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ADDENDUM #01

2/19/2016

PROJECT #: 2015-093

PROJECT NAME: Culvers's Restaurant Re-Image
840 W. Sunset Drive
Waukesha, WI

To: **All Document Holders**

From: **Ollmann Ernest Martin Architects**

Bidders shall indicate the receipt of this and all Addenda on the Bid Form.
Please reproduce as needed and attach to the Project Manual for the Project.

Sincerely,
Todd William Ost, AIA
Ollmann Ernest Martin Architects

Included in this Addendum
Page 1
Section 233113, S102, M101

CHANGES TO THE SPECIFICATIONS

1. **Section 233113 – Ductwork:3:A:**
    a. Add text to end of paragraph: Ductwork shall be sealed at all joints, transverse and longitudinal seams and connections in ductwork using listed products as referenced in the code. The referenced ductwork includes all supply, exhaust and return ducts.

CHANGES TO THE DRAWINGS

1. **B7/S102:** Change 2x12 spacing from 16" o.c. to 12" o.c..
2. **SHEET M101:**
    a. **General Notes: #13:** Add Note: Gas piping installation shall comply with NFPA 54-2009 National Fuel Gas Code.
    b. **Keyed Notes: #4:** Add Note: Access points shall be permanently identified on the exterior by a label having letters a minimum of 0.5 inch height reading " Fire Damper".
    c. **1/Mechanical First Floor Plan: Stat locations in Office 119:** Add height for controls to be located a maximum of 48" a.f.f..

Note: Wherein this Addendum conflicts with the original Project Manual and Drawings dated 2-5-2016, or any previous Addenda, this Addendum shall govern.

Cc: File

END OF ADDENDUM

DIVISION 23 – HEATING, VENTILATING AND AIR CONDITIONING

SECTION 233113 - DUCTWORK

1. GENERAL

A. It must be understood that the heating, ventilating and air conditioning drawings and details are diagrammatic and are intended to show the intent of the specifications. The contractor shall make full allowance in his proposal to cover such contingencies as actual length and routing, proper equipment locations and connections, etc. He shall take all necessary measurements and accept responsibility for their accuracy. Coordinate with the General Contractor for exact location of walls, beams, shafts, etc. Do not scale drawings. Coordinate with equipment suppliers for connections made to equipment furnished by others.

B. Make Engineer/Architect aware of any discrepancies between drawings and/or existing conditions. The Engineer/Architect reserves the right to eliminate discrepancies through minor changes in work at no change in contract cost.

2. MATERIALS

A. Sheet Metal: Furnish, install, fit and secure in place all supply, return, exhaust and vent air ducts, risers, branches, etc., as shown and detailed on plans, built of galvanized iron as hereinafter specified.

1. Sheet metal work shall be constructed according to practices recommended in the "HVAC Duct Construction Standards, 1st edition 1985" as published by SMACNA, and hereinafter specified. All duct dimensions noted on the drawings are finished inside dimensions. Sheet metal used shall not be lighter than the following:

Rectangular Ducts	Galvanized Sheet Metal Gage	Aluminum Alloy
Up thru 12"	26	.020
13" - 30"	24	.025
31" - 54"	22	.032
55" - 84"	20	.040

Round Ducts	Galvanized Sheet Metal Gage
Up thru 13"	26
14" - 22"	24

2. Install ducts, risers, etc., as indicated on the drawings, making necessary changes in cross section, offsets, etc., whether or not same is specifically indicated. If ducts cannot be run as shown on the drawings, install ducts between required point, subject to the approval of the Engineer/Architect without additional cost to the Owner.

3. At all outlets and inlets in rooms, flange ducts for attachment of grilles. Install grilles according to manufacturer's recommendations.

4. Sheet metal work throughout shall be assembled and erected in such a manner that no vibration will occur and no noise be transmitted by the moving air.

5. All duct turns shall have either an inside radius equal to the duct width or be a miter turn with turning vanes.

6. All supply take-offs shall be bellmouth or conical type. Square/rectangular take-off fittings shall have 45 degree leading edge for 4" maximum depth. No air turns allowed.

7. Duct Sealant: Non-hardening, non-migrating mastic or liquid elastic sealant gaskets and tapes, except as noted.

B. Ductwork Pressure - Velocity Classification: Low Pressure, +2" W.G., 2500 FPM maximum, Class "B" seal. All grease ducts shall have welded liquid tight seal.

