ADDENDUM #3
CITY HALL HVAC UPGRADE
BID #14/15-008 – PWP# WA-2015-012
BIDS DUE NO LATER THAN: 1:45 PM ON NOVEMBER 13, 2014 (REVISED)
PUBLIC BID OPENING: 2:00 PM ON NOVEMBER 13, 2014 (REVISED)

This addendum is to notify all potential proposers of clarifications made to the Bid documents as stated below.

GENERAL

1) Remove and replace plan sheets E0.2, E0.3, E1.1, E1.2, and E2.3 with the sheets included in this addendum.

2) Include the attached panel board specification 262416 into the specifications section of the bid documents.

Please note and adjust your bid according to the revisions, additions, deletions, clarifications or modifications as presented on this Addendum #3, which are made a part of this bid. NOTE: To avoid disqualification, this Addendum 3 (and any other addenda) must be signed by an authorized representative of the bidding firm in the space provided and must be submitted with your firm's sealed proposal. Failure to return this addendum, duly signed, may be cause for rejection of the bid. ALL ADDENDA SHOULD BE SIGNED AND PLACED IN SEQUENTIAL ORDER AND ATTACHED TO THE FRONT OF THE BID PACKAGE, COMPLETE WITH ALL REQUIRED DOCUMENTS.

_____
CONTRACTOR BUSINESS NAME

X_____
Authorized Signature

_____
Printed Name of Person Signing

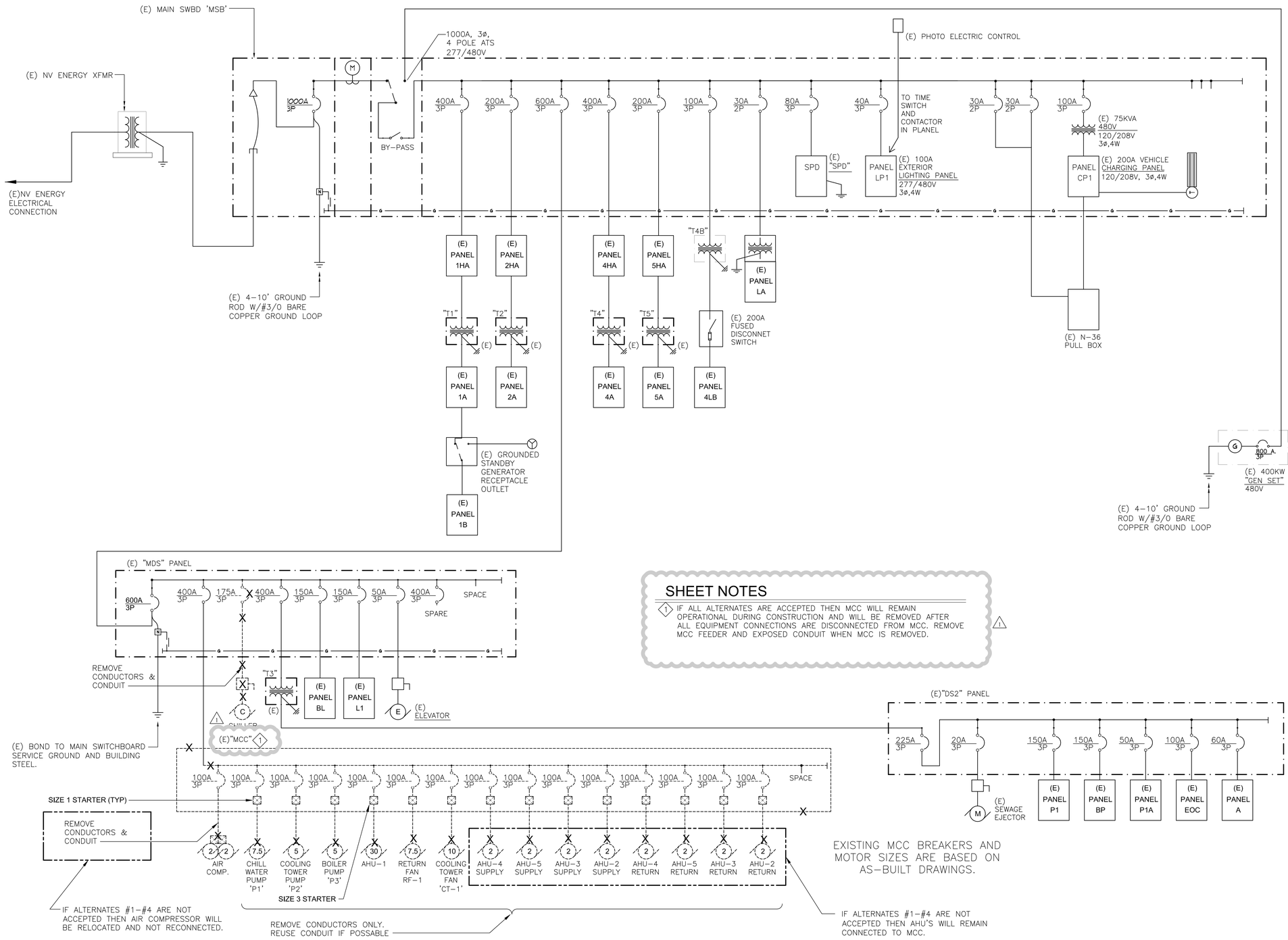
_____
Dan Marran, C.P.M., CPPO
Contracts and Risk Manager

November 7, 2014

DINTER
Airfield Electrical Mechanical
385 Gentry Way
Reno, NV 89502
Ph: 775.826.4044
Fax: 775.826.4190
Web: dinter.com
J-4454

MMI ENGINEERING
275 Monumental Cir.
Sparks, NV. 89436
(775) 750-0849
www.mmi-engineering.com

ENGINEERING



SHEET NOTES

1. IF ALL ALTERNATES ARE ACCEPTED THEN MCC WILL REMAIN OPERATIONAL DURING CONSTRUCTION AND WILL BE REMOVED AFTER ALL EQUIPMENT CONNECTIONS ARE DISCONNECTED FROM MCC. REMOVE MCC FEEDER AND EXPOSED CONDUIT WHEN MCC IS REMOVED.

