

SL 874: Building 28 Additional HVAC scope

This package contains the:

Equipment Schedule

Updated 3rd, 4th and 5th floor drawings.

Photos of proposed duct locations

Equipment cut sheets

Repack Additional Louvers & counterbalanced back draft dampers at 1st Floor

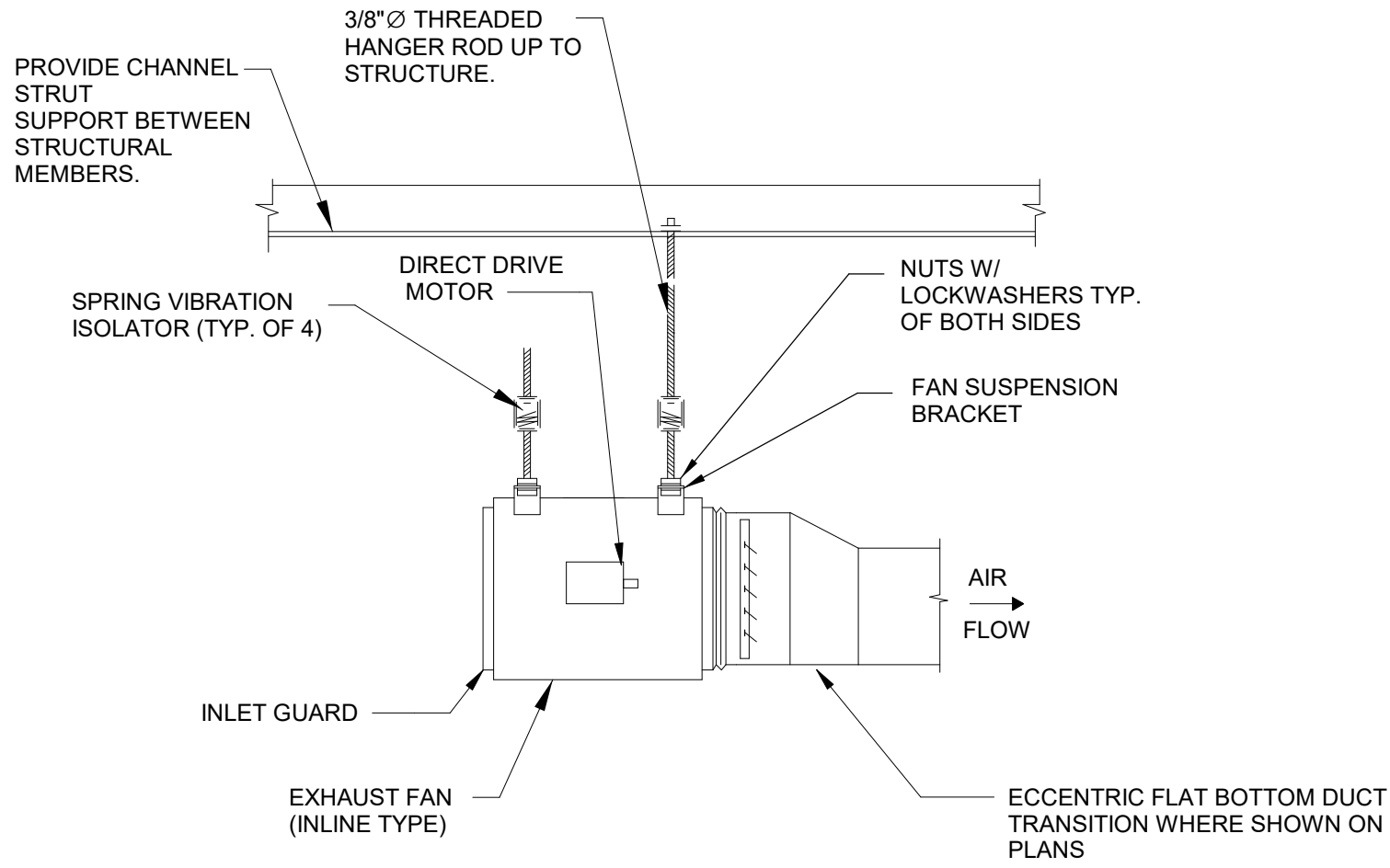
Storage Area Louvers at 5th Floor

FAN SCHEDULE																			
TAG	LOCATION	AREA SERVED	FAN DATA										ELECTRICAL			OPERATIONAL WEIGHT (LBS)	MANUFACTURER	MODEL	NOTES
			FAN TYPE	DRIVE TYPE	BLADE TYPE	AIR FLOW (CFM)	ESP (IN W.G.)	FAN RPM	BHP	MOTOR HP	MOTOR RPM	MOTOR ENCLOSURE	V	PH	HZ				
FA-0302-301	REG WASTE SHREDDER ENCLOSURE	REG WASTE SHREDDER ENCLOSURE	CENTRIFUGAL INLINE	DIRECT	BACKWARD INCLINED	2935	1.485	1750	1.14	1 1/2	1750	TEFC	460	3	60	131	GREENHECK	SQ-15	1, 4-6
FA-0302-302	REG WASTE SHREDDER PLATFORM	REG WASTE SHREDDER PLATFORM	CENTRIFUGAL UPBLAST	DIRECT	BACKWARD INCLINED	1152	0.254	1725	0.23	1/4	1725	EXP	115	1	60	63	GREENHECK	CUE-099	2, 3, 5, 6
FA-0404-303	APRON CONVEYER ENCLOSURE	APRON CONVEYER ENCLOSURE	CENTRIFUGAL INLINE	DIRECT	BACKWARD INCLINED	5597	0.521	1750	1.25	1 1/2	1750	TEFC	460	3	60	148	GREENHECK	SQ-16	1, 4-6

- NOTES:
1. PROVIDE MOTOR WITH 1.15 SERVICE FACTOR, CLASS F INSULATION, AND THERMAL OVERLOAD PROTECTION.
 2. ALUMINUM CONSTRUCTION WITH TYPE B SPARK RESISTANCE.
 3. PROVIDE MOTOR WITH 1.00 SERVICE FACTOR, CLASS B INSULATION, AND THERMAL OVERLOAD PROTECTION.
 4. PROVIDE WITH BACKDRAFT DAMPER.
 5. PROVIDE FAN WITH 1" SPRING VIBRATION ISOLATORS.
 6. PROVIDE FAN WITH INLET GUARD TO MATCH FAN MATERIALS.

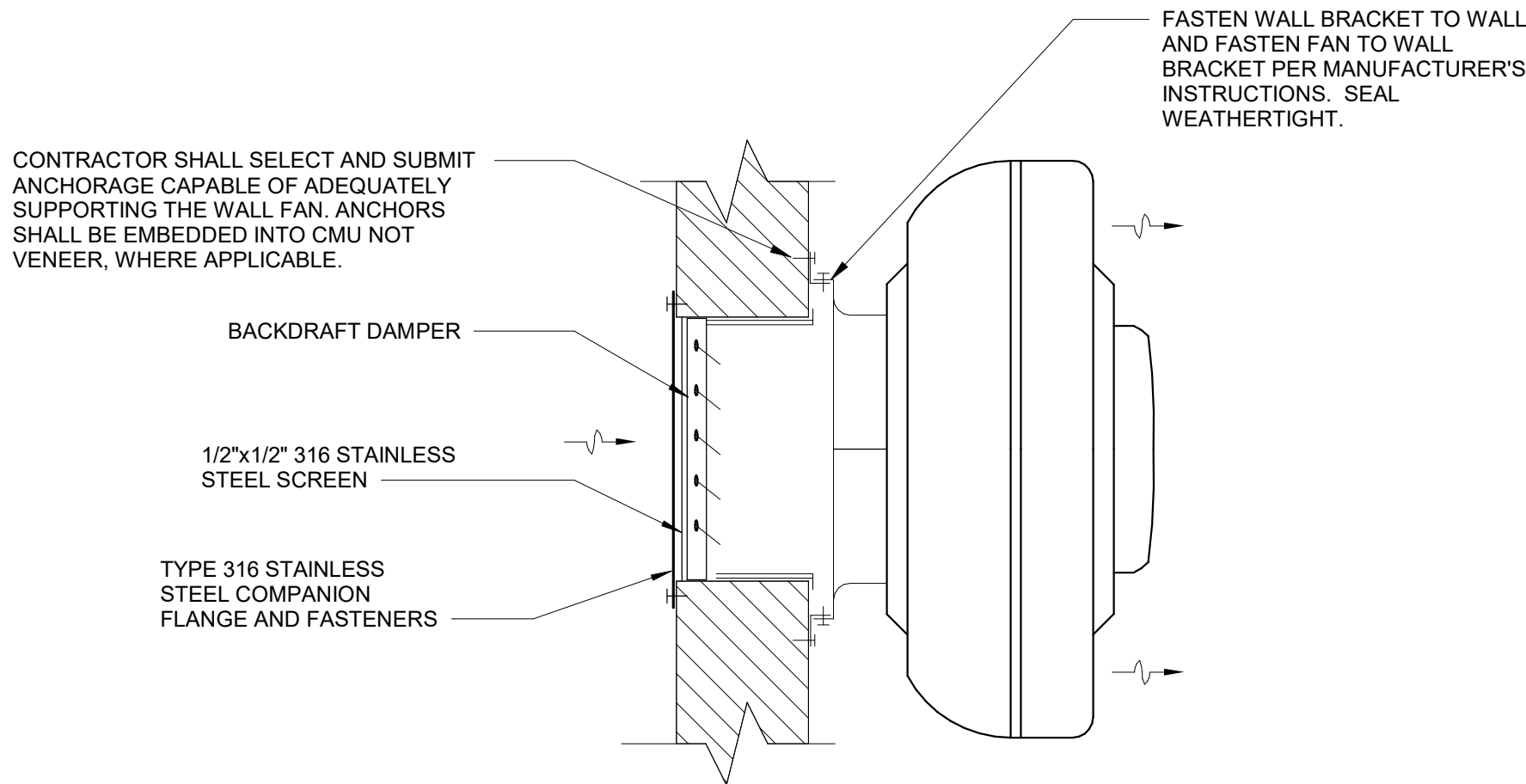
LOUVER SCHEDULE															
Tag	Location	Area Served	Description	Size (WxH)(Inch)	Nominal Depth (Inch)	Free Area (SQ FT)	Air Flow (CFM)	Free Area Velocity (FPM)	S.P. (In W.G.)	Material	Frame Type	Manufacturer	Model	Notes	
L-0302-106	REG WASTE SHREDDER ENCLOSURE	REG WASTE SHREDDER ENCLOSURE	INTAKE	36x36	6	4.8	2935	614	0.04	ALUMINUM	CHANNEL	GREENHECK	EAD-635	1	
L-0302-107	REG WASTE SHREDDER PLATFORM	REG WASTE SHREDDER PLATFORM	INTAKE	30x20	6	1.8	1152	640	0.05	ALUMINUM	CHANNEL	GREENHECK	EAD-635	1	
L-0404-108	APRON CONVEYOR ENCLOSURE	APRON CONVEYOR ENCLOSURE	INTAKE	54x24	6	4.5	2799	626	0.05	ALUMINUM	CHANNEL	GREENHECK	EAD-635	1	
L-0404-109	APRON CONVEYOR ENCLOSURE	APRON CONVEYOR ENCLOSURE	INTAKE	54x24	6	4.5	2799	626	0.05	ALUMINUM	CHANNEL	GREENHECK	EAD-635	1	

- NOTES:
1. PROVIDE WITH A 1/2" x 1/2" BIRD SCREEN IN REMOVABLE FROM ON INTERIOR SIDE OF LOUVER.



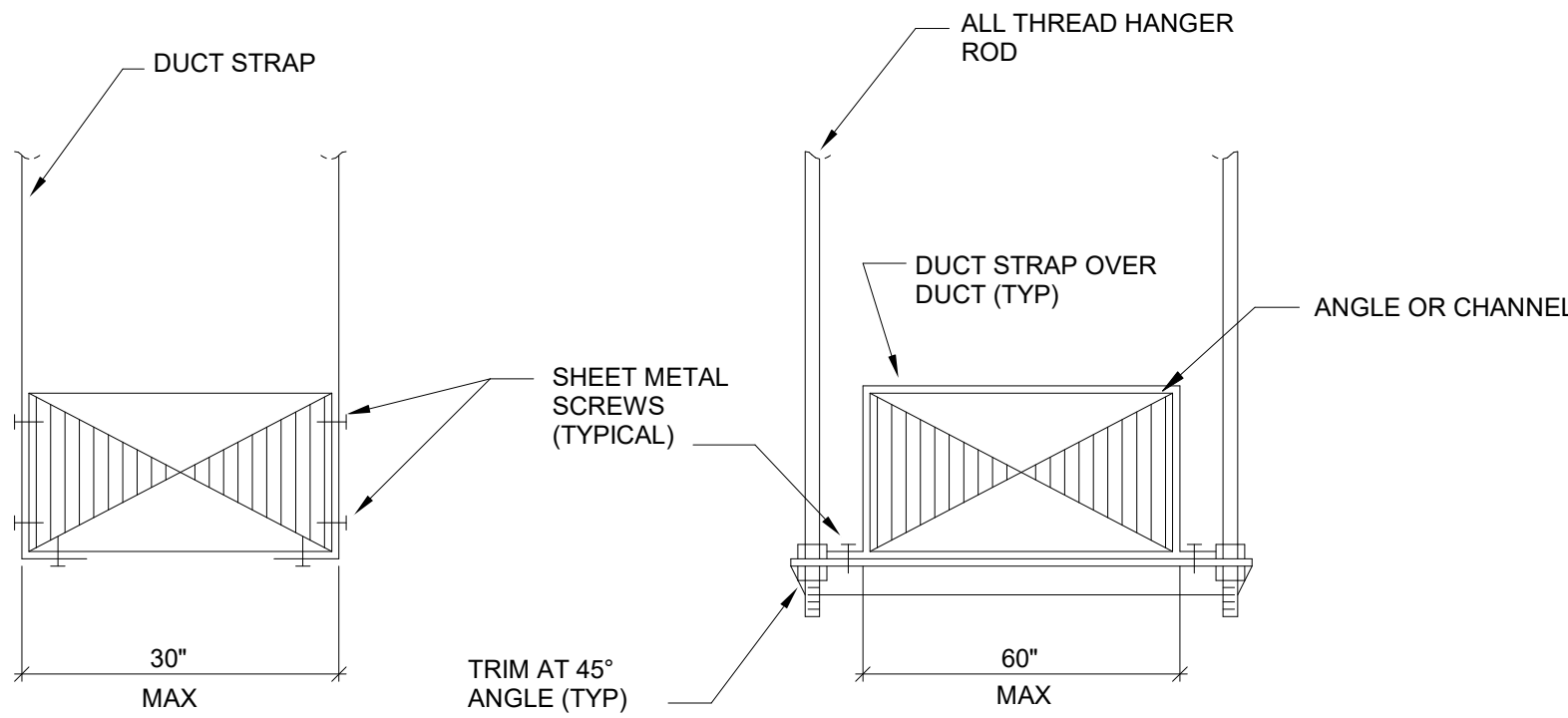
NOTE:
PROVIDE ADEQUATE SERVICE SPACE AROUND FAN FOR FAN REMOVAL
MOTOR, BELT & DRIVE ACCESS.

