

Adaptive Reuse of the Stoughton 1892 High School

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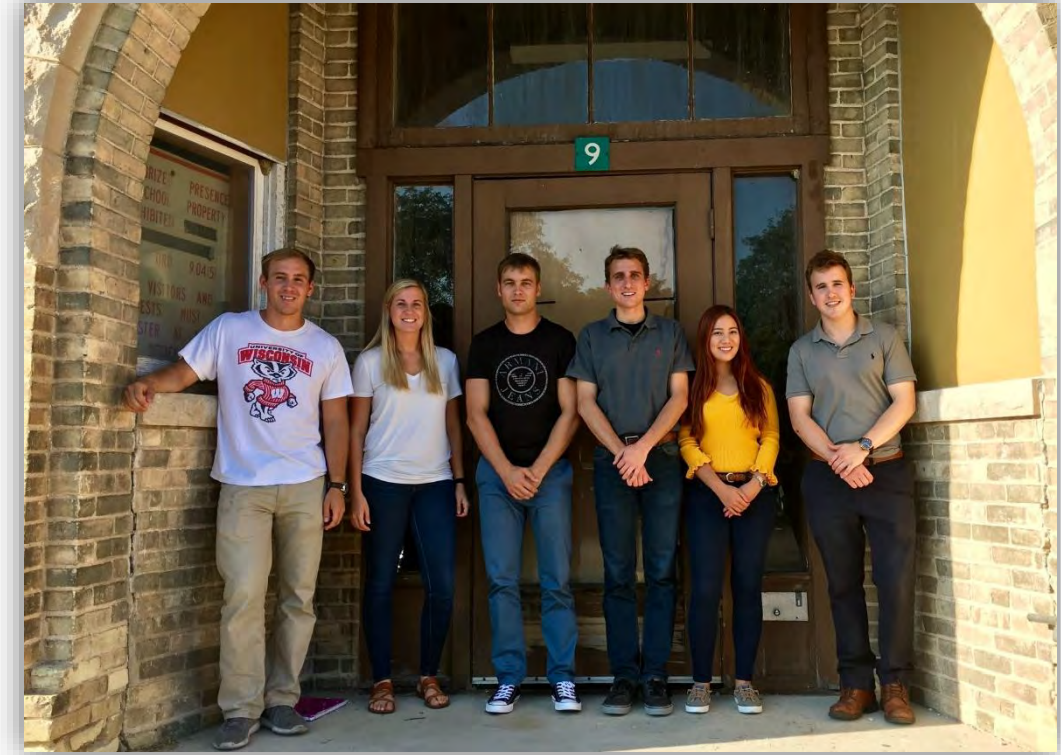
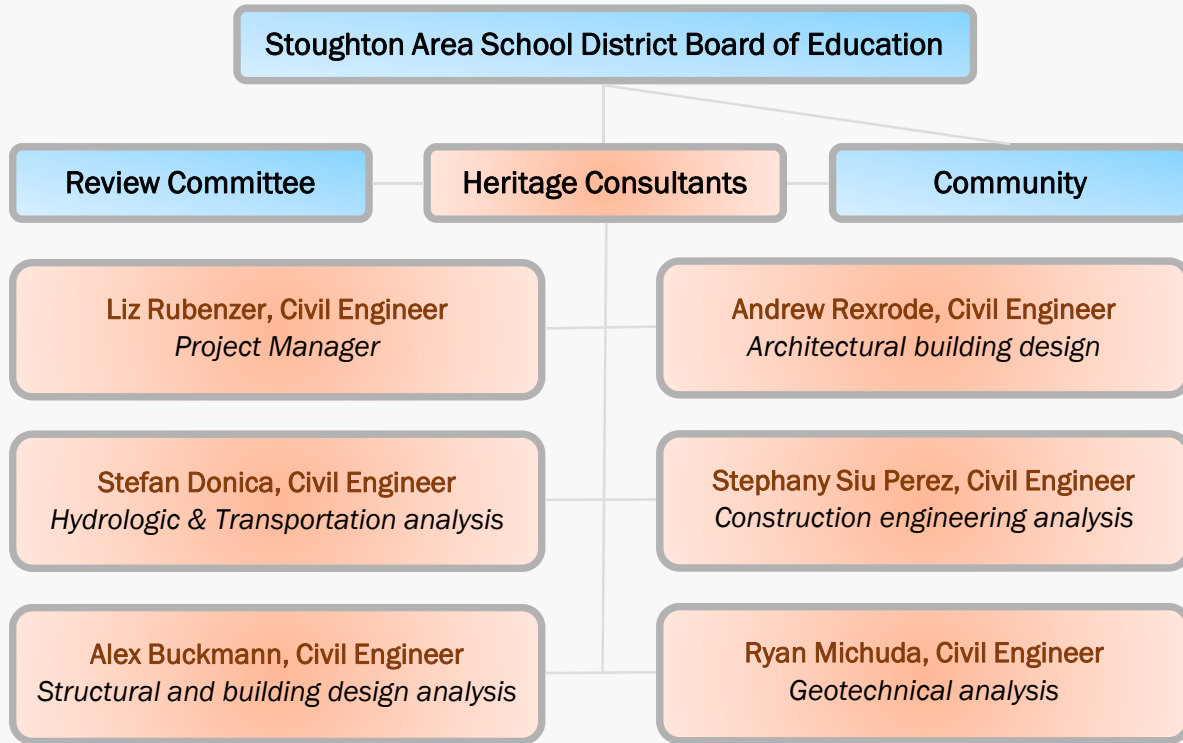


December 5th, 2017



- Existing Conditions
- Design Constraints
- Preliminary Design Solutions
- Final Design
- Opinion of Probable Cost
- Life Cycle Costs
- Construction Schedule





Existing Conditions

Design Constraints

**Preliminary Designs
Solutions**

Final Design

**Opinion of Probable
Cost**

Life Cycle Costs

**Construction
Schedule**

- ~13,000 SF
- 125 years old
- Deteriorated state
- Currently storage use only



Existing Conditions

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- Exposed framing and wiring



