

ADDENDUM No.2

Owner Architect Mechanical Consultant Structural Consultant Contractor Other

PROJECT: Dayton Power and Light
North Service Building
1317 Troy Street
Dayton, Ohio 45404

ADDENDUM NO. 2

DATE: 14 October 2011

OWNER: Dayton Power and Light
1900 Dryden Road
Dayton, Ohio 45439

ARCHITECT: Pinnacle Architects
210 N. St. Clair St.
Dayton, Ohio 45402

PROJECT NO. 268-03A

CONTRACTOR: N/A

*This Addendum supplements and amends the original drawings and specifications dated **April 2011** and shall be taken into account in preparing proposals and shall become a part of the Contract Documents. All addenda must be accounted for on the bidder's proposal.*

SPECIFICATIONS:

- Item #1:** Additional Specification Sections to be added:
Division 079200 Joint Sealers
Division 095110 Acoustical Panel Ceilings
Bidders Proposal – revise Alternate G-7 and G-8, add Alternate G-11
- Item #2:** Sections 133419, Part 2 – Products, Section 2.1 – Manufacturers. Add Kirby Building Systems and A-S Building Systems to the list of approved manufacturers.
- Item #3:** Section 075400, Item 2.2 – A PVC membrane is called out for the base bid roofing material. A TPO membrane in a corresponding design thickness shall also be approved as an equal. An additional manufacturer that is approved shall be Carlisle Syntech Inc..

ARCHITECTURAL

- Item #A-1:** Phasing Changes: Phase 2C is now Phase 2A, Phases 2A & 2B are now Phase 2C, Phase 2B will include HVAC renovation changes to the existing toilet rooms. Refer to addendum #1 for HVAC drawing changes that reflect the same
- Item #A-2:** The Basteel total privacy fence substitution is "not approved"
- Item #A-3:** Provide floor to deck chain link fence enclosure and sliding security gate as shown on the floor plans. The fence post piping shall be hot-dipped zinc coated (inside and out) schedule 40 or better per ASTM-F-1083. The pipe steel shall be in compliance with ASTM F-569 with minimum yield strength of 50,000 psi. The fence fabric shall be black vinyl coated zinc coated steel chain link fence fabric, 9 gage, 1" mesh. The overhead sliding gate shall be made of the same fence fabric material and shall be manually operable with a magnetic lock to keep it secured. The magnetic lock shall be opened by a card reader (supplied by the Owner's security consultant ADT) at the gate and shall be secured when the gate is slid back into the closed position. Provide all intermediate posts and tensioning rods necessary to achieve the design shown on the drawings.

Item #A-4: Clarification of specifications for new lockers:

What the specifications are calling for is the locker in the upper left hand of the attached file – Deluxe Collegiate Locker, Lockers will be sizes shown on the drawings: 18” W x 24”D x 84” H. The only addition to the locker shown will be an open mesh door needs to be added to the middle “open section” to allow DP&L personnel to lock the entire locker. The solid top storage compartment, low shelf and boot storage cabinet below are all still required.

PLUMBING:

Item #P-1: Question Please clarify / confirm the material specification for TD-1 aka Trench Drain Assembly in the new addition.

Answer Refer to drain schedule on sheet P4-1.

-END OF ADDENDUM No. 1-

Attachments: Question and Answers II, Question and Answers III, Specification Sections 079200 and 095110,

Question	Response
<p>On Alternate G1 Insulated Roof Panels are we to price a composite roof system using fiberglass blanket insulation and interior liner or a foam core sandwich panel? (What is the "R" value)</p>	<p>Foam core sandwich panel – R value – refer to Specification Section 133419 – Metal Building Systems – Section 1.5 System Performance Requirements – Paragraph D Items 1&2</p>
<p>We were informed DP&L will provide and install the security equipment throughout the project and the contractor needs to provide power. Please confirm.</p>	<p>DP&L will contract security equipment and installation through ADT. The winning vendor for the North Dayton project must work closely with ADT to coordinate construction schedules and ensure appropriate building equipment is procured and installed.</p> <p>Contractor is responsible for conduit rough-ins for Owner provided security equipment.</p>
<p>Question regarding the bid form, on page 2 of the bid form it states: "within 24 hours....submit a list of all major subcontractors and a schedule of values...".</p> <p>Does this mean that page 3 of the bid form where it asks for the names of the subs can be submitted within 24 hours? If this is allowed, it would help tremendously. J</p>	<p>The list of Subcontractors and their schedule of values are to be submitted within 24 hours</p>
<p>Will Soil Borings be issued? I see they are referenced in the specification but listed</p>	<p>This information was issued in Addendum #1</p>
<p>Please identify what the tree types are for the trees outside the fence (between fence and R/W)</p>	<p>This information was issued in Addendum #1</p>

Define the extent of new curb along Melberth St. Sheet C-4 indicates that the curb ends where the new 5'+/- strip of HD asphalt extends to, but the demo drawing C-3 indicates that we are removing about 5' of existing asphalt from this point and west. Does this area to the west of new 2" overlay, new HD asphalt and the gravel lot get new curb also?

The proposed curb along Melberth ends at the existing pavement

The amount of HD Asphalt and overlay do not match from sheets SD-0 & SD-0ALT to sheet C-4. Please clarify which sheet takes precedence for figuring quantities for the base bid and the alternates 9 & 10.

For figuring quantities use sheets SD-0 and SD-0ALT

Is the new 12 space employee parking lot included in Alternate 10 that changes from light weight asphalt to 4" roller compacted concrete?

Yes this correct

Please clarify what the fence type should be for Alternate G-7 and G-8. Bid form disagrees with description in Sec 012300.

This issued in Addendum #1

Spec section 087100 – 1.3 references a door hardware allowance. Is there a door hardware allowance and if so how much?

