Project Name Project No. Date

Project Location 11 95 13-1 Kilns

SECTION 11 95 13

KILNS

PART 1 - GENERAL

1.1 CONDITIONS AND REQUIREMENTS

A. The General Conditions, Supplementary Conditions, and Division 01 – General Requirements apply.

1.2 SECTION INCLUDES

A. Electric kilns.

Specifier Note: Use either or both of the paragraphs below after editing the section text.

B. Downdraft ventilation system.

C. Accessories.

1.3 RELATED SECTIONS

Specifier Note: In this article, specify work specified in other sections that is related to work of this section.

A. Section 26 05 19 - Low-Voltage Electrical Power Conductors and Cables: Services and connections to kilns and ventilation systems.

1.4 DESIGN REQUIREMENTS

Specifier Note: Visit manufacturer's web site for kiln BTU ratings for use in calculating air conditioning and ventilation requirements for rooms containing kilns.

A. Install kiln in well-ventilated, sheltered area. Do not permit temperature to exceed 105 degrees F while kiln is in use.

B. Provide a minimum of 18 inches between kiln and adjacent walls, other kilns, shelving, and other obstructions. When installing multiple kilns in the same room, ensure that the control boxes on the kilns are not facing adjacent kilns.

C. Locate kiln in a room or space with a bare concrete floor. If a bare concrete floor is not available provide a non-combustible substrate and two (2) inches of masonry below the kiln extending a minimum of 12 inches beyond the outside dimensions of the kiln.

D. If installing kilns in a room or space with a fire suppression system, do not place kilns in such a manner so as to cause sprinkler heads to go off.

E. If installing kilns in proximity to a marine environment, locate the kilns indoors and protect from exposure to damp air to avoid corrosion.

1.5 SUBMITTALS

Specifier Note: In this article, specify various types of data to be furnished by the contractor before, during, or after construction. Topics included in this article are: product data, shop drawings, samples, design data, test reports, certificates, manufacturers' instructions, manufacturers' field reports, qualification statements, and closeout submittals.

A. Submit under provisions of Section [01 33 00] [_____].

B. Product Data: Submit for kilns, ventilation systems, and accessories. Include product data, installation instructions, and manufacturer's recommendations.

C. Shop Drawings: Submit for kilns. Include plans indicating space required and relationship to work of other sections.

D. Operating and Maintenance Data: For kilns and ventilation systems to include maintenance manuals.

E. Warranties: Special warranties specified in this section.

1.6 QUALITY ASSURANCE

Specifier Note: In this article, describe qualifications, regulatory requirements, certifications, field samples, mock-ups, and pre-installation meetings.

A. Source Limitations: Obtain kilns, ventilation systems, and accessories through one (1) source from a single manufacturer. Kiln and ventilation system to be listed to UL 499 by a NRTA as a system.

B. Regulatory Requirements: Comply with provisions of the following product certifications:

1. NFPA: Provide kilns and ventilation systems listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

2. UL and NEMA: Provide electrical components required as part of kilns and ventilation systems that are listed and labeled by UL or other Nationally Recognized Testing Agency and that comply with applicable NEMA standards.

1.7 DELIVERY, STORAGE AND HANDLING

A. Deliver kilns, ventilation systems, and accessories in manufacturer's original packaging with protective covering intact.

B. Do not stack other items on top of packaged kilns during transportation and storage. Stack kilns with top end up.

C. Utilize equipment capable of moving the kiln and packaging without damage and install kilns into location.

D. Protect from damage due to weather, excessive temperature, and construction operations.

1.8 WARRANTY

A. Special Warranties: Manufacturer's standard form in which manufacturer of each kiln specified agrees replace any parts that fail in materials or workmanship within specified warranty period of five years.

1. Kiln: [See kiln specification sheet]-year limited warranty.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis-of-Design Product: The design for kilns, ventilation systems, and accessories is L&L Kiln Mfg., Inc., 505 Sharptown Road, Swedesboro, NJ 08085, Telephone: 856-294- 0077, Fax: 856-294-0070, Website: hotkilns.com/sm23t-3

Specifier Note: Select either of the following two (2) paragraphs and delete the other.

B. Substitutions are not permitted.

C. Substitutions will be considered under provisions of Section 01 60 00.

2.2 ELECTRIC KILNS

Specifier Note: Insert kiln model number in the following paragraph. Consult with manufacturer or distributor for assistance in selecting a kiln model appropriate for your application.

