**CALIFORNIA GREEN BUILDING STANDARDS CODE**

5.410 BUILDING MAINTENANCE AND OPERATION

5.410.4 TESTING AND ADJUSTING:

Testing and adjusting of systems installed shall be required for buildings less than 10,000 square feet or new systems to swerve an addition or alteration subject to Section 303.1.

5.410.4.2 SYSTEMS:

Develop a written plan of procedures for testing and adjusting systems. Systems to be included for testing and adjusting shall include at a minimum, as applicable to the project:

1. HVAC systems and controls
2. Indoor and outdoor lighting and controls
3. Water heating systems
4. Renewable energy systems
5. Landscape irrigation systems
6. Water reuse systems

5.410.4.3 PROCEDURES:

Perform testing and adjusting procedures in accordance with manufacturer's specifications and applicable standards on each system.

5.410.4.3.1 HVAC BALANCING:

In addition to testing and adjusting, before a new space-conditioning system serving a building or space is operated for normal use, the system shall be balanced in accordance with the procedures defined by the Testing Adjusting and Balancing Bureau National Standards; the National Environmental Balancing Bureau Procedural Standards; Associated Air Balance Council National Standards or as approved by the enforcing agency.

5.410.4.4 REPORTING:

After completion of testing, adjusting and balancing, provide a final report of testing signed by the individual responsible for performing these services.

5.410.4.5 OPERATION AND MAINTENANCE MANUAL:

Provide the building owner or representative with detailed operating and maintenance instructions and copies of guaranties/warranties for each system. O&M instructions shall be consistent with OSHA requirements in CCR, Title 8, Section 5142, and other related regulations.

5.410.4.5.1 INSPECTIONS AND REPORTS:

Include a copy of all inspection verifications and reports required by the enforcing agency.

5.504 POLLUTANT CONTROL

5.504.1 TEMPORARY VENTILATION:

The permanent HVAC system shall only be used during construction if necessary to condition the building or areas of addition or alteration within the required temperature range for material and equipment installation. If the HVAC system is used during construction, use return air filters with a Minimum Efficiency Reporting Value (MERV) of 8, based on ASHRAE 52.2-1999, or an average efficiency of 30% based on ASHRAE 52.1-1992. Replace air filters immediately prior to occupancy, or, if the building is occupied alteration, at the conclusion of construction.

5.504.3 COVERING OF DUCT OPENINGS OF MECHANICAL EQUIPMENT DURING CONSTRUCTION:

At the time of rough installation and during storage on the construction site until final startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheet metal, or other methods acceptable to the enforcing agency to reduce the amount of dust, water and debris which may collect in the system.

5.508 OUTDOOR AIR QUALITY

5.508.1 OZONE DEPLETION AND GREENHOUSE GAS REDUCTIONS:

Installations of HVAC, refrigeration, and fire suppression equipment shall comply with Section 5.508.1.1 and 5.508.1.2.

5.508.1.1 CHOLOROFLUOROCARBONS (CFCS):

Install HVAC, refrigeration and fire suppression equipment that do not contain CFCs.

5.508.1.2 HALONS:

Install HVAC, refrigeration and fire suppression equipment that do not contain Halons.

SECTION 15732 - PACKAGED ROOFTOP AIR-CONDITIONING UNITS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: Product Data and Shop Drawings.

B. Comply with ASHRAE 15.

C. EER: Equal to or greater than prescribed by ASHRAE 90.1, "Energy Efficient Design of New Building, except Low Rise Residential Buildings."

D. Warranties: Submit a written warranty, signed by the manufacturer, agreeing to the repair or replacement of components that fail within 5 years of Substantial Completion.

PART 2 - PRODUCTS

2.1 PACKAGED UNITS, 5 TO 20 TONS

A. Factory assembled and tested, consisting of compressors, condensers, evaporator coils, condenser and evaporator fans, refrigeration and temperature controls, filters, and dampers.

1. Refer to Rooftop Heating/Cooling Unit Schedule on drawing M200 for capacities, and manufacturers.
2. Evaporator Fans: Belt driven, forward curved centrifugal.
3. Exhaust/Relief Fans: Direct drive, forward curved centrifugal or propeller.
4. Condenser Fans: Direct drive propeller.
5. Refrigerant Coils: Aluminum fins and copper coil.
6. Compressors: Serviceable hermetic or fully hermetic, with safety controls, hot gas bypass, and timed off controls.
7. Heat Exchangers: Gas fired, with gas controls, electronic ignition, high limit cutout, and forced draft proving switch.
8. Economizer controls (Low-Leak Comparative Enthalpy, 100% capacity).
9. Low ambient controls.
10. Smoke Detectors: Photoelectric.
11. Operating Controls: Two stage heating and two stage cooling on units 8-1/2 tons and over.
12. Roof curb.
13. Control Wiring from T-stat to rooftop unit: Shall be 18ga / 7 conductor, rated for plenum applications.
14. Control Wiring from T-stat to remote sensor: Shall be a separate 18ga / 2 conductor shielded, rated for plenum applications.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install units level and plumb and firmly anchored.

B. Connect gas piping to burner with pipe same size as gas train inlet, and provide union with sufficient clearance for burner removal and service.

C. Connect to supply and return hydronic piping with shutoff valve and union or flange at each connection.

D. Install ducts to termination in roof mounting frames. Terminate return air duct through roof structure.

E. Connect units to wiring systems and to ground.

END OF SECTION 15732

SECTION 15810 - DUCTS AND ACCESSORIES

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: Product Data for fire and smoke dampers.

B. Comply with NFPA 90A for systems serving spaces more than 25,000 cu. ft. in volume or building Types II, IV, and V construction more than 3 stories in height.

C. Comply with NFPA 90B for systems serving spaces in 1 or 2 family dwellings or serving spaces less than 25,000 cu. ft..

D. Comply with NFPA 96, "Ventilation Control and Fire Protection of Commercial Cooking Operations," for kitchen hood ducts.

E. Comply with UL 181 and UL 181A for ducts and closures.

F. Testing, Adjusting, and Balancing Agency Qualifications: AABC certified (to be furnished by Tenant).

PART 2 - PRODUCTS

2.1 DUCTS

A. Spiral Duct: Spiral Lock Seam, without insulation, G90 galvanized finish, ASTM A-653/924

1. Basis of Design Manufacturers: Lindab SPIROsafe, alternates to the basis of design must be submitted for review.
2. Fittings: Factory produced standing seam construction with internal sealing. Fittings with a major axis of 36" or smaller shall be 20 gauge. Fittings with a major axis of 37"-48" shall be 18 gauge.

B. Galvanized Steel Sheet: Forming steel, ASTM A 653/653M, G90 coating designation.

C. Duct Liner: ASTM C 1071, Type II, with an airstream surface coated with a temperature resistant coating. Thickness: 1-1/2 inch. R-value : 8.

1. Adhesive: ASTM C 916, Type I.
2. Mechanical Fasteners: Galvanized steel pin, length as required to penetrate liner plus a 1/8 inch projection maximum into the airstream.

D. Joint and Seam Tape: Comply with UL 181A.

E. Joint and Seam Sealant: Comply with UL 181A.

F. Rectangular Metal Duct Fabrication: Comply with SMACNA's "HVAC Duct Construction Standard" for metal thickness, reinforcing types and intervals, tie rod applications, and joint types and intervals.

2.2 ACCESSORIES

A. Volume-Control Dampers: Factory fabricated volume control dampers, complete with required hardware and accessories. Single blade and multiple opposed blade, standard leakage rating, and suitable for horizontal or vertical applications.

B. Fire Dampers: Factory-fabricated fire dampers, complete with required hardware and accessories. UL labeled according to UL 555, "Fire Dampers".

C. Flexible Connectors: Flame retardant or noncombustible fabrics, coatings, and adhesives complying with UL 181, Class 1.

D. Flexible Ducts: Factory fabricated, insulated, round duct, with an outer jacket enclosing 2 inch thick, glass fiber insulation, R-value: 6.0, around a continuous inner liner.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Duct System Pressure Class: Construct and install each duct system with 2 inch positive and negative duct pressure classifications.

B. Conceal ducts from view in finished and occupied spaces. Except where noted as exposed.

C. Avoid passing through electrical equipment spaces and enclosures.

D. Support and connect metal ducts according to SMACNA's "HVAC Duct Construction Standard".

E. Install duct accessories according to applicable portions of details of construction as shown in SMACNA standards.

F. Install liner and/or insulation on ductwork per the material schedule on sheet M010.

G. Install volume control dampers in lined duct with methods to avoid damage to liner and to avoid erosion of duct liner.

H. Install fire and smoke dampers according to manufacturer's UL approved written instructions.

I. Install fusible links in fire dampers.

J. Provide saddle taps at tees for exposed ductwork.

3.2 TESTING, ADJUSTING, AND BALANCING

A. The Tenant will supply an independent balance agent to to balance and adjust the HVAC installation. The balance agent will be responsible for any pulley or belt changes required.

B. The GC is to have trained staffed available during the balancing to correct issues noted by the balance agent.

C. The balance agent is to balance airflow within distribution systems, including submains, branches, and terminals to indicated quantities +/- 10%. The hood exhaust system shall be balanced to a tolerance of -0+10% and the make-up air system to a tolerance of -10+0%.

D. The balance agent is to supply a copy of the balance report to the Tenant, engineer and general contractor for review.

END OF SECTION 15810

SECTION 15855 - DIFFUSERS, REGISTERS, AND GRILLES

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: None.

PART 2 - PRODUCTS

2.1 OUTLETS AND INLETS

A. All air terminal devices:

1. Refer to Grills, Registers, and Diffusers Schedule for equipment schedule
2. Manufacturer: As scheduled (NO SUBSTITUTIONS)
3. Material: As scheduled.
4. Finish: As scheduled.
5. Mounting: As scheduled.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Coordinate location and installation with duct installation and installation of other ceiling and wall mounted items.

B. Locate ceiling diffusers, registers, and grilles, as indicated on the architectural "reflected ceiling plans." Unless otherwise indicated, locate units in center of acoustical ceiling panels.

END OF SECTION 15855

## HVAC GENERAL NOTES

A GENERAL NOTES APPLY TO HVAC SHEETS.

B WORK SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AS APPROVED AND AMENDED BY THE AUTHORITY HAVING JURISDICTION, INCLUDING APPLICABLE SECTIONS OF NFPA, THE MECHANICAL CODE, AND ANY INTERIM AMENDMENTS AT THE TIME OF THE PROPOSAL. PURCHASE PERMITS ASSOCIATED WITH THE WORK. OBTAIN INSPECTIONS REQUIRED BY CODE. SEE ARCHITECTURAL SHEETS FOR THE PREVAILING CODES.

C CONTRACTOR AND SUBCONTRACTORS SHALL REVIEW A COMPLETE SET OF THE CONSTRUCTION DOCUMENTS.

D COORDINATE WORK WITH THE WORK OF OTHER TRADES, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE OWNER, AND OF THE EXISTING CONDITIONS AT THE PROJECT SITE.

E DRAWINGS FOR THE MECHANICAL WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWING SHALL NOT BE SCALED FOR EXACT MEASUREMENTS, REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE DUCTWORK, CONNECTIONS, OFFSETS, ACCESSORIES, AND MATERIALS NECESSARY FOR A COMPLETE SYSTEM.

F DUCT DIMENSIONS ON PLANS INDICATE DIMENSIONS OF INTERNAL FREE AREA.

G PERFORATED CEILING DIFFUSERS SHALL BE 4-WAY UNLESS NOTED OTHERWISE.

H COORDINATE ROOF WORK WITH THE OWNER'S CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION.

I UNLESS NOTED OTHERWISE RECTANGULAR DUCT ELBOWS GREATER THAN 45° SHALL BE MITERED ELBOWS WITH DOUBLE-THICKNESS TURNING VANES AND RECTANGULAR DUCT ELBOWS 45° OR LESS SHALL BE RADIUSED ELBOWS WITH AN INSIDE RADIUS OF AT LEAST 1/2 THE WIDTH OF THE DUCT.

J REPLACE AIR FILTERS WITH NEW, CLEAN MERV 13 AIR FILTERS AT TURNOVER.

K THE TERM "FURNISH" MEANS SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS. THE TERM "INSTALL" DESCRIBES THE OPERATIONS AT THE PROJECT SITE INCLUDING THE ACTUAL UNLOADING, UNPACKING, ASSEMBLY, ERECTING, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS. THE TERM "PROVIDE" MEANS TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE.

L PROVIDE LABELING CALLED FOR IN THE HVAC DRAWINGS USING ENGRAVED PHENOLIC PLATES.

M PROVIDE P3000 12 GA. UNISTRUT WITH PG FINISH FOR DUCT SUPPORTS AND OTHER UNISTRUT IN AREAS EXPOSED TO VIEW. SLOTTED UNISTRUT AND OTHER UNISTRUT WITH HOLES IS NOT ACCEPTABLE.

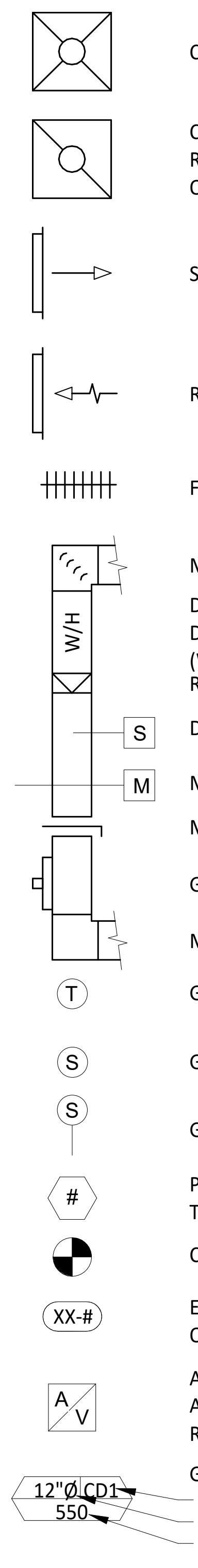
## HVAC MATERIAL SCHEDULE

| CATEGORY | APPLICATION | ALLOWABLE MATERIAL |
|---|---|---|
| DUCT | EXPOSED SUPPLY | RECT. LINED OR ROUND AS SHOWN, NO EXPOSED DUCT-SEALING MASTIC |
| | EXPOSED RETURN | RECTANGULAR, NO EXPOSED DUCT-SEALING MASTIC |
| | EXPOSED GEN. EXHAUST | RECTANGULAR OR ROUND AS SHOWN, NO EXPOSED DUCT-SEALING MASTIC |
| | CONCEALED, SUPPLY | RECT. OR ROUND AS SHOWN, LINED OR INSULATED |
| | CONCEALED, RETURN | RECT. OR ROUND AS SHOWN, LINED OR INSULATED |
| | CONCEALED, GEN. EXHAUST | RECT. OR ROUND AS SHOWN |
| | CONCEALED, TYPE I HOOD EXHAUST | RECTANGULAR 16 GA. BLACK IRON W/ WRAP OR UL 1978 FACTORY-MANUFACTURED DUCT W/ WRAP (SUBMIT SHOP DRAWINGS FOR FACTORY-MANUFACTURED DUCT PRIOR TO ORDERING FOR APPROVAL) |

## HVAC ABBREVIATIONS

| | |
|---|---|
| AFF | ABOVE FINISHED FLOOR |
| AFG | ABOVE FINISHED GRADE |
| CD | CEILING DIFFUSER |
| CU | CONDENSING UNIT |
| (E) | EXISTING |
| EF | EXHAUST FAN |
| ER | EXHAUST REGISTER |
| EXT'G | EXISTING |
| HD | HOOD |
| MUA | MAKEUP AIR UNIT |
| OBD | BLADE DAMPER |
| RG | RETURN GRILLE |
| RTU | ROOFTOP UNIT |
| SR | SUPPLY REGISTER |
| VSC | VARIABLE SPEED CONTROL |
| | |
| CO2AS | TENANT'S CO2 ALARM SUPPLIER |
| GC | GENERAL CONTRACTOR |
| HES | TENANT'S HVAC EQUIPMENT SUPPLIER |
| HS | TENANT'S HOOD SUPPLIER |
| KES | TENANT'S KITCHEN EQUIPMENT SUPPLIER |
| TAB | TENANT'S TEST AND BALANCE VENDOR |
| TCC | TENANT'S CABLING CONTRACTOR |
| TDC | TENANT'S DUCT CLEANER |
| TEMS | TENANT'S ENERGY MANAGEMENT SYSTEM SUPPLIER |
| TLS | TENANT'S LIGHT/LAMP SUPPLIER |
| TMB | TENANT'S MENU BOARD SUPPLIER |
| TMS | TENANT'S MILLWORK SUPPLIER |
| TP | TENANT'S PHONE SUPPLIER |
| TRS | TENANT'S RAILING SUPPLIER |
| TSV | TENANT'S SIGN VENDOR |
| TUV | TENANT'S UV SANITIZER SUPPLIER |
| WCS | TENANT'S WALK-IN COOLER SUPPLIER |
| WHS | TENANT'S WATER HEATER SUPPLIER |

## HVAC SYMBOLS



CEILING DIFFUSER

CEILING-MOUNTED RETURN OR EXHAUST REGISTER

SUPPLY REGISTER

RETURN GRILLE

FLEXIBLE DUCT

MITERED CORNER WITH TURNING VANES

DUCTWORK INTERNAL FREE DIMENSIONS (WIDTH/HEIGHT)

RECTANGULAR TO ROUND DUCT TRANSITION

DUCT-MOUNTED SMOKE DETECTOR

MOTOR-OPERATED DAMPER

MANUAL VOLUME DAMPER

GREASE DUCT CLEANOUT

MITERED CORNER WITHOUT TURNING VANES

GRIDPOINT THERMOSTAT

GRIDPOINT ZONE SENSOR MODULE

GRIDPOINT SUPPLY PROBE

PLAN NOTE: SEE PLAN NOTES LISTED ON THE SAME SHEET FOR NOTE MEANING

CONNECT TO EXISTING

EQUIPMENT TAG: SEE EQUIPMENT SCHEDULE ON SHEET M600 FOR EQUIPMENT INFORMATION

AUDIO/VISUAL REMOTE SMOKE DETECTOR ANNUNCIATOR WITH REMOTE KEY OPERATED RESET

GRILL, REGISTER, OR DIFFUSER TAG:
TAG
NECK SIZE
AIRFLOW [CFM]

Consultant:

NATIONAL
ENGINEERING
4635 Trueman Blvd. Suite 250
Hilliard, Ohio 43026
Phone: (614) 751-9610
Fax: (614) 552-5240
Contact: Jason Underwood
(614)202-3816
Junderwood@NationalEngineering.com

CHIPOTLE MEXICAN GRILL, INC.
PO BOX 182566
COLUMBUS, OH 43218-2566
TELEPHONE: (614) 318-2400
INTERNET: WWW.CHIPOTLE.COM

STORE NO.: 3811
BLUE OAKS PLAZA
1980 BLUE OAKS BOULEVARD, SUITE 110
ROSEVILLE, CA 95747

Issue Record:

| | |
|---|---|
| 1/14/2021 | Permit Set |
| 05/05/2022 | Construction Set |

Revisions:

Drawn: JRA
Checked: RTJ

Project No.
2102015

Contents:

HVAC
SPECIFICATIONS

M010

STATE OF CALIFORNIA

## Mechanical Systems

NRCC-MCH-E (Created 09/2020)

CALIFORNIA ENERGY COMMISSION

| | |
|---|---|
| CERTIFICATE OF COMPLIANCE | NRCC-MCH-E |

*This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4, or §141.0(b)2 for alterations.*

| | | | |
|---|---|---|---|
| Project Name: | Blue Oaks Plaza | Report Page: | Page 1 of 12 |
| Project Address: | 1980 Blue Oaks Boulevard, Suite 110, Roseville, CA 95747 | Date Prepared: | 1/14/2022 |

### A. GENERAL INFORMATION

| | | | | | |
|---|---|---|---|---|---|
| 01 | Project Location (city) | Roseville, CA | 04 | Total Conditioned Floor Area | 2,500 |
| 02 | Climate Zone | 11 | 05 | Total Unconditioned Floor Area | 0 |
| 03 | Occupancy Types Within Project: | | 06 | # of Stories (Habitable Above Grade) | 1 |

| | | | |
|---|---|---|---|
| ☐ Office (B) | ☐ Retail (M) | ☐ Non-refrigerated Warehouse (S) | |
| ☐ Hotel/ Motel Guest Rooms (R-1) | ☐ School (E) | ☐ Healthcare Facility (I) | |
| ☐ High-Rise Residential (R-2/R-3) | ☐ Relocatable Class Bldg (E) | ☑ Other (Write In): | Restaurant (A-2) |

[1] *FOOTNOTES: Climate zone can be determined on the California Energy Commission's website at http://www.energy.ca.gov/maps/renewable/building_climate_zones.html*

### B. PROJECT SCOPE

*Table Instructions: Include any mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4, or §141.0(b)2 for alterations.*

**My project consists of (check all that apply)**

| 01 | 02 | 03 |
|---|---|---|
| Air System(s) | Wet System Components | Dry System Components |
| ☑ Heating Air System | ☐ Water Economizer | ☑ Air Economizer |
| ☑ Cooling Air System | ☐ Pumps | ☐ Electric Resistance Heat |
| Mechanical Controls | ☐ Hydronic System Piping | ☑ Fan Systems |
| ☐ Mechanical Controls (existing to remain, altered or new) | ☐ Cooling Towers | ☑ Ductwork (existing to remain, altered or new) |
| | ☐ Chillers | ☑ Ventilation |
| | ☐ Boilers | ☐ Zonal Systems/ Terminal Boxes |

### C. COMPLIANCE RESULTS

*Table Instructions: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.*

| 01 | | 02 | | 03 | | 04 | | 05 | | 06 | | 07 | | 08 | 09 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| System Summary §110.1, §110.2, §140.4 | AND | Pumps §140.4(k) | AND | Fans/ Economizers §140.4(c), §140.4(e) | AND | System Controls §110.2, §120.2, §140.4(f) | AND | Ventilation §120.1 | AND | Terminal Box Controls §140.4(d) | AND | Distribution §120.3, §140.4(l) | AND | Cooling Towers §110.2(e)2 | **Compliance Results** |
| (See Table F) | | (See Table G) | | (See Table H) | | (See Table I) | | (See Table J) | | (See Table K) | | (See Table L) | | (See Table M) | |
| Yes | AND | | AND | Yes | AND | Yes | AND | Yes | AND | | AND | Yes | AND | | **COMPLIES** |
| | | | | | | | | | | | | | | **Mandatory Measures Compliance (See Table Q for Details)** | **COMPLIES** |

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| | |
|---|---|
| CERTIFICATE OF COMPLIANCE | NRCC-MCH-E |
| Project Name: Blue Oaks Plaza | Report Page: Page 2 of 12 |
| Project Address: 1980 Blue Oaks Boulevard, Suite 110, Roseville, CA 95747 | Date Prepared: 1/14/2022 |

### D. EXCEPTIONAL CONDITIONS

*This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.*

Table H indicates a Fan Power System Index that exceeds the maximum allowed per §140.4(c). Please revise to demonstrate compliance.
Selections made in Table O have been changed by the permit applicant. See Table E. Additional Remarks for permit applicant's explanation.

