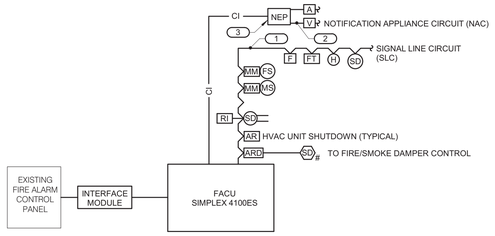
SYSTEM INPUTS / SEQUENCE OF OPERATION		PANEL/ANNUNCIATOR ALARM INDICATION	PANEL/ANNUNCIATOR SUPERVISORY INDICATION	PANEL/ANNUNCIATOR TROUBLE INDICATION	AUDIBLE ALARMS SEQUENCE	VISUAL ALARMS SEQUENCE	SMOKE DAMPER CONTROL SEQUENCE	AHU & MECHANICAL FAN SHUTDOWN SEQUENCE
							ARD	AR
FIRE ALARM PANEL, TRANSPONDER, NAC PANEL LOW BATTERY			X					
FIRE ALARM PANEL, TRANSPONDER, NAC PANEL BATTERY OR CHARGER FAILURE				X				
FIRE ALARM PANEL, TRANSPONDER, NAC PANEL ABNORMAL SWITCH OR CONTROL POSITION.			X					
FIRE ALARM PANEL, TRANSPONDER, NAC PANEL GROUND FAULT, OPEN CIRCUIT, SHORT CIRCUIT				X				
FIRE ALARM PANEL, TRANSPONDER, NAC PANEL AC POWER LOSS OR IRREGULARITY				X				
NOTIFICATION APPLIANCE CIRCUIT OR SLC LOOP GROUND FAULT, OPEN CIRCUIT, SHORT CIRCUIT				X				
INITIATING DEVICE FAILURE OR COMMUNICATION ERROR				X				
FIRE ALARM PANEL MANUAL FIRE DRILL			X		X	X		
MANUAL PULL STATION	F	X			X	X		
SMOKE DETECTOR	SD	X			X	X		
HEAT DETECTOR	H	X			X	X		
SMOKE DETECTOR FOR HVAC CONTROL	SD		X				X	X
SMOKE DETECTOR FOR SMOKE DAMPER CONTROL	SD		X				X	

1 FIRE ALARM OPERATION MATRIX

NO SCALE

NOTES :

1. ALL SYSTEM EVENTS SHALL BE LOGGED, PRINTED, AND DISPLAYED ON THE GRAPHICAL INTERFACE, IF APPLICABLE. SEE SPECIFICATIONS FOR MORE INFORMATION AND DESCRIPTIONS OF SEQUENCES OF OPERATION.
2. PARTIAL EVACUATION OR RELOCATION OF OCCUPANTS IS THE STANDARD OPERATING PROCEDURE FOR THIS FACILITY IN THE EVENT OF AN ALARM. THEREFORE, ALL NOTIFICATION APPLIANCE CIRCUITS MUST BE INSTALLED AND PROTECTED IN ACCORDANCE WITH THE CIRCUIT SURVIVABILITY REQUIREMENTS DESCRIBED IN NFPA 72. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.



2 FIRE ALARM RISER

NO SCALE

NOTES :

1. THE RISER DIAGRAM IS INTENDED TO CONVEY THE TYPES OF FIRE ALARM CONNECTIONS AND SPECIFICALLY DOES NOT INDICATE QUANTITIES, NUMBER OF CIRCUITS REQUIRED OR DISTANCES.
2. THE COMPLETE FIRE ALARM SYSTEM SHALL MEET ALL APPLICABLE CODES AND MANUFACTURER'S RECOMMENDATIONS.
3. CONTRACTOR SHALL COORDINATE ALL WIRE SIZES, TYPES AND REQUIREMENTS WITH THE VENDOR PRIOR TO BID. REFER TO SPECIFICATIONS TO DETERMINE CIRCUIT STYLES AND IF CONDUIT IS REQUIRED OR PLENUM RATED CABLE IS ACCEPTABLE.
4. ALL +120VAC WIRING REQUIRED FOR OPERATION OF THE SYSTEM AS DESCRIBED IN THE CONSTRUCTION DOCUMENTS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
5. ALL NECESSARY RELAYS MAY NOT BE SHOWN ON THIS PLAN, BUT WHERE REQUIRED FOR PROPER OPERATION OF THE SYSTEM THEY SHALL BE PROVIDED BY THE CONTRACTOR.
6. PARTIAL EVACUATION OR RELOCATION OF OCCUPANTS IS THE STANDARD OPERATING PROCEDURE FOR THIS FACILITY IN THE EVENT OF AN ALARM. THEREFORE, ALL NOTIFICATION APPLIANCE CIRCUITS MUST BE INSTALLED AND PROTECTED IN ACCORDANCE WITH THE CIRCUIT SURVIVABILITY REQUIREMENTS DESCRIBED IN NFPA 72. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

KEYNOTES:

1. REFER TO SPECIFICATION FOR REQUIREMENTS OF EACH INITIATION LOOP AND WIRING STYLE. REFER TO FLOOR PLANS FOR DEVICES AND THEIR LOCATIONS.
2. REFER TO SPECIFICATION FOR REQUIREMENTS OF EACH NOTIFICATION APPLIANCE CIRCUIT AND WIRING STYLE. REFER TO FLOOR PLANS FOR DEVICES AND THEIR LOCATIONS.
3. PROVIDE NOTIFICATION APPLIANCE EXTENDER PANELS AS REQUIRED. DETERMINATION OF NEED TO BE MADE BY FIRE ALARM VENDOR. REFER TO SPECIFICATIONS FOR REQUIREMENTS AND ACCEPTABLE MOUNTING LOCATIONS.

IMEG
2882 106TH STREET
DES MOINES, IA 50322
515.334.9906 FAX: 515.334.9908
www.imegcorp.com
PROJECT # 190042489.01

REFERENCE SCALE IN INCHES
0 1 2 3

Revisions:	Date:

CONSULTANT

IMEG

ARCHITECT/ENGINEER OF RECORD

ANDERSON
13605 1st Ave. N. #100 Plymouth, MN 55441
P 763.412.4000 | F 763.412.4090 | ae-mn.com
Anderson Engineering of Minnesota, LLC | Proj # 15744

STAMP

LICENSED PROFESSIONAL ENGINEER
KRISTEN L. SPINA
21081
IOWA
05/28/2021

Office of Construction and Facilities Management

VA | U.S. Department of Veterans Affairs

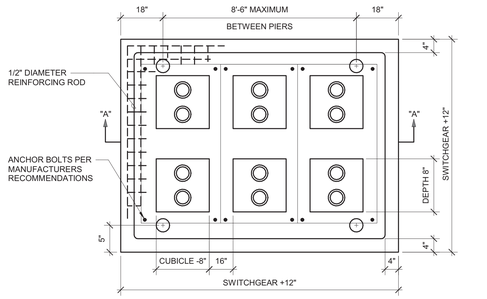
Drawing Title	ELECTRICAL DETAILS
Approved:	
Phase	100% CONSTRUCTION DOCUMENTS
	FULLY SPRINKLERED
Project Title	NWIHCS - CONSTRUCT AIR HANDLING TOWER
Location	OMAHA, NE
Issue Date	05/28/21
Checked	RICVED
Drawn	KRISPI
Project Number	636-18-303
Building Number	1
Drawing Number	E300

BID SET

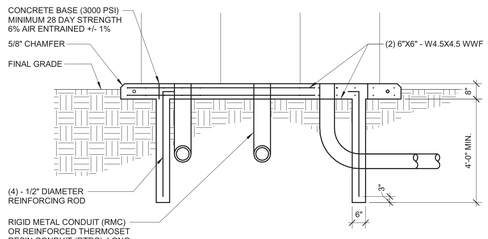
C:\Revit Local Files\MEP19_190042489.01_15744-VA-Omaha-AHU Tower_C_Zachary.R.Ross.rvt

5/28/2021 11:42:06 AM

VA FORM 08 - 6231



TOP VIEW



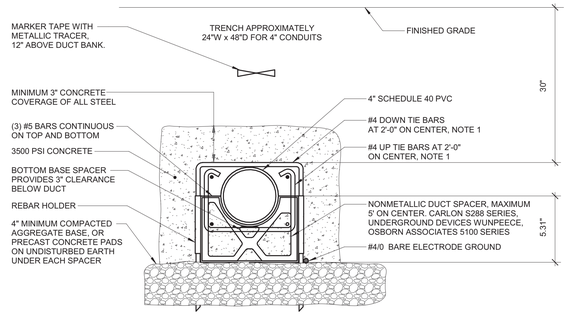
SECTION "A-A"

1 SWITCHGEAR PAD DETAIL

NO SCALE

NOTES:

1. VERIFY FINAL REQUIREMENTS WITH UTILITY COMPANY PRIOR TO INSTALLATION.

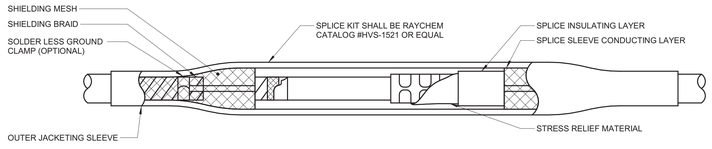


2 DUCT BANK DETAIL

NO SCALE

NOTES:

1. ARRANGE TO AVOID CONTACT BETWEEN BARS TO PREVENT INDUCTIVE HEATING OF STEEL BY AVOIDING CLOSED LOOP OF STEEL AROUND CONDUITS. OFFSET UP AND DOWN TIE BARS 6" FROM EACH OTHER.
2. INSTALL 2000 lb TENSILE STRENGTH BRAIDED POLYPROPYLENE PULL CORD IN ALL CONDUITS.
3. TRENCHING AND BACKFILL ACCORDING TO SPECIFICATIONS.
4. MINIMUM OF 4'-0" CLEAR BETWEEN ADJACENT DUCTBANKS.
5. DOWEL ENDS OF DUCTBANK INTO MANHOLE OR FOUNDATION WITH MINIMUM OF (4) #4 DOWELS.



