SHAFER | ZAHNER | ZAHNER
OFFICE OF ARCHITECTURE

September 30, 2019
GS# 210-068 NEW ADMINISTRATION BUILDING
Mississippi Delta Community College
Moorhead, Mississippi

Addendum No. 3

This Addendum forms part of the Contract Documents for the above referenced project. All other requirements of the original Contract Documents shall remain in effect except as specifically modified in this Addendum. Bidder is to acknowledge receipt of this Addendum with their bid proposal. Failure to do so may subject the Bidder to disqualification. This Addendum is issued to all known Plan Holders.

1. Clarifications:

    a. Structural Clarification: On S121 Truss Support Framing Plan, the shear splice called out at gridlines 4B/BD for the W16x26 and W24x68 connection is a standard shear connection to be designed by the steel fabricator. It can be a single plate tab connection or a double angle connection, designed for the reaction shown on the drawings.
    b. An enlarged detail of the College logo was requested; see attached PDF of enlarged logo.
    c. Fire Alarm system is not required to be voice evacuation and will not require paging through the Fire Alarm system.

2. Specifications:

    a. **ADD** Section 03332 Integrally Colored Concrete, see attached.
    b. Section 07260 Vapor Retarders, Section 2:
        i. **ADD** Paragraph 2.02a:

    "Contractor's Option for fluid applied wall membrane in lieu of self-adhesive 'peel and stick' membrane. Note: Provide flashing membrane, detailing compound, terminations, surface prep, and all other accessories for full waterproofing system installation as recommended by the manufacturer for complete system install :
    VAPOR PERMEABLE AIR AND WATER BARRIER (FLUID APPLIED WALL MEMBRANE)

    A. fluid-applied, vapor permeable, acrylic membrane that cures to form a resilient, monolithic, fully bonded elastomeric membrane when applied to construction surfaces. Product shall have the following minimum physical properties:
        1. Membrane Air Permeance: ASTM E2178: Not to exceed 0.0004 cfm/sq. ft. under a pressure differential of 0.3 in. water (1.57 psf).
        2. Assembly Performance: Provide a continuous air barrier assembly that has an air leakage not to exceed 0.0008 cfm/sq. ft. of surface area under a pressure differential of 0.3 in. water (1.57 psf) when tested in accordance with ASTM E2357.
        3. Membrane Vapor Permeance: ASTM E96, Method B: 11.2 perms
        4. Peel Adhesion: ASTM D903: min. 5 pli or substrate failure to glass faced wall board, min. 20 pli to concrete/CMU
        5. UV Exposure Limit: Not more than 180 calendar days"

510 University Drive ●Starkville, Mississippi 39759 ●662.323.1628 **T** ● info@szzarch.com **E**
A LIMITED LIABILITY CORPORATION

B. Products:
1. "Perm-A-Barrier VP"; Grace Construction Products
2. "Air-Shield LMP"; W.R. Meadows
3. "Air-Bloc 31MR"; Henry Company
4. Enershield-HP; BASF
5. R-Guard MVP; Prosoco

c. Section 09300 Porcelain Tile, Section 2.01 Tile Materials, Paragraph B – DELETE and REPLACE with the following:
   i. Base Bid / Bid Alternate #1 – Toilet Rooms – Basis of Design
      1. CONNECT by Coastal Tile : Contact Coastal Tile (Aisa Templeton Aisa@Coastal-Tile.com, 228-697-7091)
      2. Equal as approved by Architect per Division 1
      3. Tile:
         a. Basis of Design: CONNECT
            i. Size as scheduled
            ii. Color: Beige
d. Section 16441 Switchboard – REMOVE
e. ADD Section 16051 Power System Studies, attached.