There is no allowance on this project, refer to hardware schedule and door schedule

Is there a stone base below the Roller Compressed Concrete? If yes, what type of stone and how thick?

Roller compacted concrete & concrete pavement - see Specification 33100 for roller compacted concrete; see Sheet SD-4 for concrete pads; concrete drives, in conjunction with heavy duty asphalt alternate, to be in accordance with City of Dayton Standard Drawings. Concrete drives & roller compacted concrete to be installed on 6-inch thick compacted ODOT Item 304.

What is the height of the block walls in the new addition? (Wall type D)
(Sheet A3-0 Wall type D says 8'-8" and sheet A8-1 wall sections says 10'-8")

Walls are to be 10'-8" in height – Office #135 are shown to be 12'-0" reduce to 10'-8" in height. Sheet A3-1 revise wall type from noted D1 to wall type D

Sheet SD-2 includes a Concrete Containment Pit and calls for the C.I. Barrier Boom to extend 12" to extend past pad per detail 1/SD-3. This detail does not exist. Can you provide this detail and any other details showing how this containment pit is constructed?

Refer to section 11/SP-3 for detail

Can you clarify what you are expecting on the proposals? Do you want an emailed copy and 2 hard copied turned in by 2PM on the 17th or is it sufficient to submit an electronic version and overnight the hard copies?

Your proposal must be submitted electronically to the email indicated in the RFP. Hard copies can be shipped over night.

A3.1 – Elevation B and C on A9.4 indicator in Linemen Gathering Space Rm.123 is not correct.	Elevation “C” Linemen Gathering Space #123 does not exist, refer to elevation “C” Linemen Gathering Space #123 an sheet A9-1
A3.2 – Can we get some cuts thru the rest room/locker room 125 &126 to see the ceiling construction in this area?	Do not understand this question, the ceiling is a suspended ceiling system with gypsum board in the shower areas, this is for both rooms #125 and #126
Are desk & chairs in Room 123 OFOI?	Yes
Specification Section 077100 – 2.8.13 - Safety Railing System. Where does this occur?	At the roof hatch
A5.1 - Are there ceilings in Rms 142 & 144?	These rooms will have ceilings that are open to the structure above
There is no ceiling spec.	Reference attached Specification Section 095110 Acoustical Panel Ceiling
A11.0 – There are 2 floor finished SC-1. Which goes in which room?	SC-1 is to be in rooms #135 thru #142
A11.0 – There is a floor finish in rooms 120 thru 126 indicated as SPC-1. What is this floor finish?	Refer to Specification Section 033650 Stained Concrete Flooring
A11.0 – Rooms 142 & 144 have different	Room #144 Electrical is to have the same

finishes. Is that your intent?

finished as Room #142 Electrical

A3.2 – What are the 3 boxes above the existing boot wash?

Items that are to remain

A3.1 – There is no spec on the wire mesh partitions.

There are no MEP specs listed on the MEP drawings.

This was issued in Addendum #1

There is no Caulking Spec.

Reference attached Specification Section 079200 Joint Sealers

Specification section 075400-Thermoplastic membrane roofing calls for a mechanically fastened PVC roof system but the drawings call for a fully adhered roof system. Which application is to be bid?

The roof is to be constructed as specified in Section 075400

Office furniture is by the owner, correct? If we are responsible for the furniture, please supply furniture layouts and specifications.

All movable office furniture & systems walls will be supplied by DP&L through Elements IV.

Question	Response
<p>Would like to confirm...are the (4) pairs of drive gates to be antilever or overhead? If overhead what is the clearance? Can you provide a detail of the 4 sets of slide gates on this project?</p>	<p>Gates are to be as Specified in Section 323113 Metal Security Fences and Gates</p>
<p>On sheet SD2 there is a note for New Guard Rail bolted to concrete wall, can you provide a detail?</p>	<p>Refer to Exterior Elevation "G" A7-2 for guard rail elevation</p>
<p>Are there (4) pairs of card readers to be re used, supplied by owner?</p>	<p>There is a pair at each gate off Air City and one each at the front gates off Troy Street, DP&L will contract security equipment and installation through ADT. The winning vendor for the North Dayton project must work closely with ADT to coordinate construction schedules and ensure appropriate building equipment is procured and installed.</p>
<p>Is the fence contractor responsible for the card reader at fuel dispenser tank?</p>	<p>DP&L will contract security equipment and installation through ADT. The winning vendor for the North Dayton project must work closely with ADT to coordinate construction schedules and ensure appropriate building equipment is procured and installed.</p>
<p>Do we provide the card readers? If so, I would assume that the new card readers need to be compatible with the existing ones, read all of the same cards. Can you tell me the make and model of existing card readers? Do the card readers and gate operators require battery back-up?</p>	<p>DP&L will contract security equipment and installation through ADT. The winning vendor for the North Dayton project must work closely with ADT to coordinate construction schedules and ensure appropriate building equipment is procured and installed.</p>

We looked in the Mechanical section of the specifications and it refers to the drawings for the specifications. We do not see anything on the mechanical drawings for Temperature Controls. Will you please provide us with the controls specifications and the sequence of operation for this project?

Specifications were issued by addenda

Note 18 on A3-2 says to "Paint (existing bollards) if necessary". Please define "if necessary".

Note is to read "Repaint all existing bollards"

Door 102 - door schedule says it is aluminum, elevations on sheet A9-1 says it is hollow metal. Please clarify material type.

Aluminum door assembly

What is the height of the borrow lite at the window shown on detail 2/A3-3 that measures 1'-7 1/2" wide? Is this hollow metal or aluminum storefront?

