



Office of Facilities and Planning
821 LaFayette St.
Collier Physical Plant
Jefferson City, MO 65101
573-681-5887

Request for Proposals

RICHARDSON FINE ARTS CENTER WINDOW REPLACEMENT LINCOLN UNIVERSITY

**710 E. Dunklin Street
Jefferson City, Missouri 65101**

Lincoln's Project No: LU25009

August 21, 2025

PROJECT MANUAL
and
SPECIFICATIONS

**RICHARDSON FINE ARTS CENTER WINDOW REPLACEMENT
LINCOLN UNIVERSITY**

**710 E. Dunklin Street
Jefferson City, Missouri 65101**

Lincoln's Project No: LU25009

Owner:

Lincoln University
820 Chestnut St., Young Hall
Jefferson City, MO 65101

Prepared by Lincoln University:

Facilities & Planning
Collier Physical Plant
821 LaFayette St.
Jefferson City, Missouri 65101
Telephone: (573) 681-5887

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NOTICE TO CONTRACTORS

Accepting Sealed bids for:

Lincoln University – RICHARDSON FINE ARTS CENTER WINDOW REPLACEMENT – LU25009

**LINCOLN UNIVERSITY
JEFFERSON CITY, MISSOURI 65101**

Lincoln University will be accepting bids until 2:00 p.m., Friday, September 12, 2025. (Bid drop off location at the bottom)

Plans and specifications for the project may be requested after Friday, August 29, 2025, from the Office of Facilities and Planning. lufacilitiesplanning@lincolnu.edu (573) 681-5887.

A Pre-bid walkthrough for the project will be conducted on Friday, September 5, 2025, at 10:00 am. in **located at Richardson Fine Arts Center at 710 E. Dunklin Street Jefferson City, MO.**

Attendance at the Pre-bid conference for instruction is mandatory of each bidder submitting a proposal.

Attn: Landyn Smith
Lincoln University
Facilities & Planning
Shipping, Receiving, Supply
1002 Chestnut St.
Jefferson City, MO 65101

SCOPE OF WORK

Lincoln University is seeking proposals from qualified contractors to remove and replace all existing windows in the Richardson Fine Arts Center. This project includes all labor, materials, equipment, and services necessary to complete the work in accordance with industry standards and university requirements.

Please refer to Appendix A for the job site photos for this project

Contractor Scope of Work

1. Site Preparation

- Conduct a full inspection of existing window conditions prior to removal.
- Protect interior finishes, furnishings, and adjacent building systems during work.
- Remove and properly dispose of existing windows, frames, caulking, and related materials in compliance with environmental regulations.
- Repair any damaged substrate surfaces as required to accommodate new installations.

2. Window Replacement Work

- Furnish and install new energy-efficient, double-pane, low-E [specify type: aluminum-clad, vinyl, or thermally broken aluminum] windows as approved by the University.
- Provide all necessary flashing, sealants, insulation, shims, and anchors to ensure watertight, airtight, and structurally sound installations.
- Install interior and exterior trim as required for a complete and finished appearance.

3. Finishing and Detailing

- Clean all window glass, frames, and surrounding areas upon completion.
- Touch up finishes and restore disturbed areas impacted by installation.
- Verify uniform appearance across all window systems.

4. Timeline

- Project must be completed within the Fall semester of 2025.
- Work must commence no later than **September 15, 2025** and be substantially complete by **December 31, 2025**.
- Contractor must submit a detailed project schedule outlining mobilization, demolition, installation, and final punch list.

5. Site Cleanup and Safety

- Maintain a safe and secure work environment at all times.
- Implement fall protection and follow all OSHA and university safety standards.
- Remove all construction debris from the site daily.

Projected Timeline

- **RFP Issued:** August 29, 2025
- **Proposal Submission Deadline:** September 12, 2025
- **Proposal Evaluation and Selection:** September 12, 2025
- **Notice of Award:** September 15, 2025
- **Project Start Date:** September 15, 2025
- **Completion Date:** December 31, 2025

Scope of Work

PROPOSAL FORM

From: _____

Hereinafter called the "**Bidder**"

TO: Lincoln University
820 Chestnut Street, RM 309B Young Hall
Jefferson City, Missouri 65101

Hereinafter called the "**Owner**"

FOR: Richardson Fine Arts Center Window Replacement - LU25009
Lincoln University
710 E. Dunklin St.
Jefferson City, MO

Hereinafter called the "**Work**"

1. The undersigned, having examined and being familiar with the local conditions affecting the work and with the contract documents including the drawings, the Notice to Contractors, Instructions to Bidders, Statement of Bidder's Qualifications, General Conditions, Special Conditions and the body of technical specifications, including

Addenda number _____ through _____ inclusive,

As issued, by Lincoln University, Office of Facilities and Planning in Jefferson City, Missouri hereby proposes to furnish all labor, materials, equipment, services, etc. required for the performance and completion of the work, as follows:

2. In submitting this bid, it is understood that the right is reserved by Lincoln University to reject any and all bids and it is agreed that the bids may not be withdrawn for a period of 150 days from the specified time for receiving bids.
3. Accompanying this bid is a certified check or cashier's check in the amount of _____ Dollars (\$_____) or a 5% bid bond payable without condition to Lincoln University, State of Missouri, which it is agreed shall be retained as liquidated damages for the delay and extra expense caused Lincoln University if the undersigned fails to execute the contract and furnish the Performance/Payment bond required by the contract documents.
4. The Bidder agrees to complete the work required within 120 consecutive Calendar days from the date on which he receives a written "Notice to Proceed", and Further agrees to pay to, or allow Lincoln University as liquidated damages the sum of \$1000 Dollars for each calendar day thereafter, Sundays and holidays accepted that the work remains complete.
5. The Bidder agrees to pay not less than the hourly rate of wages as determined by the Department of Labor and Industrial Relations, State of Missouri, in accordance with Section 290.210 to 290.340 as amended RSMo 1978 Annual Wage Order 31.
6. The Bidder hereby certifies that all business and/or individuals employed on this Project are enrolled in the Federal Work Authorization Program as required by RSMo 285.525 and 285.530 and shall submit the Affidavit of Work Authorization along with this bid as discussed in the specifications.
7. The Bidder hereby certifies that the following subcontractors will be used in the Performance of the work
- | Name and Address of Subcontractor | Work to be performed (if none, so state) |
|-----------------------------------|--|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
8. The Bidder hereby certifies:

That this proposal is genuine and is not made in the Interest of or on behalf of any undisclosed person, firm or corporation, and is not submitted in conformity with any agreement or rules of any group, association or corporation.

That they have not directly or indirectly induced or solicited any other bidder
To put in a false or sham proposal:

That they have not solicited or induced any person, firm or corporation to refrain from bidding:

That they have not sought by collusion or otherwise to obtain for themselves and advantage over any other bidder or over the Owner: and

That they will not discriminate against any employee or application for employment because of race, creed, color or national origin in connection with the performance of the work.

Dated this _____ day of _____, 20_____

IF AN INDIVIDUAL / PARTNERSHIP / CORPORATION

Name of Firm / Partnership / Corporation

Individual / Partner / Name and Title of Officer

Signature

Additional Partner

Address of Communications

(Each bidder must complete the Proposal Form by signing on the proper signature line above and by supplying the required information called for in connection with the signature.)

Sealed bids will be received at the Office of Facilities and Planning, Lincoln University, 820 Chestnut Street, Room 309B Young Hall, Jefferson City, MO 65101.

Bids will be opened at the Time and Date specified on the first page of the Proposal Form.

BID SHEET:

BID SHEET:

Base Bid

The undersigned proposes to furnish all labor, materials, equipment, and services necessary for the removal and replacement of all windows at Richardson Fine Arts Center in accordance with the RFP and project specifications.

Total Base Bid \$ _____

(Written: _____)

Alternates

Alternate 1: Provide a cost to replace all of the window Blinds (cordless)

○ Add \$ _____ / Deduct \$ _____

Schedule

Anticipated Start Date: _____

Estimated Completion Date: _____

Warranty

Manufacturer Warranty: _____ years

Installer Warranty: _____ years

Certification

The undersigned certifies that they have examined the site, reviewed the RFP, and agree to furnish all required work for the prices stated above.

Authorized Signature: _____

Printed Name / Title: _____

Date: _____

LU CONTRACTOR'S QUALIFICATIONS

Name of Firm

Address with Zip Code

Date

Area Code and Telephone/Fax

Corporation or Partnership or Individual

CONSTRUCTION CAPABILITIES:

General roadway construction, parking lot paving and striping Other _____

FOR CORPORATION ONLY

Federal I.D. Number _____

Date of incorporation

Name of State(s) in which incorporated.

If not incorporated in Missouri, give Certificate of Authority to do business in Missouri.

Certificate No. _____ Date _____.

President's Name

Vice President's Name

Secretary's Name

Treasurer's name

FOR PARTNERSHIP ONLY

Is the Partnership: General Limited Association

Date of Organization: _____

Names and addresses of all partners with zip codes.

GENERAL INFORMATION

Federal I.D. Number _____

or Social Security Number _____

Percent (%) of work done by own staff

No. of permanent employees.

Geographical limits of operation

No. years in business

If you have done business under different name, please give name and location.

Has firm ever failed to complete project or default on a contract?

If so, state where and why. _____

Has firm ever been engaged in litigation over any contract?

If so, explain. _____

WORK HISTORY

LIST OF PROJECTS CURRENTLY UNDER CONSTRUCTION, INCLUDING COST OF EACH AND NAME AND ADDRESS OF OWNER CONTACT.

LIST OF COMPLETED PROJECTS WITHIN PAST FOUR YEARS, INCLUDING COST OF EACH AND NAME AND ADDRESS OF OWNER CONTACT.

PARTIAL RECEIPT OF PAYMENT AND RELEASE FORM

KNOW ALL PERSONS BY THESE PRESENTS THAT: _____,

hereinafter called "Subcontractor," who entered into a subcontract with

_____, hereinafter called "Contractor", for the performance of work
and/or the furnishing of material for the construction of a project entitled:

(Project Name)

(Project Number)

at: _____

(Project Address)

for the State of Missouri (Owner) which said subcontract is by this reference incorporated herein, in consideration of

such payment by Contractor,

DOES HEREBY:

1. ACKNOWLEDGE that he/she has been paid all sums due them to date for everything done by him, or done by his subcontractors, material vendors, equipment and fixture suppliers, agents and employees, or otherwise in the performance of the work called for by the aforesaid contract and all modifications or extras or additions approved to date, for the construction of said project or otherwise.
2. REPRESENT that all of his/her employees, subcontractors, material vendors, equipment and fixture suppliers and everyone else has been paid all sums due them to date, or any of them, in connection with performance of said work, or anything done or omitted by them or any of them in connection with the construction of said improvements, or otherwise.
3. RELEASES the Owner from any claim for nonpayment for any work performed or material supplied up through _____(date).

DATED this _____ day of _____, _____(year).

(Name of Subcontractor)

(Typed or Printed Name)

(Signature)

(Title)

LU FINAL RECEIPT OF PAYMENT AND RELEASE FORM

KNOW ALL PERSONS BY THESE PRESENT THAT :

Hereinafter called "Subcontractor" who heretofore entered a subcontract with

hereinafter called "Contractor" for the performance of work and/or furnishing of material for the construction
of a project entitled:

(Project title & Project number)

(Address of Project)

for Lincoln University, (Owner) which said subcontract is by this reference incorporated herein, in
consideration of such final payment by Contractor, DOES HEREBY:

1. ACKNOWLEDGE that the Contractor has been paid in full all sums due to the Contractor for everything done by the Contractor, or done by subcontractors, material vendors, equipment and fixture suppliers, agents and employees, or otherwise in the performance of the work called for by the aforesaid contract and all modifications of extras or additions thereto, for the construction of said project or otherwise.
2. RELEASE and fully, finally and forever discharge Contractor and the Owner of and from any and all suits and actions, claims and demands of whatsoever kind or character arising out of or in any manner related to anything and everything done or omitted by Subcontractor, its subcontractors, material vendors, equipment and fixture suppliers, agents and employees, in the performance of or connected with its/their performance of said work, or otherwise.

REPRESENT that all employees, subcontractors, material vendors, equipment and fixture suppliers and everyone else has been paid in full all sums due them, or any of them, in connection with performance of said work, or anything done or omitted by them or any of them in connection with the construction of said improvements, or otherwise.

DATED THIS _____ day of _____, 20__

(Name of subcontractor)

BY _____
(Typed or printed name)

(Signature)

TITLE: _____

AFFIDAVIT OF COMPLIANCE WITH PREVAILING WAGE LAW

I, _____ do hereby certify under penalty of perjury:

Project Name: _____

- 1) That all of the information in the payroll reports for this project is true and correct.
- 2) All Persons employed on said project have been paid the full weekly wages earned, that no rebates have been or will be made either directly or indirectly from the full wages earned by any person, other than permissible deductions such as FICA, Medicare, Federal Income Taxes, State Income Taxes, State Disability (SDI) Court Ordered Wage Attachments, 401K Plans.
- 3) That any payrolls otherwise under this contract required to be submitted for the project are correct and complete; that the wage rate for the workers are not less than the applicable wage rates contained in the Prevailing wage determination, as provided by the Division of Labor Standards and incorporated into the contract; that the classifications set forth therein for each worker conform with the work performed.

DATED THIS _____ day of _____, 20__

(Name of Contractor)

BY _____
(Typed or printed name)

(Signature)

TITLE: _____

FORM OF PERFORMANCE AND PAYMENT BOND

KNOW PERSONS BY THESE PRESENT, THAT we _____ as Principal, and _____ as Surety, are held and firmly bound unto LINCOLN UNIVERSITY, in the sum of _____ Dollars (\$_____), for payment whereof the Principal and Surety bind themselves, their heirs, executors, administrators and successors, jointly and severally, firmly by these presents WHEREAS, The Principal has, by means of a written agreement dated the _____ day of _____, 20____, entered into a contract with LINCOLN UNIVERSITY for _____

(Insert Base Proposal)

NOW, THEREFORE, if the Principal shall faithfully perform and fulfill all the undertakings, covenants, terms, conditions and agreements of said contract during the original term of said contract and any extension thereof that may be granted by Lincoln University, with or without notice to the Surety and during the life of any guaranty required under the contract; and shall also faithfully perform and fulfill all undertakings, covenants, terms, conditions and agreements of any and all duly authorized modifications of said contract that may hereafter be made with or without notice to the Surety; and shall also promptly make payment for material, lubricants, oil, gasoline, grain, hay, feed, coal and coke, repairs on machinery, groceries and food stuffs, equipment, and tools, consumer or used in connection with the work set forth in the contract referred to above, and all insurance premiums, both compensation and all other kinds of insurance, on said work, and for all other kinds of insurance, on said work, and for all labor performed on such work, whether by subcontractor or otherwise, at not less than the prevailing hourly rate of wages for work of a similar character (exclusive of maintenance work) in the locality in which the work is performed and not less than the prevailing hourly rate of wages for legal holiday and overtime work (exclusive of maintenance work) in the locality in which the work is performed both as determined by the Department of Labor and Industrial Relations or determined by the Court on appeal, as provided for in said contract and in any and all duly authorized modifications of said contract that may be hereafter made, with or without notice to the Surety, then this obligation shall be void and of no effect, but it is expressly understood that if the Principal should make default in or should fail to strictly, faithfully and efficiently do, perform and comply with any or more of the covenants, agreements, stipulations, conditions, requirements or undertakings, as specified in or by the terms of said contract, and with the time therein named, then this obligation shall be valid and binding upon each of the parties hereto and this bond shall remain in full force and effect; and the same may be sued on at the instance of any material man, laborer, mechanic, subcontractor, individual, or otherwise to whom such payment is due in the name of Lincoln University, to the use of any such person.

AND, IT IS FURTHER specifically provided that any modifications which may hereinafter be made in the terms of the contract or in the work to be done under it or the giving by the Owner of any extension of the time for the performance of the contract or any other forbearance on the part of either the Owner or the Principal to the other, shall not in any way release the Principal and the Surety, or either or any of them, their heirs, executors,

Form of Performance and Payment Bond

administrators and successors, from their liability hereunder, notice to the Surety of any such extension, modifications or forbearance being here waived.

IN WITNESS WHEREOF, the above bounden parties have executed the within instrument this _____ day of _____, 20____.

AS APPLICABLE:

A. An Individual _____
(Signature)

B. A Partnership _____
(Signature) Partner

(Signature) Partner

C. A Corporation _____
(Firm Name)

(Signature) President

D. Surety _____
(Surety)

(Attorney-in-Fact)

(Address of Attorney-in-Fact)

(A/C & Number)
(Telephone and Fax #, Attorney-in-Fact)

(Signature, Attorney-in-Fact)

NOTE: Surety shall attach Power of Attorney

LU AFFIDAVIT OF WORK AUTHORIZATION

STATE OF _____)

COUNTY OF _____)

On this _____ day of _____, 20_____, before me appeared. _____, personally, known to me or proved to me based on satisfactory evidence to be a person whose name is subscribed to this affidavit, who being by me duly sworn, deposed as follows:

My name is _____, and I am of sound mind, capable of making this affidavit, and personally certify the facts herein stated, as required by Section 285.530, RS Mo, to enter into any contract agreement with the state to perform any job, task, employment, labor, personal services, or any other activity for which compensation is provided, expected, or due, including but not limited to all activities conducted by business entities:

I am the _____ of _____, and I am duly authorized, directed, and/or empowered to act officially and properly on behalf of this business entity.

I hereby affirm and warrant that the business entity is enrolled in a federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, and the business entity shall participate in said program with respect to all employees working in connection with the contracted services related to the work performed for Lincoln University. I have attached documentation to this affidavit to evidence enrollment/participation by the business entity in a federal work authorization program, as required by Section 285.530, RS Mo.

In addition, I hereby affirm and warrant that the business entity does not and shall not knowingly employ, in connection to work under the within state contract agreement with Lincoln University an alien who does not have the legal right or authorization under federal law to work in the United States, as defined in 8 U.S.C. § 1324a(h)(3).

I am aware and recognize that, unless certain contract and affidavit conditions are satisfied pursuant to Section 285.530, RS Mo, the business entity may be held liable under Section 285.525 through 285.559, RS Mo, for subcontractors that knowingly employ or continue to employ any unauthorized alien to work within the state of Missouri.

I acknowledge that I am signing this affidavit as a free act and deed of the business entity and not under duress.

Affidavit Signature

Subscribed and sworn to before me this _____ day of _____, 20 ____.

Notary Public

My commission expires:

INSTRUCTIONS TO BIDDERS

ARTICLE 1 - SPECIAL NOTICE TO BIDDERS

These specifications have bound hereto a complete set of bidding forms. These are for the bidder's convenience only and are not to be detached from the specifications or filled out or executed. One unbound proposal form will be furnished to each bidder and shall be executed and submitted in a sealed envelope.

ARTICLE 2 - CONTRACT DOCUMENTS

- A. Specifications and drawings are the property of the Owner. Electronic copies will be distributed by the owner as requested by the contractors bidding the job. All copies must be destroyed or deleted by those contractors not selected for the job once the bidding process has completed.
- B. Electronic copies of drawings and specifications are on file at the Office of Facilities and Planning, 821 LaFayette St. , Lincoln University.

ARTICLE 3 - BIDDERS OBLIGATIONS

- A. Bidders must carefully examine the entire site of the work and shall make all necessary investigations to inform themselves thoroughly as to the facilities available as well as to all the difficulties involved in the completion of all work in accordance with the specifications and plans. Bidders are also required to examine all maps, plans and data mentioned in the specifications. No plea of ignorance of conditions that exist, or that may hereafter exist, or of conditions of difficulties that may be encountered in the execution of the work under this contract will be accepted as an excuse for any failure or omission on the part of the Contractor to fulfill in every detail all the requirements of the contract, nor accepted as a basis for any claims for extra compensation.
- B. Under no circumstances will a Contractor give plans and specifications to another Contractor. Any proposal received from a Contractor whose name does not appear on the list of bidders having made deposit for the plans and specifications will be subject to rejection.

ARTICLE 4 - INTERPRETATIONS

- A. No oral interpretations will be made to any bidder as to the meaning of the Plans and Specifications or the acceptability of alternate products, materials, form, or type of construction. Every request for interpretation shall be made in writing and submitted with all supporting documents not less than seven (7) calendar days before opening of bids. The request shall be sent directly to the Project Consultant. A copy of said request shall be mailed concurrently to the Director of Facilities and Planning, 309 Young Hall, Lincoln University, 820 Chestnut St., Jefferson City, Missouri 65101. Every interpretation made to a bidder will be sent as promptly as is practicable to all persons to whom Plans, and Specifications have been issued. All such addenda shall become part of the contract documents.

