

Schematic Design Ideas for the Westlake Recreation Center

Presented by:

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At Lutron Electronics

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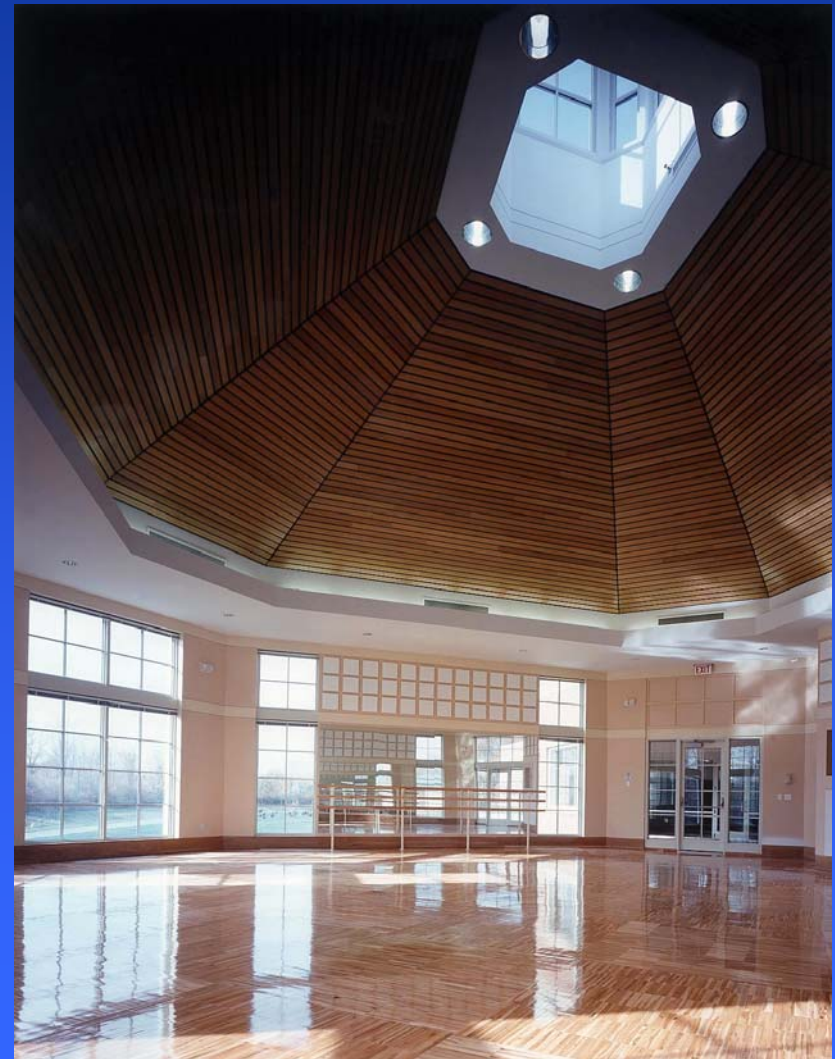
The Westlake Recreation Center

- This facility serves as a park and recreation center for the citizens of Westlake.
- The building houses four swimming pools, a gymnasium, locker rooms, a fitness room, a multi-purpose room, a babysitting room, a community room and recreation department offices.
- The four spaces that I chose to redesign are:
 - 1) Main entrance exterior
 - 2) Community Room
 - 3) Lobby, lounge area
 - 4) Multi-purpose Room



Multi-Purpose Room

- The multipurpose room is designed as a place where dance classes and other physical activities can be held
- 1,000 square foot octagonal room with a floating, maple hardwood floor
- Features include ballet bars, mirrors, sound elements to enhance acoustics and a panoramic view of the woods and outside walking trail
- The ceiling is 13' high around the perimeter and rises to 24' at the start of the skylight



Multi-Purpose Room Metaphor

- I want the multi-purpose room to feel like a dance studio – not quite as warm because it will be a place where concentration is needed
- The furnishings, such as the ballet barres, full-length mirrors, and glossy maple floors greatly contribute to the feeling of a dance studio
- To the right is an example of what I would like to achieve with the cove, which would help to avoid glare on the floor



