

GENERAL NOTES FOR NON-WATER WASH VENTILATORS

1. Locate Fan Start/Stop Switch in a convenient location.
2. Refer to the wiring diagram for required voltage, amperage, and conduit size. Exhaust ducts must be continuously supported from end to end.
3. **EXHAUST VOLUME REQUIREMENTS**
 Determined by method of capture and delivery method and in accordance with the terms of the vendor's listing. These two volume levels require that the make-up air be brought into the space in such a way that it does not create a negative pressure in the kitchen area. Requirements and the "Typical Design" drawings specify the make-up air.
 Vendor static pressure is noted on each ventilator plan view. Total duct system and other external static's must be subtracted from the available static pressure of the system static pressure drop. Static head on operation of mean sea level of 75°F kitchen ambient.
4. **MAKE-UP AIR REQUIREMENTS**
 Make-up air is critical to the performance of the ventilator.
 The total amount of make-up air (supply air) brought into the kitchen must be between 90% and 100% of the total exhaust volume. It should be brought in throughout the kitchen area evenly for best results. See the "Typical Design" drawings.
5. **NEE ELECTRIC**
 Exhaust and Supply Air Flow Rates were established by the manufacturer. Factory connections for exhaust and/or Supply Air Flow may be required for installation.
6. Ventilators to be included in accordance with NFPA-96 and NFPA-99. See the manufacturer's listing for required clearances and fire ratings. Review applicable codes with code authorities before approving drawings for fabrication. Special attention must be given to code regulations relative to clearance and fire ratings. Make-up air must be conditioned (heated, cooled, dehumidified, etc.) as required by code.
7. Ventilators manufactured in multiple sections are factory pre-wired to a single connection point. Ventilator wiring is disconnected for equipment to be reconnected by other factory interconnected (see drawing) to a single outlet point. Ventilator wiring is disconnected for equipment to be reconnected by permitting contractor.
8. **SPACE CONDITIONS IN HOT AND WARM CLIMATES / STEAM COOKING EQUIPMENT**
 Goyford recommends the kitchen temperature be kept between 74°F to 78°F with a dew point not exceeding 58°F to prevent excess condensation and/or dripping in the hood over heavy steam producing equipment such as Steamers, Kettles, Broil Pan, Sam Cookies, etc. If this is not possible, please consult the factory for increased air volume levels to prevent condensation buildup and potential dripping. Please refer to ASHRAE STDs 62.1-2010, 55-2010, and The ASHRAE Guide for Buildings in Hot & Humid Climates to determine appropriate humidity levels for steam cooking equipment or design options. It should be noted that exceeding these values can result in increased potential for mold and mildew.
9. **APPROVAL NOTICE**
 Prior to releasing the ventilator for fabrication, this drawing must be signed by an authorized representative of the company ordering the equipment and returned to Goyford. All drawings must be submitted to the factory for review and approval. The factory reserves the right to reject the equipment on shown, and has verified the following have been checked:
IMPORTANT NOTICE
 1. All dimensions, clearances and locations, etc. and hot water location, ceiling height, overall size of ventilator clearance to beams and other obstructions.
 2. The location of the cooling equipment in relation to the ventilator for proper placement of the surface fire protection access.
APPROVED FOR FABRICATION
 Any change in cooling equipment location, necessitating the reduction of the surface fire protection modules must be brought to the attention of Goyford Industries in writing, prior to the kitchen being turned over to operating personnel.
 Rules and Resident:
 Without changes
 With changes as shown
 Signature _____ Date _____

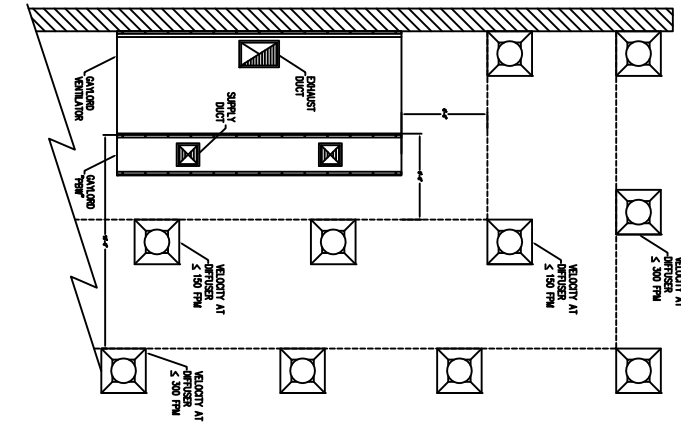
THE GAYLORD VENTILATOR TESTING LISTING AND COMPLIANCE REFERENCES:

IMPORTANT NOTE: Goyford Ventilators are designed to meet the National codes listed below. Local codes may vary. Goyford Industries must be notified in writing of local codes that may affect the ventilator design.

NATIONAL FIRE PROTECTION ASSOCIATION
 The exhaust ventilator meets all requirements of the latest edition of NFPA-96.

