

33/12-98^B 14015 New Hampshire Ave.
Colesville Elem. School (MP#33/12)

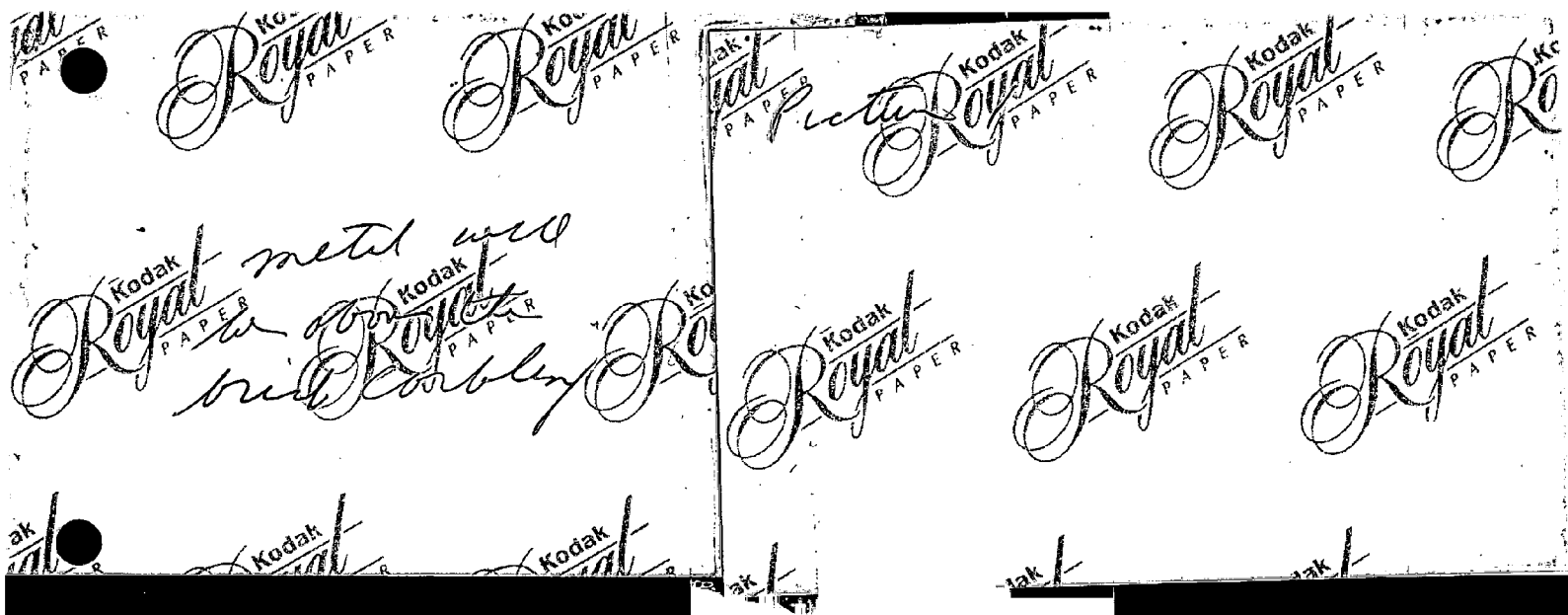


COLESVILLE ELEMENTARY
SCHOOL #

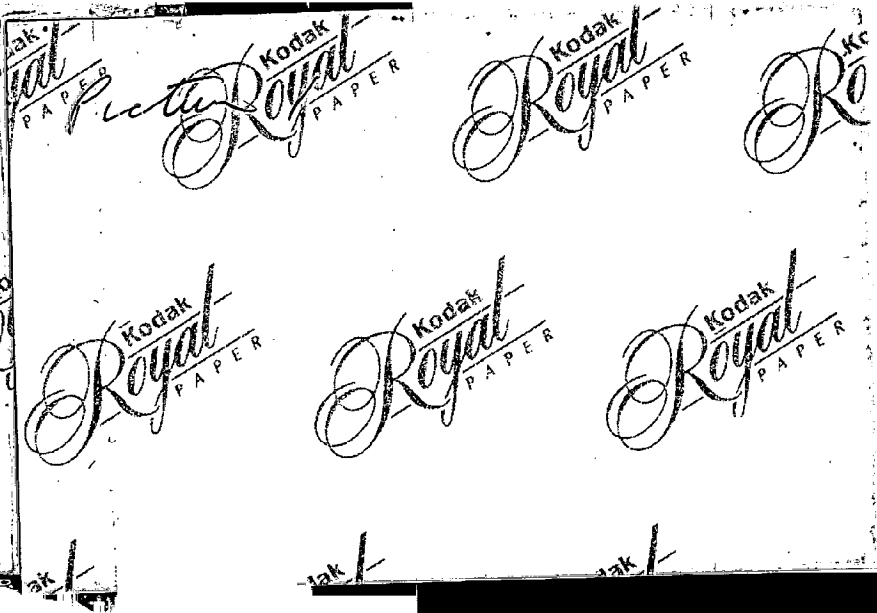
313/12

27 150%

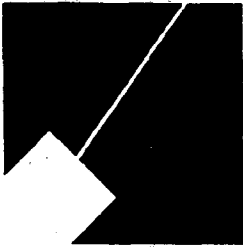




Kodak Royal PAPER metal used
Kodak Royal PAPER with cobbley



M-NCPPC



MONTGOMERY COUNTY DEPARTMENT OF PARK AND PLANNING

THE MARYLAND-NATIONAL CAPITAL
PARK AND PLANNING COMMISSION

8787 Georgia Avenue
Silver Spring, Maryland 20910-3760

FAX TRANSMITTAL SHEET

**Historic Preservation Section
Department of Park & Planning**

Telephone Number: (301) 563-3400

Fax Number: (301) 563-3412

TO: Karen Howard FAX NUMBER: 301 217 8690

FROM: Perry Kephart

DATE: 1-6-99

NUMBER OF PAGES INCLUDING THIS TRANSMITTAL SHEET: 3

NOTE:

Any question about this, please
call - 301 563-3407



RETURN TO DEPARTMENT OF PERMITTING SERVICES
250 HUNGERFORD DRIVE, 2nd FLOOR ROCKVILLE, MD 20850
301/217-6370

DPS - #8

HISTORIC PRESERVATION COMMISSION
301/563-3400

**APPLICATION FOR
HISTORIC AREA WORK PERMIT**

Contact Person: MIKE LOWE
Daytime Phone No.: 301-217-6123

Tax Account No.: _____
Name of Property Owner: LOUISVILLE SCHOOL, MONTGOMERY COUNTY Daytime Phone No.: 301-217-6123
Address: 14015 NEW HAMPSHIRE SILVER SPRING MD 20904
Street Number City / State Zip Code

Contractor: CDCI Phone No.: 301-622-9108
Contractor Registration No.: 47096 (EXPIRES 6-30-97)
Agent for Owner: MIRIAM ZARIF Daytime Phone No.: 301-622-9108

LOCATION OF BUILDING/PREMISE
House Number: MONTGOMERY COUNTY GOVERNMENT Street: DEPT. OF FACILITIES + SERVICES 110 NORTH WASHINGTON ST.
Town/City: _____ Nearest Cross Street: ROCKVILLE, MD 20850
Lot: _____ Block: _____ Subdivision: _____
Liber: _____ Folio: _____ Parcel: _____

PART ONE: TYPE OF PERMIT ACTION AND USE

1A. CHECK ALL APPLICABLE: Construct Extend Alter/Renovate A/C Slab Room Addition Porch Deck Shed
 Move Install Wreck/Raze Solar Fireplace Woodburning Stove Single Family
 Revision Repair Revocable Fence/Wall (complete Section 4) Other: _____
1B. Construction cost estimate: \$ 50,900
1C. If this is a revision of a previously approved active permit, see Permit # N/A

PART TWO: COMPLETE FOR NEW CONSTRUCTION AND EXTEND/ADDITIONS

2A. Type of sewage disposal: 01 WSSC 02 Septic 03 Other: N/A
2B. Type of water supply: 01 WSSC 02 Well 03 Other: N/A

PART THREE: COMPLETE ONLY FOR FENCE/RETAINING WALL

3A. Height _____ feet _____ inches N/A
3B. Indicate whether the fence or retaining wall is to be constructed on one of the following locations:
 On party line/property line Entirely on land of owner On public right of way/easement

I hereby certify that I have the authority to make the foregoing application, that the application is correct, and that the construction will comply with plans approved by all agencies listed and I hereby acknowledge and accept this to be a condition for the issuance of this permit.

Michael C. R. MICHAEL LOWE 10/26/98
Signature of owner or authorized agent Date

Approved: _____ For Chairperson, Historic Preservation Commission
Disapproved: _____ Signature: _____ Date: _____
Application/Permit No.: 9810260072 Date Filed: 10/26/98 Date Issued: _____



DEPARTMENT OF PUBLIC WORKS
AND TRANSPORTATION

Douglas M. Duncan
County Executive

Robert C. Merryman
Acting Director

December 28, 1998

TO: Ms. Perry Kephart
Historic Preservation Planner
Maryland National Capital Park and Planning Commission
8787 Georgia Avenue
Silver Spring, Maryland, 20910-3760

FROM: R. Michael Lowe, Facility Environmental Manager
Capital Projects Management Section
Division of Facilities and Services

RML

RE: Window Replacement at the Former Colesville School
14015 New Hampshire Avenue, Silver Spring, Maryland

As discussed with you, please withdraw the former application for work within a historic property.
Thank you for your assistance, and if I can be of any help to you, please contact me at (301) 217-6128.

cc: Chuck Milbourne, DFS
Mary Ellen Saverese, HHS

Division of Facilities and Services

110 North Washington Street, 3rd Floor • Rockville, Maryland 20850-2299
301/217-6000, TDD 301/217-6013, FAX 301/217-6003



RETURN TO: DEPARTMENT OF PERMITTING SERVICES
250 HUNGERFORD DRIVE, 2nd FLOOR, ROCKVILLE, MD 20850
301/217-6370

DPS - #8

HISTORIC PRESERVATION COMMISSION
301/563-3400

**APPLICATION FOR
HISTORIC AREA WORK PERMIT**

Contact Person: MIKE LOWE

Daytime Phone No.: 301-217-6128

Tax Account No.: _____

Name of Property Owner: COLESVILLE SCHOOL, MONTGOMERY COUNTY Daytime Phone No.: 301-217-6128

Address: 14015 NEW HAMPSHIRE Street Number City SILVER SPRING State MD Zip Code 20904

Contractor: CDEI Phone No.: 301-622-9108

Contractor Registration No.: 47092 (EXPIRES 6-30-99)

Agent for Owner: MIRIAM ZARIF Daytime Phone No.: 301-622-9108

LOCATION OF BUILDING/PREMISE

House Number: MONTGOMERY COUNTY GOVERNMENT Street: DEPT. OF FACILITIES + SERVICES 110 NORTH WASHINGTON ST.

Town/City: _____ Nearest Cross Street: ROCKVILLE, MD. 20850

Lot: _____ Block: _____ Subdivision: _____

Liber: _____ Folio: _____ Parcel: _____

PART ONE: TYPE OF PERMIT ACTION AND USE

- 1A. CHECK ALL APPLICABLE:
- Construct
 - Extend
 - Alter/Renovate
 - Move
 - Install
 - Wreck/Raze
 - Revision
 - Repair
 - Revocable
- CHECK ALL APPLICABLE:
- A/C
 - Slab
 - Room Addition
 - Porch
 - Deck
 - Shed
 - Solar
 - Fireplace
 - Woodburning Stove
 - Single Family
 - Fence/Wall (complete Section 4)
 - Other: _____

1B. Construction cost estimate: \$ 50,900

1C. If this is a revision of a previously approved active permit, see Permit # N/A

PART TWO: COMPLETE FOR NEW CONSTRUCTION AND EXTEND/ADDITIONS

2A. Type of sewage disposal: 01 WSSC 02 Septic 03 Other: N/A

2B. Type of water supply: 01 WSSC 02 Well 03 Other: N/A

PART THREE: COMPLETE ONLY FOR FENCE/RETAINING WALL

3A. Height: _____ feet _____ inches N/A

3B. Indicate whether the fence or retaining wall is to be constructed on one of the following locations:
 On party line/property line Entirely on land of owner On public right of way/easement

I hereby certify that I have the authority to make the foregoing application, that the application is correct, and that the construction will comply with plans approved by all agencies listed and I hereby acknowledge and accept this to be a condition for the issuance of this permit.

[Signature] R. MICHAEL LOWE 10/22/98
Signature of owner or authorized agent Date

Approved: _____ For Chairperson, Historic Preservation Commission

Disapproved: _____ Signature: _____ Date: _____

Application/Permit No.: 9810260072 Date Filed: 10/26/98 Date Issued: _____

THE FOLLOWING ITEMS MUST BE COMPLETED AND THE REQUIRED DOCUMENTS MUST ACCOMPANY THIS APPLICATION.

1. WRITTEN DESCRIPTION OF PROJECT

a. Description of existing structure(s) and environmental setting, including their historical features and significance:

b. General description of project and its effect on the historic resource(s), the environmental setting, and, where applicable, the historic district:

2. SITE PLAN

Site and environmental setting, drawn to scale. You may use your plat. Your site plan must include:

- a. the scale, north arrow, and date;
- b. dimensions of all existing and proposed structures; and
- c. site features such as walkways, driveways, fences, ponds, streams, trash dumpsters, mechanical equipment, and landscaping.

3. PLANS AND ELEVATIONS

You must submit 2 copies of plans and elevations in a format no larger than 11" x 17". Plans on 8 1/2" x 11" paper are preferred.

- a. **Schematic construction plans**, with marked dimensions, indicating location, size and general type of walls, window and door openings, and other fixed features of both the existing resource(s) and the proposed work.
- b. Elevations (facades), with marked dimensions, clearly indicating proposed work in relation to existing construction and, when appropriate, context. All materials and fixtures proposed for the exterior must be noted on the elevations drawings. An existing and a proposed elevation drawing of each facade affected by the proposed work is required.

4. MATERIALS SPECIFICATIONS

General description of materials and manufactured items proposed for incorporation in the work of the project. This information may be included on your design drawings.

5. PHOTOGRAPHS

- a. Clearly labeled photographic prints of each facade of existing resource, including details of the affected portions. All labels should be placed on the front of photographs.
- b. Clearly label photographic prints of the resource as viewed from the public right-of-way and of the adjoining properties. All labels should be placed on the front of photographs.

6. TREE SURVEY

If you are proposing construction adjacent to or within the dripline of any tree 6" or larger in diameter (at approximately 4 feet above the ground), you must file an accurate tree survey identifying the size, location, and species of each tree of at least that dimension.

7. ADDRESSES OF ADJACENT AND CONFRONTING PROPERTY OWNERS

For **ALL** projects, provide an accurate list of adjacent and confronting property owners (not tenants), including names, addresses, and zip codes. This list should include the owners of all lots or parcels which adjoin the parcel in question, as well as the owner(s) of lot(s) or parcel(s) which lie directly across the street/highway from the parcel in question. You can obtain this information from the Department of Assessments and Taxation, 51 Monroe Street, Rockville, (301/279-1355).

**PLEASE PRINT (IN BLUE OR BLACK INK) OR TYPE THIS INFORMATION ON THE FOLLOWING PAGE.
PLEASE STAY WITHIN THE GUIDES OF THE TEMPLATE, AS THIS WILL BE PHOTOCOPIED DIRECTLY ONTO MAILING LABELS.**



RETURN TO: DEPARTMENT OF PERMITTING SERVICES
 250 HUNGERFORD DRIVE, 2nd FLOOR, ROCKVILLE, MD 20850
 301/217-6370

DPS - #8

HISTORIC PRESERVATION COMMISSION
301/563-3400

**APPLICATION FOR
 HISTORIC AREA WORK PERMIT**

Contact Person: MIKE LOWE
 Daytime Phone No.: 301-217-6128

Tax Account No.: _____

Name of Property Owner: 1015VILLE SCHOOL MONTGOMERY COUNTY Daytime Phone No.: 301-217-6178

Address: 14015 NEW HAMPSHIRE CUMBER SPRING YMD 20904
Street Number City State Zip Code

Contractor: CDCT Phone No.: 301-672-9100

Contractor Registration No.: 47092 (EXPIRES 6-30-99)

Agent for Owner: MIRIAM ZARIF Daytime Phone No.: 301-672-9100

LOCATION OF BUILDING/PREMISE

House Number: MONTGOMERY COUNTY GOVERNMENT Street: DEPT. OF FACILITIES + SERVICES 110 NORTH WASHINGTON ST.

Town/City: _____ Nearest Cross Street: ROCKVILLE, MD. 20850

Lot: _____ Block: _____ Subdivision: _____

Liber: _____ Folio: _____ Parcel: _____

PART ONE: TYPE OF PERMIT ACTION AND USE

- 1A. CHECK ALL APPLICABLE:
- | | | | | | | | | |
|------------------------------------|----------------------------------|---|--|------------------------------------|--|--|-------------------------------|-------------------------------|
| <input type="checkbox"/> Construct | <input type="checkbox"/> Extend | <input type="checkbox"/> Alter/Renovate | <input type="checkbox"/> A/C | <input type="checkbox"/> Slab | <input type="checkbox"/> Room Addition | <input type="checkbox"/> Porch | <input type="checkbox"/> Deck | <input type="checkbox"/> Shed |
| <input type="checkbox"/> Move | <input type="checkbox"/> Install | <input type="checkbox"/> Wreck/Raze | <input type="checkbox"/> Solar | <input type="checkbox"/> Fireplace | <input type="checkbox"/> Woodburning Stove | <input type="checkbox"/> Single Family | | |
| <input type="checkbox"/> Revision | <input type="checkbox"/> Repair | <input type="checkbox"/> Revocable | <input type="checkbox"/> Fence/Wall (complete Section 4) | | <input type="checkbox"/> Other: _____ | | | |

1B. Construction cost estimate: \$ 50,900

1C. If this is a revision of a previously approved active permit, see Permit # N/A

PART TWO: COMPLETE FOR NEW CONSTRUCTION AND EXTEND/ADDITIONS

2A. Type of sewage disposal: 01 WSSC 02 Septic 03 Other: N/A

2B. Type of water supply: 01 WSSC 02 Well 03 Other: N/A

PART THREE: COMPLETE ONLY FOR FENCE/RETAINING WALL

3A. Height _____ feet _____ inches

3B. Indicate whether the fence or retaining wall is to be constructed on one of the following locations:
 On party line/property line Entirely on land of owner On public right of way/easement

I hereby certify that I have the authority to make the foregoing application, that the application is correct, and that the construction will comply with plans approved by all agencies listed and I hereby acknowledge and accept this to be a condition for the issuance of this permit.

[Signature] R. MICHAEL LOWE 10/22/98
Signature of owner or authorized agent Date

Approved: _____ For Chairperson, Historic Preservation Commission

Disapproved: _____ Signature: _____ Date: _____

Application/Permit No.: 9810260072 Date Filed: 10/26/98 Date Issued: _____

APPLICATION FOR HISTORIC AREA WORK PERMIT

Contact Person: MIKE LOWE

Daytime Phone No.: 301-217-6128

Tax Account No.: _____

Name of Property Owner: COLLETSVILLE SCHOOL, MONTGOMERY COUNTY Daytime Phone No.: 301-217-6128

Address: 14015 NEW HAMPSHIRE SILVER SPRING MD. 20904
Street Number City State Zip Code

Contractor: CDCI Phone No.: 301-622-9108

Contractor Registration No.: 47092 (EXPIRES 6-30-99)

Agent for Owner: MIRIAM ZARIF Daytime Phone No.: 301-622-9108

LOCATION OF BUILDING/PREMISE

House Number: MONTGOMERY COUNTY GOVERNMENT Street: DEPT. OF FACILITIES + SERVICES 110 NORTH WASHINGTON ST.