3 MEDIUM VOLTAGE SPLICE

NO SCALE

Revisions:	Date:

CONSULTANT

IMEG

ARCHITECT/ENGINEER OF RECORD

ANDERSON

13605 1st Ave. N. #100 Plymouth, MN 55441
P 763.412.4000 | F 763.412.4090 | ae-mn.com
Anderson Engineering of Minnesota, LLC | Proj # 15744

STAMP

LICENSED PROFESSIONAL ENGINEER
KRISTEN L. SPINA
21081
IOWA
05/28/2021

Office of Construction and Facilities Management

VA | U.S. Department of Veterans Affairs

Drawing Title: ELECTRICAL DETAILS

Approved:

Phase: 100% CONSTRUCTION DOCUMENTS

FULLY SPRINKLERED

Project Title: NWIHCS - CONSTRUCT AIR HANDLING TOWER

Location: OMAHA, NE

Issue Date: 05/28/21 | Checked: RICVED | Drawn: KRISPI

Project Number: 636-18-303

Building Number: 1

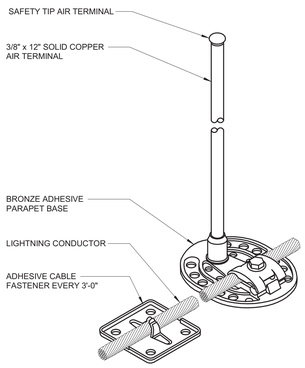
Drawing Number: E301

BID SET

C:\Revit Local Files\MEP\19_19004249.01_15744-VA-Omaha-AHU Tower_C_Zachary.R.Ross.rvt

5/28/2021 11:42:08 AM

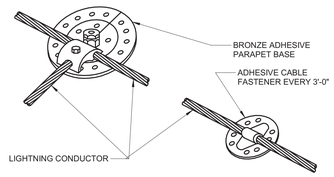
VA FORM 08 - 6231



NOTES :

1. E.C. SHALL VERIFY COMPATIBILITY OF ADHESIVE WITH ROOFING SYSTEM SUPPLIER PRIOR TO INSTALLATION.

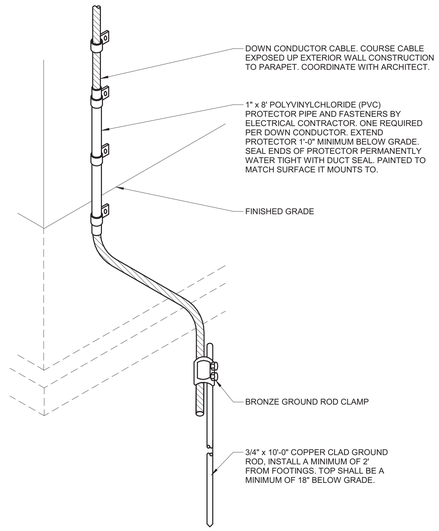
1 ADHESIVE AIR TERMINAL
NO SCALE



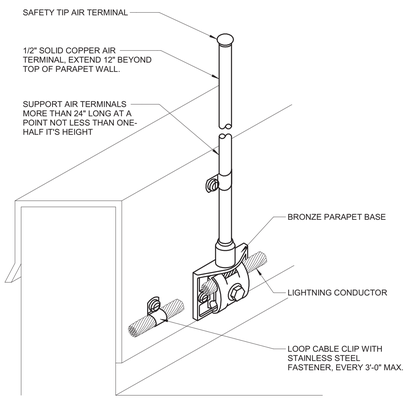
NOTES :

1. E.C. SHALL VERIFY COMPATIBILITY OF ADHESIVE WITH ROOFING SYSTEM MANUFACTURER PRIOR TO INSTALLATION.

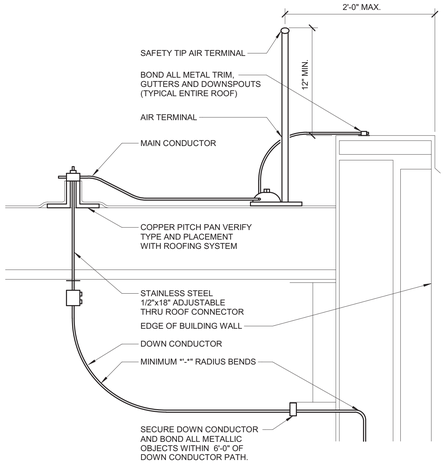
2 CABLE JUNCTION POINT
NO SCALE



3 GROUNDING AT GRADE DETAIL
NO SCALE



4 PARAPET AIR TERMINAL DETAIL
NO SCALE



5 PERIMETER AIR TERMINAL DETAIL
NO SCALE

CLASS 1 MATERIAL REQUIREMENTS

		COPPER	
TYPE OF CONDUCTOR		STANDARD	METRIC
AIR TERMINAL, SOLID	MIN. DIAMETER	3/8 IN.	9.5 MM
AIR TERMINAL, TUBULAR	MIN. DIAMETER MIN. WALL THICKNESS	5/8 IN. 0.033 IN.	15.9 MM 0.8 MM
MAIN CONDUCTOR, CABLE	MIN. SIZE EA. STRAND WGT. PER LENGTH CROSS SECT. AREA	17 AWG 187 LB/1000 FT. 57,400 CM	 278 MM 29 MM
MAIN CONDUCTOR, SOLID STRIP	THICKNESS WIDTH	0.051 IN. 1 IN.	1.30 MM 25.4 MM
BONDING CONDUCTOR, CABLE (SOLID OR STRANDED)	MIN. SIZE EA. STRAND CROSS SECT. AREA	17 AWG 26,240 CM	
BONDING CONDUCTOR, SOLID STRIP	THICKNESS WIDTH	0.051 IN. 1/2 IN.	1.30 MM 12.7 MM

6 LIGHTNING PROTECTION MATERIAL REQUIREMENTS
NO SCALE

IMEG
2882 106TH STREET
DES MOINES, IA 50322
515.334.9906 FAX: 515.334.9908
www.imegcorp.com
PROJECT # 19004249.01

REFERENCE SCALE IN INCHES
0 1 2 3

Revisions:	Date:

CONSULTANT

IMEG

ARCHITECT/ENGINEER OF RECORD

ANDERSON

13605 1st Ave. N. #100 Plymouth, MN 55441
P 763.412.4000 | F 763.412.4090 | ae-mn.com
Anderson Engineering of Minnesota, LLC | Proj # 15744

STAMP

LICENSED PROFESSIONAL ENGINEER
KRISTEN L. SPINA
21081
IOWA
05/28/2021

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Approved:

Drawing Title: ELECTRICAL DETAILS

Phase: 100% CONSTRUCTION DOCUMENTS

FULLY SPRINKLERED

Project Title: NWIHCS - CONSTRUCT AIR HANDLING TOWER

Location: OMAHA, NE

Issue Date: 05/28/21 | Checked: RICVED | Drawn: KRISPI

Project Number: 636-18-303

Building Number: 1

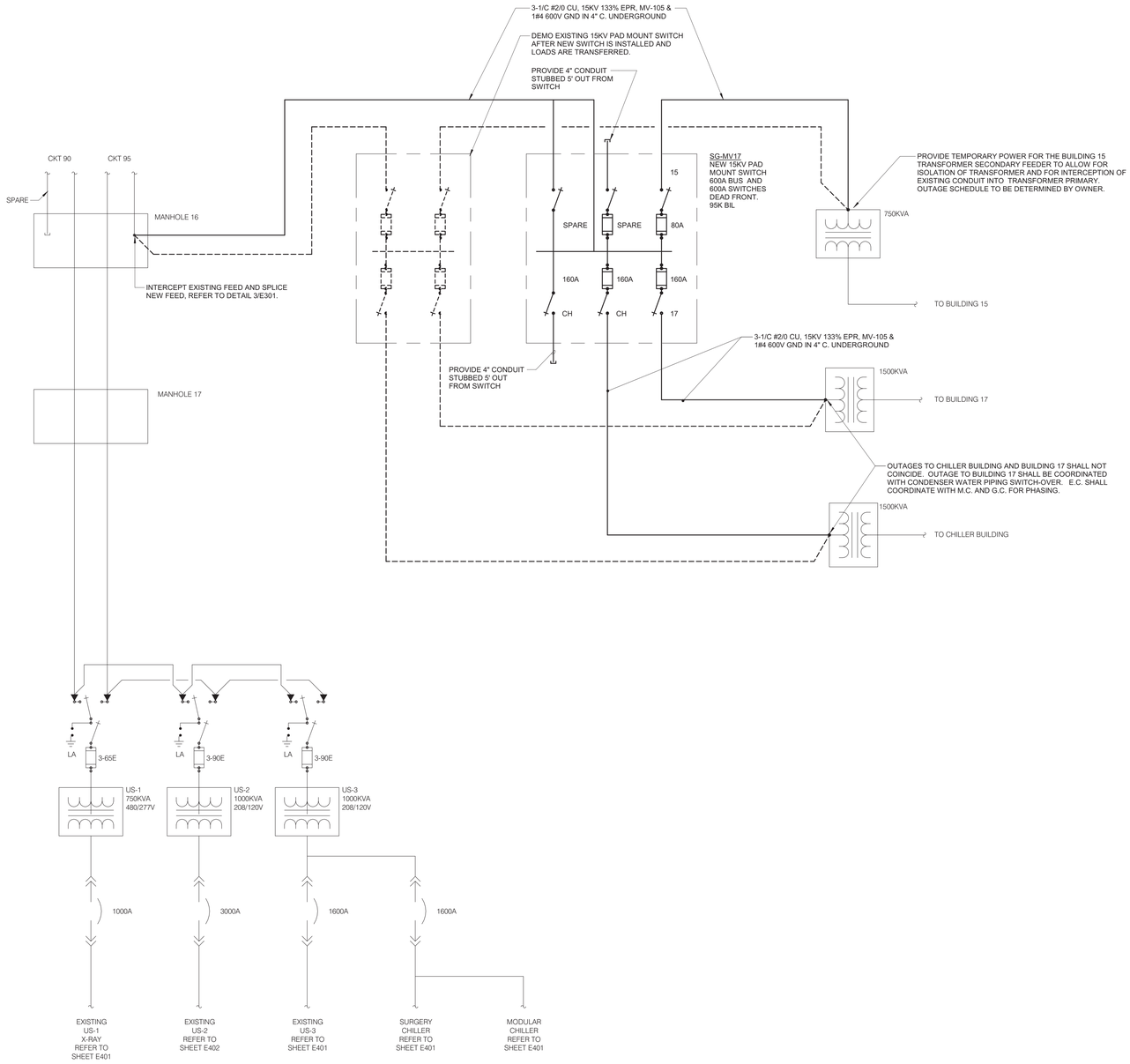
Drawing Number: E302

BID SET

5/26/2021 11:42:11 AM

C:\Revit Local Files\MEP\19_19004249.01_15744-VA-Omaha-AHU Tower_C_Zachary.R Rees.rvt

VA FORM 08 - 6231



1 15KV ELECTRICAL DISTRIBUTION

NO SCALE

KEYNOTES: (#)

1. FULLY RATED BREAKER.

ONE LINE DIAGRAM NOTES

1. AIC RATINGS LISTED FOR EQUIPMENT ARE MINIMUM REQUIREMENTS FOR BUS BRACING AND DEVICE RATING. ALL EQUIPMENT SHALL BE FULLY RATED UNLESS SPECIFICALLY NOTED AS SERIES RATED.
2. INDICATES DIRECT CONNECTION OF GROUND CONDUCTOR TO GROUND BUS. SUBSCRIPT "I" INDICATES DIRECT CONNECTION OF ISOLATED GROUND CONDUCTOR TO ISOLATED GROUND BUS.
3. INDICATES O.Z. GEDNEY OR EQUAL GROUND BUSHING BONDED TO GROUND BUS WITH CONDUCTOR SIZED TO MAXIMUM FEEDER GROUND CAPACITY.
4. CIRCUIT BREAKER CHARACTERISTICS:
5. a. [AF] INDICATES MOLDED/INSULATED CASE BREAKER FRAME SIZE, FOR ADJUSTABLE TRIP BREAKERS.
6. b. [AT] INDICATES MOLDED/INSULATED CASE BREAKER TRIP UNIT RATING, FOR ADJUSTABLE TRIP BREAKERS.