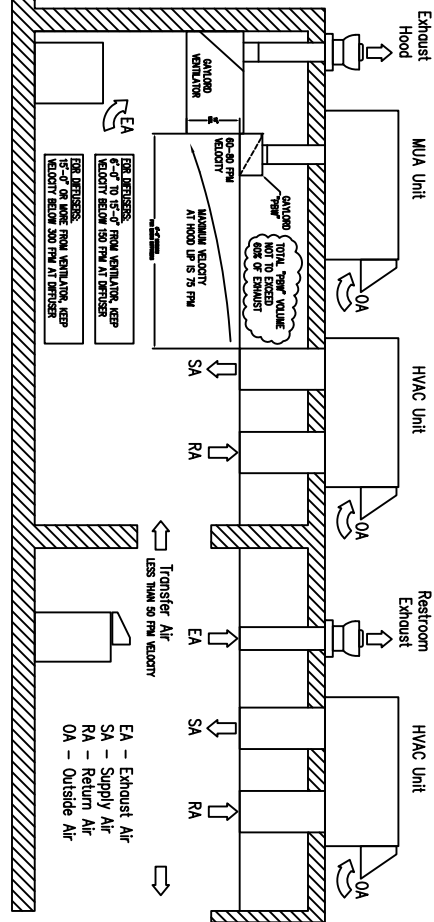
NATIONAL SANITATION FOUNDATION
 The exhaust ventilator is NSF listed to:
 Standard #2 - Food Service Equipment.
INTERNATIONAL & AMERICAN MECHANICAL CODE
 The exhaust ventilator meets all requirements of IMC and IAC.

UNDERWRITERS LABORATORIES, INC.
 The exhaust ventilator is UL Listed.
INTERTEK TESTING SERVICES
 The exhaust ventilator is ETL Listed.
 * UL and ETL listed exhaust ventilators are tested to standard: UL 710 - Exhaust Hoods for Commercial Cooking Equipment.



- Goyford Capture Performance Guarantee**
 Goyford warrants the Capture Performance of the ventilator, only if the Exhaust Air Volumes are correct, per the Exhaust Air Volume Guidelines, and the Make-up Air Volumes are correct and the make-up air is delivered correctly, per the Make-up Air Delivery Guidelines as stated below.
- Exhaust Air Volume Guidelines:**
 1. The amount of air exhausted by the Goyford Ventilator shall be between 100% and 110% of the values shown on the Plan View for the Exhaust Ducts for each ventilator.
- Make-up Air Delivery Guidelines:**
 1. Goyford "PBW" Plenum boxes shall be included for each ventilator.
 2. The amount of make-up air delivered through the Goyford "PBW" plenum boxes shall be between 90% and 100% of the values shown on the Plan View for the Supply Ducts for each ventilator.
 3. The make-up air delivered using Goyford "PBW" plenum boxes shall not exceed 60% of the exhaust volume of the ventilator.
 4. Ceiling diffusers shall be at least 6'-0" from all sides of the ventilator and the velocity of the diffuser shall not exceed 150 Feet per Minute (FPM).
 OR
 5. Ceiling diffusers shall be 15'-0" from all sides of the ventilator and the velocity of the diffuser shall not exceed 300 Feet per Minute (FPM) and the velocity of the diffuser shall not exceed 75 FPM at the ventilator lip.
 6. Cross drafts from pass through windows, hallways or other openings shall not exceed 50 FPM.
 7. All forms of make-up air introduction (PBW, Transfer Air, Diffusers, etc.) must be evenly distributed around each ventilator to prevent unequal pressurization.
 8. Kitchen pressurization shall not exceed -0.02" W.C. relative to the dining or adjacent spaces, as stated in NFPA-96 and ASHRAE Standard 154.
 9. For more information on acceptable methods of Make-up Air Delivery reference ASHRAE Standard 154.
- Following these guidelines will result in proper capture and containment at the ventilator and meet the Goyford Capture Performance Guarantee. If possible conditions cannot accommodate these guidelines, consult factory for alternative design.

TYPICAL DESIGN



TJM Consulting, Inc.
 Foodservice Consultant
 273 Main Street, Suite 5
 Yarmouth, Maine 04096

NOTICE:
 THESE DRAWING AND ALL INFORMATION HEREIN ARE THE PROPERTY OF TJM CONSULTING, INC. AND MAY NOT BE USED OR COPIED, EITHER IN WHOLE OR IN PART, WITHOUT THE EXPRESS WRITTEN CONSENT OF THE DESIGNER.

REV NO. 1

DESCRIPTION:

REV NO. 2

DESCRIPTION:

REV NO. 3

DESCRIPTION:

Portland Public Schools
 Central Kitchen
 92 Waldron Way
 Portland, Maine

PROJECT:
 Portland Public Schools Central Kitchen

DRAWN BY:
 T. Mowde

DATE:
 2-1-2013

CHECKED BY:
 T. Mowde

SHEET TITLE:
 Exhaust Hood Design Notes

SHEET NO.
 FS-11