Town/City: _____ Nearest Cross Street: ROCKVILLE, MD. 20850

Lot: _____ Block: _____ Subdivision: _____

Liber: _____ Folio: _____ Parcel: _____

PART ONE: TYPE OF PERMIT ACTION AND USE

1A. CHECK ALL APPLICABLE:

- Construct Extend Alter/Renovate
 Move Install Wreck/Raze
 Revision Repair Revocable

CHECK ALL APPLICABLE:

- A/C Slab Room Addition Porch Deck Shed
 Solar Fireplace Woodburning Stove Single Family
 Fence/Wall (complete Section 4) Other: _____

1B. Construction cost estimate: \$ 50,000

1C. If this is a revision of a previously approved active permit, see Permit # N/A

PART TWO: COMPLETE FOR NEW CONSTRUCTION AND EXTEND/ADDITIONS

2A. Type of sewage disposal: 01 WSSC 02 Septic 03 Other: N/A

2B. Type of water supply: 01 WSSC 02 Well 03 Other: N/A

PART THREE: COMPLETE ONLY FOR FENCE/RETAINING WALL

3A. Height _____ feet _____ inches

3B. Indicate whether the fence or retaining wall is to be constructed on one of the following locations:

- On party line/property line Entirely on land of owner On public right of way/easement

N/A

I hereby certify that I have the authority to make the foregoing application, that the application is correct, and that the construction will comply with plans approved by all agencies listed and I hereby acknowledge and accept this to be a condition for the issuance of this permit.

[Signature] R. MICHAEL LOWE 10/22/98
Signature of owner or authorized agent Date

Approved: _____ For Chairperson, Historic Preservation Commission

Addresses of Adjacent Property Owners

Property							
00260817	1312830.517354	P850	MD NAT CAP PK & PLAN COMM	00000	GOOD HOPE	RD	
01512241	1313138.517238	P058	MONTGOMERY COUNTY	14121	NEW HAMPSHIRE	AVE	SILVER SPRING
00281876	1312590.517306	P029	MONTGOMERY COUNTY	00000	NEW HAMPSHIRE	AVE	
00279656	1312370.517298	P031	STATE OF MARYLAND TO THE USE	14108	NEW HAMPSHIRE	AVE	SILVER SPRING
01994754	1312322.517222	P077	STATE OF MARYLAND	14106	NEW HAMPSHIRE	AVE	SILVER SPRING
02290507	1312127.517231	000	ALBERT M SHANEMAN ET AL	00000	COLESVILLE MANOR	DR	
00332602	1312076.517102	000	WILLIAM K BYRD JR	00416	COLESVILLE MANOR	DR	SILVER SPRING
02290520	1312368.517121	000	ALBERT M SHANEMAN ET AL	X 14102	NEW HAMPSHIRE	AVE	SILVER SPRING 20904
00251846	1312662.517085	P082	MONTGOMERY COUNTY	14015	NEW HAMPSHIRE	AVE	SILVER SPRING
00332910	1312157.517035	000	DARYL E & K C PAONIL	00420	COLESVILLE MANOR	DR	SILVER SPRING
00333003	1312233.516975	000	JAMES T & J E PARRECO	00424	COLESVILLE MANOR	DR	SILVER SPRING
00333036	1312320.516886	000	TRUNG T NGUYEN	X 14100	NEW HAMPSHIRE	AVE	SILVER SPRING 20904
00252112	1312666.516858	P137	MONTGOMERY COUNTY	14015	NEW HAMPSHIRE	AVE	SILVER SPRING
00268210	1313157.516764	P166	MD NAT CAP PK&PLANN COMM	00000	HOBBS	DR	
02909592	1312032.516806		SHAHABUDDIN & N KHATOON	00425	COLESVILLE MANOR	DR	SILVER SPRING
02909581	1312121.516716		WILLIE R & B J LEE	00427	COLESVILLE MANOR	DR	SILVER SPRING
00332668	1311815.516648	000	JAMES & J B GOODMAN	13905	ZEIGLER	WAY	SILVER SPRING
02909570	1312236.516640		NELSON F & M J SANCHEZ	14006	NEW HAMPSHIRE	AVE	SILVER SPRING
00250168	1312519.516637	P192	GENEVIEVE E R GARNETT ET AL	14009	NEW HAMPSHIRE	AVE	SILVER SPRING
00263274	1312257.516513	P239	SOTIRIOS G GOROGIAS ET AL	14002	NEW HAMPSHIRE	AVE	SILVER SPRING
00250090	1312031.516488	P249	LITTLE SISTER OF THE HOLY	14000	NEW HAMPSHIRE	AVE	SILVER SPRING
00258778	1311921.516159	P305	UNITED CHRISTIAN CHURCH	13908	NEW HAMPSHIRE	AVE	SILVER SPRING
02926687	1312644.516425		VESTRY OF TRANSFIGURATION	X 13925	NEW HAMPSHIRE	AVE	SILVER SPRING 20904
02449417	1312896.516346	000	MARCUS & J DORSEY	00611	HOBBS	DR	SILVER SPRING
02449406	1313028.516333	000	ARCHIE B & C L FORD	00613	HOBBS	DR	SILVER SPRING
02449394	1313151.516335	000	PIETRO & R PARISI	00615	HOBBS	DR	SILVER SPRING
02449383	1313269.516342	000	DANTE & M CELIA	00617	HOBBS	DR	SILVER SPRING
02449372	1313398.516338	000	ANGELO & M CELIA	00619	HOBBS	DR	SILVER SPRING
00279224	1312511.516266	P300	BARRY J & L A LAWRENCE	13915	NEW HAMPSHIRE	AVE	SILVER SPRING



DEPARTMENT OF PUBLIC WORKS
AND TRANSPORTATION

Douglas M. Duncan
County Executive

Graham J. Norton
Director

October 22, 1998

TO: Ms. Perry Kephart
Historic Preservation Planner
Maryland National Capital Park and Planning Commission
8787 Georgia Avenue
Silver Spring, Maryland, 20910-3760

FROM: R. Michael Lowe, Facility Environmental Manager
Capital Projects Management Section
Division of Facilities and Services

RE: Window Replacement at the Former Colesville School
14015 New Hampshire Avenue, Silver Spring, Maryland

RML

As discussed with you, please find attached an application for work in a historic building. Montgomery County Government would like to remove the metal single pane casement windows at this location. The windows are painted with lead based paint, are in poor condition, and are difficult to maintain. Concerns have been raised concerning the close proximity of chipping, peeling paint and the nearby playground area. We ask for your approval in removing the potential lead chip and dust hazard present.

The replacement windows proposed are aluminum clad wooden windows, manufactured by Marvin. These windows provide the energy requirements of a .38 U value and a .55 shading coefficient, and are available in sizes and patterns to replicate the appearance of the original materials. Attached is their proposal for your review.

As you are aware, the County also plans to undertake similar work in the remaining sections of the day care portion of Colesville School, and at the Garrett Park Day care location. We understand that your review is not required for this work, however, we plan to utilize the same replacement window, and replicate the same appearance as the original materials.

Thank you for your consideration, and if I can be of any further assistance, please contact me at (301) 217-6128.

cc: Chuck Milbourne, DFS
Mary Ellen Saverese, HHS
Paul Tseng, DFS

Division of Facilities and Services

110 North Washington Street, 3rd Floor • Rockville, Maryland 20850-2299
301/217-6000, TDD 301/217-6013, FAX 301/217-6003

33/12-98A

**MARVIN WINDOW &
DOOR SHOWPLACE****Fax**

To: MARIAM ZARIF/COCI **From:** JOHN MARUT
Fax: 301-622-2859 **Pages:** 7 (INCLUDES FAX COVER)
Phone: 301-622-9108 **Date:** 10/13/98
Re: GARRET PARK/COLESVILLE DAY **CC:**
CARE CENTERS

Urgent **For Review** **Please Comment** **Please Reply** **Please Recycle**

• Comments:

PLEASE FIND ATTACHED THE WINDOW REPLACEMENT PROPOSAL FOR BOTH THE GARRET PARK DAY CARE CENTER AND THE COLESVILLE DAY CARE CENTER.

I HAVE ALSO INCLUDED A SAMPLE SKETCH OF THE MULTIPLE WINDOW UNIT AT GARRET PARK SO THAT YOU CAN SEE HOW SIMILAR THE CONFIGURATION IS GOING TO BE COMPARED TO THE EXISTING.

I WOULD BE MORE THAN HAPPY TO PROVIDE ADDITIONAL DRAWINGS FOR ALL OF THE OTHER UNITS FOR BOTH PROJECTS ONCE YOU HAVE REVIEWED THE PROPOSALS AND FEEL THAT WHAT WE ARE PROVIDING FITS INTO THE BUDGET.

I LOOK FORWARD TO THE POSSIBILITY OF WORKING WITH YOU ON BOTH OF THESE PROJECTS AND HOPEFULLY FUTURE ONES AS WELL.

THANK YOU!



WINDOW & DOOR
SHOWPLACE INC.



October 12, 1998

To: CDCI
Silver Spring, MD
FAX 301/622-9108

Project: Garret Park Child Care Center
Montgomery County

Attn: Mariam Zarif

Marvin Window & Door Showplace, Inc. proposes to supply window units meeting the following specifications for the above captioned project as follows:

Extruded-aluminum clad windows w/ primed wood interior, clear insulating glass, 7/8" simulated divided light grilles, fiberglass mesh screens in aluminum surround, 4-9/16" jamba, and 10-year non-prorated warranty on all window components.

Quantity	Mark	Description
2	F1 & F2	Clad Multiple Awning Unit (1W3H) MO 44" x 83 1/2"
1	L1	Clad Multiple Awning Unit (4W5H) MO 270" x 102"
2	L2 & L3	Clad Multiple Awning Unit (1W3H) MO 37 1/2" x 74"
1	R1	Clad Multiple Awning Unit (4W5H) MO 270" x 102"
2	R2 & R3	Clad Multiple Awning Unit (1W3H) MO 37 1/2" x 74"

Product: \$ 26,500.00 POB Job Site + Tax
Installation: \$ 7,400.00
Total: \$ 33,900.00

Alternate:

-Furnish materials & labor to paint the interior of the window units for the above mentioned windows.
Add: \$ 2,690.00

No addenda are noted.

The attached Marvin Window & Door Showplace standard terms and specifications apply.

NOTE - Marvin products are made to order. Any changes made after the order is placed but before fabrication has started, will incur a \$100.00 charge. No changes are possible once fabrication has begun.

This price can be withdrawn if not accepted within 30 days.

Thank you for this opportunity to be of service; I look forward to receiving your order.

Sincerely,

I hereby accept this proposal:

John G. Marut
Vice President Commercial Sales

Signature

Date

MARVIN WINDOW & DOOR SHOWPLACE, INC.

Standard Terms & Specifications

Project: Garret Park Child Care Center

Included as Standard Features in Marvin Clad Products unless otherwise modified or excluded:

- Extruded aluminum clad exterior (Both frame & sash).
- Preservative treated furniture grade wood interior.
- Baked-on KYNAR / Acrylic finish meeting AMMA 605.2 Commercial Rating.
- NWWDA Hallmark Certification.
- Standard aluminum white clad exterior
- 4 9/16" Jambes (with no extensions)
- Aluminum frame expander
- Aluminum mull covers (for exterior)
- Wood mull covers (for interior)
- Clear Insulated glass
- 7/8" Simulated divided lite
- Standard Bronze Finish Hardware
- Fiberglass mesh screen with aluminum surround to match clad window color
- Ponderosa pine factory primed interior furniture grade finish
- Ten (10) Year Manufacturer Warranty on all Window Components

Excluded:

- Jamb extensions not otherwise noted.
- Interior casing, trim, stools, or aprons.
- Painting or staining.
- Unit reinforcement or structural steel.
- Custom extruded aluminum trim
- Roundtop unit over front entrance
- Existing vinyl unit first floor rear
- Sales Tax

Installation Scope:

Included is:

Labor, equipment, tools, and insurance to install the quoted windows in the rough opening as described by the customer or delineated in the project documents including

- Receive, unload, and stock new units
- Remove existing window units
- Provide lead containment for demo debris
- Furnish & install pressure treated wood blocking
- Furnish & install wood structural mulls as needed in large units
- Set, shim, & fasten new window unit
- Furnish & install insulation
- Install frame expander and install mull covers
- Trim out the interior with either a flat trim or a 1/4" trim at transition to block wall
- Caulk window unit both interior & exterior
- Adjust unit to manufacturer's specifications
- Remove debris to dumpster provided by MWDS

(Continued on next page)

Excluded unless specifically detailed and included elsewhere are:

- Non window demolition
- Repairs to existing structure or surrounding substrates
- Furnishing interior casing, sills, aprons or other millwork
- Lead paint abatement
- Siding replacement or repairs
- Non window replacement work
- Final Cleaning

Terms:

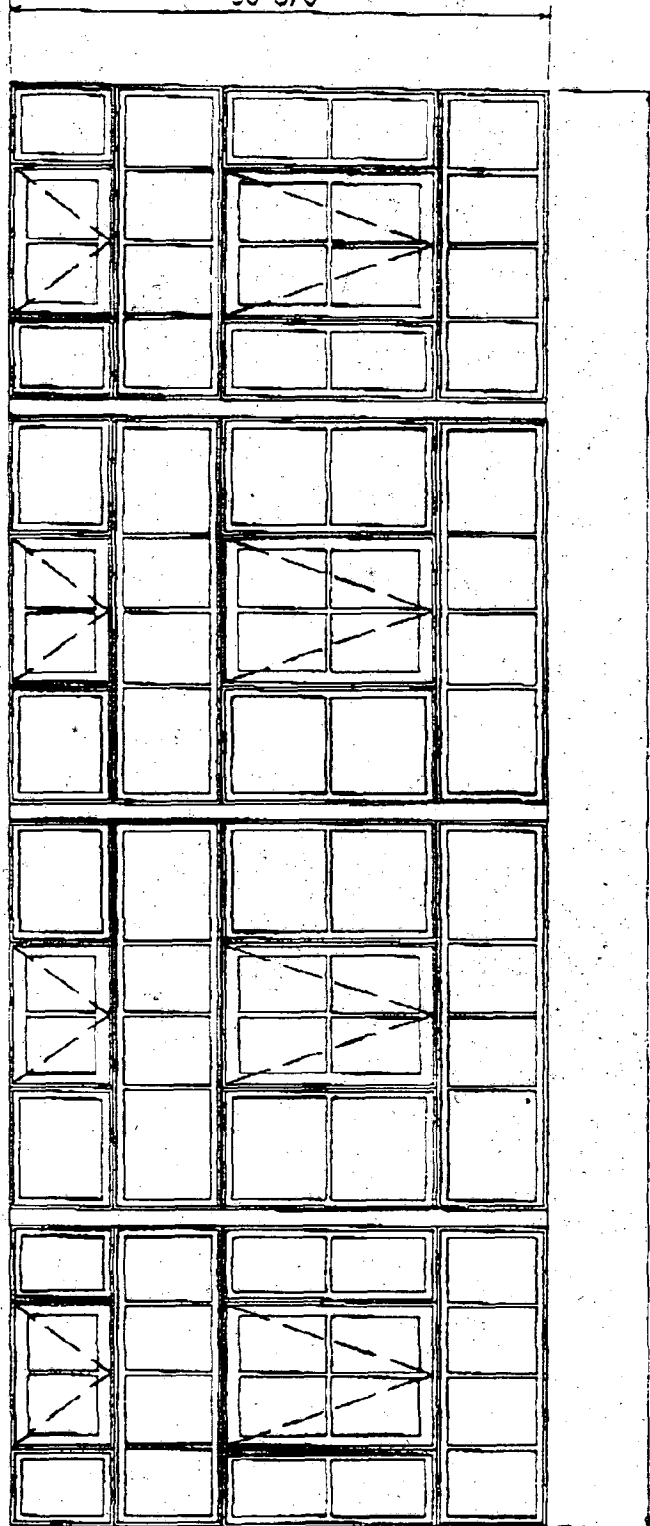
A deposit for 1/3 of the product price is due when the order is placed with the factory. The remaining balance for the product is due when the product is delivered to the site. The installation amount is due within two weeks from the date that the invoice is submitted. Invoicing will be submitted by the twenty-fifth of the month for all work to be performed by the end of that month.

Retention on window unit invoices is not acceptable. Interest will be charged at the rate of 1-1/2% monthly (18% per annum) for overdue accounts.

Notes:

- (1) Before any order can be placed with the factory. The units that are to be replaced will require a final field measure by a representative of the Marvin Window & Door Showplace to assure a proper fit. If any discrepancies arise from this final pre-check and this proposal, the owner will be made aware of the change within forty-eight hours. If there are any monetary changes that need to be made in result of the pre-check they will need to be resolved and approved before the order can be placed with the factory.
- (2) Marvin window and doors are made to order any changes made after the order is placed with the factory will require a \$100.00 change fee. If the order has already started fabrication then full payment is required for the product.

98 3/8"



269 1/6"



October 12, 1998

To: CDCI
Silver Spring, MD
FAX 301/622-9108

Project: Colesville Child Care Center
Montgomery County

Attn: Mariam Zarif

Marvin Window & Door Showplace, Inc. proposes to supply window units meeting the following specifications for the above captioned project as follows:

Extruded-aluminum clad windows w/ primed wood interior, clear insulating glass, 7/8" simulated divided light grilles, fiberglass mesh screens in aluminum surround, 4-9/16" jamba, and 10-year non-prorated warranty on all window components.

Quantity	Mark	Description
6	West	Clad Multiple Awning Unit (2W4H) MO 85" x 118 1/2"
1	West	Clad Multiple Awning Unit (2W2H) MO 85" x 53"
2	West	Clad Multiple Awning Unit (5W4H) MO 247" x 102"
2	South	Clad Multiple Awning Unit (1W4H) MO 42" x 84"
1	South	Clad Direct Set Roundtop MO 78" x 38"
1	East	Clad Multiple Awning Unit (5W4H) MO 247" x 102"
3	East	Clad Multiple Awning Unit (2W3H) MO 84" x 85"

Product: \$ 36,900.00 FOB Job Site + Tax
Installation: \$ 14,000.00
Total: \$ 50,900.00

Alternate:

-Furnish materials & labor to paint the interior of the window units for the above mentioned windows.
Add: \$ 5,200.00

No addenda are noted.

The attached Marvin Window & Door Showplace standard terms and specifications apply.

NOTE - Marvin products are made to order. Any changes made after the order is placed but before fabrication has started, will incur a \$100.00 charge. No changes are possible once fabrication has begun.

This price can be withdrawn if not accepted within 30 days.

Thank you for this opportunity to be of service; I look forward to receiving your order.