- Flooding and storm water management issues



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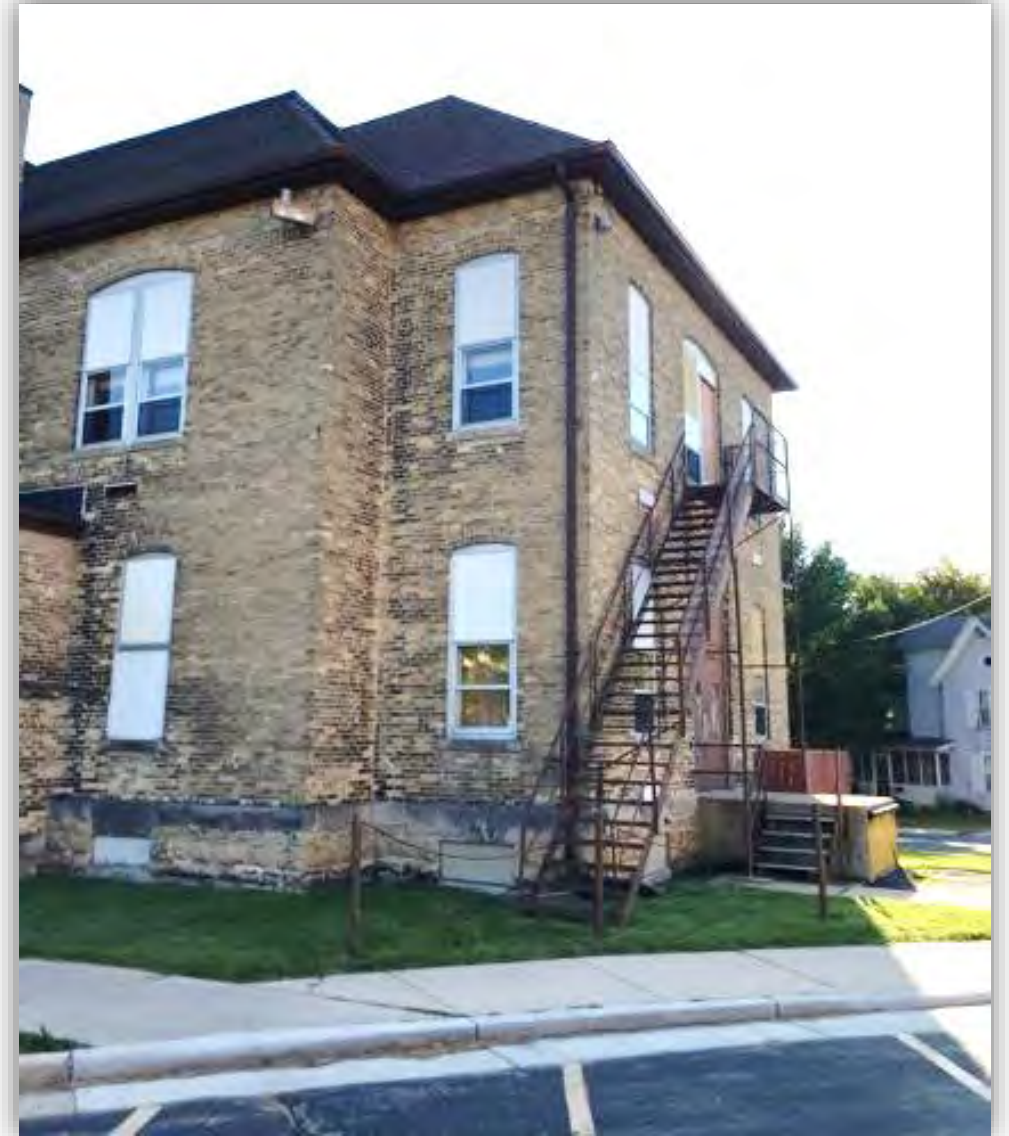
Final Design

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- Preserving the historical nature of the building
- Elevator addition and the need for a second staircase and an ADA ramp
- Lack of space



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- Repairs to damaged architectural features
- Mechanical, electrical and plumbing system overhaul
- A sealed building envelope
- Elevator and accessibility ramp
- Structural modifications to meet code
- Additional parking



Design Solutions

Existing Conditions

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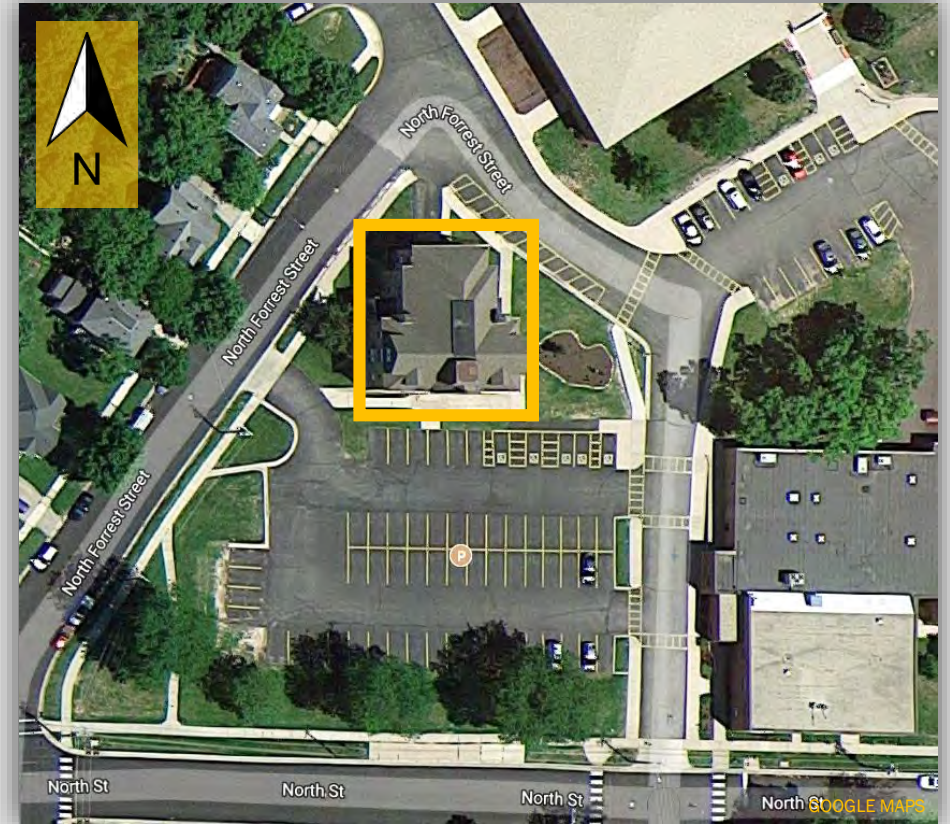
Life Cycle Costs

Construction
Schedule



BUILDING DESIGN ALTERNATIVES:

1. Function
2. Structural Modifications
3. Preserve Historical Elements



SITE DESIGN ALTERNATIVES:

1. Vehicular flow
2. Parking
3. Storm-water management

Existing Conditions

Design Constraints

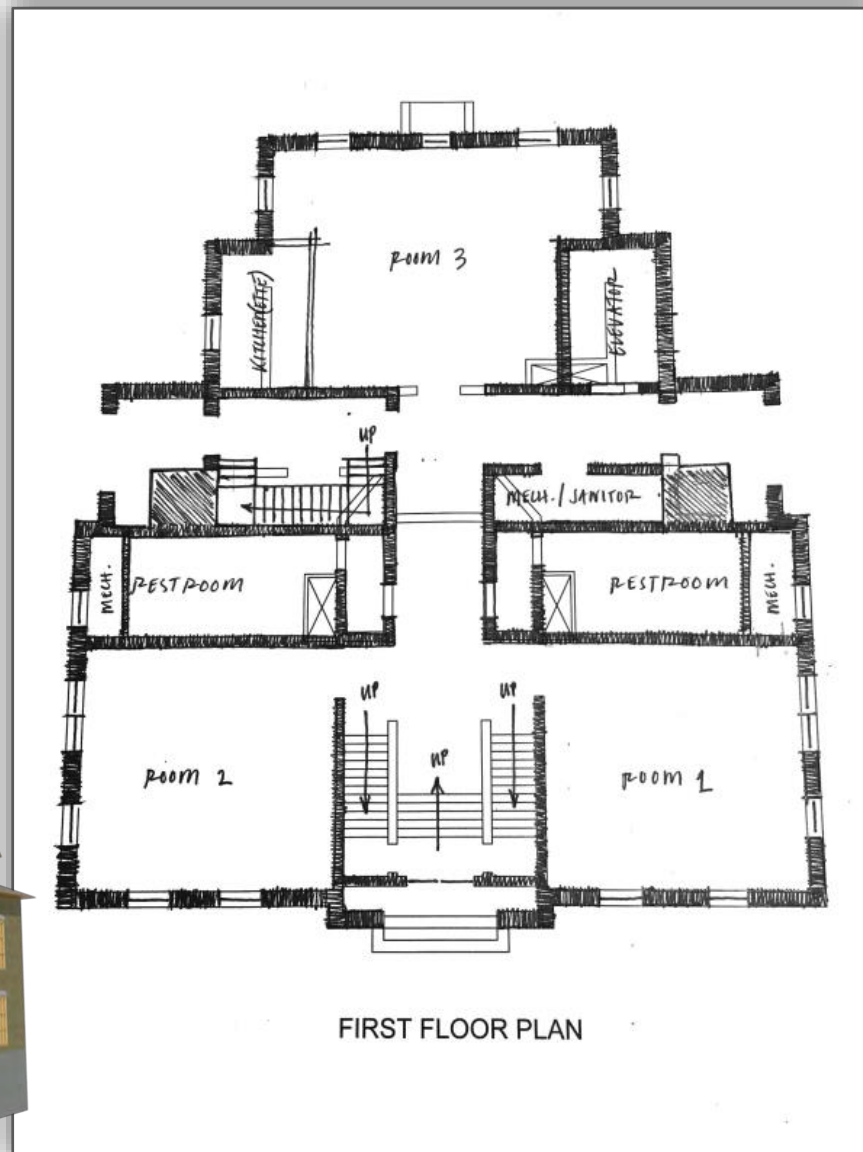
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SELECTIVE