DETAIL 1
NOT TO SCALE



WALL-MOUNTED CENTRIFUGAL EXHAUST FAN

DETAIL 3
NOT TO SCALE



NOTE:
DUCT SUPPORT MATERIALS TO MATCH DUCTWORK.

DETAIL 2
NOT TO SCALE

FULL SCALE DRAWING SHEET SIZE: 30"x42" ARCH E1

FIELD VERIFY ALL EXISTING CONDITIONS

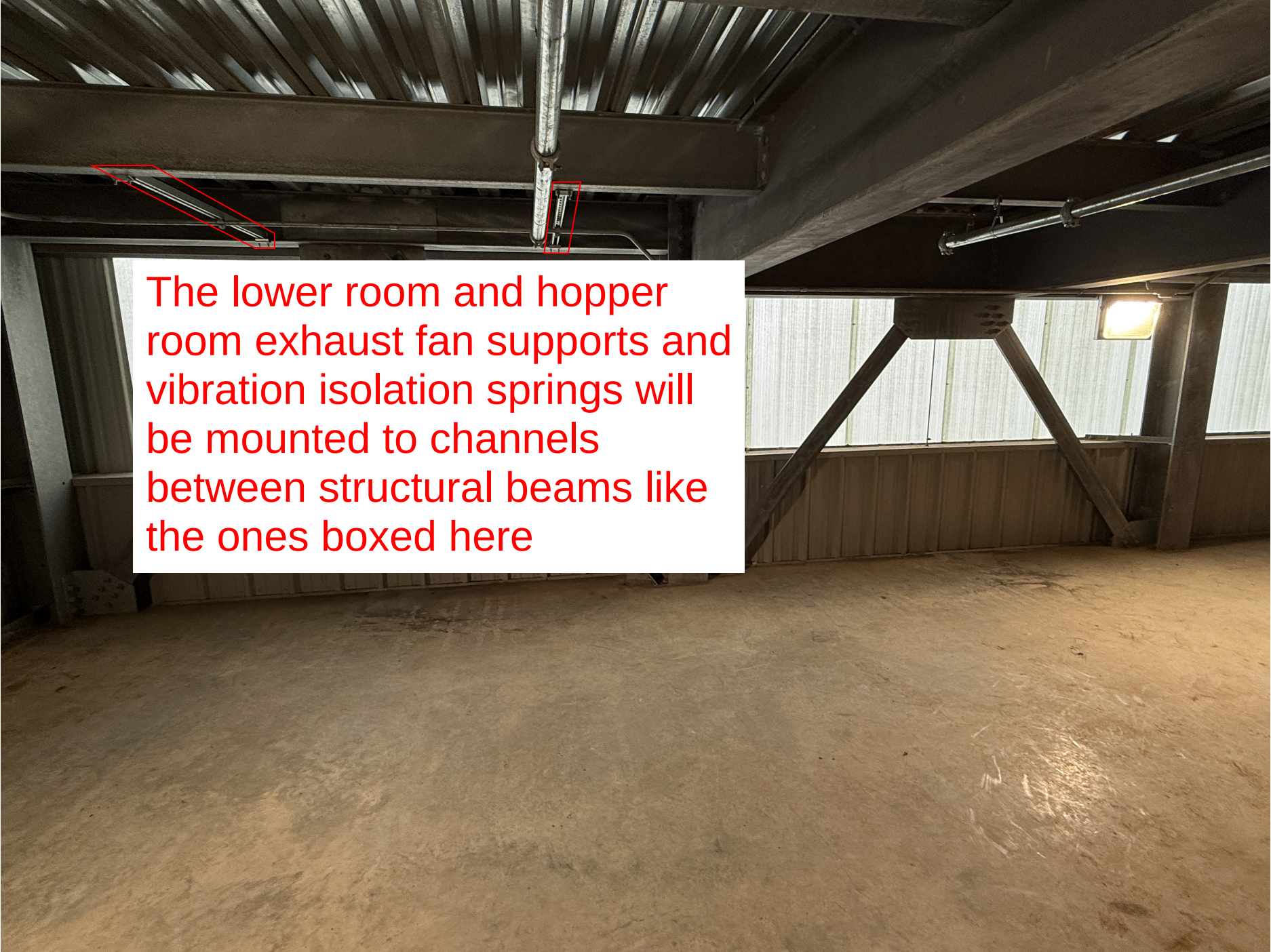
DO NOT SCALE DRAWINGS

CLIENT:
VEOLIA

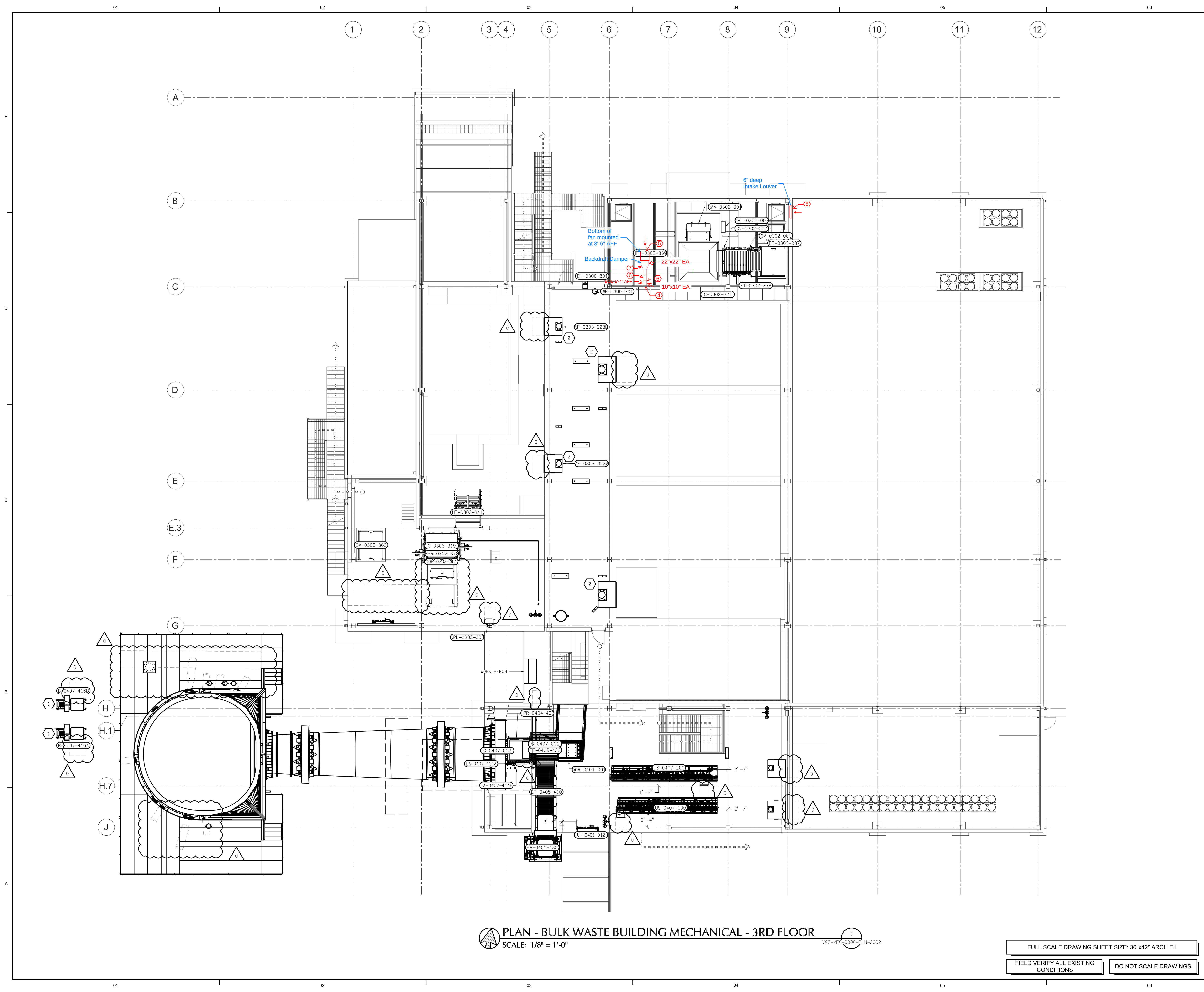
PROJECT:
HAZARDOUS WASTE INCINERATOR PROJECT


811 HASLEY ROAD, ARKADELPHIA, AR 71923

TITLE:
MECHANICAL SCHEDULE/DETAILS
BULK WASTE BUILDING



The lower room and hopper room exhaust fan supports and vibration isolation springs will be mounted to channels between structural beams like the ones boxed here



- DRAWING NOTES**
DRAWING VGS-MEC-0300-PLN-3002
- MC TO PROVIDE HOUSEKEEPING PAD FOR BLOWER PER DETAIL 11 ON VGS-SIR-0600-FIN-4203. SEE DETAIL 1 ON VGS-MEC-0000-DTL-3009 FOR PAD THICKNESS DROUT ALL APPLICABLE BLOWERS PER NYS SPEC.
 - MC TO INSTALL BUILDING FILTERS PER DETAIL 1 ON VGS-MEC-0000-3. MAINTAIN NEC CLEARANCES.
 - INSTALL 12"x12" SS SCREEN AT WALL WITH COMPANION FLANGE, PROVIDE FLASHING AND SEALANT TO CREATE WEATHERTIGHT SEAL.
 - BOTTOM OF FAN MOUNTED AT 8'-6" AFF.
 - 20"x30" SHORT RADIUS ELBOW.
 - ECCENTRIC FLAT BOTTOM REDUCER.
 - BOTTOM OF LOUVER MOUNTED AT 5'-6" AFF.
- EQUIPMENT NOTES**
- GENERAL NOTES**
APPLIES TO ALL DRAWINGS OF THIS TRADE.
- A FOR KEY PLAN AND DRAWING INDEX SEE DRAWING VGS-PRO-0000-PID-8000.
- B FOR GENERAL NOTES, LEGEND AND SYMBOLS SEE DRAWING VGS-PRO-0000-PID-8050.
- C REFER TO ARCHITECTURAL AND STRUCTURAL FLOOR PLANS FOR EQUIPMENT PADS AND PIPE SUPPORTS PROVIDED BY CSA.
- D CHECK MODEL FOR HOUSEKEEPING PAD DIMENSIONS, VERIFY SLAB HEIGHT WITH FINAL ISOMETRICS.
- E REFER TO ELECTRICAL PLN DRAWINGS FOR ELECTRICAL CLEARANCE COORDINATION.
- F A SAFETY SHOWER/EYEWASH STATION MUST BE ACCESSIBLE WITHIN 10 SECONDS FROM ANY HAZARD. THERE SHALL BE NO OBSTRUCTIONS BETWEEN THE HAZARDS AND THE SHOWER/EYEWASH STATION. STATIONS SHOULD BE NO FURTHER THAN 55 FEET FROM ANY HAZARD.