*Photo courtesy of Skidmore, Owings and Merrill

Multi-Purpose Room Ideas

Accent lights from within the cove directed up each section of the octagon

Higher wattage strip fixtures within the cove to enhance the "floating roof" effect



Recessed fluorescent uplights between each window section

CFL downlights around the perimeter of the room

Multi-Purpose Room IES Criteria

Very Important:

- *Reflected glare:* Especially important in this area because of the highly reflective floor finish, which is extremely glossy. The only direct light in my design comes from the incandescent downlights around the perimeter of the room, which will not create a lot of glare anyway.
- *Appearance of the space and the luminaires:* All of the lighting that I want to incorporate into my design will be discrete – recessed uplights in the floor, recessed downlights, strips and accent lights hidden in the coves.
- *Color appearance:* Incandescent light from the recessed downlights will add to the warmth of the room, while the high ceilings and indirect lighting of the accent and cove lighting will keep it from becoming *too* inviting so that focus can be maintained.
- *System control and flexibility:* The recessed floor fixtures should be controlled by a photocell. Everything else should be separately circuited and dimmable down to 10%.
- *Daylighting Integration and Control:* Photocell used to control recessed floor fixtures. Everything else will be dimmable to adjust to daylight conditions that might be present at any different time.

Multi-Purpose Room Fixtures and Lamps



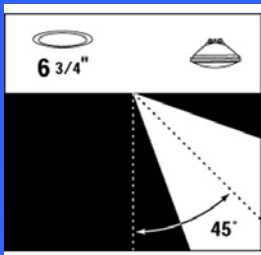
6" wide beam open reflector downlight with (1) one 42W triple tube, 4-pin CFL lamp