3. Drawings:

a. Sheet S120, S130: Delete 4x3x1/2" called for at Sun Room and South Porch – angle is not required.
b. Sheet S401: REVISE Detail 1/S401 to call for a C6x8.2 hanger at each B2, not each B1.
c. Sheet A140, A141:
   i. REVISE wall tile called out at water fountain locations from WT2 to WT1
d. Sheet A610 Finish Schedule – REVISE Finish Key:
   i. REVISE all references to BUILT by Caesar Ceramics, color Path to CONNECT by Coastal Tile, color Beige
   ii. ADD TB-1, Cove Tile Base, 6"x24" Cove Base. CONNECT by Coastal Tile, color Beige

4. Substitution Requests: The following manufacturers/products are considered 'acceptable manufacturers' as defined in the Contract Documents:

Section	Item	Manufacturer
09770	Modular Wall System	Associated Architectural Products
06610	Cast Polymer Column Covers	Melton Classics Inc. `

Approval of a Manufacturer or product as an "equal" does not in any way alter the Contract Documents. Any approved manufacturer must accommodate performance requirements, construction details, required finishes, owner's specific requirements, adjacent materials, etc. Any additional materials or components required by the "approved equal" for proper installation for the given conditions are the responsibility of the Contractor. Approval of a Manufacturer also shall not cause an up-charge for the desired finish or limit the choices of finishes, colors, materials, etc.

510 University Drive ●Starkville, Mississippi 39759 ●662.323.1628 **T** ● info@szzarch.com **E**
A LIMITED LIABILITY CORPORATION

Contents: This addendum consists of **16** (8 ½" x 11") sheets.

End of Addendum No. 3 for: GS# 210-068 NEW ADMINISTRATION BUILDING

510 University Drive ●Starkville, Mississippi 39759 ●662.323.1628 **T** ● info@szzarch.com **E**
A LIMITED LIABILITY CORPORATION


MISSISSIPPI · DELTA · COMMUNITY · COLLEGE ·
MCMXXVI
PROGRESSUS
VALOR
INTEGRITAS

ADDED BY ADDENDUM NO. 3

SECTION 03332

INTEGRALLY COLORED CONCRETE

PART 1 GENERAL

1.1 RELATED SECTIONS

A. Division 1 Sections

B. Section 03100 - Concrete Formwork

C. Section 03200 - Concrete Reinforcement

1.2 REFERENCES

ACI 214 - Recommended Practice for Evaluation of Strength Test Results of Concrete.

ACI 301 - Specifications for Structural Concrete for Buildings.

ACI 302.1 - Guide for Concrete Floor and Slab Construction.

ACI 303 – Standard Specification for Architectural Concrete

ACI 304 - Recommended Practice for Measuring, Mixing, Transporting and Placing Concrete.

ACI 305 - Hot Weather Concreting

ACI 306 - Cold Weather Concreting.

ASTM C33 - Standard Specification for Concrete Aggregates.

ASTM C94 - Standard Specification for Ready-Mixed Concrete.

ASTMC150– Standard Specification for Portland Cement

ASTM C260 - Standard Specifications for Air-Entraining Admixtures for Concrete.

ASTM C309 - Specifications for Liquid Membrane-Forming Compounds for Curing Concrete.

ASTM C494 - Standard Specifications for Chemical Admixtures for Concrete.

ASTM C618 - Standard Specifications for Fly Ash and Raw or Calcined Natural Pozzolans for Use in Portland Cement.

ASTM C979 - Standard Specification for Pigments for Integrally Colored Concrete

ASTM C989 - Standard Specification for Slag Cement for Use in Concrete and Mortars

ASTM C1602 - Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete

ASTM C494 - Standard Specifications for Chemical Admixtures for Concrete.

1.3 SUBMITTALS

A. In accordance with Section 01900 PART 5.

1. Product data:
   a. Fly ash
   b. Slag cement
   c. Metakaolin
   d. Coloring admixture
   e. Curing compound
   f. Manufacturer's color selector chart showing the colors available.
2. Mixture proportions.
3. Certification: Manufacturer's certification stating that the products delivered meet or exceed Project Specifications.
4. Ready-mixed concrete delivery tickets.
5. Qualification Data: For firms indicated in Quality Assurance Article, including list of completed projects.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Manufacturer with 10 years' experience in the production of specified products or specialty construction chemicals.