Refer to Section 9 A10-3 for typical section, Frame to be hollow metal

Are the shower receptors prefab units or should we be figuring ceramic tile floors in those areas ????? I know they are to get wall tile but I can't tell on the flooring

The shower floors are to be finished as noted on Sheet A11-0 Finish Schedule, coded note #11

Can you provide detail 1/SD-3 for the transformer containment pit? I could not find it on the drawings.

Refer to section 11 SD-3 for requested detail

On Addendum #1 under the electrical drawings E6-0 one line diagram item #2 it says to revise Panel LP1 and refer to sketch. No new sketches were provided.

Refer to attached SKE-1

Prevailing Wage? Tax Exempt?

No “prevailing wage”, Sales tax cannot appear as a separate line item on invoices. For items such as carpet, office furniture, etc., the general contractor should not pay sales tax. DP&L will make direct payments for such items.

Slide Gate Entrance facing Troy Street: There isn't enough room for the slide gate to open back to fence line. The opening is approximate 23' and the counter balance (tail of the slide gate) will be half of the opening – 11' 6" and that will make the gate 34' 6" overall. The fence line is going back to building is 28' and 7' on the other side of the opening.

All cantilever gates have been moved to the inside of the fence system

The entry gate off Troy Street into the lot need to have a opening off only 20'-0"

Slide Gates facing Air City Road: Storage Yard Entrance Gates: The entrance side (west side) gate will open into the storage yard freely by the cantilever storage racks. UL-325 requirements states that when you have a slide gate open freely past the fence line, to box in the tail of moving slide gate to reduce pinching points and this would also protect the gate as well.

All cantilever gates have been moved to the inside of the fence system

The gate into the employee parking is to slide into the grass area in front of the parking area

The gate into the storage lot is to slide into the gravel area between the employee parking and the storage lot

Employee Parking Lot Entrance Gates: The entrance side (west side) will not be able to open back due to size of fence line to open back. Slide Gates will not work outside of fence because the gate operator will be

outside of fence line and this system will not be safe from liability and vandalism. Please advise.

Turnstile Option 2: ADT isn't a manufacture of the this turnstile but a dealer. Allied is also a dealer with the same manufacture. Is Option 2 mandatory to buy through ADT?

No, the turnstiles to be by either supplier, DP&L will contract security equipment and installation through ADT. The winning vendor for the North Dayton project must work closely with ADT to coordinate construction schedules and ensure appropriate building equipment is procured and installed.

Fence Removal: Can Posts be cut below ground surface? or Does the post needed to be pulled and filled with top soil and seeded?

The posts are to removed hole filled in with top soil and seeded

Is the roller compacted concrete installed over compacted gravel fill?

Roller compacted concrete & concrete pavement - see Specification 33100 for roller compacted concrete; see Sheet SD-4 for concrete pads; concrete drives, in conjunction with heavy duty asphalt alternate, to be in accordance with City of Dayton Standard Drawings. Concrete drives & roller compacted concrete to be installed on 6-inch thick compacted ODOT Item 304.

BIDDER'S PROPOSAL

TO: _____
(GENERAL CONTRACTOR)

Having carefully read and examined the "Instructions to Bidders", "General Conditions", "General Terms and Conditions for Dayton Power & Light Construction Contract" "Project General Requirements", "Supplementary Requirements", "Scope of Work for all Bid Packages, Specifications and Drawings and Safety Requirements for the project:

**Dayton Power & Light Company
Addition & Renovation to the North Service Center
1317 Troy Street
Dayton, OH 45404**

Single Prime General Contractor Bid for all specification sections

And having inspected the premises and the conditions affecting the work, the undersigned proposes to furnish all labor, equipment, materials and supervision to complete the work in accordance with the Contract Documents. The undersigned further agrees that if said bid is accepted, will enter into a DP&L Standard contract (copy included with bid package) for the faithful performance of labor and furnishing materials if such bid is accepted.

(Contractor)		
BID LABOR	MATERIAL	TOTAL
\$ _____	\$ _____	\$ _____
Total Bid for all sections of work		

BID BREAKDOWN BY PHASING

Phase 1A	Employee Parking Lot &		
Phase 1B	Outdoor Storage Area		
		BID LABOR	MATERIAL
		TOTAL PHASE 1A & 1B	
		\$ _____	\$ _____

Phase 1C	New addition and asphalt resurfacing around the new addition and new DP&L Southwest asphalt lot for 12 cars.		
		BID LABOR	MATERIAL
		TOTAL PHASE 1C	
		\$ _____	\$ _____

Phase 2A	Renovate old garage area into new shower / locker rooms and lineman gathering spaces		
		BID LABOR	MATERIAL
		TOTAL PHASE 2A	
		\$ _____	\$ _____

By signature below, the bidding contractor agrees to complete this bid package in the scheduled time frame specified in the bidding documents.

Date of Submission of Proposal

Name of Bidder

By (Name & Title)

VOLUNTARY ALTERNATES AND SUBSTITUTIONS

The undersigned agrees that the proposals contained herein are based on the standards and the quality established and/or required by the Specifications and shown or indicated on the Drawings. Any deviation or suggestions indicated below along with the price or price change are tended for consideration only as an alternative or substitute to the contained in the Contract Documents.

Full shop drawings for any alternates or substitution are to be provided immediately upon request. These will be reviewed for compliance to specifications and drawing requirements prior to final acceptance.

General Contractors shall submit their list of sub-contractors included in their bid on the list provided below.

- Excavation _____
- Landscaping _____
- Fencing & Gates _____
- Cast in Place Concrete _____
- Asphalt & Concrete Paving _____
- Structural Steel Fabrication _____
- Structural Steel Erection _____
- Metal Building Supplier & Erector _____
- Metal Framing & Drywall _____
- Architectural Casework _____
- Roofing _____
- Doors & Hardware _____
- Overhead Doors & Operators _____
- Aluminum Entrances & Storefronts _____
- Flooring _____
- Painting & Wall Finishes _____
- Lockers _____
- Sprinkler _____
- HVAC Contractor _____
- Electrical Contractor _____

The low bidders shall present their schedule of values within 24 hours after submitting their bid. Proposal pricing as submitted on this Bidder's Proposal is to be held through successful final completion of the project.