C. All duct turns shall have either an inside radius equal to the duct width or a miter turn with turning vanes. Vanes shall be double wall air foil type.

D. Round take-off fittings shall be bellmouth or conical. Rectangular or square take-off fittings shall have a 45 degree lead edge with 4" minimum depth.

E. Volume Dampers: Furnish and install in branches of supply air and exhaust ducts. Substantial volume dampers to be fitted with quadrant locking devices for adjusting the air delivery. Damper blades shall not exceed 6" width.

F. Access Panels: Install access panels with latches and gaskets in ducts at automatic dampers, coils, fire dampers, and other duct mounted equipment. Panels in insulated ducts must be internally insulated.

G. Backdraft Dampers: Provide backdraft dampers at discharge grille of louvers unless motor operated dampers are specified with these units. Entire perimeter of blade shall be lined with neoprene or vinyl seals to prevent clatter. Damper blades shall be tight closing.

H. Flexible Duct:

1. Provide factory fabricated insulated low pressure flexible duct with zinc-coated spring steel helix, 1" thick fiberglass insulation sheathed in a seamless vapor barrier (RFK) jacket. Maximum length 8'.

2. Composite assembly, including insulation and vapor barrier, meeting Class 1 requirements of flame spread rating of 25 or less and smoke developed rating of 50 or less as set forth in NFPA Bulletin 90-A, and bearing the UL label as an air duct.

3. Flexible ductwork shall meet ductwork pressure classification.

I. Insulation:

1. Materials:

Materials shall conform to NFPA bulletin 90-A as determined by U.L. method NFPA 225 - ASTM E84, complying with applicable codes with a flame spread rating of 25 or less and a smoke developed rating of 50 or less.

2. External Ductwork Insulation:

a. Concealed ductwork (horizontal): Wrap ductwork with flexible type fiberglass insulation, operating temperature range 40 to 250 degrees F., K=0.25, 1-1/2 PCF density, vapor permeability less than 0.02 perms, installed R of 4.5. Johns Manville Microlite EQ Type 100 duct wrap insulation.

b. Concealed ductwork (vertical): Rigid fiberglass duct liner, operating temperature to 250 degrees F., installed R of 6.3. Johns Manville Permacote Linacoustic R-300.

c. Application Schedule:

	Thickness
Exhaust air ducts	1-1/2"
Fresh air ducts	1-1/2"

Supply air ducts	1-1/2"

J. Kitchen Hood Exhaust Ductwork

1. Welded Steel

a. Duct to be constructed with 16 gauge welded black iron.

b. All external joints, seams and duct connections to the hood shall be welded liquid tight conforming to NFPA 90.

c. Insulation: 3M "Fire Barrier Duct Wrap 615+".

K. Air Outlets and Inlets:

1. Furnish grilles, registers, diffusers and louvers in the sizes, type and capacity as shown on the drawings by the selected manufacturer or approved equal.

2. Grilles, registers, diffusers shall be suitable and compatible with ceiling construction in which they are installed. Check architectural schedules for ceiling construction. Coordinate locations with ceiling system and lighting fixtures.

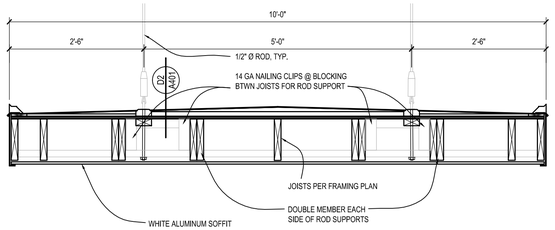
3. EXECUTION

WI item:
2-19-2016

A. Ducts shall be constructed, supported and installed in accordance with the latest standards of SMACNA. Install all turning vanes, access doors, extractors, and accessories as indicated or specified herein. Ductwork shall be sealed at all joints, transverse and longitudinal seams and connections in ductwork using listed products as referenced in the code. The referenced ductwork includes all supply, exhaust and return ducts.