EXISTING MCC BREAKERS AND MOTOR SIZES ARE BASED ON AS-BUILT DRAWINGS.

A E0.2 EXISTING SINGLE LINE DIAGRAM
SCALE: NTS

KELLER C. HACKBUSCH
Exp. 06/30/15
ELECTRICAL
STATE OF NEVADA
9/26/2014

SPARKS CITY HALL CAMPUS HVAC UPGRADE

SPARKS, NEVADA

SHEET TITLE

EXISTING SINGLE LINE DIAGRAM

REVISIONS

1 ADDENDUM 2 CHANGES

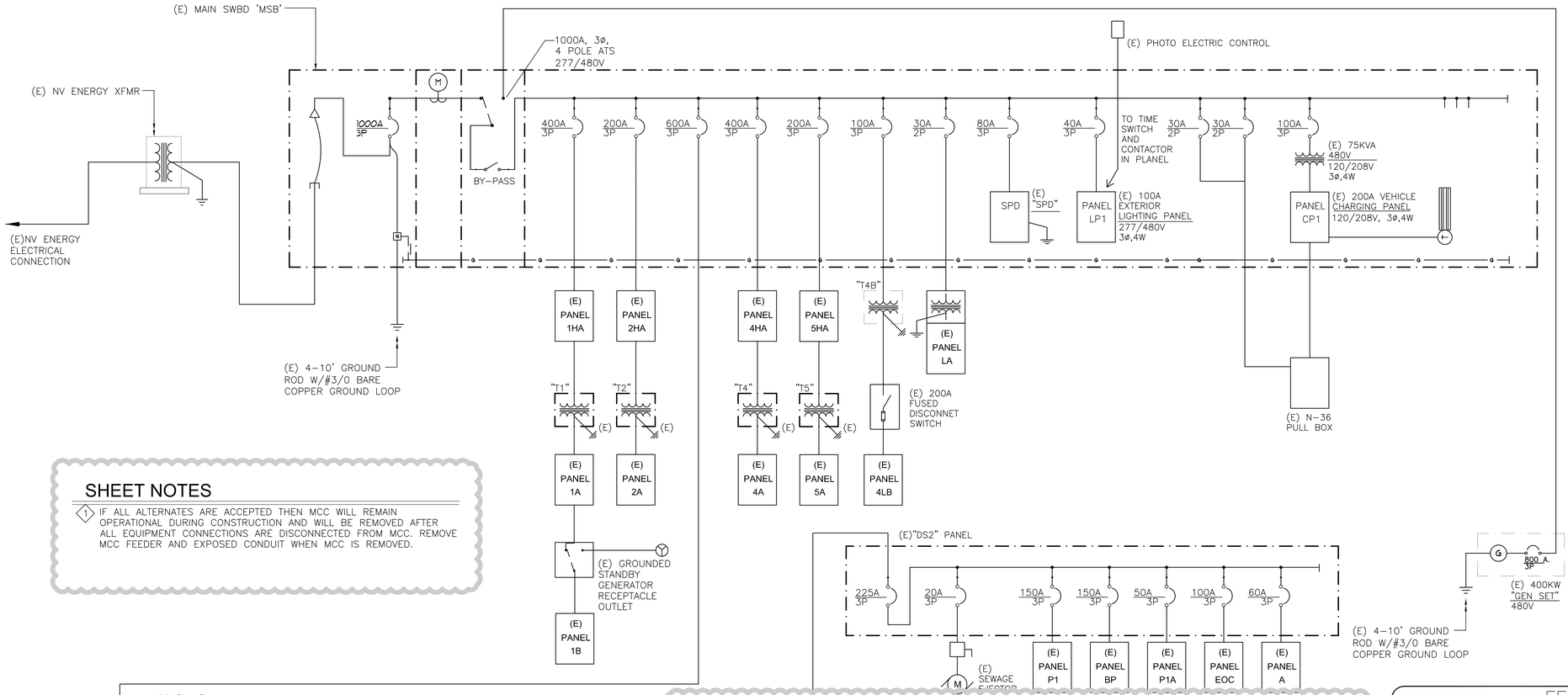
DATE :
SEPTEMBER 26, 2014

SHEET NUMBER :

E0.2

DINTER
Airfield Electrical Mechanical
385 Gentry Way
Reno, NV 89502
Ph: 775.826.4044
Fax: 775.826.4190
Web: dinter.com
J-4454

MMI ENGINEERING
275 Monumental Cir.
Sparks, NV. 89436
(775) 750-0849
www.mmi-engineering.com



SHEET NOTES

1. IF ALL ALTERNATES ARE ACCEPTED THEN MCC WILL REMAIN OPERATIONAL DURING CONSTRUCTION AND WILL BE REMOVED AFTER ALL EQUIPMENT CONNECTIONS ARE DISCONNECTED FROM MCC. REMOVE MCC FEEDER AND EXPOSED CONDUIT WHEN MCC IS REMOVED.