Sincerely,

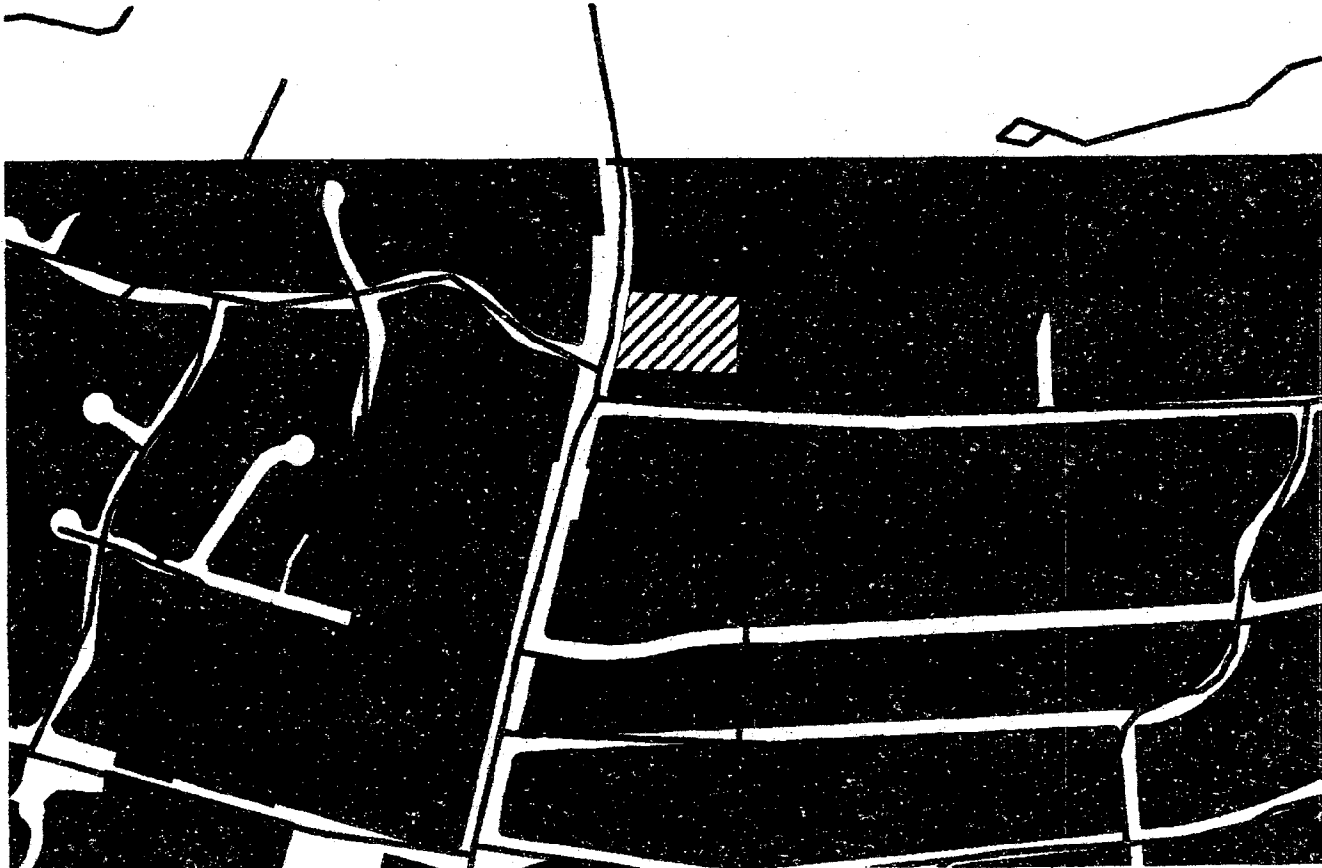
I hereby accept this proposal:

John G. Marus
Vice President Commercial Sales

Signature

Date

14015 New Hampshire Avenue & Adjacent Properties



Legend

-  Streets
-  Adjacent Properties
-  Property 200



Post-It™ brand fax transmittal memo 7671 # of pages > 2

To	<i>PERRY</i>	From	<i>MIKE LONE</i>
Co.		Co.	
Dept.		Phone #	<i>217-6128</i>
Fax #	<i>563-3412</i>	Fax #	

Addresses of Adjacent Property Owners

Parcel							
00260817	1312830.517354	P850	MD NAT CAP PK & PLAN COMM	00000	GOOD HOPE	RD	
01512241	1313138.517238	P058	MONTGOMERY COUNTY	14121	NEW HAMPSHIRE	AVE	SILVER SPRING
00281876	1312590.517306	P029	MONTGOMERY COUNTY	00000	NEW HAMPSHIRE	AVE	
00279656	1312370.517298	P031	STATE OF MARYLAND TO THE USE	14108	NEW HAMPSHIRE	AVE	SILVER SPRING
01994754	1312322.517222	P077	STATE OF MARYLAND	14106	NEW HAMPSHIRE	AVE	SILVER SPRING
02290507	1312127.517231	000	ALBERT M SHANEMAN ET AL	00000	COLESVILLE MANOR	DR	
00332602	1312076.517102	000	WILLIAM K BYRD JR	00416	COLESVILLE MANOR	DR	SILVER SPRING
02290520	1312368.517121	000	ALBERT M SHANEMAN ET AL	7 14102	NEW HAMPSHIRE	AVE	SILVER SPRING
00251846	1312662.517085	P082	MONTGOMERY COUNTY	14015	NEW HAMPSHIRE	AVE	SILVER SPRING
00332910	1312157.517035	000	DARYL E & K C PAUNIL	00420	COLESVILLE MANOR	DR	SILVER SPRING
00333003	1312233.516975	000	JAMES T & J E PARRECO	00424	COLESVILLE MANOR	DR	SILVER SPRING
00333036	1312320.516886	000	TRUNG T NGUYEN	X 14100	NEW HAMPSHIRE	AVE	SILVER SPRING
00252112	1312666.516858	P137	MONTGOMERY COUNTY	14015	NEW HAMPSHIRE	AVE	SILVER SPRING
00268210	1313157.516764	P166	MD NAT CAP PK&PLANN COMM	00000	HOBBS	DR	
02909592	1312032.516806		SHAHABUDDIN & N KHATOON	00425	COLESVILLE MANOR	DR	SILVER SPRING
02909581	1312121.516716		WILLIE R & B J LEE	00427	COLESVILLE MANOR	DR	SILVER SPRING
00332668	1311815.516648	000	JAMES & J B GOODMAN	13905	ZEIGLER	WAY	SILVER SPRING
02909570	1312236.516640		NELSON F & M J SANCHEZ	14006	NEW HAMPSHIRE	AVE	SILVER SPRING
00250168	1312519.516637	P192	GENEVIEVE E R GARNETT ET AL	14009	NEW HAMPSHIRE	AVE	SILVER SPRING
00263274	1312257.516513	P239	SOTIRIOS G GOROGIAS ET AL	14002	NEW HAMPSHIRE	AVE	SILVER SPRING
00250090	1312031.516488	P249	LITTLE SISTER OF THE HOLY	14000	NEW HAMPSHIRE	AVE	SILVER SPRING
00258778	1311921.516159	P305	UNITED CHRISTIAN CHURCH	13908	NEW HAMPSHIRE	AVE	SILVER SPRING
02926687	1312644.516425		VESTRY OF TRANSFIGURATION	X 13925	NEW HAMPSHIRE	AVE	SILVER SPRING
02449417	1312896.516346	000	MARCUS & J DORSEY	00611	HOBBS	DR	SILVER SPRING
02449406	1313028.516333	000	ARCHIE B & C L FORD	00613	HOBBS	DR	SILVER SPRING
02449394	1313151.516335	000	PIETRO & R PARISI	00615	HOBBS	DR	SILVER SPRING
02449383	1313269.516342	000	DANTE & M CELIA	00617	HOBBS	DR	SILVER SPRING
02449372	1313398.516338	000	ANGELO & M CELIA	00619	HOBBS	DR	SILVER SPRING
00279224	1312511.516266	P300	BARRY J & L A LAWRENCE	13915	NEW HAMPSHIRE	AVE	SILVER SPRING



DEPARTMENT OF PUBLIC WORKS
AND TRANSPORTATION

Douglas M. Duncan
County Executive

Graham J. Norton
Director

October 22, 1998

TO: Ms. Perry Kephart
Historic Preservation Planner
Maryland National Capital Park and Planning Commission
8787 Georgia Avenue
Silver Spring, Maryland, 20910-3760

FROM: R. Michael Lowe, Facility Environmental Manager
Capital Projects Management Section
Division of Facilities and Services

RE: Window Replacement at the Former Colesville School
14015 New Hampshire Avenue, Silver Spring, Maryland

As discussed with you, please find attached an application for work in a historic building. Montgomery County Government would like to remove the metal single pane casement windows at this location. The windows are painted with lead based paint, are in poor condition, and are difficult to maintain. Concerns have been raised concerning the close proximity of chipping, peeling paint and the nearby playground area. We ask for your approval in removing the potential lead chip and dust hazard present.

The replacement windows proposed are aluminum clad wooden windows, manufactured by Marvin. These windows provide the energy requirements of a .38 U value and a .55 shading coefficient, and are available in sizes and patterns to replicate the appearance of the original materials. Attached is their proposal for your review.

As you are aware, the County also plans to undertake similar work in the remaining sections of the day care portion of Colesville School, and at the Garrett Park Day care location. We understand that your review is not required for this work, however, we plan to utilize the same replacement window, and replicate the same appearance as the original materials.

Thank you for your consideration, and if I can be of any further assistance, please contact me at (301) 217-6128.

cc: Chuck Milbourne, DFS
Mary Ellen Saverese, HHS

Division of Facilities and Services

110 North Washington Street, 3rd Floor • Rockville, Maryland 20850-2299
301/217-6000, TDD 301/217-6013, FAX 301/217-6003

MARVIN WINDOW & DOOR SHOWPLACE

Fax

To: MARIAM ZARIF/CDGI **From:** JOHN MARUT

Fax: 301-622-2699 **Pages:** 7 (INCLUDES FAX COVER)

Phone: 301-622-9108 **Date:** 10/13/98

Re: GARRET PARK/COLESVILLE DAY **CC:**

CARE CENTERS

Urgent **For Review** **Please Comment** **Please Reply** **Please Recycle**

• Comments:

PLEASE FIND ATTACHED THE WINDOW REPLACEMENT PROPOSAL FOR BOTH THE GARRET PARK DAY CARE CENTER AND THE COLESVILLE DAY CARE CENTER.

I HAVE ALSO INCLUDED A SAMPLE SKETCH OF THE MULTIPLE WINDOW UNIT AT GARRET PARK SO THAT YOU CAN SEE HOW SIMILAR THE CONFIGURATION IS GOING TO BE COMPARED TO THE EXISTING.

I WOULD BE MORE THAN HAPPY TO PROVIDE ADDITIONAL DRAWINGS FOR ALL OF THE OTHER UNITS FOR BOTH PROJECTS ONCE YOU HAVE REVIEWED THE PROPOSALS AND FEEL THAT WHAT WE ARE PROVIDING FITS INTO THE BUDGET.

I LOOK FORWARD TO THE POSSIBILITY OF WORKING WITH YOU ON BOTH OF THESE PROJECTS AND HOPEFULLY FUTURE ONES AS WELL.

THANK YOU!



WINDOW & DOOR
SHOWPLACE INC.



October 12, 1998

To: CDCI
Silver Spring, MD
FAX 301/622-9108

Project: Garret Park Child Care Center
Montgomery County

Attn: Mariam Zarif

Marvin Window & Door Showplace, Inc. proposes to supply window units meeting the following specifications for the above captioned project as follows:

Extruded-aluminum clad windows w/ primed wood interior, clear insulating glass, 7/8" simulated divided light grilles, fiberglass mesh screens in aluminum surround, 4-9/16" jamba, and 10-year non-prorated warranty on all window components.

Quantity	Mark	Description
2	F1 & F2	Clad Multiple Awning Unit (1W3H) MO 44" x 83 1/2"
1	L1	Clad Multiple Awning Unit (4W5H) MO 270" x 102"
2	L2 & L3	Clad Multiple Awning Unit (1W3H) MO 37 1/2" x 74"
1	R1	Clad Multiple Awning Unit (4W5H) MO 270" x 102"
2	R2 & R3	Clad Multiple Awning Unit (1W3H) MO 37 1/2" x 74"

Product: \$ 26,500.00 FOB Job Site + Tax
 Installation: \$ 7,400.00
 Total: \$ 33,900.00

Alternate:

-Furnish materials & labor to paint the interior of the window units for the above mentioned windows.
 Add: \$ 2,680.00

No addenda are noted.

The attached Marvin Window & Door Showplace standard terms and specifications apply.

NOTE - Marvin products are made to order. Any changes made after the order is placed but before fabrication has started, will incur a \$100.00 charge. No changes are possible once fabrication has begun.

This price can be withdrawn if not accepted within 30 days.

Thank you for this opportunity to be of service; I look forward to receiving your order.

Sincerely,

I hereby accept this proposal:

John G. Marut
Vice President Commercial Sales

Signature

Date

MARVIN WINDOW & DOOR SHOWPLACE, INC.

Standard Terms & Specifications

Project: Garret Park Child Care Center

Included as Standard Features in Marvin Clad Products unless otherwise modified or excluded:

- Extruded aluminum clad exterior (Both frame & sash).
- Preservative treated furniture grade wood interior.
- Baked-on KYNAR / Acrylic finish meeting AMMA 605.2 Commercial Rating.
- NWWDA Hallmark Certification.
- Standard aluminum white clad exterior
- 4 9/16" Jamb (with no extensions)
- Aluminum frame expander
- Aluminum mull covers (for exterior)
- Wood mull covers (for interior)
- Clear Insulated glass
- 7/8" Simulated divided lite
- Standard Bronze Finish Hardware
- Fiberglass mesh screen with aluminum surround to match clad window color
- Ponderosa pine factory primed interior furniture grade finish
- Ten (10) Year Manufacturer Warranty on all Window Components

Excluded:

- Jamb extensions not otherwise noted.
- Interior casing, trim, stools, or aprons.
- Painting or staining.
- Unit reinforcement or structural steel.
- Custom extruded aluminum trim
- Roundtop unit over front entrance
- Existing vinyl unit first floor rear
- Sales Tax

Installation Scope:

Included is:

Labor, equipment, tools, and insurance to install the quoted windows in the rough opening as described by the customer or delineated in the project documents including

- Receive, unload, and stock new units
- Remove existing window units
- Provide lead containment for demo debris
- Furnish & install pressure treated wood blocking
- Furnish & install wood structural mulls as needed in large units
- Set, shim, & fasten new window unit
- Furnish & install insulation
- Install frame expander and install mull covers
- Trim out the interior with either a flat trim or a 1/4" trim at transition to block wall
- Caulk window unit both interior & exterior
- Adjust unit to manufacturer's specifications
- Remove debris to dumpster provided by MWDS

(Continued on next page)

Excluded unless specifically detailed and included elsewhere are:

- Non window demolition
- Repairs to existing structure or surrounding substrates
- Furnishing interior casing, sills, aprons or other millwork
- Lead paint abatement
- Siding replacement or repairs
- Non window replacement work
- Final Cleaning

Terms:

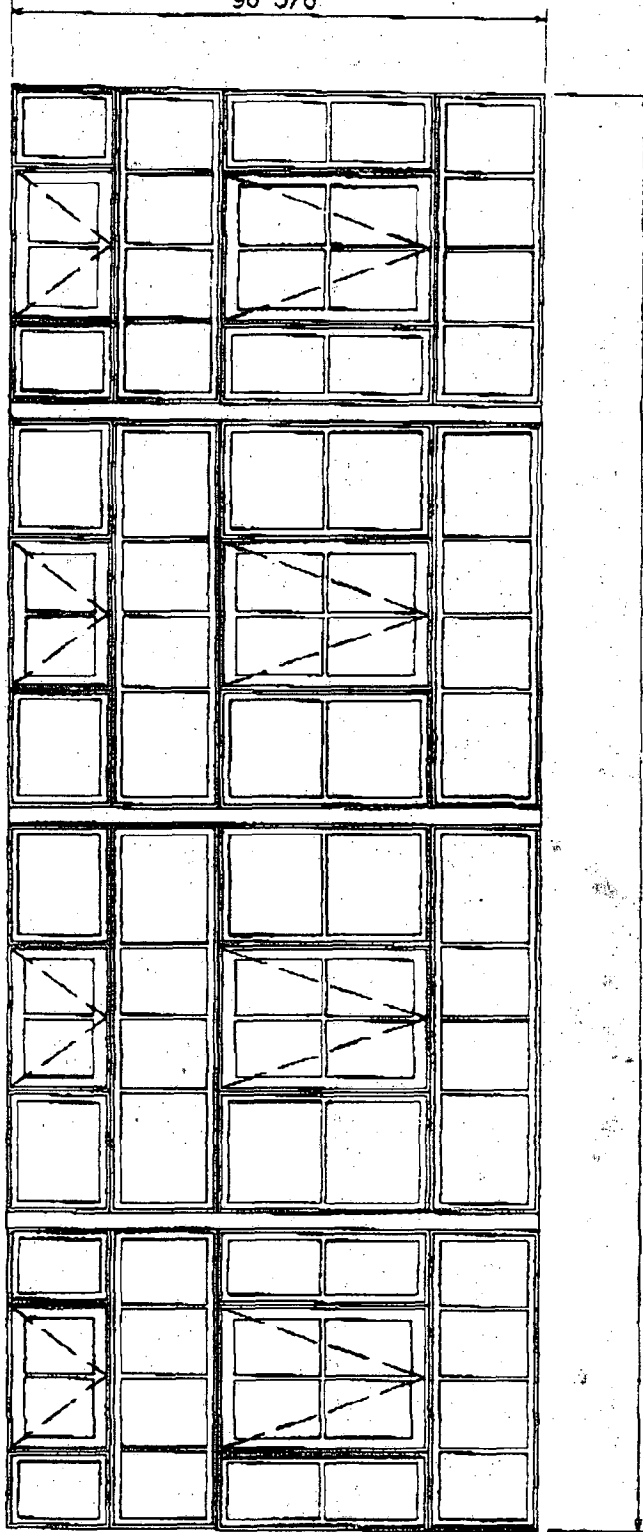
A deposit for 1/3 of the product price is due when the order is placed with the factory. The remaining balance for the product is due when the product is delivered to the site. The installation amount is due within two weeks from the date that the invoice is submitted. Invoicing will be submitted by the twenty-fifth of the month for all work to be performed by the end of that month.

Retainage on window unit invoices is not acceptable. Interest will be charged at the rate of 1-1/2% monthly (18% per annum) for overdue accounts.

Note:

- (1) Before any order can be placed with the factory. The units that are to be replaced will require a final field measure by a representative of the Marvin Window & Door Showplace to assure a proper fit. If any discrepancies arise from this final pre-check and this proposal, the owner will be made aware of the change within forty-eight hours. If there are any monetary changes that need to be made in result of the pre-check they will need to be resolved and approved before the order can be placed with the factory.
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98 3/8"



269 1/6"



October 12, 1998

To: CDCI
Silver Spring, MD
FAX 301/622-9108

Project: Colesville Child Care Center
Montgomery County

Attn: Mariam Zarif

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2	West	Clad Multiple Awning Unit (5W4H) MO 247" x 102"
2	South	Clad Multiple Awning Unit (1W4H) MO 42" x 84"
1	South	Clad Direct Set Roundtop MO 76" x 38"
1	East	Clad Multiple Awning Unit (5W4H) MO 247" x 102"
3	East	Clad Multiple Awning Unit (2W3H) MO 84" x 65"

Product: \$ 36,900.00 FOB Job Site + Tax
Installation: \$ 14,000.00
Total: \$ 50,900.00

Alternate:

-Furnish materials & labor to paint the interior of the window units for the above mentioned windows:
Add: \$ 5,200.00

No addenda are noted.

The attached Marvin Window & Door Showplace standard terms and specifications apply.

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Sincerely,

I hereby accept this proposal:

John G. Marut
Vice President Commercial Sales

Signature

Date



DEPARTMENT OF PUBLIC WORKS
AND TRANSPORTATION

Douglas M. Duncan
County Executive

Graham J. Norton
Director

October 22, 1998

TO: Ms. Perry Kephart
Historic Preservation Planner
Maryland National Capital Park and Planning Commission
8787 Georgia Avenue
Silver Spring, Maryland, 20910-3760

FROM: R. Michael Lowe, Facility Environmental Manager
Capital Projects Management Section
Division of Facilities and Services *RML*

RE: Window Replacement at the Former Colesville School
14015 New Hampshire Avenue, Silver Spring, Maryland

As discussed with you, please find attached an application for work in a historic building. Montgomery County Government would like to remove the metal single pane casement windows at this location. The windows are painted with lead based paint, are in poor condition, and are difficult to maintain. Concerns have been raised concerning the close proximity of chipping, peeling paint and the nearby playground area. We ask for your approval in removing the potential lead chip and dust hazard present.

