

45-4

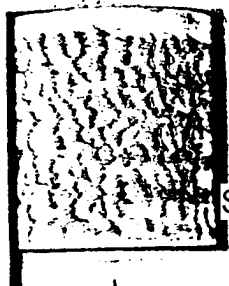
Date *15 July*

**ROUTING AND TRANSMITTAL SLIP**

TO: (Name, office symbol, room number, building, Agency/Post)

	Initials	Date
1.		
2.		
3. <i>EA/EX DIR</i>		
4.		
5.		

DD/A Registry  
*85-1793*



STAT

Would the addition of an inner glass pane to the windows of the senior officers on the 7th floor be worth suggesting to HF. Expensive but in terms of improved comfort and eventual fuel savings this could be a worthwhile project over the next year.

*the excerpts from the attached study recommend against double/triple panes.*

29 JUL 1985

*[Handwritten signatures and initials]*

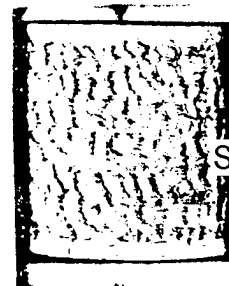
DO NOT use this form as a RECORD of approvals, concurrences, disposals, clearances, and similar actions

FROM: (Name, org. symbol, Agency/Post) Room No.—Bldg.

Phone No.

5041-102 OPTIONAL FORM 41 (Rev. 7-76)  
 Prescribed by GSA  
 FPMR (41 CFR) 101-11.206

\* GPO : 1980 O - 311-156 (17)



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83-1793

# ENERGY CONSERVATION RETROFIT STUDY

## CIA HEADQUARTERS BUILDING

McLEAN, VIRGINIA

FOR

GENERAL SERVICES ADMINISTRATION

PUBLIC BUILDING SERVICES

SEPTEMBER, 1979

VOLUME I



VVCR PARTNERSHIP

720 North Saint Asaph Street  
Alexandria, Virginia 22314

## H-1.2 WINDOW TREATMENT - MAIN BUILDING

### DOUBLE GLAZING:

- 1) By converting all the windows in the Main Building to double glazing, the Gross Exterior Wall combination U-Value required by GSA can be met.
- 2) The double glazing will reduce the total heat gain primarily by reduction of the conduction heat flow due to the temperature differentials. It will have a slight effect on the heat transfer due to heat absorption and to direct transmittance.
- 3) The installation of the double glazing would not be cost effective on the third through sixth floors because these windows are operable and should remain so. The installation on the remaining floors would be less expensive.
- 4) Since direct heat transmittance is the most critical factor in terms of heat gain, and because of installation problems, the use of double glazing, at least by itself, is not recommended.

### TRIPLE GLAZING:

- 1) Some savings in energy use would result from converting all windows to triple glazing units, but the installation costs involved far outweigh the benefits.
- 2) Triple glazed windows would reduce heat transfer primarily by increasing the resistance to heat conduction. To a lesser extent, the heat transferred by absorption and by direct heat transmittance would be reduced.
- 3) The use of triple glazed windows is not recommended, at least when planned as a primary solution, with no additional renovation.

LIFE CYCLE COST SUMMARY

Proposal	Present Value Investment	SIR	Net Present Value Savings	Energy Weight Factor
<b>Main Building Windows:</b>				
Double Glazing	\$995,000	0.60	\$-395,000	.98
Solar Film	\$475,450	1.15	\$69,000	.98
Fiberglass Screen	\$366,000	1.6	\$223,400	.98
Louver	\$835,000	0.84	\$-130,000	.98
Fiberglass Screen S, E, W, only	\$299,000	1.6	\$68,000	.99
Louver, S, E, W, only	\$682,500	0.91	\$-53,000	.99

RECOMMENDATION: FIBERGLASS SCREEN SHOULD BE INSTALLED ON ALL WINDOWS. THIS PROPOSAL SHOWED THE HIGHEST SIR RATIO AND THE GREATEST NET PRESENT VALUE SAVINGS OF ALL THE ALTERNATIVES.