

Project: **Community Healthcare**

Location: Mid-Atlantic Region

- I. Title Slide (3 screen)
 - A. Project Introduction (1 screen)
 - B. Background Information (1 screen)
- II. Analysis I: Precast Footings
 - A. Problem Identification (1 screen)
 - B. Feasibility Results (1 screen)
 - C. Structural Breadth Results (2 screens)
 - a. Footing Redesign (1 screen)
 - D. Cost & Schedule Results (2 screens)
 - E. Conclusions & Recommendations (1 screen)
- III. Analysis II: Preassembled Exterior Wall Panels
 - A. Problem Identification (1 screen)
 - B. Panel Supplier Information & Panel Layout (3 screens)
 - C. Cost & Schedule Results (2 screens)
 - D. Conclusions & Recommendations (1 screen)
- IV. Daylighting Breadth Results on the Value Engineered Skin (2 screens)
- V. Analysis III: Masonry LINAC Vault
 - A. Redesign Overview (2 screens)
 - B. Conclusions & Results (1 screen)
- VI. Analysis IV: Virtual Mockup Research
 - A. Project Background & Change Order Findings (2 screens)
 - B. Overview of Virtual Mockups & Key Findings From Interviews (1 screen)
 - C. Implementation Guide (2 screens)
- VII. Final Recommendations
 - A. Acknowledgements & Thank Yous (2 screens)

COMMUNITY HEALTHCARE



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CONSTRUCTION MANAGEMENT

PENN STATE AE THESIS
2015-18

COMMUNITY HEALTHCARE

PROJECT BACKGROUND

ANALYSIS I: PRECAST FOOTINGS

STRUCTURAL BREADTH

ANALYSIS II: PREASSEMBLED PANELS

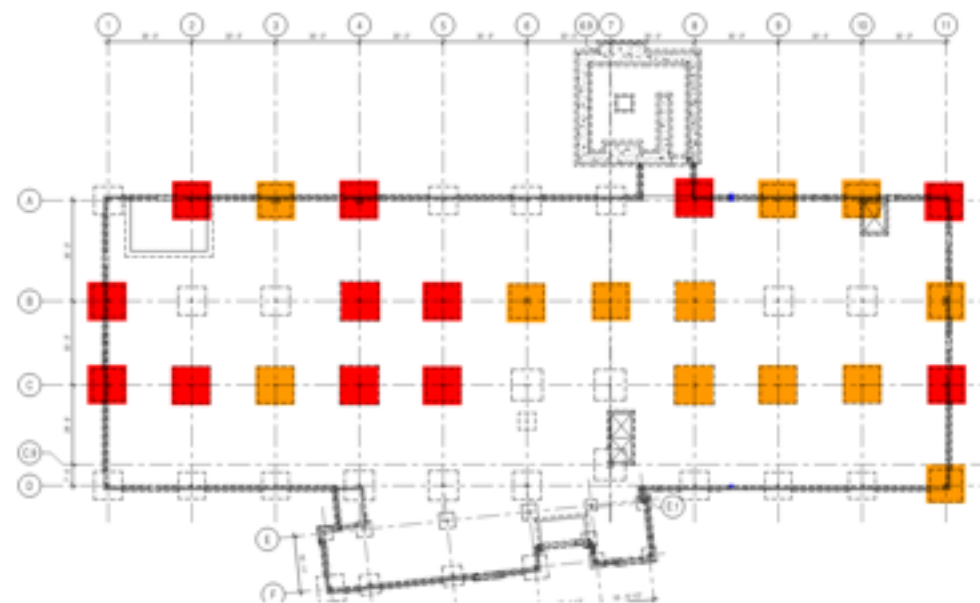
LIGHTING BREADTH

ANALYSIS III: MASONRY LINAC VAULT

ANALYSIS IV: VIRTUAL MOCKUPS

CONCLUSIONS & RECOMMENDATIONS

CLOSING REMARKS



Summary of Redesigned Footings

	LxW	Depth	Bar #	Spacing
A/2	8'x8'	1.5'	#6	0.5'
A/4	8'x8'	1.5'	#6	0.5'
A/8	8'x8'	1.5'	#6	0.5'
A/11	0'x0'	2'	#5	0.5'
B/1	8'x8'	1.5'	#6	0.5'
B/4	10'x10'	2'	#7	12"
B/5	10'x10'	2'	#7	12"
C/1	7.5'x7.5'	1.25'	#6	0.5'
C/2	0.5'x0.5'	2'	#6	0.5'
C/4	0.5'x0.5'	2'	#6	0.5'
C/5	0.5'x0.5'	2'	#6	0.5'
C/11	7.5'x7.5'	1.25'	#6	0.5'

