36/7-3-98A 8619 Colesville Rd. S. Sp.
(MP #36/7-7 Silver Theatre Shopping Center)

VITETTA GROUP

ARCHITECTURE ▫ ENGINEERING ▫ PLANNING ▫ INTERIOR DESIGN

CHRISTOPHER RUFFING, R. A.
Project Architect

1600 Duke Street ☐ Suite 400 ☐ Alexandria, VA 22314
(703) 683-1600 ☐ FAX (703) 683-1662

returning original in a week from 3/12/98

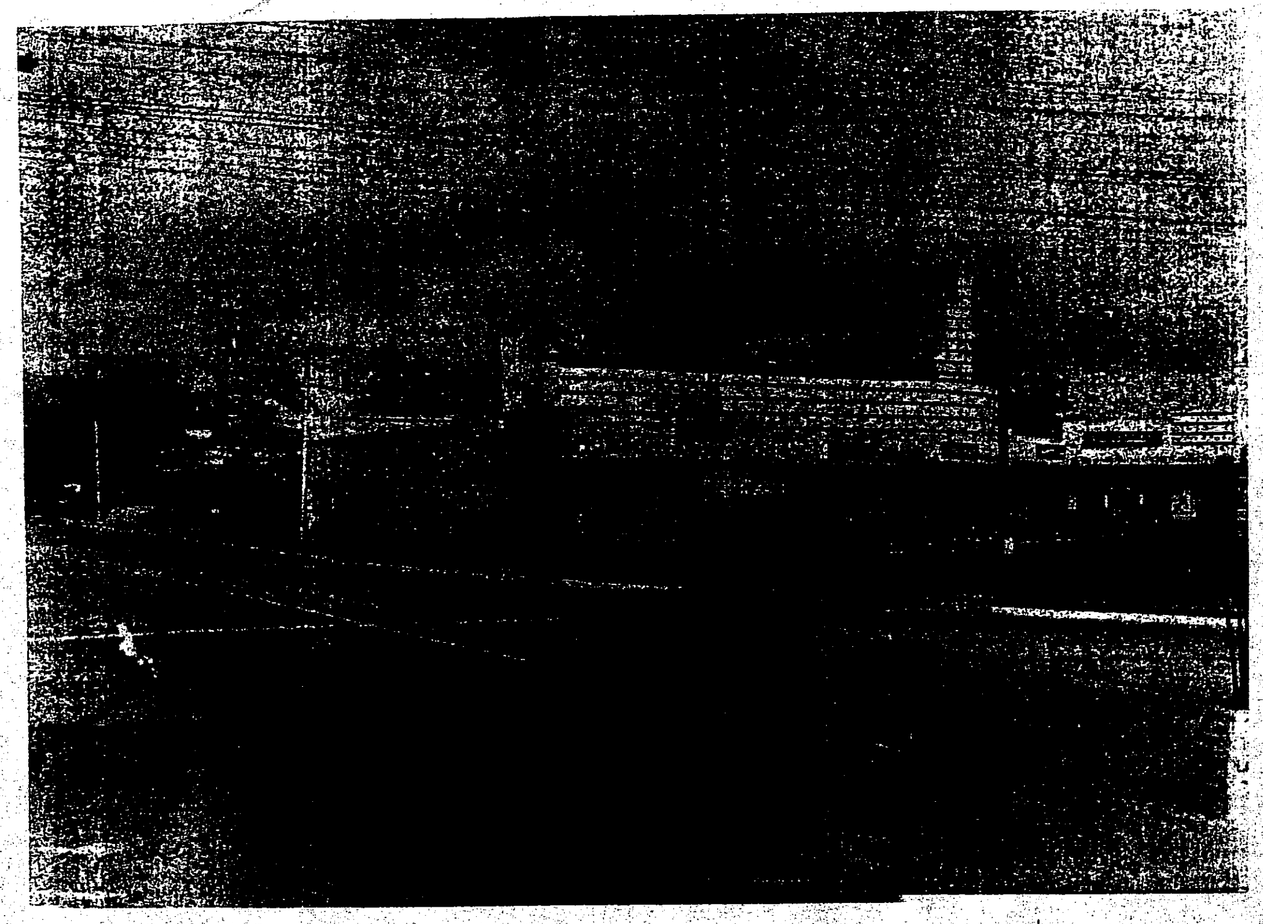
Karen Howard

217-6359

ROOF REPLACEMENT
MASONRY RESTORATION
SILVER THEATRE
SILVER SPRING, MARYLAND

IFB #: 8502050255

Facilities Maintenance #: 9280



DRAWING LIST

SHEET NUMBER	SHEET TITLE
C1	COVER SHEET
A1	DEMOLITION ROOF AREA PLAN
A2	REPLACEMENT ROOF AREA PLAN
A3	ELEVATIONS
A4	CHIMNEY ELEVATIONS
A5	DETAILS
S1	STRUCTURAL ROOF AREA PLAN
S2	STRUCTURAL SECTIONS
S3	STRUCTURAL SECTIONS
S4	STRUCTURAL SECTIONS

APPROVED
Montgomery County
Historic Preservation Commission
10/21/98

STATE OF MARYLAND
MARK C. PRICE
1987
PROFESSIONAL ENGINEER

Gale Associates, Inc.
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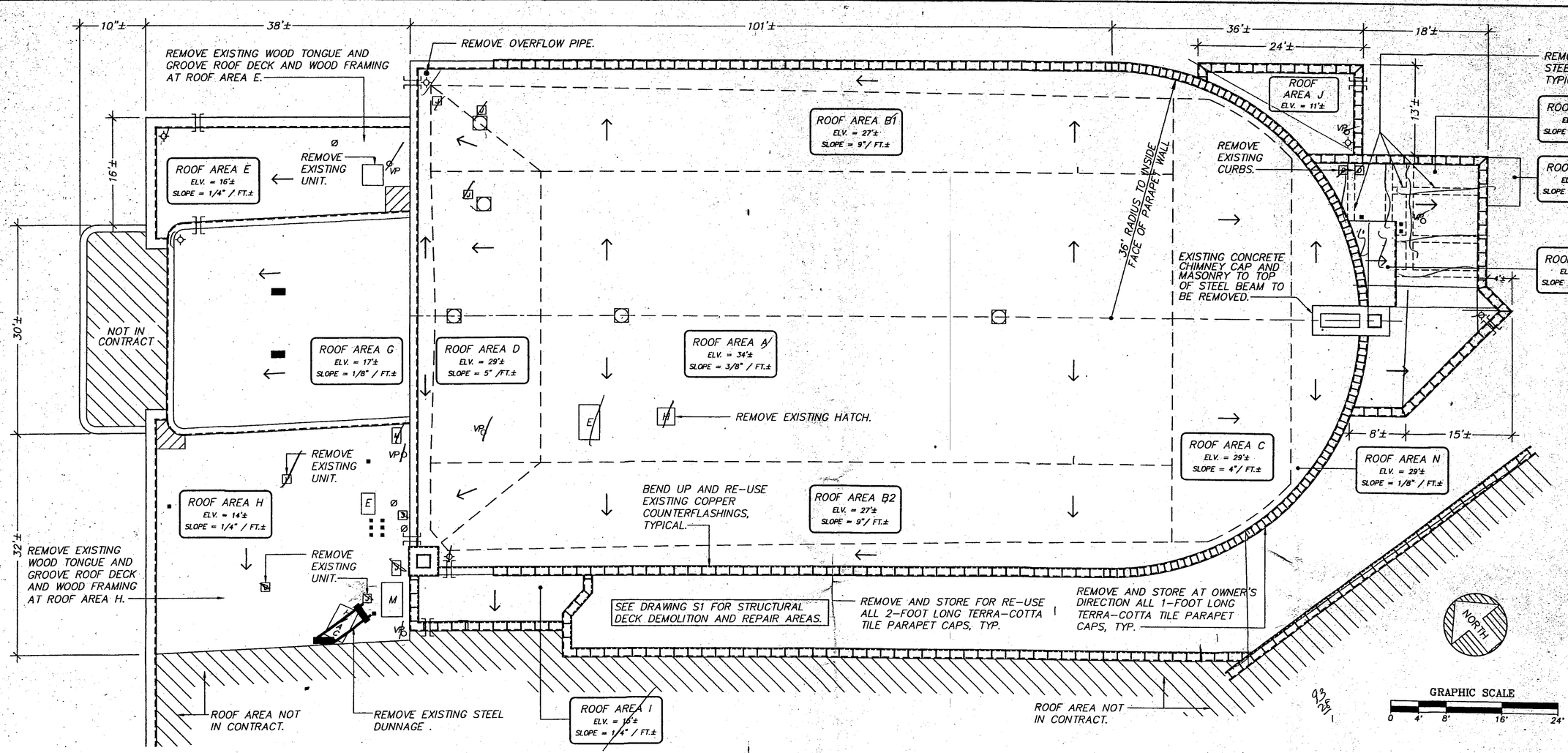
5550 Newbury St. • Baltimore, MD 21209 • (410) 664-0611

DESIGN BY: GWB
DRAWN BY: GDW
REVIEWED BY: TSK
CADD FILE:52810CVR

COVER SHEET
SILVER THEATRE
SILVER SPRING, MARYLAND
MONTGOMERY COUNTY I.F.B. NUMBER: 8502050255
FACILITIES MAINTENANCE NUMBER: 9280

DATE: JUNE 1998
GALE JN: 652810
SCALE: N.T.S.
SHEET: C1
1 OF 10

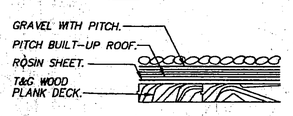


GENERAL NOTES

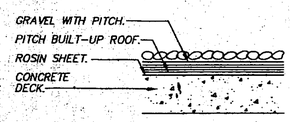
1. REMOVE EXISTING COAL TAR BUILT-UP AND MODIFIED BITUMEN MEMBRANES, BITUMINOUS FLASHING, ABANDONED UNITS AND CURBS, POURABLE SEALER POCKETS, AND ASSOCIATED APPURTENANCES THROUGHOUT THE ROOF AREAS, DOWN TO THE STRUCTURAL ROOF DECK.
2. REMOVE STEEL DUNNAGE FROM ROOF AREA H AND K.
3. THE INFORMATION SHOWN ON THE DRAWINGS HAS BEEN COMPILED FROM VARIOUS SOURCES, AND MAY NOT REFLECT THE ACTUAL CONDITIONS AT THE TIME OF CONSTRUCTION.
4. REMOVE EXISTING UNITS SCHEDULED TO BE DEMOLISHED.
5. DETAILS NOT DEPICTED SHALL BE CONSTRUCTED IN A MANNER CONSISTENT WITH THE DETAIL DRAWINGS.
6. REMOVE EXISTING DRAIN BOWL ASSEMBLIES IN PREPARATION FOR NEW ASSEMBLIES.
7. ROOFING AND FLASHINGS SHALL BE 100% WEATHERTIGHT ON A DAILY BASIS. REMOVE ONLY AS MUCH ROOFING AS CAN BE MADE WEATHERTIGHT ON THE SAME DAY. PHASED CONSTRUCTION SHALL BE ALLOWED ONLY AS SPECIFIED IN THE CONTRACT DOCUMENTS.
8. DISCONNECT, REMOVE, RAISE AND RECONNECT EXISTING APPURTENANCES AS REQUIRED TO PROVIDE THE MINIMUM SPECIFIED FLASHING HEIGHTS.
9. THE CONTRACTOR SHALL REPORT DETERIORATED OR UNSUITABLE STRUCTURAL DECK TO THE OWNER PRIOR TO PERFORMING ROOFING WORK. REMOVE AREAS OF GYPSUM DECK KNOWN TO BE DETERIORATED AS INDICATED ON SHEET S1.

EXISTING CROSS SECTIONS

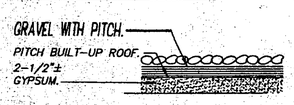
ROOF AREAS E AND H



ROOF AREAS G,I,J,K,L AND M



ROOF AREAS A,B1,B2,C,D, AND N



LEGEND

- PARAPET WALL (CAST STONE CAP)
- PARAPET WALL (TERRA-COTTA TILE CAP)
- ROOF EDGE
- RIDGE/HIP/VALLEY LINE
- EXISTING STEEL DUNNAGE TO REMAIN
- ROOF DRAIN
- OVERFLOW SCUPPER (TO REMAIN FOR REUSE)
- VP VENT PIPE
- Ø HOT PIPE
- OVERFLOW DRAIN
- ROOF AREA NOT IN CONTRACT
- POURABLE SEALER POCKET
- GRAVITY VENT
- J J - VENT
- E EQUIPMENT CURB
- F FAN UNIT
- H ROOF HATCH
- S SKYLIGHT
- D CLOSED DUCT
- M MONITOR
- SLOPE INDICATOR
- HVAC HVAC UNIT

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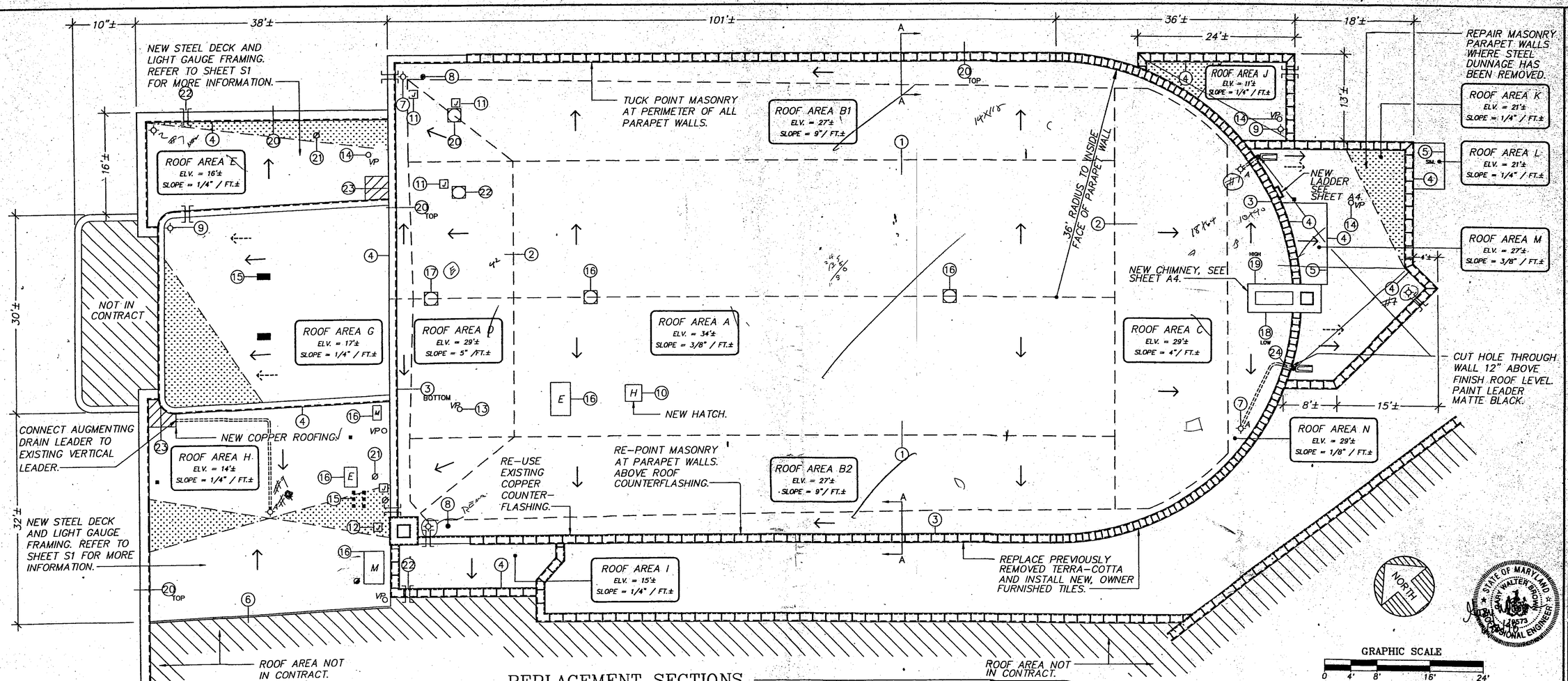
5550 Newbury St. • Baltimore, MD. 21209 • (410) 864-0611

DESIGN BY: GWB
DRAWN BY: GDW
REVIEWED BY: TSK
CADD FILE:652810A1

DEMOLITION ROOF AREA PLAN
SILVER THEATRE
SILVER SPRING, MARYLAND.
MONTGOMERY COUNTY L.F.B. NUMBER: 8502050255
FACILITIES MAINTENANCE NUMBER: 9280

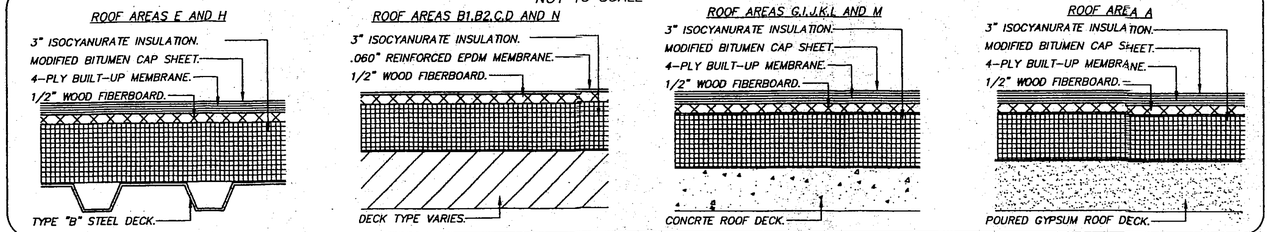
DATE: JUNE 1998
GALE JN: 652810
SCALE: 1/8" = 1'-0"
SHEET: A1
2 OF 10

STATE OF MARYLAND · WALTER S. GALE · 9973 · REGISTERED PROFESSIONAL ENGINEER



REPLACEMENT SECTIONS

NOT TO SCALE



GENERAL NOTES

1. THE INFORMATION SHOWN ON THE DRAWINGS HAS BEEN COMPILED FROM VARIOUS SOURCES, AND MAY NOT REFLECT THE ACTUAL CONDITIONS AT THE TIME OF CONSTRUCTION.
2. DISCREPANCIES NOTED BY THE CONTRACTOR IN THE DRAWINGS OR SPECIFICATIONS MUST BE BROUGHT TO THE OWNER'S ATTENTION PRIOR TO BID SUBMISSION.
3. FOR THE SAKE OF CLARITY, EACH INDIVIDUAL DETAIL ON THE ROOF PLAN HAS NOT BEEN INDICATED. INSTALLATION DETAILS HAVE BEEN INDICATED FOR TYPICAL COMPONENTS AT RANDOM LOCATIONS.
4. DETAILS NOT DEPICTED SHALL BE CONSTRUCTED IN A MANNER CONSISTENT WITH THE DETAIL DRAWINGS.
5. FOR THE SAKE OF CLARITY, EACH SECUREMENT FASTENER IS NOT SHOWN ON THE DETAIL DRAWINGS. SECUREMENT FASTENERS ARE SHOWN FOR COMPONENT TO SUBSTRATE CONNECTIONS. REFER TO SPECIFICATIONS FOR FASTENER TYPES AND SPACING.
6. ITEMS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS APPICABLE TO THE PROJECT.
7. ROOFING AND FLASHING SHALL BE 100% WEATHERTIGHT ON A DAILY BASIS. REMOVE ONLY AS MUCH ROOFING AS CAB BE REPLACED ON THE SAME DAY. NO PHASED CONSTRUCTION IS ALLOWED.
8. DISCONNECT, REMOVE, RAISE, REINSTALL AND RECONNECT EXISTING ROOFTOP EQUIPMENT AND ASSOCIATED MECHANICAL/ELECTRICAL PENETRATIONS TO PROVIDE MINIMUM SPECIFIED FLASHING HEIGHTS.
9. THE CONTRACTOR SHALL REPORT DETERIORATED OR UNSUITABLE STRUCTURAL WOOD DECK TO THE OWNER PRIOR TO PERFORMING ROOFING INSTALLATION WORK.
10. THE CONTRACTOR SHALL REPORT DETERIORATED OR UNSUITABLE STRUCTURAL DECK ABOVE AND BEYOND REPLACEMENT AREAS SHOWN ON S1 TO THE OWNER PRIOR TO PERFORMING ROOFING WORK.
11. SLOPE OF ROOF AREAS NOTED ARE EXISTING STRUCTURAL DECK SLOPES.

LEGEND

- PARAPET WALL (CAST STONE CAP)
- PARAPET WALL (TERRA-COTTA TILE CAP)
- ROOF EDGE
- RIDGE/HIP/VALLEY LINE
- NEW LEADER PIPE
- LEADER OUTLET
- STEEL DUNNAGE
- ROOF DRAIN
- AUGMENTING ROOF DRAIN
- OVERFLOW DRAIN
- OVER FLOW SCUPPER
- SLASHBLOCK
- LADDER
- CRICKET
- VP VENT PIPE
- Ø HOT PIPE
- ▪ POURABLE SEALER POCKET
- GRAVITY VENT
- J GOOSE NECK VENT
- E EQUIPMENT CURB
- F FAN UNIT
- H ROOF HATCH
- S SKYLIGHT
- M MONITOR
- DECK SLOPE INDICATOR
- TAPERED INSULATION
- HVAC HVAC UNIT
- ROOF AREA NOT IN CONTRACT

STATE OF MARYLAND — JOHN WALTER BROWN — 18573 — PROFESSIONAL ENGINEER

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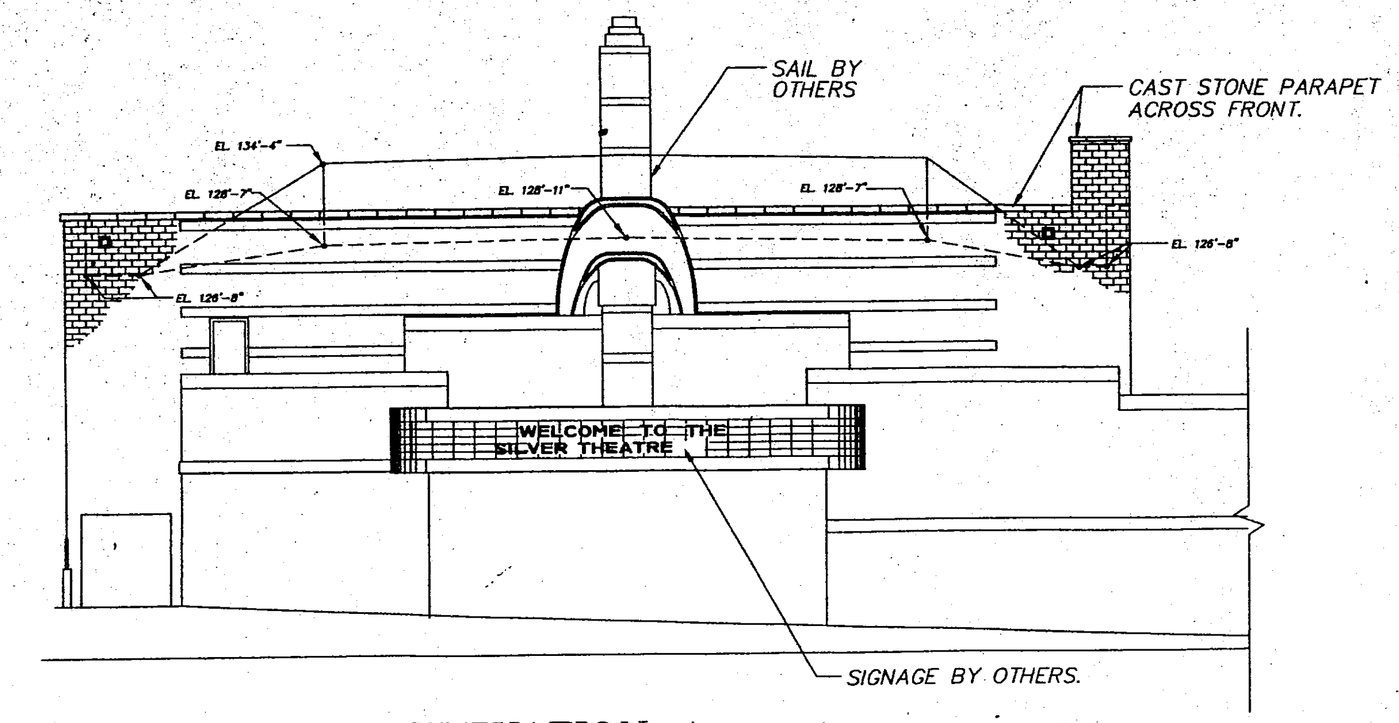
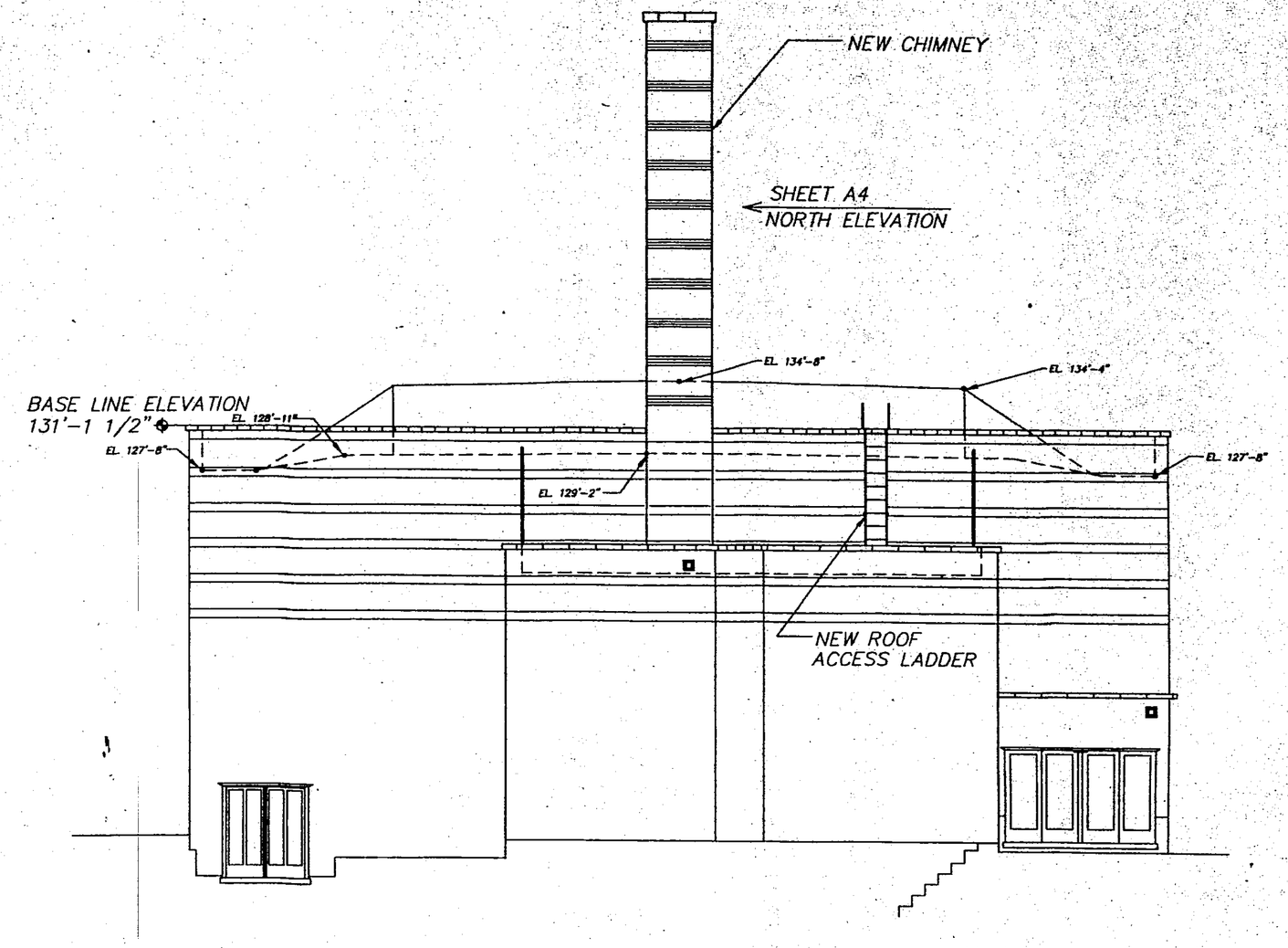
DESIGN BY: GWB
DRAWN BY: LSJ
REVIEWED BY: TSK
CADD. FILE: 52810A2

ROOF AREA PLAN (NEW WORK)
SILVER THEATRE
SILVER SPRING, MARYLAND
FACILITIES MAINTENANCE NUMBER: 9280
MONTGOMERY COUNTY J.F.B. NUMBER: 8502050255

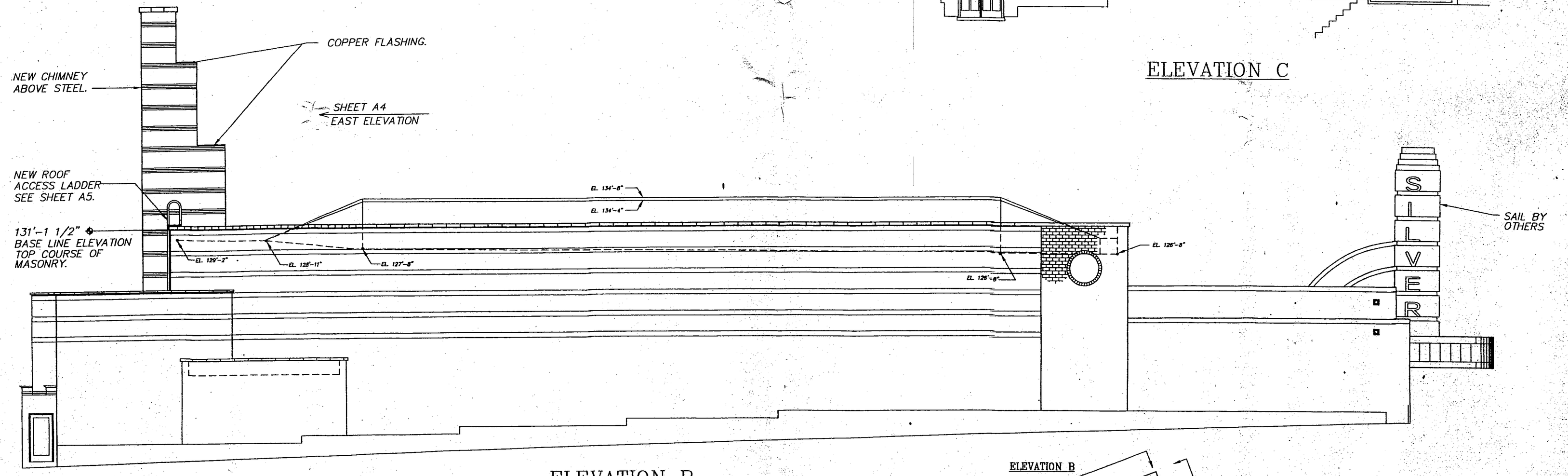
DATE: JUNE1998
GALE JN: 652810
SCALE: 1/8" = 1'-0"
SHEET: A2
3 OF 10



ELEVATION A

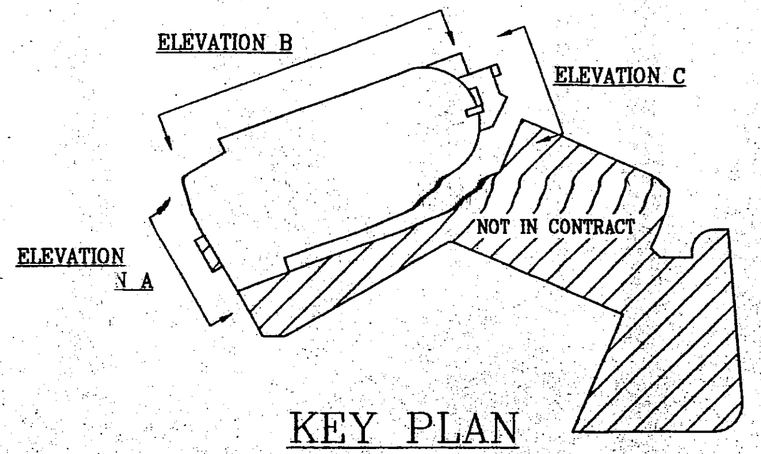


ELEVATION C



ELEVATION B

NOTES:
1. ELEVATIONS ARE SHOWN FOR FINISHED ROOF LEVEL. ENSURE THAT DECK CONSTRUCTION AND OTHER UNDERLTYNG COMPONENTS ARE INSTALLED IN A MANNER THAT RESUITS IN SPECIFIED ELEVATIONS.
2. ELEVATION DRAWINGS FOR REFERNCE POINTS ONLY. SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR ITEMS OF CONTRACT WORK.



KEY PLAN

STATE OF MARYLAND
WALTER G. GALE
18573
PROFESSIONAL ENGINEER

Gale Associates, Inc.
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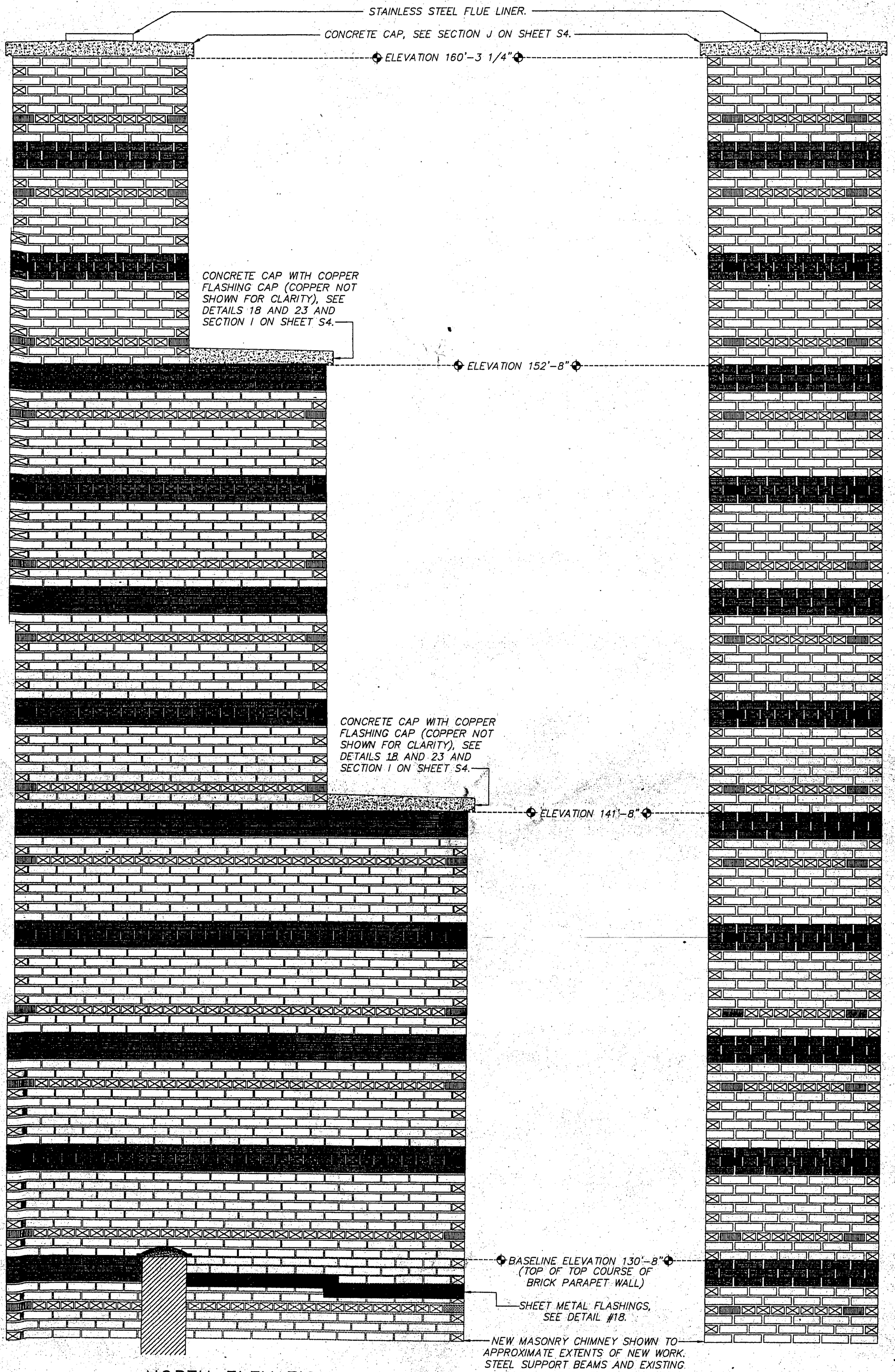
5550 Newbury St. • Baltimore, MD 21209 • (410) 664-0611

DESIGN BY: GWB
DRAWN BY: LSJ/GDW
REVIEWED BY: TSK
CADD FILE: 52810A3

ELEVATIONS
SILVER THEATRE
SILVER SPRING, MARYLAND
MONTGOMERY COUNTY I.F.B. NUMBER: 8502050425S
FACILITIES MAINTENANCE NUMBER: 9280

DATE: JUNE 1998
GALE JN: 652810
SCALE: N.T.S.

