Maude Fraizer Hall

Individual Case Study
By Dolores Jule
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Maude Fraizer Hall is the first building that was constructed in the UNLV campus. The construction was finished in 1957. It is a one story building with a 16,595 square footage. Architects:
- The original design was done by Walter Zick and Harris Sharp Engineers and Architects.
- The building was then remodeled by Robert Larson and Assemblage Studio and other design firms.

The building houses student services: admissions, records, and recruitment. The case study will focus on the two main rooms of the admissions department.
Lighting Techniques

- The main light sources in the admission department are linear fluorescent direct luminaires.
- They use T-12 or T-8 lamps.
- They are known to be the lowest-cost lighting fixtures.
- These are exposed on the side but they contain cross baffles that diffuse the light.
- It serves as an ambient and task light.
- The secondary light source used is under the counter light.
- They are small fluorescent strips that help provide more task lighting.
- The under the cabinet lights are T-5.
Problems with the current Lighting Techniques

- There is high ambient illumination level versus low task illumination levels, causing it to be uncomfortable to the eye. By having high illumination it reduces energy levels.
- When the fluorescent lamps burn they have to be changed. It takes a while for the maintenance people to change them. This causes light levels to decrease at essential task places.
- Another problem is that new lamps create higher lighting levels than the old ones. Thus, creating an undesirable environment to work in.
- They also do not provide enough desirable task lighting. Workers have to rely on additional light fixtures like swing arm lamps as shown in the picture below.
Problems with the current Lighting Techniques

- Under the counter lights can become too bright.
- Workers usually have them turned off because it produces too much glare.
- They rely on additional swing arm lamps that shine the light where it is most needed.
- I work in this office and I always hear complaints about the lighting not being good enough. Good lighting is essential in the office because a lot of reading and typing are done. Some desks have less lights than others and it becomes uncomfortable for those who do not have a swing arm lamp available.
“re-design” Lighting Techniques

Goals:
- Productivity and efficiency are essential goals in the office.
- Visual tasks should be easy and comfortable to perform. Good lighting levels are psychologically important because providing sufficient light helps people feel better. Therefore, if people feel better they will work more efficiently.
- The first step is to identify the visual tasks related to each function and setting.
- The space I am concentrating on is mainly used for reading, typing, and filing.
- A good task and ambient concept should be provided to the space.
- Low level ambient illumination are to be arranged in most of the space, and higher task illumination are to be placed at essential spots where light is needed the most.
- This will provide the best visual condition in the work space and it will conserve energy by placing high-level illumination only where is needed.
- The light levels in the desk should be sufficient for extensive reading, high computer usage which includes typing, and filing.
- Provide both variety and spatial definitions
New Lighting Techniques

- High quality lighting for each station. In this case it will be under-cabinet fluorescents. This will serve as a direct light to the work space, with an acrylic shield panel that will avoid glare and reduce heat. The manufacturer BROADWAX LIGHTING states that the fixture picked below will contain a 35-watt T5 Low Profile Grounded Electronic Fluorescent Fixture, 58 in long, 3650 lumens, 82+ CRI. The lighting designer can choose from 3000K, 4100K or 6400K (The lamp, the diffuser, mounting clips and one direct connector are all included.) You will need at least one 6’ cord and plug or a hard wire box.
New Lighting Techniques

- Provide swing-arm desk lamps. They are adjustable to improve the task lighting levels on the work surface.
- I picked the Black PL Swing-arm Desk Lamp
- The manufacture states: “Sleek, stylish and well designed. Includes base and clamp. Spring-balanced mechanism precisely focuses light where you need it. Uses one energy-efficient 13-watt PL bulb (included). Saves up to 80% of the energy normally used to produce an equal level of light. Maximum reach of 36”. Imported.”

QuickTime™ and a TIFF (Uncompressed) decompressor are needed to see this picture.
New Lighting Techniques

- Pendant fluorescent uplights
- They will provide an indirect ambient lighting that is not too bright.
- The manufacturer states that "Engineered for high performance, Enform and Enspire are direct/indirect luminaires with Trilux louvers for precise optical control and superior light distribution. Available in specular or matte, the louvers use Miro technology to deliver comfortable, ergonomic lighting. A continuous louver runs the length of the fixture and crosses joints between the fixture modules. Linear 4-, 8-, and 12-foot sections can be pendant or surface mounted and joined to form runs. The fixtures feature corners that can angle in increments from 90 to 180 degrees, providing options for a variety of pendant-mounted configurations."
Works Cited

- http://www.brodwax.com/SleekT5.htm
- Karlen, Mark and James Benya “Lighting Design Basics.”