B. Installer Qualifications: An installer with 5 years experience with work of similar scope and quality.

C. In accordance with ACI 301 for mixing, transportation, placing and consolidation of concrete.

D. In accordance with ACI 305 for hot weather concrete placement and protection.

E. In accordance with ACI 306.1 for cold weather concrete placement and protection.

F. In accordance with ACI 303.1 for curing concrete.

G. Manufacturer's representative shall be notified at least one week before start of Work.

H. Field Mockup:

1. At location on Project selected by Architect/Engineer, construct Field Mockups using procedures, equipment, materials, simulated repairs, curing procedures and quality control plan submitted for production of cast-in-place colored concrete. Include samples of control, construction, and expansion joints in sample panels. Field Mockup shall be produced by the workers who will perform the work for the Project.
2. Refer to architectural sheet A200 for mockup details.
3. For accurate color, the quantity of concrete mixed to produce the sample shall not be less than 3 cubic yards (or not less than 1/3 the capacity of the mixing drum on the ready-mixed concrete truck).
4. Accepted Field Mockup provides visual standard for work of this Section.
5. Field Mockup shall remain through completion of work for use as a quality standard for finished work.
6. Retain samples of cement, supplementary cementitious materials, aggregates and admixtures used in Field Mockup for comparison with materials used in the Work.
7. Remove Field Mockup when directed.

1.5 DELIVERY, STORAGE AND HANDLING

A. Coloring Admixture: Comply with manufacturer's instructions. Deliver coloring admixtures into manufacturer's temperature-controlled container and store in clean, dry conditions. Maintain method of storage and temperature of materials as recommended by the manufacturer.

B. Ready-Mixed Concrete: Ready-mixed concrete truck driver shall provide batch ticket to the Architect/Engineer at the time of concrete delivery. Contents of the batch ticket shall be as specified in ASTM C 94/C 94M.

1.6 PRECONSTRUCTION MEETING

A. A meeting shall be held one week prior to placement of integrally colored concrete to discuss the Project and application materials.

B. Contractor, Subcontractor, Ready-Mixed Concrete Producer's Representative, and Admixtures Manufacturer's Representative shall be present at the meeting. Architect/Engineer will be present at the meeting.

PART 2 PRODUCTS

2.1 MATERIALS

A. Portland Cement: In accordance with Section 03300.

B. Supplementary Cementitious Materials: Refer to Section 03300.

C. Aggregates: Fine and coarse aggregates shall conform to ASTM C33.

D. Water: Shall conform to ASTM C1602.

E. Air-entraining admixtures shall conform to ASTM C260 and shall be from the same manufacturer as the one that supplies coloring admixture. Use of air-entraining admixtures shall be approved by the Architect/Engineer.

F. Chemical admixtures shall conform to ASTM C494 and shall be from the same manufacturer as the one that supplies coloring admixture. Admixtures shall not contain intentionally-added chlorides.

G. Coloring Admixture:

1. Coloring admixture shall conform to the requirements of ASTM C979 and ACI 303.
2. Liquid Coloring Admixture basis of design: MasterColor® by BASF Corporation – Admixture Systems.

I. Joint Sealant:

1. Joint sealants shall be as specified in Section 03300.

2.2 COLORS

A. Colors of Concreting Materials:

1. Cement: Color shall be BUFF/CREAM TO MATCH CAST STONE AS SELECTED BY THE ARCHITECT. Use the same source, type, color and brand throughout the Project.
2. Supplementary Cementitious Materials: Supplementary cementitious materials may darken or lighten the color of concrete or produce erratic color variation. They also can extend the time of set of the concrete and finishing operations. Before their use, trial batches shall be prepared to determine their impact on time of set, finishing operations and concrete color.
3. Fine Aggregate: Color shall be locally available natural sand. Use same source and color throughout the Project.
4. Coarse Aggregate: Concrete Producer's standard aggregate complying with specifications. Use same source and color throughout the Project.
5. Coloring Admixture: As selected by Architect/Engineer.
6. Chemical admixtures: Use same admixtures throughout the Project.