SHEET: A3
4 OF 10



NORTH ELEVATION

EAST ELEVATION

BRICK SCHEDULE				
	WIDTH (APPROXIMATE)	BRICK COLOR		
		CREAM	BLACK	RED
FULL BRICK	8"			
3/4 BRICK	6"			
FALSE ROWLOCK	3-3/4"±			

GRAPHIC SCALE

0 1' 2' 3' 4'

SHEET: A4 5 OF 10	SCALE: 3/4" = 1'-0"	GALE JN: 652810	DATE: JUNE 1998

CHIMNEY ELEVATIONS

SILVER THEATRE

SILVER SPRING, MARYLAND

MONTGOMERY COUNTY I.F.B. NUMBER: 8502050255

FACILITIES MAINTENANCE NUMBER: 9280

DESIGN BY: GWB

DRAWN BY: CRC

REVIEWED BY: TSK

CADD FILE: 52810A4

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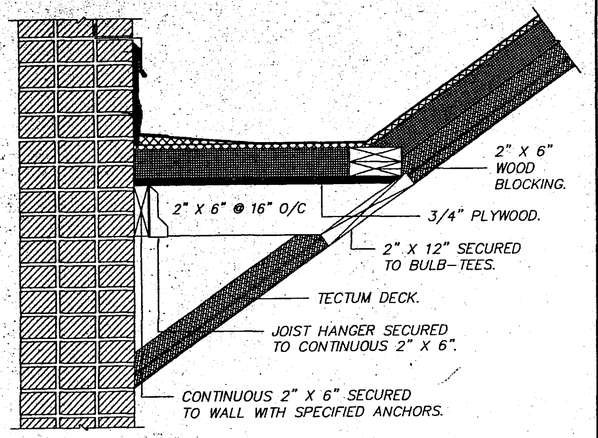
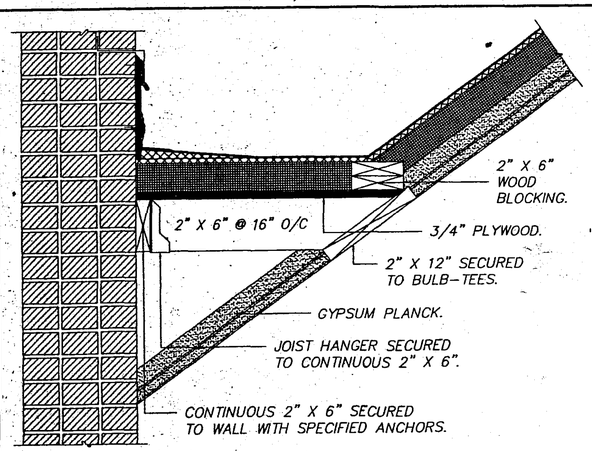
GALE

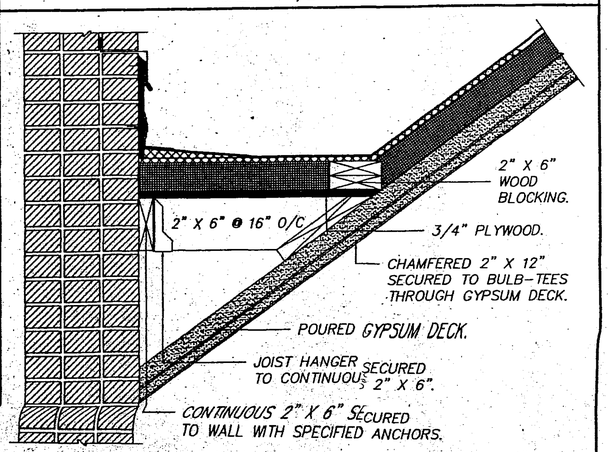
FOR ADDITIONAL INFORMATION ON ROOFING, FLASHING AND INSULATION SYSTEMS SEE DETAIL #3 AND THE ROOF CROSS SECTIONS ON SHEET A2.



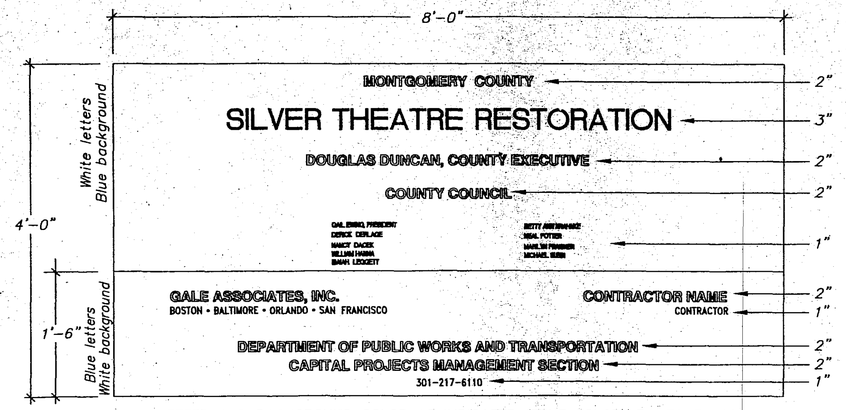
SECTION A–A (ALT. #2)
SCALE: 1-1/2" = 1'-0"



SECTION A–A (ALT. #1)
SCALE: 1-1/2" = 1'-0"

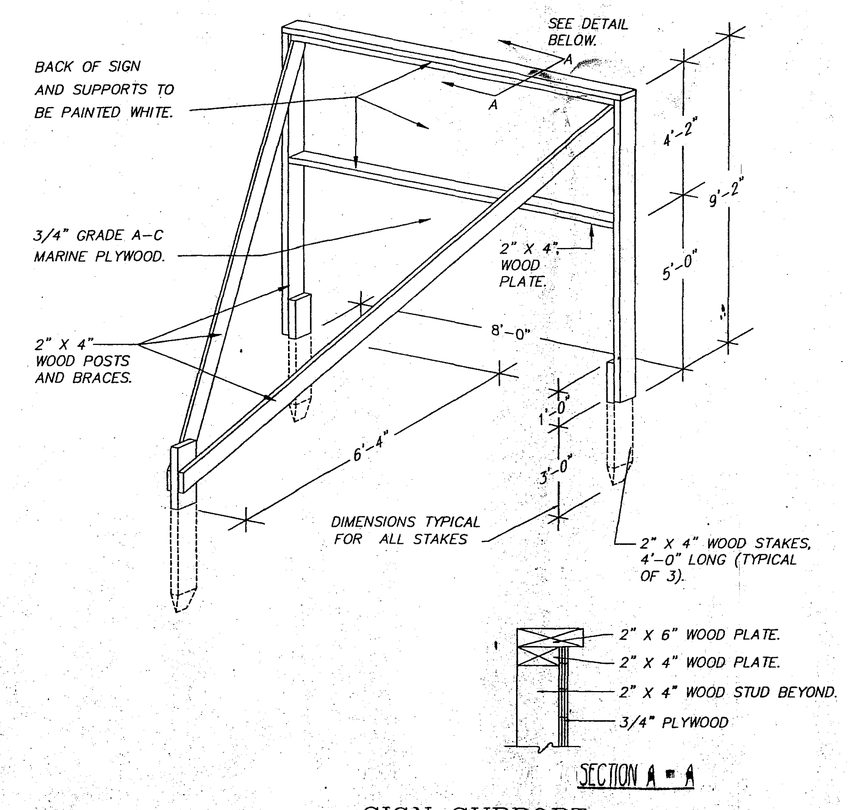


SECTION A–A (BASE BID)
SCALE: 1-1/2" = 1'-0"



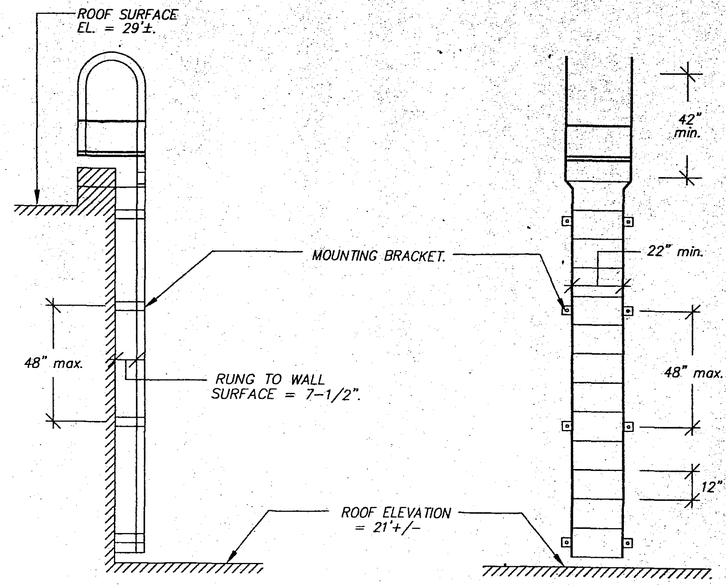
LETTER AND BACKGROUND COLOR AS INDICATED (BLUE COLOR: PANTONE 300)
LETTER STYLE TO BE HELVETICA MEDIUM

PROJECT SIGN LAYOUT
N.T.S.



SECTION A – A

SIGN SUPPORT
N.T.S.



FIXED LADDER
N.T.S.

NOTE ALL DIMENSION LUMBER SIZES SHOWN ON THIS SHEET ARE NOMINAL, NOT ACTUAL.

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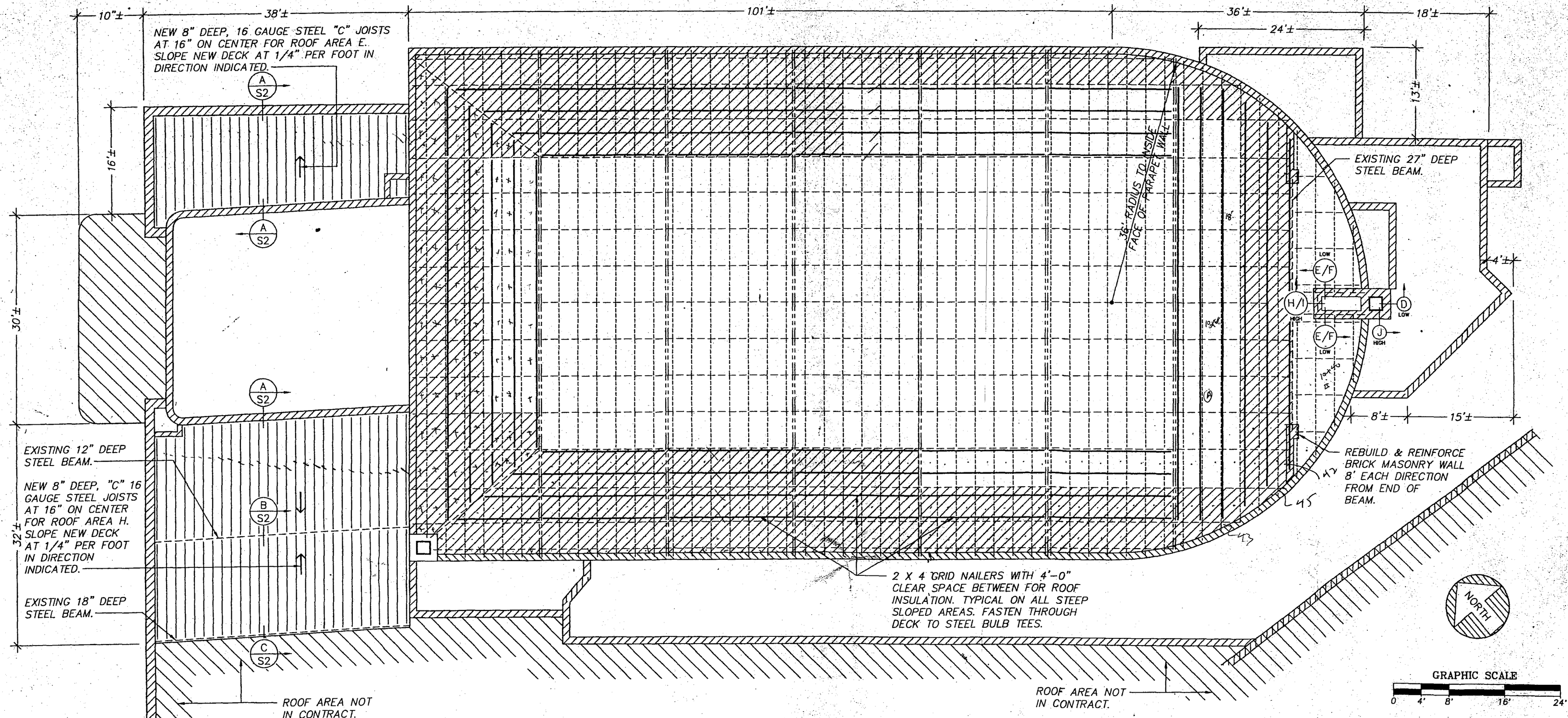
DESIGN BY: GWB
DRAWN BY: GDW
REVIEWED BY: TSK
CADD FILE: 52B10A5

DETAILS
SILVER THEATRE
SILVER SPRING, MARYLAND
MONTGOMERY COUNTY L.F.B. NUMBER: 8502050235
FACILITIES MAINTENANCE NUMBER: 9280

DATE: JUNE 1998
GALE JN: 652810
SCALE: AS NOTED
SHEET: A5
6 OF 10

STATE OF MARYLAND · WALTER S. [illegible] · 19573 · PROFESSIONAL ENGINEER



LEGEND

- MASONRY BEARING WALL
- EXISTING STEEL BEAM
- EXISTING ROOF TRUSS
- EXISTING ROOF PURLINS
- EXISTING BULB TEES
- NEW GRID NAILERS
- SLOPE INDICATOR
- ROOF AREA NOT IN CONTRACT
- DAMAGED GYPSUM DECK

GENERAL NOTES

1. THE INFORMATION SHOWN ON THE DRAWINGS HAS BEEN COMPILED FROM VARIOUS SOURCES, AND MAY NOT REFLECT THE ACTUAL CONDITIONS AT THE TIME OF CONSTRUCTION.
2. THE CONTRACTOR SHALL REPORT DETERIORATED OR UNSUITABLE STRUCTURAL DECK (NOT NOTED HERE) TO THE OWNER PRIOR TO PERFORMING ROOFING WORK.
3. BASE BID: REPLACE DESIGNATED AREAS OF DAMAGED GYPSUM DECK WITH NEW POURED GYPSUM DECK.
4. ALTERNATE #1: REPLACE DESIGNATED AREAS OF DAMAGED GYPSUM DECK WITH GYPSUM PLANK DECK.
5. ALTERNATE #2: REPLACE DESIGNATED AREAS OF DAMAGED GYPSUM DECK WITH TECTUM PLANK DECK.
6. ROOF AREAS E AND H SHALL RECEIVE REPLACEMENT 22 GAUGE, 1-1/2" DEEP, TYPE "B", STEEL ROOF DECK.

STATE OF MARYLAND · CARL WALTER SHOWN · 19573 · PROFESSIONAL ENGINEER

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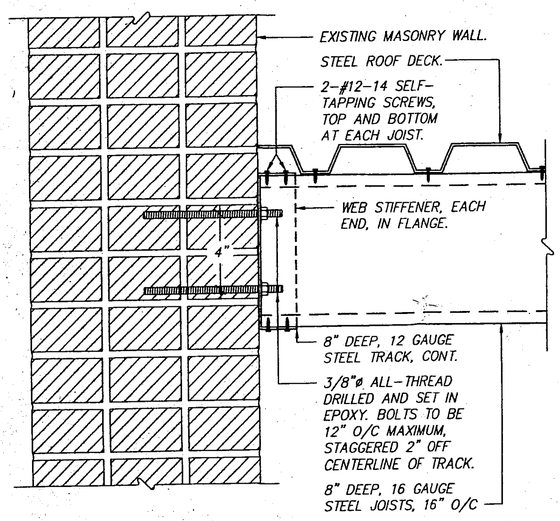
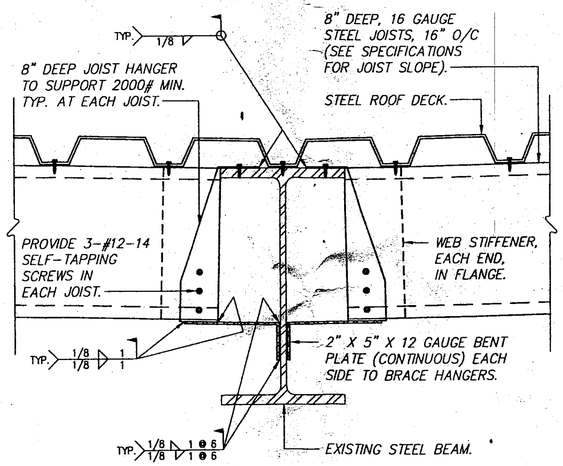
DESIGN BY: GWB/CRC
DRAWN BY: LSJ/CRC
REVIEWED BY: TSK
CADD FILE: 52810S-1

STRUCTURAL ROOF AREA PLAN
SILVER THEATRE
SILVER SPRING, MARYLAND
MONTGOMERY COUNTY I.F.B. NUMBER: 8502050295
FACILITIES MAINTENANCE NUMBER: 9280

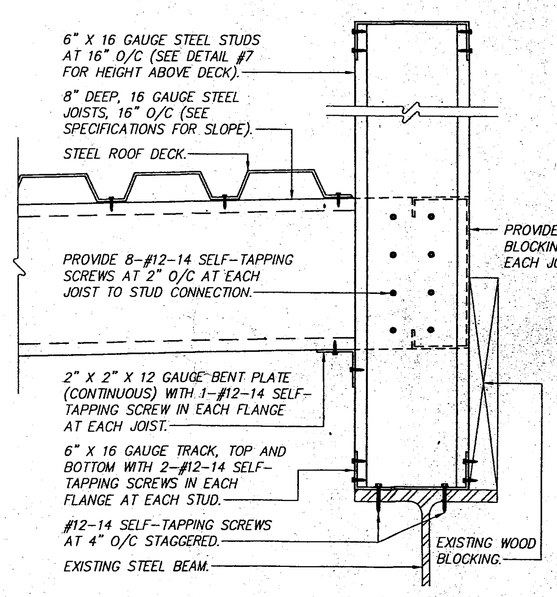
DATE: JUNE 1998
GALE JN: 652810
SCALE: 1/8" = 1'-0"
SHEET: S1
7 OF 10



JOIST CONNECTION – TYPE I (A)



JOIST CONNECTION – TYPE II (B)



JOIST CONNECTION – TYPE III (C)

NOTE: COORDINATE FINISHED DECK ELEVATION TO ACCOMMODATE CRICKET INSULATION AND MINIMUM FINISHED FLASHING HEIGHTS.

ALL ITEMS ARE NEW UNLESS DESIGNATED AS EXISTING — : ROOF AND INSULATION SYSTEMS NOT SHOWN FOR CLARITY

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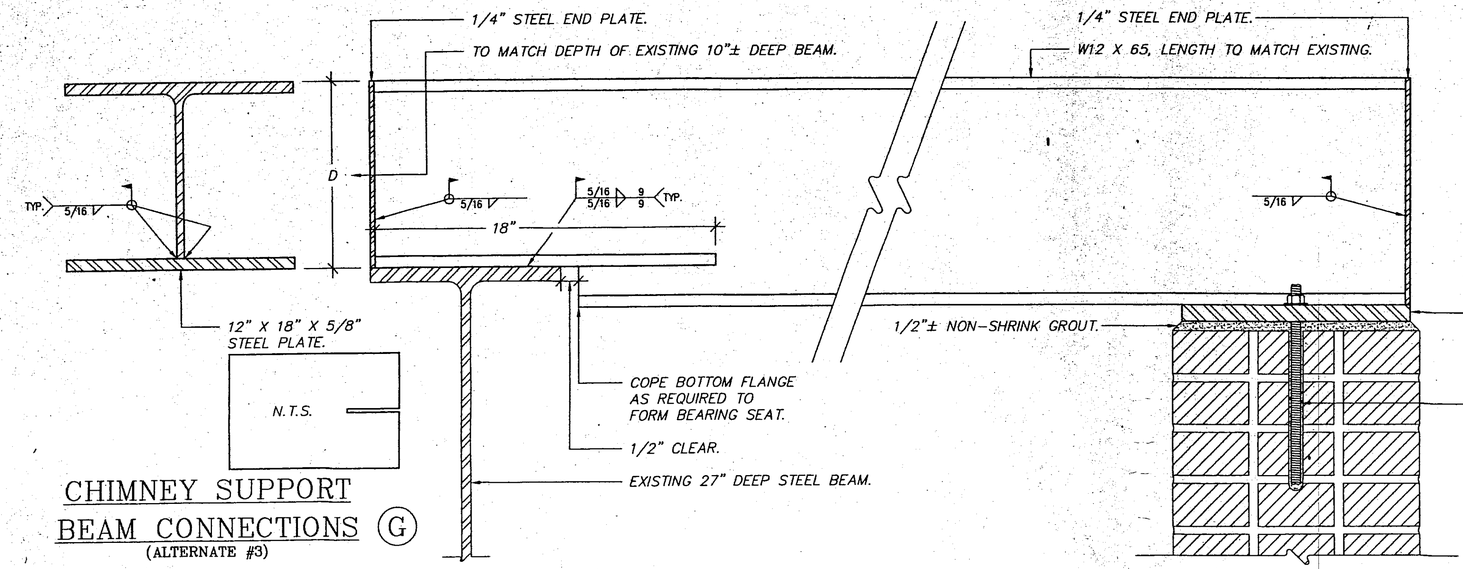
DESIGN BY: CRC
DRAWN BY: CRC
REVIEWED BY: EJM
CADD FILE: 528105-2

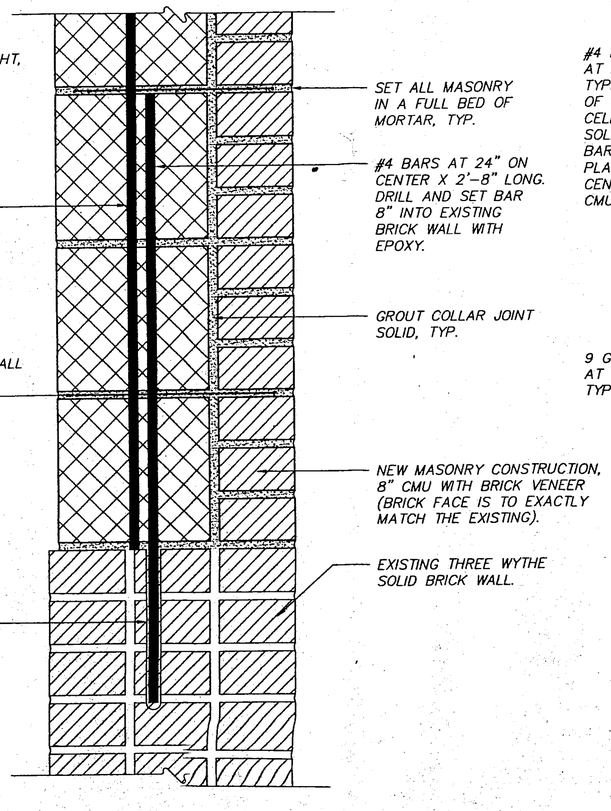
STRUCTURAL SECTIONS
SILVER THEATRE
SILVER SPRING, MARYLAND
MONTGOMERY COUNTY, L.F.B. NUMBER: 850205025
FACILITIES MAINTENANCE NUMBER: 9280

DATE: JUNE 1998
GALE JN: 652810
SCALE: 3" = 1'-0"
SHEET: S2
8 OF 10

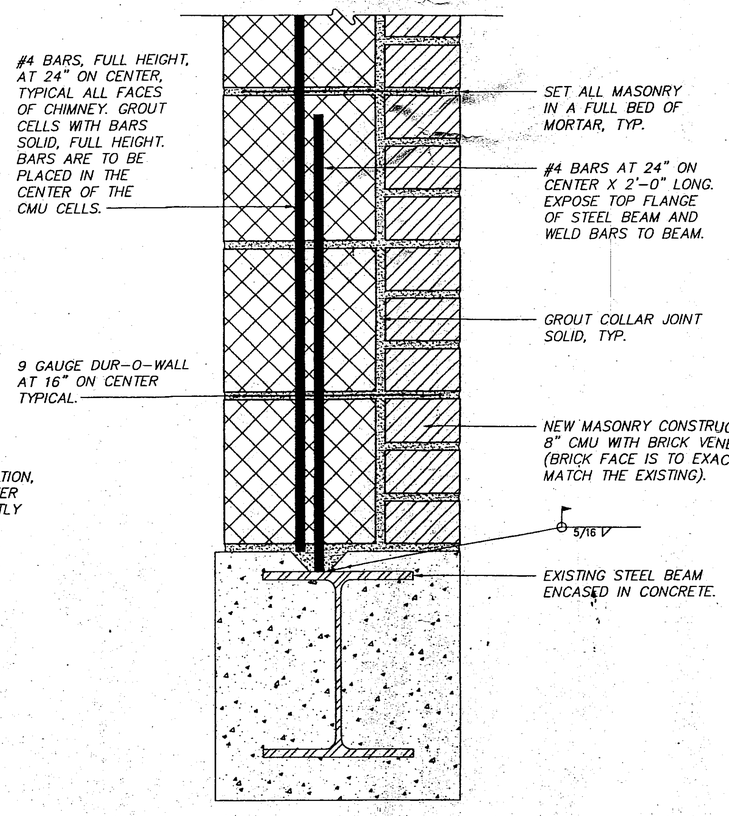


CHIMNEY SUPPORT BEAM CONNECTIONS (G)

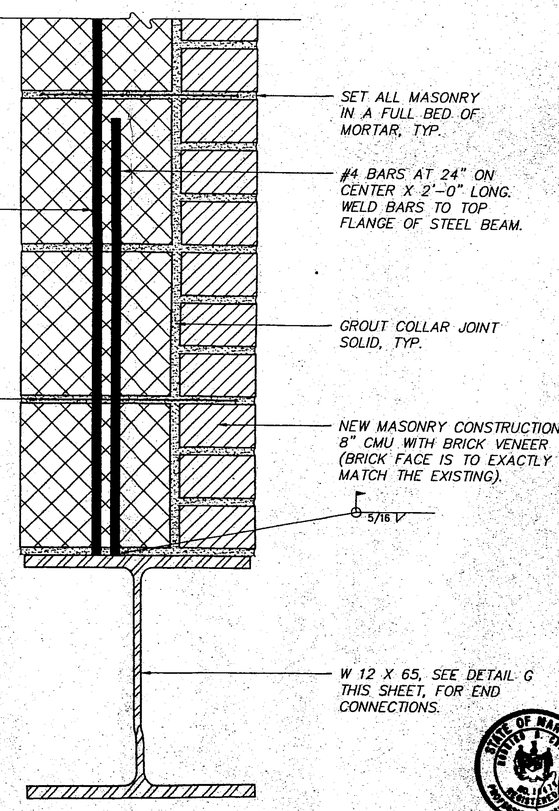
(ALTERNATE #3)



NEW MASONRY TO EXISTING MASONRY (D)



NEW MASONRY TO EXISTING STEEL BEAM (E)



NEW MASONRY TO NEW STEEL BEAM (F)

(ALTERNATE #3)

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DESIGN BY: AMN ENG.
DRAWN BY: CRC
REVIEWED BY: EJM
CADD FILE: 528105-3

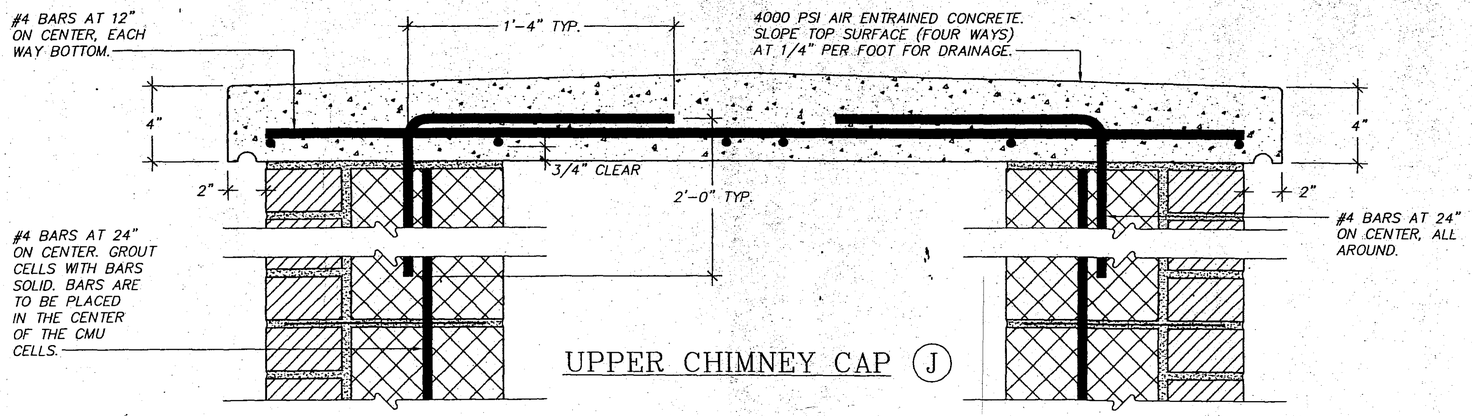
STRUCTURAL SECTIONS
SILVER THEATRE
SILVER SPRING, MARYLAND

FACILITIES MAINTENANCE NUMBER: 9280
MONTGOMERY COUNTY I.F.B. NUMBER: 8502050255

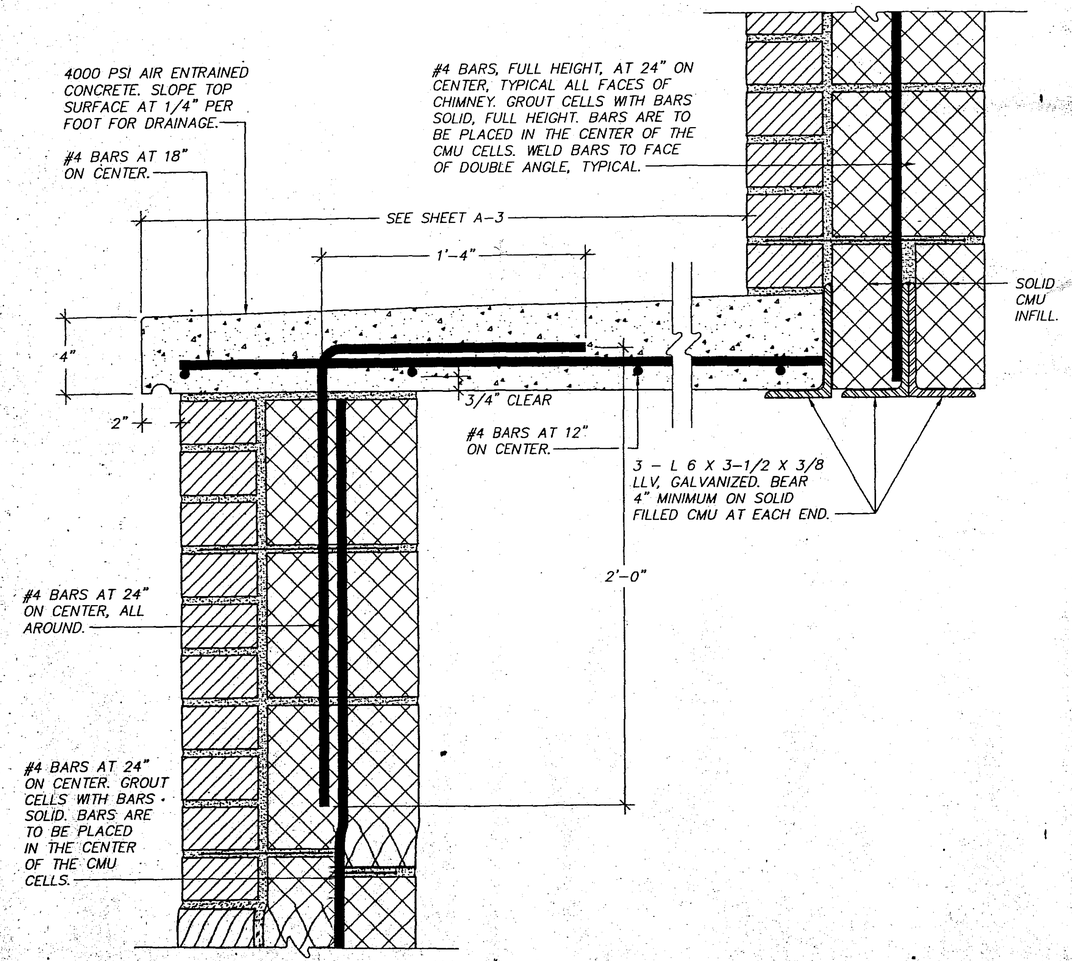
DATE: JUNE 1998
GALE JN: 652810
SCALE: 3" = 1'-0"

SHEET: S3
9 OF 10

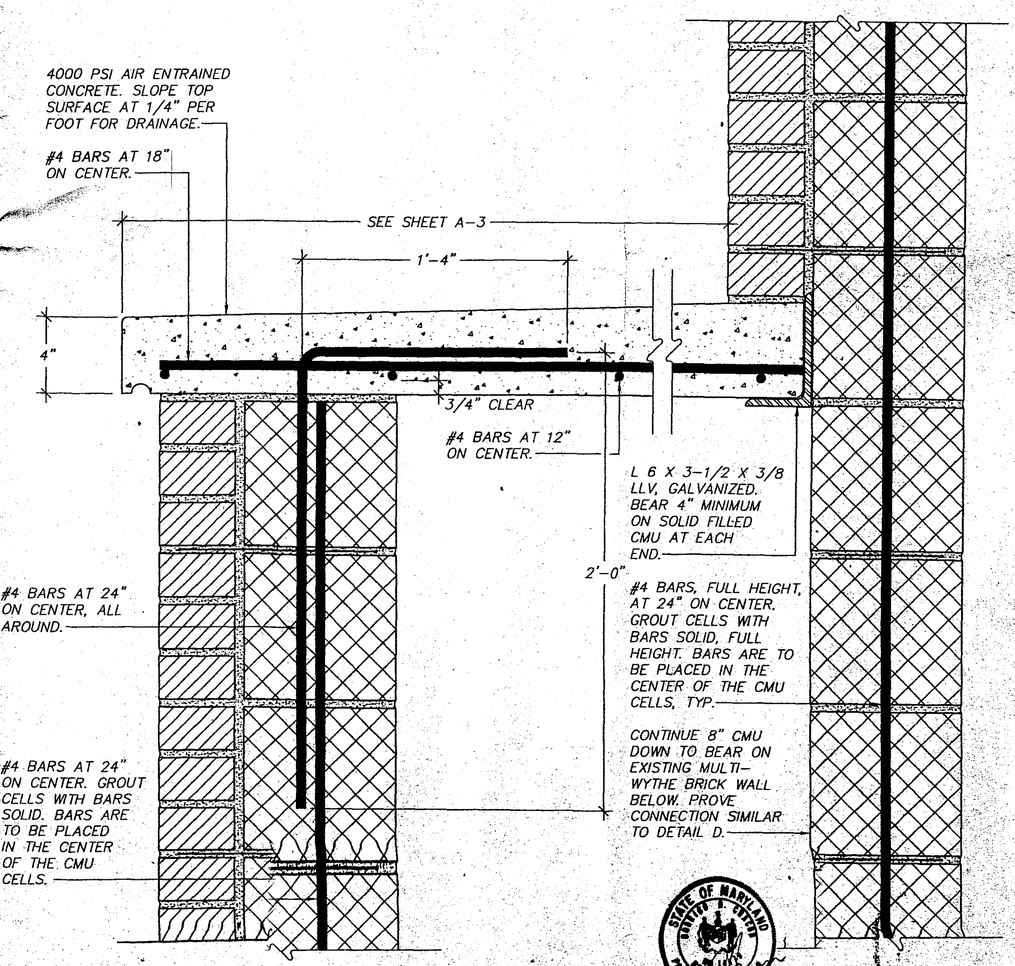
STATE OF MARYLAND — EDWARD J. MUSE — REGISTERED PROFESSIONAL ENGINEER



UPPER CHIMNEY CAP (J)



LOWER CHIMNEY CAP (H)



INTERMEDIATE CHIMNEY CAP (I)

Gale Associates, Inc.
Boston • Baltimore • Orlando • San Francisco
5550 Newbury St. • Baltimore, MD 21209 • (410) 664-0611

DESIGN BY: AWN, ENG.
DRAWN BY: CRC
REVIEWED BY: EJM
CADD FILE: 528105-4

STRUCTURAL SECTIONS
SILVER THEATRE
SILVER SPRING, MARYLAND
FACILITIES MAINTENANCE NUMBER: 9280
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10 OF 10

REPORT OF EXISTING CONDITIONS AND FINDINGS REGARDING THE RESTORATION OF

THE ROOF OF THE SILVER THEATER

SILVER SPRING
MONTGOMERY COUNTY
MARYLAND

PREPARED AT THE REQUEST OF

THE MONTGOMERY COUNTY GOVERNMENT

BY

VITETTA GROUP

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Attachments:

I Investigation and Findings

Vitetta Group with Mr. Donald Scheuerman, of the Montgomery County Government, and the County Government's roof consultant, Gale Associates, Inc., visited the site to investigate the existing roofing material and to perform certain core tests in the different roof areas. Attached is our sketch (Roof / SK-1) showing the location of the various areas and the results of each test. (see Gale Associates memorandum to Mr. Scheuerman, for an attached list of test cuts 1 through 20)

In general we found:

1. The main auditorium (Roof / SK-1 Areas A, B, C, D and N) is covered with approximately five plies of built up roofing material over a poured in place gypsum deck (see Roof Type D on Drawing A2 attached to Gale Associates memorandum). The main auditorium roof has been re-roofed once with a single ply of roof membrane installed over top of the original roof. From our visual field observations, it is apparent that the existing roof has been repeatedly patch repaired and has reached the end of its useful life. It must be replaced. The condition of the existing, original poured-in-place gypsum deck is generally very good but, based on visual observation of the underside of the deck, as visible from the attic space, in conjunction with the results of test cuts 7, 9 and 10, we estimate that approximately 20% of the original gypsum deck requires replacement before a new roof system can be installed. Bidders should be required to provide unit pricing for the gypsum deck system replacement.

2. The theater lobby (north) and mechanical / support rooms (south and west), (Roof / SK-1 Areas G, I, J, K, L and M) are covered with approximately four plys of built up asphalt pitch roofing membrane on a concrete deck (see Roof Type C on Drawing A2 attached to Gale Associates memorandum). From our visual field observations, it is apparent that the these existing roofs have been spot patch repaired and have reached the end of their useful life. They must be replaced. The condition of the existing, original concrete deck is good at the points of inspection as reflected by the results of test cuts 12, 18 and 19. There is no current evidence that any significant concrete deck replacement will be required in these areas. However, spot testing is not foolproof and some percentage of concrete deck repair or replacement may be required if it is found defective when the existing membrane is removed. We estimate that approximately 5% to 10% of the concrete deck may require either repair or replacement and suggest that unit prices be required for repair and for replacement from the bidders.

3 The two original stores flanking the theater lobby to the east and west, (Roof / SK-1 Areas E and H), are covered with approximately four plys of built up asphalt pitch roofing membrane on a wood tongue and groove deck (see Roof Type A on Drawing A2 attached to Gale Associates memorandum). From our visual field observations, it is apparent that the these existing roofs have been spot patch repaired and have reached the end of their useful life. They must be replaced. The existing, (assumed) original wood deck is water saturated as reflected by the results of test cuts 2 and 20. These two wood

deck areas must be replaced with new decking before they can be re-roofed. The existing water saturated decking could be replaced either in-kind (T&G wood planks) or with metal decking. We recommend in kind replacement if the structural support system is determined to be viable. If the existing structural support system (assumed to be wood joists from the original construction documents) is determined to be damaged, then the system should be replaced either in-kind or with a new steel joist and decking system that can be fire proofed.

