HARRY RANSOM HUMANITIES RESEARCH CENTER

EXPANSION AND RENOVATION

THE UNIVERSITY OF TEXAS AT AUSTIN

SCHEMATIC LIGHTING DESIGN

MICHAEL ANTHONY LOMBARDI
LIGHTING / ELECTRICAL OPTION
DR. RICHARD MISTRICK, ADVISOR

THE HARRY RANSOM CENTER

46,360 Square Feet (Renovated First and Second Floors)
Seven Above-Grade Floors and Basement

Originally Constricted 1972
Renovated 15 May 2001 - April 2003
$9 Million Project Cost

Building Functions

- Cultural Center
- Gallery
- Historic Archives
- Artifact Preservation
- Performance Center

THE ARCHIVES

The Ransom Center is home to one of the world's largest cultural archives, including:

36 Million Literary Manuscripts

1 Million Rare Books

5 Million Photographs

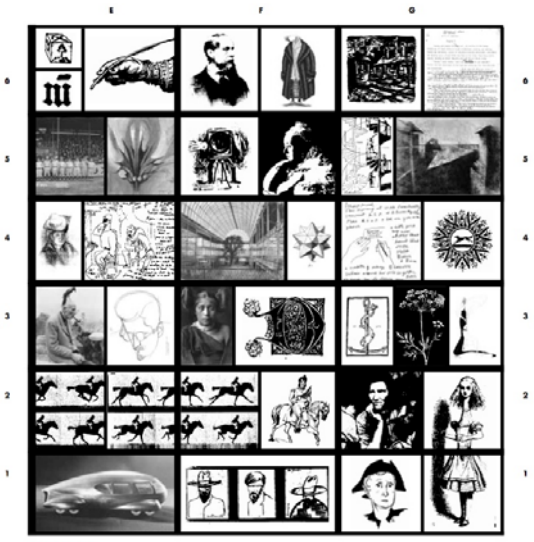
Over 100,000 Works of Art

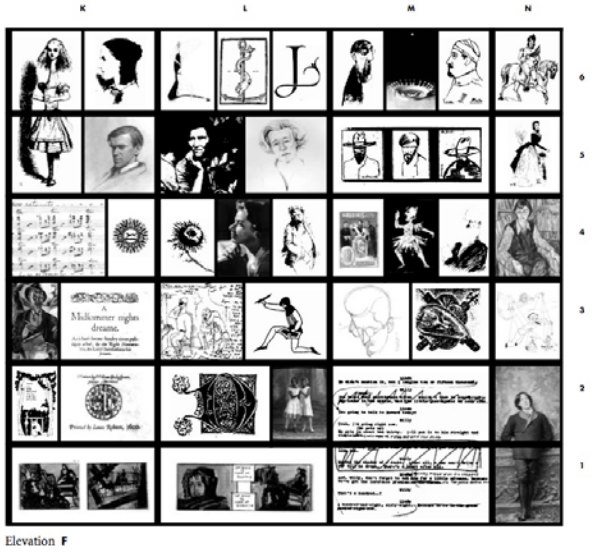
The Gutenberg Bible (c. 1455)

The World's First Photograph

Artwork by Frida Kahlo and Diego Rivera

Manuscript collections of Ernest Hemmingway, T.S. Elliot, James Joyce and more





Elevation F

THE RENOVATION

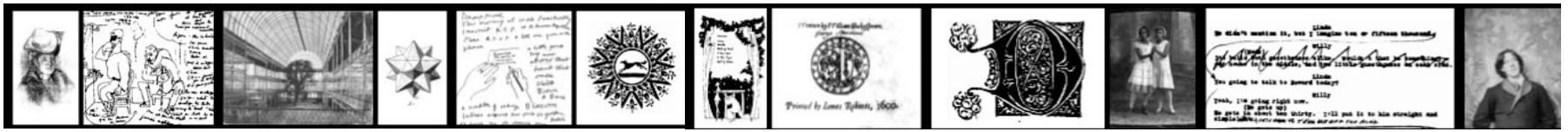
Renovation scope includes entire first and second floor

Includes gallery, theatre, and archive library / reading spaces

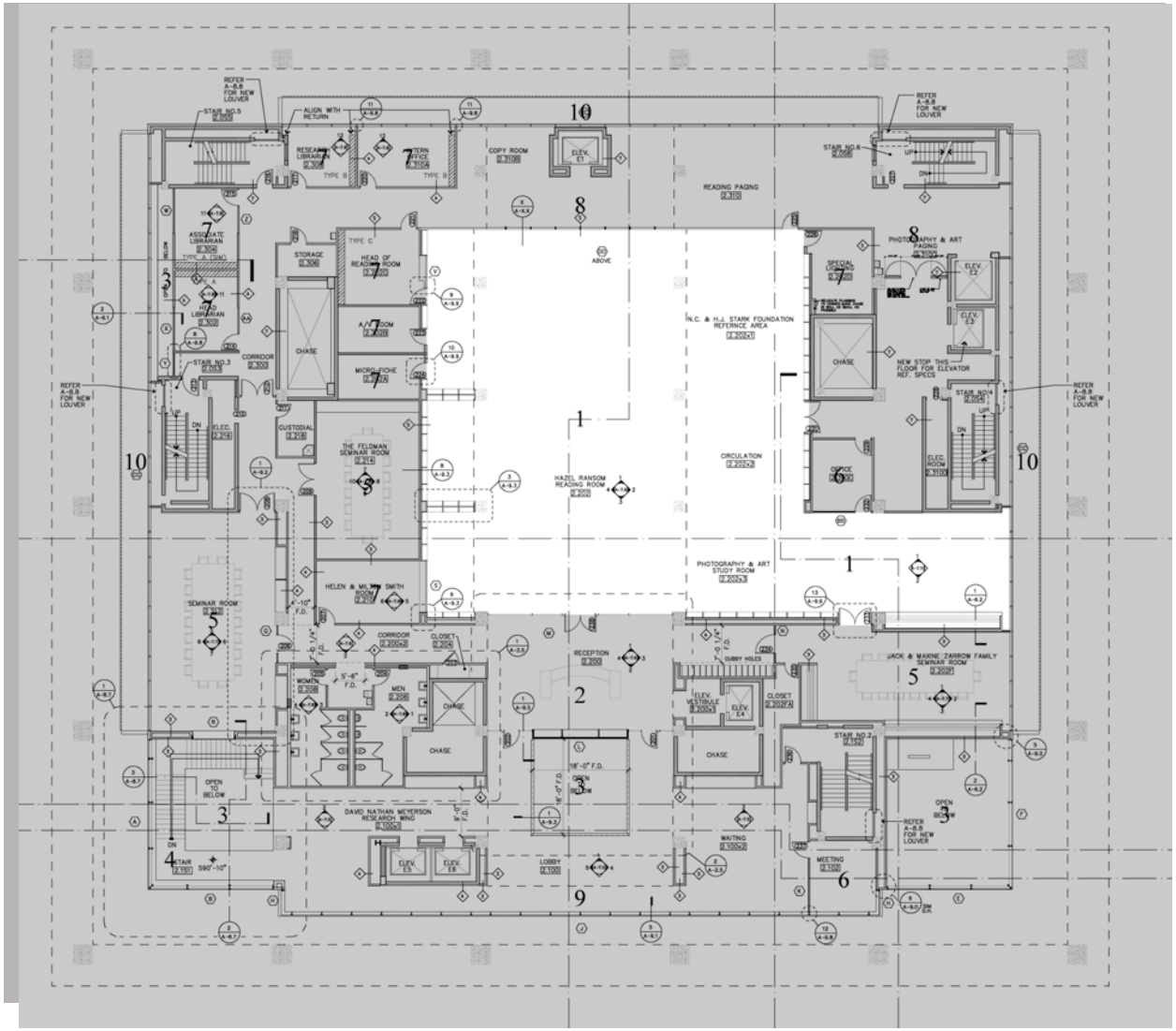
Exterior covered overhangs were converted to interior circulation and lobby spaces with glass curtain walls

DESIGN OBJECTIVE

The Ransom Center archives are not only a valuable resource for scholars around the world; they are one of the world's most complete set of artifacts. Use light to reinforce the story told by these documents, journals, sketches, photographs and paintings. **From the artists' first childhood strokes to their final pen marks**, light should be used to reveal the cultural history of humanity and reinforce the architecture that protects its**,** **from the moment they enter to their last step out the door...**



DESIGN SCOPE



Exterior

Façade/Canopy

Lobby

Entrance Lobby

Corridors

Stair Hall

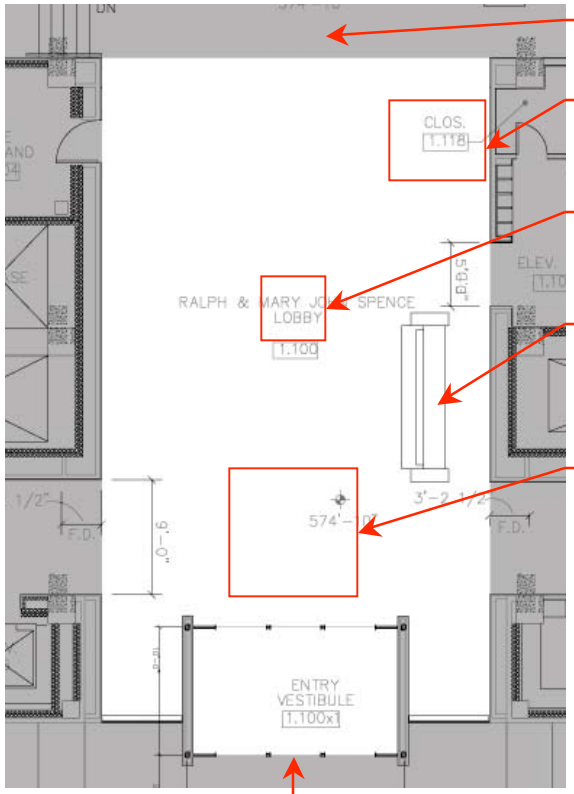
Theatre Lobby

Gallery

Theatre

Reading Room

ENTRANCE LOBBY



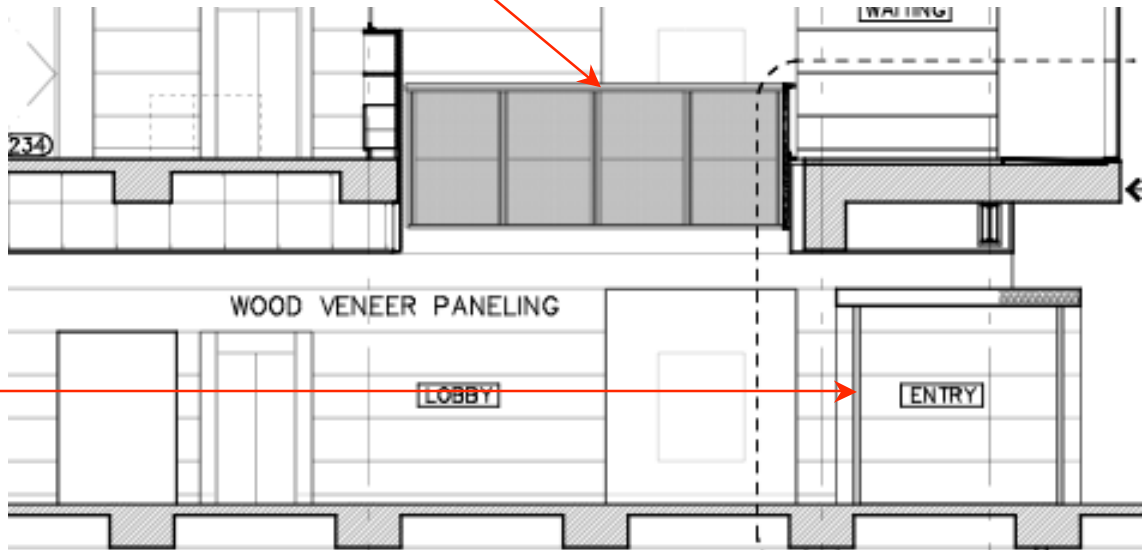
To Gallery

First Photograph Display

Gutenberg Bible

Security Desk

Open to Above



Entrance Vestibule
and Signature Wall

ENTRANCE LOBBY

Design Goals

Create warm comfortable space that functions well for social gatherings

Highlight rich wood walls

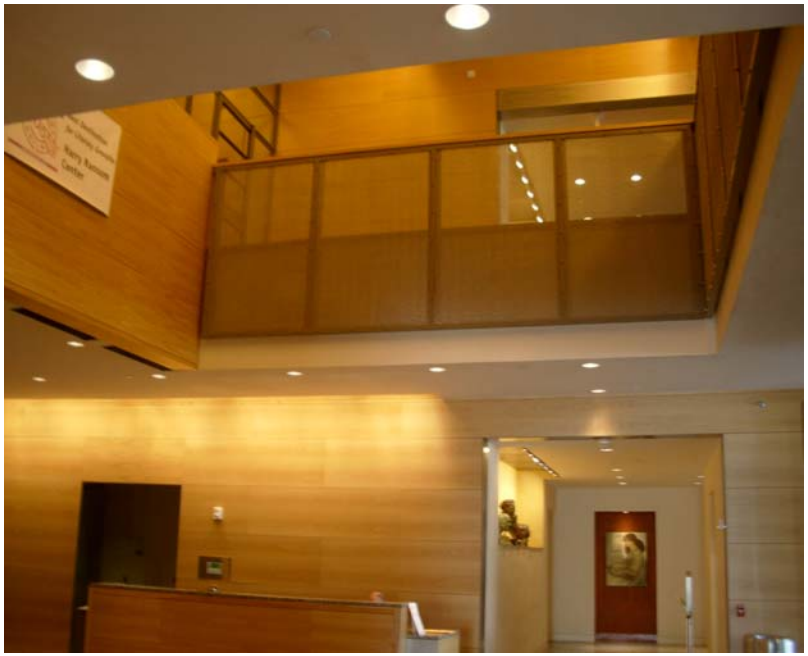
Create a visually open space

Highlight the Gutenberg Bible Display case

Provide adequate illumination for security desk

Provide simple/logical building lighting control system at security desk

Reduce power density from 8.55 W/sq.ft to 1.3 W/ sq. ft per ASHRAE/IESNA 90.1-2004