2.3 CONCRETE MIXTURE PROPORTIONS

A. Compressive strength of concrete shall as indicated in the Structural Drawings.Slump of concrete shall be in accordance with Section 03300.

C. Air content shall be as indicated in the Structural Drawings.

D. Add coloring admixture to concrete mixture according to manufacturer's written instructions.

PART 3 EXECUTION

3.1 PLACEMENT AND CONSOLIDATION

A. Do not add water to concrete mixture in the field.

B. Place and consolidate concrete as specified in ACI 301.

3.2 FINISHING

A. Finishing shall be in accordance with Section 03300.

B. Troweling or broom-finishing colored concrete shall be performed in the same direction to maintain uniform appearance. Do not add additional water to the surface during the finishing process.

C. Concrete surfaces that are required to be specially treated shall be treated as specified in Section 5 – Architectural Treatments, ACI 303.

3.3 CURING

A. Concrete curing shall be in accordance with Section 03300.

3.4 TOLERANCES

A. Minor variations in appearance of integrally colored concrete, which are similar to natural variations in color and appearance of uncolored concrete, are acceptable.

END OF SECTION

ADDED BY ADDENDUM NO. 3

SECTION 16051

POWER SYSTEM STUDIES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Short-circuit study.

B. Protective device coordination study.

C. Arc flash and shock risk assessment.

1. Includes arc flash hazard warning labels.

D. Criteria for the selection and adjustment of equipment and associated protective devices not specified in this section, as determined by studies to be performed.

1.02 RELATED REQUIREMENTS

A. Section 16075 - Identification for Electrical Systems: Additional requirements for arc flash hazard warning labels.

B. Section 16210 - Low-Voltage Electrical Service Entrance.

C. Section 16430 - Low-Voltage Switchgear.

D. Section 16443 - Panelboards.

E. Section 16491 - Fuses.

F. Section 16411 - Enclosed Circuit Breakers.

G. Section 16412 - Enclosed Switches.

H. Section 16423 - Enclosed Controllers.

1.03 REFERENCE STANDARDS

A. ANSI Z535.4 - American National Standard for Product Safety Signs and Labels 2011.

B. IEEE 141 - IEEE Recommended Practice for Electrical Power Distribution for Industrial Plants 1993 (Reaffirmed 1999).

C. IEEE 242 - IEEE Recommended Practice for Protection and Coordination of Industrial and Commercial Power Systems 2001, with Errata (2003).

D. IEEE 399 - IEEE Recommended Practice for Industrial and Commercial Power Systems Analysis 1997.

E. IEEE 551 - IEEE Recommended Practice for Calculating Short-Circuit Currents in Industrial and Commercial Power Systems 2006.

F. IEEE 1584 - IEEE Guide for Performing Arc Flash Hazard Calculations 2018.

G. NEMA MG 1 - Motors and Generators 2017.

H. NETA ATS - Acceptance Testing Specifications for Electrical Power Equipment and Systems 2017.

I. NFPA 70 - National Electrical Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

J. NFPA 70E - Standard for Electrical Safety in the Workplace 2018.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Coordination:

1. Existing Installations: Coordinate with equipment manufacturer(s) to obtain data necessary for completion of studies.
2. Coordinate the work to provide equipment and associated protective devices complying with criteria for selection and adjustment, as determined by studies to be performed.
3. Notify Edmonds Engineering, Inc. of any conflicts with or deviations from the contract documents. Obtain direction before proceeding with work.

B. Pre-Study Meeting: Conduct meeting with Owner to discuss system operating modes and conditions to be considered in studies.