FEEDER SCHEDULE

NO.	FROM	TO	CONDUIT & WIRE THWN U.N.O.	CU	AL
1	PANEL 'MCC'	AHU-1	(4) #8CU W/ (1) #8CU GND	X	
2	PANEL 'MCC'	RT-1	(4) #12CU W/ (1) #8CU GND	X	
3	PANEL 'MCC'	COOLING TOWER FAN CT-1	(4) #12CU W/ (1) #8CU GND	X	
4	PANEL 'MCC'	AHU-4 SUPPLY	(4) #10CU W/ (1) #8CU GND	X	
5	PANEL 'MCC'	AHU-5 SUPPLY	(4) #10CU W/ (1) #8CU GND	X	
6	PANEL 'MCC'	AHU-3 SUPPLY	(4) #10CU W/ (1) #8CU GND	X	
7	PANEL 'MCC'	AHU-2 SUPPLY	(4) #10CU W/ (1) #8CU GND	X	
8	PANEL 'MCC'	AHU-4 RETURN	(4) #10CU W/ (1) #8CU GND	X	
9	PANEL 'MCC'	AHU-5 RETURN	(4) #10CU W/ (1) #8CU GND	X	
10	PANEL 'MCC'	AHU-3 RETURN	(4) #10CU W/ (1) #8CU GND	X	
11	PANEL 'MCC'	AHU-2 RETURN	(4) #10CU W/ (1) #8CU GND	X	
12	PANEL 'MCC'	BP-3	(4) #12CU W/ (1) #8CU GND	X	
13	PANEL 'MCC'	BP-4	(4) #12CU W/ (1) #8CU GND	X	
14	PANEL 'MCC'	CHWP-1	(4) #12CU W/ (1) #8CU GND	X	
15	PANEL 'MCC'	CHWP-2	(4) #12CU W/ (1) #8CU GND	X	
16	PANEL 'MCC'	CHWP-3	(4) #12CU W/ (1) #8CU GND	X	
17	PANEL 'MCC'	CHWP-4	(4) #12CU W/ (1) #8CU GND	X	
18	PANEL 'MCC'	CWP-1	(4) #12CU W/ (1) #8CU GND	X	
19	PANEL 'MCC'	CWP-2	(4) #12CU W/ (1) #8CU GND	X	
20	PANEL 'MDS'	CHILLER	(3) #350 W/ (1) #2CU GND, 2 1/2"C.	X	
21	PANEL 'MDS'	PANEL 'MCC'	(3) #500 W/ (1) #2CU GND, 2 1/2"C.	X	
22				X	
23				X	

A E0.3 NEW SINGLE LINE DIAGRAM
SCALE: NTS

9/26/2014

SPARKS CITY HALL CAMPUS HVAC UPGRADE
SPARKS, NEVADA

SHEET TITLE
NEW SINGLE LINE DIAGRAM

REVISIONS
1 ADDENDUM 2 CHANGES

DATE : SEPTEMBER 26, 2014
SHEET NUMBER :
E0.3

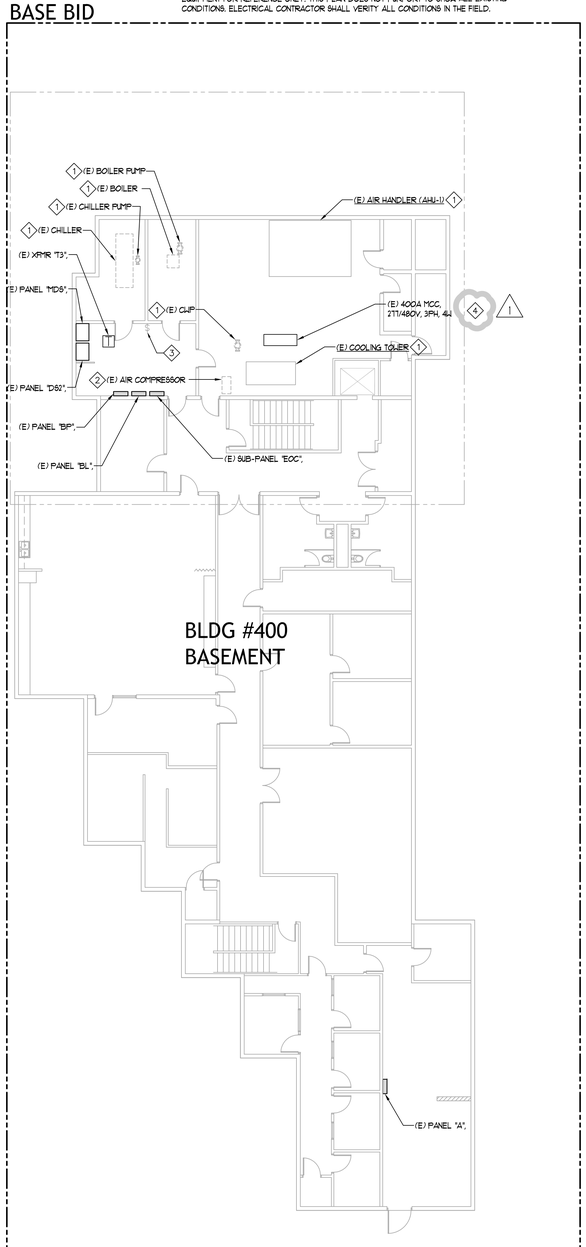
SHEET NOTES:

1. ELECTRICAL CONTRACTOR TO DISCONNECT ALL ELECTRICAL CONNECTION TO MECHANICAL EQUIPMENT. CONDUCTORS TO BE REMOVED BACK TO PANEL. CONDUIT TO BE REUSED. CONTROL WIRING REMOVAL TO BE COMPLETED BY MECHANICAL'S CONTROLS CONTRACTOR.
2. ELECTRICAL CONTRACTOR TO DISCONNECT AND REMOVE ALL CONDUCTORS AND CONDUIT TO PANEL. (IF ALTERNATES 1-4 ARE NOT ACCEPTED THEN THE AIR COMPRESSOR WILL BE RELOCATED AND RECONNECTED)
3. RELOCATE BOILER SHUT DOWN SWITCH. SEE SHEET E2.3 NOTE 3 FOR NEW LOCATION.
4. IF ALL ALTERNATES ARE ACCEPTED THEN MCC WILL REMAIN OPERATIONAL DURING CONSTRUCTION AND WILL BE REMOVED AFTER ALL EQUIPMENT CONNECTIONS ARE DISCONNECTED FROM MCC. REMOVE MCC FEEDER AND EXPOSED CONDUIT WHEN MCC IS REMOVED. /1