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Thank you for your consideration, and if I can be of any further assistance, please contact me at (301) 217-6128.

cc: Chuck Milbourne, DFS
Mary Ellen Saverese, HHS
Paul Tseng, DFS

Division of Facilities and Services

110 North Washington Street, 3rd Floor • Rockville, Maryland 20850-2299
301/217-6000, TDD 301/217-6013, FAX 301/217-6003

33/12-98 (8)



RETURN TO: DEPARTMENT OF PERMITTING SERVICES
 250 HUNGERFORD DRIVE, 2ND FLOOR, ROCKVILLE, MD 20850
 301/217-6376

DPS - #8

HISTORIC PRESERVATION COMMISSION
301/563-3400

**APPLICATION FOR
 HISTORIC AREA WORK PERMIT**

Contact Person: MIKE LOWE

Daytime Phone No.: 301-217-6128

Tax Account No.: _____

Name of Property Owner: COLLETSVILLE SCHOOL, MONTGOMERY COUNTY Daytime Phone No.: 301-217-6128

Address: 14015 NEW HAMPSHIRE SILVER SPRING MD. 20904
Street Number City State Zip Code

Contractor: CDCI Phone No.: 301-622-9108

Contractor Registration No.: 47092 (EXPIRES 6-30-99)

Agent for Owner: MIRIAM ZARIF Daytime Phone No.: 301-622-9108

LOCATION OF BUILDING/PREMISE

House Number: MONTGOMERY COUNTY GOVERNMENT Street: DEPT. OF FACILITIES + SERVICES 110 NORTH WASHINGTON ST.

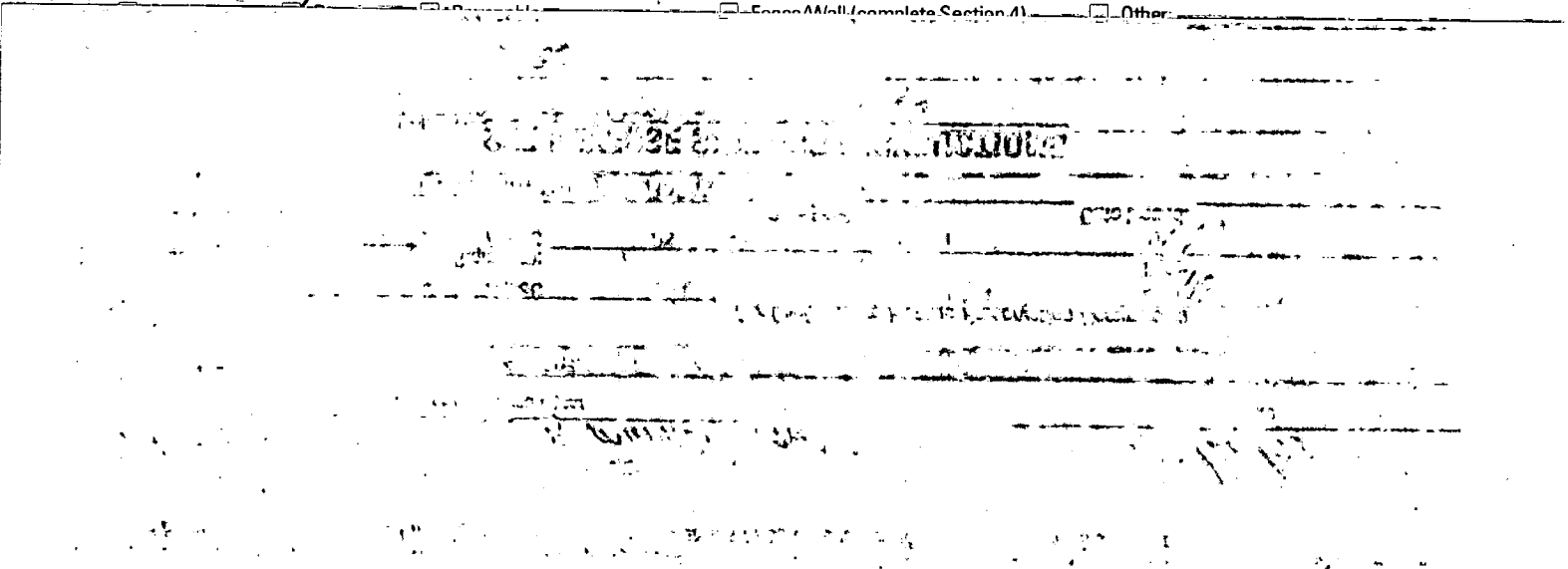
Town/City: _____ Nearest Cross Street: ROCKVILLE, MD. 20850

Lot: _____ Block: _____ Subdivision: _____

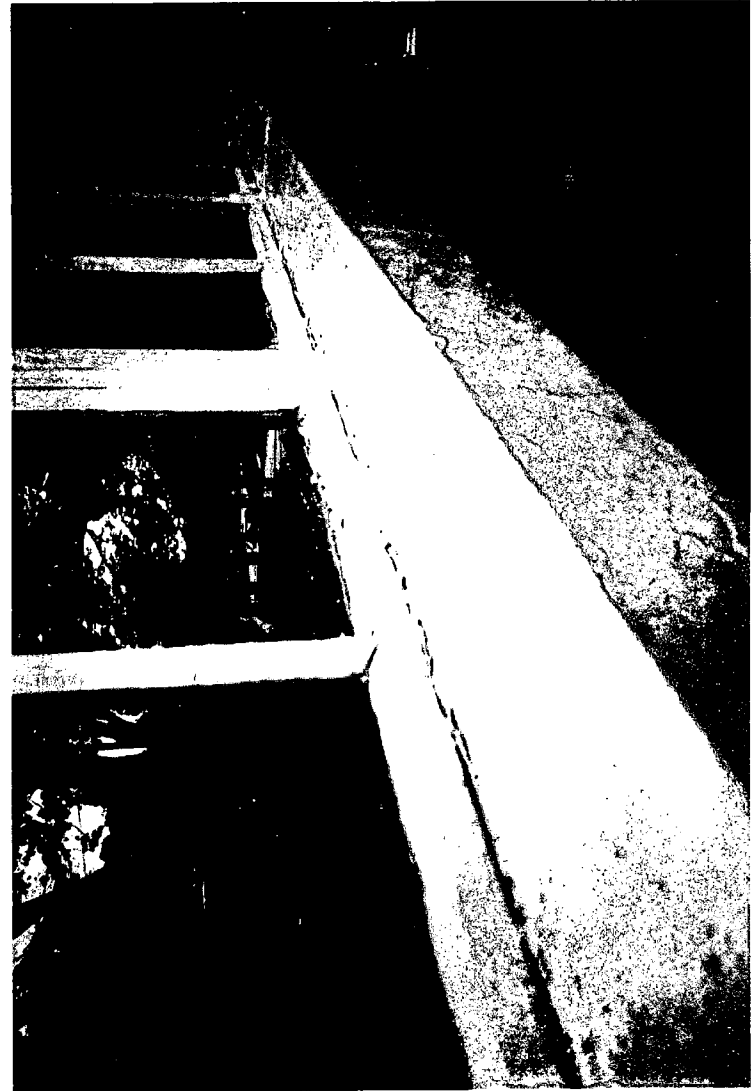
Liber: _____ Folio: _____ Parcel: _____

PART ONE: TYPE OF PERMIT ACTION AND USE

- 1A. CHECK ALL APPLICABLE:
- | | | | | | | | | |
|------------------------------------|----------------------------------|---|--|------------------------------------|--|--|-------------------------------|-------------------------------|
| <input type="checkbox"/> Construct | <input type="checkbox"/> Extend | <input type="checkbox"/> Alter/Renovate | <input type="checkbox"/> A/C | <input type="checkbox"/> Slab | <input type="checkbox"/> Room Addition | <input type="checkbox"/> Porch | <input type="checkbox"/> Deck | <input type="checkbox"/> Shed |
| <input type="checkbox"/> Move | <input type="checkbox"/> Install | <input type="checkbox"/> Wreck/Raze | <input type="checkbox"/> Solar | <input type="checkbox"/> Fireplace | <input type="checkbox"/> Woodburning Stove | <input type="checkbox"/> Single Family | | |
| <input type="checkbox"/> [unclear] | | | <input type="checkbox"/> Fence/Wall (complete Section 4) | | | <input type="checkbox"/> Other: _____ | | |







MARVIN WINDOW & DOOR SHOWPLACE

Fax

To: MARIAM ZARIF/CDGI **From:** JOHN MARUT

Fax: 301-622-2859 **Pages:** 7 (INCLUDES FAX COVER)

Phone: 301-622-9108 **Date:** 10/13/98

Re: GARRET PARK/COLESVILLE DAY **CC:**
CARE CENTERS

Urgent **For Review** **Please Comment** **Please Reply** **Please Recycle**

• **Comments:**

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THANK YOU!

MARVIN WINDOWS & DOORS PRODUCT CATALOG.

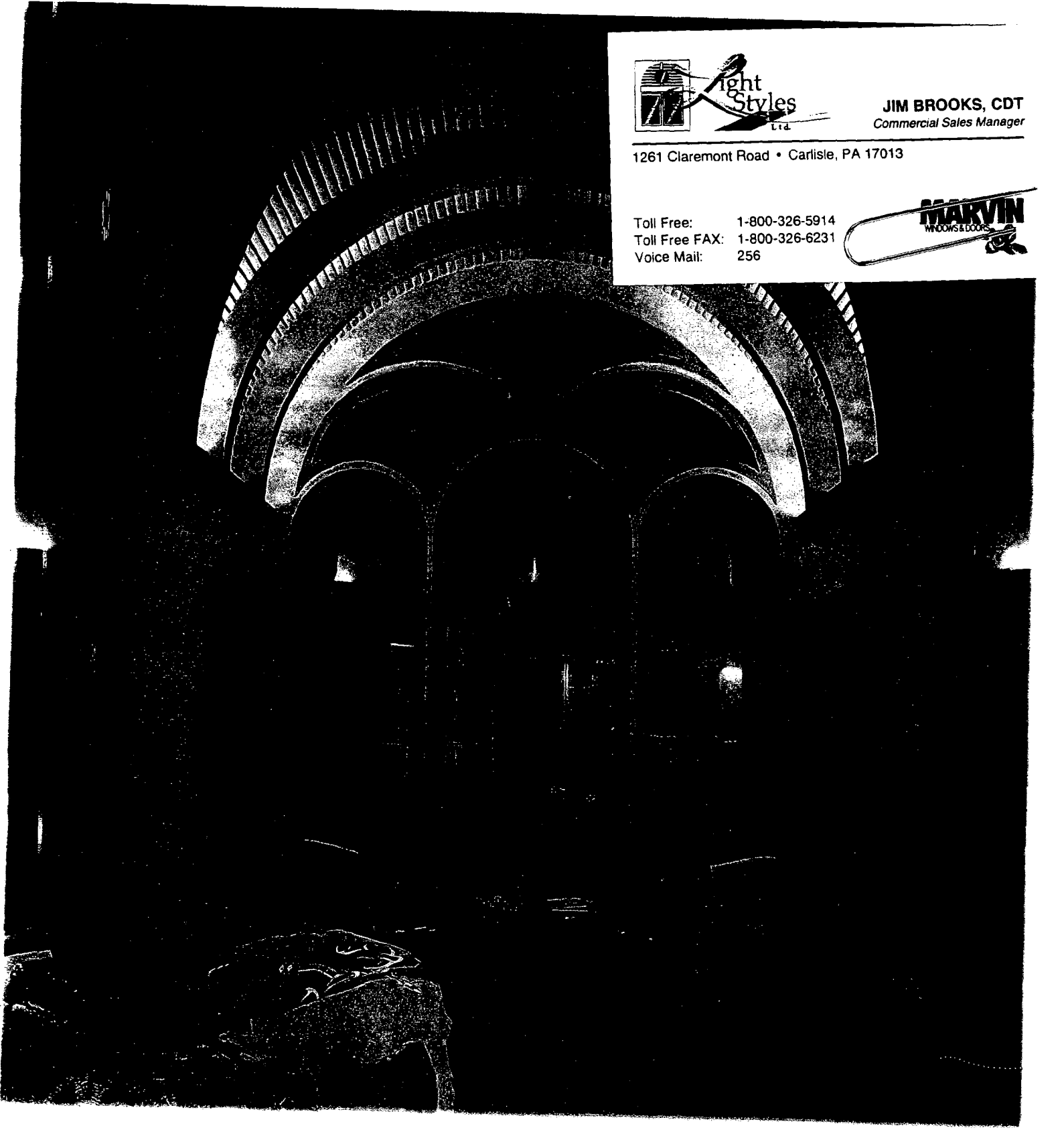
Exploring The Wonderful Choices in Made To Order Windows and Doors.



JIM BROOKS, CDT
Commercial Sales Manager

1261 Claremont Road • Carlisle, PA 17013

Toll Free: 1-800-326-5914
Toll Free FAX: 1-800-326-6231
Voice Mail: 256



WINDOWS THAT WARM THE COOL DAYS AND COOL THE WARM ONES.

The beauty of Marvin's Made To Order philosophy is that it allows us to respond to your needs. This philosophy extends to providing glazing options that can make a home more comfortable. Whether you need to keep a room warm in cold climates or cool in warm climates, Marvin has a variety of glazing options to help.

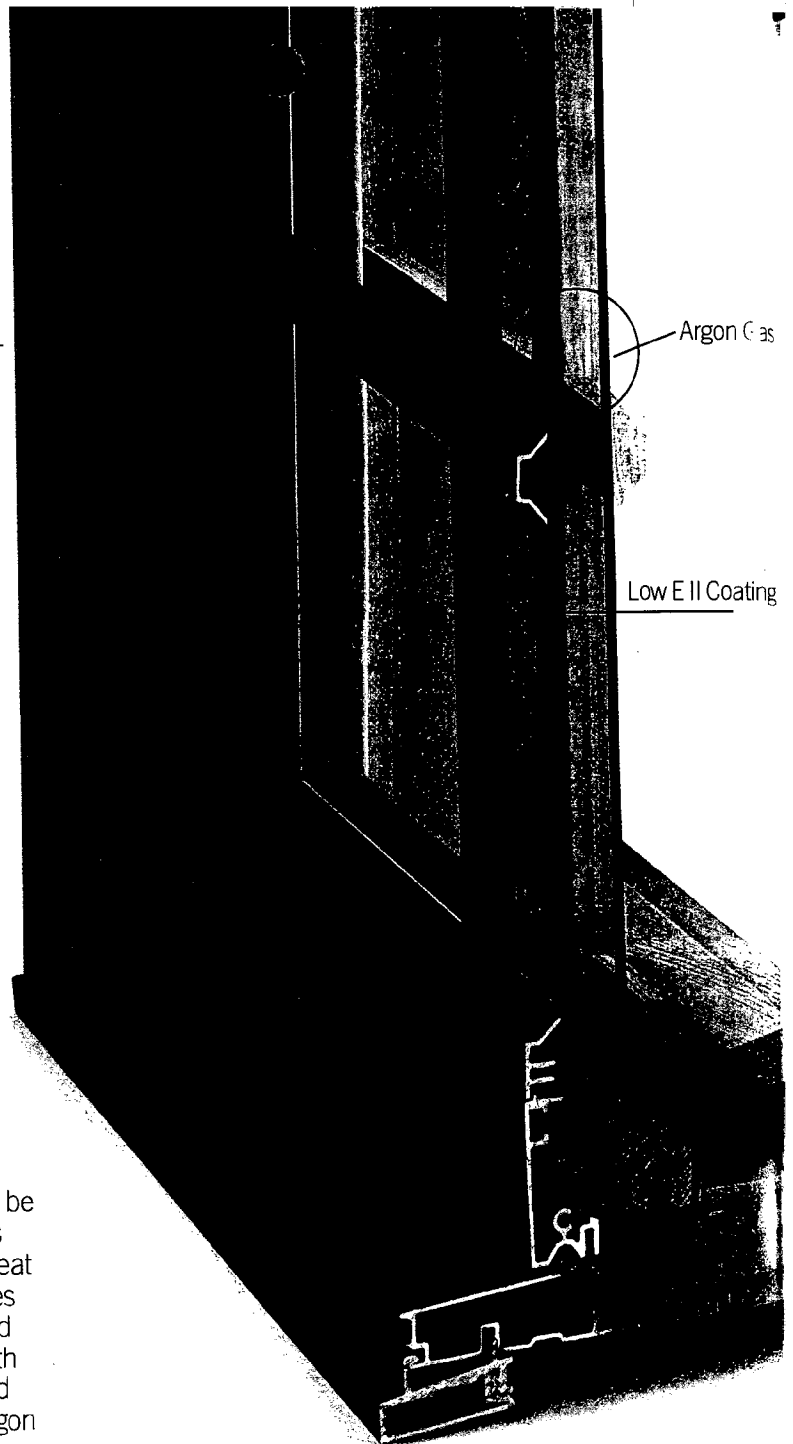
DOUBLE SEALED-DOUBLE PROTECTION

The first step in increasing the energy efficiency of windows or doors is to use insulating glass (IG). Insulating glass is standard on all Marvin windows and doors. Its primary purpose is to keep the inside heat (or cold) from being transferred outside the home, thereby reducing energy costs.

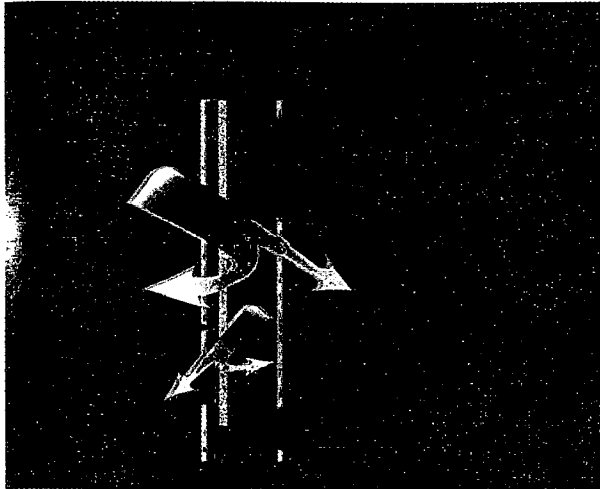
The construction of insulating glass is critical to long-term performance. To ensure a tight seal between the panes, Marvin bonds the glass to the spacer using polyisobutylene. Then, polyurethane or silicon is applied around the entire perimeter creating a dual seal. This prevents moisture and air penetration between the panes of glass which could decrease efficiency as well as cause unsightly fogging.

LOW E II WITH ARGON MEANS LOWER ENERGY COSTS

The benefits obtained by using insulating glass can be further enhanced with special glass coatings and gases like argon*. Low Emissivity (Low E) coatings help keep heat out or in depending on your needs. Low E II also reduces ultraviolet ray penetration* to help keep drapes, rugs and furniture from fading. Low E II glass comes standard with argon gas (instead of air) between the panes in standard one-lite units to increase energy savings even more. Argon gas is colorless, odorless, non-corrosive, non-toxic and non-flammable. It's known for its insulating qualities and provides 30% more resistance to thermal conductivity than air.



*Depending on altitude, argon may not be available on all units and UV ray penetration may vary. Contact your local distributor or dealer for information.



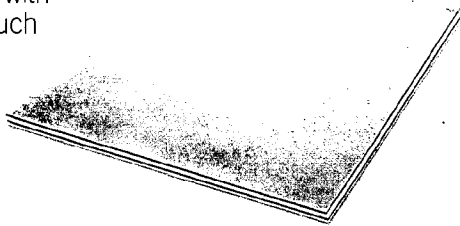
Low E II is applied to surface number 2. The neutral colored glazing is ideal for both northern and southern climates and provides excellent optical quality.

