

DHDC 23-8239

APPROVAL DOCUMENT – POST AT WORK LOCATION

CITY OF DETROIT
HISTORIC DISTRICT COMMISSION

2 WOODWARD, SUITE 808
DETROIT, MICHIGAN 48226

3/14/23

CERTIFICATE OF APPROPRIATENESS

Tom Maliszewski III
WCI Contractors, Inc.
20210 Conner St.
Detroit, MI 48234

RE: Application Number 23-8239; 2200 East Atwater (2600) St.; Aretha Franklin Amphitheater/ Chene Park Historic District

Dear Applicant,

At the Regular Meeting that was held on March 8, 2023, the Detroit Historic District Commission (“DHDC”) reviewed the above-referenced application. Pursuant to Section 5(1) of the Michigan Local Historic District Act, as amended, being MCL 399.205 (1) and Sections 21-2-73/21-2-78 of the 2019 Detroit City Code; the DHDC hereby issues a Certificate of Appropriateness (“COA”) for the following work, effective on March 14, 2023, as it meets the Secretary of Interior’s Standards for Rehabilitation and the district’s Elements of Design:

- ***Replace four (4) ribbons of steel-framed office windows with aluminum-framed windows in the Guest Services/Administrative Building as indicated in the attached drawings and details.***
- ***Install exhaust vent/louver at the west elevation wall per the attached drawings, specifications, and details.***
- ***Repaint exterior of building, light grey, per attached specifications and details.***

The Certificate of Appropriateness is issued with the following condition:

- ***All window trim shall be painted to match existing trim, deep lagoon (blue) color.***

Please retain this COA for your files and post it at the subject property until work is complete. It is important to note that approval by the DHDC does not waive the applicant's responsibility to comply with any other applicable ordinances or statutes. If you have any questions regarding the foregoing, please contact staff at 313-224-1762 or hdc@detroitmi.gov.

For the Commission:



Daniel Rieden
Staff
Detroit Historic District Commission

WCI

Contractors, Inc.

General Contractors
Site Development

20210 Conner
Detroit, MI 48234

Phone: (313) 368-2100
Fax: (313) 368-8986

February 6, 2023

City of Detroit – Planning & Development Department
2 Woodward Ave, Suite 808
Detroit, MI 48226

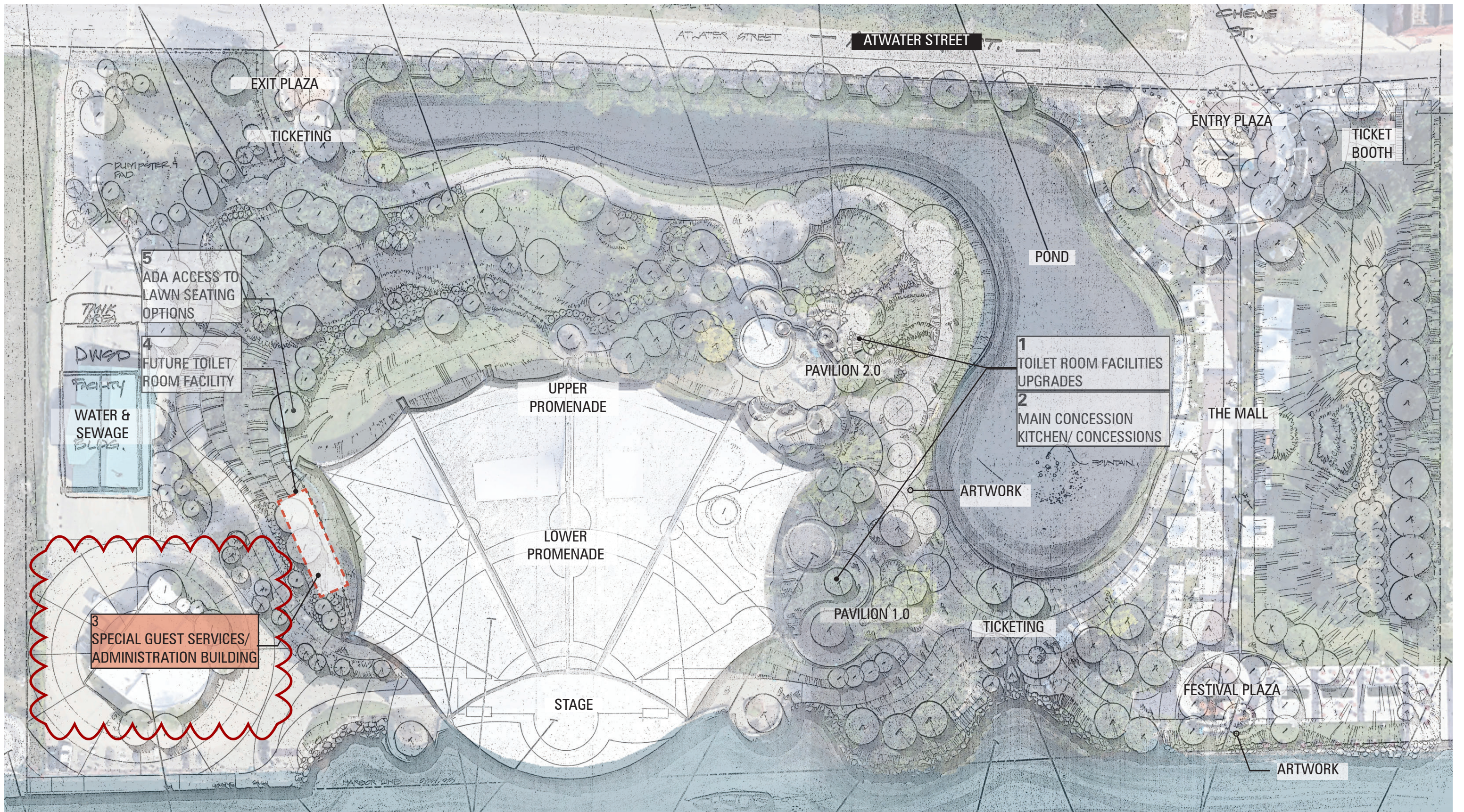
RE: Aretha Franklin Amphitheater – Guest Services / Administration Building Exterior Improvements

WCI Contractors is under contract by the City of Detroit to perform various Capital Improvements at The Aretha Franklin Amphitheater. We are currently working at the facility on various site repairs and improvements, previously submitted and approved under COA 20-6820, approved on August 29, 2020 and expanded in scope on October 15, 2020.

This submission request is for additional work items added to the Guest Services / Administration building. The scope includes the following:

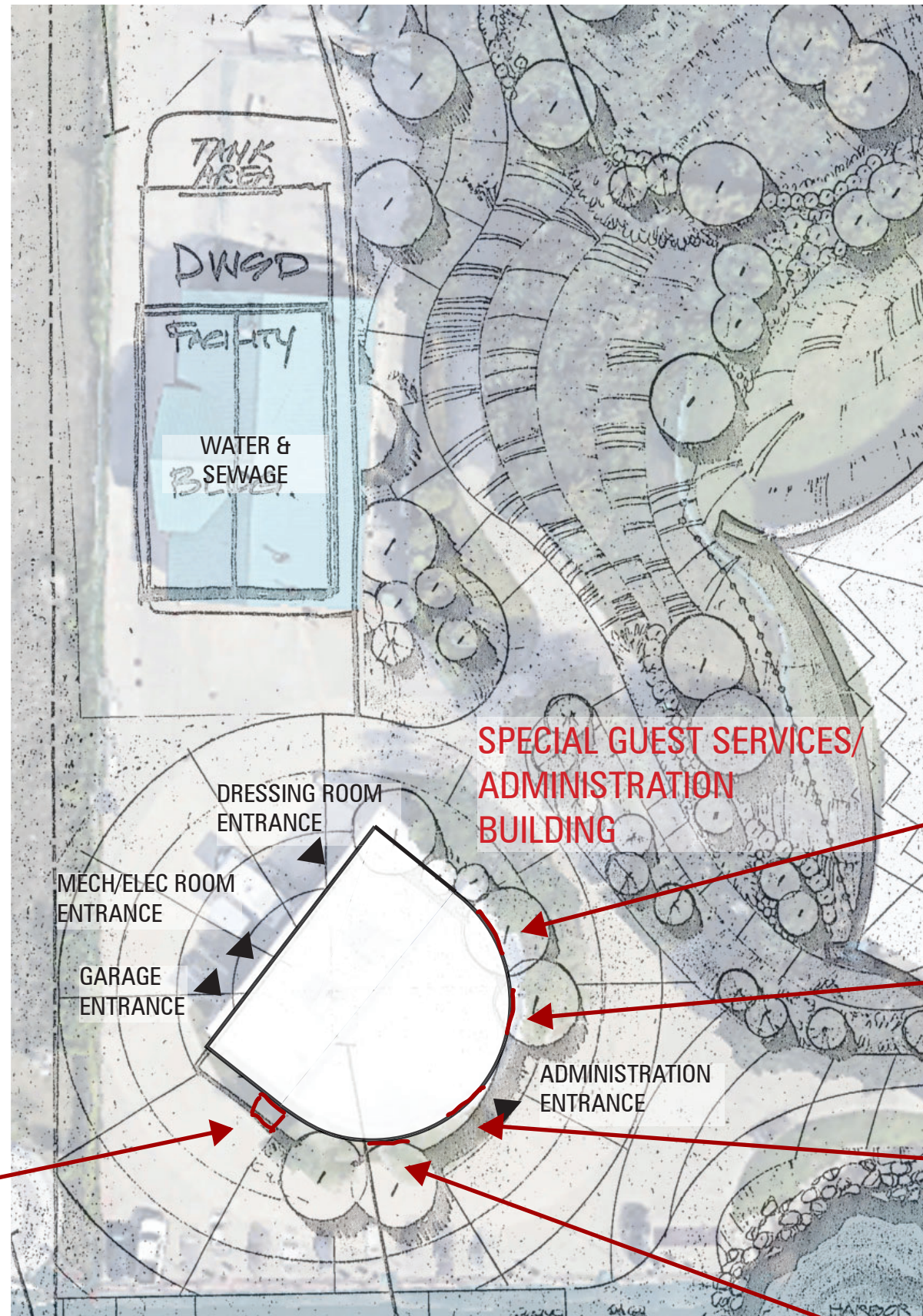
1. Repaint exterior of the building to match the existing gray color.
2. Replace the four (4) Fixed Steel Framed office windows with Aluminum framed windows. The current windows are all fixed panes that do not open. The proposed windows will have an opening center section to permit fresh air in the office area.
3. Improve room ventilation in the Guest Services Food Warming Area by installing an exhaust fan that exhausts through the Western Exterior Wall. Exhaust louver to be elevated to below the roof line.

The windows that are being replaced due to observed corrosion of the hollow metal steel frames and for the benefit of being able to open. The existing windows have a painted steel frame the matches the Deep Lagoon color found throughout the site. The proposed windows will be clear anodized aluminum frames to reduce maintenance requirements of a painted finish.



COMPOSITE SITE PLAN

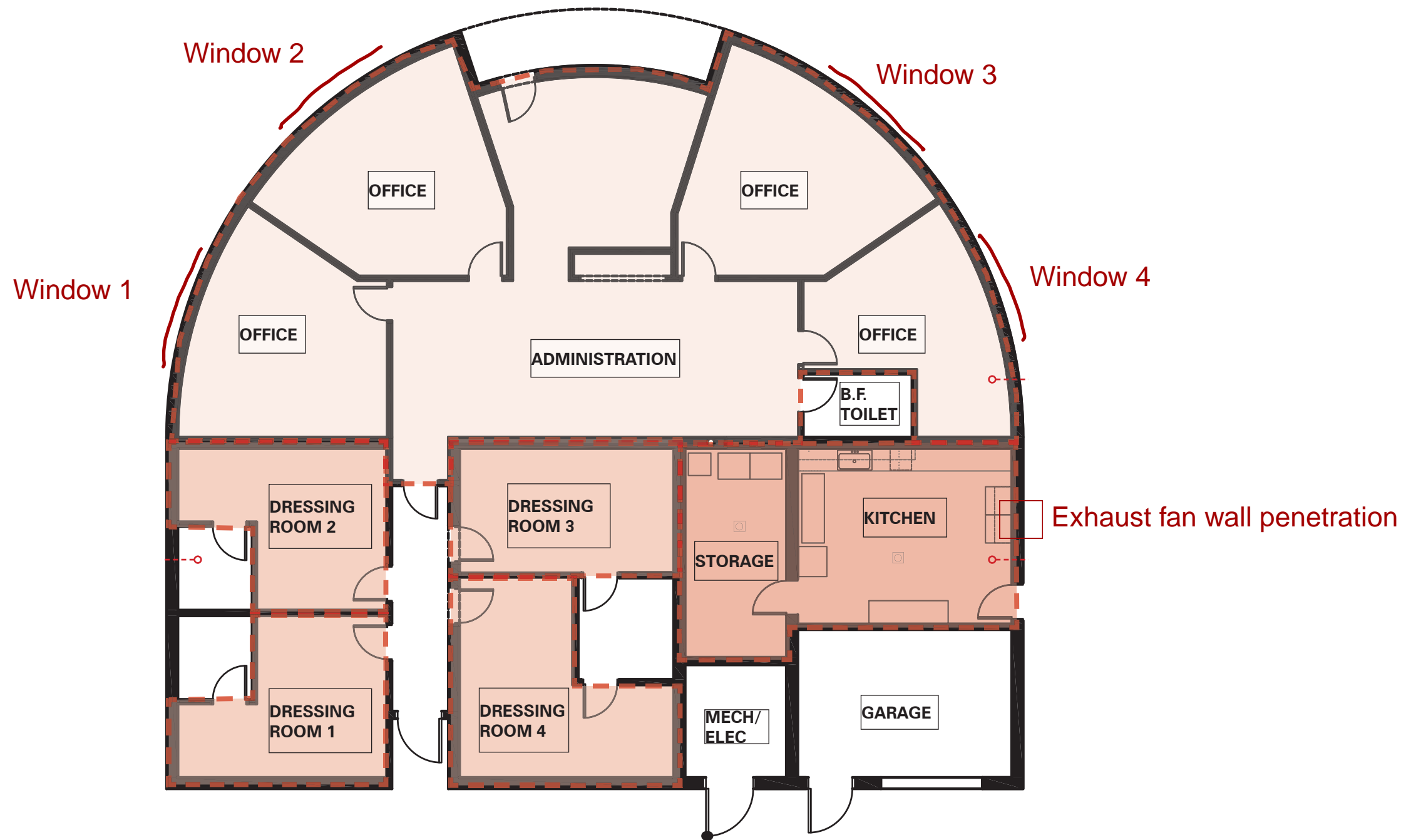




SPECIAL GUEST SERVICES/ ADMINISTRATION BUILDING SITE PLAN



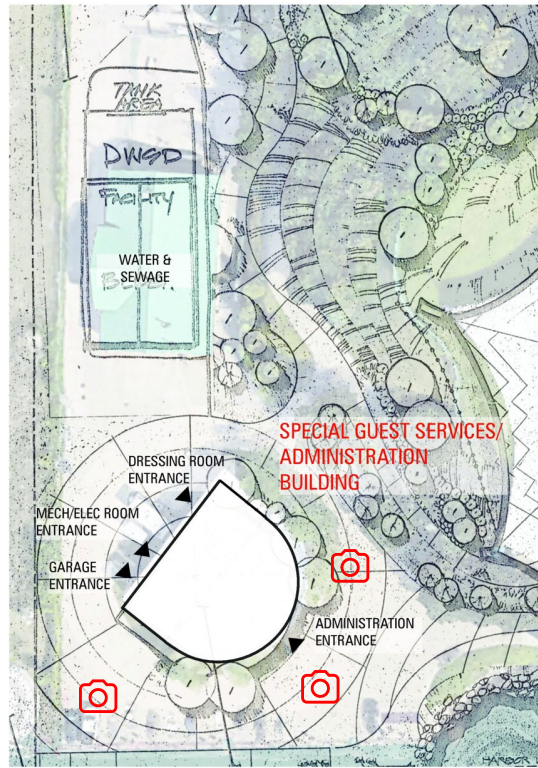
Window 4
NORTH



OVERALL PLAN_EXISTING CONDITIONS

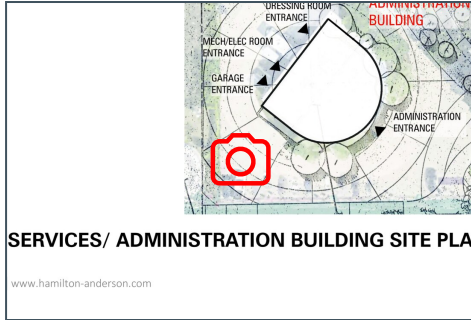
FLOOR PLAN 3/32" = 1'-0"





