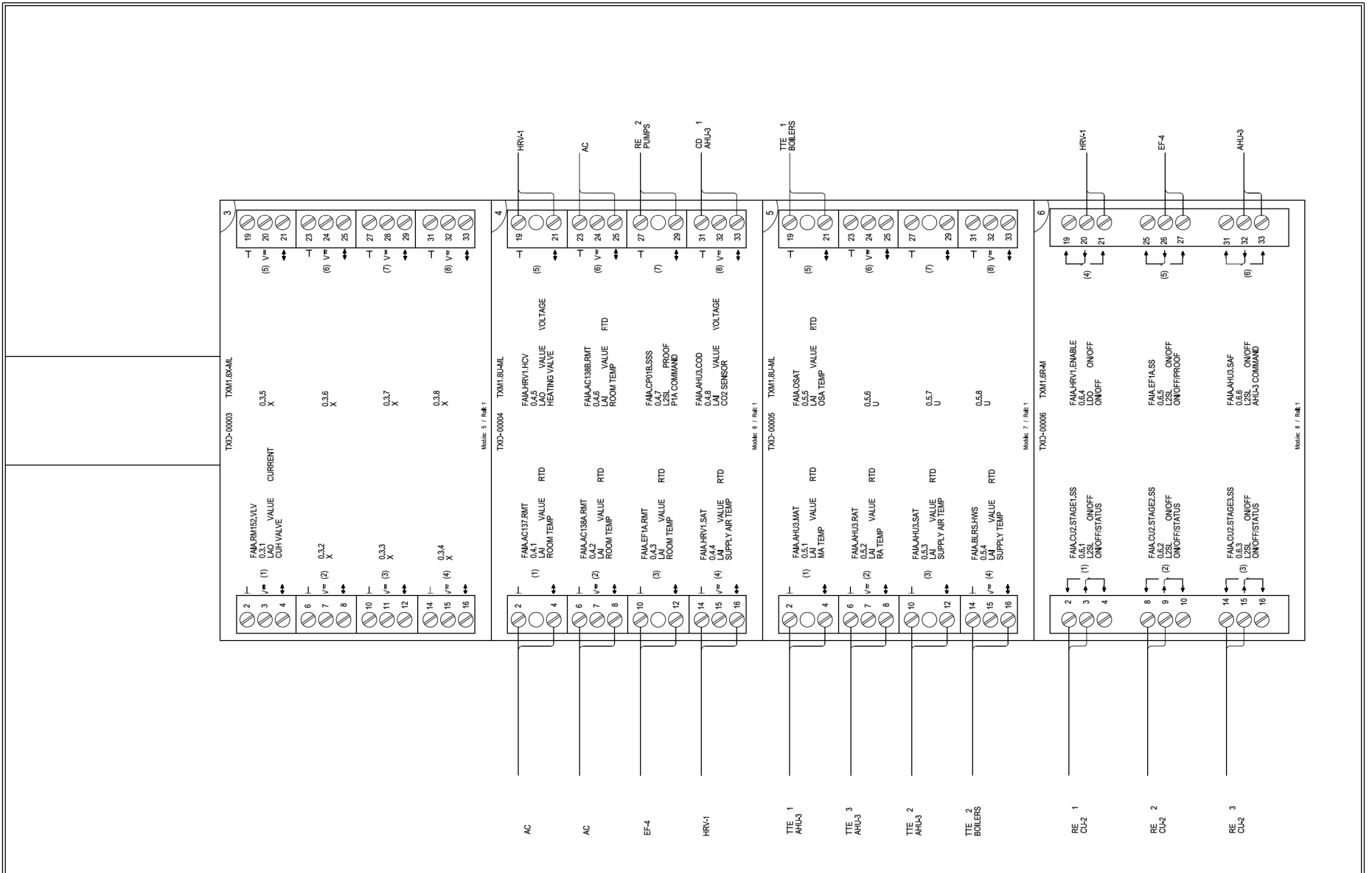
DMVA FAIRBANKS ARMOY
FAIRBANKS, AK

PREPARED BY	DRAWN BY	CHECKED BY	INITIALS	DATE	LAST MODIFIED
TL	NEP	TMA		05/23/06	12/02/14

FAIAPXCM03 X-9

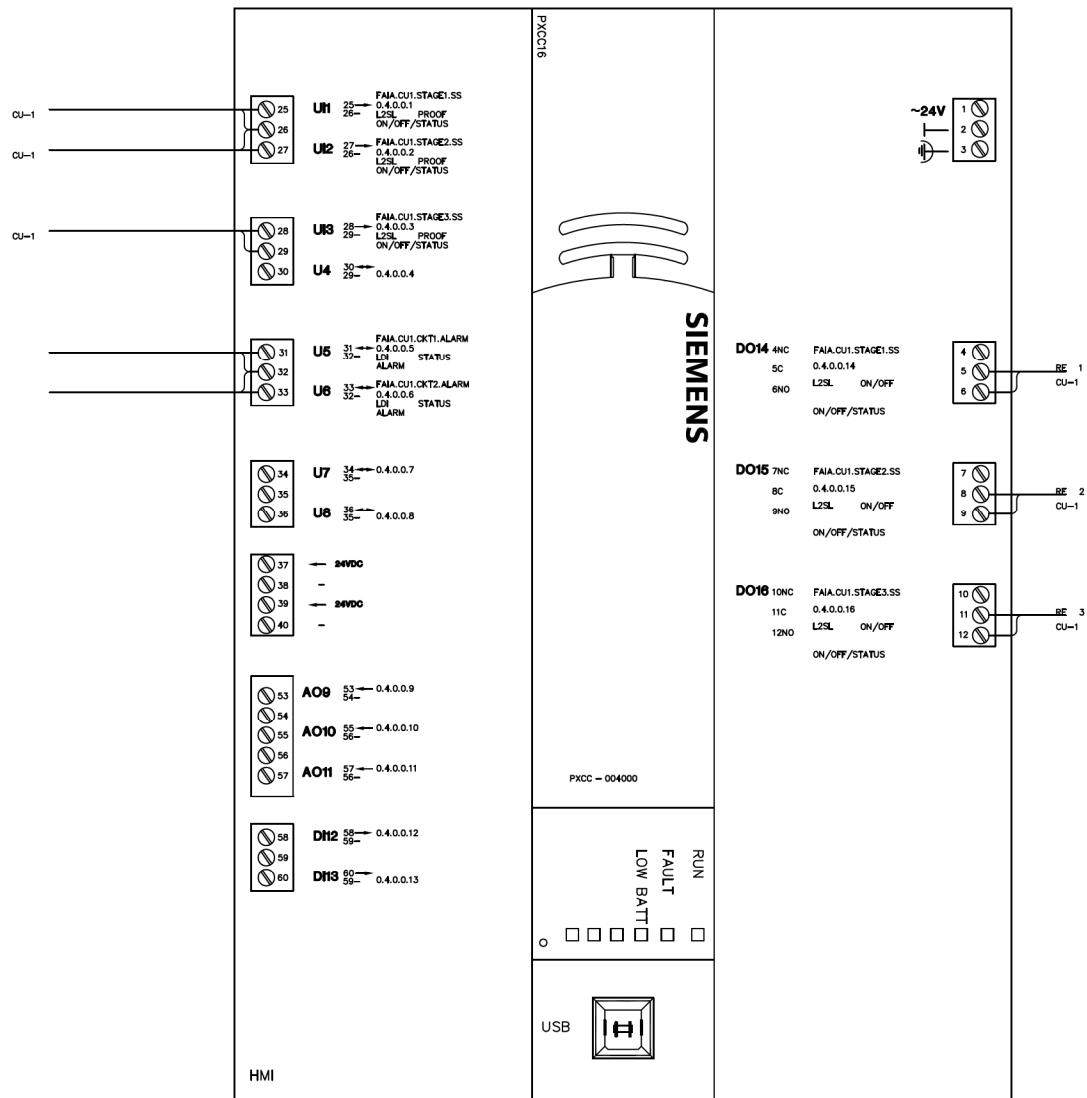
440P-159367

1
N031



Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Panel Mounted Devices					
PXCM 000	1	PXC100-PE96.A	SIEMENS	149478	PXC MOD, P2, TX-I/O, 96 NODE, APOGEE
	1	PXX-485.3	SIEMENS	149478	PXC MOD EXPANSION MODULE, 3 RS-485
	1	TXA1.K24	SIEMENS	149476	ADDRESS KEY 1-24
	2	TXS1.12F4	SIEMENS	149476	24VDC SUPPLY 1200MA, 4 A FUSE
	1	TXM1.16D	SIEMENS	149476	16 DIGITAL INPUT MODULE
	3	TXM1.8X-ML	SIEMENS	149476	8 UNIV I/O W/ 4-20MA, OVD&LCD
	1	TXM1.8U	SIEMENS	149476	8 UNIVERSAL I/O MODULE
	3	TXM1.6R-M	SIEMENS	149476	6 RELAY OUTPUT MODULE W/OVD
	1	TXM1.8U-ML	SIEMENS	149476	8 UNIV I/O MODULE W/ OVD&LCD