END OF BIDDER'S PROPOSAL

SECTION 079200 - JOINT SEALERS**PART 1 - GENERAL****RELATED DOCUMENTS**

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division-1 Specification Sections, apply to this Section.

Alternates: Refer to Section 010300 - Alternates.

SUMMARY

This Section includes joint sealants for the following locations:

- Exterior joints in vertical surfaces and non-traffic horizontal surfaces as indicated below.
 - Control and expansion joints in unit masonry.
 - Control and expansion joints in cast-in-place concrete.
 - Joints between different materials listed above.
 - Perimeter joints between materials listed above and frames of doors.
 - Other joints as indicated.
- Exterior joints in horizontal traffic surfaces as indicated below:
 - Control, expansion, and isolation joints in cast-in-place concrete slabs and sidewalks.
Other joints as indicated.
- Interior joints in horizontal traffic surfaces as indicated below:
 - Control and expansion joints in cast-in-place concrete.
 - Control and expansion joints in unit masonry

Related Sections: The following Sections contain requirements that relate to this Section:

SYSTEM PERFORMANCE REQUIREMENTS

Provide elastomeric joint sealants that have been produced and installed to establish and to maintain watertight and airtight continuous seals without causing staining or deterioration of joint substrates.

Provide joint sealants for interior applications that have been produced and installed to establish and maintain airtight continuous seals that are water resistant and cause no staining or deterioration of joint substrates.

SUBMITTALS

Product data from manufacturers for each joint sealant product required.

- Certification by joint sealant manufacturer that sealants plus the primers and cleaners required for sealant installation comply with local regulations controlling use of volatile organic compounds.

Samples for initial selection purposes in form of manufacturer's standard bead samples, consisting of strips of actual products showing full range of colors available, for each product exposed to view.

Samples for verification purposes of each type and color of joint sealant required. Install joint sealant samples in 1/2-inch-wide joints formed between two 6-inch-long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.

QUALITY ASSURANCE

Installer Qualifications: Engage an experienced Installer who has completed joint sealant applications similar in material, design, and extent to that indicated for Project that have resulted in construction with a record of successful in-service performance.

PROJECT CONDITIONS

Environmental Conditions: Do not proceed with installation of joint sealers under the following conditions:

- When ambient and substrate temperature conditions are outside the limits permitted by joint sealant manufacturer or below 40 deg. F.
- When joint substrates are wet.

Joint Width Conditions: Do not proceed with installation of joint sealants where joint widths are less than allowed by joint sealant manufacturer for application indicated.

Joint Substrate Conditions: Do not proceed with installation of joint sealants until contaminants capable of interfering with their adhesion are removed from joint substrates.

PART 2 - PRODUCTS

MATERIALS, GENERAL

Compatibility: Provide joint sealants, joint fillers, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.

Colors: Provide color of exposed joint sealants to comply with the following:

- Provide selections made by Architect from manufacturer's full range of standard colors for products of type indicated.

Classification Schedule:

Refer to the following schedule explaining classifications used in this specification to describe type, use, grade and class of joint sealants.

- Type S: Single component product.
- Type M: Multi-component products.
- Use T: Sealant designed for joints subject to pedestrian and vehicular traffic exposure.
- Use NT: Sealant designed for non-traffic exposure.
- Uses M, G, A, and O: Sealants designed for adherence to mortar (M), glass (G), aluminum (A) and materials other than the previous three (O).
- Grade P: Products with sufficient flow to fill joints in horizontal surfaces and remain level and smooth at a temperature of 40 degrees F.

- ❑ Grade NS: Products which can be applied to joints in vertical surfaces without sagging at temperatures between 40 degrees F and 122 degrees F.
- ❑ Classes 25 and 12-1/2: Sealants able to withstand an increase and decrease of plus or minus 25 percent or plus or minus 12-1/2 percent of joint width.

Joint Sealant Schedule:

The following schedule lists and identifies joint sealants to be used in the work and location where sealant is typically applied.

- ❑ Multi-Part Pourable Urethane Sealant: Exterior and interior joints in horizontal surfaces of concrete; between metal and concrete, mortar, stone and masonry.
- ❑ One-Part Neutral Cure Silicone Sealant: Exterior and interior joints in vertical surfaces of concrete and masonry; between concrete masonry and stone; between metal and concrete, mortar or stone; interior and exterior perimeter joints of metal frames in exterior walls; exterior overhead joints.
- ❑ One-Part Acid-Curing Silicone Sealant: Exposed joints within glazed curtain wall framing systems, skylight framing systems, and aluminum entrance framing systems.
- ❑ One-Part Mildew-Resistant Silicone Sealant: Interior joints in vertical surfaces of ceramic tile in toilet rooms.
- ❑ Acrylic-Emulsion Sealant: Interior joints in field-painted vertical and overhead surfaces at perimeter of elevator door frames and hollow metal door frames; in gypsum drywall, plaster, concrete and concrete masonry; and all other interior joints not indicated otherwise.

ELASTOMERIC JOINT SEALANTS

Elastomeric Sealant Standard: Provide manufacturer's standard chemically curing elastomeric sealants that comply with ASTM C 920 and other requirements indicated on each Elastomeric Joint Sealant Data Sheet at end of this Section, including those requirements referencing ASTM C 920 classifications for Type, Grade, Class, and Uses.

