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# [LIGHTING TECH I PROPOSAL MEMO]

By Jason Brognano  
Lighting/Electrical Option  
Advisor: Dr. Richard Mistrick



## Summary

This document contains the proposed spaces to investigate for the Lighting Tech I assignment. As part of the BIM/IPD thesis, these items are subject to change depending upon group direction for the duration of the year. These spaces were chosen based upon current design issues that each team member believes will be addressable both as an individual and as an integration team.

## Building Section

Currently, KGB Maser (BIM/IPD Team #3) has aspirations to address one wing of the Millennium Science Complex. Manageable and diverse spaces cannot be obtained without examining a full wing. Spaces will include offices, labs, corridors, and chases if an entire wing is examined.

## Possible Redesign Spaces

The following are spaces that could be addressed for lighting design or daylight redesign – these are subject to change with shifts in group direction:

### Perimeter Corridors

Each floor contains corridors around the perimeter with ample possibility for changes in daylight delivery. The first floor corridor serves as no more than a buffer zone, so daylighting will not be high priority. The first floor mezzanine is a catwalk in the middle of the first floor height and may not require redesign of any sort. The second and third floors contain perimeter offices and study areas. Daylighting in these spaces have the possibility of drastically reducing lighting energy requirements as well as creating warmth from solar radiation. Laboratories line the center of the wing, which provides opportunity for interfacing mechanical and electrical/lighting systems.

Typical Dimensions, Use, and Materials:

Width: 7'-0" to 8'-0"

Length: Entire perimeter

Use: Movement of occupants throughout the wings

Visual Tasks: Included but not limited to navigation, vertical plane reading (bulletin boards and room tags) and horizontal plane reading in study areas

Materials: Painted gypsum wall board, acoustical ceiling tile, VTC flooring

See attached plan

### Conference Rooms

The Millennium Science Complex houses several conference rooms in each wing:

First Floor – one room on each side of the cantilever entrance

Second Floor – two dividable conference rooms above the Material Science cantilever entrance

Third Floor – two dividable rooms in the Material Science cantilever, one conference, one seminar room

Each of these will need to display the goals of the Millennium Science Complex as a high-tech powerhouse in the research field. The dividable rooms pose a controls challenge as well as integrating with mechanical equipment to treat the rooms as one or two spaces depending upon use.

Typical Dimensions, Use, and Materials:

Width: Approx. 20'-0" between column lines

Length: Approx. 19'-0" to 37'-0" depending upon location

Use: Meetings, presentations, gatherings

Visual Tasks: Included but not limited to vertical plane reading (bulletin boards, presentation boards, digital projections, room tags, etc.) and horizontal plane reading, portable computer viewing

Materials: Painted gypsum wall board, acoustical ceiling tile, possible wood tables, VTC flooring  
See attached plan

### Café and Commons

The third floor contains a cafeteria and commons area for occupants to retreat from research. This space may prove to be an excellent opportunity for new lighting application to achieve Flynn Impressions suitable to the use of the space. However, as it is in the bridge, it may not fall into the group scope of work.

Typical Dimensions, Use, and Materials:

Width: Approx. 46'-0" to 62'-0" depending upon location in space

Length: 60'-0' in largest open area

Use: Gathering space during free time, events, or other social activity

Visual Tasks: Included but not limited to navigation, vertical plane reading (bulletin boards and room tags) and horizontal plane reading at tables, eating

Materials: Painted gypsum wall board, acoustical ceiling tile, VTC flooring  
See attached plan

### Entrance Vestibule

The entrance vestibule of the Material Science wing contains two spiral staircases to move occupants to the second floor. With a glass curtain wall on the west perimeter, interests will include perception from the exterior as well as emotional responses upon entering the space.

Typical Dimensions, Use, and Materials:

Width: Approx. 22'-0"

Length: Approx. 66'-0"

Use: Entrance to Material Science

Visual Tasks: Included but not limited to navigation, vertical plane reading (bulletin boards and room tags), horizontal circulation, vertical circulation, and garner emotional response of occupants

Materials: Glazing, painted gypsum wall board, MP4 metal panels, VTC flooring  
See attached plan

### **Courtyard Beneath Cantilever**

Below the cantilever is a courtyard with possibility for lighting redesign, again, depending upon the scope of the group.