Floor uplights - (1) one 50W low voltage tungsten-halogen lamp

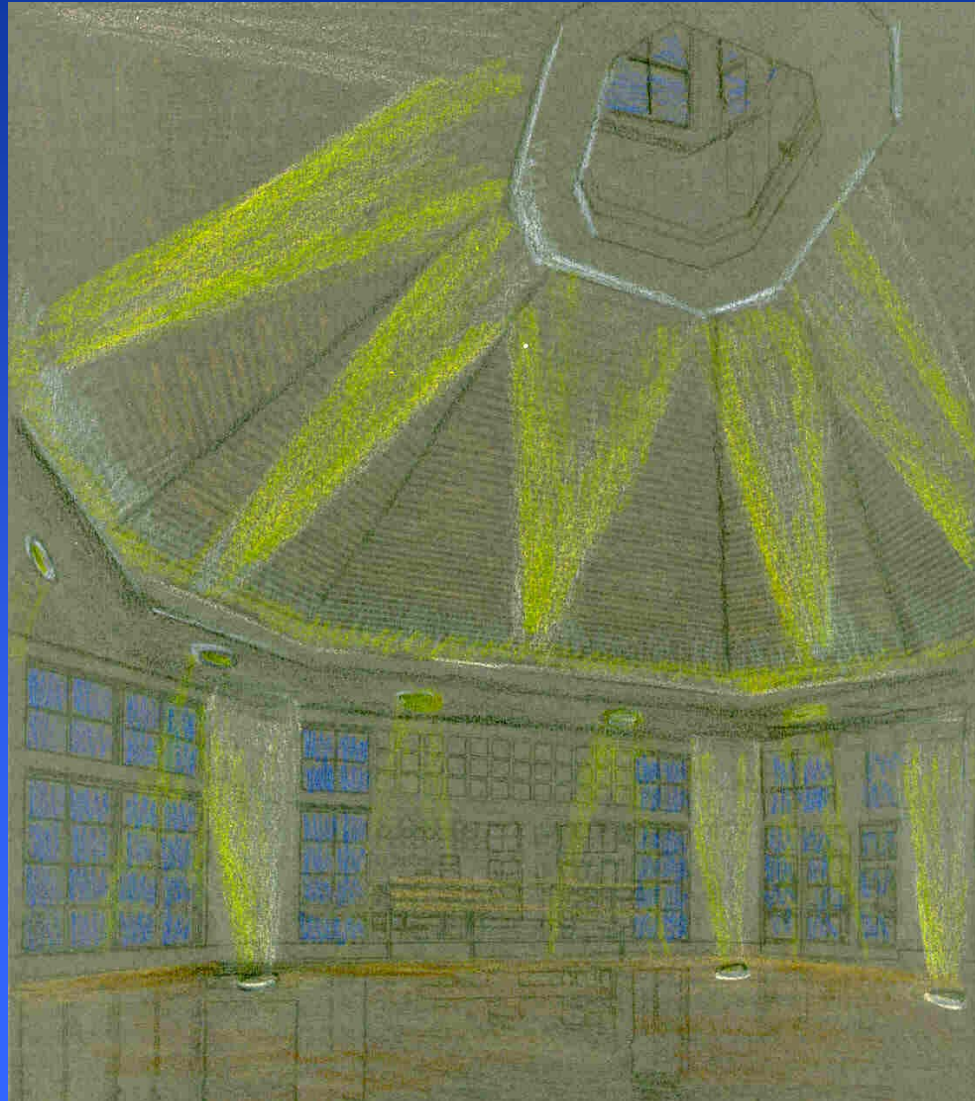


Staggered fluorescent striplights within each cove - (1) one 25W T8 lamp for each strip



Accent uplighting in cove - (1) one 75W PAR36 lamp

Multi-purpose Room Sketch



Multi-Purpose Room Controls

- CFL downlights around perimeter use 4-pin dimmable lamps and are controlled by a wall dimmer switch
- Cove lighting strips and accent lights on dimmable ballasts controlled by a wall dimmer switch
- Photocells used to control the floor fixtures – normally any kind of daylight is sufficient for activities in this room during the day

Front Exterior and Drive-Around

- Rectangular island with a brick pathway, some landscaping and a flagpole across from the entrance canopy
- The entrance canopy leads into the main lobby of the building
- The lobby can be seen towering behind the canopy – the octagonal library is to the left of the canopy



Exterior Metaphor and Examples

- I want the front porch and the lobby rising up behind it to look like a glowing ember in comparison with the rest of the front exterior. I would like to highlight the edges and corners with incandescent accent spots, while lining the sidewalks with bollards. I would like to line the perimeter of the drive-around island with some type of small bollard and place an accent light at the bottom of the flagpole.