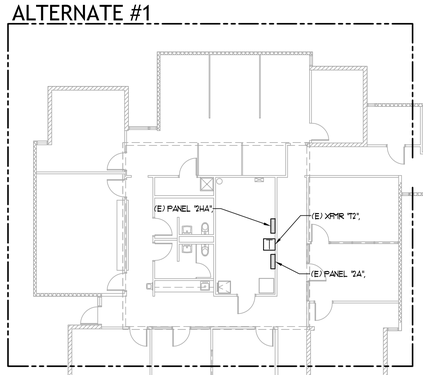
GENERAL NOTES:

1. THIS PLAN INDICATES EXISTING MECHANICAL EQUIPMENT AND ELECTRICAL DISTRIBUTION EQUIPMENT FOR REFERENCE ONLY. THIS PLAN DOES NOT PURPORT TO SHOW ALL EXISTING CONDITIONS. ELECTRICAL CONTRACTOR SHALL VERIFY ALL CONDITIONS IN THE FIELD.

BASE BID



ALTERNATE #1



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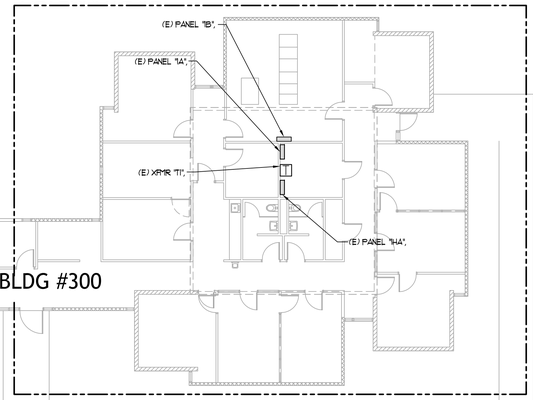
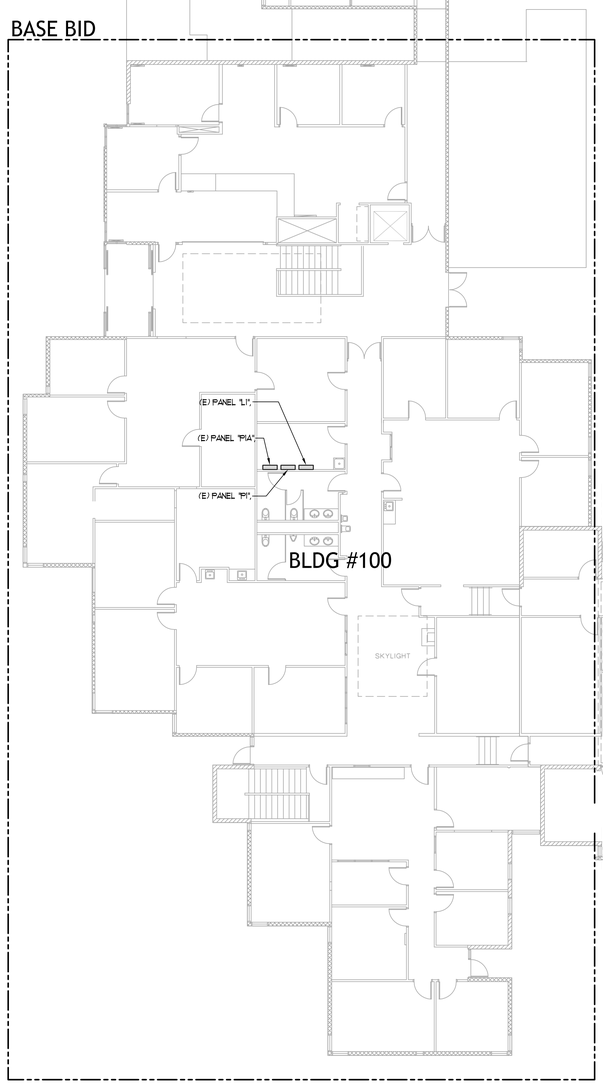


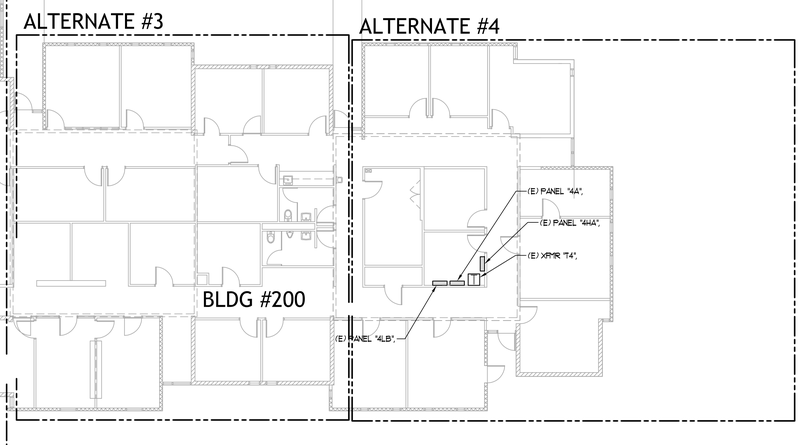
BLDG #300

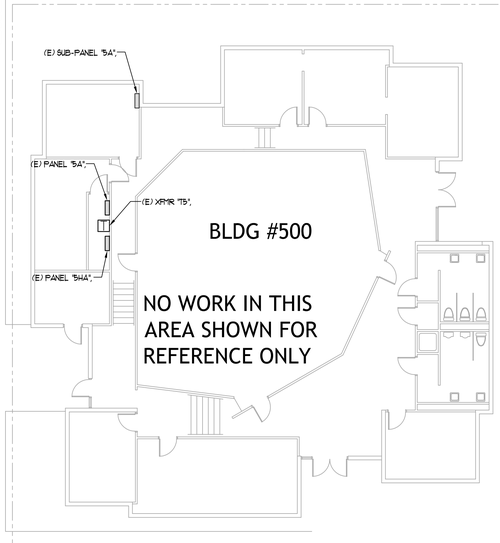
BASE BID



ALTERNATE #3

ALTERNATE #4





A E1.1 MECHANICAL POWER COMPLEX DEMOLITION PLAN
SCALE: 3/32"=1'-0"