ARTICLE 5 - PROPOSALS AND BIDDING PROCEDURES

- A. All proposals shall be submitted without modification or reservation on the proposal form with each space properly filled. Proposals not on this form will be rejected. Modifications of the proposals after delivery to the Director of Facilities and Planning will not be accepted unless submitted on a new proposal form and delivered to the Director of Facilities and Planning in lieu of the original proposal prior to the time set for opening bid proposals.
- B. All proposals shall be accompanied by a Bid Bond, executed by the bidder and a duly authorized surety company, Certified Check, Cashier's Check or Bank Draft made payable to Lincoln University, State of Missouri, in the amount as set forth in the official advertisement for bid. Failure of the Contractor to submit the full amount required shall be sufficient cause to reject bid. The bidder agrees that the proceeds of the check, draft or bond shall become the property of Lincoln University, if for any reason the bidder withdraws bid after closing or if on notification of award refuses or is unable to execute tendered contract, provide an acceptable Performance and Payment Bond, provide evidence of required insurance coverage, and provide required copies of affirmative action plans within fourteen (14) consecutive calendar days after such tender. It is further agreed that, if a contract is not awarded within thirty (30) days after the opening of bids, a bidder may file a written notice with the Director of Facilities and Planning for the withdrawal of bid.
- C. The check, draft or bond submitted by the successful bidder will be returned after the receipt of an acceptable Performance and Payment Bond and execution of formal contract. Checks, drafts, or bonds of all other bidders will be returned within

a reasonable time after it is determined that the bid represented by same will receive no further consideration by Lincoln University.

- D. All proposals shall be accompanied by a signed and notarized Affidavit of Work Authorization. As part of RSMo 285.525 and 285.530 require business entities to enroll and participate in a federal work authorization program to be eligible to receive award of any state contract more than \$5,000.

ARTICLE 6 - SIGNING OF THE PROPOSAL

- A. Proposals from a partnership shall be signed in the firm name by at least one partner, or in the firm name by Attorney-in-Fact. If signed by Attorney-in-Fact there shall be attached to the proposal a Power of Attorney evidencing authority to sign the proposal, dated and executed by all partners of the firm.
- B. Proposals from a corporation shall have the correct corporate name thereon and the signature of an authorized officer of the corporation manually written below the corporate name followed by the words "By _____". Title of office held by the person signing for the corporation shall appear below the signature of the officer.
- C. Proposals from an individual doing business under a firm name shall be signed in the name of the individual doing business under the proper firm's name.

ARTICLE 7 - RECEIVING BIDS

- A. Bids received prior to the time of opening will be securely kept, unopened. The office whose duty is to receive bids will decide when the specified time for opening bids has arrived, and no bid received thereafter will be considered. No responsibility will attach to any officer for the premature opening of a bid not properly submitted.
- B. Proposals are to be presented in sealed envelopes that shall be plainly marked with Project Title, Bid Date and Bid Time and delivered to the place specified in the Advertisement for Bids. Bidders shall be responsible for actual delivery of proposals during business hours, and it shall not be sufficient to show that a proposal was dispatched in time to be received before scheduled closing time for receipt of proposal.
- C. Bidders are cautioned to allow ample time for transmittal of bids by mail or otherwise. If bid is mailed, bidder should secure correct information relative to the probable time of arrival and distribution of mail at the place where bid is to be received and make-do allowance for possible delays.
- D. No Contractor shall stipulate in proposal any conditions not contained in the specifications or standard proposal form contained in the contract documents.

- E. Proposals will be received separately or in combination as shown in and required by the Form of Proposal. Proposals will be completed to include insertion of all amounts for alternate proposals, unit prices and cost accounting data, etc. Failure to complete all required information may be cause for rejection of bid.
- F. Bidder's attention is directed to the fact that no bid will be accepted or considered if delivered after the specified time for receiving bids.
- G. No telephonic or total telegraphic bids will be accepted or allowed.
- H. The completed forms shall be without interlineations, alteration, or erasure. Contractor may request additional copies of forms.
- I. The Owner reserves the right to waive informalities in proposals and reject any or all proposals.

ARTICLE 8 - MODIFICATION AND WITHDRAWAL OF BIDS

- A. Bidder may withdraw proposal at any time prior to scheduled closing time for receipt of proposals, but no bidder may withdraw proposal after the scheduled closing time for receipt of bids.
- B. Only telegrams, letters and other written requests for modifications or correction of previously submitted proposals, which are addressed in the same manner as proposals and are received by Owner prior to scheduled closing time for receipt of proposals, will be accepted and the proposal corrected in accordance with such written requests with the following provisions:
 - (a) Any such written request must be contained in a sealed envelope which is plainly marked "Modification of proposal on (project title and bid date)".
 - (b) Telegraphic modifications must be received prior to the bid opening time.
 - (c) Telegraphic modifications must be followed by a written notice from the bidder within forty-eight (48) hours after bid opening time confirming the contents of such telegraphic modification.

ARTICLE 9 - STATEMENT OF BIDDERS QUALIFICATIONS

- A. Each bidder must submit as part of bid proposal, a statement of bidder's qualifications which is a part of the proposal form. The Owner shall have the right to take such steps as it deems necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish to the Owner such additional information and data for this purpose as the Owner may request. The right is reserved to reject any bid where an investigation or consideration of the information

submitted by such bidder does not satisfy the Owner that the bidder is qualified to carry out properly the terms of the contract documents.

ARTICLE 10 - AWARD OF CONTRACT

- A. The Owner reserves the right to reject any and/or all bids and further to waive all informalities in bidding when deemed in the best interest of Lincoln University.
- B. The Owner reserves the right to let other contracts in connection with the work, including but not by way of limitation, contracts for the furnishing and installation of furniture, equipment, machines, appliances, and other apparatus.
- C. In awarding the contract the Owner may take into consideration the bidder's skill, facilities, capacity, experience, responsibility, previous work record and financial standing; and the necessity of prompt and efficient completion of work herein described. Inability of any bidder to meet the requirements mentioned above may be cause for rejection of proposal, however, no contract will be awarded to any individual, partnership or corporation, who has had a contract with the State of Missouri declared in default within the preceding twelve months.
- D. Award of Alternates, if any - the Owner reserves the right to award alternates in any order which results in the maximum amount of work being accepted within available construction funds.
- E. RSMo 285.525 and 285.530 require business entities to enroll and participate in a federal work authorization program to be eligible to receive award of any state contract more than \$5,000. Bidders should submit with their bid an Affidavit of Work Authorization along with appropriate documentation evidencing such enrollment and participation. Affidavit of Work Authorization is in the bid packet. Submittal of this form and appropriate documentation is required before the award of any contract. In addition, the contractor shall be responsible for compliance of these requirements by all subcontractors and suppliers, at any tier associated with this contract.

ARTICLE 11 - FORM OF CONTRACT AND PERFORMANCE/PAYMENT BOND

- A. The forms of the contract and performance/payment bond to be executed are standard forms which are on file with the Office of the Director of Facilities and Planning. The contract and performance/payment bond shall be executed in ten (10) and five (5) original counterparts, respectively.
- B. The Owner will prepare and forward copies of the contract and performance/payment bonds to the bidders to whom the contracts for the work are awarded and such bidders shall return the properly executed prescribed copies of

the contract, bond, evidence of required insurance and required copies of affirmative action plans to the Owner within fourteen (14) consecutive calendar days after their receipt.

- C. No proposal shall be considered binding upon the Owner until the written contract has been properly executed, a satisfactory bond has been furnished, evidence of required insurance coverage has been received and appropriate affirmative action plan submitted. Failure to execute and return the contract and associated documents within the prescribed period shall be treated, at the option of the Owner, as a breach of bidder's obligation and the Owner shall be under no further obligation to bidder.
- D. If the successful bidder is doing business in the State of Missouri under a fictitious name, bidder shall furnish to Owner, attached to the Proposal Form, a properly certified copy of the Certificate of Registration of Fictitious Name from the State of Missouri, and such certificate shall remain on file with the Owner. No contract will be awarded by the Owner until such certificate is furnished by the bidder.
- E. Any successful bidder which is a corporation organized in a state other than Missouri shall furnish to the Owner, attached to the Proposal Form, a properly certified copy of its current Certificate of Authority to do business in the State of Missouri, such certificate to remain on file with the Owner. No contract will be awarded by the Owner unless such certificate is furnished by the bidder.
- F. Any successful bidder which is a corporation organized in the State of Missouri shall furnish, at its own cost, to the Owner, if requested, a Certificate of Good Standing issued by the Secretary of State, such certificate to remain on file with the Owner.

ARTICLE 12 - CONTRACT SECURITY

- A. The Contractor shall furnish a performance/payment bond in an amount at least equal to 100% of the contract price as security for the faithful performance of contract and for the payment of all persons performing labor on the project and furnishing materials in connection therewith under contract as set forth in the standard form of performance/payment bond. The Surety on such bond shall be a duly authorized surety company satisfactory to the Owner.
- B. The Contractor shall furnish at no cost to the Owner, if requested, a properly certified copy of the current Certificate of Authority to transact business in the State of Missouri of the surety company executing the required bond, such certificate to remain on file with the Owner.
- C. If at any time the Owner, for justifiable cause, shall be or become dissatisfied with any surety or sureties then upon the performance/payment bond, the Contractor shall within five (5) days after notice from the Owner substitute an acceptable bond signed by such other surety or sureties as may be satisfactory to the Owner. The

premiums on such bond shall be paid by the Contractor. No further payments shall be due nor made until the new acceptable bond is furnished to the Owner.

ARTICLE 13 - TIME OF COMPLETION AND LIQUIDATED DAMAGES

- A. Bidders must agree to commence work on a date to be specified in a written "Notice To Proceed" from the Owner, and the entire work shall be completed within the time specified. Liquidated damages for delay in completion of the work shall be as prescribed. (See Article 14 of General Conditions.)

ARTICLE 14 - NUMBER OF CONSTRUCTION DOCUMENTS

- A. The Owner will furnish the Contractor a copy of the executed contract.
- B. The Owner will furnish the Contractor free of charge the number of complete sets of plans and specifications for the work and all applicable subdivisions thereof, as set forth in the special conditions. Additional sets may be obtained from the Consultant at the cost of reproduction.
- C. The Owner will furnish the Contractor the number of copies of explanatory or change drawings required during construction as set forth in the special conditions

ARTICLE 15 - LIST OF SUBCONTRACTORS

- A. Each bidder must submit as part of bid proposal, a list of subcontractors to be used in performing the work. The list shall specify the single designated subcontractor's name and address for each category of work listed in the Proposal Form. If work within a category will be performed by more than one subcontractor, list the name and address of each subcontractor, and specify the exact portion of the work to be done. If acceptance/nonacceptance of alternates will affect the designation of a subcontractor, provide information for each affected category.
- B. Failure to include a complete subcontractor list shall be grounds for rejection on the bid proposal.

ARTICLE 16 -TAX EXEMPTION

- A. Lincoln University is a tax-exempt organization. Sales to contractors who purchase construction materials and supplies to fulfill their contract for exempt organizations are not subject to sales tax provided the exempt organizations furnish a copy of their current exemption letter and a project exemption certificate to the contractor

authorizing the purchases for the project. The exempt organization may monitor all supplies purchased, used, and consumed in fulfilling the project.

- B. A project exemption certificate shall include, but may not be limited to, the following:
 - 1. The exempt entity's name, address, Missouri Tax Identification Number and signature or authorized representative of the exempt entity.
 - 2. The project location, description, and unique identification number.
 - 3. Date the contract is entered.
 - 4. The estimated project completion date; and
 - 5. The certificate expiration date.
- C. Contractor must provide a copy of the exempt organization's exemption letter and the project exemption certificate to suppliers when purchasing materials and supplies to be consumed in the project.
- D. Contractors are not exempt from sales tax on the purchase of machinery, equipment or tools used in fulfilling these contracts.
- E. Suppliers shall render to the contractor invoices bearing the name of the exempt organization and the project identification number. The purchasing contractor must retain these invoices for a period of five (5) years.
- F. Contractors must file a sales tax return for all excess resalable materials and supplies, which are not returned to the supplier. This return must be filed and paid no later than the due date of the contractor's sales tax return following the month in which the contractor determines that the materials were not used in the project.
- G. An exempt organization that fails to revise the project exemption certificate's expiration date as necessary to complete the work required by the contract will be liable for any sales tax due as determined by an audit of the contractor.

ARTICLE 17 –TOBACCO POLICY

- A. Lincoln University strives to present a healthy, safe, and clean campus. environment for its students, employees, and visitors. For this reason, the use of any tobacco product, including but not limited to cigarettes, smokeless tobacco, and e-cigarettes is prohibited on campus. This policy applies to all buildings on and off the main campus whether owned or leased by Lincoln University, University vehicles, open-air spaces, and common areas.

SPECIFICATIONS

1.1 Scope

- Furnish and install **Quaker Historic Series H450 Fixed Aluminum Windows, 3 ¼" Frame.**
- Work shall include removal of existing windows, prep of openings, installation of new windows, application of flashing (if applicable), sealants, interior/exterior trim, and final cleaning.

1.2 References

- ASTM E2112 – Standard Practice for Installation of Exterior Windows.
- ASTM E283 – Air Leakage Performance.
- ASTM E330 – Structural Performance of Exterior Windows.
- ASTM E1105 – Water Penetration Resistance.

1.3 Submittals

- Product data, cut sheets, and installation instructions for Quaker H450 series.
- Shop drawings showing dimensions, anchoring methods, and relationship to adjacent construction.
- Sealant manufacturer's data sheet & warranty.

1.4 Quality Assurance

- Installer shall be certified by Quaker or demonstrate a minimum of 5 years' experience with historic aluminum window installations.
- Mock-up: Provide one installed window for review/approval before full installation.

2. PRODUCTS

2.1 Manufacturer

- **Quaker Windows & Doors** – Historic Series H450 Fixed Aluminum Windows, 3 ¼" Frame.

2.2 Window Construction

- Frame Depth: 3 ¼".
- Operation: Fixed (non-operable).
- Glazing: Insulated, Low-E glass, Argon-filled, per project energy requirements.

- Finish: Factory-applied baked-on powder coat, color as selected by university.
- Performance Rating: Minimum AW-50 (per AAMA).

2.3 Accessories

- Anchors: Stainless steel or manufacturer-approved corrosion-resistant fasteners.
- Flashing: Self-adhering waterproof flashing membrane compatible with adjacent materials (if applicable).
- Insulation: Backer rod
- Sealants: ASTM C920 silicone sealant, color-matched, UV-stable.
- Trim: Interior aluminum or wood trim as specified (if applicable).

3. EXECUTION

3.1 Examination

- Verify all openings are square, plumb, and structurally sound.
- Report discrepancies to Owner before proceeding.

3.2 Preparation

- Remove existing windows carefully, avoiding damage to adjacent masonry.
- Clean all debris, dust, and deteriorated materials from opening.
- Repair substrate as needed, including tuckpointing, patching, or leveling.
- Install flashing at sill and jambs per ASTM E2112.

3.3 Installation

- Install windows in accordance with manufacturer's written instructions and approved shop drawings.
- Set frames plumb, level, and square.
- Anchor windows through jambs with stainless steel fasteners at max 16" on center, 6" from corners, unless otherwise required.
- Shim as necessary to maintain alignment and prevent frame distortion.
- Provide thermal break between window frame and adjacent masonry where possible.

3.4 Glazing & Sealing

- Factory glazing shall remain intact; do not field reglaze unless damaged.
- Apply backer rod and sealant at exterior perimeter joint, tooling for full adhesion and watertight finish.
- Apply interior sealant bead to create air barrier continuity.

3.6 Cleaning & Protection

- Clean all exposed aluminum and glass surfaces free of dirt, adhesives, and sealant smears.
- Protect installed windows with protective film until project completion.
- Remove film and final clean glass immediately prior to Owner acceptance.

LU GENERAL CONDITIONS

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GENERAL CONDITIONS

- A. These General Conditions apply to each section of these specifications and must be carefully read by each contractor, as all contractors are subject to the provisions contained herein.
- B. The General Conditions are intended to define the relationship of the Owner, Consultant and all contractors thereby establishing certain rules and provisions governing the operation and performance of the work so that the work may be continued and completed in a safe, orderly, expeditious and workmanlike manner.

ARTICLE 1 - DEFINITIONS

- A. As used in these contract documents, the following terms shall have the meanings and refer to the parties designated in these definitions.
 - (a) "OWNER": Lincoln University. Owner may act through any duly authorized committee or representative thereof. Communications to Owner shall be forwarded via Director of Facilities and Planning, Lincoln University, Room 309 Young Hall, 820 Chestnut Street, Jefferson City, Missouri 65101.
 - (b) "CONSULTANT": When the term "Consultant" is used herein, it shall refer to the Architect or Engineer specified and defined in Paragraph 1 of the Special Conditions, or a duly authorized representative.
 - (c) "UNIVERSITY REPRESENTATIVE": University Representative is the Director of Facilities Planning of Lincoln University; or such person authorized to act for the Director, shall be the authorized representative of the Owner.
 - (d) "CONTRACTOR": Party or parties who have entered into a contract with the Owner to furnish work under these specifications and drawings.
 - (e) "SUBCONTRACTOR": Party or parties who contract under, or for the performance of part or all of, the Contract between the Owner and Contractor. The subcontract may or may not be direct with the Contractor.
 - (f) "WRITTEN NOTICE": Any notice to the Contractor from the Owner relative to any part of this contract shall be in writing and considered delivered and service thereof complete when said notice is posted by registered or certified mail to said Contractor at Contractor's last given address, or delivered in person to said Contractor or authorized representative on the work.
 - (g) "WORK": Labor, material, supplies, plant and equipment required to perform and complete the service agreed to by the Contractor in safe, expeditious, orderly and workmanlike manner so that the project shall be complete and finished in the best manner known to each respective trade.

- (h) "CONTRACT DOCUMENTS": The "Contract Documents" shall consist of the executed contract, the Special Conditions, the General Conditions, the Advertisement for Bids, the Instructions to Bidders, the Proposal, the Prevailing Wage Determination, the Specifications and Drawings, including all modifications as set forth in Addenda or Change Orders to any of the above, the required Certificates of Insurance and Performance/Payment Bond and Notice to Proceed.
- (i) "JOINT VENTURE": An association of two (2) or more businesses to carry out a single business enterprise for profit for which purpose they combine their property, capital, efforts, skills and knowledge.
- (j) "KANSAS METROPOLITAN AREA" The City of Kansas City and the Missouri counties of Ray, Platte, Jackson, Cass and Clay.
- (k) "ST. LOUIS METROPOLITAN AREA": The City of St. Louis and the Missouri counties of Franklin, St. Charles, St. Louis and Jefferson.
- (l) "SUBSTANTIALLY COMPLETE:" Substantial Completion is the stage in the progress of the work when the work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so the Owner can occupy or utilize the work for its intended use.

ARTICLE 2 - DRAWINGS AND SPECIFICATIONS

- A. Drawings are intended to show general arrangements, design and extent of work and are partly diagrammatic. As such, they are not intended to be scaled for roughing-in measurements or to serve as shop drawings.
- B. Specifications are separated into titled divisions for convenience of reference only and to facilitate letting of contracts and subcontracts. Such separations shall not, however, operate to make the Consultant or Owner an arbiter to establish limits of subcontracts or to establish jurisdiction.
- C. Figured dimensions take precedence over scaled measurements and details over smaller scale general drawings.
- D. In case of discrepancy between drawings and specifications, specifications shall govern. Should discrepancies in architectural drawings, structural drawings and mechanical drawings occur, architectural drawings shall govern and, in case of conflict between structural and mechanical drawings, structural drawings shall govern.
- E. Anything shown on drawings and not mentioned in these specifications or vice versa, as well as any work which is obviously necessary to complete the project within the limits established by the drawings and specifications, although not shown on or described therein, shall be performed by the Contractor as a part of the contract.

- F. Data concerning lot size, ground elevations, present obstructions on or near the site, locations and depth of sewers, conduits, pipes, wires, etc., position of sidewalks, curbs, pavements, etc., and nature of ground and subsurface conditions have been obtained from sources the Owner believe reliable, although accuracy of such data is not guaranteed.
- G. Upon encountering conditions differing materially from those indicated in the contract documents, the Contractor shall promptly notify the University Representative before such conditions are disturbed. The University shall promptly investigate said conditions and report to the University Representative, with recommendations. If conditions do materially differ and cause increase or decrease in contract cost or time required for completion of any portion of the work, a Change Order will be initiated as outlined in Article 26 of these General Conditions.
- H. Only work included in the contract documents is authorized, and the Contractor shall do no work other than that described therein or in accordance with appropriately authorized and approved Change Orders.

ARTICLE 3 - RIGHTS AND RESPONSIBILITIES OF CONSULTANT AND DIRECTOR

- A. The University shall give all orders and directions contemplated under the contract relative to the execution of the work. The University shall determine the amount, quality, acceptability and fitness of kind of work and materials which are to be paid for under this contract. In the event any question shall arise between the parties hereto, relative to the contract of specifications, determination or decision of the University shall be a condition precedent to the right of the Contractor to receive any money or payment for work under the contract affected in any manner or to any extent by such question.
- B. The Owner may file a written notice to the Contractor to dismiss forthwith any subcontractors, superintendents, foremen, workmen, watchmen or other employees whom the Owner may deem incompetent, careless or a hindrance to proper or timely execution of the work, and Contractor shall comply with such notice as promptly as practicable without detriment to the work or its progress.
- C. If Contractors refuse to cooperate with the instructions and reasonable requests of other contractors in the overall coordinating of the work, the Owner's Representative may take such appropriate action and issue such instructions as in Owner's judgment may be required to avoid unnecessary and unwarranted delay.
- D. If in the judgment of the Owner's Representative it becomes necessary at any time to accelerate work, the Contractor, when ordered by the Owner's Representative in writing, shall cease work at any point and transfer employees to such point or points and execute such portions of work as may be required to enable others to hasten and properly engage and carry out their work, all as directed by the Owner.