REV	DESCRIPTION	BY	DATE
1	ISSUED FOR CONSTRUCTION	WAF	12/01/2023

DENHAM BLYTHE
design/build
Lexington KY 859.255.7405
Nashville TN 615.855.2244
Louisville KY 270.791.1105
Greenville SC 864.485.6992

SPECIALTY SERVICES
Lexington KY 859.255.7405

THERMALTECH ENGINEERING
FACILITY AND UTILITY SYSTEMS
ANALYSIS/DESIGN/CONSTRUCTION
513-561-2271 • WWW.THERMALTECH.COM

CLIENT: VEOLIA

PROJECT: HAZARDOUS WASTE INCINERATOR PROJECT



811 HASLEY ROAD, ARKADELPHIA, AR 71923

TITLE: PLAN
BULK WASTE BUILDING
MECHANICAL - 3RD FLOOR

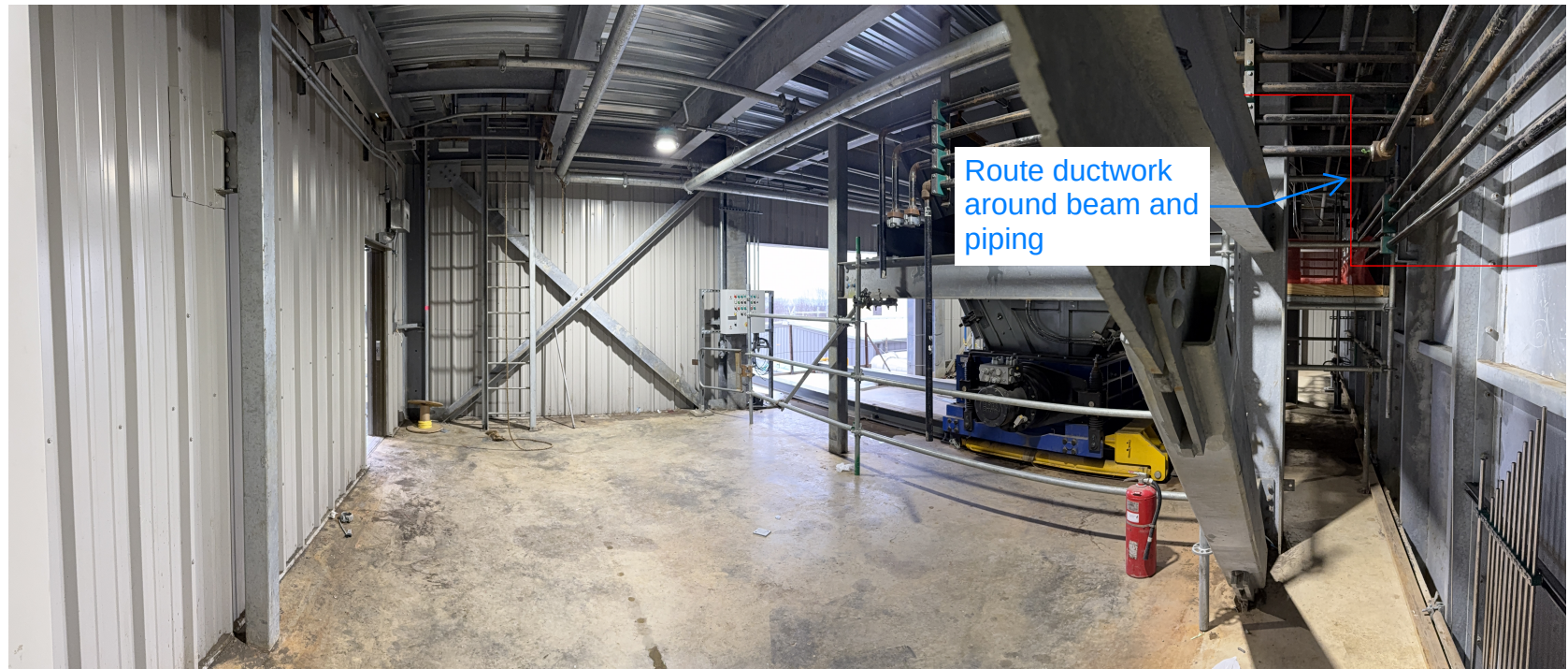
VGS DRAWING NO.
VGS-MEC-0300-PLN-3002

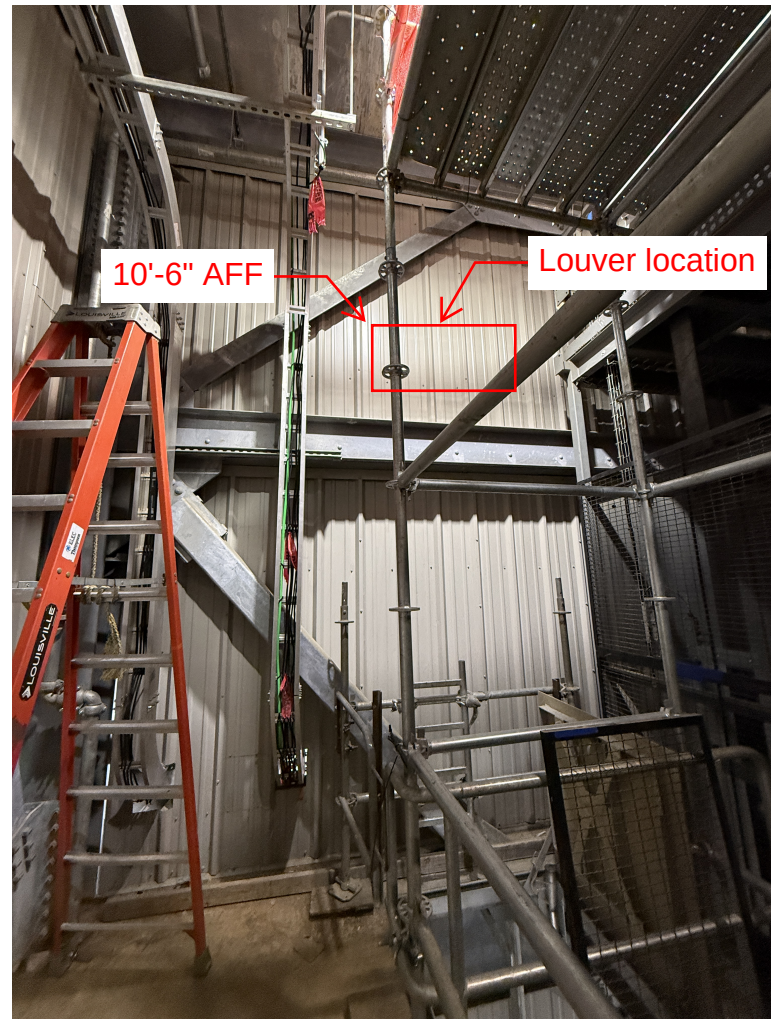
REV. SIZE
0 E

FULL SCALE DRAWING SHEET SIZE: 30"x42" ARCH E1

FIELD VERIFY ALL EXISTING
CONDITIONS

DO NOT SCALE DRAWINGS







PLAN - BULK WASTE BUILDING MECHANICAL - 5TH FLOOR
SCALE: 1/8" = 1'-0"

1
VGS-MEC-0300-PLN-3004

FULL SCALE DRAWING SHEET SIZE: 30"x42" ARCH E1

FIELD VERIFY ALL EXISTING
CONDITIONS

DO NOT SCALE DRAWINGS

DRAWING NOTES

- DRAWING VGS-MEC-0300-PLN-3004
- WC TO PROVIDE EXPLOSION DUCT FOR STD SMP SYSTEM.
- MC TO PROVIDE COMPRESSED AIR BREAK TANK.
- INSTALL 12"x12" SS SCREEN AT WALL WITH COMPANION FLANGE. PROVIDE FLASHING AND SEALANT TO CREATE WEATHERTIGHT SEAL.
- ECCENTRIC FLAT BOTTOM REDUCER.
- BOTTOM OF FAN MOUNTED AT 4'-6".
- BOTTOM OF LOUVER MOUNTED AT 0'-6" AFF

EQUIPMENT NOTES

GENERAL NOTES

APPLIES TO ALL DRAWINGS OF THIS TRADE

- A FOR KEY PLAN AND DRAWING INDEX SEE DRAWING VGS-PRO-0000-PID-8000.
- B FOR GENERAL NOTES, LEGEND AND SYMBOLS SEE DRAWING VGS-PRO-0000-PID-8050.
- C REFER TO ARCHITECTURAL AND STRUCTURAL FLOOR PLANS FOR EQUIPMENT PADS AND PIPE SUPPORTS PROVIDED BY CSA.
- D CHECK MODEL FOR HOUSEKEEPING PAD DIMENSIONS. VERIFY SLAB HEIGHT WITH FINAL ISOMETRICS.
- E REFER TO ELECTRICAL PLN DRAWINGS FOR ELECTRICAL CLEARANCE COORDINATION.
- F A SAFETY SHOWER/EYEWASH STATION MUST BE ACCESSIBLE WITHIN 10 SECONDS FROM ANY HAZARD. THERE SHALL BE NO OBSTRUCTIONS BETWEEN THE HAZARDS AND THE SHOWER/EYEWASH STATION. STATIONS SHOULD BE NO FURTHER THAN 55 FEET FROM ANY HAZARD.

REV	DESCRIPTION	BY	DATE
0	ISSUED FOR CONSTRUCTION	AMA	12/01/2023

DENHAM BLYTHE
design/build
Lexington KY 859.255.7405
Nashville TN 615.855.2244
Louisville KY 270.791.1105
Greenville SC 864.485.6992

**SPECIALTY
SERVICES**
Lexington KY 859.255.7405

**THERMALTECH
ENGINEERING**
FACILITY AND UTILITY SYSTEMS
ANALYSIS/DESIGN/CONSTRUCTION
513-561-2271 • WWW.THERMALTECH.COM

CLIENT: VEOLIA

PROJECT: HAZARDOUS WASTE INCINERATOR PROJECT

VEOLIA

811 HASLEY ROAD, ARKADELPHIA, AR 71923

TITLE: PLAN
BULK WASTE BUILDING
MECHANICAL - 5TH FLOOR

VGS DRAWING NO.
VGS-MEC-0300-PLN-3004

REV: 0
SIZE: E



Model: SQ-15

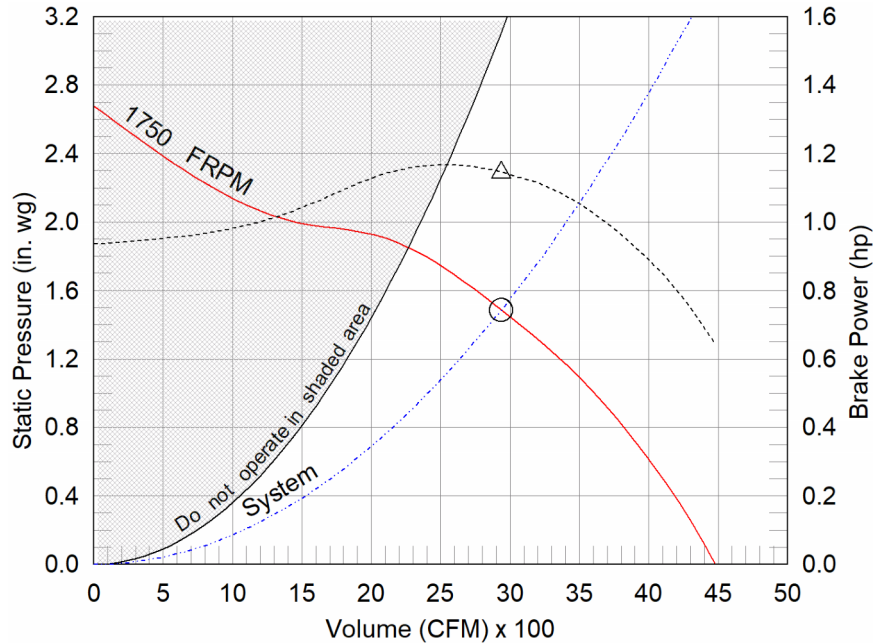
Direct Drive Mixed Flow Inline Fan

Dimensional	
Quantity	1
Weight w/o Acc's (lb)	109
Weight w/ Acc's (lb)	131
Max T Motor Frame Size	184
Optional Damper (in.)	22 x 22

Performance	
Requested Volume (CFM)	2,935
Actual Volume (CFM)	2,935
Total External SP (in. wg)	1.485
Fan RPM	1750
Operating Power (hp)	1.14
Elevation (ft)	489
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.074
Tip Speed (ft/min)	8,361
Static Eff. (%)	60

Misc Fan Data	
Fan Eff. Index (FEI)	1.39
Outlet Velocity (ft/min)	874

Motor	
Motor Mounted	Yes
Size (hp)	1 1/2
Voltage/Cycle/Phase	460/60/3
Enclosure	TEFC
Motor RPM	1750
Windings	1
Min. Circuit Ampacity (MCA)	3.75
Max. Overcurrent Protection (MOP)	15
Short Circuit Current Rtg (SCCR)	5 kA



- △ Operating Bhp point
- Operating point at Total External SP
- Fan curve
- System curve
- Brake horsepower curve

Static Pressure Calculations

External SP	1.485 in. wg
Direct Drive RPM Adjustment	0.000 in. wg
Total External SP	1.485 in. wg

Nameplate Model: SQ-15-M2-X

Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	77	87	78	72	70	71	70	70	79	67	18.3
Outlet	94	89	77	76	75	74	72	71	82	70	22
Radiated	74	82	68	64	61	59	60	59	71	59	11.4

Notes:

All dimensions shown are in units of in.
*NEC FLA, MCA and MOP are for reference only – based on tables 430.248 or 430.25 of National Electric Code 2020. Actual motor FLA may vary, for sizing thermal overload, consult factory. MCA and MOP values shown only account for the motor, not accessories (damper actuator, field supplied VFD, etc).
LwA - A weighted sound power level, based on ANSI S1.4
dBA - A weighted sound pressure level, based on 11.5 dB attenuation per Octave band at 5 ft - dBA levels are not licensed by AMCA International
Sones - calculated using AMCA 301 at 5 ft



Model: SQ-15

Direct Drive Mixed Flow Inline Fan

Greenheck model SQ Mixed Flow meets or exceeds legacy centrifugal models SQ/BSQ in performance and features. SQ Mixed flow is an approved equal and can be considered a direct replacement for these models.

Standard Construction Features:

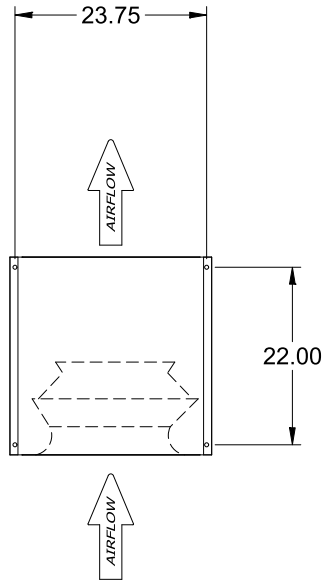
Galvanized steel housing – Mixed flow aluminum wheel – Two bolted access panels – Slip-in duct connection flange – Ball bearing motors – Corrosion resistant fasteners

Selected Options & Accessories:

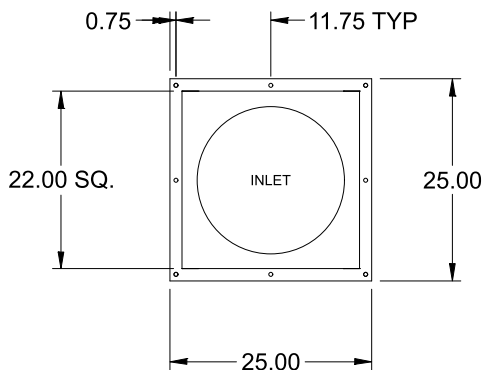
Motor with Thermal Overload
Motor with 1.15 or Greater Motor Service Factor
Motor with Class F or Greater Insulation
UL/cUL 705 Listed - "Power Ventilators"
Junction Box Mounted and Wired
Switch, NEMA-1, Toggle, Shipped Separate
Galvanized Housing
Aluminum Mixed Flow Wheel
Fan: Spring, Hanging, 1 Inch Isolator PN: 850343, Incl. 4 isolators and 4 brackets
Damper Shipped Loose, Inline, WD-330-PB-22X22, Gravity Operated, Not Coated
Unit Warranty: 1 Yr (Standard)

SQ-15

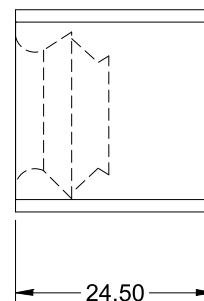
Direct Drive Mixed Flow Inline Fan



TOP VIEW



END VIEW



SIDE VIEW

Notes: All dimensions shown are in units of in.