ENTRANCE LOBBY

Addressing Issues

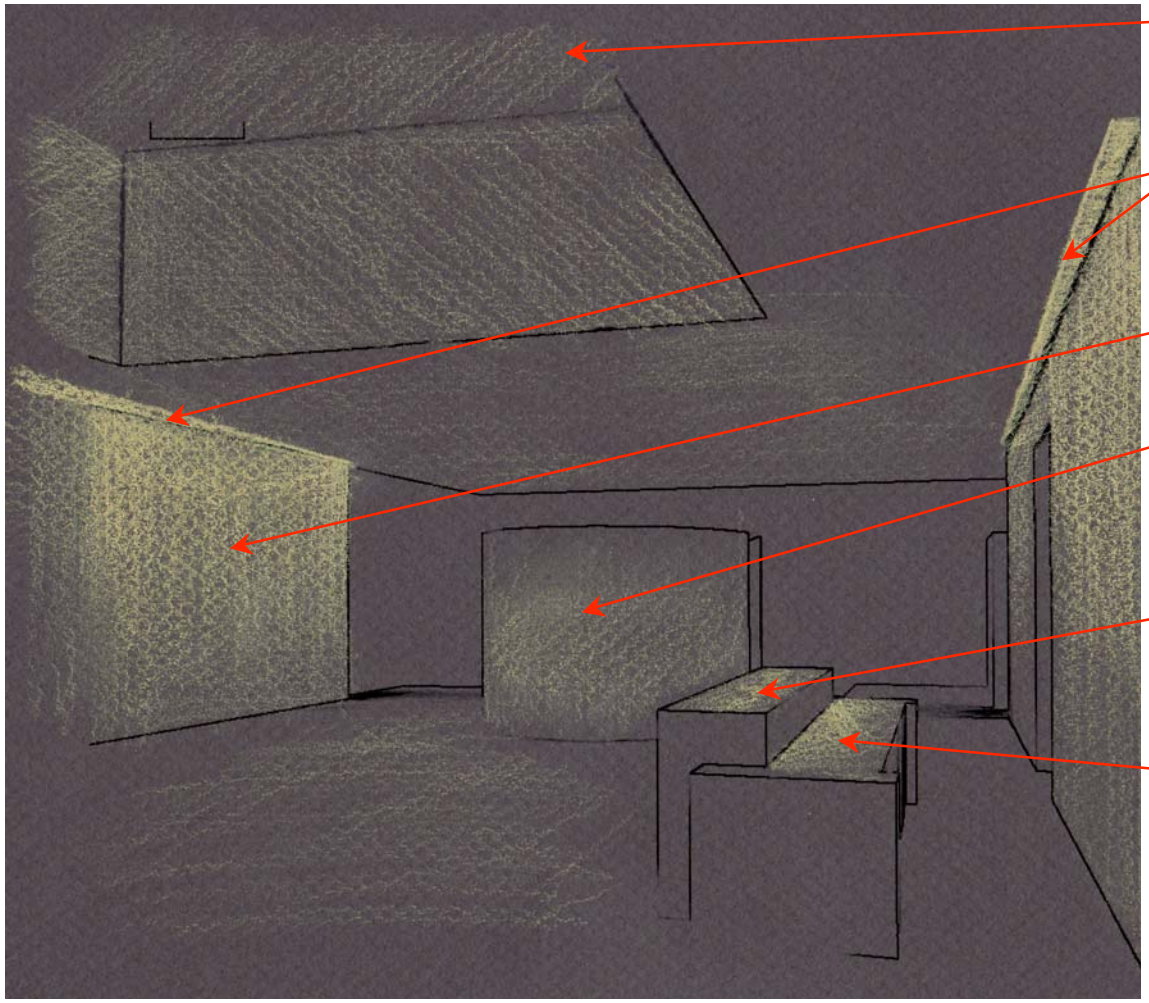
Incandescent perimeter lights consume energy, burn out quickly, and produce reflections on wood walls

Glass donor plaque should be redesigned

Carefully select downlight locations

ENTRANCE LOBBY

Schematic Design



Ambient lighting from second floor lobby

Linear fluorescent cove system to highlight wood walls

Consider specialty lighting for glass donor plaque

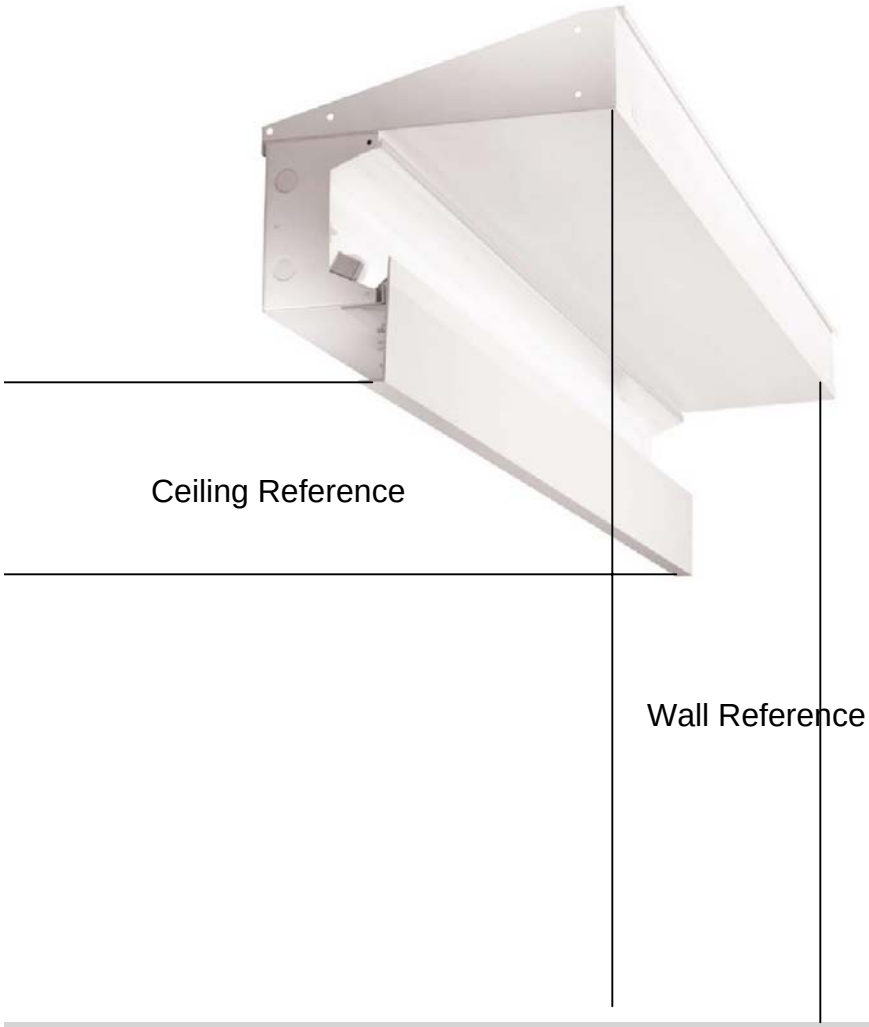
Provide soft illumination on Gutenberg Bible display wall with ceiling recessed adjustable accent lighting

Small ceiling recessed halogen downlights to highlight security counter surface

Linear fluorescent undercabinet lighting for task work

ENTRANCE LOBBY

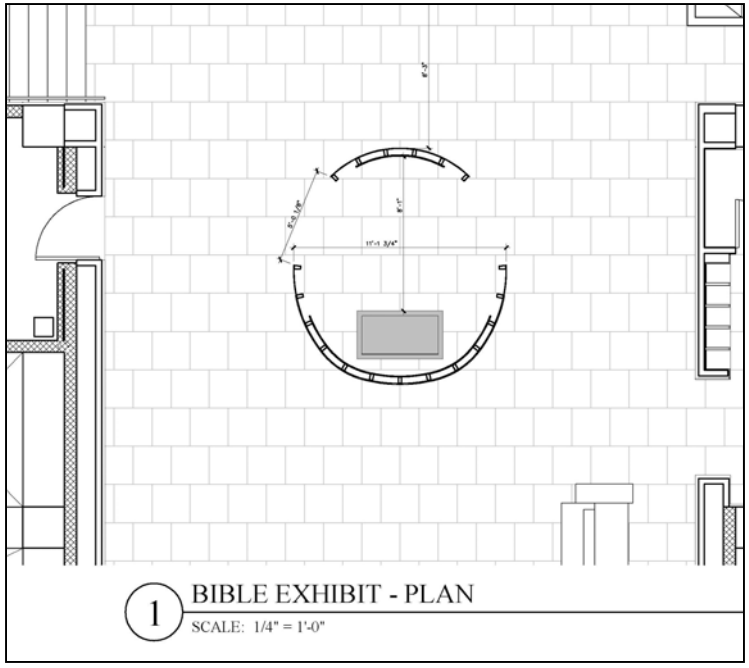
Schematic Design



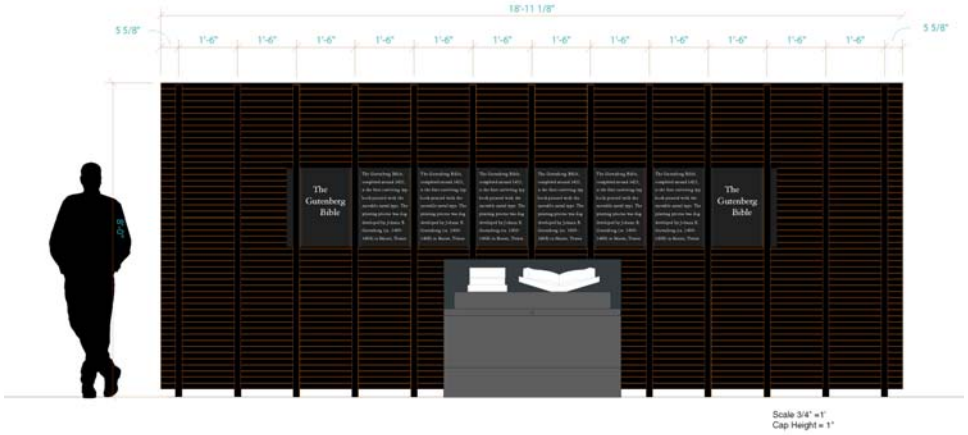
Wall Grazing

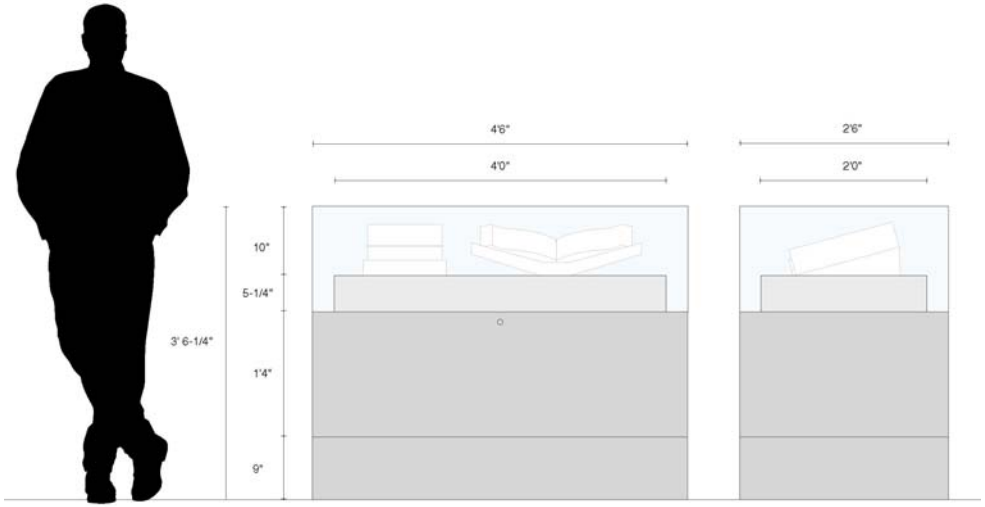
Provide linear cove system with optics to evenly light wall from ceiling to floor