WARM EDGE TECHNOLOGY IMPROVES R VALUES & REDUCES CONDENSATION

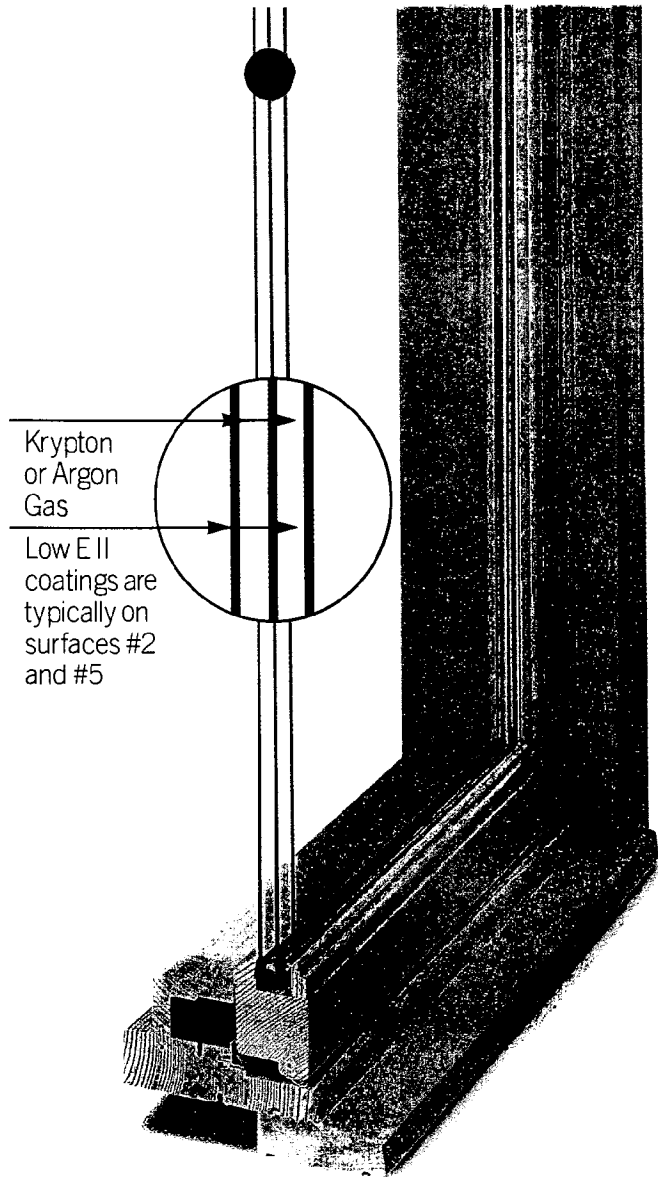
Traditional aluminum spacers have two "bridges" that can transfer heat and cold. Our Warm Edge spacers use low conductive material, reducing temperature transfer. The result is greater energy efficiency and improved comfort.

SAFETY GLASS

To provide safety or meet code, Marvin offers windows with tempered glass. We are able to offer you quick and reliable delivery of tempered glass windows because we have in-house tempering capability. So you can get most of your windows within normal lead times to help you complete your projects faster. (Very large sizes and windows with special coatings, such as Low E II, require longer lead times.)



Tempered Glass



Krypton or Argon Gas

Low E II coatings are typically on surfaces #2 and #5

ENERGY EFFICIENCY...AND MORE.

A HIGHER R VALUE

For superior energy efficiency, specify Marvin High R glazing.

High R consists of three panes of glass, two of which have Low E II coatings. Depending on the size of the unit, the space between the panes is filled with krypton or argon gas*. Krypton is known for its ability to provide insulating properties in a small air space. Typical Unit R Values range from 4.3 to 5.5. Typical Center of Glass R Values run as high as 8.0.

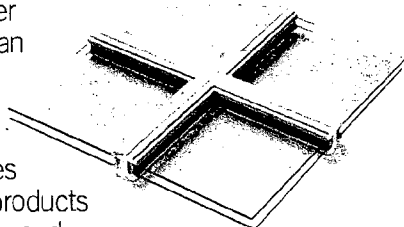
High R is currently available on wood Casemasters, Awnings, Picture units, direct glaze Polygons, Round Tops, Trimline Doors, and Magnum Tilt Turns and Hoppers.

*Depending on altitude, argon and krypton may not be available on all units. Contact your local distributor or dealer for information.

YOUR SIGNATURE IN LITES.

PERSONALIZE YOUR DESIGN WITH LITES

Divided lites harmoniously blend art and light to achieve a traditional, historic or contemporary look. They allow you to express your lifestyle, tastes or values via design. And with the flexibility of Marvin's product offering and Made To Order system, almost any look can be achieved from simple geometric styles to free-form expression. More important, Marvin provides three distinct divided lite products to accommodate specific needs.



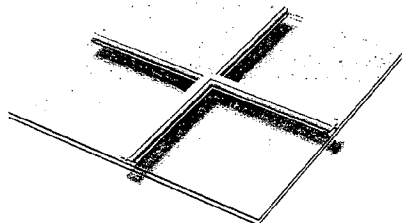
Authentic Divided Lites (ADL)

ADLs are a Marvin hallmark. In fact, Marvin is one of only a few manufacturers that still produces authentic divided lites. ADLs feature separate pieces of single pane or insulating glass that are individually glazed into the muntin bars. ADLs are available in a variety of muntin bar widths to help create the look you want. Standard and custom patterns are available, as are radius lite cuts. Mortise and tenon construction makes ADL products extremely strong and durable. ADLs are reglazable in the field. Magnum window products offer aluminum clad sash and muntin bars. ADLs offer window connoisseurs a product that is rich in historic tradition and authenticity.



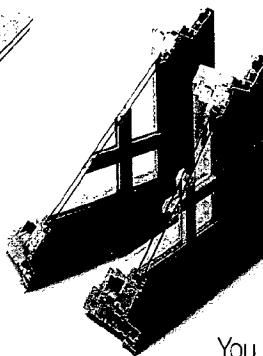
Removable Grilles

Removable grilles provide the illusion of ADLs. Yet, they can be easily removed for convenient glass cleaning. They are made from solid pine and are designed to fit on the interior only. Generally, they are a more economical alternative to authentic divided lites. Available muntin widths include 3/4" and 1 1/8".



Simulated Divided Lites (SDL)

SDLs consist of muntins which are permanently attached to the interior and exterior of the glass with a durable adhesive. The interior and exterior muntins mirror each other to closely replicate the look of ADLs. On aluminum clad products, the interior muntins are wood but the exterior muntins are aluminum.



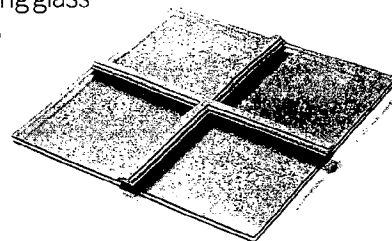
A carefully designed polymeric adhesive ensures permanent adhesion in all weather conditions.

The beauty of SDLs is design flexibility. You can say "yes" to lite cuts that would usually be impossible.

You can also specify very large units that have a high degree of structural integrity. Plus,

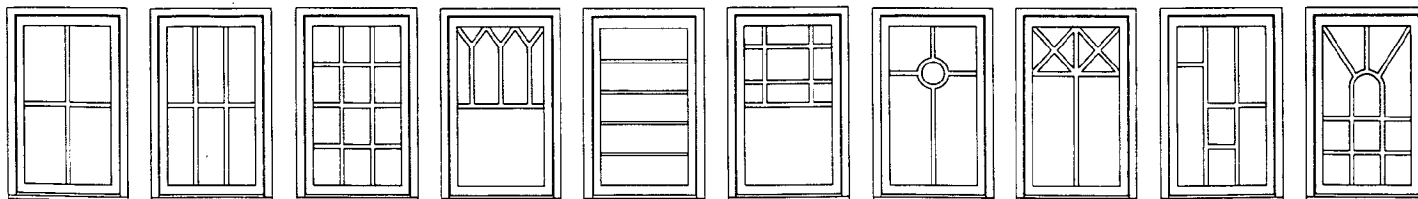
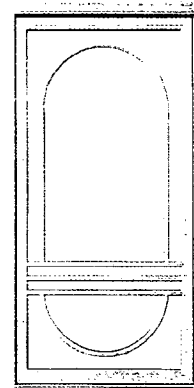
SDLs offer the energy efficiency that a single expanse of insulating glass can offer. Muntin profiles include 7/8" and 1 1/8".

Optional spacer bars between glass panes complete the authentic effect. Marvin SDLs also offer a very clean appearance.



OUR MUNTINS LINE UP

Marvin knows you are concerned with details. That's why we offer you the ability to order windows, doors and multiple assemblies with muntins that line up—both vertically and horizontally. And because we produce assemblies in the factory, we benefit from a high degree of control over the quality of the entire assembly. Marvin craftsmen don't have to worry whether the muntins of the transom being made "down the road" will line up with the muntins on the Picture unit they're assembling.



MARVIN

WINDOW & DOOR
SHOWPLACE INC.



October 12, 1998

To: CDCI
Silver Spring, MD
FAX 301/622-9108

Project: Garret Park Child Care Center
Montgomery County

Attn: Mariam Zarif

Marvin Window & Door Showplace, Inc. proposes to supply window units meeting the following specifications for the above captioned project as follows:

Extruded-aluminum clad windows w/ primed wood interior, clear insulating glass, 7/8" simulated divided light grilles, fiberglass mesh screens in aluminum surround, 4-9/16" jamba, and 10-year non-prorated warranty on all window components.

Quantity	Mark	Description
2	F1 & F2	Clad Multiple Awning Unit (1W3H) MO 44" x 83 1/2"
1	L1	Clad Multiple Awning Unit (4W5H) MO 270" x 102"
2	L2 & L3	Clad Multiple Awning Unit (1W3H) MO 37 1/2" x 74"
1	R1	Clad Multiple Awning Unit (4W5H) MO 270" x 102"
2	R2 & R3	Clad Multiple Awning Unit (1W3H) MO 37 1/2" x 74"

Product: \$ 26,500.00 FOB Job Site + Tax
Installation: \$ 7,400.00
Total: \$ 33,900.00

Alternate:

-Furnish materials & labor to paint the interior of the window units for the above mentioned windows:
Add: \$ 2,680.00

No addenda are noted.

The attached Marvin Window & Door Showplace standard terms and specifications apply.

NOTE - Marvin products are made to order. Any changes made after the order is placed but before fabrication has started, will incur a \$100.00 charge. No changes are possible once fabrication has begun.

This price can be withdrawn if not accepted within 30 days.

Thank you for this opportunity to be of service; I look forward to receiving your order.

Sincerely,

I hereby accept this proposal:

John G. Marut
Vice President Commercial Sales

Signature

Date

MARVIN WINDOW & DOOR SHOWPLACE, INC.

Standard Terms & Specifications

Project: Garret Park Child Care Center

Included as Standard Features in Marvin Clad Products unless otherwise modified or excluded:

- Extruded aluminum clad exterior (Both frame & sash).
- Preservative treated furniture grade wood interior.
- Baked-on KYNAR / Acrylic finish meeting AMMA 605.2 Commercial Rating.
- NWWDA Hallmark Certification.
- Standard aluminum white clad exterior
- 4 9/16" Jamb (with no extensions)
- Aluminum frame expander
- Aluminum mull covers (for exterior)
- Wood mull covers (for interior)
- Clear Insulated glass
- 7/8" Simulated divided lite
- Standard Bronze Finish Hardware
- Fiberglass mesh screen with aluminum surround to match clad window color
- Ponderosa pine factory primed interior furniture grade finish
- Ten (10) Year Manufacturer Warranty on all Window Components

Excluded:

- Jamb extensions not otherwise noted.
- Interior casing, trim, stools, or aprons.
- Painting or staining.
- Unit reinforcement or structural steel.
- Custom extruded aluminum trim
- Roundtop unit over front entrance
- Existing vinyl unit first floor rear
- Sales Tax

Installation Scope:

Included is:

Labor, equipment, tools, and insurance to install the quoted windows in the rough opening as described by the customer or delineated in the project documents including

- Receive, unload, and stock new units
- Remove existing window units
- Provide lead containment for demo debris
- Furnish & install pressure treated wood blocking
- Furnish & install wood structural mulls as needed in large units
- Set, shim, & fasten new window unit
- Furnish & install insulation
- Install frame expander and install mull covers
- Trim out the interior with either a flat trim or a 1/4 trim at transition to block wall
- Caulk window unit both interior & exterior
- Adjust unit to manufacturer's specifications
- Remove debris to dumpster provided by MWDS

(Continued on next page)

Excluded unless specifically detailed and included elsewhere are:

- Non window demolition
- Repairs to existing structure or surrounding substrates
- Furnishing interior casing, sills, aprons or other millwork
- Lead paint abatement
- Siding replacement or repairs
- Non window replacement work
- Final Clearing

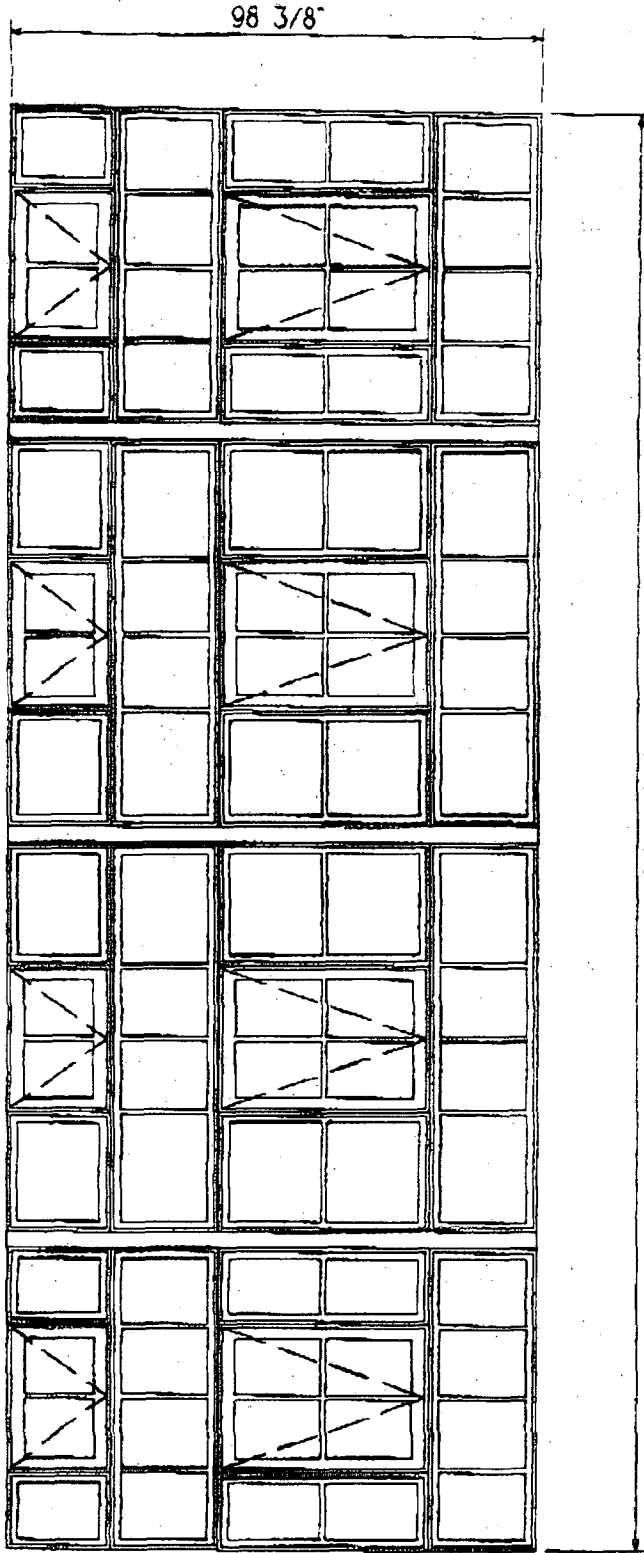
Terms:

A deposit for 1/3 of the product price is due when the order is placed with the factory. The remaining balance for the product is due when the product is delivered to the site. The installation amount is due within two weeks from the date that the invoice is submitted. Invoicing will be submitted by the twenty-fifth of the month for all work to be performed by the end of that month.

Retainage on window unit invoices is not acceptable. Interest will be charged at the rate of 1-1/2% monthly (18% per annum) for overdue accounts.

Note:

- (1) Before any order can be placed with the factory. The units that are to be replaced will require a final field measure by a representative of the Marvin Window & Door Showplace to assure a proper fit. If any discrepancies arise from this final pre-check and this proposal, the owner will be made aware of the change within forty-eight hours. If there are any monetary changes that need to be made in result of the pre-check they will need to be resolved and approved before the order can be placed with the factory.
- (2) Marvin window and doors are made to order any changes made after the order is placed with the factory will require a \$100.00 change fee. If the order has already started fabrication then full payment is required for the product.



269 1/6



October 12, 1998

To: CDCI
Silver Spring, MD
FAX 301/622-9108

Project: Colesville Child Care Center
Montgomery County

Attn: Mariam Zarif

Marvin Window & Door Showplace, Inc. proposes to supply window units meeting the following specifications for the above captioned project as follows:

Extruded-aluminum clad windows w/ primed wood interior, clear insulating glass, 7/8" simulated divided light grilles, fiberglass mesh screens in aluminum surround, 4-9/16" jamba, and 10-year non-prorated warranty on all window components.

Quantity	Mark	Description
6	West	Clad Multiple Awning Unit (2W4H) MO 85" x 118 1/2"
1	West	Clad Multiple Awning Unit (2W2H) MO 85" x 53"
2	West	Clad Multiple Awning Unit (5W4H) MO 247" x 102"
2	South	Clad Multiple Awning Unit (1W4H) MO 42" x 84"
1	South	Clad Direct Set Roundtop MO 78" x 38"
1	East	Clad Multiple Awning Unit (5W4H) MO 247" x 102"
3	East	Clad Multiple Awning Unit (2W3H) MO 84" x 65"

Product: \$ 36,900.00 FOB Job Site + Tax
Installation: \$ 14,000.00
Total: \$ 50,900.00

Alternate:

-Furnish materials & labor to paint the interior of the window units for the above mentioned windows:
Add: \$ 5,200.00

No addenda are noted.

The attached Marvin Window & Door Showplace standard terms and specifications apply.

NOTE - Marvin products are made to order. Any changes made after the order is placed but before fabrication has started, will incur a \$100.00 charge. No changes are possible once fabrication has begun.

This price can be withdrawn if not accepted within 30 days.

Thank you for this opportunity to be of service; I look forward to receiving your order.

Sincerely,

I hereby accept this proposal:

John G. Marut
Vice President Commercial Sales

Signature

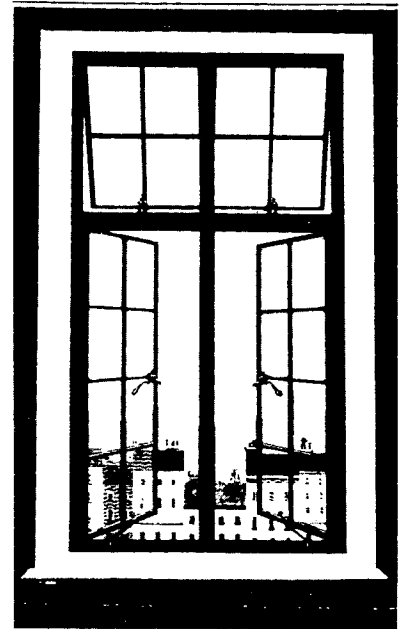
Date

13 PRESERVATION BRIEFS

The Repair and Thermal Upgrading of Historic Steel Windows

Sharon C. Park, AIA

Technical Preservation Services Preservation Assistance Division
National Park Service U.S. Department of the Interior



The Secretary of the Interior's "Standards for Rehabilitation" require that where historic windows are individually significant features, or where they contribute to the character of significant facades, their distinguishing visual qualities must not be destroyed. Further, the rehabilitation guidelines recommend against changing the historic appearance of windows through the use of inappropriate designs, materials, finishes, or colors which radically change the sash, depth of reveal, and muntin configuration; the reflectivity and color of the glazing; or the appearance of the frame.