### E. ADDITIONAL REMARKS

*This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.*

### F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

*Table Instructions: Complete the following equipment schedules to show compliance with mandatory requirements found in §110.1 and §110.2(a) and prescriptive requirements found in §140.4(a), §140.4(b) and §140.4(k) or §141.0(b)2 for alterations.*

**Dry System Equipment Sizing (includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters)**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Equipment Sizing per Mechanical Schedule (kBtu/h) §140.4 (a&b) | | | | | | |
| | | | | Heating Output[2,3] | | | Cooling Output[2,3] | | Load Calculations[3,4] | |
| Name or Item Tag | Equipment Category per Tables 110.2 | Equipment Type per Tables 110.2 & Title 20 | Smallest Size Available[1] §140.4(a) | Per Design (kBtu/h) | Rated (kBtu/h) | Supp. Heating Output (kBtu/h) | Sensible Per Design (kBtu/h) | Rated (kBtu/h) | Total Heating Load (kBtu/h) | Total Sensible Cooling Load (kBtu/h) |
| RTU-1 | Unitary AC/ Condensers | AC, air cooled, split (3 phase) | Yes | 96 | 120 | 0 | 70 | 94 | 23.9 | 63.2 |
| RTU-2 | Unitary AC/ Condensers | AC, air cooled, split (3 phase) | Yes | 96 | 120 | 0 | 76 | 95 | 49.2 | 79.7 |

[1] *FOOTNOTES: Equipment shall be the smallest size, within the available options of the desired equipment line, necessary to meet the design heating and cooling loads of the building per §140.4(a). Healthcare facilities are excepted.*

[2] *It is common practice to show rated output capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables.*

[3] *If equipment is heating only, leave cooling output and load blank. If equipment is cooling only, leave heating output and load blank.*

[4] *Authority Having Jurisdiction may ask for load calculations used for compliance per §140.4(b).*

Table Continued

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| | |
|---|---|
| CERTIFICATE OF COMPLIANCE | NRCC-MCH-E |
| Project Name: Blue Oaks Plaza | Report Page: Page 3 of 12 |
| Project Address: 1980 Blue Oaks Boulevard, Suite 110, Roseville, CA 95747 | Date Prepared: 1/14/2022 |

**Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP))**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 |
|---|---|---|---|---|---|---|---|---|
| | | Heating Mode | | | | Cooling Mode | | |
| Name or Item Tag | Size Category (Btu/h) | Rating Condition (°F) | Efficiency Unit | Min Efficiency Required per Tables 110.2/ Title 20 | Design Efficiency | Efficiency Unit | Min Efficiency Required per Tables 110.2/ Title 20 | Design Efficiency |
| RTU-1 | | | | | | | | |
| RTU-2 | | | | | | | | |

### G. PUMPS

*This Section Does Not Apply*

### H. FAN SYSTEMS & AIR ECONOMIZERS

*Table Instructions: Complete the following Table for fan systems to demonstrate compliance with prescriptive requirements found in §140.4(c), §140.4(e) and §140.4(m). First document the system details, then add fans within that system to document compliance with fan power requirements. Fan systems serving only process loads are exempt from these requirements and do not need to be included in Table H.*

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **System Name:** | RTU-1 | **Economizer:**[1] | Differential Enthalpy | **Economizer Controls:** | Designed per §140.4(e) and (m) | **System Fan Type:** | Constant Volume |

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|
| | | | | | | Fan Power Pressure Drop Adjustment - Table 140.4-B | |
| Fan Name or Item Tag | Fan Function | Qty | Maximum Design Supply Airflow (CFM) | HP Unit[2] | Design HP | Device | Design Airflow through Device (CFM) |
| RTU-1 | Supply | 1 | 3,200 | Nameplate HP | 3 | | |
| | | | | | | Calculated Adjustment (in $H_2O$) | |

| | | | | | |
|---|---|---|---|---|---|
| Total System Design Supply Airflow (CFM): | 3,200 | Total System Design (B)HP: | 3 | **Maximum System Fan Power (B)HP:** | |

Table Continued

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| | |
|---|---|
| CERTIFICATE OF COMPLIANCE | NRCC-MCH-E |
| Project Name: Blue Oaks Plaza | Report Page: Page 4 of 12 |
| Project Address: 1980 Blue Oaks Boulevard, Suite 110, Roseville, CA 95747 | Date Prepared: 1/14/2022 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **System Name:** | RTU-2 | **Economizer:**[1] | Differential Enthalpy | **Economizer Controls:** | Designed per §140.4(e) and (m) | **System Fan Type:** | Constant Volume |

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|
| | | | | | | Fan Power Pressure Drop Adjustment - Table 140.4-B | |
| Fan Name or Item Tag | Fan Function | Qty | Maximum Design Supply Airflow (CFM) | HP Unit[2] | Design HP | Device | Design Airflow through Device (CFM) |
| RTU-2 | Supply | 1 | 3,400 | Nameplate HP | 3 | | |
| | | | | | | Calculated Adjustment (in $H_2O$) | |

| | | | | | |
|---|---|---|---|---|---|
| Total System Design Supply Airflow (CFM): | 3,400 | Total System Design (B)HP: | 3 | **Maximum System Fan Power (B)HP:** | |

[1] *FOOTNOTE: Computer room economizers must meet requirements of §140.9(a) and will be documented on the NRCC-PRC-E document.*

[2] *The unit used for HP must be consistent for all fans within a system.*

### I. SYSTEM CONTROLS

*Table Instructions: Complete the following Table to demonstrate compliance with mandatory controls in §110.2 and §120.2 and prescriptive controls in §140.4(f) and (n) or requirements in §141.0(b)2E for altered space conditioning systems.*

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 |
|---|---|---|---|---|---|---|---|---|
| System Name | System Zoning | Conditioned Floor Area Being Served ($ft^2$) | Thermostats §110.2(b) & (c)[1], §120.2(a) or §141.0(b)2E | Shut-Off Controls §120.2(e) | Isolation Zone Controls §120.2(g) | Demand Response §110.12 and §120.2(b) | Supply Air Temp. Reset §140.4(f) | Window Interlocks per §140.4(n) |
| RTU-1 | single zone | ≤ 25,000 $ft^2$ | Setback Thermostat | Auto Timeswitch | Auto Timeswitch | NA: PTAC, PTHP, Rm AC, HP | NA: Single Zone | NA: No operable windows |
| RTU-2 | single zone | ≤ 25,000 $ft^2$ | Setback Thermostat | Auto Timeswitch | Auto Timeswitch | NA: PTAC, PTHP, Rm AC, HP | NA: Single Zone | NA: No operable windows |

[1] *FOOTNOTES: Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves are not required to have setback thermostats.*

* *NOTES: Controls with a * require a note in the space below explaining how compliance is achieved.*

*EX: System 1: SA Temp Reset: Exempt because zones compliant with §140.4(d); EXCEPTION 1 to §140.4(f)*

Table Continued

---

| | |
|---|---|
| CERTIFICATE OF COMPLIANCE | NRCC-MCH-E |
| Project Name: Blue Oaks Plaza | Report Page: Page 5 of 12 |
| Project Address: 1980 Blue Oaks Boulevard, Suite 110, Roseville, CA 95747 | Date Prepared: 1/14/2022 |

Table Continued

### J. VENTILATION AND INDOOR AIR QUALITY

*Table Instructions: Complete the following Table to demonstrate compliance with mandatory ventilation requirements in §120.1 and §120.2(e)3B for all nonresidential, high-rise residential and hotel/motel occupancies. For alterations, only ventilation systems being altered within the scope of the permit application need to be documented in this table. In lieu of this table, the required outdoor ventilation rates and airflows may be shown on the plans or the calculations can be presented in a spreadsheet.*

| | | |
|---|---|---|
| 01 | ☐ | Check the box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table. |
| 02 | ☑ | Check this box if the project includes Nonresidential or Hotel/Motel spaces |
| | ☐ | Check this box if the project includes new or altered high-rise residential dwelling units |
| 03 | ☐ | Check the box if the project is using natural ventilation in any spaces to meet required ventilation rates per §120.1(c)2. |

**Nonresidential and Hotel/ Motel Ventilation Systems**

| 04 | | 05 | | 06 | | 07 |
|---|---|---|---|---|---|---|
| **System Name:** | RTU-1 | System Design OA CFM Air Flow[1]: | 500 | System Design Transfer Air CFM: | 0 | Air Filtration per §120.1(c) and §141.0(b)2[2]<br>Provided per §141.0(b)2c (alteration) |

| 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | |
|---|---|---|---|---|---|---|---|---|---|
| | Mechanical Ventilation Required per §120.1(c)3[3] | | | | | Exh. Vent. per §120.1(c)4 | | | |
| Space Name or Item Tag | Occupancy Type[4] | Conditioned Floor Area ($ft^2$) | # of showerheads / toilets | # of people[5] | Required Min OA CFM | Required Minimum CFM | Provided per Design CFM | DCV or Occupant Sensor Controls per §120.1(d)3, §120.1(d)5 & §120.2(e)3[6] | |
| Kitchen | Kitchen (cooking) | 1,170 | | | 175.5 | 819 | 3,250 | DCV | NA: Space exhaust is > design ventilation rate exception |
| | | | | | | | | Occ Sensor | NA: Continously operated per §120.2(e)3 exception |
| Office | Office space | 50 | | | 7.5 | | 150 | DCV | NA: Space exhaust is > design ventilation rate exception |
| | | | | | | | | Occ Sensor | NA: Continously operated per §120.2(e)3 exception |

| | | | | | |
|---|---|---|---|---|---|
| 17 | Total System Required Min OA CFM | 183 | 18 | Ventilation for this System Complies? | Yes |

**Nonresidential and Hotel/ Motel Ventilation Systems**

| 04 | 05 | 06 | 07 |
|---|---|---|---|

Table Continued

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| | |
|---|---|
| CERTIFICATE OF COMPLIANCE | NRCC-MCH-E |
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Table Continued

| | | | | | | |
|---|---|---|---|---|---|---|
| **System Name:** | RTU-2 | System Design OA CFM Air Flow[1]: | 1,000 | System Design Transfer Air CFM: | 0 | Air Filtration per §120.1(c) and §141.0(b)2[2]<br>Provided per §141.0(b)2c (alteration) |

| 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | |
|---|---|---|---|---|---|---|---|---|---|
| | Mechanical Ventilation Required per §120.1(c)3[3] | | | | | Exh. Vent. per §120.1(c)4 | | | |
| Space Name or Item Tag | Occupancy Type[4] | Conditioned Floor Area ($ft^2$) | # of showerheads / toilets | # of people[5] | Required Min OA CFM | Required Minimum CFM | Provided per Design CFM | DCV or Occupant Sensor Controls per §120.1(d)3, §120.1(d)5 & §120.2(e)3[6] | |
| Dining | Cafeteria/ fast-food dining | 975 | | | 487.5 | | 3,350 | DCV | NA: Space exhaust is > design ventilation rate exception |
| | | | | | | | | Occ Sensor | NA: Continously operated per §120.2(e)3 exception |
| Restroom | Toilet (private)- cont. exh. | 230 | 2 | | 34.5 | 50 | 50 | DCV | NA: Space exhaust is > design ventilation rate exception |
| | | | | | | | | Occ Sensor | NA: Continously operated per §120.2(e)3 exception |

| | | | | | |
|---|---|---|---|---|---|
| 17 | Total System Required Min OA CFM | 522 | 18 | Ventilation for this System Complies? | Yes |

[1] *FOOTNOTES: System CFM should include both mechanical and natural ventilation for the zone/system.*

[2] *Air filtration requirements apply to the following three system types per §120.1(c)1A: space conditioning systems utilizing ducts to supply air to occupiable space; supply-only ventilation systems providing outside air to occupiable space; supply side of balanced ventilation systems including heat recovery and energy recovery ventilation systems providing outside air to occupiable space.*

[3] *Uniform Mechanical Code may have more stringent ventilation requirements; the most stringent code requirement takes precedence.*

[4] *See Standards Tables 120.1-A and 120.1-B.*

[5] *For lecture halls with fixed seating, the expected number of occupants shall be determined in accordance with the California Building Code.*

[6] *§120.2(e)3 requires systems serving rooms that are required by §130.1(c) to have lighting occupancy sensing controls to also have occupancy sensing zone controls for ventilation. Examples of spaces which require lighting occupancy sensors include offices 250$ft^2$ or smaller, multipurpose rooms less than 1,000$ft^2$, classrooms, conference rooms, restrooms, aisles and open areas in warehouses, library book stack aisles, corridors, stairwells, parking garages, and loading and unloading zones, unless excepted by §130.1(c).*

### K. TERMINAL BOX CONTROLS

*This Section Does Not Apply*

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| | |
|---|---|
| CERTIFICATE OF COMPLIANCE | NRCC-MCH-E |
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### L. DISTRIBUTION (DUCTWORK AND PIPING)

*Table Instructions: Complete the following tables to show compliance with mandatory pipe insulation requirements found in §120.3 and prescriptive requirements found in §140.4(l) for duct leakage testing.*

**Duct Leakage Sealing**

| | | | |
|---|---|---|---|
| The answers to the questions below apply to the following duct system(s): | RTU-1&2 | Duct leakage testing triggered for these systems? | No |

| | | | |
|---|---|---|---|
| 11 | No | The scope of the project includes only duct systems serving healthcare facilites. | |
| 12 | Yes | Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system. | |
| 13 | Yes | The space conditioning system serves less than 5,000 $ft^2$ of conditioned floor area. | |
| 14 | No | The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system: | |
| | | ☐ | Outdoors |
| | | ☐ | In a space directly under a roof that has a U-factor greater than the U-factor of the ceiling, or if the roof does not meet the requirements of §140.3(a)1B or if the roof has fixed vents or openings to the outside/ unconditioned spaces |
| | | ☐ | In an unconditioned crawlspace |
| | | ☐ | In other unconditioned spaces |
| 15 | No | The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos. | |
| 16 | No | The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2. | |
| 17 | | Duct system shall be sealed in accordance with the California Mechanical Code. | |

### M. COOLING TOWERS

*This Section Does Not Apply*

### N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

*Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/*

| YES | NO | Form/Title | Systems To Be Field Verified | Field Inspector | |
|---|---|---|---|---|---|
| | | | | Pass | Fail |
| ● | | NRCI-MCH-01-E - Must be submitted for all buildings. | | ☐ | ☐ |

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| | |
|---|---|
| CERTIFICATE OF COMPLIANCE | NRCC-MCH-E |
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### O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

*Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/*

| YES | NO | Form/Title | Systems To Be Field Verified | Field Inspector | |
|---|---|---|---|---|---|
| | | | | Pass | Fail |
| ● | ○ | NRCA-MCH-02-A Outdoor Air must be submitted for all newly installed HVAC units.<br>*Note: MCH02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.* | | ☐ | ☐ |
| ● | ○ | NRCA-MCH-03-A Constant Volume Single Zone HVAC<br>*NOTE: This form does not automatically move to "Yes". If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes".* | | ☐ | ☐ |
| ○ | ● | NRCA-MCH-04-A Air Distribution Duct Leakage | | ☐ | ☐ |
| ● | ○ | NRCA-MCH-05-A Air Economizer Controls | | ☐ | ☐ |
| ○ | ● | NRCA-MCH-06-A Demand Control Ventilation Systems Acceptance must be submitted for all systems required to employ demand controlled ventilation (refer to §120.1(c)3) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO2) concentration setpoints. | | ☐ | ☐ |
| ○ | ● | NRCA-MCH-07-A Supply Fan Variable Flow Controls | | ☐ | ☐ |
| ○ | ● | NRCA-MCH-08-A Valve Leakage Test | | ☐ | ☐ |
| ○ | ● | NRCA-MCH-09-A Supply Water Temperature Reset Controls | | ☐ | ☐ |
| ○ | ● | NRCA-MCH-10-A Hydronic System Variable Flow Controls | | ☐ | ☐ |
| ○ | ● | NRCA-MCH-11-A Automatic Demand Shed Controls | | ☐ | ☐ |

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| | |
|---|---|
| CERTIFICATE OF COMPLIANCE | NRCC-MCH-E |
| Project Name: Blue Oaks Plaza | Report Page: Page 9 of 12 |
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| | | | | | |
|---|---|---|---|---|---|
| ● | ○ | NRCA-MCH-12-A FDD for Packaged Direct Expansion Units | | ☐ | ☐ |
| ○ | ● | NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance | | ☐ | ☐ |
| ○ | ● | NRCA-MCH-14-A Distributed Energy Storage DX AC Systems Acceptance<br>*NOTE: This form does not automatically move to "Yes". If Distributed Energy Storage DX AC Systems are included in the scope, permit applicant should move this form to "Yes".* | | ☐ | ☐ |
| ○ | ● | NRCA-MCH-15-A Thermal Energy Storage (TES) System Acceptance<br>*NOTE: This form does not automatically move to "Yes". If Chilled Water Storage, Ice-on-Coil Internal Melt, Ice-on-Coil External Melt, Ice Harvester, Brine, Ice-Slurry, Eutectic Salt, Clathrate Hydrate Slurry (CHS), Cryogenic or Encapulated (Ice Ball) Systems are included in the scope, permit applicant should move this form to "Yes".* | | ☐ | ☐ |
| ○ | ● | NRCA-MCH-16-A Supply Air Temperature Reset Controls | | ☐ | ☐ |
| ○ | ● | NRCA-MCH-17-A Condenser Water Temperature Reset Controls | | ☐ | ☐ |
| ○ | ● | NRCA-MCH-18 Energy Management Control Systems | | ☐ | ☐ |
| ○ | ● | NRCA-MCH-19 Occupancy Sensor Controls | | ☐ | ☐ |
| ○ | ● | NRCA-MCH-20 Multi-Family Ventilation | | ☐ | ☐ |
| ○ | ● | NRCA-MCH-21 Multi-Family Envelope Leakage | | ☐ | ☐ |

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Consultant:
NATIONAL ENGINEERING
4635 Trueman Blvd. Suite 250
Hilliard, Ohio 43026
Phone: (614) 751-9610
Fax: (614) 552-5240
Contact: Jason Underwood
(614)202-3816
Junderwood@NationalEngineering.com

CHIPOTLE MEXICAN GRILL, INC.
PO BOX 182566
COLUMBUS, OH 43218-2566
TELEPHONE: (614) 318-2400
INTERNET: WWW.CHIPOTLE.COM

STORE NO.: 3811
BLUE OAKS PLAZA
1980 BLUE OAKS BOULEVARD, SUITE 110
ROSEVILLE, CA 95747

Issue Record:

| | |
|---|---|
| 1/14/2021 | Permit Set |
| 05/05/2022 | Construction Set |

Revisions:

| | | |
|---|---|---|
| 1 | 02/25/2022 | CITY COMMENTS |

Drawn: JRA
Checked: RTJ

Project No.
2102015

Contents:

MECHANICAL TITLE 24 COMPLIANCE

M020

STATE OF CALIFORNIA

## Mechanical Systems

NRCC-MCH-E (Created 09/2020)

CALIFORNIA ENERGY COMMISSION

| | |
|---|---|
| CERTIFICATE OF COMPLIANCE | NRCC-MCH-E |
| Project Name: Blue Oaks Plaza | Report Page: Page 10 of 12 |
| Project Address: 1980 Blue Oaks Boulevard, Suite 110, Roseville, CA 95747 | Date Prepared: 1/14/2022 |

### P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

*Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be completed by a HERS Rater and provided to the building inspector during construction. The final documents must be created by a HERS Providers registry, but drafts can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCV/*

| YES | NO | Form/Title | Field Inspector | |
|---|---|---|---|---|
| | | | Pass | Fail |
| ○ | ● | NRCV-MCH-04-H Duct Leakage Test<br>*NOTE: Must be completed by a HERS Rater* | ☐ | ☐ |
| ○ | ● | NRCV-MCH-24 Enclosure Air Leakage Worksheet<br>*NOTE: Must be completed by a HERS Rater* | ☐ | ☐ |
| ○ | ● | NRCV-MCH-27 High-rise Residential<br>*NOTE: Must be completed by a HERS Rater* | ☐ | ☐ |
| ○ | ● | NRCV-MCH-32 Local Mechanical Exhaust<br>*NOTE: Must be completed by a HERS Rater* | ☐ | ☐ |

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STATE OF CALIFORNIA

## Mechanical Systems

NRCC-MCH-E (Created 09/2020)

CALIFORNIA ENERGY COMMISSION

| | |
|---|---|
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### Q. MANDATORY MEASURES DOCUMENTATION LOCATION

*Table Instructions: Indicate where mandatory measures are documented in the plan set or construction documentation. For any mandatory measures that do not apply, mark the plan sheet or construction document location as "N/A", any active cells that are left blank will result in non-compliance in Table C.*

| 01 | | 02 |
|---|---|---|
| | | Plan sheet or construction document location |
| Compliance with Mandatory Measures documented through MCH Mandatory Measures Note Block: | Yes | M010 |

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STATE OF CALIFORNIA

## Mechanical Systems

NRCC-MCH-E (Created 09/2020)

CALIFORNIA ENERGY COMMISSION

| | |
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| CERTIFICATE OF COMPLIANCE | NRCC-MCH-E |
| Project Name: Blue Oaks Plaza | Report Page: Page 12 of 12 |
| Project Address: 1980 Blue Oaks Boulevard, Suite 110, Roseville, CA 95747 | Date Prepared: 1/14/2022 |

### DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Compliance documentation is accurate and complete.

| | | | |
|---|---|---|---|
| Documentation Author Name: | Richard T. Jones, PE | Documentation Author Signature: | |
| Company: | National Engineering, Ltd. | Signature Date: | 1/14/2022 |
| Address: | 4635 Trueman Blvd. Suite 250 | CEA/ HERS Certification Identification (if applicable): | |
| City/State/Zip: | Hilliard, OH 43026 | Phone: | 614-751-9610 |

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**

**I certify the following under penalty of perjury, under the laws of the State of California:**

1. **The information provided on this Certificate of Compliance is true and correct.**
2. **I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)**
3. **The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.**
4. **The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.**
5. **I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.**

| | | | |
|---|---|---|---|
| Responsible Designer Name: | Richard T. Jones, PE | Responsible Designer Signature: | |
| Company : | National Engineering, Ltd. | Date Signed: | 1/14/2022 |
| Address: | 4635 Trueman Blvd. Suite 250 | License: | 30376 |
| City/State/Zip: | Hilliard, OH 43026 | Phone: | 614-751-9610 |

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STATE OF CALIFORNIA

## Process Systems

NRCC-PRC-E (Created 01/21)

CALIFORNIA ENERGY COMMISSION

| | |
|---|---|
| CERTIFICATE OF COMPLIANCE | NRCC-PRC-E |
| *Table Instructions: Include any process systems that are within the scope of the permit application and are demonstrating compliance with mandatory requirements in §120.6, or prescriptive requirements in §140.9. This compliance document is used for newly constructed, addition and alteration projects.* | |
| Project Name: Blue Oaks Plaza | Report Page: Page 1 of 5 |
| Project Address: 1980 Blue Oaks Boulevard, Suite 110, Roseville, CA 95747 | Date Prepared: 1/14/2022 |

### A. GENERAL INFORMATION

| | | | | | |
|---|---|---|---|---|---|
| 01 | Project Location (city) | Roseville, CA | 04 | Total Conditioned Floor Area | 2,500 |
| 02 | Climate Zone | 3 | 05 | Total Unconditioned Floor Area | 0 |
| 03 | Occupancy Types Within Project: | | 06 | # of Stories (Habitable Above Grade) | 1 |

| | | | |
|---|---|---|---|
| ☐ Office | ☐ Retail | ☐ Non-refrigerated Warehouse | |
| ☐ Hotel/ Motel | ☐ School | ☐ Healthcare Facility | |
| ☐ High-Rise Residential | ☐ Relocatable Class Bldg | ☑ Other (Write In): | Restaurant (A-2) |

### B. PROJECT SCOPE

*Table Instructions: Include any process systems listed below within the scope of the permit application that are demonstrating compliance with mandatory requirements in §120.6 or prescriptive requirements in §140.9.*

**My project consists of (check all that apply):**

| 01 | 02 |
|---|---|
| ☐ Refrigerated Spaces <3,000 ft$^2$ Total (no Title 24, Pt 6 requirements) | ☐ Elevator Lighting & Ventilation Controls (mandatory §120.6(f)) |
| ☐ Refrigerated Spaces ≥3,000 ft$^2$ Total (mandatory §120.6(a)) | ☐ Escalator & Moving Walkway Speed Controls (mandatory §120.6(g)) |
| ☐ Food Stores > 8,000 ft$^2$ cfa (mandatory §120.6(b)) | ☐ Computer Rooms > 20W/ft$^2$ Power Density (prescriptive §140.9(a))[1] |
| ☐ Enclosed Parking Garage Exhaust ≥ 10,000 cfm (mandatory §120.6(c)) | ☑ Commercial Kitchen Ventilation/Exhaust (prescriptive §140.9(b))[1] |
| ☐ Newly Installed Process Boilers (mandatory §120.6(d)) | ☐ Laboratory Exhaust/Factory Exhaust & Fume Hood (prescriptive §140.9(c))[1] |
| ☐ Compressed Air Systems Combined HP $\geq$ 25 (mandatory §120.6(e)) | |

*[1] FOOTNOTES: These building features can comply using the performance method. If using the performance method for these features, compliance should be demonstrated on the NRCC-PRF-E compliance document.*

### C. COMPLIANCE RESULTS

*Table Instructions: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.*

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|
| Refrigerated Warehouse/ Space §120.6(a) | Commercial Refrigeration §120.6(b) | Parking Garage Exhaust §120.6(c) | Process Boilers §120.6(d) | Compressed Air Systems §120.6(e) | Elevators §120.6(f) | Escalators & Moving Walkways §120.6(g) | Computer Rooms §140.9(a) | Commercial Kitchens §140.9(b) | Laboratory Exhaust §140.9(c) | **Compliance Results** |
| (See Table F) | (See Table G) | (See Table H) | (See Table I) | (See Table J) | (See Table K) | (See Table L) | (See Table M) | (See Table N) | (See Table O) | |
| | | | | | | | | Yes | | **COMPLIES** |

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STATE OF CALIFORNIA

## Process Systems

NRCC-PRC-E (Created 01/21)

CALIFORNIA ENERGY COMMISSION

| | |
|---|---|
| CERTIFICATE OF COMPLIANCE | NRCC-PRC-E |
| *Table Instructions: Include any process systems that are within the scope of the permit application and are demonstrating compliance with mandatory requirements in §120.6, or prescriptive requirements in §140.9. This compliance document is used for newly constructed, addition and alteration projects.* | |
| Project Name: Blue Oaks Plaza | Report Page: Page 2 of 5 |
| Project Address: 1980 Blue Oaks Boulevard, Suite 110, Roseville, CA 95747 | Date Prepared: 1/14/2022 |

### D. EXCEPTIONAL CONDITIONS

*This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.*

No exceptional conditions apply to this project.

