

Eastside III

East Liberty, Pittsburgh, PA

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Tech Report 4b | Spring Semester Proposal

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Image courtesy of PJ Dick, Inc.

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 Gantt Chart

| Building Overview

- Building Name | Eastside III Building B
- Location + Site | East Liberty, Pittsburgh, PA
- Building Occupant Name | Eastside Bond
- Occupancy or Function Type | Mixed Use Development
 - Mixed Commercial Spaces
 - 175 Apartments
 - Parking Facility
- Size | 221,000 total sf
- Number of Stories | 5 stories above grade + 2 stories below grade
- Primary Project Team
 - Owner | The Mosites Company <http://mosites.net/>
 - General Contractor | PJ Dick, Inc. <http://www.pjdick.com/>
 - Architect | The Design Collective <http://www.designcollective.com/>
 - MEP + FP | Allen & Shariff Engineering <http://www.allenshariff.com/>
 - Structural | Structural Consultants Associates, Inc. <http://www.scaengineers.com/>
 - Interior Designer | RD Jones <http://www.rdjones.com/>
- Dates of Construction | June 2014 - June 2016



| Part 1

Lighting Depth

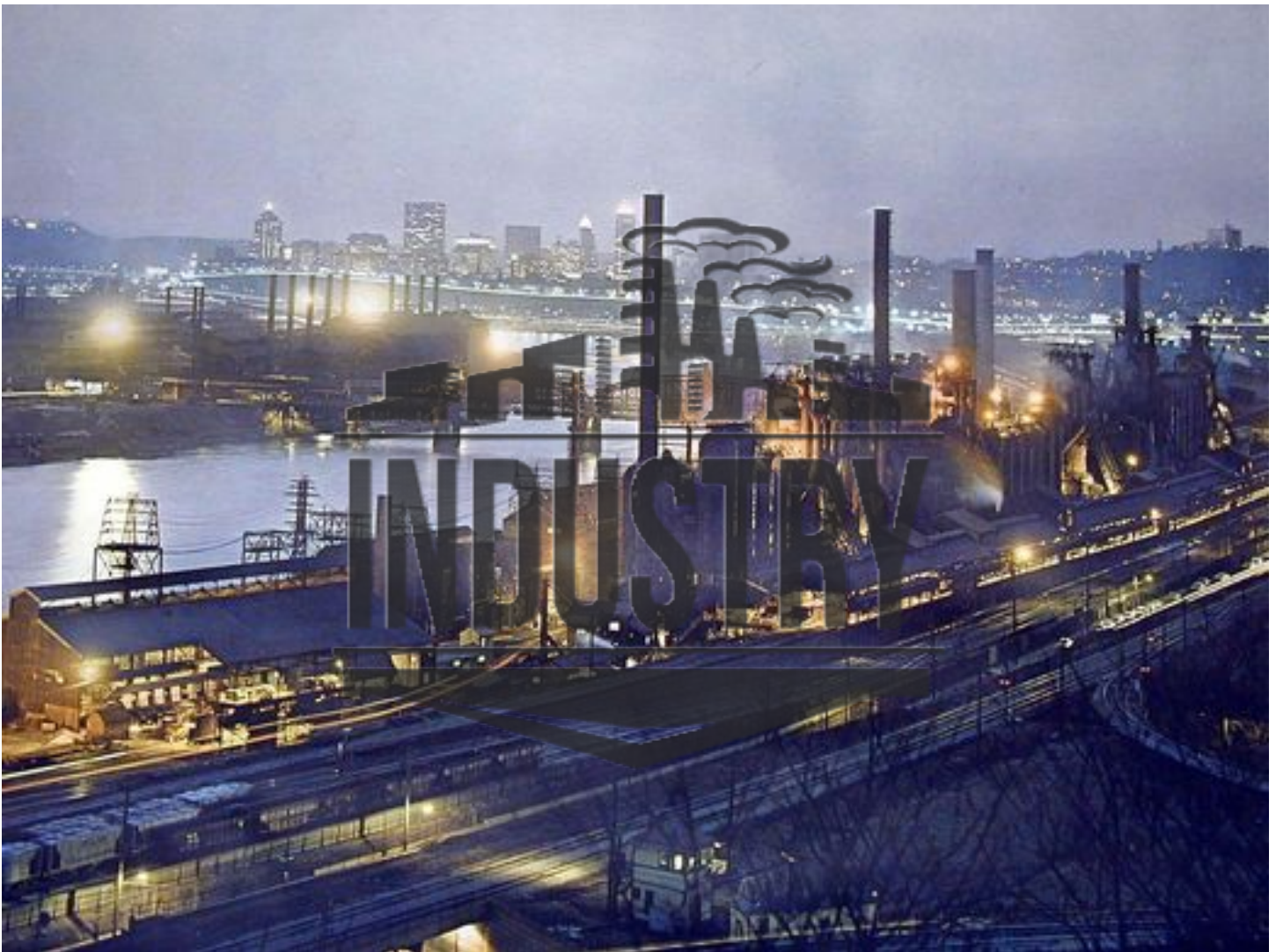
Concept:

Eastside III is in the final phase of a revitalization project in the heart of the East Liberty neighborhood of Pittsburgh, PA. The City of Pittsburgh and its current gentrification trend has transformed once low value neighborhoods, like East Liberty, into high value metropolitan areas. Eastside III has brought in new market-rate housing and host of amenities to the area.

The present and future of Pittsburgh is exciting, new and promising but we cannot forget the roots of such a distinguished industrial and commercial city. The city's **industry** is what *makes Pittsburgh, Pittsburgh*. The steel industry, the bridges, the train tracks, the smog of the 1950's.