SOLVENT-RELEASE-CURING JOINT SEALANTS

Acrylic Sealant: Manufacturer's standard one-part, non-sag, solvent-release-curing acrylic terpolymer sealant complying with AAMA 808.3 or FS TT-S-00230 or both, with capability when tested for adhesion and cohesion under maximum cyclic movement per ASTM C 719, to withstand the following percentage change in joint width existing at time of application and remain adhered to joint substrates indicated for Project without failing cohesively:

- ❑ 12-1/2 percent movement in both extension and compression for a total of 25 percent.

Butyl Sealant: Manufacturer's standard one-part, non-sag, solvent-release-curing, polymerized butyl sealant complying with ASTM C 1085 and formulated with minimum of 75 percent solids to be non-staining, paintable, and have a tack-free time of 24 hours or less.

Pigmented Narrow Joint Sealant: Manufacturer's standard, solvent-release-curing, pigmented synthetic rubber sealant complying with AAMA 803.3 and formulated for sealing joints 3/16 inch or smaller in width.

LATEX JOINT SEALANTS

General: Provide manufacturer's standard one-part, non-sag, mildew-resistant, paintable latex sealant of formulation indicated that is recommended for exposed applications on interior and protected exterior

locations and that accommodates indicated percentage change in joint width existing at time of installation without failing either adhesively or cohesively.

Acrylic-Emulsion Sealant: Provide product complying with ASTM C 834 that accommodates joint movement of not more than 5 percent in both extension and compression for a total of 10 percent.

Silicone Emulsion Sealant: Provide product complying with ASTM C 834 and, except for weight loss measured per ASTM C 792, with ASTM C 920 that accommodates joint movement of not more than 25 percent in both extension and compression for a total of 50 percent.

EPOXY JOINT SEALANT

Epoxy Joint Sealant: shall be EVAZOTE 380 ESP System with EVA-POX Bonder #1 as manufactured by E-Poxy Industries, Inc., 14 W. Shore Street, Ravena, New York 12143-1698 (1-800-833-3400).

TAPE SEALANTS

Tape Sealant: Manufacturer's standard, solvent-free, butyl-based tape sealant with a solids content of 100 percent formulated to be non-staining, paintable, and non-migrating in contact with non-porous surfaces with or without reinforcement thread to prevent stretch and packaged on rolls with a release paper on one side.

PREFORMED FOAM SEALANTS

Prefomed Foam Sealants: Manufacturer's standard preformed, pre-compressed, impregnated open-cell foam sealant manufactured from high-density urethane foam impregnated with a non-drying, water repellent agent; factory-produced in pre-compressed sizes and in roll or stick form to fit joint widths indicated and to develop a watertight and airtight seal when compressed to the degree specified by manufacturer; and complying with the following requirements:

Properties: Permanently elastic, mildew-resistant, non-migratory, non-staining, and compatible with joint substrates and other joint sealants.

- Impregnating Agent: Manufacturer's standard.
- Density: Manufacturer's standard.
- Backing: None.

JOINT SEALANT BACKING

General: Provide sealant backings of material and type that are non-staining; are compatible with joint substrates, sealants, primers and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.

Plastic Foam Joint Fillers: Preformed, compressible, resilient, non-staining, non-waxing, non-extruding strips of flexible plastic foam of material indicated below and of size, shape, and density to control sealant depth and otherwise contribute to producing optimum sealant performance:

- Open-cell polyurethane foam.
- Closed-cell polyethylene foam, non-absorbent to liquid water and gas, non-outgassing in unruptured state.
- Proprietary, reticulated, closed-cell polymeric foam, non-outgassing, with a density of 2.5 pcf and tensile strength of 35 psi per ASTM D 1623, and with water absorption less than 0.02 gms/cc per ASTM C 1083.

- Any material indicated above.

Elastomeric Tubing Joint Fillers: Neoprene, butyl, EPDM, or silicone tubing complying with ASTM D 1056, non-absorbent to water and gas, capable of remaining resilient at temperatures down to -26 deg F (-32 deg C). Provide products with low compression set and of size and shape to provide a secondary seal, to control sealant depth, and otherwise contribute to optimum sealant performance.

Bond-Breaker Tape: Polyethylene tape or other plastic tape as recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

MISCELLANEOUS MATERIALS

Primer: Material recommended by joint sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint sealant-substrate tests and field tests.

Cleaners for Non-porous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming in any way joint substrates and adjacent non-porous surfaces, and formulated to promote optimum adhesion of sealants with joint substrates.

Masking Tape: Non-staining, non-absorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

EXAMINATION

Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint sealant performance. Do not proceed with installation of joint sealants until unsatisfactory conditions have been corrected.

PREPARATION

Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with recommendations of joint sealant manufacturer and the following requirements:

- Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
- Clean concrete, masonry, unglazed surfaces of ceramic tile, and similar porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining from above cleaning operations by vacuuming or blowing out joints with oil-free compressed air.
- Remove laitance and form release agents from concrete.
- Clean metal, glass, porcelain enamel, glazed surfaces of ceramic tile, and other non-porous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.

Joint Priming: Prime joint substrates where indicated or where recommended by joint sealant manufacturer based on preconstruction joint sealant-substrate tests or prior experience. Apply primer to

comply with joint sealant manufacturer's recommendations. Confine primers to areas of joint sealant bond; do not allow spillage or migration onto adjoining surfaces.

Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

INSTALLATION OF JOINT SEALANTS

General: Comply with joint sealant manufacturer's printed installation instructions applicable to products and applications indicated, except where more stringent requirements apply.

Sealant Installation Standard: Comply with recommendations of ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.

Acoustical Sealant Application Standard: Comply with recommendations of ASTM C 919 for use of joint sealants in acoustical applications as applicable to materials, applications, and conditions indicated.