ENTRANCE LOBBY



Gutenberg Bible Display



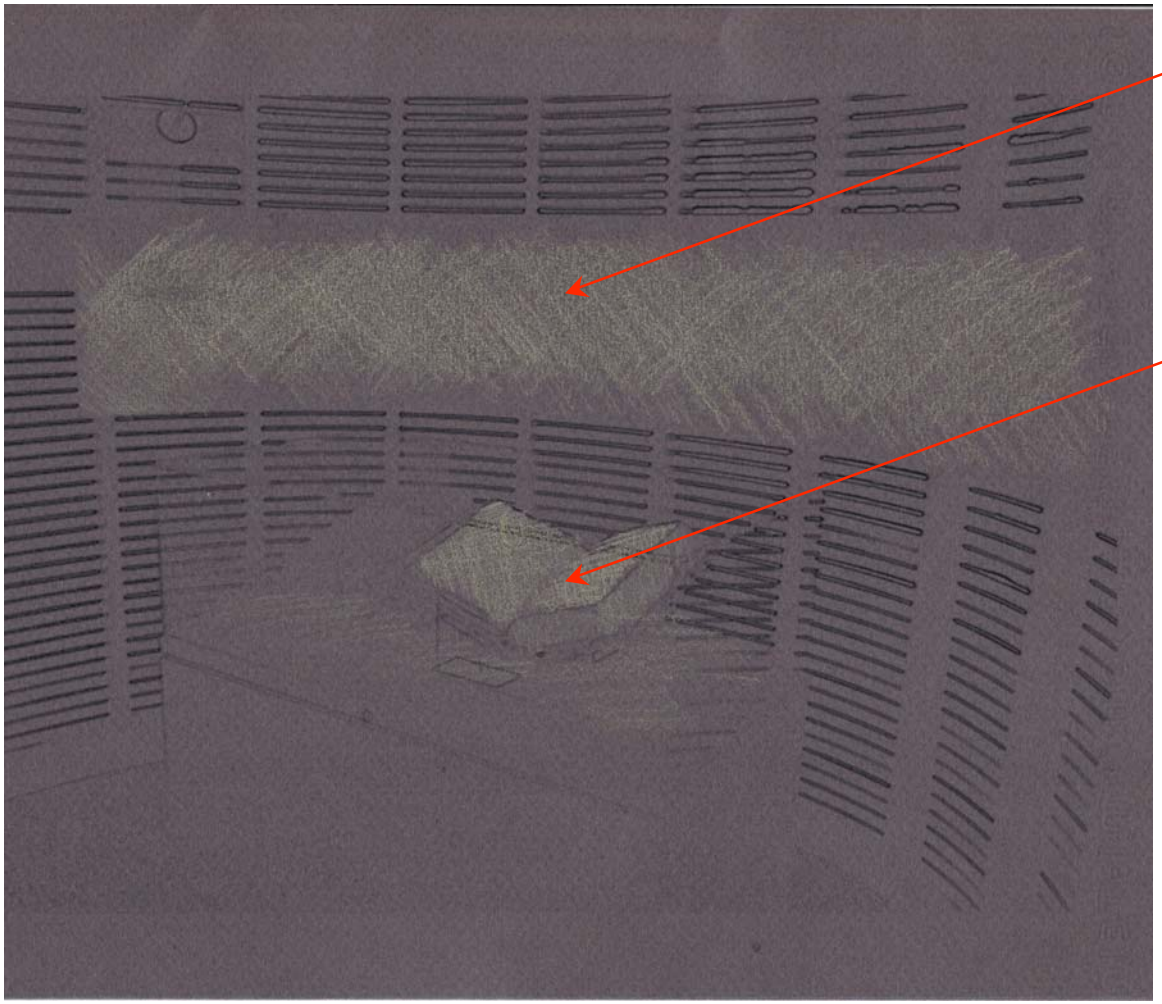


ENTRANCE LOBBY

Gutenberg Bible Display

ENTRANCE LOBBY

Gutenberg Bible Display



Ceiling recessed adjustable accents to highlight feature text.

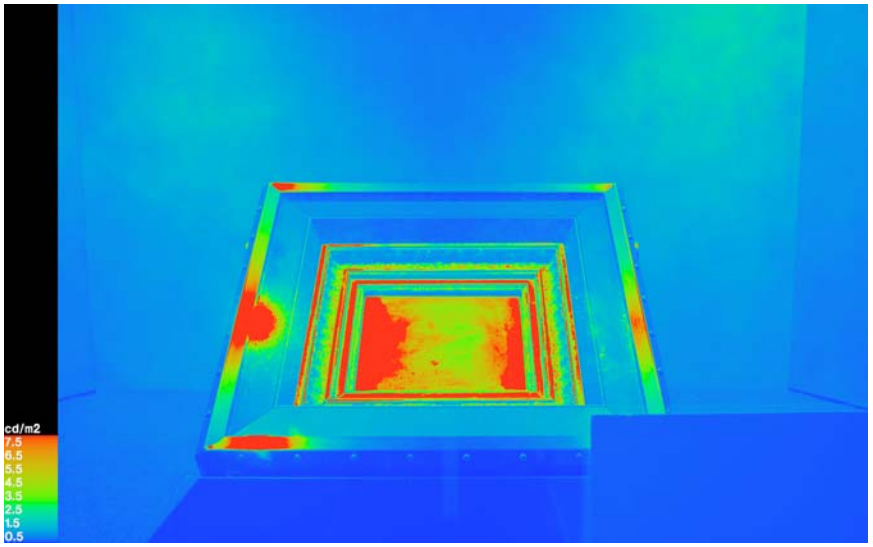
General ambient illumination to provide soft illumination on Bible text. Consider ceiling recessed adjustable accent lighting to highlight display.

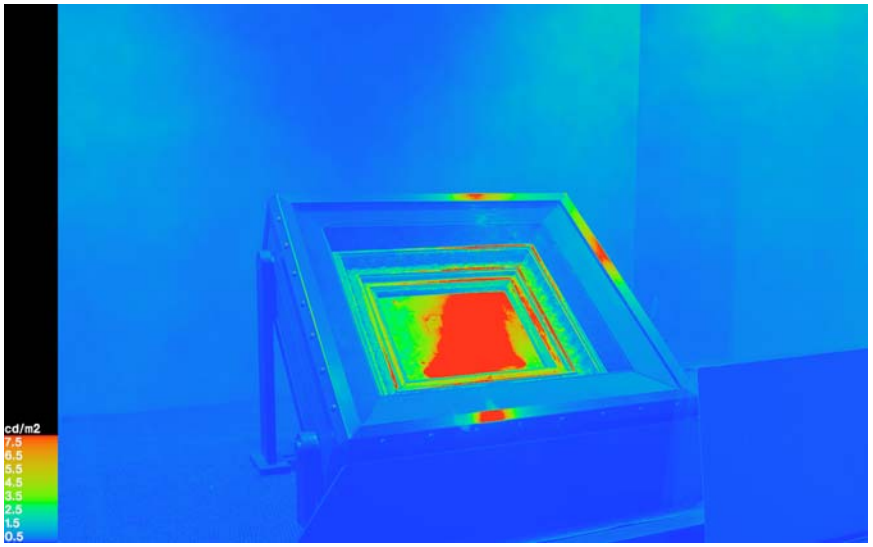
ENTRANCE LOBBY

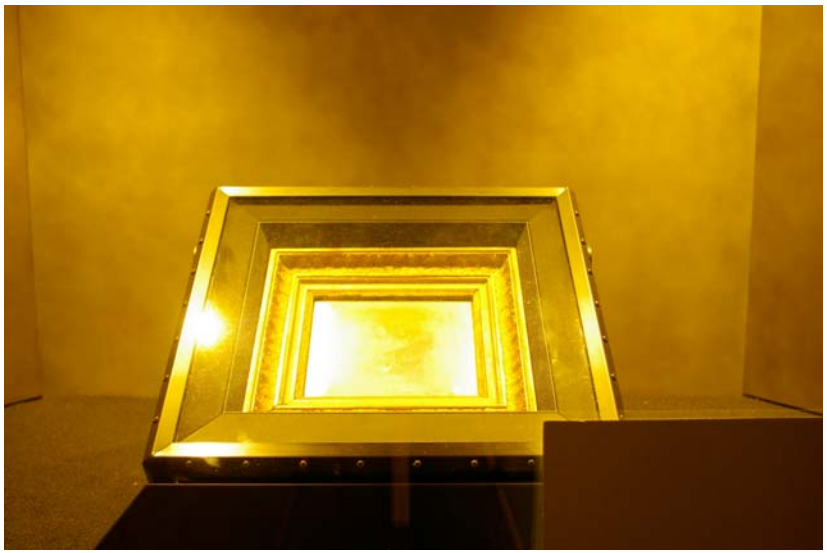
First Photograph Display

ENTRANCE LOBBY

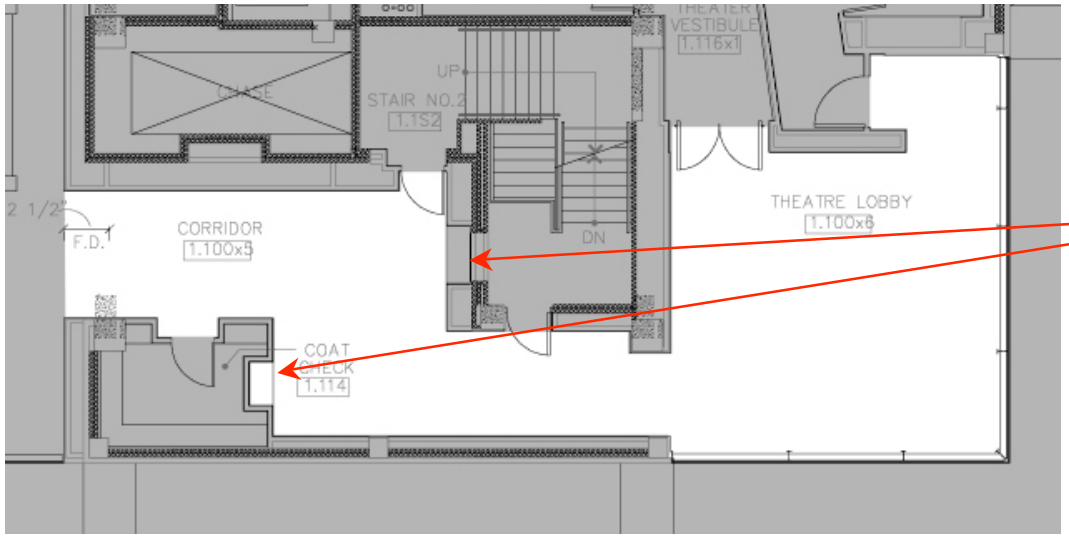
First Photograph Display







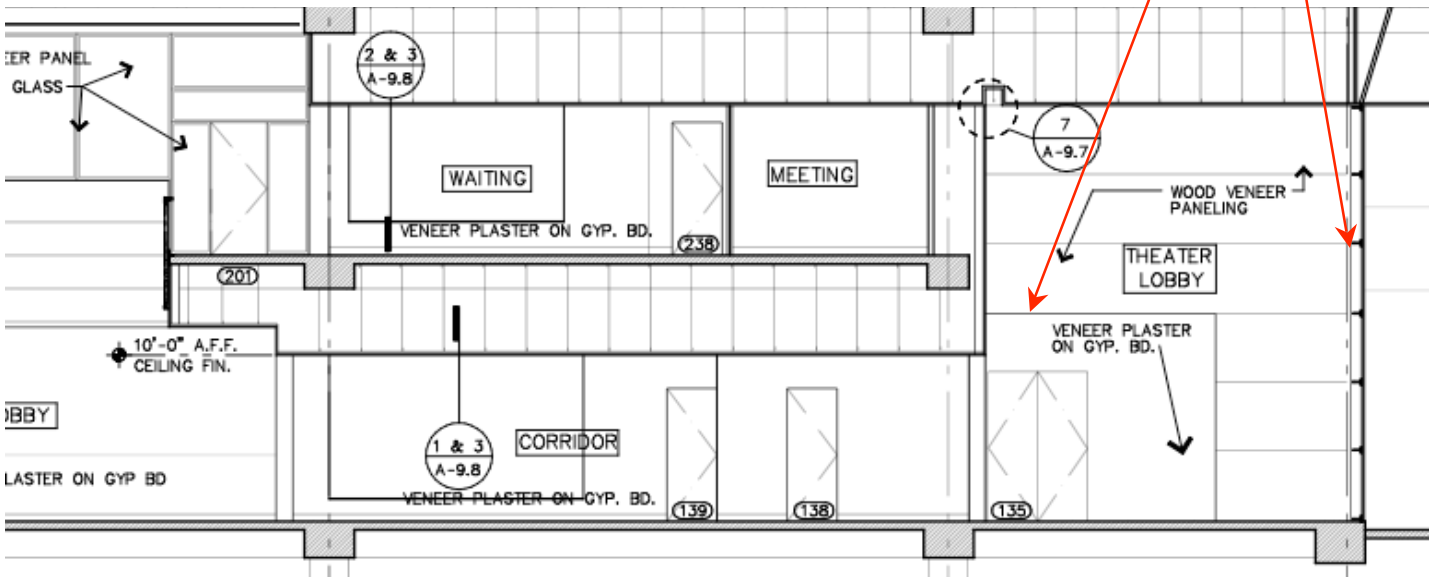
NORTH CORRIDOR / THEATRE LOBBY



Art Niche

Painted Plaster on Gypsum Wall (12' height)