SPECIAL GUEST SERVICES/ ADMINISTRATION BUILDING SITE PLAN





Created:
 mgmt@wcicontractorsinc.com
 Feb 6, 2023 11:15 AM

Last Updated:
 mgmt@wcicontractorsinc.com
 Feb 6, 2023 11:21 AM

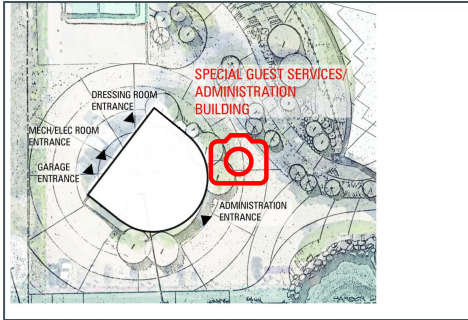
Approximate
Exhaust Location



IMG_2523
Taken on:
 Oct 20, 2022 10:08 AM
Added on:
 Feb 6, 2023 11:16 AM
Added by:
 Thomas Maliszewski III



IMG_2522
Taken on:
 Oct 20, 2022 10:08 AM
Added on:
 Feb 6, 2023 11:16 AM
Added by:
 Thomas Maliszewski III



Created:
mgmt@wcicontractorsinc.com
Feb 6, 2023 11:17 AM

Last Updated:
mgmt@wcicontractorsinc.com
Feb 6, 2023 11:21 AM



IMG_2533

Taken on:
Oct 20, 2022 10:09 AM
Added on:
Feb 6, 2023 11:18 AM
Added by:
Thomas Maliszewski III



IMG_2532

Taken on:
Oct 20, 2022 10:09 AM
Added on:
Feb 6, 2023 11:18 AM
Added by:
Thomas Maliszewski III

Aretha Franklin Captial Improvements

2600 Atwater Street, Detroit, Michigan

W C I
Contractors
Inc.



IMG_2530

Taken on:

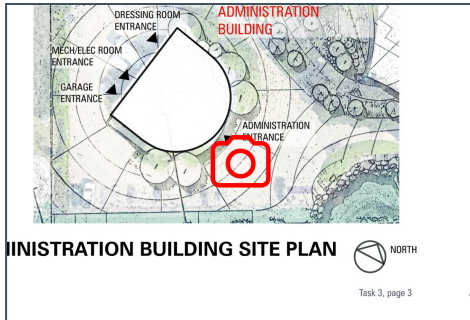
Oct 20, 2022 10:09 AM

Added on:

Feb 6, 2023 11:18 AM

Added by:

Thomas Maliszewski III



Created:

mgmt@wcicontractorsinc.com

Feb 6, 2023 11:16 AM

Last Updated:

mgmt@wcicontractorsinc.com

Feb 6, 2023 11:21 AM



IMG_2527

Taken on:
Oct 20, 2022 10:09 AM

Added on:
Feb 6, 2023 11:17 AM

Added by:
Thomas Maliszewski III



IMG_2526

Taken on:
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Added on:
Feb 6, 2023 11:17 AM

Added by:
Thomas Maliszewski III

Aretha Franklin Captial Improvements

2600 Atwater Street, Detroit, Michigan

W C I
Contractors
Inc.



IMG_2525

Taken on:

Oct 20, 2022 10:09 AM

Added on:

Feb 6, 2023 11:17 AM

Added by:

Thomas Maliszewski III

ARETHA FRANKLIN ADMIN

2600 ATWATER ST. DETROIT, MI 48207

SHOP DRAWING PACKAGE

PREFERRED
GLASS INC.

6215 KING RD.
MARINE CITY, MICHIGAN 48039
P: 810.420.0753
F: 810.420.0754

GLAZING SCHEDULE

GL-1	1/4" SN68 #2 TEMPERED 1/2" AIRSPACE (MILL SPACER) 1/4" CLEAR TEMPERED COATING: NONE

SYSTEM NOTES

SYSTEMS TYPES
 SYSTEM #1: TUBELITE T14000 1 (2" X 4 1/2") STOREFRONT SYSTEM
 SYSTEM #2: TUBELITE CVW 3700 CONCEALED VENT WINDOW

METAL FINISHES
 CLASS 2 CLEAR ANODIZED

SEALANT TYPES
 TBD

STRUCTURE BY OTHERS
 THE BUILDING STRUCTURE AND COMPONENTS THEREOF MUST BE CAPABLE OF SAFELY CARRYING THE LOADS IMPOSED UPON IT BY THE SYSTEMS DETAILED, INCLUDING BUT NOT LIMITED TO DEAD LOADS OF THE SYSTEMS, WIND LOADINGS, THERMAL LOADINGS, SEISMIC LOADINGS, SNOW LOADINGS AND LIVE LOADINGS.

NOTES:
 THESE SHOP DRAWINGS HAVE BEEN PREPARED BASED ON ARCHITECTURAL DRAWINGS: 12.19.22

SYMBOLS

- GLAZING IDENTIFICATION	- WORK POINT
- DETAIL IDENTIFICATION /PAGE NUMBER	- ELEVATION BENCHMARK
- COLUMN LINE	- DEAD LOAD ANCHOR
- SECTION	- WIND LOAD ANCHOR
- VIEW	- REVISION NUMBER CALL-OUT
- SCHEDULED HARDWARE	- STEEL CALL-OUT

R.O. - ROUGH OPENING	N.T.S. - NOT TO SCALE
D.O. - DOOR OPENING	F.F. - FINISH FLOOR
D.L.O. - DAY LIGHT OPENING	V.I.F. - VERIFY IN FIELD
S.F.O. - STOREFRONT OPENING	DL - DEADLOAD
C.W.O. - CURTAINWALL OPENING	WL - WINDLOAD
G.S. - GLASS SIZE	E.O.G - EDGE OF GLASS
F.S. - FRAME SIZE	T/O - TOP OF
W.P. - WORK POINT	B/O - BOTTOM OF
CL - CENTER LINE	REF. - REFERENCE

DRAWING NOTES

- MP DRAFTING & DESIGN AND THE CUSTOMER WILL ASSUME NO RESPONSIBILITY FOR ERRORS RESULTING FROM THE USE OF THESE DRAWINGS BY OTHER TRADES.
 - FINAL APPROVAL BY THE GENERAL CONTRACTOR CONSTITUTES ACCEPTANCE OF ALL DEVIATIONS TO THE CONTRACT DOCUMENTS MADE BY MP DRAFTING & DESIGN AND THE CUSTOMER IN THESE DRAWINGS.
 - THESE DRAWINGS REPRESENT MP DRAFTING'S AND THE CUSTOMER'S INTERPRETATION OF THE APPLICATION OF PRODUCTS TO THIS PROJECT IN FUNCTIONAL COMPLIANCE WITH THE ARCHITECT'S DRAWINGS AND SPECIFICATION. IT IS IMPORTANT THAT THIS INTERPRETATION BE REVIEWED DIMENSIONALLY AND FUNCTIONALLY WITH RESPECT TO ACTUAL ARCHITECT'S INTENT, INTERFACING CONDITIONS, MATERIAL AND JOB SITE CONDITIONS.
 - ALL DIMENSIONS SHALL BE FIELD VERIFIED AND/OR APPROVED BY THE GENERAL CONTRACTOR PRIOR TO GLASS ORDERING AND FABRICATION. MP DRAFTING & DESIGN AND THE CUSTOMER WILL ASSUME NO RESPONSIBILITY FOR DIMENSIONAL ERRORS OR CHANGES RESULTING FROM FIELD CORRECTIONS.
 - PROJECT MATERIALS MUST BE PROTECTED IMMEDIATELY FROM STAINING BY WET CARDBOARD PAPER AND FROM THE ACTION OF HARSH ALKALIS AND SAND IN CONCRETE, STUCCO, MORTAR OR PLASTER. THE SETTING OF THE PROJECT MATERIALS REQUIRES THE GENERAL CONTRACTOR TO CLOSELY SUPERVISE OTHER TRADES SO AS TO PREVENT MARRING OR DISCOLORATION FROM ANY CAUSE.
 - ALL SEALANT JOINTS SHOULD BE SEALED WATERTIGHT FOLLOWING THE SEALANT MANUFACTURER'S RECOMMENDATIONS AS TO SIZE, METHOD OF APPLICATION AND COMPATIBILITY WITH ADJOINING MATERIALS.
 - ALL FRAMING SYSTEMS SHALL BE FABRICATED & INSTALLED PER THE MANUFACTURERS INSTRUCTIONS.
 - THE ROUGH OPENINGS PROVIDED MUST BE SQUARE AND WITHIN SPECIFIED BUILDING TOLERANCES.
 - PERIMETER SUBSTRATE MUST BE CAPABLE OF WITHSTANDING REACTION FORCES IMPOSED BY DESIGN LOADS.
 - ALL FASTENING INFORMATION TO BE VERIFIED ON SITE BY CUSTOMER FOR VARIATION FROM SHOP DRAWINGS. ALL FASTENERS SHOWN FOR REFERENCE ONLY UNLESS SPECIFICALLY CALLED OUT BY PROFESSIONAL ENGINEER.
 - LAWS AND BUILDING AND SAFETY CODES GOVERNING THE DESIGN AND USE OF GLAZING ENTRANCE, WINDOW AND CURTAIN WALL PRODUCTS VARY WIDELY. MP DRAFTING & DESIGN AND THE CUSTOMER DOES NOT CONTROL THESE SELECTION OF PRODUCT CONFIGURATIONS, OPERATING HARDWARE OR GLAZING MATERIALS AND ASSUMES NO RESPONSIBILITY.
 - SEE CUSTOMER'S QUOTATION FOR ANY EXCLUDED ITEMS NOT NOTED WITHIN.
- PROPRIETARY NOTICE:**
 THIS DRAWING SHEET AND CONTENTS HEREIN ARE PROPERTY OF MP DRAFTING & DESIGN AND ITS CUSTOMERS. USE OF THESE DRAWINGS, ITS CONTENT AND DESIGN CONCEPTS ARE INTENDED FOR THE USE OF THE INTENDED RECIPIENT. MP DRAFTING & DESIGN AND ITS CUSTOMERS ARE NOT RESPONSIBLE FOR USE BY OTHER PARTIES.

MP drafting & design
 www.MPDRAFTING.com
 P: 248.522.7096
 F: 248.522.7030

ARCHITECT:

ARCHITECT NOTE:
 ALL NOTES REQUESTING VERIFICATION, CONFIRMATION, OR INFORMATION THAT ARE NOT ANSWERED ARE ASSUMED TO BE CORRECT AS SHOWN ON THESE DRAWINGS.

STAMPS/ SUBMITTALS:

REVISION	DATE
0	01.04.23
1	02.22.23
-	-
-	-
-	-

PROJECT NUMBER:
22-295

ENGINEERING

P.E. STRUCTURAL REVIEW INCLUDED: YES NO

TYPICAL ENGINEERING NOTE:
 ENGINEERING REVIEW (IF REQUIRED) WILL BE PROVIDED AFTER 1ST SUBMITTAL APPROVAL OF THESE SHOP DRAWINGS. ALL APPLICABLE INFORMATION BELOW, SYSTEM REVIEW, REINFORCEMENT, FASTENERS, LOADS, ETC. WILL BE PROVIDED AT THAT TIME.

ARCHITECT NOTE: PLEASE VERIFY ALL INFORMATION BELOW

SHEET INDEX

C1	COVER SHEET
E1	ELEVATION
D1 THRU D2	DETAILS

NOTE SYMBOL KEY

	ARCHITECT NOTE		ENGINEERING NOTE ENGINEER OF RECORD OR DELEGATED DESIGN
	GLAZING CONTRACTOR OR PROJECT MANAGER NOTE		FABRICATOR OR INSTALLER NOTE

DESIGN LOADS: (PER ----)
 BASIC WINDSPEED: -
 IMPORTANCE FACTOR: -
 EXPOSURE CATEGORY: -
 BUILDING HEIGHT: -
 TYPICAL WINDLOAD: -
 CORNER WINDLOAD: -
 SNOW LOADS: -
 ALLOWABLE DEFLECTION: - L/175 (SPAN < 13'-6"), L/240+1/4" (SPAN >= 13'-6")

DIMENSION VERIFICATION

FIELD VERIFIED:
 GUARANTEED DIMENSIONS:

