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|--|--------------------------------------|---|---------------------------------|----------------------------|----------|
|  | | HISTORIC PRESERVATION COMMISSION AGENDA ITEM EXECUTIVE SUMMARY | | | |
| | | Agenda Item Title/Address: | COA: 200 N. 2 nd St. | | |
| | | Proposal: | Windows | | |
| | | Petitioner: | Mary Morgan | | |
| Please check appropriate box (x) | | | | | |
| | | PUBLIC HEARING | | MEETING 12/7/16 | X |
| AGENDA ITEM CATEGORY: | | | | | |
| X | Certificate of Appropriateness (COA) | | Façade Improvement Plan | | |
| | Preliminary Review | | Landmark/District Designation | | |
| | Discussion Item | | Commission Business | | |
| ATTACHMENTS: | | | | | |
| Proposed window | | Photos of existing windows | | | |
| | | | | | |
| EXECUTIVE SUMMARY: | | | | | |
| Proposed is replacement of the Carroll Tower windows with double-hung, aluminum windows. | | | | | |
| RECOMMENDATION / SUGGESTED ACTION: | | | | | |
| Provide feedback and recommendations on approval of the COA. | | | | | |

NOTICE OF PRODUCT CERTIFICATION



CERTIFICATION NO: NI011073.01-R2
DATE: 04/25/2012
CERTIFICATION PROGRAM: Structural
COMPANY: Quaker
CODE: 031-1
REVISION DATE: 09/10/2015

To verify that the "Notice of Product Certification" is valid, please visit www.NAMICertification.com to assure that the product is active and currently listed. This certification represents product conformity to the applicable specification and that certification criteria has been satisfied. A NAMI approved certification label must be applied to the product to claim certification status. Please review and advise NAMI if any corrections are required to this document.

| COMPANY NAME AND ADDRESS | PRODUCT DESCRIPTION |
|---|--|
| Quaker Window Products 504 Highway 63 South Freeburg, MO 65035 | Series "E500" Thermally-Broken Aluminum Double Hung Window Configuration: XX Glazing: Insulating Glass (Annealed) Frame: W-1524mm(60") H-2514mm(99") Sash: W-1448mm(57") H-1264mm(49.75") |

| SPECIFICATION | PRODUCT RATING |
|--|--|
| AAMA/WDMA/CSA 101/I.S.2/A440-08 | Class AW-PG40 1524 x 2514 (60 x 99)-H |

Product Tested By: Architectural Testing, Inc.
Report No: B4859.01-801-47
Expiration Date: November 30, 2025

Administrator's Signature: _____


NATIONAL ACCREDITATION AND MANAGEMENT INSTITUTE, INC.

4794 George Washington Memorial Highway
Hayes, VA 23072
Tel: (804) 684-5124
Fax: (804) 684-5122



E500 SERIES
DOUBLE HUNG (DOUBLE TILT)(AW40)
3 1/4 " FRAME DEPTH

FEATURES

1.) Available Configurations

- Double hung (double tilt)

2.) Main frame / Sash

- Double fin-type weatherstripping
- Drop-in marine glazing
- Stainless steel pivot bars
- Integral full width lift handles
- Header expander
- Sill angle
- Limited sash travel (optional)
- Thermal break in frame and sash

3.) Commercial Framing System

- 3 1/4" frame depth
- 0.062" wall thickness of metal (frame)
- 0.062" wall thickness of metal (sash)

4.) Type of hardware

- Wide variety of locking and operating hardware options
- Block and tackle balancers

5.) Performance

- Structural & Thermal (Test reports available upon request)

6.) Glazing

- 1" drop-in glazed insulated
- Capillary tubes (optional)
- Argon gas (optional)
- Wide variety of glazing, tinting and thickness options

7.) Muntin choices

- Internal or simulated divided lites available

8.) Finish

- Baked on powder coat finish meets ANSA/AAMA 2605 specs and provided in black finish