Minimize overall building remodeling costs by only including necessary remodel work.

Existing Conditions

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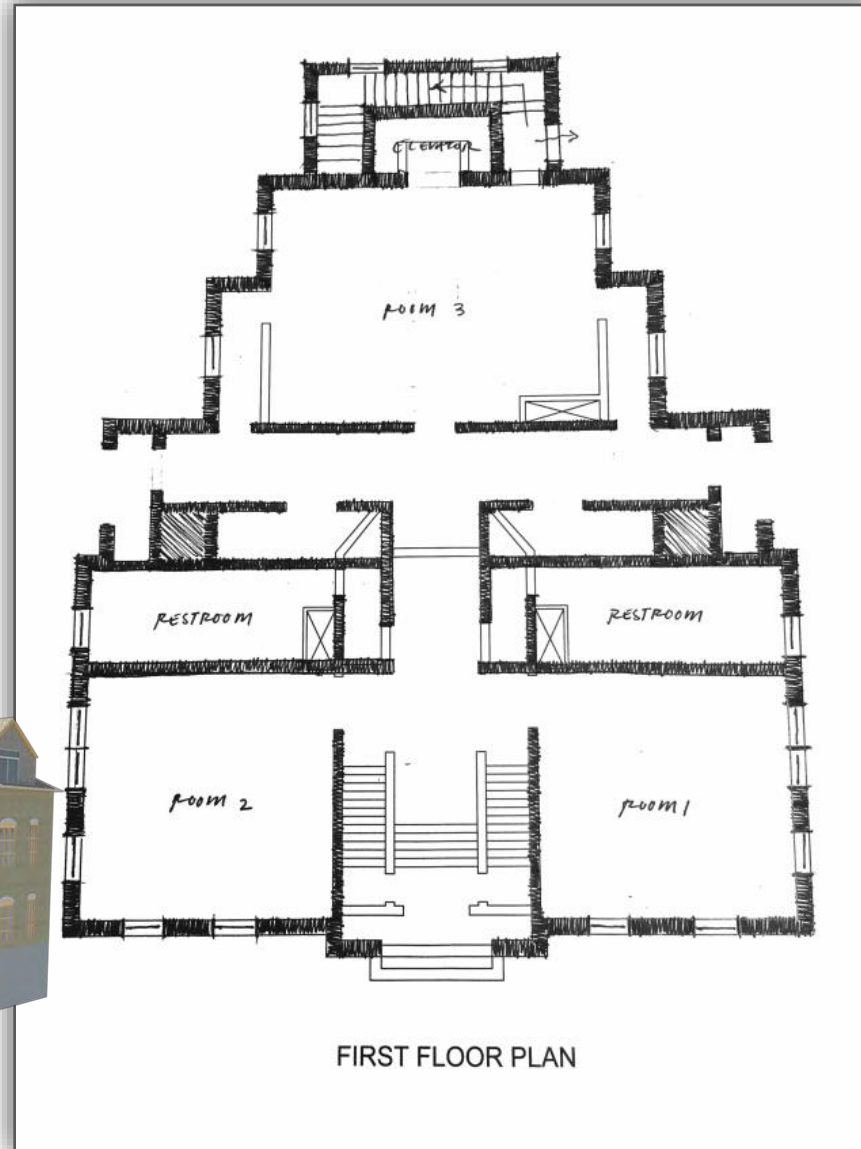
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INTERMEDIATE



*Perform complete remodel of
all building spaces.*

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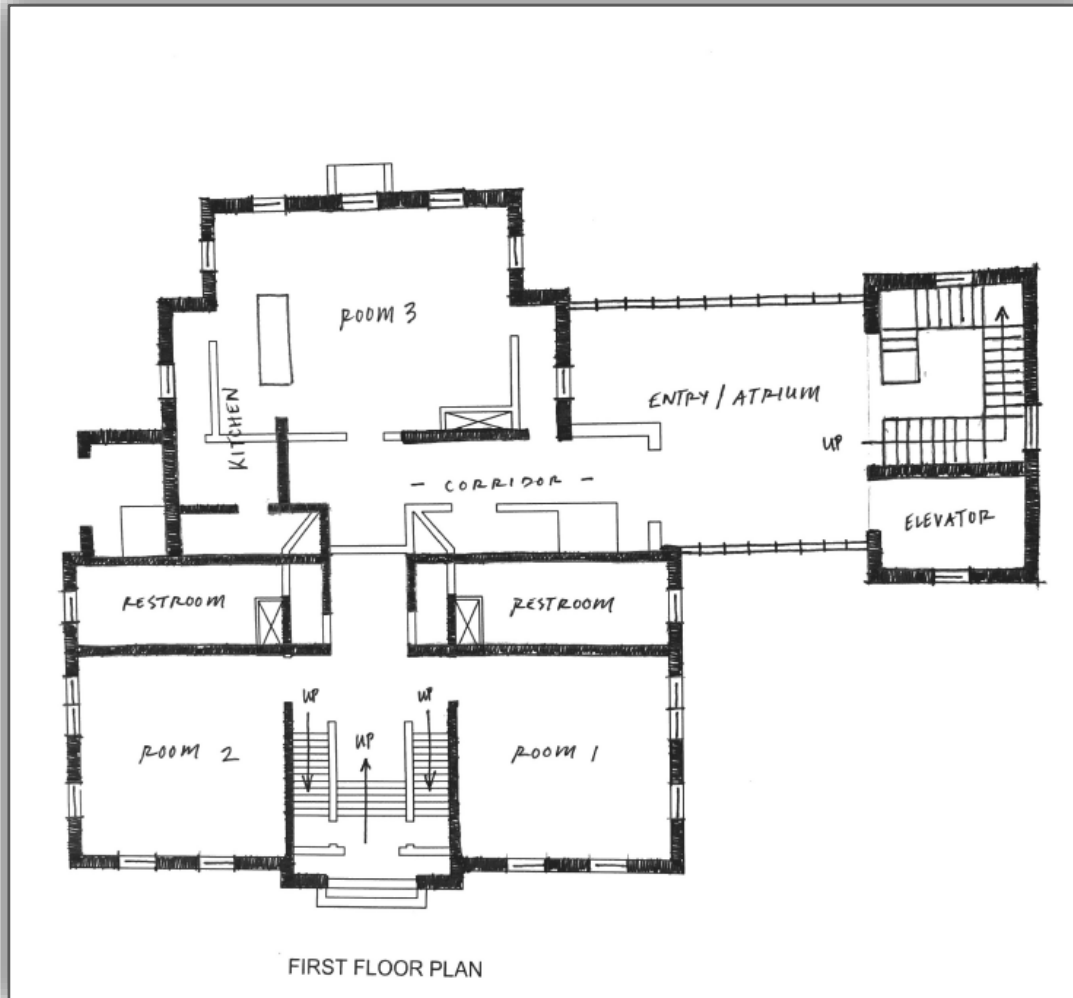
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COMPREHENSIVE



Incorporate modern addition that respects the existing Romanesque Revival Architecture.