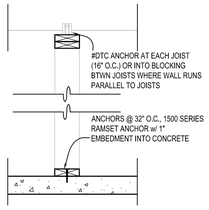
B. Provide all necessary personnel, equipment, and services and perform all tests necessary to demonstrate the integrity of the completed installation to the approval of the Owner and Engineer/Architect. The air and hydronic systems shall be tested, adjusted and balanced in accordance with the latest edition of the Associated Air Balance Council (AABC) Procedural Standards, NEBB or equivalent.

END OF SECTION 233113



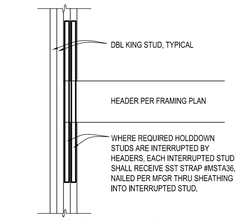
A2 CANOPY SECTION

SCALE : 3/4" = 1'-0"



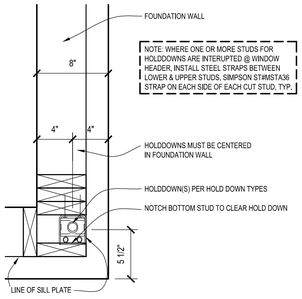
B1 INT. WALL ANCHOR

SCALE : 3/4" = 1'-0"



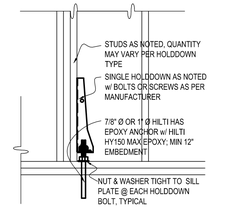
B3 STRAP DETAIL

SCALE : 3/4" = 1'-0"



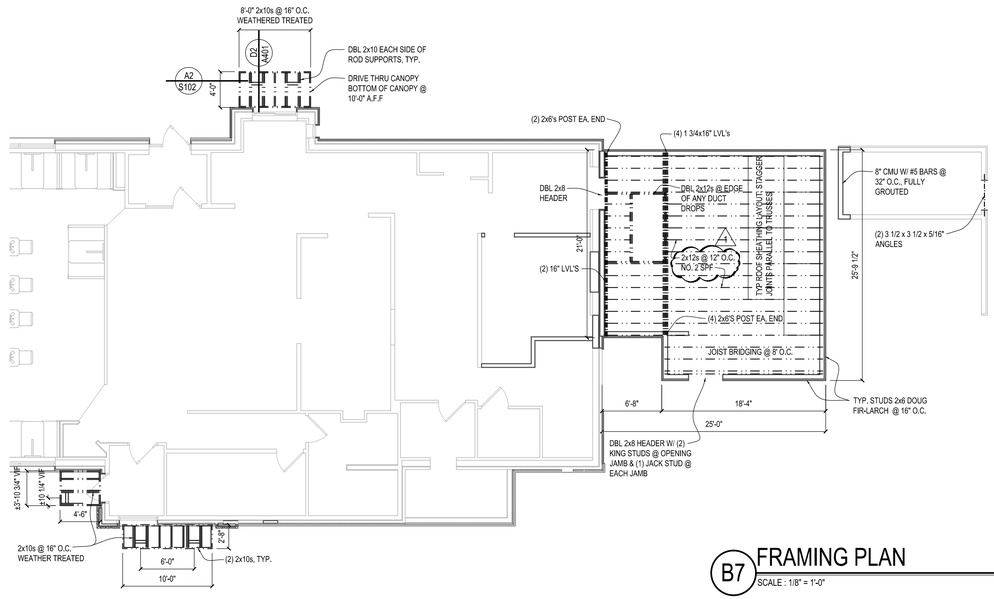
B4 CORNER HOLDDOWN

SCALE : 1 1/2" = 1'-0"



C3 HOLDDOWN

SCALE : 3/4" = 1'-0"



B7 FRAMING PLAN

SCALE : 1/8" = 1'-0"

GENERAL SHEATHING REQUIREMENTS

1. INSTALL SHEATHING CONTINUOUS OVER ENTIRE WALL.
2. REFER TO BUILDING PLANS, SECTIONS, AND ELEVATIONS FOR DIMENSIONS.
3. SEE FLOOR PLAN FOR EXACT LOCATIONS OF WINDOW AND DOOR OPENINGS.
4. COORDINATE WITH WALL SECTIONS SHOWN ON SHEET A401
5. ALL SHEATHING SHALL BE INSTALLED W/ 1/8" GAP @ ALL PANEL EDGES.