*Photo courtesy of
Fisher Marantz Stone
Lighting Design



*Photo courtesy of
Reese Engineering



*Photo courtesy of Louis Poulsen Lighting

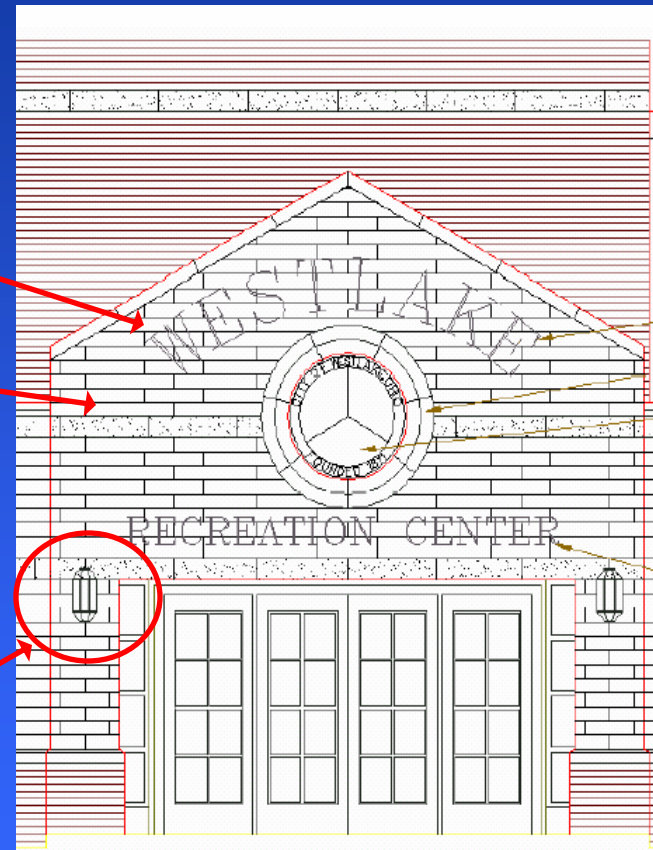


*Photo courtesy of The
Lighting Practice

Exterior Elevation

- 20" cast bronze letters on front
- Cut face sandstone with rock face sandstone border
- Brick along the bottom

I would like to keep the lanterns on the front – they are very inviting and appropriate



Exterior Ideas

Two accent fixtures
places on either side of
the flagpole



Floodlights on the wall
sections between each
large window



Small bollards lining
either side of the brick
walkway



Spotlights on "Westlake Recreation
Center" and the seal

Accent lights on the
trees in front of the
building

Exterior Ideas

*Recessed downlights
under the ledge*

*I would like to continue the wall-
mounted floods around the inside
of the canopy to completely light
the skylight*



Exterior IES Criteria

Very Important:

- *Color contrast/appearance:* During the daytime, this is not really controllable, but at night, the entry porch should glow in comparison to the rest of the building. Contrast will be achieved by using many accent lights along the building front and outlining the sidewalks and drive-around island with bollards.
- *Light pollution/tresspass:* Accent lights will contain a narrow beam and only accomplish the task that they are intended for.
- *Peripheral detection:* Bollards along either side of all sidewalks to aid in peripheral detection.
- *Surface characteristics:* Important because light will graze the sandstone and scatter. Accent lights will be used on various parts of the building as uplights to bring out the texture of the sandstone.

Exterior Fixtures and Lamps



Wall mounted uplight
inside canopy - (1) one
42-watt triple tube CFL
lamp

Flood lights on front
façade – 100W MH
Or 150W HPS lamp



Bollards around the
driveway island and along
either side of the
sidewalks – (1) one 42W
triple tube CFL lamp



Spotlights on front of canopy –

Exterior Sketch



Exterior Sketch



Lobby

- The lobby is the first room that you see when you walk into the main entrance on the North side of the building
- Brick Wall - 8'-8" high on South side of lobby
- Walking in, you see a staircase leading to the mezzanine level directly in front of you
- Open to lobby and library on the North side
- Clerestory windows 16'-4" up from the floor – the windows are 7' high, 7'-8" wide
- Total ceiling height: 27'-0"



Lounge and Library Area

- The lounge is open to the lobby on its south side
- Lounge ceiling height: 8'-8"
- Library is connected and open to the lounge
- Library is octagonal in shape and its ceiling comes to a point in the center, with a perimeter cove
- Library ceiling height in center: 10'-6"
- Library ceiling height around perimeter: 16'-4"
- Pool table and lounge chairs in library
- Television and lounge furniture in lounge



Lobby Metaphor and Examples

- I want the lobby to represent the heart of the building – it is the place that everyone sees first upon entering the building
- I want it to maintain its importance while making it more inviting



*Photos courtesy of Reese Engineering



*Photos courtesy of Smithgroup



*Photos courtesy of Louis Poulsen Lighting

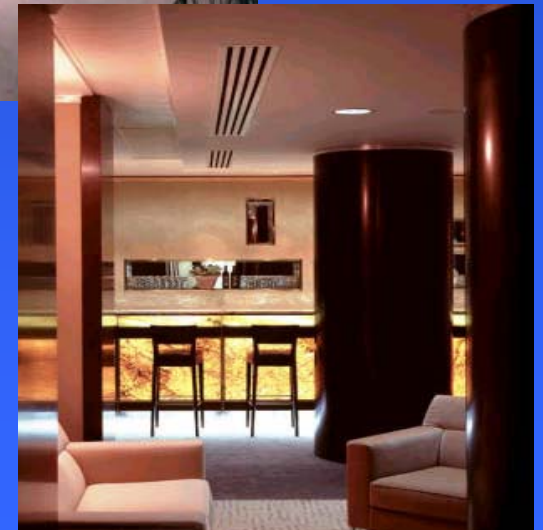


Lounge/Library Metaphors

- I want the lounge and library areas to feel like your living room at home – a place where you can kick back, relax, and watch television or read.
- I feel that the warmth will be easier to achieve in these areas because the ceilings are much lower – the décor with the couches and lounge chairs also contributes to this feeling