Details of Final Design



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EXISTING SQUARE
FOOTAGE

13,000

ADDITION SQUARE
FOOTAGE

5,000

TOTAL SQUARE
FOOTAGE

18,000

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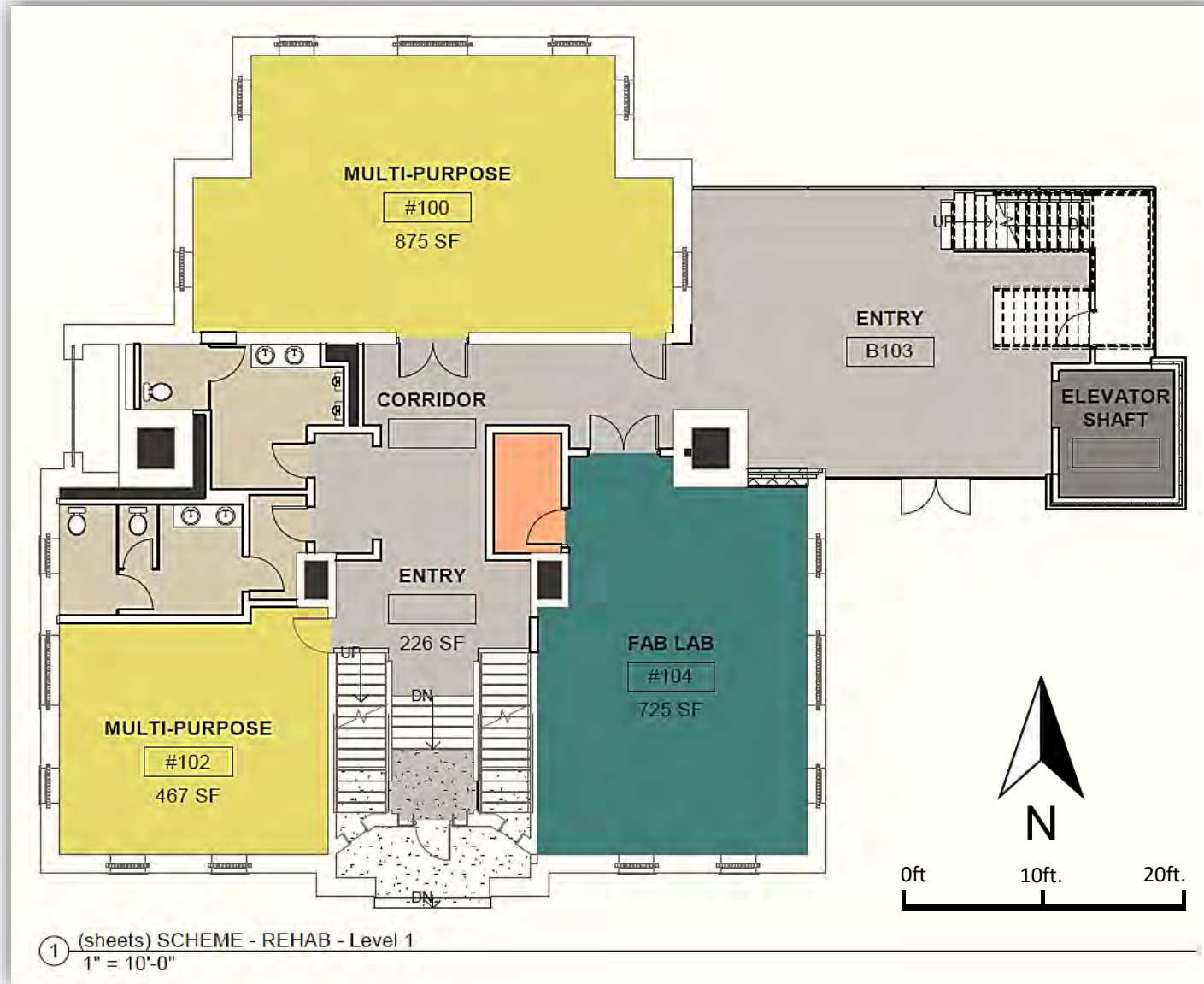
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ROOM LEGEND