Windows are among the most vulnerable features of historic buildings undergoing rehabilitation. This is especially the case with rolled steel windows, which are often mistakenly not deemed worthy of preservation in the conversion of old buildings to new uses. The ease with which they can be replaced and the mistaken assumption that they cannot be made energy efficient except at great expense are factors that typically lead to the decision to remove them. In many cases, however, repair and retrofit of the historic windows are more economical than wholesale replacement, and all too often, replacement units are unlike the originals in design and appearance. If the windows are important in establishing the historic character of the building (see fig. 1), insensitively designed replacement windows may diminish—or destroy—the building's historic character.

This *Brief* identifies various types of historic steel windows that dominated the metal window market from 1890-1950. It then gives criteria for evaluating deterioration and for determining appropriate treatment, ranging from routine maintenance and weatherization to extensive repairs, so that replacement may be avoided where possible.¹ This information applies to do-it-yourself jobs and to large rehabilitations where the volume of work warrants the removal of all window units for complete overhaul by professional contractors.

This *Brief* is not intended to promote the repair of ferrous metal windows in every case, but rather to insure that preservation is always the first consideration in a rehabilitation project. Some windows are not important elements in defining a building's historic character; others are highly significant, but so deteriorated that repair is infeasible. In such cases, the *Brief* offers guidance in evaluating appropriate replacement windows.



Fig. 1 Often highly distinctive in design and craftsmanship, rolled steel windows play an important role in defining the architectural character of many later nineteenth and early twentieth century buildings. Art Deco, Art Moderne, the International Style, and Post World War II Modernism depended on the slim profiles and streamlined appearance of metal windows for much of their impact. Photo: William G. Johnson.

¹The technical information given in this brief is intended for most ferrous (or magnetic) metals, particularly rolled steel. While stainless steel is a ferrous metal, the cleaning and repair techniques outlined here must not be used on it as the finish will be damaged. For information on cleaning stainless steel and non-ferrous metals, such as bronze, Monel, or aluminum, refer to *Metals in America's Historic Buildings* (see bibliography).

HISTORICAL DEVELOPMENT

Although metal windows were available as early as 1860 from catalogues published by architectural supply firms, they did not become popular until after 1890. Two factors combined to account for the shift from wooden to metal windows about that time. Technology borrowed from the rolling industry permitted the mass production of rolled steel windows. This technology made metal windows cost competitive with conventional wooden windows. In addition, a series of devastating urban fires in Boston, Baltimore, Philadelphia, and San Francisco led to the enactment of strict fire codes for industrial and multi-story commercial and office buildings.

As in the process of making rails for railroads, rolled steel windows were made by passing hot bars of steel through progressively smaller, shaped rollers until the appropriate angled configuration was achieved (see fig. 2). The rolled steel sections, generally 1/8" thick and 1" - 1 1/2" wide, were used for all the components of the windows: sash, frame, and subframe (see fig. 3). With the addition of wire glass, a fire-resistant window resulted. These rolled steel windows are almost exclusively found in masonry or concrete buildings.

A byproduct of the fire-resistant window was the strong metal frame that permitted the installation of larger windows and windows in series. The ability to have expansive amounts of glass and increased ventilation dramatically changed the designs of late 19th and early 20th century industrial and commercial buildings.

The newly available, reasonably priced steel windows soon became popular for more than just their fire-resistant qualities. They were standardized, extremely durable, and easily transported. These qualities led to the use of steel windows in every type of construction, from simple industrial and institutional buildings to luxury commercial and apartment buildings. Casement, double-hung, pivot, projecting, astral, and continuous windows differed in operating and ventilating capacities. Figure 4 outlines the kinds and properties of metal windows available then and now. In addition, the thin profiles of metal windows contributed to the streamlined appearance of the Art Deco, Art Moderne, and International Styles, among others.

The extensive use of rolled steel metal windows continued until after World War II when cheaper, non-corroding aluminum windows became increasingly popular. While aluminum windows dominate the market today, steel windows are still fabricated. Should replacement of original windows become necessary, replacement windows may be available from the manufacturers of some of the earliest steel windows. Before an informed decision can be made whether to repair or replace metal windows, however, the significance of the windows must be determined and their physical condition assessed.

ROLLING SECTION FROM BAR

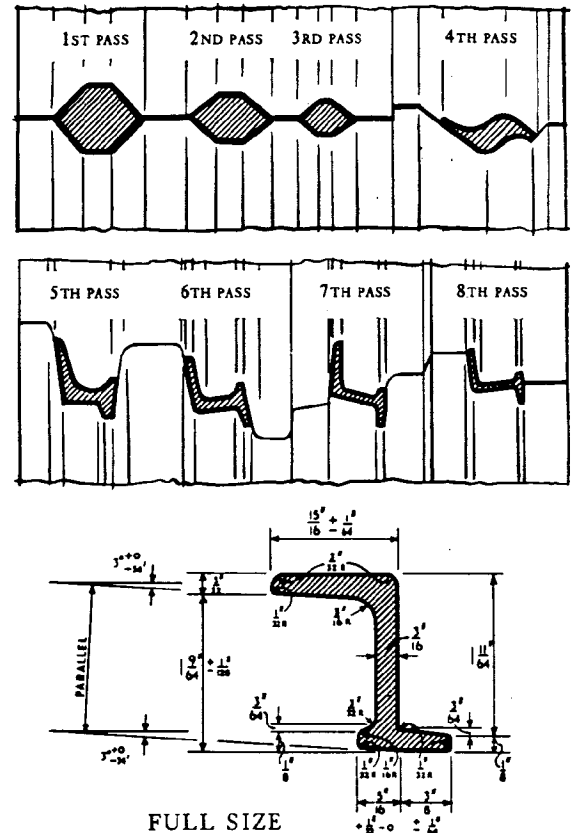


Fig. 2. The process of rolling a steel bar into an angled section is illustrated above. The shape and size of the rolled section will vary slightly depending on the overall strength needed for the window opening and the location of the section in the assembly: subframe, frame, or sash. The 1/8" thickness of the metal section is generally standard. Drawing: A Metal Window Dictionary. Used with permission.

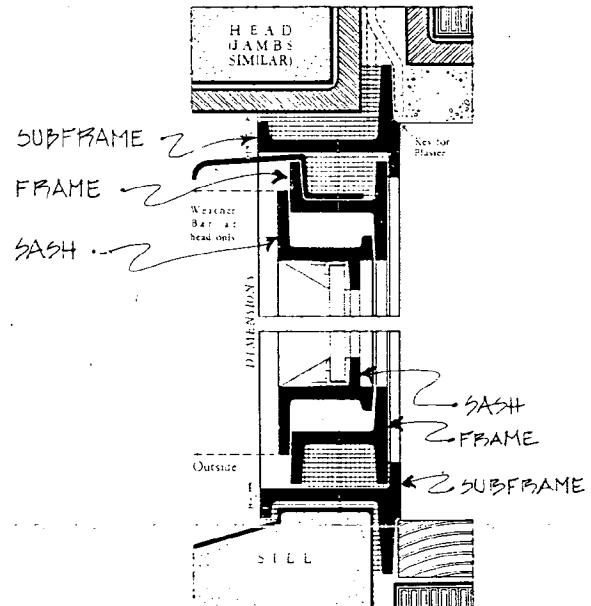


Fig. 3 A typical section through the top and bottom of a metal window shows the three component parts of the window assembly: subframe, frame, and sash. Drawings: Catalogue No. 15, January 1931; International Casement Co., Inc., presently Hope's Architectural Products, Inc., Jamestown, NY. Used with permission.

EVALUATION

Historic and Architectural Considerations

An assessment of the significance of the windows should begin with a consideration of their function in relation to the building's historic use and its historic character. Windows that help define the building's historic character should be preserved even if the building is being converted to a new use. For example, projecting steel windows used to introduce light and an effect of spaciousness to a warehouse or industrial plant can be retained in the conversion of such a building to offices or residences.

Other elements in assessing the relative importance of the historic windows include the design of the windows and their relationship to the scale, proportion, detailing and architectural style of the building. While it may be easy to determine the aesthetic value of highly ornamented windows, or to recognize the importance of streamlined windows as an element of a style, less elaborate windows can also provide strong visual interest by their small panes or projecting planes when open, particularly in simple, unadorned industrial buildings (see fig. 5).

One test of the importance of windows to a building is to ask if the overall appearance of the building would be changed noticeably if the windows were to be removed or radically altered. If so, the windows are important in defining the building's historic character, and should be repaired if their physical condition permits.

Physical Evaluation

Steel window repair should begin with a careful evaluation of the physical condition of each unit. Either drawings or photographs, liberally annotated, may be used to record the location of each window, the type of operability, the condition of all three parts—sash, frame and sub-frame—and the repairs essential to its continued use.

Specifically, the evaluation should include: presence and degree of corrosion; condition of paint; deterioration of the metal sections, including bowing, misalignment of the sash, or bent sections; condition of the glass and glazing compound; presence and condition of all hardware, screws, bolts, and hinges; and condition of the masonry or concrete surrounds, including need for caulking or resetting of improperly sloped sills.

Corrosion, principally rusting in the case of steel windows, is the controlling factor in window repair; therefore, the evaluator should first test for its presence. Corrosion can be light, medium, or heavy, depending on how much the rust has penetrated the metal sections. If the rusting is merely a surface accumulation or flaking, then the corrosion is light. If the rusting has penetrated the metal (indicated by a bubbling texture), but has not caused any structural damage, then the corrosion is medium. If the rust has penetrated deep into the metal, the corrosion is heavy. Heavy corrosion generally results in some form of structural damage, through delamination,

to the metal section, which must then be patched or spliced. A sharp probe or tool, such as an ice pick, can be used to determine the extent of corrosion in the metal. If the probe can penetrate the surface of the metal and brittle strands can be dug out, then a high degree of corrosive deterioration is present.

In addition to corrosion, the condition of the paint, the presence of bowing or misalignment of metal sections, the amount of glass needing replacement, and the condition of the masonry or concrete surrounds must be assessed in the evaluation process. These are key factors in determining whether or not the windows can be repaired in place. The more complete the inventory of existing conditions, the easier it will be to determine whether repair is feasible or whether replacement is warranted.

Rehabilitation Work Plan

Following inspection and analysis, a plan for the rehabilitation can be formulated. The actions necessary to return windows to an efficient and effective working condition will fall into one or more of the following categories: routine maintenance, repair, and weatherization. The routine maintenance and weatherization measures described here are generally within the range of do-it-yourselfers. Other repairs, both moderate and major, require a professional contractor. Major repairs normally require the removal of the window units to a workshop, but even in the case of moderate repairs, the number of windows involved might warrant the removal of all the deteriorated units to a workshop in order to realize a more economical repair price. Replacement of windows should be considered only as a last resort.

Since moisture is the primary cause of corrosion in steel windows, it is essential that excess moisture be eliminated and that the building be made as weathertight as possible before any other work is undertaken. Moisture can accumulate from cracks in the masonry, from spalling mortar, from leaking gutters, from air conditioning condensation runoff, and from poorly ventilated interior spaces.

Finally, before beginning any work, it is important to be aware of health and safety risks involved. Steel windows have historically been coated with lead paint. The removal of such paint by abrasive methods will produce toxic dust. Therefore, safety goggles, a toxic dust respirator, and protective clothing should be worn. Similar protective measures should be taken when acid compounds are used. Local codes may govern the methods of removing lead paints and proper disposal of toxic residue.

ROUTINE MAINTENANCE

A preliminary step in the routine maintenance of steel windows is to remove surface dirt and grease in order to ascertain the degree of deterioration, if any. Such minor cleaning can be accomplished using a brush or vacuum followed by wiping with a cloth dampened with mineral spirits or denatured alcohol.

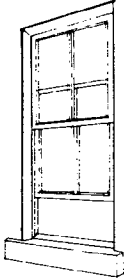
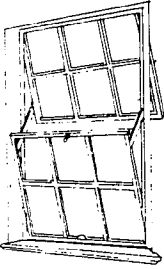
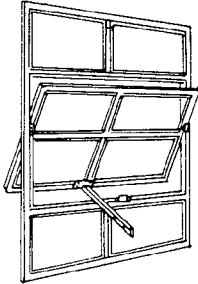
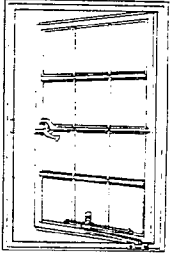
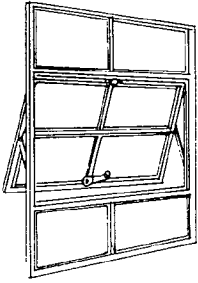
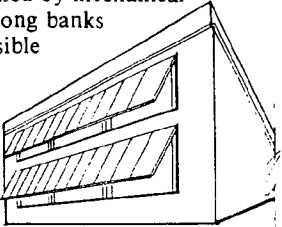
<p><i>Double-hung</i> industrial windows duplicated the look of traditional wooden windows. Metal double-hung windows were early examples of a building product adapted to meet stringent new fire code requirements for manufacturing and high-rise buildings in urban areas. Soon supplanted in industrial buildings by less expensive pivot windows, double-hung metal windows regained popularity in the 1940s for use in speculative suburban housing.</p>	 <p><i>Austral</i> windows were also a product of the 1920s. They combined the appearance of the double-hung window with the increased ventilation and ease of operation of the projected window. (When fully opened, they provided 70% ventilation as compared to 50% ventilation for double-hung windows.) Austral windows were often used in schools, libraries and other public buildings.</p> 
<p><i>Pivot</i> windows were an early type of industrial window that combined inexpensive first cost and low maintenance. Pivot windows became standard for warehouses and power plants where the lack of screens was not a problem. The window shown here is a horizontal pivot. Windows that turned about a vertical axis were also manufactured (often of iron). Such vertical pivots are rare today.</p>	<p><i>Casement</i> windows adapted the English tradition of using wrought iron casements with leaded cames for residential use. Rolled steel casements (either single, as shown, or paired) were popular in the 1920s for cottage style residences and Gothic style campus architecture. More streamlined casements were popular in the 1930s for institutional and small industrial buildings.</p>  
<p><i>Projecting</i> windows, sometimes called awning or hopper windows, were perfected in the 1920s for industrial and institutional buildings. They were often used in "combination" windows, in which upper panels opened out and lower panels opened in. Since each movable panel projected to one side of the frame only, unlike pivot windows, for example, screens could be introduced.</p>	<p><i>Continuous</i> windows were almost exclusively used for industrial buildings requiring high overhead lighting. Long runs of clerestory windows operated by mechanical tension rod gears were typical. Long banks of continuous windows were possible because the frames for such windows were often structural elements of the building.</p>  

Fig. 4 Typical rolled steel windows available from 1890 to the present. The various operating and ventilating capacities in combination with the aesthetics of the window style were important considerations in the selection of one window type over another. Drawings: Sharon C. Park, AIA.

If it is determined that the windows are in basically sound condition, the following steps can be taken: 1) removal of light rust, flaking and excessive paint; 2) priming of exposed metal with a rust-inhibiting primer; 3) replacement of cracked or broken glass and glazing compound; 4) replacement of missing screws or fasteners; 5) cleaning and lubrication of hinges; 6) repainting of all steel sections with two coats of finish paint compatible with the primer; and 7) caulking the masonry surrounds with a high quality elastomeric caulk.

Recommended methods for removing light rust include manual and mechanical abrasion or the application of chemicals. Burning off rust with an oxy-acetylene or propane torch, or an inert gas welding gun, should never be attempted because the heat can distort the metal. In addition, such intense heat (often as high as 3800° F) vaporizes the lead in old paint, resulting in highly toxic fumes. Furthermore, such heat will likely result in broken glass. Rust can best be removed using a wire brush, an aluminum oxide sandpaper, or a variety of power tools



Fig. 5 Windows often provide a strong visual element to relatively simple or unadorned industrial or commercial buildings. This design element should be taken into consideration when evaluating the significance of the windows. Photo: Michael Auer.

adapted for abrasive cleaning such as an electric drill with a wire brush or a rotary whip attachment. Adjacent sills and window jambs may need protective shielding.

Rust can also be removed from ferrous metals by using a number of commercially prepared anti-corrosive acid compounds. Effective on light and medium corrosion, these compounds can be purchased either as liquids or gels. Several bases are available, including phosphoric acid, ammonium citrate, oxalic acid and hydrochloric acid. Hydrochloric acid is generally not recommended; it can leave chloride deposits, which cause future corrosion. Phosphoric acid-based compounds do not leave such deposits, and are therefore safer for steel windows. However, any chemical residue should be wiped off with damp cloths, then dried immediately. Industrial blow-dryers work well for thorough drying. The use of running water to remove chemical residue is never recommended because the water may spread the chemicals to adjacent surfaces, and drying of these surfaces may be more difficult. Acid cleaning compounds will stain masonry; therefore plastic sheets should be taped to the edge of the metal sections to protect the masonry surrounds. The same measure should be followed to protect the glazing from etching because of acid contact.

Measures that remove rust will ordinarily remove flaking paint as well. Remaining loose or flaking paint can be removed with a chemical paint remover or with a pneumatic needle scaler or gun, which comes with a series of chisel blades and has proven effective in removing flaking paint from metal windows. Well-bonded paint may serve to protect the metal further from corrosion, and need not be removed unless paint build-up prevents the window from closing tightly. The edges should be feathered by sanding to give a good surface for repainting.

Next, any *bare* metal should be wiped with a cleaning solvent such as denatured alcohol, and dried immediately in preparation for the application of an anti-corrosive primer. Since corrosion can recur very soon after metal has been exposed to the air, the metal should be primed immediately after cleaning. Spot priming may be required periodically as other repairs are undertaken. Anti-corrosive primers generally consist of oil-alkyd based paints rich in zinc or zinc chromate.² Red lead is no longer available because of its toxicity. All metal primers, however, are toxic to some degree and should be handled carefully. Two coats of primer are recommended. Manufacturer's recommendations should be followed concerning application of primers.

REPAIR

Repair in Place

The maintenance procedures described above will be insufficient when corrosion is extensive, or when metal window sections are misaligned. Medium to heavy corrosion that has not done any structural damage to the metal sections can be removed either by using the chemical cleaning

process described under "Routine Maintenance" or by sandblasting. Since sandblasting can damage the masonry surrounds and crack or cloud the glass, metal or plywood shields should be used to protect these materials. The sandblasting pressure should be low, 80-100 pounds per square inch, and the grit size should be in the range of #10-#45. Glass peening beads (glass pellets) have also been successfully used in cleaning steel sections. While sandblasting equipment comes with various nozzle sizes, pencil-point blasters are most useful because they give the operator more effective control over the direction of the spray. The small aperture of the pencil-point blaster is also useful in removing dried putty from the metal sections that hold the glass. As with any cleaning technique, once the bare metal is exposed to air, it should be primed as soon as possible. This includes the inside rabbeted section of sash where glazing putty has been removed. To reduce the dust, some local codes allow only wet blasting. In this case, the metal must be dried immediately, generally with a blow-drier (a step that the owner should consider when calculating the time and expense involved). Either form of sandblasting metal covered with lead paints produces toxic dust. Proper precautionary measures should be taken against toxic dust and silica particles.