GENERAL STRUCTURAL NOTES

CARPENTRY – SEE FRAMING PLAN THIS SHEET

1. FLASH ALL HEADS OF WINDOWS AND DOORS.
2. ALL STRUCTURAL LUMBER SHALL BE AS SPECIFIED IN PROJECT MANUAL AND BELOW UNLESS OTHERWISE NOTED HEREIN.
   - LAMINATED VENEER LUMBER SHALL HAVE MINIMUM Fb = 2600 PSI & E=1800 KSI
   - STUDS: #2 DOUG FIR-LARCH U.N.O.
   - HEADERS, JOISTS, ROUGH FRAMES, FRAMING SILLS, etc.: #2 SPF OR #2 HEM FIR
   - NAILERS @ MEMBRANE ROOFING: #2 SPF OR #2 HEM FIR
   - WOOD FURRING & GROUNDS: #2 WHITE PINE
   - PLYWOOD: CONFORMING TO PS 1, APA PRP-108, INCLUDING GRADE STAMPING
     ROOF SHEATHING: C-D GRADE w/ EXTERIOR GLUE (CDX)
     SHEATHING OVER STUDS: EXTERIOR TYPE, C-C GRADE
     INTERIOR WALL SHEATHING: EXTERIOR TYPE, B-C GRADE.
   - OSB: CONFORMING TO DOC PS 2, EXPOSURE 1 GRADE

WALL SHEATHING NOTES:
- EXTERIOR SHEATHING SHALL BE 15/32" O.S.B. SHEATHING WITH 10d NAILS @ 6" O.C. @ EDGES & 12" O.C. IN PANEL FIELD
- JOINTS IN SHEATHING SHALL HAVE 2X BLOCKING BETWEEN STUDS

ROOF SHEATHING NOTES:
NEW ROOF SHEATHING SHALL BE 19/32" APA RATED OSB OR CDX PLYWD. INSTALL 10d NAILS AT:
- 6" O.C. AT ROOF PERIMETER & AT EXISTING
- 6" O.C. AT OTHER PANEL EDGES,
- 12" O.C. IN PANEL FIELD.

SEE GENERAL STRUCT. NOTES & DESIGN LOADS ON SHEET S101

CULVER'S RESTAURANT RE-IMAGE
840 W Sunset Drive
Waukesha, WI 53189
County of WAUKESHA

Culver Franchising System, Inc.
1240 Water Street
Prairie du Sac, WI 53578
608-643-7980

OWNER:
BERES FOODS, LLC
1650 E Main St.
Waukesha, WI 53186
Gary Beres 414-640-7533
Jill Beres 262-443-1989

ARCHITECTS
OLLMANN ERNEST MARTIN ARCHITECTS
509 South State Street
Belvidere Illinois 61008
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FRAMING PLAN & DETAILS