REVISION HISTORY	SIEMENS 2520 ROLAND ROAD FAIRBANKS, AK 99709 USA PHONE: 907.479.7034 FAX: 907.479.3679 SIEMENS INDUSTRY, INC BUILDING TECHNOLOGIES	DMVA FAIRBANKS ARMORY FAIRBANKS, AK					440P-159367 1
		ENGINEER TL	DRAFTER NEP	CHECKED BY TMA	INITIAL RELEASE 05/23/06	LAST EDIT DATE 12/02/14	N03L
		FAIA PXCM03 BOILER ROOM 141 BOM					



Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Panel Mounted Devices					
PXCC 1	1	PXC16.2-P.A	SIEMENS	149454	APOGEE 16PT, RS-485 ALN

REVISION HISTORY

SIEMENS

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
PHONE: 907.479.7034
FAX: 907.479.3679

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/14/15

FAIAFPNL-04 MECH RM 142 BOM

440P-159367
0

N04A

TEC SCHEDULE

EQUIPMENT TAG	PANEL	FLN NUMBER	ADDRESS	CONTROLLER NAME	APPLICATION	VALVES	OTHER ATTACHED POINTS	LOCATIONS SERVED	SEE DRAWING
BB-138A	N03	1	1	ARMORY.138A.TEC	2543	2		138A	400
BB-138B	N03	1	2	ARMORY.138B.TEC	2543	1		138B	400A

TRANSFORMER SERVICE SCHEDULE

TRANSFORMER PANEL: SB-3
LOCATION: BOILER ROOM 141

OUTPUT NUMBER: 1

XFMR CAPACITY: 94 VA CLASS 1

XFMR OUTPUT 1 & 2 FROM SAME POWER SOURCE. COMBINED MAXIMUM TOTAL IS 94 VA.

PAGE	TAG	DEVICE	VA	PAGE	TAG	DEVICE	VA	PAGE	TAG	DEVICE	VA
N01	PXCC	PXC36-E.A	35								

TRANSFORMER SERVICE SCHEDULE

TRANSFORMER PANEL: XFMR-1

LOCATION: BOILER ROOM 141

TRANSFORMER PANEL: XFMR-1

OUTPUT NUMBER: 1

XFMR CAPACITY: 100VA

PAGE	TAG	DEVICE	VA
100A	AE-1	HRV-1 O/A DAMPER	7
100A	AE-2	HRV-1 E/A DAMPER	7
100A	V-1	HRV-1 PREHEAT VALVE	3
100A	V-2	HRV-1 HEATING VALVE	3
200A	V-1	HX-1 STEAM VALVE	17
TOTAL			37

TRANSFORMER PANEL: XFMR-1

OUTPUT NUMBER: 2

XFMR CAPACITY: 100VA

PAGE	TAG	DEVICE	VA
400	TEC-1	BB-001 TEC	12
400	TEC-1	BB-002 TEC	12
400	TEC-1	BB-009 TEC	12
400	TEC-1	BB-010 TEC	12
400	TEC-1	BB-011 TEC	12
400	TEC-1	BB-003 TEC	12
TOTAL			72

TRANSFORMER PANEL: XFMR-1

OUTPUT NUMBER: 3

XFMR CAPACITY: 100VA

PAGE	TAG	DEVICE	VA
401	TEC-1	UH-1 TEC	14
401	TEC-1	UH-2,3 TEC	16
300	PPM-52	AC-1/VF-2 POINT PICKUP MODULE	4
TOTAL			34

TRANSFORMER PANEL: XFMR-1

OUTPUT NUMBER: 4

XFMR CAPACITY: 100VA

PAGE	TAG	DEVICE	VA
TOTAL			0

TRANSFORMER PANEL: XFMR-1

OUTPUT NUMBER: 5

XFMR CAPACITY: 100VA

PAGE	TAG	DEVICE	VA
TOTAL			0

TRANSFORMER SERVICE SCHEDULE

TRANSFORMER PANEL: XFMR-2 LOCATION: FLOOR 1

TRANSFORMER PANEL: XFMR-2
OUTPUT NUMBER: 1
XFMR CAPACITY: 100VA

PAGE	TAG	DEVICE	VA
400	TEC-1	BB-WEST STAIR TEC	12
400	TEC-1	BB-100 TEC	12
400	TEC-1	BB-102 TEC	12
400	TEC-1	BB-104 TEC	12
400	TEC-1	BB-106 TEC	12
400	TEC-1	BB-110 TEC	12
400	TEC-1	BB-114 TEC	12
TOTAL			84

TRANSFORMER PANEL: XFMR-2
OUTPUT NUMBER: 2
XFMR CAPACITY: 100VA

PAGE	TAG	DEVICE	VA
400	TEC-1	BB-114 TEC	12
400	TEC-1	BB-116 TEC	12
400	TEC-1	BB-EAST STAIR TEC	12
400	TEC-1	BB-111A TEC	12
400	TEC-1	BB-111 TEC	12
400	TEC-1	BB-109 TEC	12
TOTAL			72