Bent or bowed metal sections may be the result of damage to the window through an impact or corrosive expansion. If the distortion is not too great, it is possible to realign the metal sections without removing the window to a metal fabricator's shop. The glazing is generally removed and pressure is applied to the bent or bowed section. In the case of a muntin, a protective 2 x 4 wooden bracing can be placed behind the bent portion and a wire cable with a winch can apply progressively more pressure over several days until the section is realigned. The 2 x 4 bracing is necessary to distribute the pressure evenly over the damaged section. Sometimes a section, such as the bottom of the frame, will bow out as a result of pressure exerted by corrosion and it is often necessary to cut the metal section to relieve this pressure prior to pressing the section back into shape and making a welded repair.

Once the metal sections have been cleaned of all corrosion and straightened, small holes and uneven areas resulting from rusting should be filled with a patching material and sanded smooth to eliminate pockets where water can accumulate. A patching material of steel fibers and an epoxy binder may be the easiest to apply. This steel-based epoxy is available for industrial steel repair; it can also be found in auto body patching compounds or in plumber's epoxy. As with any product, it is important to follow the manufacturer's instructions for proper use and best results. The traditional patching technique—melting steel welding rods to fill holes in the metal sections—may be difficult to apply in some situations; moreover, the window glass must be removed during the repair process, or it will crack from the expansion of the heated metal sections. After these repairs, glass replacement, hinge lubrication, painting, and other cosmetic repairs can be undertaken as necessary.

²Refer to Table IV. Types of Paint Used for Painting Metal in *Metals in America's Historic Buildings*, p. 139. (See bibliography).

To complete the checklist for routine maintenance, cracked glass, deteriorated glazing compound, missing screws, and broken fasteners will have to be replaced; hinges cleaned and lubricated; the metal windows painted, and the masonry surrounds caulked. If the glazing must be replaced, all clips, glazing beads, and other fasteners that hold the glass to the sash should be retained, if possible, although replacements for these parts are still being fabricated. When bedding glass, use only glazing compound formulated for metal windows. To clean the hinges (generally brass or bronze), a cleaning solvent and fine bronze wool should be used. The hinges should then be lubricated with a non-greasy lubricant specially formulated for metals and with an anti-corrosive agent. These lubricants are available in a spray form and should be used periodically on frequently opened windows.

Final painting of the windows with a paint compatible with the anti-corrosive primer should proceed on a dry day. (Paint and primer from the same manufacturer should be used.) Two coats of finish paint are recommended if the sections have been cleaned to bare metal. The paint should overlap the glass slightly to insure weathertightness at that connection. Once the paint dries thoroughly, a flexible exterior caulk can be applied to eliminate air and moisture infiltration where the window and the surrounding masonry meet.

Caulking is generally undertaken after the windows have received at least one coat of finish paint. The perimeter of the masonry surround should be caulked with a flexible elastomeric compound that will adhere well to both metal and masonry. The caulking used should be a type intended for exterior application, have a high tolerance for material movement, be resistant to ultraviolet light, and have a minimum durability of 10 years. Three effective compounds (taking price and other factors into consideration) are polyurethane, vinyl acrylic, and butyl rubber. In selecting a caulking material for a window retrofit, it is important to remember that the caulking compound may be covering other materials in a substrate. In this case, some compounds, such as silicone, may not adhere well. Almost all modern caulking compounds can be painted after curing completely. Many come in a range of colors, which eliminates the need to paint. If colored caulking is used, the windows should have been given two coats of finish paint prior to caulking.

Repair in Workshop

Damage to windows may be so severe that the window sash and sometimes the frame must be removed for cleaning and extensive rust removal, straightening of bent sections, welding or splicing in of new sections, and reglazing. These major and expensive repairs are reserved for highly significant windows that cannot be replaced; the procedures involved should be carried out only by skilled workmen. (see fig. 6a—6f.)

As part of the orderly removal of windows, each window should be numbered and the parts labelled. The operable metal sash should be dismantled by removing the hinges; the fixed sash and, if necessary, the frame can then be unbolted or unscrewed. (The subframe is usually left in place. Built into the masonry surrounds, it can only be cut out with a torch.) Hardware and hinges should be labelled and stored together.

The two major choices for removing flaking paint and corrosion from severely deteriorated windows are dipping in a chemical bath or sandblasting. Both treatments require removal of the glass. If the windows are to be dipped, a phosphoric acid solution is preferred, as mentioned earlier. While the dip tank method is good for fairly evenly distributed rust, deep set rust may remain after dipping. For that reason, sandblasting is more effective for heavy and uneven corrosion. Both methods leave the metal sections clean of residual paint. As already noted, after cleaning has exposed the metal to the air, it should be primed immediately after drying with an anti-corrosive primer to prevent rust from recurring.

Sections that are seriously bent or bowed must be straightened with heat and applied pressure in a workshop. Structurally weakened sections must be cut out, generally with an oxy-acetylene torch, and replaced with sections welded in place and the welds ground smooth. Finding replacement metal sections, however, may be difficult. While most rolling mills are producing modern sections suitable for total replacement, it may be difficult to find an exact profile match for a splicing repair. The best source of rolled metal sections is from salvaged windows, preferably from the same building. If no salvaged windows are available, two options remain. Either an ornamental metal fabricator can weld flat plates into a built-up section, or a steel plant can mill bar steel into the desired profile.

While the sash and frame are removed for repair, the subframe and masonry surrounds should be inspected. This is also the time to reset sills or to remove corrosion from the subframe, taking care to protect the masonry surrounds from damage.

Missing or broken hardware and hinges should be replaced on all windows that will be operable. Salvaged windows, again, are the best source of replacement parts. If matching parts cannot be found, it may be possible to adapt ready-made items. Such a substitution may require filling existing holes with steel epoxy or with plug welds and tapping in new screw holes. However, if the hardware is a highly significant element of the historic window, it may be worth having reproductions made.

Following are illustrations of the repair and thermal upgrading of the rolled steel windows in a National Historic Landmark (fig. 6). Many of the techniques described above were used during this extensive rehabilitation. The complete range of repair techniques is then summarized in the chart titled *Steps for Cleaning and Repairing Historic Steel Windows* (see fig. 7).

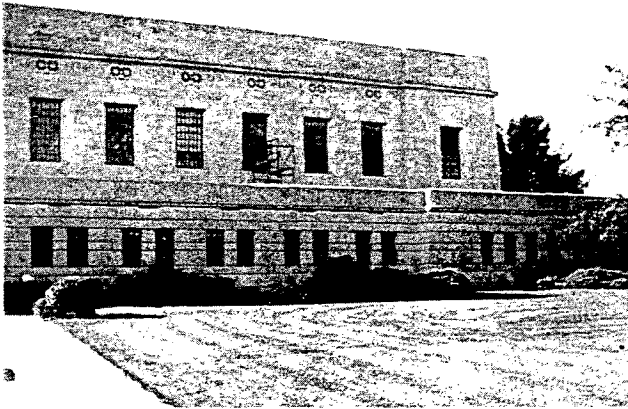


Fig. 6 a. View of the flanking wing of the State Capitol where the rolled steel casement windows are being removed for repair.

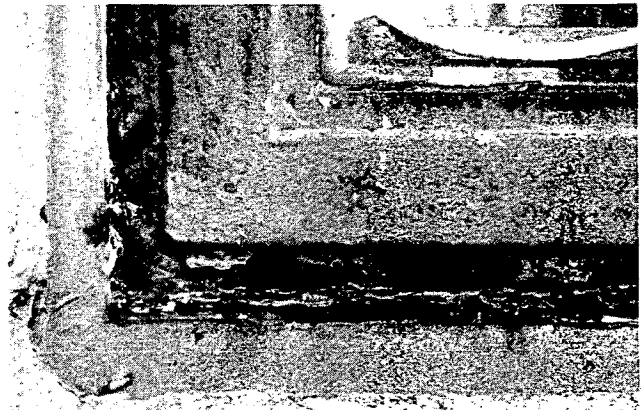


Fig. 6 b. View from the exterior showing the deteriorated condition of the lower corner of a window prior to repair. While the sash was in relatively good condition, the frame behind was rusted to the point of inhibiting operation.

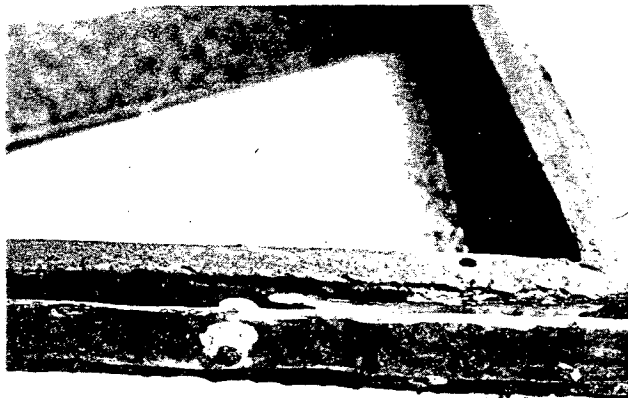


Fig. 6 c. View of the rusted frame which was unscrewed from the subframe and removed from the window opening and taken to a workshop for sandblasting. In some cases, severely deteriorated sections of the frame were replaced with new sections of milled bar steel.



Fig. 6 d. View looking down towards the sill. The subframes appeared very rusted, but were in good condition once debris was vacuumed and surface rust was removed, in place, with chemical compounds. Where necessary, epoxy and steel filler was used to patch depressions in order to make the subframe serviceable again.

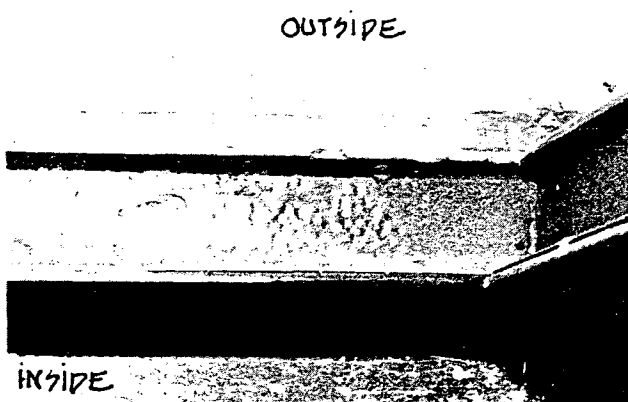


Fig. 6 e. View looking down towards the sill. The cleaned frame was reset in the window opening. The frame was screwed to the refurbished subframe at the jamb and the head only. The screw holes at the sill, which had been the cause of much of the earlier rusting, were infilled. Vinyl weatherstripping was added to the frame.



Fig. 6 f. View from the outside of the completely refurbished window. In addition to the steel repair and the installation of vinyl weatherstripping, the exterior was caulked with polyurethane and the single glass was replaced with individual lights of thermal glass. The repaired and upgraded windows have comparable energy efficiency ratings to new replacement units while retaining the historic steel sash, frames and subframes.

Fig. 6. The repair and thermal upgrading of the historic steel windows at the State Capitol, Lincoln, Nebraska. This early twentieth century building, designed by Bertram Goodhue, is a National Historic Landmark. Photos: All photos in this series were provided by the State Building Division.

STEPS FOR CLEANING AND REPAIRING HISTORIC STEEL WINDOWS

Work Item	Recommended Techniques	Tools, Products and Procedures	Notes
	*(Must be done in a workshop)		
1. Removing dirt and grease from metal	General maintenance and chemical cleaning	Vacuum and bristle brushes to remove dust and dirt; solvents (denatured alcohol, mineral spirits), and clean cloths to remove grease.	Solvents can cause eye and skin irritation. Operator should wear protective gear and work in ventilated area. Solvents should not contact masonry. Do not flush with water.
2. Removing Rust/Corrosion			
Light	Manual and mechanical abrasion	Wire brushes, steel wool, rotary attachments to electric drill, sanding blocks and disks.	Handsanding will probably be necessary for corners. Safety goggles and masks should be worn.
	Chemical cleaning	Anti-corrosive jellies and liquids (phosphoric acid preferred); clean damp cloths.	Protect glass and metal with plastic sheets attached with tape. Do not flush with water. Work in ventilated area.
Medium	Sandblasting/abrasive cleaning	Low pressure (80-100 psi) and small grit (#10-#45); glass peening beads. Pencil blaster gives good control.	Removes both paint and rust. Codes should be checked for environmental compliance. Prime exposed metal promptly. Shield glass and masonry. Operator should wear safety gear.
Heavy	*Chemical dip tank	Metal sections dipped into chemical tank (phosphoric acid preferred) from several hours to 24 hours.	Glass and hardware should be removed. Protect operator. Deepset rust may remain, but paint will be removed.
	*Sandblasting/abrasive cleaning	Low pressure (80-100 psi) and small grit (#10-#45).	Excellent for heavy rust. Remove or protect glass. Prime exposed metal promptly. Check codes for environmental compliance. Operator should wear safety gear.
3. Removing flaking paint.	Chemical method	Chemical paint strippers suitable for ferrous metals. Clean cloths.	Protect glass and masonry. Do not flush with water. Have good ventilation and protection for operator.
	Mechanical abrasion	Pneumatic needle gun chisels, sanding disks.	Protect operator; have good ventilation. Well-bonded paint need not be removed if window closes properly.
4. Aligning bent, bowed metal sections	Applied pressure	Wooden frame as a brace for cables and winch mechanism.	Remove glass in affected area. Realignment may take several days.
	*Heat and pressure	Remove to a workshop. Apply heat and pressure to bend back.	Care should be taken that heat does not deform slender sections.

Work Item	Recommended Techniques	Tools, Products and Procedures	Notes
	*(Must be done in a workshop)		
5. Patching depressions	Epoxy and steel filler	Epoxy fillers with high content of steel fibers; plumber's epoxy or autobody patching compound.	Epoxy patches generally are easy to apply, and can be sanded smooth. Patches should be primed.
	Welded patches	Weld in patches using steel rods and oxy-acetylene torch or arc welder.	Prime welded sections after grinding connections smooth.
6. Splicing in new metal sections	*Cut out decayed sections and weld in new or salvaged sections	Torch to cut out bad sections back to 45° joint. Weld in new pieces and grind smooth.	Prime welded sections after grinding connection smooth.
7. Priming metal sections	Brush or spray application	At least one coat of anti-corrosive primer on bare metal. Zinc-rich primers are generally recommended.	Metal should be primed as soon as it is exposed. If cleaned metal will be repaired another day, spot prime to protect exposed metal.
8. Replacing missing screws and bolts	Routine maintenance	Pliers to pull out or shear off rusted heads. Replace screws and bolts with similar ones, readily available.	If new holes have to be tapped into the metal sections, the rusted holes should be cleaned, filled and primed prior to redrilling.
9. Cleaning, lubricating or replacing hinges and other hardware	Routine maintenance, solvent cleaning	Most hinges and closure hardware are bronze. Use solvents (mineral spirits), bronze wool and clean cloths. Spray with non-greasy lubricant containing anti-corrosive agent.	Replacement hinges and fasteners may not match the original exactly. If new holes are necessary, old ones should be filled.
10. Replacing glass and glazing compound	Standard method for application	Pliers and chisels to remove old glass, scrape putty out of glazing rabbet, save all clips and beads for reuse. Use only glazing compound formulated for metal windows.	Heavy gloves and other protective gear needed for the operator. All parts saved should be cleaned prior to reinstallation.
11. Caulking masonry surrounds	Standard method for application	Good quality (10 year or better) elastomeric caulking compound suitable for metal.	The gap between the metal frame and the masonry opening should be caulked; keep weepholes in metal for condensation run-off clear of caulk.
12. Repainting metal windows	Spray or brush	At least 2 coats of paint compatible with the anti-corrosive primer. Paint should lap the glass about 1/8" to form a seal over the glazing compound.	The final coats of paint and the primer should be from the same manufacturer to ensure compatibility. If spraying is used, the glass and masonry should be protected.

Fig. 7. STEPS FOR CLEANING AND REPAIRING HISTORIC STEEL WINDOWS. Compiled by Sharon C. Park, AIA.

WEATHERIZATION

Historic metal windows are generally not energy efficient; this has often led to their wholesale replacement. Metal windows can, however, be made more energy efficient in several ways, varying in complexity and cost. Caulking around the masonry openings and adding weatherstripping, for example, can be do-it-yourself projects and are important first steps in reducing air infiltration around the windows. They usually have a rapid payback period. Other treatments include applying fixed layers of glazing over the historic windows, adding operable storm windows, or installing thermal glass in place of the existing glass. In combination with caulking and weatherstripping, these treatments can produce energy ratings rivaling those achieved by new units.³

Weatherstripping

The first step in any weatherization program, caulking, has been discussed above under "Routine Maintenance." The second step is the installation of weatherstripping where the operable portion of the sash, often called the ventilator, and the fixed frame come together to reduce perimeter air infiltration (see fig. 8). Four types of weatherstripping appropriate for metal windows are spring-metal, vinyl strips, compressible foam tapes, and sealant beads. The spring-metal, with an integral friction fit mounting clip, is recommended for steel windows in good condition. The clip eliminates the need for an applied glue; the thinness of the material insures a tight closure. The weatherstripping is clipped to the inside channel of the rolled metal section of the fixed frame. To insure against galvanic corrosion between the weatherstripping (often bronze or brass), and the steel window, the window must be painted prior to the installation of the weatherstripping. This weatherstripping is usually applied to the entire perimeter of the window opening, but in some cases, such as casement windows, it may be best to avoid weatherstripping the hinge side. The natural wedging action of the weatherstripping on the three sides of the window often creates an adequate seal.

Vinyl weatherstripping can also be applied to metal windows. Folded into a "V" configuration, the material forms a barrier against the wind. Vinyl weatherstripping is usually glued to the frame, although some brands have an adhesive backing. As the vinyl material and the applied glue are relatively thick, this form of weatherstripping may not be appropriate for all situations.

Compressible foam tape weatherstripping is often best for large windows where there is a slight bending or distortion of the sash. In some very tall windows having closure hardware at the sash mid-point, the thin sections

of the metal window will bow away from the frame near the top. If the gap is not more than 1/4", foam weatherstripping can normally fill the space. If the gap exceeds this, the window may need to be realigned to close more tightly. The foam weatherstripping comes either with an adhesive or plain back; the latter variety requires application with glue. Compressible foam requires more frequent replacement than either spring-metal or vinyl weatherstripping.

A fourth type of successful weatherstripping involves the use of a caulking or sealant bead and a polyethylene bond breaker tape. After the window frame has been thoroughly cleaned with solvent, permitted to dry, and primed, a neat bead of low modulus (firm setting) caulk, such as silicone, is applied. A bond breaker tape is then applied to the operable sash covering the metal section where contact will occur. The window is then closed until the sealant has set (2-7 days, depending on temperature and humidity). When the window is opened, the bead will have taken the shape of the air infiltration gap and the bond breaker tape can be removed. This weatherstripping method appears to be successful for all types of metal windows with varying degrees of air infiltration.

Since the several types of weatherstripping are appropriate for different circumstances, it may be necessary to use more than one type on any given building. Successful weatherstripping depends upon using the thinnest material adequate to fill the space through which air enters. Weatherstripping that is too thick can spring the hinges, thereby resulting in more gaps.