9.) Screen choices

- Aluminum, stainless steel, fiberglass, or solar screen mesh

10.) Panning & Trim choices

- Wide variety of panning, receptor and trim available

11.) Specialty

- Attached exterior storm window



| | |
|-----------------------------|---|
| MODEL | Double hung |
| SERIES | Emerge E500 Series |
| CLASS | AW40 |
| OPERATION | <div style="border: 1px solid black; padding: 5px; display: inline-block;"> <div style="text-align: center;">↓</div> <hr style="border: 0; border-top: 1px solid black; margin: 2px 0;"/> <div style="text-align: center;">↑</div> </div> |
| MAXIMUM SIZE | AAMA structural test size is 5' x 8'-3"(AW40) minimum. |
| GLAZING THICKNESS | 1" insulated glass |
| MULLING | Mulls to fixed and operable units with 3 1/4" frame depth(Emerge) |
| FINISHES | Baked-on powder coat finish that meets 2604 specs. Anodic finishes, custom colors, 2605 finishes available. |
| MUNTINS | Between the glass(dust-free) or simulated divided lites. |
| SCREENS | Full screen with extruded aluminum frame and wire mesh cloth, optional stainless steel screen. |
| OPERATING FORCE(LBS) | 44 lbf (maintain motion) |
| CURVED SHAPES | Various geometric shapes available. |

PERFORMANCE

The performance numbers listed below represent independent laboratory test on Quaker Windows at the time of publication. Please contact Quaker Window for the most recent performance data.

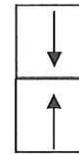
| Model | NWWDA Rating I.S. 2-97 | Structural Load P.S.F. | Air At 50 MPH (cfm/ft ²) | Water (No Penetration) PSF | CRF Condensation Resistance Factor | U-value | SHGC |
|-------------|---------------------------|------------------------------|--|----------------------------------|--|---------|------|
| Double Hung | AW40 | 60.15 | .22 | 8.15 | | 0.41 | 0.26 |

STC Rating: NA (Contact Quaker Window for glazing options and optional STC Ratings)

NOTE: Numbers listed are subject to change

:U value tests were conducted with Low-E and Argon.

*Lower U-values (0.35) can be achieved using "Energy Package"



QUAKER WINDOW PRODUCTS CO, INC.

EMERGE E500 SERIES

DOUBLE HUNG (AW40)

(Tilt) (3 1/4" Frame Depth)

Quaker Window Products reserves the right to change any and all designs without notice. Due to periodic re-certification requirements, results shown may vary slightly.

PART 1 - GENERAL

1.01 TESTING AND PERFORMANCE REQUIREMENTS

A. Specific Performance Requirements:

Windows shall conform to specified AAMA/WDMA/CSA 101/I.S.2/A440-08 **AW40** requirements at a minimum test size of 5'x 8'-3" (1" I.G.-3/16" panes) and following, whichever are the more stringent:

1. **Air Infiltration Test:** With the sash in a closed and locked position, the window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration shall not exceed **(0.22 cfm/ft²)**.

2. **Water Resistance Test:** The glazed unit shall be mounted in its vertical position continuously supported around perimeter and the sash placed in the fully closed and locked position. The window unit shall be subjected to a water resistance test in accordance with ASTM E 331 and ASTM E 547, using a static pressure of **8.15 psf** with no uncontrolled water leakage.

Testing shall be performed on windows both with and without an available insect screen.

3. **Uniform Load Structural Test:** Per ASTM E 330. At the conclusion of tests, there shall be no glass breakage, permanent damage of fasteners, hardware parts or any other damage causing the window to be inoperable at **60.15 psf**.

4. **Operating Force:** Each movable panel shall operate in either direction with a force of **44 lbf** to maintain motion.

1.02 QUALITY ASSURANCE

A. Standards: Except as otherwise indicated, requirements for aluminum windows, terminology and standards of performance and fabrication workmanship are those specified and recommended in ANSI/AAMA 101 and applicable general

recommendations published by AAMA and the NWWDA.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Aluminum Extrusions: All extruded sections shall be of 6063-T6 aluminum. Alloy and temper recommended by window manufacturer for strength, corrosion resistance, and application of required finish, but no less than 22,000 psi ultimate tensile strength, a yield of 16,000 psi. Comply with ASTM B 221.

B. Hardware: Hardware having component parts which are exposed shall be of aluminum, stainless steel, or other non-corrosive materials compatible with aluminum. Cadmium or zinc-plated steel where used must be in accordance with ASTM Specification A 165 or A 164.

1. Primary sash locks: All primary locking devices shall be cast. No plastic will be permitted.

C. Balances: Block & Tackle conforming to AAMA 902 and of appropriate size and capacity to hold operable sash stationary in any open position shall be used. Sash balances shall be easily accessible and replaceable in the field without the use of special tools.