   c. [LSIG] INDICATES FEATURES PROVIDED WITH SOLID STATE CIRCUIT BREAKER. [LONG TIME (W/DELAY), SHORT TIME (W/DELAY), INSTANTANEOUS, GROUND FAULT].

   d. [LSIA] INDICATES FEATURES PROVIDED WITH SOLID STATE CIRCUIT BREAKER. [LONG TIME (W/DELAY), SHORT TIME (W/DELAY), INSTANTANEOUS, GROUND FAULT ALARM (NO GROUND FAULT TRIP)].

   e. [AER] INDICATES ARC ENERGY REDUCTION SYSTEM

   f. [100% RATED] INDICATES MOLDED/INSULATED CASE BREAKER RATED FOR FULL CONTINUOUS CAPACITY OF CIRCUIT BREAKER NAMEPLATE.
7. INDICATES CURRENT TRANSFORMER, SIZE AS SPECIFIED.
8. INDICATES DRAWOUT DEVICE.
9. MEDIUM VOLTAGE TERMINATIONS (STRESS CONE).
10. LA — INDICATES LIGHTNING ARRESTORS.
11. FUSED MEDIUM VOLTAGE SWITCH.
12. MEDIUM VOLTAGE SWITCH
13. MANHOLE
14. GROUND GRID CONDUCTOR (ABOVE GROUND)
15. GROUND GRID CONDUCTOR (BELOW GROUND)

IMEG
2882 106TH STREET
DES MOINES, IA 50322
515.334.9908 FAX: 515.334.9908
www.imegcorp.com
PROJECT # 19004249.01

REFERENCE SCALE IN INCHES 0 1 2 3

Revisions:	Date:

CONSULTANT: IMEG

ARCHITECT/ENGINEER OF RECORD:
ANDERSON
13605 1st Ave. N. #100 Plymouth, MN 55441
P 763.412.4000 | F 763.412.4090 | ae-mn.com
Anderson Engineering of Minnesota, LLC | Proj # 15744

STAMP: LICENSED PROFESSIONAL ENGINEER — KRISTEN L. SPINA — 21081 — IOWA — 05/28/2021

Office of Construction and Facilities Management

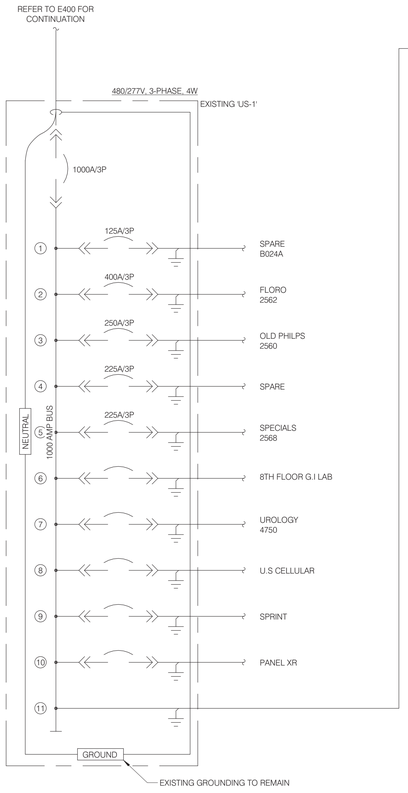
VA U.S. Department of Veterans Affairs

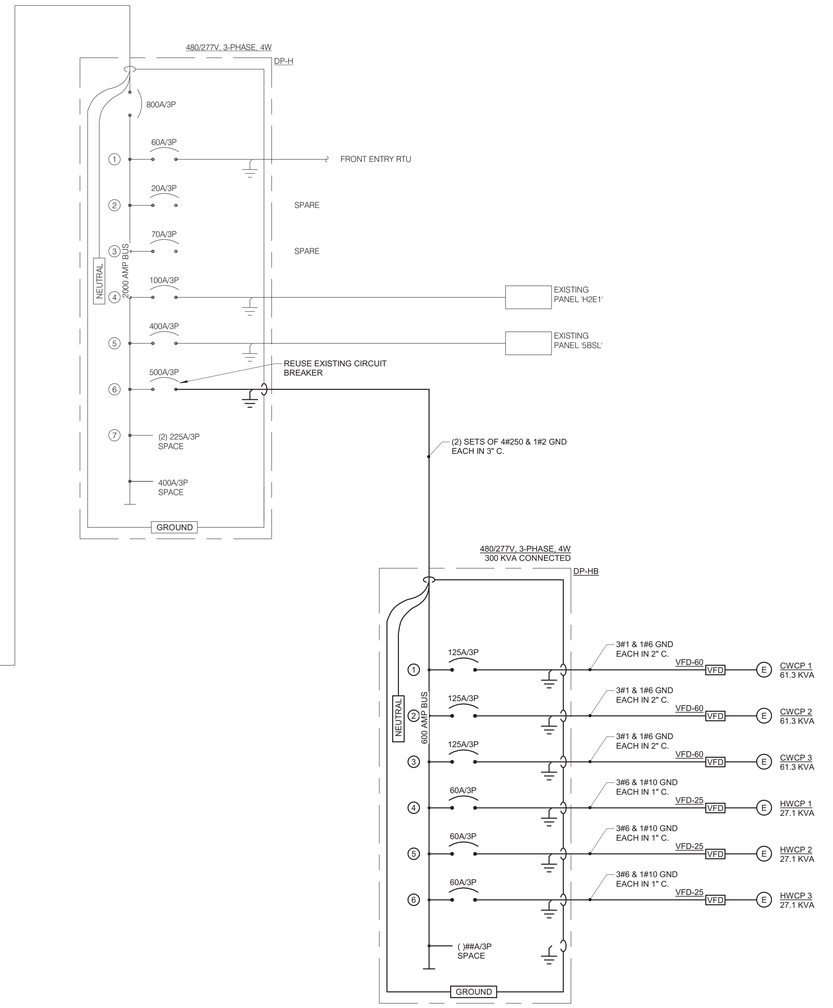
Drawing Title: 15KV ELECTRICAL DISTRIBUTION	Phase: 100% CONSTRUCTION DOCUMENTS	Project Title: NWIHCS - CONSTRUCT AIR HANDLING TOWER	Project Number: 636-18-303
Approved:	FULLY SPRINKLERED	Location: OMAHA, NE	Building Number: 1
		Issue Date: 05/28/21 / Checked: RICVED / Drawn: KRISPI	Drawing Number: E400

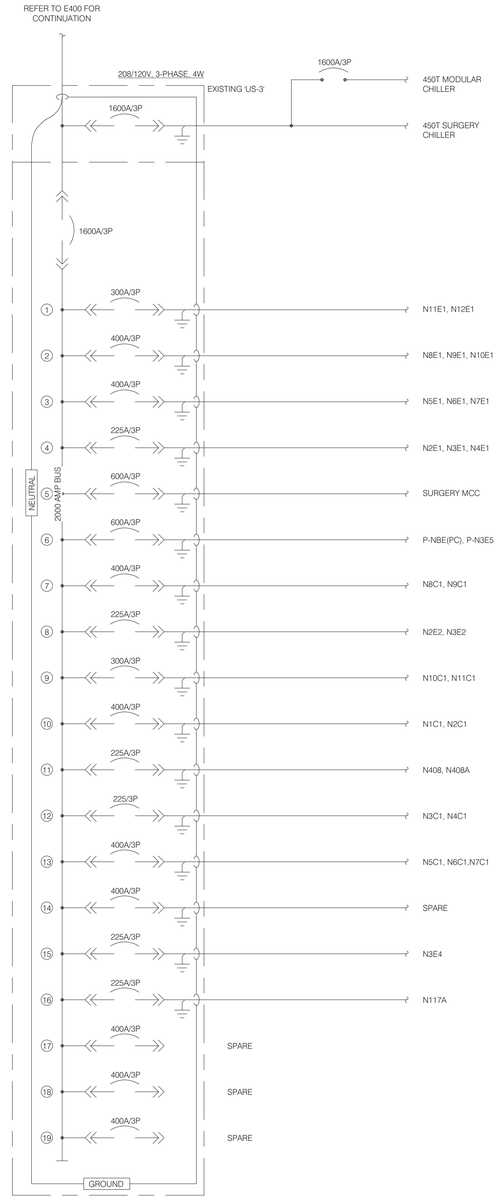
BID SET

C:\Revit Local Files\MEP\19_19004249.01_15744-VA-Omaha-AHU Tower_C_Zachary.R.Ross.rvt
5/28/2021 11:42:13 AM

VA FORM 08 - 6231







1 ELECTRICAL ONE-LINE DIAGRAM - US 1 & 3

NO SCALE

IMEG
2882 106TH STREET
DES MOINES, IA 50322
515.334.9906 FAX: 515.334.9908
www.imegcorp.com
PROJECT # 19004249.01

REFERENCE SCALE IN INCHES
0 1 2 3

Revisions:	Date:

CONSULTANT: IMEG

ARCHITECT/ENGINEER OF RECORD:
ANDERSON
13605 1st Ave. N. #100 Plymouth, MN 55441
P 763.412.4000 | F 763.412.4090 | ae-mn.com
Anderson Engineering of Minnesota, LLC | Proj # 15744