A. Electric Kilns: Manufacturer's Model No. [Insert kiln model number] [10-sided] [12- sided] [Font-Loading] electric kilns with components, options, and accessories needed to comply with requirements and provide complete functional kilns including the following components.

1. Full Support Kiln stand.

2. Kiln floor or slab.

3. 3" thick K23 Fire brick.

4. Kiln Interior Size: [See kiln specification sheet]

5. Kiln elements secured in hard protective ceramic channels to make kiln maintenace easy.

6. Designed system for securing kiln sections together.

7. Minimum of Two Chest handles for each independent high kiln section. [Delete this line for eFL front-loading kilns]

8. Lid with Stainless Steel Spring-Loaded lifter and latch. [Delete this line for eFL front-loading kilns]

9. Control box with angled touchpad for control to permit easy viewing and programming of kiln controls.

10. [See kiln specification sheet for number of thermocouples] Thermocouple(s) with ceramic protection tube

11. Control to be a Genesis Touchscreen type digital control with WiFi connectivity for monitoring temperature

12. Minimum of One Peephole plug per kiln section.

13. Factory prewire kilns for electrical switching devices and computer interface system. Factory predrill holes in the kiln floor for the downdraft ventilation system.

2.3 DOWNDRAFT VENTILATION SYSTEM

A. Downdraft Ventilation System: L&L “Vent-Sure” negative pressure downdraft ventilation system; capable of removing hazardous fumes only, not heat. System to consist of the following components:

1. Blower motor with six (6) ft power cord and in-line switch.

2. 8 x 12 inch mounting plate.

3. Eight (8) ft x three (3) inch flexible aluminum duct.

4. Spring-loaded plenum cup assembly.

5. Blower inlet tube.

6. Blower discharge tube.

8. Three (3) to four (4) inch connector.

9. Floor mounting plate.

10. Mounting hardware.

B. System fits a single top-loading, multi-sided, electric kiln with a chamber size less than 12 cu ft. Provide a dual intake kit to vent two (2) kilns with chamber volumes each under 12 cu ft.

C. Electrical Switching Device: L&L “Vent Control” electrical switching device utilizing a programmable power output in the controller to turn the downdraft ventilation system on and off using the event . [This paragraph is optional]

2.4 ACCESSORIES

A. Furniture Kits: Kit includes [See kiln specification sheet for number of shelves] high alumina cordierite pressed [See kiln specification sheet for diameter and shape of shelves] ” diameter half shelves and one (1) post kit with four each of ½”, 1”, 2” 4”, 6” and 8” high square posts evenly cut for stable kiln loading of shelves. Kits are designed to fire to Cone 10 temperatures.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions where kilns, ventilation systems, and accessories, for compliance with requirements that affect installation and with requirements for installation tolerances. Notify the Architect in writing of conditions detrimental to proper completion of the work. Do not proceed with work until unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Downdraft Ventilation System:1. Ensure that kiln stand is a minimum of eight (8) inches high. If stand is lower than eight (8) inches high, either shim legs to increase distance from floor to eight (8) inches or replace stand with one (1) that is eight (8) inches high.

2. If kiln does not have factory drilled holes, provide holes in the center of the bottom brick slab per manufacturer's recommendations in the ventilation instruction manual.

3.3 INSTALLATION

A. Install in strict accordance with manufacturer's written installation instructions and recommendations. Coordinate installation with adjacent work to ensure proper clearances.

B. Install units in final locations after finishes have been completed in each area. Verify that clearances are adequate to properly operate equipment.

C. Set units level, plumb, properly aligned, and securely in place.

D. See Division 26 sections for electrical requirements.

E. Downdraft Ventilation System:

1. Assemble and install system components on kiln in accordance with manufacturer's written instructions.

2. Install the blower and motor assembly on the wall in a location that is close enough for the flexible aluminum duct to reach the kiln without overstretching the duct. Where wallmounting is not possible, mount the vent motor on the floor or above the ceiling.

3.4 CLEANING AND PROTECTION

A. Test kilns, ventilation systems, and accessories to verify proper operation. Make necessary adjustments.

B. Verify that accessories required have been furnished and installed.

C. Remove packing material and leave kilns in clean condition, ready for operation.

END OF SECTION