REVISIONS

REV	DESCRIPTION	DATE	BY
0	1ST SUBMITTAL	01.04.23	EJL
1	2ND SUBMITTAL	02.22.23	EJL

PROJECT NAME:
 ARETHA FRANKLIN
 ADMIN

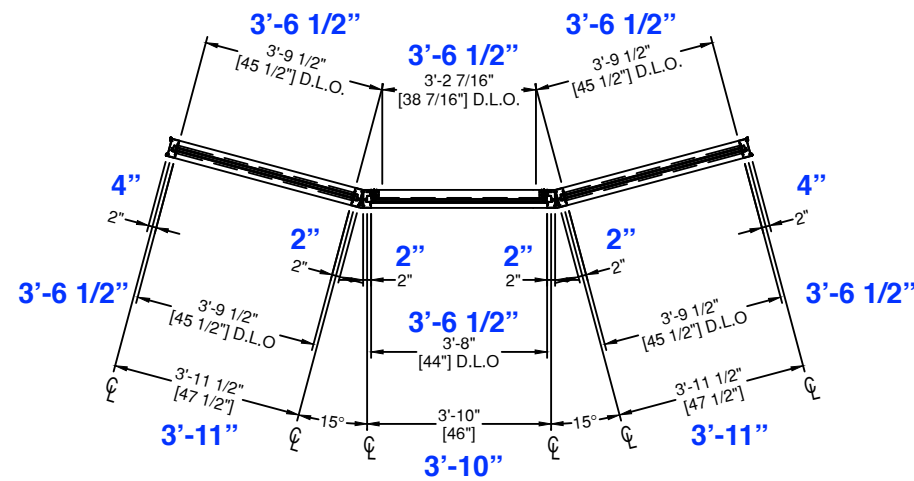
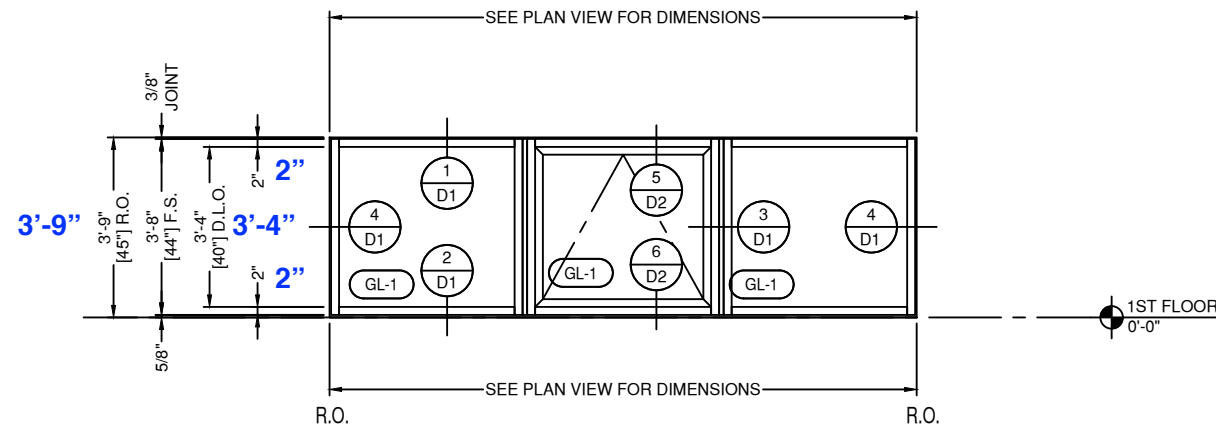
SHEET DESCRIPTION:
COVER SHEET

SHEET:
C1

NOTE:
ALL DIMENSIONS TO BE FIELD
VERIFIED PRIOR TO FABRICATION

Existing Dimensions in Blue

Note: Center Window Panel
to Open Awning Style;
Hinged from the Top



1 ELEVATION 1
E1

DRAWING SCALE
24x36: 1/2" = 1'-0"
11x17: 1/4" = 1'-0"

THUS REQD: 4
OPP REQD: 0
TOTAL REQD: 4

ARCH. REF.
XXX

TUBELITE T1400 SERIES 2"X4-1/2" S.F.
TUBELITE CW 37000 OPERABLE WINDOW
FINISH: CLEAR ANODIZED

PREFERRED
GLASS INC.

6215 KING RD.
MARINE CITY, MICHIGAN 48039
P: 810.420.0753
F: 810.420.0754

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ARCHITECT:

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1	02.22.23
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-	-
-	-

PROJECT NUMBER:
22-295

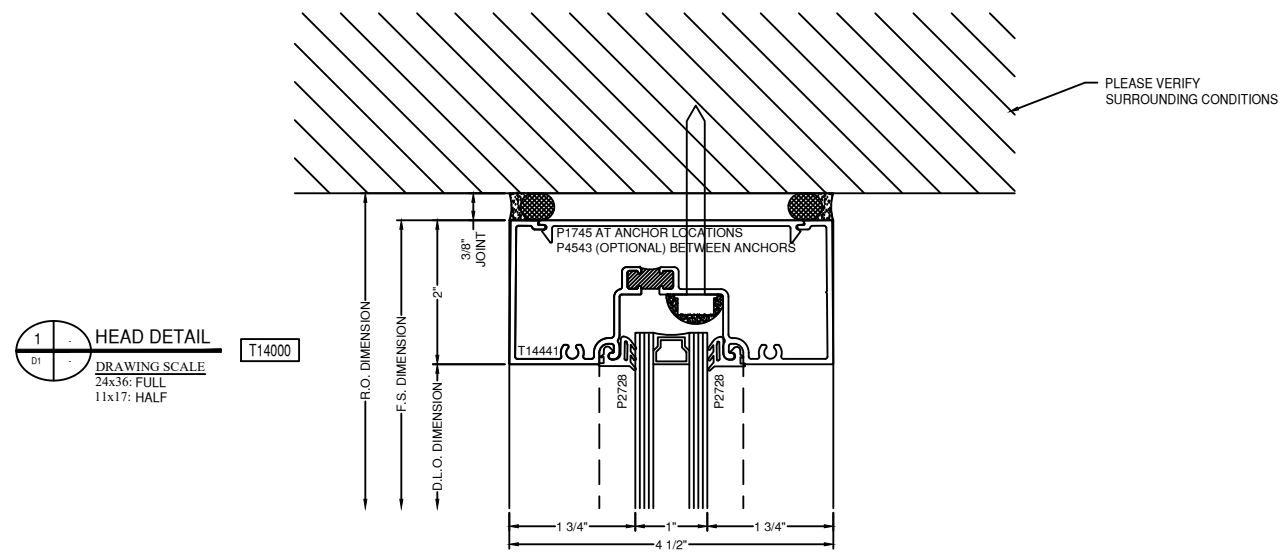
PROJECT NAME:
ARETHA FRANKLIN
ADMIN

SHEET DESCRIPTION:
ELEVATIONS

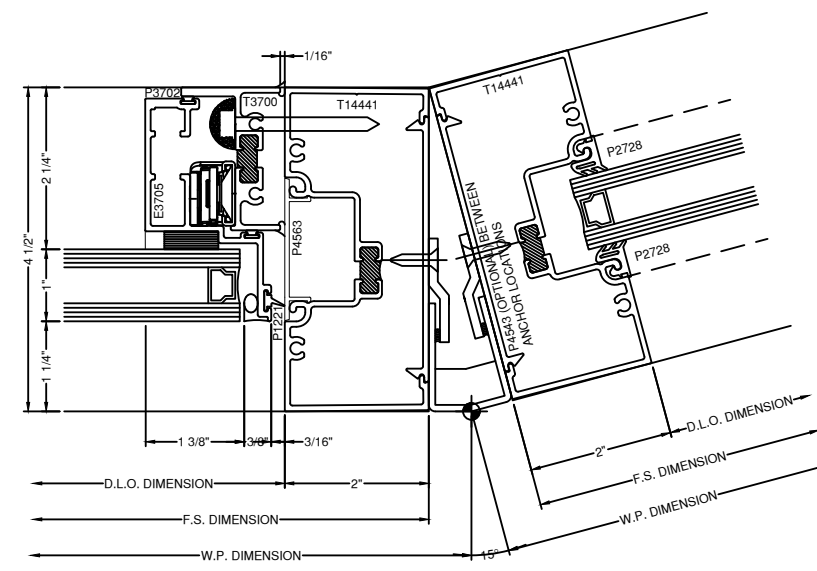
SHEET:
E1

NOTE:
FASTENERS SHOWN FOR LOCATION
REFERENCE ONLY. FASTENER TYPE, SIZE
AND SPACING ARE TO BE DETERMINED
BY THE PROFESSIONAL ENGINEER.

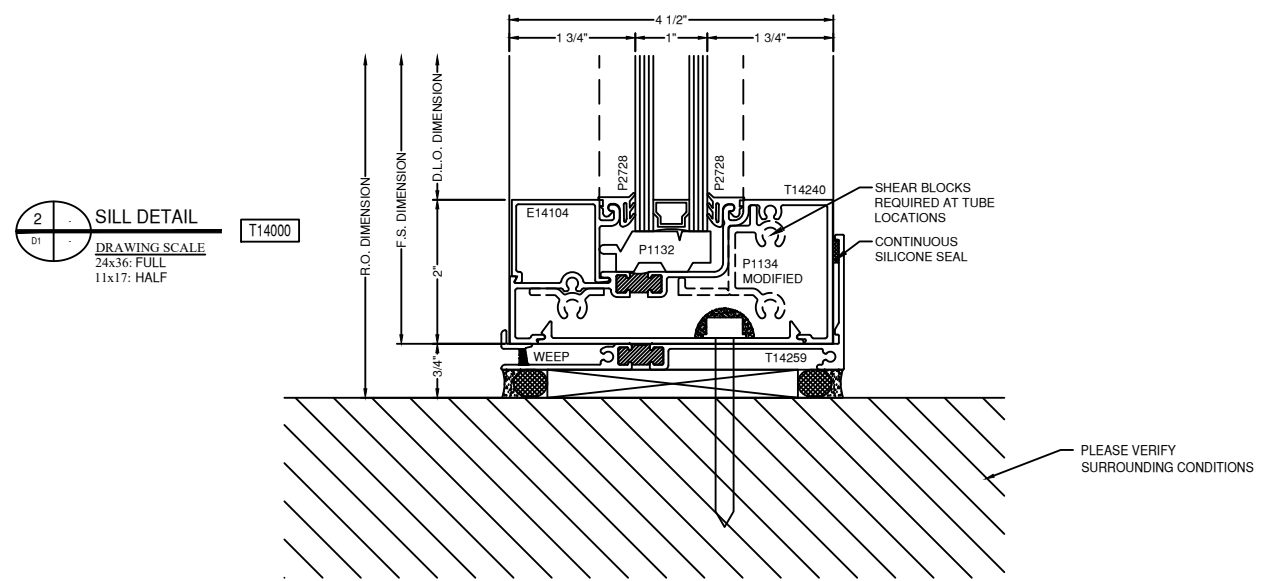
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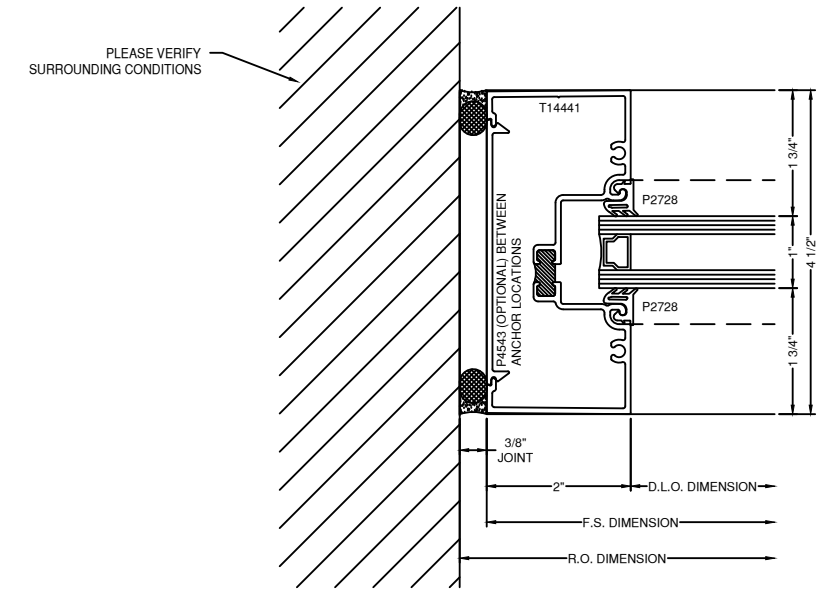
1 HEAD DETAIL
DRAWING SCALE
24x36: FULL
11x17: HALF
T14000



3 CORNER DETAIL
DRAWING SCALE
24x36: FULL
11x17: HALF
T14000
CVW3700



2 SILL DETAIL
DRAWING SCALE
24x36: FULL
11x17: HALF
T14000



4 JAMB DETAIL
DRAWING SCALE
24x36: FULL
11x17: HALF
T14000

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**ARETHA FRANKLIN
ADMIN**

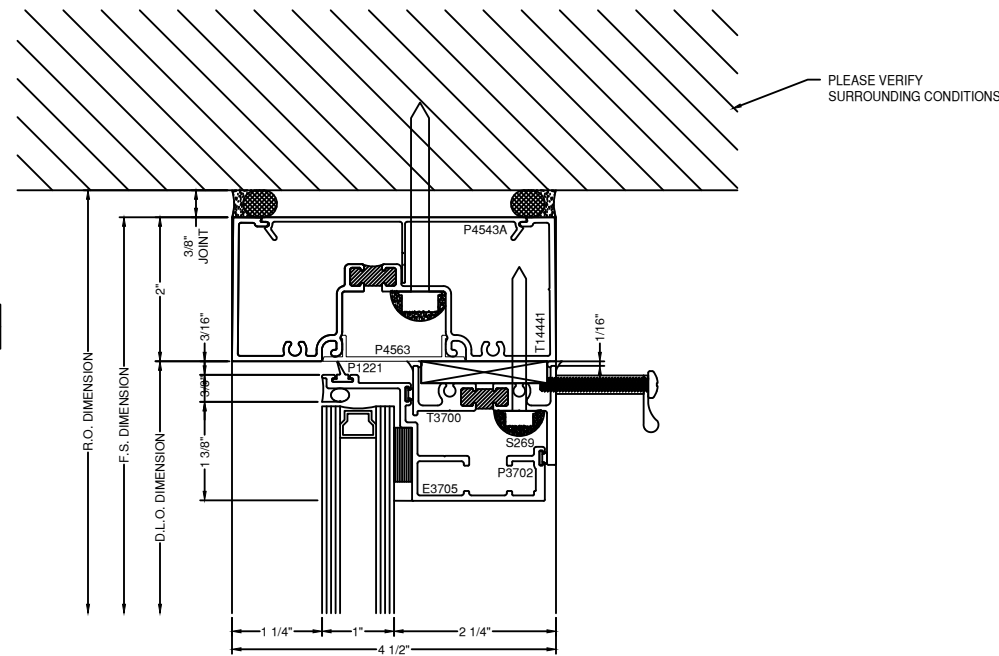
SHEET DESCRIPTION:
DETAILS

SHEET:
D1

NOTE:
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REFERENCE ONLY. FASTENER TYPE, SIZE
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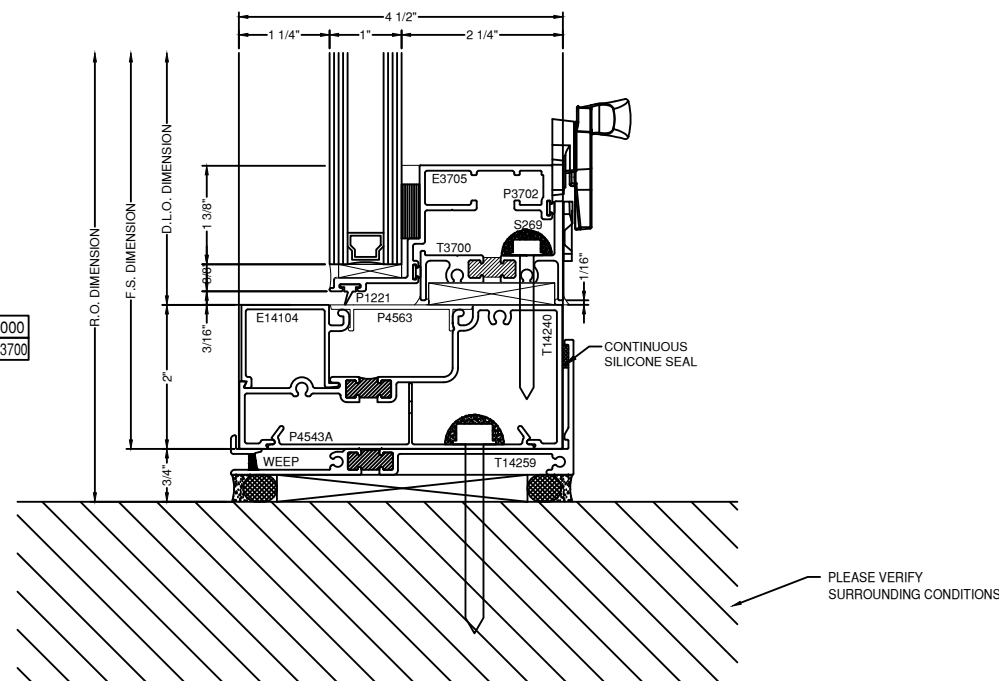
NOTE:
ALL DIMENSIONS TO BE FIELD
VERIFIED PRIOR TO FABRICATION