Disconnect Switch

Enclosure Rating: NEMA-1

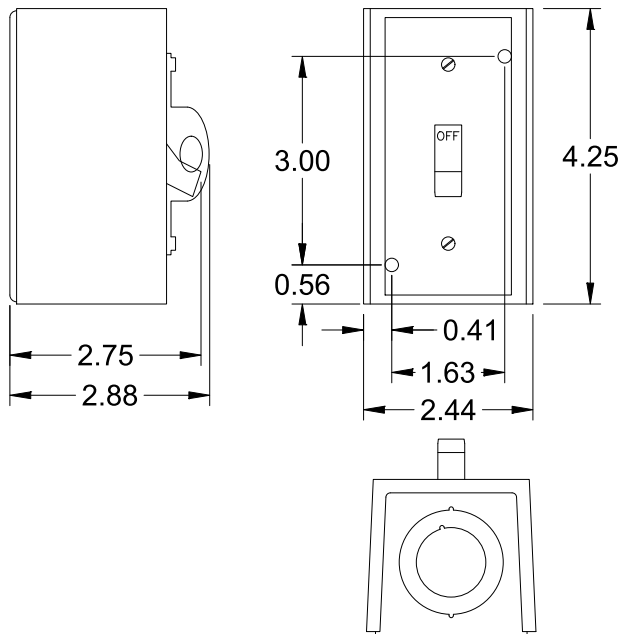
Standard Construction Features:

Enclosure constructed for indoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment and to provide a degree of protection against falling dust. This enclosure meets the rod entry and the indoor corrosion protection design tests. The rod entry test is intended to simulate incidental contact with enclosure equipment. Enclosure is equipped with provision to lockout in the off position with customer supplied lock.

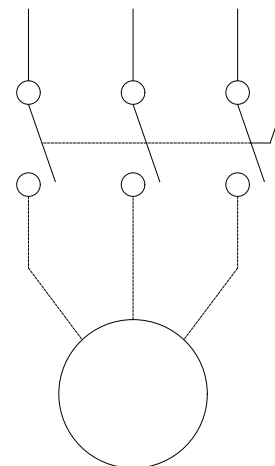
Disconnect Switch Configuration

Type:	Toggle	Motor Size:	1 1/2 hp	Voltage:	460	UL Listed:	Yes
Manufacturer:	Square D	Cycle:	60	Amperage:	30	CSA Approved:	Yes
Overload Protection:	None	Phase:	3	Switch Pole(s):	3	Rating:	10 hp
Junction Box Mtg.:	Ship Separate	RPM:	1750	Exp. Resist. Wiring:	None		
Switch Mounting:	Shipped Separate						

Electrical Drawing Details



Wiring Schematic



Notes: All dimensions shown are in units of in.

Fan Isolator

Type: Spring, Hanging, 1 Inch

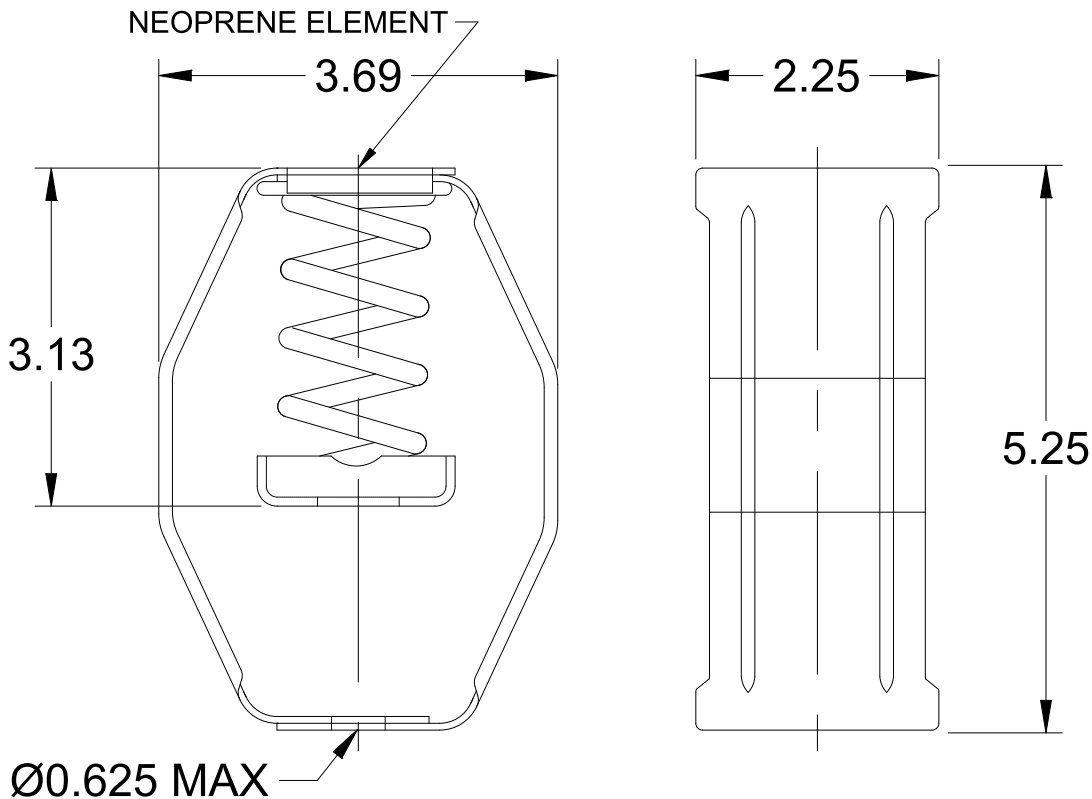
Standard Construction Features:

The spring hanging isolator is designed to reduce the transmission of vibration and noise produced by suspended equipment and piping. To assure stability, the spring element has a minimum lateral stiffness of 1.0 times the rated vertical stiffness. The hanger will allow a support rod misalignment through a 30 degree arc and the isolation brackets will carry a 500% overload without failure. The isolator has an epoxy powder coated bracket and spring coil which is color coded according to the load capacity and has a noise isolation pad, all which is assembled into a stamped or welded hanger bracket. This part number includes 4 isolators.

Isolator Configuration

Description:	SH-1-35	Color:	Blue
Manufacturer:	Kinetics Noise Control	Mounting:	Hanging
Load Capacity:	35 lb	Kit Part Number:	850343
Deflection at Full Load:	1.52	Selection Deflection (in.):	1.18

Spring, Hanging, 1 Inch Deflection - Vibration Isolator



Notes: All dimensions shown are in units of in.

Warranty

1 Yr (Standard)

WARRANTY AND LIABILITY: SELLER warrants to Buyer that products manufactured are free from defects in material and workmanship for a period of 1 Yr (Standard) from the date of shipment. SELLER's obligations and liabilities under this warranty are limited to furnishing FOB factory or warehouse at SELLER's designated shipping point, freight allowed to Buyer's city, (or point of export for shipments outside the conterminous United States) replacement equipment (or at the option of SELLER parts therefore) for all Seller's products not conforming to this warranty and which have been returned to the manufacturer. No liability whatever shall attach to SELLER until said products have been paid for and such liability shall be strictly limited to the purchase price of the equipment shown to be defective. Motors are warranted by the motor manufacturer for a period of one year. Should motors furnished by SELLER prove defective during this period, they should be returned to the nearest authorized motor service station. SELLER will not be responsible for any removal or installation costs. Electrical components, excluding motors, are warranted only to the extent warranted by the original manufacturer. To the extent that SELLER is entitled to pass through a warranty of the original equipment manufacturer of the electrical goods sold, SELLER will pass through such warranties to Buyer. The legal remedies described in this Warranty are the sole exclusive remedy of Buyer. SELLER MAKES NO OTHER WARRANTY, EITHER EXPRESS OR IMPLIED, REGARDING ITS PRODUCTS, OR ITS SELECTION AND APPLICATION, INCLUDING, BUT NOT LIMITED TO, COMPLIANCE WITH BUILDING CODES, SAFETY CODES, LAWS, MERCHANTABILITY OR FITNESS OR A PARTICULAR PURPOSE. This warranty is extended solely to the Buyer. It is nontransferable and non-assignable, and the Buyer shall not permit or authorize its employees, agents, representatives or customers to claim, represent or imply that this limited warranty extends or is available to anyone other than the Buyer. ANY MISUSE, NEGLIGENCE, FAILURE TO FOLLOW INSTRUCTIONS OR MANUALS OF INSTALLATION OF MAINTENANCE REPAIR, SERVICE, RELOCATION OR ALTERATION TO OR OF, OR OTHER TAMPERING WITH, THE PRODUCTS PERFORMED BY ANY PERSON OR ENTITY OTHER THAN SELLER WITHOUT SELLER'S PRIOR WRITTEN APPROVAL OR ANY USE OF REPLACEMENT PARTS NOT SUPPLIED BY SELLER, SHALL IMMEDIATELY VOID AND CANCEL ALL WARRANTIES WITH RESPECT TO THE AFFECTED PRODUCTS. THE WARRANTY AND LIABILITY SET FORTH HEREIN ARE IN LIEU OF ALL OTHER WARRANTIES AND LIABILITIES WHETHER IN CONTRACT OR IN NEGLIGENCE, EXPRESSED OR IMPLIED, IN LAW OR IN FACT, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR USE. SELLER PROVIDES NO INDEPENDENT WARRANTY FOR THIRD PARTY PRODUCTS OR COMPONENTS SOLD TOGETHER OR INCORPORATED WITH SELLER'S PRODUCT(S). THE SELLER HAS THE RIGHT TO SETTLE ANY AND ALL DISPUTES REGARDING THE WARRANTY.

AMCA



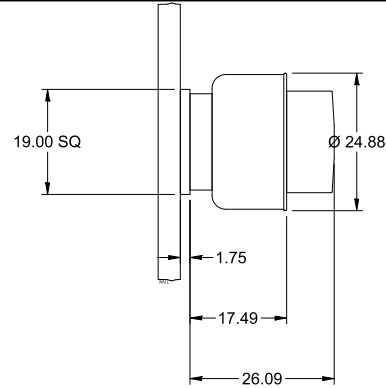
AMCA Licensed for Sound and Air Performance and FEI ratings. Power rating (BHP/kW) does not include transmission losses.

Greenheck Fan Corporation certifies that the model shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA certified ratings seal applies to air, sound and FEI performance ratings only. Performance certified is for installation type B: Free inlet, Ducted outlet. Power rating (bhp) does not include transmission losses. The sound power level ratings are shown in decibels, referred to 10-12 watts, calculated per AMCA Standard 301. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet Lwi, LwiA and outlet Lwo, LwoA, installation type B: Free inlet, Ducted outlet. Ratings for inlet sound do not include the effects of duct end correction. Ratings for outlet sound include the effects of duct end correction. The AMCA Certified Ratings Seal for Sound applies to inlet LwiA ratings only. Radiated (casing) sound data is the sound generated through the fan housing when the fan is ducted on both the inlet and outlet (Installation type D). The AMCA licensed air and/or sound performance data has been modified for installation, appurtenances (accessories), etc. The modified performance is not AMCA licensed but is provided to aid in selection and applications of the product.