#### Typical Dimensions, Use, and Materials:

Width: Approx. 180'-0"

Length: Approx. 180'-0"

Use: Exterior Gathering Space

Visual Tasks: Exterior Navigation

Materials: MP4 metal panels, face brick and concrete

See attached plan

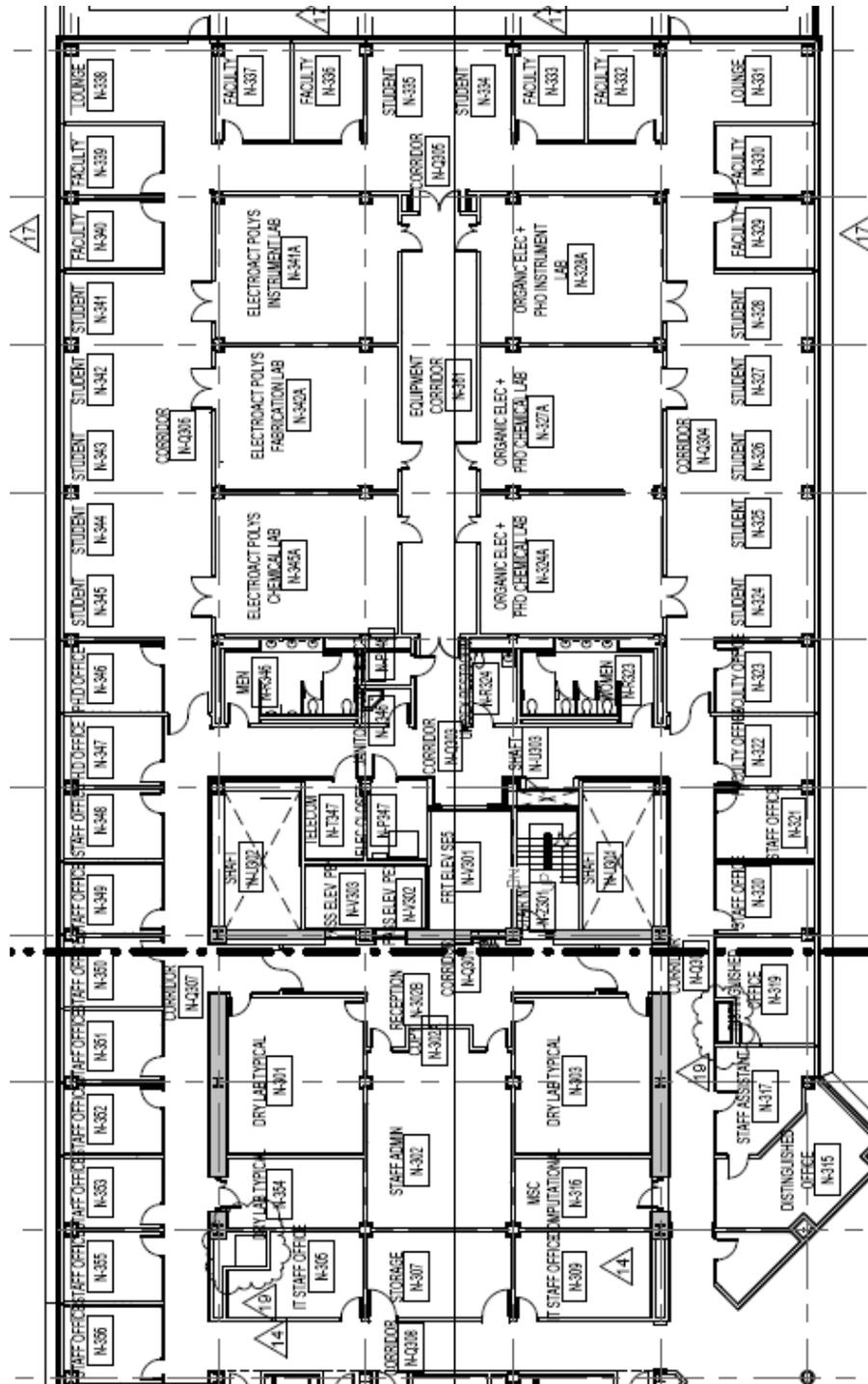
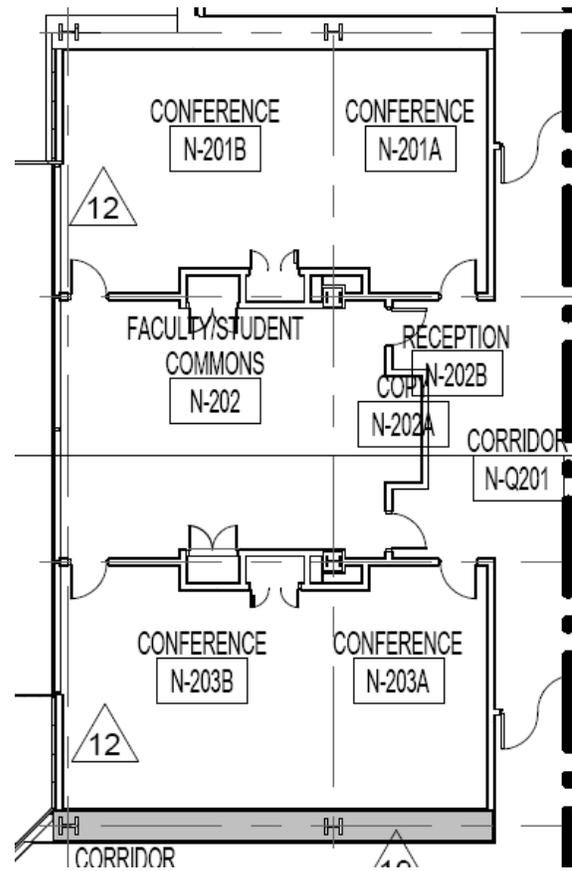