ARTICLE 4 - INSPECTION OF THE WORK

- A. The Owner and any duly appointed representative shall at all times have access to the work whenever it is in preparation or progress, and the Contractors shall provide proper facilities for such access and for inspection and supervision.
- B. During progress of work the Owner will be represented at the project by the University's appointed representative, whose duty it will be to see that the contract is properly fulfilled.
- C. The Owner's inspection is for the purpose of assuring the Owner that the drawings and specifications are being properly executed. Although inspector is instructed to confer with Contractor regarding interpretation of plans and specifications, such assistance shall not relieve Contractor of any responsibility for the work.
- D. The fact that the Owner has failed to observe faulty work, or work done which is not in accordance with the drawings and specifications, shall not relieve the Contractor from responsibility for correcting such work without additional compensation.
- E. If any work is covered up without approval or consent of the Owner, it must, if requested by the Owner, be uncovered by the Contractor. No compensation shall be allowed for this work. If such work is found to be defective in any respect, due to fault of the Contractor, or subcontractors, the Contractor shall defray all the expenses of such examination and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the contract, the actual cost of labor and material necessarily involved in the examination and replacement plus 10% shall be allowed the Contractor. If the Contractor fails to proceed at once with the correction of rejected defective materials or workmanship, the Owner may by contract or otherwise have the defects remedied or rejected, materials removed from the site and charge the cost of the same against any monies which may be due the Contractor without prejudice to any other rights or remedies of the Owner on the premises.

ARTICLE 5 - COMPLIANCE WITH LAWS, PERMITS, REGULATIONS AND INSPECTIONS

- A. Although the Owner is Lincoln University, municipal or political subdivision ordinances, zoning ordinances, construction codes and other like ordinances are not applicable to construction on Owner's property, the Contractor will be required to submit plans and specifications to any municipal or political subdivision authority, obtain construction permits or any other licenses or permits from or submit to inspections by any municipality or political subdivision relating to the construction of this project. All permits or licenses required by municipality or political subdivision for operation on property not belonging to Owner shall be obtained by and paid for by Contractor. Each Contractor shall comply with all applicable laws, ordinances, rules and regulations as it is not the intent of the Owner to arbitrarily dismiss the authorities identified above.

ARTICLE 6 - ANTI-KICKBACK

- A. No official of the Owner who is authorized in such capacity and on behalf of the Owner to negotiate, make, accept or approve, or to take part in negotiating, making, accepting, or approving any architectural, engineering, inspection, construction or material supply contract or any subcontract in connection with the construction of the project, shall become directly or indirectly interested personally in this contract or in any part hereof. No officer, employee, architect, attorney, engineer or inspector of or for the Owner who is authorized in such capacity and on behalf of the Owner to exercise any legislative, executive, supervisory or other similar functions in connection with the construction of the project shall become directly or indirectly interested personally in this contract, any material supply contract, subcontract, insurance contract, or any other contract pertaining to the project.

ARTICLE 7 - PATENTS AND ROYALTIES

- A. The Contractor shall hold and save the Owner and its officers, agents, servants and employees harmless from liability of any nature of kind, including cost and expense, for, or on account of, any patented or unpatented invention, process, article or appliance manufactured or used in the performance of the contract, including its use by the Owner, unless otherwise specifically stipulated in the contract documents.
- B. If the Contractor uses any design, device or materials covered by letters, patent or copyright, the Contractor shall provide for such use by suitable agreement with the Owner of such patented or copyrighted design, device or material. It is mutually agreed and understood, without exception, that the contract prices shall include all royalties or costs in any way involved in the work. The Contractor and/or the Contractor's sureties shall indemnify and save harmless the Owner of the project from any and all claims for infringement by reason of the use of such patented or copyrighted design, device or materials or any trademark or copyright in connection with work agreed to be performed under this contract and shall indemnify the Owner for any cost, expense or damage it may be obliged to pay by reason of such infringement at any time during the prosecution of the work or after completion of the work.

ARTICLE 8 - STATUTORY PREFERENCE

- A. By virtue of statutory authority, a preference will be given to Missouri labor and to products of mines, forests and quarries of the State of Missouri when they are found in marketable quantities in the State, and all such materials shall be of the best quality and suitable character that can be obtained at reasonable market prices, all as provided for in Section 8.280, Missouri Revised Statutes 1978 and Cumulative Supplements.

ARTICLE 9 - COMMUNICATIONS

- A. All notices, requests, instructions, approvals and claims must be in writing. All papers required to be delivered to the Owner shall, unless otherwise specified by the Owner in writing to the contrary, be delivered to the Director of Facilities and Planning, Lincoln University, Room 309

Young Hall, 820 Chestnut Street, Jefferson City, Missouri 65101. Any such notice shall be deemed to have been given as of the time of actual receipt.

ARTICLE 10 - DUTIES OF CONTRACTOR

- A. The Contractor shall supply sufficient labor, material, plant and equipment and pay when due any laborer, subcontractor or supplier for supplies furnished and otherwise prosecute the work with diligence to prevent work stoppage and insure completion thereof within the time specified. The Contractor shall pay not less than the prevailing hourly rate of wages for work of a similar character in the locality in which the work is performed, as determined by the Department of Labor and Industrial Relations of the State of Missouri and as set out in the contract specifications.
- B. The Contractor and each subcontractor shall submit to the Owner, such schedules of quantities and costs, progress schedules, payrolls, reports, estimated records and other data as the Owner may request concerning work performed or to be performed under the contract.
- C. The Contractor shall give access to, upon written request from the Owner, all time cards, material invoices, payrolls, profit and loss statements, and all other direct or indirect costs related to this work.
- D. Each Contractor shall be responsible for laying out own work and for any damage which may occur to work of any other contractor because of errors or inaccuracies, as well as be responsible for unloading, uncrating and handling of all materials and equipment to be erected or placed by Contractor, whether furnished by Contractor or others. Layout of mechanical and electrical work shall be coordinated with layouts of Contractor for general construction work. Unless otherwise directed by Owner, salvage materials, waste and scrap resulting from such work shall be promptly removed from the site by the responsible Contractor.
- E. Contractors shall limit operations and storage of materials to the area within the project, except as necessary to connect to existing utilities, and shall not encroach on neighboring property.
- F. Contractors shall prearrange time with the University Representative in case it becomes necessary for the interruption of any service to make connections, alterations or relocations and shall fully cooperate with Owner in doing work so as to cause the least annoyance and interference with the continuous operation of the institution. Unless otherwise specified in these documents, all connections, alterations or relocations will be performed during normal working hours.
- G. Each Contractor shall coordinate all work so there shall be no prolonged interruption of existing equipment. All parking lot improvements must be scheduled with the University Representative to avoid any disruption of operation within the campus activities. In no case, unless previously approved in writing by the University Representative, shall parking lot areas be left unprotected at the end of a workday or over a weekend. Any interruption of construction activities whether intentionally or accidentally, shall not relieve the Contractor responsible for the interruption from repairing and restoring the property to normal service. Repairs and

restoration shall be made before the workers responsible for the repair and restoration leave the job.

- H. Each Contractor shall be responsible for repair of damage to property on or off the project occurring during construction of project, and all such repairs shall be made to the satisfaction of the Owner.
- I. Contractors shall not overload, or permit others to overload, any part of any structure during building operations.
- J. Each Contractor shall be responsible for shoring required to protect work or adjacent property and improvements of Owner and shall be responsible for shoring or for giving any required notice to adjacent property owners and shall pay for any damage caused by failure to shore or by improper shoring or by failure to give proper notice. Shoring shall be removed only after completion of permanent supports.
- K. During the performance of work the Contractor shall be responsible for providing and maintaining warning signs, lights, signal devices, barricades, guard rails, fences and other devices appropriately located on site which will give proper and understandable warning to all persons of danger of entry onto land, structure or equipment. Such warning and protective devices shall be removed only when approved by the Owner.
- L. The Contractor shall be responsible for protection, including weather protection, and proper maintenance of all equipment and materials installed or to be installed by Contractor.
- M. The Contractor shall be responsible for care of finished work and must protect same from damage or defacement until final acceptance by the Owner. All damaged and defaced work shall be repaired or replaced to Owner's satisfaction at the expense of Contractor.
- N. The Contractor shall designate a responsible member of the organization available at the job site whose duty shall be the prevention of accidents.
- O. The Contractor may always employ a person or persons for watch duty service outside of regular working hours, and at such times during working hours when work is not in progress at the building, from the time the excavation work is started until the entire work is complete. This watch duty service will in no way relieve the Contractor of responsibility for replacing or making good any theft or damage.
- P. Before commencing work, Contractors shall confer with the Owner's Representative to ascertain full knowledge of all rules and regulations affecting working conditions. Rules and regulations in force at the institution shall take precedence over rules and regulations that exist outside the institution's jurisdiction. If the Contractor observes that the drawings and specifications are at variance therewith, the Contractor shall promptly notify the Owner in writing, and any necessary changes shall be adjusted as provided in the contract for changes in the work. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules and regulations and without such notice, the Contractor shall bear all costs arising therefrom and saving the Owner "harmless".

- Q. No project signs shall be erected without the written approval of the Owner, unless said sign complies with a specific requirement of these specifications, in which case approval of the University Representative must be obtained prior to erection.
- R. Contractor shall verify all measurements. No extra charges or compensation will be allowed as a result of failure to verify dimensions before ordering materials or fabricating items.
- S. The Contractor shall provide at the proper time such material as is required for support of work. If supplemental work required, whether shown on drawings or not, the Contractor shall see that they are properly constructed by the Contractor or subcontractor whose duty it is to construct the same.
- T. All rubbish, debris, and dirt resulting from the Contractor's work shall be cleaned up as required, and removed from the property. The premises shall at all times be kept in a clean, safe and professional manner.
- U. The Contractor shall, prior to requesting final inspection, remove equipment and shall leave work "broom-clean" or its equivalent, unless more exactly specified in the contract documents. Prior to receiving final payment, the Contractor shall remove all rubbish, tools, equipment etc., from the site.
- V. If any work is required to be specially tested or approved, Contractor shall give the Consultant timely notice of date for such inspection.

ARTICLE 11 – BOND

- A. Contractor shall furnish a performance/payment bond in an amount at least equal to 100% of the contract price as security for the faithful performance of the contract and for the payment of all persons performing labor on the project and furnishing materials in connection therewith under this contract as set forth in the standard form of performance/payment bond included in the contract documents. The Surety on such bond shall be a duly authorized Surety Company satisfactory to the Owner.

ARTICLE 12 - COMMENCEMENT AND COMPLETION OF WORK

- A. Before a "Notice to Proceed" with the work will be issued the Contractor must submit the following properly executed instruments to the Owner:
 - (a) Contract;
 - (b) Performance/payment bond as described in Article 12;
 - (c) Certificates of Insurance, or the actual policies themselves, showing that the Contractor has obtained the insurance coverage required by Article 21. If provided, the certificates of insurance shall comply with the requirements of Article 21 (D) and;

These items must be received by the Owner within fourteen (14) consecutive calendar days after the Contractor receives the letter directing him to submit them. If not, the Owner may treat the failure to timely submit them as a refusal by the Contractor to accept a contract for this work and may retain as liquidated damages the Contractor's bid bond, cashier's check or certified check as provided in the Instructions to Bidders.

B. Within ten (10) days following receipt of the "Notice to Proceed", the Contractor shall submit to the Consultant for approval the following:

(a) A progress and payment schedule as described in Article 15; and

(b) A complete breakdown of the Contractor's proposal as described in Article 27

No payments to the Contractor will be made until the Contractor has submitted these items and they have been approved by the Owner; provided, however, that should the Contractor not receive written notification from the Owner of the disapproval of any of these items within twenty-one (21) calendar days of their receipt by the Owner, the Contractor may consider them approved and may proceed accordingly.

C. Contractor shall commence work upon a date to be specified by the Owner in the "Notice to Proceed". Contractor shall prosecute the work with faithfulness and energy, and shall complete the entire work on or before the completion time stated in the contract documents, or pay to the Owner the damages resulting from the failure to timely complete the work as set out in Article 14.

D. Extension of time stipulated in the Contract for completion of the work will be made when changes in the work occur, as provided in Article 26, when the work is suspended as provided in Article 13 (F); or when the work of the Contractor is delayed on account of conditions which could not have been foreseen, or which were beyond the control of the Contractor, subcontractors or suppliers, and which were not the result of their fault or negligence. Extension of time for completion shall also be allowed for any delays in the progress of the work caused by any act (except as provided elsewhere in these General Conditions) or neglect of the Owner or the Owner's employees or by other Contractors employed by the Owner, or for any delay in the furnishing of drawings and necessary information by the Consultant, or delay in return of shop drawings, or for any other cause which in the opinion of the Owner entitles the Contractor to an extension of time, including but not restricted to fires, floods, unusually severe weather or labor strike.

E. The Contractor shall notify the Consultant and University Representative promptly of any occurrence or conditions which in the Contractor's opinion entitle him/her to an extension of time. Such notice shall be in writing and shall include all necessary supporting materials and be submitted in ample time to permit full investigation and evaluation of the

Contractor's claim. The Consultant shall promptly acknowledge the Contractor's notice, and with the University Representative, shall provide information and recommendation to the

Owner for decision. Failure on the part of the Contractor to provide such notice shall constitute a waiver by the Contractor of any claim.

- F. When conditions at the site of the proposed work are considered by the Owner to be unsatisfactory for prosecution of the work, Contractor may be ordered in writing to suspend the work or any part thereof until reasonable conditions exist. When such suspension is not due to fault or negligence of the Contractor, time allowed for completion of such suspended work will be extended by a period of time equal to that lost due to delay occasioned by ordered suspension.

ARTICLE 13 - LIQUIDATED DAMAGES/SUBSTANTIAL COMPLETION

- A. It is agreed that the Owner may deduct from the contract price and retain as liquidated damages, and not as penalty or forfeiture, the sum stipulated in the contract for each calendar day, Sunday and holidays excepted, after date specified for completion of the project that the entire work is not substantially complete.
- B. The term "substantially complete" as used herein shall be construed to mean the completion of the entire work in strict accord with all requirements of the drawings and specifications except minor items which in the opinion of the Owner will not interfere with complete and satisfactory use of the facilities. However, this does not relieve the Contractor of the requirements concerning final completion and of Article 33 - General Guarantee.
- C. Only certification by the Owner as to substantial completion of the work within the time specified shall be conclusive and binding on the Owner and Contractor for the purpose of determining whether or not liquidated damages shall be assessed under the terms hereof and the sum total amount due.
- D. Liquidated damages or any matter related thereto shall not relieve the Contractor or the Contractor's surety of any responsibility or obligation under this contract.
- E. If the work embraced by the terms of this contract is not substantially completed on or before the time specified in this contract because of any act or omission of the Contractor, then, without prejudice to any other rights, claims or remedies the Owner may have the architectural, engineering and inspection costs and expenses incurred by the Consultant upon the work, from the originally agreed upon completion date to the substantial completion date of all work, shall be borne by the Contractor and may be deducted by the Owner from any amount owing and due the Contractor.

ARTICLE 14 - PROGRESS AND SCHEDULING

- A. Each Contractor shall submit for the Consultant's approval, in reproducible form, a progress schedule showing rate of progress the Contractor agrees to maintain and order in which the Contractor proposes to carry on various phases of work. Schedule shall show percentage of work completed at any time, anticipated monthly payments by Owner, as well as significant dates (such as completion of excavation, concrete work, asphalt work, paint striping, etc.) which shall serve as check points to determine compliance with approved schedule. Progress

schedule of the Contractor shall be submitted to subcontractors to permit coordinating their progress schedules to the general construction work.

- B. Values employed in preparation of any schedules will be used only for determining the basis for partial payments and will not be considered as a basis for additions to or deductions from the contract price.
- C. There will be no payments of any periodic estimates until the progress schedule has been approved by the Consultant, and subsequent payments of periodic estimates will be suspended if the project schedule has not been adequately updated to reflect actual conditions.
- D. Contractor shall employ and supply a sufficient force of workers, material, and equipment and shall pay when due, any workers, subcontractor or supplier and otherwise prosecute the work with such diligence so as to maintain the rate of progress indicated on the progress schedule, prevent work stoppage, and insure completion of the project within the time specified.

ARTICLE 15 - SUBSTITUTIONS AND/"OR APPROVED EQUAL"

- A. Whenever in any of the contract documents any article, appliance, device or material is designated by the name of the manufacturer or vendor or by any proprietary or trade name and such name is followed by the words "or approved equal", "or as approved" or preceded by the words "similar and equal to", the standard products of manufacturers other than those specified will be accepted when, prior to the order or use thereof, it is proven to the satisfaction of the Owner that they are equal in design, strength, durability, usefulness and convenience for the purpose intended.
- B. The Contractor may request use of any article, device, product, material, fixture, form or type of construction which in the judgment of the Owner is equal in all respects to that named. Any changes required in the details and dimensions indicated on the drawings for the substitution of products other than those called for shall be properly made as approved by the Owner at the expense of the Contractor requesting the substitution or change.
- C. In the event the Contractor desires to substitute any article, device, product, material, fixture, form or type of construction for that specified, the Contractor shall submit a request for such substitution in writing to the Owner within thirty (30) days after the date of the "Notice to Proceed". A copy of said request shall be sent concurrently to the Owner, Lincoln University, Jefferson City, Missouri. Thereafter no consideration will be given to alternate forms of accomplishing the work. This article does not preclude the Owner exercising the provisions of Article 26 hereof.

ARTICLE 16 - SUPERINTENDENCE

- A. The Contractor shall keep at the work site during its progress, a competent superintendent satisfactory to the Owner. The Superintendent shall represent the Contractor in the Contractor's absence and all directions given to the Superintendent shall be as binding as if

given to the Contractor. The Superintendent shall carefully study and compare all drawings, specifications and other instructions and shall, at once, report to the University's Representative any error, inconsistency or omission which may be discovered. The Superintendent shall not be changed except with the consent of the Owner.

ARTICLE 17 - SHOP DRAWINGS

- A. The Contractor shall submit, with such promptness as to cause no delay in work or in that of any other contractors, all shop and setting drawings. Such drawings shall be submitted to the Owner in four (4) copies for the Owner's use and additional copies as required for the Contractors, subcontractors, material suppliers, and to meet the requirements for maintenance manuals, etc., as described in Article 32.
- B. Each drawing and/or series of drawings submitted must be accompanied by a letter of transmittal giving a list of the titles and numbers of the drawings. Each series shall be numbered consecutively for ready reference and each drawing shall be marked with the following information:
 - (a) Date of Submission
 - (b) Name of Project
 - (c) Location
 - (d) Branch of Work
 - (e) Project Number
 - (f) Name of Submitting Contractor
 - (g) Name of Subcontractor
- C. All subcontractor's shop drawings and schedules shall be submitted by the Contractor and shall bear the stamp of approval by the Contractor as evidence that the Contractor has checked them. Any shop drawings and schedules submitted without this stamp, or without having been checked, will be returned to the Contractor for resubmission and the drawings and schedules will be considered as never having been submitted.
- D. The Contractor shall include with the shop drawings, a letter indicating all deviations from the drawings and/or specifications. Failure to so notify of such deviations will be grounds for subsequent rejection of the related work or materials. If, in the opinion of the Owner, the deviations are not acceptable, the Contractor will be required to furnish the item as specified and indicated on the drawings.
- E. It is the Contractor's obligation and responsibility to check all shop drawings and schedules and to be fully responsible for them and for their coordination with connecting work. Shop

drawings and schedules shall indicate in detail all parts of an item of work, including erection and setting instructions and engagements with the work of other trades.

- F. The Owner shall check shop drawings and schedules with reasonable promptness and approve them only in conformance with the design concept of the project and compliance with the information given in the contract documents. The approval shall not relieve the Contractor from the responsibility for deviations from the drawings and specifications, unless the Contractor has called the Consultant's attention to same, in writing, at the time of submission. An approval of any such modification will be given only if it is in the interest of the Owner, to affect an improvement in the work, does not increase the contract sum and/or completion time, is subject generally to all contract stipulations and covenants, and is without prejudice to any and all rights under the surety bond.
- G. No extension of time will be granted the Contractor because of failure to submit shop drawings and schedules in ample time to allow for review, possible resubmittals and approval. Fabrication of work shall not commence until the Contractor has received approval. The Contractor shall furnish prints of approved shop drawings and schedules to all contractors whose work is in any way related to the work under the contract. Only prints bearing this approval will be allowed on the site of construction.
- H. All shop drawings must be submitted prior to the receipt of the third partial payment request. After the second payment has been made, no further payments will be made without the written consent of the Owner until all shop drawings have been submitted.
- I. On completion of the work, and as a condition precedent to receiving final payment, all shop drawings and schedules of all work for all trades shall be corrected to a true and actual representation of the work actually performed, erected and installed. Drawings showing the actual work completed (See Article 31.)