D. Weatherstripping: Provide double weatherstripping using silicone-coated woven pile with polypropylene fin center where specified with AAMA 701.

E. Glass:

1. All glazing shall be glazed at the factory as follows:

a) All units shall be constructed to an overall minimum thickness of 7/8" with two lites of DSB (1/8"), 3/16" or 1/4" (as size and loading requires)

2. Glazing Options: Optional glazing such as tinted, laminated, tempered, reflective, low-E, argon-filled and others are available upon request.

F. Thermal Break: The thermal barrier shall provide a continuous uninterrupted thermal break around the entire perimeter of the frame and all panels and shall not be bridged by any metal conductors.

2.02 FABRICATION

A. Window Members: All window members, including grille bars, shall be of aluminum. (Unless Indicated Otherwise).

1. All aluminum main frame extrusions shall have a minimum wall thickness of 0.062.
2. Depth of frame and sash shall not be less than 3 1/4".

B. Assembly: The windows shall be assembled in a secure and workmanlike manner to perform as hereinafter specified. All joints of the main frame and the sash shall be butt type, coped and joined neatly and secured by means of screws anchored in integral ports. The main frame at the sill and head shall be sealed on the underside with a narrow joint sealant meeting AAMA 803.3 specification for Narrow Joint Sealants.

C. Sash Construction: The sash shall be of butt construction mechanically joined so that they may be easily repaired. The meeting rails of the top and bottom sash shall interlock in the closed position. The meeting rail interlock shall consist of two separate and distinct metal interlocks containing fin seal weatherstripping as an integral part of both metal interlocks.

D. Finishes

Organic Coating: Baked-on powder coat finish that meets ANSA/AAMA 2604.

1. Other finishes available upon request

E. Glazing

1. Units shall be "drop glazed" with a snap-in aluminum extruded glazing bead and a rubber wedge on the interior glass. The exterior is bead glazed with a hotmelt type backbedding.

F. Screens

1. Screens frames shall be extruded aluminum
2. Screen mesh shall be (aluminum or fiberglass)

PART 3 - EXECUTION:

3.01 INSTALLATION:

A. Comply with manufacturer's specifications and recommendations for installation of window units, hardware, operators and other components of work. In no case shall attachment to existing structure or to components of the window system be through or abridge the thermal barriers of the replacement windows.

B. Set units plumb, level and true to line, without warp or rack of frames or sash. Anchor securely in place. Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic

action. Windows must be securely blocked and fastened.

C. Wedge insulation between frames of new windows and construction to remain, or between frames and new blocking as applicable. Compress fiberglass to not less than 50 percent of original thickness.

D. Set sill members and other members in bed of compound as shown, or with joint filler or gaskets as shown, to provide weathertight construction. Seal units following installation and as required to provide a weathertight system.

E. Fasteners: Aluminum, stainless steel, or other materials warranted by manufacturer to be non-corrosive and compatible with aluminum window members, hardware and other components of the windows.

3.02 OPERATION AND MAINTENANCE:

A. Adjust operating sash and hardware to provide tight fit at contact points and at weatherstripping. Adjust also for smooth operation and a weathertight closure.

B. Clean aluminum surfaces promptly after installation of windows, exercising care to avoid damage to the finish. Remove excess glazing and sealant compound, dirt and other substances.

1. Lubricate hardware and moving parts

2. For frame and sash cleaning, use a common window cleaner or mild detergent solution with a regular cloth. After cleaning, be sure to thoroughly rinse all surfaces with clean water to remove any detergent residue.

C. Clean glass promptly after installation of windows. Remove glazing and sealant compound, dirt and other substances.

1. Use a common window cleaner with a lint-free cloth or chamois.

2. Do Not Use:

a) Caustic or abrasive cleaner or any silicon-based solvents on the frame or sash surfaces, as they may damage or discolor the finish

b) Petroleum-based lubricants as they may discolor the finish

c) Insecticides (bug spray) on or near window surface. Contact of insecticides with the finish could damage or discolor the window surface.