Model: CUE-099-A

Direct Drive Upblast Centrifugal Roof Exhaust Fan

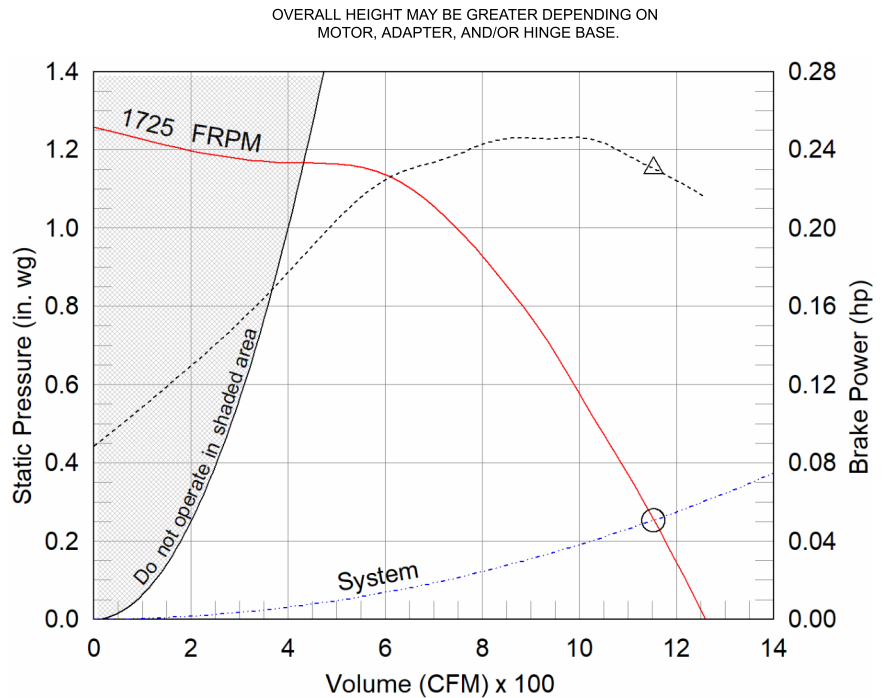
Dimensional	
Quantity	1
Weight w/o Acc's (lb)	54
Weight w/ Acc's (lb)	63
Max T Motor Frame Size	56
Standard Curb Cap Size (in.)	19 x 19
Wall Opening (in.)	15 x 15



Performance	
Requested Volume (CFM)	1,023
Actual Volume (CFM)	1,152
Total External SP (in. wg)	0.254
Fan RPM	1725
Operating Power (hp)	0.23
Elevation (ft)	489
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.074
Tip Speed (ft/min)	5,053
Static Eff. (%)	20

Misc Fan Data	
Fan Energy Index (FEI)	-
Outlet Velocity (ft/min)	900

Motor	
Motor Mounted	Yes
Size (hp)	1/4
Voltage/Cycle/Phase	115/60/1
Enclosure	EXP
Motor RPM	1725
Efficiency Rating	Standard
Windings	1
NEC FLA* (Amps)	5.8
Min. Circuit Ampacity (MCA)	7.25
Max. Overcurrent Protection (MOP)	15
Short Circuit Current Rtg (SCCR)	5 kA



- △ Operating Bhp point
- Operating point at Total External SP
- Fan curve
- - - System curve
- - - Brake horsepower curve

Static Pressure Calculations

External SP	0.2 in. wg
Direct Drive RPM Adjustment	0.054 in. wg
Total External SP	0.254 in. wg

Notes:

All dimensions shown are in units of in.
*NEC FLA, MCA and MOP are for reference only – based on tables 430.248 or 430.25 of National Electric Code 2020. Actual motor FLA may vary, for sizing thermal overload, consult factory. MCA and MOP values shown only account for the motor, not accessories (damper actuator, field supplied VFD, etc).
LwA - A weighted sound power level, based on ANSI S1.4 dBA - A weighted sound pressure level, based on 11.5 dB attenuation per Octave band at 5 ft - dBA levels are not licensed by AMCA International
Sones - calculated using ANSI/AMCA 301 at 5 ft

Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	73	72	79	75	69	70	66	54	77	66	13.3



Model: CUE-099-A

Direct Drive Upblast Centrifugal Roof Exhaust Fan

Standard Construction Features:

- Aluminum housing - Backward curved composite (sizes 60-95) or aluminum (sizes 99-300) wheel - Aluminum curb cap with prepunched mounting holes - Drain trough - Ball bearing motors (sizes 85-300 and all Vari Green), sleeve bearing motors (sizes 60-80) - Motor isolated on shock mounts - Corrosion resistant fasteners - Removable power pack - Tool-less hood entry

Spark B construction was selected.

Greenheck has included options and accessories for this product that meet the intent of AMCA 99 - spark resistant construction guidelines. Greenheck recommends, but does not require, an EXP motor for this product line. If an EXP motor is not selected, the engineer of record must determine if this is acceptable for the application. The resulting fan construction in no way implies a guarantee of safety for any level of spark resistance. Spark resistant construction does not prevent ignition of explosive gasses or vapors due to catastrophic failure or from any airstream material that may exist within a system.

Selected Options & Accessories:

Motor with Thermal Overload
Motor with Class B or Greater Insulation
Standard Curb Cap Size - 19 Square
Sidewall Mounting - Fan Configured for Wall-Mounted Applications
Wall Bracket will be Mounted to the Wall
Spark B Construction
UL/cUL 705 Listed - "Power Ventilators"
Switch, NEMA-7 and 9, Toggle, Shipped with Unit
Wall Bracket - Galvanized, Under Sized 0.5 in. (Shipped Loose) (PN 916647)
Fastener Material: Stainless
Aluminum Rub Ring
Composite Wheel Material
Conduit Chase Qty 1
Unit Warranty: 1 Yr (Standard)

Disconnect Switch

Enclosure Rating: NEMA-7 and 9

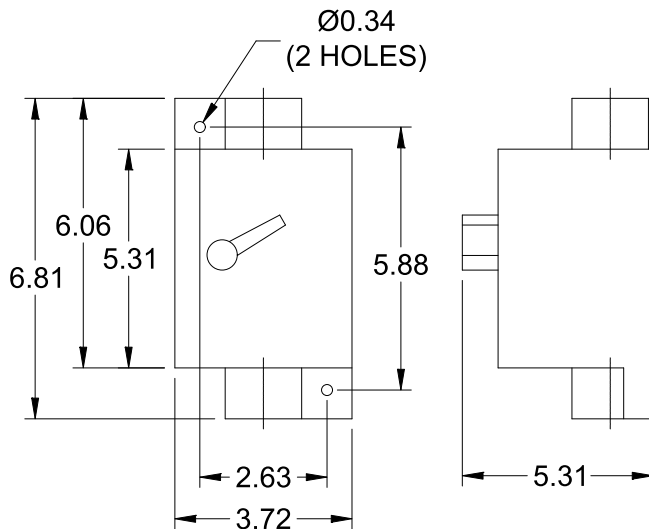
Standard Construction Features:

Enclosures are for indoor use in locations classified as Class I (flammable gases), Group A, B, C, or D and Class II (combustible dust), Group E, F, or G, as defined by the National Electrical Code. Enclosures shall be capable of preventing the entrance of dust and withstanding the pressure resulting from an internal explosion or specified gases. It shall contain such an explosion sufficiently so that an explosive gas-air mixture existing in the atmosphere surrounding the enclosure will not be ignited. Enclosed heat generating devices shall not cause external surfaces to reach temperatures capable of igniting or discoloring dust on the enclosure or igniting dust-air mixtures in the surrounding area. Enclosures shall meet designed tests for dust, explosion, hydrostatic, temperature, and aging gaskets. Enclosure is equipped with provision to lockout in the off position with customer supplied lock.

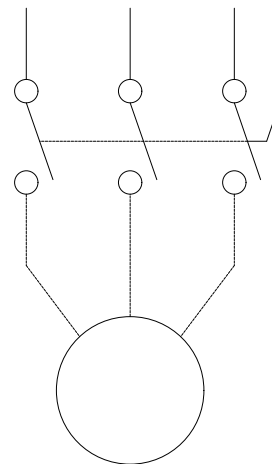
Disconnect Switch Configuration

Type:	Toggle	Motor Size:	1/4 hp	Voltage:	115	UL Listed:	Yes
Manufacturer:	Square D	Cycle:	60	Amperage:	30	CSA Approved:	Yes
Overload Protection:	None	Phase:	1	Switch Pole(s):	3	Rating:	15 hp
Junction Box Mtg.:	Ship With Unit	RPM:	1725	Exp. Resist. Wiring:	None		
Switch Mounting:	Shipped With Unit						

Electrical Drawing Details



Wiring Schematic



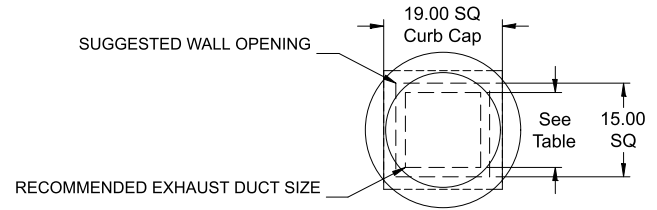
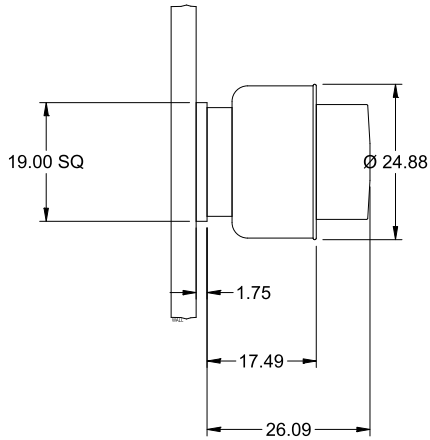
Notes: All dimensions shown are in units of in.

C:\Users\coburnmp\OneDrive - CDM Smith\Documents\CAPS\Jobs\Veolia Gum Springs.gfcj

Generated by: coburnmp@cdmsmith.com

Assembly Drawing

Type: Direct Drive Upblast Centrifugal Roof Exhaust Fan



DUCT TYPE	SIZE
STANDARD	12 SQ
FIRE-WRAPPED	8 SQ

DUCT DIMENSIONS ARE LARGEST POSSIBLE DUCT TO FIT THROUGH CURB.
CONSULT SYSTEM DESIGN ENGINEER FOR RECOMMENDED DUCT SIZE.

OVERALL HEIGHT MAY BE GREATER DEPENDING ON
MOTOR, ADAPTER, AND/OR HINGE BASE.

Notes: All dimensions shown are in units of in..

Warranty

1 Yr (Standard)

WARRANTY AND LIABILITY: SELLER warrants to Buyer that products manufactured are free from defects in material and workmanship for a period of 1 Yr (Standard) from the date of shipment. SELLER's obligations and liabilities under this warranty are limited to furnishing FOB factory or warehouse at SELLER's designated shipping point, freight allowed to Buyer's city, (or point of export for shipments outside the conterminous United States) replacement equipment (or at the option of SELLER parts therefore) for all Seller's products not conforming to this warranty and which have been returned to the manufacturer. No liability whatever shall attach to SELLER until said products have been paid for and such liability shall be strictly limited to the purchase price of the equipment shown to be defective. Motors are warranted by the motor manufacturer for a period of one year. Should motors furnished by SELLER prove defective during this period, they should be returned to the nearest authorized motor service station. SELLER will not be responsible for any removal or installation costs. Electrical components, excluding motors, are warranted only to the extent warranted by the original manufacturer. To the extent that SELLER is entitled to pass through a warranty of the original equipment manufacturer of the electrical goods sold, SELLER will pass through such warranties to Buyer. The legal remedies described in this Warranty are the sole exclusive remedy of Buyer. SELLER MAKES NO OTHER WARRANTY, EITHER EXPRESS OR IMPLIED, REGARDING ITS PRODUCTS, OR ITS SELECTION AND APPLICATION, INCLUDING, BUT NOT LIMITED TO, COMPLIANCE WITH BUILDING CODES, SAFETY CODES, LAWS, MERCHANTABILITY OR FITNESS OR A PARTICULAR PURPOSE. This warranty is extended solely to the Buyer. It is nontransferable and non-assignable, and the Buyer shall not permit or authorize its employees, agents, representatives or customers to claim, represent or imply that this limited warranty extends or is available to anyone other than the Buyer. ANY MISUSE, NEGLIGENCE, FAILURE TO FOLLOW INSTRUCTIONS OR MANUALS OF INSTALLATION OF MAINTENANCE REPAIR, SERVICE, RELOCATION OR ALTERATION TO OR OF, OR OTHER TAMPERING WITH, THE PRODUCTS PERFORMED BY ANY PERSON OR ENTITY OTHER THAN SELLER WITHOUT SELLER'S PRIOR WRITTEN APPROVAL OR ANY USE OF REPLACEMENT PARTS NOT SUPPLIED BY SELLER, SHALL IMMEDIATELY VOID AND CANCEL ALL WARRANTIES WITH RESPECT TO THE AFFECTED PRODUCTS. THE WARRANTY AND LIABILITY SET FORTH HEREIN ARE IN LIEU OF ALL OTHER WARRANTIES AND LIABILITIES WHETHER IN CONTRACT OR IN NEGLIGENCE, EXPRESSED OR IMPLIED, IN LAW OR IN FACT, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR USE. SELLER PROVIDES NO INDEPENDENT WARRANTY FOR THIRD PARTY PRODUCTS OR COMPONENTS SOLD TOGETHER OR INCORPORATED WITH SELLER'S PRODUCT(S). THE SELLER HAS THE RIGHT TO SETTLE ANY AND ALL DISPUTES REGARDING THE WARRANTY.

AMCA



AMCA Licensed for Sound and Air Performance. Power rating (BHP/kW) does not include transmission losses.

Greenheck Fan Corporation certifies that the model shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program. Performance certified is for installation type A: Free inlet, Free outlet. Power rating (BHP/kW) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per ANSI/AMCA Standard 301. Values shown are for installation type A: free inlet hemispherical sone levels. dBA levels are not licensed by AMCA International. The AMCA Certified Ratings Seal applies to sone ratings only.

WD-420 Backdraft Damper

APPLICATION & DESIGN

The WD-420 is an non-motorized backdraft dampers which can be mounted vertically for intake air. Backdraft dampers are designed to prevent reverse airflow.

DAMPER RATINGS

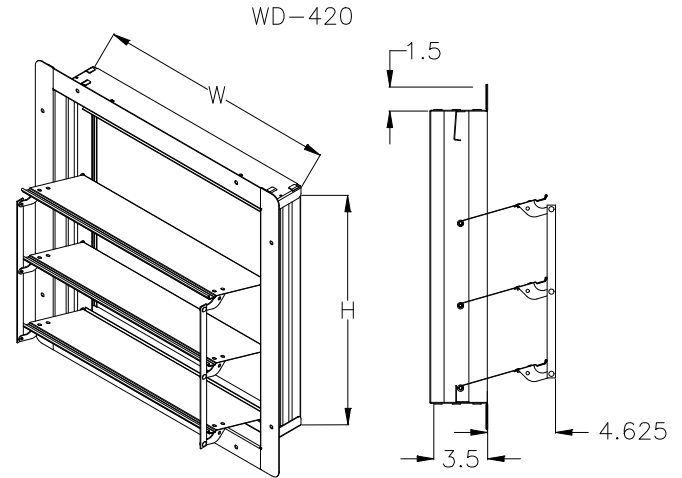
Max. Pressure: Up to 2 in. wg - pressure differential
Max. Velocity: Up to 2,500 ft/min
Temperature: 180 F

PRODUCT DETAILS

Frame: Galvanized
Frame Thickness: 18 ga
Blade: Aluminum
Blade Seal Material: Vinyl
Blade Thickness: 0.025 in.
Axle Material: Steel
Axle Bearings: Synthetic
Linkage Material: Galvanized
Sizing: Nominal

OPTIONS & ACCESSORIES

Clean Wrap: No
Union Label: No Preference



- This drawing shows a general damper configuration and is not intended to depict the exact configuration of all dampers in this submittal.
- Width and Height furnished approximately 0.250 in. under size.
- Installation instructions available at www.greenheck.com.
- Pressure drop data applies to units with minimum start open pressure. Higher start open pressure will result in different performance.