DINTER
Artistic Electrical Mechanical
385 Gentry Way
Reno, NV 89502
Ph: 775.826.4044
Fax: 775.826.4190
Web: dinter.com
J-4454

MMI ENGINEERING
275 Monumental Cir.
Sparks, NV. 89436
(775) 750-0849
www.mmi-engineering.com

KELLER C. HACKBUSCH
Exp. 06/30/15
ELECTRICAL
STATE OF NEVADA
No. 018316
REGISTERED PROFESSIONAL ENGINEER

9/26/2014

SPARKS CITY HALL CAMPUS HVAC UPGRADE

SPARKS, NEVADA

SHEET TITLE

MECHANICAL POWER COMPLEX DEMOLITION PLAN

REVISIONS

/1 ADDENDUM 2 CHANGES

DATE : SEPTEMBER 26, 2014

SHEET NUMBER :

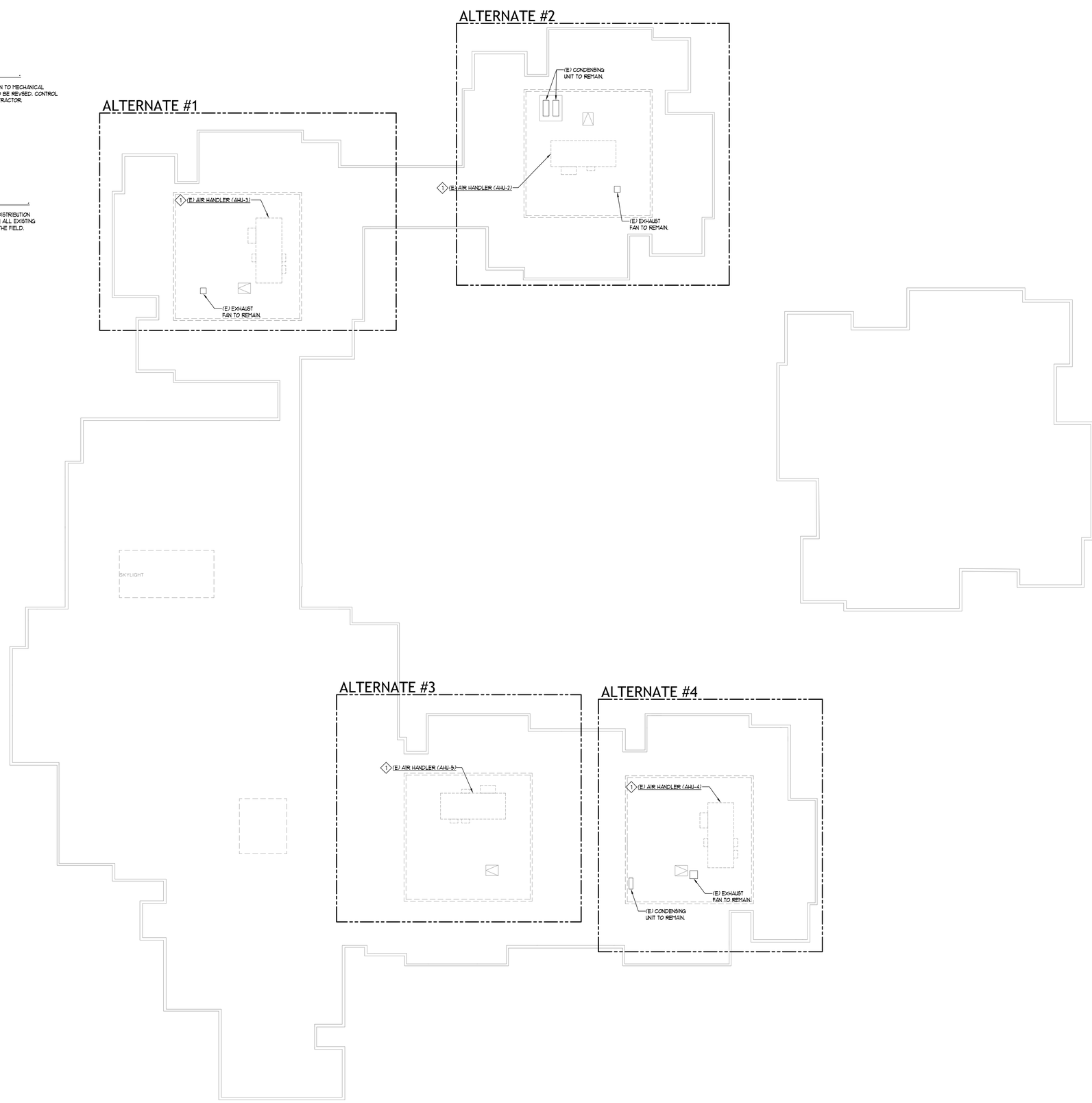
E1.1

SHEET NOTES:

1. ELECTRICAL CONTRACTOR TO DISCONNECT ALL ELECTRICAL CONNECTION TO MECHANICAL EQUIPMENT. CONDUCTORS TO BE REMOVED BACK TO PANEL. CONDUIT TO BE REVISED. CONTROL WIRING REMOVAL TO BE COMPLETED BY MECHANICAL'S CONTROLS CONTRACTOR.

GENERAL NOTES:

1. THIS PLAN INDICATES EXISTING MECHANICAL EQUIPMENT AND ELECTRICAL DISTRIBUTION EQUIPMENT FOR REFERENCE ONLY. THIS PLAN DOES NOT PURPORT TO SHOW ALL EXISTING CONDITIONS. ELECTRICAL CONTRACTOR SHALL VERIFY ALL CONDITIONS IN THE FIELD.