It should be noted that test cut number 17 at the east edge of roof area H revealed two roofs consisting of four plys of built up roofing membrane (each) on a gypsum deck. We recommend that this anomaly be further investigated before construction documents are completed.

Vitetta Group, with our consultant, Preservation Services, Inc., visited the site to investigate the original paint colors of the roof top accessories and to obtain samples of the original mortars for the interior roof parapet and chimney masonry. Attached is our sketch, Roof / SK-2, indicating the locations of the samples taken. The laboratory results of these tests and conclusions are found in the attached report and data sheets from Preservation Services, Inc. In general we found that the most likely original color of the roof top accessories was beige/tan between Munsell numbers 2.5Y - 8/2 and 2.5Y - 8/4, a color range that is very similar to the color of the existing buff/cream colored brick that is the predominant color of the facades.

The results of the mortar sample testing reflected in the laboratory report indicate that the original mortars are appropriate for the types of masonry found on the parapet wall and that the colors are appropriate to their substrata masonry depending on base colors and locations. This is common for the type of construction during the period. The mortar, in general, is in good condition, with only about 30% patch pointing replacement required. The original joints, however, are reverse struck and it is recommended that replaced joints should be correctly struck when installed.

Vitetta Group was able to obtain and copy original photographs (002 and 003) of the Silver Theater from the files of the Historic Preservation Section of the Montgomery County Department of Park and Planning to confirm the original appearance of the roofing. We were also was given copies of the original construction drawings of the Silver Theater by the Silver Spring Redevelopment Office. These original documents indicate the various roof structures, decks, and finish (surface) materials and other related details such as roof ventilators, the original chimney design, etc.

Vitetta Group's Chief Structural Engineer, visited the site and reviewed the condition of the roof and in particular the condition of the roof's steel framing system as accessed through the attic space above the auditorium. The results of this review are contained in his report of the January 29, 1998 site visit. The general finding of the report is that the existing structural support of the main auditorium roof is in good condition and that only

minor, localized repairs to the bulb-tee support members may be required when replacing associated areas of the gypsum deck.

II Scope of Roofing Demolition

1. The main auditorium (Roof / SK-1 Areas A, B, C, D and N)

The minimum extent of roof deck replacement that will be required is shown on the attached drawing Roof / SK-1.

Roof areas A, B C, D and N above the theater auditorium, are composed of gypsum deck. Existing gypsum deck that is found to be deteriorated should be removed and replaced in kind. It is estimated that approximately 20% (approximately 2000 square feet) of the existing gypsum deck above the auditorium must be replaced due to past or current water intrusion below failed roof membrane.

Related to the roof deck is the condition of the steel structural system that supports the deck. As discussed above, the attached structural engineer's site visit report indicates that overall the structural frame is in good condition and only minor repairs are expected to be required.

For the Auditorium roof, Vitetta Group recommends the use of new nailable gypsum deck, 2 1/2" to 3" in depth, poured over 5/8" thick gypsum form board to match the original roof deck assembly as observed during the field investigations and corroborated by the information found on the original construction documents. The system can be obtained from United States Gypsum Company through their representative for cementitious deck gypsum roof systems, the Proteet Group of Charlotte, NC. Literature describing this system is attached to this report (attachment A).

While the first choice of replacement material for the auditorium roof deck is obviously replacement in-kind using poured-in-place, nailable gypsum deck, it should be noted that the availability of certified installers of the system is extremely limited. There is also a technical problem involved with the lengthy curing period required for poured-in-place gypsum that could adversely affect the fabric of the building if not handled with extreme care. There are two alternative materials that might be used for extensive replacement sections such as those found on the "mansard" and gutter sections of the auditorium roof designated as areas B, C, D and N on drawing Roof / SK-1. These areas may be repaired by cutting away the damaged existing deck and installing either new prefabricated gypsum roof deck panels or new cementitious woodfiber panels such as the "Tectum" panels recommended in the attached report from Gale Associates, Inc. (Attachment B).

Vitetta Group suggests that the County consider providing bid documents that call for a base bid, for replacement in-kind using the original gypsum deck system, with two deduct alternates for the installation of 1, the prefabricated gypsum roof deck panels and 2, the prefabricated cementitious woodfiber (CWF) panels.

It should be noted that the alternate systems should only be used if it can be demonstrated that the acoustical qualities of the auditorium will not be adversely affected by the substitution of the prefabricated gypsum or the CWF panels for the original gypsum system.

2. The theater lobby (north) and mechanical / support rooms (south and west), (Roof / SK-1 Areas G, I, J, K, L and M)

The results of the test cuts performed at the remaining roof areas: G, I, J, K, L, and M, indicate that these areas are on (or in the case of I, J and L can be assumed to be) undeteriorated concrete deck that should be able to be reused as the substrate for new roof membrane.

3. The two original stores flanking the theater lobby to the east and west, (Roof / SK-1 Areas E and H),

Roof areas E and H, above the stores to the north and south of the theater lobby, are composed of tongue and groove wood plank decking over a structural system that is suspected to be wood roof joists. It will be necessary to perform a destructive test opening in order to determine if the structure is wood joist as indicated by the original drawings, or if some other system was used. Test cuts in these two areas reveal that the

(continued on page 5)

deck is saturated and needs to be replaced. If the existing joist structure is found to be sound, the decking may be replaced (in-kind) with new wood decking. If the existing structural wood joists prove to be deteriorated, they should be replaced with new steel framing members and steel deck, the entire system coated with fireproofing material.

The results of the test cuts performed at the remaining roof areas: F, G, I, J, K, L, and M, indicate that these areas are on (or in the case of I, J and L can be assumed to be) undeteriorated concrete deck that should be able to be reused as the substrate for new roof membrane.

All of the existing, membranes, on all roof areas should be removed down to the structural decks (including the areas that have more than one roof). In the process of demolition, each section of exposed deck should be inspected and approved before new roofing membrane is installed in that area.

A requirement for unit pricing should be included in the specification for the following roof deck replacement (along with that which is already included in the contract):

a) concrete deck repair/replacement $/sq ft
b) wood T&G plank deck repair/ replacement $/sq ft
c) gypsum deck system deck repair/replacement $/sq ft

III Guidelines for Roofing Base and Membrane Replacement

1. Roof areas A,B, C, D and N above the theater auditorium were originally built-up asphalt topped roofing. This was confirmed by review of the original construction drawings and as observed during visual inspection of test cut No. 15 (see photograph 001) which revealed the asphalt top sheet of the original built-up roof immediately underneath the current roofing top sheet. This finding is also supported by the attached historic photographs 002 and 003 taken from the south in which the south facing mansard slope of the auditorium roof is clearly visible and displays the monolithic appearance of rolls of granular asphalt impregnated top sheets.

For the auditorium roof, Vitetta Group recommends the use of new sheet roofing which has the appearance of the original asphalt impregnated sheet roofing. As the slope of the mansard sections (B, C, and D) is too steep for most built-up roofing systems it will probably be necessary to use a system that is appropriate for the steep (36 degree) slope but can be modified to give the appearance of the original asphalt rolls. Samples must be obtained of both the hypalon coated EPDM with broadcasted sand finish and the modified bitumen cap sheet with black granules suggested in the Gale Associates, Inc. memorandum attached to this report. The end result of the choice of membrane systems for the auditorium roof must be a visual match for the original black granular appearance of the asphalt sheet roofing and a reasonably warranted roof system in excess of ten years for materials and five years for workmanship.

2. The roof areas above the lobby and mechanical/ support areas, I, J, K, L and M are currently covered with built up pitch with gravel ballast. There are no known historic photographs of these flat roof areas but the original construction documents indicate that these roofs were also built-up membrane with an asphalic top sheet. Vitetta Group recommends the use of new sheet roofing which duplicates the appearance of the original asphalt impregnated sheet roofing. The end result of the choice of membrane systems for the flat roof areas should be a visual match for the original black granular appearance of the asphalt sheet roofing. While these roofs are not visible from the street, they are clearly visible from the adjacent taller buildings which now surround the site and their appearance should be compatible with the remaining roof areas.

3. The roof areas above the stores that flank the lobby, E and H are currently covered with built up pitch with gravel ballast. As stated above, there are no known historic photographs of these flat roof areas but the original construction documents indicate that these roofs were also built-up membrane with an asphalic top sheet. Vitetta Group recommends the use of new sheet roofing which has the appearance of the original asphalt impregnated sheet roofing. The end result of the choice of membrane systems for the flat roof areas should be a visual match for the original black granular appearance of the asphalt sheet roofing. While these roofs are not visible from the street, they too, are clearly visible from the adjacent buildings which now surround the site, and their appearance also, should be compatible with the remaining roof areas.

In general, all new roofing membrane must match, as closely as possible, the appearance of the original roof. It should be understood that in order to meet current energy codes, even for historic buildings, some modifications may be required, such as the addition of thermal insulation which may increase the thickness of the roof deck by a small dimension, but will be imperceptible from the original profiles.

All new roofing systems must be designed to meet current, applicable energy, building and fire codes for Montgomery County and the State of Maryland for historic buildings.

It is strongly recommended that the construction documents for the re-roofing of this building require the manufacturer(s) to warranty the roof system(s) for a minimum of 15 years from the date of acceptance by the County for defects due to manufacturer and the installer of the new roof system(s) to provide minimum five year warranty against all defects due to workmanship and installation.

As much as possible of the existing metal counter flashings (photograph 003) should be maintained in place and reused. The built-in metal counter flashings will be required to be carefully bent-up in order to install new roof perimeter fabric flashings and bent back down after the new flashings have been installed. It will not be possible to obtain a "like new" appearance of the built-in counter flashings but they must be repaired to a reasonable and acceptable appearance and made watertight and functional. We have employed this technique on several building restorations recently with success.

4. Roof Insulation: No roof insulation was discovered during our field investigations or any indication of intent to install insulation found on the original construction documents.

However, it is recommended that insulation be designed and installed to comply with all applicable governing codes. The architectural details of this building are such, that up to three inches of rigid roof insulation could be included in the design without significantly altering the appearance of the roof.

5. New roofing details: It is recommended that the designer of the new roof systems use current accepted roofing details for all new and reused flashings, pitch-pockets, curbs and other roof system details in order to be compatible with the new system specified and to insure the County the ability to obtain the warranties required.

IV Guidelines for Roofing Accessory Replacement/ Restoration

All existing historic (original) and new roof top accessories (see photograph 003) are to remain in their current locations (see attached Roof Plan). These items will need to be temporarily disconnected and reinstalled on new curbs that will accommodate the thickness of additional insulation board that may need to be installed to meet codes. During the process, all existing paint should be removed to bare metal by the gentlest means possible. The accessories must then be modified to meet current codes if necessary, prepared, primed and finish painted to match the original colors as determined by the paint analysis test results attached to this report (see attached drawing Roof / SK-2 for locations of paint test samples and attachment D for laboratory results and report of findings).

The original accessories include approximately five goose neck vents, two major (highly visible) and one minor gravity ventilators, ten vent pipes and one original roof hatch. It should be noted that the, existing roof hatch should be replaced with a modern, code conforming, operable unit that approximates the dimensions and profiles of the existing hatch.

If it is determined that any historic (original) roof accessory is deteriorated beyond repair then it should be replaced in kind in it's existing location and painted to match the original color as determined by the paint analysis. Replacement may only be undertaken if a reasonable attempt to repair each unit is made and found to be unsuccessful. are first

No roof accessories that are likely to be required for operation of the building systems should be removed and replaced with new roof deck and membrane until it is determined that they are no longer required for proper function of the building support systems (e.g. the new ventilator added recently to provide ventilation exhaust to the building while it is being restored). However, non-original accessories that can be determined to be obsolete, may be removed and new deck and membrane installed at those locations.

V Guidelines for Original Chimney Replacement

The chimney at the east (apse) end of the building (see photograph 005) is to be restored to the original form as shown on the original construction documents (see attached annotated excerpts from the original construction drawings) and as confirmed by the historic photographs (see photographs 002 and 003).

The top of the replicated caststone chimney top will be approximately thirty feet above the top of the existing chimney at its current high point. The restoration will include a four foot set back from the west face of the chimney at the 141'-8" elevation and a three foot set back at the 152'-8" elevation. The westward projecting masonry will be sealed and roofed over with new metal cricket flashings as shown on the original contract documents. The upper portion of the chimney was apparently removed down to it's current height in past decades. The condition of the remaining chimney is not indicative of any apparent distress. It is assumed, at this time, that there is no apparent structural reason that the chimney should not be reconstructed to it's historic height and shape. Vitetta Group has observed visually that the condition of the chimney base in the boiler room does not show any apparent signs of distress in the base. We recommend that a final inspection of the interstitial space immediately below the north face of the chimney be made in order to observe the condition of the support beam below the chimney at the underside of the roof deck. If no signs of distress are apparent then the chimney should be restored to it's original form. It is likely that additional reinforcing will be required when the chimney is reconstructed but this will not be visually detectable.

There is a strong possibility that the chimney will be used functionally to accommodate the new HVAC system. Before the reconstruction of the upper, missing portion is started, it is recommended that a new code compliant, stainless steel chimney liner be installed in the existing, lower portion of the chimney to facilitate the installation of the liner.

The brick used for the chimney reconstruction must be a match for the two types of brick as seen in the remaining portion of the original structure. The buff colored (cream) brick will be laid in running bond, nine courses high per band and the black salt glazed face brick will be laid in running bond, three courses high per the original drawings. The mortar used for the reconstruction of the chimney must be produced to match the original mortar mix in proportions of components and color. The results of the mortar test for the chimney are found in the attachment D, mortar analysis section. The mortar sample for the chimney was taken from the base of the remaining portion of the chimney and is indicated as "MS-1" on the attached drawing Roof / SK-2. It is important that the sheet metal flashing installed over the wash surfaces of the replacement chimney set-backs, match the original construction documentation (see attached excerpts of original construction documents.

VI Guidelines for Brick Parapet Wall Repair

1. The interior face of the parapet walls should be repaired as part of the roof replacement project. The existing pointing mortar is in relatively good condition and appears to be original. (see photograph 006). Vitetta group recommends that approximately 30% of the existing joints above the roof level be raked out and repointed with new pointing mortar to match the original as defined in the attached mortar analysis report. Locations of mortar test samples can be seen on the attached drawing Roof / SK-2, indicated as "MS-1 through MS-7A" and the appropriate mortar mix and colors can be found in the mortar analysis section of attachment D. The specifications should include a unit price request for linear feet if repointing of the brick masonry.

2. The entire parapet cap system, both caststone and terra-cotta tile units should be removed and reset after the existing through-wall flashings have been repaired (if required). The caststone bedding mortar must match the results of the attached mortar analysis test report for sample MS-7A. It is recommended that the terra-cotta parapet cap units be removed and carefully stored. The existing bedding mortar should be removed and the top of the parapet wall cleaned and fitted with new "deformed" metal flashing that provides a mechanical attachment to both the top of the parapet brick wall and the new bedding mortar required to reinstall the salvaged terra-cotta parapet tile caps. Both the reinstalled terra-cotta caps and the reset caststone parapet capstones should be sealed using urethane sealant colored to match the color of the original mortar on all wash surfaces and vertical joints. Horizontal joints should be repointed with new pointing mortar which must match the mixture and color of mortar MS-6 as described in the attached mortar analysis report.

Missing terra-cotta tile parapet caps (see photograph 005) must be replaced with new replacement units to match the existing. If it is not possible to find a source of matching replacement units, salvaged units from the adjacent shopping center parapet may be used. Salvaged units would be required to be modified in order to fit the apse curve where the units are missing. Salvaged units may only be taken from portions of the shopping center parapet that are known to be scheduled for demolition (specifications should direct the contractor to verify with the County, which areas of shopping center parapet would be available for terra-cotta unit appropriation).

All joints between masonry and metal should be raked out and have new urethane sealant installed with wicked weep tubes at 12" on center. This would occur particularly at the joint between the bottom brick and the top of the metal through wall counter flashing.

The separated mortar joint that runs continuously around the auditorium parapet wall, at the fourth joint below the bottom of the parapet cap, appears to be caused by rust jacking of a steel plate that is built into the wall at that point (see photographs 004 and 006). The intent of the plate is not known at this point. There is some indication on the original construction drawings that a steel angle with one leg downward may have been installed and possibly tied to the spandrel beam below in order to strengthen the masonry parapet,

but this is conjecture and should be investigated further. Vitetta Group recommends that a destructive test be performed to uncover a reasonable size portion (approximately 4 feet in length in two areas for a total of 8 feet of exposure) of the steel to observe and attempt to discover the reason for its use and then, a more informed judgment as to how to repair this condition can be made. If it is decided not to investigate the situation, there are remedial measures that can be applied to treat it as a "moving joint," but this will not repair the source of the problem. If the problem is not addressed, the steel will continue to rust and cause this joint to fail periodically. We strongly recommend further testing of this item. If the remedial measure is decided upon then the County should assume that the condition will be a chronic maintenance item.

The existing roof dunnage (steel support for former HVAC units) shown at roof area K on the attached drawing, Roof / SK-1, should be removed. The parapet wall that this support steel should be taken down to the bottom of the existing imbedded steel so that it can be completely removed. After the steel has been removed, the parapet can be reconstructed reusing the salvaged brick units and the terra-cotta cap can be reinstalled as described above. This removal will insure that remnants of the steel framing will not remain inside the parapet wall where it might continue to rust and damage the parapet further.

Caststone parapet cladding that faces outward should not be repointed until the facade of the entire building is restored, at which time all visible caststone facing would be repointed and cleaned at one time by the same contractor. This is the only way to insure a uniform appearance of the caststone portions of the facades.

VII Additional Roof Drain Inlet Locations

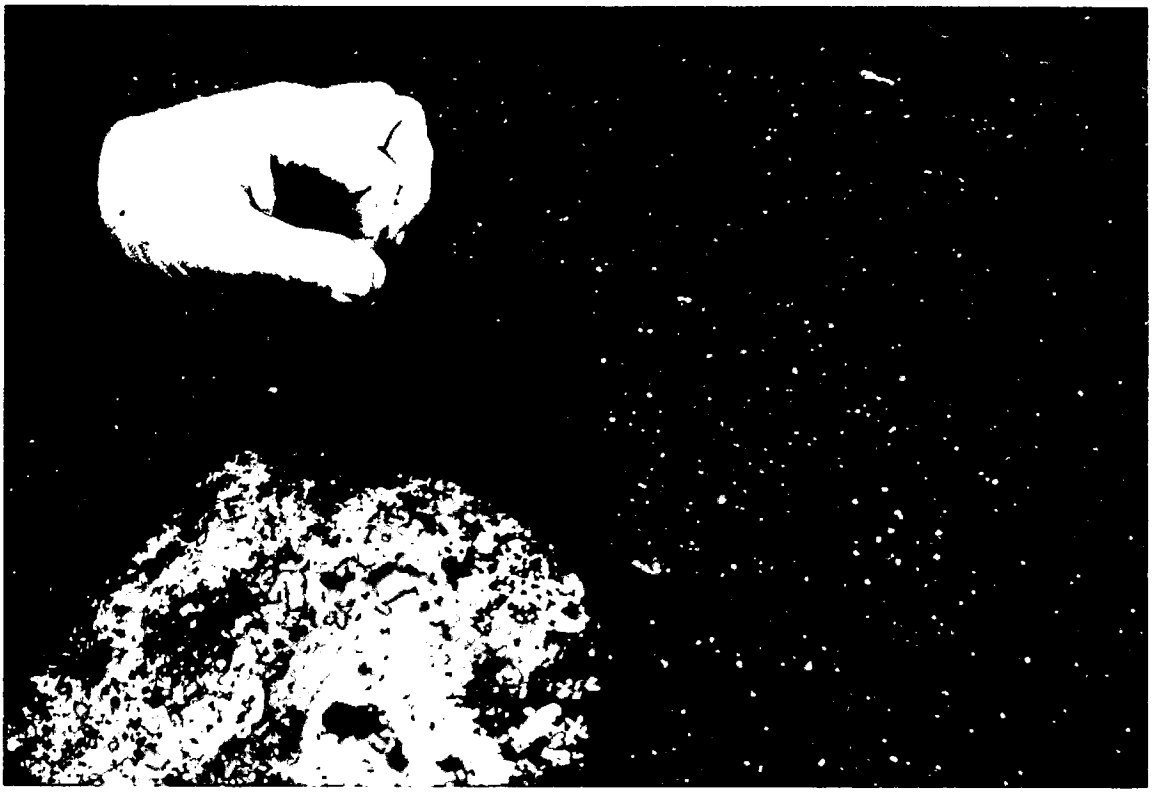
Currently the entire auditorium roof is drained to two roof drains located in the northeast and northwest corners of the roof (see drawing Roof / SK-1). Both of these drains appear to be blocked and these locations are concurrent with the most serious water intrusion damage to the historic fabric of the auditorium ceiling below. These drains should be replaced with new drains and the rain water conductors into which they drain need to be inspected and cleared to insure that they are sound and able to be reused. If the conductors prove to be unusable, they must be replaced with new conductors as far as required to insure proper drainage of the roof. The existing original sheet metal roof scuppers (see photograph 009) are too high above the drains to be of any practical use if the drains or rain water conductors should become blocked. Vitetta Group recommends that two additional roof drains be added at locations approximately ten feet to the east of the existing drains. These additional drains would serve as emergency back-up if the primary drains became blocked. An alternative solution would be to relocate the existing sheet metal scuppers to positions about ten inches above the top of the new roof membrane so that they would function as emergency overflow relief if the drains or rain water conductors become blocked.

VII Paint and Mortar Test Findings

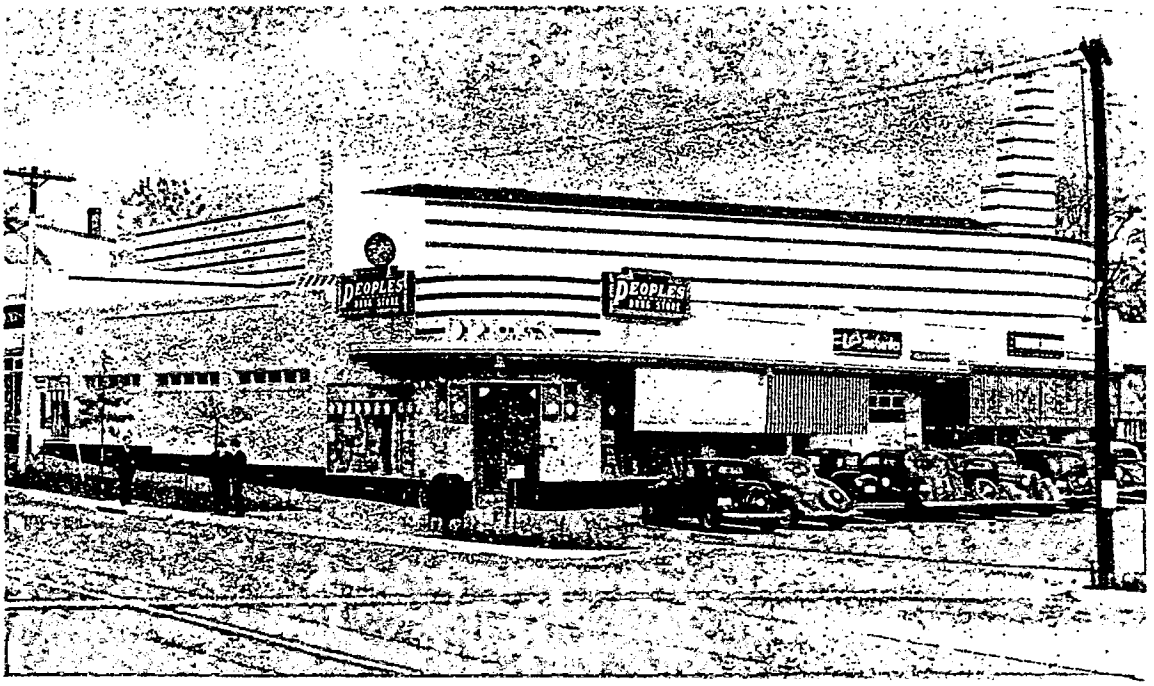
The attached drawing Roof / SK-2 indicates the locations of the four paint samples and the eight mortar samples collected on March 17, 1998.

The samples have been collected and analyzed by Vitetta Group's building materials conservation consultants, Preservation Services, Inc. of Fredericksburg, Virginia. The results of the laboratory analysis of the samples is contained in the attached report (attachment D) We recommend that the historic paint colors as evidenced in the laboratory report be used to repaint the original, extant roof accessories and any new, non-original equipment that must remain. We also recommend that the pointing mortar, used to repoint the caststone and brick on the interior face of the roof parapet wall and to point the reconstructed chimney, match the resulting mortar mixtures and colors for each specific type of brick and stone, as presented in the accompanying mortar analysis test report.

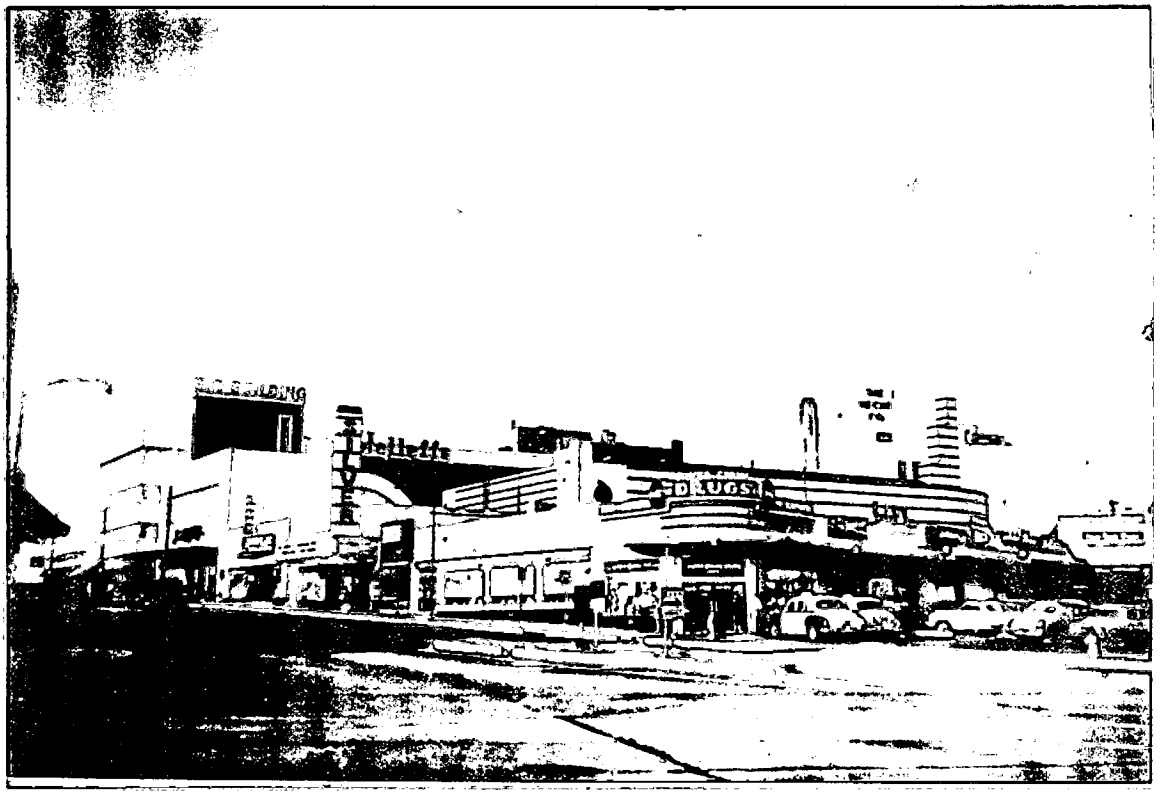
VIII Referenced Photographs



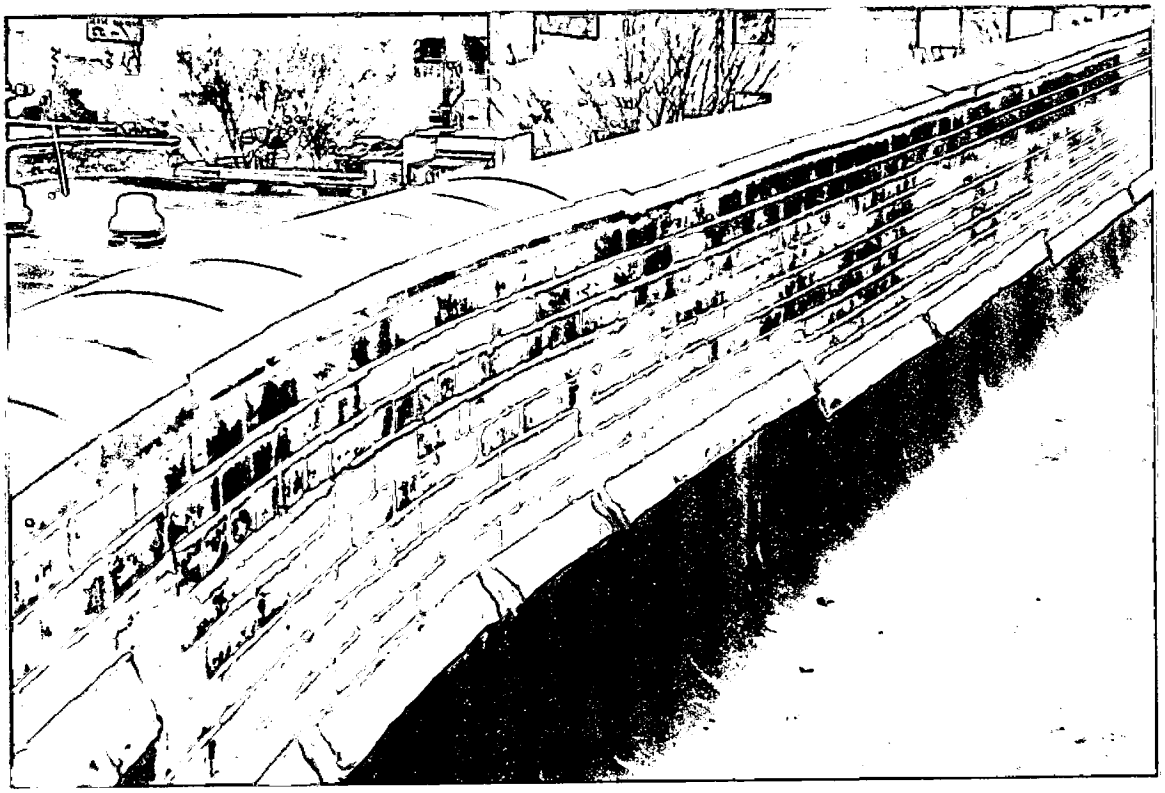
001 Test cut No. 15 showing the top sheet of the existing roofing pealed back to reveal the top sheet of the original historic asphalt sheet roof and gypsum deck.



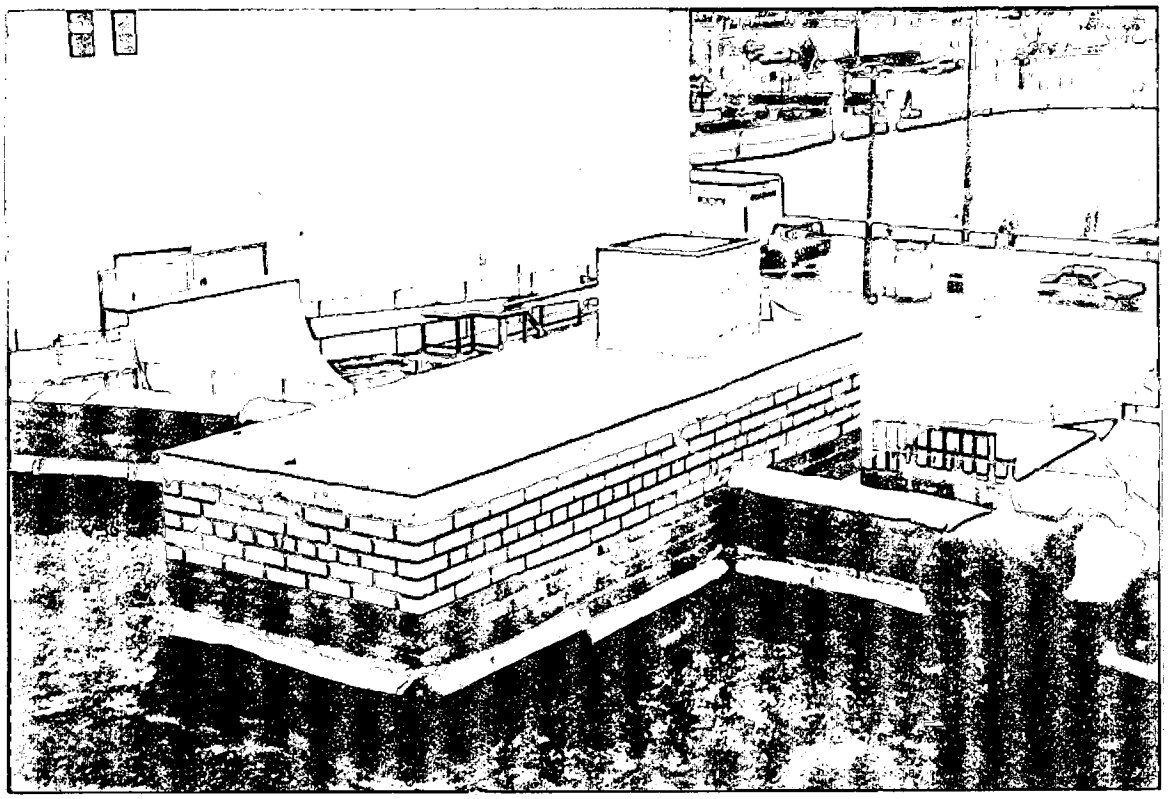
002 1938 photograph taken from the west showing asphalt sheet roofing on the west facing mansard slope of the of the auditorium and the original chimney to the left.



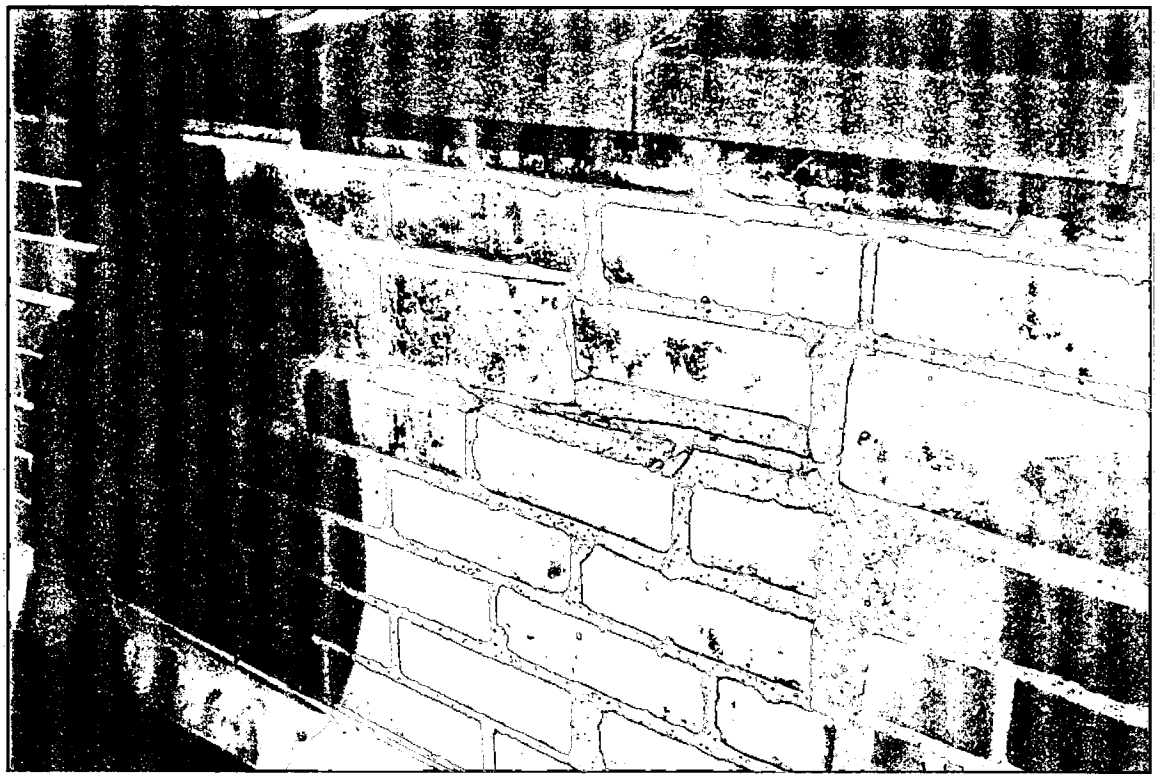
003 Mid-twentieth-century photo showing the mansard roof and original chimney.



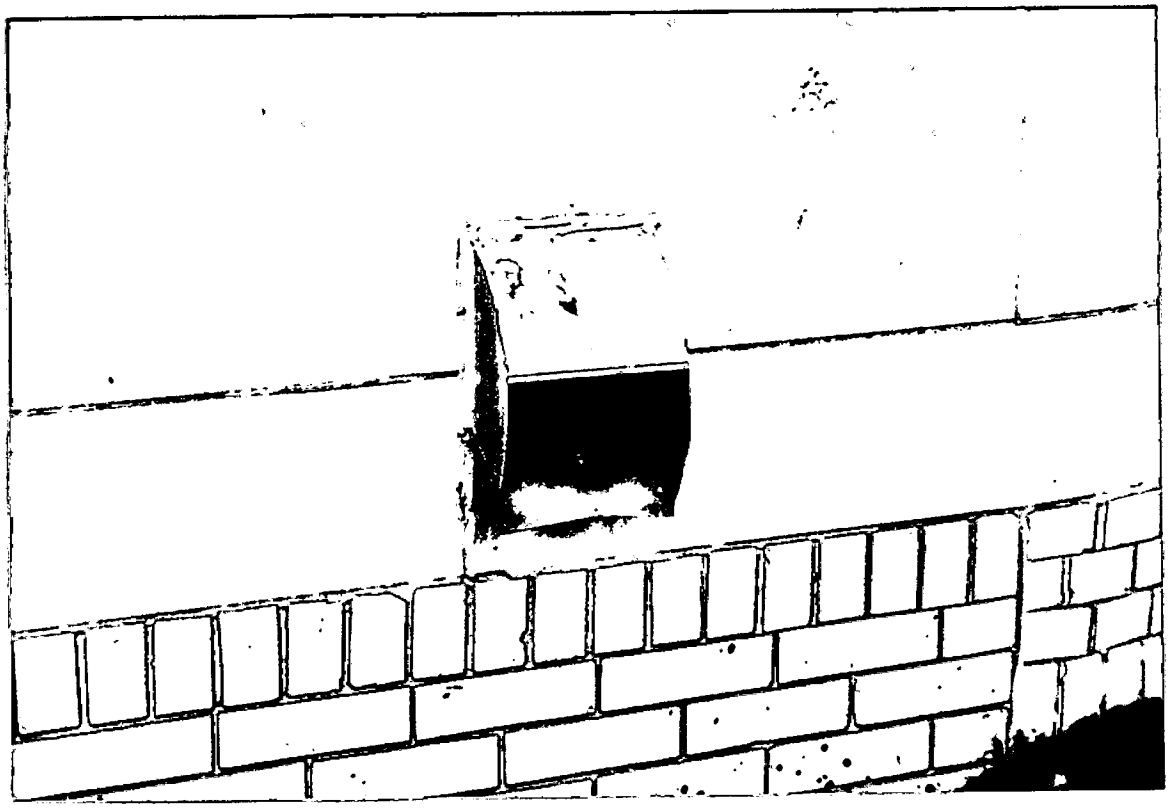
004 East face of the west parapet wall of the auditorium roof showing separated joint, metal counter-flashing and terra-cotta parapet cap (1998 photograph).