ARTICLE 18 - SAMPLES, TESTS AND CERTIFICATES

- A. The Contractor shall prepare samples of all items requested or required by the specification. Samples shall be properly identified and submitted with such promptness as to cause no delay in work or in that of any other contractor and to allow for consideration by the Consultant and Owner.
- B. Each set of samples submitted must be accompanied by a letter of transmittal containing the following information:
 - (a) Date of Submission
 - (b) Name of Project
 - (c) Location
 - (d) Branch of Work

(e) Project Number

(f) Name of Submitting Contractor

(g) Name of Subcontractor

- C. No materials shall be delivered to the site of construction or incorporated into the work until the Contractor has received approval. Any materials installed prior to receipt of such approval shall be subject to rejection by the Consultant.
- D. Samples shall be labeled to designate material or product represented, grade, place of origin, name of producer and name of Contractor.
- E. Approval of material is general and shall not constitute waiver of Owner's right to demand full compliance with contract requirements.
- F. Unless Owner is authorized at the time of submittal to return samples at Contractor's expense, rejected samples will be destroyed.
- G. After delivery of materials Owner may make such tests as deemed necessary with samples required for such tests being furnished and at the cost of the appropriate Contractor. If the material, equipment or accessory fails to meet the contract requirements, all costs of testing shall be paid by the Contractor. If the item meets the contract requirements, costs of testing will be paid by Owner.
- H. On the basis of the test results, materials, workmanship, equipment or accessories may be rejected even though general approval has been given. If items have been incorporated in work, Owner shall have the right to cause their removal and replacement by items meeting contract requirements or to demand and secure such reparation to the Owner from the Contractor as is equitable.
- I. The Owner reserves the right to require Contractor to furnish a certificate guaranteeing that material or equipment as submitted complies with contract requirements. Certificates shall be in notarized affidavit form. If statement originates with manufacturer, Contractor shall endorse all claims and submit statement in the Contractor's name.
- J. When directed by the Owner, and unless otherwise specified with the technical design section, samples of finished work and field applied paints and finishes shall be located as directed and shall include sample panels constructed at site of approximately 20 square feet each.
- K. All tests required by the specifications shall be paid for by the Contractor to testing laboratories approved by the Owner.

ARTICLE 19 - MATERIALS AND WORKMANSHIP

- A. Unless otherwise specified, all materials shall be new and both workmanship and materials shall be of the best quality. If required by the Owner, satisfactory evidence shall be furnished as to the kind and quality of the materials and workmanship.
- B. All materials and workmanship used in the work shall be subject to the inspection of the Owner, and any work which is deemed defective shall be removed, rebuilt or made good. The cost of such correction shall be borne by the Contractor. All condemned materials shall be immediately removed from the site of the work.
- C. Failure or neglect on the part of the Owner to condemn or reject bad or inferior materials or workmanship shall not be construed to imply an acceptance of any work. The work herein specified to be done is not to be considered as finally accepted until it is so stated in writing by the Owner.
- D. Unless otherwise provided and stipulated within these specifications, the Contractor shall furnish, construct, and/or install and pay for materials, devices, mechanisms, equipment, all necessary personnel, utilities including, but not limited to water, heat, light and electric power, transportation services, applicable taxes of every nature, and all other facilities necessary for the proper execution and completion of the work,
- E. All temporary shoring, bracing, etc., required for the removal of existing work and/or for the installation of new work shall be included in this contract. This must be done to the entire satisfaction of the Owner but the Contractor must assume full responsibility for the work. The Contractor shall make good, at no cost to the Owner, any damage caused by improper support or failure of shoring in any respect.
- F. Contractor shall, at all times, enforce strict discipline and good order among employees, and shall not employ on the work any unfit person or anyone not skilled in the work assigned.
- G. Contractor shall carefully examine the plans and drawings and shall be responsible for the proper fitting of material, equipment and apparatus into the parking lots and roadways.
- H. Contractor shall base proposal only on materials, method of construction and equipment indicated. Contractor may make a written proposal to Owner to use alternate materials, methods or fixtures, in accordance with Article 16, Substitutions.
- I. Contractor shall promptly remove at own expense all rejected materials from the site of work.
- J. When a material has been approved no change in brand or make will be permitted unless:
 - (a) Written verification is received from the manufacturer stating they cannot make delivery on the date previously agreed, or
 - (b) Materials delivered fails to comply with contract requirements.

ARTICLE 20 - INSURANCE

- A. The Contractor shall not commence work under this contract until the Contractor has obtained and submitted to the Owner "Certificate of Insurance" for all insurance required under this Article and such insurance has been approved by the Owner; nor shall the Contractor allow any subcontractor to commence on subcontract until all similar insurance required of the subcontractor has been obtained and approved.
- B. Contractor shall provide and maintain during the life of the contract and until final acceptance of the work, insurance acceptable to the Owner which will afford protection and coverage in accordance with the requirements set forth below.
- (a) Worker's Compensation Insurance: Worker's Compensation Insurance for all employees at the site of the project, and, in case any work is sublet, Contractor shall require any and/or all subcontractor(s) similarly to provide Worker's Compensation Insurance for all their employees unless such employees are covered by the protection afforded by Contractor. In case any class of employees engaged in hazardous work under this contract at the site of the project is not covered under the Worker's Compensation Statute, the Contractor shall provide and shall cause each subcontractor to provide Employer's Liability Insurance. Contractors shall provide coverage under the "Occupational Disease Act" of the State of Missouri, in addition to the above requirements, if the operations of the Contractor or any subcontractor are applicable thereunder. Worker's Compensation Insurance shall comply in all respects with the requirements of the Statutes of the State of Missouri.
- (b) Public Liability and Property Damage Insurance: Public Liability and Property Damage Insurance in comprehensive general liability form as shall protect

Contractor and any subcontractor performing work covered by this contract from claims for damages for personal injury, including wrongful death; and from claims for property damage which may arise from the operations under the contract, including all trucks and automobiles used, whether owned or not, and whether such operations be by the Contractor or any subcontractor or by anyone directly employed by either of them. The amount of insurance shall not be less than the following:

1. Public Liability and Property Damage -

Bodily Injury:

each person	\$ 100,000.00
each accident	\$ 800,000.00

Property Damage:

each accident	\$ 500,000.00
aggregate	\$ 500,000.00

2. Automobile Public Liability & Property Damage -

Bodily Injury:

each person	\$ 100,000.00
each accident	\$ 800,000.00

General Conditions

Property Damage:

each accident

\$ 100,000.00

Such policy or policies shall by proper endorsement cover any liability of Contractor under the indemnification provision, Article 25 of the General Conditions.

- (c) Insurance Covering Special Hazards: The Public Liability and Property Damage Insurance policy or policies of the Contractor shall provide coverage for special hazards such as operation of material hoists, blasting or other use of explosives, and damage to underground property.
 - (d) Owner's Protective Liability Insurance: Owner's Protective Liability Insurance for protection of the Owner and the Consultant protecting them against the standard hazards, except liability from operation of trucks and automobiles, and with the amount of coverage provided in the Public Liability and Property Damage Insurance of Contractor.
 - (e) Builder's Risk and Installation Floater Insurance: Insurance upon the work and all materials, equipment, supplies, temporary structures and similar items which may be incident to the site, against loss or damage from fire and such other casualties as are included in extended coverage in broad comprehensive form, vandalism and malicious mischief, in an amount not less than the replacement cost of the work or the contract price, whichever is greater, with loss payable to Contractor and Owner as their respective interest may appear. Such insurance may be written with Building and Contents Form of Endorsement. In the event Building and Contents Form Endorsement contains an alterations and repair permit, Contractor shall maintain sufficient insurance to cover the full value of the work and materials as the work progresses, and shall furnish Owner copies of all endorsements. If Builder's Risk Reporting Form of Endorsement is used, Contractor shall make all reports as required therein so as to keep in force an amount of insurance which will equal to the replacement cost of the work, materials, equipment, supplies, temporary structures, and other property covered thereby; and if, as a result of Contractor's
 - (f) failure to make any such report, the amount of insurance so recoverable shall be less than such replacement cost, Contractor's interest in the proceeds of such insurance, if any, shall be subordinated to Owner's interest to the end that Owner may receive full reimbursement for its loss.
- C. All insurance shall be procured through and be written by insurance companies which are acceptable to and approved by the Owner and shall be obtained and paid for by Contractor.
- D. Within fourteen (14) consecutive calendar days after receipt of the letter directing the Contractor to do so, the Contractor shall furnish the Owner with certificates showing that the Owner is covered by the required insurance and showing the type, amount, class of operations covered, effective dates and dates of expiration of the policies. All certificates shall contain substantially the statement: "The insurance covered by this certificate will not be canceled or

altered except after ten days' written notice has been received by the Owner." In addition, the original Owner's protective policy shall be forwarded to the Owner.

- E. Upon receipt of any notice of cancellation of alteration, Contractor shall within five (5) days procure other policies of insurance similar in all respects to the policy or policies about to be canceled or altered; and if Contractor fails to provide, procure and deliver acceptable evidence thereof, Owner may obtain such insurance at the cost and expense of Contractor without notice to Contractor.
- F. It is understood and agreed that the insurance required by the provisions of this Article is required in the public interest and that Owner does not assume any liability for acts of the Contractor, any subcontractor or their employees in the performance of the contract.

ARTICLE 21 - SEPARATE CONTRACTS AND COOPERATION

- A. The Owner reserves the right to let other contracts in connection with this work. The Contractor shall afford other contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work and shall properly connect and coordinate work with theirs.
- B. The Contractor shall consult the drawings for all other contractors in connection with this work. Any work conflicting with the above shall be brought to the attention of the Consultant before the work is performed. If the Contractor fails to do this, the Contractor shall remove any part so conflicting and rebuild same, as directed by the Consultant, at no additional cost to the Owner.
- C. No Contractor shall delay any other Contractor by neglecting to perform their work at the proper time. Each Contractor shall be required to coordinate own work with other Contractors so as to afford others reasonable opportunity for execution of their work.
- D. Each Contractor shall be responsible for damage to Owner's or other Contractor's property done by the Contractor or persons in their employ through the Contractor's or their fault or negligence.
- E. Should a Contractor sustain any damage through any act of omission of any other contractor having a contract with the Owner, the Contractor so damaged shall have no claim or cause of action against the Owner for such damage, but shall have a claim or cause of action against the other Contractor to recover any and all damages sustained by reason of the acts of omissions of such contractor. The phrase "act of omission" as used in this section shall be defined to include, but not be limited to, any unreasonable delay on the part of any such contractors.

ARTICLE 22 - SUBCONTRACTS

- A. Subcontractor assignments as identified in the bid proposal shall not be changed without written approval of the Owner.

- B. Contractor is as fully responsible to the Owner for the acts and omissions of subcontractors and of persons either directly or indirectly employed by them as the Contractor is for the acts and omissions of persons directly employed by the Contractor.
- C. Every subcontractor shall be bound by the applicable terms and provisions of the contract documents, by no contractual relationship shall exist between any subcontractor and the Owner unless the right of the Contractor to proceed with the work is suspended or the contract is terminated as herein provided, and the Owner in writing elects to assume the subcontract.
- D. The Contractor shall upon receipt of "Notice to Proceed" and prior to submission of the first payment request, notify the Consultant and University Representative in writing of the names of any subcontractors to be used in addition to those identified in the bid proposal and all major materials suppliers proposed for all parts of the work.

ARTICLE 23 - ASSIGNMENT OF CONTRACT

- A. No assignment by Contractor of any amount or any part of the Contract or of funds to be received thereunder will be recognized unless such assignment has had the written approval of the Owner and the surety has been given due notice of such assignment and has furnished written consent thereto. In addition to the usual recitals in assignment contracts, the following language must be set forth: "It is agreed that the funds to be paid to the assignee under this assignment are subject to performance by the Contractor of the contract and to claims or liens for services rendered or materials supplied for the performance of the work called for in said contract in favor of all persons, firms or corporations rendering such services or supplying such materials."

ARTICLE 24 - INDEMNIFICATION

- A. Contractor agrees to indemnify and save harmless Owner and Consultant, their agents, servants and employees, from and against any and all liability for damage arising from injuries to persons or damage to property occasioned by any acts or omissions of Contractor, any subcontractors, agents, servants or employees, including any and all expense, legal or otherwise, which may be incurred by Owner or Consultant, its agents, servants or employees, in defense of any claim, action or suit, irrespective of any claims that an act, omission or negligence of Owner or Consultant, its agents, servants or employees contributed to such injury or damage.
- B. The obligations of the Contractor under this paragraph shall not extend to the liability of the Consultant, the Consultant's agents or employees, arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, design or specifications, or (2) giving of or the failure to give directions or instructions by the Consultant, the Consultant's agents or employees as required by the contract documents provided such giving or failure to give is the primary cause of the injury or damage.

ARTICLE 25 - CHANGES IN THE WORK

- A. The Owner, without giving notice to the surety and without invalidating this contract, may order extra work or make changes by altering, adding to or deducting from the work, this contract sum being adjusted accordingly. All such work shall be executed under the conditions of the original contract. A claim for extension of time caused by any change must be adjusted at the time of ordering such change. No future request for time will be considered.
- B. Each Contract Change shall include all costs required to perform the work including all labor, material, equipment, overheads and profit, delay, disruptions, or other miscellaneous expenses. No requests for additional compensation including claims for delay, disruption, or reduced efficiency as a result of this change will be considered.
- C. The amount of any adjustment in this contract price for authorized changes shall be agreed upon before such changes become effective and shall be determined, through submission of a request for proposal, as follows:
 - 1. By an acceptable unit price or fixed price proposal from Contractor and subcontractor. Breakdown shall include all takeoff sheets of each Contractor and subcontractor. Breakdown shall include a listing of each item of material with unit prices and number of hours of labor for each task. Labor costs per hour shall be included with labor burden identified, which shall be not less than the prevailing wage rate, etc. Overhead and profit shall be shown separately for each subcontractor and the Contractor.
 - 2. By a cost-plus-fixed-fee (time and material) basis with maximum price, total cost not to exceed said maximum. Breakdown shall include a listing of each item of material with unit prices and number of hours of labor for each task. Labor costs per hour shall be included with labor burden identified, which shall be not less than the prevailing wage rate, etc. Overhead and profit shall be shown separately for each subcontractor and the Contractor.
 - 3. By unit prices contained in Contractor's original bid form and incorporated in the construction contract.
- D. Overhead and Profit on Contract Changes shall be applied as follows:
 - 1. The overhead and profit charge by the Contractor and all subcontractors shall be considered to include, but is not limited to: incidental job burdens, small truck (under 1 ton) expense, mileage, small hand tools, company benefits and general office overhead. Project supervision including field supervision and job site office expense shall be considered a part of overhead and profit unless a compensable time extension is granted.

The percentages for overhead and profit charged on Contract Changes shall be negotiated, and may vary according to the nature, extent, and complexity of the work involved. However, the overhead and profit for the Contractor or subcontractor actually performing the work shall not exceed 15%. When one or more tiers of subcontractors are used, in no event shall any Contractor or subcontractor receive as overhead and profit more than 7% of the cost of the work performed by any of his/her subcontractors. In no case shall the total overhead and profit paid by the Owner on any Contract Changes exceed twenty five percent (25%) of the cost of materials, labor and equipment necessary to put the contract change work in place.

2. The Contractor will be allowed to add the cost of bonding and insurance to their cost of work. This bonding and insurance cost shall not exceed 2% and shall be allowed on the total cost of the added work including overhead and profit.
 3. On proposals covering both increases and decreases in the amount of this contract, the application of overhead and profit shall be on the net change in the cost of the work.
 4. The percentage for overhead and profit to be credited to the Owner on Contract Changes that are solely decreases in the quantity of work or materials shall be negotiated, and may vary according to the nature, extent and complexity of the work involved, but in no case shall be less than ten percent (10%), unless the percentage for overhead and profit charged for Contract Changes for this contract, has been negotiated to less than 10%. The negotiated rate shall then apply to credits as well.
- E. No claim for an addition to this contract sum shall be valid unless authorized as aforesaid in writing by the Owner. In the event that none of the foregoing methods are agreed upon, the Owner may order work performed by force account or accounts. The cost of such work shall be determined by the Contractor's actual labor and material cost to perform the work plus overhead and profit as outlined in paragraph C above. The Owner's representative Administrator shall approve the Contractor's daily time and material invoices for the work involved.
- F. If the Contractor claims that any instructions involve extra cost under this contract, he/she shall give the Owner written notice thereof within a reasonable time after the receipt of such instructions, and in any event before proceeding to execute the work. No such claim shall be valid unless so made and authorized by the Owner, in writing.
- G. In an emergency affecting the safety of life or of the structure or of adjoining property, the Contractor, without special instruction or authorization from the Owner, is hereby permitted to act at his/her discretion to prevent such threatened loss or injury. Any compensation claimed by the Contractor on account of such emergency work shall be submitted in writing and determined by agreement with the Owner.

ARTICLE 26 - PAYMENT TO CONTRACTORS

A. PAYMENTS:

- (a) Payments on account of this contract will be made monthly as the work progresses. The Contractor shall submit to the Owner, in the manner and form prescribed, an application for each payment, and, if requested, receipts or other vouchers showing payments for materials and labor, including payments to subcontractors. The Owner will make partial payments as soon thereafter as possible, for work done during the preceding calendar month on estimates certified to the Owner subject to the approval of the Owner. The Owner shall retain ten percent (10%) of the amount of each such estimate until final completion and acceptance of all work covered by the contract, except that on completion of fifty percent (50%) of the work the retainage may be reduced to five percent (5%) of the value of the work in place and materials properly stored on the site if in the opinion of the Owner the work has progressed satisfactorily and there is no reason to believe the Contractor may default in the execution of the balance of the work. All bills, claims and demands for labor performed, work done or materials furnished, shall be submitted in six (6)

- (b) copies by the Contractor. The terms and conditions of this paragraph shall be executed in strict accord with Section 8.260 RSMo 1978 and Cumulative Supplements.
 - (c) For contracts, the cost of which is \$5,000.00 or less, paragraph (a) of this article shall not apply. Contracts falling within this category shall merit but a single payment which shall become due and payable on completion and acceptance of all work specified thereunder. The terms and provisions of this paragraph shall be executed in strict accord with Section 8.270 RSMo 1978 and Cumulative Supplements.
 - (d) Each payment made to Contractor shall be on account of the total amount payable to Contractor and all material and work covered by paid partial payment shall thereupon become the sole property of Owner. No such payment shall be deemed to be approval for any item or items for which such payment is made, and this provision shall not be construed as relieving Contractor from sole responsibility for care and protection of materials and work upon which payments have been made or restoration of any damaged work or as a waiver of the right of Owner to require fulfillment of all terms of the contract.
 - (e) Ordinarily no allowance will be made in estimates for materials delivered on site of work and not incorporated in work; however, items considered by Consultant to be major items of considerable magnitude, if suitably stored on the site, will be allowed in estimates on the basis of ninety percent (90%) of value, the value calculated in proportion to contract price.
- B. PAYMENTS WITHHELD: The Owner may withhold or nullify in whole or part any certificate to such extent as may be necessary to protect the Owner from loss on account of:
- (a) Defective work not remedied.
 - (b) Failure of the Contractor to make payment properly to subcontractors for material or labor.
 - (c) Claims files or reasonable evidence indicating probable filing of claims.
 - (d) A reasonable doubt that the contract can be completed for the balance then unpaid.
 - (e) Damage to another Contractor.

When the Owner is satisfied the Contractor has remedied above grounds, payments shall be made for amounts withheld.

C. FINAL PAYMENT:

- (a) Final payment shall be due at such time as the work is fully completed and all provisions of the contract have been satisfactorily fulfilled.
- (b) Upon receipt of written notice from the Contractor to the Consultant that the work is ready for final inspection and acceptance, the Consultant and University Representative shall promptly make such inspection. If the work is acceptable and the contract fully performed,

the Contractor will be directed to submit a final estimate for certifications. If the Owner approves the same, the entire balance shall be due and payable.

(c) Where the specifications provide for the performance by the Contractor of certain tests for the purpose of balancing and checking the air conditioning and heating equipment and the Contractor shall have furnished and installed all such equipment in accordance with the specifications, but said test cannot then be made because of weather conditions, such test shall be considered as required under the provisions of the specifications, Article 19 of General Conditions, and the contract may be certified as satisfactorily completed and the work accepted and full payment made, even though the tests have not been made.

- D. RELEASES: Neither the final payment nor any part of the retained percentage shall become due until the Contractor delivers to the University Representative a complete file of releases, on a standard form prescribed by the Owner and included in the contract documents, from subcontractors and material persons evidencing payment in full for services, equipment and materials, as the case may require, and a properly executed Affidavit of Compliance with Prevailing Wage Law in the form as included in the contract specifications.
- E. If any lien or claim remains unsatisfied after all payments are made, the Contractor shall refund to the Owner all monies that the latter may be compelled to pay in discharging such a lien or claim including all costs and a reasonable attorney's fee.