Figure 1: Perimeter corridor with study areas and offices



**Figure 2 :** Third floor conference rooms



**Figure 3:** Second floor conference rooms

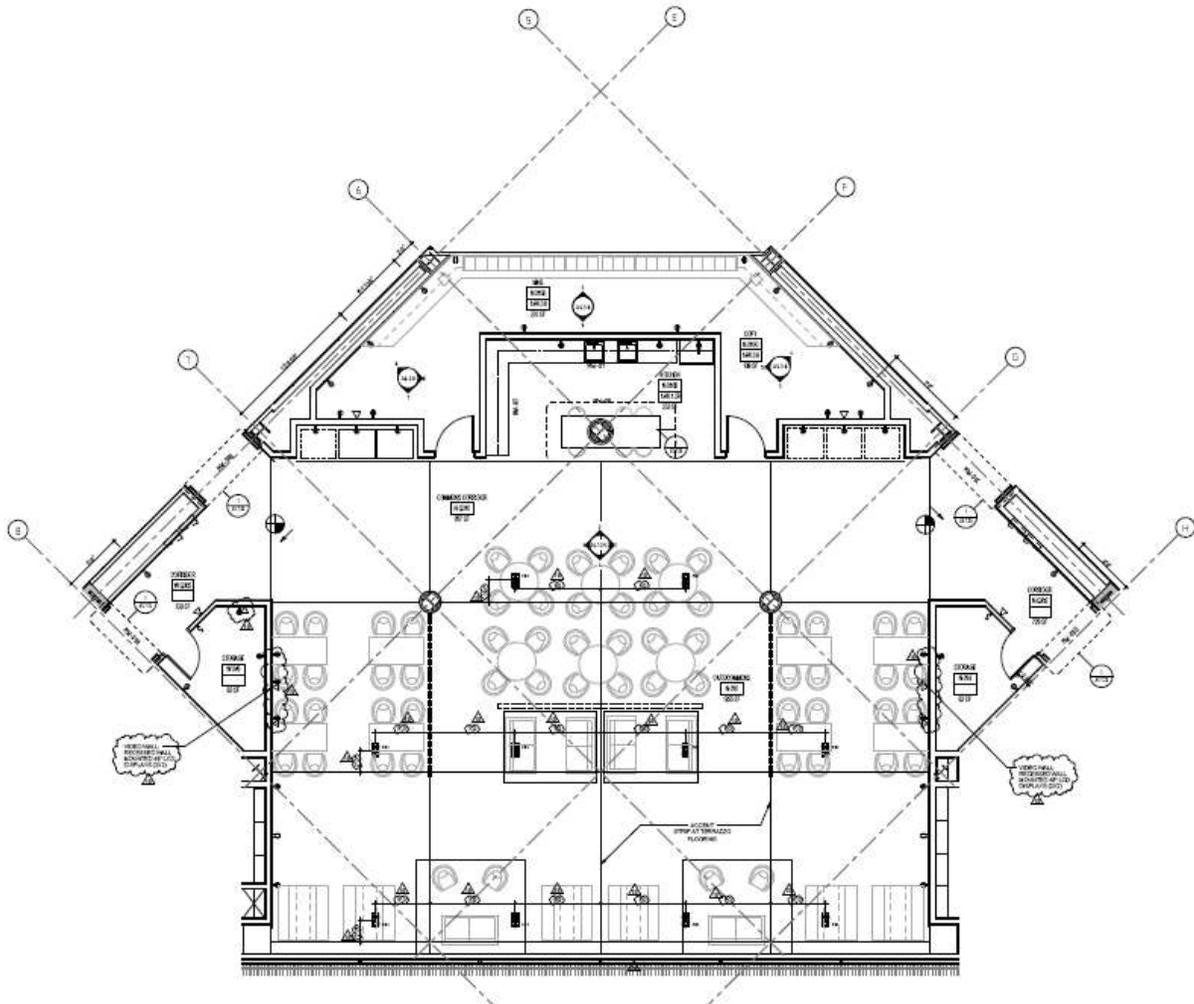


Figure 4: Third floor cafe and commons area

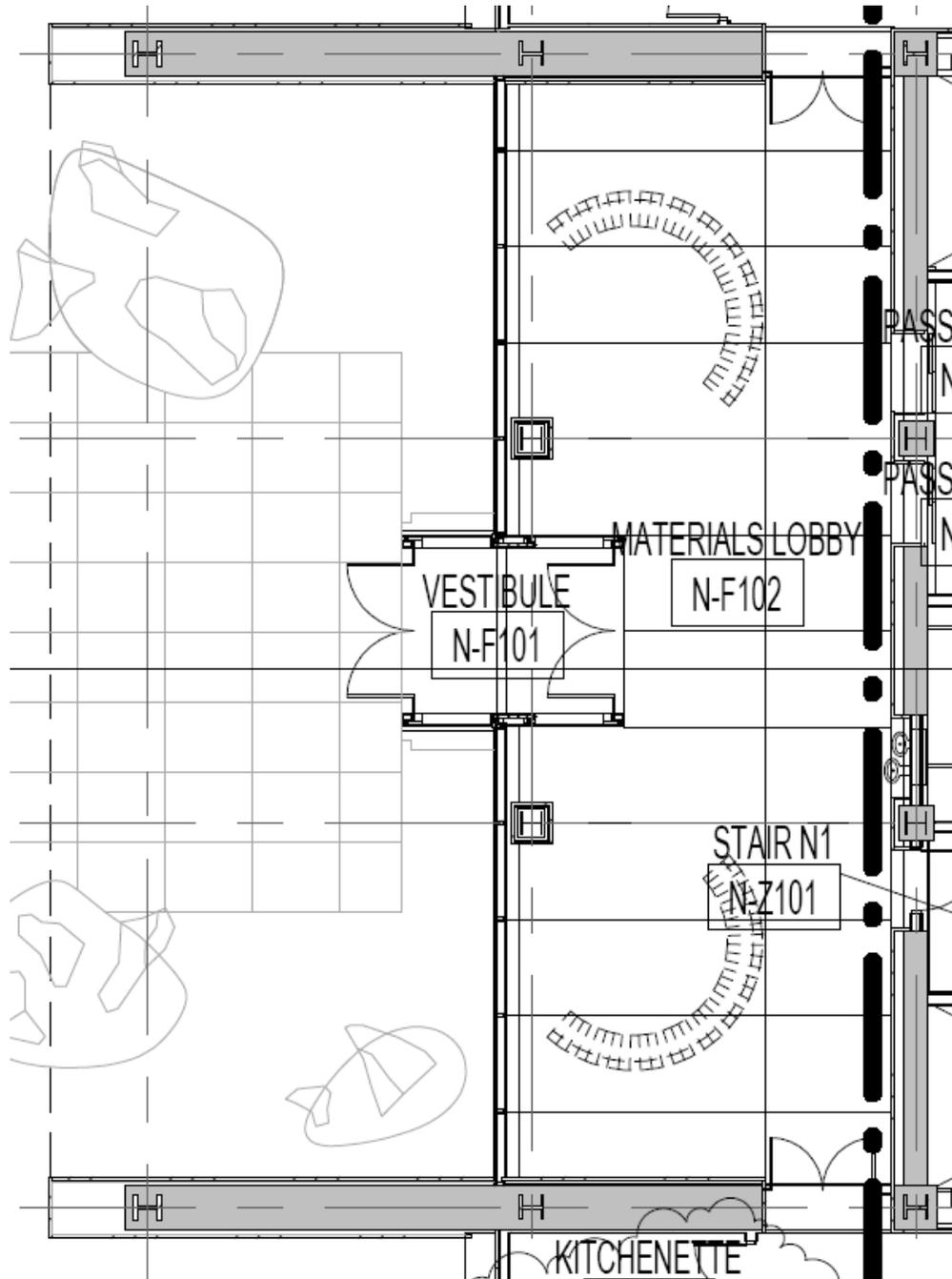