5 HEAD DETAIL
DRAWING SCALE
24x36: FULL
11x17: HALF
T14000
CVW3700



PLEASE VERIFY
SURROUNDING CONDITIONS

6 SILL DETAIL
DRAWING SCALE
24x36: FULL
11x17: HALF
T14000
CVW3700



PLEASE VERIFY
SURROUNDING CONDITIONS

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PROJECT NUMBER:
22-295

PROJECT NAME:
ARETHA FRANKLIN
ADMIN

SHEET DESCRIPTION:
DETAILS

SHEET:
D2

4500/4600 Series Windows

Commercial Aluminum Hopper, Awning, Casement & Fixed



Quality Windows & Doors for All Seasons

All models AAMA rated AW
Specifically designed for commercial
and architectural applications



Innova Apartments - Cleveland, OH
4500 Fixed and 4600 Projected Windows

Product Performance Details (AAMA/WDMA/CSA 101/I.S.2/A440-◆)

Type	Product Designation ◆▼	Structural/Water/ Air Test Size (W x H)	Air Infiltration (cfm/sq ft)	Water Resistance (psf)	Deflection (psf)	Structural ^ (psf)
4500 Fixed <i>Blast Also Available!</i>	AW40	60"W x 99"H	< 0.01 @ 6.27 psf	8.15	40	60
	<i>optional:</i> AW100			12.11	100	150
4500 Project-In Hopper	AW40	60"W x 36"H	0.08 @ 6.27 psf	8.15	40	60
	<i>optional:</i> AW70			12.11	70	105
	<i>optional:</i> AW90			12.11	90	135
4600 Project-Out Casement <i>Blast Also Available!</i>	AW40	36"W x 60"H	0.05 @ 6.27 psf	8.15	40	60
	<i>optional:</i> AW70			12.11	70	105
4600 Project-Out Awning <i>Blast Also Available!</i>	AW40	60"W x 36"H	0.03 @ 6.27 psf	8.15	40	60
	<i>optional:</i> AW65			12.11	65	97.5
4600 Project-Out Awning with Roto Operator § <i>ADA Compliant Option Available</i>	AW40	60"W x 36"H	0.01 @ 6.27 psf	8.15	40	60

◆ The '05 fenestration standard utilized five performance classes - R, LC, C, HC and AW. NAFS-08 and -11 utilize four such classes - R, LC, CW and AW.

▼ Many window ratings can be increased by downsizing the window and determining maximum performance either through testing or calculation. Contact your local WDJAN sales representative for details.

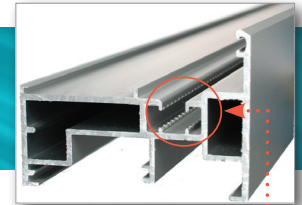
^ This is an intentional overload aspect to window performance testing and should not be used in lieu of the window DP (Design Pressure) when evaluating a product for a specific project or use.

§ ADA Compliant option per AAMA 513-12 with an average operating force of less than 5 lbf for lock handles and operator. All testing based on AAMA 513-12 without air, water and structural allowances or reductions; but including sampling, test equipment and methodology qualifications.

4500/4600 Series Features

- High Quality 1" Sealed Insulated Glass: Numerous options available including Low-E, tinted, obscure, tempered, laminated, argon-filled and spandrel
- Integral Mulling/Stacking System: Provides an unlimited selection of multi-window configurations within a single master frame, such as a combination of fixed and projected units
- Accessories available such as interior snap trim, pre-set panning, mullions, expanders, strap anchors, face flange adaptors, head/ jamb receptors and subsills
- Interior glazed design for ease of glass replacement

Our products feature pour and debridge polyurethane thermal breaks for better performance, with a 10-year pass-through warranty against failure of the polymer.

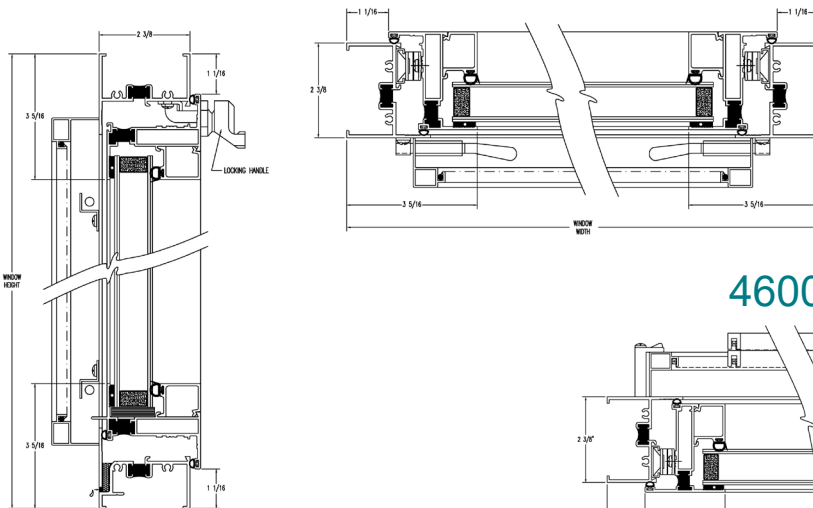


Abrasion "hooks" displace metal along the lugs to improve adhesion in the thermal barrier pocket.

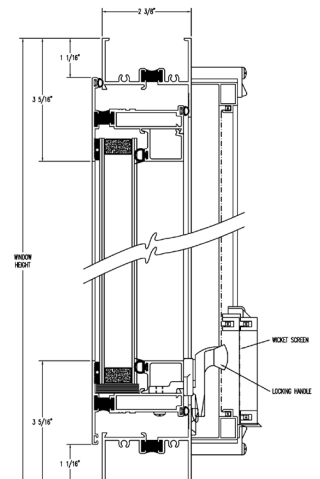
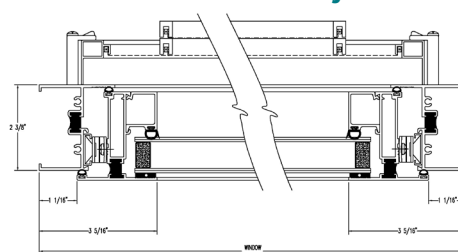
- 2 $\frac{3}{8}$ " Frame Depth
- Electrostatically-applied baked-on polyester standard colors meet or exceed AAMA 2603 performance standards: Bronze, White
- Available high-performance fluoropolymer colors meet or exceed AAMA 2605 standards: White (70% Kynar®), Bronze (70% Kynar®) (*Kynar® is a registered trademark of Arkema, Inc.*)
- Available anodic coatings meet or exceed AAMA 611 performance standards: Clear or Bronze Anodized
- Non-standard colors available subject to minimum quantity requirements
- Optional stainless steel hardware packages are also available
- Blast-Resistant fixed and project-out models also available, call for details

Visit www.wojan.com for the most current product details, CAD drawings and project photos

4500 Project-In



4600 Project-Out

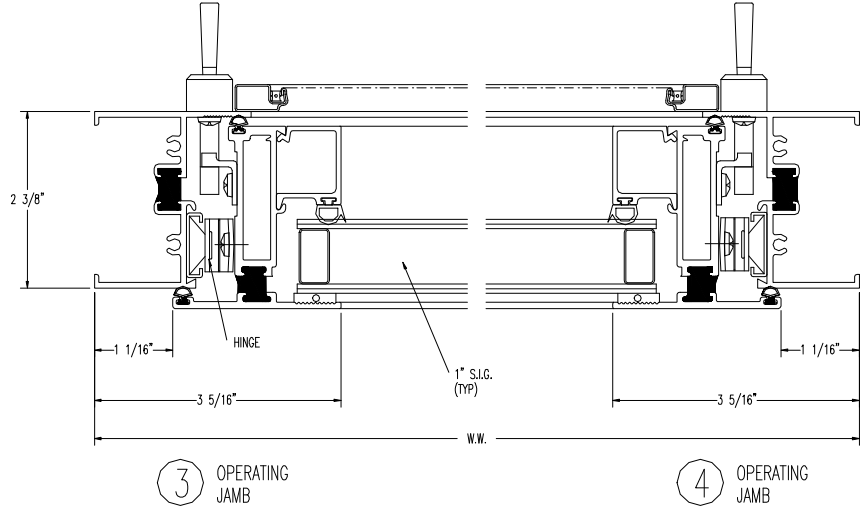
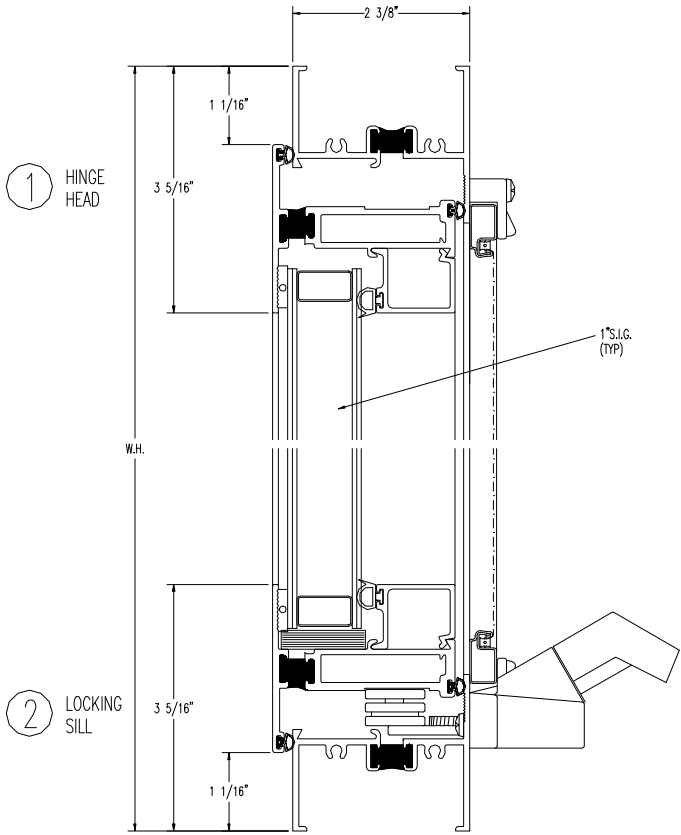
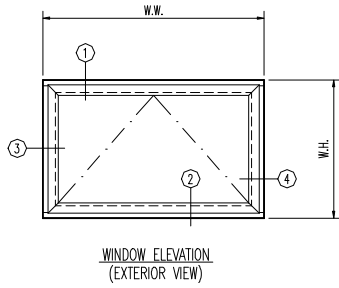


HQ/Sales/Manufacturing
217 Stover Road
Charlevoix, MI 49720
fax (231) 547-4237

www.wojan.com
(800) 632-9827

Manufacturing
340 Jay Street
Coldwater, MI 49038
fax (517) 279-9832

4600 PROJECT-OUT AWNING ROTO



TUBELITE®

DEPENDABLE

LEADERS IN ECO-EFFICIENT STOREFRONT,
CURTAINWALL AND ENTRANCE SYSTEMS



More recycled content, eco-efficient finishes

Anodized Finishes



Clear Class 2 **C2**
Clear Class 1 **C1**



Champagne **CH**



Light Bronze **LB**



Medium Bronze **MB**



Dark Bronze **DB**



Extra Dark Bronze **EB**



Black **BL**

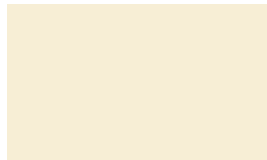


Copper **CA**

Standard Painted Colors – 70% PVDF



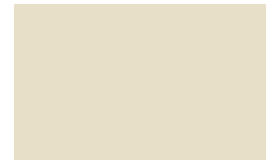
Bone White **1P**
LT609-70



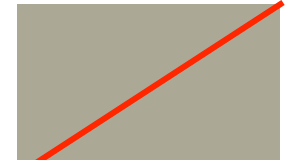
Colonial White **NP**
LT640-70



Sandstone **5P**
LT607-70



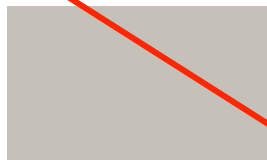
Burnt Sun **7P**
LT612-70



Antique Bronze **ZP**
LT641-70



Beige **BP**
LT603-70



Light Seawolf Beige **CP**
LT614-70



Dove Gray **VP**
LT615-70



Slate Gray **WP**
LT604-70



Charcoal Gray **XP**
LT605-70



Patina Green **SP**
LT616-70



Dark Ivy **TP**
LT617-70



Hartford Green **2P**
LT606-70



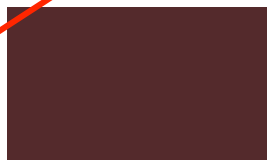
Military Blue **DP**
LT610-70



Interstate Blue **UP**
LT623-70



Colonial Red **RP**
LT622-70



Boysenberry **9P**
LT608-70



Sage Brown **8P**
LT620-70



Quaker Bronze **6P**
LT602-70

NOTE Colors shown are not exact and are intended for planning purposes.

For actual job, Tubelite® will supply Linetec color chips.

TUBELITE®

DEPENDABLE

LEADERS IN ECO-EFFICIENT STOREFRONT,
CURTAINWALL AND ENTRANCE SYSTEMS



More recycled content, eco-efficient finishes

Finish Color Guide Chart

Depend on Tubelite® for detailed information on the performance, integrity, and weatherability of anodized finishes, and for specifications on the color retention, erosion resistance, and gloss retention of painted finishes.