### E. ADDITIONAL REMARKS

*This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.*

### F. REFRIGERATED WAREHOUSE/SPACES

*This Section Does Not Apply*

### G. COMMERCIAL REFRIGERATION

*This Section Does Not Apply*

### H. ENCLOSED PARKING GARAGE EXHAUST

*This Section Does Not Apply*

### I. PROCESS BOILER

*This Section Does Not Apply*

### J. COMPRESSED AIR SYSTEMS

*This Section Does Not Apply*

### K. ELEVATOR LIGHTING AND VENTILATION

*This Section Does Not Apply*

### L. ESCALATORS AND MOVING WALKWAYS SPEED CONTROLS

*This Section Does Not Apply*

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STATE OF CALIFORNIA

## Process Systems

NRCC-PRC-E (Created 01/21)

CALIFORNIA ENERGY COMMISSION

| | |
|---|---|
| CERTIFICATE OF COMPLIANCE | NRCC-PRC-E |
| *Table Instructions: Include any process systems that are within the scope of the permit application and are demonstrating compliance with mandatory requirements in §120.6, or prescriptive requirements in §140.9. This compliance document is used for newly constructed, addition and alteration projects.* | |
| Project Name: Blue Oaks Plaza | Report Page: Page 3 of 5 |
| Project Address: 1980 Blue Oaks Boulevard, Suite 110, Roseville, CA 95747 | Date Prepared: 1/14/2022 |

### M. COMPUTER ROOM SYSTEM SUMMARY

*This Section Does Not Apply*

### N. COMMERCIAL KITCHEN EXHAUST AND VENTILATION

*Table Instructions: Complete the following table to demonstrate compliance with prescriptive requirements found in §140.9(b). Requirements only apply to new hoods or replacement hoods being installed as part of the permitted scope. Existing hoods not being replaced, or any hoods within a healthcare facility do not need to meet requirements.*

**Kitchen Ventilation** §140.9(b)2

| | | |
|---|---|---|
| 01 | ☐ | Existing kitchen hoods not being replaced as part of an addition or alteration (do not need to meet requirements) |
| **Requirements** | | |
| Replacement Air to Hood Compliance Method §140.9(b)1A | | |
| 02 | Providing replacement air directly to the hood(s) that does not exceed 10% of the hood(s) exhaust rate. | |

| | |
|---|---|
| Mechanically cooled or heated makeup air delivered to any space with a kitchen hood is designed per 140.9(b)2A to not exceed the greater of: | |
| 03 | The supply flow required to meet the space heating and cooling load |

| | |
|---|---|
| 05 | The kitchen /dining facility has a total Type I and Type II kitchen hood exhaust airflow rate > 5000 cfm and is dign to have one of the following per 140.9(b)2B: |
| | NA: Not a kitchen /dining facility having a total Type I and Type II kitchen hood exhaust airflow rate > 5,000 cfm |

**Kitchen Exhaust: Airflow Rate** §140.9(b)2

| 01 | Kitchen Name or Tag | Kitchen | Compliance Method per §140.9(b)1B | NA: Kitchen/ dining facility has a total Type I and Type II hood exhaust rate < 5,000 cfm. | | |
|---|---|---|---|---|---|---|
| 02 | 03 | 04 | 05 | 06 | 07 | 08 |
| Name or Item Tag | Hood Type[1] | Hood Style | Hood Length (ft) | Equipment Duty | Design Hood Exhaust Rate (CFM) | Max Hood Exhaust Rate Allowed (CFM) |
| HD-1 | Type I | | | | 3,200 | |

*[1] FOOTNOTE: Type II hoods do not have a max hood exhaust air rate per Part 6 §140.9(b)1B.*

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STATE OF CALIFORNIA

## Process Systems

NRCC-PRC-E (Created 01/21)

CALIFORNIA ENERGY COMMISSION

| | |
|---|---|
| CERTIFICATE OF COMPLIANCE | NRCC-PRC-E |
| *Table Instructions: Include any process systems that are within the scope of the permit application and are demonstrating compliance with mandatory requirements in §120.6, or prescriptive requirements in §140.9. This compliance document is used for newly constructed, addition and alteration projects.* | |
| Project Name: Blue Oaks Plaza | Report Page: Page 4 of 5 |
| Project Address: 1980 Blue Oaks Boulevard, Suite 110, Roseville, CA 95747 | Date Prepared: 1/14/2022 |

### O. LABORATORY AND FACTORY EXHAUST AND FUME HOODS

*This Section Does Not Apply*

### P. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

*Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://ww2.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/.*

| YES | NO | Form/Title | Field Inspector | |
|---|---|---|---|---|
| | | | Pass | Fail |
| ● | ○ | NRCI-PRC-01-E Covered Process | ☐ | ☐ |

### Q. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

*Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://ww2.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/.*

| YES | NO | Form/Title | Field Inspector | |
|---|---|---|---|---|
| | | | Pass | Fail |
| ○ | ● | NRCA-PRC-01-F Compressed Air Systems | ☐ | ☐ |
| ● | ○ | NRCA-PRC-02-F Kitchen Exhaust | ☐ | ☐ |
| ○ | ● | NRCA-PRC-03-F Garage Exhaust | ☐ | ☐ |
| ○ | ● | NRCA-PRC-04-F Refrigerated Warehouses - Evaporator Fan Motor Controls | ☐ | ☐ |
| ○ | ● | NRCA-PRC-05-F Refrigerated Warehouses - Evaporative Condenser Controls | ☐ | ☐ |
| ○ | ● | NRCA-PRC-06-Refrigerated Warehouses - Air Cooled Condenser Controls | ☐ | ☐ |
| ○ | ● | NRCA-PRC-16-Refrigerated Warehouses - Adiabatic Condenser Controls | ☐ | ☐ |
| ○ | ● | NRCA-PRC-07 Refrigerated Warehouses - Variable Speed Compressor | ☐ | ☐ |
| ○ | ● | NRCA-PRC-08-F Refrigerated Warehouses - Electric Resistance Underslab Heating System | ☐ | ☐ |
| ○ | ● | NRCA-PRC-12-F Elevator Lighting & Ventilation Controls | ☐ | ☐ |
| ○ | ● | NRCA-PRC-13-F Escalators & Moving Walkways Speed Controls | ☐ | ☐ |
| ○ | ● | NRCA-PRC-14-F Lab Exhaust Ventilation Systems | ☐ | ☐ |
| ○ | ● | NRCA-PRC-15-F Fume Hood Automatic Sash Closure Systems | ☐ | ☐ |

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STATE OF CALIFORNIA

## Process Systems

NRCC-PRC-E (Created 01/21)

CALIFORNIA ENERGY COMMISSION

| | |
|---|---|
| CERTIFICATE OF COMPLIANCE | NRCC-PRC-E |
| *Table Instructions: Include any process systems that are within the scope of the permit application and are demonstrating compliance with mandatory requirements in §120.6, or prescriptive requirements in §140.9. This compliance document is used for newly constructed, addition and alteration projects.* | |
| Project Name: Blue Oaks Plaza | Report Page: Page 5 of 5 |
| Project Address: 1980 Blue Oaks Boulevard, Suite 110, Roseville, CA 95747 | Date Prepared: 1/14/2022 |

### DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Compliance documentation is accurate and complete.

| | | | |
|---|---|---|---|
| Documentation Author Name: | Richard T. Jones | Documentation Author Signature: | |
| Company: | National Engineering, Ltd. | Signature Date: | 1/14/2022 |
| Address: | 4635 Trueman Blvd. Suite 250 | CEA/ HERS Certification Identification (if applicable): | |
| City/State/Zip: | Hilliard, OH 43026 | Phone: | 614-751-9610 |

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**

**I certify the following under penalty of perjury, under the laws of the State of California:**

1. **The information provided on this Certificate of Compliance is true and correct.**
2. **I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)**
3. **The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.**
4. **The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.**
5. **I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.**

| | | | |
|---|---|---|---|
| Responsible Designer Name: | Richard T. Jones, PE | Responsible Designer Signature: | |
| Company : | National Engineering, Ltd. | Date Signed: | 1/14/2022 |
| Address: | 4635 Trueman Blvd. Suite 250 | License: | 30376 |
| City/State/Zip: | Hilliard, OH 43026 | Phone: | 614-751-9610 |

Add Responsible Person | Remove Last

---

Consultant:

NATIONAL
ENGINEERING
4635 Trueman Blvd. Suite 250
Hilliard, Ohio 43026
Phone: (614) 751-9610
Fax: (614) 552-5240
Contact: Jason Underwood
(614)202-3816
Junderwood@NationalEngineering.com

CHIPOTLE MEXICAN GRILL, INC.
PO BOX 182566
COLUMBUS, OH 43218-2566
TELEPHONE: (614) 318-2400
INTERNET: WWW.CHIPOTLE.COM

STORE NO.: 3811

BLUE OAKS PLAZA
1980 BLUE OAKS BOULEVARD, SUITE 110
ROSEVILLE, CA 95747

Issue Record:

| | |
|---|---|
| 1/14/2021 | Permit Set |
| 05/05/2022 | Construction Set |

Revisions:

| | |
|---|---|
| Drawn: | Checked: |
| JRA | RTJ |

Project No.

2102015

Contents:

MECHANICAL TITLE 24 COMPLIANCE

M021

STATE OF CALIFORNIA

## Domestic Water Heating System

NRCC-PLB-E (Created 10/20) CALIFORNIA ENERGY COMMISSION

| | |
|---|---|
| CERTIFICATE OF COMPLIANCE | NRCC-PLB-E |

*This document is used to demonstrate compliance for nonresidential occupancies with requirements in §110.1, §110.3, §120.3, and §140.5, and with requirements in §141.0 for additions and alterations, for domestic water heating scopes using the prescriptive path. For high-rise residential and hotel/motel occupancies, compliance is demonstrated with requirements in §110.1, §110.3, §120.3, §150.0 and §150.1(c)8, and with requirements in §150.2 for additions and alterations.*

| | |
|---|---|
| Project Name: Blue Oaks Plaza | Report Page: Page 1 of 6 |
| Project Address: 1980 Blue Oaks Boulevard, Suite 110, Roseville, CA 95747 | Date Prepared: 1/14/2022 |

### A. GENERAL INFORMATION

| | | | | | |
|---|---|---|---|---|---|
| 01 | Project Location (city) | Roseville, CA | 02 | Climate Zone | 3 |
| 03 | Occupancy Types Within Project (select all that apply): | | | | |

☐ Nonresidential ☐ High-Rise Residential ☐ Hotel/ Motel
☐ State Building ☐ Healthcare Facility ☑ Other (Write In): Restaurant (A-2)

### B. PROJECT SCOPE

*Table Instructions: Include any domestic water heating systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive paths outlined in §140.5, §150.1(c)8, and §141.0(a), or §141.0(b)2N for additions or alterations. Solar water heating systems should be documented on the NRCC-SRA compliance document. Combined hydronic water heating systems should be documented on the NRCC-MCH compliance document.*

| 01 | 02 | 03 | | |
|---|---|---|---|---|
| My project consists of (check all that apply): | System Type[1,2] | System Components | | |
| ☑ New System (DHW system being installed for the first time in newly constructed building) | Central System (serving nonresidential spaces) | ☑ Equipment | ☑ Distribution | ☑ Controls |
| ☐ System Alteration (equipment, distribution or controls) | | ☐ Equipment | ☐ Distribution | ☐ Controls |

[1] *FOOTNOTE: Point of use water heaters, or other non-central systems used to serve nonresidential spaces, are considered individual systems.*
[2] *Dwelling units refers to hotel/ motel guest rooms and units in a high-rise residential occupancy.*

### C. COMPLIANCE RESULTS

*Table Instructions: Table C will indicate if the project data input into the compliance document is compliant with water heating requirements. This table is not editable by the user. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D., or the table indicated as not compliant for guidance.*

| 01 | 02 | 03 | 04 |
|---|---|---|---|
| Domestic Hot Water Equipment | Distribution Systems | Controls | **Compliance Results** |
| (See Table F) | (See Table G) | (See Table H) | |
| Yes | Yes | Yes | **COMPLIES** |

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STATE OF CALIFORNIA

## Domestic Water Heating System

NRCC-PLB-E (Created 10/20) CALIFORNIA ENERGY COMMISSION

| | |
|---|---|
| CERTIFICATE OF COMPLIANCE | NRCC-PLB-E |
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### D. EXCEPTIONAL CONDITIONS

*This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.*

No exceptional conditions apply to this project.

### E. ADDITIONAL REMARKS

*This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.*

### F. DOMESTIC HOT WATER EQUIPMENT

*Table Instructions: Complete the following table to demonstrate compliance with mandatory equipment requirements in §110.1 and §110.3. For high-rise residential and hotel/ motel occupancies, compliance with prescriptive requirements in §150.1(c)8 must also be demonstrated and with §150.2 for addition and alteration scopes.*

**Equipment Schedule: Central Systems**

| 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 |
|---|---|---|---|---|---|---|---|---|
| Name or Item Tag | Equipment Type | Volume (gal) | Rated Input Capacity (Btu/h) | Rated Efficiency (%) | Minimum Efficiency Required (%) | Efficiency Unit | Designed Standby Loss[1] | Maximum Standby Loss[1] |
| DWH-1 | Gas Instantaneous Water Heater | 0 | 199 | 95 | 80 | Et | | |
| DWH-2 | Gas Instantaneous Water Heater | 0 | 199 | 95 | 80 | Et | | |

[1] *FOOTNOTE: For gas water heaters/ boilers, standby loss is in BTUH. For electric storage water heaters, standby loss is in %/hr.*

**Water Heating Equipment All Occupancies**

| | Yes | No | Not Applicable | Requirement |
|---|---|---|---|---|
| 18 | ○ | ○ | ● | Unfired storage tank insulation shall have Internal + External ≥ R-16 OR External ≥ R-12. Label required per §110.3(c)3 |
| 19 | ○ | ○ | ● | New state buildings 60% of energy for service water heating from site solar energy or recovered energy per §110.3(c)5 |
| 20 | ● | ○ | ○ | Isolation valves for instantaneous water heater with input rating > 6.8 kBTUH or 2 kW has been specified per §110.3(c)6 |

### G. DOMESTIC HOT WATER DISTRIBUTION SYSTEM

*Table Instructions: Complete the following table to demonstrate compliance for nonresidential occupancies with distribution requirements in §120.3 and §140.5. For high-rise residential and hotel/motel occupancies, compliance is demonstrated with requirements in §110.3(c), §120.3, §150.0, §150.1.*

Table Continued

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STATE OF CALIFORNIA

## Domestic Water Heating System

NRCC-PLB-E (Created 10/20) CALIFORNIA ENERGY COMMISSION

| | |
|---|---|
| CERTIFICATE OF COMPLIANCE | NRCC-PLB-E |
| Project Name: Blue Oaks Plaza | Report Page: Page 3 of 6 |
| Project Address: 1980 Blue Oaks Boulevard, Suite 110, Roseville, CA 95747 | Date Prepared: 1/14/2022 |

Table Continued

**Recirculation Loops in Central Systems Serving Dwelling Units or Nonresidential Spaces**

| | Yes | No | Not Applicable | Requirement |
|---|---|---|---|---|
| 01 | ○ | ○ | ● | Air release valve or vertical pump installation per §110.3(c)4A |
| 02 | ● | ○ | ○ | Check valve or similar located between recirculation pump and water heating equipment to prevent backflow per §110.3(c)4B |
| 03 | ○ | ○ | ● | Hose bibb installed between pump and equipment and isolation valve between hose bibb and equipment per §110.3(c)4C |
| 04 | ○ | ○ | ● | Isolation valves on both sides of the pump per §110.3(c)4D |
| 05 | ○ | ○ | ● | Cold water and recirculation loop piping shall not be connected to the hot water storage tank drain port per §110.3(c)4E |
| 06 | ● | ○ | ○ | Check valve installed on cold water supply between hot water system and next closest tee on cold water supply per §110.3(c)4F |
| 07 | ○ | ○ | ● | For central systems serving multiple dwelling units, design includes two or more recirculation loops serving separate dwelling units per §150.1(c)8Bii unless building has ≤ 8 dwelling units. |

**Mandatory Pipe Insulation All Occupancies**

| | | |
|---|---|---|
| 12 | ☑ | For systems serving nonresidential spaces, pipe insulation for the following applications is specified to comply with Table 120.3-A (see below) per §120.3:<br>- Recirculating system piping, including supply and return piping of the water heater<br>- The first 8 ft of hot and cold outlet piping for a nonrecirculating storage system<br>- Pipes that are externally heated |
| 13 | ☑ | Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather shall be installed with a cover suitable for outdoor service per §120.3(b) and §150.0(j)3 |

**TABLE 120.3-A PIPE INSULATION THICKNESS**

| Fluid Temperature Range (°F) | Conductivity Range (Btu-in per hour per ft² per °F) | Insulation Mean Rating Temp (°F) | Nominal Pipe Diameter (in) | | |
|---|---|---|---|---|---|
| | | | <1 | 1 to < 1.5 | 1.5 to < 4 |
| | | | **Minimum Insulation Required** | | |
| 105-140 | 0.22-0.28 | 100 | **1.0 in or R-7.7** | **1.5 in or R-12.5** | **1.5 in or R-11** |

### H. DOMESTIC HOT WATER SYSTEM CONTROLS

*Table Instructions: Complete the following table to demonstrate compliance with controls requirements in §110.3 for all occupancies. For high-rise residential and hotel/motel occupancies, compliance is demonstrated with requirements in §150.1(c)8.*

| | Yes | No | Not Applicable | Requirement |
|---|---|---|---|---|

Table Continued

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STATE OF CALIFORNIA

## Domestic Water Heating System

NRCC-PLB-E (Created 10/20) CALIFORNIA ENERGY COMMISSION

| | |
|---|---|
| CERTIFICATE OF COMPLIANCE | NRCC-PLB-E |
| Project Name: Blue Oaks Plaza | Report Page: Page 4 of 6 |
| Project Address: 1980 Blue Oaks Boulevard, Suite 110, Roseville, CA 95747 | Date Prepared: 1/14/2022 |

Table Continued

| | Yes | No | Not Applicable | Requirement |
|---|---|---|---|---|
| 01 | ● | ○ | ○ | Construction documents require manufacturer certification that service water-heating systems are equipped with automatic temperature controls capable of adjusting temperature settings per §110.3(a) |
| 02 | ● | ○ | ○ | Systems with capacity > 167,000 BTUH equipped with outlet temperature controls per §110.3(c)1 unless covered by California Plumbing Code Section 613.0. |
| 03 | ● | ○ | ○ | Controls for circulating pumps or electrical heat trace systems are capable of automatically turning off the system per §110.3(c)2 unless system serves healthcare facility. |
| 04 | ○ | ○ | ● | For recirculation systems serving multiple dwelling units, design includes automatic pump controls per §150.1(c)8Bii, or §150.2 for additions or alterations |
| 05 | ○ | ○ | ● | For recirculation systems serving individual dwelling units, design includes manual on/off controls as specified in Reference Appendix RA 4.4.9 per §150.1(c)8. |
| 06 | ○ | ○ | ● | For replacement single heat pump water heaters serving individual dwelling units in climate zones 1-15, design includes communication interface that meets demand responsive control requirements of §110.12(a) per §150.2(b)1Hiii. |

### I. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

*Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/*

| YES | NO | Form/Title | Field Inspector | |
|---|---|---|---|---|
| | | | Pass | Fail |
| ● | | NRCI-PLB-01-E - Must be submitted for all buildings | ☐ | ☐ |
| ○ | ● | NRCI-PLB-02-E - Must be submitted for high-rise residential and hotel/ motel central hot water distribution systems to be recognized for compliance. | ☐ | ☐ |
| ○ | ● | NRCI-PLB-03-E - Must be submitted for high-rise residential and hotel/ motel single dwelling unit hot water distribution systems to be recognized for compliance. | ☐ | ☐ |

### J. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

*There are no Certificates of Acceptance applicable to service water heating requirements.*

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STATE OF CALIFORNIA

## Domestic Water Heating System

NRCC-PLB-E (Created 10/20) CALIFORNIA ENERGY COMMISSION

| | |
|---|---|
| CERTIFICATE OF COMPLIANCE | NRCC-PLB-E |
| Project Name: Blue Oaks Plaza | Report Page: Page 5 of 6 |
| Project Address: 1980 Blue Oaks Boulevard, Suite 110, Roseville, CA 95747 | Date Prepared: 1/14/2022 |

### K. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

*Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be completed by a HERS Rater and provided to the building inspector during construction. The final documents must be created by a HERS Providers registry, but drafts can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCV/*

| YES | NO | Form/Title | Field Inspector | |
|---|---|---|---|---|
| | | | Pass | Fail |
| ○ | ● | NRCV-PLB-21-H High-rise Residential Central Hot Water Distribution HERS Verification | ☐ | ☐ |
| ○ | ● | NRCV-PLB-22-H High-rise Residential Individual Dwelling Unit Hot Water Distribution HERS Verification | ☐ | ☐ |

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STATE OF CALIFORNIA

## Domestic Water Heating System

NRCC-PLB-E (Created 10/20) CALIFORNIA ENERGY COMMISSION

| | |
|---|---|
| CERTIFICATE OF COMPLIANCE | NRCC-PLB-E |
| Project Name: Blue Oaks Plaza | Report Page: Page 6 of 6 |
| Project Address: 1980 Blue Oaks Boulevard, Suite 110, Roseville, CA 95747 | Date Prepared: 1/14/2022 |

### DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete

| | |
|---|---|
| Documentation Author Name: Richard T. Jones, PE | Documentation Author Signature: RT Jones |
| Company: National Engineering, Ltd. | Signature Date: 1/14/2022 |
| Address: 4635 Trueman Blvd. Suite 250 | CEA/ HERS Certification Identification (if applicable): |
| City/State/Zip: Hilliard, OH 43026 | Phone: 614-751-9610 |

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**

**I certify the following under penalty of perjury, under the laws of the State of California:**

1. **The information provided on this Certificate of Compliance is true and correct.**
2. **I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)**
3. **The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.**
4. **The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.**
5. **I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.**

| | |
|---|---|
| Responsible Designer Name: Richard T. Jones, PE | Responsible Designer Signature: RT Jones |
| Company : National Engineering, Ltd. | Date Signed: 1/14/2022 |
| Address: 4635 Trueman Blvd. Suite 250 | License: 30376 |
| City/State/Zip: Hilliard, OH 43026 | Phone: 614-751-9610 |

---

Consultant:
NATIONAL
ENGINEERING
4635 Trueman Blvd. Suite 250
Hilliard, Ohio 43026
Phone: (614) 751-9610
Fax: (614) 552-5240
Contact: Jason Underwood
(614)202-3816
Junderwood@NationalEngineering.com