- ALCOVE
- CORRIDOR
- ELEVATOR SHAFT
- ENTRY
- KITCHEN
- MEP CHASE
- MULTI-PURPOSE
- OFFICES
- RESTROOM
- STORAGE

Existing Conditions

Design Constraints

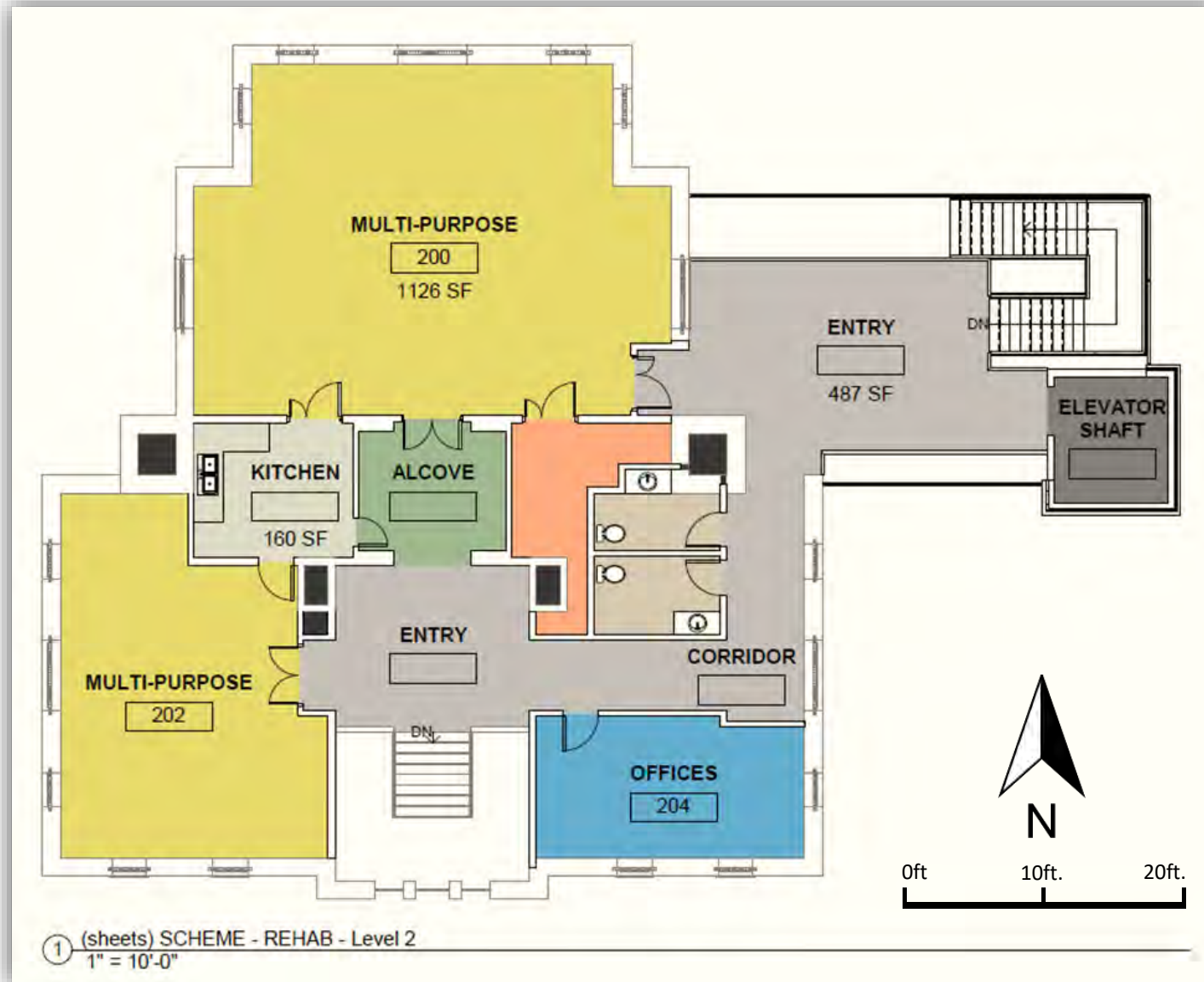
Preliminary Designs Solutions

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ROOM LEGEND

- ALCOVE
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- OFFICES
- RESTROOM
- STORAGE

First Floor – Interior Aerial View

Existing Conditions

Design Constraints

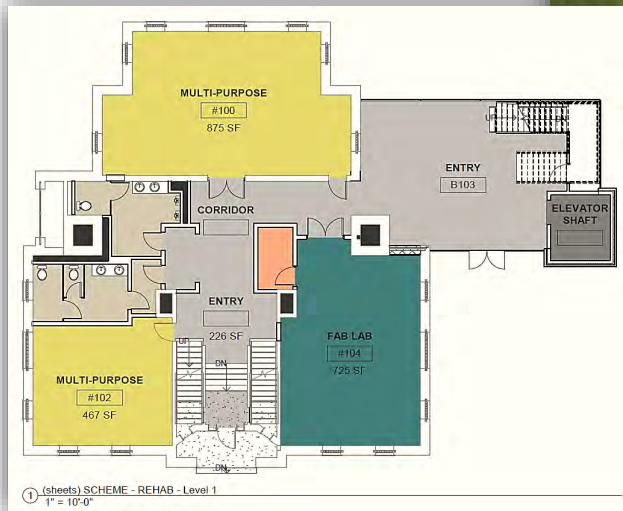
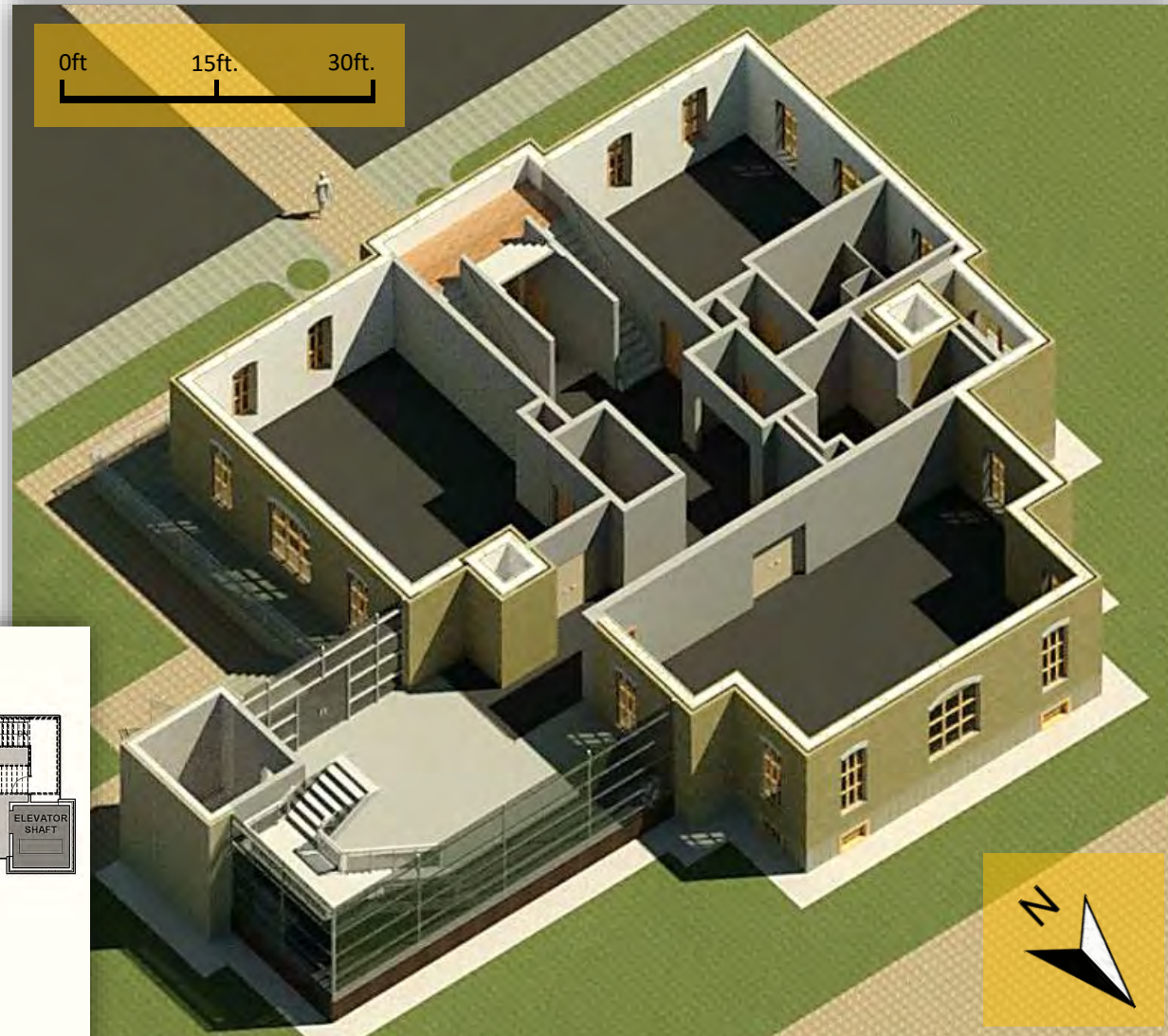
Preliminary Designs Solutions

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Second Floor – Interior Aerial View