	AAMA Code	Code Performance	Content	Applicable Warranty	Tubelite® Colors Available
ANODIZED	611	Anodized aluminum provides and maintains a superior level of performance in terms of film integrity, exterior weatherability, and general appearance for many years.	Two-step electrolytic anodizing process	Standard Linetec 5yr. warranty applies on Class I anodize ✓ Standard Tubelite 2yr. warranty applies on Class II anodize	Standard Finishes: Clear - Class II C2 Dark Bronze - Class I DB Special Finishes: Clear - Class I C1 Champagne - Class I CH Light Bronze - Class I LB Medium Bronze - Class I MB Extra Dark Bronze - Class I EB Black - Class I BL Copper - Class I CA
PAINTED	2605	Co 10 yrs – Fade = 5 Delta E Ch 10 yrs – Chalk = 8 Gl 10 yrs – 50% retention Er 10 yrs – 10% loss SS 4,000 hrs Hu 4,000 hrs	70% PVDF	10-Yr Linetec Warranty ✓	Standard Finishes: Bone White 1P Charcoal GrayXP Colonial WhiteNP Patina GreenSP Sandstone5P Dark IvyTP Burnt Sun7P Hartford Green2P Antique BronzeZP Military BlueDP BeigeBP Interstate BlueUP Light Sea Wolf BeigeCP Colonial RedRP Boysenberry9P Sage Brown8P Dove GrayVP Quaker Bronze6P Slate GrayWP Custom Finishes: Nearly unlimited in-house blendable shades
	2604	Co 5 yrs – Fade = 5 Delta E Ch 5 yrs – Chalk = 8 Gl 5 yrs – 30% retention Er 5 yrs – 10% loss SS 3,000 hrs Hu 3,000 hrs	50% PVDF	5-Yr Linetec Warranty ✓	Custom Finishes: Nearly unlimited in-house blendable shades
	2603	Co 1 yr – “slight” fade Ch 1 yr – “slight” chalk Gl no specification Er no specification SS 1,500 hrs Hu 1,500 hrs	Baked Enamel	5-Yr Linetec Warranty (Adhesion only)	Custom Finishes: Nearly unlimited in-house blendable shades

KEY Co = Color Retention
Ch = Chalk Resistance
Gl = Gloss Retention
Er = Erosion Resistance

SS = Salt Spray
Hu = Humidity
= Tubelite Standard Color Palette

NOTE Class I = Minimum 0.7 mil thickness
Class II = Minimum 0.4 mil thickness
✓ = Extended Warranty Available (Contact Tubelite Inc.)

ECOLUMINUM™

Beyond being compliant, Tubelite's sister company Linetec captures and destroys the Volatile Organic Compounds (VOCs) present in solvent-borne paints during the finishing process. 100% of the solvents are captured from the painting operations, and destroyed with a \$2 million “oxidizer”, which burns the VOC's at 1500 degree heat, converting them to harmless water vapor. In doing so, our liquid-paints are just as VOC-free to the environment as powder or waterborne paints.

At Linetec's anodize operations, the process does not use heavy metals or toxins and is environmentally friendly. Anodized aluminum is 100% recyclable and uses simple water-based chemistry that can be treated easily and releases no harmful by-products. Linetec's voluntary commitment to a clean and healthy environment goes well beyond industry standards or regulatory requirements.

City of Detroit GSD

AFT Admin Kitchen Ventilation

Detroit

PERMITS / CONSTRUCTION - 12/21/2022

HAMILTON ANDERSON PROJECT NUMBER: 202022.01 CCM02

HamiltonAnderson
architecture landscape architecture urban design

Hamilton Anderson Associates, Inc
1435 Randolph Suite 200
Detroit, Michigan 48226
p 313 964 0270 f 313 964 0170
www.hamilton-anderson.com

LOCATION MAP:



SITE MAP:



PROJECT CONTACTS:

OWNER:
City of Detroit
General Services Department
115 Erksine St.
Detroit, MI 48201
(313) 628-0900
www.detroitmi.gov

ARCHITECT/LANDSCAPE ARCHITECT:
Hamilton Anderson Associates, Inc.
1435 Randolph
Suite 200
Detroit, MI 48226
(313) 964-0270
www.hamilton-anderson.com

ELECTRICAL/MECHANICAL ENGINEER:
Strategic Energy Solutions, Inc.
4000 West Eleven Mile Rd.
Berkley, MI 48072
(248) 399-1900
www.sesnet.com/

SHEET INDEX:

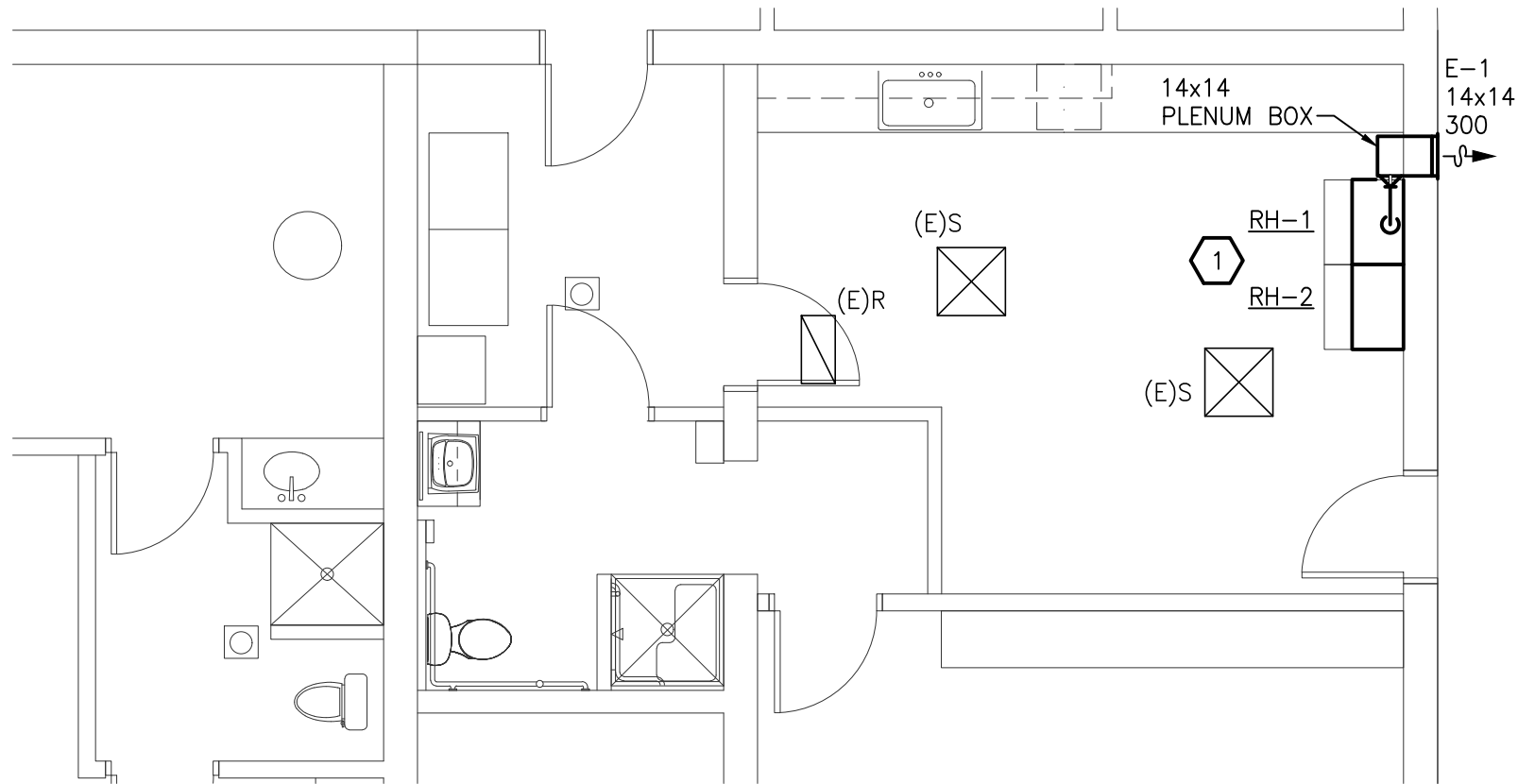
C0 COVER SHEET
M1 HVAC PLAN AND KITCHEN VENTILATION
M2 MECHANICAL SCHEDULES AND DETAILS
E1 ELECTRICAL PLAN

Drawn: S:\21_0025_06_AFA_Guest_Services\Phase 2 EH\CAD\Mech\21002506_P12_MECHANICAL_SHEETS.dwg
 Plotted: Wed, 21 Dec 2022 - 4:41pm by Rlu



HVAC PLAN AND GENERAL INFORMATION

SCALE: 3/16" = 1'-0"



SHEET INDEX	
SHT NO	DESCRIPTION
M1	HVAC PLAN AND GENERAL INFORMATION
M2	MECHANICAL SCHEDULES

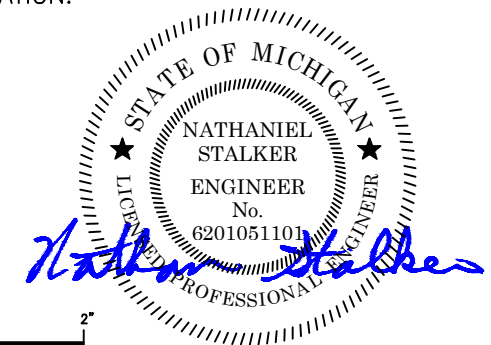
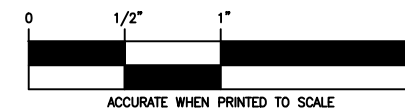
HVAC GENERAL NOTES

- THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL EXTENT OF THE WORK. PROVIDE HVAC SYSTEMS COMPLETE PER SMACNA STANDARDS, AND PER APPLICABLE CODES INCLUDING ALL NECESSARY OFFSETS, FITTINGS, SPECIAL RADIUS OR MITERED ELBOWS WHICH ARE REQUIRED DUE TO SPACE CONSTRAINTS OR STRUCTURAL CONDITIONS OR OTHER CONDITIONS.
- CONTRACTOR SHALL COORDINATE THEIR WORK WITH THE WORK OF ALL OTHER TRADES. ALL DUCTWORK IS TO BE ROUTED AS HIGH AS POSSIBLE. PROVIDE ACCESS AROUND ALL NEW EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. VERIFY ALL CLEARANCES PRIOR TO THE FABRICATION OF ANY WORK.
- DUCTWORK SHALL NOT BE INSTALLED IN A LOCATION THAT RESTRICTS THE ACCESS TO MECHANICAL DEVICES REQUIRING ACCESS.
- THE CONTRACTOR SHALL PROVIDE ALL MISCELLANEOUS SUPPORTING STEEL, ETC. FOR THE PROPER INSTALLATION OF ALL MECHANICAL SYSTEMS.
- COORDINATE WALL PENETRATIONS, LOUVER SIZES, LOCATIONS ETC. WITH ARCHITECTURAL TRADES. SEAL ALL DUCT PENETRATIONS.
- THE CEILING SPACE IS USED AS A RETURN AIR PLENUM. NO PLASTIC MATERIALS INCLUDING PVC PIPING, CONDUIT, WIRING, ETC. SHALL BE USED. ALL MATERIAL IN THE CEILING SPACE IS TO BE PLENUM RATED.
- CONNECTION TO EQUIPMENT SHALL BE VERIFIED WITH MANUFACTURER'S CERTIFIED DRAWINGS. TRANSITIONS TO ALL EQUIPMENT SHALL BE VERIFIED AND PROVIDED FOR EQUIPMENT FURNISHED.



KEYED NOTES

- CONVERTIBLE DOMESTIC RANGE HOODS (BROAN F40000 OR EQUAL) FURNISHED BY ARCH, INSTALLED BY MECH CONTRACTOR. CENTER HOODS OVER EXISTING RANGES. VERIFY EXACT LOCATION IN FIELD PRIOR TO INSTALL. RH-1 TO BE DUCTED TO THE OUTSIDE WITH A 8"Ø EA DUCT. PROVIDE TRIM FOR DUCT PENETRATION AT EXISTING LAY-IN CEILING (@ +/- 9'-0" A.F.F.). RH-2 TO TO BE INSTALL AS RE-CIRCULATING HOOD. REFER TO PRODUCT INSTALLATION MANUAL FOR FURTHER INFORMATION.



12/21/2022



HAMILTON ANDERSON, INC
 1435 Randolph Suite 200
 Detroit, Michigan 48226

ISSUED	DATE

ISSUED	DATE
BUILDING PERMIT	12/21/2022

CHECKED	JMC
DRAWN	PAC

PROJECT: AFT ADMIN BUILDING
 KITCHEN VENTILATION
 SES PROJECT # 2021 0025 06

SHEET TITLE:
 HVAC PLAN AND
 GENERAL
 INFORMATION

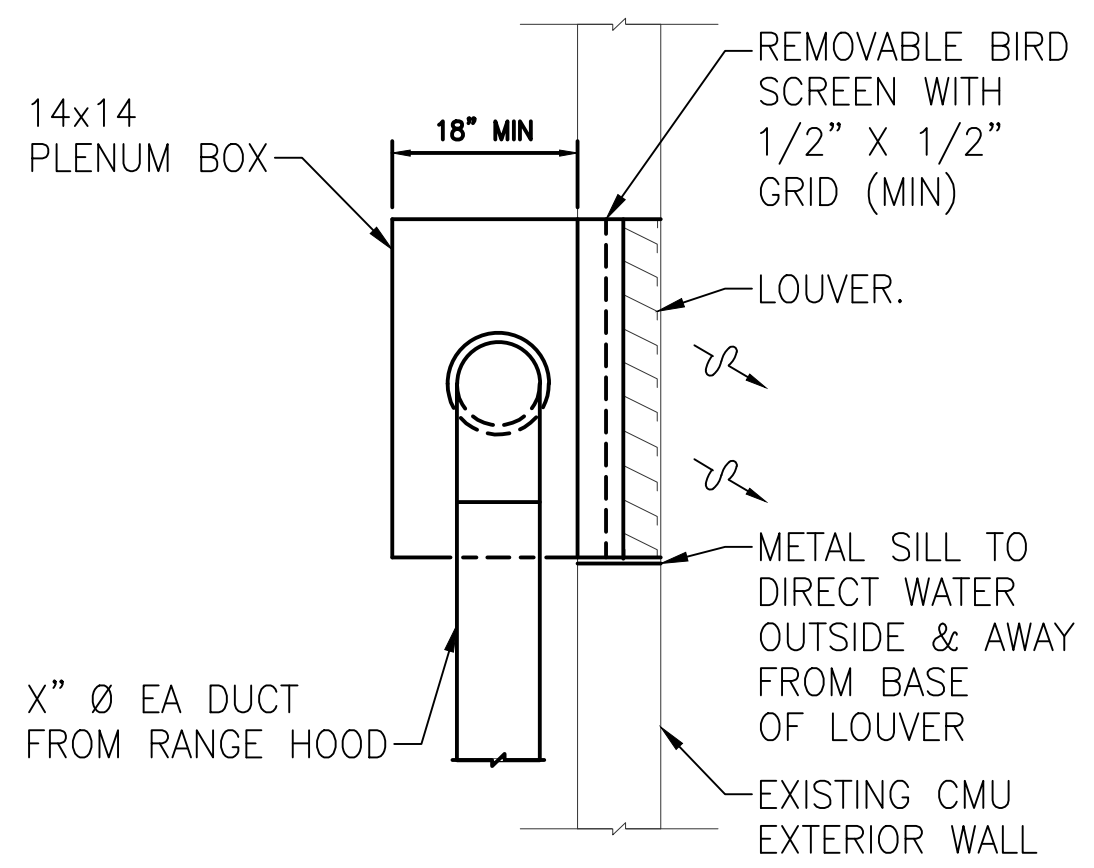
SHEET NUMBER:
M1

GRILLE, REGISTER AND DIFFUSER SCHEDULE

UNIT ID	FACE SIZE	NECK SIZE	MOUNTING	ACCESSORY	FINISH	MATERIAL	MANUFACTURER / MODEL NO.	REMARKS
E-1	NECK+2	SEE PLANS	SIDEWALL	-	WHITE	STEEL	GREENHECK / ESD-635	PAINT GRILLE TO MATCH EXISTING EXTERIOR LOUVERS.