Date: 2-5-2016

Revision: 2/19/2016 WI comments

2015-093

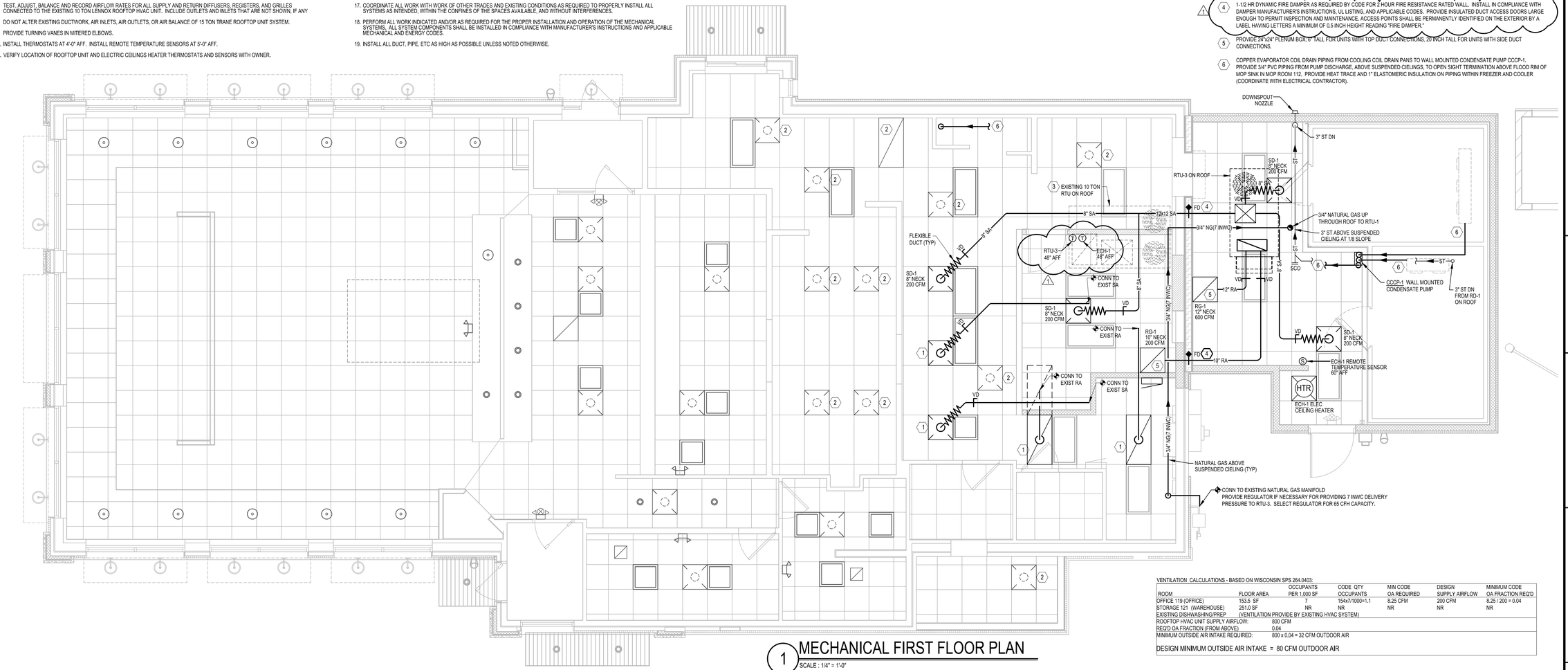
S102

GENERAL NOTES:

1. INDICATED DUCT SIZES FOR LINED DUCT ARE INSIDE DIMENSION. CLEAR OF DUCT LINER.
2. PROVIDE DUCT LINER FOR ALL VERTICAL RECTANGULAR SUPPLY AND RETURN DUCT DROPS FROM RTU. PROVID DUCT LINER WITH MINIMUM 1" THICKNESS AND MINIMUM INSTALLED R-VALUE 4.0. INSTALL AS INDICATED, IN COMPLIANCE WITH NAIMA AND SMACNA GUIDES, AND IN COMPLIANCE WITH BUILDING CODES.
3. EXISTING HVAC SYSTEMS AS SHOWN MAY BE INCOMPLETE OR INCORRECT; FIELD VERIFY EXISTING HVAC CONFIGURATIONS AND MODIFY WORK SCOPE AS REQUIRED.
4. TEST, ADJUST, AND BALANCE HVAC SYSTEM RTU-3 AS INDICATED AND IN COMPLIANCE WITH BUILDING CODES.
5. TEST, ADJUST, BALANCE AND RECORD AIRFLOW RATES FOR ALL SUPPLY AND RETURN DIFFUSERS, REGISTERS, AND GRILLES CONNECTED TO THE EXISTING 10 TON LENNOX ROOFTOP HVAC UNIT. INCLUDE OUTLETS AND INLETS THAT ARE NOT SHOWN, IF ANY
6. DO NOT ALTER EXISTING DUCTWORK, AIR INLETS, AIR OUTLETS, OR AIR BALANCE OF 15 TON TRANE ROOFTOP UNIT SYSTEM.
9. PROVIDE TURNING VANES IN MITERED ELBOWS.
10. INSTALL THERMOSTATS AT 4'-0" AFF. INSTALL REMOTE TEMPERATURE SENSORS AT 5'-0" AFF.
11. VERIFY LOCATION OF ROOFTOP UNIT AND ELECTRIC CEILINGS HEATER THERMOSTATS AND SENSORS WITH OWNER.
12. SET THERMOSTAT AT 70 DEG F FOR HEATING AND 75 DEG F FOR COOLING.
13. PROVIDE BLACK STEEL GAS PIPING SYSTEM COMPLYING WITH APPLICABLE FUEL GAS CODE AND LOCAL CODES. PAINT OUTDOOR NATURAL GAS PIPING YELLOW. GAS PIPING INSTALLATION SHALL COMPLY WITH NFPA 54-2009, NATIONAL FUEL GAS CODE.
14. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF EQUIPMENT AND ITEMS INSTALLED IN CEILINGS.
15. INSTALL RTU-1 CONDENSATE TRAP FURNISHED BY RTU MANUFACTURER. ARRANGE TRAP TO DISCHARGE CONDENSATE ON ROOF.
16. DO NOT LOCATE PIPING OR DUCTWORK OVER ELECTRICAL PANELS.
17. COORDINATE ALL WORK WITH WORK OF OTHER TRADES AND EXISTING CONDITIONS AS REQUIRED TO PROPERLY INSTALL ALL SYSTEMS AS INTENDED, WITHIN THE CONFINES OF THE SPACES AVAILABLE, AND WITHOUT INTERFERENCES.
18. PERFORM ALL WORK INDICATED AND/OR AS REQUIRED FOR THE PROPER INSTALLATION AND OPERATION OF THE MECHANICAL SYSTEMS. ALL SYSTEM COMPONENTS SHALL BE INSTALLED IN COMPLIANCE WITH MANUFACTURER'S INSTRUCTIONS AND APPLICABLE MECHANICAL AND ENERGY CODES.
19. INSTALL ALL DUCT, PIPE, ETC AS HIGH AS POSSIBLE UNLESS NOTED OTHERWISE.

