



Tech Report 1, Part 1: Lighting Proposal Memo

TO: Shawn Good

FROM: Sarah Miller

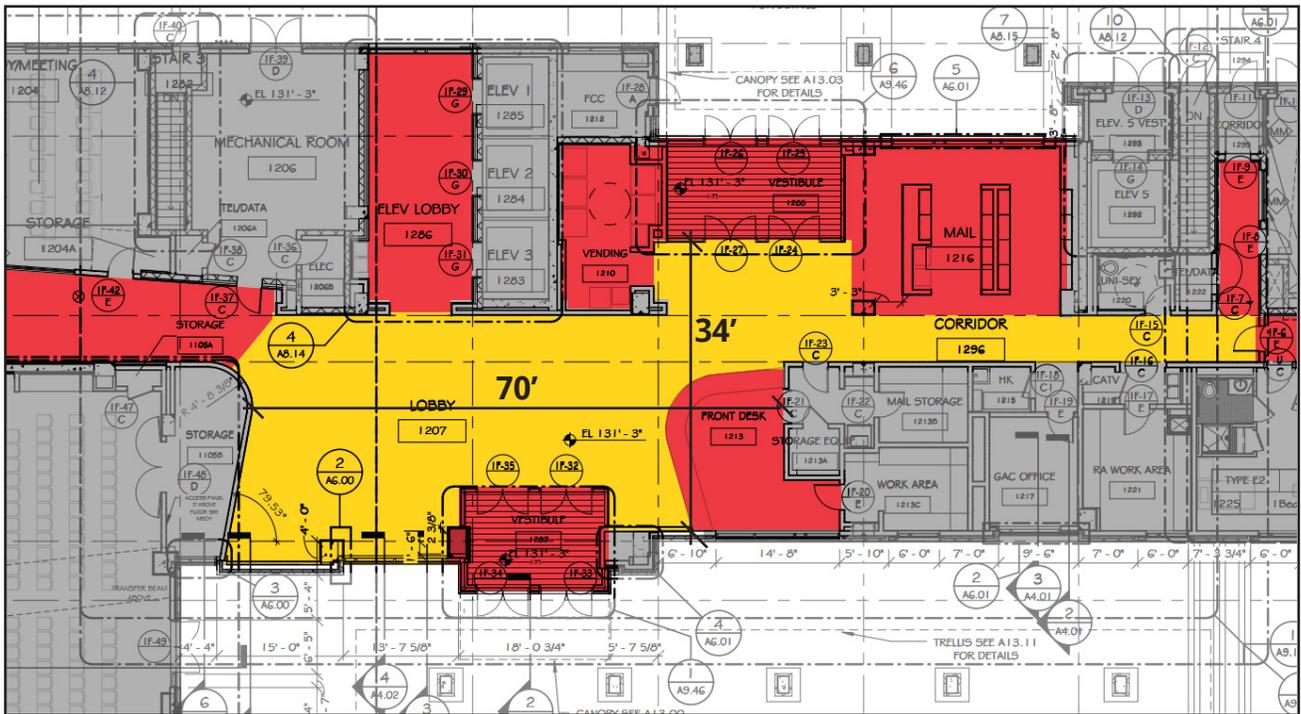
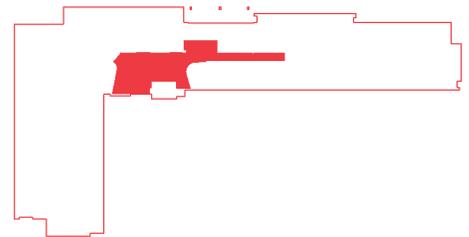
DATE: 9 September, 2013

SUBJECT: University of Maryland: Prince Frederick Hall

This memo discusses the different spaces I will study for the lighting design portion of my senior thesis project. The building I have selected for study is Prince Frederick Hall on University of Maryland's campus. A unique aspect of this building is the programming of spaces it contains. The first floor of this building consists mainly of lecture and classroom space, and the upper floors are dormitory rooms and study spaces. In order to reflect the variety of spaces, my studies will focus on the following: the lobby, the seminar room, a typical dormitory suite, and the entry plaza. The remainder of this memo provides further detail of these four spaces.