The lighting design throughout Eastside III will highlight and bring to life just that - the city, the town, and the building's **industry**. The strong interior design and architecture within Eastside III speaks for its industrial feel itself, and the lighting will simply *highlight* to this prominent identity of Eastside.

Throughout each space, the lighting design will call to attention the materials that gives each space its identity - its **industry**.



| Part 2

Electrical Depth

System Redesign | Building Utilization + Equipment Analysis:

The utilization voltage of the residential portion of Eastside III will be converted from a 208/120V system to a 480/277V system. This change will require switching the current 208/120V transformer from the input voltage to a 480/277V transformer, resizing the switchboards and feeders, and installing a transformer for each meter of the residential section (4 total). The current feeder and equipment costs will be compared to the new cost of equipment and the electrical rooms on each floor of the residential housing will be resized to account for the new transformers.

| Part 3

MAE Depth

Daylighting Analysis:

Within the amenity spaces of Eastside III, daylight is plentiful through the use of curtainwalls and building entrances. I will be analyzing these spaces, specifically in the Lower Level Lobby, Main Lobby, and Fitness Center, through an in-depth daylighting analysis. This analysis will determine current daylighting conditions within these spaces, such as useable daylight autonomy and glare. Since the lobby spaces are mainly used as transition spaces, I will also be studying the implementation of building façade materials that can be added to curtainwalls to create a patterned effect within the spaces. Glazing and building materials will be analyzed further to ensure maximum sustainable performance.

| Part 4

Breadths

Mechanical Breadth:

Tying into the daylighting analysis, I will look into the HVAC effects from solar heat gain within the daylight plentiful amenity spaces of Eastside III. I will also consider mechanical heating and cooling loads within the newly designed electrical rooms of the residential portion of the building, being altered from my electrical depth.

Acoustical Breadth:

In addition to mechanical considerations within the electrical rooms, I will also look into the acoustical effects that the new transformers may create to the room's surrounding spaces. Since these electrical rooms will be near residential units, acoustics is a large concern for this private section of Eastside III.

| Part 5

Schematic Design Feedback

Lee Brandt | Horton Lees Brogden Lighting Design

- Very good approach with concept: highlighting the base architecture
- For the 3 concept space: since they are focusing on 3 different areas, think about what happens with their surrounding areas
 - What will the general lighting solution be?
- Presentation style and approach was view, but the images only provided one view
 - Think about what else is going on in the space
 - What is going on around the front desk? Not the only thing in the space
- Right idea in the Fitness Center - it did seem dark so painting the ceiling white and opening the space up is a good move
- The presentation could have used a better walk-through and less of a big concept
 - RCPs and plans could have helped this to give an understanding of the space's orientation

Mike Barber | The Lighting Practice

- Use baby steps to introduce your building - plans, section, guide the audience through
- Appreciated the presentation style and technique
- Lobby:
 - Look at it holistically
 - Concrete wall with glazing
 - Like the idea of uplighting the mullions - but think about the effects on the glass
 - Think about how the pieces work together for the common concept
- Billiard Room:
 - Probably going to need more lighting on the pool table than the cove
 - Pool tables need to have bright lighting
 - Decorative lighting over the pool table isn't a bad idea
- Exterior:
 - Present the lighting in layers, like the other spaces
- Use the laying approach when presenting the lighting, but using plans to guide through

| Part 5

Schematic Design Feedback Cont.

Ken Douglas | Illumination Arts

- Nice overall presentation
- Struggled with seeing the current images before presenting my design - do I have other images for these spaces, sketchup model, rendering, etc.?
- Original designer made really bold statements
 - Some of these statements takes away from my concept
- Fitness Center:
 - People are always on their backs looking up, so look at the downlight approach
 - Indirect lighting is good for this space
- Kitchen:
 - Be careful dropping in more dark surfaces, like the floating ceiling being introduced over the table
 - Think about what material this ceiling will be
 - Make the space open up. Since the materials are dark, you don't want it to feel like its closing in
 - Use vertical illumination to achieve that effect
 - Show the lighting effects of the Billiard Room in the Kitchen's rendering

Dr. Kevin Houser | Penn State University

- Look at the IES recommendations for a pool table

Craig Casey | Lutron

- Fitness Center:
 - The image made it seem like the dropped ceiling was dark, make sure to use a lighter color to open the space up
- Lobby:
 - Maybe make it less of a static environment - implement some type of dynamic lighting effect

| Appendix A

Spring Semester Timeline

SPRING 2017 SEMESTER PROJECT SCHEDULE														
Activitiy	January				February				March				April	
	9	16	23	30	6	13	20	27	6	13	20	27	3	10
Lighting Depth														
Revisit Schemes														
Edit Models														
DD Lower Level Lobby														
DD Main Lobby														
DD Kitchen + Billiard														
DD Fitness Center														
DD Pool Courtyard														
Lighting Calculations														
Fixture Schedule														
Documentation														
Electrical Depth														
System Redesign														
Load Analysis														
Cost Analysis														
Resize Elec Rooms														
MAE Depth														
3D Modeling														
Stadic Study														
Glare Study														
Daylighting Solution Analysis														
Breadth														
Mechanical - Lobby, Res.														
Acoustical - Residential														
Report Completion														
Report Formatting														
Documentation of Depths + Breadths														
Presentation Formatting														
Presentation Feedback														
Final Edits														
									SPRING BREAK				FINAL REPORT DUE	
													THESIS PRESENTATION	