STAMP: LICENSED PROFESSIONAL ENGINEER — KRISTEN L. SPINA — 21081 — IOWA — 05/28/2021

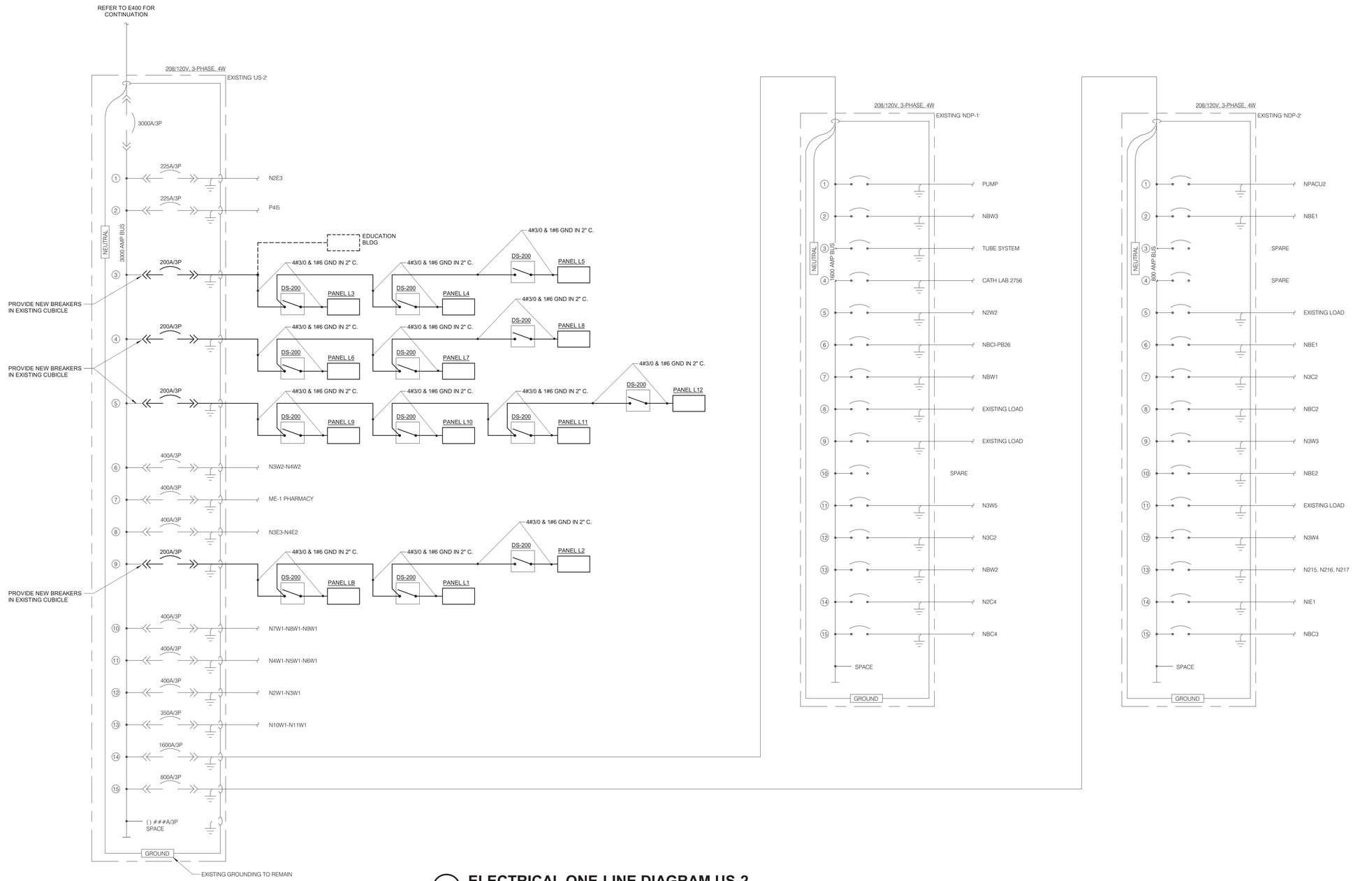
Office of Construction and Facilities Management
VA | U.S. Department of Veterans Affairs

Drawing Title: ELECTRICAL ONE-LINE DIAGRAMS	Phase: 100% CONSTRUCTION DOCUMENTS	Project Title: NWIHCS - CONSTRUCT AIR HANDLING TOWER	Project Number: 636-18-303
Approved:			Building Number: 1
	FULLY SPRINKLERED	Location: OMAHA, NE	Drawing Number: E401
		Issue Date: 05/28/21 / Checked: RICVED / Drawn: KRISPI	

BID SET

5/26/2021 11:42:16 AM
C:\Revit Local Files\MEP\19_19004249.01_15744-VA-Omaha-AHU Tower_C_Zachary.R.Ross.rvt

VA FORM 08 - 6231



1 ELECTRICAL ONE-LINE DIAGRAM US-2

NO SCALE

IMEG
2882 106TH STREET
DES MOINES, IA 50322
515.334.9566 FAX: 515.334.9908
www.imegcorp.com
PROJECT # 19004248.01

REFERENCE SCALE IN INCHES
0 1 2 3

Revisions:	Date:

CONSULTANT

IMEG

ARCHITECT/ENGINEER OF RECORD

ANDERSON
13605 1st Ave. N. #100 Plymouth, MN 55441
P 763.412.4000 | F 763.412.4090 | ae-mn.com
Anderson Engineering of Minnesota, LLC | Proj # 15744

STAMP

LICENSED PROFESSIONAL ENGINEER
KRISTEN L. SPINA
21081
IOWA
05/21/2021

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: ELECTRICAL ONE-LINE DIAGRAMS	Phase: 100% CONSTRUCTION DOCUMENTS	Project Title: NWIHCS - CONSTRUCT AIR HANDLING TOWER	Project Number: 636-18-303
			Building Number: 1
Approved:	FULLY SPRINKLERED	Location: OMAHA, NE	Drawing Number: E402
		Issue Date: 05/28/21 / Checked: RICVED / Drawn: KRISPI	

BID SET

5/26/2021 11:42:18 AM

C:\Revit Local Files\MEP19_19004248.01_15744-VA-Omaha-AHU Tower_C_Zachary.R.Ross.rvt

VA FORM 08 - 6231

VARIABLE FREQUENCY DRIVE SCHEDULE

STARTER TYPE:	REMARKS:	
PWM - PULSE WIDTH MODULATED	SA - STANDARD ACCESSORIES	TA - TWO CONVERTIBLE AUXILIARY CONTACTS
12PWM - 12 PULSE PWM	(INCLUDES * ITEMS)	ISO - ISOLATION TRANSFORMER
18PWM - 18 PULSE PWM	*MA - MANUAL SPEED ADJUSTMENT	*SHZ - SKIP FREQUENCY CAPABILITY
LINE DISCONNECT:	*ET - ELECTRONIC THERMAL OVERLOADS	RSS - REMOTE START-STOP
DS - DISCONNECT SWITCH	*CT - CONTROL TRANSFORMER, FUSED, 120V	RDR - REMOTE DRIVE RUN
FDS - FUSED DISCONNECT SWITCH	*HA - HAND-OFF-AUTO DOOR SWITCH	RFT - REMOTE FAULT TRIP
CB - CIRCUIT BREAKER	TO - MELTING THERMAL OVERLOADS	LR - INPUT LINE REACTOR
CONTROL:	MOL - MULTIPLE MOTOR OVERLOADS	HAR - PASSIVE HARMONIC FILTER
PN - 3-15 PSI TRANSDUCER		
420 - 4-20mA FOLLOWER		

ITEM	LINE DISC.	DRIVE BYPASS	CONTROL	VOLTAGE			DRIVE		NEMA ENCLOSURE	REMARKS	APPROVED MANUFACTURERS
				INPUT	OUTPUT	PH.	H.P. RATING	TYPE			
VFD-25	CB	3 CONTACT	420	460 V	460 V	3	25	PWM	1	SA [LR] VARIABLE TORQUE HAR	TOSHIBA Q9 SERIES ABB ACH 550 SERIES ALLEN BRADLEY POWERFLEX 400 SERIES DANFOSS VLT6000 SERIES G.E. AF300 P11 SERIES SQUARE D [E-FLEX] CUTLER-HAMMER [HVX] SERIES YASKAWA E7
VFD-60	CB	3 CONTACT	420	460 V	460 V	3	60	PWM	1	SA [LR] VARIABLE TORQUE HAR	TOSHIBA Q9 SERIES ABB ACH 550 SERIES ALLEN BRADLEY POWERFLEX 400 SERIES DANFOSS VLT6000 SERIES G.E. AF300 P11 SERIES SQUARE D [E-FLEX] CUTLER-HAMMER [HVX] SERIES YASKAWA E7

E - DISCONNECT AND STARTER SCHEDULE

NOTE: ALL DISCONNECTS (EXCEPT MANUAL STARTERS) SHALL BE HEAVY DUTY TYPE.

DISCONNECT TYPE:	REMARKS:	
FU - FUSED	SA - STANDARD ACCESSORIES (INCLUDES * ITEMS)	PF - PHASE LOSS PROTECTION (5 HP OR GREATER...
NF - NON-FUSED	*CT - CONTROL TRANSFORMER, FUSED 120V	TO - MELTING THERMAL OVERLOADS (1 PHASE)
CB - CIRCUIT BREAKER	*EO - ELECTRONIC OVERLOAD (3 PHASE MOTORS)	TS - 2 SPEED SELECTOR SWITCH IN DOOR
	*HA - HAND-OFF-AUTO IN DOOR	GP - GREEN (OFF) PILOT LIGHT IN DOOR
STARTER TYPE:	*RP - RED (RUN) PILOT LIGHT IN DOOR	FA - 4-CONVERTIBLE AUXILIARY CONTACTS
FV - FULL VOLTAGE	*TA - TWO CONVERTIBLE AUXILIARY CONTACTS	EI - ELECTRICAL INTERLOCK (2)-N.O. & (2)-N.C.
YD - WYE - DELTA	S/N - INSULATED NEUTRAL ASSEMBLY	SS - START-STOP PUSHBUTTON IN DOOR
RE - REVERSING		HL - HANDLE PADLOCK HASP
TW - 2 SPEED, 2 WINDING		
SW - 2 SPEED, 1 WINDING		
RV - REDUCED VOLTAGE AUTOXFMR		
SS - SOLID STATE		
MS - MANUAL STARTER		
MX - MANUAL SWITCH		
FS - FUSED SWITCH		

ITEM	DISCONNECT TYPE & RATING		CIRCUIT VOLTAGE	POLES	STARTER		NEMA ENCLOSURE	REMARKS	APPROVED MANUFACTURERS
	TYPE	RATING			NEMA SIZE	TYPE			
DS-200	NF	200 A	208 V	3			1	HL	SQUARE D 3110 HU364 EATON TYPE DH GENERAL ELECTRIC TYPE TH SIEMENS TYPE HNF
MX-1		30 A	120 V	1	0	MX	1	HL	SQUARE D 2510 KG1 EATON TYPE B2 GENERAL ELECTRIC TYPE TC SIEMENS TYPE MMS

LED LUMINAIRE SCHEDULE

(DESC) DOOR:	**DISTRIBUTION:**	**BEAMWIDTH:**	**(L/L) LENS/LOUVER:**
FA - FLAT ALUMINUM	II - ANSI/IES TYPE 2 DISTRIBUTION	NSP - VERY NARROW SPOT	K19 - KSH19 .156" ACRYLIC
FS - FLAT STEEL	III - ANSI/IES TYPE 3 DISTRIBUTION	SP - SPOT	A - .125"ACRYLIC
RA - REGRESSED ALUMINUM	IV - ANSI/IES TYPE 4 DISTRIBUTION	MD - MEDIUM	B - BAFFLE/LOUVER
RS - REGRESSED STEEL	V - ANSI/IES TYPE 5 DISTRIBUTION	WD - WIDE	C - CLEAR ALZAK
FINISH:		VWD - VERY WIDE	F - FROSTED ACRYLIC
PAF - PAINT AFTER FABRICATION		WW - WALL WASH	G - TEMPERED GLASS
CFSA - COLOR-FINISH SELECTION BY ARCHITECT			K - KSH12 .125" ACRYLIC
			M – MATTE DIFFUSE CLEAR
			N -...
			P - POLYCARBONATE
			R - HIGH IMPACT DR ACRYLIC
			SS – SEMI-SPECULAR CLEAR
			O - OTHER (SEE DESCRIPTION) [DESIGN SPECIFIC BLANKS]