*Photos courtesy of Skidmore, Owings and Merrill

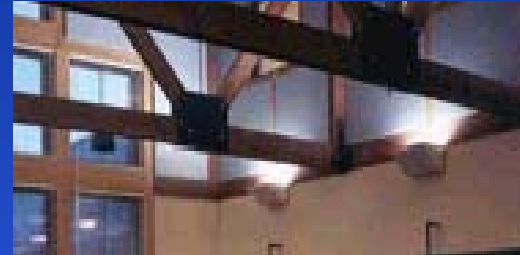


Lobby Ideas

Wall mounted fixtures with a direct component on brick facing – would make dining area more intimate



Wall sconces with only an indirect component to light the ceiling



MR-16 fixtures along the wall under the edge where the lobby meets the lounge

Lobby Ideas



Pendant mounted fixtures with a direct component only to hang from the ceiling – will create a more inviting environment – not so overwhelming

Lounge Area Ideas

Slotted
fluorescent
wallwasher
fixtures in
the ceiling
between
windows



Reading
lamps on
tables



Evenly spaced CFL
downlights with small
openings

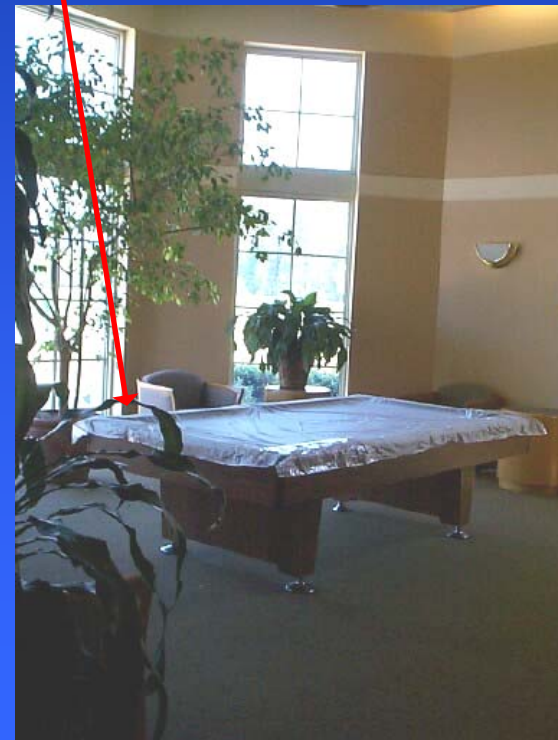
Library Ideas

I would like to keep the cove lighting, but increase the wattage of the lamps



I would like to get rid of these two wall sconces and replace them with a single sconce that has a direct and indirect component

Recessed floor uplights to accent the wall sections between each window

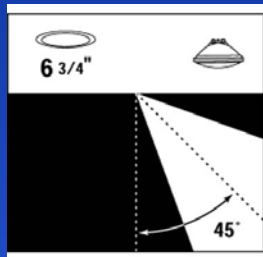


Lobby, Lounge Area IES Criteria

Very Important:

- Uniformity of light distribution on the task plane (library): CFL downlight in the center of the ceiling for the pool table
- Appearance of the space and the luminaries: The pendant mounted fixtures and wall mounted arm fixtures by the café must be chosen with care with respect to appearance because the lobby area is very open and all fixtures are visible. The wall-mounted uplights are also important because they are very visible.
- Color appearance (Lobby) : The wall mounted arm fixtures and pendant fixtures will make the lobby area seem warmer – the actual color of the wall is quite nice and I do not think that I would change it.
- System control and flexibility: All lighting except the wall mounted arm fixtures, recessed downlights, wallwashers in the lounge, and wall sconces will be controlled by photocells.
- Daylighting Integration and Control (lobby): As mentioned before, I would like to use photocells to incorporate daylight into my design.

