The Web Shop

AE 482 Submission 2

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Files Located at P:\AE482

Executive Summary

For this second submission, the space in study is the main entrance façade. The current main entrance is not the original main entrance of the building. Instead it has acquired its status over the years as the primary entrance due to its proximity to the parking lot. The previous main entrance at the street front was used less and less, until it was eventually blocked off during remodeling.

The issue is that the primary entrance does not look more important than any other entrance. Therefore for a guest, it is difficult to find their way into the building.

By adding an illuminated architectural element surrounding the entrance, as well as signage and a subtly lit façade, the entrance truly appears to be the main entrance. There is no doubt that any guest entering the premises will be able to find their way into the building.

Existing Conditions

The entrance is located at the junction of the two building halves, between the factory floor and the office space. It leads from the middle of the main parking lot to the main lobby. As it stands, there is no lighting on any of the building facades. The only lighting in the adjacent area is pathway lighting, consisting of 5-Elliptipar F152 fixtures.

Materials:

Walls:

Red Brick

Reflectance: 0.15 (assumed)

Windows:

Double Pane Glass

Reflectance: 0.15

Transmittance: 0.85

Sidewalk:

Concrete:

Reflectance: 0.3 (assumed)

Design Considerations

Design Criteria:

Building Exteriors – Entrances – Active (pedestrian/ conveyance)

Illuminance Values

- Horizontal – 5 fc
- Vertical – 3 fc

Appearance of Space and Luminaires

- The appearance of the luminaires should implement the exterior architecture by being simple and not interrupting the task in the space. In the case of the building façade and sidewalk, the fixtures should not be obvious.

Color Appearance

- Color rendering in dimly lit situations becomes increasingly more difficult. A lamp with a high CRI value and low CCT value should be chosen.

Direct Glare

- Use of cut off optics or semi-cutoff optics can control glare. Avoid using luminaires where the bare lamp can be seen.

Light Pollution/Trespass

- Avoid using luminaires that emit light above the horizontal plane. Minimize direct light onto nearby windows and illumination onto adjacent properties.

Modeling of Faces or Objects

- If it is important to identify faces, provide adequate vertical and horizontal illuminance. Diffuse illumination from luminaires and from surface reflection is helpful.