TRANSFORMER PANEL: XFMR-2
OUTPUT NUMBER: 3
XFMR CAPACITY: 100VA

PAGE	TAG	DEVICE	VA
400	TEC-1	BB-105 TEC	12
400	TEC-1	BB-103 TEC	12
400	TEC-1	BB-101 TEC	12
401A	TEC-2	CUH-7 TEC	14
TOTAL			50

TRANSFORMER PANEL: XFMR-2
OUTPUT NUMBER: 4
XFMR CAPACITY: 100VA

PAGE	TAG	DEVICE	VA
TOTAL			0

TRANSFORMER PANEL: XFMR-2
OUTPUT NUMBER: 5
XFMR CAPACITY: 100VA

PAGE	TAG	DEVICE	VA
TOTAL			0

TRANSFORMER SERVICE SCHEDULE

TRANSFORMER PANEL: XFMR-3 LOCATION: FLOOR 2

TRANSFORMER PANEL: XFMR-3
OUTPUT NUMBER: 1
XFMR CAPACITY: 100VA

PAGE	TAG	DEVICE	VA
400	TEC-1	BB-HALL WEST	12
400	TEC-1	BB-200A TEC	12
400	TEC-1	BB-200B TEC	12
400	TEC-1	BB-202 TEC	12
400	TEC-1	BB-204A TEC	12
400	TEC-1	BB-204B TEC	12
TOTAL			72

TRANSFORMER PANEL: XFMR-3
OUTPUT NUMBER: 2
XFMR CAPACITY: 100VA

PAGE	TAG	DEVICE	VA
400	TEC-1	BB-206A TEC	12
400	TEC-1	BB-206B TEC	12
400	TEC-1	BB-HALL EAST	12
400	TEC-1	BB-209B TEC	12
400	TEC-1	BB-207B TEC	12
400	TEC-1	BB-207A TEC	12
TOTAL			72

TRANSFORMER PANEL: XFMR-3
OUTPUT NUMBER: 3
XFMR CAPACITY: 100VA

PAGE	TAG	DEVICE	VA
400	TEC-1	BB-205 TEC	12
400	TEC-1	BB-203B TEC	12
400	TEC-1	BB-203A TEC	12
TOTAL			36

TRANSFORMER PANEL: XFMR-3
OUTPUT NUMBER: 4
XFMR CAPACITY: 100VA

PAGE	TAG	DEVICE	VA
401A	TEC-2	CUH-1 TEC	12
401A	TEC-2	CUH-3 TEC	12
401A	TEC-2	CUH-5 TEC	12
401A	TEC-2	CUH-6 TEC	12
401A	TEC-2	CUH-4 TEC	12
401A	TEC-2	CUH-2 TEC	12
TOTAL			72

TRANSFORMER PANEL: XFMR-3
OUTPUT NUMBER: 5
XFMR CAPACITY: 100VA

PAGE	TAG	DEVICE	VA
TOTAL			0

BUILDING TECHNOLOGIES

LOCATION:	FAIRBANKS, AK	PROJECT NAME:	DMVA FAIRBANKS ARMORY	DATE:	09/15/15
JOB NO:	44OP-159367			PAGE:	1
ENGR:	TL			REV:	

1. All valves 2-1/2" and larger have flanged ends, 2" and smaller have screwed ends.
2. All control valves and wells shall be installed by the mechanical contractor.
3. Standard abbreviations used on control valves are:

Steam inlet pressure, actual pressure drop, and shut off pressure indicated in PSIG.

ACTUATOR TYPES: SR - Spring Return; NSR - No Spring Return
CR - Capacitor Driven Return

Valve ID/Location	Qty	Product Number	Valve Size	Body Type	Body Style	Actual Cv	Actuator Type	Design P. Drop (psi)	Required Flow (gpm)	Min (gpm)	Max (gpm)	Preset (gpm)	Steam Inlet	Press Drop (psi)	Valve Spec Sheet	Shut Off	ANSI Class	Comment
-------------------	-----	----------------	------------	-----------	------------	-----------	---------------	----------------------	---------------------	-----------	-----------	--------------	-------------	------------------	------------------	----------	------------	---------

HEAT RECOVERY UNIT 1

V-1	1	262-02030	0.50	2 Way	Globe	0.40	NO-SR	3.00	0.50	N/A	0.00	1.66	154 010	120	250.00	HRV-1 HC-1
-----	---	-----------	------	-------	-------	------	-------	------	------	-----	------	------	---------	-----	--------	------------

Failsafe: NSR - No Spring Return SR - Spring Return NO - Normal Open NC - Normal Close