C. Sequencing:
1. Submit study reports prior to or concurrent with product submittals.
2. Do not order equipment until matching study reports and product submittals have both been evaluated by Edmonds Engineering, Inc..
3. Verify naming convention for equipment identification prior to creation of final drawings, reports, and arc flash hazard warning labels (where applicable).

D. Scheduling:
1. Arrange access to existing facility for data collection with Owner.
2. Where work of this section involves interruption of existing electrical service, arrange service interruption with Owner.

1.05 SUBMITTALS

A. See Section 01300 - Administrative Requirements, for submittal procedures.

B. Study preparer's qualifications.

C. Field testing agency's qualifications.

D. Study reports, stamped or sealed and signed by study preparer.

E. Product Data: In addition to submittal requirements specified in other sections, include manufacturer's standard catalog pages and data sheets for equipment and protective devices indicating information relevant to studies.
1. Include characteristic time-current trip curves for protective devices.
2. Include impedance data for busway.
3. Include impedance data for engine generators.
4. Clearly indicate whether proposed short circuit current ratings are fully rated or, where acceptable, series rated systems.
5. Include documentation of listed series ratings upon request.
6. Identify modifications made in accordance with studies that:
a. Can be made at no additional cost to Owner.
b. As submitted will involve a change to the contract sum.

F. Arc Flash Hazard Warning Label Samples: One of each type and legend specified.

G. Site-specific arc flash hazard warning labels.

H. Field quality control reports.

I. Certification that field adjustable protective devices have been set in accordance with requirements of studies.

J. Project Record Documents: Revise studies as required to reflect as-built conditions.

1. Include hard copies with operation and maintenance data submittals.
2. Include computer software files used to prepare studies with file name(s) cross-referenced to specific pieces of equipment and systems.

1.06 POWER SYSTEM STUDIES

A. Scope of Studies:

1. Perform analysis of new electrical distribution system as indicated on drawings.
2. Except where study descriptions below indicate exclusions, analyze system at each bus from primary protective devices of utility source down to each piece of equipment involved, including parts of system affecting calculations being performed (e.g. fault current contribution from motors).
3. Include in analysis alternate sources and operating modes (including known future configurations) to determine worst case conditions.
    a. Known Operating Modes:
        1) Utility as source.
        2) Generator as source.
        3) Utility/generator in parallel.
        4) Bus tie breaker open/close positions.
        5) Maintenance settings.

B. General Study Requirements:

1. Comply with NFPA 70.
2. Perform studies utilizing computer software complying with specified requirements; manual calculations are not permitted.

C. Data Collection:

1. Compile information on project-specific characteristics of actual installed equipment, protective devices, feeders, etc. as necessary to develop single-line diagram of electrical distribution system and associated input data for use in system modeling.
    a. Utility Source Data: Include primary voltage, maximum and minimum three-phase and line-to-ground fault currents, impedance, X/R ratio, and primary protective device information.
        1) Obtain up-to-date information from Utility Company. Generic information nor infinite bus shall not be acceptable.
        2) Utility Company: As indicated on drawings.
    b. Generators: Include manufacturer/model, kW and voltage ratings, and impedance.
    c. Motors: Include manufacturer/model, type (e.g. induction, synchronous), horsepower rating, voltage rating, full load amps, and locked rotor current or NEMA MG 1 code letter designation.
    d. Transformers: Include primary and secondary voltage ratings, kVA rating, winding configuration, percent impedance, and X/R ratio.
    e. Protective Devices:
        1) Circuit Breakers: Include manufacturer/model, type (e.g. thermal magnetic, electronic trip), frame size, trip rating, voltage rating, interrupting rating,

available field-adjustable trip response settings, and features (e.g. zone selective interlocking).