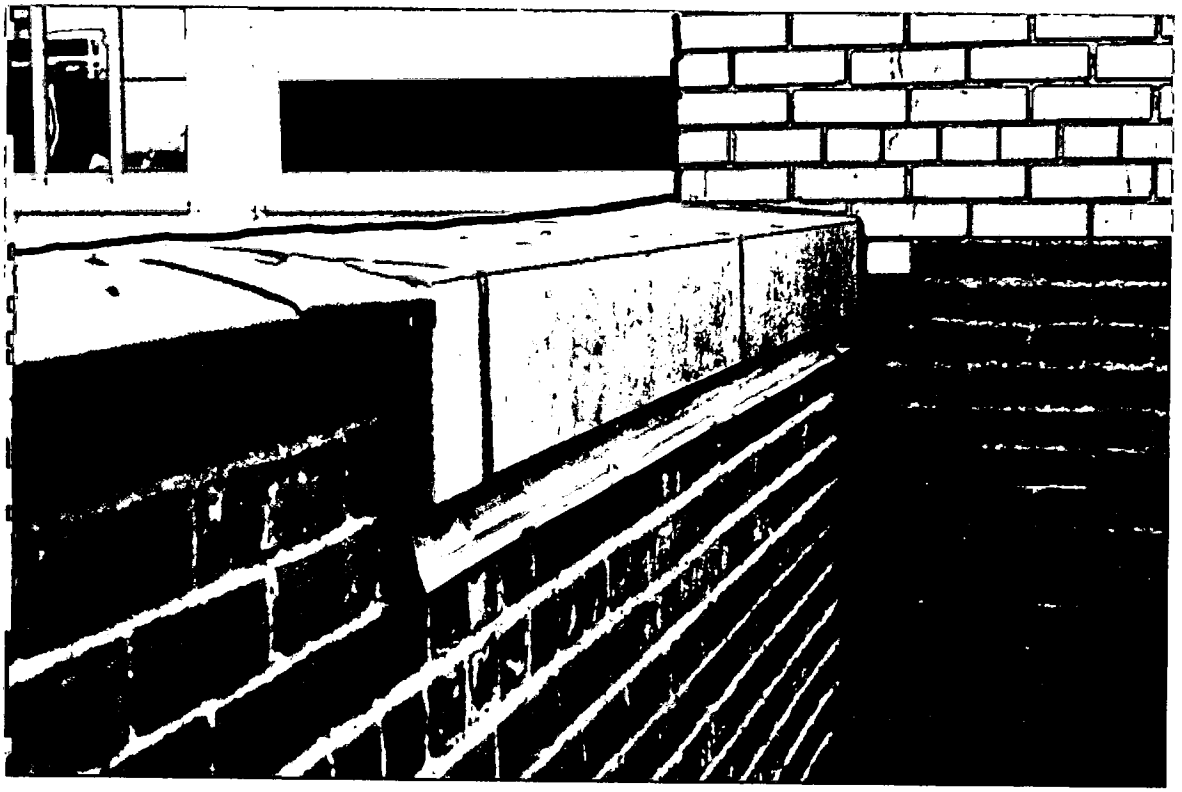
005 Base of the demolished chimney intersecting the south (apse) end of the auditorium (note chimney flue at right of photo, 1998 photograph)



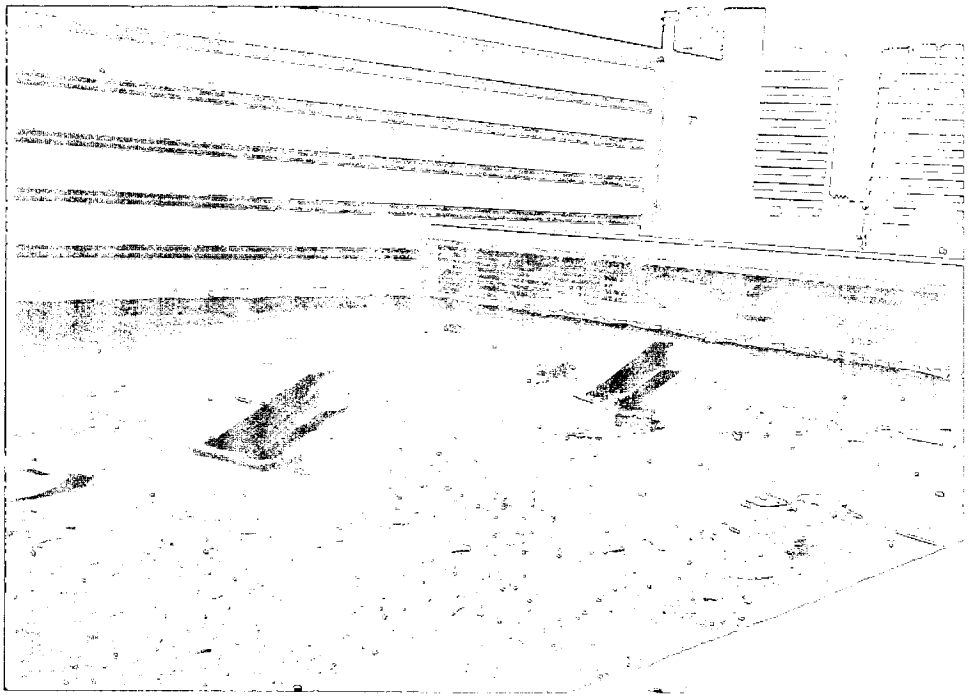
006 Detail of west face of the east parapet wall showing mortar joints and the steel plate exposed (1998 photograph).



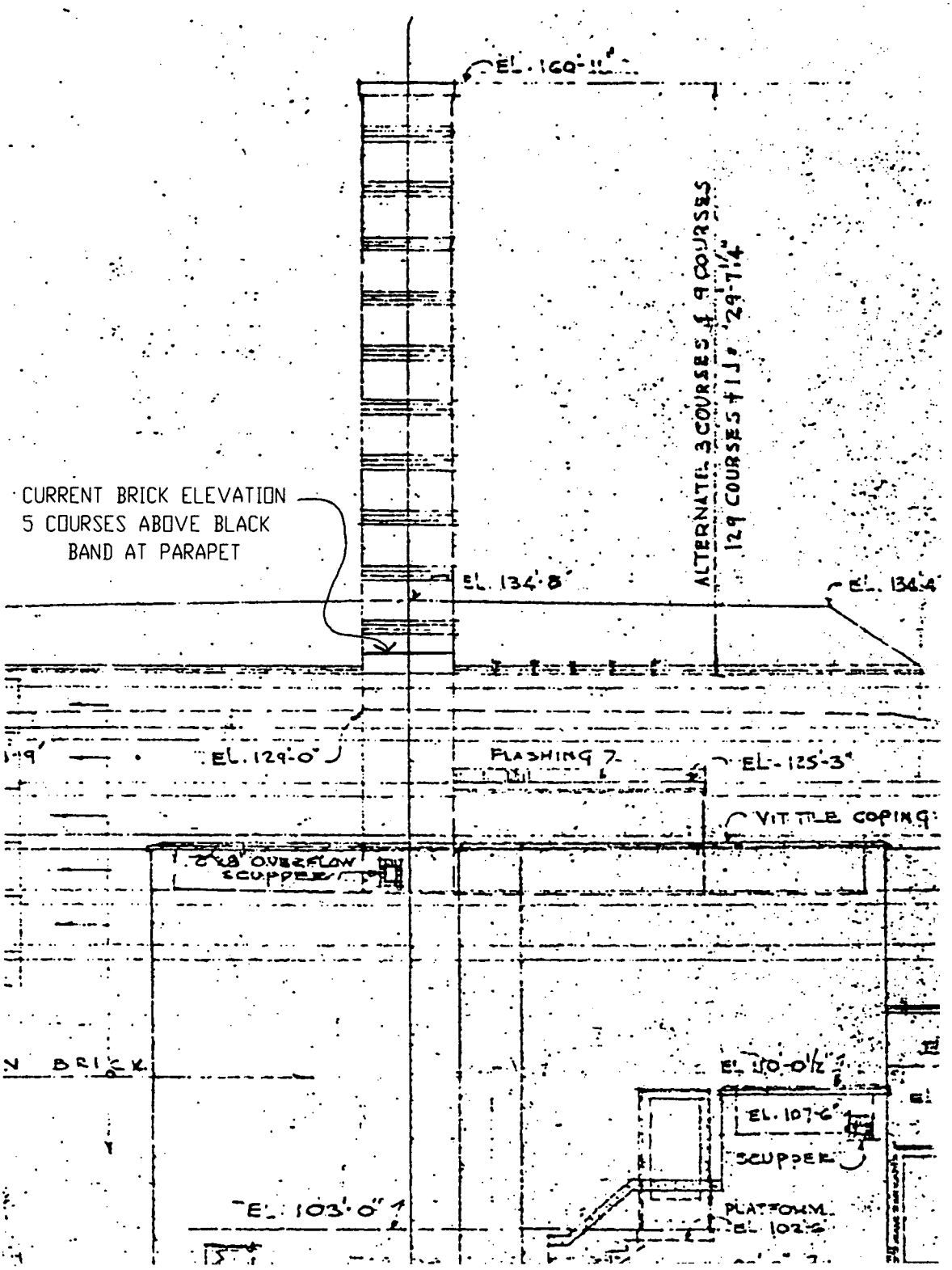
007 Existing original sheet metal scupper and caststone parapet wall cladding with buff brick parapet wall below (1998 photograph).



008 Juncture of caststone and terra-cotta parapet caps at the northwest corner of auditorium roof (1998 photograph).



009 Exterior view of original parapet wall scupper in the auditorium parapet wall to the right in the distance (1995 photograph).

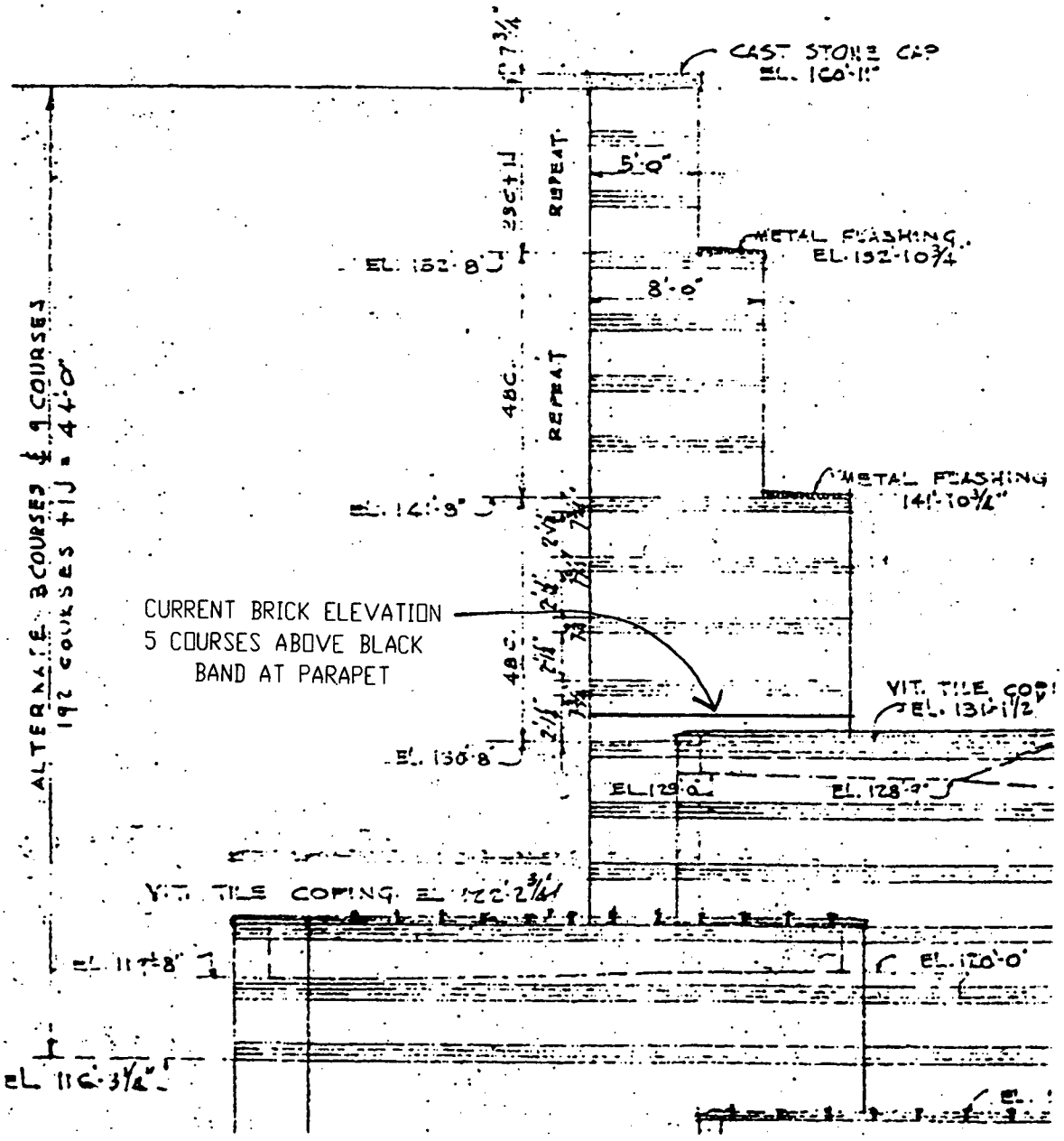


EAST ELEVATION

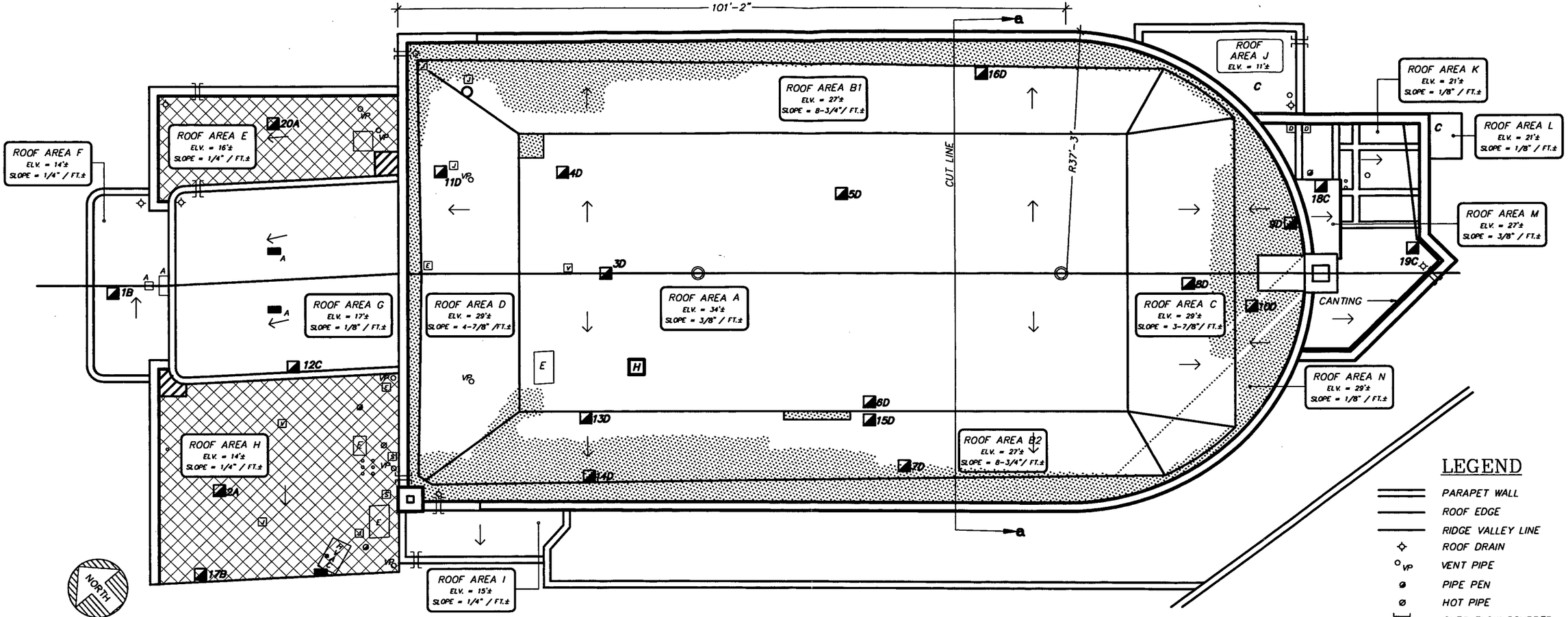
ALTERNATE BANDS OF BRICK
9 COURSES PER BAND - CREAM BRICK
3 COURSES PER BAND - BLACK BRICK

REPLACE
10 FULL BANDS - CREAM BRICK
10 FULL BANDS - BLACK BRICK
4 COURSES - CREAM BRICK

TOTAL REPLACEMENT OF 124 COURSES OF BRICK



SOUTH ELEVATION

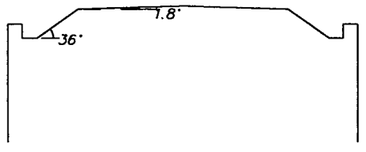


PLAN OF ROOF SHOWING EXTENT OF DECK REPLACEMENT

GRAPHIC SCALE

0 4' 8' 16' 24'

BASED ON PLAN AND INFORMATION SUPPLIED BY GALE ASSOCIATES, INC.



SECTION a–a
SCALE: 1/16"=1'-0"

ROOF AREA

AREA A+B+C+D+N=	9100 sq. ft.
AREA E=	480 sq. ft.
AREA F=	310 sq. ft.
AREA G=	980 sq. ft.
AREA H=	1150 sq. ft.
AREA I=	170 sq. ft.
AREA J=	190 sq. ft.
AREA K=	500 sq. ft.
AREA L=	35 sq. ft.
AREA M=	65 sq. ft.

LEGEND

- PARAPET WALL
- ROOF EDGE
- RIDGE VALLEY LINE
- ROOF DRAIN
- VP VENT PIPE
- PIPE PEN
- HOT PIPE
- OVER FLOW SCUPPER
- POURABLE SEALER POCKET
- A PSP TO BE REMOVED
- J GOOSE NECK VENT
- E EQUIPMENT CURB
- F FAN UNIT
- H ROOF HATCH
- S SKYLIGHT
- D CLOSED DUCT
- SLOPE INDICATOR
- HVAC HVAC UNIT
- 13D TEST CUT INDICATOR, ROOF TYPE
- DAMAGED DECK–(GYPSUM)
- DAMAGED DECK–(WOOD)

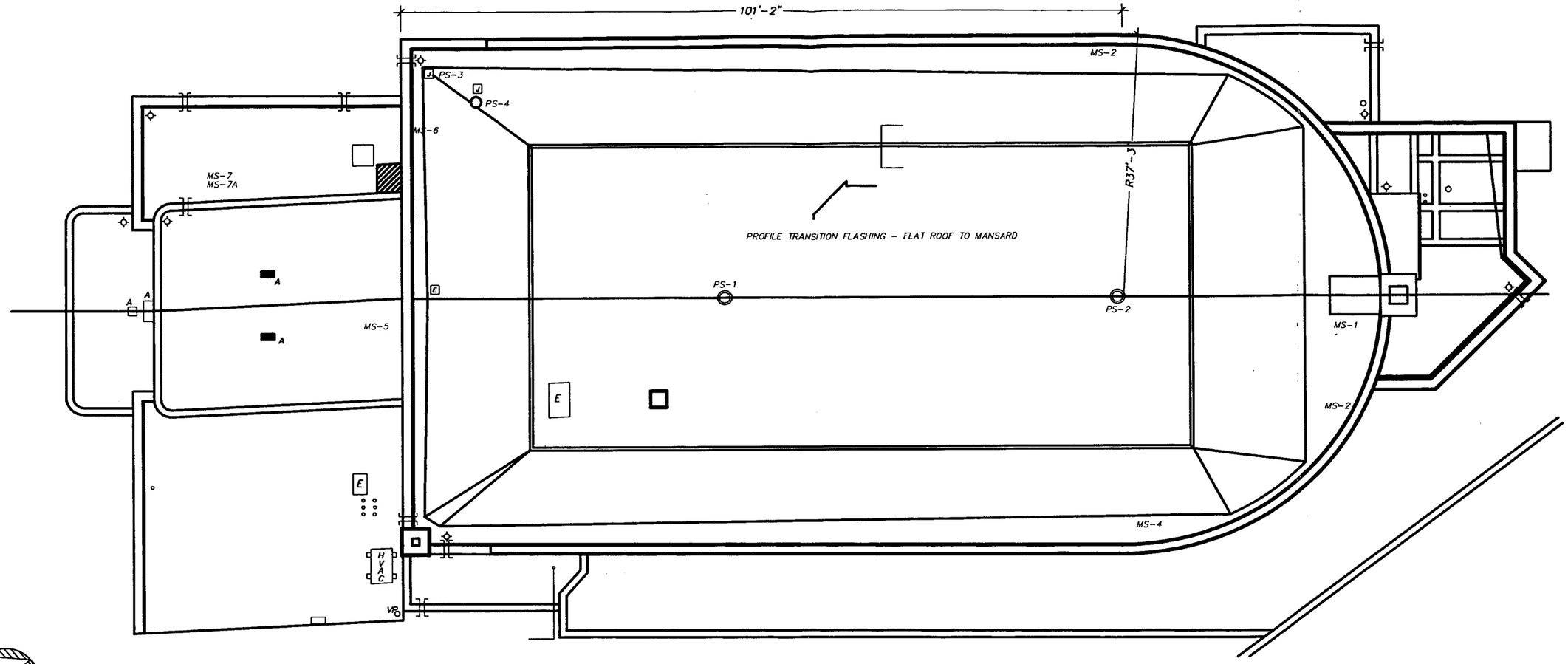
VITETTA GROUP
ARCHITECTURE ▢ ENGINEERING ▢ PLANNING ▢ INTERIOR DESIGN

JOB TITLE: SILVER THEATER PHASE I

JOB NO.	SUBJECT:	BY:	DATE	CHK'D.	DATE	PAGE	OF
VG 6142.0000	ROOF REPORT	MRB	4/3/98	CR	4/3/98	1	2

ROOF

SK-1



PLAN OF ROOF SHOWING LOCATIONS OF PAINT AND MORTAR SAMPLING

BASED ON PLAN AND INFORMATION SUPPLIED BY GALE ASSOCIATES, INC.

GRAPHIC SCALE

0 4' 8' 16' 24'

KEY TO PAINT SAMPLES

- PS-1: ROOF TOP VENTILATOR - BOTTOM SHAFT
- PS-2: ROOF TOP VENTILATOR - OUTER RIM (INSIDE FACE)
- PS-3: GOOSE NECK - NORTH FACE (UNDER NECK)
- PS-4: ROOF TOP VENTILATOR (NORTH SIDE SHAFT)

KEY TO MASONRY SAMPLES

- MS-1: INBOARD CHIMNEY FACE
- MS-2: PARAPET MORTAR (INBOARD FACE)
- MS-3: TERRA COTTA PARAPET CAP - JOINT
- MS-4: INSIDE PARAPET MORTAR AT CRACK AT STEEL (WEST)
- MS-5: BLACK BRICK MORTAR - OUTBOARD FACE
- MS-6: CASTSTONE PARAPET MORTAR (CAP STONE)
- MS-7: CASTSTONE POINTING MORTAR
- MS-7A: CASTSTONE BEDDING MORTAR

VITETTA GROUP

ARCHITECTURE ▫ ENGINEERING ▫ PLANNING ▫ INTERIOR DESIGN

JOB TITLE: SILVER THEATER PHASE I									
JOB NO.	SUBJECT:	BY:	DATE	CHK'D.	DATE	PAGE	OF	ROOF	SK-2
VG 6142.0000	ROOF REPORT	MRB	4/3/98	CR	4/3/98	2	2		

ATTACHMENT A

United States Gypsum Company

System Folder SA-305

Cementitious Deck Gypsum Roof Systems

lower energy demands

low-cost noise control

improved fire protection

lower insurance rates

reduced construction costs

high structural strength

design versatility

all-weather installation

USG

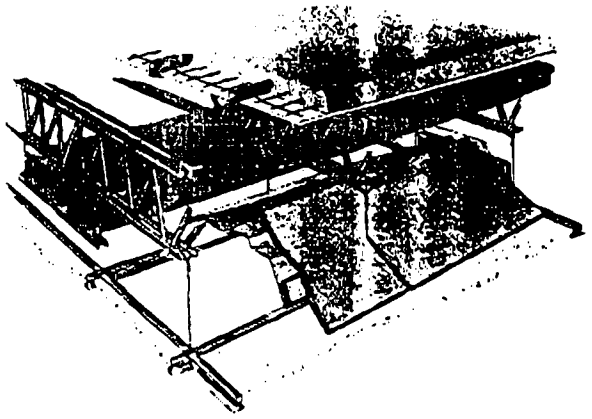
Gypsum Roof Deck Systems SA-305

Two Basic Deck Systems

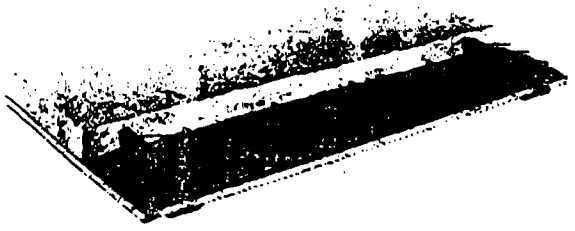
1. Fire-Rated Gypsum Roof Decks of PYROFILL Gypsum Concrete are poured in place over galvanized reinforcing mesh and formboards supported by steel sub-purlins. Formboards are left exposed or a rated finished ceiling is suspended below. The result is a rock-hard, monolithic roof deck system that resists hurricane uplift wind forces up to 125 psf; resists seismic shock well in excess of building code requirements; and has passed the UL Wind Uplift Class 90 test. Gypsum decks are rated noncombustible and their use dramatically reduces insurance rates for lifetime savings. Gypsum sets fast, so roofing can be applied without undue delay. These features make the systems ideal for schools, hospitals, warehouses, industrial construction and other buildings where up to 2-hour fire resistance is required.
2. USG Service Ceiling Systems provide walk-deck ceilings to permit full access to the interstitial space between the Service Ceiling and the floor above.

Limitations

1. Gypsum roof decks are suitable for normal temperature and humidity conditions. Acid fumes, generally not harmful to gypsum, may affect framing. Where such abnormal conditions prevail, consult a specialist for particular recommendations.
2. Certain recommendations concerning drying and ventilation, expansion and contraction, decorating and roofing must be adhered to for satisfactory performance (see Specifications on page 9 for details).
3. Although SHEETROCK brand Formboard is treated to resist mildew growth, such growth can occur under adverse conditions. See Notes to Architect for details of precautionary measures in notes 1, 2, 3, 4, and 7.



deck with ceiling



basic gypsum deck

Fire Ratings

A choice of fire-rated systems with exposed deck construction, suspended acoustical or drywall ceilings

The UL-tested USG roof deck systems listed below ensure the extra protection required in specific applications. USG's policy of comprehensive testing of complete roof systems offers high-quality decks that meet all major building codes.

UL Design No. P676 (Rating—2 hr.)
Two-in. PYROFILL Poured Gypsum Concrete and KEYDECK Reinforcing Mesh on ½-in. exposed SHEETROCK brand Formboard supported by KEYDECK Truss Tees spaced 32¾ in. o.c. on fireproofed beams 8 ft. o.c. max. System rated 1½ hr. with beams 9 ft. o.c. max. Slab weight: 11 psf.

UL Design No. P503 (Rating—2 hr.)
Two-in. PYROFILL Poured Gypsum Concrete and KEYDECK Reinforcing Mesh on ½-in. SHEETROCK brand Formboard supported by KEYDECK Truss Tees spaced 32¾ in. o.c. and welded to 14-in. steel bar joists spaced 4 ft. o.c. max.; USG Metal Furring Channels spaced 24 in. o.c. wire-tied to joists, ⅝-in. SHEETROCK brand Gypsum Panels, FIRECODE C Core, screw-attached to channels, joints unfinished or taped. Restrained assembly rated 2 hr.; unrestrained assembly 1½ hr. Slab weight: 11 psf.

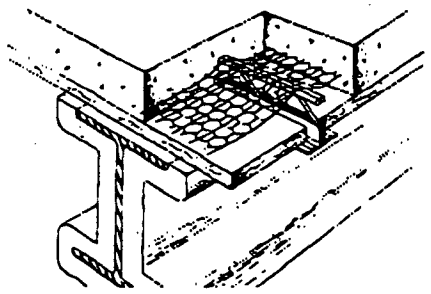
UL Design No. P207 (Rating—1½ hr.)
Two-in. PYROFILL Poured Gypsum Concrete reinforced with KEYDECK Wire Mesh on ½-in. SHEETROCK brand Formboard supported by KEYDECK Bulb Tees spaced 32 in. o.c. and welded to 12-in. steel bar joist 4 ft. o.c. max. and AURATONE FIRECODE Acoustical Panels suspended on an exposed rated grid system. Slab weight: 11 psf.

UL Design No. P229 (Rating—1 hr.)
Two-in. PYROFILL Poured Gypsum Concrete and KEYDECK Reinforcing Mesh on ½-in. SHEETROCK brand Formboard supported by KEYDECK Truss Tees spaced 32¾ in. o.c. and welded to 10-in. steel bar joists spaced 6 ft. o.c. max.; IRMA roof assembly—built-up roofing on slab, maximum 8-in. rigid foam plastic insulation above roofing with crushed stone over insulation, ⅝-in. AURATONE FIRECODE Ceiling Panels on a suspended exposed rated grid system, restrained and unrestrained assembly rated 1 hr. Slab weight: 11 psf.

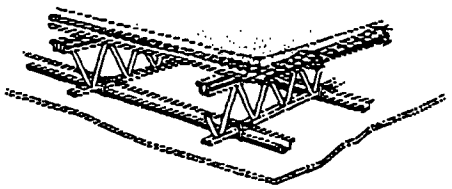
UL Design No. P505 (Rating—1½ hr.)
Two-in. PYROFILL Poured Gypsum Concrete and KEYDECK Reinforcing Mesh on ½-in. SHEETROCK brand Formboard supported by KEYDECK Truss Tees spaced 32¾ in. o.c. and welded to bar joists spaced 4 ft. o.c. max.; IRMA roof assembly—built-up roofing on slab, maximum 8-in. rigid foam plastic insulation above roofing with crushed stone over insulation; USG Metal Furring Channels spaced 24 in. o.c. wire-tied to joists, ⅝-in. SHEETROCK brand Gypsum Panels, FIRECODE C Core, screw-attached to channels, joints exposed or finished. Restrained assembly rated 1½ hr.; unrestrained assembly 1 hr. Slab weight: 11 psf.

UL Design No. P507 (Rating—1½ hr.)
Two-in. PYROFILL Poured Gypsum Concrete and KEYDECK Reinforcing Mesh on ½-in. SHEETROCK brand Formboard supported by KEYDECK Truss Tees spaced 32¾ in. o.c. and welded to bar joists spaced 4 ft. o.c. max.; IRMA roof assembly—built-up roofing on slab, maximum 8-in. rigid foam plastic insulation above roofing with crushed stone over insulation; light fixtures and dampers, ⅝-in. SHEETROCK brand Gypsum Panels, FIRECODE C Core, screw-attached to suspended rated grid system, joints finished. Restrained assembly rated 1½ hr.; unrestrained assembly 1 hr. Slab weight: 11 psf.

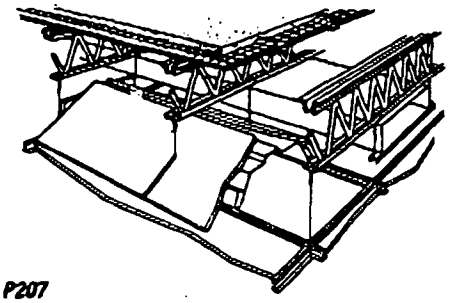
UL Designs



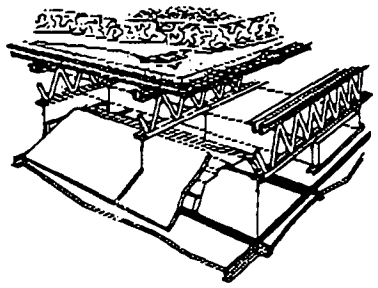
UL Des. P676



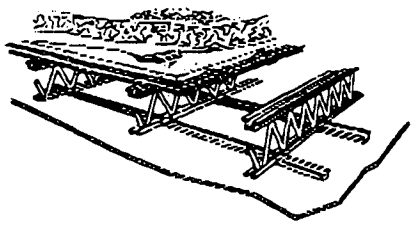
UL Des. P503



UL Des. P207



UL Des. P229 & P507



UL Des. P505

PYROFILL Gypsum Concrete is mill formulated and composed of calcined gypsum and wood chips or shavings. It is mixed at the jobsite with clean water only and poured in place over permanent formboards. Thermal resistance (R) value is 0.67 per inch. It complies with ASTM C317.

Steel sub-purlins vary in size, weight and shape and are selected according to required span and loading (see page 5). They provide lateral bracing, anchorage against uplift, and restrict deck movement due to temperature change. Sub-purlin spacing accommodates formboard with a slight tolerance for ease of formboard placement. Sub-purlins are spaced approx. 32¾ in. o.c. and are welded to the structural framing members. USG neither manufactures nor sells bulb or truss tee sub-purlins. Roll-formed USG sub-purlins are available 18 ga. and 16 ga.

Reinforcing mesh for gypsum concrete is one of the following types:

1. KEYDECK—A galvanized wire mesh, woven with 16-ga. straight wires and 19-ga. diagonal wires.
2. 48-1214—A galvanized, welded wire mesh with 12-ga. longitudinal wires at 4 in. o.c. and 14-ga. transverse wires at 8 in. o.c.

The effective cross-sectional area of reinforcing mesh placed at 90° to the sub-purlins is .026 sq. in. per foot of mesh width. USG neither manufactures nor sells reinforcing mesh.

SHEETROCK brand Formboard is a rigid gypsum board, treated to resist mildew* effectively where adequate ventilation is provided. Fire ratings are available with 2-in. gypsum slabs and exposed tees. Ideal for almost every roof deck need, concealed or exposed. Makes economical ceilings for warehouses, light manufacturing buildings, schools—any construction where durability and low cost are desired.

*Although SHEETROCK brand Formboard is treated to resist mildew growth, such growth can occur under adverse conditions. See Notes to Architect for details of precautionary measures in notes 1, 2, 3, 4, and 7.

Structural Strength

To withstand hurricane winds, wind uplift and roof loads . . .

USG roof deck systems form a monolithic unit that structurally integrates the roof deck with the roof framing. Sub-purlins, securely welded to bar joists or purlins, resist uplift and transmit slab loads. Reinforcing mesh provides tensile strength, enables the slab to transmit the load to the framing. With truss tees, the gypsum fill flows through the open web to mechanically key all components into a structural unit. The resulting rigid diaphragm firmly resists horizontal and vertical loading from wind and seismic forces.

Gypsum concrete decks have high structural strength and a hard surface. In tests, standard assemblies supported uniform roof loads over 450 psf when wet and 700 psf when dry. At a dry density of 50 pcf for PYROFILL Gypsum Concrete, the compressive strength of the slab is 500 psi min. This conforms to ASTM C317 for Class A gypsum concrete.

USG roof decks with long, clear spans can be designed for fewer bar joists to optimize design.

In hurricane areas, such as Florida, standard gypsum roof decks have withstood repeated fierce blows without damage. This is because USG roof decks resist uplift action by nearly four times the normal requirements of 35 psf when constructed with bulb or truss tee sub-purlins welded to the primary framing.

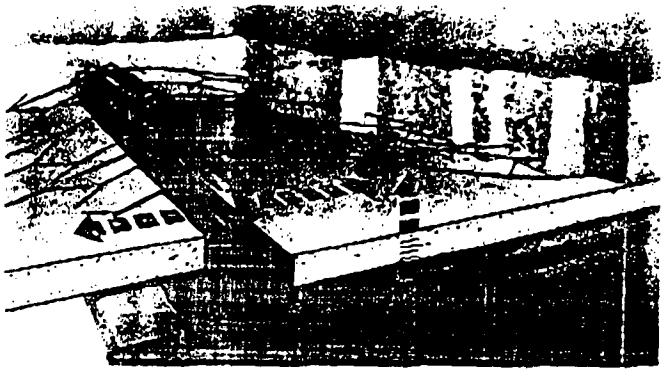
UL Wind Uplift Class 90 has been assigned to a poured gypsum concrete roof deck assembly based on qualified testing (see NM

513 in UL Roofing Materials and Systems Directory). The system tested consisted of PYROFILL Gypsum Concrete over SHEETROCK brand Formboard with bulb tees, KEYDECK Mesh and roof covering attached with NAIL-TITE Nails. This USG assembly successfully withstood the rigorous test—while most competitive deck systems have not. Extended coverage insurance rates are generally lower for assemblies having passed the test, especially in Gulf Coast and Prairie States where high wind velocities are prevalent.

To resist seismic shock or to reinforce the building . . .

USG roof decks provide excellent lateral bracing. They have withstood some of the most severe earthquakes in California and have been approved as rigid diaphragms in Los Angeles and in many of the 1,000 cities which use the Uniform Building Code.