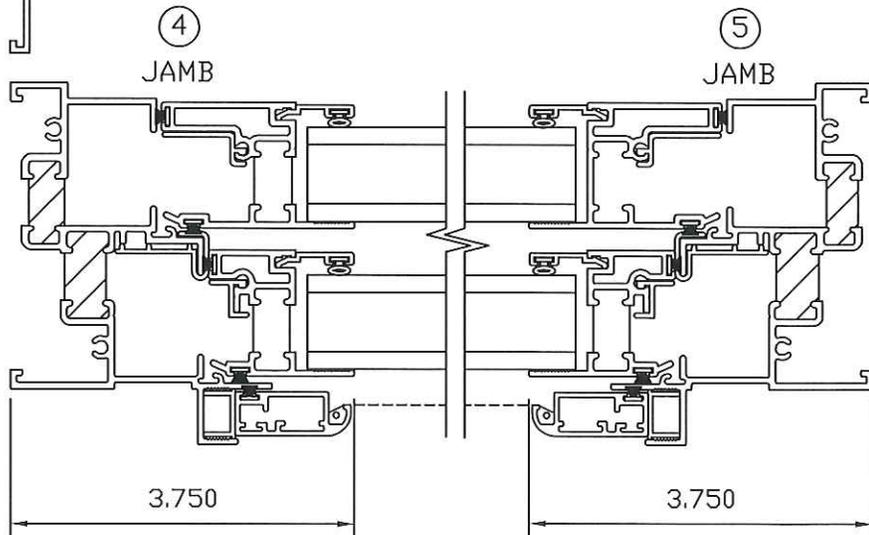
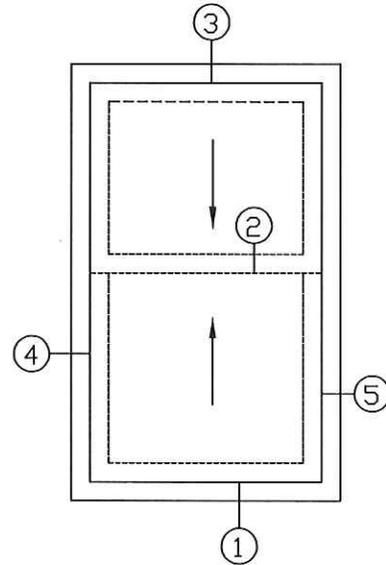
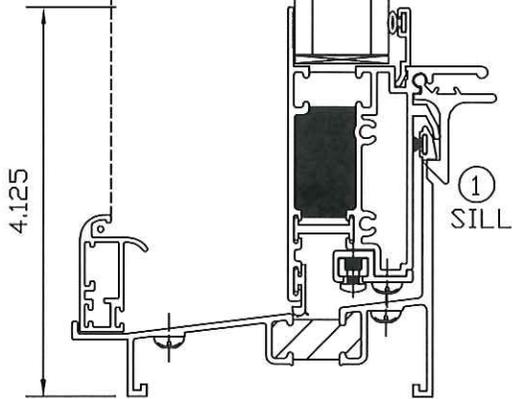
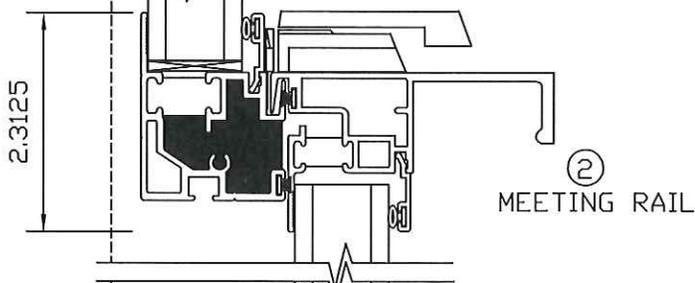
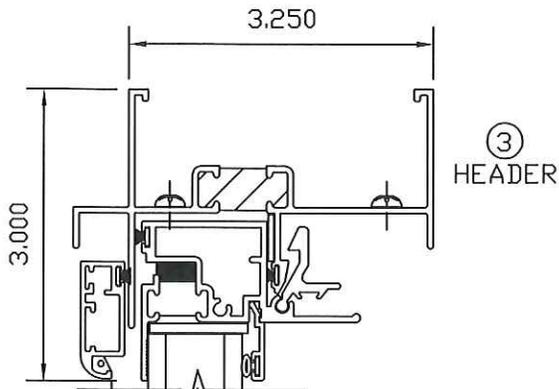
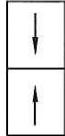
D. Initiate all protection and other precautions required to ensure that window units will be without damage or deterioration at time of acceptance.



(telephone) 573-744-5211
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EMERGE E500 DOUBLE HUNG

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