Lobby

The first floor lobby of this building serves as circulation to several key areas of the building: two entry vestibules, a front desk, the resident mail center, elevator lobby, a corridor to academic space, and a corridor to living quarters.



The most basic function of this space is circulation. Occupants need to navigate through the lobby to reach their intended destination. As such, the lighting should reflect the relative hierarchy of possible destinations for easier wayfinding. To gain a better understanding of each of these spaces, I will first develop three schematic design concepts. Design sketches are a well suited technique to this area because precise light levels are not nearly as important as the contrast and texture created by light.

Activities and Visual Tasks:

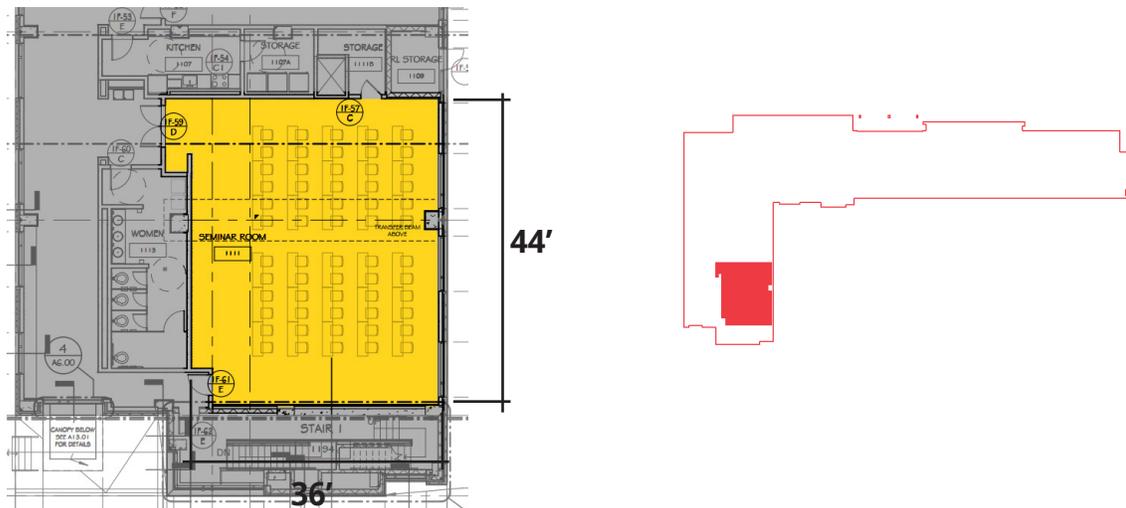
- wayfinding
- reading (at front desk & mailboxes)
- life safety (emergency) lighting very important

Materials:

- floor: terrazzo (TER-101 & TER-102)
resilient flooring (RF-101) [in vestibule]
- walls: tile (T-10 & T-102)
wall paint on gypsum board (SSUR-102;103;104;107;111)
metal paneling (MTL-01)
- ceiling: metal panel ceiling (PT-02d) [in vestibule]
gypsum board (PT 102)
ACT (AC-1)

Seminar Room

This large work space provides seating for about 60 students. The primary function of this space is for lectures and exams.



In contrast to the lobby, the overall light level in this space is very important to the function of the room. The primary visual tasks that will take place here are reading and note taking. For this space, I will apply different lighting schemes to accommodate different lecture styles. These will be further developed in later steps to reflect the programming of the space. Possible lighting schemes include one for AV presentations, for professors' lectures, and for professors writing notes at the front of the class.