USG poured gypsum roof decks with bulb tees or truss tees structurally tie the framing system together to reinforce the building and provide resistance to wind and seismic loads.



Open-web construction allows gypsum fill to flow through truss tee to embed it in a solid mass of gypsum concrete. This, plus welding of truss tee to supports, provides strong composite resistance to shear and uplift. The mesh provides tensile strength to reinforce the deck. Cracking and deflection caused by impact and seismic shock are minimized.

Economy

USG decks give more for less . . . in fire-rated systems

Initial savings can amount to thousands of dollars in construction investment when USG fire-rated roof decks are specified. A UL 2-hr. fire-rated system often costs only a few cents per sq. ft. more than a non-rated system . . . and considerably less than other types of 2-hr. UL fire-rated decks. USG decks enjoy ready acceptance from major code bodies and insurance companies. Savings are achieved through the unique advantages that USG roof decks offer in strength, fire resistance and durability.

In Fast Installation

Up to 30,000 sq. ft. of gypsum deck can be poured in one day. The quick-setting action of gypsum concrete permits roofing almost immediately. There's no wait for curing as with ordinary lightweight concrete decks; no costly delays in erection schedules.

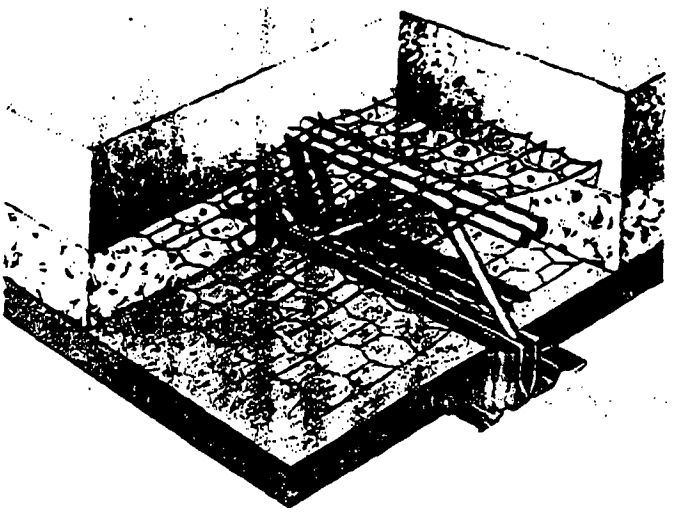
USG roof decks can be poured in cold weather; in any weather in which men can work. The quick-setting action of gypsum concrete makes it one of the best roof deck materials for winter construction. The exothermic reaction in the slab protects it from freezing before set takes place and the slab is capable of carrying design loads.

In Reduced Construction Costs

USG gypsum roof decks meet Factory Mutual Noncombustible Classification to qualify for lowest extended-coverage insurance rates without the clear-span limitations imposed upon steel roof deck designs. With gypsum decks, bar joist spacing can be optimized for major cost reductions over steel and lightweight concrete systems.

In Total Value

USG gypsum roof decks are the best value in the industry. They offer maximum economy without sacrificing safety or strength. They resist rot, warpage and deterioration to cut maintenance costs and also reduce insurance rates.



double-board poured gypsum deck

Northlake Mall, Atlanta, GA
Architect: Toombs, Amisano & Wells

[redacted]

For product information and services, contact:

The Poteet Group
310 Sardis View Lane
Charlotte, NC 28270
(704) 364-2543
Fax (704) 366-9721

United States Gypsum Company
125 South Franklin Street
P.O. Box 806278
Chicago, IL 60680-4124
A Subsidiary of USG Corporation

P-697/1-95 Printed in U.S.A.

ATTACHMENT B

Gale Associates, Inc.

5550 Newbury St. Baltimore, MD 21209 FAX: (410) 664-0711 TEL: (410) 664-0611

MEMORANDUM

TO:	Don Scheuerman, MCG	PH :	301 217-6075
		FAX:	301 271-6045
		RE:	Silver Theatre
CC:	Chris Ruffing, Vitetta fax (703) 683-1662		
	Ed Madden, GALE Assoc.		

FROM: Gary W. Brown, P.E. JOB NO: 652810

DATE: 3/31/98 No. of Pages including cover sheet: 5

RE:

We have completed our initial field work and some preliminary design calculations for the Silver Theatre project.

STRUCTURE

The areas of deteriorated gypsum decking are primarily found in the valley sections and portions of the steep slope area of the main roof. Also, the wood decking on the roof areas E and H (see attached plan) are saturated. The test pulls, where applicable, are shown on the attached log and are referenced on the roof plan.

New decking materials will be required in the locations shown on the roof plan. GALE recommends that a plank type material is installed to replace the gypsum. The planks must be able to span the distance between the existing bulb tees. Additionally, the existing reinforced deck spans from support to support utilizing wire mesh. The new decking should be specified to span at least this distance. Cementitious woodfiber (CWF) by Tectum, Inc. or concrete planks (e.g. MidCon metal edge of Hortonville, WI or Steel Edge Crete-plank by Martin Fireproofing of Buffalo, NY) are examples of potential deck replacement materials. Since the concrete planks do not tout the acoustical properties of their material as Tectum does, GALE assumes that CWF will act as a better sound insulator than the concrete planks. Note that this assumption is based on observation and not empirical data, so we will be willing to discuss the design parameters with all parties as the project progresses.

The structure beneath the wood decks was inaccessible to us during our survey so we are not able to determine the most feasible deck replacement material, but can assume at this stage that new tongue and groove wood decking or other lightweight construction materials can be utilized to replace the existing deteriorated deck. Our rooftop field survey indicated that the entire areas were damaged so a complete replacement should be anticipated.

DRAINAGE

We have also calculated the drainage requirements of the building based on BOCA codes and the more stringent design of SMACNA. The two existing six inch drains near the front of the building (north side) are sized to accommodate the drainage requirements of a one hundred year storm (BOCA National Plumbing Code 1993).

SMACNA Fifth Edition, 1993 requires that the two existing drains should be eight inches rather than six inches for the same 100 year storm. The addition of supplemental drainage and some minor redesign of the contours of the roof on the south side of the building can nearly alleviate the capacity overloading of the existing six inch drains and leaders on the north side of the building. If we introduce new drainage from roof areas C and N onto roof area K, the total flow (Q) from the aggregate roof areas is 0.287 ft^3/s for the 100 year storm (I=9.7 in/hr, A=0.029 acres, average C=0.95). This flow may be used in calculating drainage for storm water management. Note that the drainage on the north end of the building will be reduced from the existing condition with the introduction of the new drains on the south end, therefore no flow calculations have been developed.

THERMAL

Our roof designs for Montgomery County typically include provisions for insulation meeting ASHRAE 90.1 requirements. The total average R-value requirement for the system, including air spaces, is 16.6 per these requirements. Accordingly, the roofing system on all areas should receive two inches of isocyanurate plus an inch of wood fiberboard. These may be reduced if the County directs GALE to disregard this requirement, but some insulation is required to act as a substrate for the membrane in any case.

ARCHITECTURAL

The membrane choice is based on the configuration of the building and the desire to closely emulate the historic aspects of the structure. Although a light colored membrane (e.g. white granular surfaced modified bitumen) is more resilient than darker membranes due to their ability to reflect sunlight better (and therefore reduce the effects of thermal shock), GALE has considered the use of a black granular surfaced membrane over a four ply built up roof on the

Gale Associates, Inc.

5550 Newbury St. Baltimore, MD 21209 FAX: (410) 664-0711 TEL: (410) 664-0611

low traffic, low slope roof areas. Alternatively, a two (or more) ply modified bitumen system in a cold or hot asphalt application can be used on the low sloped roofs.

The low slope, high traffic areas should receive a lighter colored surface or the provision of walkpads to eliminate tearing of the membrane which occurs under load (work boots, tool boxes, etc.) at elevated temperatures.

The steep slope areas of the roof must be designed to apparently resemble built up roofing or roll roofing. The steep slope of Areas B, C, and D is greater than what GALE would recommend using asphalt or coal tar pitch. Consequently, we have considered designing the areas with fully adhered EPDM (with a nailer grid pattern) coated with hypalon paint and broadcast sand. An alternative design would be to use asphalt shingles in a pattern and appearance which somewhat resemble the roll roofing, but eliminating the horizontal lines will not be completely feasible. A third option would be to install two plies of modified bitumen (cap sheet with black granules) in a cold adhesive. The adhesive would need to be the trowel grade flashing adhesive and back nailing would be necessary.

The valley sections are of particular concern (evidenced by the existing failure) and require special attention. The valleys for the EPDM or shingle options may be accomplished with EPDM. The modified bitumen option could be accomplished with modified bitumen valley section. GALE will provide all details as required depending on the option which is chosen.

From a contractor's construction management standpoint and a manufacturer's culpability standpoint regarding leaks, the alternative which reduces the amount of different materials and manufacturers makes sense. From a purely waterproofing point of view, the combination of the four ply BUR with cap sheet, the shingles on the mansard and EPDM valleys is an appropriate solution.

Please call me as soon as you can to discuss GALE's findings.

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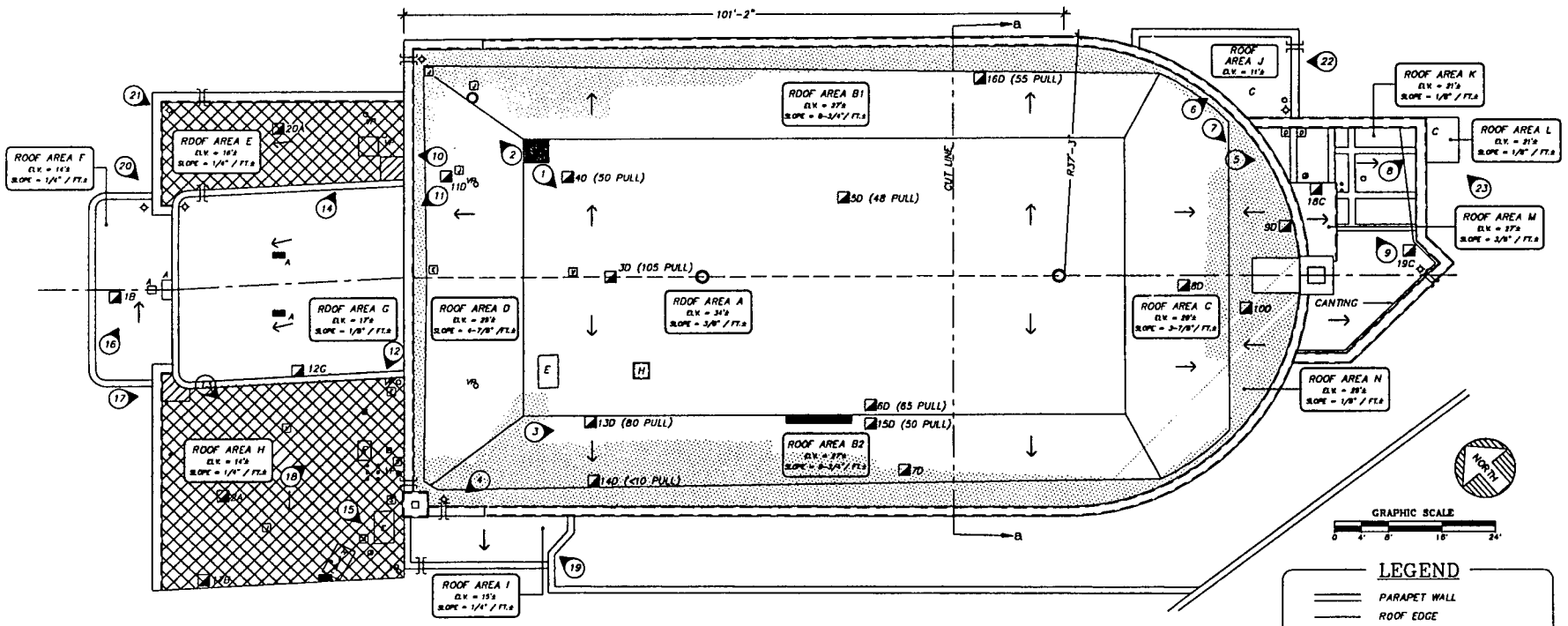
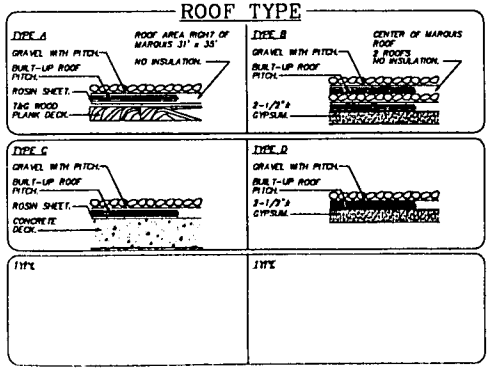
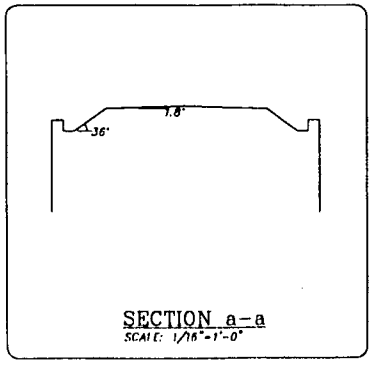


GENERAL NOTES

1. REMOVE EXISTING ASPHALT BUILT-UP AND MODIFIED BITUMEN MEMBRANES, METAL ROOFING, BITUMINOUS AND SHEET METAL FLASHINGS, ABANDONED POURABLE SEALER POCKETS, ROOFTOP INSULATION AND ASSOCIATED APPURTENANCES THROUGHOUT THE ROOF AREAS DOWN TO THE STRUCTURAL ROOF DECK.
2. REMOVE, RAISE AND REINSTALL ALL ROOFTOP HVAC UNITS. UNITS ARE TO BE REINSTALLED ON NEW ELEVATED STEEL FRAMING.
3. THE INFORMATION SHOWN ON THE DRAWINGS HAS BEEN COMPILED FROM VARIOUS SOURCES, AND MAY NOT REFLECT THE ACTUAL CONDITIONS AT THE TIME OF CONSTRUCTION.
4. REMOVE EXISTING DRAIN BOWL ASSEMBLIES IN PREPARATION FOR NEW ASSEMBLIES.
5. ROOFING AND FLASHINGS SHALL BE 100% WEATHERTIGHT ON A DAILY BASIS. REMOVE ONLY AS MUCH ROOFING AS CAN BE MADE WEATHERTIGHT ON THE SAME DAY. PHASED CONSTRUCTION SHALL BE ALLOWED ONLY AS SPECIFIED IN THE CONTRACT DOCUMENTS.
6. DISCONNECT, REMOVE, RAISE AND RECONNECT EXISTING APPURTENANCES AS REQUIRED TO PROVIDE THE MINIMUM SPECIFIED FLASHING HEIGHTS.
7. THE CONTRACTOR SHALL REPORT DETERIORATED OR UNSUITABLE STRUCTURAL DECK TO THE OWNER PRIOR TO PERFORMING ROOFING WORK.

ROOF TYPE





SECTION a-a
SCALE: 1/16"=1'-0"

LEGEND

- PARAPET WALL
- ROOF EDGE
- RIDGE VALLEY LINE
- ROOF DRAIN
- VP — VENT PIPE
- PIPE PEN
- HOT PIPE
- OVER FLOW SCUPPER
- POURABLE SEALER POCKET
- PSP TO BE REMOVED
- GOOSE NECK VENT
- EQUIPMENT CURB
- FAN UNIT
- ROOF HATCH
- SKYLIGHT
- CLOSED DUCT
- SLOPE INDICATOR
- HVAC UNIT
- PHOTO INDICATOR
- 13D (80 PULL) — TEST CUT INDICATOR, ROOF TYPE (PULL VALUE)
- DAMAGED DECK-(GYPSUM)
- DAMAGED DECK-(WOOD)

Gale Associates, Inc.
Boston • Baltimore • Orlando • San Francisco
5550 Newbury St. • Baltimore, MD 21209 • (410) 664-0611

DESIGN BY: GWB
DRAWN BY: LSJ
REVIEWED BY: TSK
CADD FILE: 523100P2

DECK REPLACEMENT PLAN
SILVER SPRING SHOPPING CENTER
SILVER SPRING, MARYLAND

DATE: MARCH 1998
GALE JN: 652810
SCALE: 1" = 8'-0"
SHEET: A2
2 OF 2

Silver Theater
Montgomery County
GALE JN: 642810

TEST CUT NUMBER		ROOF TYPE		ROOF AREA
1	Verification Cut	B	Dry to touch	F
2	Verification Cut	A	Moist to touch	H
3	Verification Cut	D	(105 pull value) dry	A
4	Verification Cut	D	(50 pull value) dry	A
5	Verification Cut	D	(48 pull value) dry	A
6	Verification Cut	D	(65 pull value) dry	A
7	Verification Cut	D	Saturated	B2
8	Verification Cut	D	Moist to touch	C
9	Roof to Wall	D	West to touch	N
10	Verification Cut	D	Wet to touch	N
11	Verification Cut	D	Dry to touch	D
12	Roof to Wall	C	Dry to touch	G
13	Verification Cut	D	(80 pull value) dry	B2
14	Verification Cut	D	(40 pull value) dry	B2
15	Verification Cut	D	(50 pull value) dry	B2
16	Verification Cut	D	(55 pull value) dry	B1
17	Edge Cut	A		H
18	Edge Cut	C		M
19	Verification Cut	C	Dry to touch	K
20	Verification Cut	A	Saturated	E

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ATTACHMENT C

SITE VISIT REPORT

PROJECT: Silver Theater Restoration

PROJECT NO.: HP404

SITE VISIT NO.: 01

DATE OF VISIT: January 29, 1998

DATE OF TYPING: February 11, 1998

ATTENDEES:

Don Scheuerman, Jr.	Montgomery County
Todd Gerhart, P.E.	Vitetta Group
Chris Ruffing	Vitetta Group

The purpose of the site visit was to observe the existing roof structure and plaster ceiling support structure and identify deterioration of the existing roof deck, steel framing and ceiling black iron due to water infiltration from the leaks in the roofing.

01.01 The existing roof system over the theater seating area consists of a poured gypsum deck on bulb-Tees supported by wide flange purlins spanning between steel trusses. The steel trusses clear span the theater seating area and bear on steel columns in the masonry walls on the north and south sides of the theater. The poured gypsum deck appeared to be 2 to 3 inches thick including the ½ inch gypsum board form spanning between the bulb-Tees and was reinforced with wire mesh.

01.02 The effects of recent water infiltration through the roof did not appear to effect the steel purlins and trusses. No structural distress attributed to water infiltration was observed in the exposed steel roof framing. The steel primer paint was still bonded to the steel framing and virtually no corrosion was observed except a localized areas adjacent to leaking roof drains. The continued water infiltration at these isolated locations has removed the primer paint and initiated localized surface corrosion. However, even at these local areas, steel section loss due to corrosion appeared insignificant. These observations should be further verified during the proposed restoration. Our initial observations indicate only minor structural repairs will be necessary at these localized areas.

01.03 The gypsum roof deck was more effected by the recent water infiltration, but again only in localized areas. The majority of the roof deck and bulb-Tees exhibited no signs of deterioration or structural distress. In localized areas, the gypsum form board was sagging, loose and stained from water infiltration. Removing the form board exposed the bottom of the deck for observation. In most locations, deck appeared to be in no distress from the water infiltration even though the form board had sagged. In the areas of significant water infiltration, the gypsum had been either partially or completely eroded exposing the bulb-Tees and wire mesh. The bulb-Tees and wire mesh showed signs of corrosion and some section loss. Our initial observations indicate that replacement or repairs of portions of the gypsum roof deck will be necessary at these localized areas. A more thorough investigation and documentation of the existing roof deck is required to more carefully define the areas requiring replacement or repairs.

01.04 Distress in the black iron, ties, and metal lath supporting the plaster ceiling effects of water infiltration was limited to the localized areas of significant water infiltration. In these locations, minor corrosion of the steel ceiling framing was observed. However, the cause of the localized plaster holes was a result of failure of the plaster due to the water rather than corrosion of metal ceiling framing. Similar to the gypsum roof deck, localized replacement and repairs will be required.

01.05 A horizontal crack in the existing north and south parapet walls was reviewed during our site visit. The crack occurs approximately 4 to 5 brick courses from the parapet cap and appears to be a through wall crack. The crack is continuous on both the north and south wall parapets, although it is more pronounced on the south wall than the north. At the northeast corner of the building, a piece of steel was observed in the parapet at the horizontal crack location. Also, a review of the existing building cross sections indicates what appears to be an angle in the parapet at that approximate location. If the parapet does contain hidden steel at this location in the parapet, that may be the cause of the observed horizontal crack. Further investigation is required to identify the cause of the crack and appropriate repair actions.

01.06 The existing steel stubs left from the original sign over the entry were observed on the low roof above the lobby. These stubs did not appear to be in deteriorated from exposure and can be reused if a replica of the original sign is replaced. An investigation of the stub connections to the roof framing needs to be completed to be sure that no hidden distress exists prior to reuse.

01.07 Attached are copies of photos taken during the site visit.

/sg

Attachments

cc: CR/HM/JWS

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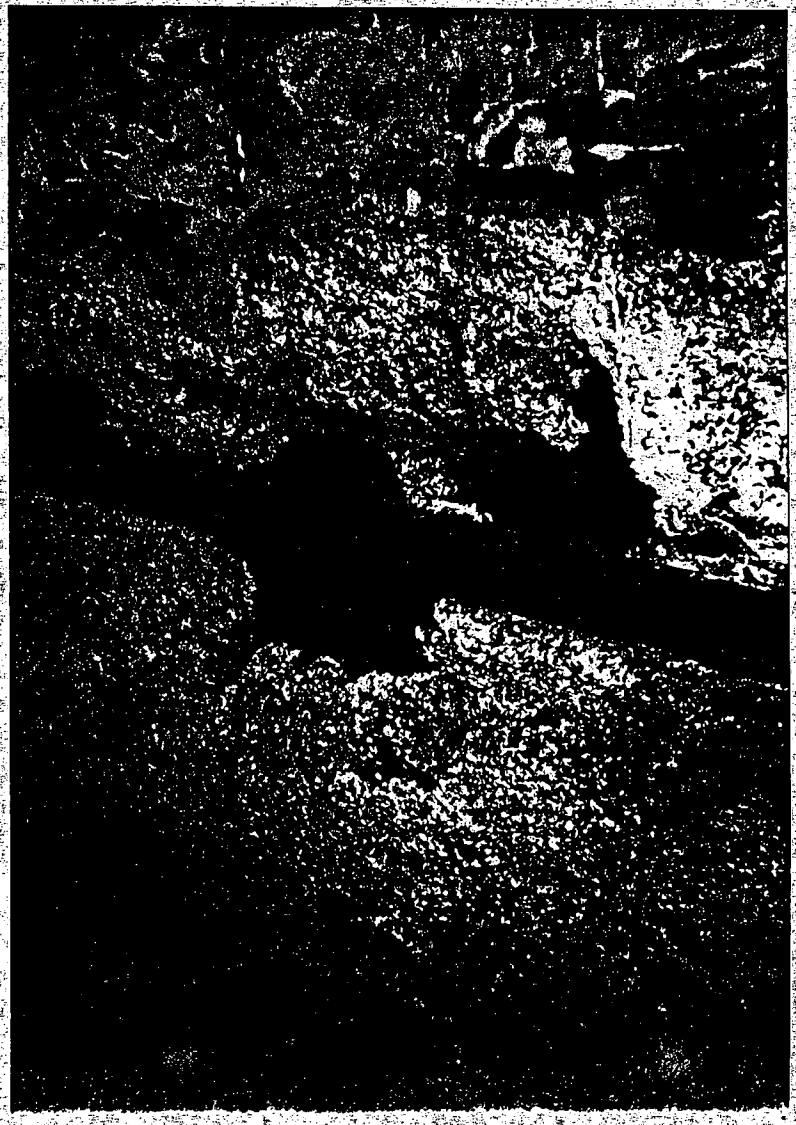
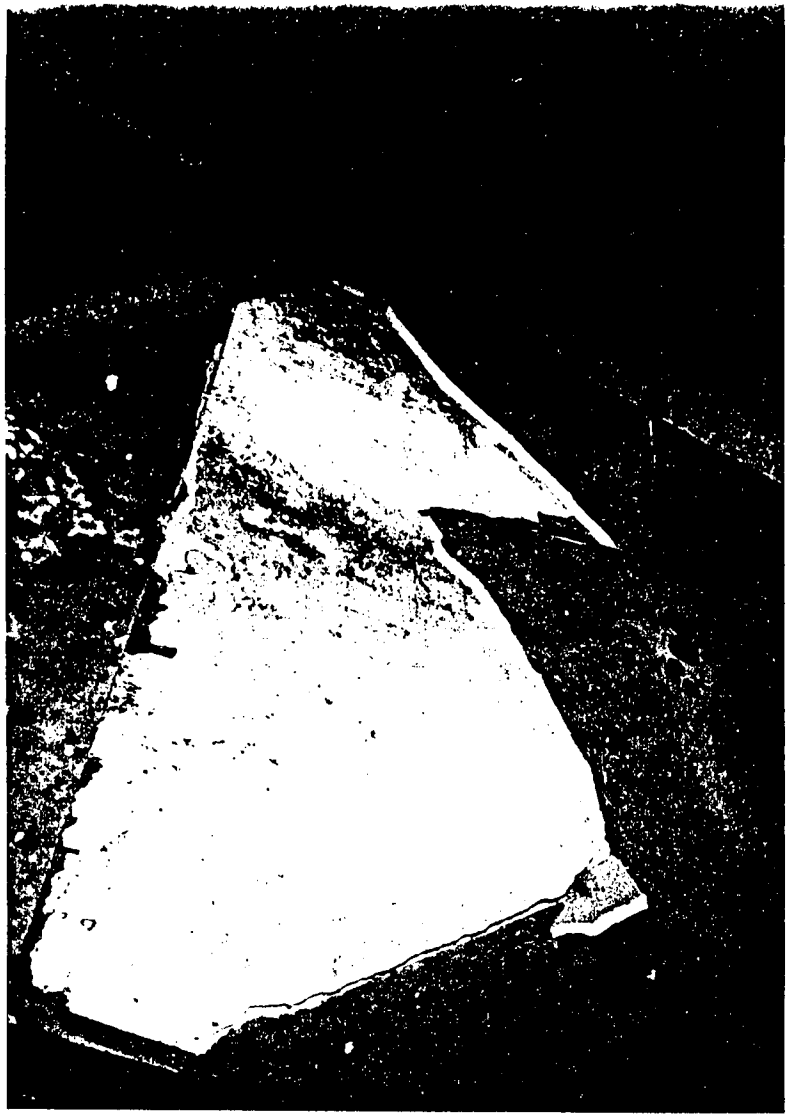
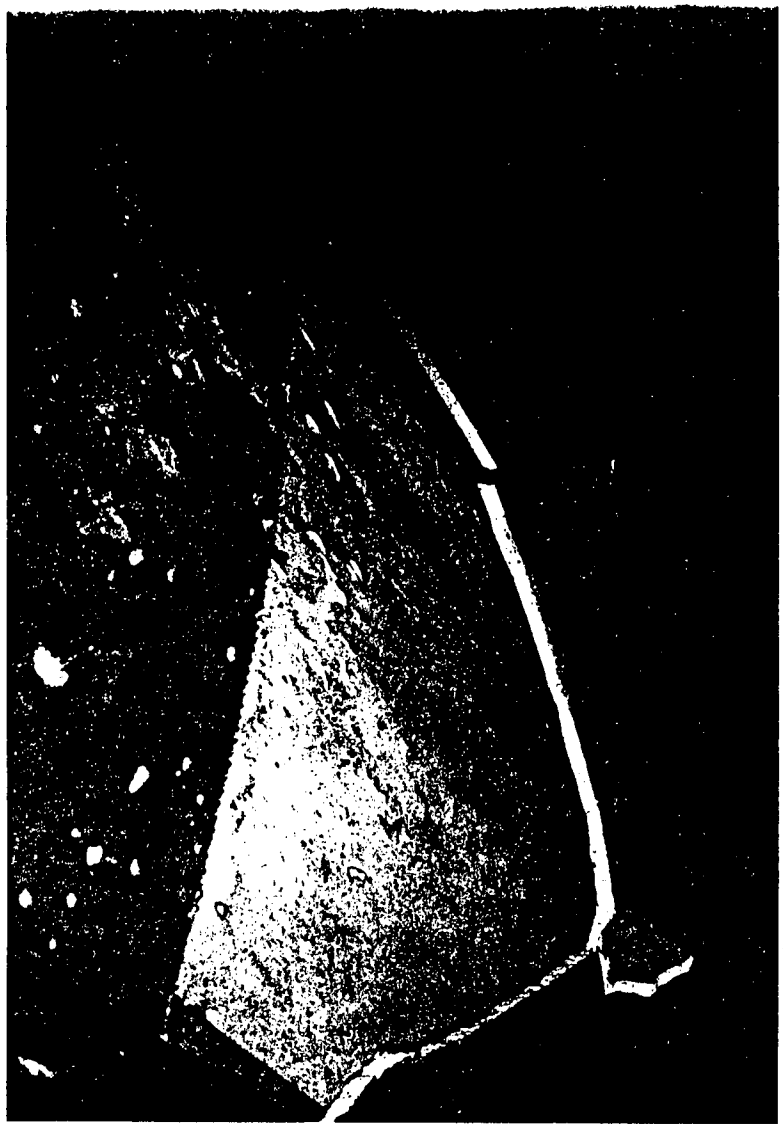
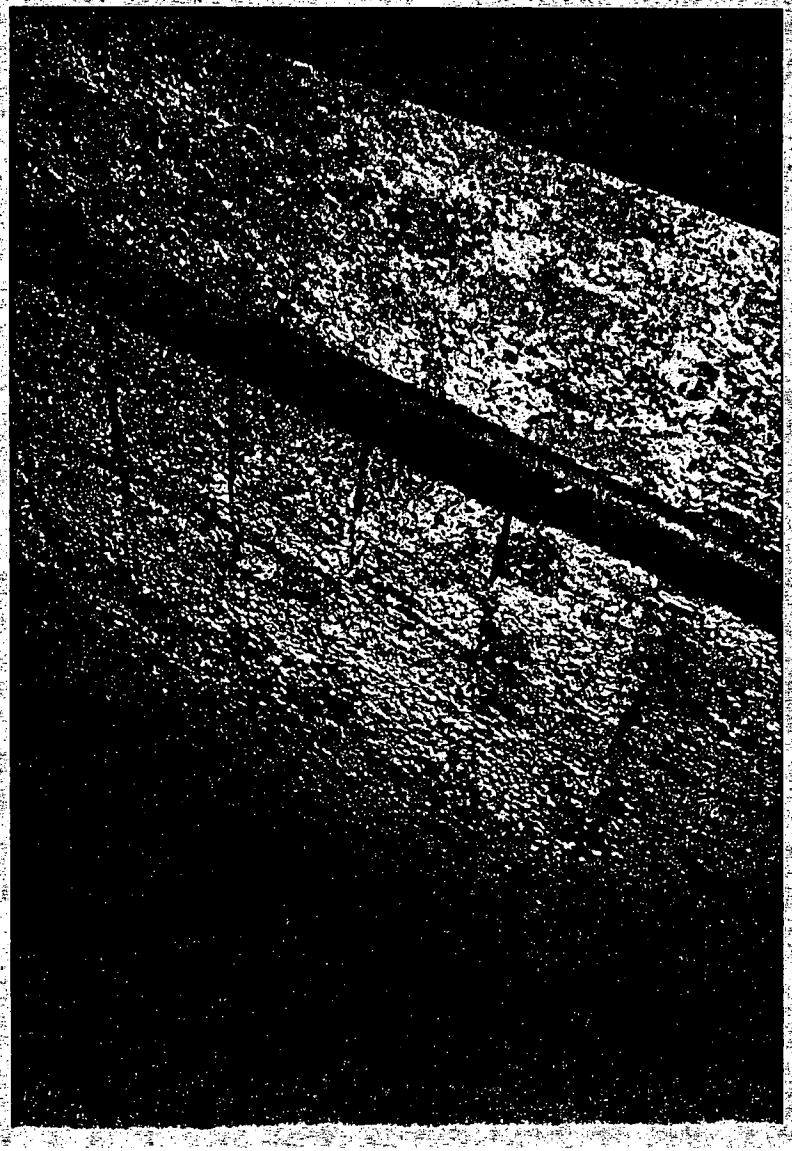
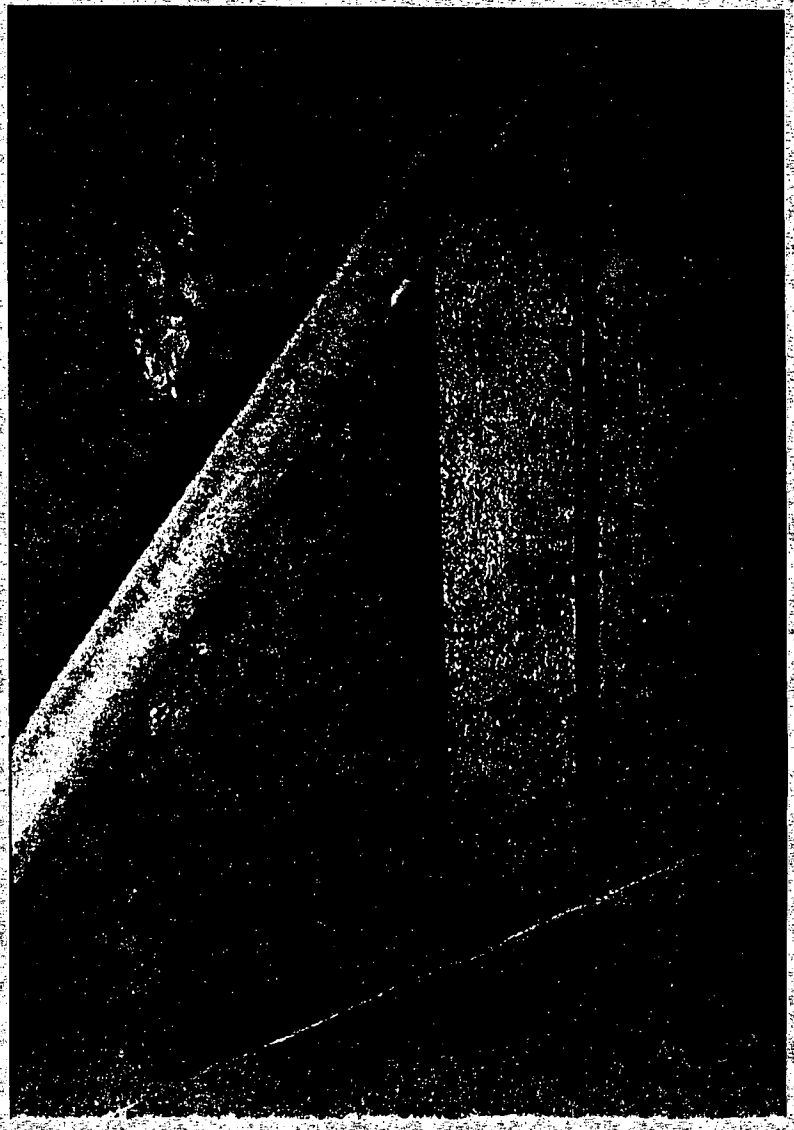
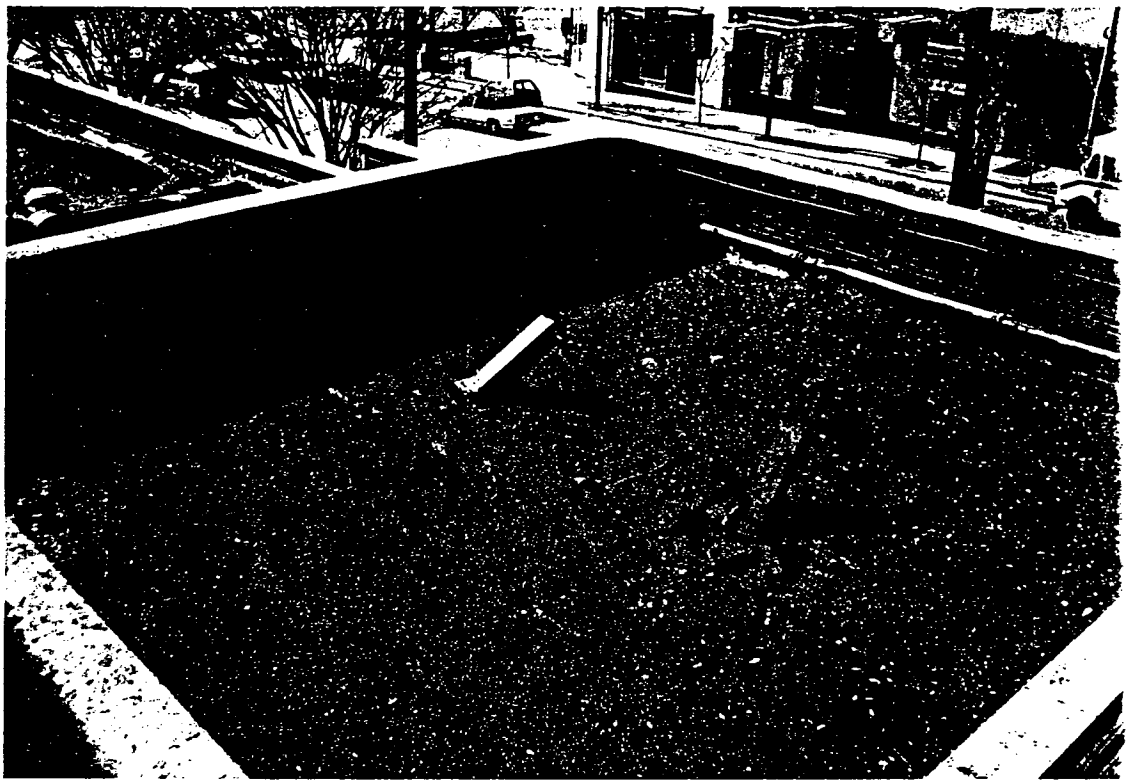