SUMMARY

ID #	TAG	QTY	W (in.)	H (in.)	SECTIONS WIDE	SECTIONS HIGH	SHIP SECTIONS
8-1	Upper Room Backdraft Damper	1	15.000	15.000	1	1	1

Fan and damper applications may involve the handling of potentially explosive or flammable particles, fumes, or vapors. Such applications require careful consideration of all system components to ensure the safe handling of such gas streams. In order to assist end users with the specification of spark resistant products, the Air Movement and Control Association International (AMCA) has developed standard 99-0401, *Classification for Spark Resistant Construction*. The purpose of this standard is to establish general construction guidelines for fans and dampers that are intended for use in spark resistant applications.

AMCA 99-0401 was initially developed as a reference for the specification of centrifugal utility blower models. However, over time, other fan types have appeared in specifications for use in spark resistant applications. As a result, many manufacturers have chosen to offer fans with levels of construction that meet the intent of AMCA 99-0401, despite the fact that these fans may not fully conform to the guidelines established by the standard. As of the release date of this bulletin, there is neither a physical label nor testing protocol for certifying the spark resistance level of a fan.

In order to meet the requirements of spark resistant applications, Greenheck offers several options and accessories including varying levels of aluminum construction, EXP motor enclosures, shaft seals and rub rings on most fan models. We have gone to great lengths to ensure our methods of construction and choice of alloys meet the intent of AMCA 99-0401. Ultimately, it is the customer who must choose the type of fan, materials and design because they are in the best position to understand the inherent risks given the limitations of the AMCA standard, the ambient location of the installation, the degree of protection required by the application they are selecting for and the maintenance requirements of the materials selected.

Please note that Greenheck takes exception to note #1 of the standard on fan models where the bearings, drive components or motor may be in contact with the airstream of the fan. **It is up to the discretion of the consulting engineer to approve of any such exceptions and make the final determination on which fan models are acceptable for spark resistant applications. It is also the responsibility of the consulting engineer to specify any options or accessories that are required to meet the intent of the desired level of spark resistant construction from AMCA 99-0401.** As the system designer, the consulting engineer, must advise the end user in assessing the risks and identifying the safest selection. Greenheck is not in a position to consult on what modifications are necessary to make an acceptably safe system for any specific application or environment. Especially where the hazards are extremely severe, end users need to add more detailed specifications and consult with an expert to mitigate the risk that an unsafe condition could arise.

For clarification or questions please refer to AMCA 99-0401 construction guidelines.

Model: SQ-20

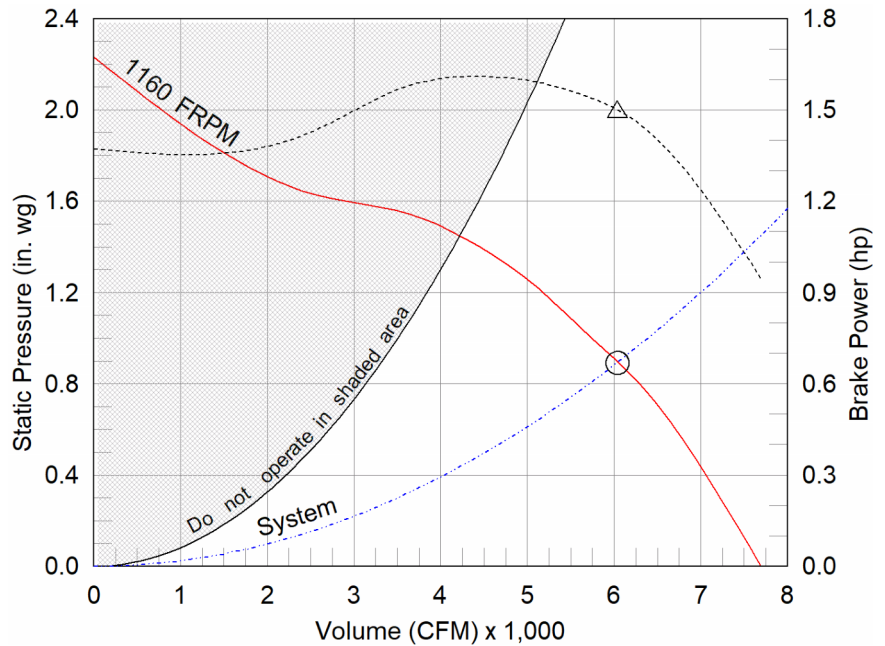
Direct Drive Mixed Flow Inline Fan

Dimensional	
Quantity	1
Weight w/o Acc's (lb)	238
Weight w/ Acc's (lb)	263
Max T Motor Frame Size	215
Optional Damper (in.)	29 x 29

Performance	
Requested Volume (CFM)	5,485
Actual Volume (CFM)	6,036
Total External SP (in. wg)	0.893
Fan RPM	1160
Operating Power (hp)	1.49
Elevation (ft)	489
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.074
Tip Speed (ft/min)	7,440
Static Eff. (%)	57

Misc Fan Data	
Fan Eff. Index (FEI)	1.45
Outlet Velocity (ft/min)	1,021

Motor	
Motor Mounted	Yes
Size (hp)	2
Voltage/Cycle/Phase	460/60/3
Enclosure	TEFC
Motor RPM	1160
Windings	1
Short Circuit Current Rtg (SCCR)	5 kA



- △ Operating Bhp point
- Operating point at Total External SP
- Fan curve
- - - System curve
- - - Brake horsepower curve

Static Pressure Calculations

External SP	0.737 in. wg
Direct Drive RPM Adjustment	0.156 in. wg
Total External SP	0.893 in. wg

Nameplate Model: SQ-20-M2-X

Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	70	78	75	74	72	72	69	64	78	67	15.0
Outlet	76	76	76	77	75	73	71	65	80	69	16.7
Radiated	79	74	69	63	62	56	54	53	67	56	8.4

Notes:

All dimensions shown are in units of in.
*Please consult factory for actual motor amp draw
LwA - A weighted sound power level, based on ANSI S1.4
dBA - A weighted sound pressure level, based on 11.5 dB
attenuation per Octave band at 5 ft - dBA levels are not
licensed by AMCA International
Sones - calculated using AMCA 301 at 5 ft



Model: SQ-20

Direct Drive Mixed Flow Inline Fan

Greenheck model SQ Mixed Flow meets or exceeds legacy centrifugal models SQ/BSQ in performance and features. SQ Mixed flow is an approved equal and can be considered a direct replacement for these models.

Standard Construction Features:

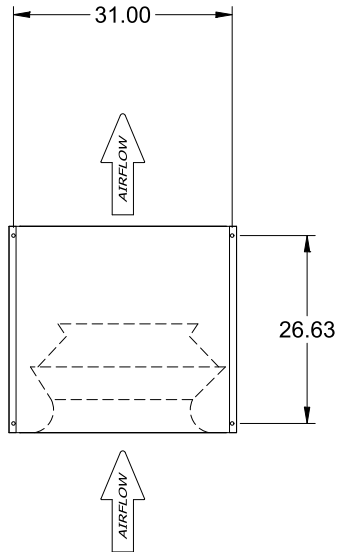
Galvanized steel housing – Mixed flow aluminum wheel – Two bolted access panels – Slip-in duct connection flange – Ball bearing motors – Corrosion resistant fasteners

Selected Options & Accessories:

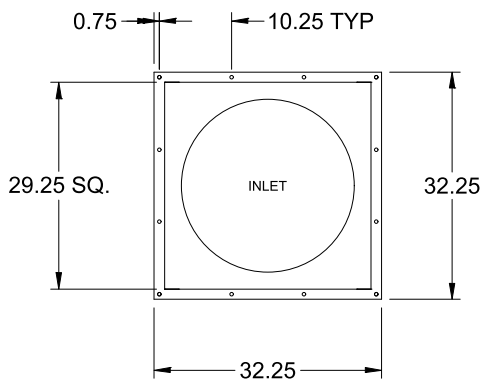
Motor with 1.15 or Greater Motor Service Factor
Motor with Class F or Greater Insulation
UL/cUL 705 Listed - "Power Ventilators"
Junction Box Mounted and Wired
Switch, NEMA-1, Toggle, Shipped Separate
Galvanized Housing
Aluminum Mixed Flow Wheel
Fan: Spring, Hanging, 1 Inch Isolator PN: 850344, Incl. 4 isolators and 4 brackets
Damper Shipped Loose, Inline, WD-330-PB-29X29, Gravity Operated, Not Coated
Unit Warranty: 1 Yr (Standard)

SQ-20

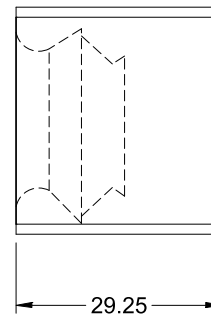
Direct Drive Mixed Flow Inline Fan



TOP VIEW



END VIEW



SIDE VIEW

Notes: All dimensions shown are in units of in.

Disconnect Switch

Enclosure Rating: NEMA-1

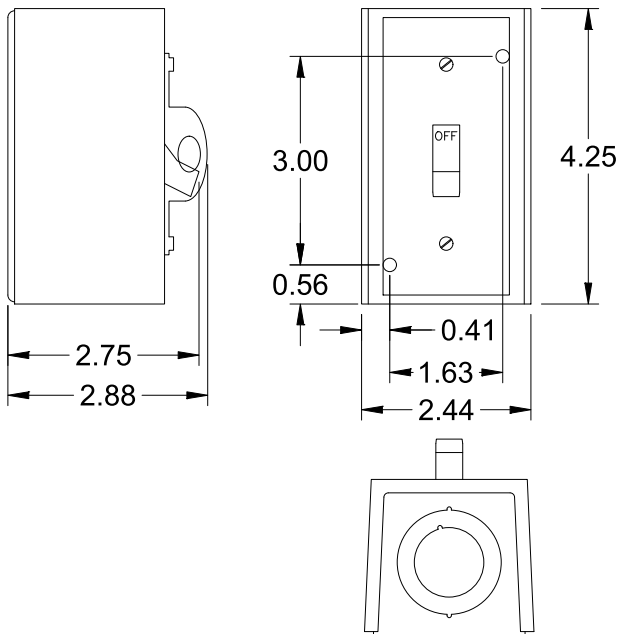
Standard Construction Features:

Enclosure constructed for indoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment and to provide a degree of protection against falling dust. This enclosure meets the rod entry and the indoor corrosion protection design tests. The rod entry test is intended to simulate incidental contact with enclosure equipment. Enclosure is equipped with provision to lockout in the off position with customer supplied lock.

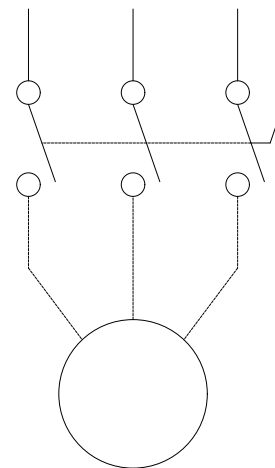
Disconnect Switch Configuration

Type:	Toggle	Motor Size:	2 hp	Voltage:	460	UL Listed:	Yes
Manufacturer:	Square D	Cycle:	60	Amperage:	30	CSA Approved:	Yes
Overload Protection:	None	Phase:	3	Switch Pole(s):	3	Rating:	10 hp
Junction Box Mtg.:	Ship Separate	RPM:	1160	Exp. Resist. Wiring:	None		
Switch Mounting:	Shipped Separate						

Electrical Drawing Details



Wiring Schematic



Notes: All dimensions shown are in units of in.

Fan Isolator

Type: Spring, Hanging, 1 Inch

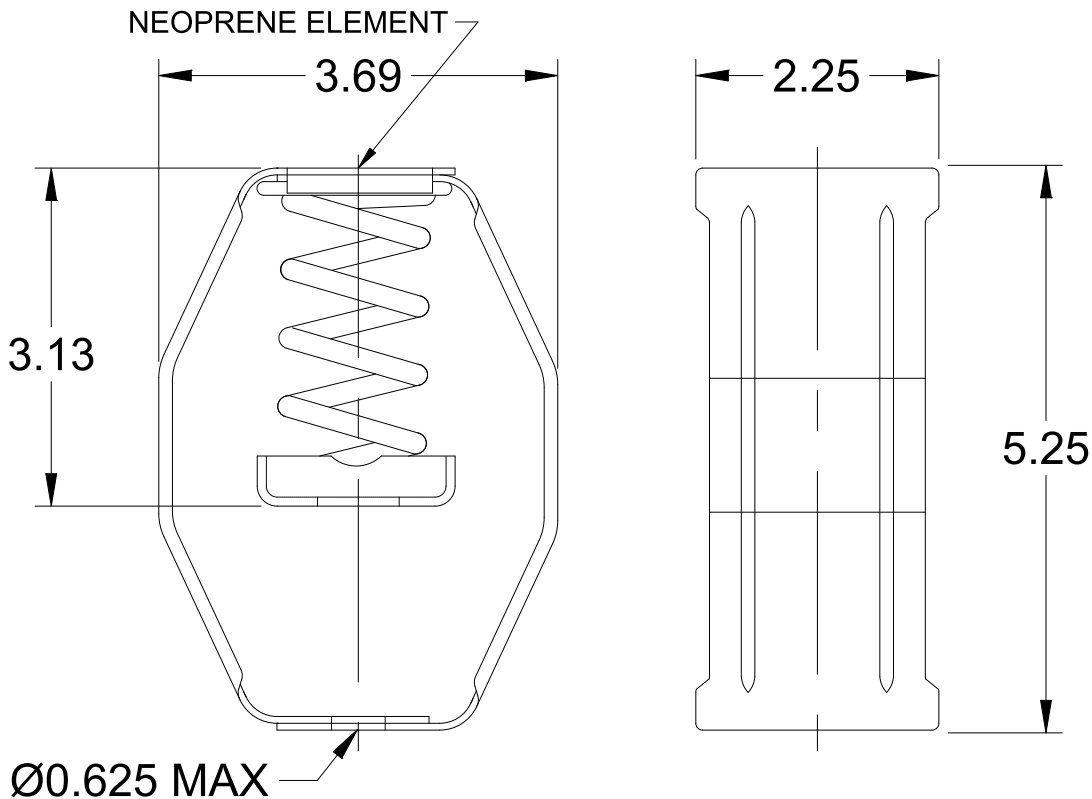
Standard Construction Features:

The spring hanging isolator is designed to reduce the transmission of vibration and noise produced by suspended equipment and piping. To assure stability, the spring element has a minimum lateral stiffness of 1.0 times the rated vertical stiffness. The hanger will allow a support rod misalignment through a 30 degree arc and the isolation brackets will carry a 500% overload without failure. The isolator has an epoxy powder coated bracket and spring coil which is color coded according to the load capacity and has a noise isolation pad, all which is assembled into a stamped or welded hanger bracket. This part number includes 4 isolators.