Etched Glass Curtain Wall



ENTRANCE LOBBY

First Photograph Display

Improving the Display Lighting

Maintain extremely low light levels to preserve the artifact
0.10 fc vertical on photograph
0.05 fc ambient

Consider alternative lighting systems

Low wattage halogen track fixtures with UV shields located above case window; will allow flexible on-site aiming

Fiber optic system to provide non-directional, glare-free ambient lighting in display case

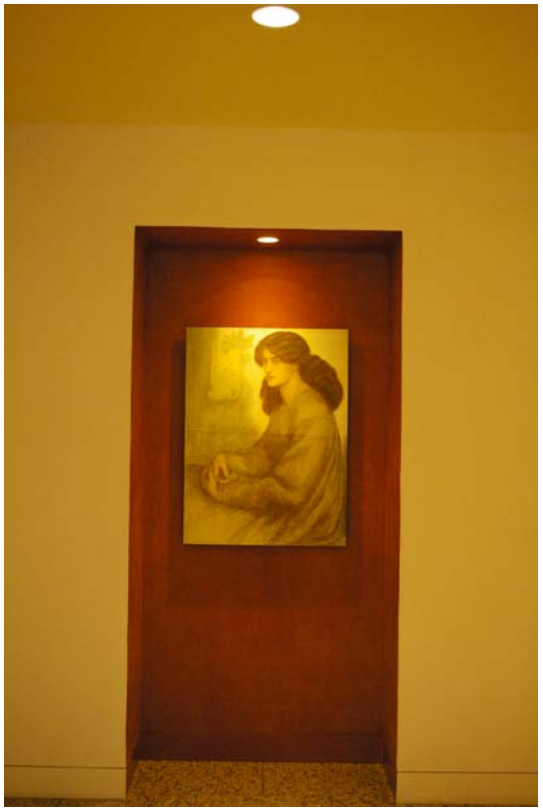
LED system to provide glare free diffuse ambient light from multiple locations within case

NORTH CORRIDOR / THEATRE LOBBY

Improving the Design

Replace incandescent perimeter lighting

Highlight sculptures



Hide accent light and soften scallop pattern

NORTH CORRIDOR / THEATRE LOBBY

Design Goals

Create simple lighting system that compliments the building's architecture

Highlight display artwork and sculpture

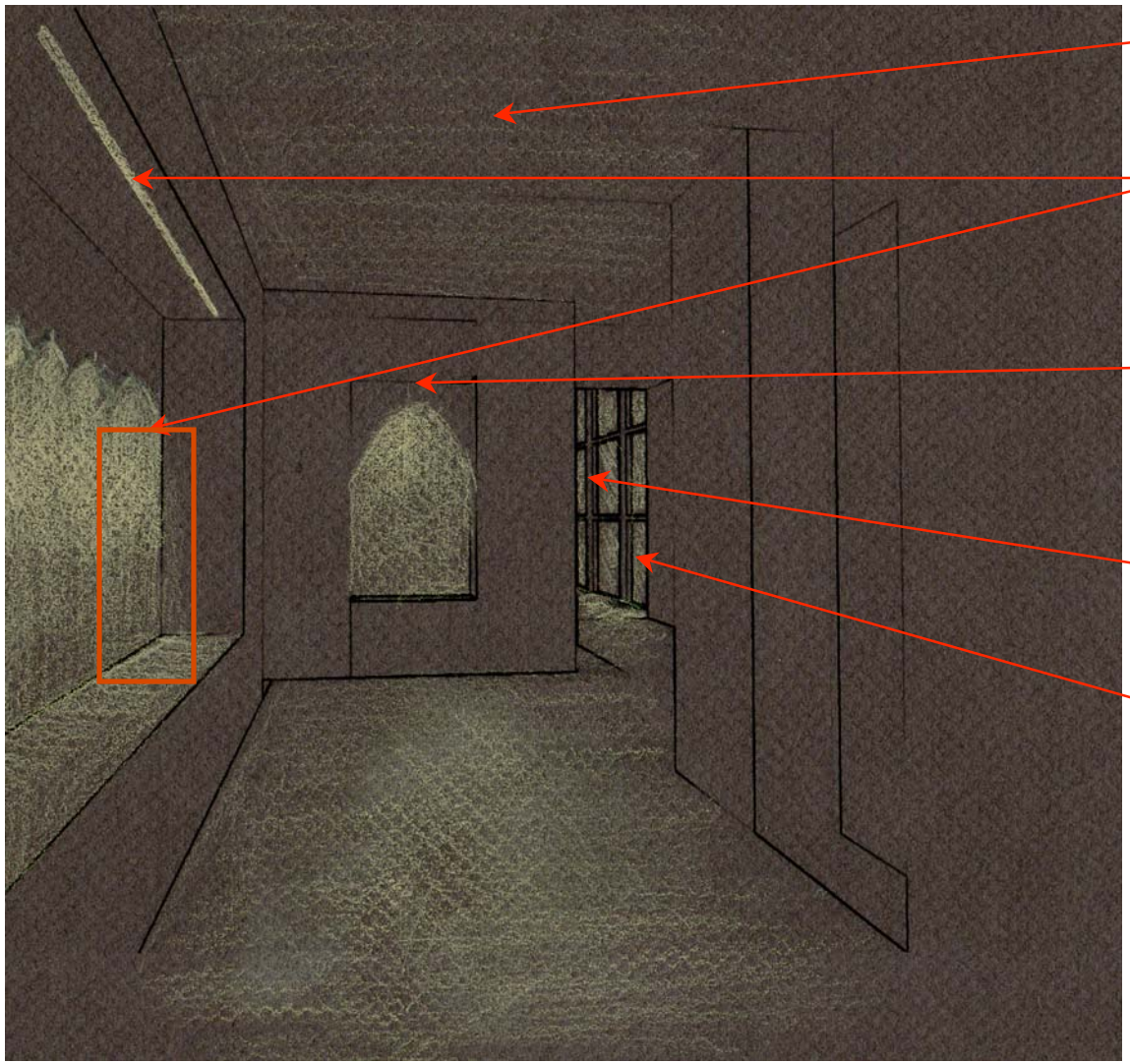
Create a relaxing environment for social gathering

Illuminate the etched glass curtain wall

Reduce power density from 7.93 W/sq.ft. to 1.2 W/sq.ft per ASHRAE/IESNA 90.1-2004

NORTH CORRIDOR / THEATRE LOBBY

Schematic Design



Ceiling recessed downlights for general hallway lighting

Highlight sculptures with recessed accent lights or track system

Provide valance for incandescent strip lights with halogen accent light to highlight artwork

Theatre lobby beyond

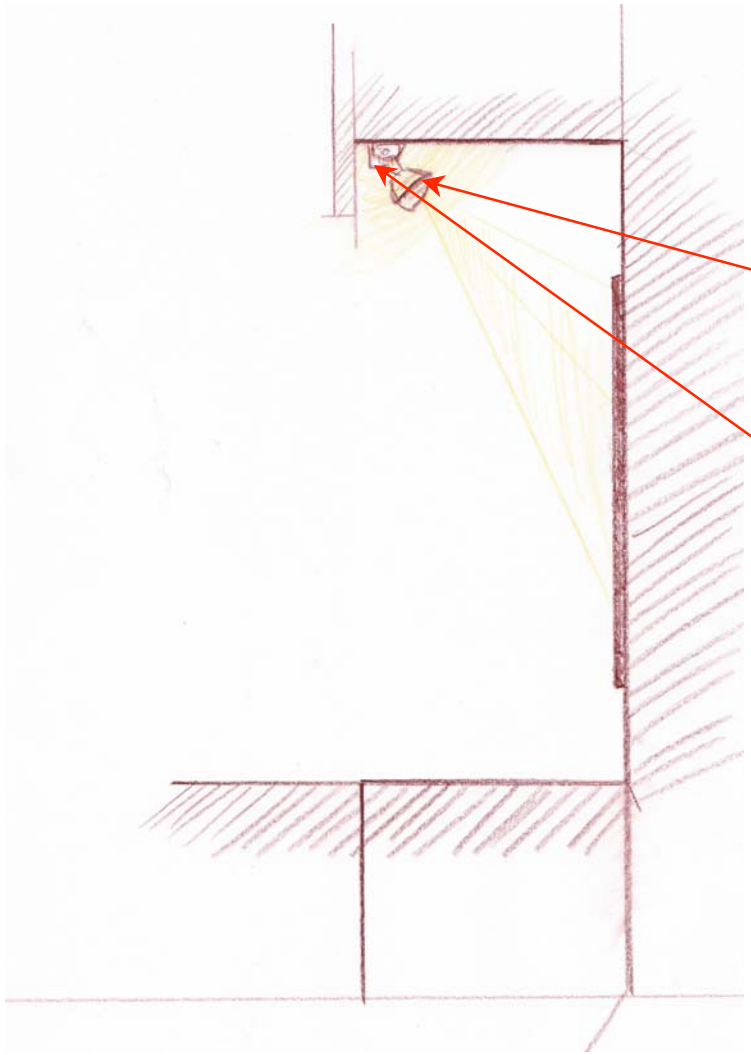
Etched Glass Curtain Wall

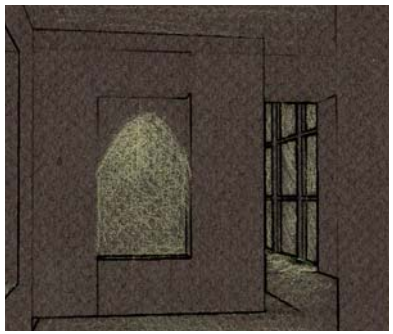
Highlight etched glass windows with dynamic white LED lighting (refer to exterior renderings)

Linear fluorescent track system to highlight wood walls in theatre lobby (refer to main lobby cove system)