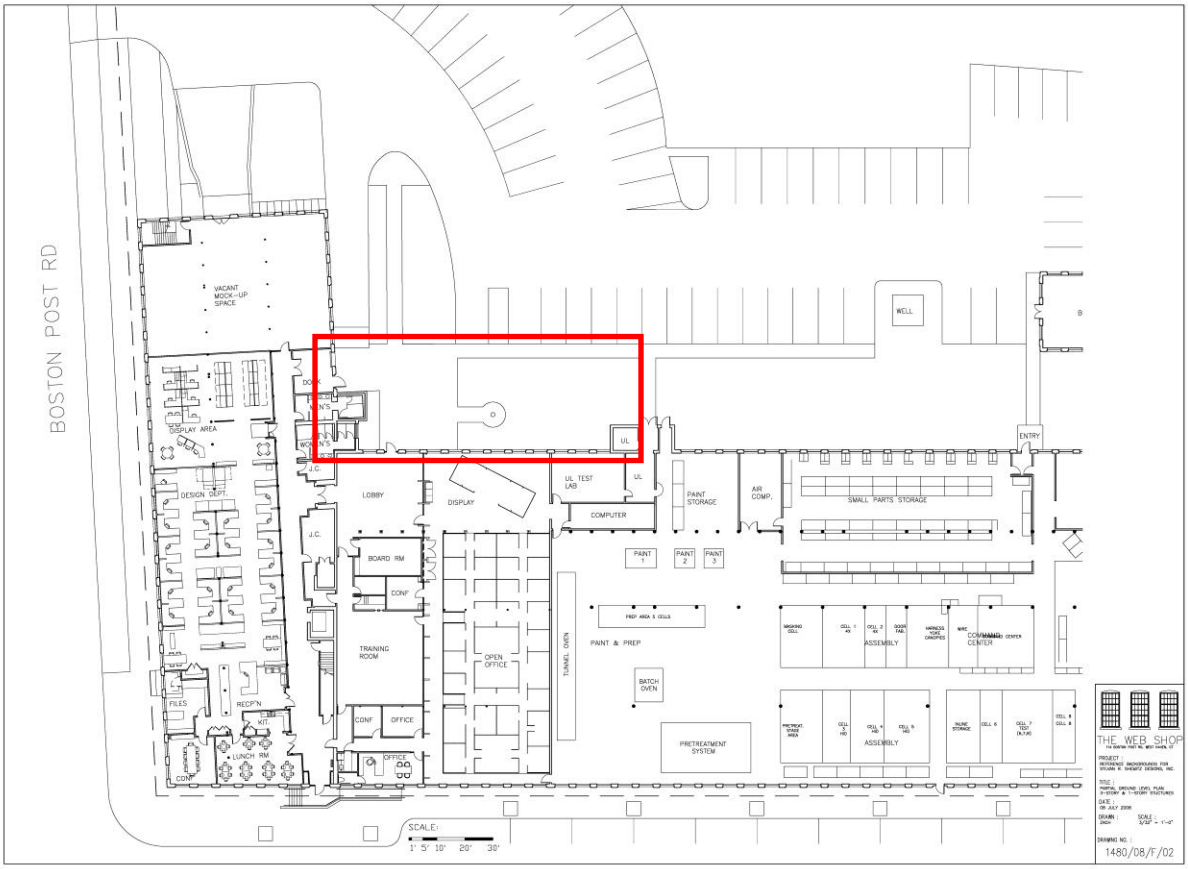
Points of Interest

- Make sure signs, special landscaping, and other points of interest are clearly visible to attract attention.

Power Allowances and Control Requirements (ASHRAE 90.1):

According to ASHRAE 90.1, power densities for plaza areas shall not exceed 0.2 W/ft^2. Walkways less than 10 ft wide shall not exceed a power density of 1.0 W/linear foot. Walkways greater than 10 ft wide shall not have a power density exceeding 0.2 W/ft^2. Lighting for all exterior applications shall have automatic controls capable of turning off exterior lighting when sufficient daylight is available or when the lighting is not required during nighttime hours.

Floor Plan



The red area represents the scope of the Façade.

Proposed Design

The design incorporates a new entrance canopy that establishes dominance over other entrances. The canopy consists of a simple slab supported by wood trusses and columns. The design takes cues from many of the interior architectural wood elements, such as the saw-tooth fenestration supports in the factory, and the wood columns in the open office.

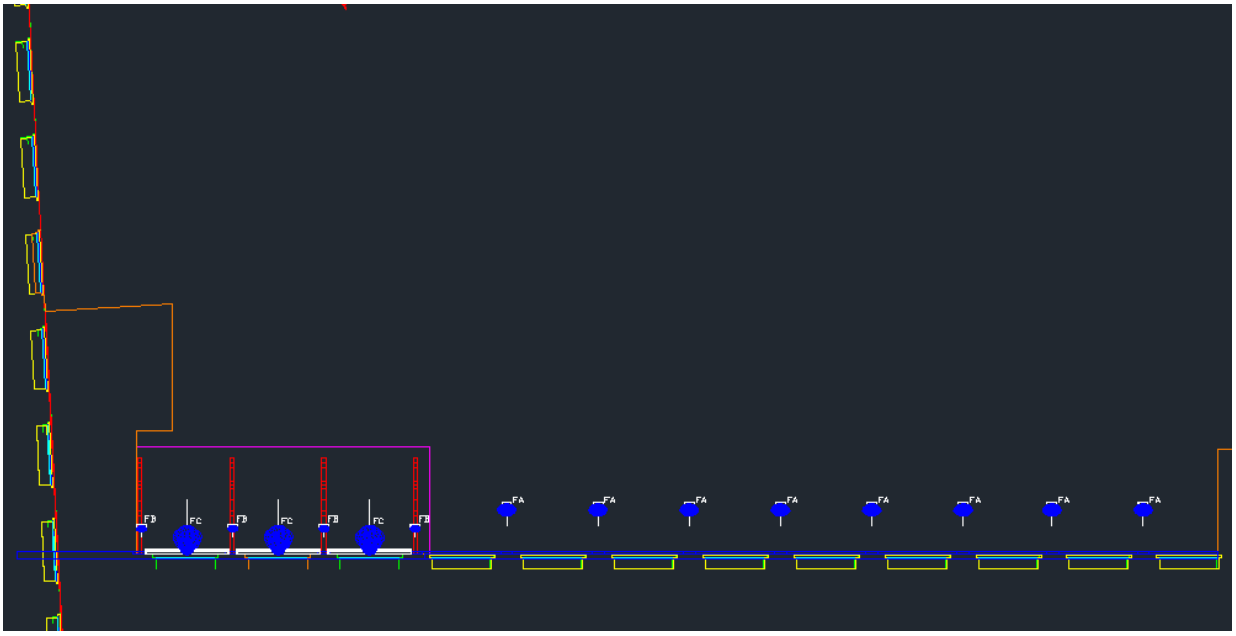
This design was chosen over several other possibilities. Of the others, this design exudes more simplicity and elegance. Also it allows the most sunlight into the space through the large windows in the facade. Other designs had a tendency to block out sunlight. But most importantly this design is the most easily recognizable as the main entrance, as it stands out more than any other entrance.