Existing Conditions

Design Constraints

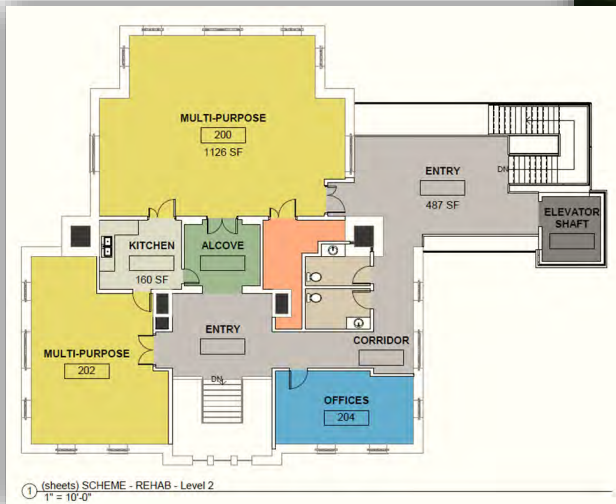
Preliminary Designs Solutions

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Existing Conditions

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Solutions

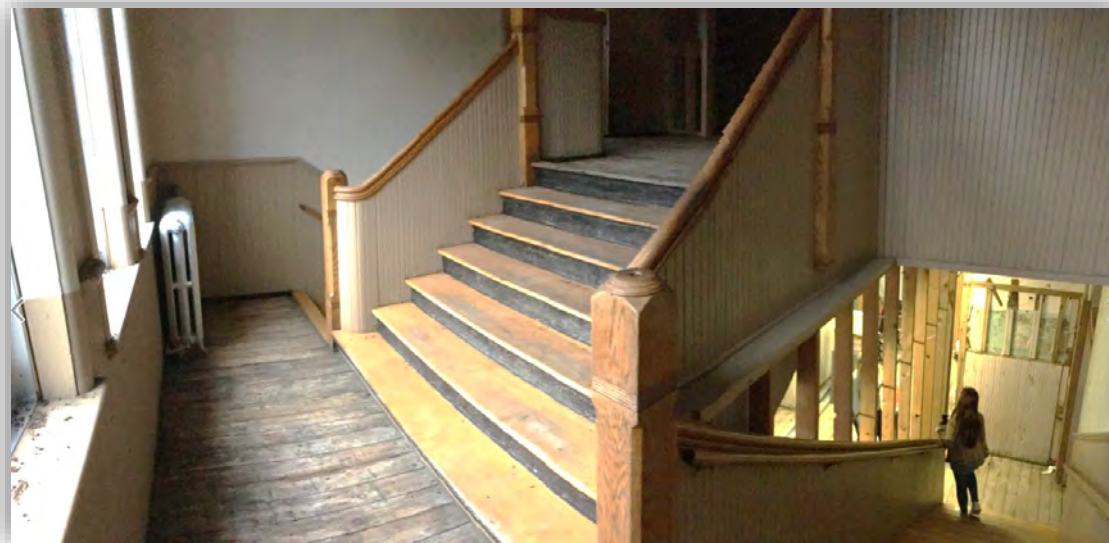
Final Design

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- Beam Dimensions
- Material Type



Existing Conditions

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Occupancy	Required Live Loads	
	Uniform (psf)	Concentrated (lb)
Computer Lab	100	2,000
Lobbies	100	
Stage	150	
Corridors	100	
School Classroom	40	1,000

Existing Conditions

Design Constraints

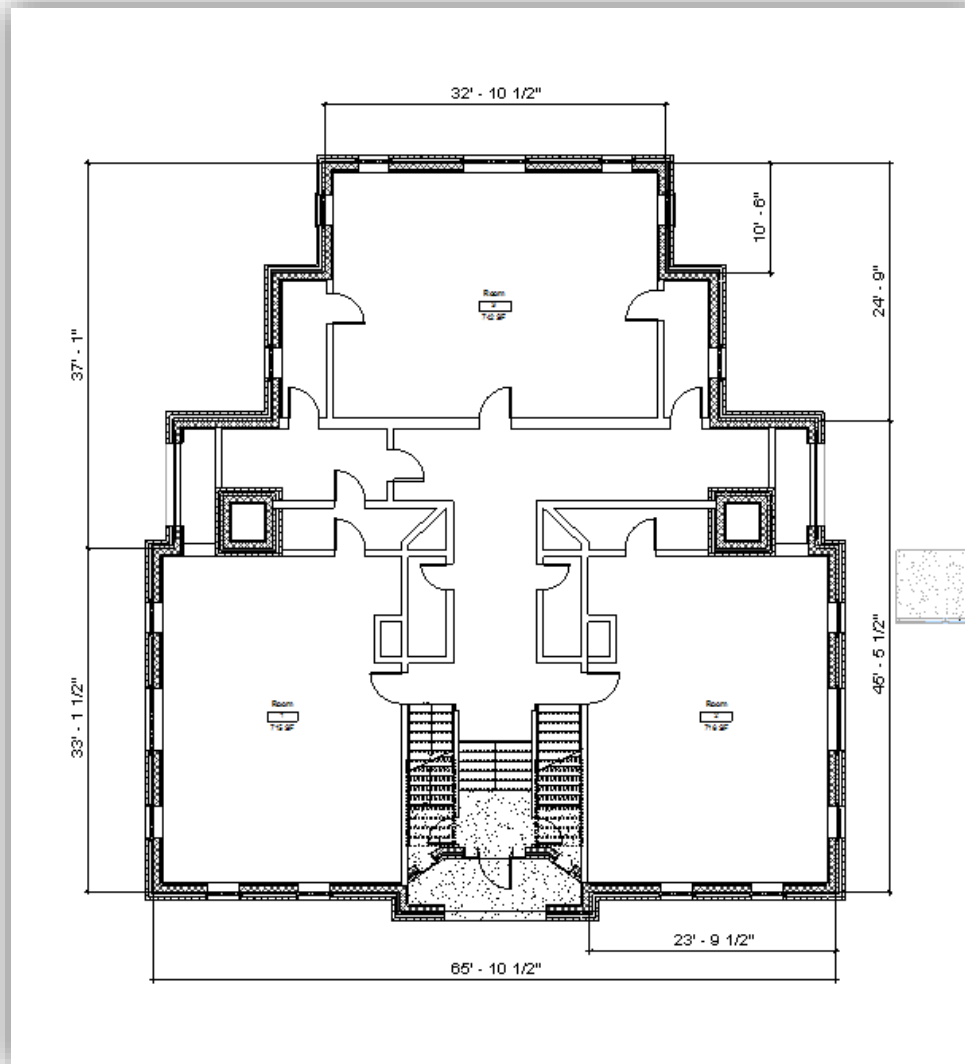
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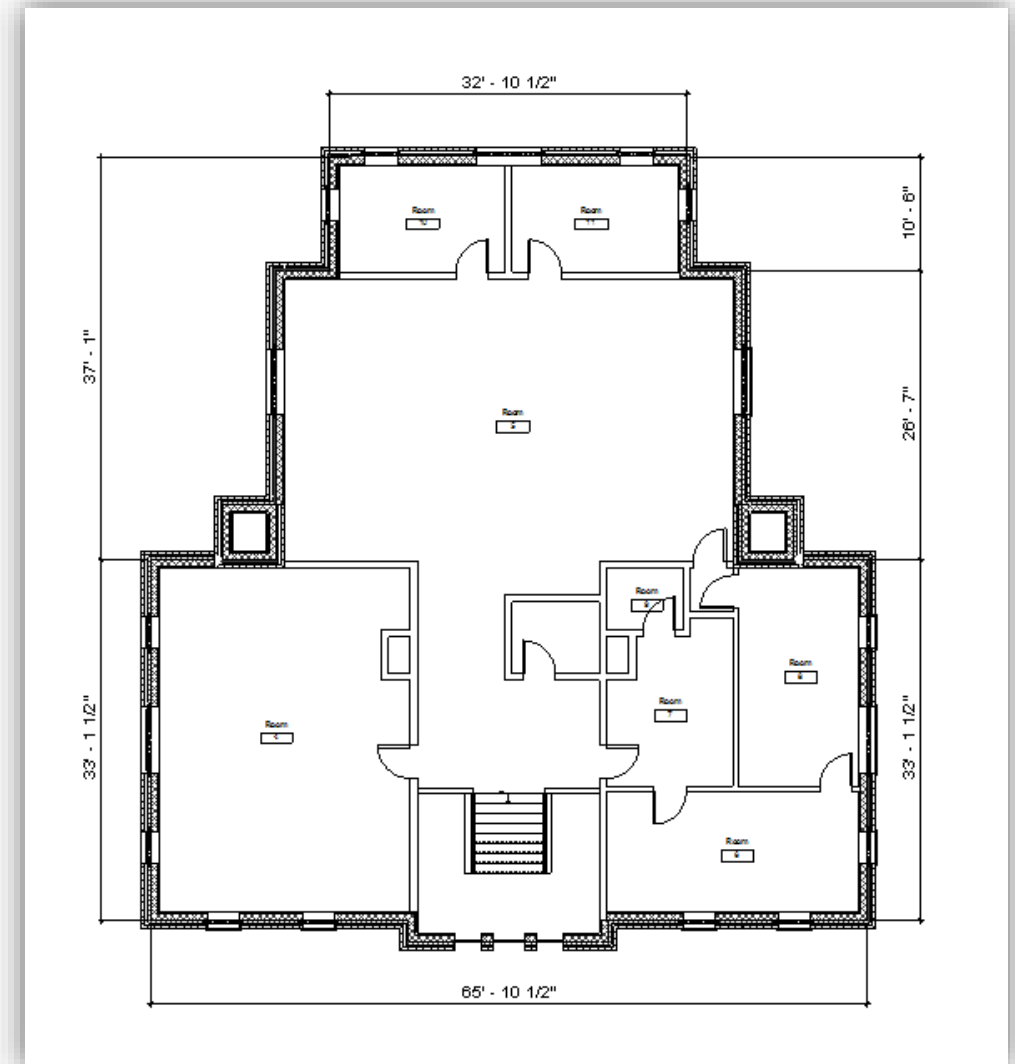
Opinion of Probable
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First Floor