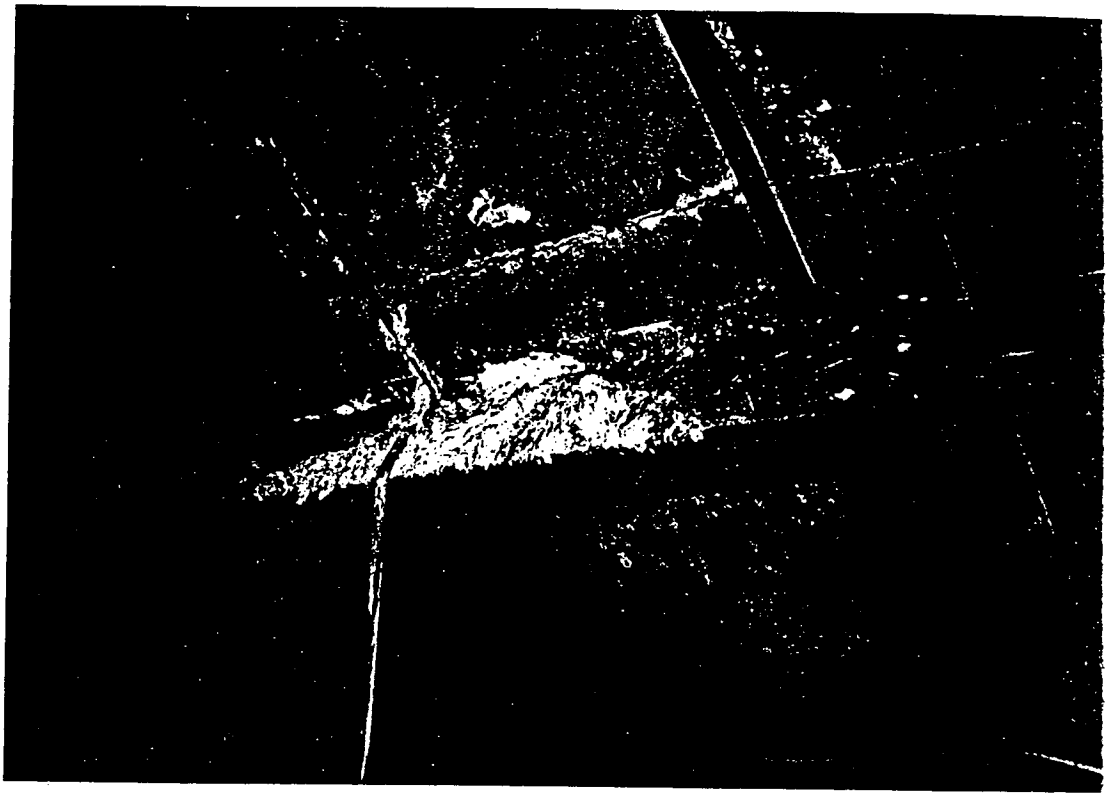


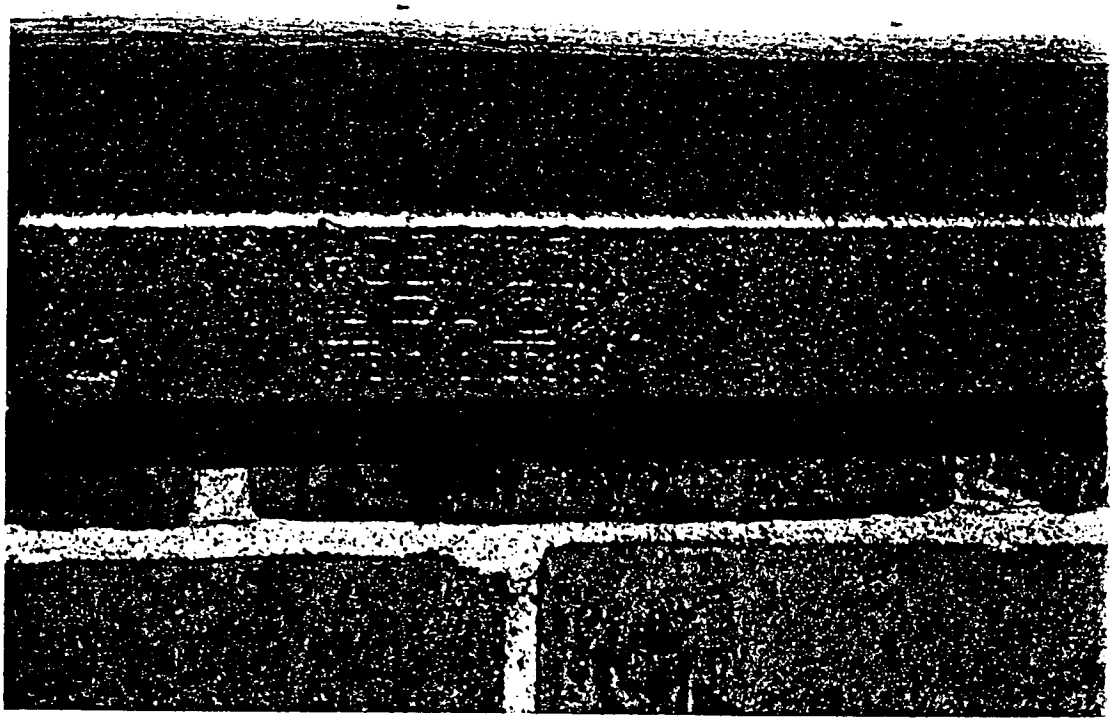


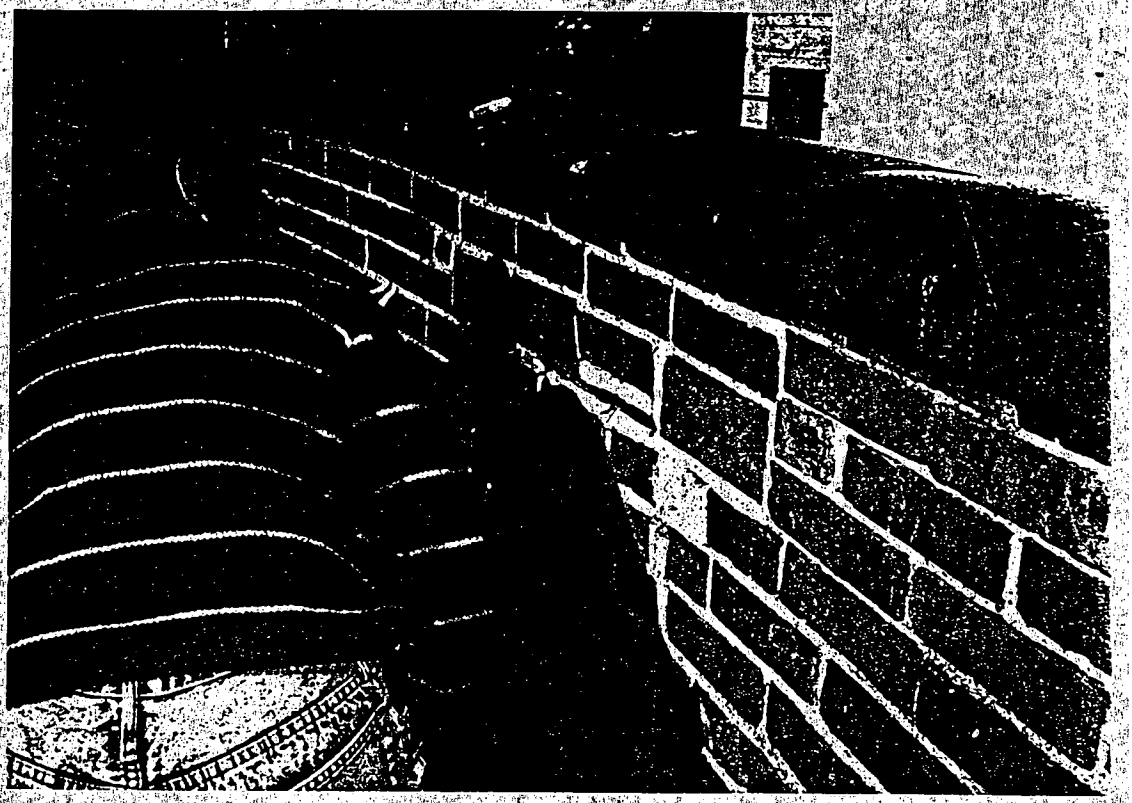


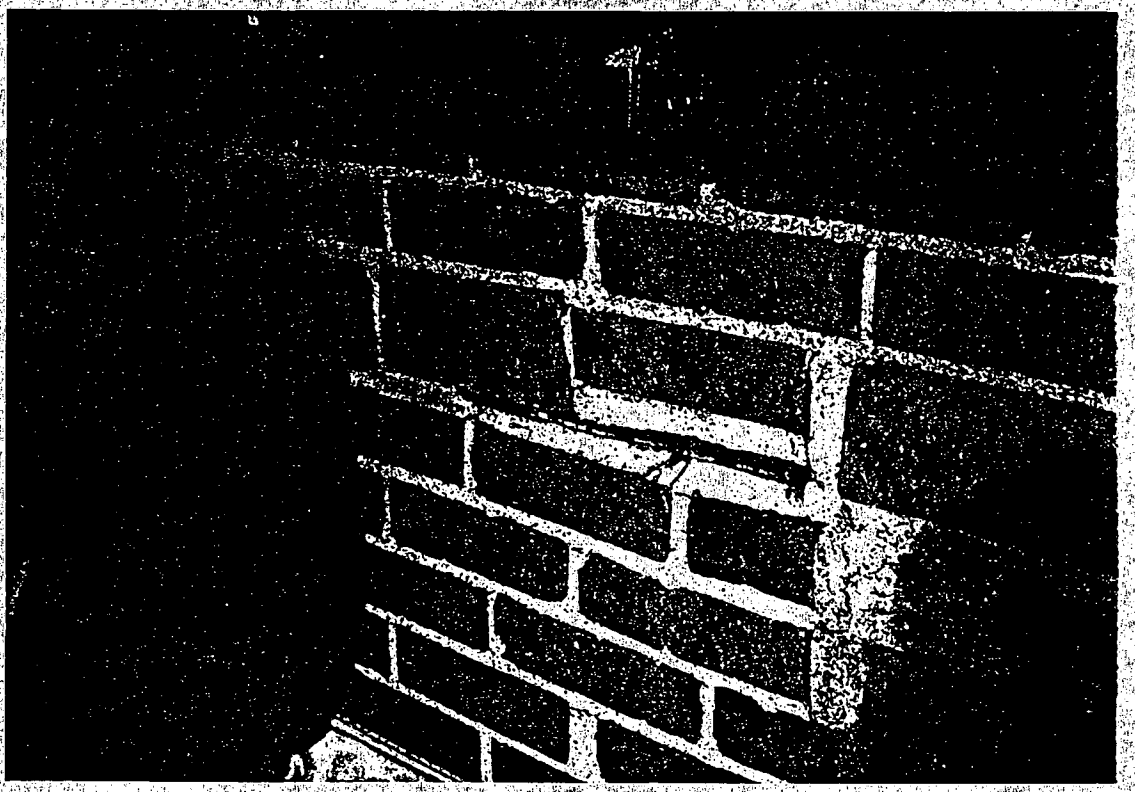












ATTACHMENT D

PRESERVATION SERVICES, INC.
601 Jackson Street + Fredericksburg, Virginia 22401 (540) 899-7790
Post Office Box 832 + Fredericksburg, Virginia 22404 Fax: (540) 899-8950

Silver Theatre

Paint Study

This survey was conducted with the primary purpose of establishing the sequence of painted finishes on each of the ventilation assemblies on the roof. It was apparent from observation at the site that these units were painted uniformly during each campaign.

A total of five (5) samples were taken, identified as follows:

PS-1 Roof Top Ventilator - Bottom shaft

PS-2 Roof Top Ventilator - Outer rim - inside face

PS-3 Goose Neck - North face - under neck

PS-4 Roof Top Ventilator - North side shaft

PS-5 Goose Neck - East face - under neck

Each sample was examined under a Bausch and Lomb stereo zoom microscope, illuminated with a high intensity fibre optic lamp, adjusted to 5500 K. Samples were examined both from the surface and cross-section to establish chronology. Color matching was done to exposed surface areas. Selected colors were matched to the Munsell standard book of color and designations noted for the report.

Conclusion: Samples numbered 1-2-4 were identical in both color and sequence, confirming that the colors were uniform at any point in time. Samples numbered 3-5 lacked the earliest layer but were identical beginning with the second layer through the fifth. The sequence is as follows:

Samples 1-2-4		Samples 3-5
Galvanized Metal		Galvanized Metal
Red	Between 10R-4/8 & 10R-5/8	
Beige/Tan	Between 2.5Y-8/2 & 2.5Y-8/4	Beige/Tan
Green	Between 10H4-2/4 & 10GY-3/4	Green
Blue	Between 7.5B-5/6 & 10B 5/6	Blue
Present Green	Between 5G-2/4 & 5G-3/4	Present Green

The earliest color (red) contains lead and might be intended as a primer, though it is a thick coating which would be unusual as a primer. More likely I think the red was a coating in place prior to installation of the goose neck ventilators.

The beige/tan coating was in use while all ventilators were in place and all colors following in sequence represent subsequent changes.

Andrew Ladygo

Andrew L. Ladygo
President

April 5, 1998

PRESERVATION SERVICES, INC.
601 Jackson Street ÷ Fredericksburg, Virginia 22401 (540) 899-7790
Post Office Box 832 ÷ Fredericksburg, Virginia 22404 Fax: (540) 899-8950

Silver Theatre

Mortar Study

Motars present at the Silver Theatre were analyzed with the purpose of determining content and proportion of constituent materials. To this end, nine (9) samples were retrieved during the site visit. Each represented a specific condition which was likely to differ slightly from the rest. Clearly some attempt was made to tint the original mortar to match or blend with adjacent finish surfaces.

The samples were labeled as follows:

MS1 - Inboard chimney face
MS2 - Parapet mortar (inboard face)
MS3 - Terra Cotta parapet mortar
MS4 - Parapet mortar
MS5 - Black brick mortar
MS6 - Limestone parapet mortar
MS7 - Limestone pointing mortar
MS7A- Limestone bedding mortar
MS8 - Red brick mortar

Each sample was subjected to visual analysis at low magnification and its characteristic features noted on the lab data sheets. Sample hardness was determined through comparative probing with a scratch awl. Sample color was determined through comparison with the Munsell soil color standard.

Measured samples were processed in a dilute hydrochloric acid solution to separate the inert components from the cementitious binder. The fines were then separated from the sand fraction through filtration of the aqueous solution. Each component was recorded by weight and Munsell color notation on the analysis sheets and where sufficient sand was present, a particle size profile was established.

No elemental analysis was done at this time. If and when it becomes imperative to accurately profile the elemental structure of the lime or other cementitious material we can do so.

Conclusion: All mortars examined were quite similar in composition. Portland cement is the primary binder in all cases and the ratio of aggregate to cementitious material varies only slightly. There appears to be a higher percentage of binder in the stone setting and pointing mortar than in the brick mortars.

The aggregate appears to be quite uniform and well graded for its purpose. The tinted mortars include colored sand as well to achieve the desired effect. Fines present in the colored mortars account for the finished appearance but the sand used throughout is probably from a single source with good particulate structure.

An appropriate mix for the brick masonry repair and pointing would be:

1 part Portland cement Type II
1 part hydrated lime
6 parts sand - to match original

This can be tinted to match, for specific locations

An appropriate mix for the stone pointing would be the following:

1 part Portland cement
3 parts sand - to match original

Sand samples from our testing will be returned to the Architect and could be made available at the commencement of work.

Andrew L. Ladygo
President

April 5, 1998

MORTAR ANALYSIS

JOB: Silver Theatre, Silver Spring, MD.

SAMPLE: Chimney "S" Mortar Beige Brick MS-1

SAMPLE WEIGHT: _____ SAMPLE HARDNESS: _____

TEST SAMPLE WGT: 3.87g TEST SAMPLE COLOR: 10YR 7/2

NOTES: 3:1

WEIGHT SOLUABLE FRACTION: 0.75g 3.12

WEIGHT SAND: 2.64 COLOR SAND: 10YR 8/3

WEIGHT FINES: 0.48g COLOR FINES: 5Y 7/2

SCREEN SAND:	WGT.	CUM.WGT.	% PASS
#8	0	0	100%.
#16	0.04g	0.04g	99%.
#30	0.34g	0.58g	74%.
#50	1.15g	1.73g	26%.
#100	0.47g	2.2g	6%.
#200	0.12g	2.32g	>1%
PASS	0.02g	2.34g	0

NOTES:

Quartz 90%.

Yellow	40%
White	20%
Clear	35%
Grey	5%

Red Sandstone	3%
Pyroxene (Black)	3%
Mica	1%
Unassigned.	3%

MS-1

MORTAR ANALYSIS

RATIOS OF MIX

* Weight of lime (Ca and Mg) content: (Soluble Fraction)

0.75 (weight of soluble fraction) x 0.95 = 0.71 gms. / 3.87 (sample weight) = 0.18 % x 1.5 = 0.27 parts/vol (Lime)

* Weight of sample residue: (Fines)

0.48 (weight of fines) / 3.87 (sample weight) = 0.12 % x 1.5 = 0.18 parts/vol (Clay)

3:1

* Weight of sand:

2.64 (weight of sand) / 3.87 (sample weight) = 0.68 % x 1.0 = 0.68 parts/vol (Sand)

* If weight of sample residue with paper (after drying) is from portland cement, weight fo sample residue x 1.5 = weight of cement soluble fraction.

0.72 (weight of cement soluble fraction) + 0.48 (weight of sample residue) / 3.87 (sample weight) = 0.31 % x 1.0 = 0.31 parts/vol (Portland)

* If weight of sample residue with paper (after drying) is from natural cement, weight fo sample residue x 2.0 = weight of cement soluble fraction.

_____ (weight of cement soluble fraction) + _____ (weight of sample residue) / _____ (sample weight) = _____ % x 1.8 = _____ parts/vol (natural cement)

MORTAR ANALYSIS

JOB: SILVER THEATRE, SILVER SPRING, MD.

SAMPLE: PARAPET - EAST, MS-2

SAMPLE WEIGHT: _____ SAMPLE HARDNESS: _____

TEST SAMPLE WGT: 21.06g TEST SAMPLE COLOR: CHART 1 7/N

NOTES:

4:1

WEIGHT SOLUABLE FRACTION: 3.4g 17 66

WEIGHT SAND: 15.82 COLOR SAND: 10YR 7/1

WEIGHT FINES: 1.84g COLOR FINES: 5Y 6/2

SCREEN SAND:	WGT.	CUM.WGT.	% PASS
#8	0.46g	0.46g	97%
#16	1.66g	2.12g	87%
#30	5.82g	7.94g	50%
#50	5.46g	13.40g	15%
#100	1.76g	15.16g	4%
#200	0.45g	15.61g	>1%
PASS	0.12g	15.73g	0

NOTES:

- QUARTZ 65%
  - WHITE 30%
  - OPAQUE 20%
  - YELLOW 40%
  - ROSE 10%
- MICA (CLEAR) 5%
- DARKED SANDSTONE 10%

- SHARP ANGULAR GRAINS. 15%
  ROUND GRAINS 85%
- SHAPE % OF MATERIAL WAS UNDISSOLVED

MS-2

MORTAR ANALYSIS

RATIOS OF MIX

- Weight of lime (Ca and Mg) content: (Soluble Fraction)

_____ x 0.95 = _____ gms. / _____ = _____% x 1.5 = _____ parts/vol (Lime)
weight of soluble fraction; sample weight

- Weight of sample residue: (Fines)

1.84 / 21.06 = 0.09 % x 1.5 = 0.13 parts/vol (Clay)
weight of fines; sample weight

4:1

- Weight of sand:

15.82g / 21.06 = 0.75 % x 1.0 = 0.75 parts/vol (Sand)
weight of sand; sample weight

- If weight of sample residue with paper (after drying) is from portland cement, weight fo sample residue x 1.5 = weight of cement soluble fraction.

1.84 x 1.5 =

2.76 + 1.84 / 21.06 = .22 % x 1.0 = .22 parts/vol (Portland)
weight of cement soluble fraction; weight of sample residue; sample weight

- If weight of sample residue with paper (after drying) is from natural cement, weight fo sample residue x 2.0 = weight of cement soluble fraction.

_____ + _____ / _____ = _____% x 1.8 = _____ parts/vol (natural cement)
weight of cement soluble fraction; weight of sample residue; sample weight

MORTAR ANALYSIS

JOB: SILVER THEATRE, SILVER SPRING MD.

SAMPLE: PARAPET TILE MS-3

SAMPLE WEIGHT: _____ SAMPLE HARDNESS: _____

TEST SAMPLE WGT: 25.03 g TEST SAMPLE COLOR: 10R 6/3

NOTES: 4.1

WEIGHT SOLUABLE FRACTION: 4.32 g 20.71

WEIGHT SAND: 16.16 g COLOR SAND: 2.5 YR 5/3

WEIGHT FINES: 2.55 g COLOR FINES: 10 R 5/4

SCREEN SAND:	WGT.	CUM.WGT.	% PASS
#8	0.18g	0.18g	99 %
#16	1.69 g	1.87g	90 %.
#30	4.67g	8.54g	52 %.
#50	6.79g	15.33g	14 %.
#100	2.02g	17.35g	3%.
#200	0.40g	17.75g	>1%
PASS	0.05g	17.80g	0

NOTES:

QUARTZ	85%
WHITE	45
CLEAR	35
YELLOW	20
MICA	2 %
PYROXENE	2 %
SANDSTONE	1 %
UNDISSOLVED	10%

- ROUNDED & SHARP ANGULAR GRAINS

- PERCENTAGE OF UNDISSOLVED ADHERING TO QUARTZ.

MS-3

MORTAR ANALYSIS

RATIOS OF MIX

* Weight of lime (Ca and Mg) content: (Soluble Fraction)

_____ x 0.95 = _____ gms. / _____ = _____% x 1.5 = _____ parts/vol (Lime)
weight of soluble fraction; sample weight

* Weight of sample residue: (Fines)

2.55 / 25.03 = 0.10 % x 1.5 = 0.15 parts/vol (Clay)
weight of fines; sample weight

4:1

* Weight of sand:

16.16 / 25.03 = 0.72 % x 1.0 = 0.72 parts/vol (Sand)
weight of sand; sample weight

* If weight of sample residue with paper (after drying) is from portland cement, weight fo sample residue x 1.5 = weight of cement soluble fraction.

3.82 + 2.55 / 25.03 = 0.25 % x 1.0 = 0.25 parts/vol (Portland)
weight of cement soluble fraction; weight of sample residue; sample weight

* If weight of sample residue with paper (after drying) is from natural cement, weight fo sample residue x 2.0 = weight of cement soluble fraction.

_____ + _____ / _____ = _____% x 1.8 = _____ parts/vol (natural cement)
weight of cement soluble fraction; weight of sample residue; sample weight

MORTAR ANALYSIS

JOB: Silver Theatre, Silver Spring, MD.

SAMPLE: Parapet-West, MS-4

SAMPLE WEIGHT: _____ SAMPLE HARDNESS: _____

TEST SAMPLE WGT: 26.86 g TEST SAMPLE COLOR: 10YR 7/2

NOTES: 4 1

WEIGHT SOLUABLE FRACTION: 4.58 g 22.2 g

WEIGHT SAND: 20.04 g COLOR SAND: 10 YR 7/3

WEIGHT FINES: 2.24 g COLOR FINES: 2.5 Y 7/2

SCREEN SAND:	WGT.	CUM.WGT.	% PASS	
#8	0.75g	0.75g	96 %	95% UNDISSOLVED ACCEPTA
#16	3.01 g	3.76g	81 %	
#30	7.71g	11.47g	42 %.	
#50	6.22g	17.69g	10 %.	
#100	1.44g	19.13g	3 %	
#200	0.34g	19.47g	1 %	
PASS	0.08g	19.55g	0 %.	

NOTES: ROUNDED & SHARP ANGULAR GRAINS

QUARTZ 90%
- WHITE 45 %
- CLEAR 20 %
- YELLOW 35 %

MICA 3%

RED SANDSTONE 3%

UNDISSOLVED 4%

MS-4

MORTAR ANALYSIS

RATIOS OF MIX

- Weight of lime (Ca and Mg) content: (Soluble Fraction)

_____ x 0.95 = _____ gms. / _____ = _____% x 1.5 = _____ parts/vol (Lime)
weight of soluble fraction; sample weight

- Weight of sample residue: (Fines)

2.24g / 26.86 = 0.08 % x 1.5 = 0.12 parts/vol (Clay)
weight of fines; sample weight

4:1

- Weight of sand:

20.09 / 26.86 = 0.74 % x 1.0 = 0.74 parts/vol (Sand)
weight of sand; sample weight

- If weight of sample residue with paper (after drying) is from portland cement, weight fo sample residue x 1.5 = weight of cement soluble fraction.

3.36 + 2.24 / 26.86 = 0.20 % x 1.0 = 0.20 parts/vol (Portland)
weight of cement soluble fraction; weight of sample residue; sample weight

- If weight of sample residue with paper (after drying) is from natural cement, weight fo sample residue x 2.0 = weight of cement soluble fraction.

_____ + _____ / _____ = _____% x 1.8 = _____ parts/vol (natural cement)
weight of cement soluble fraction; weight of sample residue; sample weight

MORTAR ANALYSIS

JOB: SILVER THEATRE, SILVER SPRING, MD.

SAMPLE: FRONT - UPPER BLACK TILE MS-5

SAMPLE WEIGHT: _____ SAMPLE HARDNESS: _____

TEST SAMPLE WGT: 17.26g TEST SAMPLE COLOR: CHART 1 2.5/N

NOTES: 4·1

WEIGHT SOLUABLE FRACTION: 4.04 g 12 22

WEIGHT SAND: 11.92 g COLOR SAND: CHART 1 5/N

WEIGHT FINES: 1.30 g COLOR FINES: CHART 1 3/N

SCREEN SAND:	WGT.	CUM.WGT.	% PASS
#8	0.06 g	0.06 g	>100 %
#16	1.32 g	1.38 g	89 %
#30	4.85 g	6.23 g	47 %
#50	4.34 g	10.57 g	10 %
#100	0.92 g	11.49 g	2 %.
#200	0.15 g	11.64 g	>1 %
PASS	0.01 g	11.65 g	0

NOTES:

QUARTZ - 90 %
WHITE - 40 %
CLEAR - 40 %
YELLOW - 20 %
GREEN - TRACES
MICA - 2 %
RED SYNOSTONE - 4 %
UNDISSOLVED. - 4 %.
EPIDOTE - TRACES
SCHIST - TRACES

ROUNDED & SHARP ANGULAR GRAINS.

MS-5

MORTAR ANALYSIS

RATIOS OF MIX

✲ Weight of lime (Ca and Mg) content: (Soluble Fraction)

_____ x 0.95 = _____ gms. / _____ = _____% x 1.5 = _____ parts/vol (Lime)
weight of soluble fraction; sample weight

✲ Weight of sample residue: (Fines)

1.30 / 17.26g = 0.07 % x 1.5 = 0.11 parts/vol (Clay)
weight of fines; sample weight

4:1

✲ Weight of sand:

11.92 / 17.26g = 0.69 % x 1.0 = 0.69 parts/vol (Sand)
weight of sand; sample weight

✲ If weight of sample residue with paper (after drying) is from portland cement, weight fo sample residue x 1.5 = weight of cement soluble fraction.

1.95 + 1.3 / 17.26g = 0.19 % x 1.0 = 0.19 parts/vol (Portland)
weight of cement soluble fraction; weight of sample residue; sample weight

✲ If weight of sample residue with paper (after drying) is from natural cement, weight fo sample residue x 2.0 = weight of cement soluble fraction.

_____ + _____ / _____ = _____% x 1.8 = _____ parts/vol (natural cement)
weight of cement soluble fraction; weight of sample residue; sample weight

MORTAR ANALYSIS

JOB: SILVER THEATRE, SILVER SPRING MD.

SAMPLE: PARAPET-STONE, MS-6

SAMPLE WEIGHT: _____ SAMPLE HARDNESS: _____

TEST SAMPLE WGT: 19.08g TEST SAMPLE COLOR: 10YR 7/2

NOTES: VERY DIFFICULT TO CRUSH. 2.5:1

WEIGHT SOLUABLE FRACTION: 6.74 12.39

WEIGHT SAND: 10.25 g COLOR SAND: 10 YR 7/3

WEIGHT FINES: 2.09g COLOR FINES: 2.54 7/3

SCREEN SAND:	WGT.	CUM.WGT.	% PASS
#8	0.85g	0.85 g	92%
#16	0.40g	1.25 g	90%
#30	1.67g	2.92 g	71%
#50	4.47g	7.39g	25%
#100	2.10 g	9.49g	3%
#200	0.25g	9.74g	>1%
PASS	0.06g	9.8g	0

UN DISSOLVED AGGREGATION

NOTES:

QUARTZ 90 %
- WHITE 40 %
- CLEAR 19 %
- YELLOW 40 %
- ROSE 1 %

- ROUNDED & SHARP ANGULAR GRAINS

REDSANDSTONE 3%

MICA TRACES.

BROWN SANDSTONE 3%

EPIDOTE 1%

MS-6

MORTAR ANALYSIS

RATIOS OF MIX

- Weight of lime (Ca and Mg) content: (Soluble Fraction)

_____ x 0.95 = _____ gms. / _____ = _____% x 1.5 = _____ parts/vol (Lime)
weight of soluble fraction; sample weight

- Weight of sample residue: (Fines)

2.09 / 19.08 = 0.11 % x 1.5 = 0.16 parts/vol (Clay)
weight of fines; sample weight

2.5 : 1

- Weight of sand:

10.25gr / 19.08 = 0.54 % x 1.0 = 0.54 parts/vol (Sand)
weight of sand; sample weight

- If weight of sample residue with paper (after drying) is from portland cement, weight fo sample residue x 1.5 = weight of cement soluble fraction.

3.13 + 2.09 / 19.08 = 0.27 % x 1.0 = 0.27 parts/vol (Portland)
weight of cement soluble fraction; weight of sample residue; sample weight

- If weight of sample residue with paper (after drying) is from natural cement, weight fo sample residue x 2.0 = weight of cement soluble fraction.

_____ + _____ / _____ = _____% x 1.8 = _____ parts/vol (natural cement)
weight of cement soluble fraction; weight of sample residue; sample weight

MORTAR ANALYSIS

JOB: Silver Theatre, Silver Spring MD.

SAMPLE: Stone Pointing MS-7

SAMPLE WEIGHT: _____ SAMPLE HARDNESS: _____

TEST SAMPLE WGT: 16.00 g TEST SAMPLE COLOR: 10YR 8/1

NOTES: 2:1

WEIGHT SOLUABLE FRACTION: 5.8 g 10.2

WEIGHT SAND: 7.95 g COLOR SAND: 10 YR. 7/3

WEIGHT FINES: 2.25 g COLOR FINES: 5Y 7/3

SCREEN SAND:	WGT.	CUM.WGT.	% PASS
#8	0.06 g	0.06 g	99%
#16	0.44 g	0.50 g	94%
#30	2.26 g	2.76 g	64%
#50	3.45 g	6.21 g	19%
#100	1.14 g	7.35 g	4%
#200	0.26 g	7.61 g	>1%
PASS	0.04 g	7.65 g	100%.

NOTES:

ROUND & ANGULAR (SHARP) GRAINS.

QUARTZ 75%
- WHITE 45 %
- CLEAR 15 %
- YELLOW 40 %
- ROSE TRACES

UNBISCUITED 20 %
MICA 2 %
SANDSTONE 3 %

MS-7

MORTAR ANALYSIS

RATIOS OF MIX

❁ Weight of lime (Ca and Mg) content: (Soluble Fraction)

_____ x 0.95 = _____ gms. / _____ = _____% x 1.5 = _____ parts/vol (Lime)
weight of soluble fraction; sample weight

❁ Weight of sample residue: (Fines)

2.25g / 16.00 = 0.14 % x 1.5 = 0.21 parts/vol (Clay)
weight of fines; sample weight

2 : 1

❁ Weight of sand:

7.95 / 16.00 = 0.49 % x 1.0 = 0.49 parts/vol (Sand)
weight of sand; sample weight

❁ If weight of sample residue with paper (after drying) is from portland cement, weight fo sample residue x 1.5 = weight of cement soluble fraction.

2.25x1.5 = 3.37 + 2.25 / 16.00 = 0.35 % x 1.0 = 0.35 parts/vol (Portland)
weight of cement soluble fraction; weight of sample residue; sample weight

❁ If weight of sample residue with paper (after drying) is from natural cement, weight fo sample residue x 2.0 = weight of cement soluble fraction.

_____ + _____ / _____ = _____% x 1.8 = _____ parts/vol (natural cement)
weight of cement soluble fraction; weight of sample residue; sample weight

MORTAR ANALYSIS

JOB: SILVER THEATRE, SILVER SPRING, MD.

SAMPLE: MS - 7A

SAMPLE WEIGHT: _____ SAMPLE HARDNESS: _____

TEST SAMPLE WGT: 13.45g TEST SAMPLE COLOR: 10YR 6/3

NOTES: 2.5:1

WEIGHT SOLUABLE FRACTION: 4.68g 8.17

WEIGHT SAND: 7.72g COLOR SAND: 10 YR 7/2

WEIGHT FINES: 1.05g COLOR FINES: 2.5YR 7/3

SCREEN SAND:	WGT.	CUM.WGT.	% PASS	
#8	0.04g	0.04g	>100%	UNDISSOLVED AGGREGATES.
#16	0.35g	0.39g	95%	
#30	2.01g	2.40g	68%	
#50	3.62g	6.02g	20%	
#100	1.16g	7.18g	5%	
#200	0.29g	7.47g	1%	
PASS	0.07	7.54g	0	

NOTES:

QUARTZ 90%
- WHITE 45%
- CLEAR 40%
- YELLOW 15%
- ROSE TRACES

MICA 3
RED SANDSTONE 3
SCHIST TRACES
UNDISSOLVED 3

MS-7A

MORTAR ANALYSIS

RATIOS OF MIX

* Weight of lime (Ca and Mg) content: (Soluble Fraction)

_____ x 0.95 = _____ gms. / _____ = _____% x 1.5 = _____ parts/vol (Lime)
weight of soluble fraction; sample weight

* Weight of sample residue: (Fines)

1.05 / 13.45 = 0.07 % x 1.5 = 0.12 parts/vol (Clay)
weight of fines; sample weight

2.5 : 1

* Weight of sand:

7.72 / 13.45 = 0.57 % x 1.0 = 0.57 parts/vol (Sand)
weight of sand; sample weight

* If weight of sample residue with paper (after drying) is from portland cement, weight fo sample residue x 1.5 = weight of cement soluble fraction.

1.05x1.5 1.57 + 1.05 / 13.45 = 0.19 % x 1.0 = 0.19 parts/vol (Portland)
weight of cement soluble fraction; weight of sample residue; sample weight

* If weight of sample residue with paper (after drying) is from natural cement, weight fo sample residue x 2.0 = weight of cement soluble fraction.

_____ + _____ / _____ = _____% x 1.8 = _____ parts/vol (natural cement)
weight of cement soluble fraction; weight of sample residue; sample weight

MORTAR ANALYSIS

JOB: SILVER THEATRE, SILVER SPRING MD.

SAMPLE: RED BRICK MORTAR MS-8

SAMPLE WEIGHT: _____ SAMPLE HARDNESS: _____

TEST SAMPLE WGT: 16.40 g TEST SAMPLE COLOR: 5YR 5/3

NOTES:

WEIGHT SOLUABLE FRACTION: _____

WEIGHT SAND: 12.93g COLOR SAND: 10 R 6/3

WEIGHT FINES: 1.85g COLOR FINES: 10 R 5/4

SCREEN SAND:	WGT.	CUM.WGT.	% PASS
#8	0.28g	0.28g	98%
#16	1.03g	1.31g	89%
#30	4.00g	4.31g	63%
#50	5.40g	9.71	17%
#100	1.61g	11.32	4%
#200	0.35g	11.67	>1%
PASS	0.05g	11.72	0

UNDISSOLVED.

NOTES:

QUARTZ 90%
- WHITE 40%
- CLEAR 40%
- YELLOW 20%
- GREEN TRACES

MICA 2%
RED SANDSTONE 5%
PYROXENE TRACES
UNDISSOLVED 3%

- ROUNDED SHARP ANGULAR GRAINS
- LARGER SIZE GRAINS ARE UNDISSOLVED ROCK/SA

MS-8

MORTAR ANALYSIS

RATIOS OF MIX

❁ Weight of lime (Ca and Mg) content: (Soluble Fraction)

_____ x 0.95 = _____ gms. / 1 = _____% x 1.5 = _____ parts/vol (Lime)
weight of soluble fraction — sample weight

❁ Weight of sample residue: (Fines)

1.85 / 18.40 = 0.10 % x 1.5 = 0.15 parts/vol (Clay)
weight of fines — sample weight

3.5:1

❁ Weight of sand:

12.93 / 18.40 = 0.70 % x 1.0 = 0.70 parts/vol (Sand)
weight of sand — sample weight

❁ If weight of sample residue with paper (after drying) is from portland cement, weight fo sample residue x 1.5 = weight of cement soluble fraction.

2.77 + 1.85 / 18.40 = 0.25 % x 1.0 = 0.25 parts/vol (Portland)
weight of cement soluble fraction — weight of sample residue — sample weight

❁ If weight of sample residue with paper (after drying) is from natural cement, weight fo sample residue x 2.0 = weight of cement soluble fraction.

_____ + _____ / _____ = _____% x 1.8 = _____ parts/vol (natural cement)
weight of cement soluble fraction — weight of sample residue — sample weight

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

Date: 6-10-98

MEMORANDUM

TO: Robert Hubbard, Director
Department of Permitting Services

FROM: Gwen Wright, Coordinator
Historic Preservation

SUBJECT: Historic Area Work Permit

The Montgomery County Historic Preservation Commission has reviewed the attached application for a Historic Area Work Permit. This application was:

_____ Approved _____ Denied

X Approved with Conditions:

(1) Applicant to provide permit set to HPC staff for review/stamping prior to applying for the building permit with DPS.

THE BUILDING PERMIT FOR THIS PROJECT SHALL BE ISSUED CONDITIONAL UPON ADHERENCE TO THE APPROVED HISTORIC AREA WORK PERMIT (HAWP).

Applicant: Montgomery County (Gary Stith, Agent)

Address: 962 Wayne Ave, Suite 300, Silver Spring, MD 20915

***THE APPLICANT MUST ARRANGE FOR A FIELD INSPECTION BY CALLING DPS/FIELD SERVICES (217-6240) FIVE DAYS PRIOR TO COMMENCEMENT OF WORK AND WITHIN TWO WEEKS FOLLOWING COMPLETION OF WORK.