CHIPOTLE MEXICAN GRILL, INC.
PO BOX 182566
COLUMBUS, OH 43218-2566
TELEPHONE: (614) 318-2400
INTERNET: WWW.CHIPOTLE.COM

STORE NO.: 3811
BLUE OAKS PLAZA
1980 BLUE OAKS BOULEVARD, SUITE 110
ROSEVILLE, CA 95747

Issue Record:

| | |
|---|---|
| 1/14/2021 | Permit Set |
| 05/05/2022 | Construction Set |

Revisions:

| Drawn: | Checked: |
|---|---|
| JRA | RTJ |

Project No.
2102015

Contents:
MECHANICAL TITLE 24 COMPLIANCE

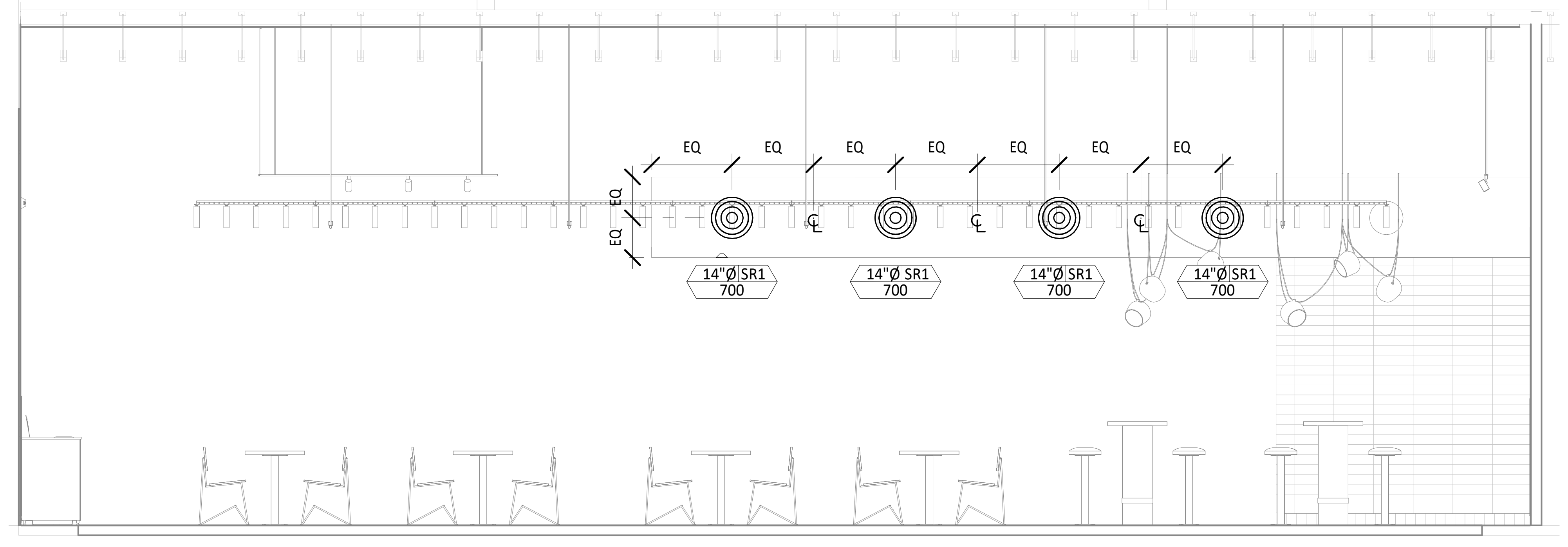
M022

## HVAC PLAN NOTES

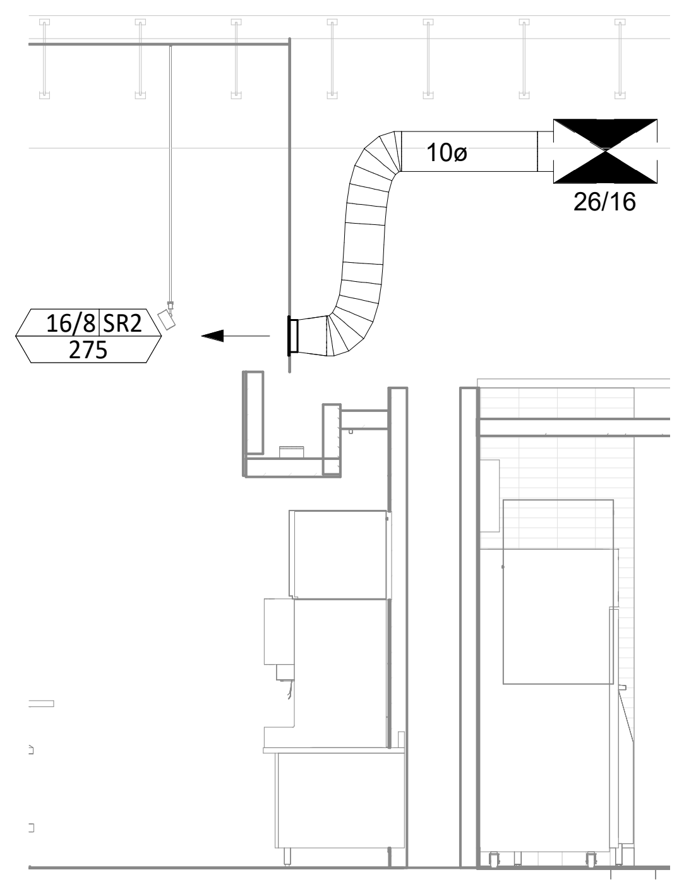
1 SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR CEILING MOUNTED EQUIPMENT LOCATION. TYPICAL.
2 PAINT DUCTWORK VISIBLE THROUGH DINING ROOM SUPPLY REGISTERS AND RETURN GRILL BLACK. TYPICAL.
3 REFER TO ARCHITECTURAL SHEETS FOR SUPPLY REGISTER ELEVATIONS AND LOCATIONS.
4 26/16 DUCT UP FOR TRANSITION TO RTU-1 RETURN CONNECTION IN ROOF CURB.
5 24/18 DUCT UP FOR TRANSITION TO RTU-2 RETURN CONNECTION IN ROOF CURB.
6 26/16 DUCT UP FROM BUILDING SUPPLY THROUGH ROOF. TRANSITION TO RTU-1 SUPPLY CONNECTION IN ROOF CURB. RTU-1 SHALL HAVE AN INTEGRAL SMOKE DETECTOR MOUNTED IN THE SUPPLY AIR STREAM. INTERLOCK SMOKE DETECTOR TO RTU-1 OPERATION.
7 26/16 DUCT UP FROM BUILDING SUPPLY TO RTU-2 SUPPLY CONNECTION. TRANSITION IN ROOF CURB. RTU-2 SHALL HAVE AN INTEGRAL SMOKE DETECTOR MOUNTED IN THE SUPPLY AIR STREAM. INTERLOCK SMOKE DETECTOR TO RTU-2 OPERATION.
8 16/16 DUCT UP THROUGH ROOF. TRANSITION TO MAU-1 SUPPLY CONNECTION IN ROOF CURB.
9 10/15 DUCTS UP FROM HOOD TO 20/15 DUCT THROUGH ROOF TO EF-1 COMPLIANT WITH NFPA 96. PROVIDE RADIUSED ELBOWS WITH AN INSIDE RADIUS OF 0.5W AT ELBOWS IN GREASE DUCT.
10 8/6 DUCT UP THROUGH ROOF TO EF-2.
11 28/10 DUCT DOWN TO MAKEUP AIR PSP DUCT CONNECTION. TRANSITION TO SUPPLY PLENUM OPENING SIZE. TYPICAL FOR 3.
12 8" DIA. DUCT DOWN TO AC PSP DUCT CONNECTION. TRANSITION TO SUPPLY PLENUM OPENING SIZE. TYPICAL. CAP UNUSED DUCT CONNECTIONS.
13 INSTALL GRIDPOINT THERMOSTATS FURNISHED BY TEMS FOR RTU-1 AND RTU-2 AT THIS LOCATION AT 48" AFF. COORDINATE WITH ELECTRICAL SWITCHING IN THIS AREA. PROVIDE WIRING AS SHOWN IN DETAIL 8/E710.
14 INSTALL GRIDPOINT ZONE SENSOR MODULE FURNISHED BY TEMS FOR RTU-1 AT THIS LOCATION 60" AFF DIRECTLY TO WALL (NO JUNCTION BOX). COORDINATE LOCATION WITH EQUIPMENT. PROVIDE WIRING AS SHOWN IN DETAIL 8/E710.
15 INSTALL GRIDPOINT ZONE SENSOR MODULE FURNISHED BY TEMS FOR RTU-2 AT THIS LOCATION 66" AFF DIRECTLY TO WALL (NO JUNCTION BOX). COORDINATE LOCATION WITH EQUIPMENT. PROVIDE WIRING AS SHOWN IN DETAIL 8/E710.

## HVAC PLAN NOTES

16 INSTALL GRIDPOINT SUPPLY PROBE FURNISHED BY TEMS FOR RTU-1 IN THE SUPPLY DUCTWORK UPSTREAM FROM THE FIRST BRANCH CONNECTION. PROVIDE WIRING AS SHOWN IN DETAIL 8/E710.
17 INSTALL GRIDPOINT SUPPLY PROBE FURNISHED BY TEMS FOR RTU-2 IN THE SUPPLY DUCTWORK UPSTREAM FROM THE FIRST BRANCH CONNECTION. PROVIDE WIRING AS SHOWN IN DETAIL 8/E710.
18 INSTALL REMOTE TEMPERATURE SENSOR FOR HOOD HD-1 AT THIS LOCATION 60" AFF. COORDINATE LOCATION WITH EQUIPMENT. PROVIDE (2) #18 G. THERMISTOR CABLE FROM TEMPERATURE SENSOR TO HOOD CONTROL PANEL.
19 INSTALL KITCHEN HOOD, HD-1. SUPPORT HOOD PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND AS DETAILED IN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS. INSTALL HOOD ACCORDING TO THE REQUIREMENTS OF ITS LISTING, IN COMPLIANCE WITH NFPA 96, THE BUILDING CODE, AND AUTHORITIES HAVING JURISDICTION. HOOD SHALL HAVE AN INTEGRAL DUCT COLLAR TEMPERATURE SENSOR TO AUTOMATICALLY ENERGIZE THE EXHAUST AND MAKEUP AIR FANS IF COOKING TEMPERATURES ARE DETECTED. EXHAUST DUCT SYSTEM TO BE WELDED OR FACTORY-MANUFACTURED WATER AND AIR TIGHT. INSTALL CLEANOUTS PER CODE AND AS SHOWN. INSTALL HOOD PER DETAILS 2 AND 4/M700. CHIPOTLE WILL PROVIDE AN INDEPENDENT TESTING AGENCY FOR TESTING THE INTEGRITY OF THE GREASE DUCT SYSTEM.
20 INSTALL REMOTE CONDENSING UNIT FOR WALK-IN COOLER ON ROOF AS DETAILED IN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS. INSTALL REFRIGERANT LINE SET, THERMOSTATIC EXPANSION VALVE, SOLENOID VALVE, TEMPERATURE CONTROL, SIGHT GLASS, FILTER DRIER, PRESSURE CONTROL, LOW AMBIENT CONTROLS, AND WEATHERPROOF HOUSING. TRAP AND SLOPE REFRIGERANT LINES PER MANUFACTURER'S RECOMMENDATIONS. INSTALLATION SHALL COMPLY WITH ASHRAE/ANSI STANDARD 15. INSTALL THE REFRIGERANT LINE SET UNDER THE ROOF DECK TO WITHIN 3' OF THE CONDENSING UNIT. CUT 2-1/2" HOLE IN WALK-IN COOLER ROOF FOR REFRIGERANT LINE SET AND SEAL PER THE COOLER MANUFACTURER'S INSTALLATION INSTRUCTIONS AFTER LINE SET IS INSTALLED.
21 INSTALL REMOTE CONDENSER FOR ICE MACHINE ON ROOF AS DETAILED IN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS. INSTALL REFRIGERANT LINE SET, THERMOSTATIC EXPANSION VALVE, SOLENOID VALVE, TEMPERATURE CONTROL, SIGHT GLASS, FILTER DRIER, PRESSURE CONTROL, LOW AMBIENT CONTROLS, AND WEATHERPROOF HOUSING. TRAP AND SLOPE REFRIGERANT LINES PER MANUFACTURER'S RECOMMENDATIONS. SEAL PIPING PENETRATIONS THROUGH ROOF. INSTALLATION SHALL COMPLY WITH ASHRAE/ANSI STANDARD 15. INSTALL THE REFRIGERANT LINE SET UNDER THE ROOF DECK TO WITHIN 3' OF THE REMOTE CONDENSER. IF REFRIGERANT PIPING TO ICE MAKER IS EXPOSED TO PUBLIC VIEW CONCEAL WITHIN A STAINLESS STEEL SHROUD AS SHOWN IN THE ARCHITECTURAL DRAWINGS.
22 INSTALL ROOFTOP EQUIPMENT PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND AS DETAILED IN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS.
23 INSTALL EXHAUST FAN EF-1 PER DETAIL 5/M700 AND AS DETAILED IN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS. INSTALL GREASE VIROGUARD SYSTEM FURNISHED BY CHIPOTLE ON EXHAUST FAN, EF-1.
24 PROVIDE SUPPLY DIFFUSER CONNECTION TO SUPPLY SYSTEM PER DETAIL 1/M700. TYPICAL.
25 PROVIDE AUDIO/VISUAL REMOTE SMOKE DETECTOR ANNUNCIATOR WITH REMOTE KEY OPERATED RESET. WIRE A UNIT BACK TO EACH SMOKE DETECTOR. MOUNT UNIT 60" AFF. TYPICAL.
26 INSTALL REME HALO AIR PURIFIER FURNISHED BY TUV IN RTU PER DETAIL 6/M700. SEE ELECTRICAL DRAWINGS FOR POWER CONNECTION INFORMATION. INSTALL UV WARNING STICKERS ON FACE OF ENCLOSURE PER DETAIL AND ON ANY RTU ACCESS DOOR(S) THROUGH WHICH THE REME HALO WOULD BE VISIBLE IF OPENED.
27 MAINTAIN 10' CLEARANCE BETWEEN WATER HEATER FLUE TERMINATION AND OUTSIDE AIR INTAKES. MAINTAIN 10' CLEARANCE BETWEEN WATER HEATER COMBUSTION AIR INTAKE AND EXHAUST FAN EF-1 DISCHARGE. SEE PLUMBING DRAWINGS FOR MORE INFORMATION ON WATER HEATER FLUE AND COMBUSTION AIR TERMINATIONS.



5
M100
HVAC DINING ROOM SECTION 2
1/4" = 1'-0"



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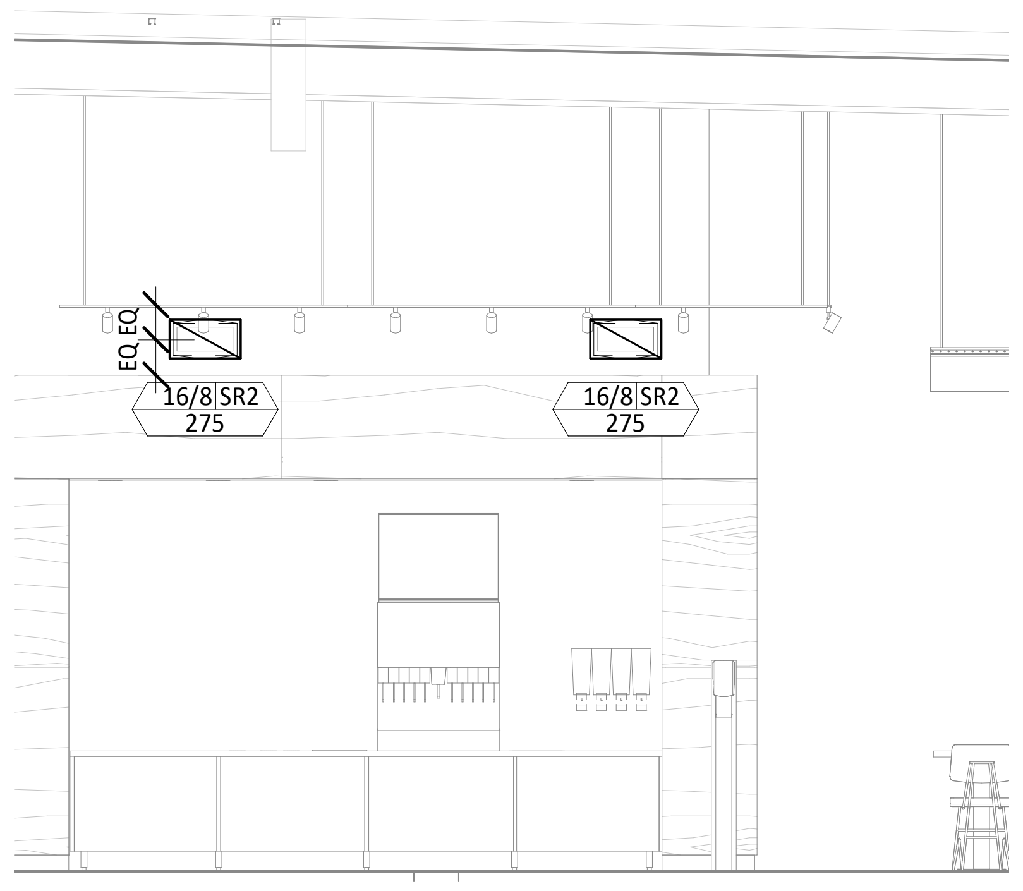
HVAC DINING ROOM SECTION 1
1/4" = 1'-0"



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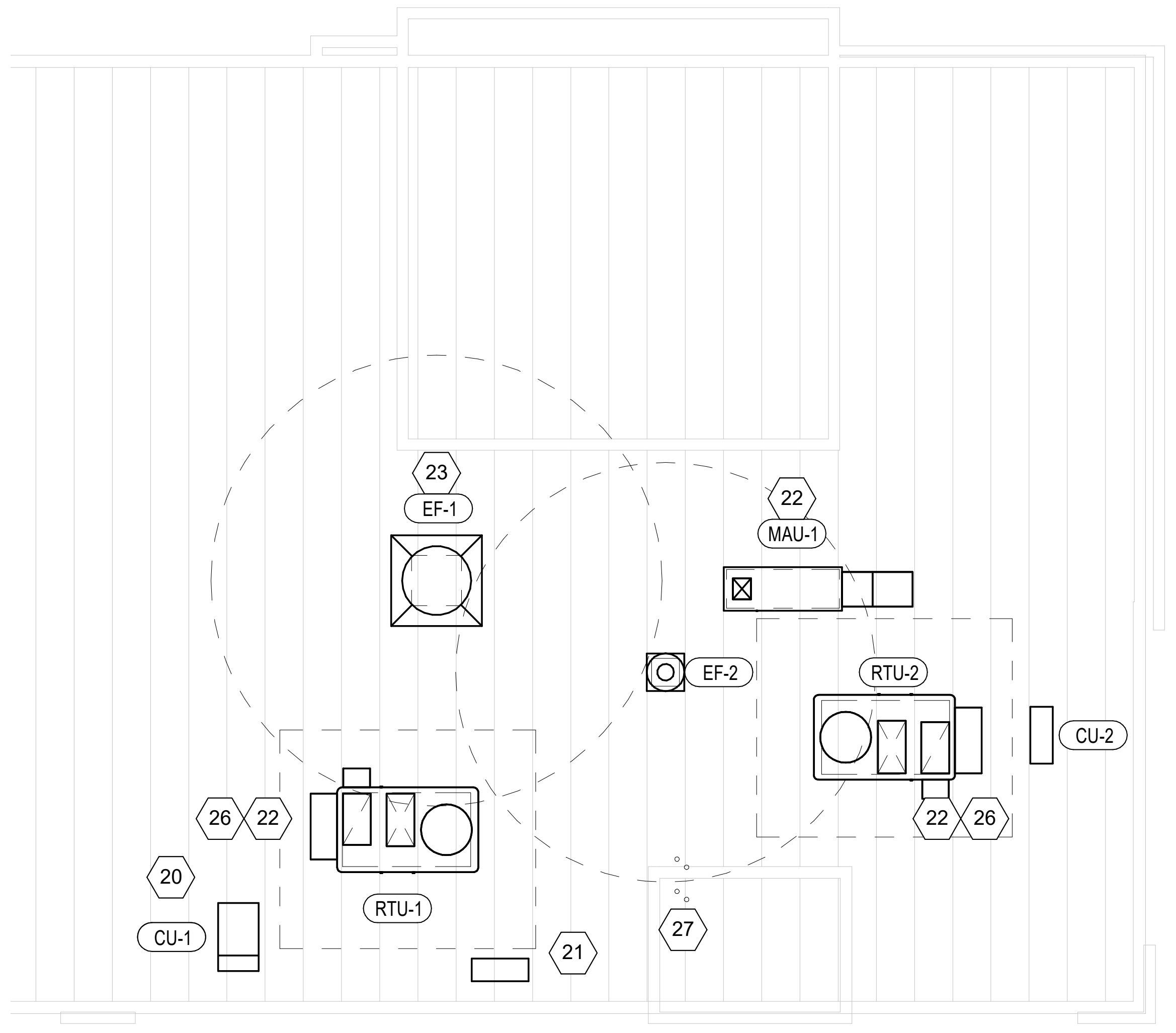
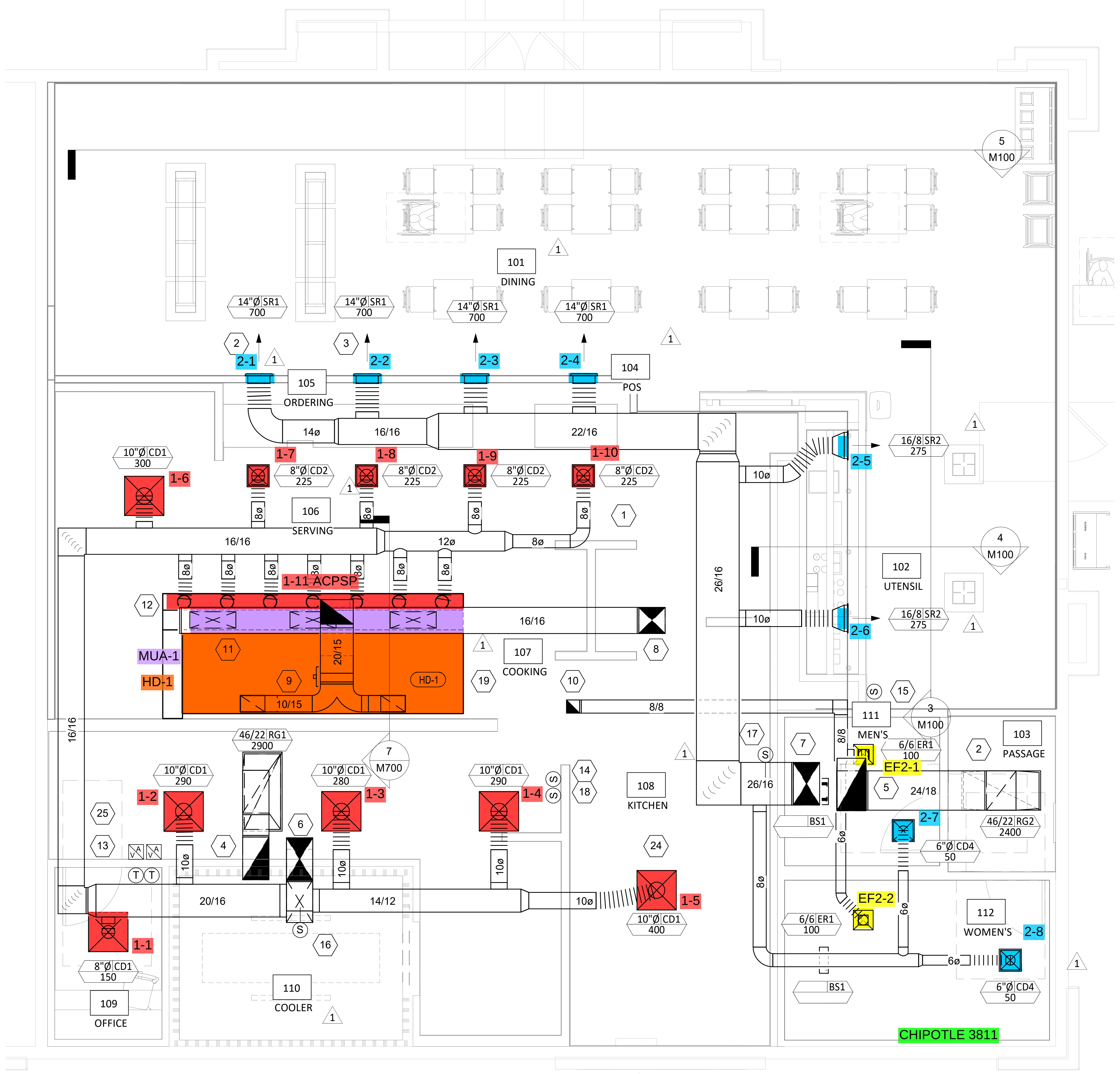
HVAC DINING ROOM SECTION
1/4" = 1'-0"



2
M100
HVAC ROOF PLAN
1/8" = 1'-0"



1
M100
HVAC FLOOR PLAN
1/4" = 1'-0"

Consultant:

NATIONAL
ENGINEERING
4635 Trueman Blvd. Suite 250
Hilliard, Ohio 43026
Phone: (614) 751-9610
Fax: (614) 552-5240
Contact: Jason Underwood
(614)202-3816
Junderwood@NationalEngineering.com

CHIPOTLE MEXICAN GRILL, INC.
PO BOX 182566
COLUMBUS, OH 43218-2566
TELEPHONE: (614) 318-2400
INTERNET: WWW.CHIPOTLE.COM

STORE NO.: 3811
BLUE OAKS PLAZA
1980 BLUE OAKS BOULEVARD, SUITE 110
ROSEVILLE, CA 95747

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| 1 | 02/25/2022 | CITY COMMENTS |