ARTICLE 27 - PARTIAL OCCUPANCY/SUBSTANTIAL COMPLETION

- A. The Owner may fully occupy the facility as soon as it is substantially completed. No provisions in this document shall be construed to prevent partial occupancy by the Owner so long as the partial occupancy does not materially affect the construction process.
- B. Contractor agrees that Owner upon advance notification to Contractor in writing will be permitted to occupy and use any completed or partially completed portions of the project when such occupancy and use is to the Owner's best interest.
- C. If such prior occupancy increases the cost of the work or delays its completion, provided that the same occur prior to the completion date fixed by the "Notice to Proceed", and as amended by contract Change Orders, and provided the Contractor submits written notification of such cost increase or time delay, the Contractor shall be entitled to extra compensation or extension of time, or both.

ARTICLE 28 - ARBITRATION, DISPUTES AND DISAGREEMENTS

- A. In order to prevent all disputes or disagreements between the parties in this contract in relation to their performance hereof on the part of this Contractor, it is hereby expressly agreed and understood that in case any controversy or difference of opinion shall arise between the parties aforesaid as to quality, quantity or value of the work, or material, the interpretation of the provisions of this Contract or any other matter connected with this work, the decision of the Attorney General of the State of Missouri, shall be final and binding on all parties.

ARTICLE 29 - RIGHTS OF OWNER ON BREACH OF CONTRACT

- A. If the Contractor shall be judged bankrupt, or if the Contractor should make a general assignment for the benefit of its creditors, or if a receiver should be appointed on account of its insolvency, or if the Contractor should persistently or repeatedly refuse or fail to supply enough properly skilled workers or proper materials or if the Contractor should fail to make prompt payments to subcontractor or for material or labor, or persistently disregard laws, ordinances or the instructions of the Owner, or otherwise be guilty of a substantial violation of any provision of the contract, then the Owner may serve notice on the Contractor and the Contractor's surety setting forth the violations and demanding compliance with the contract. Unless within ten (10) consecutive calendar days after serving such notice, such violations shall cease and satisfactory arrangements for corrections be made, the Owner may suspend the Contractor's right to proceed with the work or terminate the contract.
- B. In the event the Owner suspends Contractor's right to proceed with the work or terminates the contract, the Owner may demand that the Contractor's surety take over and complete the work on the contract, after the surety submits a written proposal to the Owner and receives written approval and upon the surety's failure or refusal to do so within ten (10) consecutive calendar days after demand therefor, the Owner may take over the work and prosecute the same to completion by bid or negotiated contract, or the Owner may elect to take possession of and utilize in completing the work such materials, supplies, appliances and plant as may be on the site of the work, and all subcontractors, if the Owner elects, shall be bound to perform their contracts.
- C. The Contractor and the Contractor's surety shall be and remain liable to the Owner for any excess cost or damages occasioned to the Owner as a result of the actions above set forth.
- D. The Contractor, in the event of such suspension or termination, shall not be entitled to receive any further payments under the contract until the work is wholly finished. Then, if the unpaid balance under the contract, shall exceed all expenses of the Owner as certified by the Consultant, such excess shall be paid to the Contractor; but, if any such expenses shall exceed the unpaid balance as certified by the Consultant, the Contractor and the Contractor's surety shall be liable for and shall pay the difference and any damages to the Owner.
- E. In exercising Owner's right to secure completion of the work under any of the provisions hereof, the Owner shall have the right to exercise Owner's sole discretion as to the manner, methods and reasonableness of costs of completing the work.
- F. The rights of the Owner to suspend or terminate as herein provided shall be cumulative and not exclusive and shall be in addition to any other remedy provided by law.
- G. The Contractor, in the event of such suspension or termination, may be declared ineligible for Owner contracts for a minimal period of twelve (12) months. Further, no contract will be awarded to any Contractor who lists in proposal any subcontractor whose prior performance has contributed, as determined by the Owner, to a breach of a contract. In order to be considered for State awarded contracts after this period, the Contractor/subcontractor will be required to forward acceptance reports to the Owner regarding successful completion of non-

State projects during the intervening twelve (12) months from the date of default. No State contracts will be awarded to a Contractor/subcontractor until the ability to perform responsibly in the private sector has been proven to the Owner.

ARTICLE 30 - RECORD DRAWINGS

- A. Contractors shall, at the completion of their work and prior to submission of request for final payment, complete and turn over to the Consultant a marked up set of drawings provided for construction. The corrections shall show all field changes that were made to adopt to field conditions, changes resulting from contract Change Orders and all buried installations of piping, conduit, and utility services. All buried and concealed items both inside and outside the building shall be accurately located as to depth and referenced to two permanent features such as interior or exterior wall faces and dimensions shall be given in a neat and legible manner in a contrasting colored pencil or ink.

ARTICLE 31 - WARRANTIES AND OPERATING INSTRUCTIONS

- A. Warranties and operating instructions of various equipment items, according to the manufacturer's policy covering their products, shall be delivered in three (3) copies to the Consultant prior to submission of the final pay estimate.

ARTICLE 32 - GENERAL GUARANTEE

- A. Neither the final certificate of payment nor any provision in the contract documents for partial use or occupancy of the premises by the Owner shall constitute an acceptance of work not done in accordance with the contract documents or relieve the Contractor or the Contractor's sureties of liability in respect to any express warranties or responsibility for faulty materials, workmanship or liquidated damages.
- B. The Contractor or the Contractor's sureties shall remedy any defects in the work and pay for any damage to other work resulting therefrom which shall appear within a period of one (1) year from the date of final acceptance unless a longer period is otherwise specified. The Owner will give notice of observed defects with reasonable promptness.
- C. In case of default on the part of the Contractor in fulfilling this part of the contract, the Owner may correct the work or repair the damage and the cost and expense incurred in such event shall be paid by or recoverable from the Contractor.
- D. Should Contractor be required to perform tests that due to climatic conditions must be delayed, it is understood that such tests will be accomplished by Contractor at the earliest possible date with the provisions of the General Guarantee beginning upon satisfactory completion of said test. The responsibility of the Contractor under this section will not be abrogated if the Owner should elect to initiate final payment.

ARTICLE 33 – DOMESTIC PRODUCTS PROCUREMENT

- A. In accordance with the Missouri Domestic Products Procurement Act (Senate Bill 74, 84th General Assembly, First Regular Session), any manufactured goods or commodities used or supplied in the performance of this contract or any subcontract thereto shall be manufactured, assembled or produced in the United States, unless the specified products are not manufactured, assembled or produced in the United States in sufficient quantities to meet the contracts requirements, or if obtaining the specified products manufactured, assembled or produced in the United States would increase the cost of this contract for purchase of the product by more than ten percent.
- B. The contractor shall certify, through each pay application, that all manufactured goods or commodities used or supplied in the performance of the work for which payment is requested were manufactured, produced or assembled in the United States. If the goods used or supplied in the performance of the work for which payment is requested were not manufactured, produced or assembled in the United States, (2) are not manufactured in sufficient quantities to meet the needs of this contract, (3) cannot be manufactured, assembled or produced in the United States within the necessary time to meet the requirements of this contract, or (4) would increase the cost of this contract for the purchase of the product by more than ten percent (10%) if purchased from a manufacturer or producer in the United States.

AFFIDAVIT OF COMPLIANCE WITH PREVAILING WAGE LAW

I, _____ do hereby certify under penalty of perjury:

Project Name: _____

- 1) That all of the information in the payroll reports for this project is true and correct.
- 2) All Persons employed on said project have been paid the full weekly wages earned, that no rebates have been or will be made either directly or indirectly from the full wages earned by any person, other than permissible deductions such as FICA, Medicare, Federal Income Taxes, State Income Taxes, State Disability (SDI) Court Ordered Wage Attachments, 401K Plans.
- 3) That any payrolls otherwise under this contract required to be submitted for the project are correct and complete; that the wage rate for the workers are not less than the applicable wage rates contained in the Prevailing wage determination, as provided by the Division of Labor Standards and incorporated into the contract; that the classifications set forth therein for each worker conform with the work performed.

DATED THIS _____ day of _____, 20__

(Name of Contractor)

BY _____
(Typed or printed name)

(Signature)

TITLE: _____

APPENDIX A











H450

HISTORICAL ALUMINUM SERIES

Casement | Project-Out | Fixed



Product Material
Aluminum

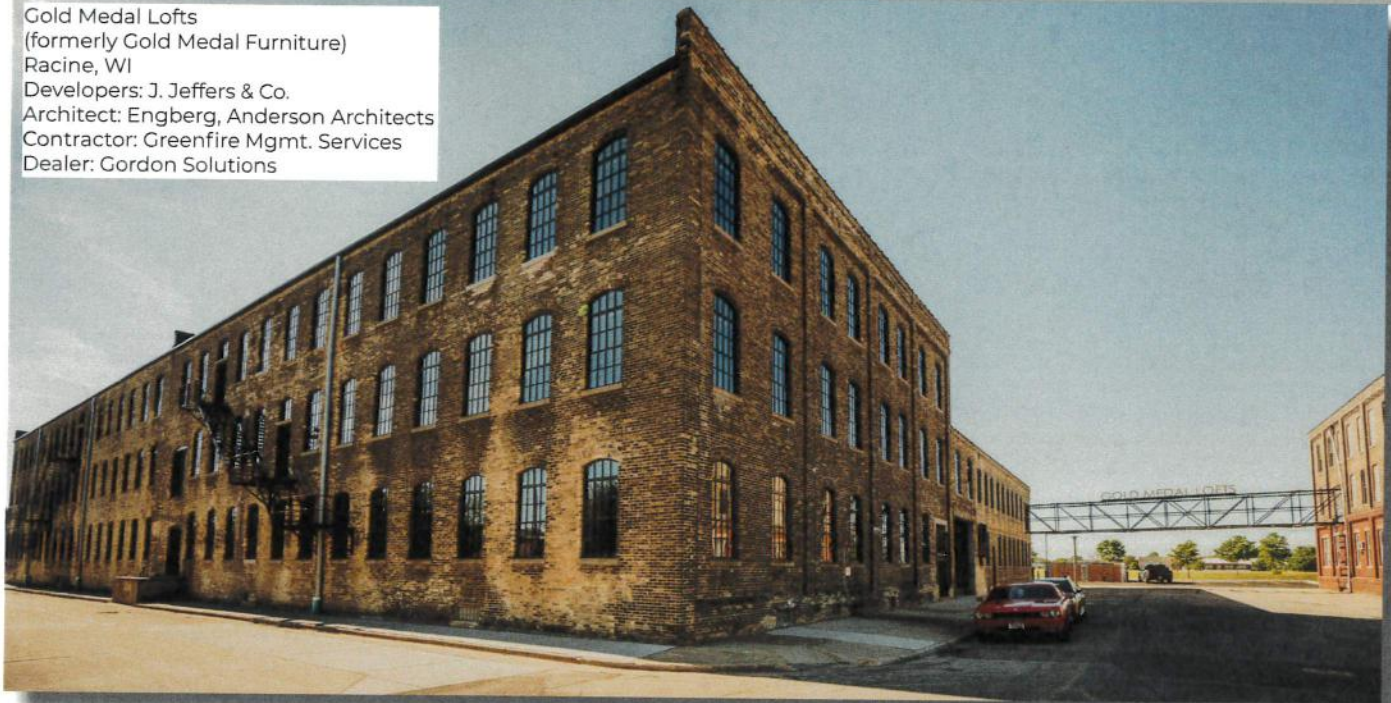


Frame Depth
3 1/4"



Rating
Casement: CW90
Project-Out: CW70
Fixed: Up to AW110

Gold Medal Lofts
(formerly Gold Medal Furniture)
Racine, WI
Developers: J. Jeffers & Co.
Architect: Engberg, Anderson Architects
Contractor: Greenfire Mgmt. Services
Dealer: Gordon Solutions



Design Pressure Casement: Up to 105 Project-Out: Up to 105 Fixed: Up to 110	U-Value* Casement: .39 - .44 Project-Out: .40 - .60 Fixed: .25 - .31
Air Infiltration Casement: <.30 Project-Out: <.30 Fixed: <.10	SHGC* Casement: .14 - .48 Project-Out: .14 - .48 Fixed: .16 - .57
Water Resistance Casement: Up to 10 Project-Out: Up to 10 Fixed: Up to 15	CR* Casement: 45 - 48 Project-Out: 40 - 49 Fixed: 49 - 62
OITC* Casement: 29 - 32 Other models: Contact Quaker	STC* Casement: 34 - 37 Other models: Contact Quaker

*-Ranges based on multiple Low-E/Argon I.G. combinations
*-Ranges based on multiple I.G. combinations

FEATURES:

- ▶ Historically-correct bevel frame
- ▶ Architectural grade aluminum frame
- ▶ Thermally-broken frame and sash with pour-and-debridge technology
- ▶ 2 7/16" narrow sitelines
- ▶ With or without Integral Nailing Fin
- ▶ 1" insulating glass
- ▶ Standard High-Performance 2604 Powder Paint Finish (an FGIA Specification)
- ▶ Optional upgrade to 2605 Powder Paint Finish (an FGIA Specification)
- ▶ Casement and Project-out operating models
- ▶ 30+ "Quick-Pick" colors, with unlimited custom colors available.
- ▶ Optional Upgrade to 2605 Powder Paint Finish (an FGIA Specification)
- ▶ Impact rated versions (H470 Series) of Project-Out model w/cam handle and Fixed model

www.QuakerCommercialWindows.com

Information listed is deemed accurate as of date shown. Quaker Windows reserves the right to change or discontinue any product, feature or option without notice.

May, 2022 V6

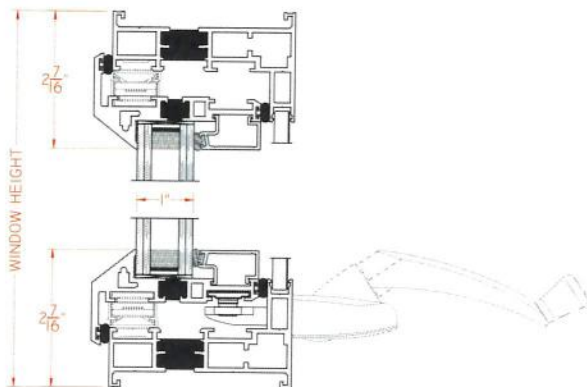


H450

HISTORICAL ALUMINUM SERIES

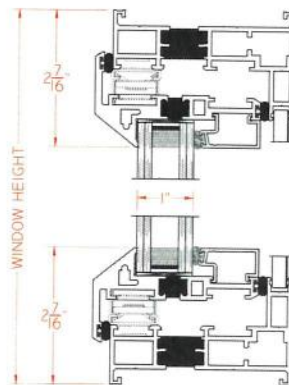
Casement Roto (CW90)

Test size = 36" x 60"



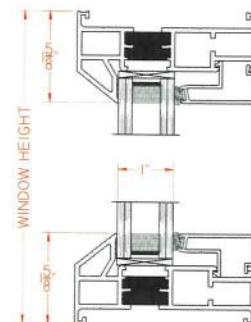
Casement Push/Pull Cup (CW90)

Test size = 36" x 60"



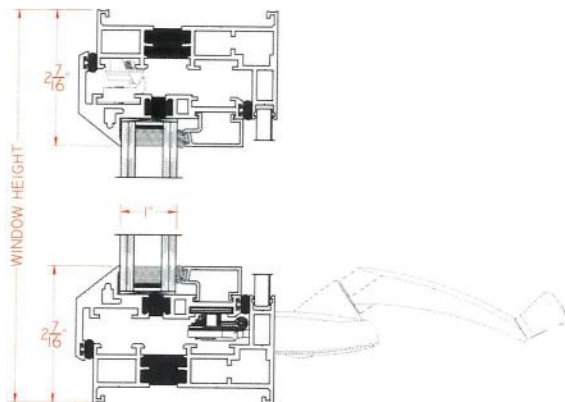
Fixed (AW110/AW60)

AW110 Test size = 72" x 110"
AW60 Test Size = 60" x 99"



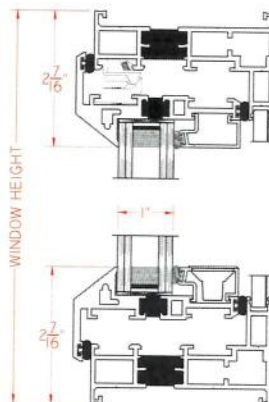
Project-Out Roto (CW70)

Test size = 60" x 36"



Project-Out Push/Pull Cup (CW70)

Test size = 60" x 36"



All ratings listed are NAFS certified.

Lofts at the HUPP
St. Louis, MO
Owner: E+A / Screaming Eagle
Gen. Cont: Pinnacle Contracting
Dealer: Dalco Industries



QuakerCommercialWindows.com

1-800-347-0438

Commercial@quakerwindows.com

Made in America: All Quaker products are designed and manufactured in the United States at our state-of-the-art facilities in Freeburg, MO and Eldon, MO.



H450 Series 3 1/4" Frame Depth Fixed

H450 FIXED (PICTURE WINDOW)

FEATURES

- ◇ Commercial Framing System
 - 3 1/4" main frame
 - Historically-correct bevel frame exterior
 - Minimum of 0.080" wall thickness, 0.70 on TDL
 - Available with or without integral nailing fin
- ◇ Thermally Enhanced Design
 - Thermally-broken main frame and vent rails
 - Azon pour and debridge thermal break technology
- ◇ Glazing
 - 1" insulating glass

BENEFITS

- ◇ Historically accurate profiles to help your project meet Historic Preservation codes
- ◇ The capacity to match exterior colors for unique project facades
- ◇ The ability to facilitate large sizes for taller and wider window openings

OPTIONS

- ◇ Available Configurations
 - Fixed
 - Continuous frame capabilities
- ◇ Muntin Choices
 - Internal or simulated divided lites available
- ◇ Screen
 - Wicket Screen (Push-out model only)
- ◇ Glazing
 - Multiple Low-E and argon glazing choices
 - Glazing pocket can accept 1 3/8" insulating glass for sound attenuation purposes
 - Capillary tubes
 - Wide variety of glazing, tinting and thickness options
- ◇ Panning & Trim Choices
 - Wide variety of panning, receptor and trim available
- ◇ Mulling
 - Wide variety of structural mulls

PERFORMANCE

- ◇ Structural & Thermal (test reports or thermal simulations available upon request)

Model	Fixed (Picture Window)	
Test Size:	72" x 120"	60" x 99"
NAFS Rating	AW50	AW110
Structural Load P.S.F.		105
Air at 50 MPH (cfm/ft ²)	<0.01	
Water (No Penetration) P.S.F.	15.04	
U-Value (ranges based on multiple Low-E/Argon combinations)	0.26-0.50	
SHGC (ranges based on multiple Low-E/Argon combinations)	0.16-0.69	

Our products are tested to the standards of and certified by some of the foremost organizations in the fenestration industry.