Second Floor

Existing Conditions

Design Constraints

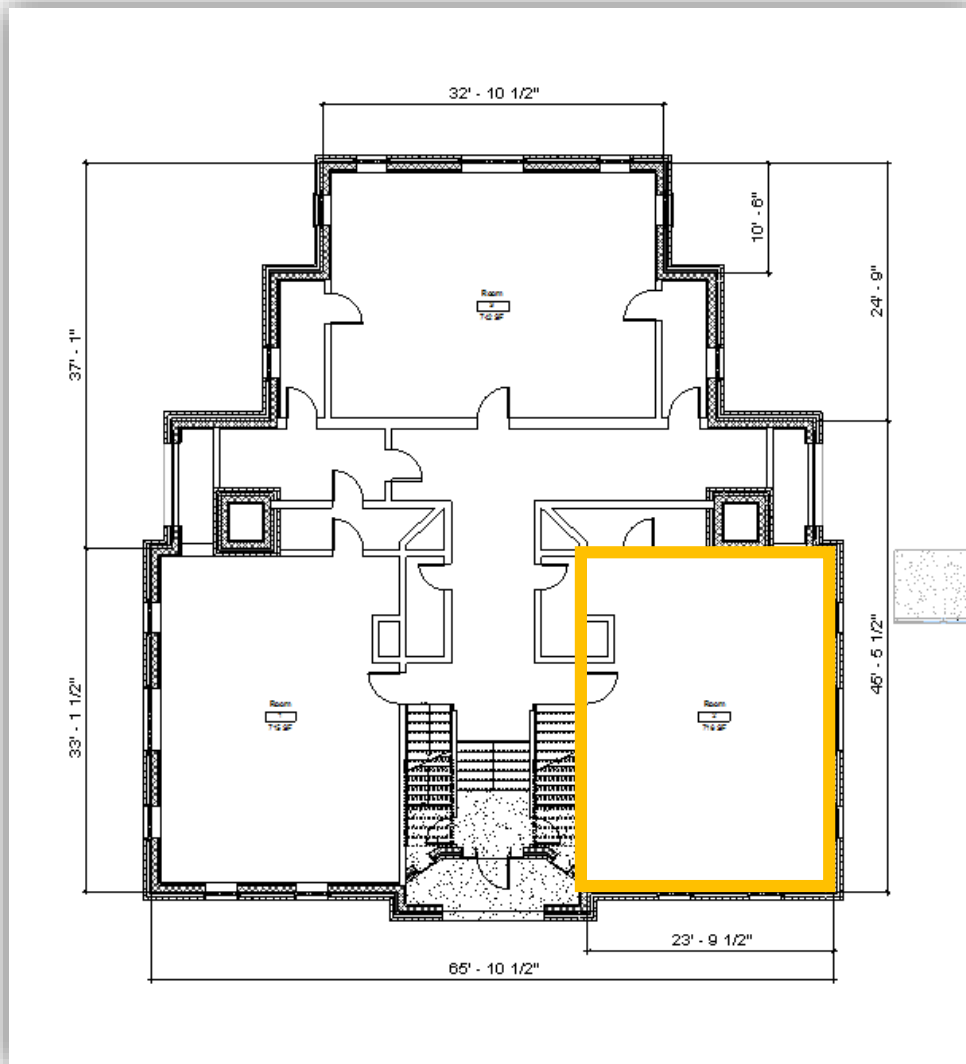
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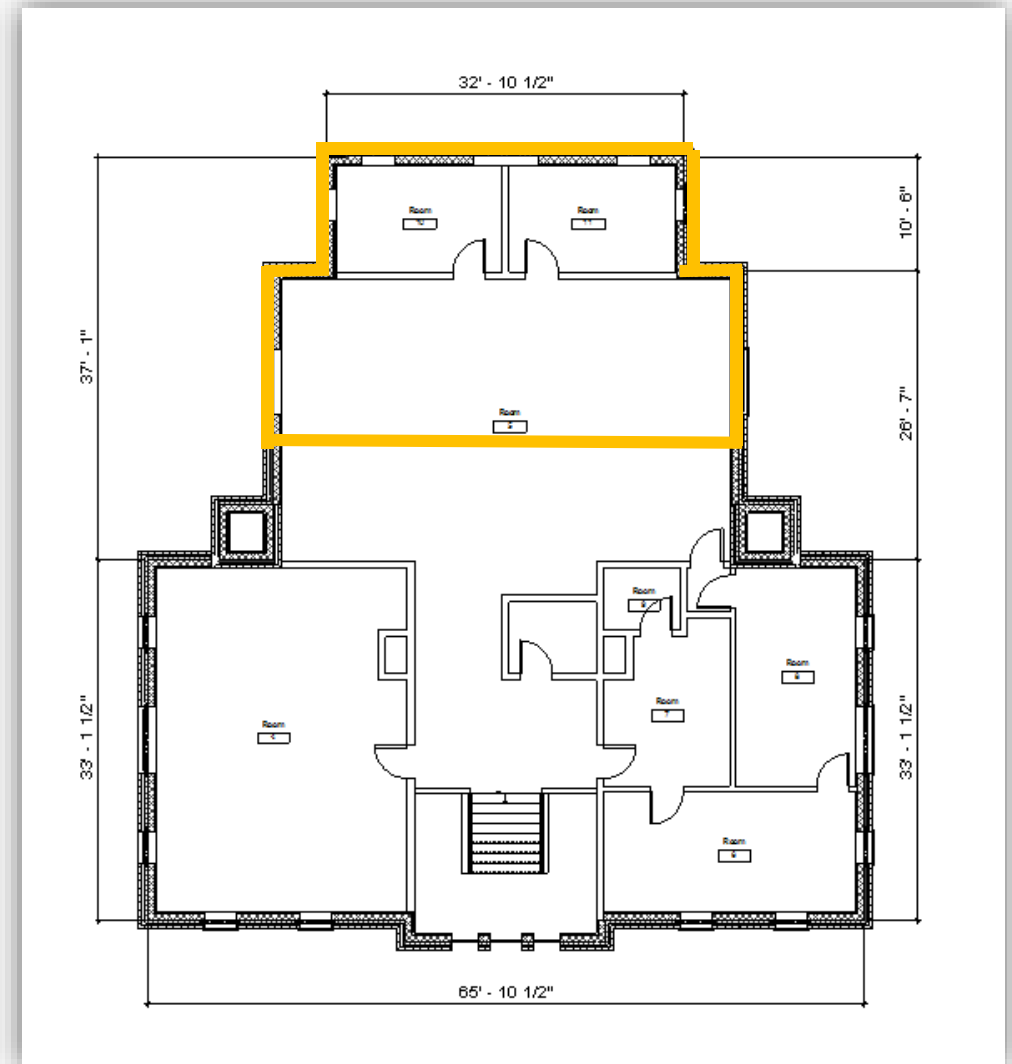
Opinion of Probable
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First Floor