A / E1.2 MECHANICAL POWER ROOF DEMOLITION PLAN

SCALE: 3/32"=1'-0"

DINTER
Artistic Electrical Mechanical
385 Gentry Way
Reno, NV 89502
Ph: 775.826.4044
Fax: 775.826.4190
Web: dinter.com
J-4454

MMI ENGINEERING
275 Monumental Cir.
Sparks, NV. 89436
(775) 750-0849
www.mmi-engineering.com

MMI ENGINEERING

KELLER C. HACKBUSCH
Exp. 06/30/15
ELECTRICAL
STATE OF NEVADA
REGISTERED PROFESSIONAL ENGINEER
NO. 018326

9/26/2014

SPARKS CITY HALL
CAMPUS HVAC UPGRADE
SPARKS, NEVADA

SHEET TITLE

MECHANICAL POWER ROOF DEMOLITION PLAN

REVISIONS

DATE :
SEPTEMBER 26, 2014

SHEET NUMBER :

E1.2

ALL WORK IS BASE BID.

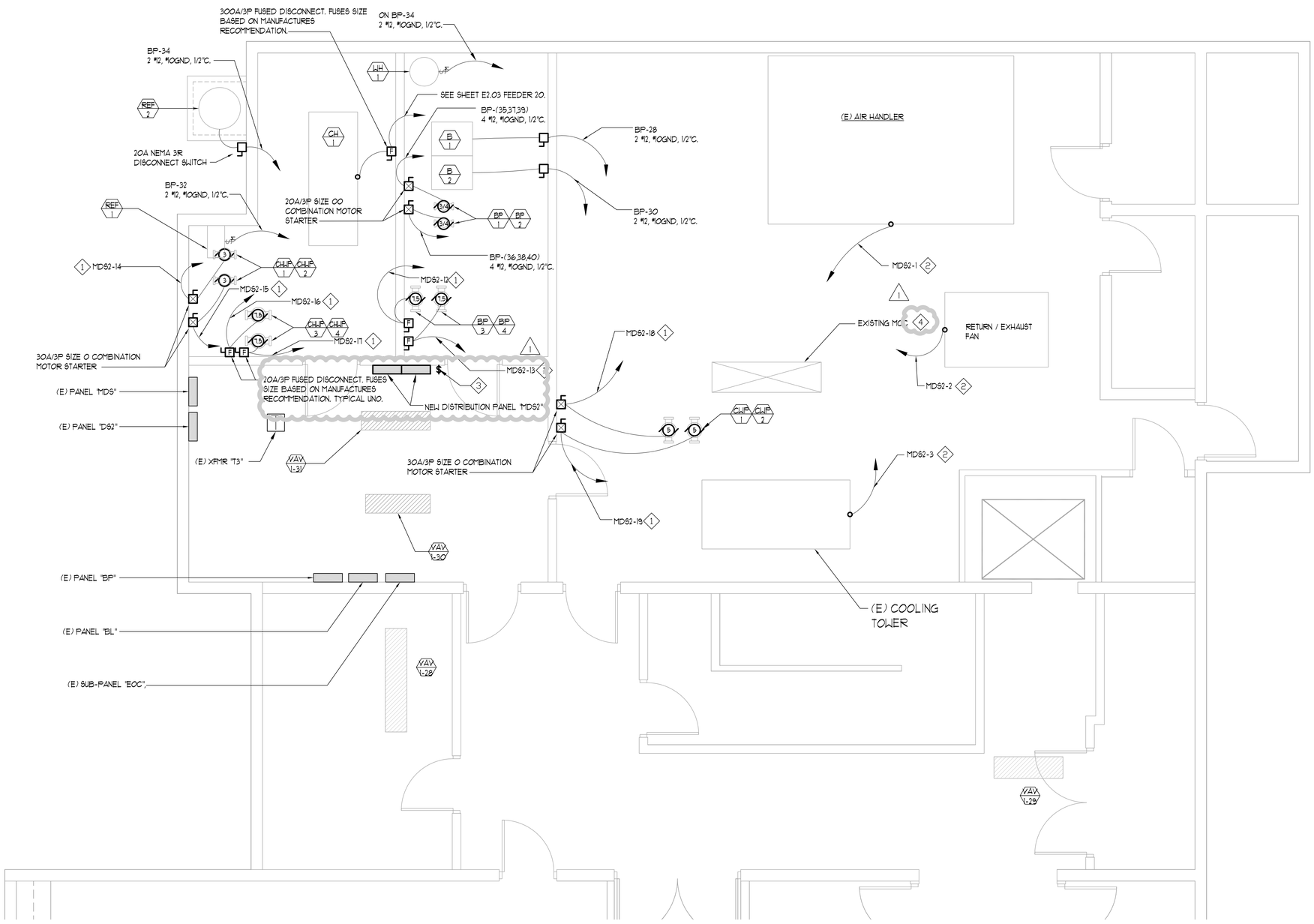
IF ALTERNATE 1-4 ARE NOT ACCEPTED THEN THE EXISTING AIR COMPRESSOR WILL BE RELOCATED AND RECONNECTED. COORDINATE NEW LOCATION WITH MECHANICAL CONTRACTOR.

SHEET NOTES:

1. ELECTRICAL CONTRACTOR TO CONNECT MECHANICAL EQUIPMENT. CONTROL WIRING TO BE COMPLETED BY MECHANICAL'S CONTROLS CONTRACTOR. SEE FEEDER SCHEDULE ON SHEET E0.3 FOR CONDUCTOR SIZES.
2. CONNECT EXISTING EQUIPMENTS NEW VARIABLE FREQUENCY DRIVES (VFD). SEE FEEDER SCHEDULE ON SHEET E0.3 FOR CONDUCTOR SIZES.
3. NEW LOCATION FOR BOILER SHUTDOWN SWITCH. CONNECT TO BOTH NEW BOILERS.
4. IF ALL ALTERNATES ARE ACCEPTED THEN MCC WILL REMAIN OPERATIONAL DURING CONSTRUCTION AND WILL BE REMOVED AFTER ALL EQUIPMENT CONNECTIONS ARE DISCONNECTED FROM MCC. REMOVE MCC FEEDER AND EXPOSED CONDUIT WHEN MCC IS REMOVED.