Installation of Sealant Backings: Install sealant backings to comply with the following requirements:

- ❑ Install joint fillers of type indicated to provide support of sealants during application and at position required to produce the cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
 - Do not leave gaps between ends of joint fillers.
 - Do not stretch, twist, puncture, or tear joint fillers.
 - Remove absorbent joint fillers that have become wet prior to sealant application and replace with dry material.
- ❑ Install bond breaker tape between sealants where backer rods are not used between sealants and joint fillers or back of joints.

Installation of Sealants: Install sealants by proven techniques that result in sealants directly contacting and fully wetting joint substrates, completely filling recesses provided for each joint configuration, and providing uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability. Install sealants at the same time sealant backings are installed.

Tooling of Non-sag Sealants: Immediately after sealant application and prior to time skinning or curing begins, tool sealants to form smooth, uniform beads of configuration indicated, to eliminate air pockets, and to ensure contact and adhesion of sealant with sides of joint. Remove Excess sealants from surfaces adjacent to joint. Do not use tooling agents that discolor sealants or adjacent surfaces or are not approved by sealant manufacturer.

- ❑ Provide concave joint configuration per Figure 5A in ASTM C 1193, unless otherwise indicated.
- ❑ Provide flush joint configuration, per Figure 5B in ASTM C 1193, where indicated.
 - Use masking tape to protect adjacent surfaces of recessed tooled joints.
- ❑ Provide recessed joint configuration, per Figure 5C in ASTM C 1193 of recess depth and at locations indicated.

Installation of Preformed Foam Sealants: Install each length of sealant immediately after removing protective wrapping, taking care not to pull or stretch material, and to comply with sealant manufacturer's directions for installation methods, materials, and tools that produce seal continuity at ends, turns, and intersections of joints. For applications at low ambient temperatures where expansion of sealant requires acceleration to produce seal, apply heat to sealant in conformance with sealant manufacturer's recommendations.

CLEANING

Clean off excess sealants or sealant smears adjacent to joints as work progresses by methods and with cleaning materials approved by manufacturers of joint sealants and of products in which joints occurs.

PROTECTION

Protect joint sealants during and after curing period from contact with contaminating substances or from damage resulting from construction operations or other causes so that they are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so that repaired areas are indistinguishable from original work.

END OF SECTION 079200

SECTION 095110 - ACOUSTICAL PANEL CEILINGS**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes fire-rated acoustical panels and fire-rated exposed suspension systems for ceilings.
- B. Products furnished, but not installed under this Section, include anchors, clips, and other ceiling attachment devices to be cast in concrete at ceilings.

1.3 DEFINITIONS

- A. AC: Articulation Class.
- B. CAC: Ceiling Attenuation Class.
- C. LR: Light Reflectance coefficient.
- D. NRC: Noise Reduction Coefficient.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Coordinate Drawings: Reflected ceiling plans drawn to scale and coordinating penetrations and ceiling-mounted items. Show the following:
 - 1. Ceiling suspension members.
 - 2. Method of attaching hangers to building structure.
 - a. Furnish layouts for cast-in-place anchors, clips, and other ceiling attachment devices whose installation is specified in other Sections.
 - 3. Ceiling-mounted items including lighting fixtures, diffusers, grilles, speakers, sprinklers, access panels, and special moldings.
 - 4. Minimum Drawing Scale: 1/8 inch = 1 foot (1:96)
- C. Samples for Initial Selection: For components with factory-applied color finishes.
- D. Samples for Verification: For each component indicated and for each exposed finish required, prepared on Samples of size indicated below.
 - 1. Acoustical Panel: Set of 6-inch- (150-mm-) square Samples of each type, color, pattern, and texture.
 - 2. Exposed Suspension System Members, Moldings, and Trim: Set of 12-inch- (300-mm-) long Samples of each type, finish, and color.
- E. Field quality-control test reports.
- F. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for each acoustical panel ceiling.

- G. Research/Evaluation Reports: For each acoustical panel ceiling and components and anchor type.
- H. Maintenance Data: For finishes to include in maintenance manuals.

1.5 QUALITY ASSURANCE

- A. Acoustical Testing Agency Qualifications: An independent testing laboratory, or an NVLAP-accredited laboratory, with the experience and capability to conduct the testing indicated, as documented according to ASTM E 548. NVLAP-accredited laboratories must document accreditation, based on a "Certificate of Accreditation" and a "Scope of Accreditation" listing the test methods specified.
- B. Source Limitations:
 - 1. Acoustical Ceiling Panel: Obtain each type through one source from a single manufacturer.
 - 2. Suspension System: Obtain each type through one source from a single manufacturer.
- C. Source Limitations: Obtain each type of acoustical ceiling panel and supporting suspension system through one source from a single manufacturer.
- D. Fire-Test-Response Characteristics: Provide acoustical panel ceilings that comply with the following requirements:
 - 1. Fire-Resistance Characteristics: Provide acoustical panel ceilings identical to those of assemblies tested for fire resistance per ASTM E 119 by UL or another testing and inspecting agency acceptable to authorities having jurisdiction.
 - a. Fire-Resistance Ratings: Indicated by design designations from UL's "Fire Resistance Directory" or from the listings of another testing and inspecting agency. Acoustic panels and fire rated suspended grid system shall attain a ¾ hour fire rating.
 - b. Identify materials with appropriate markings of applicable testing and inspecting agency.
 - 2. Surface-Burning Characteristics: Provide acoustical panels with the following surface-burning characteristics complying with ASTM E 1264 for Class A materials as determined by testing identical products per ASTM E 84:
 - a. Smoke-Developed Index: 450 or less.
 - b. Maximum flame spread: (UL) 0-25.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver acoustical panels, suspension system components, and accessories to Project site in original, unopened packages and store them in a fully enclosed, conditioned space where they will be protected against damage from moisture, humidity, temperature extremes, direct sunlight, surface contamination, and other causes.
- B. Before installing acoustical panels, permit them to reach room temperature and a stabilized moisture content.
- C. Handle acoustical panels carefully to avoid chipping edges or damaging units in any way.