NORTH CORRIDOR / THEATRE LOBBY

Schematic Design





Adjustable halogen accent
to highlight painting

Festoon lamps to provide
ambient lighting

NORTH CORRIDOR / THEATRE LOBBY

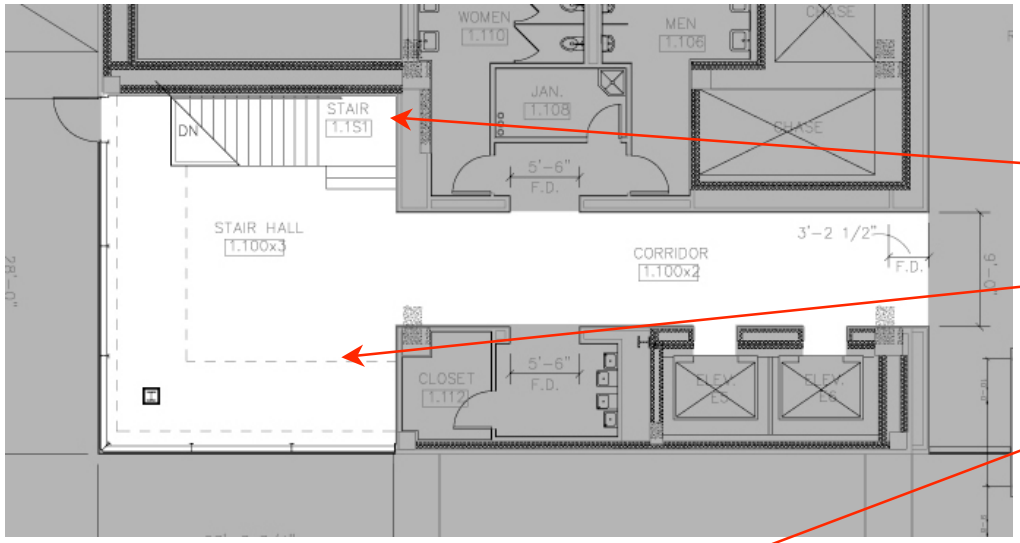
Schematic Design

Adjustable flangeless accent fixtures

or

Adjustable track lighting

SOUTH CORRIDOR / STAIR HALL

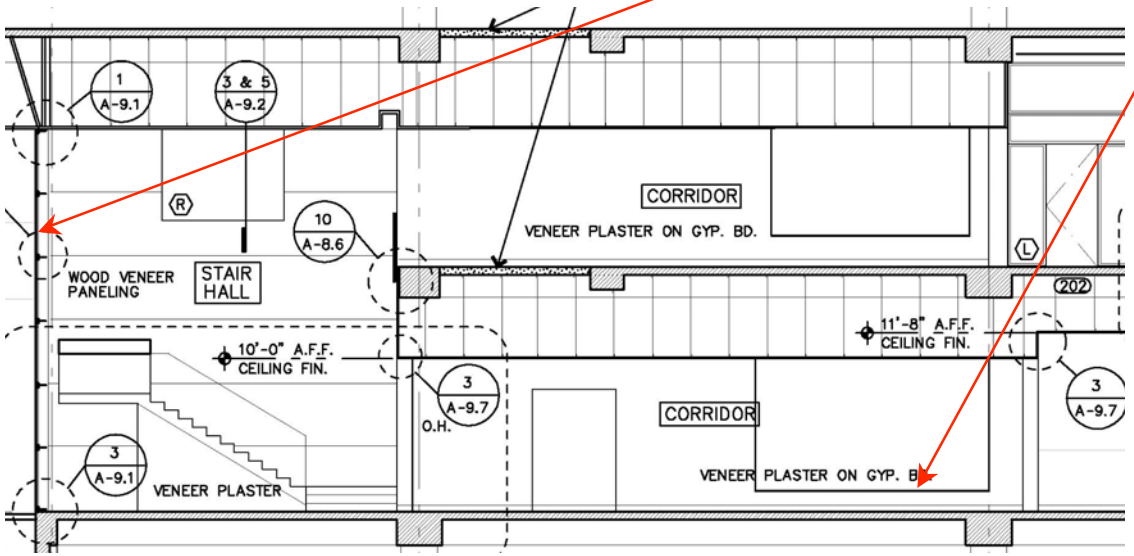


Staircase

Second Floor Balcony

Etched Glass Curtain Wall

Sculpture Display Wall



SOUTH CORRIDOR / STAIR HALL

Design Goals

Create simple lighting system that compliments the building's architecture

Highlight display artwork and sculpture

Create a relaxing environment for social gathering

Illuminate the etched glass curtain wall

Improve upon elevator threshold lighting

Reduce power density to 1.2 W/sq.ft. Per ASHRAE/IESNA 90.1-2004

SOUTH CORRIDOR / STAIR HALL

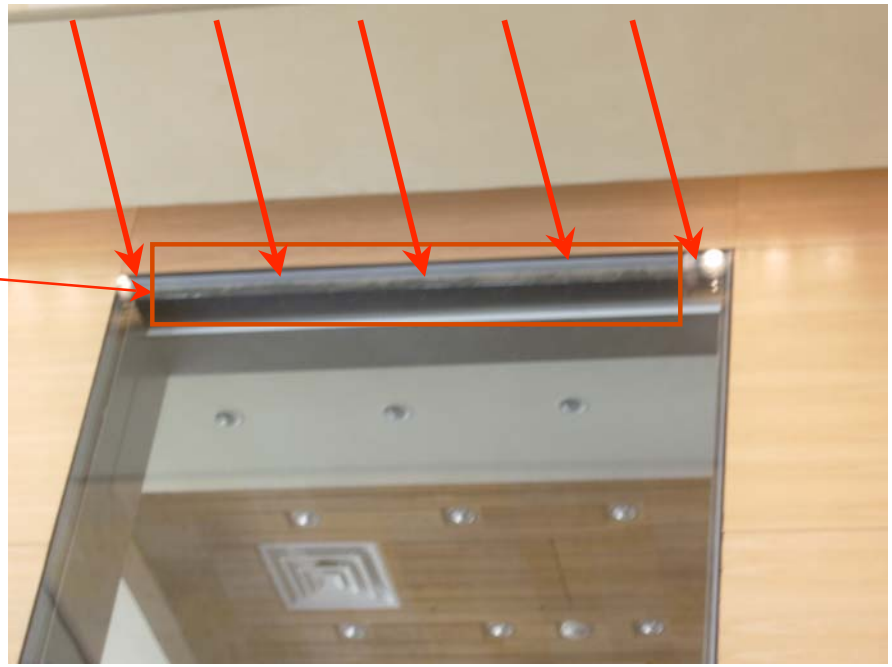
Addressing Issues

Incandescent cove system creates lamp reflections on conference room glass opening

Present solution: expired lamps along window are not replaced

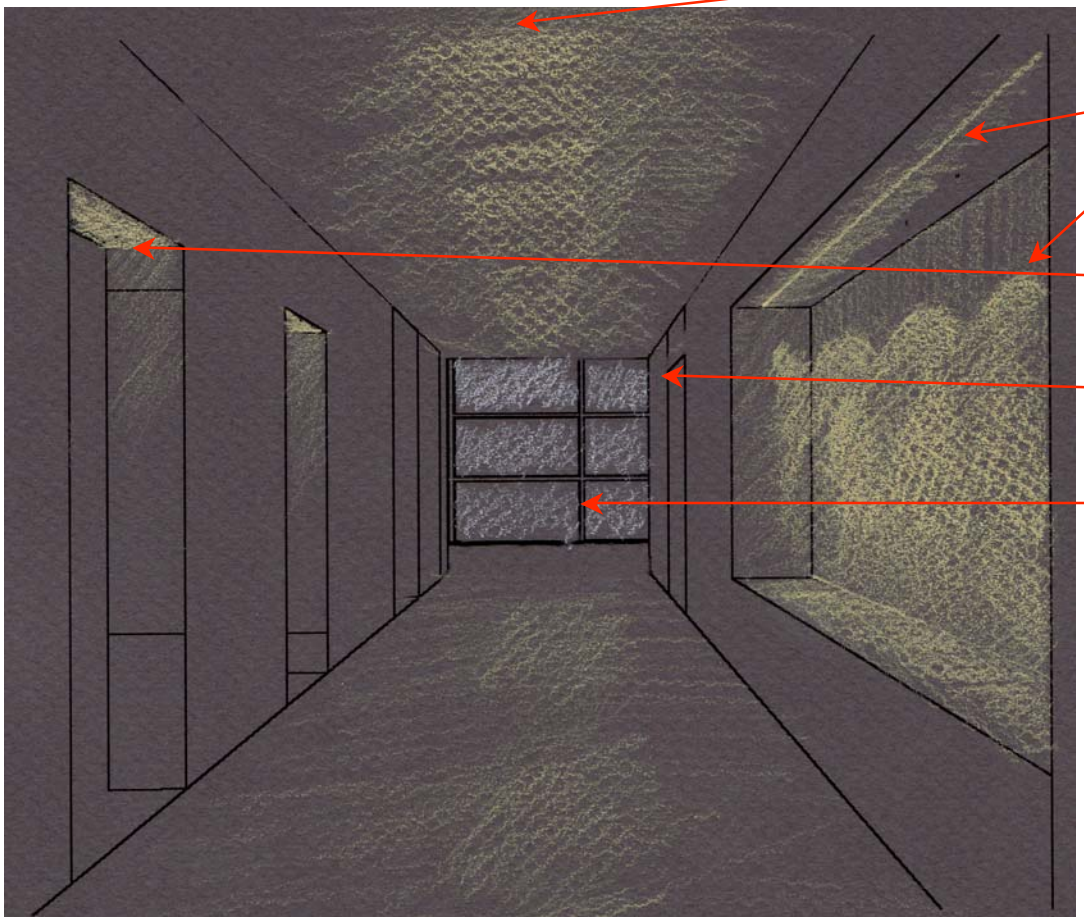
Replace cove with fluorescent source

Adjust window dimensions to prevent reflections



SOUTH CORRIDOR / STAIR HALL

Schematic Design



Ceiling recessed downlights for general hallway lighting

Highlight sculptures with recessed accent lights or track system

Glowing white LED panel with color shift to signal elevator arrival

Stair Hall beyond

Etched Glass Curtain Wall

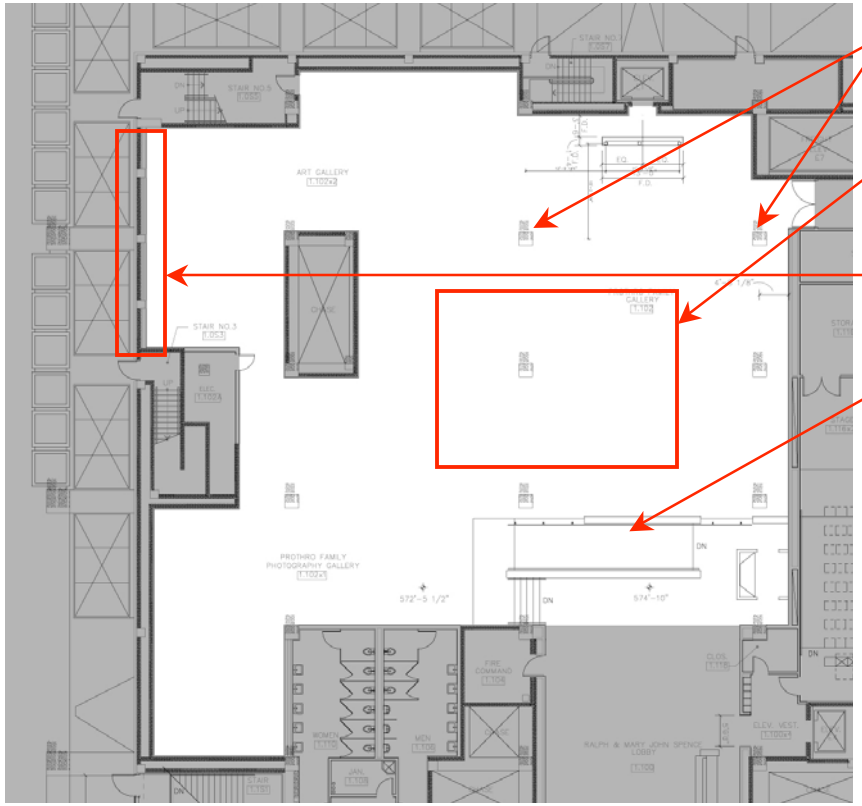
Highlight etched glass windows with dynamic white LED lighting (refer to exterior renderings)

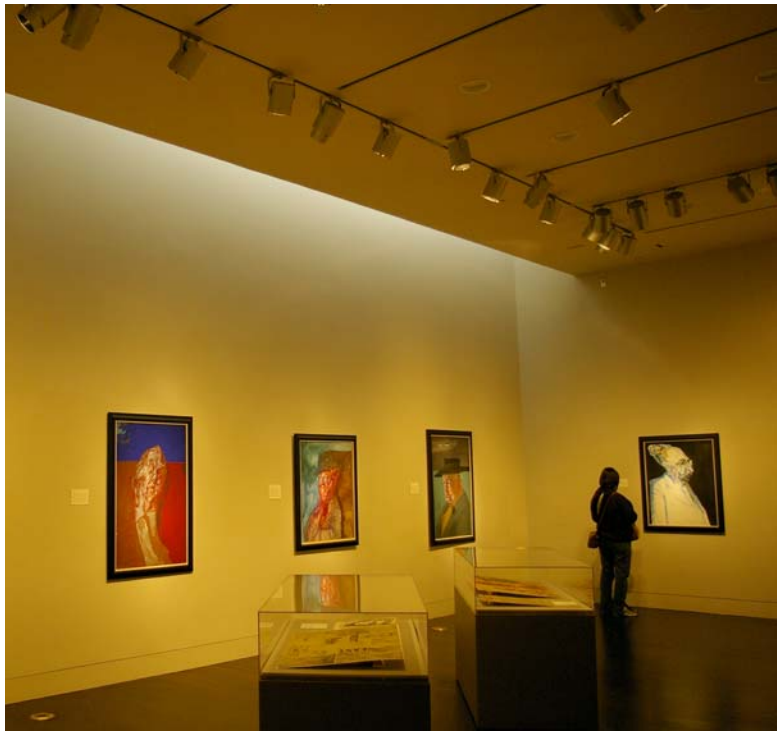
Beyond

Recessed floor uplights to highlight underside of feature staircase

Linear fluorescent track system to highlight wood walls in theatre lobby (refer to main lobby cove system)