P.O. Silver Theater/Shopping Center Complex #36/7

RETURN TO: DEPARTMENT OF PERMITTING SERVICES
250 HUNGERFORD DRIVE, ROCKVILLE, MARYLAND 20850
301/217-6370

DPS - #8

HISTORIC PRESERVATION COMMISSION
301/495-4570

APPLICATION FOR HISTORIC AREA WORK PERMIT

Contact Person: GARY STITH

Daytime Phone No.: 301 565-7359

Tax Account No.: _____

Name of Property Owner: MONTGOMERY COUNTY Daytime Phone No.: 301 565-7300

Address: 962 Wayne Ave. Suite 300 SILVER SPRING, MD 22015
Street Number City Steet Zip Code

Contractorr: FOULGER/PRATT' Phone No.: 301 948-0522

Contractor Registration No.: _____

Agent for Owner: _____ Daytime Phone No.: _____

LOCATION OF BUILDING/PREMISE

House Number: 8619 Street: COLESVILLE ROAD

Town/City: SILVER SPRING Nearest Cross Street: GEORGIA AVE.

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: ROOF REPLACEMENT

1B. Construction cost estimate: $ UNKNOWN

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

PART TWO: COMPLETE FOR NEW CONSTRUCTION AND EXTEND/ADDITIONS

2A. Type of sewage disposal: 01 ☐ WSSC 02 ☐ Septic 03 ☐ Other: _____

2B. Type of water supply: 01 ☐ WSSC 02 ☐ Well 03 ☐ Other: _____

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.

Gary Stith REDEVELOPMENT MANAGER 5/20/98
Signature of owner or authorized agent Date

Approved: X w/Conditions For Chairperson, Historic Preservation Commission

Disapproved: _____ Signature: _____ Date: 6/10/98

Application/Permit No.: 980520004 Date Filed: 5-20-98 Date Issued: _____

SEE REVERSE SIDE FOR INSTRUCTIONS

36/7-7-98A

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:

   SEE ATTACHED REPORT

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

   REPLACE ROOF OF THE SILVER THEATRE AND RECONSTRUCT The Masonry Chimney at the rear of the Building

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 landsceping.

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 incorporetion 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 leest 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 tha parcel in question. You can obtain this information from the Department of Assessments and Taxation, 51 Monroe Street, Rockville, (301/279-1355). ACROSS STREET = LDC, Inc, 9601 Georgia Avenue, Silver Spring, MD 20915
   ATTACHED PROPERTY IS MONTGOMERY CO.

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.

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

Date: 6-10-98

MEMORANDUM

TO: Historic Area Work Permit Applicants

FROM: Gwen Wright, Coordinator
Historic Preservation Section

SUBJECT: Historic Area Work Permit Application - Approval of Application/Release of Other Required Permits

---

Enclosed is a copy of your Historic Area Work Permit application, approved by the Historic Preservation Commission at its recent meeting, and a transmittal memorandum stating conditions (if any) of approval.

You may now apply for a county building permit from the Department of Permitting Services (DPS) at 250 Hungerford Drive, second floor, in Rockville. Please note that although your work has been approved by the Historic Preservation Commission, it must also be approved by DPS before work can begin.

When you file for your building permit at DPS, you must take with you the enclosed forms, as well as the Historic Area Work Permit that will be mailed to you directly from DPS. These forms are proof that the Historic Preservation Commission has reviewed your project. For further information about filing procedures or materials for your county building permit review, please call DPS at 301-217-6370.

If your project changes in any way from the approved plans, either before you apply for your building permit or even after the work has begun, please contact the Historic Preservation Commission staff at 301-563-3400.

Please also note that you must arrange for a field inspection for conformance with your approved HAWP plans. Please inform DPS/Field Services at 301-217-6240 of your anticipated work schedule.

Thank you very much for your patience and good luck with your project!

HISTORIC PRESERVATION COMMISSION STAFF REPORT

Address: 8619 Colesville Road	Meeting Date: 6/10/98
Resource: Silver Theatre/Shopping Center Master Plan Site #36/7-3	Review: HAWP
Case Number: 36/7-3-98A	Tax Credit: N/A
Public Notice: 5/27/98	Report Date: 6/3/98
Applicant: Montgomery County	Staff: Robin D. Ziek
PROPOSAL: Repair roof of Silver Theater; Rebuild masonry chimney	RECOMMENDATIONS: APPROVAL w/CONDITIONS

PROJECT DESCRIPTION

RESOURCE: The Silver Theater
STYLE: Art Deco Theater
DATE: 1938

The Silver Theatre/Shopping Center was built in 1938 as a single suburban complex. It was designed by John Eberson, an important architect in movie theater design all over the country. The County now owns the property, but had to obtain it through condemnation proceedings; the previous owner subjected the building to demolition by neglect, and, in fact, was responsible for the removal of the rear chimney proposed to be rebuilt in this HAWP.

The Theater is protected by an easement with the Maryland Historical Trust (MHT), and the applicant has coordinated reviews with the HPC and the MHT. Typically, projects which are protected by a state easement, and which work has been reviewed and approved by the MHT easement committee, are presented to the HPC in expedited format. This project is being reviewed concurrently by MHT and HPC; MHT staff have informally indicated that they anticipate approval of the proposal.

PROPOSAL

The project is conceived as a restoration of the Silver Theater. To that end, the county has hired a preservation architect, Hy Myers with the Vitetta Group, to develop the project.

The roof decking and roof membrane will be repaired in kind. Additional roof drains will be installed to address inadequate drainage which has led to severe deterioration in the past.

The chimney at the rear of the building will be restored to its original form, extending c30' above the existing chimney cap. This was an important design element of the Art Deco designed Theater, and the restoration of this chimney is highly desirable.

The immediate goal for the roof repairs is to completely dry out the interior of the theater to prepare the way for the interior restoration. The MHT easement also protects the interior of the theater, and MHT will work closely with the County as the work progresses.

STAFF DISCUSSION

This proposed work is long overdue, and the entire community will benefit by the restoration of this historic theater. The work on the Shopping Center will follow as the development of the land behind the Theater/Shopping Center Complex proceeds. Staff notes that there is still a Locational Atlas Resource to evaluate - the Silver Spring Historic District. There are several Art Deco commercial buildings along the Colesville Road corridor which may constitute a thematic historic district. This will, of course, come before the HPC at some later date.

STAFF RECOMMENDATION

Staff recommends that, **with the following conditions**, the Commission find this concept general consistent with the purposes of Chapter 24A-8(b)2:

> The proposal is compatible in character and nature with the historical, archeological, architectural or cultural features of the historic site, or the historic district in which an historic resource is located and would not be detrimental thereto or to the achievement of the purposes of this chapter;

and with Secretary of the Interior's Standards for Rehabilitation #9:

> New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.

CONDITIONS:

1. The applicant will provide the permit set of drawings to HPC staff for review and stamping prior to applying for the building permit with DPS.

and subject to the general condition that, after issuance of the Montgomery County Department of Permitting Services (DPS) permit, the applicant arrange for a field inspection by calling the DPS Field Services Office at (301) 217-6240 prior to commencement of work and not more than two weeks following completion of work.

RETURN TO: DEPARTMENT OF PERMITTING SERVICES
250 HUNGERFORD DRIVE, ROCKVILLE, MARYLAND 20850
301/217-6370

DPS - #8

HISTORIC PRESERVATION COMMISSION
301/495-4570

APPLICATION FOR HISTORIC AREA WORK PERMIT

Contact Person: GARY STITH

Daytime Phone No.: 301 565-7359

Tax Account No.: _____

Name of Property Owner: MONTGOMERY COUNTY Daytime Phone No.: 301 565-7300

Address: 962 Wayne Ave. Suite 300 SILVER SPRING, MD 20915
Street Number / City / Street / Zip Code

Contractor: FOULGER/PRATT Phone No.: 301 948-0522

Contractor Registration No.: _____

Agent for Owner: _____ Daytime Phone No.: _____

LOCATION OF BUILDING/PREMISE

House Number: 8619 Street: COLESVILLE ROAD

Town/City: SILVER SPRING Nearest Cross Street: GEORGIA AVE.

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: ROOF REPLACEMENT

1B. Construction cost estimate: $ UNKNOWN

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

PART TWO: COMPLETE FOR NEW CONSTRUCTION AND EXTEND/ADDITIONS

2A. Type of sewage disposal: 01 ☐ WSSC 02 ☐ Septic 03 ☐ Other: _____

2B. Type of water supply: 01 ☐ WSSC 02 ☐ Well 03 ☐ Other: _____

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.

Gary Stith REDEVELOPMENT MANAGER 5/20/98
Signature of owner or authorized agent / Date

Approved: _____ For Chairperson, Historic Preservation Commission

Disapproved: _____ Signature: _____ Date: _____

Application/Permit No.: 9805200091 Date Filed: 5-20-98 Date Issued: _____

SEE REVERSE SIDE FOR INSTRUCTIONS

(3)

36/7-7-98A

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:

   SEE ATTACHED REPORT

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

   REPLACE ROOF OF THE SILVER THEATRE AND RECONSTRUCT The Masonry Chimney at the rear of the BUILDING

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). ACROSS STREET - LDG, Inc. 8601 Georgia Avenue SILVER SPRING, MD. 20915 ATTACHED PROPERTY IS MONTGOMERY CO.

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.

SILVER SPRING REGIONAL CENTER
962 Wayne Avenue, Suite 300
Silver Spring, MD 20910
301/565-7300
Fax: 301/565-7363 or 7365

FAX

Date: 05-28-98 Pages including cover sheet: 1

To: Sue Burbacker

From: Gary Stith

Phone: 301-563-3400
Fax # 503-3412
cc:

Phone:
Fax #

Remarks:
properties adjacent and behind the Silver Theatre are owned by the county, properties across the street are owned by:

Cal & B Klausner et al
4622 32nd St. N
Arlington, VA
22207-4404

for prop. on
8622 Colesville Rd

LDG Inc.
8601 Georgia Ave #200
Silver Spring, MD
20910

for prop. on
8601 Georgia Ave.

U:Shared\Admin\FaxCovr

TOTAL P.01

(5)

REPORT OF EXISTING CONDITIONS AND FINDINGS REGARDING THE RESTORATION OF

THE ROOF OF THE SILVER THEATER

SILVER SPRING
MONTGOMERY COUNTY
MARYLAND

PREPARED AT THE REQUEST OF

THE MONTGOMERY COUNTY GOVERNMENT

BY

VITETTA GROUP

TABLE OF CONTENTS

Attachments:

I Investigation and Findings

Vitetta Group with Mr. Donald Scheuerman, of the Montgomery County Government, and the County Government's roof consultant, Gale Associates, Inc., visited the site to investigate the existing roofing material and to perform certain core tests in the different roof areas. Attached is our sketch (Roof / SK-1) showing the location of the various areas and the results of each test. (see Gale Associates memorandum to Mr. Scheuerman, for an attached list of test cuts 1 through 20)

In general we found:

1. The main auditorium (Roof / SK-1 Areas A, B, C, D and N) is covered with approximately five plies of built up roofing material over a poured in place gypsum deck (see Roof Type D on Drawing A2 attached to Gale Associates memorandum). The main auditorium roof has been re-roofed once with a single ply of roof membrane installed over top of the original roof. From our visual field observations, it is apparent that the existing roof has been repeatedly patch repaired and has reached the end of its useful life. It must be replaced. The condition of the existing, original poured-in-place gypsum deck is generally very good but, based on visual observation of the underside of the deck, as visible from the attic space, in conjunction with the results of test cuts 7, 9 and 10, we estimate that approximately 20% of the original gypsum deck requires replacement before a new roof system can be installed. Bidders should be required to provide unit pricing for the gypsum deck system replacement.

2. The theater lobby (north) and mechanical / support rooms (south and west), (Roof / SK-1 Areas G, I, J, K, L and M) are covered with approximately four plys of built up asphalt pitch roofing membrane on a concrete deck (see Roof Type C on Drawing A2 attached to Gale Associates memorandum). From our visual field observations, it is apparent that the these existing roofs have been spot patch repaired and have reached the end of their useful life. They must be replaced. The condition of the existing, original concrete deck is good at the points of inspection as reflected by the results of test cuts 12, 18 and 19. There is no current evidence that any significant concrete deck replacement will be required in these areas. However, spot testing is not foolproof and some percentage of concrete deck repair or replacement may be required if it is found defective when the existing membrane is removed. We estimate that approximately 5% to 10% of the concrete deck may require either repair or replacement and suggest that unit prices be required for repair and for replacement from the bidders.

3 The two original stores flanking the theater lobby to the east and west, (Roof / SK-1 Areas E and H), are covered with approximately four plys of built up asphalt pitch roofing membrane on a wood tongue and groove deck (see Roof Type A on Drawing A2 attached to Gale Associates memorandum). From our visual field observations, it is apparent that the these existing roofs have been spot patch repaired and have reached the end of their useful life. They must be replaced. The existing, (assumed) original wood deck is water saturated as reflected by the results of test cuts 2 and 20. These two wood

(8)

deck areas must be replaced with new decking before they can be re-roofed. The existing water saturated decking could be replaced either in-kind (T&G wood planks) or with metal decking. We recommend in kind replacement if the structural support system is determined to be viable. If the existing structural support system (assumed to be wood joists from the original construction documents) is determined to be damaged, then the system should be replaced either in-kind or with a new steel joist and decking system that can be fire proofed.

It should be noted that test cut number 17 at the east edge of roof area H revealed two roofs consisting of four plys of built up roofing membrane (each) on a gypsum deck. We recommend that this anomaly be further investigated before construction documents are completed.

Vitetta Group, with our consultant, Preservation Services, Inc., visited the site to investigate the original paint colors of the roof top accessories and to obtain samples of the original mortars for the interior roof parapet and chimney masonry. Attached is our sketch, Roof / SK-2, indicating the locations of the samples taken. The laboratory results of these tests and conclusions are found in the attached report and data sheets from Preservation Services, Inc. In general we found that the most likely original color of the roof top accessories was beige/tan between Munsell numbers 2.5Y - 8/2 and 2.5Y - 8/4, a color range that is very similar to the color of the existing buff/cream colored brick that is the predominant color of the facades.

The results of the mortar sample testing reflected in the laboratory report indicate that the original mortars are appropriate for the types of masonry found on the parapet wall and that the colors are appropriate to their substrata masonry depending on base colors and locations. This is common for the type of construction during the period. The mortar, in general, is in good condition, with only about 30% patch pointing replacement required. The original joints, however, are reverse struck and it is recommended that replaced joints should be correctly struck when installed.

Vitetta Group was able to obtain and copy original photographs (002 and 003) of the Silver Theater from the files of the Historic Preservation Section of the Montgomery County Department of Park and Planning to confirm the original appearance of the roofing. We were also was given copies of the original construction drawings of the Silver Theater by the Silver Spring Redevelopment Office. These original documents indicate the various roof structures, decks, and finish (surface) materials and other related details such as roof ventilators, the original chimney design, etc.

Vitetta Group's Chief Structural Engineer, visited the site and reviewed the condition of the roof and in particular the condition of the roof's steel framing system as accessed through the attic space above the auditorium. The results of this review are contained in his report of the January 29, 1998 site visit. The general finding of the report is that the existing structural support of the main auditorium roof is in good condition and that only

minor, localized repairs to the bulb-tee support members may be required when replacing associated areas of the gypsum deck.

II Scope of Roofing Demolition

1. The main auditorium (Roof / SK-1 Areas A, B, C, D and N)

The minimum extent of roof deck replacement that will be required is shown on the attached drawing Roof / SK-1.

Roof areas A, B C, D and N above the theater auditorium, are composed of gypsum deck. Existing gypsum deck that is found to be deteriorated should be removed and replaced in kind. It is estimated that approximately 20% (approximately 2000 square feet) of the existing gypsum deck above the auditorium must be replaced due to past or current water intrusion below failed roof membrane.

Related to the roof deck is the condition of the steel structural system that supports the deck. As discussed above, the attached structural engineer's site visit report indicates that overall the structural frame is in good condition and only minor repairs are expected to be required.

For the Auditorium roof, Vitetta Group recommends the use of new nailable gypsum deck, 2 1/2" to 3" in depth, poured over 5/8" thick gypsum form board to match the original roof deck assembly as observed during the field investigations and corroborated by the information found on the original construction documents. The system can be obtained from United States Gypsum Company through their representative for cementitious deck gypsum roof systems, the Proteet Group of Charlotte, NC. Literature describing this system is attached to this report (attachment A).

While the first choice of replacement material for the auditorium roof deck is obviously replacement in-kind using poured-in-place, nailable gypsum deck, it should be noted that the availability of certified installers of the system is extremely limited. There is also a technical problem involved with the lengthy curing period required for poured-in-place gypsum that could adversely affect the fabric of the building if not handled with extreme care. There are two alternative materials that might be used for extensive replacement sections such as those found on the "mansard" and gutter sections of the auditorium roof designated as areas B, C, D and N on drawing Roof / SK-1. These areas may be repaired by cutting away the damaged existing deck and installing either new prefabricated gypsum roof deck panels or new cementitious woodfiber panels such as the "Tectum" panels recommended in the attached report from Gale Associates, Inc. (Attachment B).

Vitetta Group suggests that the County consider providing bid documents that call for a base bid, for replacement in-kind using the original gypsum deck system, with two deduct alternates for the installation of 1, the prefabricated gypsum roof deck panels and 2, the prefabricated cementitious woodfiber (CWF) panels.

It should be noted that the alternate systems should only be used if it can be demonstrated that the acoustical qualities of the auditorium will not be adversely affected by the substitution of the prefabricated gypsum or the CWF panels for the original gypsum system.

2. The theater lobby (north) and mechanical / support rooms (south and west), (Roof / SK-1 Areas G, I, J, K, L and M)

The results of the test cuts performed at the remaining roof areas: G, I, J, K, L, and M, indicate that these areas are on (or in the case of I, J and L can be assumed to be) undeteriorated concrete deck that should be able to be reused as the substrate for new roof membrane.

3. The two original stores flanking the theater lobby to the east and west, (Roof / SK-1 Areas E and H),

Roof areas E and H, above the stores to the north and south of the theater lobby, are composed of tongue and groove wood plank decking over a structural system that is suspected to be wood roof joists. It will be necessary to perform a destructive test opening in order to determine if the structure is wood joist as indicated by the original drawings, or if some other system was used. Test cuts in these two areas reveal that the

(continued on page 5)

deck is saturated and needs to be replaced. If the existing joist structure is found to be sound, the decking may be replaced (in-kind) with new wood decking. If the existing structural wood joists prove to be deteriorated, they should be replaced with new steel framing members and steel deck, the entire system coated with fireproofing material.

The results of the test cuts performed at the remaining roof areas: F, G, I, J, K, L, and M, indicate that these areas are on (or in the case of I, J and L can be assumed to be) undeteriorated concrete deck that should be able to be reused as the substrate for new roof membrane.

All of the existing, membranes, on all roof areas should be removed down to the structural decks (including the areas that have more than one roof). In the process of demolition, each section of exposed deck should be inspected and approved before new roofing membrane is installed in that area.

A requirement for unit pricing should be included in the specification for the following roof deck replacement (along with that which is already included in the contract):

a) concrete deck repair/replacement $/sq ft
b) wood T&G plank deck repair/ replacement $/sq ft
c) gypsum deck system deck repair/replacement $/sq ft

III Guidelines for Roofing Base and Membrane Replacement

1. Roof areas A,B, C, D and N above the theater auditorium were originally built-up asphalt topped roofing. This was confirmed by review of the original construction drawings and as observed during visual inspection of test cut No. 15 (see photograph 001) which revealed the asphalt top sheet of the original built-up roof immediately underneath the current roofing top sheet. This finding is also supported by the attached historic photographs 002 and 003 taken from the south in which the south facing mansard slope of the auditorium roof is clearly visible and displays the monolithic appearance of rolls of granular asphalt impregnated top sheets.

For the auditorium roof, Vitetta Group recommends the use of new sheet roofing which has the appearance of the original asphalt impregnated sheet roofing. As the slope of the mansard sections (B, C, and D) is too steep for most built-up roofing systems it will probably be necessary to use a system that is appropriate for the steep (36 degree) slope but can be modified to give the appearance of the original asphalt rolls. Samples must be obtained of both the hypalon coated EPDM with broadcasted sand finish and the modified bitumen cap sheet with black granules suggested in the Gale Associates, Inc. memorandum attached to this report. The end result of the choice of membrane systems for the auditorium roof must be a visual match for the original black granular appearance of the asphalt sheet roofing and a reasonably warranted roof system in excess of ten years for materials and five years for workmanship.

2. The roof areas above the lobby and mechanical/ support areas, I, J, K, L and M are currently covered with built up pitch with gravel ballast. There are no known historic photographs of these flat roof areas but the original construction documents indicate that these roofs were also built-up membrane with an asphalic top sheet. Vitetta Group recommends the use of new sheet roofing which duplicates the appearance of the original asphalt impregnated sheet roofing. The end result of the choice of membrane systems for the flat roof areas should be a visual match for the original black granular appearance of the asphalt sheet roofing. While these roofs are not visible from the street, they are clearly visible from the adjacent taller buildings which now surround the site and their appearance should be compatible with the remaining roof areas.

3. The roof areas above the stores that flank the lobby, E and H are currently covered with built up pitch with gravel ballast. As stated above, there are no known historic photographs of these flat roof areas but the original construction documents indicate that these roofs were also built-up membrane with an asphalic top sheet. Vitetta Group recommends the use of new sheet roofing which has the appearance of the original asphalt impregnated sheet roofing. The end result of the choice of membrane systems for the flat roof areas should be a visual match for the original black granular appearance of the asphalt sheet roofing. While these roofs are not visible from the street, they too, are clearly visible from the adjacent buildings which now surround the site, and their appearance also, should be compatible with the remaining roof areas.

In general, all new roofing membrane must match, as closely as possible, the appearance of the original roof. It should be understood that in order to meet current energy codes, even for historic buildings, some modifications may be required, such as the addition of thermal insulation which may increase the thickness of the roof deck by a small dimension, but will be imperceptible from the original profiles.

All new roofing systems must be designed to meet current, applicable energy, building and fire codes for Montgomery County and the State of Maryland for historic buildings.

It is strongly recommended that the construction documents for the re-roofing of this building require the manufacturer(s) to warranty the roof system(s) for a minimum of 15 years from the date of acceptance by the County for defects due to manufacturer and the installer of the new roof system(s) to provide minimum five year warranty against all defects due to workmanship and installation.

As much as possible of the existing metal counter flashings (photograph 003) should be maintained in place and reused. The built-in metal counter flashings will be required to be carefully bent-up in order to install new roof perimeter fabric flashings and bent back down after the new flashings have been installed. It will not be possible to obtain a "like new" appearance of the built-in counter flashings but they must be repaired to a reasonable and acceptable appearance and made watertight and functional. We have employed this technique on several building restorations recently with success.

4. Roof Insulation: No roof insulation was discovered during our field investigations or any indication of intent to install insulation found on the original construction documents.

However, it is recommended that insulation be designed and installed to comply with all applicable governing codes. The architectural details of this building are such, that up to three inches of rigid roof insulation could be included in the design without significantly altering the appearance of the roof.

5. New roofing details: It is recommended that the designer of the new roof systems use current accepted roofing details for all new and reused flashings, pitch-pockets, curbs and other roof system details in order to be compatible with the new system specified and to insure the County the ability to obtain the warranties required.

IV Guidelines for Roofing Accessory Replacement/ Restoration

All existing historic (original) and new roof top accessories (see photograph 003) are to remain in their current locations (see attached Roof Plan). These items will need to be temporarily disconnected and reinstalled on new curbs that will accommodate the thickness of additional insulation board that may need to be installed to meet codes. During the process, all existing paint should be removed to bare metal by the gentlest means possible. The accessories must then be modified to meet current codes if necessary, prepared, primed and finish painted to match the original colors as determined by the paint analysis test results attached to this report (see attached drawing Roof / SK-2 for locations of paint test samples and attachment D for laboratory results and report of findings).

The original accessories include approximately five goose neck vents, two major (highly visible) and one minor gravity ventilators, ten vent pipes and one original roof hatch. It should be noted that the, existing roof hatch should be replaced with a modern, code conforming, operable unit that approximates the dimensions and profiles of the existing hatch.

If it is determined that any historic (original) roof accessory is deteriorated beyond repair then it should be replaced in kind in it's existing location and painted to match the original color as determined by the paint analysis. Replacement may only be undertaken if a reasonable attempt to repair each unit is made and found to be unsuccessful. are first

No roof accessories that are likely to be required for operation of the building systems should be removed and replaced with new roof deck and membrane until it is determined that they are no longer required for proper function of the building support systems (e.g. the new ventilator added recently to provide ventilation exhaust to the building while it is being restored). However, non-original accessories that can be determined to be obsolete, may be removed and new deck and membrane installed at those locations.

V Guidelines for Original Chimney Replacement

The chimney at the east (apse) end of the building (see photograph 005) is to be restored to the original form as shown on the original construction documents (see attached annotated excerpts from the original construction drawings) and as confirmed by the historic photographs (see photographs 002 and 003).

The top of the replicated caststone chimney top will be approximately thirty feet above the top of the existing chimney at its current high point. The restoration will include a four foot set back from the west face of the chimney at the 141'-8" elevation and a three foot set back at the 152'-8" elevation. The westward projecting masonry will be sealed and roofed over with new metal cricket flashings as shown on the original contract documents. The upper portion of the chimney was apparently removed down to it's current height in past decades. The condition of the remaining chimney is not indicative of any apparent distress. It is assumed, at this time, that there is no apparent structural reason that the chimney should not be reconstructed to it's historic height and shape. Vitetta Group has observed visually that the condition of the chimney base in the boiler room does not show any apparent signs of distress in the base. We recommend that a final inspection of the interstitial space immediately below the north face of the chimney be made in order to observe the condition of the support beam below the chimney at the underside of the roof deck. If no signs of distress are apparent then the chimney should be restored to it's original form. It is likely that additional reinforcing will be required when the chimney is reconstructed but this will not be visually detectable.

There is a strong possibility that the chimney will be used functionally to accommodate the new HVAC system. Before the reconstruction of the upper, missing portion is started, it is recommended that a new code compliant, stainless steel chimney liner be installed in the existing, lower portion of the chimney to facilitate the installation of the liner.

The brick used for the chimney reconstruction must be a match for the two types of brick as seen in the remaining portion of the original structure. The buff colored (cream) brick will be laid in running bond, nine courses high per band and the black salt glazed face brick will be laid in running bond, three courses high per the original drawings. The mortar used for the reconstruction of the chimney must be produced to match the original mortar mix in proportions of components and color. The results of the mortar test for the chimney are found in the attachment D, mortar analysis section. The mortar sample for the chimney was taken from the base of the remaining portion of the chimney and is indicated as "MS-1" on the attached drawing Roof / SK-2. It is important that the sheet metal flashing installed over the wash surfaces of the replacement chimney set-backs, match the original construction documentation (see attached excerpts of original construction documents.

VI Guidelines for Brick Parapet Wall Repair

1. The interior face of the parapet walls should be repaired as part of the roof replacement project. The existing pointing mortar is in relatively good condition and appears to be original. (see photograph 006). Vitetta group recommends that approximately 30% of the existing joints above the roof level be raked out and repointed with new pointing mortar to match the original as defined in the attached mortar analysis report. Locations of mortar test samples can be seen on the attached drawing Roof / SK-2, indicated as "MS-1 through MS-7A" and the appropriate mortar mix and colors can be found in the mortar analysis section of attachment D. The specifications should include a unit price request for linear feet if repointing of the brick masonry.

2. The entire parapet cap system, both caststone and terra-cotta tile units should be removed and reset after the existing through-wall flashings have been repaired (if required). The caststone bedding mortar must match the results of the attached mortar analysis test report for sample MS-7A. It is recommended that the terra-cotta parapet cap units be removed and carefully stored. The existing bedding mortar should be removed and the top of the parapet wall cleaned and fitted with new "deformed" metal flashing that provides a mechanical attachment to both the top of the parapet brick wall and the new bedding mortar required to reinstall the salvaged terra-cotta parapet tile caps. Both the reinstalled terra-cotta caps and the reset caststone parapet capstones should be sealed using urethane sealant colored to match the color of the original mortar on all wash surfaces and vertical joints. Horizontal joints should be repointed with new pointing mortar which must match the mixture and color of mortar MS-6 as described in the attached mortar analysis report.

Missing terra-cotta tile parapet caps (see photograph 005) must be replaced with new replacement units to match the existing. If it is not possible to find a source of matching replacement units, salvaged units from the adjacent shopping center parapet may be used. Salvaged units would be required to be modified in order to fit the apse curve where the units are missing. Salvaged units may only be taken from portions of the shopping center parapet that are known to be scheduled for demolition (specifications should direct the contractor to verify with the County, which areas of shopping center parapet would be available for terra-cotta unit appropriation).

All joints between masonry and metal should be raked out and have new urethane sealant installed with wicked weep tubes at 12" on center. This would occur particularly at the joint between the bottom brick and the top of the metal through wall counter flashing.

The separated mortar joint that runs continuously around the auditorium parapet wall, at the fourth joint below the bottom of the parapet cap, appears to be caused by rust jacking of a steel plate that is built into the wall at that point (see photographs 004 and 006). The intent of the plate is not known at this point. There is some indication on the original construction drawings that a steel angle with one leg downward may have been installed and possibly tied to the spandrel beam below in order to strengthen the masonry parapet,

but this is conjecture and should be investigated further. Vitetta Group recommends that a destructive test be performed to uncover a reasonable size portion (approximately 4 feet in length in two areas for a total of 8 feet of exposure) of the steel to observe and attempt to discover the reason for its use and then, a more informed judgment as to how to repair this condition can be made. If it is decided not to investigate the situation, there are remedial measures that can be applied to treat it as a "moving joint," but this will not repair the source of the problem. If the problem is not addressed, the steel will continue to rust and cause this joint to fail periodically. We strongly recommend further testing of this item. If the remedial measure is decided upon then the County should assume that the condition will be a chronic maintenance item.

The existing roof dunnage (steel support for former HVAC units) shown at roof area K on the attached drawing, Roof / SK-1, should be removed. The parapet wall that this support steel should be taken down to the bottom of the existing imbedded steel so that it can be completely removed. After the steel has been removed, the parapet can be reconstructed reusing the salvaged brick units and the terra-cotta cap can be reinstalled as described above. This removal will insure that remnants of the steel framing will not remain inside the parapet wall where it might continue to rust and damage the parapet further.

Caststone parapet cladding that faces outward should not be repointed until the facade of the entire building is restored, at which time all visible caststone facing would be repointed and cleaned at one time by the same contractor. This is the only way to insure a uniform appearance of the caststone portions of the facades.

VII Additional Roof Drain Inlet Locations

Currently the entire auditorium roof is drained to two roof drains located in the northeast and northwest corners of the roof (see drawing Roof / SK-1). Both of these drains appear to be blocked and these locations are concurrent with the most serious water intrusion damage to the historic fabric of the auditorium ceiling below. These drains should be replaced with new drains and the rain water conductors into which they drain need to be inspected and cleared to insure that they are sound and able to be reused. If the conductors prove to be unusable, they must be replaced with new conductors as far as required to insure proper drainage of the roof. The existing original sheet metal roof scuppers (see photograph 009) are too high above the drains to be of any practical use if the drains or rain water conductors should become blocked. Vitetta Group recommends that two additional roof drains be added at locations approximately ten feet to the east of the existing drains. These additional drains would serve as emergency back-up if the primary drains became blocked. An alternative solution would be to relocate the existing sheet metal scuppers to positions about ten inches above the top of the new roof membrane so that they would function as emergency overflow relief if the drains or rain water conductors become blocked.

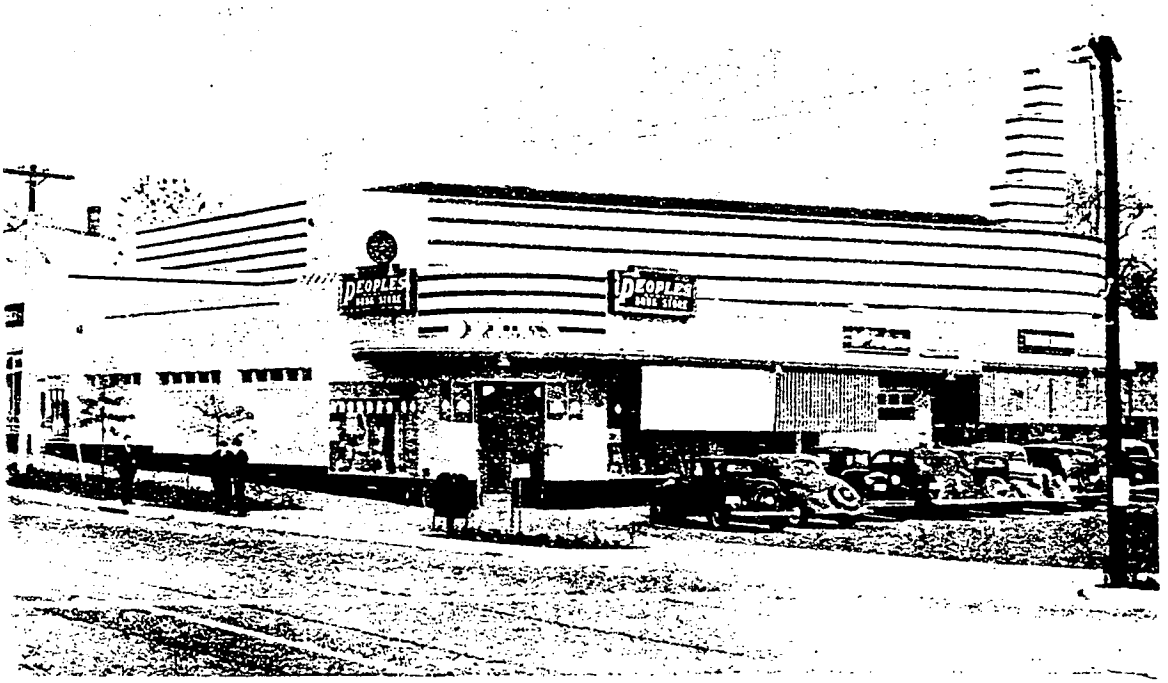
VII Paint and Mortar Test Findings

The attached drawing Roof / SK-2 indicates the locations of the four paint samples and the eight mortar samples collected on March 17, 1998.

The samples have been collected and analyzed by Vitetta Group's building materials conservation consultants, Preservation Services, Inc. of Fredericksburg, Virginia. The results of the laboratory analysis of the samples is contained in the attached report (attachment D) We recommend that the historic paint colors as evidenced in the laboratory report be used to repaint the original, extant roof accessories and any new, non-original equipment that must remain. We also recommend that the pointing mortar, used to repoint the caststone and brick on the interior face of the roof parapet wall and to point the reconstructed chimney, match the resulting mortar mixtures and colors for each specific type of brick and stone, as presented in the accompanying mortar analysis test report.

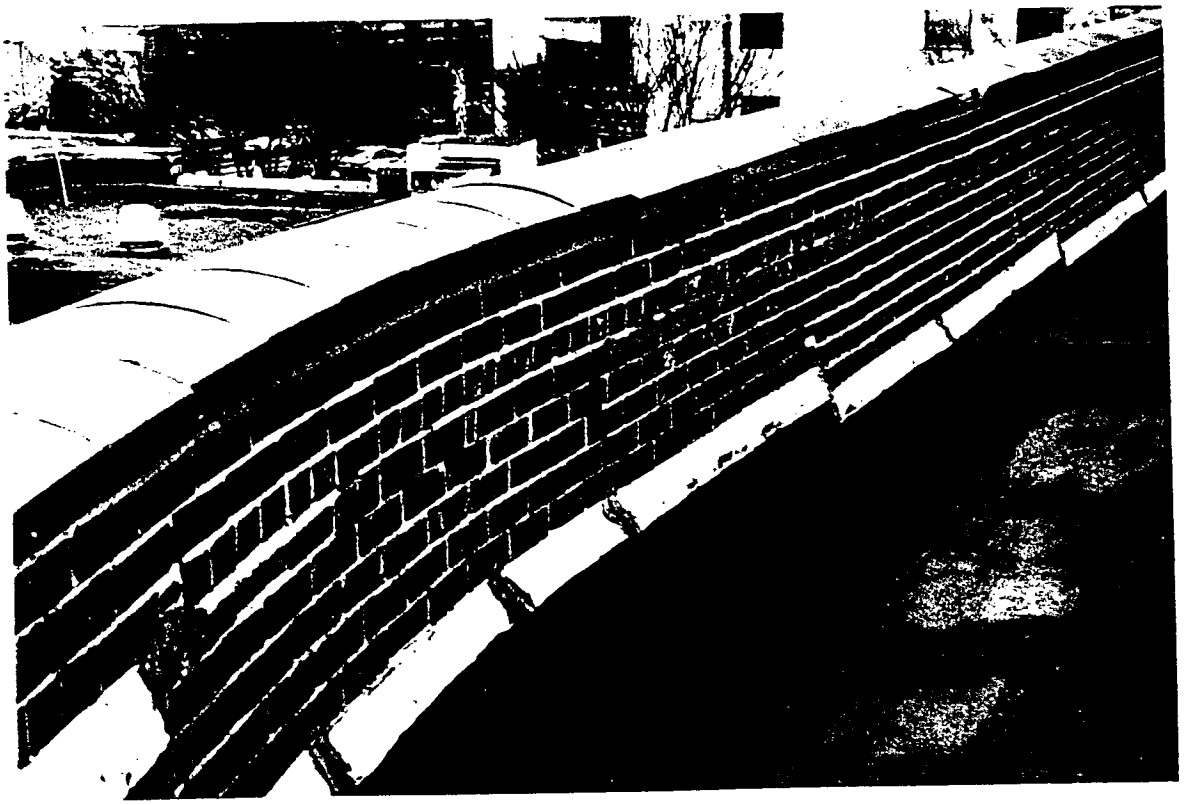
VIII Referenced Photographs

001 Test cut No. 15 showing the top sheet of the existing roofing pealed back to reveal the top sheet of the original historic asphalt sheet roof and gypsum deck.