1.7 PROJECT CONDITIONS

- A. Environmental Limitations: Do not install acoustical panel ceilings until spaces are enclosed and weatherproof, wet work in spaces is complete and dry, work above ceilings is complete, and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.
 - 1. Pressurized Plenums: Operate ventilation system for not less than 48 hours before beginning acoustical panel ceiling installation.

1.8 COORDINATION

- A. Coordinate layout and installation of acoustical panels and suspension system with other construction that penetrates ceilings or is supported by them, including light fixtures, HVAC equipment, fire-suppression system, and partition assemblies.

1.9 EXTRA MATERIALS

- A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Acoustical Ceiling Panels: Full-size panels equal to 2.0 percent of quantity installed.
 - 2. Suspension System Components: Quantity of each exposed component equal to 2.0 percent of quantity installed.

PART 2 - PRODUCTS**2.1 MANUFACTURERS**

- A. In other Part 2 articles where titles below introduce lists, the following requirements apply for product selection:
 - 1. Manufacturers: Subject to compliance with requirements, provide products by the manufacturers specified. Refer to Room finish Schedule and Legend on construction drawings.

2.2 METAL SUSPENSION SYSTEMS, GENERAL

- A. Metal Suspension System Standard: Provide manufacturer's standard direct-hung metal suspension systems of types, structural classifications, and finishes indicated that comply with applicable requirements in ASTM C 635.
- B. Finishes and Colors, General: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes. Provide manufacturer's standard factory-applied finish for type of system indicated.
- C. Attachment Devices: Size for five times the design load indicated in ASTM C 635, Table 1, "Direct Hung," unless otherwise indicated.
- D. Wire Hangers, Braces, and Ties: Provide wires complying with the following requirements:
 - 1. Zinc-Coated Carbon-Steel Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper.
 - 2. Nickel-Copper-Alloy Wire: ASTM B 164, nickel-copper-alloy UNS No. N04400.

3. Size: Select wire diameter so its stress at three times hanger design load (ASTM C 635, Table 1, "Direct Hung") will be less than yield stress of wire, but provide not less than 0.106-inch- (2.69-mm-) diameter wire.
- E. Hanger Rods, Flat Hangers: Mild steel, zinc coated or protected with rust-inhibitive paint.
- F. Angle Hangers: Angles with legs not less than 7/8 inch (22 mm) wide; formed with 0.04-inch- (1-mm-) thick, galvanized steel sheet complying with ASTM A 653/A 653M, G90 (Z275) coating designation; with bolted connections and 5/16-inch- (8-mm-) diameter bolts.

2.3 METAL EDGE MOLDINGS AND TRIM

- A. Available Manufacturers:
1. Armstrong World Industries, Inc.
 2. Chicago Metallic Corporation.
 3. USG Interiors, Inc.
- B. Roll-Formed Sheet-Metal Edge Moldings and Trim: Type and profile indicated or, if not indicated, manufacturer's standard moldings for edges and penetrations that fit acoustical panel edge details and suspension systems indicated; formed from sheet metal of same material, finish, and color as that used for exposed flanges of suspension system runners.
1. For lay-in panels with reveal edge details, provide stepped edge molding that forms reveal of same depth and width as that formed between edge of panel and flange at exposed suspension member.
 2. For circular penetrations of ceiling, provide edge moldings fabricated to diameter required to fit penetration exactly.
 3. For narrow-face suspension systems, provide suspension system and manufacturer's standard edge moldings that match width and configuration of exposed runners.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, including structural framing to which acoustical panel ceilings attach or abut, with Installer present, for compliance with requirements specified in this and other Sections that affect ceiling installation and anchorage and with requirements for installation tolerances and other conditions affecting performance of acoustical panel ceilings.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Measure each ceiling area and establish layout of acoustical panels to balance border widths at opposite edges of each ceiling. Avoid using less-than-half-width panels at borders, and comply with layout shown on reflected ceiling plans.

3.3 INSTALLATION, GENERAL

- A. General: Install acoustical panel ceilings to comply with US263, also known as A2.1, ASTM E-119 and NFPA 251 and ASTM C 636 and per manufacturer's written instructions and CISCA's "Ceiling Systems Handbook."

- B. Suspend ceiling hangers from building's structural members and as follows:
1. Install hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structure or of ceiling suspension system. Wire should be located between the main tee splice and the expansion relief notch and a maximum 48" o.c. or per the requirements of the specific UL design.
 2. Splay hangers only where required to miss obstructions; offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.
 3. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with location of hangers at spacings required to support standard suspension system members, install supplemental suspension members and hangers in form of trapezes or equivalent devices. Size supplemental suspension members and hangers to support ceiling loads within performance limits established by referenced standards and publications.
 4. Secure wire hangers to ceiling suspension members and to supports above with a minimum of three tight turns. Connect hangers directly either to structures or to inserts, eye screws, or other devices that are secure and appropriate for substrate and that will not deteriorate or otherwise fail due to age, corrosion, or elevated temperatures.
 5. Secure flat, angle, channel, and rod hangers to structure, including intermediate framing members, by attaching to inserts, eye screws, or other devices that are secure and appropriate for both structure to which hangers are attached and type of hanger involved. Install hangers in a manner that will not cause them to deteriorate or fail due to age, corrosion, or elevated temperatures.
 6. Do not support ceilings directly from permanent metal forms or floor deck. Fasten hangers to cast-in-place hanger inserts, postinstalled mechanical or adhesive anchors, or power-actuated fasteners that extend through forms into concrete.
 7. Do not attach hangers to steel deck tabs.
 8. Do not attach hangers to steel roof deck. Attach hangers to structural members.
 9. Space hangers not more than 48 inches (1200 mm) o.c. along each member supported directly from hangers, unless otherwise indicated; provide hangers not more than 8 inches (200 mm) from ends of each member.
- C. Secure bracing wires to ceiling suspension members and to supports with a minimum of four tight turns. Suspend bracing from building's structural members as required for hangers, without attaching to permanent metal forms, steel deck, or steel deck tabs. Fasten bracing wires into concrete with cast-in-place or post installed anchors.
- D. Install edge moldings and trim of type indicated at perimeter of acoustical ceiling area and where necessary to conceal edges of acoustical panels.
1. Screw attach moldings to substrate at intervals not more than 16 inches (400 mm) o.c. and not more than 3 inches (75 mm) from ends, leveling with ceiling suspension system to a tolerance of 1/8 inch in 12 feet (3.2 mm in 3.66 m). Miter corners accurately and connect securely.
 2. Do not use exposed fasteners, including pop rivets, on moldings and trim.
- E. Install suspension system runners so they are square and securely interlocked with one another. Remove and replace dented, bent, or kinked members.