KEYED NOTES

1. RELOCATED EXISTING DIFFUSER. CONNECT TO SAME SYSTEM WITH SAME DUCT SIZE, MATERIAL, AND INSULATION AS BEFORE RELOCATION. TEST, ADJUST, AND BALANCE TO SAME AIRFLOW RATE AS BEFORE START OF WORK.
2. EXISTING DIFFUSER, REGISTER, OR GRILLE. TEST, ADJUST, AND BALANCE TO SAME AIRFLOW RATE AS BEFORE START OF WORK.
3. EXISTING ROOFTOP UNIT ON ROOF. TEST, ADJUST, AND BALANCE SUPPLY, RETURN, RELIEF, AND OUTSIDE AIR INTAKE MAXIMUM AND MINIMUM AIRFLOW RATES TO SAME AS BEFORE START OF WORK.
4. 1-1/2 HR DYNAMIC FIRE DAMPER AS REQUIRED BY CODE FOR 2 HOUR FIRE RESISTANCE RATED WALL. INSTALL IN COMPLIANCE WITH DAMPER MANUFACTURER'S INSTRUCTIONS, UL LISTING, AND APPLICABLE CODES. PROVIDE INSULATED DUCT ACCESS DOORS LARGE ENOUGH TO PERMIT INSPECTION AND MAINTENANCE. ACCESS POINTS SHALL BE PERMANENTLY IDENTIFIED ON THE EXTERIOR BY A LABEL HAVING LETTERS A MINIMUM OF 0.5 INCH HEIGHT READING "FIRE DAMPER."
5. PROVIDE 24"x24" PLENUM BOX, 6" TALL FOR UNITS WITH TOP DUCT CONNECTIONS, 20 INCH TALL FOR UNITS WITH SIDE DUCT CONNECTIONS.
6. COPPER EVAPORATOR COIL DRAIN PIPING FROM COOLING COIL DRAIN PANS TO WALL MOUNTED CONDENSATE PUMP CCCP-1. PROVIDE 3/4" PVC PIPING FROM PUMP DISCHARGE, ABOVE SUSPENDED CIELINGS, TO OPEN SIGHT TERMINATION ABOVE FLOOD RIM OF MOP SINK IN MOP ROOM 112. PROVIDE HEAT TRACE AND 1" ELASTOMERIC INSULATION ON PIPING WITHIN FREEZER AND COOLER (COORDINATE WITH ELECTRICAL CONTRACTOR).