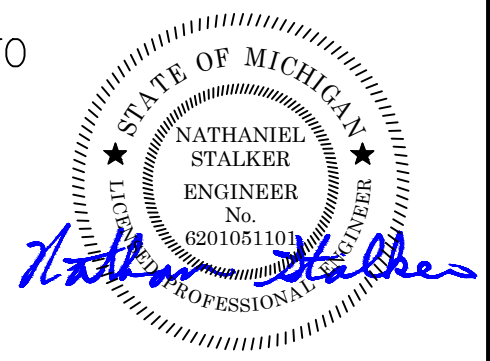
NOTES:

- OVERALL SIZE OF OPENING SHOULD BE 1/4 " AND 1/2 " GREATER IN BOTH DIRECTIONS THAN EXTERNAL DIMENSIONS OF LOUVER FOR SIZES ≤ 48" AND > 48", RESPECTIVELY.
- MAX LOUVER WIDTH ≤ 5FT, USE MULLION CONNECTED SECTIONS FOR GREATER WIDTHS.
- CAULK AND SEAL AROUND PERIMETER OF LOUVER SECTION AT WALL. FILL ALL VOIDS BETWEEN DUCT AND CMU WITH MINERAL WOOL INSULATION.
- PROVIDE ALUMINUM OR GALV EXPANDED BIRD EXCLUSION SCREEN ON INSIDE (OR OUTSIDE) OF LOUVER. (MIN FREE AREA 80% OF GROSS AREA) ATTACH TO OUTSIDE IF BLADE SEPARATION IS > 2 1/2 ".
- CONSTRUCT EXTRUDED LOUVER OF NON-FERROUS CORROSION RESISTANT MATERIAL AND SECURE WITH SS OR ALUMINUM FASTENERS.
- DO NOT OVERACT OPENING BEYOND DIMENSIONS INDICATED TO MAINTAIN STRUCTURAL INTEGRITY OF EXISTING CMU WALL.



EXHAUST AIR LOUVER WITH PLENUM BOX DETAIL

NO SCALE



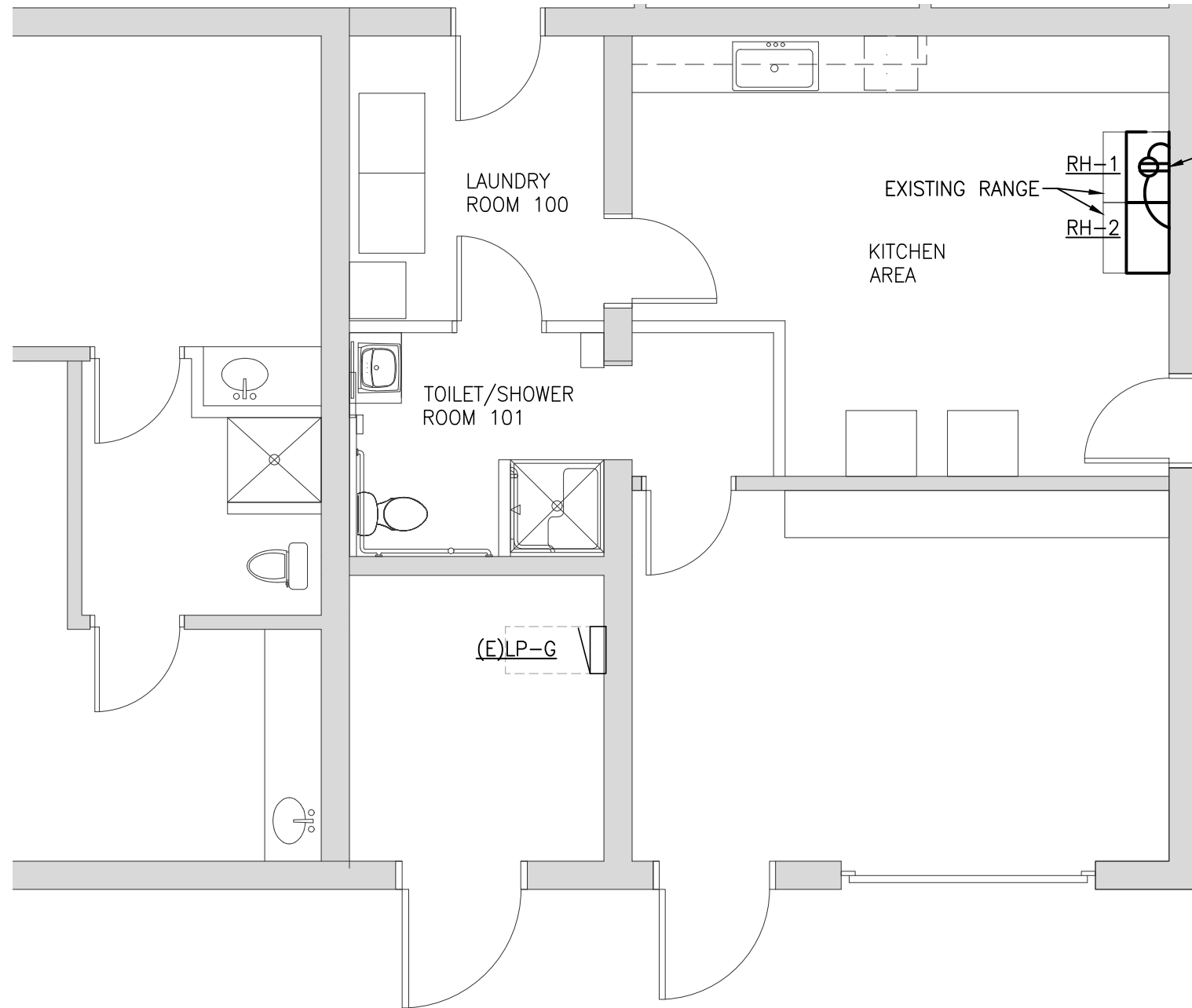
12/21/2022

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 Plotted: Wed, 21 Dec 2022 - 4:41pm by fu



ELECTRICAL PLAN

SCALE: 3/16" = 1'-0"



PROVIDE A DUPLEX RECEPTACLE FOR RH-1 AND RH-2. LOCATE RECEPTACLE PER MANUFACTURER INSTRUCTIONS. PROVIDE NEW 120V, 1PH, 20A BREAKER IN PANEL LP-G, BREAKER 31 FED WITH 2#12, 1#12G IN 3/4" C.

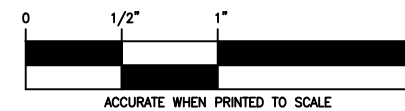
	CONNECTED	DEMAND	TOTAL
RH-1:	MOTOR 300W	* 1.25%	= 375W
	LAMP 75W	* 1.25%	= 93W
RH-2:	MOTOR 300W	* 1.00%	= 300W
	LAMP 75W	* 1.25%	= 93W
TOTAL			= 861W

APPROXIMATE ELECTRICAL LOAD ADDED:
861W @120V.

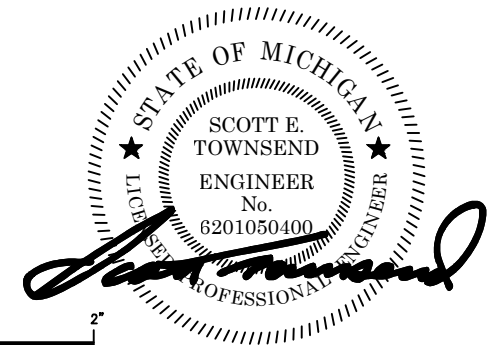
DRAWING INDEX	
SHT NO	DESCRIPTION
E1	ELECTRICAL PLAN

POWER GENERAL NOTES

1. ALL CONDUITS SERVING 120 VOLTS OR GREATER SHALL INCLUDE A GROUND WIRE.
2. ALL 120 VOLT CIRCUITS SHALL UTILIZE A SEPARATE NEUTRAL.
3. ROUTE ALL CONDUITS CONCEALED UNLESS APPROVED BY OWNER.



ACCURATE WHEN PRINTED TO SCALE



12/21/2022



HAMILTON ANDERSON, INC
 1435 Randolph Suite 200
 Detroit, Michigan 48226

ISSUED	DATE

ISSUED	DATE
BUILDING PERMIT	12/21/2022

CHECKED	DATE
FKU JMC	

PROJECT: AFT ADMIN BUILDING
 KITCHEN VENTILATION
 SES PROJECT # 2021 0025 06

SHEET TITLE
 ELECTRICAL PLAN

SHEET NUMBER
E1

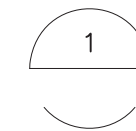
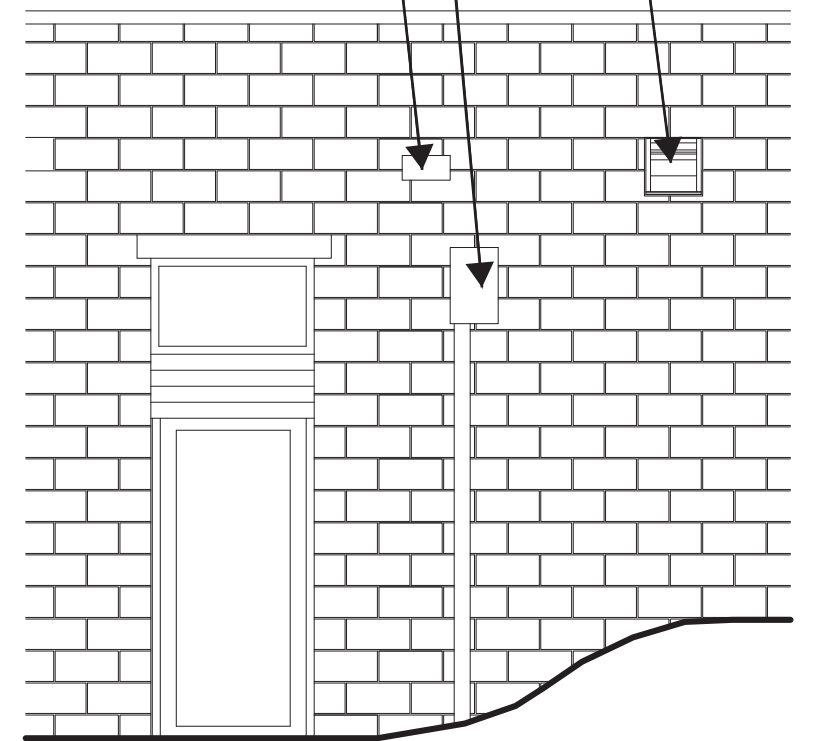


EXISTING WALL MOUNTED LIGHT

NEW 14" x 14" EXHAUST LOUVER FLUSH MOUNTED WITH FACE OF BLOCK AND PAINTED TO MATCH EXISTING CMU

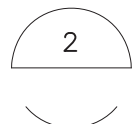
EXISTING WALL MOUNTED ELECTRICAL CONDUIT AND BOX

EXISTING WALL MOUNTED LIGHT



PARTIAL ELEVATION

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

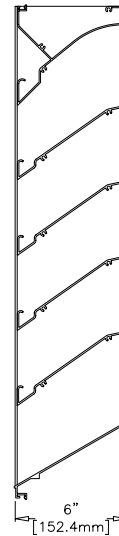


EXTERIOR ELEVATION IMAGE

SCALE: N.T.S.

Standard Construction

Frame	Heavy gauge extruded 6063-T5 aluminum, 6 in. (152 mm) x 0.081 in. (2 mm) nominal wall thickness
Blades	Drainable design, heavy gauge extruded 6063-T5 aluminum, 0.081 in. (2 mm) nominal wall thickness, positioned 37° on approximately 4 in. (102 mm) centers
Louver Depth	6 in. (152 mm)
Construction	Mechanically fastened
Finish	Mill
Minimum Size	12 in. W x 12 in. H (305 mm W x 305 mm H)
Maximum Single Section Size	120 in. W x 120 in. H (3048 mm W x 3048 mm H) Limited to 70 ft. sq. (6.5 sq. m)
Wind Load	25 PSF (1.2 kPa)



Performance Ratings



Greenheck Fan Corporation certifies that the ESD-635 louvers shown herein are 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 Water Penetration and Air Performance ratings.

Performance of 48 in. x 48 in. (1219 mm x 1219 mm) Louver

Free Area	
Area	9.41 sq. ft. (0.874 sq. m)
Percent	58.8%
Performance at Beginning Point of Water Penetration	
Free Area Velocity	Above 1250 fpm (6.350 m/s)
Max Intake Volume	11,763 cfm (5.551 m ³ /s)
Performance at 6,000 CFM (2.832 m³/s) Intake	
Pressure Drop	0.061 in. wg (0.015 kPa)

Document Links

[Louver Finishes & Colors](#)
[Louver Product Selection Guide](#)
[Louver Products Catalog](#)
[Louver Warranty Statement](#)

Options and Accessories

- [Bird Screen](#)
- [Blank Off Panels](#)
- [Extended Sill](#)
- [Filter Rack/Filter](#)
- [Flange Frame](#)
- [Glazing Frame](#)
- [Hinged Frame](#)
- [Insect Screen](#)
- [Mounting Angles](#)
- [Security Bars](#)
- [Variety of Architectural Finishes](#)
- Welded Construction
- 0.125 in. (3 mm) Nominal Frame and/or Blade Thickness

Standard Details

[ESD-635 Standard Details](#)

Structural reinforcing members may be required to adequately support and install multiple louver sections within a large opening. Structural reinforcing members along with any associated installation hardware is not provided by Greenheck unless indicated otherwise by Greenheck. Options and accessories including, but not limited to, screens, filter racks, louver doors, and blank off panels are not subject to structural analysis unless indicated otherwise by Greenheck.

Free Area Chart

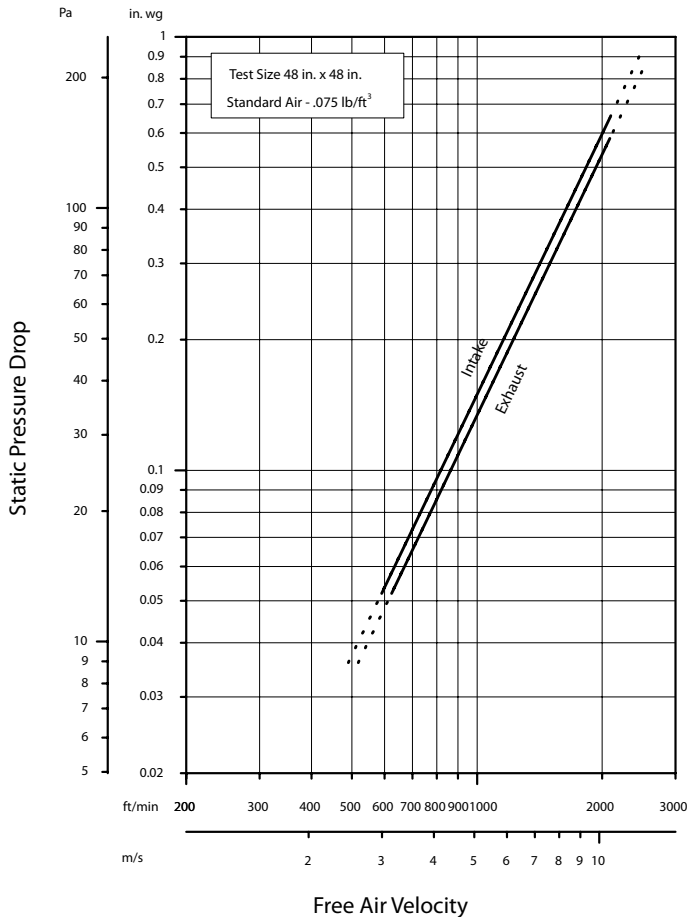
Free Area Chart shows free area in square feet and square meters.