GENERAL NOTES:

1. THIS PLAN INDICATES DESIGN MECHANICAL EQUIPMENT LOCATION. ELECTRICAL CONTRACTOR TO VERIFY EXACT LOCATIONS WITH MECHANICAL CONTRACTOR DURING CONSTRUCTION..



BUILDING #400 (NORTH HALF) BASEMENT
ENLARGED NEW MECHANICAL POWER PLAN
A E2.3
SCALE: 3/8"=1'-0"

DINTER
Airfield Electrical Mechanical
385 Gentry Way
Reno, NV 89502
Ph: 775.826.4044
Fax: 775.826.4190
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275 Monumental Cir.
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KELLER C. HACKBUSCH
Exp. 06/30/15
ELECTRICAL
9/26/2014

SPARKS CITY HALL
CAMPUS HVAC UPGRADE
SPARKS, NEVADA

SHEET TITLE

BUILDING #400 (NORTH)
BASEMENT - ENLARGED
NEW MECHANICAL
POWER PLAN

REVISIONS

1 ADDENDUM 2 CHANGES

DATE :
SEPTEMBER 26, 2014

SHEET NUMBER :
E2.3

SECTION 262416 - PANELBOARDS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Distribution panelboards.

1.3 DEFINITIONS

A. SVR: Suppressed voltage rating.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of panelboard, switching and overcurrent protective device, accessory, and component indicated. Include dimensions and manufacturers' technical data on features, performance, electrical characteristics, ratings, and finishes.

B. Shop Drawings: For each panelboard and related equipment.

1. Include dimensioned plans, elevations, sections, and details. Show tabulations of installed devices, equipment features, and ratings.
2. Detail enclosure types and details for types other than NEMA 250, Type 1.
3. Detail bus configuration, current, and voltage ratings.
4. Short-circuit current rating of panelboards and overcurrent protective devices.
5. Include evidence of NRTL listing for series rating of installed devices.
6. Detail features, characteristics, ratings, and factory settings of individual overcurrent protective devices and auxiliary components.
7. Include wiring diagrams for power, signal, and control wiring.
8. Include time-current coordination curves for each type and rating of overcurrent protective device included in panelboards.

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For qualified testing agency.

B. Seismic Qualification Certificates: Submit certification that panelboards, overcurrent protective devices, accessories, and components will withstand seismic forces defined in Section 260548.16 "Seismic Controls for Electrical Systems." Include the following:

1. Basis for Certification: Indicate whether withstand certification is based on actual test of assembled components or on calculation.
2. Dimensioned Outline Drawings of Equipment Unit: Identify center of gravity and locate and describe mounting and anchorage provisions.
3. Detailed description of equipment anchorage devices on which the certification is based and their installation requirements.

C. Field Quality-Control Reports:

1. Test procedures used.
2. Test results that comply with requirements.
3. Results of failed tests and corrective action taken to achieve test results that comply with requirements.

D. Panelboard Schedules: For installation in panelboards. Submit final versions after load balancing.

1.6 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For panelboards and components to include in emergency, operation, and maintenance manuals. In addition to items specified in Section 017823 "Operation and Maintenance Data," include the following:

1. Manufacturer's written instructions for testing and adjusting overcurrent protective devices.
2. Time-current curves, including selectable ranges for each type of overcurrent protective device that allows adjustments.

1.7 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Keys: Two spares for each type of panelboard cabinet lock.
2. Fuses for Fused Switches: Equal to 10 percent of quantity installed for each size and type, but no fewer than three of each size and type.

1.8 QUALITY ASSURANCE

A. Testing Agency Qualifications: Member company of NETA or an NRTL.

1. Testing Agency's Field Supervisor: Currently certified by NETA to supervise on-site testing.

B. Source Limitations: Obtain panelboards, overcurrent protective devices, components, and accessories from single source from single manufacturer.

C. Product Selection for Restricted Space: Drawings indicate maximum dimensions for panelboards including clearances between panelboards and adjacent surfaces and other items. Comply with indicated maximum dimensions.

D. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

E. Comply with NEMA PB 1.

F. Comply with NFPA 70.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Handle and prepare panelboards for installation according to NECA 407.

1.10 PROJECT CONDITIONS

A. Environmental Limitations:

1. Do not deliver or install panelboards until spaces are enclosed and weathertight, wet work in spaces is complete and dry, work above panelboards is complete, and temporary HVAC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during the remainder of the construction period.
2. Rate equipment for continuous operation under the following conditions unless otherwise indicated:

    a. Ambient Temperature: Not exceeding 23 deg F to plus 104 deg F.
    b. Altitude: Not exceeding 6600 feet.

B. Service Conditions: NEMA PB 1, usual service conditions, as follows:

1. Ambient temperatures within limits specified.
2. Altitude not exceeding 6600 feet.

C. Interruption of Existing Electric Service: Do not interrupt electric service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary electric service according to requirements indicated:

1. Notify Owner no fewer than two days in advance of proposed interruption of electric service.
2. Do not proceed with interruption of electric service without Owner's written permission.
3. Comply with NFPA 70E.

1.11 COORDINATION

A. Coordinate layout and installation of panelboards and components with other construction that penetrates walls or is supported by them, including electrical and other types of equipment, raceways, piping, encumbrances to workspace clearance requirements, and adjacent surfaces. Maintain required workspace clearances and required clearances for equipment access doors and panels.