(MTG) MOUNTING:		**(WATT) PER: FIX - FIXTURE, FT - FOOT, LAMP**
CL - CEILING SURFACE	RE - RECESSED	
CV - COVE	SP - SUSPENDED	**(TYPE) LED**
FR - FLANGED RECESSED	SU - SURFACE	RGB - COLOR CHANGING LED
P - PERIMETER	UC - UNDER CABINET	LED - LIGHT EMITTING DIODE
PL - POLE	WL - WALL	RGBW - COLOR CHANGING + WHITE
	O - OTHER (SEE DESCRIPTION)	TLED - TUBULAR LED LAMP
		RGBA - COLOR CHANGING + AMBER
		OLED - ORGANIC LED
		RLED - RETROFIT LED
		DLED - DYNAMIC TUNABLE...
		WLED - WARM DIM LED

(TYPE) DRIVER:			
0-10V - 0-10V DIMMING	EB - ELECTRONIC	HL - HIGH/LOW (100%/50%) STEP DIM	MV - MULTI-VOLTAGE ELECTRONIC
DALI - DIGITAL ADDRESSABLE	ELV - ELECTRONIC LOW VOLTAGE	LINE - LINE VOLTAGE...	REM - REMOTE
DMX - DIGITAL MULTIPLEX	EM - EMERGENCY BATTERY	ML - MULTI-LEVEL...	O - OTHER (SEE DESCRIPTION)

CATALOG NUMBER SHALL NOT BE CONSIDERED COMPLETE AND MATERIAL SHALL NOT BE ORDERED BY MANUFACTURER AND CATALOG NUMBER ONLY. THE COMPLETE DESCRIPTION AND THE SPECIFICATION SHALL BE COORDINATED WITH THE CATALOG NUMBER TO DETERMINE THE EXACT MATERIAL AND ACCESSORIES TO BE ORDERED. THE FIRST MANUFACTURER LISTED IS THE BASIS OF DESIGN.

VERIFY AND COORDINATE ALL CEILING TYPES WITH LUMINAIRE MOUNTING AND TRIM REQUIREMENTS PRIOR TO THE RELEASE OF THE LUMINAIRE ORDER.
CONFIRM ALL COLORS AND FINISHES OF ALL LUMINAIRE COMPONENTS WITH ARCHITECT AND INTERIOR DESIGNER PRIOR TO THE RELEASE OF THE LUMINAIRE ORDER.
UNLESS INDICATED ON LIGHTING PLANS OR BELOW, REFER TO ARCHITECTURAL AND INTERIOR DESIGN ELEVATIONS, SECTIONS AND DETAILS FOR ALL SUSPENDED AND WALL MOUNTED LUMINAIRE MOUNTING HEIGHTS.

REFER TO SPECIFICATION SECTIONS LIGHTING 26 51 00 AND EMERGENCY LIGHTING EQUIPMENT 26 52 00 FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
INTERIOR CORRELATED COLOR TEMPERATURE 4000K, COLOR RENDERING INDEX (CRI) AT OR ABOVE 80, UNLESS NOTED OTHERWISE.
EXTERIOR CORRELATED COLOR TEMPERATURE 4000K, COLOR RENDERING INDEX (CRI) AT OR ABOVE 80, UNLESS NOTED OTHERWISE.

ITEM	DESCRIPTION	L/L	MTG	DIMENSIONS			DIA	WATT	PER	LED			DRIVER		APPROVED MANUFACTURER / SERIES
				L	W	H		MAX ANSI		TYPE	QTY	ABSOLUTE LUMENS (MIN)	VOLTS	TYPE	
F1	LED STRIP LIGHT WITH 22 GAUGE STEEL HOUSING. ACRYLIC LENS WITH DIFFUSED LIGHT DISTRIBUTION. SURFACE OR SUSPENDED MOUNTING. UL LISTED.	O	SP/SU/WL	48"	2.5"	3"	NA	44W	FIX	LED		4,250	UNV	0-10V	CREE LS4-40L-40K-10V COLUMBIA LCL SERIES LITHONIA CLX SERIES
F1A	LED STRIP LIGHT WITH 22 GAUGE STEEL HOUSING. ACRYLIC LENS WITH DIFFUSED LIGHT DISTRIBUTION. SURFACE OR SUSPENDED MOUNTING. UL LISTED.	O	SP/SU/WL	96"	2.5"	3"	NA	88W	FIX	LED		8,400	UNV	0-10V	CREE LS8-80L-40K-10V COLUMBIA LCL SERIES LITHOINA CLX SERIES
W1	ARCHITECTURAL WALL SCONCE. SINGLE PIECE DIE CAST ALUMINUM HOUSING WITH ZINC INFUSED TGIC THERM2SET OWDER COAT FINISH. FINIAH AS SLECTED BY ARCHITECT FROM STANDARD OPTIONS. INTEGRAL PHOTOCELL. INTEGRAL, COLD WEATHER EMERGENCY BATTERY BACK UP.	O	WL	18"	8"	11"	NA	71W	FIX	LED		10,221	UNV	0-10V	LIHTONIA WDGE3 LED-P3-40K-70CRI-R2-MVOLT-E20WC-PE-XX OR PRE-APPROVED EQUIVALENT
EM1	EMERGENCY UNIT, TWO ADJUSTABLE LED HEADS, WHITE THERMOPLASTIC HOUSING. SELF TEST & DIAGNOSTICS OF BATTERY AND LAMPS	O	WL	9"	2.5"	5"	NA	10W	FIX	LED	2	EXEMPT	UNV	EM	DUAL-LITE EVR2 LIGHTALARMS GRANDE COMPACT PHILIPS CHLORIDE EMERGI-LITE
EX1	EDGE-LIT SINGLE FACED EXIT SIGN. INJECTION MOLDED ACRYLIC MIRROR LENS AND EXTRUDED ALUMINUM HOUSING. HOUSING FINISH AND COLORS SELECTED BY ARCHITECT. VERIFY RECESSED END, BACK OR CEILING MOUNTING AND ARROWS WITH PLANS. NICKEL CADMIUM BATTERY BACK UP. DAMP LOCATION RATED.	O	CL/WL	13"	1"	8"	NA	3.5W		LED		NA	UNV	EM	LITHONIA LRP-X-RMR-120/277-ELN McPHILBEN 45V 1 EVENLITE SOV 1C DUAL-LITE LE S LIGHTALARMS SPLEDN SERIES

PLAN ID	LIGHTING CONTROL SEQUENCE DESCRIPTION:
{LS1}	Sequence: Switched lights are controlled in this space. ON: The lights turn on using switches. OFF: The lights turn off using switches.

IMEG
2882 106TH STREET
DES MOINES, IA 50322
515.334.9906 FAX: 515.334.9908
www.imegcorp.com
PROJECT # 19004249.01

REFERENCE SCALE IN INCHES
0 1 2 3

Revisions:	Date:

CONSULTANT: IMEG

ARCHITECT/ENGINEER OF RECORD
ANDERSON
13605 1st Ave. N. #100 Plymouth, MN 55441
P 763.412.4000 | F 763.412.4090 | ae-mn.com
Anderson Engineering of Minnesota, LLC | Proj # 15744

STAMP: LICENSED PROFESSIONAL ENGINEER — KRISTEN L. SPINA — 21061 — IOWA — 05/21/2021

Office of Construction and Facilities Management

VA | U.S. Department of Veterans Affairs

Drawing Title: ELECTRICAL SCHEDULES
Approved:
Phase: 100% CONSTRUCTION DOCUMENTS
FULLY SPRINKLERED
Project Title: NWIHCS - CONSTRUCT AIR HANDLING TOWER
Location: OMAHA, NE
Issue Date: 05/28/21
Checked: RICVED
Drawn: KRISPI
Project Number: 636-18-303
Building Number: 1
Drawing Number: E500

BID SET

VA FORM 08 - 6231

C:\Revit Local Files\MEP\19_19004249.01_15744-VA-Omaha-ANU Tower_C_Zachary.R Roos.rvt
5/26/2021 11:42:24 AM

PANEL NAME: LB

TYPE: BOLT-ON
MOUNTING: SURFACE
FED FROM: US-2
SCCR:
LOCATION: BASEMENT FLOOR

SOLID NEUTRAL
GROUND BUS

CONNECTED 16.1 kVA
MAIN: 200 A/MLO
VOLTS: 120/208 Wye
PHASE: 3
WIRE: 4
DEMAND: 16.08 kVA

Panel Notes: ALL WIRING IS 2#12 & 1#12 GND IN 3/4" C. UNLESS OTHERWISE NOTED.

CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	P	WIRE ID	A	B	C	WIRE ID	OVERCURRENT PROTECTION P	AMPS	LOAD DESCRIPTION	CKT NO.
1	AHU-BA-HEATWHEEL	20 A	1		1	1.26			1	20 A	RECEPTACLES	2
3	RECEPTACLES	20 A	1			0.72	1		1	20 A	AHU-1A-HEATWHEEL	4
5	AHU-1B-HEAT WHEEL	20 A	1		1		1		1	20 A	AHU-BB-HEATWHEEL	6
7	CRS-1	20 A	1		1.13	1.13			1	20 A	CRS-1	8
9	CRS-2	20 A	1			0.67	0.83		1	20 A	FCU-1	10
11	FCU-1	20 A	1				0.83	1	1	20 A	AHU-1B-LIGHTS	12
13	SPARE	20 A	1	--	0	0.83			1	20 A	FCU-1	14
15	SPARE	20 A	1	--		0	0	--	1	20 A	SPARE	16
17	AHU-BA-LIGHTS	20 A	1				1	1	1	20 A	AHU-BB-LIGHTS	18
19	AHU-1A-LIGHTS	20 A	1		1	0.68			1	20 A	Lighting	20
21	SPARE	20 A	1	--		0	0	--	1	20 A	SPARE	22
23	SPARE	20 A	1	--			0	0	1	20 A	SPARE	24
25	SPARE	20 A	1	--	0	0		--	1	20 A	SPARE	26
27	SPARE	20 A	1	--		0	0	--	1	20 A	SPARE	28
29	SPARE	20 A	1	--			0	0	1	20 A	SPARE	30
31	SPARE	20 A	1	--	0	0		--	1	20 A	SPARE	32
33	SPARE	20 A	1	--		0	0	--	1	20 A	SPARE	34
35	SPARE	20 A	1	--			0	0	1	20 A	SPARE	36
37	SPARE	20 A	1	--	0	0		--	1	20 A	SPARE	38
39	SPARE	20 A	1	--		0	0	--	1	20 A	SPARE	40
41	SPARE	20 A	1	--			0	0	1	20 A	SPARE	42
43	SPARE	20 A	1	--	0	0		--	1	20 A	SPARE	44
45	SPARE	20 A	1	--		0	0	--	1	20 A	SPARE	46
47	SPARE	20 A	1	--			0	0	1	20 A	SPARE	48
49	SPARE	20 A	1	--	0	0		--	1	20 A	SPARE	50
51	SPARE	20 A	1	--		0	0	--	--	--	SPACE	52
53	SPACE	--	--	--			0	0	--	--	SPACE	54
55	SPACE	--	--	--	0	0		--	--	--	SPACE	56
57	SPACE	--	--	--		0	0	--	--	--	SPACE	58
59	SPACE	--	--	--			0	0	--	--	SPACE	60
		Total Load:			7.03 kVA	3.22 kVA	5.83 kVA					
		Total Amps:			61.97	26.83	51.93					

[Key*:]

PANEL NAME: L3

TYPE: BOLT-ON
MOUNTING: SURFACE
FED FROM: US-2
SCCR:
LOCATION: THIRD FLOOR

SOLID NEUTRAL
GROUND BUS

CONNECTED 8.1 kVA
MAIN: 200 A/MLO
VOLTS: 120/208 Wye
PHASE: 3
WIRE: 4
DEMAND: 8.05 kVA

Panel Notes: ALL WIRING IS 2#12 & 1#12 GND IN 3/4" C. UNLESS OTHERWISE NOTED.

CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	P	WIRE ID	A	B	C	WIRE ID	OVERCURRENT PROTECTION P	AMPS	LOAD DESCRIPTION	CKT NO.
1	AHU-3A-LIGHTS	20 A	1		1	1			1	20 A	AHU-3A-HEATWHEEL	2
3	AHU-3B-LIGHTS	20 A	1			1	1		1	20 A	AHU-3B-HEATWHEEL	4
5	RECEPTACLES	20 A	1				0.9	0.9	1	20 A	RECEPTACLES	6
7	FCU-1	20 A	1		0.83	0.83			1	20 A	FCU-1	8
9	Lighting	20 A	1			0.39	0.2		1	20 A	Lighting	10
11	SPARE	20 A	1	--			0	0	1	20 A	SPARE	12
13	SPARE	20 A	1	--	0	0		--	1	20 A	SPARE	14
15	SPARE	20 A	1	--		0	0	--	1	20 A	SPARE	16
17	SPARE	20 A	1	--			0	0	1	20 A	SPARE	18
19	SPARE	20 A	1	--	0	0		--	1	20 A	SPARE	20
21	SPARE	20 A	1	--		0	0	--	1	20 A	SPARE	22
23	SPARE	20 A	1	--			0	0	1	20 A	SPARE	24
25	SPARE	20 A	1	--	0	0		--	1	20 A	SPARE	26
27	SPARE	20 A	1	--		0	0	--	1	20 A	SPARE	28
29	SPARE	20 A	1	--			0	0	1	20 A	SPARE	30
31	SPARE	20 A	1	--	0	0		--	1	20 A	SPARE	32
33	SPARE	20 A	1	--		0	0	--	1	20 A	SPARE	34
35	SPACE	--	--	--			0	0	--	--	SPACE	36
37	SPACE	--	--	--	0	0		--	--	--	SPACE	38
39	SPACE	--	--	--		0	0	--	--	--	SPACE	40
41	SPACE	--	--	--			0	0	--	--	SPACE	42
		Total Load:			3.66 kVA	2.59 kVA	1.8 kVA					
		Total Amps:			31.51	22.61	15					

[Key*:]

PANEL NAME: L1

TYPE: BOLT-ON
MOUNTING: SURFACE
FED FROM:
SCCR:
LOCATION: FUTURE MECHANICAL 1104A

SOLID NEUTRAL
GROUND BUS

CONNECTED 5.3 kVA
MAIN: 200 A/MLO
VOLTS: 120/208 Wye
PHASE: 3
WIRE: 4
DEMAND: 5.33 kVA

Panel Notes:

CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	P	WIRE ID	A	B	C	WIRE ID	OVERCURRENT PROTECTION P	AMPS	LOAD DESCRIPTION	CKT NO.	
1	LIGHTING	20 A	1		0.59	0.35			1	20 A	LIGHTING	2	
3	RECEPTACLES	20 A	1			1.26	1.26		1	20 A	RECEPTACLES	4	
5	Receptacles	20 A	1				0.54	0.83	1	20 A	FCU-1	6	
7	LIGHTING	20 A	1		0	0.5			1	20 A	FACP	8	*H
9												10	
11												12	
13												14	
15												16	
17												18	
19												20	
21												22	
23												24	
25												26	
27												28	
29												30	
31												32	
33												34	
35												36	
37												38	
39												40	
41												42	
		Total Load:			1.44 kVA	2.52 kVA	1.37 kVA						
		Total Amps:			12.06	21.09	11.42						

[Key*:] H- HANDLE LOCK

PANEL NAME: L4

TYPE: BOLT-ON
MOUNTING: SURFACE
FED FROM: US-2
SCCR:
LOCATION: FOURTH FLOOR

SOLID NEUTRAL
GROUND BUS

CONNECTED 7.9 kVA
MAIN: 200 A/MLO
VOLTS: 120/208 Wye
PHASE: 3
WIRE: 4
DEMAND: 7.85 kVA

Panel Notes: ALL WIRING IS 2#12 & 1#12 GND IN 3/4" C. UNLESS OTHERWISE NOTED.

CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	P	WIRE ID	A	B	C	WIRE ID	OVERCURRENT PROTECTION P	AMPS	LOAD DESCRIPTION	CKT NO.
1	AHU-4A-LIGHTS	20 A	1		1	1			1	20 A	AHU-4A-HEATWHEEL	2
3	AHU-4B-LIGHTS	20 A	1				1	1	1	20 A	AHU-4B-LIGHTS	4
5	FCU-1	20 A	1					0.83	0.83	1	20 A	Power	6
7	RECEPTACLES	20 A	1		0.9	0.9				1	20 A	RECEPTACLES	8
9	Lighting	20 A	1				0.39	0		--	1	20 A	SPARE	10
11	SPARE	20 A	1	--				0	0	--	1	20 A	SPARE	12
13	SPARE	20 A	1	--	0	0				--	1	20 A	SPARE	14
15	SPARE	20 A	1	--			0	0		--	1	20 A	SPARE	16
17	SPARE	20 A	1	--				0	0	--	1	20 A	SPARE	18
19	SPARE	20 A	1	--	0	0				--	1	20 A	SPARE	20
21	SPARE	20 A	1	--			0	0		--	1	20 A	SPARE	22
23	SPARE	20 A	1	--				0	0	--	1	20 A	SPARE	24
25	SPARE	20 A	1	--	0	0				--	1	20 A	SPARE	26
27	SPARE	20 A	1	--			0	0		--	1	20 A	SPARE	28
29	SPARE	20 A	1	--				0	0	--	1	20 A	SPARE	30
31	SPARE	20 A	1	--	0	0				--	1	20 A	SPARE	32
33	SPARE	20 A	1	--			0	0		--	1	20 A	SPARE	34
35	SPACE	--	--	--				0	0	--	--	--	SPACE	36
37	SPACE	--	--	--	0	0				--	--	--	SPACE	38
39	SPACE	--	--	--			0	0		--	--	--	SPACE	40
41	SPACE	--	--	--				0	0	--	--	--	SPACE	42
		Total Load:			3.8 kVA	2.39 kVA	1.66 kVA						
		Total Amps:			32.61	20.9	13.83						

[Key*:]

PANEL NAME: L2

TYPE: BOLT-ON
MOUNTING: SURFACE
FED FROM: US-2
SCCR:
LOCATION: SECOND FLOOR

SOLID NEUTRAL
GROUND BUS

CONNECTED 7.5 kVA
MAIN: 200 A/MLO
VOLTS: 120/208 Wye
PHASE: 3
WIRE: 4
DEMAND: 7.52 kVA

Panel Notes: ALL WIRING IS 2#12 & 1#12 GND IN 3/4" C. UNLESS OTHERWISE NOTED.

CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	P	WIRE ID	A	B	C	WIRE ID	OVERCURRENT PROTECTION P	AMPS	LOAD DESCRIPTION	CKT NO.
1	AHU-2A-LIGHTS	20 A	1		1	1			1	20 A	AHU-2A-HEATWHEEL	2
3	AHU-2B-LIGHTS	20 A	1			1	1		1	20 A	AHU-2B-HEATWHEEL	4
5	FCU-1	20 A	1				0	0	1	20 A	FCU-1	6
7	RECEPTACLES	20 A	1		1.44	1.44			1	20 A	RECEPTACLES	8
9	Lighting	20 A	1			0.64						10
11	SPARE	20 A	1	--			0	0	--	1	20 A	SPARE	12
13	SPARE	20 A	1	--	0	0			--	1	20 A	SPARE	14
15	SPARE	20 A	1	--		0	0		--	1	20 A	SPARE	16
17	SPARE	20 A	1	--			0	0	--	1	20 A	SPARE	18
19	SPARE	20 A	1	--	0	0			--	1	20 A	SPARE	20
21	SPARE	20 A	1	--		0	0		--	1	20 A	SPARE	22
23	SPARE	20 A	1	--			0	0	--	1	20 A	SPARE	24
25	SPARE	20 A	1	--	0	0			--	1	20 A	SPARE	26
27	SPARE	20 A	1	--		0	0		--	1	20 A	SPARE	28
29	SPARE	20 A	1	--			0	0	--	1	20 A	SPARE	30
31	SPARE	20 A	1	--	0	0			--	1	20 A	SPARE	32
33	SPARE	20 A	1	--		0	0		--	1	20 A	SPARE	34
35	SPACE	--	--	--			0	0	--	--	--	SPACE	36
37	SPACE	--	--	--	0	0			--	--	--	SPACE	38
39	SPACE	--	--	--		0	0		--	--	--	SPACE	40
41	SPACE	--	--	--			0	0	--	--	--	SPACE	42
		Total Load:			4.88 kVA	2.64 kVA	0 kVA						
		Total Amps:			44.05	25.37	0						

[Key*:]

PANEL NAME: L5

TYPE: BOLT-ON
MOUNTING: SURFACE
FED FROM: US-2
SCCR:
LOCATION: FIFTH FLOOR

SOLID NEUTRAL
GROUND BUS

CONNECTED 7.9 kVA
MAIN: 200 A/MLO
VOLTS: 120/208 Wye
PHASE: 3
WIRE: 4
DEMAND: 7.9 kVA

Panel Notes:

CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	P	WIRE ID	A	B	C	WIRE ID	OVERCURRENT PROTECTION P	AMPS	LOAD DESCRIPTION	CKT NO.
1	FCU-1	20 A	1		0.83	0.83			1	20 A	FCU-1	2
3	AHU-5A-LIGHTS	20 A	1				1	1	1	20 A	AHU-5A-HEATWHEEL	4
5	AHU-5B-LIGHTS	20 A	1						1	20 A	AHU-5B-HEATWHEEL	6
7	RECEPTACLES	20 A	1		0.9	0.9			1	20 A	RECEPTACLES	8
9	Lighting	20 A	1			0.44	0		--	1	20 A	SPARE	10
11	SPARE	20 A	1	--			0	0	--	1	20 A	SPARE	12
13	SPARE	20 A	1	--	0	0			--	1	20 A	SPARE	14
15	SPARE	20 A	1	--		0	0		--	1	20 A	SPARE	16
17	SPARE	20 A	1	--			0	0	--	1	20 A	SPARE	18
19	SPARE	20 A	1	--	0	0			--	1	20 A	SPARE	20
21	SPARE	20 A	1	--		0	0		--	1	20 A	SPARE	22
23	SPARE	20 A	1	--			0	0	--	1	20 A	SPARE	24
25	SPARE	20 A	1	--	0	0			--	1	20 A	SPARE	26
27	SPARE	20 A	1	--		0	0		--	1	20 A	SPARE	28
29	SPARE	20 A	1	--			0	0	--	1	20 A	SPARE	30
31	SPARE	20 A	1	--	0	0			--	1	20 A	SPARE	32
33	SPARE	20 A	1	--		0	0		--	1	20 A	SPARE	34
35	SPACE	--	--	--			0	0	--	--	--	SPACE	36
37	SPACE	--	--	--	0	0			--	--	--	SPACE	38
39	SPACE	--	--	--		0	0		--	--	--	SPACE	40
41	SPACE	--	--	--			0	0	--	--	--	SPACE	42
		Total Load:			3.46 kVA	2.44 kVA	2 kVA						
		Total Amps:			29.4	20.93	16.67						

[Key*:]

BRANCH CIRCUIT WIRING KEY

WIRE ID	THHW/THWN COPPER CONDUCTORS 2 WIRE	3 WIRE	4 WIRE	EQUIPMENT GROUNDING CONDUCTOR	CONDUIT
A#	2#12	3#12	4#12	1#12	3/4"
B#	2#10	3#10	4#10	1#10	3/4"
C#	2#8	3#8	4#8	1#10	3/4"
D#	2#6	3#6	4#6	1#10	1"
E#	2#4	3#4	4#4	1#8	1 1/4"
F#	2#3	3#3	4#3	1#8	1 1/4"
G#	2#2	3#2	4#2	1#8	1 1/4"
H#	2#1	3#1	4#1	1#6	1 1/2"
J#	2#1/0	3#1/0	4#1/0	1#6	2"

ALL BRANCH CIRCUITS SHALL INCLUDE THE EQUIPMENT GROUND CONDUCTOR

IMEG
2892 100TH STREET
DES MOINES, IA 50322
515.334.9900 FAX: 515.334.9908
www.imegcorp.com
PROJECT # 19004249.01

REFERENCE SCALE IN INCHES
0 1 2 3

Revisions:	Date:

CONSULTANT: IMEG

ARCHITECT/ENGINEER OF RECORD:
ANDERSON
13605 1st Ave. N. #100 Plymouth, MN 55441
P 763.412.4000 | F 763.412.4090 | ae-mn.com
Anderson Engineering of Minnesota, LLC | Proj # 15744

STAMP: LICENSED PROFESSIONAL ENGINEER — KRISTEN L. SPINA — 21081 — IOWA — 05/28/2021

Office of Construction and Facilities Management
VA U.S. Department of Veterans Affairs

Drawing Title: ELECTRICAL SCHEDULES
Phase: 100% CONSTRUCTION DOCUMENTS
Project Title: NWIHCS - CONSTRUCT AIR HANDLING TOWER
Project Number: 636-18-303
Building Number: 1
Approved:
FULLY SPRINKLERED
Location: OMAHA, NE
Issue Date: 05/28/21
Checked: RICVED
Drawn: KRISPI
Drawing Number: E502

BID SET

PANEL NAME: L6

TYPE: BOLT-ON
MOUNTING: SURFACE
FED FROM: US-2
SCCR:
LOCATION: SIXTH FLOOR

SOLID NEUTRAL
GROUND BUS

CONNECTED 7.9 kVA
MAIN: 200 A/MLO
VOLTS: 120/208 Wye
PHASE: 3
WIRE: 4
DEMAND: 7.85 kVA

Panel Notes: ALL WIRING IS 2#12 & 1#12 GND IN 3/4" C. UNLESS OTHERWISE NOTED.

CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	P	WIRE ID	A	B	C	WIRE ID	OVERCURRENT PROTECTION P	AMPS	LOAD DESCRIPTION	CKT NO.
1	FCU-1	20 A	1		0.83	0.83			1	20 A	FCU-1	2
3	AHU-6A-LIGHTS	20 A	1			1	1		1	20 A	AHU-6A-HEATWHEEL	4
5	AHU-6B-LIGHTS	20 A	1				1	1	1	20 A	AHU-6B-HEATWHEEL	6
7	RECEPTACLES	20 A	1		0.9	0.9			1	20 A	RECEPTACLES	8
9	Lighting	20 A	1			0.39	0	--	1	20 A	SPARE	10
11	SPARE	20 A	1	--			0	--	1	20 A	SPARE	12
13	SPARE	20 A	1	--	0	0		--	1	20 A	SPARE	14
15	SPARE	20 A	1	--		0	0	--	1	20 A	SPARE	16
17	SPARE	20 A	1	--			0	--	1	20 A	SPARE	18
19	SPARE	20 A	1	--	0	0		--	1	20 A	SPARE	20
21	SPARE	20 A	1	--		0	0	--	1	20 A	SPARE	22
23	SPARE	20 A	1	--			0	--	1	20 A	SPARE	24
25	SPARE	20 A	1	--	0	0		--	1	20 A	SPARE	26
27	SPARE	20 A	1	--		0	0	--	1	20 A	SPARE	28
29	SPARE	20 A	1	--			0	--	1	20 A	SPARE	30
31	SPARE	20 A	1	--	0	0		--	1	20 A	SPARE	32
33	SPARE	20 A	1	--		0	0	--	1	20 A	SPARE	34
35	SPACE	--	--	--			0	--	--	--	SPACE	36
37	SPACE	--	--	--	0	0		--	--	--	SPACE	38
39	SPACE	--	--	--		0	0	--	--	--	SPACE	40
41	SPACE	--	--	--			0	--	--	--	SPACE	42
		Total Load:			3.46 kVA	2.39 kVA	2 kVA					
		Total Amps:			29.34	20.46	16.67					

[Key*:]

PANEL NAME: L7

TYPE: BOLT-ON
MOUNTING: SURFACE
FED FROM: US-2
SCCR:
LOCATION: SEVENTH FLOOR

SOLID NEUTRAL
GROUND BUS

CONNECTED 7.9 kVA
MAIN: 200 A/MLO
VOLTS: 120/208 Wye
PHASE: 3
WIRE: 4
DEMAND: 7.9 kVA

Panel Notes: ALL WIRING IS 2#12 & 1#12 GND IN 3/4" C. UNLESS OTHERWISE NOTED.

CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	P	WIRE ID	A	B	C	WIRE ID	OVERCURRENT PROTECTION P	AMPS	LOAD DESCRIPTION	CKT NO.
1	FCU-1	20 A	1		0.83	0.83			1	20 A	FCU-1	2
3	AHU-7A-LIGHTS	20 A	1				1	1	1	20 A	AHU-7A-HEATWHEEL	4
5	AHU-7B-LIGHTS	20 A	1					1	1	20 A	AHU-7B-HEATWHEEL	6
7	RECEPTACLES	20 A	1		0.9	0.9			1	20 A	RECEPTACLES	8
9	Lighting	20 A	1				0.44	0			SPARE	10
11	SPARE	20 A	1	--				0	0	--	SPARE	12
13	SPARE	20 A	1	--	0	0					SPARE	14
15	SPARE	20 A	1	--			0	0			SPARE	16
17	SPARE	20 A	1	--				0	0	--	SPARE	18
19	SPARE	20 A	1	--	0	0					SPARE	20
21	SPARE	20 A	1	--			0	0			SPARE	22
23	SPARE	20 A	1	--				0	0	--	SPARE	24
25	SPARE	20 A	1	--	0	0					SPARE	26
27	SPARE	20 A	1	--			0	0			SPARE	28
29	SPARE	20 A	1	--				0	0	--	SPARE	30
31	SPARE	20 A	1	--	0	0					SPARE	32
33	SPARE	20 A	1	--			0	0			SPARE	34
35	SPACE	--	--	--				0	0	--	SPACE	36
37	SPACE	--	--	--	0	0					SPACE	38
39	SPACE	--	--	--			0	0			SPACE	40
41	SPACE	--	--	--				0	0	--	SPACE	42
		Total Load:			3.46 kVA	2.44 kVA	2 kVA					
		Total Amps:			29.4	20.93	16.67					

[Key*:]

PANEL NAME: L8

TYPE: BOLT-ON
MOUNTING: SURFACE
FED FROM: US-2
SCCR:
LOCATION: EIGHTH FLOOR

SOLID NEUTRAL
GROUND BUS

CONNECTED 7.9 kVA
MAIN: 200 A/MLO
VOLTS: 120/208 Wye
PHASE: 3
WIRE: 4
DEMAND: 7.9 kVA

Panel Notes: ALL WIRING IS 2#12 & 1#12 GND IN 3/4" C. UNLESS OTHERWISE NOTED.

CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	P	WIRE ID	A	B	C	WIRE ID	OVERCURRENT PROTECTION P	AMPS	LOAD DESCRIPTION	CKT NO.
1	FCU-1	20 A	1		0.83	1			1	20 A	AHU-8A-LIGHTS	2
3	AHU-8A-HEATWHEEL	20 A	1			1	1		1	20 A	AHU-8B-LIGHTS	4
5	AHU-8B-HEATWHEEL	20 A	1					1	0.83		FCU-1	6
7	RECEPTACLES	20 A	1		0.9	0.9			1	20 A	RECEPTACLES	8
9	Lighting	20 A	1			0.44	0	--	1	20 A	SPARE	10
11	SPARE	20 A	1	--			0	0	--	1	20 A	SPARE	12
13	SPARE	20 A	1	--	0	0		--	1	20 A	SPARE	14
15	SPARE	20 A	1	--		0	0	--	1	20 A	SPARE	16
17	SPARE	20 A	1	--			0	0	--	1	20 A	SPARE	18
19	SPARE	20 A	1	--	0	0		--	1	20 A	SPARE	20
21	SPARE	20 A	1	--		0	0	--	1	20 A	SPARE	22
23	SPARE	20 A	1	--			0	0	--	1	20 A	SPARE	24
25	SPARE	20 A	1	--	0	0		--	1	20 A	SPARE	26
27	SPARE	20 A	1	--		0	0	--	1	20 A	SPARE	28
29	SPARE	20 A	1	--			0	0	--	1	20 A	SPARE	30
31	SPARE	20 A	1	--	0	0		--	1	20 A	SPARE	32
33	SPARE	20 A	1	--		0	0	--	1	20 A	SPARE	34
35	SPACE	--	--	--			0	0	--	--	SPACE	36
37	SPACE	--	--	--	0	0		--	--	--	SPACE	38
39	SPACE	--	--	--		0	0	--	--	--	SPACE	40
41	SPACE	--	--	--			0	0	--	--	SPACE	42
		Total Load:			3.63 kVA	2.44 kVA	1.83 kVA					
		Total Amps:			31.04	21.15	15.25					

[Key*:]

PANEL NAME: L9

TYPE: BOLT-ON
MOUNTING: SURFACE
FED FROM: US-2
SCCR:
LOCATION: NINTH FLOOR

SOLID NEUTRAL
GROUND BUS

CONNECTED 7.9 kVA
MAIN: 200 A/MLO
VOLTS: 120/208 Wye
PHASE: 3
WIRE: 4
DEMAND: 7.9 kVA

Panel Notes: ALL WIRING IS 2#12 & 1#12 GND IN 3/4" C. UNLESS OTHERWISE NOTED.

CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	P	WIRE ID	A	B	C	WIRE ID	OVERCURRENT PROTECTION P	AMPS	LOAD DESCRIPTION	CKT NO.
1	FCU-1	20 A	1		0.83	1			1	20 A	AHU-9A-LIGHTS	2
3	AHU-9A-HEATWHEEL	20 A	1			1	1		1	20 A	AHU-9B-LIGHTS	4
5	AHU-9B-HEATWHEEL	20 A	1					1	1	20 A	FCU-1	6
7	RECEPTACLES	20 A	1		0.9	0.9			1	20 A	RECEPTACLES	8
9	Lighting	20 A	1			0.44	0	--	1	20 A	SPARE	10
11	SPARE	20 A	1	--			0	0	--	1	20 A	SPARE	12
13	SPARE	20 A	1	--	0	0		--	1	20 A	SPARE	14
15	SPARE	20 A	1	--			0	0	--	1	20 A	SPARE	16
17	SPARE	20 A	1	--				0	0	--	1	20 A	SPARE	18
19	SPARE	20 A	1	--	0	0		--	1	20 A	SPARE	20
21	SPARE	20 A	1	--			0	0	--	1	20 A	SPARE	22
23	SPARE	20 A	1	--				0	0	--	1	20 A	SPARE	24
25	SPARE	20 A	1	--	0	0		--	1	20 A	SPARE	26
27	SPARE	20 A	1	--			0	0	--	1	20 A	SPARE	28
29	SPARE	20 A	1	--				0	0	--	1	20 A	SPARE	30
31	SPARE	20 A	1	--	0	0		--	1	20 A	SPARE	32
33	SPARE	20 A	1	--			0	0	--	1	20 A	SPARE	34
35	SPACE	--	--	--				0	0	--	SPACE	36
37	SPACE	--	--	--	0	0		--	--	--	SPACE	38
39	SPACE	--	--	--		0	0	--	--	--	SPACE	40
41	SPACE	--	--	--			0	0	--	--	SPACE	42
		Total Load:			3.63 kVA	2.44 kVA	1.83 kVA					
		Total Amps:			31.04	21.15	15.25					

[Key*:]

PANEL NAME: L10

TYPE: BOLT-ON
MOUNTING: SURFACE
FED FROM: US-2
SCCR:
LOCATION: TENTH FLOOR

SOLID NEUTRAL
GROUND BUS

CONNECTED 7.9 kVA
MAIN: 200 A/MLO
VOLTS: 120/208 Wye
PHASE: 3
WIRE: 4
DEMAND: 7.9 kVA

Panel Notes: ALL WIRING IS 2#12 & 1#12 GND IN 3/4" C. UNLESS OTHERWISE NOTED.

CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	P	WIRE ID	A	B	C	WIRE ID	OVERCURRENT PROTECTION P	AMPS	LOAD DESCRIPTION	CKT NO.
1	FCU-1	20 A	1		0.83	1			1	20 A	AHU-10A-LIGHTS	2
3	AHU-10A-HEATWHEEL	20 A	1				1	1	1	20 A	AHU-10B-LIGHTS	4
5	AHU-10B-HEATWHEEL	20 A	1					1	0.83		FCU-1	6
7	RECEPTACLES	20 A	1		0.9	0.9			1	20 A	RECEPTACLES	8
9	Lighting	20 A	1				0.44	0			SPARE	10
11	SPARE	20 A	1	--				0	0	--	SPARE	12
13	SPARE	20 A	1	--	0	0					SPARE	14
15	SPARE	20 A	1	--			0	0			SPARE	16
17	SPARE	20 A	1	--				0	0	--	SPARE	18
19	SPARE	20 A	1	--	0	0					SPARE	20
21	SPARE	20 A	1	--			0	0			SPARE	22
23	SPARE	20 A	1	--				0	0	--	SPARE	24
25	SPARE	20 A	1	--	0	0					SPARE	26
27	SPARE	20 A	1	--			0	0			SPARE	28
29	SPARE	20 A	1	--				0	0	--	SPARE	30
31	SPARE	20 A	1	--	0	0					SPARE	32
33	SPARE	20 A	1	--			0	0			SPARE	34
35	SPACE	--	--	--				0	0	--	SPACE	36
37	SPACE	--	--	--	0	0					SPACE	38
39	SPACE	--	--	--		0	0	--	--	--	SPACE	40
41	SPACE	--	--	--			0	0	--	--	SPACE	42
		Total Load:			3.63 kVA	2.44 kVA	1.83 kVA					
		Total Amps:			31.04	21.15	15.25					

[Key*:]

PANEL NAME: L11

TYPE: BOLT-ON
MOUNTING: SURFACE
FED FROM: US-2
SCCR:
LOCATION: ELEVENTH FLOOR

SOLID NEUTRAL
GROUND BUS

CONNECTED 16.8 kVA
MAIN: 200 A/MLO
VOLTS: 120/208 Wye
PHASE: 3
WIRE: 4
DEMAND: 16.8 kVA

Panel Notes: ALL WIRING IS 2#12 & 1#12 GND IN 3/4" C. UNLESS OTHERWISE NOTED.

CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	P	WIRE ID	A	B	C	WIRE ID	OVERCURRENT PROTECTION P	AMPS	LOAD DESCRIPTION	CKT NO.
1	FCU-1	20 A	1		0.83	1			1	20 A	AHU-11A-LIGHTS	2
3	AHU-11A-HEATWHEEL	20 A	1			1	1		1	20 A	AHU-11B-LIGHTS	4
5	AHU-11B-HEATWHEEL	20 A	1					1	0.83		FCU-1	6
7	RECEPTACLES	20 A	1		0.9	0.9			1	20 A	RECEPTACLES	8
9	Lighting	20 A	1			0.44	2.23		2	20 A	HT-1	10
11	HT-2	20 A	2				2.23	2.23	--	--	--	12
13	--	--	--	--	2.23	0			1	20 A	SPARE	14
15	SPARE	20 A	1	--			0	0	--	1	20 A	SPARE	16
17	SPARE	20 A	1	--				0	0	--	1	20 A	SPARE	18
19	SPARE	20 A	1	--	0	0					1	20 A	SPARE	20
21	SPARE	20 A	1	--			0	0			1	20 A	SPARE	22
23	SPARE	20 A	1	--				0	0	--	1	20 A	SPARE	24
25	SPARE	20 A	1	--	0	0					1	20 A	SPARE	26
27	SPARE	20 A	1	--			0	0			1	20 A	SPARE	28
29	SPARE	20 A	1	--				0	0	--	1	20 A	SPARE	30
31	SPARE	20 A	1	--	0	0					1	20 A	SPARE	32
33	SPARE	20 A	1	--			0	0			1	20 A	SPARE	34
35	SPACE	--	--	--				0	0	--	--	--	SPACE	36
37	SPACE	--	--	--	0	0					--	--	SPACE	38
39	SPACE	--	--	--		0	0	--	--	--	--	--	SPACE	40
41	SPACE	--	--	--			0	0	--	--	--	--	SPACE	42
		Total Load:			5.86 kVA	4.67 kVA	6.28 kVA					
		Total Amps:			50.31	38.9	53.85					

[Key*:]

BRANCH CIRCUIT WIRING KEY

WIRE ID	THHW/THWN COPPER CONDUCTORS 2 WIRE	3 WIRE	4 WIRE	EQUIPMENT GROUNDING CONDUCTOR	CONDUIT
A#	2#12	3#12	4#12	1#12	3/4"
B#	2#10	3#10	4#10	1#10	3/4"
C#	2#8	3#8	4#8	1#10	3/4"
D#	2#6	3#6	4#6	1#10	1"
E#	2#4	3#4	4#4	1#8	1 1/4"
F#	2#3	3#3	4#3	1#8	1 1/4"
G#	2#2	3#2	4#2	1#8	1 1/4"
H#	2#1	3#1	4#1	1#6	1 1/2"
J#	2#1/0	3#1/0	4#1/0	1#6	2"

ALL BRANCH CIRCUITS SHALL INCLUDE THE EQUIPMENT GROUND CONDUCTOR

IMEG
2892 100TH STREET
2892 100TH ST 52322
515.334.9908 FAX: 515.334.9908
www.imegcorp.com
PROJECT # 19004249.01

REFERENCE SCALE IN INCHES
0 1 2 3

Revisions:	Date:

CONSULTANT
IMEG

ARCHITECT/ENGINEER OF RECORD
ANDERSON
13605 1st Ave. N. #100 Plymouth, MN 55441
P 763.412.4000 | F 763.412.4090 | ae-mn.com
Anderson Engineering of Minnesota, LLC | Proj # 15744

STAMP
LICENSED PROFESSIONAL ENGINEER
KRISTEN L. SPINA
21081
IOWA
05/28/2021

Office of Construction and Facilities Management
VA | U.S. Department of Veterans Affairs

Approved:

Drawing Title: ELECTRICAL SCHEDULES
Phase: 100% CONSTRUCTION DOCUMENTS
Project Title: NWIHCS - CONSTRUCT AIR HANDLING TOWER
Project Number: 636-18-303
Building Number: 1
Location: OMAHA, NE
Issue Date: 05/28/21
Checked: RICVED
Drawn: KRISPI
Drawing Number: E503

FULLY SPRINKLERED

BID SET

C:\Revit Local Files\MEP\19_19004249.01_15744-VA-Omaha-AHU Tower_C_Zachary.R.Ross.rvt
5/28/2021 11:42:32 AM
VA FORM 08 - 6231