- F. Install acoustical panels with undamaged edges and fit accurately into suspension system runners and edge moldings. Scribe and cut panels at borders and penetrations to provide a neat, precise fit.
1. For square-edged panels, install panels with edges fully hidden from view by flanges of suspension system runners and moldings.
 2. For reveal-edged panels on suspension system runners, install panels with bottom of reveal in firm contact with top surface of runner flanges.
 3. For reveal-edged panels on suspension system members with box-shaped flanges, install panels with reveal surfaces in firm contact with suspension system surfaces and panel faces flush with bottom face of runners.
 4. Paint cut edges of panel remaining exposed after installation; match color of exposed panel surfaces using coating recommended in writing for this purpose by acoustical panel manufacturer.
 5. Install hold-down clips in areas indicated, in areas required by authorities having jurisdiction, and for fire-resistance ratings; space as recommended by panel manufacturer's written instructions, unless otherwise indicated.
 6. Protect lighting fixtures and air ducts to comply with requirements indicated for fire-resistance-rated assembly.

3.4 CLEANING

- A. Clean exposed surfaces of acoustical panel ceilings, including trim, edge moldings, and suspension system members. Comply with manufacturer's written instructions for cleaning and touchup of minor finish damage. Remove and replace ceiling components that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.

END OF SECTION 095110

PANEL ID: LP1 - RIGHT TUB
 LOCATION: LINEMEN GATHERING 123
 MOUNTING: SURFACE
 MAIN TYPE: MAIN LUGS ONLY

VOLTAGE: 208 / 120
 PHASE: 3
 WIRE: 4
 MAIN SIZE: 225 AMPS

LEGEND:

NOTES: COORDINATE LUG SIZE WITH WIRE SIZE ON 1 LINE DIAGRAM.

PROVIDE PANEL WITH FEED THRU LUGS.

GND SIZE	WIRE SIZE	BRANCH CIRCUIT DESCRIPTION	CIRCUIT BREAKER SIZE/TYPE	CIRCUIT NUMBER	CIRCUIT BREAKER SIZE/TYPE	BRANCH CIRCUIT DESCRIPTION	WIRE SIZE	GND SIZE
		(E) CORD REEL	20/1	1 * 2	20/1	(E) GFI SOUTH FENSE		
		(E) GFI OUTSIDE	20/1	3 * 4	20/1	(E) GFI SOUTH FENCE		
		(E) GFI OUTSIDE	20/1	5 * 6	20/1	(E) GFI SOUTH FENCE		
		(E) CORD REEL	20/1	7 * 8	20/1	(E) GFI SOUTH FENCE		
		(E) CORD REEL	20/1	9 * 10	20/1	(E) GFI SOUTH FENCE		
		(E) CORD REEL	20/1	11 * 12	20/1	(E) GFI SOUTH FENCE		
		(E)GFI	20/1	13 * 14	20/1	(E) GFI SOUTH FENCE		
		(E)GFI	20/1	15 * 16	20/1	(E) GFI SOUTH FENCE		
		(E)GFI	20/1	17 * 18	20/1	(E) GFI SOUTH FENCE		
		(E)GFI	20/1	19 * 20	20/1	(E) GFI SOUTH FENCE		
		(E)GFI	20/1	21 * 22	20/1	(E) SOUTHIDE GFI		
		(E)WALL PACK	20/1	23 * 24	20/1	(E) SOUTHIDE GFI		
		(E) GFI	20/1	25 * 26	20/1	(E) SOUTHIDE GFI		
		(E) LIGHTS STORE	20/1	27 * 28	20/1	(E) SOUTHIDE GFI		
		(E)EXIT LIGHTS	20/1	29 * 30	20/1	(E) SOUTHIDE GFI		
		SPARE	20/1	31 * 32	20/1	SPARE		
		SPARE	20/1	33 * 34	20/1	SPARE		
		SPARE	20/1	35 * 36	20/1	SPARE		
		SPARE	20/1	37 * 38	20/1	SPARE		
10	10	TB3	30/2	39 * 40	20/1	SPARE		
-	10	-	-	41 * 42	20/1	SPARE		

CONNECTED LOAD SUMMARY:

LIGHTING: 1.3 KVA
 RECEPTACLES & MISC.: 11.7 KVA
 MOTOR: 0.0 KVA
 HEATING: 0.0 KVA
 TOTAL: 13.0 KVA

PANEL AMP SUMMARY:

30.0 PHASE A
 38.7 PHASE B
 39.8 PHASE C

JOB NAME DAYTON POWER & LIGHTING
 NORTH SERVICE CENTER

SCALE N.T.S.

DATE 11/14/11

JOB NUMBER 2011-0201



Korda/Nemeth Engineering, Inc - Consulting Engineers

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REF. SHEET E5-0

SKETCH NO. SKE-2