GALLERY


Exposed Columns
Display Case Area
Lightwell
Ramp and Stairs



GALLERY

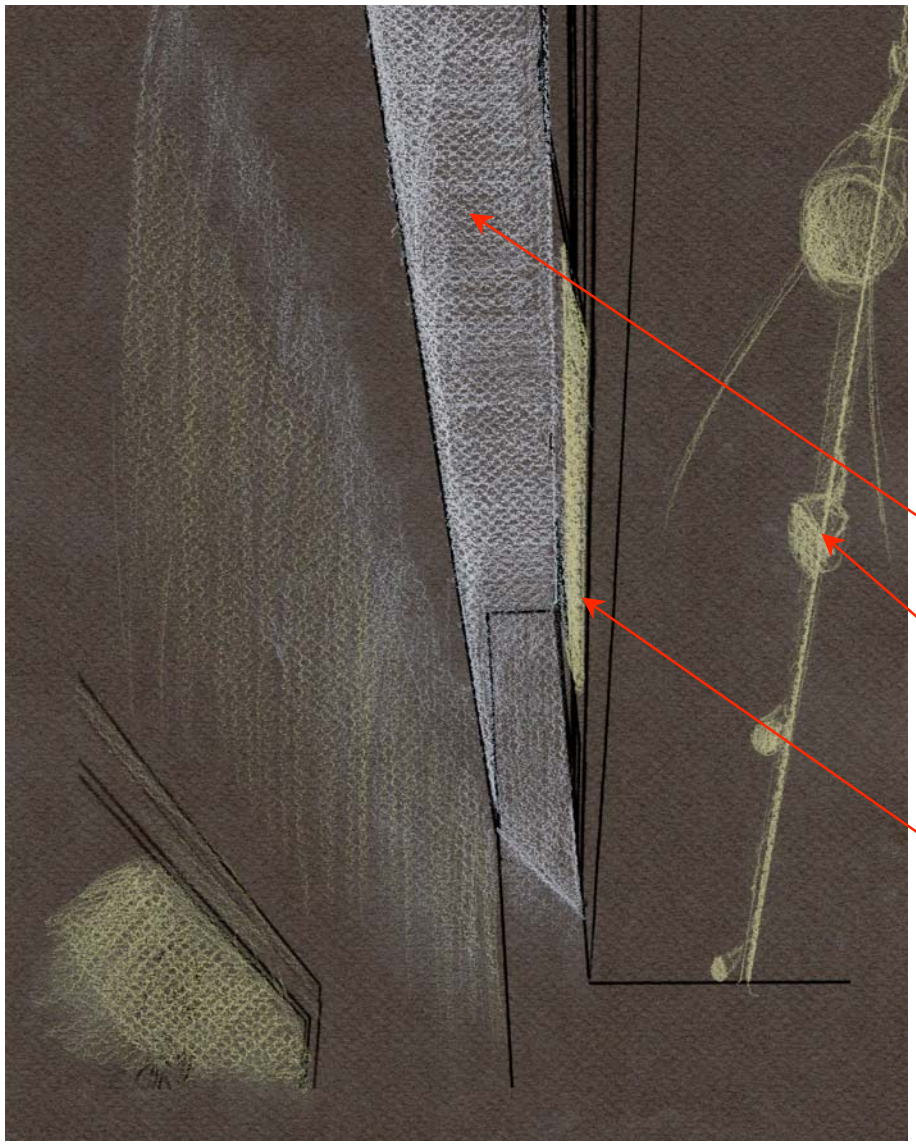
Design Objective

Provide a comprehensive redesign of the gallery ceiling structure

- Reinforce the building’s strong exterior presence
- Reduce ceiling clutter
- Tuck monopoint accent fixtures into ceiling
- Integrate emergency lighting into accent system

GALLERY

Lightwell Concept

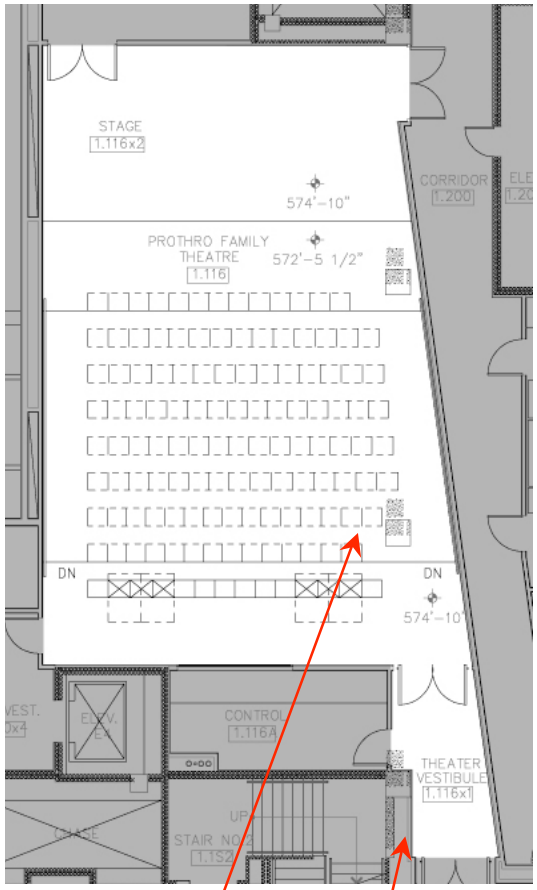


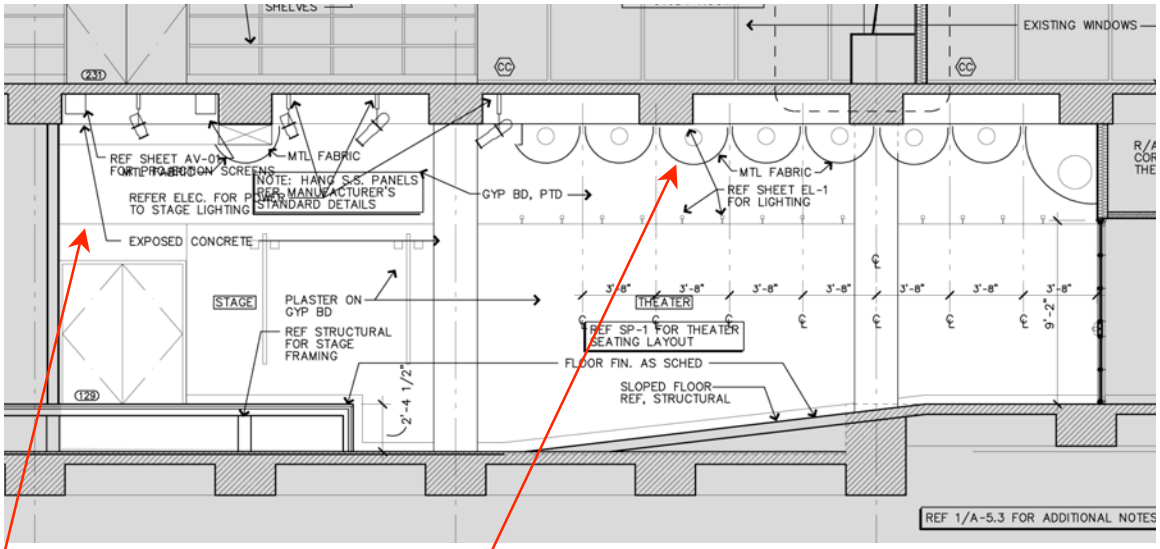
Indirect daylight from second floor windows

Recessed track or monopoint system to provide flexible lighting for artwork

Surface mounted or recessed linear fluorescent fixture with asymmetric distribution to supplement daylight during dark hours. Consider photosensor control.

THEATRE



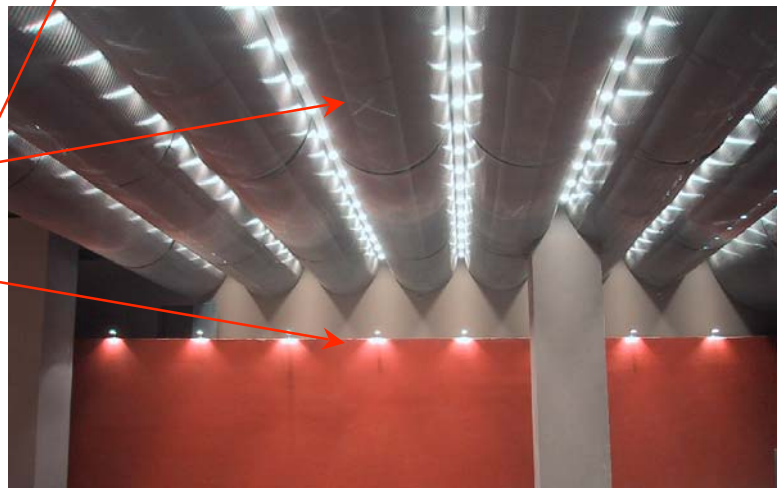


Seating

Transition Vestibule

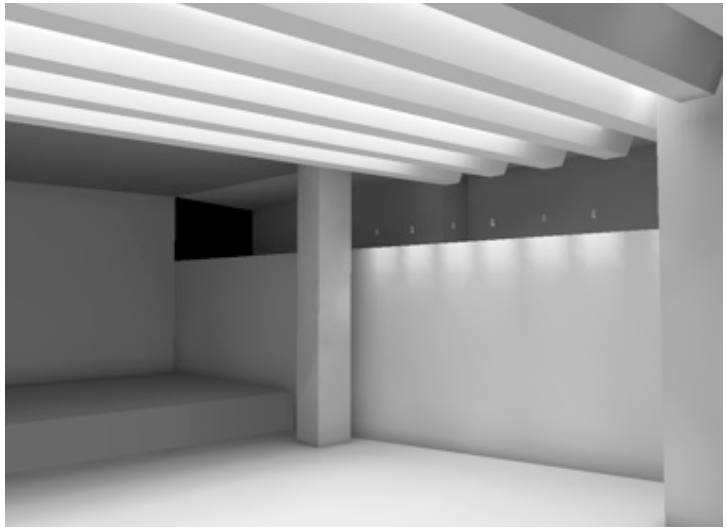
Draped Fabric Ceiling

3/4 Height Wall,
Red Painted Plaster
on Gypsum Board



THEATRE

Design Objective



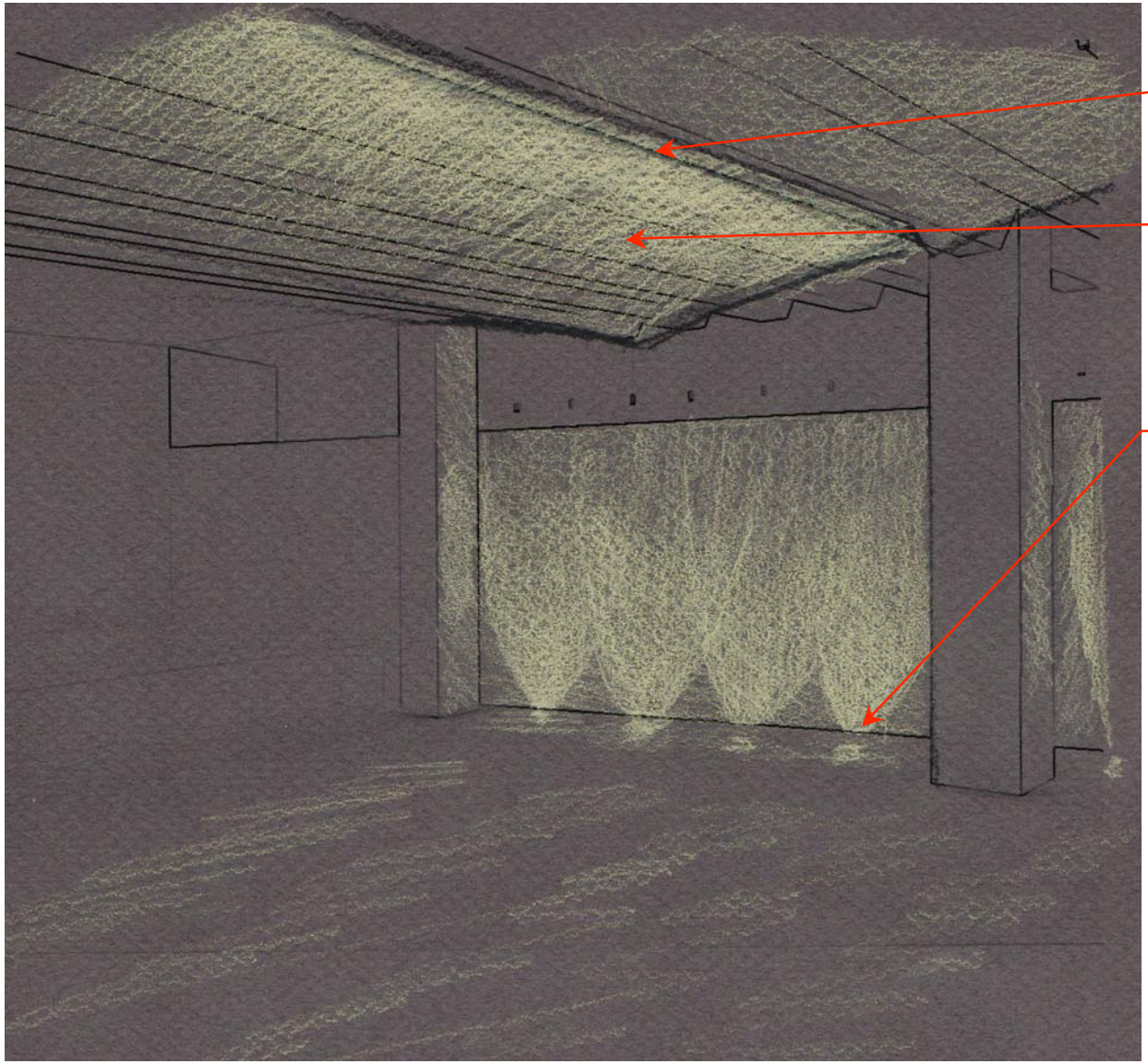
Provide a low maintenance lighting system