B. Coordinate sizes and locations of concrete bases with actual equipment provided. Cast anchor-bolt inserts into bases. Concrete, reinforcement, and formwork requirements are specified with concrete.

PART 2 - PRODUCTS

2.1 DISTRIBUTION PANELBOARDS

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Eaton Electrical Inc.; Cutler-Hammer Business Unit.
2. General Electric Company; GE Consumer & Industrial - Electrical Distribution.
3. Siemens Energy & Automation, Inc.
4. Square D; a brand of Schneider Electric.

B. Panelboards: NEMA PB 1, power and feeder distribution type.

C. Doors: Secured with vault-type latch with tumbler lock; keyed alike.

1. For doors more than 36 inches high, provide two latches, keyed alike.

D. Mains: Fused switch.

E. Branch Overcurrent Protective Devices: Fused switches.

2.2 DISCONNECTING AND OVERCURRENT PROTECTIVE DEVICES

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Eaton Electrical Inc.; Cutler-Hammer Business Unit.
2. General Electric Company; GE Consumer & Industrial - Electrical Distribution.
3. Siemens Energy & Automation, Inc.
4. Square D; a brand of Schneider Electric.

B. Fused Switch: NEMA KS 1, Type HD; clips to accommodate specified fuses; lockable handle.

1. Fuses, and Spare-Fuse Cabinet: Comply with requirements specified in Section 262813 "Fuses."
2. Fused Switch Features and Accessories: Standard ampere ratings and number of poles.

2.3 ACCESSORY COMPONENTS AND FEATURES

A. Accessory Set: Include tools and miscellaneous items required for overcurrent protective device test, inspection, maintenance, and operation.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Receive, inspect, handle, and store panelboards according to NECA 407.

B. Examine panelboards before installation. Reject panelboards that are damaged or rusted or have been subjected to water saturation.

C. Examine elements and surfaces to receive panelboards for compliance with installation tolerances and other conditions affecting performance of the Work.

D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Install panelboards and accessories according to NECA 407.

B. Equipment Mounting: Install panelboards on concrete bases, 4-inch nominal thickness.

1. Install dowel rods to connect concrete base to concrete floor. Unless otherwise indicated, install dowel rods on 18-inch centers around full perimeter of base.
2. For panelboards, install epoxy-coated anchor bolts that extend through concrete base and anchor into structural concrete floor.
3. Place and secure anchorage devices. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
4. Install anchor bolts to elevations required for proper attachment to panelboards.
5. Attach panelboard to the vertical finished or structural surface behind the panelboard.

C. Temporary Lifting Provisions: Remove temporary lifting eyes, channels, and brackets and temporary blocking of moving parts from panelboards.

D. Comply with mounting and anchoring requirements specified in Section 260548.16 "Seismic Controls for Electrical Systems."

E. Mount top of trim 90 inches above finished floor unless otherwise indicated.

F. Mount panelboard cabinet plumb and rigid without distortion of box. Install overcurrent protective devices and controllers not already factory installed.

G. Install filler plates in unused spaces.

H. Arrange conductors in gutters into groups and bundle and wrap with wire ties after completing load balancing.

I. Comply with NECA 1.

3.3 IDENTIFICATION

A. Identify field-installed conductors, interconnecting wiring, and components; provide warning signs complying with Section 260553 "Identification for Electrical Systems."

B. Create a directory to indicate installed circuit loads after balancing panelboard loads; incorporate Owner's final room designations. Obtain approval before installing. Use a computer or typewriter to create directory; handwritten directories are not acceptable.

C. Panelboard Nameplates: Label each panelboard with a nameplate complying with requirements for identification specified in Section 260553 "Identification for Electrical Systems."

D. Device Nameplates: Label each branch circuit device in distribution panelboards with a nameplate complying with requirements for identification specified in Section 260553 "Identification for Electrical Systems."

3.4 FIELD QUALITY CONTROL

A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect, test, and adjust components, assemblies, and equipment installations, including connections.

B. Perform tests and inspections.

1. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, and to assist in testing.

C. Acceptance Testing Preparation:

1. Test insulation resistance for each panelboard bus, component, connecting supply, feeder, and control circuit.
2. Test continuity of each circuit.

D. Tests and Inspections:

1. Perform each visual and mechanical inspection and electrical test stated in NETA Acceptance Testing Specification. Certify compliance with test parameters.

2. Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.
3. Perform the following infrared scan tests and inspections and prepare reports:

    a. Initial Infrared Scanning: After Substantial Completion, but not more than 60 days after Final Acceptance, perform an infrared scan of each panelboard. Remove front panels so joints and connections are accessible to portable scanner.
    b. Follow-up Infrared Scanning: Perform an additional follow-up infrared scan of each panelboard 11 months after date of Substantial Completion.
    c. Instruments and Equipment:

        1) Use an infrared scanning device designed to measure temperature or to detect significant deviations from normal values. Provide calibration record for device.

E. Panelboards will be considered defective if they do not pass tests and inspections.

F. Prepare test and inspection reports, including a certified report that identifies panelboards included and that describes scanning results. Include notation of deficiencies detected, remedial action taken, and observations after remedial action.

3.5 ADJUSTING

A. Adjust moving parts and operable component to function smoothly, and lubricate as recommended by manufacturer.

B. Load Balancing: After Substantial Completion, but not more than 60 days after Final Acceptance, measure load balancing and make circuit changes.

1. Measure as directed during period of normal system loading.
2. Perform load-balancing circuit changes outside normal occupancy/working schedule of the facility and at time directed. Avoid disrupting critical 24-hour services such as fax machines and on-line data processing, computing, transmitting, and receiving equipment.
3. After circuit changes, recheck loads during normal load period. Record all load readings before and after changes and submit test records.
4. Tolerance: Difference exceeding 20 percent between phase loads, within a panelboard, is not acceptable. Rebalance and recheck as necessary to meet this minimum requirement.

END OF SECTION 262416