Isolator Configuration

Description:	SH-1-70	Color:	Green
Manufacturer:	Kinetics Noise Control	Mounting:	Hanging
Load Capacity:	70 lb	Kit Part Number:	850344
Deflection at Full Load:	1.36	Selection Deflection (in.):	1.16

Spring, Hanging, 1 Inch Deflection - Vibration Isolator



Notes: All dimensions shown are in units of in.

Warranty

1 Yr (Standard)

WARRANTY AND LIABILITY: SELLER warrants to Buyer that products manufactured are free from defects in material and workmanship for a period of 1 Yr (Standard) from the date of shipment. SELLER's obligations and liabilities under this warranty are limited to furnishing FOB factory or warehouse at SELLER's designated shipping point, freight allowed to Buyer's city, (or point of export for shipments outside the conterminous United States) replacement equipment (or at the option of SELLER parts therefore) for all Seller's products not conforming to this warranty and which have been returned to the manufacturer. No liability whatever shall attach to SELLER until said products have been paid for and such liability shall be strictly limited to the purchase price of the equipment shown to be defective. Motors are warranted by the motor manufacturer for a period of one year. Should motors furnished by SELLER prove defective during this period, they should be returned to the nearest authorized motor service station. SELLER will not be responsible for any removal or installation costs. Electrical components, excluding motors, are warranted only to the extent warranted by the original manufacturer. To the extent that SELLER is entitled to pass through a warranty of the original equipment manufacturer of the electrical goods sold, SELLER will pass through such warranties to Buyer. The legal remedies described in this Warranty are the sole exclusive remedy of Buyer. SELLER MAKES NO OTHER WARRANTY, EITHER EXPRESS OR IMPLIED, REGARDING ITS PRODUCTS, OR ITS SELECTION AND APPLICATION, INCLUDING, BUT NOT LIMITED TO, COMPLIANCE WITH BUILDING CODES, SAFETY CODES, LAWS, MERCHANTABILITY OR FITNESS OR A PARTICULAR PURPOSE. This warranty is extended solely to the Buyer. It is nontransferable and non-assignable, and the Buyer shall not permit or authorize its employees, agents, representatives or customers to claim, represent or imply that this limited warranty extends or is available to anyone other than the Buyer. ANY MISUSE, NEGLIGENCE, FAILURE TO FOLLOW INSTRUCTIONS OR MANUALS OF INSTALLATION OF MAINTENANCE REPAIR, SERVICE, RELOCATION OR ALTERATION TO OR OF, OR OTHER TAMPERING WITH, THE PRODUCTS PERFORMED BY ANY PERSON OR ENTITY OTHER THAN SELLER WITHOUT SELLER'S PRIOR WRITTEN APPROVAL OR ANY USE OF REPLACEMENT PARTS NOT SUPPLIED BY SELLER, SHALL IMMEDIATELY VOID AND CANCEL ALL WARRANTIES WITH RESPECT TO THE AFFECTED PRODUCTS. THE WARRANTY AND LIABILITY SET FORTH HEREIN ARE IN LIEU OF ALL OTHER WARRANTIES AND LIABILITIES WHETHER IN CONTRACT OR IN NEGLIGENCE, EXPRESSED OR IMPLIED, IN LAW OR IN FACT, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR USE. SELLER PROVIDES NO INDEPENDENT WARRANTY FOR THIRD PARTY PRODUCTS OR COMPONENTS SOLD TOGETHER OR INCORPORATED WITH SELLER'S PRODUCT(S). THE SELLER HAS THE RIGHT TO SETTLE ANY AND ALL DISPUTES REGARDING THE WARRANTY.

AMCA



AMCA Licensed for Sound and Air Performance and FEI ratings. Power rating (BHP/kW) does not include transmission losses.

Greenheck Fan Corporation certifies that the model shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA certified ratings seal applies to air, sound and FEI performance ratings only. Performance certified is for installation type B: Free inlet, Ducted outlet. Power rating (bhp) does not include transmission losses. The sound power level ratings are shown in decibels, referred to 10-12 watts, calculated per AMCA Standard 301. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet Lwi, LwiA and outlet Lwo, LwoA, installation type B: Free inlet, Ducted outlet. Ratings for inlet sound do not include the effects of duct end correction. Ratings for outlet sound include the effects of duct end correction. The AMCA Certified Ratings Seal for Sound applies to inlet LwiA ratings only. Radiated (casing) sound data is the sound generated through the fan housing when the fan is ducted on both the inlet and outlet (Installation type D). The AMCA licensed air and/or sound performance data has been modified for installation, appurtenances (accessories), etc. The modified performance is not AMCA licensed but is provided to aid in selection and applications of the product.

Model: EAD-635-36x36

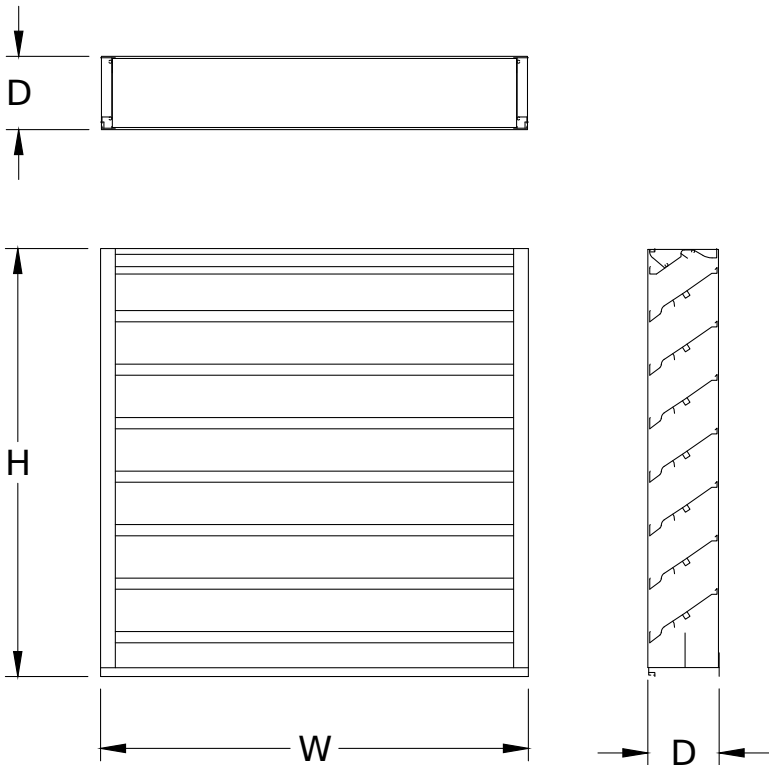
6 in. Adjustable, Drainable Blade Louver

Certifications/special requirements: AMCA-500-L (Air), AMCA-500-L (Water)

Construction	
Material	Aluminum
Blade Type	All
Blade Orientation	Horizontal
Weight (lbs)	37

Dimensional	
Nominal Width (in)	36
Nominal Height (in)	36
Actual Width (in)	35.75
Actual Height (in)	35.75
Blade Depth (in)	6
Sections Wide	1
Sections High	1

Performance	
Application	Intake
Volume (CFM)	2,935
Pressure Drop (in. wg)	0.04
Free Area Velocity (ft/min)	614
Free Area (ft^2)	4.8
Air Density (lbs/ft^3)	0.075



*Louvers are tested to figure 5.5-6.5

*Sections wide x high are as configured with a base mill finish channel frame product and may vary depending on options selected.



Greenheck Fan Corporation certifies that the louver shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to air performance and water penetration ratings.



Model: EAD-635-30x20

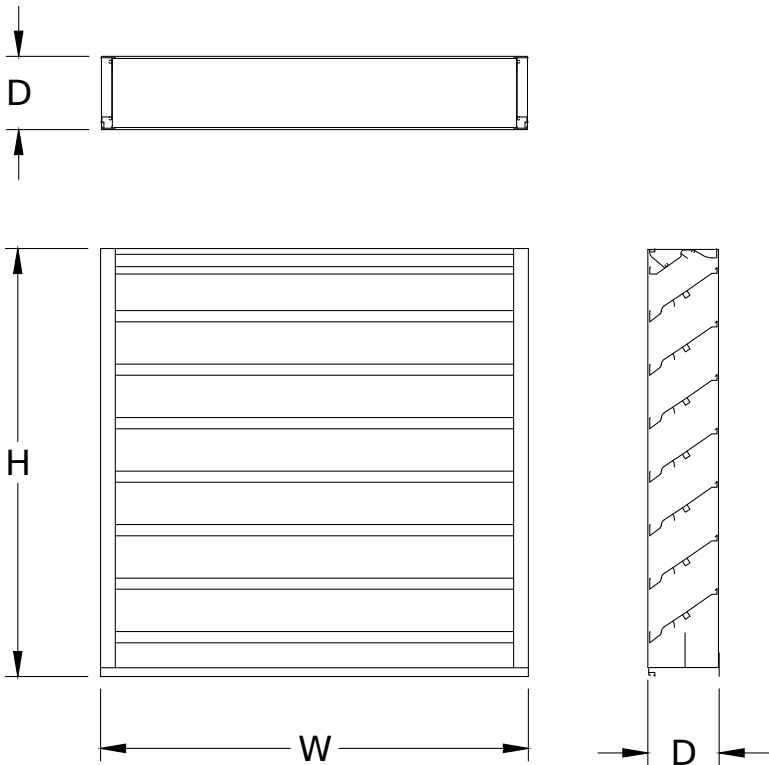
6 in. Adjustable, Drainable Blade Louver

Certifications/special requirements: AMCA-500-L (Air), AMCA-500-L (Water)

Construction	
Material	Aluminum
Blade Type	All
Blade Orientation	Horizontal
Weight (lbs)	17

Dimensional	
Nominal Width (in)	30
Nominal Height (in)	20
Actual Width (in)	29.75
Actual Height (in)	19.75
Blade Depth (in)	6
Sections Wide	1
Sections High	1

Performance	
Application	Intake
Volume (CFM)	1,152
Pressure Drop (in. wg)	0.05
Free Area Velocity (ft/min)	640
Free Area (ft^2)	1.8
Air Density (lbs/ft^3)	0.075



*Louvers are tested to figure 5.5-6.5

*Sections wide x high are as configured with a base mill finish channel frame product and may vary depending on options selected.



Greenheck Fan Corporation certifies that the louver shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to air performance and water penetration ratings.



Model: EAD-635-54x24

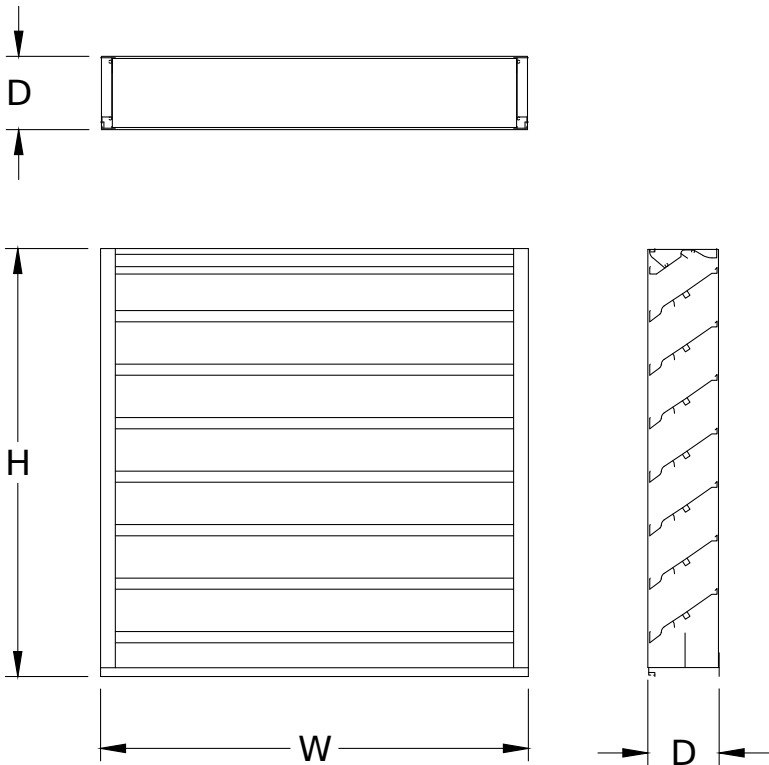
6 in. Adjustable, Drainable Blade Louver

Certifications/special requirements: AMCA-500-L (Air), AMCA-500-L (Water)

Construction	
Material	Aluminum
Blade Type	All
Blade Orientation	Horizontal
Weight (lbs)	37