There are four important parts to the lighting design. First is the uplighting to the underside of the canopy. This space is purposely brighter than the surrounding spaces to attract the most attention. Consequently this indirectly lights the space beneath the canopy, providing sufficient illuminance to the entrance. The second space is the façade to the left of the entrance. Metal halide uplights are used to accentuate the strong columns, but not to the point of overpowering the entrance. Third is the otherwise dark space above the canopy. This space is to be illuminated in the same manner at the columns to the left of the entrance, but at a smaller scale. Lastly is signage to the right of the entrance. Utilizing an otherwise plain protrusion, The Lighting Quotient's trademark "Q" will be a recognizable symbol, representing what is to be found beyond the doors.

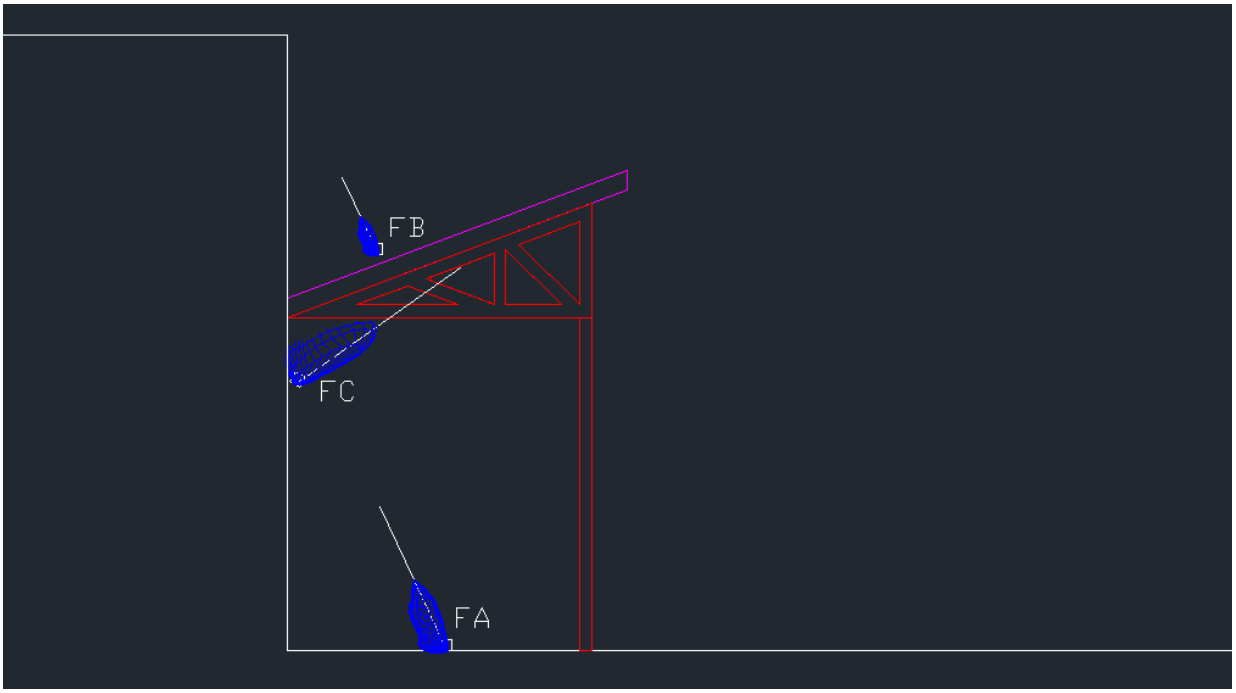
Schedule

Symbol	Description	Manufacturer	Product Number	Lamp Number	Watts	Lumens	CCT	CRI
FA	Uplight	Elliptipar	M159	CDM70/T6/830	70	6600	3000	81
FB	Uplight	Elliptipar	M159	CDM35/T6/830	35	3300	3000	81
FC	Uplight	Elliptipar	F151	F39T5HO	39	3500	3000	82
				F54T5HO	54	5000	3000	82
FD	Signage	Custom						

Design Plan



Plan view shown above. Section view shown below.



Renderings