Lobby, Lounge Area and Lamps and Fixtures



Accent uplighting in cove – (1)
one 75W PAR36 lamp

Table lamp with
(1) 60-75W
incandescent lamp



6" wide beam open reflector
downlight with (1) one 42W
triple tube, 4-pin CFL lamp

Staggered fluorescent
striplights within each cove
(1) one 25W T8 lamp for
each strip



2'X2' direct-indirect
fixture with (2) two
40W biax lamps

Wall sconce – (2) two
26W CFL lamps

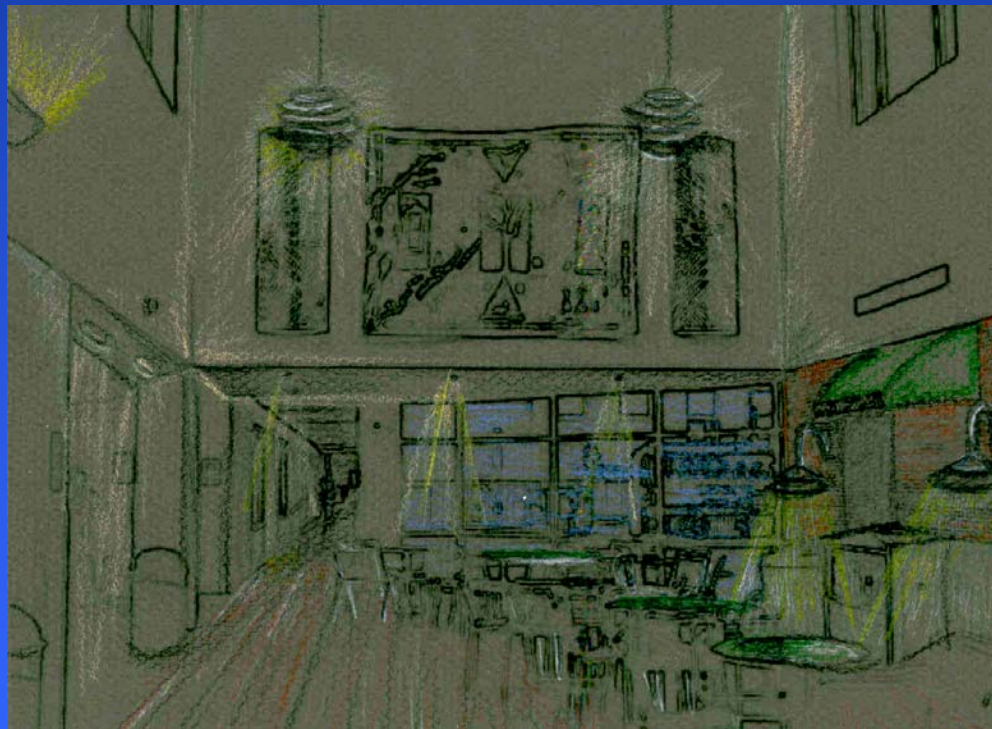


Pendant mounted fixtures with
(1) one 150W Ceramic Metal
Halide bulb

Floor uplights – (1) one
50W low voltage
tungsten-halogen lamp



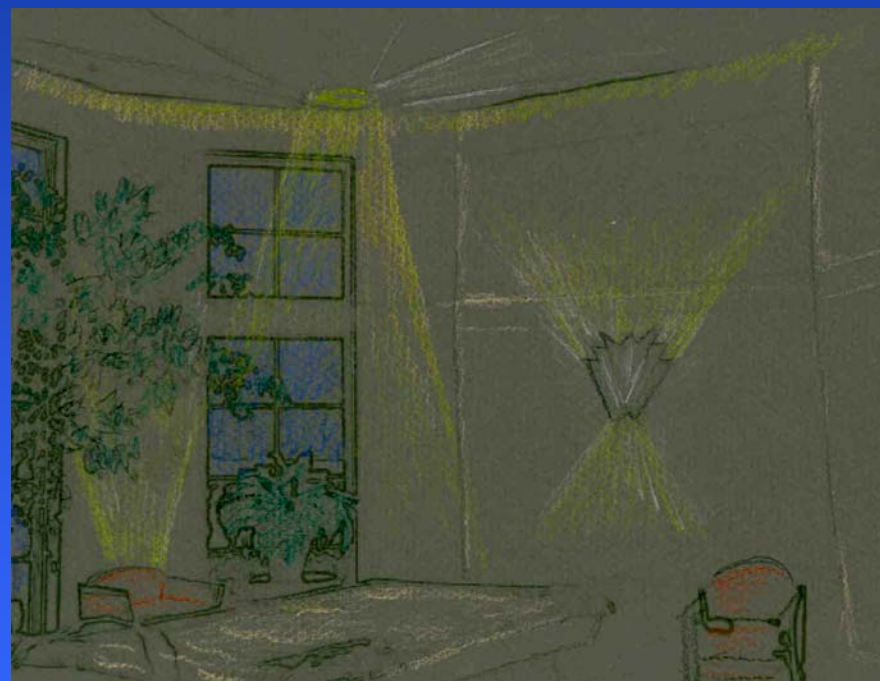
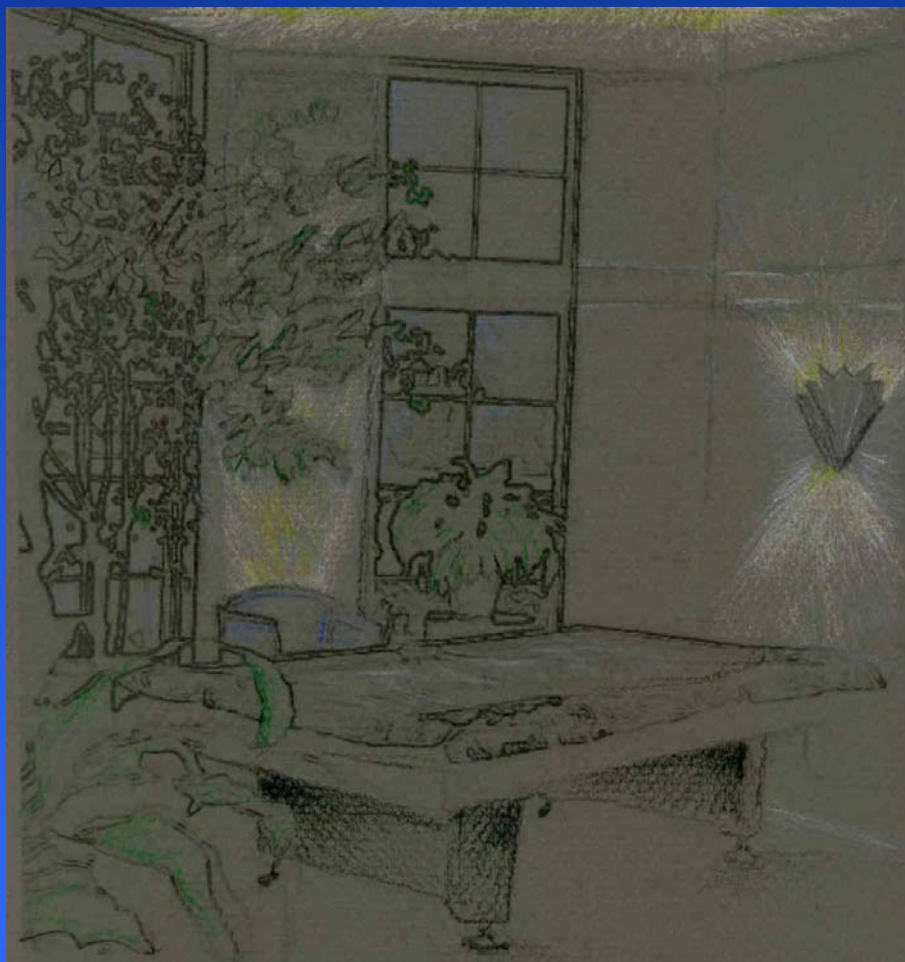
Lobby Sketches