Dimensional	
Nominal Width (in)	54
Nominal Height (in)	24
Actual Width (in)	53.75
Actual Height (in)	23.75
Blade Depth (in)	6
Sections Wide	1
Sections High	1

Performance	
Application	Intake
Volume (CFM)	2,799
Pressure Drop (in. wg)	0.05
Free Area Velocity (ft/min)	626
Free Area (ft^2)	4.5
Air Density (lbs/ft^3)	0.075



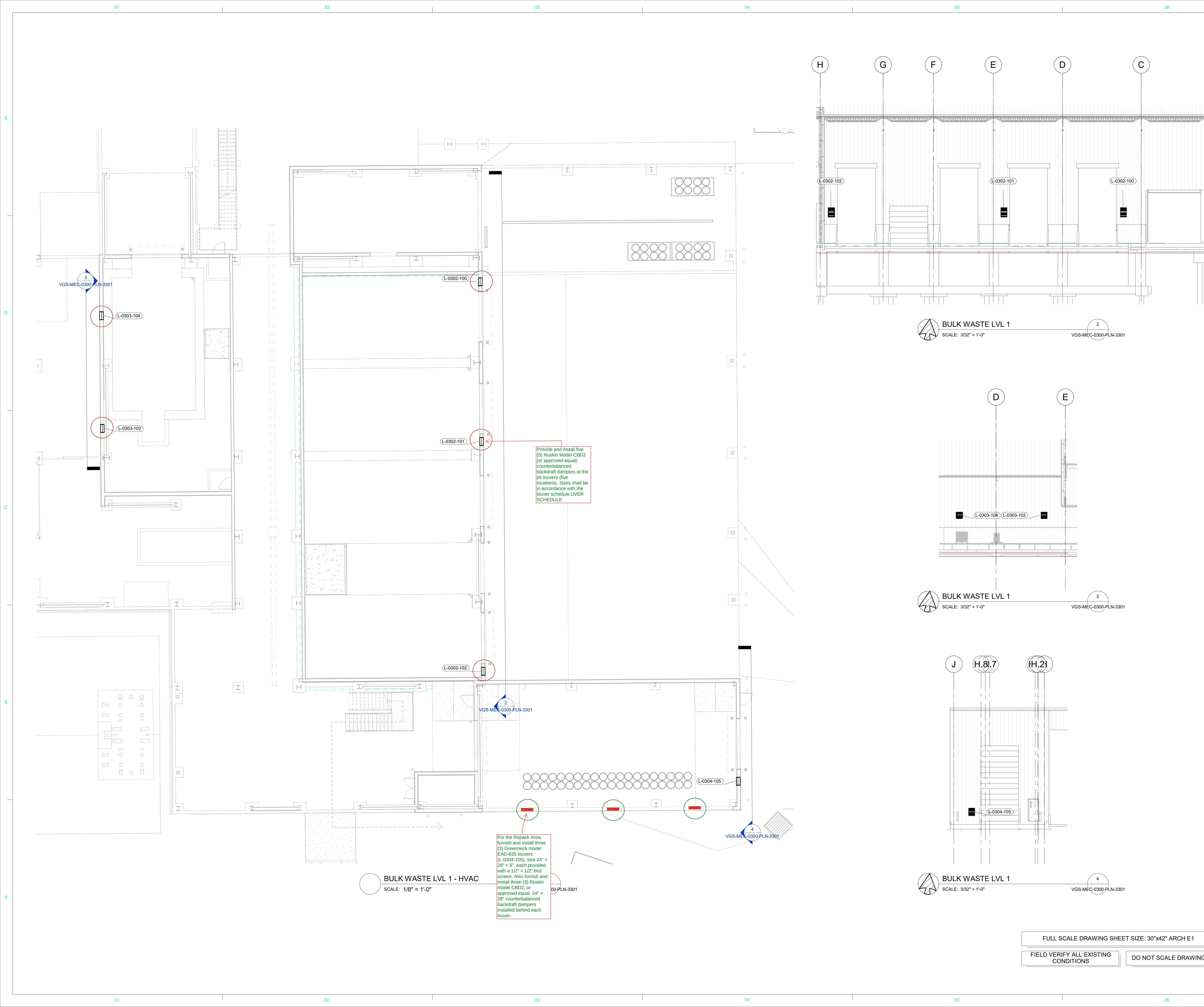
*Louvers are tested to figure 5.5-6.5

*Sections wide x high are as configured with a base mill finish channel frame product and may vary depending on options selected.



Greenheck Fan Corporation certifies that the louver shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to air performance and water penetration ratings.





THESE DRAWINGS WERE CONTROLLED
BY HARGROVE AND OWNED BY VEOLIA
FOR ALL ISSUANCES PRIOR TO 3/12/21

STAMP

REV	DESCRIPTION	BY	DATE
0	ISSUED FOR CONSTRUCTION	RSCH	6/26/2023

DENHAM BLYTHE
design/build
Lexington KY 859.255.7405
Nashville TN 615.855.2244
Louisville KY 270.791.1105
Greenville SC 864.485.6992

SPECIALTY SERVICES
Lexington KY 859.255.7405

THERMALTECH ENGINEERING
FACILITY AND UTILITY SYSTEMS
ANALYSIS/DESIGN/CONSTRUCTION
513-561-2271 WWW.THERMALTECH.COM

CLIENT: VEOLIA
PROJECT: HAZARDOUS WASTE INCINERATOR PROJECT

VEOLIA
811 HASLEY ROAD, ARKADELPHIA, AR 71923

TITLE: PLAN
BULK WASTE LVL 1
HVAC

VGS DRAWING NO. VGS-MEC-0300-PLN-3301
REV. SIZE
0 E

FULL SCALE DRAWING SHEET SIZE: 30"x42" ARCH E1
FIELD VERIFY ALL EXISTING CONDITIONS
DO NOT SCALE DRAWINGS

Louver Schedule

Equipment Specification **VGS-MEC-0300-LST-3236**

For

Veolia North America or designated Affiliate

VGS New Hazardous Waste Incinerator

Gum Springs, Arkansas

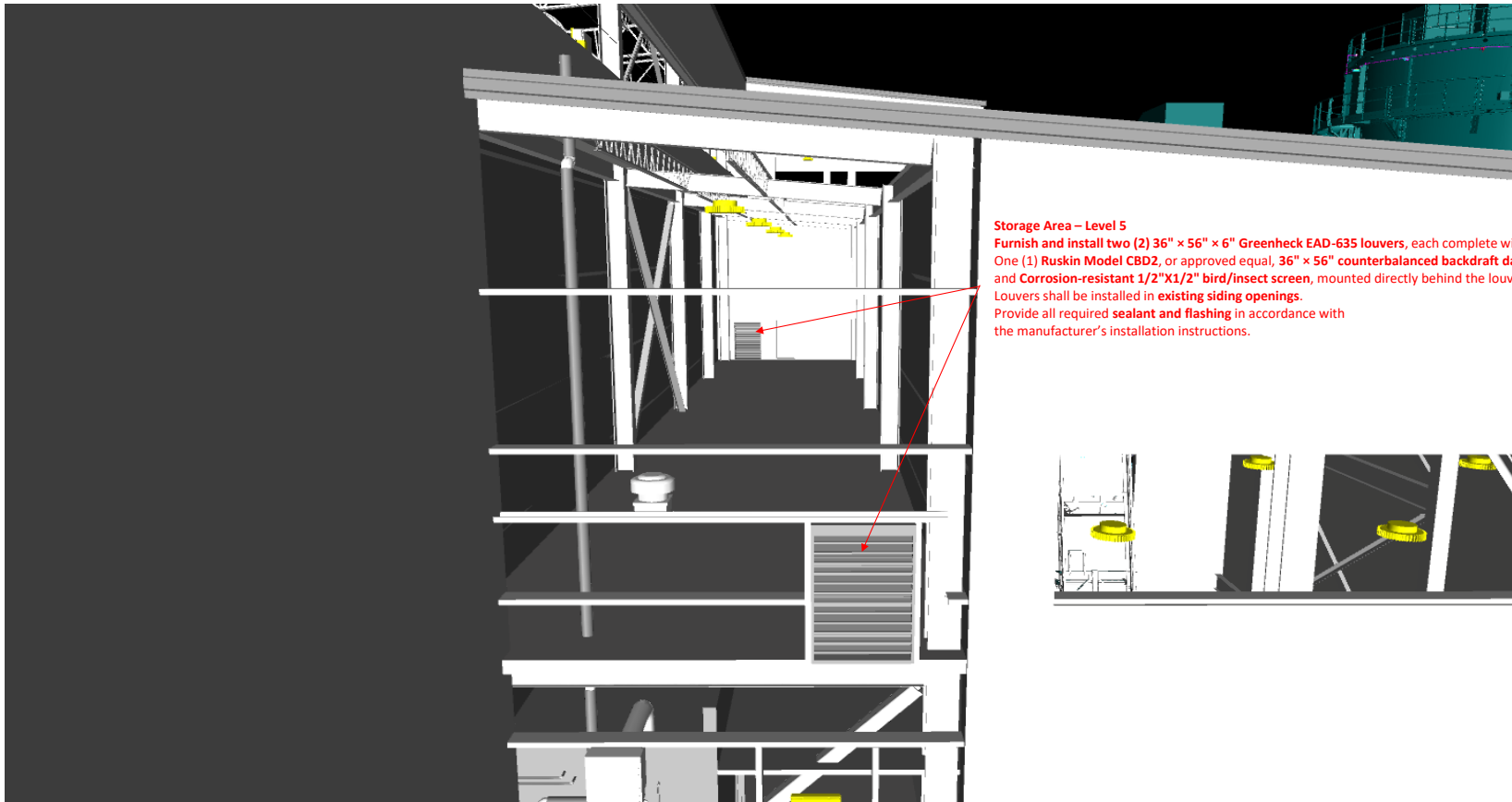
USA

Revision	Date	Description	By	Approved
0	2023-06-27	Issued for Construction	RSCH	RAC



VGS Bulk Waste Building Louver Schedule	
Veolia Document Number	VGS-MEC-0300-LST-3236
Project Title	VEOLIA HazMat Incinerator
Project Number	13004.330
Location	Gum Springs, AR
Project Manager	Rod Crousey
Assigned Technical Engineer	Ryan Schroer

DESIGNATION	TYPE	MOUNTING	FACE	DESIGN FLOW, CFM	PANEL SIZE, INCHES			GROSS AREA, SF	MIN FREE AREA, %	ACTUAL FREE AREA VEL, FPM	RECOMM MAX VEL, FPM [1][2]	ESTIM DP AT DESIGN FLOW, IN. WG. [3]	FINISH	NOTES (SEE BELOW)																REFERENCE PRODUCT			
					W	H	D							A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P			Q	R
L-0302-100	INLET	SURFACE	LOUVER	2,791	24	36	6	6.0	52%	898	1,000	0.12	MILL	X			X		X		X					X	X					GREENHECK EAD-635	
L-0302-101	INLET	SURFACE	LOUVER	2,791	24	36	6	6.0	52%	898	1,000	0.12	MILL	X			X		X		X					X	X					GREENHECK EAD-635	
L-0302-102	INLET	SURFACE	LOUVER	2,791	24	36	6	6.0	52%	898	1,000	0.12	MILL	X			X		X		X					X	X					GREENHECK EAD-635	
L-0303-103	INLET	SURFACE	LOUVER	1,716	24	24	6	4.0	47%	907	1,000	0.12	MILL	X			X		X		X					X	X					GREENHECK EAD-635	
L-0303-104	INLET	SURFACE	LOUVER	1,716	24	24	6	4.0	47%	907	1,000	0.12	MILL	X			X		X		X					X	X					GREENHECK EAD-635	
L-0304-105	INLET	SURFACE	LOUVER	2,172	24	28	6	4.7	50%	933	1,000	0.13	MILL	X			X		X		X					X	X					GREENHECK EAD-635	
GENERAL NOTES:														NOTES:																			
[1] TO LIMIT WATER ENTRAINMENT TO LESS THAN 0.01 OZ/SF FOR INLET LOUVERS														A BLADES TO BE PARALLEL TO FLOOR																			
[2] TO LIMIT PRESSURE DROP TO A REASONABLE VALUE FOR EXHAUST LOUVERS														B BLADES TO BE PERPENDICULAR TO FLOOR																			
[3] DOES NOT INCLUDE PRESSURE DROP OF BIRD OR INSECT SCREENS														C ALUMINUM CONSTRUCTION																			
														D STEEL CONSTRUCTION																			
														E HEAVY DUTY CONSTRUCTION (RUSKIN "H" SUFFIX)																			
														F DRAINABLE BLADES																			
														G DOUBLE DRAINABLE BLADES																			
														H BIRD SCREEN																			
														I INSECT SCREEN																			
														J INTEGRAL AIR FLOW MEASURING PORTS																			
														K PROVIDE RUSKIN OR EQUAL CBD2 COUNTERBALANCED BACKDRAFT DAMPER BEHIND LOUVER IN SHEETMETAL PLENUM SAME SIZE AS LOUVER FACE AREA																			
														L PROVIDE 1 FOOT DEEP SHEETMETAL PLENUM BEHIND LOUVER SAME SIZE AS LOUVER FACE AREA																			
														M ADJUSTABLE OPERABLE LOUVERS																			
														N EQUAL BY AMERICAN WARMING, AERO, LOUVERS&DAMPERS OR SUBSTITUTIONS PER PROVISIONS OF THE SPECIFICATIONS																			



Storage Area – Level 5

Furnish and install two (2) 36" x 56" x 6" Greenheck EAD-635 louvers, each complete with:
One (1) Ruskin Model CBD2, or approved equal, 36" x 56" counterbalanced backdraft damper,
and Corrosion-resistant 1/2"x1/2" bird/insect screen, mounted directly behind the louver frame.
Louvers shall be installed in existing siding openings.
Provide all required sealant and flashing in accordance with the manufacturer's installation instructions.