Drawn: RTJ
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Project No.
2102015

Contents:
HVAC PLAN

M100

## VIROGUARD SCHEDULE

| TAG | QUANITITY | DESCRIPTION | DUCT CONNECTION SIZE | FAN | FURNISHED BY | INSTALLED BY | BASIS FOR DESIGN MANUFACTURER |
|---|---|---|---|---|---|---|---|
| VG-1 | 1 | VIROGUARD HOOD EXHAUST FAN ROOFTOP CONTAINMENT SYSTEM | 18" X 18" | CAPTIVE-AIRE DU240HFA | TDC | GC | ENVIROMATIC |

## GRILLS, REGISTERS, AND DIFFUSERS SCHEDULE

| TAG | DESCRIPTION | FACE SIZE | MATERIAL | FINISH | MOUNTING | FURNISHED BY | INSTALLED BY | BASIS FOR DESIGN | | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | MANUFACTURER | MODEL | |
| BS1 | BATHROOM AIR PURIFICATION UNIT | 5.44" X 16" | ALUMINUM | STAINLESS STEEL | GYP CEILING | TUV | GC | RGF ENVIRONMENTAL GROUP | BRU ASSEMBLY | SEE ELECTRICAL SHEETS FOR CONNECTION INFORMATION |
| CD1 | PERFORATED CEILING DIFFUSER | 24" X 24" | ALUMINUM | WHITE | LAY-IN CEILING | GC | GC | NAILOR | 4320A TYPE L | PROVIDE INTEGRAL OBD |
| CD2 | PERFORATED CEILING DIFFUSER | 12" X 12" | ALUMINUM | WHITE | GYP CEILING | GC | GC | NAILOR | 4320A TYPE S | PROVIDE INTEGRAL OBD, REMOVE 4-WAY DEFLECTOR |
| CD4 | PERFORATED CEILING DIFFUSER | 12" X 12" | ALUMINUM | WHITE | GYP CEILING | GC | GC | NAILOR | 4320A TYPE S | PROVIDE INTEGRAL OBD |
| ER1 | PERFORATED CEILING EXHAUST | 12" X 12" | ALUMINUM | WHITE | GYP CEILING | GC | GC | NAILOR | 4330R TYPE S | PROVIDE INTEGRAL OBD |
| RG1 | PERFORATED CEILING RETURN | 48" X 24" | ALUMINUM | WHITE | LAY-IN CEILING | GC | GC | NAILOR | 4330R TYPE L | |
| RG2 | PERFORATED CEILING RETURN | 48" X 24" | ALUMINUM | WHITE | GYP CEILING | GC | GC | NAILOR | 4330R TYPE S | |
| SR1 | ADJUSTABLE TURBO NOZZLE | SEE NECK SIZE | ALUMINUM | WHITE | WALL | GC | GC | SEIHO | NT14 | PROVIDE FACE-ACCESSIBLE OBD |
| SR2 | DOUBLE DEFLECTION SUPPLY REGISTER | SEE NECK SIZE | ALUMINUM | MILL | DUCT | GC | GC | NAILOR | 51DH | PROVIDE INTEGRAL OBD |

## FAN SCHEDULE

| TAG | DRIVE TYPE | EXHAUST FLOW [CFM] | E.S.P. [in W.C.] | WEIGHT [lbs] | ELECTRICAL | | FURNISHED BY | INSTALLED BY | BASIS FOR DESIGN | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | MOTOR POWER | V/P/H | | | MANUFACTURER | MODEL | |
| EF-1 | DIRECT | 3200 CFM | 1.20 in-wg | 400 | 3 HP | 208/3/60 | HS | GC | CAPTIVE-AIRE | DU240HFA | FURNISHED WITH DISCONNECT AND VENTED ROOF CURB |
| EF-2 | DIRECT | 200 CFM | 0.60 in-wg | 100 | 0.18 HP | 120/1/60 | HS | GC | CAPTIVE-AIRE | DR12HFA | FURNISHED WITH DISCONNECT, VARIABLE SPEED CONTROLLER, BACKDRAFT DAMPER AND ROOF CURB |

## MAKEUP AIR UNIT SCHEDULE

| TAG | DESCRIPTION | AIRFLOW | | HEATING CAPACTIY | | | | APPROXIMATE WEIGHT [lbs] | ELECTRICAL | | FURNISHED BY | INSTALLED BY | BASIS FOR DESIGN | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | SUPPLY FLOW [CFM] | E.S.P. [in. W.C.] | INPUT [MBH] | OUTPUT [MBH] | MAXIMUM TURNDOWN | EAT | | MOTOR POWER | V/P/H | | | MANUFACTURER | MODEL | |
| MAU-1 | MAKEUP AIR UNIT | 1950 | 0.80 | 225 | 220 | 12.5:1 | 31 °F | 650 | 2 HP | 208/3/60 | HS | GC | CAPTIVE-AIRE | A1-D.250-G10 | FURNISHED WITH DISCONNECT, ROOF CURB, SCREEN INTAKE, AND WASHABLE ALUMINUM FILTERS |

## CONDENSING UNIT SCHEDULE

| TAG | DESCRIPTION | NOMINAL CAPACITY [TONS] | NUMBER OF COMPRESSORS | NUMBER OF CIRCUITS | REFRIGERANT TYPE | REFRIGERANT CHARGE | WEIGHT | ELECTRICAL | | | FURNISHED BY | INSTALLED BY | BASIS FOR DESIGN | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | MOCP | FLA | V/P/H | | | MANUFACTURER | MODEL | |
| CU-1 | WALK-IN COOLER REMOTE CONDENSING UNIT | -- | 1 | 1 | R-404A | | 200 | 15 A | 6.5 A | 208/3/60 | WCS | GC | HARFORD | PCL99MOP-3 | FURNISHED WITH WALK-IN COOLER |
| CU-2 | ICE MAKER - REMOTE CONDENSER | -- | 0 | 1 | R-404A | 11 lbs 7.4 oz | 100 | | | 120/1/60 | KES | GC | - | - | FURNISHED WITH ICE MAKER |
| CU-3 | ICE MAKER - REMOTE CONDENSER | -- | 0 | 1 | R-404A | 11 lbs 7.4 oz | 100 | | | 120/1/60 | KES | GC | - | - | FURNISHED WITH ICE MAKER |

## KITCHEN HOOD SCHEDULE

| TAG | DESCRIPTION | MAX COOKING TEMP. | EXHAUST PLENUM | | | | | | | PERFORATED SUPPLY PLENUMS | | | | | | | | | | NUMBER OF LIGHT FIXTURES | APPROXIMATE WEIGHT [lbs] | FURNISHED BY | INSTALLED BY | BASIS FOR DESIGN | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | DUCT COLLARS | | | | | | | | MAU PLENUM | | | | AC PLENUM | | | | | | | | | |
| | | | | | | | | | | | | | | DUCT COLLARS | | | | DUCT COLLARS | | | | | | | | |
| | | | AIRFLOW [CFM] | SP [in. W.C] | NO. | WIDTH | LENGTH | LENGTH | WIDTH | SP [in. W.C.] | SUPPLY PLENUM LENGTH | SUPPLY PLENUM WIDTH | AIRFLOW [CFM] | N0. | WIDTH | LENGTH | AIRFLOW [CFM] | N0. | DIAMETER | | | | | MANUFACTURER | MODEL | |
| HD-1 | TYPE I CANOPY HOOD WITH PERFORATED MAU AND AC SUPPLY PLENUMS | 600°F | 3200 | 0.86 | 2 | 10" | 15" | 14' - 3" | 4' - 3" | 0.2 | 15' - 3" | 22" | 1950 | 3 | 10" | 28" | 800 | 7 | 8" | 10 | 1200 | HS | GC | CAPTIVE-AIRE | 5424 ND-2-ACPSP-F | MAT'L: 18 GA. TYPE 430 SS. PROVIDE WITH 16" TALL HE SS FILTERS, INTEGRAL UTILITY CABINET, ANSUL SYSTEM, DUCT COLLAR TEMPERATURE SENSOR, PREWIRE PACKAGE, SPARE FIRE SYSTEM DRY CONTACT, AND 4-POLE 20A CONTACTOR |

## ROOFTOP UNIT SCHEDULE

| TAG | DESCRIPTION | NOMINAL CAPACITY [TONS] | EER | AIRFLOW | | | NET COOLING CAPACITY | | | | | HEATING CAPACITY | | | # OF COMPRESSORS | # OF CIRCUITS | REFRIG. TYPE | REFRIG. CHARGE | APPROX. WEIGHT [lbs] | ELECTRICAL | | | FURNISHED BY | INSTALLED BY | BASIS FOR DESIGN | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | TOTAL [CFM] | OA [CFM] | ESP [IN. W.C.] | TOTAL [MBH] | SENSIBLE [MBH] | EAT [DEG. F] | | COND. EAT [DEG. F] | INPUT [MBH] | OUTPUT [MBH] | EAT [DEG. F] | | | | | | MOCP | FLA | V/P/H | | | MANUFACTURER | MODEL | |
| | | | | | | | | | DB | WB | | | | | | | | | | | | | | | | | |
| RTU-1 | KITCHEN ROOFTOP UNIT | 8.5 | 12.5 | 3400 | 500 | 0.8 | 94 | 70 | 80 | 68 | 100 | 120 | 96 | 64 | 2 | 2 | R-410A | 6.3/4.9 | 1500 | 50 A | 42.0 A | 208/3/60 | HES | GC | TRANE | YHC102 | FURNISHED WITH COMP. ENTHALPY ECON., BAROMETRIC RELIEF, RET. SMOKE DETECTOR W/ REMOTE KEYED ANNUNCIATOR/RESET, M.O.D., MERV-8 FILTERS, CURB, HAIL GUARD, TOOLLESS HINGED ACCESS PANELS, DISCONNECT, & UNIT-MOUNTED CONVENIENCE RECEPTACLE |
| RTU-2 | DINING ROOM ROOFTOP UNIT | 8.5 | 12.5 | 3400 | 1000 | 0.8 | 95 | 76 | 83 | 69 | 99 | 120 | 96 | 58 | 2 | 2 | R-410A | 6.3/4.9 | 1500 | 50 A | 42.0 A | 208/3/60 | HES | GC | TRANE | YHC102 | FURNISHED WITH COMP. ENTHALPY ECON., BAROMETRIC RELIEF, RET. SMOKE DETECTOR W/ REMOTE KEYED ANNUNCIATOR/RESET, M.O.D., MERV-8 FILTERS, CURB, HAIL GUARD, TOOLLESS HINGED ACCESS PANELS, DISCONNECT, & UNIT-MOUNTED CONVENIENCE RECEPTACLE |

## AIR BALANCE SCHEDULE

| Tag | Supply Flow [CFM] | Return Flow [CFM] | Exhaust Flow [CFM] | Subtotal [CFM] |
|---|---|---|---|---|
| EF-1 | 0 | 0 | 3200 | -3200 |
| EF-2 | 0 | 0 | 200 | -200 |
| MAU-1 | 1950 | 0 | 0 | 1950 |
| RTU-1 | 3400 | 2900 | 0 | 500 |
| RTU-2 | 3400 | 2400 | 0 | 1000 |
| Net Pressurization [CFM] | | | | 50 |

## CONTROL FUNCTIONS

A. THE MAIN COOKING EXHAUST FAN AND MAKE-UP AIR UNIT SHALL BE INTERLOCKED TO OPERATE TOGETHER. THIS CONTROL CIRCUIT IS ACTIVATED BY A SWITCH AND INCLUDES A FIRE PROTECTION OVERRIDE.

B. THE TEMPERATURE IN EACH ZONE IS CONTROLLED BY SPACE TEMPERATURE SENSORS CONNECTED TO THE THERMOSTATS LOCATED IN THE OFFICE. ALL ZONES SHALL OPERATE WITH CONTINUOUS FAN OPERATION DURING OCCUPIED TIMES AND INTERMITTENTLY AS NEEDED TO MAINTAIN SET POINTS DURING UNOCCUPIED TIMES. OUTSIDE AIR DAMPERS SHALL BE OPEN CONTINUOUSLY WHEN EITHER IN OCCUPIED MODE OR WHEN THE HOOD SYSTEM IS ON AND SHALL BE CLOSED DURING UNOCCUPIED PERIODS.

C. THE THERMOSTATS SHALL DETERMINE OCCUPIED/UNOCCUPIED STATUS BASED ON THE SCHEDULE IN THE ENERGY MANAGEMENT SYSTEM.

Consultant:
NATIONAL
ENGINEERING
4635 Trueman Blvd. Suite 250
Hilliard, Ohio 43026
Phone: (614) 751-9610
Fax: (614) 552-5240
Contact: Jason Underwood
(614)202-3816
Junderwood@NationalEngineering.com

CHIPOTLE MEXICAN GRILL, INC.
PO BOX 182566
COLUMBUS, OH 43218-2566
TELEPHONE: (614) 318-2400
INTERNET: WWW.CHIPOTLE.COM

STORE NO.: 3811
BLUE OAKS PLAZA
1980 BLUE OAKS BOULEVARD, SUITE 110
ROSEVILLE, CA 95747

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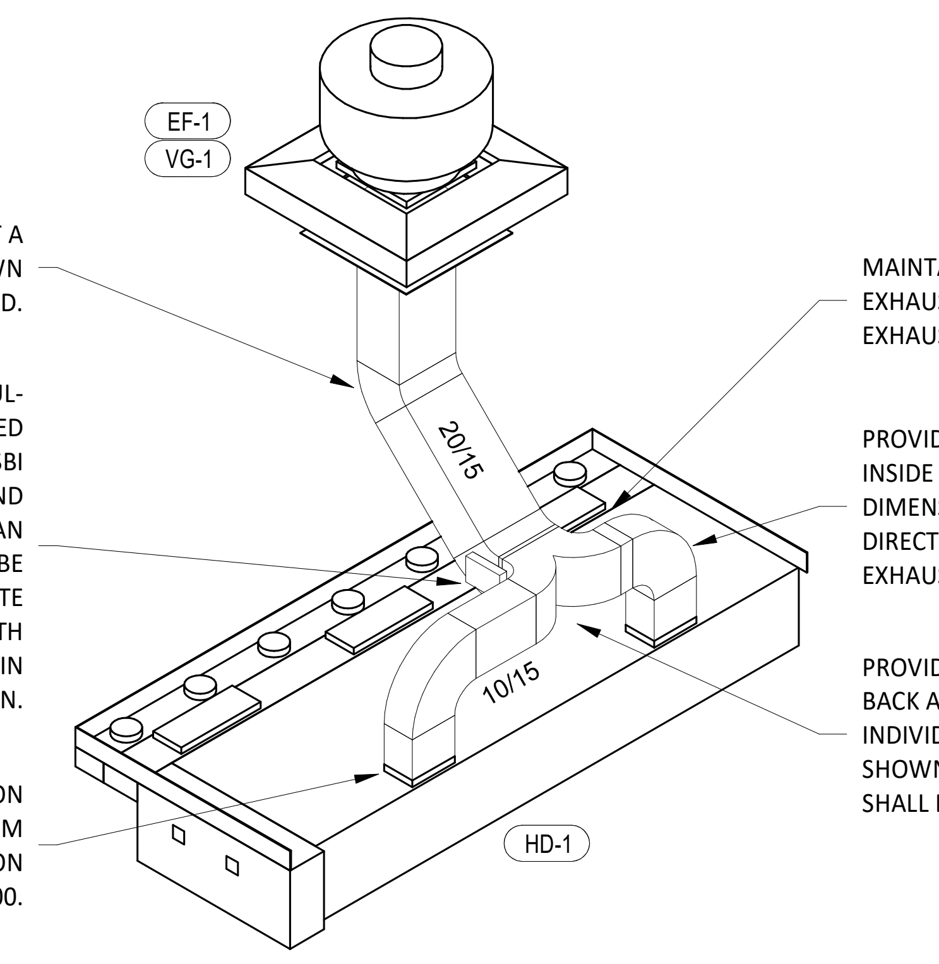
Project No.: 2102015

Contents: HVAC SCHEDULES

M600



SLOPE HORIZONTAL GREASE DUCT A MINIMUM OF 1/4" PER FOOT DOWN TOWARD THE CONNECTION TO THE HOOD.

GREASE DUCT CLEANOUTS SHALL BE UL-LISTED DUCTMATE PREINSULATED CLEANOUT DOORS MODEL D128ULWSBI FOR DUCTS AT LEAST 17" TALL AND DW128ULWSBI FOR DUCTS LESS THAN 17" TALL. CLEANOUTS SHALL BE FURNISHED BY TENANT. COORDINATE NUMBER AND SIZE REQUIRED WITH ENVIROMATIC. INSTALL AS SHOWN IN THE HVAC FLOOR PLAN.

PROVIDE FIRE RESISTANT INSULATION ON TYPE I HOOD EXHAUST DUCT FROM CONNECTION TO HOOD TO CONNECTION TO EXHAUST FAN PER DETAIL 3/M700.

MAINTAIN SYMMETRY IN GREASE EXHAUST DUCT'S TRANSITION TO THE EXHAUST RISER.

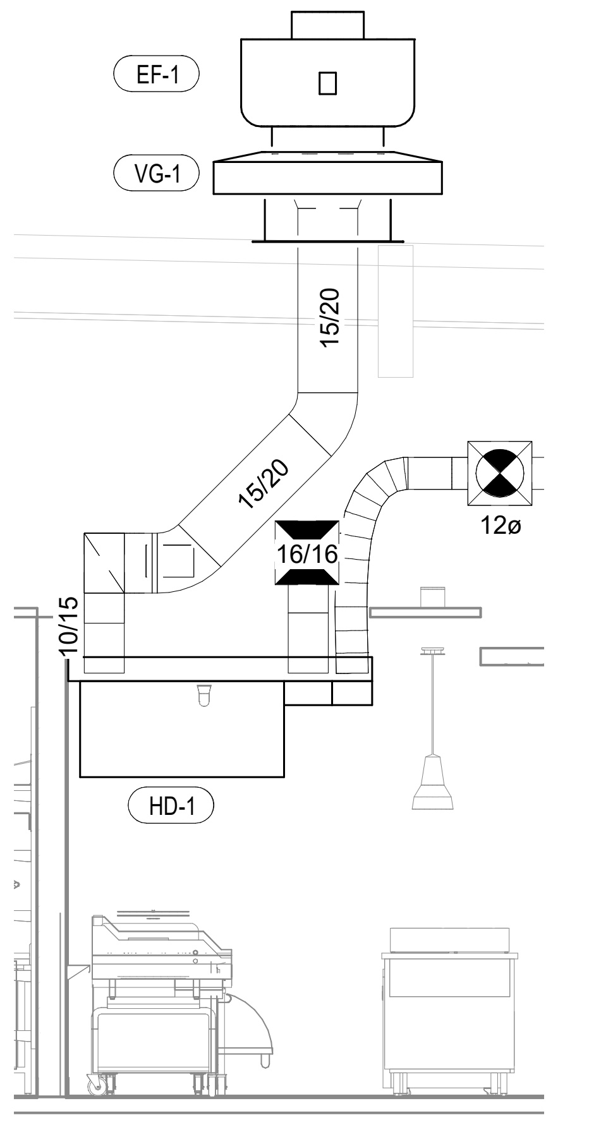
PROVIDE RADIUSED ELBOWS WITH AN INSIDE RADIUS OF 0.5 X THE DUCT DIMENSION AT ALL CHANGES OF DIRECTION IN THE TYPE I HOOD EXHAUST DUCT.

PROVIDE TEE FITTING WITH RADIUSED BACK AND RADIUSED THROAT WHERE INDIVIDUAL EXHAUST RISERS CONVERGE AS SHOWN. THE CENTERLINE OF THE RADII SHALL BE EQUAL TO THE DUCT DIMENSION.

8
M700

## HOOD EXHAUST ISOMETRIC

N.T.S.



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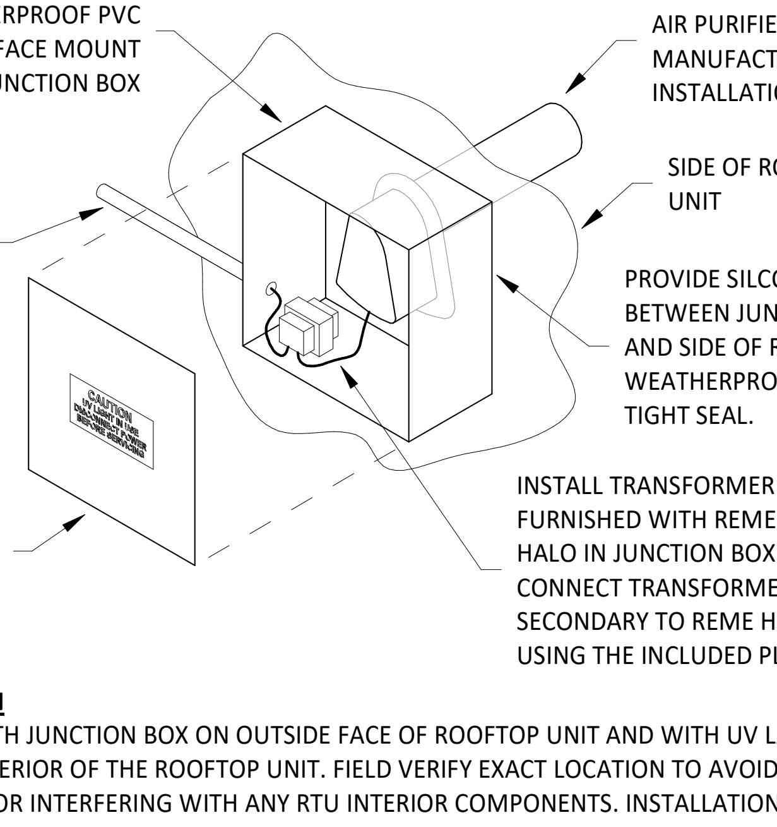
M700

## DUCT SECTION AT HOOD

1/4" = 1'-0"



12" X 12" X 6" WEATHERPROOF PVC SURFACE MOUNT JUNCTION BOX

PROVIDE 120V POWER TO JUNCTION BOX PER ELECTRICAL DRAWINGS. CONNECT TO TRANSFORMER WITHIN JUNCTION BOX.

GASKETTED JUNCTION BOX COVER. INSTALL UV WARNING STICKER ON OUTSIDE FACE OF COVER.

INSTALL RGF REME HALO UV AIR PURIFIER PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

SIDE OF ROOFTOP UNIT

PROVIDE SILCONE SEALANT BETWEEN JUNCTION BOX AND SIDE OF RTU FOR A WEATHERPROOF AND AIR-TIGHT SEAL.

INSTALL TRANSFORMER FURNISHED WITH REME HALO IN JUNCTION BOX. CONNECT TRANSFORMER SECONDARY TO REME HALO USING THE INCLUDED PLUG.

**INSTALLATION LOCATION**

INSTALL AIR PURIFIER WITH JUNCTION BOX ON OUTSIDE FACE OF ROOFTOP UNIT AND WITH UV LAMP TUBE EXTENDING INTO THE INTERIOR OF THE ROOFTOP UNIT. FIELD VERIFY EXACT LOCATION TO AVOID DAMAGING, TOUCHING, OR INTERFERING WITH ANY RTU INTERIOR COMPONENTS. INSTALLATION LOCATION SHALL BE AS FOLLOWS:

**TRANE**: INSTALL INTO THE SUPPLY AIR STREAM THROUGH THE REMOVABLE PANEL COVERING THE HORIZONTAL DISCHARGE SUPPLY AIR OPENING.