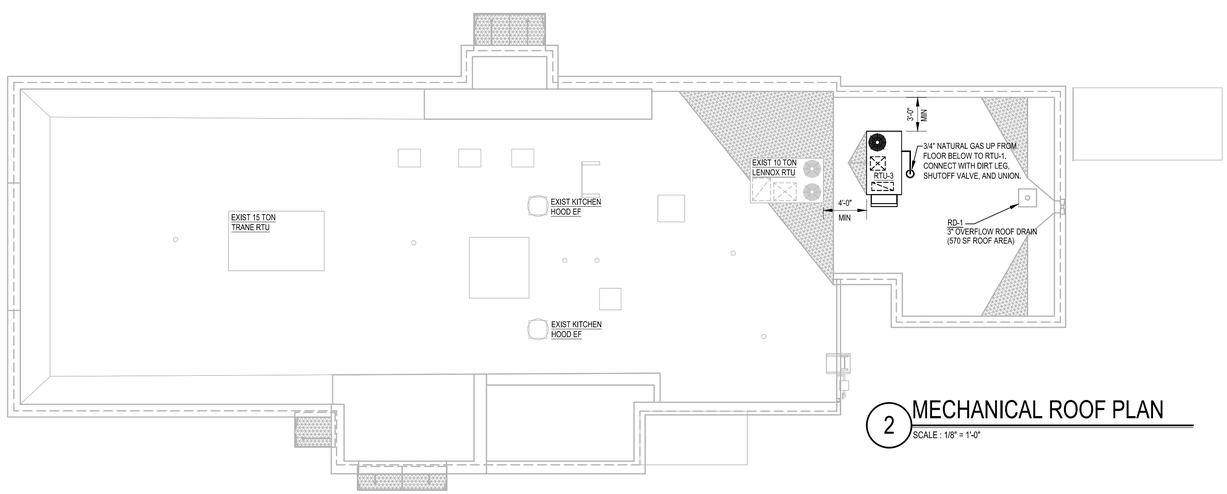
1 MECHANICAL FIRST FLOOR PLAN

SCALE : 1/4" = 1'-0"

VENTILATION CALCULATIONS - BASED ON WISCONSIN SPS 284.0403:

ROOM	FLOOR AREA	OCCUPANTS PER 1,000 SF	CODE QTY OCCUPANTS	MIN CODE OA REQUIRED	DESIGN SUPPLY AIRFLOW	MINIMUM CODE OA FRACTION REQ'D
OFFICE 119 (OFFICE)	153.5 SF	7	154x7/1000=1.1	8.25 CFM	200 CFM	8.25 / 200 = 0.04
STORAGE 121 (WAREHOUSE)	251.0 SF	NR	NR	NR	NR	NR
EXISTING DISHWASHING/PREP	(VENTILATION PROVIDE BY EXISTING HVAC SYSTEM)					
ROOFTOP HVAC UNIT SUPPLY AIRFLOW:	800 CFM					
REQ'D OA FRACTION (FROM ABOVE):	0.04					
MINIMUM OUTSIDE AIR INTAKE REQUIRED:	800 x 0.04 = 32 CFM OUTDOOR AIR					

DESIGN MINIMUM OUTSIDE AIR INTAKE = 80 CFM OUTDOOR AIR



2 MECHANICAL ROOF PLAN

SCALE : 1/8" = 1'-0"

DIFFUSER, REGISTER, AND GRILLE SCHEDULE

TAG	SERVICE	TYPE	MATERIAL	THROW	FACE	NECK	MOUNTING	MANUFACTURER/MODEL	Notes
SD-1	SUPPLY	SQUARE CONCENTRIC CONE	STEEL	4-WAY	24X24	SEE PLAN	LAY-IN	CARNES SFTB24	1, 2
RG-1	RETURN	GRID CORE ("EGGCRATE")	ALUMINUM	N/A	24X24	SEE PLAN	LAY-IN	CARNES RAPAH	2

DIFFUSER NOTES:
1. PROVIDE W/ ADJUSTABLE OPPOSED BLADE DAMPER
2. PROVIDE WITH WHITE FINISH UNLESS NOTED OTHERWISE.

CULVER'S RESTAURANT RE-IMAGE
840 W Sunset Drive
Waukesha, WI 53189
County of WAUKESHA

Culver Franchising System, Inc.
1240 Water Street
Prairie du Sac, WI 53578
608-643-7980

OWNER:
BERES FOODS, LLC
1650 E Main St.
Waukesha, WI 53186
Gary Beres 414-640-7533
Jill Beres 262-443-1989

OLLMANN ERNEST MARTIN ARCHITECTS
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MECANICAL PLANS

Revision: 2-19-2016

Date: 2-5-2016

2015-093

M101