Figure 5: Material Science entrance vestibule

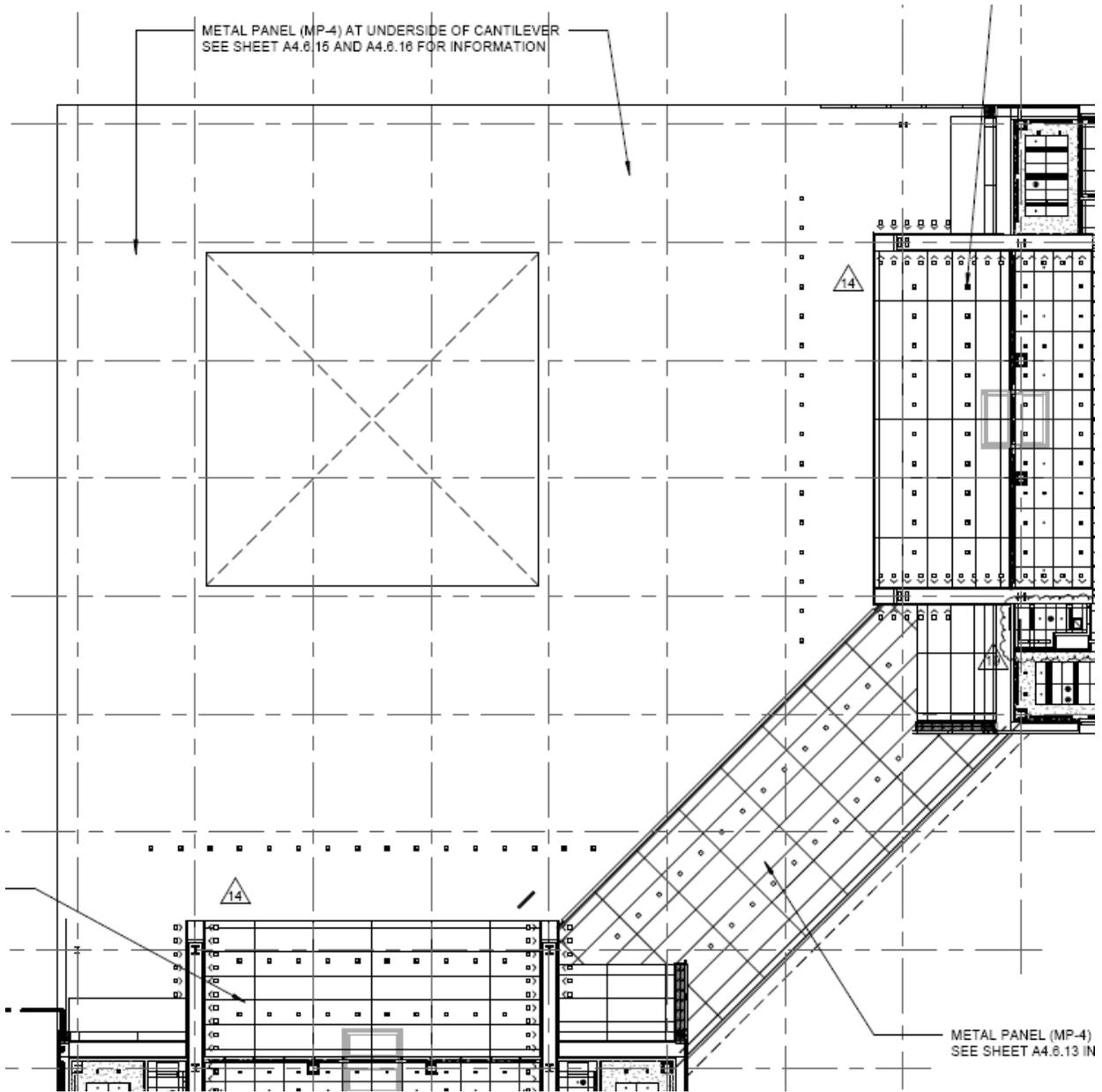


Figure 6: Courtyard reflected ceiling plan