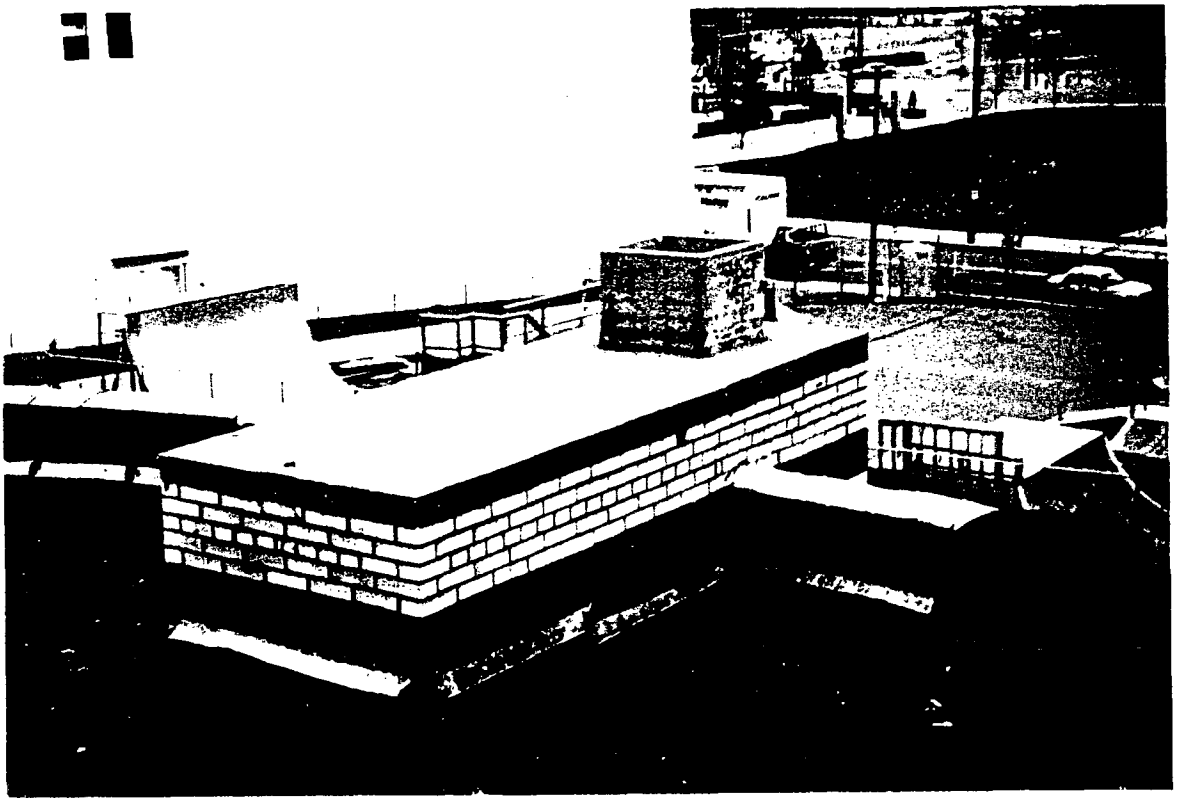
002 1938 photograph taken from the west showing asphalt sheet roofing on the west facing mansard slope of the of the auditorium and the original chimney to the left.

003 Mid-twentieth-century photo showing the mansard roof and original chimney.

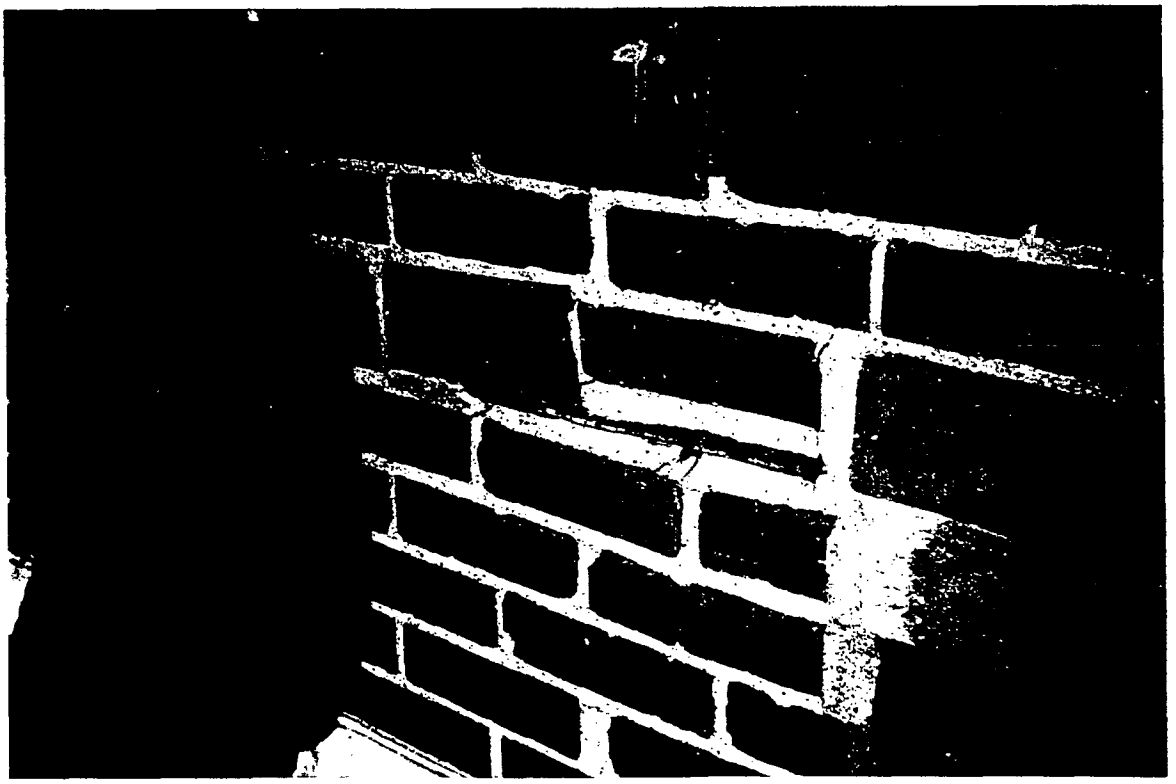


004 East face of the west parapet wall of the auditorium roof showing separated joint, metal counter-flashing and terra-cotta parapet cap (1998 photograph).

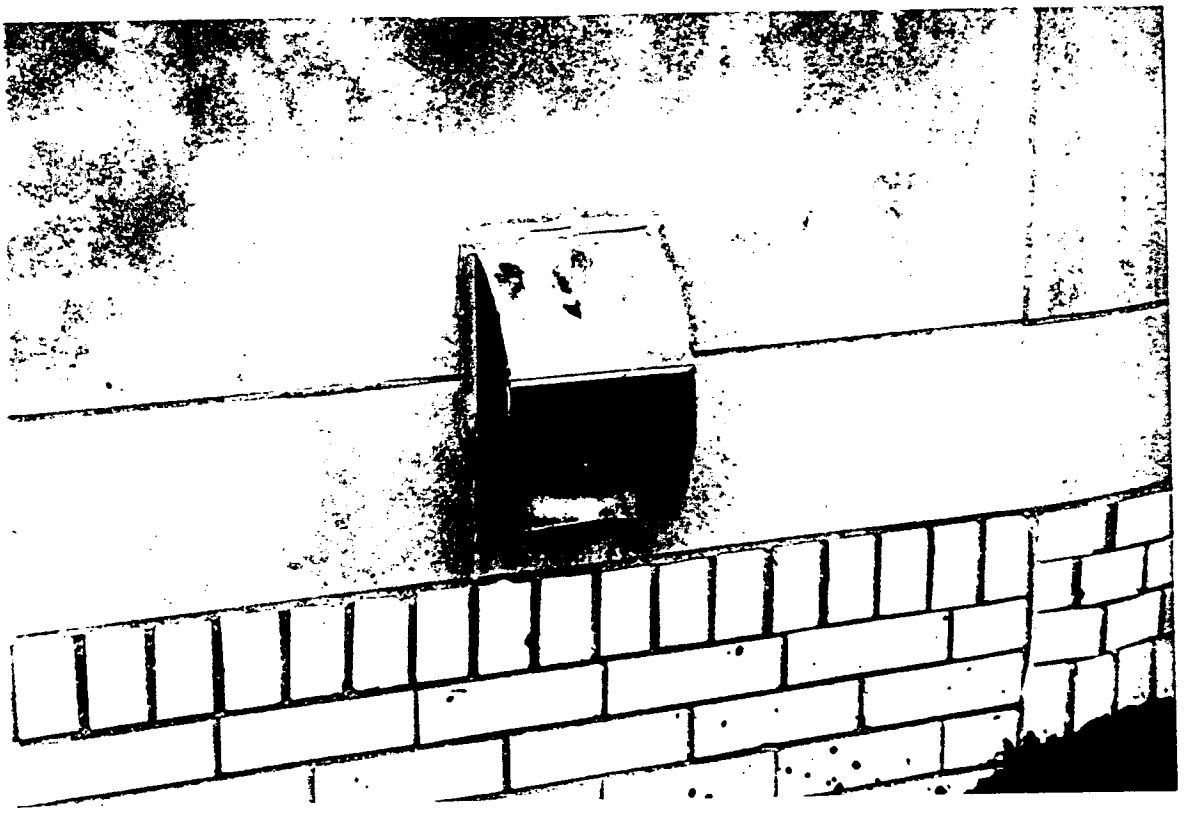
20



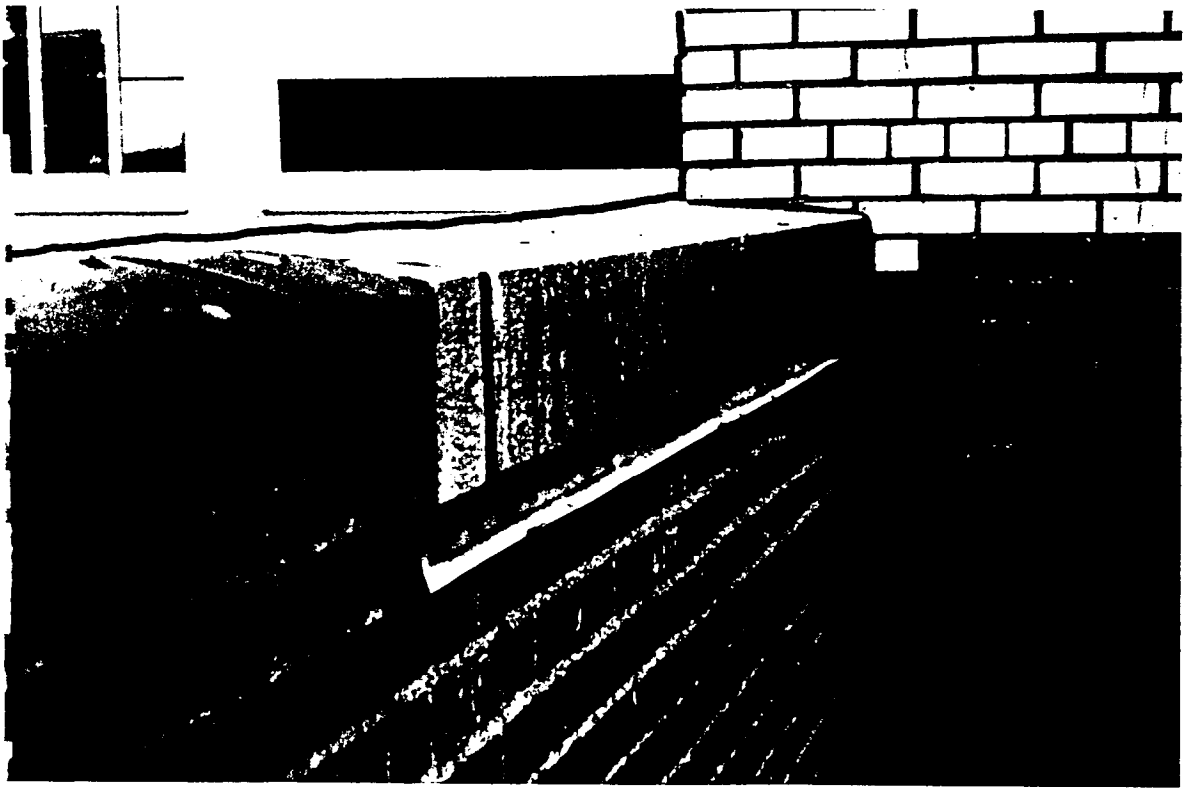
005 Base of the demolished chimney intersecting the south (apse) end of the auditorium (note chimney flue at right of photo, 1998 photograph)



006 Detail of west face of the east parapet wall showing mortar joints and the steel plate exposed (1998 photograph).

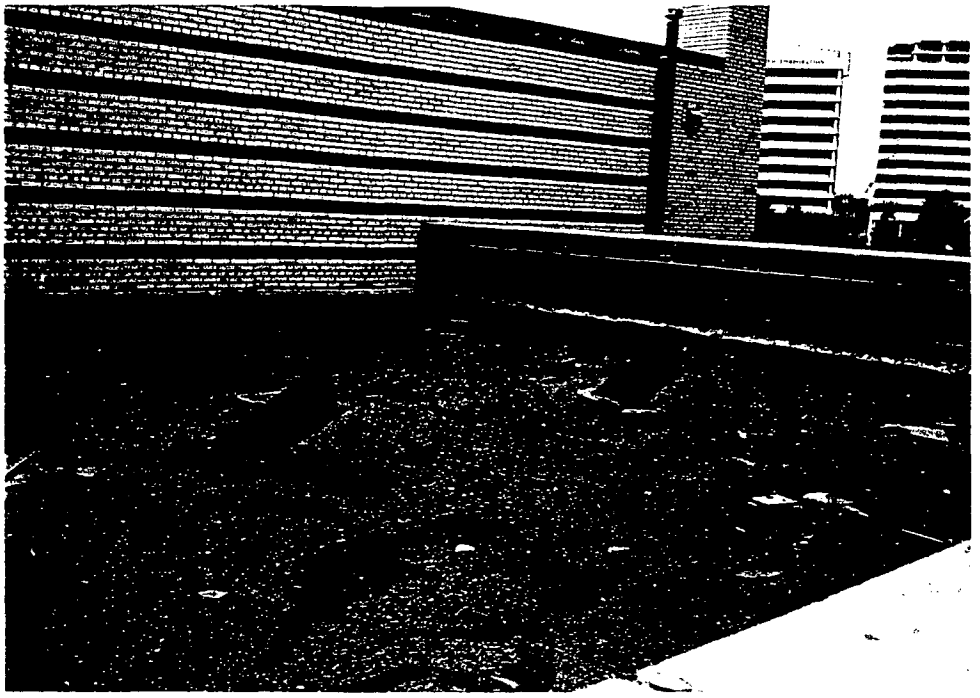


007 Existing original sheet metal scupper and caststone parapet wall cladding with buff brick parapet wall below (1998 photograph).

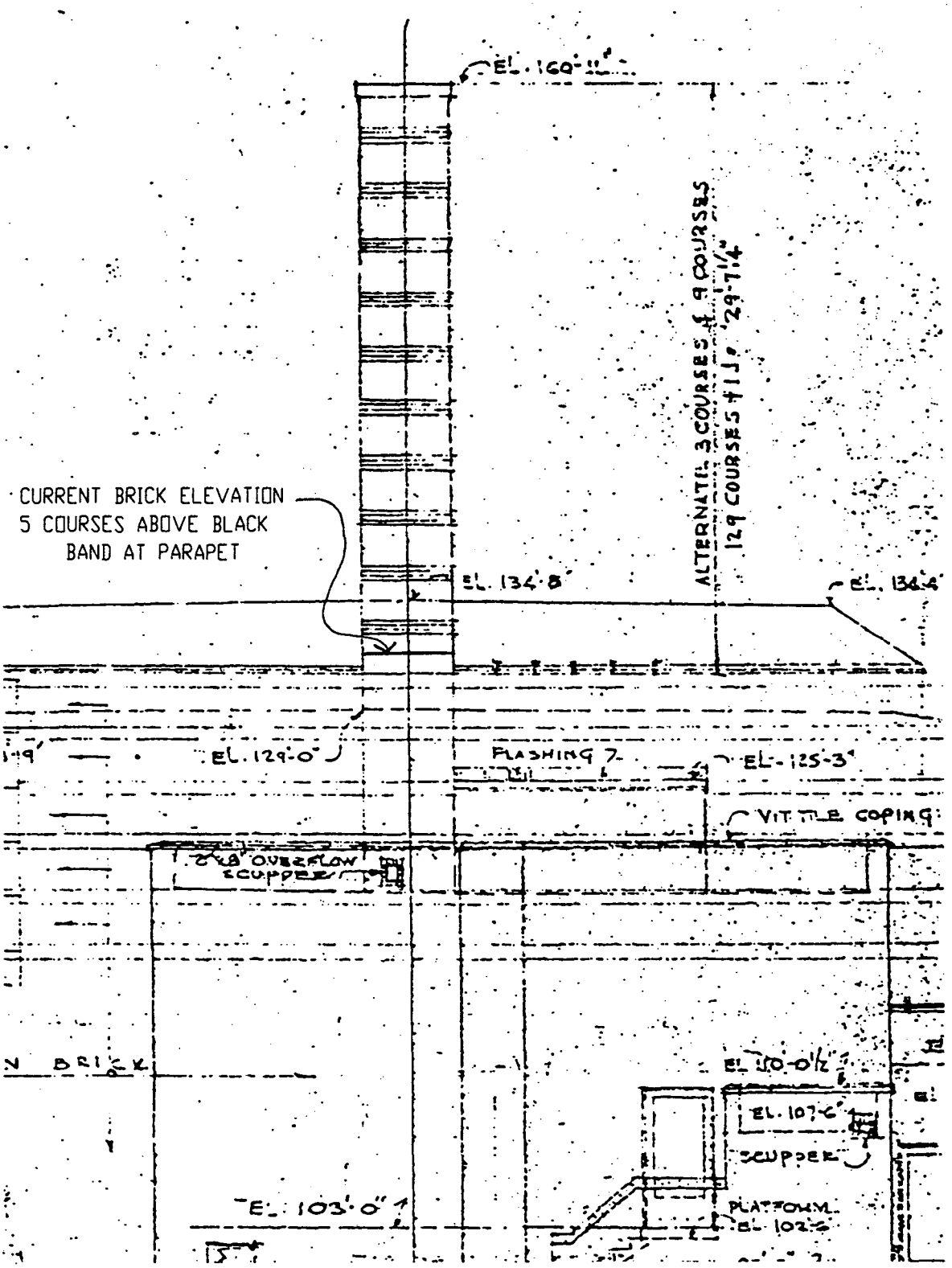


008 Juncture of caststone and terra-cotta parapet caps at the northwest corner of auditorium roof (1998 photograph).

11



009 Exterior view of original parapet wall scupper in the auditorium parapet wall to the right in the distance (1995 photograph).

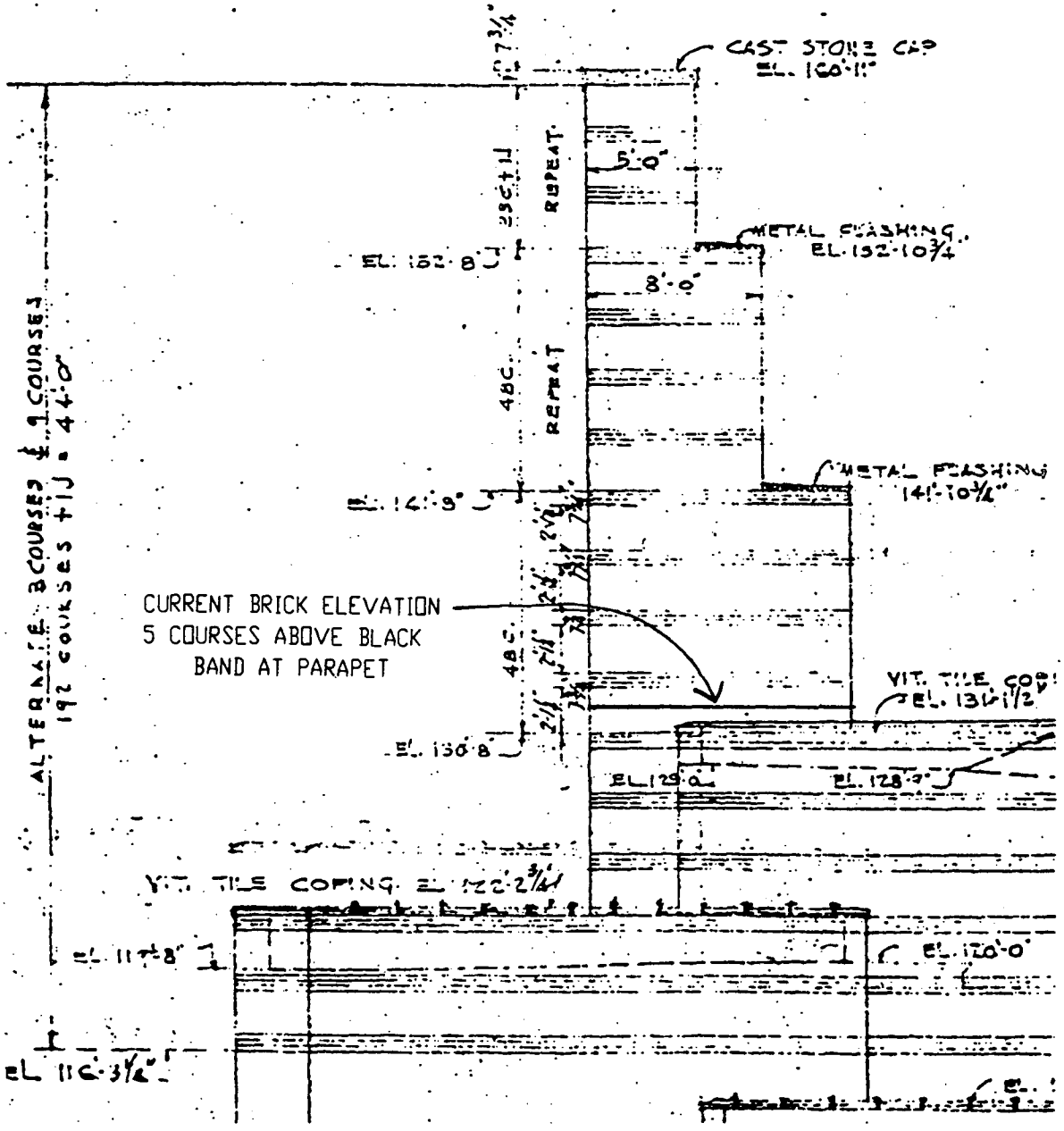


EAST ELEVATION

ALTERNATE BANDS OF BRICK
9 COURSES PER BAND - CREAM BRICK
3 COURSES PER BAND - BLACK BRICK

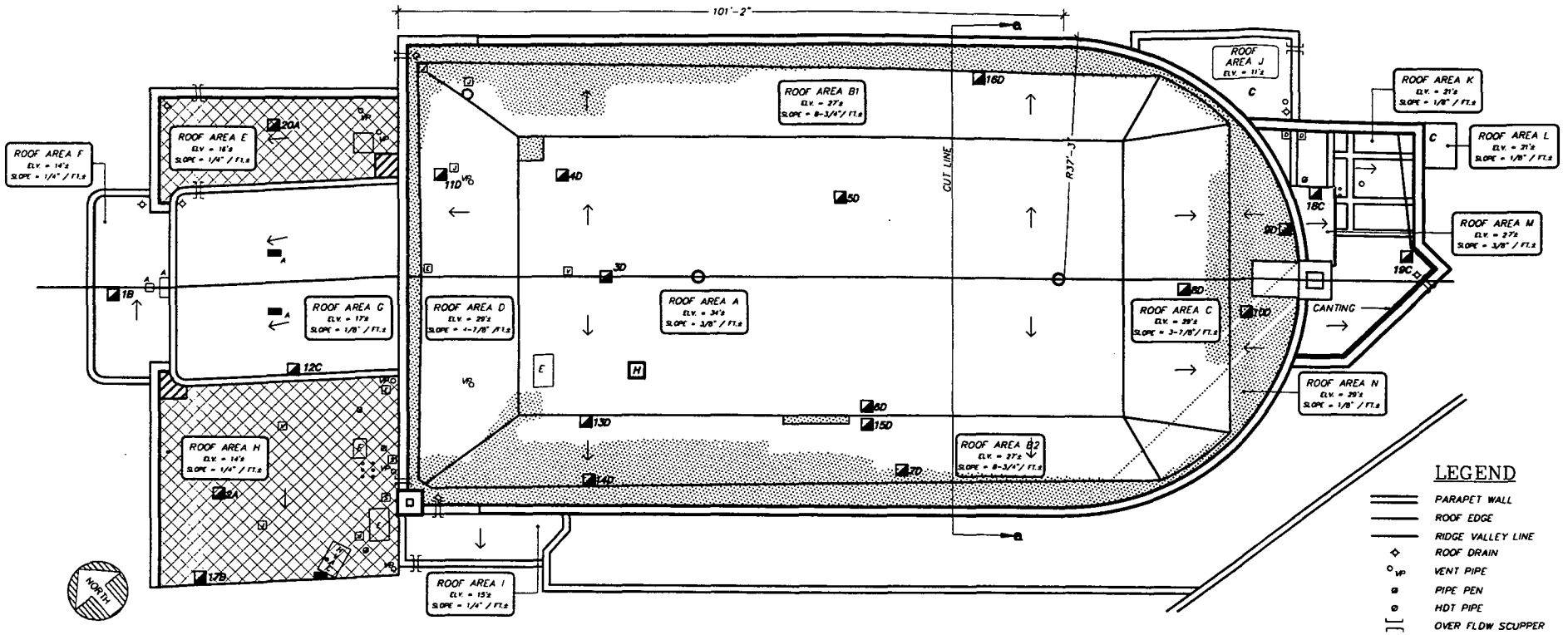
REPLACE
10 FULL BANDS - CREAM BRICK
10 FULL BANDS - BLACK BRICK
4 COURSES - CREAM BRICK

TOTAL REPLACEMENT OF 124 COURSES OF BRICK



SOUTH ELEVATION

25

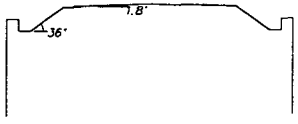


PLAN OF ROOF SHOWING EXTENT OF DECK REPLACEMENT

GRAPHIC SCALE

0 4' 8' 16' 24'

BASED ON PLAN AND INFORMATION SUPPLIED BY GALE ASSOCIATES, INC.



SECTION a–a
SCALE: 1/16"=1'-0"

ROOF AREA

AREA A+B+C+D+N=	9100 sq. ft.
AREA E=	480 sq. ft.
AREA F=	310 sq. ft.
AREA G=	980 sq. ft.
AREA H=	1150 sq. ft.
AREA I=	170 sq. ft.
AREA J=	190 sq. ft.
AREA K=	500 sq. ft.
AREA L=	35 sq. ft.
AREA M=	65 sq. ft.

LEGEND

- PARAPET WALL
- ROOF EDGE
- RIDGE VALLEY LINE
- ROOF DRAIN
- VP VENT PIPE
- PIPE PEN
- HDT PIPE
- OVER FLOW SCUPPER
- POURABLE SEALER POCKET
- PSP TO BE REMOVED
- V GOOSE NECK VENT
- E EQUIPMENT CURB
- F FAN UNIT
- H ROOF HATCH
- S SKYLIGHT
- D CLOSED DUCT
- SLOPE INDICATOR
- HVAC HVAC UNIT
- 13D TEST CUT INDICATOR, ROOF TYPE
- DAMAGED DECK–(GYPSUM)
- DAMAGED DECK–(WOOD)

VITETTA GROUP
ARCHITECTURE ◻ ENGINEERING ◻ PLANNING ◻ INTERIOR DESIGN

JOB TITLE: SILVER THEATER PHASE I									
JOB NO.	SUBJECT:	BY:	DATE	CHK'D.	DATE	PAGE	OF	ROOF	SK-1
VG 6142.0000	ROOF REPORT	MRB	4/3/98	CR	4/3/98	1	2		

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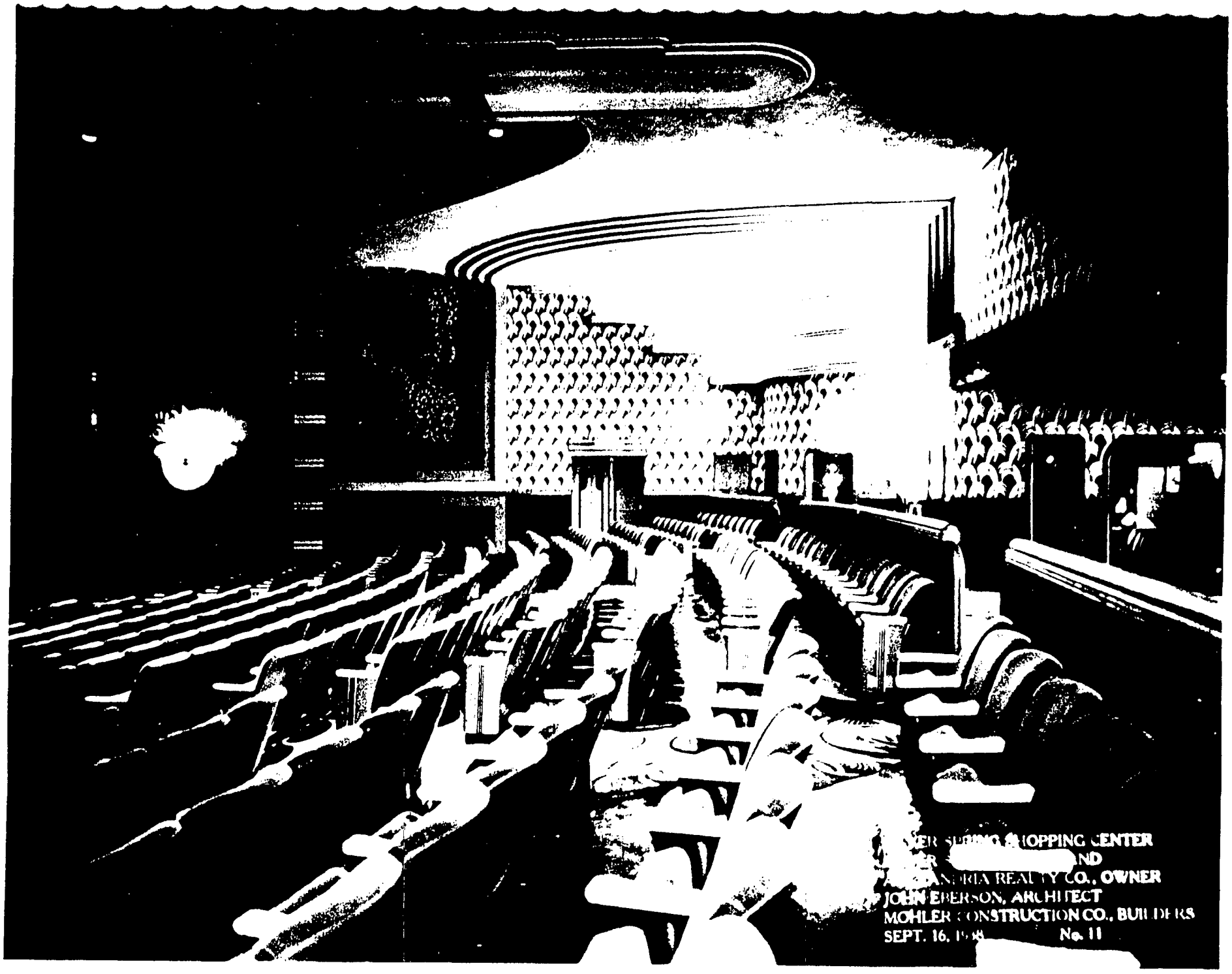
SHIRLEY TEMPLE GEORGE MURPHY
"LITTLE MISS BROADWAY"

PEOPLES
PEOPLES

SILVER SPRING SHOPPING CENTER
SILVER SPRING, MARYLAND
REALTY CO., OWNER
ARCHITECT
CONSTRUCTION CO., BUILDERS
No. 12

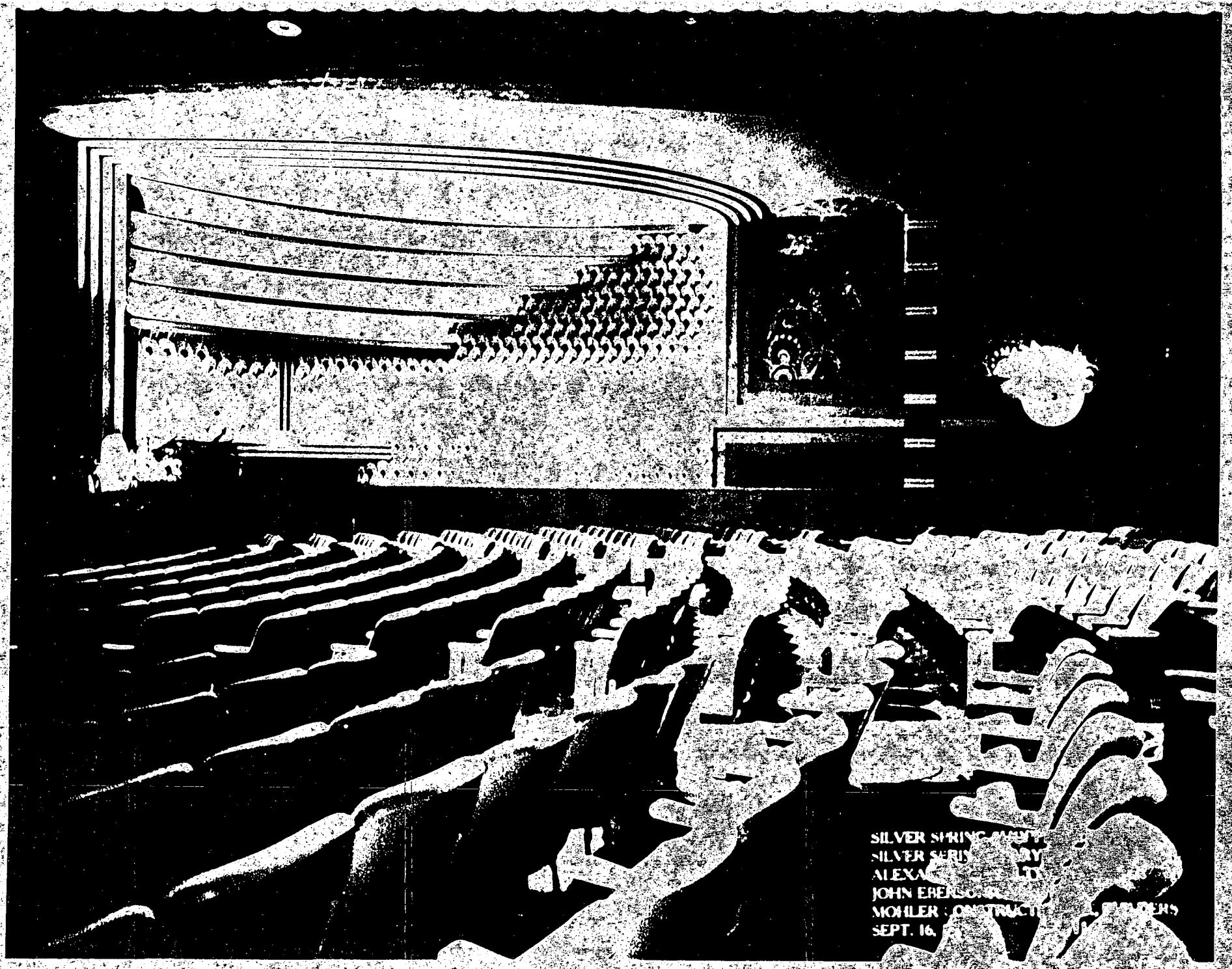
29


SILVER SPRING SHOPPING CENTER
SILVER SPRING, MARYLAND
ALEXANDRIA REALTY CO., OWNER
ARCHITECT
ALLEN CONSTRUCTION CO., BUILDERS
No. 11


OPPING CENTER
ND
RIA REALTY CO., OWNER
JOHN EBERSON, ARCHITECT
MOHLER CONSTRUCTION CO., BUILDERS
No. 11

(3)

32


SILVER SPRING
SILVER SERIES
ALEXA
JOHN EBERSO
MOHLER : CONSTRUCTI
SEPT. 16,

VAN SPRING SHOP
VAN SPRING, MANTA
VAN SPRING, MANTA

SILVER SPRING REGIONAL CENTER

Douglas M. Duncan
County Executive

May 29, 1998

Douglas M. Wrenn
Acting Director

Mr. Richard J. Brand, Administrator
Financial Assistance and Easements
Division of Historical and Cultural Programs
Maryland Department of Housing and Community Development
100 Community Place
Crownsville, Maryland 21032

Re: Maryland Bond Bill Project - Silver Theatre

Dear Richard:

We are preparing the materials you requested in your letter of May 1, 1998, for the historic easement on the Silver Theatre. In the mean time, we are proceeding with the roof repair project that is necessary to stabilize the building and the reconstruction of the chimney. We have made application with the Montgomery County Historic Preservation Commission (HPC) for a Historic Area Work Permit to allow for these improvements. The hearing before the HPC is scheduled for 7:30 p.m. June 10, 1998.

Attached is the report by the Vitetta Group making recommendations for the roof repair project. Also enclosed is a draft of the specifications for the roof repair project prepared by Gale Associates, Inc. This document is being reviewed by Vitetta and a final copy of the specifications will be given to Foulger-Pratt next week. Foulger-Pratt is the developer of the Silver Spring Urban Renewal Project and will be the County's contractor for all public improvements in the Urban Renewal Area.

We want to move forward with these improvements as quickly as possible. We would like to request that you review and approve of these improvements to the Silver Theatre even though the historic easement is not actually in place. The stabilization of the Silver Theatre necessitates that we proceed with this project now.

Please call me if you have any questions. I look forward to your comments and approval of this proposed work.

Sincerely,

Gary Stith
Redevelopment Manager

encl.

cc: Jim Duke, DFS w/o enclosures
Chris Ruffing, Vitetta w/o enclosures
Diane Schwartz Jones, County Attorney w/o enclosures
Robin D. Ziek, HPC w/o enclosures

Apr 8, 1998

Chris Rutting Vitetta Group
James Duke - P.M. - MC.
Gary Stith - S.S. Redevel. Corp.

Concept of New Development -

Gary Bondin, RTKL - architect for project. W/ Foulger-Pratt developers.

Steel frame
gypsum deck (3" Thick) on a
(Gypsum form board over the steel.
Gypsum w/ wood chips.

* Check Art Deco Society Web page on Silver Theatre

Phase I - Roof Repairs, etc
Phase II:

OPEN: FALL '99 Sept 10, 199

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. 6374

FROM: ROBIN ZEK

DATE: OCT. 21, 1998

NUMBER OF PAGES INCLUDING THIS TRANSMITTAL SHEET: 3

NOTE: Call me if you need anything else regarding release of the building permit
Robin