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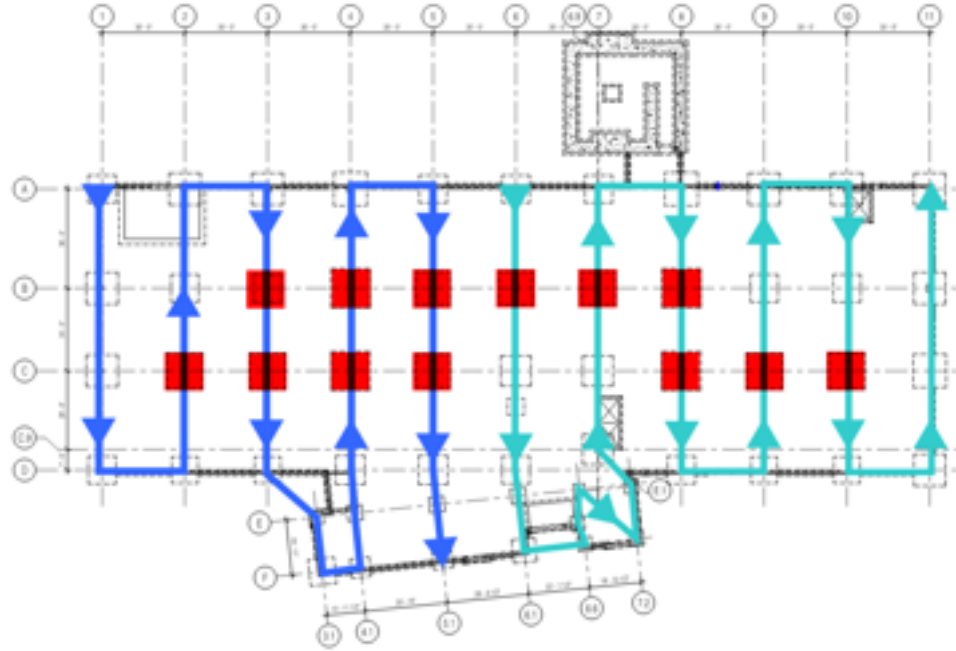
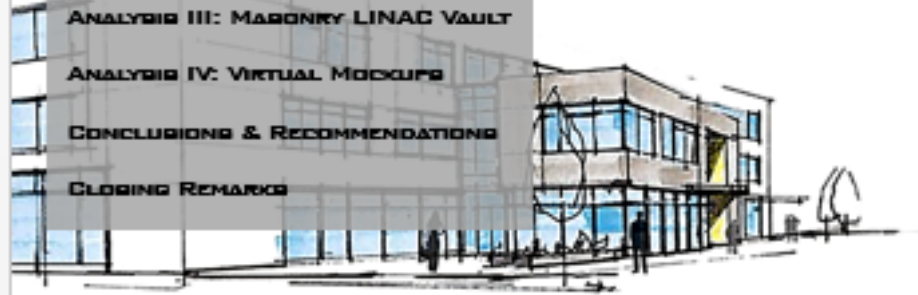
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Delivery Schedule

	Footings	Load Weight	Delivery Date
Truck 1	A/1, B/1, C/1, D/1, D/2, C/2	85000 lbs	
Truck 2	B/2, A/2, A/3, B/3, C/3	79000 lbs	
Truck 3	D/3, F/3.1, E/3.1, F/4.1, E/4.1, D/4, C/4	79000 lbs	
Truck 4	B/4, A/4, A/5, B/5	80000 lbs	
Truck 5	C/5, D/5, E/5.1, F/5.1, A/6	63000 lbs	
Truck 6	B/6, C/6, C/A/6, D/6, E/6.1, F/6.1, F/6.6, E/6.6, E/6.6, F/7.2, E/7.2	80000 lbs	
Truck 7	C/6/7, C/7, B/7, A/7, A/8	78000 lbs	
Truck 8	B/8, C/8, D/8, D/9	70000 lbs	
Truck 9	C/9, B/9, A/9, A/10, B/10	79000 lbs	
Truck 10	C/10, D/10, D/11, C/11, B/11, A/11	77000 lbs	

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