**YORK**: INSTALL INTO THE SUPPLY AIR PLENUM FROM THE BACK SIDE OF THE UNIT JUST ABOVE THE HEAT EXCHANGER.

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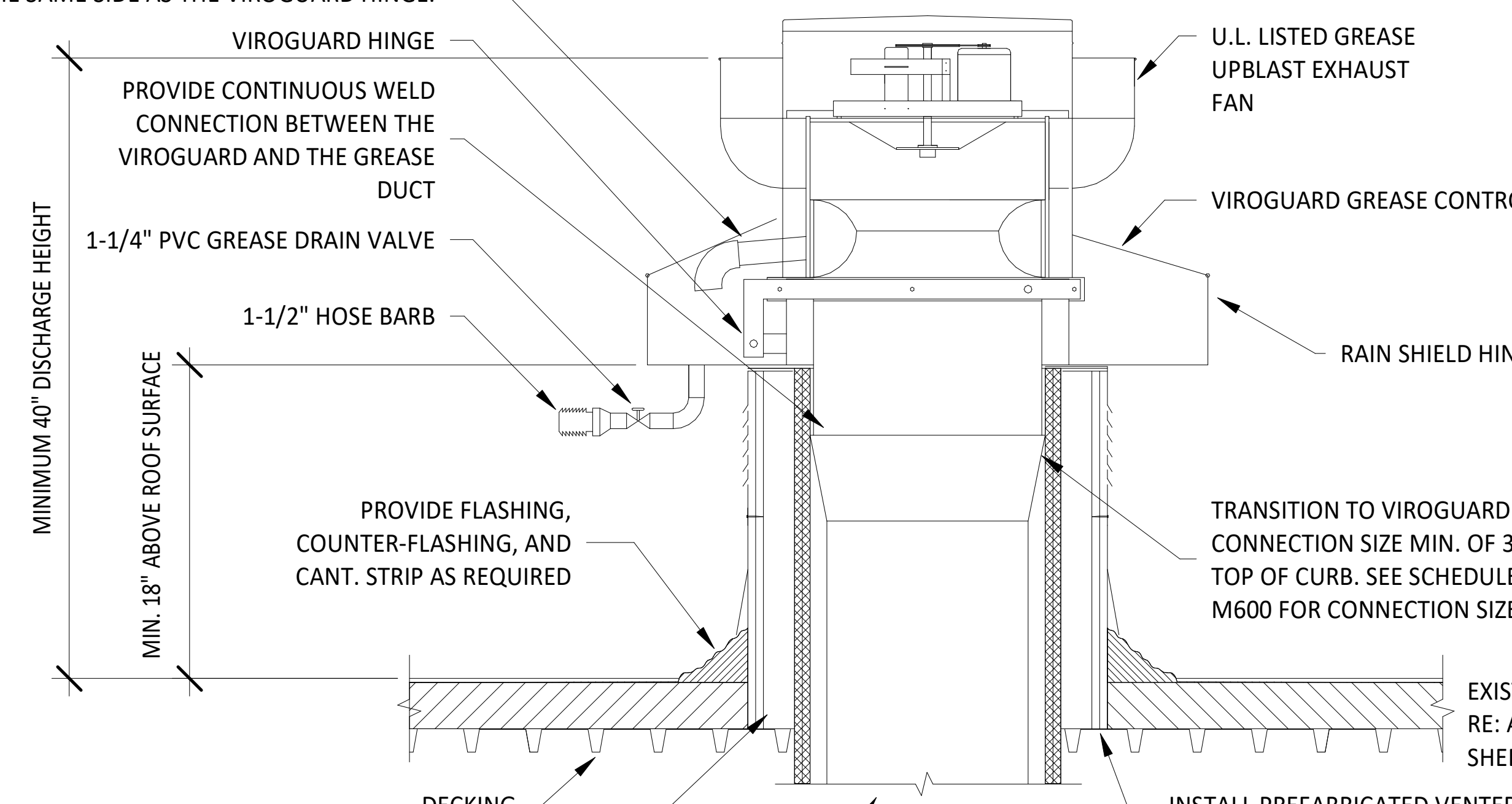
M700

## UV AIR PURIFIER INSTALLATION

N.T.S.



EXHAUST FAN DRAIN WITH RUBBER ELBOW. ROTATE EXHAUST FAN SO THAT FAN DRAIN IS ON THE SAME SIDE AS THE VIROGUARD HINGE.

VIROGUARD HINGE

PROVIDE CONTINUOUS WELD CONNECTION BETWEEN THE VIROGUARD AND THE GREASE DUCT

1-1/4" PVC GREASE DRAIN VALVE

1-1/2" HOSE BARB

PROVIDE FLASHING, COUNTER-FLASHING, AND CANT. STRIP AS REQUIRED

DECKING

SHIM CURB AS REQUIRED TO MAINTAIN 18" CLEARANCE FROM BOTTOM OF VIROGUARD TO ROOF SURFACE AND OTHER COMBUSTIBLE MATERIALS. SEE STRUCTURAL DRAWINGS FOR ANY REQUIRED CONNECTION DETAILS.

GREASE DUCT

U.L. LISTED GREASE UPBLAST EXHAUST FAN

VIROGUARD GREASE CONTROL DEVICE

RAIN SHIELD HINGE

TRANSITION TO VIROGUARD DUCT CONNECTION SIZE MIN. OF 3" BELOW TOP OF CURB. SEE SCHEDULE ON SHEET M600 FOR CONNECTION SIZE.

EXISTING ROOF DECK RE: ARCHITECTURAL SHEETS FOR DETAILS

INSTALL PREFABRICATED VENTED ROOF CURB FURNISHED BY CHIPOTLE

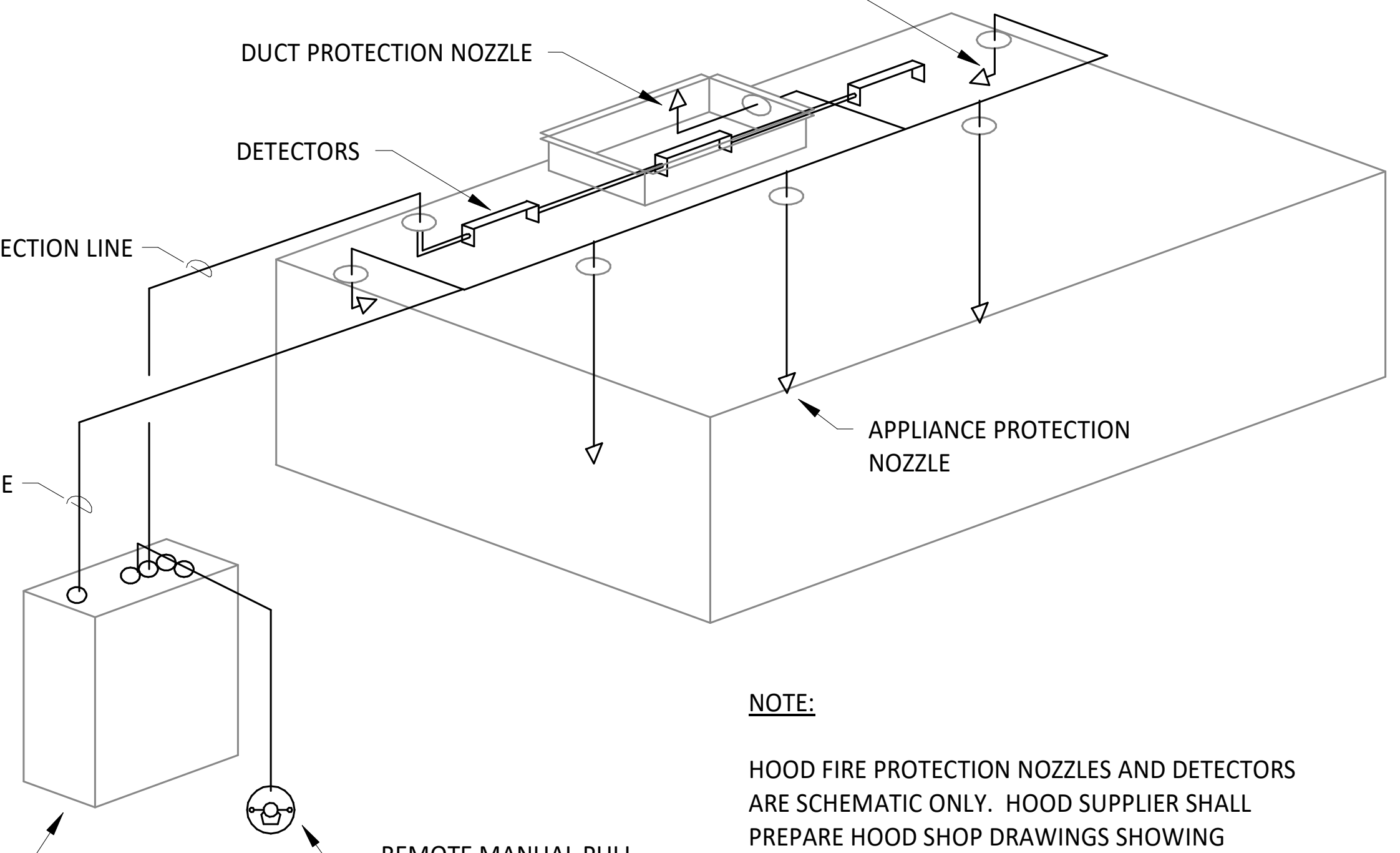
NOTE:

1. INSTALLATION SHALL BE IN ACCORDANCE WITH NFPA 96 REQUIREMENTS.
2. HINGE FAN SO IT TIPS BACK TOWARD FAN DRAIN AND TOWARD VIROGUARD DRAIN.

5
M700

## GREASE EXHAUST FAN

N.T.S.



PLENUM PROTECTION NOZZLE

DUCT PROTECTION NOZZLE

DETECTORS

DETECTION LINE

AGENT LINE

SYSTEM CONTROL AUTOMAN WITH AGENT TANK ENCLOSED

REMOTE MANUAL PULL STATION WITH WIRE GUARD

APPLIANCE PROTECTION NOZZLE

NOTE:

HOOD FIRE PROTECTION NOZZLES AND DETECTORS ARE SCHEMATIC ONLY. HOOD SUPPLIER SHALL PREPARE HOOD SHOP DRAWINGS SHOWING ACTUAL DEVICE LAYOUT AND SHALL OBTAIN PERMITS ASSOCIATED WITH THIS WORK.

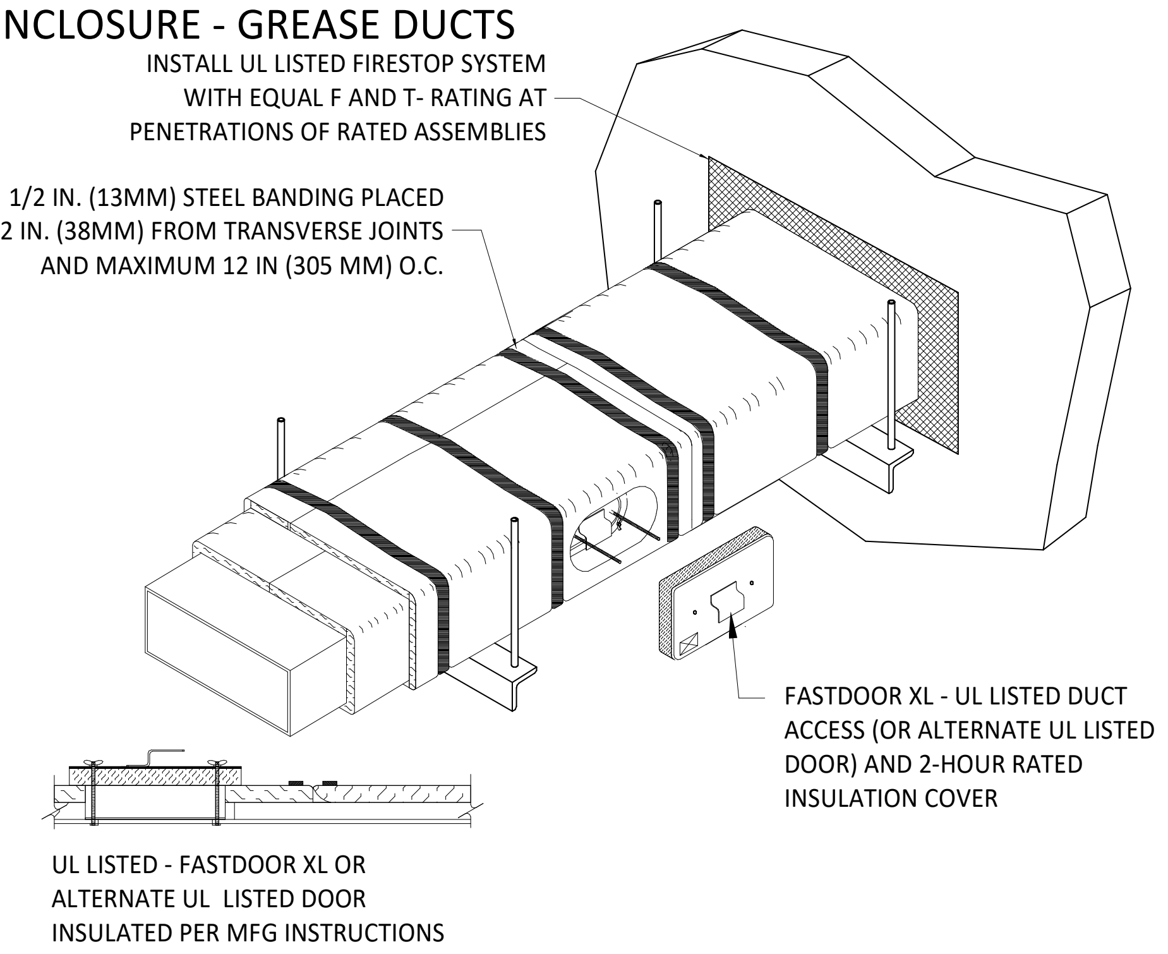
4
M700

## FIRE SUPPRESSION SYSTEM SCHEMATIC

N.T.S.

### FIRE RATED ENCLOSURE - GREASE DUCTS

1. THERMAL CERAMICS FIREMASTER FASTWRAP XL IS TESTED TO ASTM E2336 AND UL LISTED PER HNKT.G18 TO PROVIDE ZERO CLEARANCE TO COMBUSTIBLES AND TO PROVIDE A 1- OR 2-HOUR ENCLOSURE. THROUGH PENETRATIONS FIRESTOP SYSTEMS ARE TESTED IN ACCORDANCE WITH ASTM E 814 (UL 1479). ICC CODE EVALUATION PER REPORT UL ER 14229-01.
2. COMPLIANT TO THE FOLLOWING CODES:
   - NFPA 96
   - INTERNATIONAL MECHANICAL CODES
   - UNIFORM MECHANICAL CODE.
   - CALIFORNIA MECHANICAL CODE
3. INSULATION APPLIED IN TWO LAYERS WITH TIGHT COMPRESSION JOINT ON BOTH LAYERS AT ALL JOINTS.
4. MINIMUM 16 GAUGE CARBON STEEL (OR 18 GAGE STAINLESS STEEL) RECTANGULAR OR ROUND GREASE EXHAUST DUCT
5. INSTALL UL LISTED AND LIQUID TIGHT THERMAL CERAMICS FASTDOOR XL ACCESS DOORS, OR ALTERNATE DOOR UL LISTED PER UL1978, AT ALL CHANGES IN DIRECTION AND AT MINIMUM EVERY 12 FT ON HORIZONTAL RUNS.
6. SUPPORT HANGER SYSTEMS DO NOT NEED TO BE WRAPPED PROVIDED THE HANGER RODS ARE MINIMUM OF 3/8 IN. DIAMETER AND SUPPORTS ARE MINIMUM 2 X 2 X 1/8 IN. STEEL ANGLE OR SMACNA EQUIVALENT SUPPORT SYSTEM.
7. THERMAL CERAMICS DUCT WRAP SHALL BE INSTALLED DIRECTLY ONTO THE DUCT AND APPLIED FROM THE HOOD CONNECTION TO THE CONNECTION TO THE FAN.
8. THERMAL CERAMICS DUCT ENCLOSURE SYSTEM SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS AND UL LISTINGS.



INSTALL UL LISTED FIRESTOP SYSTEM WITH EQUAL F AND T- RATING AT PENETRATIONS OF RATED ASSEMBLIES

1/2 IN. (13MM) STEEL BANDING PLACED 1-1/2 IN. (38MM) FROM TRANSVERSE JOINTS AND MAXIMUM 12 IN (305 MM) O.C.

FASTDOOR XL - UL LISTED DUCT ACCESS (OR ALTERNATE UL LISTED DOOR) AND 2-HOUR RATED INSULATION COVER

UL LISTED - FASTDOOR XL OR ALTERNATE UL LISTED DOOR INSULATED PER MFG INSTRUCTIONS

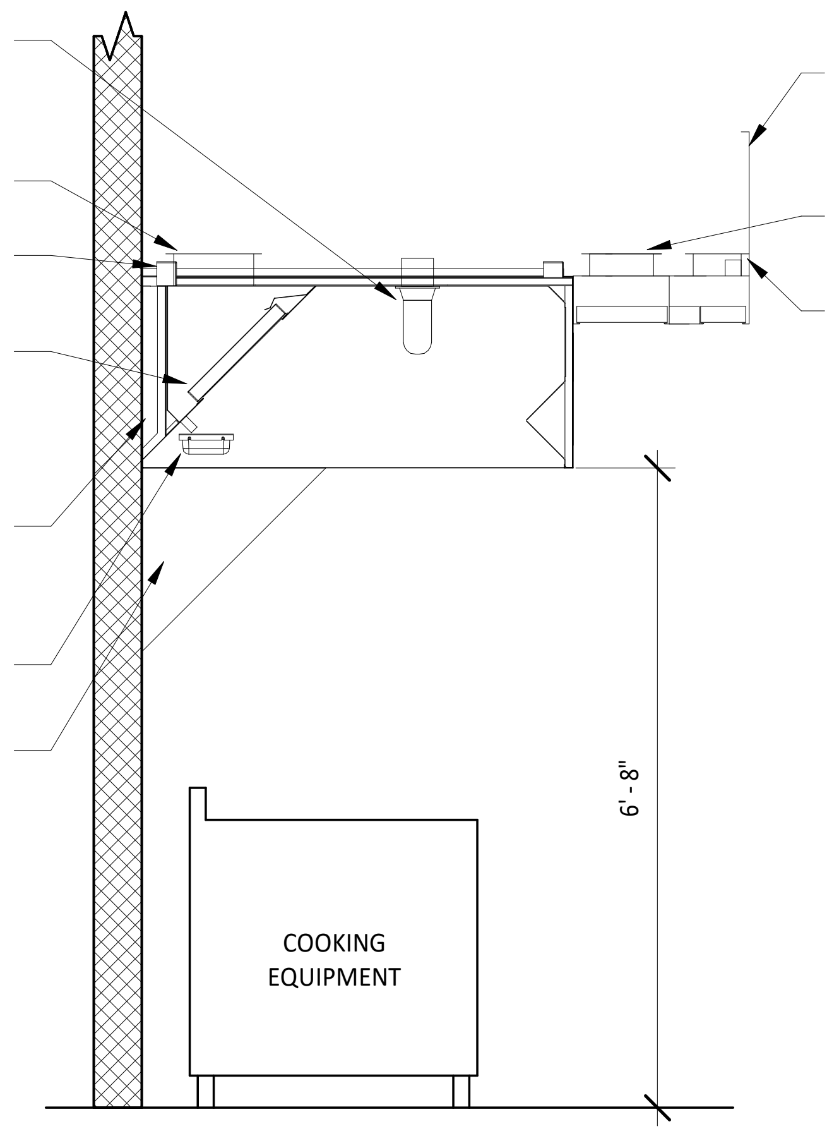
TIGHT COMPRESSION JOINT ON BOTH LAYERS

Morgan ThermalCeramics
P.O. Box 923
Augusta, Georgia 30903–0923
Phone: (706) 560–4038

3
M700

## FIREMASTER DUCT WRAP - UL HNKT-G18

N.T.S.



UL-LISTED HIGH TEMP INCANDESCENT LIGHT FIXTURE ASSEMBLY INCLUDING CLEAR THERMAL AND SHOCK RESISTANT GLOBE

EXHAUST RISERS WITH DUCT COLLAR TEMPERATURE SENSORS

HANGING ANGLE (TYPICAL)

16"-TALL CAPTRATE SOLO FILTERS WITH HOOK

1" LAYER OF FACTORY-INSTALLED INSULATION IN 3" INTERNAL STANDOFF TO MEET 0" CLEARANCE TO COMBUSTIBLE SURFACE REQUIREMENTS

GREASE DRAIN WITH REMOVABLE CUP

23" QUARTER END PANELS AT EACH END

ENCLOSURE PANEL TO BE APPROXIMATELY 2" ABOVE FINISHED CEILING. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR CEILING HEIGHT.

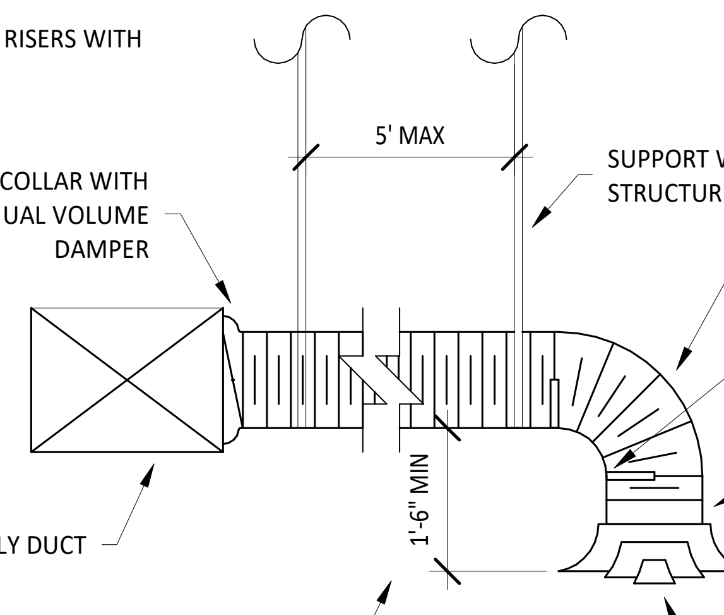
MUA PLENUM SUPPLY RISERS WITH VOLUME DAMPERS

AC PLENUM SUPPLY RISERS WITH VOLUME DAMPERS

2
M700

## HOOD SECTION VIEW

N.T.S.



SPIN-IN COLLAR WITH MANUAL VOLUME DAMPER

SUPPLY DUCT

REFER TO ARCHITECTURAL DWGS. FOR CEILING TYPE

SUPPORT WITH 1"-WIDE STRAP TO STRUCTURE ABOVE

INSULATED FLEXIBLE DUCT 5'-0" MAX

PROVIDE THERMAFLEX 90° ELBOW FLEX DUCT SUPPORT

METAL CLAMP AROUND FLEX DUCT & COLLAR TO BE DRAWN TIGHT & TAPED

CEILING DIFFUSER PROVIDE SQUARE TO ROUND ADAPTOR AS NEEDED

NOTE:

1. METHOD OF INSTALLATION FOR AIRTIGHT SEAL IS TYPICAL FOR ALL FLEX CONNECTIONS TO AIR DISTRIBUTION DEVICES.

1
M700

## DIFFUSER CONNECTION

N.T.S.

Consultant:
NATIONAL ENGINEERING
4635 Trueman Blvd. Suite 250
Hilliard, Ohio 43026
Phone: (614) 751-9610
Fax: (614) 552-5240
Contact: Jason Underwood
(614)202-3816
Junderwood@NationalEngineering.com

CHIPOTLE MEXICAN GRILL, INC.
PO BOX 182566
COLUMBUS, OH 43218-2566
TELEPHONE: (614) 318-2400
INTERNET: WWW.CHIPOTLE.COM

STORE NO.: 3811

BLUE OAKS PLAZA
1980 BLUE OAKS BOULEVARD, SUITE 110
ROSEVILLE, CA 95747

Issue Record:

| | |
|---|---|
| 1/14/2021 | Permit Set |
| 05/05/2022 | Construction Set |

Revisions:

| Drawn: | Checked: |
|---|---|
| RTJ | RTJ |

Project No.
2102015

Contents:
HVAC DETAILS

M700

FOR QUESTIONS, CALL THE
Highwoods Group
REGION 40
PHONE: (919) 875-0420
EMAIL: reg40@captiveaire.com

PATENT NUMBERS
AC-PSP (UNITED STATES) - US PATENT 7963830 B2.
AC-PSP WALL (CANADA) - CA PATENT 2820509.
AC-PSP ISLAND (CANADA) - CA PATENT 2520330.