Activities and Visual Tasks:

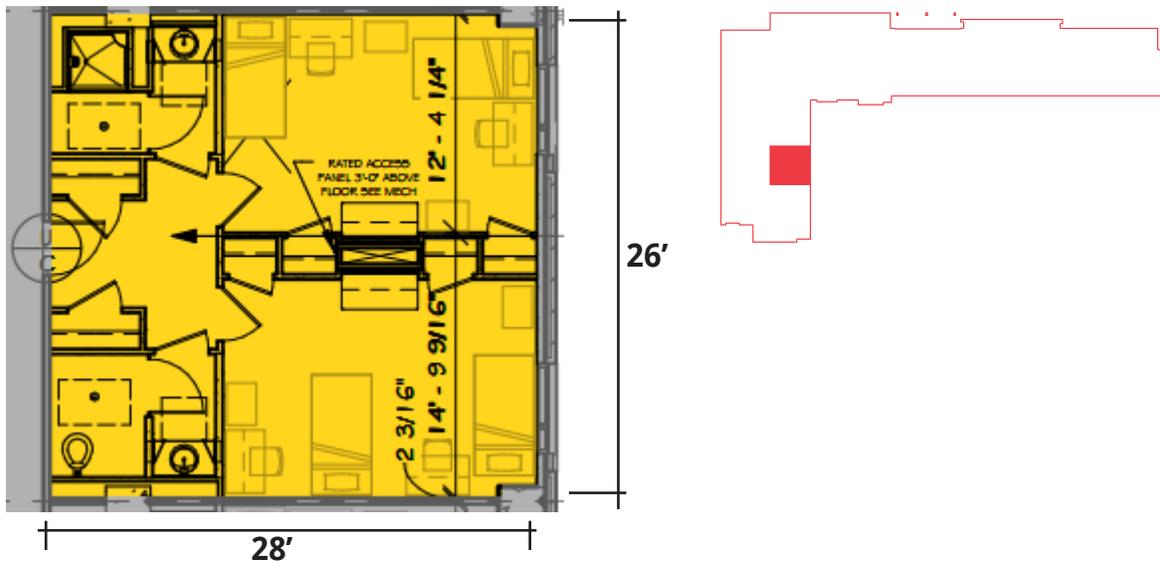
- note taking
- reading (printed text as small as 12pt font)
- reading (computer screen)
- AV presentations
- facial acuity of lecturer
- blackboard/whiteboard visual acuity

Materials:

- floor: carpet (CPT-102)
floorboxes
- walls: painted
chair rail with ledge around perimeter of room (SSUR-110)
white board above chair rail (see page 4/A9.53)
painted gypsum wallboard below chair rail (PT-110s)
(2) motorized projector screens
blackout shades on windows
- ceiling: ACT (AC-1) in center of room
painted gypsum wallboard

Dormitory Suite

The 2nd - 7th floors consist mainly of dormitory rooms. Of these, there are two main types: single rooms and suites. The dormitory suites offer an opportunity to study a unique special purpose space. Each suite contains two bedrooms, each with two twin beds, for a total of four residents per suite. Suites also have a vestibule area, two bathroom areas, and two closets. I plan to integrate psychological impressions to better reinforce the lighting design in this space.



Visual tasks that require the most light include reading and writing. However this not simply a study room, this space is the residence of four students, and should be treated as such. Much of the occupant's time will be spent in their room: sleeping, showering, studying, doing homework, watching television, and more. Controllability is very important to the long-term comfort of the occupants. Furthermore the design will have to be flexible enough to accommodate the needs of two people sharing a single bedroom. Furthermore, because half of the typical suites face directly east and the other half faces west, this area also offers the possibility of an integrated architectural and daylighting breadth to better utilize passive lighting.