Louver Height Inches (Meters)	Louver Width in Inches (Meters)																		
	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
0.30	0.30	0.46	0.61	0.76	0.91	1.07	1.22	1.37	1.52	1.68	1.83	1.98	2.13	2.29	2.44	2.59	2.74	2.90	3.05
12	0.19	0.32	0.44	0.57	0.69	0.82	0.94	1.04	1.16	1.29	1.41	1.54	1.66	1.79	1.91	2.01	2.13	2.26	2.38
0.30	0.02	0.03	0.04	0.05	0.06	0.08	0.09	0.10	0.11	0.12	0.13	0.14	0.15	0.17	0.18	0.19	0.20	0.21	0.22
18	0.48	0.80	1.11	1.42	1.74	2.05	2.36	2.60	2.91	3.22	3.54	3.85	4.16	4.48	4.79	5.02	5.34	5.65	5.96
0.46	0.04	0.07	0.10	0.13	0.16	0.19	0.22	0.24	0.27	0.30	0.33	0.36	0.39	0.42	0.45	0.47	0.50	0.52	0.55
24	0.77	1.27	1.77	2.27	2.77	3.27	3.76	4.14	4.64	5.14	5.64	6.14	6.63	7.13	7.63	8.01	8.51	9.01	9.50
0.61	0.07	0.12	0.16	0.21	0.26	0.30	0.35	0.38	0.43	0.48	0.52	0.57	0.62	0.66	0.71	0.74	0.79	0.84	0.88
30	1.05	1.73	2.41	3.09	3.77	4.45	5.13	5.64	6.32	7.01	7.69	8.37	9.05	9.73	10.41	10.92	11.60	12.28	12.96
0.76	0.10	0.16	0.22	0.29	0.35	0.41	0.48	0.52	0.59	0.65	0.71	0.78	0.84	0.90	0.97	1.01	1.08	1.14	1.20
36	1.35	2.22	3.09	3.97	4.84	5.71	6.59	7.24	8.11	8.99	9.86	10.73	11.61	12.48	13.35	14.01	14.88	15.76	16.63
0.91	0.13	0.21	0.29	0.37	0.45	0.53	0.61	0.67	0.75	0.84	0.92	1.00	1.08	1.16	1.24	1.30	1.38	1.46	1.54
42	1.62	2.67	3.71	4.76	5.81	6.86	7.91	8.69	9.74	10.79	11.84	12.89	13.94	14.99	16.03	16.82	17.87	18.92	19.97
1.07	0.15	0.25	0.34	0.44	0.54	0.64	0.73	0.81	0.90	1.00	1.10	1.20	1.30	1.39	1.49	1.56	1.66	1.76	1.86
48	1.92	3.17	4.42	5.67	6.91	8.16	9.41	10.34	11.59	12.84	14.09	15.33	16.58	17.83	19.08	20.01	21.26	22.51	23.75
1.22	0.18	0.29	0.41	0.53	0.64	0.76	0.87	0.96	1.08	1.19	1.31	1.42	1.54	1.66	1.77	1.86	1.98	2.09	2.21
54	2.18	3.60	5.02	6.44	7.85	9.27	10.69	11.75	13.17	14.58	16.00	17.42	18.83	20.25	21.67	22.73	24.15	25.56	26.98
1.37	0.20	0.33	0.47	0.60	0.73	0.86	0.99	1.09	1.22	1.35	1.49	1.62	1.75	1.88	2.01	2.11	2.24	2.37	2.51
60	2.49	4.10	5.71	7.32	8.94	10.55	12.16	13.37	14.98	16.59	18.21	19.82	21.43	23.04	24.66	25.87	27.48	29.09	30.70
1.52	0.23	0.38	0.53	0.68	0.83	0.98	1.13	1.24	1.39	1.54	1.69	1.84	1.99	2.14	2.29	2.40	2.55	2.70	2.85
66	2.75	4.53	6.32	8.10	9.88	11.67	13.45	14.79	16.57	18.36	20.14	21.92	23.71	25.49	27.27	28.61	30.40	32.18	33.96
1.68	0.26	0.42	0.59	0.75	0.92	1.08	1.25	1.37	1.54	1.71	1.87	2.04	2.20	2.37	2.53	2.66	2.82	2.99	3.15
72	3.05	5.03	7.01	8.99	10.97	12.95	14.93	16.41	18.39	20.37	22.35	24.33	26.31	28.29	30.27	31.75	33.73	35.71	37.69
1.83	0.28	0.47	0.65	0.84	1.02	1.20	1.39	1.52	1.71	1.89	2.08	2.26	2.44	2.63	2.81	2.95	3.13	3.32	3.50
78	3.31	5.46	7.61	9.76	11.91	14.06	16.21	17.83	19.98	22.13	24.28	26.43	28.58	30.73	32.88	34.49	36.64	38.79	40.94
1.98	0.31	0.51	0.71	0.91	1.11	1.31	1.51	1.66	1.86	2.06	2.26	2.46	2.66	2.85	3.05	3.20	3.40	3.60	3.80
84	3.62	5.96	8.31	10.66	13.00	15.35	17.69	19.45	21.80	24.15	26.49	28.84	31.19	33.53	35.88	37.64	39.98	42.33	44.68
2.13	0.34	0.55	0.77	0.99	1.21	1.43	1.64	1.81	2.03	2.24	2.46	2.68	2.90	3.12	3.33	3.50	3.71	3.93	4.15
90	3.88	6.40	8.91	11.43	13.95	16.46	18.98	20.87	23.38	25.90	28.42	30.93	33.45						
2.29	0.36	0.59	0.83	1.06	1.30	1.53	1.76	1.94	2.17	2.41	2.64	2.87	3.11						
96	4.18	6.90	9.61	12.32	15.04	17.75	20.46	22.50	25.21	27.92	30.64	33.35	36.06						
2.44	0.39	0.64	0.89	1.14	1.40	1.65	1.90	2.09	2.34	2.59	2.85	3.10	3.35						
102	4.44	7.33	10.21	13.09	15.98	18.86	21.74	23.90	26.79	29.67	32.55	35.44	38.32						
2.59	0.41	0.68	0.95	1.22	1.48	1.75	2.02	2.22	2.49	2.76	3.02	3.29	3.56						
108	4.75	7.83	10.91	13.99	17.07	20.15	23.23	25.54	28.62	31.70	34.78	37.86	40.94						
2.74	0.44	0.73	1.01	1.30	1.59	1.87	2.16	2.37	2.66	2.95	3.23	3.52	3.80						
114	5.01	8.26	11.51	14.76	18.01	21.26	24.51	26.95	30.20	33.45	36.70	39.95	43.20						
2.90	0.47	0.77	1.07	1.37	1.67	1.98	2.28	2.50	2.81	3.11	3.41	3.71	4.01						
120	5.31	8.76	12.21	15.66	19.10	22.55	26.00	28.58	32.03	35.48	38.92	42.37	45.82						
3.05	0.49	0.81	1.13	1.45	1.77	2.09	2.42	2.66	2.98	3.30	3.62	3.94	4.26						

Airflow Resistance

Standard Air - 0.075 lb/ft³ (1.2 kg/m³)

Test size 48 in. x 48 in. (1219 mm x 1219 mm)

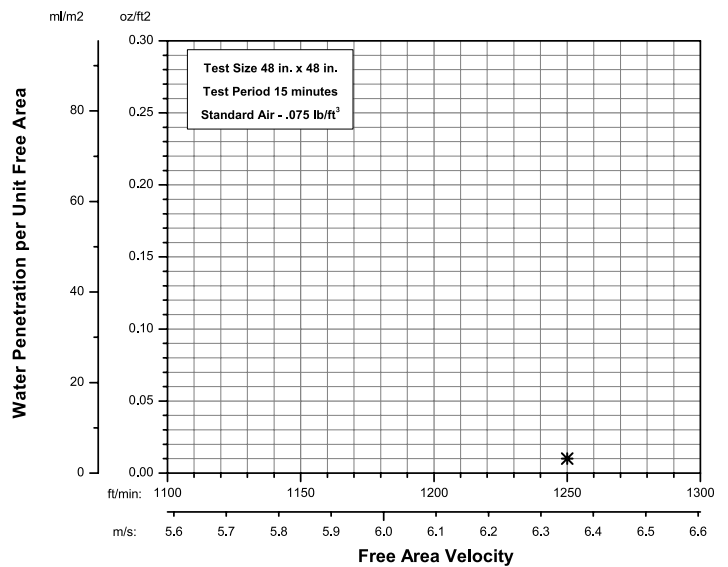


Model ESD-635 resistance to airflow (pressure drop) varies depending on louver application (air intake or air exhaust). Free area velocities (shown) are higher than average velocity through the overall louver size. See louver selection information. (Test Figure 5.5-6.5)

Water Penetration

Standard Air - 0.075 lb/ft³ (1.2 kg/m³)

Test size 48 in. x 48 in. (1219 mm x 1219 mm) Test duration of 15 min.



The AMCA Water Penetration Test provides a method for comparing various louver models and designs as to their efficiency in resisting the penetration of rainfall under specific laboratory test conditions. The beginning point of water penetration is defined as that velocity where the water penetration curve projects through 0.01 oz. (3 g) of water (penetration) per sq. ft. (m²) of louver free area. ***The beginning point of water penetration for Model ESD-635 is above 1250 fpm (6.350 m/s) free area velocity.** These performance ratings do not guarantee a louver to be weatherproof or stormproof and should be used in combination with other factors including good engineering judgement in selecting louvers.

SHERWIN-WILLIAMS 701810 04/08/21
586-757-7069 Order# 0202437

INTERIOR ARCHITECTURAL
PROMAR 200 ZERO VOC LATEX
LOW GLOSS EG-SHEL FM 8000XL

CLD 3673 1556
CUSTOM MANUAL MATCH

CCE*COLORANT	OZ	32	64	128
B1-Black	-	10	1	-
Y3-Deep Gold	-	8	1	1

ONE GALLON
B41W02651

EXTRA WHITE
650876220

DPC

P-4

Non Returnable Tinted Color

CAUTION: To assure consistent color, always order enough paint to complete the job and intermix all containers of the same color before application. Mixed colors may vary slightly from color strip or color chip.



0202437-004

SHERWIN-WILLIAMS 701810 04/08/21
586-757-7069 Order# 0202437

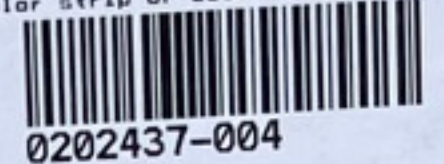
INTERIOR ARCHITECTURAL
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0202437-004



Pro Industrial™ Multi-Surface Acrylic Eg-Shel

B66-1560 Series



CHARACTERISTICS

Pro Industrial Multi-Surface Acrylic is a waterborne acrylic for interior and exterior use on marginally prepared metal or masonry surfaces. Features multiple sheens, fast dry, easy application and dry fall properties.

Features:

- Self-priming directly to multiple surfaces
- Excellent one-coat hide and stain blocking
- Abrasion resistant
- Optimized for spray application
- Good exterior color and gloss retention
- Dries fast and dry falls in 10-15 feet
- Suitable for use in USDA inspected facilities

For use on properly prepared:

Steel, Galvanized & Aluminum, Concrete and Masonry.

Finish: 10-20° @85°

Color: Most colors

Recommended Spreading Rate per coat:

Wet mils: 3.75-6.0

Dry mils: 1.5-2.3

Coverage: 271-416 sq.ft. per gallon

Theoretical Coverage: 625 sq. ft. per gallon @ 1 mil dry

Approximate spreading rates are calculated on volume solids and do not include any application loss.

Note: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 5.0 mils wet, @ 50% RH:

Drying, and recoat times are temperature, humidity, and film thickness dependent. Dry fall characteristics will be affected at temperatures below 77°F(25°C) or above 50% RH.

	@50°F	@77°F	@100°F
To touch	1 hour	30 minutes	15 minutes
To handle	2 hours	1 hour	30 minutes
To recoat	4 hours	2 hours	1hour
To dryfall	10-15 ft.	10 ft.	10 ft.

Tinting with CCE only:

Tinting will affect dryfall characteristics.

Base	oz. per gallon	Strength
Extra White	0-6	SherColor
Ultra Deep Base	10-14	SherColor

Extra White B66W01561
(may vary by color)

V.O.C. (less exempt solvents):

less than 50 grams per litre; 0.42 lbs. per gallon
As per 40 CFR 59.406

Volume Solids:	39 ± 2%
Weight Solids:	51 ± 2%
Weight per Gallon:	10.39 lb
Flash Point:	N/A
Vehicle Type:	Acrylic
Shelf Life:	24 months, unopened

COMPLIANCE

As of 11/18/2021, Complies with:

OTC	Yes
OTC Phase II	Yes
S.C.A.Q.M.D.	Yes
CARB	Yes
CARB SCM 2007	Yes
CARB SCM 2020	Yes
Canada	Yes
LEED® v4 & v4.1 Emissions	No
LEED® v4 & v4.1 V.O.C.	Yes
EPD-NSF® Certified	No
MIR-Manufacturer Inventory	No
MPI®	Yes

APPLICATION

Temperature:

minimum	50°F
maximum	100°F
air, surface, and material	
At least 5°F above dew point	

Relative humidity: 85% maximum

The following is a guide. Changes in pressures and tip sizes may be needed for proper spray characteristics. Always purge spray equipment before use with listed reducer. Any reduction must be compatible with the existing environmental and application conditions.

Reducer: Water

Airless Spray:

Pressure	2000 p.s.i.
Hose	1/4 inch I.D.
Tip	.013 - .017 inch
Filter	60 mesh

Conventional Spray:

Gun	Binks 95
Fluid Nozzle	63 C
Air Nozzle	63 FB
Atomization Pressure	60 p.s.i.
Fluid Pressure	50 p.s.i.
Reduction:	Not recommended

Brush Nylon-polyester

Roller Cover 1/4 inch woven

If specific application equipment is listed above, equivalent equipment may be substituted.

Apply paint at the recommended film thickness and spreading rate as indicated. Application of coating above maximum or below minimum recommended spreading rate may adversely affect coating performance.