### *HOOD INFORMATION - JOB#5294934*

| HOOD NO | TAG | MODEL | MANUFACTURER | LENGTH | MAX COOKING TEMP | TYPE | APPLIANCE DUTY | DESIGN CFM/FT | TOTAL EXH CFM | EXHAUST PLENUM RISER(S) WIDTH | LENG | HEIGHT | DIA | CFM | VEL | SP | MUA CFM | AC CFM | HOOD CONSTRUCTION | HOOD CONFIG END TO END | ROW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | 5424 ND-2-ACPSP-F | CAPTIVEAIRE | 14' 3" | 600 DEG | I | HEAVY | 225 | 3200 | 10"<br>10" | 15"<br>15" | 4"<br>4" | | 1600<br>1600 | 1536<br>1536 | -0.854"<br>-0.854" | 1950 | 798 | 430 SS WHERE EXPOSED | ALONE | ALONE |

### *HOOD INFORMATION*

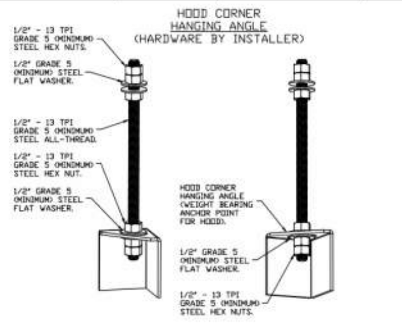
| HOOD NO | TAG | FILTER(S) TYPE | QTY | HEIGHT | LENGTH | EFFICIENCY @ 7 MICRONS | LIGHT(S) QTY | TYPE | WIRE GUARD | UTILITY CABINET(S) LOCATION | SIZE | FIRE SYSTEM TYPE | FIRE SYSTEM SIZE | ELECTRICAL MODEL # | SWITCHES QUANTITY | FIRE SYSTEM PIPING | HOOD HANGING WEIGHT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | CAPTRATE SOLO FILTER | 10 | 16" | 16" | 85% SEE FILTER SPEC | 10 | L55 SERIES E26 | NO | RIGHT | 12"x54"x24" | ANSUL R-102 | 3.0/3.0 | SC-311110MA | 1 LIGHT<br>1 FAN | YES | 1113 LBS |

### *HOOD OPTIONS*

| HOOD NO | TAG | OPTION |
|---|---|---|
| 1 | | FIELD WRAPPER 18.00" HIGH FRONT, LEFT, RIGHT. |
| | | RIGHT QUARTER END PANEL 23" TOP WIDTH, 0" BOTTOM WIDTH, 23" HIGH 430 SS. |
| | | LEFT QUARTER END PANEL 23" TOP WIDTH, 0" BOTTOM WIDTH, 23" HIGH 430 SS. |
| | | INSULATION FOR BACK OF HOOD. |
| | | FULL DIMENSION HANGING BRACKET - FRONT. |

### *PERFORATED SUPPLY PLENUM(S)*

| HOOD NO | TAG | POS | LENGTH | WIDTH | HEIGHT | TYPE | RISER(S) WIDTH | LENG | DIA | CFM | SP |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | Front | 183" | 22" | 6" | MUA | 10" | 28" | | 650 | 0.166" |
| | | | | | | MUA | 10" | 28" | | 650 | 0.166" |
| | | | | | | MUA | 10" | 28" | | 650 | 0.166" |
| | | | | | | AC | | | 8" | 114 | 0.041" |
| | | | | | | AC | | | 8" | 114 | 0.041" |
| | | | | | | AC | | | 8" | 114 | 0.041" |
| | | | | | | AC | | | 8" | 114 | 0.041" |
| | | | | | | AC | | | 8" | 114 | 0.041" |
| | | | | | | AC | | | 8" | 114 | 0.041" |
| | | | | | | AC | | | 8" | 114 | 0.041" |



ASSEMBLY INSTRUCTIONS

HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD. SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN. MUST USE DOUBLED HEX NUT CONFIGURATION BENEATH HOOD HANGING ANGLES AND ABOVE CEILING ANCHORS. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.

## SPECIFICATION: CAPTRATE® GREASE-STOP® SOLO FILTER

THE CAPTRATE GREASE-STOP SOLO FILTER IS A SINGLE-STAGE FILTER FEATURING A UNIQUE S-BAFFLE DESIGN IN CONJUNCTION WITH A SLOTTED REAR BAFFLE DESIGN, TO DELIVER EXCEPTIONAL FILTRATION EFFICIENCY.

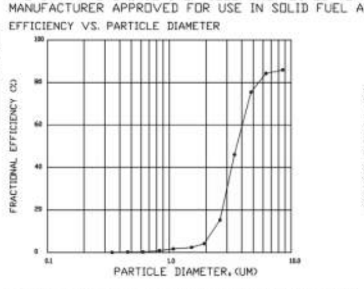
FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNEL(S).

UNITS SHALL INCLUDE STAINLESS STEEL HANDLES AND A FASTENING DEVICE TO SECURE THE TWO COMPONENTS WHEN ASSEMBLED.

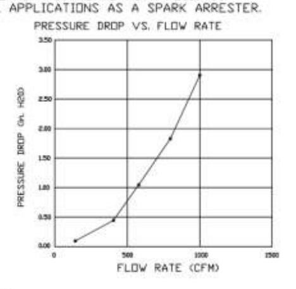
GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 85% GREASE PARTICLES SEVEN MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1.0 INCHES OF WATER GAUGE.

THE CAPTRATE GREASE-STOP SOLO WAS TESTED TO ASTM STANDARD ASTM F2519-05. MANUFACTURER APPROVED FOR USE IN SOLID FUEL APPLICATIONS AS A SPARK ARRESTER.

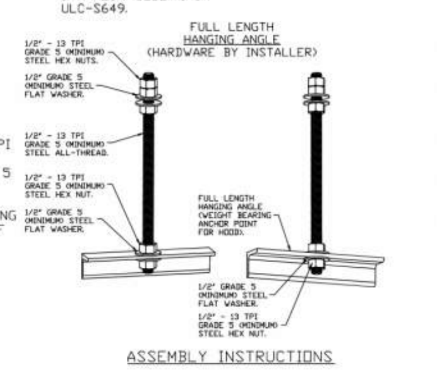
EFFICIENCY VS. PARTICLE DIAMETER



PRESSURE DROP VS. FLOW RATE



CAPTRATE FILTERS ARE BUILT IN COMPLIANCE WITH:
NFPA #96.
NSF STANDARD #2.
UL STANDARD #1046.
INT. MECH. CODE (IMC).
ULC-S649.



ASSEMBLY INSTRUCTIONS

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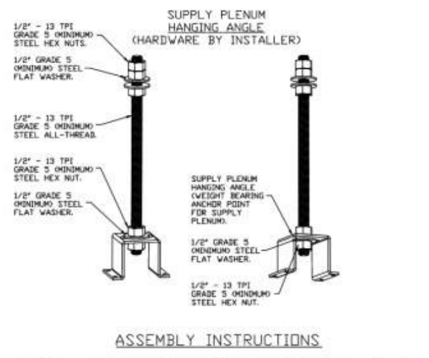

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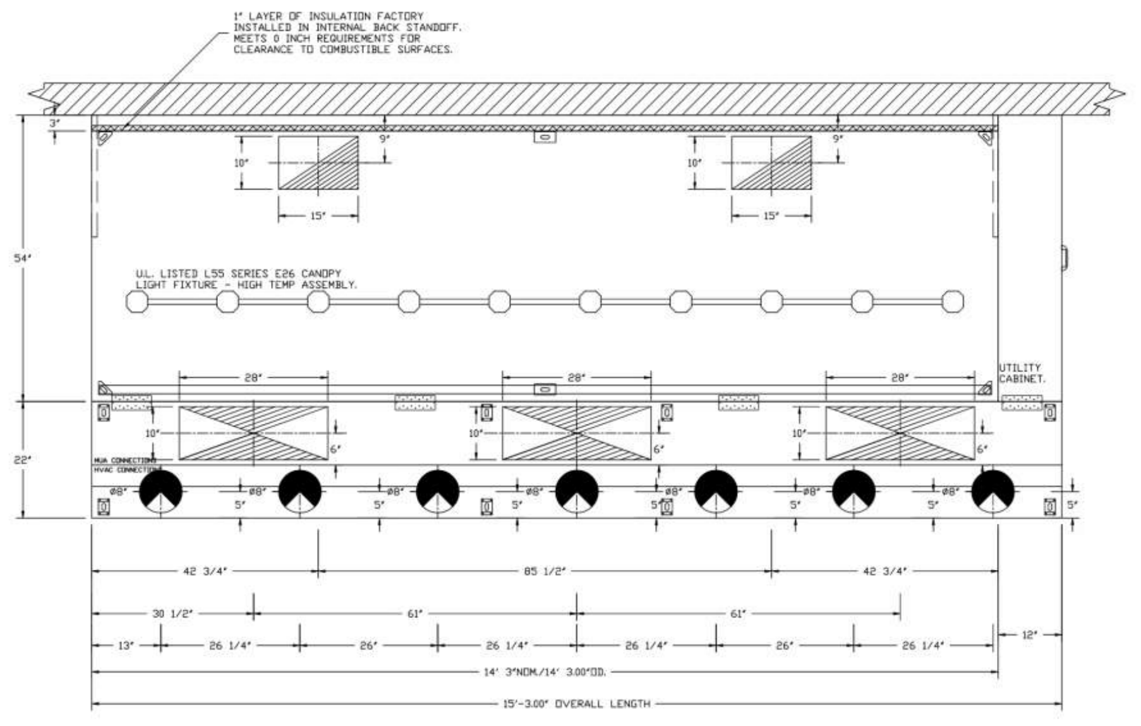

PLAN VIEW - HOOD #1
14' 3.00" LONG 5424ND-2-ACPSP-F
NOTE: ADDITIONAL HANGING ANGLES PROVIDED FOR HOODS 12' AND LONGER.

ACPSP SHIPS LOOSE FOR FIELD INSTALLATION

REVISIONS
| | DESCRIPTION | DATE |
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CAPTIVEAIRE
Highwoods Group

CHIPOTLE BLUE OAKS PLAZA #3811
ROSEVILLE, CA, 95747

**DATE:** 1/26/2022
**DWG.#:** 5294934
**DRAWN BY:** JMB-40
**SCALE:** 3/4" = 1'-0"
**MASTER DRAWING**
**SHEET NO.** 1

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SECTION 23 38 13 13
SPECIFICATIONS
TAG: Commercial Kitchen Ventilation Hoods, Listed Commercial Kitchen Hoods

PART 1 - GENERAL

1.1 SUMMARY

A. The ND2 series is a Type I, wall canopy hood for use over 600°F cooking surface temperatures. The aerodynamic design includes a mechanical baffle and performance enhancing lip for exceptional capture and containment.

B. The hood shall have the size, shape, and performance specified on drawings.

1.2 SUBMITTALS

A. The manufacturer assumes no liability for the use or results of use from this document. Specifications are to be reviewed by the engineer to confirm the project's requirements and meet Federal, State, and Local codes and regulations.

B. As the manufacturer continues product development, it reserves the right to change design and specifications without notice.

C. The manufacturer shall supply complete computer generated submittal drawings, including hood section view(s) and hood plan view(s). These drawings must be available to the engineer, architect, and owner for their use in construction, operation, and maintenance.

1.3 QUALITY ASSURANCE

A. This hood is ETL-listed to standard UL710, ULC710, and ULC-S646 when installed in accordance with these installation instructions and National Fire Protection Association Standard "NFPA 96, Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations."

B. Built-in compliance with NSF/ANSI Standard 2.

C. The hood shall be ETL Listed as:

1. "Exhaust Hood Without Exhaust Damper."
2. ETL Sanitation Listed and built in accordance with NFPA 96.
3. The ETL label shall list temperature rating(s) and minimum CFM/ft rating(s).

1.4 WARRANTY

A. All units shall be provided with the following standard warranty:

1. This equipment is warranted to be free from defects in materials and workmanship, under normal use and service, for a period of 2-years from date of shipment.

B. The manufacturer shall not be liable for incidental and consequential losses and damages potentially attributable to malfunctioning equipment. Should any part of the equipment prove to be defective in material or workmanship within the 2-year warranty period, upon examination by the manufacturer, such part will be repaired or replaced by manufacturer at no charge. The buyer shall pay all labor costs incurred in connection with such repair or replacement. Equipment shall not be returned without manufacturer's prior authorization, and all returned equipment shall be shipped by the buyer, freight prepaid to a destination determined by the manufacturer.

C. Refer to Manufacturer's Operation, Installation, and Maintenance (OIM) Manual for detailed descriptions of what is/is not covered and contact information for warranty claims.

PART 2 - PRODUCTS

2.1 GENERAL

A. Construction shall be dependent on the structural application to minimize distortion and other defects. All seams, joints, and penetrations of the hood enclosure to the lower outermost perimeter, which directs and captures grease-laden vapor and exhaust gases, shall have a liquid-tight continuous external weld in accordance with NFPA 96.

B. Duct sizes, CFM, and static pressure requirements shall be as shown on drawings. Static pressure requirements shall be precise and accurate; air velocity and volume information shall be accurate within 1-ft increments along the length of the ventilator.

2.2 CONSTRUCTION

A. Construction shall be type 430 stainless steel.

B. Double wall insulated front to eliminate condensation and increase rigidity on wide sizes. The insulation shall have a flexural modulus of 475 EI, meet UL 181 requirements and be in accordance with NFPA 90A and 90B.

C. Hood shall be equipped with a minimum of four connections for hanger rods. Hood lengths greater than 12' will have added hangers.

D. Exhaust duct collar to be 4" high with flange.

E. The grease drain system shall be an enclosed integral part of the hood back and have slopes with an exposed, removable 1/2 grease cup to facilitate cleaning.

F. An integral baffle to direct grease laden vapors toward the exhaust filter bank.

G. Hood shall be furnished with UL classified filters, supplied in size and quantity as required by ventilator.

H. All seams shall be welded and have stainless steel on exposed surfaces.

2.3 LIGHTING

A. L55 Series canopy light fixture, includes clear thermal and shock resistant globe.

2.4 FILTERS

A. Stainless Steel Captrate Solo filter with hook, ETL Listed. Particulate capture efficiency: 85% efficient at 9 microns, 76% efficient at 5 microns.

2.5 OPTIONS

A. Fire Suppression System: UL 300 fire suppression system.

B. Optional perforated supply plenum shall provide make-up air discharged below the cooking equipment.

1. Perforated diffuser plates shall be included in the design to provide even air distribution.
2. Unexposed surfaces shall be constructed of aluminized steel. Plenum shall be insulated to prevent condensation.
3. Dual Plenum (AC-PSP)

C. Hood Mounted Utility Cabinet - Cabinet can store listed fire suppression system, listed components, pre-wired electrical controls.

2.6 ACCESSORIES

A. End Panel(s) maximize hood performance and eliminate the effects of cross drafts in the kitchen. Units constructed of stainless steel and sized according to hood width and cooking equipment. Exposed edges hemmed for safety and rigidity. Selected panels:

1. Quarter End Panel

B. Wrapper(s) may be installed from the factory or field installed. Wrapper(s) selected:

1. Wrapper

C. Miscellaneous option(s) selected:

1. Full Dimension Hanging Bracket -Unistrut added to allow for various hood mounting locations.
2. Insulation for Back of Hood -Backside of hood is fully insulated.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and conditions under which the system is installed. Do not proceed with work until unsatisfactory conditions have been corrected in a manner acceptable to Installer.

3.2 INSTALLATION

A. Install in accordance with manufacturer's instructions, drawings, written specifications, manufacturer's installation manual, and all applicable building codes.

REVISIONS
| | DESCRIPTION | DATE |
|---|---|---|
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| △ | | |
| △ | | |
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CAPTIVEAIRE
Highwoods Group

CHIPOTLE BLUE OAKS PLAZA #3811
ROSEVILLE, CA, 95747

**DATE:** 1/26/2022
**DWG.#:** 5294934
**DRAWN BY:** JMB-40
**SCALE:** 3/4" = 1'-0"
**MASTER DRAWING**
**SHEET NO.** 3

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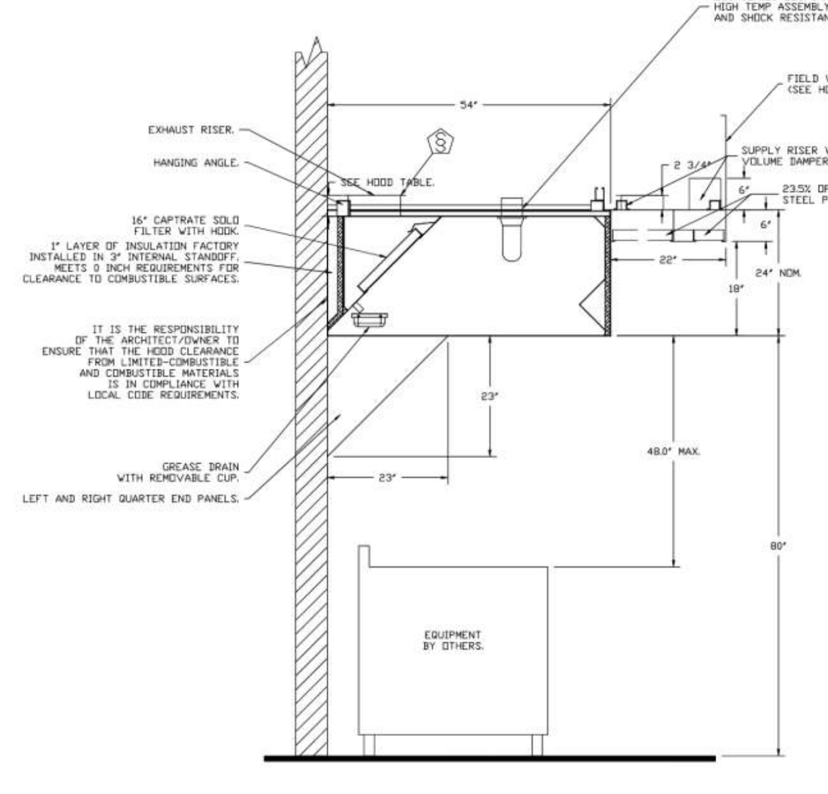

SECTION VIEW - MODEL 5424ND-2-ACPSP-F
HOOD - #1

### *FIRE SYSTEM INFORMATION - JOB#5294934*

| FIRE SYSTEM NO | TAG | TYPE | SIZE | FLOW POINTS | INSTALLATION SYSTEM | INSTALLATION LOCATION ON HOOD |
|---|---|---|---|---|---|---|
| 1 | | ANSUL R102 | 3.0/3.0 | 13 | FIRE CABINET RIGHT | RIGHT, HOOD 1 |

### *GAS VALVE(S)*

| FIRE SYSTEM NO | TAG | TYPE | SIZE | SUPPLIED BY |
|---|---|---|---|---|
| 1 | | MECHANICAL | 1.500 | CAPTIVEAIRE SYSTEMS |

REVISIONS
| | DESCRIPTION | DATE |
|---|---|---|
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| △ | | |
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CAPTIVEAIRE
Highwoods Group

CHIPOTLE BLUE OAKS PLAZA #3811
ROSEVILLE, CA, 95747

**DATE:** 1/26/2022
**DWG.#:** 5294934
**DRAWN BY:** JMB-40
**SCALE:** 3/4" = 1'-0"
**MASTER DRAWING**
**SHEET NO.** 2

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### *EXHAUST FAN INFORMATION - JOB#5294934*

| FAN UNIT NO | TAG | QTY | FAN UNIT MODEL # | MANUFACTURER | CFM | ESP | RPM | MOTOR ENCL | HP | BHP | PHASE | VOLT | FLA | DISCHARGE VELOCITY | WEIGHT (LBS) | SONES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | EF-1 | 1 | DU240HFA | CAPTIVEAIRE | 3200 | 1.500 | 854 | ODP,PREMIUM | 3.000 | 1.6880 | 3 | 208 | 10.2 | 727 FPM | 304 | 16.1 |
| 2 | EF-2 | 1 | DR12HFA | CAPTIVEAIRE | 150 | 0.600 | 1282 | TEAO-ECM | 0.250 | 0.0930 | 1 | 115 | 2.9 | | 49 | 7.1 |

### *MUA FAN INFORMATION - JOB#5294934*

| FAN UNIT NO | TAG | QTY | FAN UNIT MODEL # | BLOWER | HOUSING | MIN CFM | DESIGN CFM | ESP | RPM | MOTOR ENCL | HP | BHP | PHASE | VOLT | FLA | MCA | MOCP | WEIGHT (LBS) | SONES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | MAU-1 | 1 | A1-D.250-15D | 15MF-1-MOD | A1-D.250 | 1000 | 1950 | 0.500 | 2046 | ODP,PREMIUM | 2.000 | 1.3380 | 3 | 208 | 6.1 | 7.7A | 15A | 508 | 21 |

### *GAS FIRED MAKE-UP AIR UNIT(S)*

| FAN UNIT NO | TAG | INPUT BTUs | OUTPUT BTUs | TEMP RISE | REQUIRED INPUT GAS PRESSURE | GAS TYPE | BURNER EFFICIENCY(%) |
|---|---|---|---|---|---|---|---|
| 3 | MAU-1 | 92510 | 85109 | 41°F | 7 IN. W.C. - 14 IN. W.C. | NATURAL | 92 |

### *FAN OPTIONS*

| FAN UNIT NO | TAG | QTY | DESCRIPTION |
|---|---|---|---|
| 1 | EF-1 | 1 | GREASE BOX |
| | | 1 | REMOVE HINGE KIT LABEL FROM THE FAN BASE |
| | | 1 | 2 YEAR PARTS WARRANTY |
| 2 | EF-2 | 1 | I 12-BDD DAMPER |
| | | 1 | ECM WIRING PACKAGE - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL (TELCO MOTOR), CCW ROTATION |
| | | 1 | 2 YEAR PARTS WARRANTY |
| 3 | MAU-1 | 1 | MOTORIZED BACKDRAFT DAMPER FOR A1-D HOUSING - MEETS AMCA CLASS 1A RATING |
| | | 1 | LOW FIRE START |
| | | 1 | INLET PRESSURE GAUGE, 0-35" |
| | | 1 | MANIFOLD PRESSURE GAUGE, -5 TO 15" WC |
| | | 1 | SEPARATE 120V WIRING PACKAGE (REQUIRED AND USED ONLY FOR DCV OR PREWIRE WITH VFD) - THREE PHASE ONLY |
| | | 1 | UNIT MOUNTED VFD FOR USE WITH ECPM03 |
| | | 1 | 2 YEAR PARTS WARRANTY |

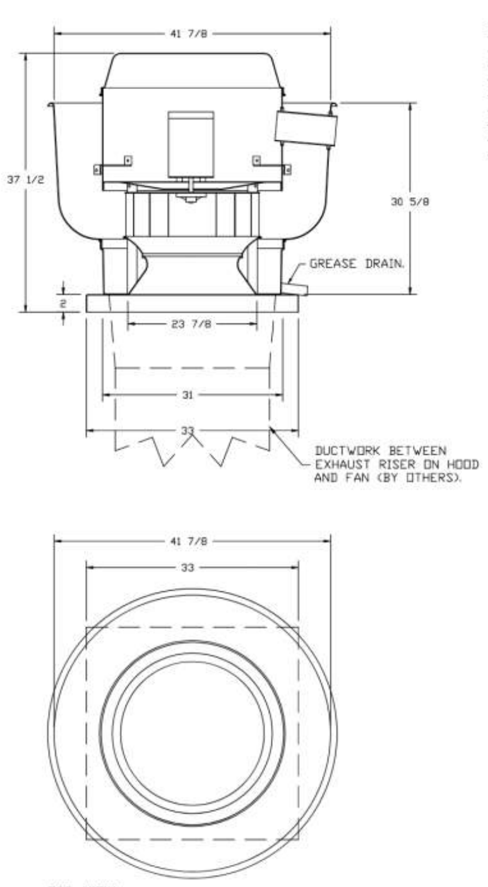
### *FAN ACCESSORIES*

| FAN UNIT NO | TAG | EXHAUST GREASE CUP | EXHAUST GRAVITY DAMPER | EXHAUST WALL MOUNT | SUPPLY SIDE DISCHARGE | SUPPLY GRAVITY DAMPER | SUPPLY MOTORIZED DAMPER | SUPPLY WALL MOUNT |
|---|---|---|---|---|---|---|---|---|
| 1 | EF-1 | YES | | | | | | |
| 2 | EF-2 | | YES | | | | | |
| 3 | MAU-1 | | | | | | YES | |

### *CURB ASSEMBLIES*

| NO | ON FAN | TAG | WEIGHT | ITEM | SIZE |
|---|---|---|---|---|---|
| 1 | # 1 | | 43 LBS | CURB | 31.500"W X 31.500"L X 20.000"H ALONG LENGTH, RIGHT VENTED. |
| 2 | # 2 | EF-2 | 31 LBS | CURB | 17.500"W X 17.500"L X 26.000"H ALONG LENGTH, RIGHT. |
| 3 | # 3 | MAU-1 | 65 LBS | CURB | 21.000"W X 71.000"L X 20.000"H ALONG WIDTH, RIGHT INSULATED. |

FAN #1 DU240HFA - EXHAUST FAN (EF-1)



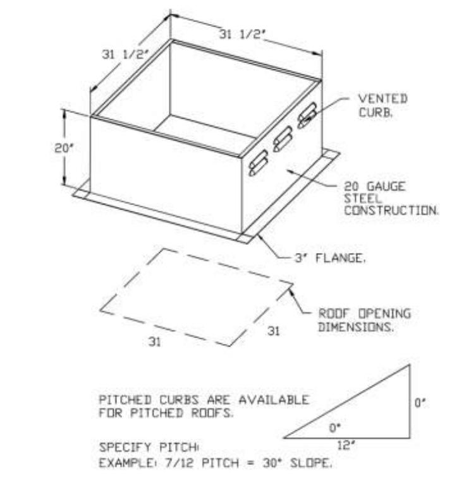
TOP VIEW

FEATURES:
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL705 AND UL762 AND ULC-S645
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- HIGH HEAT OPERATION 300°F (149°C).
- GREASE CLASSIFICATION TESTING.
- NEMA 3R SAFETY DISCONNECT SWITCH.