Lounge Area Sketch



Library Area Sketches



Lobby, Lounge Area and Exterior Controls

- Wall sconce uplights and pendant-mounted fixtures controlled by photocells
- Floor recessed fixtures are on a timer
- Cove lighting strips in library are not dimmable because I want the library to look like it is 'glowing' at night from the exterior
- All exterior lighting controlled by photocells

Community Room

- The Community Room has a capacity of 200 people in a theater-style setting or 160 for lunch or dinner
- Ceiling height: 13'-3"
- The community consists of 4 quadrants in which there is a cove in each quadrant
- Height to top of cove: 15'-6"
- The room features floor length windows overlooking the lake and is professionally decorated with chandeliers and color-coordinated wall coverings and carpeting.



Community Room Metaphor and Examples

- I want the community room to contain two different lighting systems – one for business-type presentations and another for a party-type setting. Metaphorically, I want the community room lighting to have the flexibility to look like a grand ballroom or an executive lecture room when needed.
- I would like the cove lighting to appear a little warmer because right now, the cove appears washed out
- The chandeliers are unnecessary so I plan to get rid of these also



*Photo courtesy of Belfer Lighting



*Photo courtesy of Skidmore, Owings, and Merrill

Community Room Ideas

MRI 6 pinhole
downlights evenly
spaced within the
coves



No chandeliers or
anything hanging from
the coves

Wall sconces
with a direct
and indirect
component



CFL downlights
around the perimeter
of the room and
coves

Less strip fixtures of a
lower wattage within
the coves so a
'glowing' effect is
created instead of
the cove being
washed out

An adjustable
fluorescent fixture
diagonally placed in
the ceiling above the
speaker

Community Room IES Criteria

Very Important:

- *Reflected glare:* This is addressed with the low-voltage MR16 fixtures within the coves, since these will not cause glare from the height at which they are mounted. Also, the cove lighting will reduce glare on the tables.
- *Appearance of the space and the luminaries:* The only decorative fixtures in the room will be the wall sconces – everything else will be neutral and blended in with the architecture (IE MR16 fixtures, recessed compact fluorescent downlights, strip lights in the cove)
- *Color appearance –* The low-voltage, cove lighting, and wall sconces contribute to a feeling of warmth within the room
- *System control and flexibility:* Electronic ballasts dimmable down to 1% will be used in combination with wall dimmers because you can customize them to match everything else in the room. I want all different systems in the room circuited separately and on their own wallbox dimmers.

Community Room IES Criteria

Very Important:

- *Facial Modeling and shadows: Addressed with the cove and low-voltage systems – all systems can be dimmed to improve shadows. Facial modeling is especially important for the speaker, so an adjustable fixture that sits diagonally is placed in the ceiling to adjust to different speakers and light levels.*
- *Daylighting Integration and Control: Electric shades are used to control daylight and dimmable switches are used to adjust light levels when daylight is present.*
- *Flicker and strobe: All fluorescent lighting is controlled by electronic ballasts, so flicker and stobe will not be an issue since there is no HID lighting here.*

Community Room Fixtures and Lamps



6" wide beam open reflector downlight with (1) one 42W triple tube, 4-pin CFL lamp



Fixture for the speaker with (2) two 55W fluorescent lamps



Staggered fluorescent striplights within each cove – (1) one 25W T8 lamp for each strip



Low-voltage downlights With (1) one 50W/12V lamp



Wall sconce – (2) two 26W CFL lamps

Community Room Sketch



Community Room Controls

- CFL downlights around perimeter use 4-pin dimmable lamps and are controlled by a wall dimmer box
- Cove lighting strips on dimmable ballasts controlled by a wall dimmer box
- MR16 fixtures controlled by dimmable wall box
- Electric shades on all windows controlled by wall switches
- Diagonal conferencing fixture in the front on a dimmable wall box