Activities and Visual Tasks:

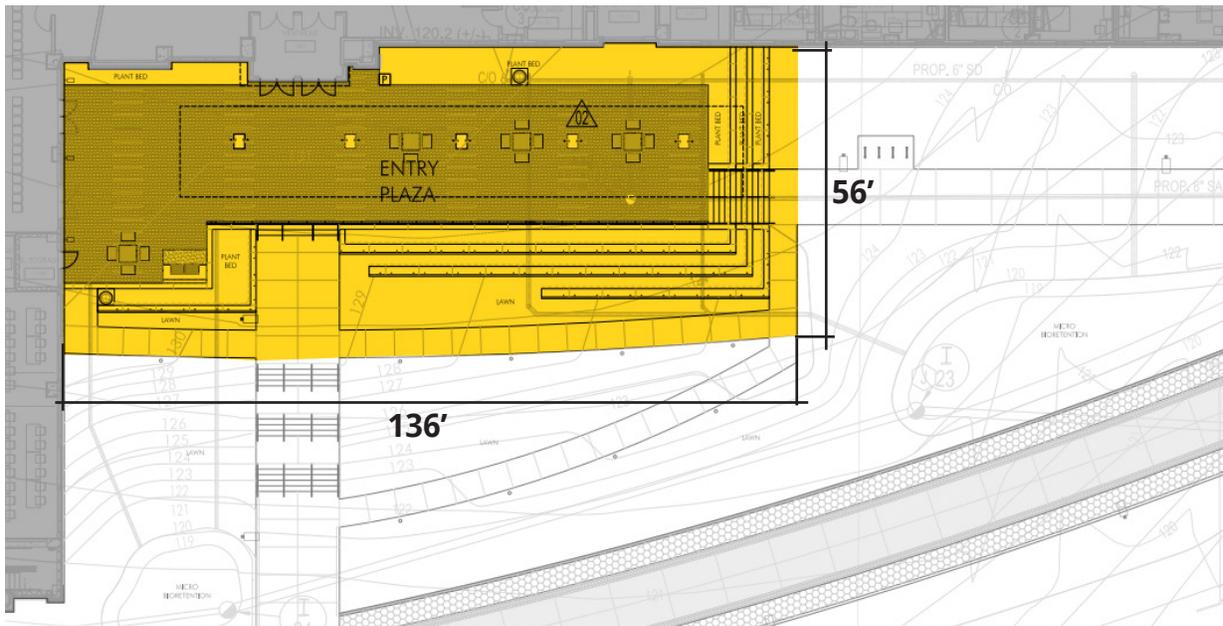
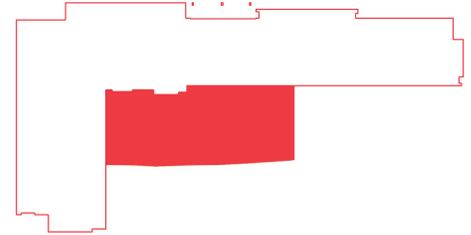
- reading, writing, computer based tasks
- showering, dressing, makeup
- low light necessary for sleeping & relaxing

Materials:

- floor: resilient flooring (RF-201)[bedroom & vestibule]
tile (T-210 & T-211) [bath areas]
- walls: painted gypsum wallboard
- ceiling: painted gypsum wallboard (PT-202u) [bedroom & vestibule]
ACT (AC-2) [bath areas]

Entry Plaza

The main entry to the building is located on the south side of the building. This outdoor space serves as a transition space into the lobby. In addition, it offers some seating for campus occupants.



During the day, when most classes occur, this area will not require any electric lighting. However, this building also contains several floors of dormitory rooms. Students returning to their room at night will need enough light to feel safe while navigating into the building. Event lighting must also be provided for this space to ensure safety if the building should need to be evacuated at night.

Activities and Visual Tasks:

- wayfinding to building entrance
- safety & comfort

Materials:

- paving: brick paving (PAV-04 & PAV-01)
stone dust paving (14/L1.20)
concrete paving (01/L1.20)
- facade: brick (MAS-01)
cast stone (MAS-03)
metal paneling (PNL-02)
curtain wall (PT-02d)

Summary

The following four spaces will be used for my lighting design analysis:

- **Seminar Room:** large work space
- **Dormitory Suite:** special purpose space
psychological impressions
- **Lobby:** circulation space
3 schematic design sketches
- **Entry Plaza:** outdoor space