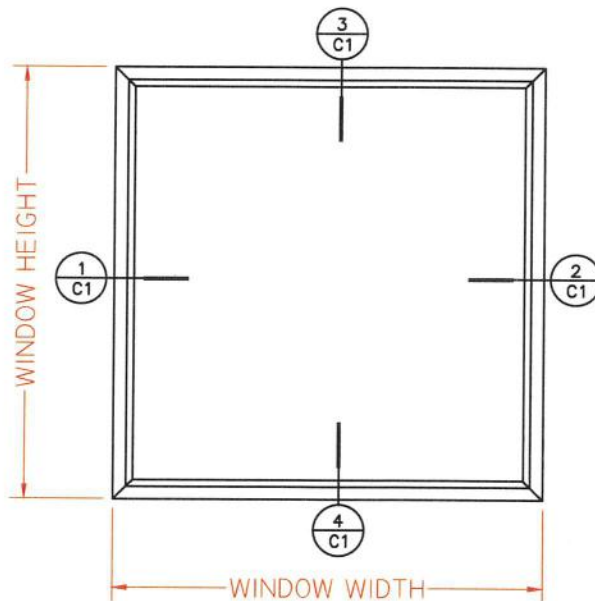
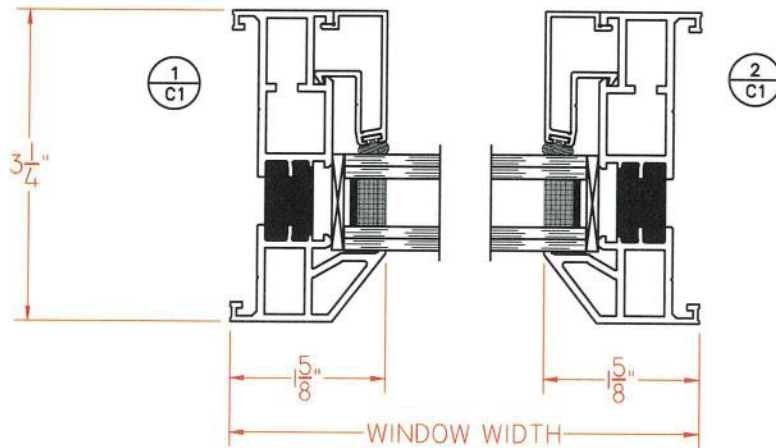




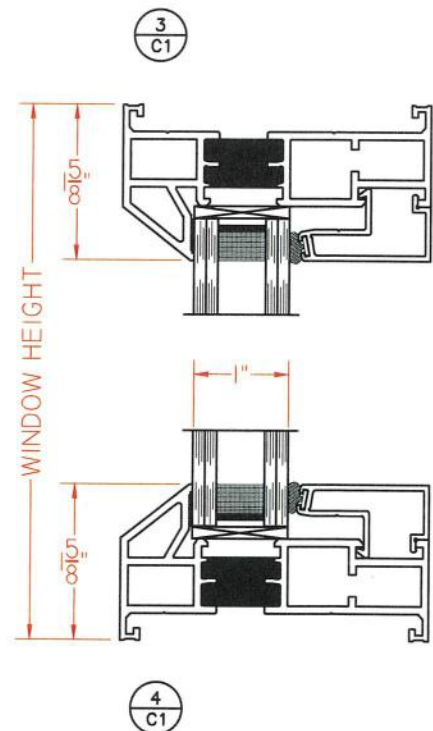
H450 Series 3 1/4" Frame Depth Fixed

H450 FIXED (PICTURE WINDOW) WITHOUT NAIL FIN

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



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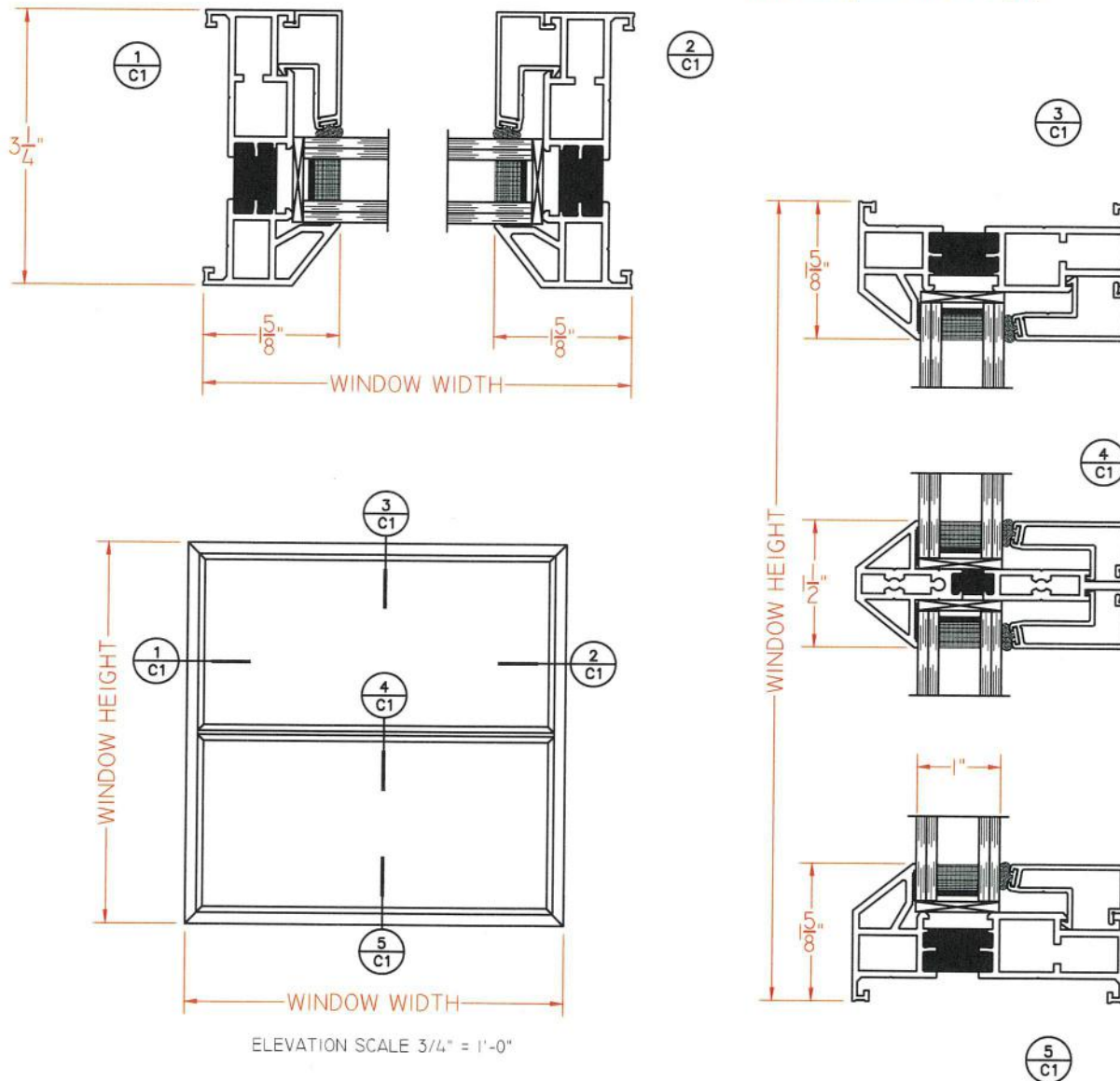




H450 Series 3 1/4" Frame Depth Fixed

H450 FIXED/FIXED (PICTURE WINDOW/PICTURE WINDOW)

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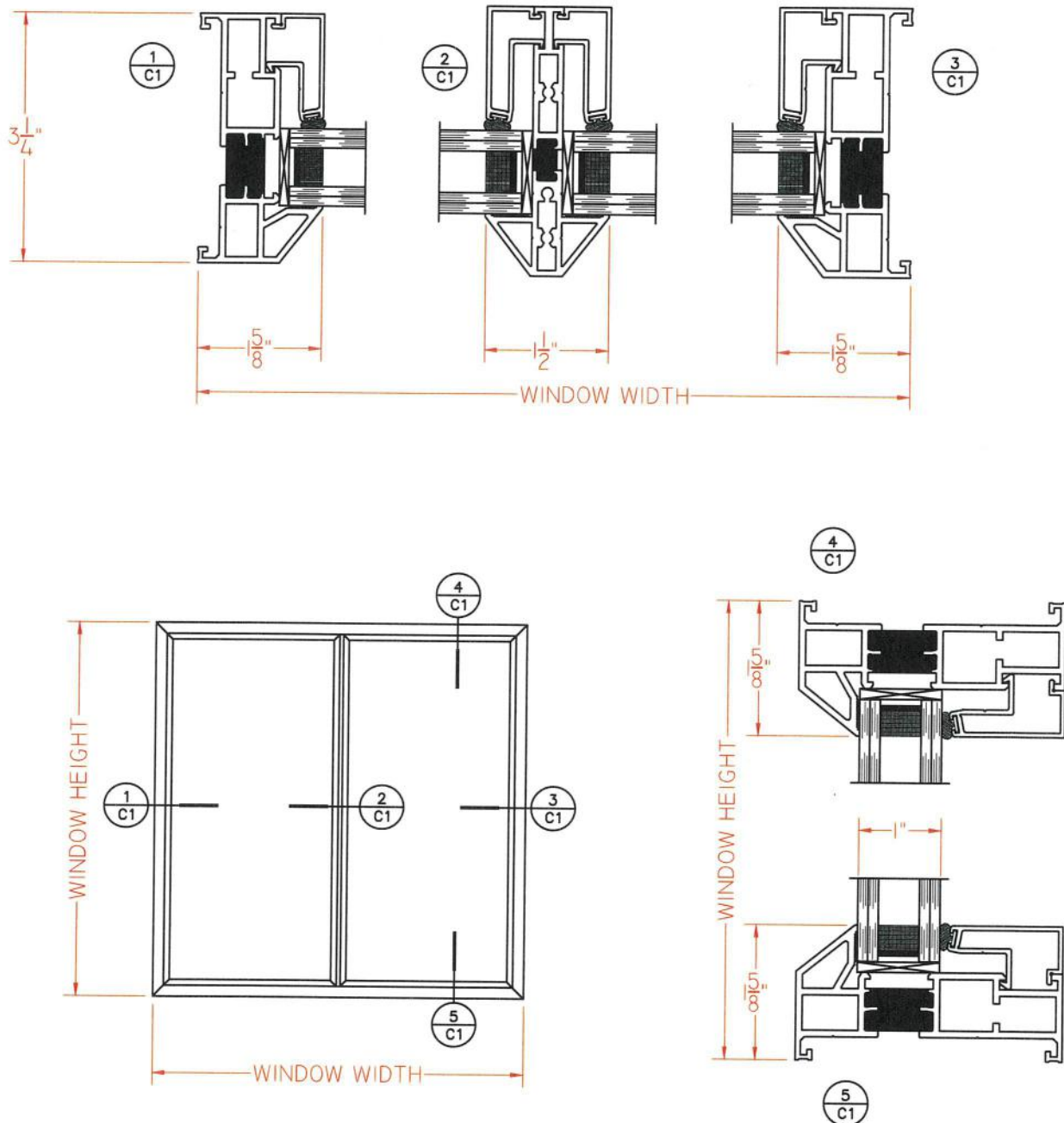




H450 Series 3 1/4" Frame Depth Fixed

H450 FIXED/FIXED (PICTURE WINDOW/PICTURE WINDOW)

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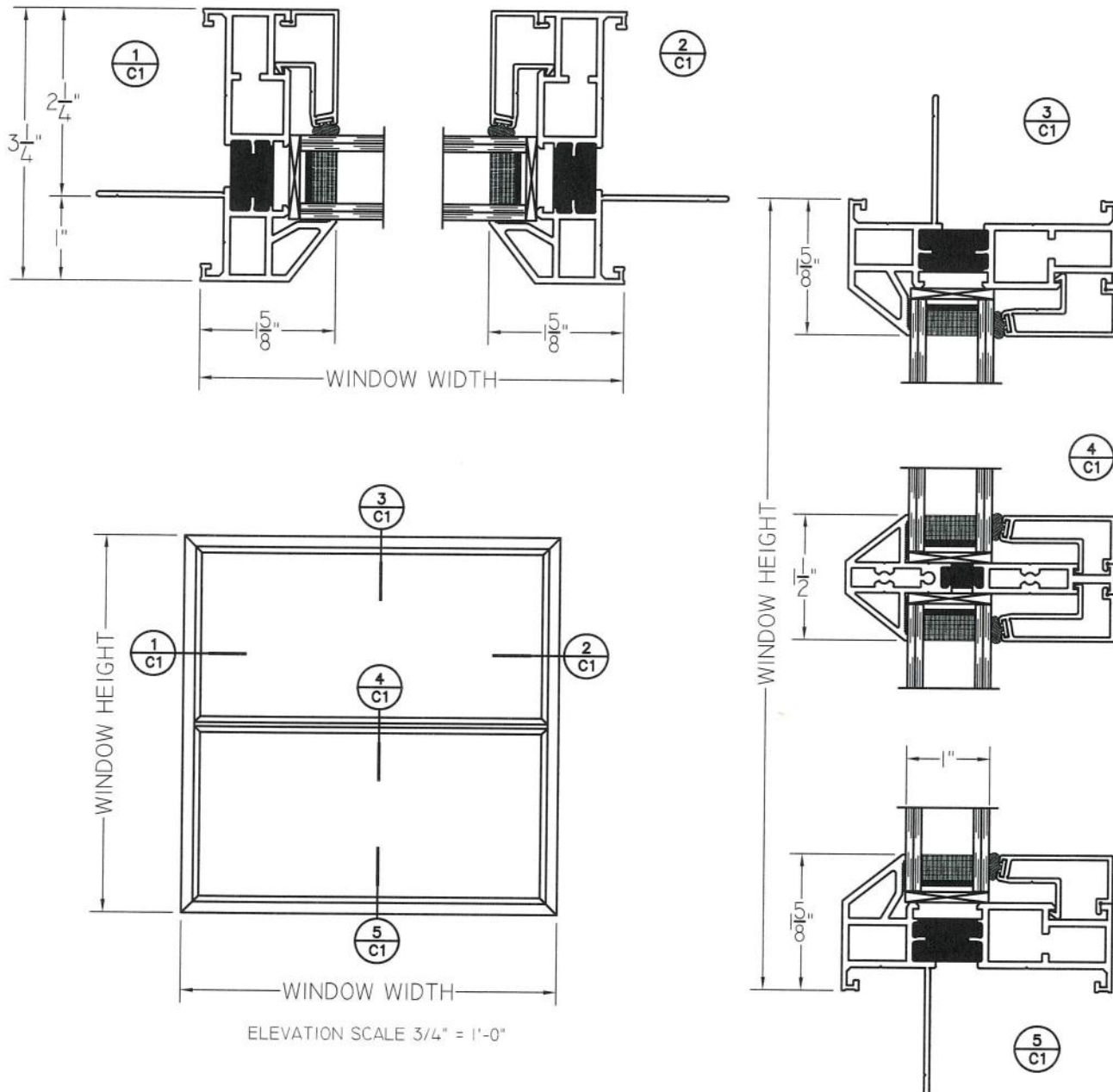


H450 Series 3 1/4" Frame Depth Fixed

H450 FIXED/FIXED (PICTURE WINDOW/PICTURE WINDOW)

WITH
OPTIONAL
NAIL FIN

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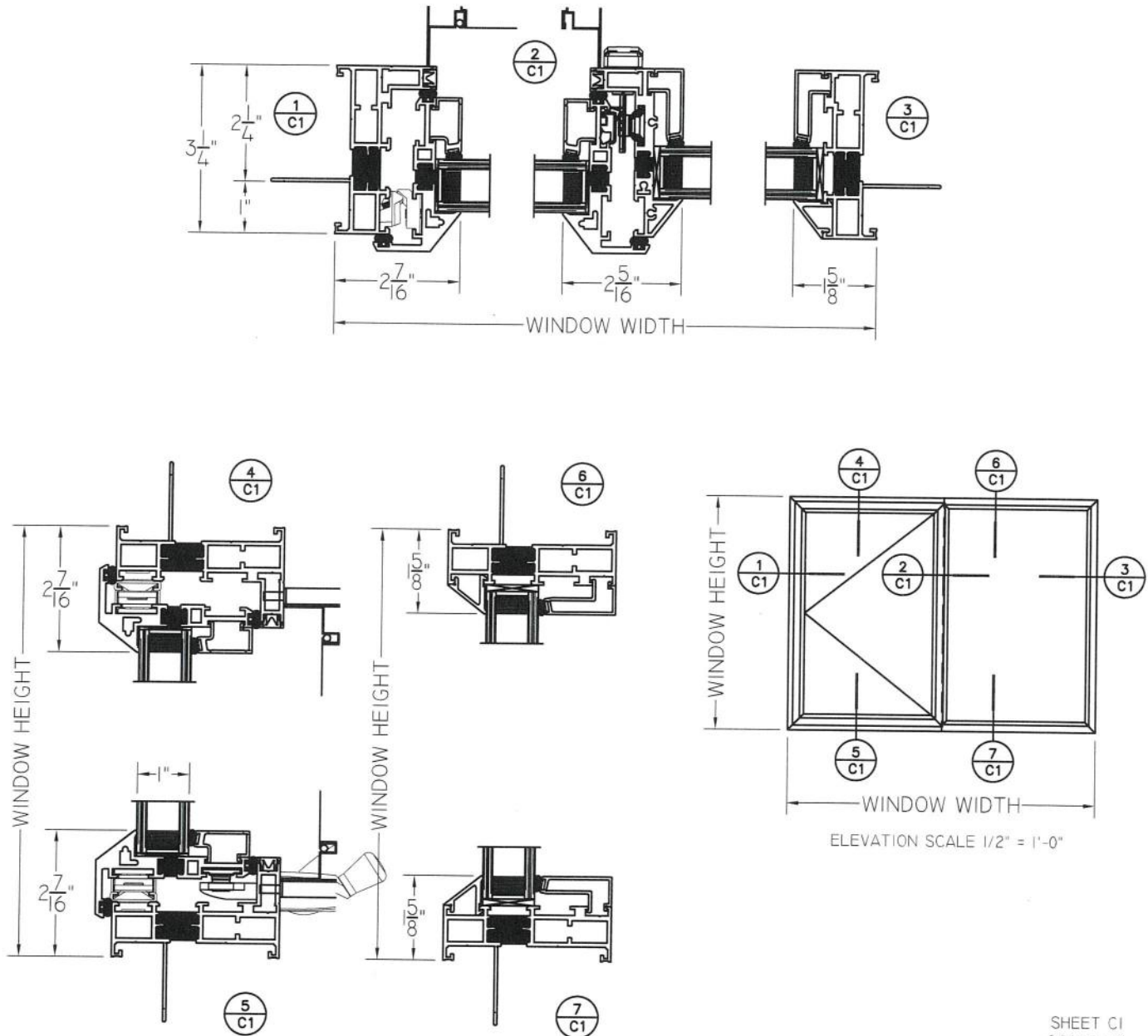


H450 Series 3 1/4" Frame Depth Fixed

H450 CASEMENT/FIXED (CASEMENT/PICTURE WINDOW)

WITH
OPTIONAL
NAIL FIN

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SHEET C1
SCALE 1:3

Our products are tested to the standards of and certified by some of the foremost organizations in the fenestration industry.



(QUAKER H450 DS FIXED WINDOW)

SECTION 08 51 13 (08520) - ALUMINUM WINDOWS

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. Fixed Aluminum Window Units
2. Glass and Glazing for Aluminum Windows.
3. Wood Blocking, Shims, Anchors, Clips, and all accessories necessary for a complete installation furnished and installed.
4. All aluminum trim and closure pieces
5. Installation labor, tools, equipment, and services necessary for installation of Aluminum Windows.

B. Related Sections:

1. Section 07 62 00 (07620) - Sheet Metal Flashing and Trim
2. Section 07 92 00 (07920) - Joint Sealants
3. Section 08 13 73 (08130) – Sliding Aluminum Doors and Frames
4. Section 08 41 13 (08410) – Aluminum Entrances and Storefront
5. Section 08 80 00 (08800) - Glazing

1.02 REFERENCES

A. Aluminum Association (AA)

1. DAF-45 – “Designation System for Aluminum Finishes”

B. Fenestration and Glazing Industry Alliance (FGIA) (a.k.a.) American Architectural Manufacturers Association (AAMA):

1. 101 – “Voluntary Performance Specification for Windows, Skylights and Glass Doors”

SECTION 08 51 13 (08520) – ALUMINUM WINDOWS

2. 502 – “Voluntary Specification for Field Testing of Newly Installed Fenestration Products”
3. 513 – “Voluntary Specification for Standard Laboratory Test Method For Determination Of Forces And Motions Required To Activate Operable Parts Of Operable Windows And Doors In Accessible Spaces”
4. 611 – “Voluntary Specification for Anodized Architectural Aluminum”
5. 1503 – “Voluntary Test Method for Thermal Transmittance and Condensation Resistance of Windows, Doors and Glazed Wall Sections”
6. 2400 – “Voluntary Specification for Installation of Windows with a Mounting Flange in Stud Frame Construction”
7. 2604 – “Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels”
8. 2605 – “Voluntary Specification, Performance Requirements and Test Procedures for Superior Performance Organic Coatings on Aluminum Extrusions and Panels”
9. CW-10 – “Care and Handling of Architectural Aluminum from Shop to Site”

C. American National Standards Institute (ANSI) Publications

1. Z97.1 – “Performance Specifications and Methods of Test for Safety Glazing Materials Used in Buildings”

D. ASTM International (ASTM) Publications:

1. C518 – “Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus”
2. C1036 – “Standard Specifications for Flat Glass”
3. C1048 – “Standard Specifications for Heat-Treated Flat Glass – Kind HS, Kind FT Coated and Uncoated Glass”
4. D3985 – “Standard Test Method for Oxygen Gas Transmission Rate Through Plastic Film and Sheeting Using a Coulometric Sensor”
5. E90 – “Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements”

SECTION 08 51 13 (08520) – ALUMINUM WINDOWS

6. E283 – “Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen”
 7. E330 – “Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors By Uniform Static Air Pressure Difference”
 8. E331 – “Standard Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors By Uniform Static Air Pressure Difference”
 9. E413 – “Classification for Rating Sound Insulation”
 10. E547 – “Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Differential”
 11. E774 – “Standard Specification for Sealed Insulating Glass Units”
 12. F588 - “Standard Test Methods for Measuring the Forced Entry Resistance of Window Assemblies, Excluding Glazing Impact”
 13. F1249 – “Standard Test Method for Water Vapor Transmission Rate Through Plastic Film and Sheeting Using a Modulated Infrared Sensor”
- E. National Glass Association (NGA):
1. “GANA Glazing Manual”
- F. Insulating Glass Certification Council (IGCC)
- G. National Fenestration Ratings Council (NFRC)
- H. U.S. Consumer Product Safety Commission (CPSC) Publications:
1. 16 CFR Part 1201 “Safety Standard For Architectural Glazing Materials”
- I. Window and Door Manufacturers Association (WDMA) Publications:
1. FGIA/AAMA/WDMA 101/I.S.2/NAFS “Voluntary Performance Specification for Windows, Skylights and Glass Doors”
 2. FGIA/AAMA/WDMA/CSA 101/I.S.2/A440 “Standard/Specification for Windows, Doors and Unit Skylights”

SECTION 08 51 13 (08520) – ALUMINUM WINDOWS

1.03 SUBMITTALS

- A. Submit "Letter of Conformance" in accordance with Section 01 33 00 (01330) – with the following supporting data:
 - 1. Product data for each type of aluminum window specified, including standard construction details, dimensions of individual components, profiles, finishes, and accessories.
 - 2. Shop drawings for each type of window specified, including 1/4-inch scale wall elevations, typical unit elevations at 3/4-inch scale details, full size details of typical composite members and the following:
 - a. Panning Details
 - b. Flashing and drainage details.
 - c. Mullion details, including reinforcement and stiffeners.
 - d. Joinery details.
 - 3. Samples: Provide full-size or partial-size sample of window illustrating glazing system, quality of construction and finish.
 - 4. Product certificates signed by the window manufacturer certifying that window units comply with specified performance requirements.
 - 5. Submit certified independent laboratory test reports verifying compliance with all test requirements of 1.05 PERFORMANCE REQUIREMENTS as requested by Architect.