When using spray application, use a 50% overlap with each pass of the gun to avoid holidays, bare areas, and pinholes. If necessary, cross spray at a right angle.

Overspray landing on hot surfaces may adhere to these surfaces. Immediately remove overspray from hot surfaces before adhesion occurs.

No painting should be done immediately after a rain or during foggy weather.

Do not paint on wet surfaces.

Check adhesion by applying a test strip to determine the readiness for painting.

SPECIFICATIONS

Steel*

2 coats Pro Industrial Multi-Surface Acrylic

Steel:

1 coat Pro Industrial Pro-Cryl Primer or Pro Industrial DTM Primer/Finish or Kem Bonds HS or Zinc Clad Primer
1-2 coats Pro Industrial Multi-Surface Acrylic

Aluminum:

1-2 coats Pro Industrial Multi-Surface Acrylic

Aluminum (Water Based Primer):

1 coat Pro Industrial Pro-Cryl Primer
1-2 coats Pro Industrial Multi-Surface Acrylic

Concrete Block (CMU):

1 coat Pro Industrial Heavy Duty Blockfiller or Loxon Acrylic Block Surfacers
1-2 coats Pro Industrial Multi-Surface Acrylic

Concrete/Masonry:

1 coat Loxon Concrete & Masonry Primer (if needed)
or Loxon Conditioner (if needed)
2 coats Pro Industrial Multi-Surface Acrylic

Drywall:

1 coat ProMar 200 Zero V.O.C. Primer
1-2 coats Pro Industrial Multi-Surface Acrylic

Galvanizing:

2 coats Pro Industrial Multi-Surface Acrylic

Pre-Finished Siding: (Baked-on finishes)

1 coat Bond-Plex Waterbased Acrylic or DTM Bonding Primer
1-2 coats Pro Industrial Multi-Surface Acrylic

Wood, exterior:

1 coat Exterior Wood Primer
1-2 coats Pro Industrial Multi-Surface Acrylic

Wood, interior:

1 coat Premium Wall & Wood Primer
1-2 coats Pro Industrial Multi-Surface Acrylic

*Primer recommended for best performance

Pro Industrial™

Multi-Surface Acrylic Eg-Shel

SURFACE PREPARATION

WARNING! Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at **1-800-424-LEAD** (in US) or contact your local health authority.

Do not use hydrocarbon solvents for cleaning.

Remove all surface contamination by washing with an appropriate cleaner, rinse thoroughly and allow to dry. Existing peeled or checked paint should be scraped and sanded to a sound surface. Glossy surfaces should be sanded dull. Stains from water, smoke, ink, pencil, grease, etc. should be sealed with the appropriate primer-sealer. Recognize that any surface preparation short of total removal of the old coating may compromise the service length of the system.

Iron & Steel - Minimum surface preparation is Hand Tool Clean per SSPC-SP2. Remove all oil and grease from surface per SSPC-SP1. For better performance, use Commercial Blast Cleaning per SSPC-SP6. Primer recommended for best performance

Aluminum - Remove all oil, grease, dirt, oxide and other foreign material per SSPC-SP1.

Galvanizing - Allow to weather a minimum of six months prior to coating. Solvent Clean per SSPC-SP1. When weathering is not possible, or the surface has been treated with chromates or silicates, first Solvent Clean per SSPC-SP1 and apply a test patch. Allow paint to dry at least one week before testing adhesion. If adhesion is poor, brush blasting per SSPC-SP16 is necessary to remove these treatments. Rusty galvanizing requires a minimum of Hand Tool Cleaning per SSPC-SP2, prime the area the same day as cleaned.

Concrete Block - Surface should be thoroughly clean and dry. Air, material and surface temperatures must be at least 55°F (13°C) before filling. Use Pro industrial Heavy Duty Block Filler or Loxon Acrylic Block Surfacer. The filler must be thoroughly dry before topcoating.

Masonry - All masonry must be free of dirt, oil, grease, loose paint, mortar, masonry dust, etc. Clean per SSPC-SP13/Nace 6/ ICRI No. 310.2R, CSP 1-3. Poured, troweled, or tilt-up concrete, plaster, mortar, etc. must be thoroughly cured at least 30 days at 75°F. Form release compounds and curing membranes must be removed by brush blasting. Brick must be allowed to weather for one year prior to surface preparation and painting. Prime the area the same day as cleaned. Weathered masonry and soft or porous cement board must be brush blasted or power tool cleaned to remove loosely adhering contamination and to get to a hard, firm surface. Apply one coat Loxon Conditioner, following label recommendations.

Wood - Surface must be clean, dry, and sound. Prime with recommended primer. No painting should be done immediately after a rain or during foggy weather. Knots and pitch streaks must be scraped, sanded and spot primed before full coat of primer is applied. All nail holes or small openings must be properly caulked. Sand to remove any loose or deteriorated surface wood and to obtain a proper surface profile.

SURFACE PREPARATION

Previously Painted Surface - If in sound condition, clean the surface of all foreign material. Smooth, hard or glossy coatings and surfaces should be dulled by abrading the surface. Apply a test area, allowing paint to dry one week before testing adhesion. If adhesion is poor, additional abrasion of the surface and/or removal of the previous coating may be necessary. Retest surface for adhesion. If paint is peeling or badly weathered, clean surface to sound substrate and treat as a new surface as above. Recognize that any surface preparation short of total removal of the old coating may compromise the service length of the system.

Mildew- Prior to attempting to remove mildew, it is always recommended to test any cleaner on a small, inconspicuous area prior to use. Bleach and bleaching type cleaners may damage or discolor existing paint films. Bleach alternative cleaning solutions may be advised.

Mildew may be removed before painting by washing with a solution of 1 part liquid bleach and 3 parts water. Apply the solution and scrub the mildewed area. Allow the solution to remain on the surface for 10 minutes. Rinse thoroughly with water and allow the surface to dry before painting. Wear protective eyewear, waterproof gloves, and protective clothing. Quickly wash off any of the mixture that comes in contact with your skin. Do not add detergents or ammonia to the bleach/water solution.

PERFORMANCE

System Tested: (unless otherwise indicated)

Substrate: Steel
Surface Preparation: SSPC-SP10
Finish: 2 coats Pro Industrial Multi-Surface Acrylic B66W01561, 2.5 DFT per coat

Adhesion:
Method: ASTM D4541
Result: 1212 p.s.i.

Abrasion Resistance:
Method: ASTM D4060, CS17 wheel, 1000 cycles, 1000 mg load
Result: 65.5 mg loss

Corrosion Weathering*:
Method: ASTM D5894, 5 cycles
Result: Rating 10, per ASTM D714 for Blistering. Rating 7 per ASTM D1654 for corrosion

Direct Impact Resistance:
Method: ASTM D2794
Result: 28 inch lb.

Dry Heat Resistance:
Method: ASTM D2485
Result: 300°F

Flexibility:
Method: ASTM D522, 1/8 inch mandrel
Result: Pass

Pencil Hardness: 30 days
Method: ASTM D3363
Result: H

Water Vapor Permeance (US) : 22.74 Perms
Method: ASTM D1653 grains/(hr ft² in Hg

*over Pro Industrial Pro-Cryl Primer

SAFETY PRECAUTIONS

Before using, carefully read **CAUTIONS** on label. Refer to the Safety Data Sheets (SDS) before use.

FOR PROFESSIONAL USE ONLY.

Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.

CLEANUP INFORMATION

Clean spills, spatters, hands and tools immediately after use with soap and warm water. After cleaning, flush spray equipment with compliant cleanup solvent to prevent rusting of the equipment. Follow manufacturer's safety recommendations when using solvents.

HOTW 11/18/2021 B66W01561 13 44
FRC


SAFETY DATA SHEET

B66T1564

Section 1. Identification

Product name	: PRO INDUSTRIAL™ Multi-Surface Acrylic Eg-Shel Coating Ultradeep Base
Product code	: B66T1564
Other means of identification	: Not available.
Product type	: Liquid.
<u>Relevant identified uses of the substance or mixture and uses advised against</u>	
Paint or paint related material.	
Manufacturer	: THE SHERWIN-WILLIAMS COMPANY 101 W. Prospect Avenue Cleveland, OH 44115
Emergency telephone number of the company	: US / Canada: (800) 424-9300 Mexico: SETIQ 800-00-214-00 / 55-5559-1588 Available 24 hours and 365 days a year
Product Information Telephone Number	: US / Canada: (800) 524-5979 Mexico: Not Available
Regulatory Information Telephone Number	: US / Canada: (216) 566-2902 Mexico: Not Available
Transportation Emergency Telephone Number	: US / Canada: (800) 424-9300 Mexico: SETIQ 800-00-214-00 / 55-5559-1588 Available 24 hours and 365 days a year

Section 2. Hazards identification

OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture	: SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 1.2%
<u>GHS label elements</u>	
Hazard pictograms	: 
Signal word	: Warning
Hazard statements	: May cause damage to organs through prolonged or repeated exposure.
<u>Precautionary statements</u>	
Prevention	: Do not breathe vapor.
Response	: Get medical advice or attention if you feel unwell.
Storage	: Not applicable.

Date of issue/Date of revision	: 2/22/2023	Date of previous issue	: 11/24/2022	Version	: 16.01	1/12
B66T1564	PRO INDUSTRIAL™ Multi-Surface Acrylic Eg-Shel Coating Ultradeep Base			SHW-85-NA-GHS-US		

Section 2. Hazards identification

- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Supplemental label elements** : WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY.
This product contains a Significant New Use Rule (SNUR) Chemical. Do not allow this product to enter drains, sewers, wastewater treatment systems, groundwater, streams, lakes or ponds. See Environmental Data Sheet (EDS) for additional details.
Please refer to the SDS for additional information. Keep out of reach of children. Do not transfer contents to other containers for storage.
- Hazards not otherwise classified** : None known.

Section 3. Composition/information on ingredients

- Substance/mixture** : Mixture
- Other means of identification** : Not available.
- CAS number/other identifiers**

Ingredient name	% by weight	CAS number
Amorphous Silica	≤3	7631-86-9
2-(2-Butoxyethoxy)-ethanol	≤3	112-34-5

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention following exposure or if feeling unwell. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention following exposure or if feeling unwell. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Section 4. First aid measures

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Section 6. Accidental release measures

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : **This product contains a Significant New Use Rule (SNUR) Chemical. Do not allow this product to enter drains, sewers, wastewater treatment systems, groundwater, streams, lakes or ponds. See Environmental Data Sheet (EDS) for additional details.**

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits (OSHA United States)

Ingredient name	CAS #	Exposure limits
Amorphous Silica	7631-86-9	NIOSH REL (United States, 10/2020). [SILICA, AMORPHOUS] TWA: 6 mg/m ³ 10 hours.
2-(2-Butoxyethoxy)-ethanol	112-34-5	ACGIH TLV (United States, 1/2022). TWA: 10 ppm 8 hours. Form: Inhalable fraction and vapor

Occupational exposure limits (Canada)

Ingredient name	CAS #	Exposure limits
Diethylene glycol monobutyl ether	112-34-5	CA Ontario Provincial (Canada, 6/2019). TWA: 10 ppm 8 hours. Form: Inhalable fraction and vapour.

Occupational exposure limits (Mexico)

Ingredient name	CAS #	Exposure limits
2-(2-butoxyethoxy)ethanol	112-34-5	ACGIH TLV (United States, 1/2022). TWA: 10 ppm 8 hours. Form: Inhalable fraction and vapor

Appropriate engineering controls

: If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls

: **This product contains a Significant New Use Rule (SNUR) Chemical. Do not allow this product to enter drains, sewers, wastewater treatment systems, groundwater, streams, lakes or ponds. See Environmental Data Sheet (EDS) for additional details.**

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Section 8. Exposure controls/personal protection

- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

- Physical state** : Liquid.
- Color** : Not available.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : 9.1
- Melting point/freezing point** : Not available.
- Boiling point, initial boiling point, and boiling range** : 100°C (212°F)
- Flash point** : Closed cup: Not applicable.
- Evaporation rate** : 0.09 (butyl acetate = 1)
- Flammability** : Not available.
- Lower and upper explosion limit/flammability limit** : Lower: 0.9%
Upper: 5.9%
- Vapor pressure** : 2.3 kPa (17.5 mm Hg)
- Relative vapor density** : 1 [Air = 1]
- Relative density** : 1.04
- Solubility(ies)** :

Media	Result
cold water	Partially soluble

- Partition coefficient: n-octanol/water** : Not applicable.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Kinematic (40°C (104°F)): >20.5 mm²/s (>20.5 cSt)
- Molecular weight** : Not applicable.
- Aerosol product**
- Heat of combustion** : 0.762 kJ/g

Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : No specific data.
- Incompatible materials** : No specific data.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
2-(2-Butoxyethoxy)-ethanol	LD50 Dermal	Rabbit	2700 mg/kg	-
	LD50 Oral	Rat	4500 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Amorphous Silica	Eyes - Mild irritant	Rabbit	-	24 hours 25 mg	-
2-(2-Butoxyethoxy)-ethanol	Eyes - Moderate irritant	Rabbit	-	24 hours 20 mg	-
	Eyes - Severe irritant	Rabbit	-	20 mg	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Amorphous Silica	-	3	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
2-(2-Butoxyethoxy)-ethanol	Category 3	-	Respiratory tract irritation Narcotic effects
	Category 3		

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
2-(2-Butoxyethoxy)-ethanol	Category 2	-	-

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Potential chronic health effects

Not available.

- General** : May cause damage to organs through prolonged or repeated exposure.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.

Numerical measures of toxicity

Section 11. Toxicological information

Acute toxicity estimates

Route	ATE value
Oral	390753.62 mg/kg
Dermal	234452.17 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Amorphous Silica	Acute EC50 2.2 g/L Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Chronic NOEC 12.5 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	21 days
2-(2-Butoxyethoxy)-ethanol	Acute LC50 1300000 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
2-(2-Butoxyethoxy)-ethanol	-	-	Readily

Bioaccumulative potential

Not available.

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : This product contains a Significant New Use Rule (SNUR) Chemical. Do not allow this product to enter drains, sewers, wastewater treatment systems, groundwater, streams, lakes or ponds. See Environmental Data Sheet (EDS) for additional details.

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 15. Regulatory information

International lists :

- Australia inventory (AIIIC):** Not determined.
- China inventory (IECSC):** Not determined.
- Japan inventory (CSCL):** Not determined.
- Japan inventory (ISHL):** Not determined.
- Korea inventory (KECI):** Not determined.
- New Zealand Inventory of Chemicals (NZIoC):** Not determined.
- Philippines inventory (PICCS):** Not determined.
- Taiwan Chemical Substances Inventory (TCSI):** Not determined.
- Thailand inventory:** Not determined.
- Turkey inventory:** Not determined.
- Vietnam inventory:** Not determined.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		0
Physical hazards		0

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

Procedure used to derive the classification

Classification	Justification
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	Calculation method

History

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Key to abbreviations :

- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- N/A = Not available
- SGG = Segregation Group
- UN = United Nations

📌 Indicates information that has changed from previously issued version.

Notice to reader

Section 16. Other information

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by the manufacturer, including but not limited to the incorporation of products not specified by the manufacturer, or the use or addition of products in proportions not specified by the manufacturer. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.