2) Fuses: Include manufacturer/model, type/class (e.g. Class J), size/rating, and speed (e.g. time delay, fast acting).

f. Protective Relays: Include manufacturer/model, type, settings, current/potential transformer ratio, and associated protective device.

g. Conductors: Include feeder size, material (e.g. copper, aluminum), insulation type, voltage rating, number per phase, raceway type, and actual length.

2. Existing Installations:

a. Collect data on existing electrical distribution system necessary for completion of studies, including field verification of available existing data (e.g. construction documents, previous studies). Include actual settings for field-adjustable devices.

D. Short-Circuit Study:

1. Comply with IEEE 551 and applicable portions of IEEE 141, IEEE 242, and IEEE 399.

2. For purposes of determining equipment short circuit current ratings, consider conditions that may result in maximum available fault current, including but not limited to:

a. Maximum utility fault currents.

b. Maximum motor contribution.

c. Known operating modes (e.g. utility as source, generator as source, utility/generator in parallel, bus tie breaker open/close positions).

3. For each bus location, calculate the maximum available three-phase bolted symmetrical and asymmetrical fault currents. For grounded systems, also calculate the maximum available line-to-ground bolted fault currents.

E. Protective Device Coordination Study:

1. Comply with applicable portions of IEEE 242 and IEEE 399.

2. Analyze alternate scenarios considering known operating modes (e.g. utility as source, generator as source, utility/generator in parallel, bus tie breaker open/close positions).

3. Analyze protective devices and associated settings for suitable margins between time-current curves to achieve full selective coordination while providing adequate protection for equipment and conductors.

F. Arc Flash and Shock Risk Assessment:

1. Comply with NFPA 70E.

2. Perform incident energy and arc flash boundary calculations in accordance with IEEE 1584 (as referenced in NFPA 70E Annex D), where applicable.

a. To clarify IEEE 1584 statement that "equipment below 240 V need not be considered unless it involves at least one 125 kVA or larger low-impedance transformer in its immediate power supply" for purposes of studies, study preparer to include equipment rated less than 240 V fed by transformers less than 125 kVA in calculations.

b. Where reasonable, study preparer may assume a maximum clearing time of two seconds in accordance with IEEE 1584, provided that the conditions are such that a worker's egress from an arc flash event would not be inhibited.

c. For single-phase systems, study preparer to perform calculations assuming three-phase system in accordance with IEEE 1584 yielding conservative results.

3. For equipment with main devices mounted in separate compartmentalized sections, perform calculations on both the line and load side of the main device.

4. Analyze alternate scenarios considering conditions that may result in maximum incident energy, including but not limited to:

a. Maximum and minimum utility fault currents.

b. Maximum and minimum motor contribution.

c. Known operating modes (e.g. utility as source, generator as source, utility/generator in parallel, bus tie breaker open/close positions).

G. Study Reports:

1. General Requirements:

a. Identify date of study and study preparer.

b. Identify study methodology and software product(s) used.

c. Identify scope of studies, assumptions made, implications of possible alternate scenarios, and any exclusions from studies.

d. Identify base used for per unit values.

e. Include single-line diagram and associated input data used for studies; identify buses on single-line diagram as referenced in reports, and indicate bus voltage.

f. Include conclusions and recommendations.

2. Short-Circuit Study:

a. For each scenario, identify at each bus location:

1) Calculated maximum available symmetrical and asymmetrical fault currents (both three-phase and line-to-ground where applicable).

2) Fault point X/R ratio.

3) Associated equipment short circuit current ratings.

b. Identify locations where the available fault current exceeds the equipment short circuit current rating, along with recommendations.

3. Protective Device Coordination Study:

a. For each scenario, include time-current coordination curves plotted on log-log scale graphs.

b. For each graph include (where applicable):

1) Partial single-line diagram identifying the portion of the system illustrated.

2) Protective Devices: Time-current curves with applicable tolerance bands for each protective device in series back to the source, plotted up to the maximum available fault current at the associated bus.

3) Conductors: Damage curves.

4) Transformers: Inrush points and damage curves.