1.04 DEFINITIONS

- A. Performance grade number, included as part of the FGIA/AAMA/WDMA/CSA 101/I.S.2/A440 product designation code, is actual design pressure in pounds force per square foot used to determine structural test pressure and water test pressure.

1.05 PERFORMANCE REQUIREMENTS

- A. Certify that windows have been tested in accordance with FGIA/American Architectural Manufacturers Association (FGIA/AAMA/WDMA) Specification for Performance Class specified complying with the following performance standards:

1. FGIA/AAMA/WDMA/CSA 101/I.S.2/A440 Performance Requirements:
Provide aluminum windows of the performance class and grade indicated that comply with FGIA/AAMA/WDMA/CSA 101/I.S.2/A440.
 - a. Performance Class: F-AW
 - b. Performance Grade: 110
2. Uniform Structural Properties (ASTM E330): Pressure acting inward and outward. No permanent damage to glass or fasteners shall occur with permanent deformation at a maximum of 1/175 of its span, when tested at a static air pressure difference of the following:
 - a. Class F-AW-110: 165.0 PSF
3. Water Resistance (ASTM E331 and ASTM E547): No water penetration at test pressure indicated.
 - a. Class F-AW-110: 12.0 PSF
4. Air Leakage (ASTM E283):
 - a. Maximum 0.3 CFM per sq./ft. of total exterior surface area, when tested at a static air pressure differential of 6.2 PSF minimum.

B. Project Wind Loads:

Please specify design wind pressure, both positive and negative required by the governing building code, as calculated from ANSI A58.1, or as determined by boundary layer wind tunnel testing. Minimum for positive and negative pressure = 10.0 p.s.f.

1. The system shall be designed to withstand the following loads with respect to the plane of the wall:
 - a. Positive pressure of ____ p.s.f. at non corner zones.
 - b. Negative pressure of ____ p.s.f. at non corner zones.
 - c. Negative pressure of ____ p.s.f. at corner zones.

1.06 QUALITY ASSURANCE

- A. All window units shall be manufactured by a single source.

SECTION 08 51 13 (08520) – ALUMINUM WINDOWS

1. All windows in any one project must be by the same manufacturer and with comparable frame depth, profile, glazing bite, and installation requirements. Manufacturer must provide a window system that can incorporate all window configurations used on the project.
2. Standards: Requirements for aluminum windows, terminology and standard of performance, and fabrication workmanship are those specified and recommended in FGIA/AAMA/WDMA/CSA 101/I.S.2/A440 and The Aluminum Association (AA).
 - a. All window units shall be labeled as conforming to FGIA/AAMA/WDMA/CSA 101/I.S.2/A440. The label shall state the name of the manufacturer, the approved labeling agency and the product designation as specified in FGIA/AAMA/WDMA/CSA 101/I.S.2/A440.
 - b. All testing shall be conducted using FGIA/AAMA/WDMA/CSA 101/I.S.2/A440 Gateway Performance minimum specified test sizes.

1.07 DELIVERY, STORAGE AND HANDLING

- A. Transportation and Handling: Transport products by methods to avoid product damage, deliver in undamaged condition in manufacturer's unopened containers or packaging. Provide equipment and personnel to handle products by method to prevent soiling or damage. Promptly inspect shipments to assure that products comply with requirements, quantities are correct, and products are undamaged.
- B. Storage and Protection: Store products in accordance with manufacturer's instructions, with seals and labels intact and legible. Store sensitive products in weather-tight enclosures; maintain with temperature and humidity ranges required by manufacturer's instruction.

1.08 WARRANTIES

- A. Aluminum Window Warranty
 1. Products: Submit a written warranty, executed by the window manufacturer, for the following:
 - a. Framing components: A period of (5) years from the date of manufacture, against defective materials and workmanship, including

substantial non-compliance with applicable specification requirements and industry standards, which results in premature failure of the windows or parts, outside of normal wear.

- b. Insulating glass units: A period of (10) years from the date of manufacture, against insulating glass seal failure unrelated to glass breakage.
 - c. In the event windows or components are found defective, manufacturer will repair or provide replacements without charge at manufacturer's option.
 - d. Where applicable, materials which are applied to the face of insulating glass for the purpose of simulating division in glass openings (SDL's) are warranted against detaching from the glass surface for a period of (5) years.
 - e. Finish: Refer to Part 2, Section 2.06 "FINISHES" for warranty requirements.
 - f. Warranty for all components must be direct from the manufacturer (non- pass through) and non- prorated for the entire term. Warranty must be assignable to the non-residential owner, and transferable to subsequent owners through its length.
2. Installation: Submit a written warranty, executed by the window installer, for a period of (1) year from the date of substantial completion, against defective materials or workmanship, including substantial non-compliance with applicable specification requirements, which result in premature failure.
- a. In the event installation of windows or components is found to be defective, installer will repair or provide replacements without charge at the installer's option.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Approved Manufacturers:

- 1. Quaker Window Products Company, Inc. (800) 347-0438
 - a. Fixed Window: "H450 DS Series"

2. Substitutions: Only pre-approved products specified by the Architect will be acceptable. Submit the following information with proper documentation as required for pre-bid substitution requests, and at least (10) working days prior to bid date.
 - a. Independent test reports certifying that proposed product is in accordance with, and meets all criteria specified in Section 1.05 "PERFORMANCE REQUIREMENTS".
 - b. Drawing details of elevations and sections, and samples in accordance with, and as specified in Section 1.03 "SUBMITTALS".
 - c. Copy of manufacturer's warranty specified in accordance with, and as specified in Section 1.08 "WARRANTIES".
 - d. Any additional information requested by the Architect.

2.02 MATERIALS

A. Aluminum Members:

1. Extruded aluminum prime billet 6063-T6 alloy for primary components, 6063-T6, or 6061-T6 for structural components, all in accordance with (ASTM B221).

B. Structural Thermal Break Construction:

1. Frame and sash members shall include a structural thermal barrier, applied in the manufacturer's facility, using concealed low-conductance poured-in-place polyurethane in a pre-treated cavity.
2. After proper curing, the aluminum bridge section must be removed to provide a 1/2" minimum separation between interior and exterior metal surfaces.
3. The thermal barrier cavity shall have a manufactured mechanical lock applied consisting of abrading or lancing of the extrusion cavity prior to application of poured-in-place polyurethane.
4. Thermal Break Performance Requirements:
 - a. Shear strength: minimum 2,500 Lbf in accordance with (AAMA TIR-A8).

- b. Flexural strength: minimum 19,000 psi in accordance with (AAMA_D 790).
- c. Thermal conductivity of barrier material: maximum 0.84 BTU-in/(hr-ft²-°F) in accordance with (ASTM C 518).
- d. Systems employing non-structural thermal barriers, or barrier systems absent of a mechanical lock application are not acceptable.

2.03 MANUFACTURED UNITS

- A. Principal window frame members shall have a minimum 0.090" outside wall thickness, and .078" mounting webs, and sectional flanges.
- B. Window frame depth shall be 3 1/4" minimum.
- C. Glazing: Refer to Section 2.05 "GLASS MATERIALS".

2.04 COMPONENTS

- A. All fasteners, tools, equipment, and other materials necessary for a complete installation shall be furnished by the Contractor.
 - 1. Aluminum, nonmagnetic stainless steel, epoxy adhesive, or other materials warranted by the manufacturer to be noncorrosive and compatible with all window members, cladding, trim, anchors, and other components.
- B. Thermoplastic or thermo-set plastic caps, housings, and other components to be injection-molded nylon, extruded PVC, or other suitable compound.
- C. Accessories:
 - 1. Sills: Manufacturer's standard exterior sills, as shown on Drawings.

Optional Item

- a. Nailing fin: Shall be integral to the frame and consist of extruded aluminum as a manufacturer's standard.
 - b. Sill Flashing: manufacturer's standard snap-on type, if required as shown on Drawings.
- 2. Trim: Manufacturer's standard interior snap trims, type as shown on Drawings.

3. Mullions: Provide mullions and cover plates as shown, matching window units. Allow for erection tolerances and provide for movement of window units due to thermal expansion and building deflections, as indicated. Provide mullions and cover plates capable of withstanding design loads of window units.

Optional Item

4. Muntins:

Select one of the Muntin options [item "a."] below if required

a. Internal Muntins:

- 1) Roll formed aluminum of specified width, located between glass panes within the sealed insulating glass unit.
- 2) Muntins shall have finish to match color of Window Frame.

a. Simulated Divided Lite Muntins:

- 1) Composition shall include:
 - i. Exterior applied extruded aluminum Muntin of specified width, continuously adhered to surface of glass with a high performance acrylic adhesive system.
 - ii. Roll formed aluminum of specified width, located between glass panes within the sealed insulating glass unit.
- 2) Interior applied extruded aluminum Muntin of specified width, continuously adhered to surface of glass with a high performance acrylic adhesive system.
- 3) Finish of Exterior and Interior applied muntin components shall comply with Section 2.06 "FINISHES".
- 4) Finish color of Exterior and Interior applied muntins, and internal muntins shall match Window Frame.

Optional Item

5. Panning:

- a. Provide extruded aluminum panning in accordance with (ASTM B221) by Window Manufacturer, type and size as indicated on Drawings.

- b. Panning joinery shall be cut to fit by Window Manufacturer.
- c. Finish of Panning components shall comply with Section 2.06 "FINISHES", and color shall match Aluminum Windows.

Optional Item

6. Receptor System / Subframe:

- a. Provide extruded aluminum, thermally broken Receptor System with Aluminum Windows by Window Manufacturer in accordance with (ASTM B221), as shown on Drawings.
- b. Receptor System components shall encompass a complete assembled frame, fastened and sealed independently from window frames prior to window installation according to manufacturer's instructions.
- c. Finish of Receptor System components shall comply with Section 2.06 "FINISHES", and color shall match Aluminum Windows.

2.05 GLASS MATERIALS:

Please select one of the [item "A."] glass types below which is in accordance with design. The recommended Low-Emissivity (Low-E) coating options are listed below; however, if the design requires tinted glass, or another specific type of (Low-E), please choose the blank option and add pertinent information

- A. Clear Float Glass: ASTM C1036, Type 1 (transparent glass, flat), Class 1 (clear), Quality q3 (glazing select) as manufactured by one of the following:
 - 1. Approved Manufacturers:
 - a. Cardinal Industries
 - b. Approved Substitution by Architect
- A. Coated Low Emissivity Glass: Type 1 (transparent glass, flat), Class 1 (clear), Quality q3 (glazing select), with coating type and performance characteristics complying with requirements specified below:
 - 1. Low E Coating: Surface #2 on insulated units.

2. Approved Manufacturers:
 - a. "LoE²- 272"; Cardinal Industries
 - b. Approved Substitution by Architect.
 3. Whole Window U-Value shall be a maximum of 0.30.
 4. Solar Heat Gain Coefficient shall be a maximum of .37.
- A. Coated Low Emissivity Glass: Type 1 (transparent glass, flat), Class 1 (clear), Quality q3 (glazing select), with coating type and performance characteristics complying with requirements specified below:
1. Low E Coating: Surface #2 on insulated units.
 2. Approved Manufacturers:
 - a. "LoE³- 366"; Cardinal Industries
 - b. Approved Substitution by Architect.
 3. Whole Window U-Value shall be a maximum of 0.29.
 4. Solar Heat Gain Coefficient shall be a maximum of .25.
- A. Coated Low Emissivity Glass: Type 1 (transparent glass, flat), Class 1 (clear), Quality q3 (glazing select), with coating type and performance characteristics complying with requirements specified below:
1. Dual Low E Coating: Insulated dual pane units.
 - a. Surface #2: "LoE³ -366; Cardinal Industries
 - b. Surface #4: "i89"; Cardinal Industries
 2. Approved Manufacturers:
 - a. Cardinal Industries
 - b. Approved Substitution by Architect.

3. Whole Window U-Value shall be a maximum of 0.25.
4. Solar Heat Gain Coefficient shall be a maximum of .24.

A. *(Please specify if none of the above items are selected)*

B. Tempered Glass: Condition A (uncoated surfaces), Type 1 (transparent glass, flat), Class 1 (clear), Quality q3, clear, fully tempered safety glass (meet requirements of ANSI Z97.1).

1. All tempered glass shall conform to ASTM C1048, ANSI Z97.1, and CPSC 16 CFR Part 1201. Tempered glass shall bear permanent monogram indicating tempered quality. Fabrication marks on tempered glass shall be located to be concealed in completed installation.

C. Windows shall be glazed as follows:

1. Sound Transmission Class (STC) (ASTM E413): Provide glazing required for conforming to over all STC ratings as specified for aluminum windows.

For sound transmission class requirements, please consult Quaker Window Products (800) 347-0438

D. Insulating Glass: Manufacturer's standard units that comply with specified quality standards and coatings.

- a. Provide preassembled units consisting of organically sealed panes of glass enclosing a hermetically sealed dehydrated air space and complying with ASTM E774 for performance classification indicated as well as with other requirements specified for glass characteristics, air space, sealing system, sealant, space material, and desiccants.

1) Total Thickness: 1"

2) Thickness of Each Pane: as necessary to meet structural performance criteria. ***or specify***

3) Air Space: argon gas filled ***or specify***

For higher sound transmission class requirements, changes may be required to the highlighted values. Please consult Quaker Window Products (800) 347-0438

b. Exterior Pane of Glass:

- 1) Provide tempered glass where shown on Drawings and as required by local codes and ordinances.

c. Insulated Unit Sealing System:

- 1) Insulating glass unit spacer system must include a secondary dual seal. This also applied to solid foam warm edge seal glass spacer systems.

2.06 FINISHES

A. Finish of Aluminum Components

1. Finish of all exposed areas of aluminum windows and components shall be applied in accordance with the appropriate AAMA Voluntary Guide Specification shown below:

Please select one of the following sets "a., b. & c." below

- a. High Performance Organic Powder Coating conforming to (FGIA/AAMA 2604), Voluntary Specification, Performance Requirements and Test Procedures which also meets the following standards:
 - 1) Powder Coating resin shall consist of Fluoroethylene Vinyl Ether (FEVE).
 - 2) Coatings which require a chrome based liquid primer or pretreatment are not allowed.
 - 3) Scratch resistance shall meet or exceed a pencil test of H in accordance with (ASTM D3363-00), "Standard Test Method for Film Hardness by Pencil Test."
 - 4) Abrasion resistance shall meet or exceed a Taber abrasion test of 1000 rotations in accordance with (ASTM D4060-14), "Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser".
- b. Finish Warranty Period: 10 years from date of manufacture
- c. Color Selection: Please select a color

- a. Superior Performance Organic Powder Coating conforming to (FGIA/AAMA 2605), Voluntary Specification, Performance Requirements and Test Procedures which also meets the following standards:
 - 1) Powder Coating resin shall consist of Fluoroethylene Vinyl Ether (FEVE).
 - 2) Coatings which require a chrome based liquid primer or pretreatment are not allowed.
 - 3) Scratch resistance shall meet or exceed a pencil test of H in accordance with (ASTM D3363-00), "Standard Test Method for Film Hardness by Pencil Test".
 - 4) Abrasion resistance shall meet or exceed a Taber abrasion test of 1000 rotations in accordance with (ASTM D4060-14), "Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser".
- b. Finish Warranty Period: ****15 years** from date of manufacture
- c. Color Selection: Please select a color
- a. Electrolytically Deposited Anodic Coating, Class 1, Designation AAM12C21A44 conforming to (FGIA/AAMA 611)
- b. Finish Warranty Period: 5 years from date of manufacture

- c. Color Selection: (clear, champagne, light bronze, medium bronze, dark bronze, or black)

b) **Optional 20 year warranty is available for Superior Performance Organic Coatings. (AAMA 2605). Full warranty is for a standard, non-metallic and non-exotic color, and may require a clear topcoat in order to comply with full warranty period.

2.07 FABRICATION

- A. Fabricate windows allowing for minimum clearances and shim spacing around perimeter of assembly yet enabling installation.
- B. Rigidly fit joints and corners. Accurately fit and secure corners tight. Make corner joints flush, hairline, and weatherproof. Seal corner joints with sealant.
- C. Develop drainage holes with moisture pattern to exterior.
- D. Prepare components to receive anchor devices. Fabricate anchorage items.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Site Verification of Conditions:
 - 1. Verify that building substrates permit installation of windows according to the manufacturer's instructions, approved shop drawings, calculations and contract documents.
 - 2. Do not install windows until unsatisfactory conditions are corrected.

3.02 INSTALLATION

- A. Erection of Aluminum Windows
 - 1. Install windows with skilled tradesmen in exact accordance with approved Shop Drawings, Installation Instructions, Specifications, and in accordance with (FGIA/AAMA_101/I.S.2./ A440).

2. Windows must be installed plumb, square, and level for proper weathering and operation. Jambs must not be "sprung", bowed, or warped during installation.
3. Any uncoated aluminum components of Aluminum Window shall be insulated from direct contact with steel, masonry, concrete, or other dissimilar metals by bituminous paint, zinc chromate primer, nonconductive shims, or other suitable insulating materials.

Optional Item

B. Field Tests

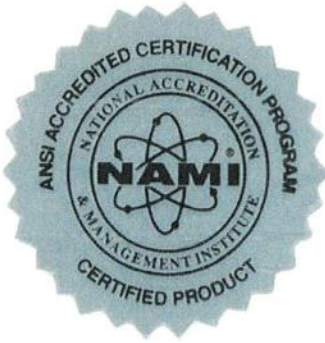
1. Field testing procedure of installed windows shall be in accordance with AAMA 502.
2. The test pressure used during the field test procedure shall be 2/3 of the rated test pressure of the test specimen in accordance with AAMA 502. There shall be no optional variances over 2/3 used during testing.
3. Initial field testing must be performed prior to no more than 5% of windows have been installed. **or specify**
4. All field testing expenses shall be at the burden of **specify**

3.02 ADJUSTING AND CLEANING

- A. After completion of window installation, windows shall be inspected, adjusted, put into working order and left clean, free of labels, dirt, or other debris. Protection from this point shall be the responsibility of the General Contractor.

END OF SECTION

NOTICE OF PRODUCT CERTIFICATION



CERTIFICATION NO: NI014834
DATE: 04/27/2020
CERTIFICATION PROGRAM: Structural
COMPANY: Quaker
CODE: 031-1

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 "H450" Aluminum Fixed Window Configuration: O Glazing: Insulating Glass (Tempered) Frame: W-1832mm(72.13") H-3051mm(120.13") DLO: W-1749mm(68.88) H-2959mm(116.5")

SPECIFICATION	PRODUCT RATING
AAMA/WDMA/CSA 101/I.S.2/A440-08	Class AW-PG110 3456 x 3048 (72 x 120)-FW Design Pressure: ± 5280 Pa (± 110 psf) Water Penetration Resistance Test Pressure: 580 Pa (15.04 psf)

Product Tested By: Intertek, PLC
Report No: K8909.01-801-47
Expiration Date: April 30, 2024

Administrator's Signature: _____

A handwritten signature in black ink, appearing to be "MD" or similar, written over a horizontal line.