Reduce energy consumption

Create rhythmic visual interest for guests before shows and during intermissions

THEATRE

Schematic Design



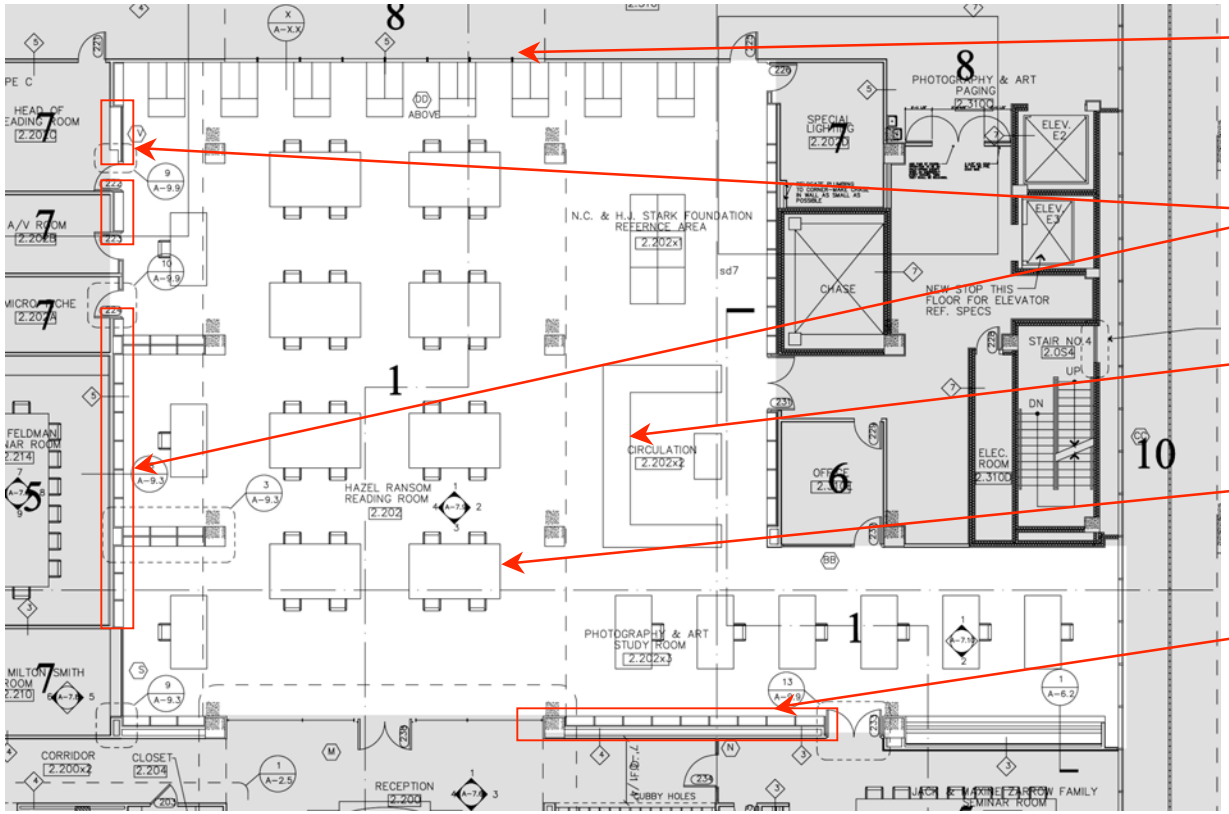
Fluorescent cove system for ambient light

Supplement cove lighting with recessed downlights

Asymmetric floor recessed uplights to create rhythmic feel on red feature wall

READING ROOM

READING ROOM



Glass Interior Windows

Windows face into daylit offices

Wall Bookshelves

Circulation Desk

Reading Tables

Easel Display Wall

READING ROOM

Schematic Design

Linear fluorescent cove or surface mount asymmetric fixture to highlight wood ceilings and provide glare-free ambient lighting. Consider implementing dimming controls.

Daylight penetration from high interior windows facing daylit perimeter offices.

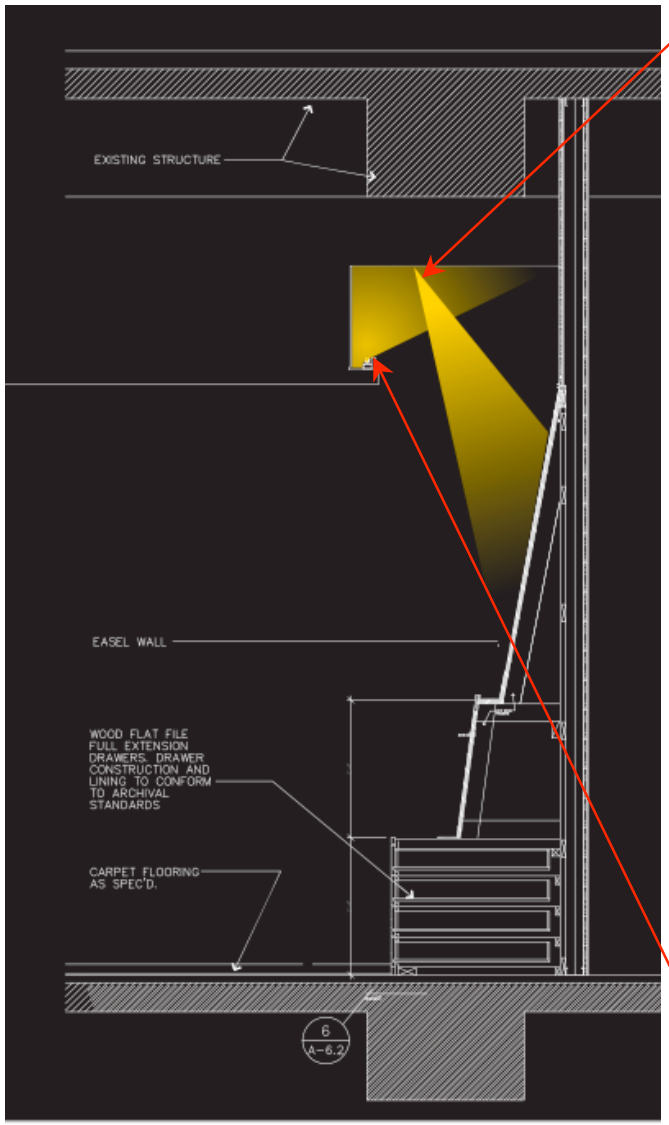
Consider mounting sconces on columns to provide visual interest.

Ceiling recessed fluorescent lighting with asymmetric distribution to light perimeter stacks.

Provide individually controlled table lamps for reading tables.

READING ROOM

Easel Wall Detail



Recessed track system to accent the temporary display of artifacts on easel wall. Allow for dimming.

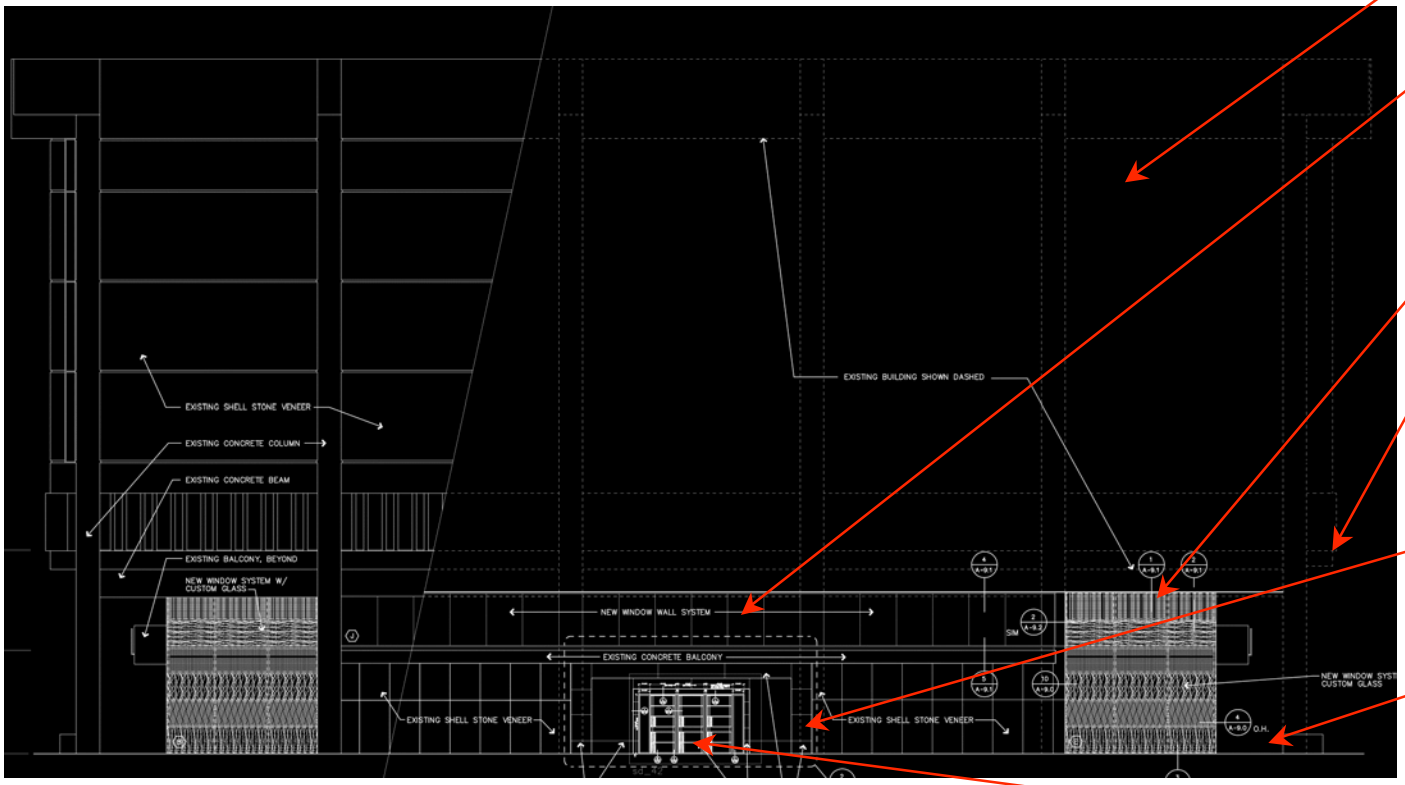
The easel wall is used to temporarily display artifacts requested in advance from patrons of the Ransom Center Library and Archives.

A user friendly dimming system should be provided for observers to temporarily illuminate the artifacts as well as adjust the cove system lighting.

Linear fluorescent cove to provide general illumination for easel wall and visually open the reading room space. Allow for dimming.