NORMAL TEMPERATURE TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

ABNORMAL FLARE-UP TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

OPTIONS
GREASE BOX.
REMOVE HINGE KIT LABEL FROM THE FAN BASE.
2 YEAR PARTS WARRANTY.



PITCHED CURBS ARE AVAILABLE FOR PITCHED ROOFS.

SPECIFY PITCH:
EXAMPLE: 7/12 PITCH = 30° SLOPE.

REVISIONS
| | DESCRIPTION | DATE |
|---|---|---|
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CAPTIVEAIRE
Highwoods Group

CHIPOTLE BLUE OAKS PLAZA #3811
ROSEVILLE, CA, 95747

**DATE:** 1/26/2022
**DWG.#:** 5294934
**DRAWN BY:** JMB-40
**SCALE:** 3/4" = 1'-0"
**MASTER DRAWING**
**SHEET NO.** 4

FOR REFERENCE ONLY

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Consultant:

NATIONAL
ENGINEERING

4635 Trueman Blvd. Suite 250
Hilliard, Ohio 43026
Phone: (614) 751-9610
Fax: (614) 552-5240
Contact: Jason Underwood
(614)202-3816
Junderwood@NationalEngineering.com

CHIPOTLE MEXICAN GRILL

CHIPOTLE MEXICAN GRILL, INC.
PO BOX 182566
COLUMBUS, OH 43218-2566
TELEPHONE: (614) 318-2400
INTERNET: WWW.CHIPOTLE.COM

STORE NO.: 3811
BLUE OAKS PLAZA
1980 BLUE OAKS BOULEVARD, SUITE 110
ROSEVILLE, CA 95747

Issue Record:
1/14/2021 Permit Set
05/05/2022 Construction Set

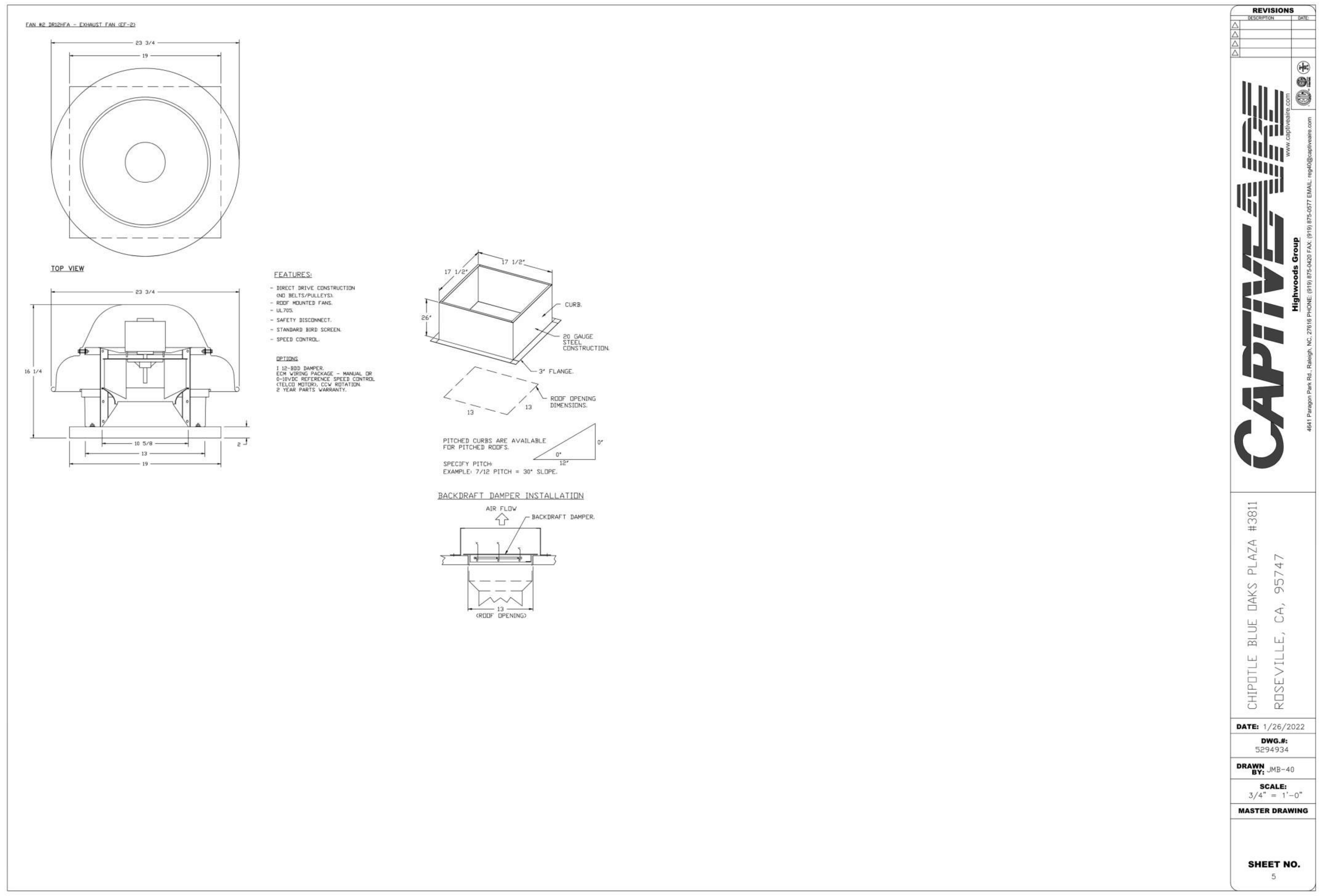
Revisions:
1 02/25/2022 CITY COMMENTS

Drawn: JRA
Checked: RTJ

Project No.
2102015

Contents:
CAPTIVEAIRE HOOD DRAWINGS

SHEET1



FEATURES:

- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- UL705.
- SAFETY DISCONNECT.
- STANDARD BIRD SCREEN.
- SPEED CONTROL.

OPTIONS

I 12-BDD DAMPER.
ECM WIRING PACKAGE - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL (TELCO MOTOR), CCW ROTATION.
2 YEAR PARTS WARRANTY.

PITCHED CURBS ARE AVAILABLE FOR PITCHED ROOFS.

SPECIFY PITCH:
EXAMPLE: 7/12 PITCH = 30° SLOPE.

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www.captiveaire.com
Highwoods Group
4641 Paragon Park Rd., Raleigh, NC, 27616 PHONE: (919) 875-0420 FAX: (919) 875-0577 EMAIL: reg40@captiveaire.com

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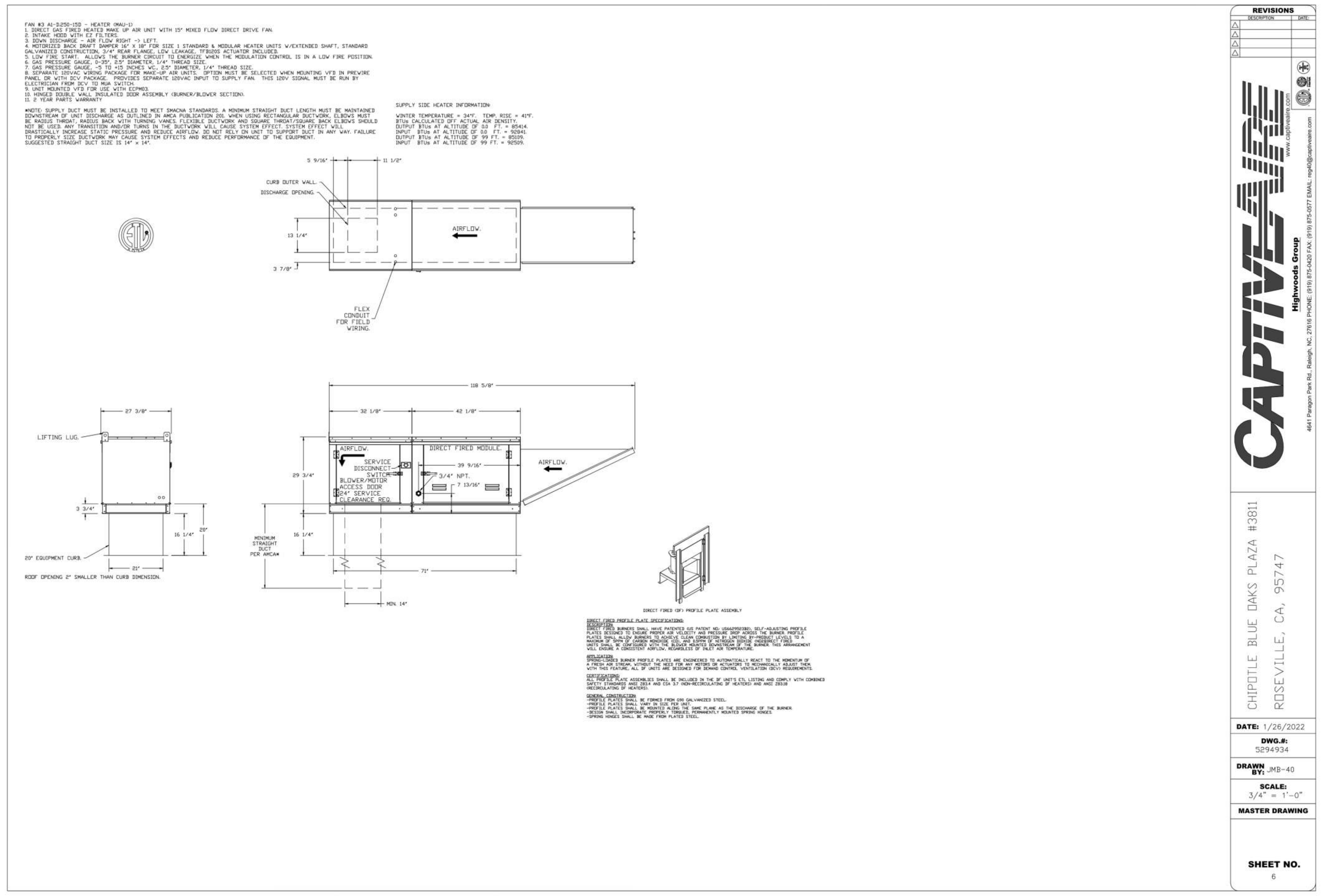

FAN #3 A1-D.250-15D - HEATER (MAU-1)
1. DIRECT GAS FIRED HEATED MAKE UP AIR UNIT WITH 15" MIXED FLOW DIRECT DRIVE FAN.
2. INTAKE HOOD WITH EZ FILTERS.
3. DOWN DISCHARGE - AIR FLOW RIGHT -> LEFT.
4. MOTORIZED BACK DRAFT DAMPER 16" X 18" FOR SIZE 1 STANDARD & MODULAR HEATER UNITS W/EXTENDED SHAFT, STANDARD GALVANIZED CONSTRUCTION, 3/4" REAR FLANGE, LOW LEAKAGE, TFB120S ACTUATOR INCLUDED.
5. LOW FIRE START. ALLOWS THE BURNER CIRCUIT TO ENERGIZE WHEN THE MODULATION CONTROL IS IN A LOW FIRE POSITION.
6. GAS PRESSURE GAUGE, 0-35", 2.5" DIAMETER, 1/4" THREAD SIZE.
7. GAS PRESSURE GAUGE, -5 TO +15 INCHES WC., 2.5" DIAMETER, 1/4" THREAD SIZE.
8. SEPARATE 120VAC WIRING PACKAGE FOR MAKE-UP AIR UNITS. OPTION MUST BE SELECTED WHEN MOUNTING VFD IN PREWIRE PANEL OR WITH DCV PACKAGE. PROVIDES SEPARATE 120VAC INPUT TO SUPPLY FAN. THIS 120V SIGNAL MUST BE RUN BY ELECTRICIAN FROM DCV TO MUA SWITCH.
9. UNIT MOUNTED VFD FOR USE WITH ECPM03.
10. HINGED DOUBLE WALL INSULATED DOOR ASSEMBLY (BURNER/BLOWER SECTION).
11. 2 YEAR PARTS WARRANTY

*NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE THROAT/SQUARE BACK ELBOWS SHOULD NOT BE USED. ANY TRANSITION AND/OR TURNS IN THE DUCTWORK WILL CAUSE SYSTEM EFFECT. SYSTEM EFFECT WILL DRASTICALLY INCREASE STATIC PRESSURE AND REDUCE AIRFLOW. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY. FAILURE TO PROPERLY SIZE DUCTWORK MAY CAUSE SYSTEM EFFECTS AND REDUCE PERFORMANCE OF THE EQUIPMENT. SUGGESTED STRAIGHT DUCT SIZE IS 14" x 14".

SUPPLY SIDE HEATER INFORMATION:

WINTER TEMPERATURE = 34°F. TEMP. RISE = 41°F.
BTUs CALCULATED OFF ACTUAL AIR DENSITY.
OUTPUT BTUs AT ALTITUDE OF 0.0 FT. = 85414.
INPUT BTUs AT ALTITUDE OF 0.0 FT. = 92841.
OUTPUT BTUs AT ALTITUDE OF 99 FT. = 85109.
INPUT BTUs AT ALTITUDE OF 99 FT. = 92509.

ROOF OPENING 2" SMALLER THAN CURB DIMENSION.

DIRECT FIRED (DF) PROFILE PLATE ASSEMBLY

DIRECT FIRED PROFILE PLATE SPECIFICATIONS:
DESCRIPTION:
DIRECT FIRED BURNERS SHALL HAVE PATENTED (US PATENT NO: US6629523B2), SELF-ADJUSTING PROFILE PLATES DESIGNED TO ENSURE PROPER AIR VELOCITY AND PRESSURE DROP ACROSS THE BURNER. PROFILE PLATES SHALL ALLOW BURNERS TO ACHIEVE CLEAN COMBUSTION BY LIMITING BY-PRODUCT LEVELS TO A MAXIMUM OF 5PPM OF CARBON MONOXIDE (CO), AND 0.5PPM OF NITROGEN DIOXIDE (NO2)DIRECT FIRED UNITS SHALL BE CONFIGURED WITH THE BLOWER MOUNTED DOWNSTREAM OF THE BURNER. THIS ARRANGEMENT WILL ENSURE A CONSISTENT AIRFLOW, REGARDLESS OF INLET AIR TEMPERATURE.

APPLICATION:
SPRING-LOADED BURNER PROFILE PLATES ARE ENGINEERED TO AUTOMATICALLY REACT TO THE MOMENTUM OF A FRESH AIR STREAM, WITHOUT THE NEED FOR ANY MOTORS OR ACTUATORS TO MECHANICALLY ADJUST THEM. WITH THIS FEATURE, ALL DF UNITS ARE DESIGNED FOR DEMAND CONTROL VENTILATION (DCV) REQUIREMENTS.

CERTIFICATIONS:
ALL PROFILE PLATE ASSEMBLIES SHALL BE INCLUDED IN THE DF UNIT'S ETL LISTING AND COMPLY WITH COMBINED SAFETY STANDARDS ANSI Z83.4 AND CSA 3.7 (NON-RECIRCULATING DF HEATERS) AND ANSI Z83.18 (RECIRCULATING DF HEATERS).

GENERAL CONSTRUCTION:
-PROFILE PLATES SHALL BE FORMED FROM G90 GALVANIZED STEEL.
-PROFILE PLATES SHALL VARY IN SIZE PER UNIT.
-PROFILE PLATES SHALL BE MOUNTED ALONG THE SAME PLANE AS THE DISCHARGE OF THE BURNER.
-DESIGN SHALL INCORPORATE PROPERLY TORQUED, PERMANENTLY MOUNTED SPRING HINGES.
-SPRING HINGES SHALL BE MADE FROM PLATED STEEL.

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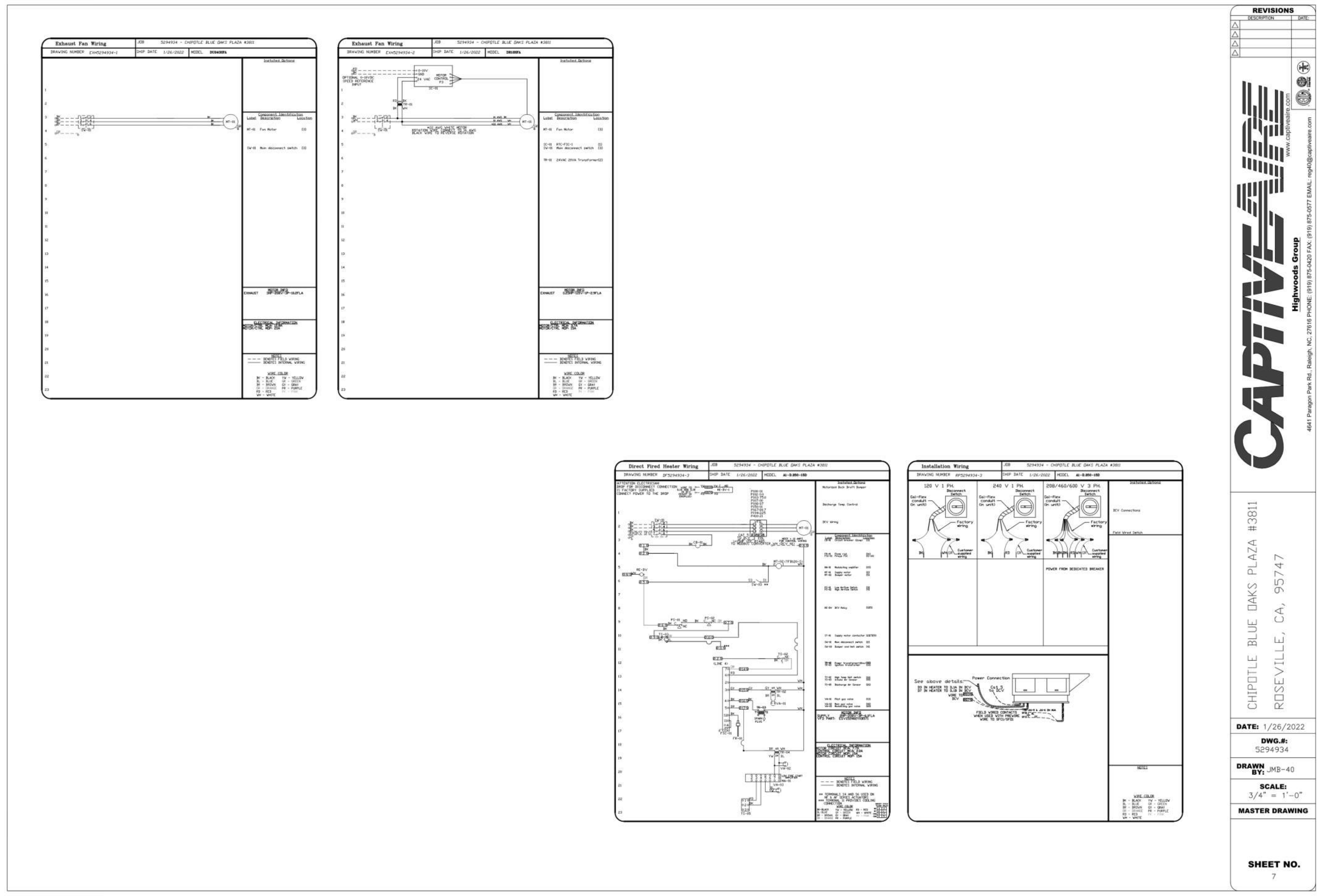

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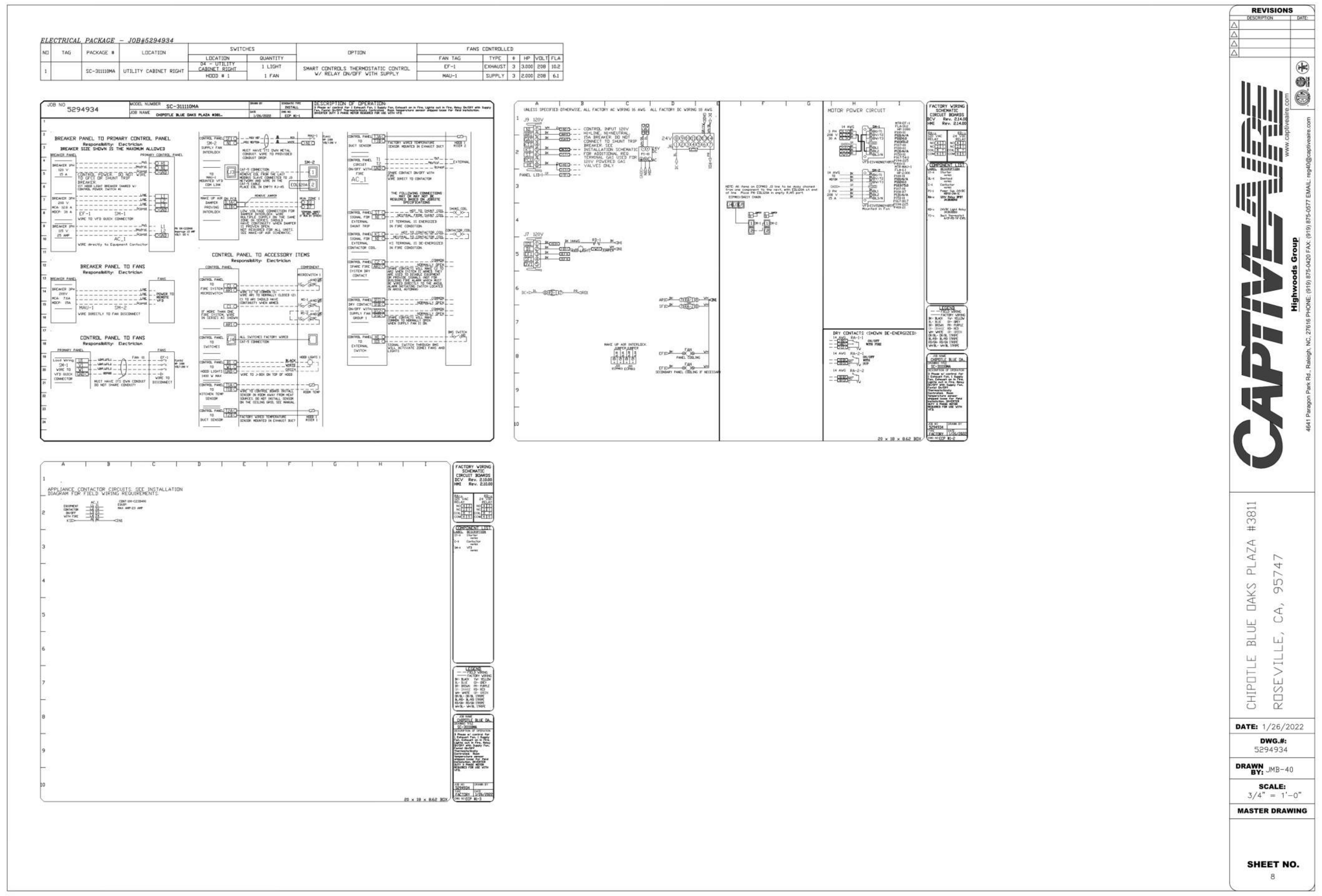

*ELECTRICAL PACKAGE - JOB#5294934*

| NO | TAG | PACKAGE # | LOCATION | SWITCHES |  | OPTION | FANS CONTROLLED |  |  |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  |  |  |  | LOCATION | QUANTITY |  | FAN TAG | TYPE | # | HP | VOLT | FLA |
| 1 |  | SC-311110MA | UTILITY CABINET RIGHT | 04 - UTILITY CABINET RIGHT | 1 LIGHT | SMART CONTROLS THERMOSTATIC CONTROL W/ RELAY ON/OFF WITH SUPPLY | EF-1 | EXHAUST | 3 | 3.000 | 208 | 10.2 |
|  |  |  |  | HOOD # 1 | 1 FAN |  | MAU-1 | SUPPLY | 3 | 2.000 | 208 | 6.1 |

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Consultant:

NATIONAL
ENGINEERING
4635 Trueman Blvd. Suite 250
Hilliard, Ohio 43026
Phone: (614) 751-9610
Fax: (614) 552-5240
Contact: Jason Underwood
(614)202-3816
Junderwood@NationalEngineering.com

CHIPOTLE MEXICAN GRILL, INC.
PO BOX 182566
COLUMBUS, OH 43218-2566
TELEPHONE: (614) 318-2400
INTERNET: WWW.CHIPOTLE.COM

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SHEET2