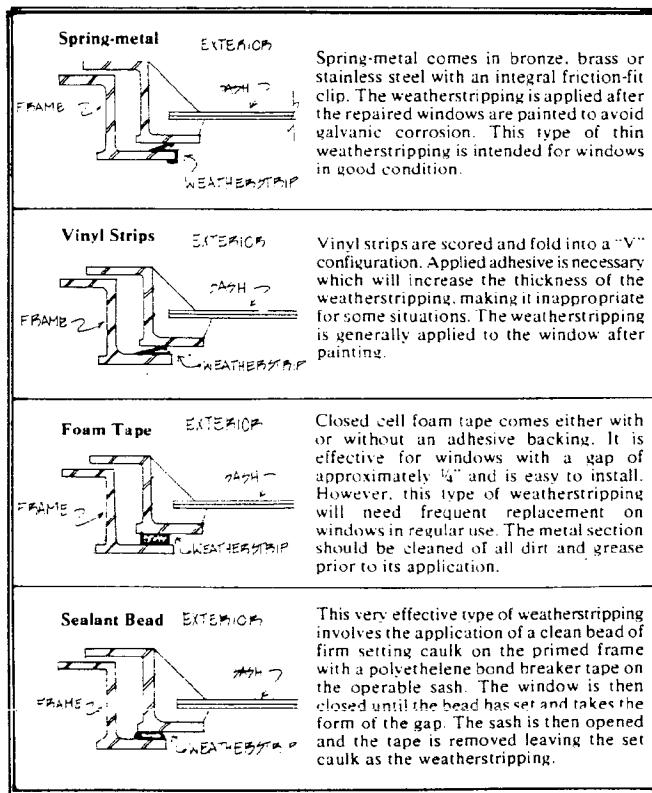


Fig. 8 APPROPRIATE TYPES OF WEATHERSTRIPPING FOR METAL WINDOWS. Weatherstripping is an important part of upgrading the thermal efficiency of historic steel windows. The chart above shows the jamb section of the window with the weatherstripping in place. Drawings: Sharon C. Park, AIA.

³One measure of energy efficiency is the U-value (the number of BTUs per hour transferred through a square foot of material). The lower the U-value, the better the performance. According to *ASHRAE HANDBOOK-1977 Fundamentals*, the U-value of historic rolled steel sash with single glazing is 1.3. Adding storm windows to the existing units or reglazing with 5/8" insulating glass produces a U-value of .69. These methods of weatherizing historic steel windows compare favorably with rolled steel replacement alternatives: with factory installed 1" insulating glass (.67 U-value); with added thermal-break construction and factory finish coatings (.62 U-value).

Thermal Glazing

The third weatherization treatment is to install an additional layer of glazing to improve the thermal efficiency of the existing window. The decision to pursue this treatment should proceed from careful analysis. Each of the most common techniques for adding a layer of glazing will effect approximately the same energy savings (approximately double the original insulating value of the windows); therefore, cost and aesthetic considerations usually determine the choice of method. Methods of adding a layer of glazing to improve thermal efficiency include adding a new layer of transparent material to the window; adding a separate storm window; and replacing the single layer of glass in the window with thermal glass.

The least expensive of these options is to install a clear material (usually rigid sheets of acrylic or glass) over the original window. The choice between acrylic and glass is generally based on cost, ability of the window to support the material, and long-term maintenance outlook. If the material is placed over the entire window and secured to the frame, the sash will be inoperable. If the continued use of the window is important (for ventilation or for fire exits), separate panels should be affixed to the sash without obstructing operability (see fig. 9). Glass or acrylic panels set in frames can be attached using magnetized gaskets, interlocking material strips, screws or adhesives. Acrylic panels can be screwed directly to the metal windows, but the holes in the acrylic panels should allow for the expansion and contraction of this material. A compressible gasket between the prime sash and the storm panel can be very effective in establishing a thermal cavity between glazing layers. To avoid condensation, 1/8" cuts in a top corner and diagonally opposite bottom corner of the gasket will provide a vapor bleed, through which moisture can evaporate. (Such cuts, however, reduce thermal performance slightly.) If condensation does occur, however, the panels should be easily removable in order to wipe away moisture before it causes corrosion.

The second method of adding a layer of glazing is to have independent storm windows fabricated. (Pivot and astral windows, however, which project on either side of the window frame when open, cannot easily be fitted with storm windows and remain operational.) The storm window should be compatible with the original sash configuration. For example, in paired casement windows, either specially fabricated storm casement windows or sliding units in which the vertical meeting rail of the slider reflects the configuration of the original window should be installed. The decision to place storm windows on the inside or outside of the window depends on whether the historic window opens in or out, and on the visual impact the addition of storm windows will have on the building. Exterior storm windows, however, can serve another purpose besides saving energy: they add a layer of protection against air pollutants and vandals, although they will partially obscure the prime window. For highly ornamental windows this protection can determine the choice of exterior rather than interior storm windows.

The third method of installing an added layer of glazing is to replace the original single glazing with thermal glass. Except in rare instances in which the original glass is of special interest (as with stained or figured glass), the glass can be replaced if the hinges can tolerate the weight of the additional glass. The rolled metal sections for steel windows are generally from 1" - 1 1/2" thick. Sash of this thickness can normally tolerate thermal glass, which ranges from 3/8" - 5/8". (Metal glazing beads, readily available, are used to reinforce the muntins, which hold the glass.) This treatment leaves the window fully operational while preserving the historic appearance. It is, however, the most expensive of the treatments discussed here. (See fig. 6f).

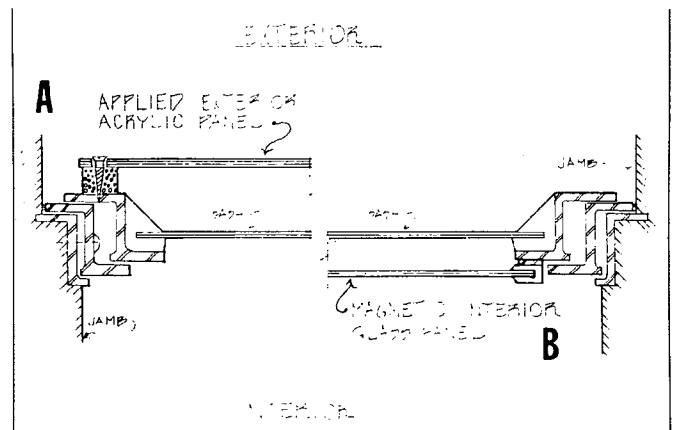


Fig. 9 Two examples of adding a second layer of glazing in order to improve the thermal performance of historic steel windows. Scheme A (showing jamb detail) is of a 1/4" acrylic panel with a closed cell foam gasket attached with self-tapping stainless steel screws directly to the exterior of the outwardly opening sash. Scheme B (showing jamb detail) is of a glass panel in a magnetized frame affixed directly to the interior of the historic steel sash. The choice of using glass or acrylic mounted on the inside or outside will depend on the ability of the window to tolerate additional weight, the location and size of the window, the cost, and the long-term maintenance outlook. Drawing: Sharon C. Park, AIA.

WINDOW REPLACEMENT

Repair of historic windows is always preferred within a rehabilitation project. Replacement should be considered only as a last resort. However, when the extent of deterioration or the unavailability of replacement sections renders repair impossible, replacement of the entire window may be justified. In the case of significant windows, replacement in kind is essential in order to maintain the historic character of the building. However, for less significant windows, replacement with compatible new windows may be acceptable. In selecting compatible replacement windows, the material, configuration, color, operability, number and size of panes, profile and proportion of metal sections, and reflective quality of the original glass should be duplicated as closely as possible.

A number of metal window manufacturing companies produce rolled steel windows. While stock modern window designs do not share the multi-pane configuration of

historic windows, most of these manufacturers can reproduce the historic configuration if requested, and the cost is not excessive for large orders (see figs. 10a and 10b). Some manufacturers still carry the standard pre-World War II multi-light windows using the traditional 12" x 18" or 14" x 20" glass sizes in industrial, commercial, security, and residential configurations. In addition, many of the modern steel windows have integral weatherstripping, thermal break construction, durable vinyl coatings, insulating glass, and other desirable features.



Fig. 10 a. A six-story concrete manufacturing building prior to the replacement of the steel pivot windows. Photo: Charles Parrott.



Fig. 10 b. Close-up view of the new replacement steel windows which matched the multi-lighted originals exactly. Photo: Charles Parrott.

Windows manufactured from other materials generally cannot match the thin profiles of the rolled steel sections. Aluminum, for example, is three times weaker than steel and must be extruded into a box-like configuration that does not reflect the thin historic profiles of most steel windows. Wooden and vinyl replacement windows generally are not fabricated in the industrial style, nor can they reproduce the thin profiles of the rolled steel sections, and consequently are generally not acceptable replacements.

For product information on replacement windows, the owner, architect, or contractor should consult manufacturers' catalogues, building trade journals, or the Steel Window Institute, 1230 Keith Building, Cleveland, Ohio 44115.

SUMMARY

The National Park Service recommends the retention of significant historic metal windows whenever possible. Such windows, which can be a character-defining feature of a historic building, are too often replaced with inappropriate units that impair rather than complement the overall historic appearance. The repair and thermal upgrading of historic steel windows is more practicable than most people realize. Repaired and properly maintained metal windows have greatly extended service lives. They can be made energy efficient while maintaining their contribution to the historic character of the building.

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This publication has been prepared pursuant to the Economic Recovery Tax Act of 1981, which directs the Secretary of the Interior to certify rehabilitations of historic buildings that are consistent with their historic character; the guidance provided in this brief will assist property owners in complying with the requirements of this law.

Preservation Briefs: 13 has been developed under the technical editorship of Lee H. Nelson, AIA, Chief, Preservation Assistance Division, National Park Service, U.S. Department of the Interior, Washington, D.C. 20240. Comments on the usefulness of this information are welcomed and can be sent to Mr. Nelson at the above address.

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REMODELER PROFILE

Repairing A Masterpiece A Specialist is Called to Frank Lloyd Wright's Fallingwater

June 1992-1993 is a year of Frank Lloyd Wright commemorations celebrating the birth of this country's master builder, 125 years ago. The re-opening of the Guggenheim Museum in New York City this past June heralded the beginning of these celebrations for the famed architect. The opening of a hatch in Fallingwater, the internationally renowned house designed by Wright in 1936, was a small, intimate, yet significant part of the ongoing celebrations.

Located near Mill Run, Pennsylvania, Fallingwater was described by *New York Times* architecture critic Paul Goldberger as "...Wright's greatest essay in horizontal space...his most powerful piece of structural drama...[and] his most sublime integration of man and nature." In 1986, the Forum of the American Institute of Architects designated it, "The most successful example of American architectural design."

Built on cantilevers over a waterfall, Wright's design included a hatch in the living room, made of glass and steel, which allowed Fallingwater residents and their visitors to view the water below them. For access to the outdoors, the three-piece hatch was designed to roll back, opening to steps that lead to the Bear Run stream and the waterfall. In addition to providing an approach to the stream, Wright intended the hatch to cool off the house. Unfortunately,

having corroded and seized, the hatch had not been fully opened in thirty years. Enter John Seekircher.

A Rare Kind of Craftsman

The Seekircher Steel Window Repair business is unique in its community. In fact, it is unique in the country. That is why W.A.S.A. Associates, an historic architectural firm, contacted Seekircher this past spring. W.A.S.A. was looking for

for *Historic Buildings*, compiled by the National Park Service of the U.S. Department of Interior and the Georgia Institute of Technology.

A real craftsman, Seekircher's hands are his principle tools; he carries whatever else he needs in a small tool box.

"Basically, [the hatch] is a three-sectioned steel and glass sliding door laying flat," says Seekircher. To open the hatch, the first section rolls back underneath the second; these two sections were supposed to roll underneath the third; then all three would finally roll under a planter that was suspended at the end of the hatch. However, because of the accumulation of dirt, debris and corrosion over the years, the second and third sections had frozen up and could not be moved. Seekircher's task was to get things rolling again.

"I took it all apart, but I had to wait six hours for the architects from W.A.S.A. who were coming up from the city. They wanted to document the construction of the hatch. So, while I had all this time to kill, I figured let's see if I can get this thing to work. And that's what I did. Basically I just cleaned out all the tracks, cleaned up all the rollers on each of the doors, put it all back, and it worked.

"The people flipped! Nobody'd ever seen it open. I put it all back together and got it into working condition in one day, with no parts."

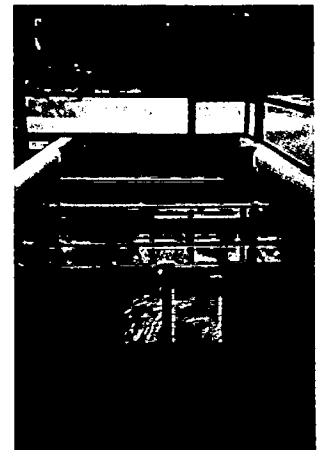
Much of the steel in the track system was rotted, so Seekircher ultimately had to weld in new steel at a later date.

Now that the hatch is in working condi-



Fallingwater was designed by Frank Lloyd Wright in 1936 for the family of Pittsburgh department store owner Edgar J. Kaufmann. It served as a weekend home for the Kaufmanns until 1963 when the house, its contents and grounds were presented to the Western Pennsylvania Conservancy by Edgar Kaufmann, Jr.

someone with the necessary skills to complete the repairs on the hatch. They were able to find Seekircher because his firm is listed in both *The Restoration Directory*, compiled by the New York Landmarks Conservancy, and the *Window Directory*



John Seekircher, owner of Seekircher Steel Window Repair was called in to open the hatch that had corroded and seized through thirty years of disuse.

tion again, the Western Pennsylvania Conservancy, which oversees this house museum, has instituted a program of regular maintenance. Leaks in the planter, which contributed to the corrosion, have been patched.

Seekircher Steel Window Repair adjusts, repairs and makes steel casement windows more energy efficient. Long active in the Hudson Valley Chapter of the National Association of the Remodeling Industry, Seekircher became its new president in January 1993. You can contact John Seekircher by calling (914) 693-1920. Seekircher Steel Window Repair, 630 Saw Mill River Road, Ardsley, New York 10502. ☐

Streetscapes: **The Cragswold**

Deciding to Repair, Not Replace, the Casements

Casement windows at the Cragswold apartment building in Scarsdale, N.Y., shown in 1929, are being repaired, rather than replaced.



Collection of Donald Kyle

By **CHRISTOPHER GRAY**

CHECK any building with steel casement windows in New York. If it's not controlled by landmark protection, chances are that its windows are either in a gradual state of decay or are being replaced one by one.

To many apartment owners, repair problems with steel casements — rust, balky mechanics, heat loss — seem insuperable. But the Cragswold, a 1928 co-op in Scarsdale, N.Y., has chosen a novel approach: It is repairing, not replacing, each of the windows in its Tudor-style apartment building.

The Cragswold was built as a co-op by a group of New York investors who aimed at combining the convenience of an elevator apartment house with a suburban setting.

Designed by Townsend, Steidle & Haskell, the six-story building has 44 apartments of 4 to 6 rooms in two cross-shaped wings, with cross ventilation and picturesque exposures.

The facades are broad fields of irregular brick on a base course of local rubble-stone. The walls run up in a variety of bays, gables, diamond-patterned brick, half-timber and stucco, all topped by an irregular profile of crenellations, turrets and chimney tops. The casements, which have small panes and swing out to the side, add to the medieval effect.

Wooden window frames can be maintained with casual carpentry skills, but steel requires more sophisticated repairs, which are thus often ignored. At the Cragswold, the slide-arm assemblies — which govern the

swing of the window — had become choked with paint and gunk, freezing the sash closed or, sometimes, slightly open. Steel channels had filled with corrosion and paint, making a tight fit very difficult. Rust was spreading inside and out.

There are plenty of companies eager to sell a co-op new windows, but few willing to repair old ones. Either as a cause or as a result, few buildings have sponsored comprehensive repairs of their steel windows.

But the Cragswold — which is not covered by landmark regulations — is the exception and is now in the middle of a six-month rehabilitation of its casement windows. John Seekircher, of Ardsley, has been retained to clean and repair every one of its 600-plus window frames. The total project, including repainting the frames, will cost \$120,000.

Mr. Seekircher has stripped and refurbished many of the interior fittings — exposing the original bright brass handles that few tenants knew were there. The restored window frames are now like some handsome piece of machinery oiled and brought back to life. The brass handles are bright enough to be seen from across the street.

The handles have small notched settings to allow for a small draft, and a set screw on the slides to hold them wide open. The fixed sashes have an exquisite little bell-shaped pane with a bottom facing vent, closed when necessary by a custom fitted steel panel.

The original sliding screen panels are in place, and those shareholders most aware of the special light that comes in through the multipaned casements remove the screens in the winter and store them in special racks in the basement.

DONALD KYLE, vice president of the Cragswold, says that there was only limited discussion of junking the originals. "About two-thirds of the shareholders focussed on the appearance" he says, "and there was a general consensus that the buildings that had put in new windows spoiled the Tudor look of the street."

Mr. Kyle says that the board tried to take into account both short- and long-term costs of their decision: energy, maintenance and useful life.

"We're all caught up in this replacement window fad, but the energy savings from a totally new window would have required a 50-year payback on the cost of new windows," which he estimates at \$500,000, "and there's no guarantee you won't have problems in two or three years with the new windows".

Mr. Seekircher, who exclusively repairs steel casement windows, crusades for saving what he sees as "something that's stood the test of time." He sees a substantial decrease in the amount of light admitted by modern windows, which have much fatter profiles than steel casements, but basically he has an engineer's affection for machinery that can be put in efficient working order with a little thought. Since he began work in 1977 he has seen many buildings rip out all or many of their steel window frames.

"But I've even begun taking out later replacement windows and installing casements — that feels good," he said. "The tide has definitely begun to turn." ■

Newsday's Weekly
Report on the Local
And National Markets

Real Estate



John Seekircher plies his trade on a steel casement window in Great Neck.

Newsday / David L. Pokress

Clearly, He's a Craftsman

By Herbert Hadad

JOHN SEEKIRCHER has a very particular window on the world. It is an old steel casement window, most likely in dire need of repair.

The 40-year-old craftsman has made a career out of repairing such windows, the kind that, when they do what they are supposed to do, are usually cranked to swing open.

Countless steel casement windows were installed in metropolitan-area houses and apartment buildings before World War II, including about 50 in a Tudor home in the Russell Gardens section of Great Neck.

"Nothing was able to open, they were in horrendous condition because people neglect them," said Seekircher, who took on the project of repairing them. "Now new people have moved in, a younger generation, which is interested in restoring them."

Another recent repair involved 156 windows and 11 sets of French doors at a North Shore mansion.

Seekircher started repairing steel casement windows while working in his father-in-law's masonry business. He later joined what is now the Metro-North Railroad to perfect his ironworking skills and for the past six years has, with his brother Bobby, devoted all his time to saving steel casement windows.

"What's the alternative?" Seekircher asked with a kind of affable zeal. "People do conversions, take out casements and put in double-hung sash vinyl windows. They lose a lot of light, some are inferior in quality, the architecture is altered dramatically, the value of the building decreases.

"If I had a vintage automobile, a Model T, and put in electric windows, and gave you a new color, you'd

look at me as if I had two heads on my shoulders."

Seekircher insists he can make the windows snug, which dilutes the argument that new windows are more energy-efficient. His basic charge is usually \$40 a window, and he says he will show up to fix just one.

His work may include a cleaning to open stuck windows, aligning frames so windows close snugly, repairing hinges and replacing cranks. Storm windows and screens can also be fitted inside the windows.

"A few people may be doing this," he said, "but they'll also replace them. In that respect, I'm unique. I won't take your windows out. It's a commitment I made 17 years ago."

Locust Valley preservation architect Walter Sedovic, who has worked with Seekircher, said he has the ability "to coax value out of the steel casement windows. He is really the only person who provides quality work consistently."

Sedovic said Seekircher was referred to him by the New York Landmarks Conservancy. One client of Seekircher was The Century, a landmark apartment building at 245 Central Park West in Manhattan.

A much different assignment was an old but active firehouse in Sea Cliff, where Seekircher restored about 110 windows. His most unusual job was a three-section casement-like hatch inoperative for 30 years in Fallingwater, the famed house near Mill Run, Pa., that was designed by Frank Lloyd Wright. He got it to work in one day without any replacement parts.

In a typical year, he and his brother strike out from their Westchester County shop in Ardsley to repair 4,000 to 5,000 windows in four states.

Herbert Hadad is a free-lance writer.