EXTERIOR

EXTERIOR



Stone Façade

Cantilevered Glass Walkway

Etched Glass Curtain Wall

Canopy Reference

Etched Glass Signature Wall

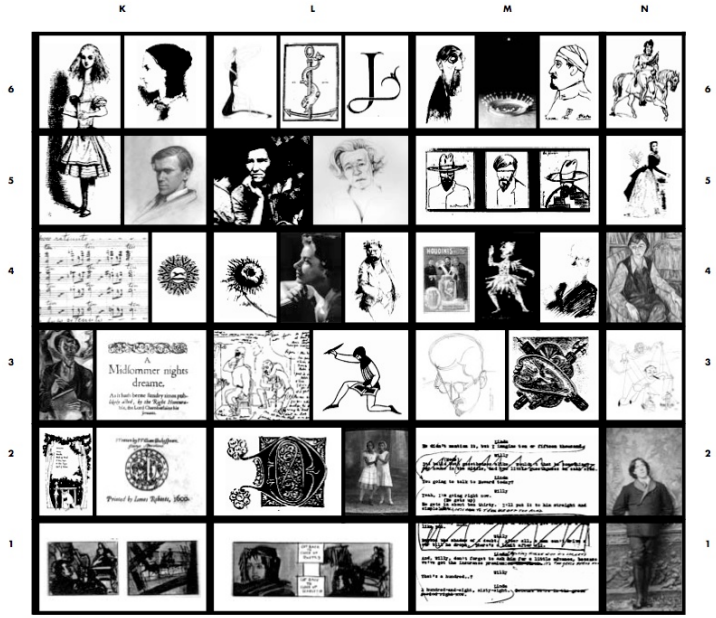
Covered Pedestrian Passthrough and Grade Reference

Entrance Vestibule

EXTERIOR

The Ransom Center entrance features an etched glass “signature wall.” The signature of each artist in the Ransom Center collections is incorporated into the glazing.

EXTERIOR



Each rectangle represents a piece of the Ransom Center collections. During the day intriguing shadows of the collections are cast onto the interior lobby floors and walls.

EXTERIOR

Design Concept

Bring the Ransom Center archives “outside” the building

Reduce scallop patterns on exterior façade

Draw people to the etched glass walls and building entrance

Create a more comfortable plaza night setting

EXTERIOR

Canopy and Façade

Recessed exterior grade downlights to provide soft pads of light under building canopy walkway.

White LED striplights intergraded into curtain wall frame to provide dynamic illumination of the etched glass images.

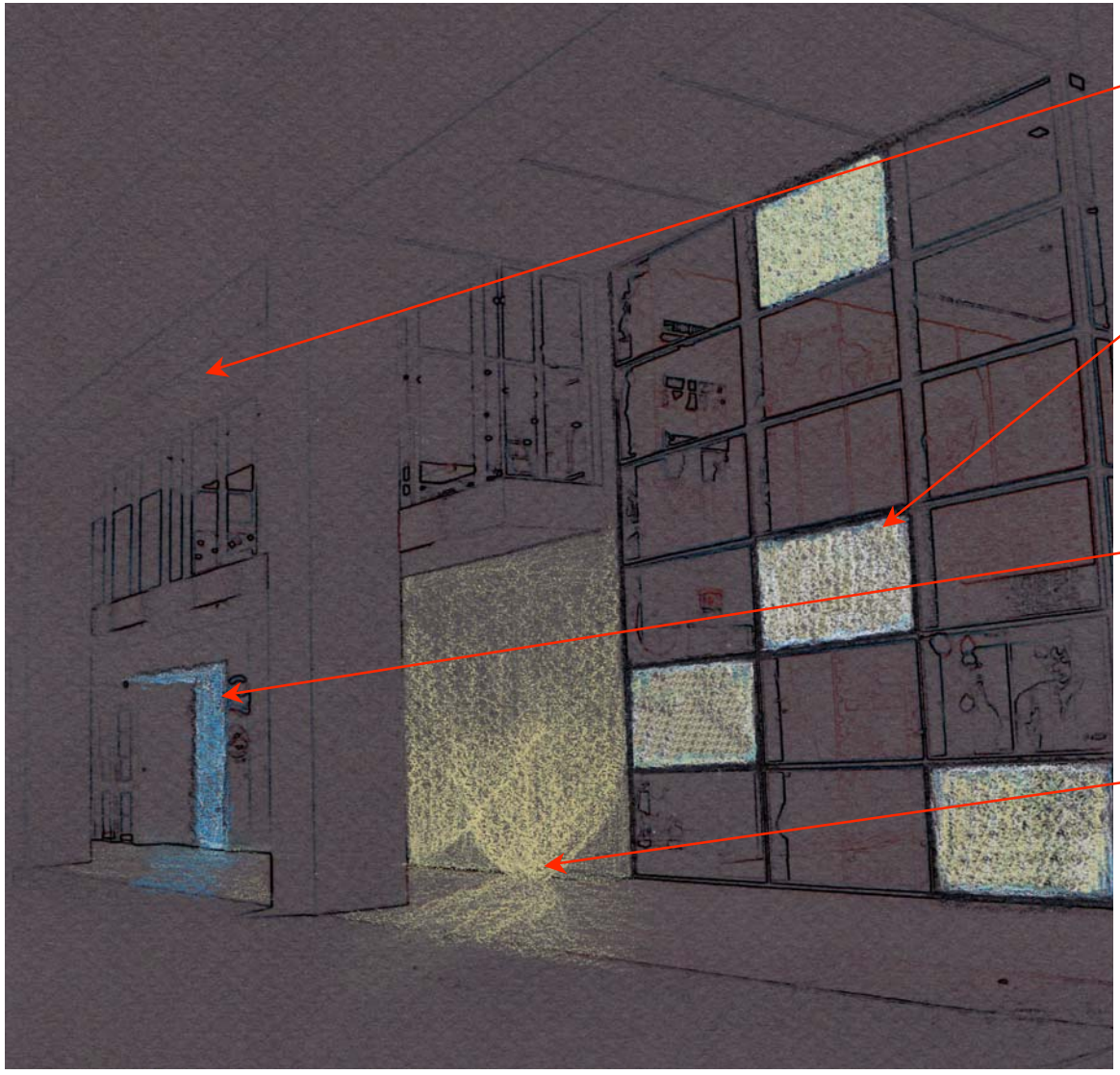
Façade illumination - option 1

Recessed linear fluorescent cove to graze stone wall.

Entrance “signature wall” illuminated with color changing LED system to draw visitors to entrance.

EXTERIOR

Canopy and Façade



Recessed exterior grade downlights to provide soft pads of light under building canopy walkway.

White LED striplights intergraded into curtain wall frame to provide dynamic illumination of the etched glass images.

Entrance “signature wall” illuminated with color changing LED system to draw visitors to entrance.

Façade illumination - option 2

In-grade recessed lighting with asymmetric distribution to provide scallop effect on façade.

EXTERIOR

Plaza and Facade

EXTERIOR

Entrance

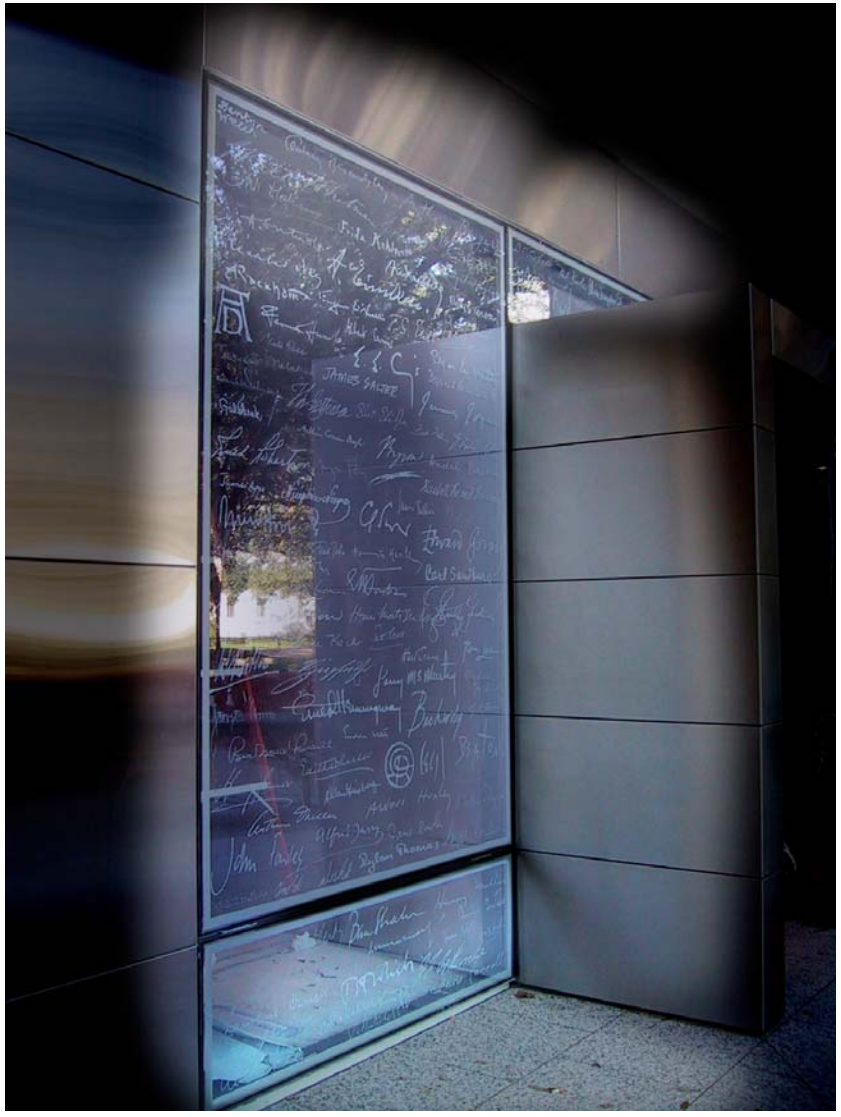
EXTERIOR

Color Changing Signature Wall

Provide color changing LEDs recessed into floor and ceiling

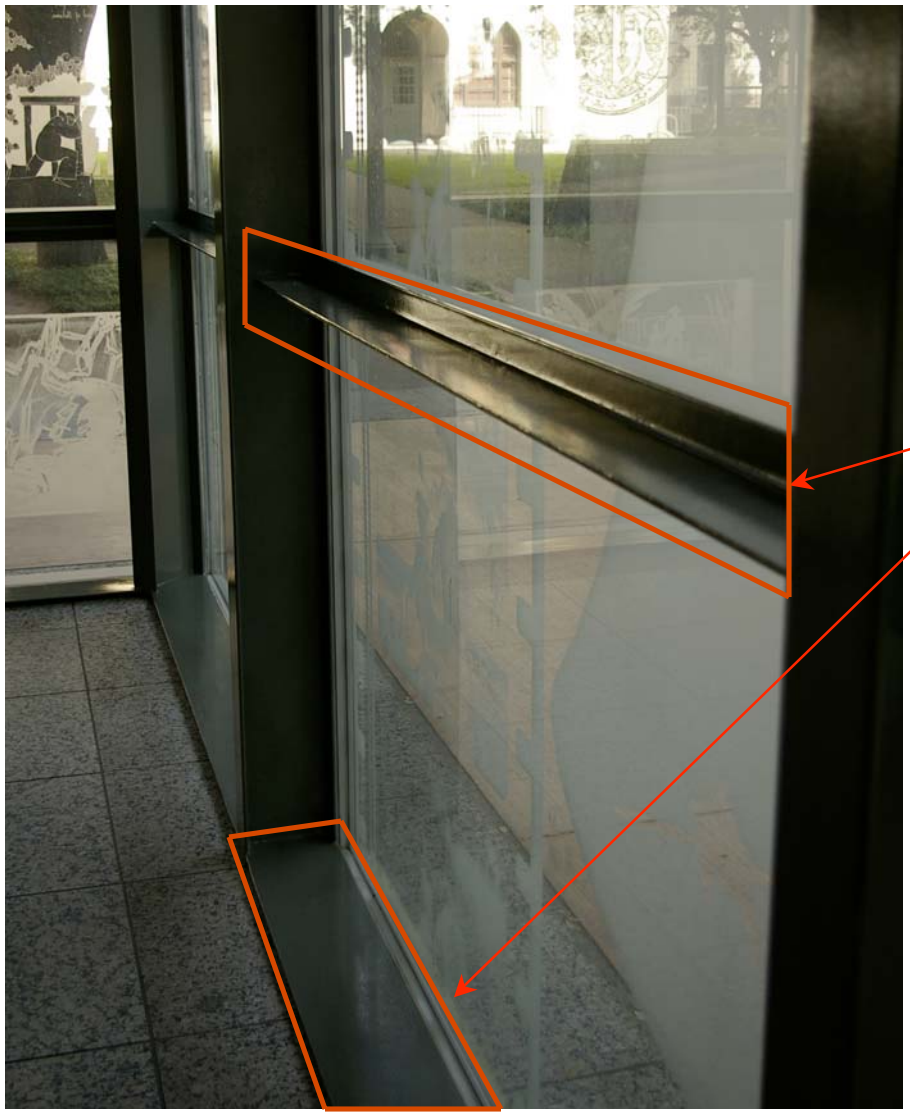
EXTERIOR

Color Changing Signature Wall



EXTERIOR

Etched glass wall



Graze etched glass windows with light

Redesign framing system to incorporate white LEDs

EXTERIOR

LED Façade Lighting

Questions?