5) Generators: Full load current, overload curves, decrement curves, and short circuit withstand points.

6) Motors: Full load current, starting curves, and damage curves.

7) Capacitors: Full load current and damage curves.

c. For each protective device, identify fixed and adjustable characteristics with available ranges and recommended settings.

1) Circuit Breakers: Include long time pickup and delay, short time pickup and delay, and instantaneous pickup.

2) Include ground fault pickup and delay.

3) Include fuse ratings.

4) Protective Relays: Include current/potential transformer ratios, tap, time dial, and instantaneous pickup.

d. Identify cases where either full selective coordination or adequate protection is not achieved, along with recommendations.

4. Arc Flash and Shock Risk Assessment:

a. For each scenario, identify at each bus location:

1) Calculated incident energy and associated working distance.

2) Calculated arc flash boundary.

3) Bolted fault current.

4) Arcing fault current.

5) Clearing time.

6) Arc gap distance.

b. For purposes of producing arc flash hazard warning labels, summarize the maximum incident energy and associated data reflecting the worst case condition of all scenarios at each bus location.

c. Identify locations where the calculated maximum incident energy exceeds 40 calories per sq cm.

d. Include recommendations for reducing the incident energy at locations where the calculated maximum incident energy exceeds 8 calories per sq cm.

1.07 QUALITY ASSURANCE

A. Study Preparer Qualifications: Professional electrical engineer licensed in the State in which the Project is located and with minimum five years experience in the preparation of studies of similar type and complexity using specified computer software.

1. Study preparer may be employed by the manufacturer of the electrical distribution equipment.

2. Study preparer may be employed by field testing agency.

B. Field Testing Agency Qualifications: Independent testing organization specializing in testing, analysis, and maintenance of electrical systems with minimum five years experience; NETA Accredited Company.

1. Field Supervisor: Certified electrical testing technician; NETA ETT Level III.

C. Computer Software for Study Preparation: Use the latest edition of commercially available software utilizing specified methodologies.

1. Acceptable Software Products:

a. EasyPower LLC.

b. ETAP/Operation Technology, Inc.

c. Power Analytics Corporation.

d. SKM Systems Analysis, Inc.

PART 2 PRODUCTS

2.01 ARC FLASH HAZARD WARNING LABELS

A. Provide warning labels complying with ANSI Z535.4 to identify arc flash hazards for each work location analyzed by the arc flash and shock risk assessment.

1. Materials: Comply with Section 16075.

2. Minimum Size: 4 by 6 inches (100 by 150 mm).

3. Legend: Provide custom legend in accordance with NFPA 70E based on equipment-specific data as determined by arc flash and shock risk assessment.

a. Include orange header that reads "WARNING" where calculated incident energy is less than 40 calories per square cm.

b. Include red header that reads "DANGER" where calculated incident energy is 40 calories per square cm or greater.

c. Include the text "Arc Flash and Shock Hazard; Appropriate PPE Required" or approved equivalent.

d. Include the following information:

1) Arc flash boundary.

2) Available incident energy and corresponding working distance.

3) Nominal system voltage.

4) Limited approach boundary.

5) Restricted approach boundary.

6) Equipment identification.

7) Date calculations were performed.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install arc flash warning labels in accordance with Section 16075.

3.02 FIELD QUALITY CONTROL

A. See Section 01400 - Quality Requirements, for additional requirements.

B. Inspect and test in accordance with NETA ATS, except Section 4.

C. Adjust equipment and protective devices for compliance with studies and recommended settings.

D. Notify Edmonds Engineering, Inc. of any conflicts with or deviations from studies. Obtain direction before proceeding.

E. Submit detailed reports indicating inspection and testing results, and final adjusted settings.

3.03 CLOSEOUT ACTIVITIES

A. See Section 01780 - Closeout Submittals, for closeout submittals.

B. See Section 01790 - Demonstration and Training, for additional requirements.

END OF SECTION 16051