**NATIONAL ACCREDITATION AND
MANAGEMENT INSTITUTE, INC.**

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

QUAKER WINDOWS AND DOORS TEST REPORT

SCOPE OF WORK

AAMA/WDMA/CSA 101/I.S.2/A440 TESTING ON SEREIS H450 ALUMINUM FIXED WINDOW

REPORT NUMBER

K8909.01-801-47-R1

TEST DATE(S)

04/06/20

ISSUE DATE

04/09/20

RE-ISSUE DATE

04/13/20

RECORD RETENTION END DATE

04/06/24

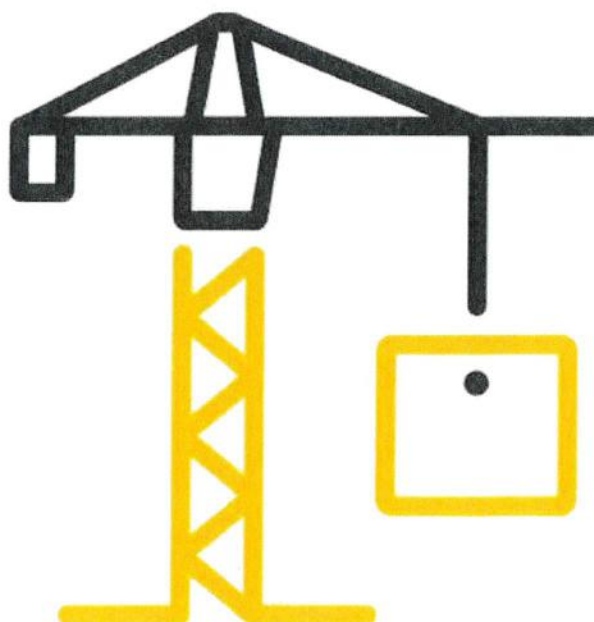
PAGES

14

DOCUMENT CONTROL NUMBER

RT-R-AMER-Test-2804 (04/17/18)

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TEST REPORT FOR QUAKER WINDOW AND DOORS

Report No.: K8909.01-801-47-r1

Date: 04/09/20

1909 10th Street, Suite 100
Plano, Texas 75074
Telephone: 469-814-0687
www.intertek.com/building

REPORT ISSUED TO

QUAKER WINDOWS AND DOORS

Hwy. 63 South

Freeburg, MO. 65035

SECTION 1

SCOPE

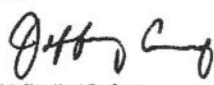
Intertek Building & Construction (B&C) was contracted by Quaker Windows & Door to perform testing in accordance with AAMA/WDMA/CSA 101/I.S.2/A440 on their Series H450 Aluminum Fixed Window. Results obtained are tested values and were secured by using the designated test methods. Testing was conducted at the Intertek test facility in Plano, TX. This report does not constitute certification of this product nor an opinion or endorsement by this laboratory.

SECTION 2

SUMMARY OF TEST RESULTS

TITLE	RESULTS
AAMA/WDMA/CSA 101/I.S.2/A440-08	3456 x 3048 (72 x 120) AW-PG110-F
Design Pressure	± 5280 Pa (± 110.30 psf)
Air Infiltration	< 0.05 L/s/m ² (< 0.01 cfm/ft ²)
Water Penetration Resistance Test Pressure	580 Pa (15.04 psf)

For INTERTEK B&C:

COMPLETED BY: Jeffrey Crump
Sr. Project Manager –
AWS
TITLE:
SIGNATURE: 
DATE: 04/13/20

Digitally Signed by: Jeffrey Crump

REVIEWED BY: Andy Cost
TITLE: Laboratory Manager
SIGNATURE: 
DATE: 04/13/20

Digitally Signed by: Andy Cost

JC:cm

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TEST REPORT FOR QUAKER WINDOW AND DOORS

Report No.: K8909.01-801-47-r1

Date: 04/09/20

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SECTION 3

TEST SPECIFICATION(S)/METHOD(S)

The specimens were evaluated in accordance with the following:

AAMA/WDMA/CSA 101/1.S.2/A440-08 *North American Fenestration Standard/Specification for Windows, Doors, and Skylights*

AAMA 910-10, *Voluntary "Life Cycle" Specifications and Test Methods for AW Class Architectural Windows and Doors*

AND

AAMA 205-15, *In-Plant Testing Guidelines for Manufacturers and Independent Laboratories*

SECTION 4

MATERIAL SOURCE/INSTALLATION

Test specimens were provided by the client. Representative samples of the test specimen(s) will be retained by Intertek B&C for a minimum of four years from the test completion date.

The specimen was installed into a SPF wood buck. The rough opening allowed for a 1/8" shim space and the exterior perimeter of the specimen was sealed to the test buck. Installation of the tested product was performed by the client.

LOCATION	ANCHOR DESCRIPTION	ANCHOR SPACING
Nailing Fin	#8 x 1-5/8" deck screws	3" from each corner and 15-18" O.C. Nail fin sealed to buck with silicone.

SECTION 5

EQUIPMENT

Calibration of test equipment was performed by Intertek B&C in accordance with AAMA 205-15.

SECTION 6

LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Jeffrey Crump	Intertek B&C



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TEST REPORT FOR QUAKER WINDOW AND DOORS

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SECTION 7

Reference Intertek B&C Report No. K8909.01-801-47, dated 04/06/20 for complete *Gateway* test specimen description and test results.

SECTION 8

TEST SPECIMEN DESCRIPTION

Product Type: Aluminum Fixed Window

Series/Model: H4500

Product Size(s):

OVERALL AREA: 5.6 m ² (60.2 ft ²)	WIDTH		HEIGHT	
	millimeters	inches	millimeters	inches
Overall size	1832	72-1/8	3051	120-1/8
Fixed DLO	1749	68-7/8	2959	116-1/2

Frame Construction:

MEMBER	MATERIAL	DESCRIPTION
Head, sill and jambs	Aluminum	Extruded aluminium thermally broken with azocore

	JOINERY TYPE	DETAIL
All corners	Mitered and crimped	Attached with two (2) frame corner keys (part #CD-340-AI) with gaskets

Reinforcement: *Reinforcement was not utilized*

Weatherstripping: *Weatherstripping was not utilized*



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Glazing: *No conclusions of any kind regarding the adequacy or inadequacy of the glass in any glazed test specimen(s) can be made.*

GLASS TYPE	SPACER TYPE	INTERIOR LITE	EXTERIOR LITE	GLAZING METHOD
1" IG	1/2" Super Spacer	1/4" clear tempered	1/4" clear tempered	Interior glazed with frame gasket and silicon at the exterior face glass with aluminium glazing bead located at the interior face of glass

LOCATION	QUANTITY	DAYLIGHT OPENING		GLASS BITE
		millimeters	inches	
Fixed lite	1	1749 x 2959	68-7/8 x 116-1/2	.50

Drainage: *Weeps were not utilized*

Hardware: *Hardware was not utilized*



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TEST REPORT FOR QUAKER WINDOW AND DOORS

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SECTION 9

TEST RESULTS

The temperature during testing was 29°C (84°F). The results are tabulated as follows:

TITLE OF TEST	RESULTS	ALLOWED	NOTE
Air Leakage, Infiltration per ASTM E283 at 300 Pa (6.27 psf)	<0.05 L/s/m ² (<0.01 cfm/ft ²)	0.5 L/s/m ² (0.10 cfm/ft ²) max.	1
Water Penetration, per ASTM E547 and ASTM E331 at 72 Pa (15.04 psf)	Pass	No leakage	
Uniform Load Deflection, per ASTM E330 Deflections taken at anchors +5280 Pa (+110.3 psf) -5280 Pa (-110.3 psf)	<.10 mm (<0.01") <.10 mm (<0.01")	2.3 mm (0.09") max. 2.3 mm (0.09") max.	4,5,6
Uniform Load Structural, per ASTM E330 Permanent set taken at vertical mull +7920 Pa (+165.4 psf) -7920 Pa (-165.4 psf)	<.10 mm (<0.01") <.10 mm (<0.01")	.8 mm (0.03") max. .8 mm (0.03") max.	5,6
Forced Entry Resistance, per ASTM F588 Type: D - Grade: 10	Pass	No entry	



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Note 1: The tested specimen meets (or exceeds) the performance levels specified in AAMA/WDMA/CSA 101/I.S.2/A440 for air leakage resistance.

Note 2: Test Date 04/06/20 / Time: 10:00 AM (Air Note Only)

Note 3 Without insect screen.

Note 4: The client opted to start at a pressure higher than the minimum required. Test results are reported under Optional Performance.

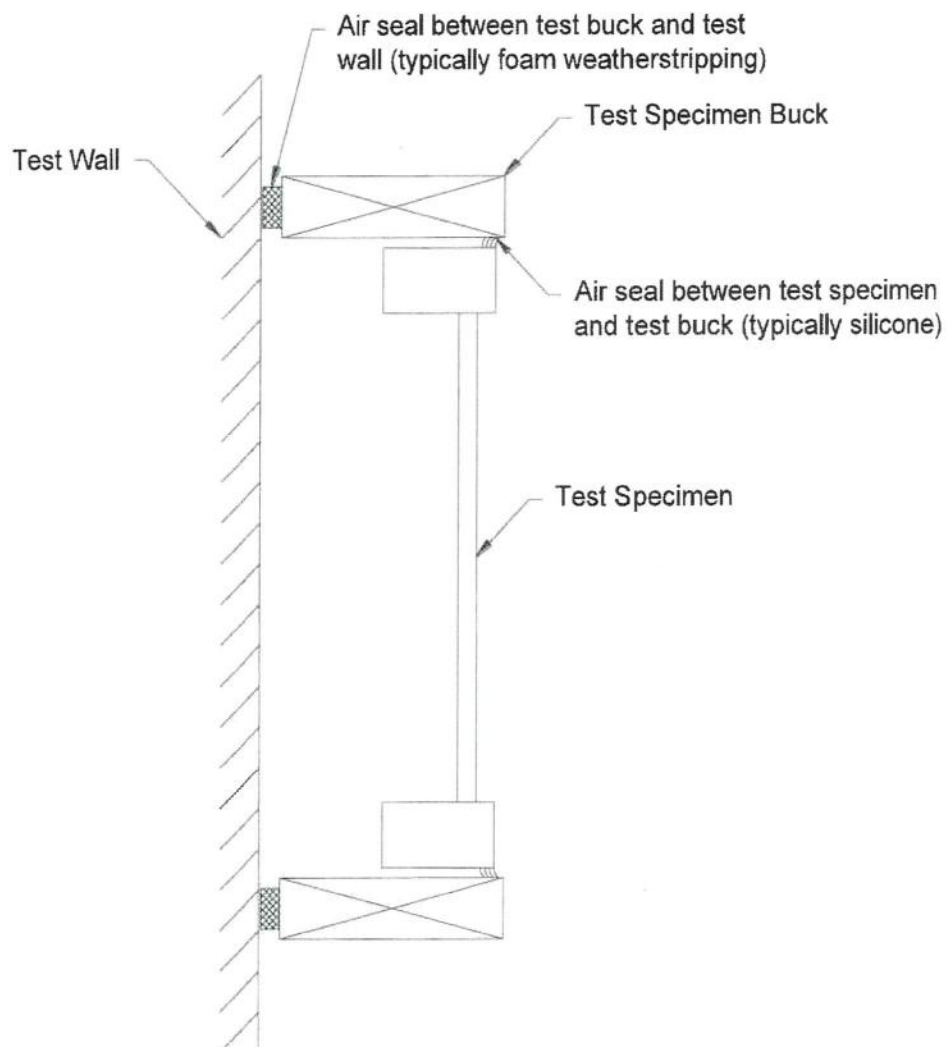
Note 5: The deflections reported are not limited by AAMA/WDMA/CSA 101/I.S.2/A440 for this product designation. The deflection data is recorded in this report for special code compliance and information only.

Note 6: Loads were held for 10 seconds.

Note 7: Tape and film were not used to seal against air leakage during structural testing. In our opinion, the tape and film did not influence the results of the test.

SECTION 10**LOCATION OF AIR SEAL**

The air seal between the test specimen and the test wall is detailed below. The seal is made of foam weatherstripping and is attached to the edge of the test specimen buck. The test specimen buck is placed against the test wall and clamped in place, compressing the weatherstripping and creating a seal.





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TEST REPORT FOR QUAKER WINDOW AND DOORS

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SECTION 11

CONCLUSION

The specimen tested successfully met the performance requirements for an **AW-PG110-FW** rating.

Reference Intertek-ATI Report No. K8909.01-801-41, dated 4/06/20 for complete *Gateway* test specimen description and test results.

General Note: An asterisk (*) next to the size designation indicates that the size tested for optional performance was smaller than the *Gateway* test size for the product type and class.



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TEST REPORT FOR QUAKER WINDOW AND DOORS

Report No.: K8909.01-801-47-r1

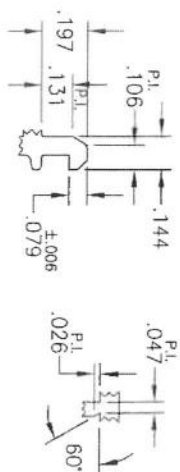
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SECTION 12

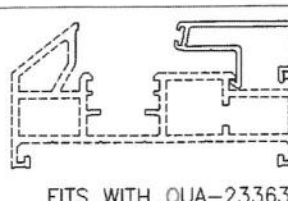
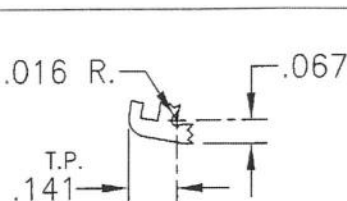
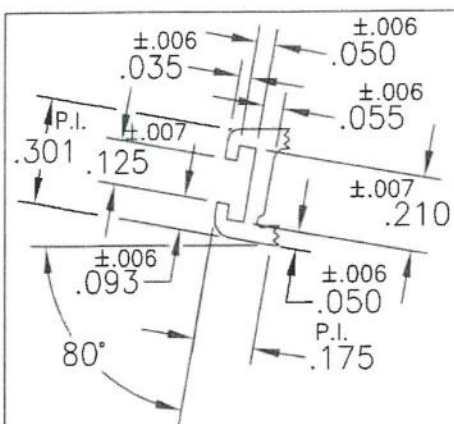
DRAWINGS

The test specimen drawings have been reviewed by Intertek B&C and are representative of the test specimen(s) reported herein. Test specimen construction was verified by Intertek B&C per the drawings included in this report. Any deviations are documented herein or on the drawings.



ACTUAL SIZE

PART NO.	DWG. NO.
END USE	915-7-19
H600N FXD FRAME NF	
CLASS	ALLOY
HOLLOW III	6063-T6
DE NO.	QUA-23364-H



FITS WITH QUA-23363

intertek
Total Quality Assurance

Report #: K8909.01-801-44

Date: 04/08/20

Verified by: J. Crump

DIE NO.

QUA-23367

BKR. NO.

1.A.

BOLS. NO.

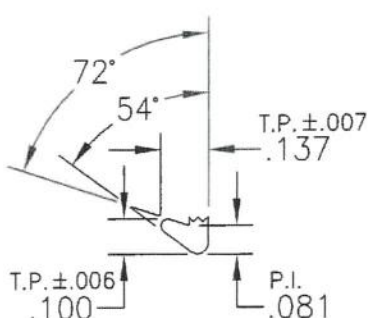
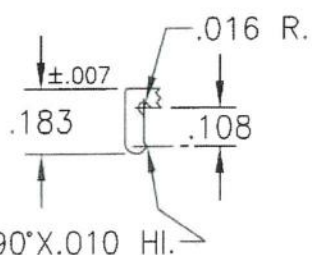
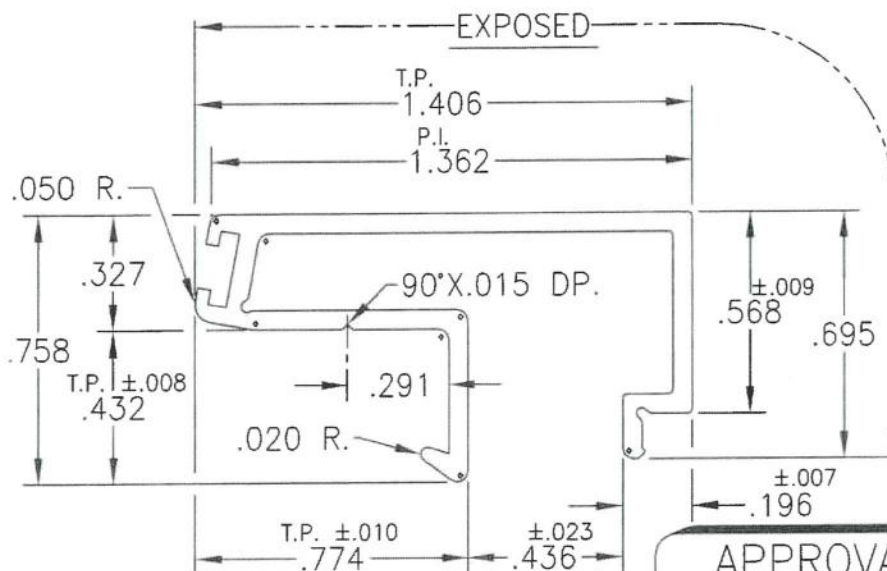
1.B.

FDR. PLT.

1/2 POCKET

PREF. PRESS

.030 R.-(.) (7)



APPROVAL PRINT

- PLEASE INDICATE ANY EXPOSED SURFACES.
- PLEASE MARK CLEARLY ANY CORRECTIONS OR REVISIONS YOU FEEL ARE NECESSARY.
- PLEASE SIGN & DATE ON THE LINE BELOW INDICATING YOUR APPROVAL AS IS, OR WITH YOUR MARKED CHANGES.
- PLEASE EXPEDITE THIS APPROVAL, DELAY IN YOUR APPROVAL MAY RESULT IN A DELAY OF YOUR MATERIAL ORDER.

APPROVED

DATE

ACTUAL SIZE

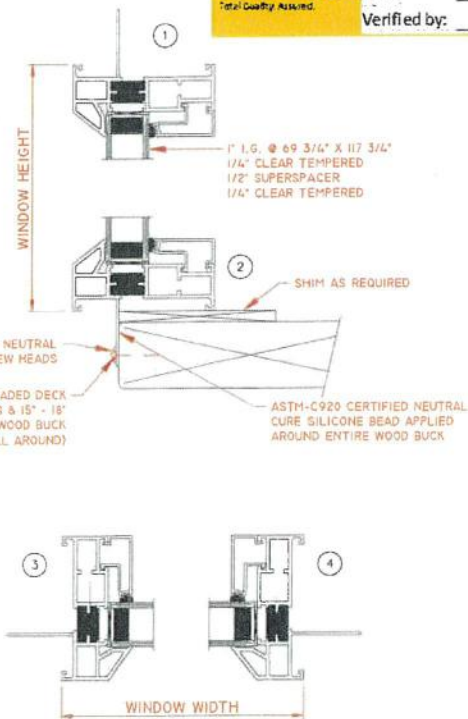
NOTES: ±.006

- .055 TYP. WALL THKN. EXCEPT AS NOTED.
- BREAK SHARP CORNERS AT .015 R.

REVISION				tel TOWER EXTRUSIONS, LTD.			
				NAME			
				QUAKER WINDOWS			
				PART NO.		DWG. NO.	
						918-7-19	
ALUMINUM ASSOCIATION STANDARD TOLERANCES TO APPLY UNLESS OTHERWISE SPECIFIED							
EST. AREA	.200	CIRCLE SIZE	DATE:	DRAWN BY:			
EST. WT./FT.	.240	1.48	7-16-19	H. ENLOE			
EST. PERIM.	7.499	FACTOR	DIE SIZE	PRESS NO.			
		31	RATIO	SCALE			
				2X L			
CLASS				ALLOY		DIE NO.	
SOLID				6063-T6		QUA-23367	

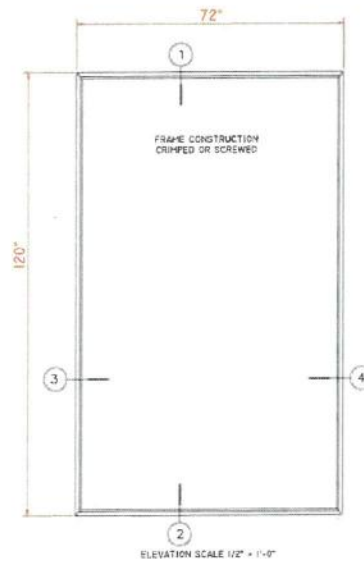


Report #: K8909.01-801-44
Date: 04/08/20
Verified by: J. Crump



BILL OF MATERIALS

QTY.	PART #	DESCRIPTION	VENDOR
2	M23364	Frame Head/Sill	Tower Extrusions
2	M23364	Frame Jamb	Tower Extrusions
2	M23367	Hr Fxd Glaz Bead	Tower Extrusions
2	M23367	Vt Fxd Glaz Bead	Tower Extrusions
1	E20158KN	Glazing Stop Bulb - Black	Ultrafab
8	SB125-1062K2-2	Setting Block	SECON
8	CD-340-AL	Corn Key (Pairs)	Sullivan
As Req'd	06523000	Corn Key Screw	Amesbury Truth
2	QWP-FXDFRAME-B	Frame Gaskets (Pairs) (Black)	SECON
As Req'd	MXQ2102-10C2	Seam Sealant	Novagard
As Req'd	RG57700-02	Glazing Sealant	Momentive 2 Part
As Req'd	RG57703B	Glazing Sealant	Momentive 2 Part



Quaker HARDWARE & SUPPLY		N.W. 65 SOUTH P.O. BOX 87 FRESHMAN, MD. 20735	
FILE #		H450 72X120 FIXED	
DATE	C.A.D.	DATE	4-3-2020
SHEET		H450_FIXED	
SCALE		6"=1'-0"	



Total Quality. Assured.

TEST REPORT FOR QUAKER WINDOW AND DOORS

Report No.: K8909.01-801-47-r1

Date: 04/09/20

1909 10th Street, Suite 100
Plano, Texas 75074
Telephone: 469-814-0687
www.intertek.com/building

SECTION 13

REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	04/09/20	N/A	Original Report Issue
1	04/13/20	2	Change design pressure on summary