Second Floor

Existing Conditions

Design Constraints

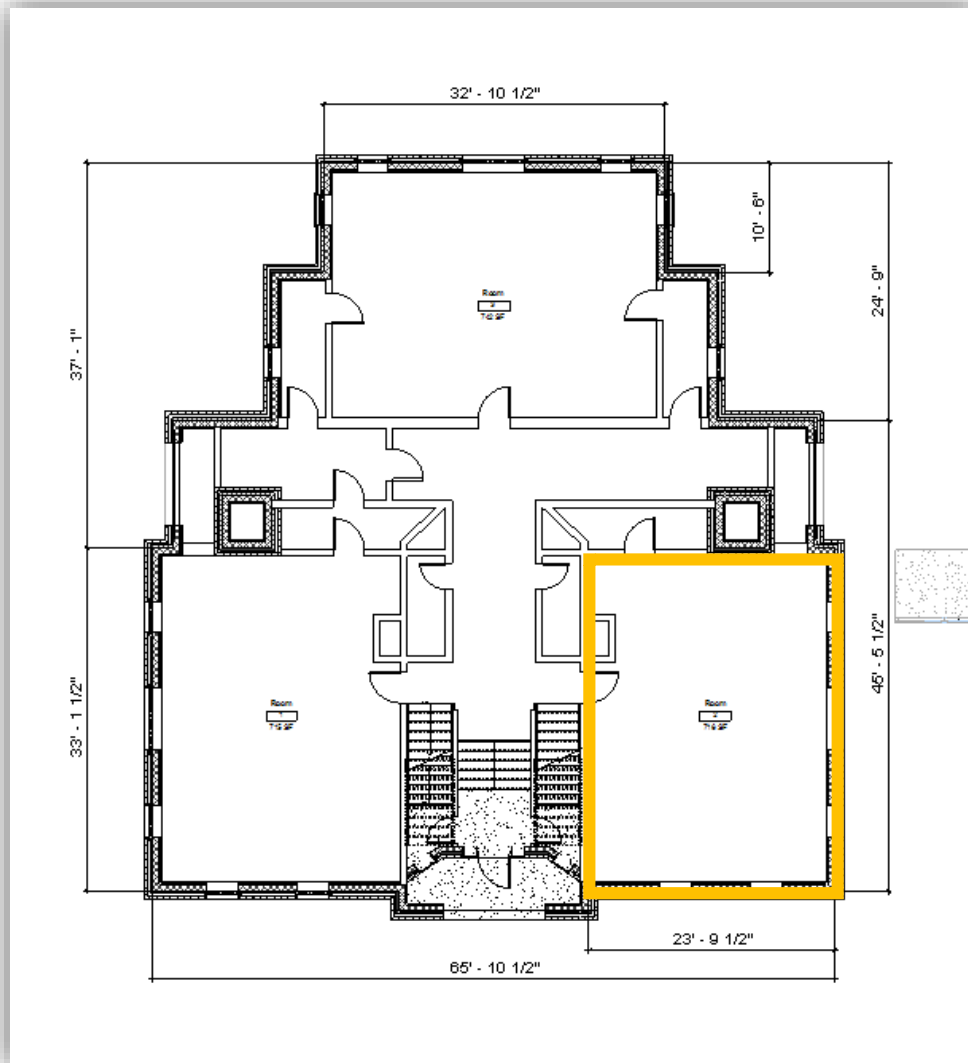
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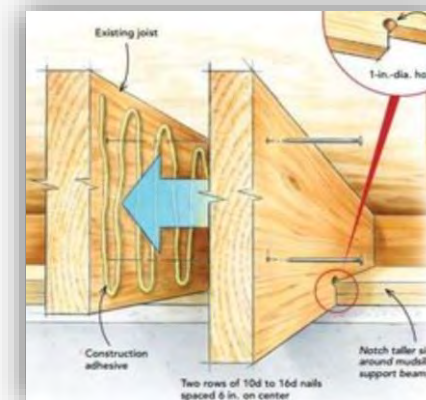
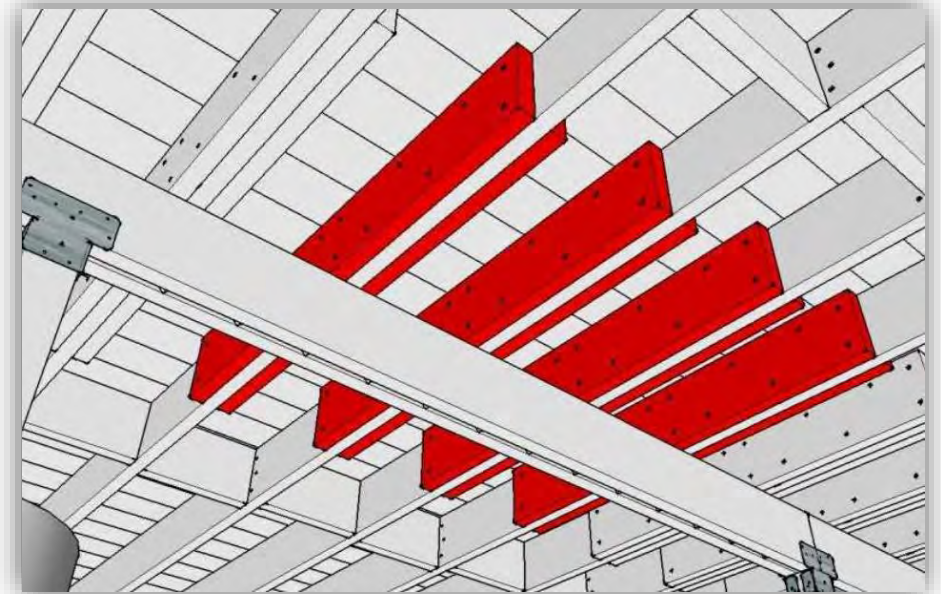
Opinion of Probable
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First Floor



Existing Conditions

Design Constraints

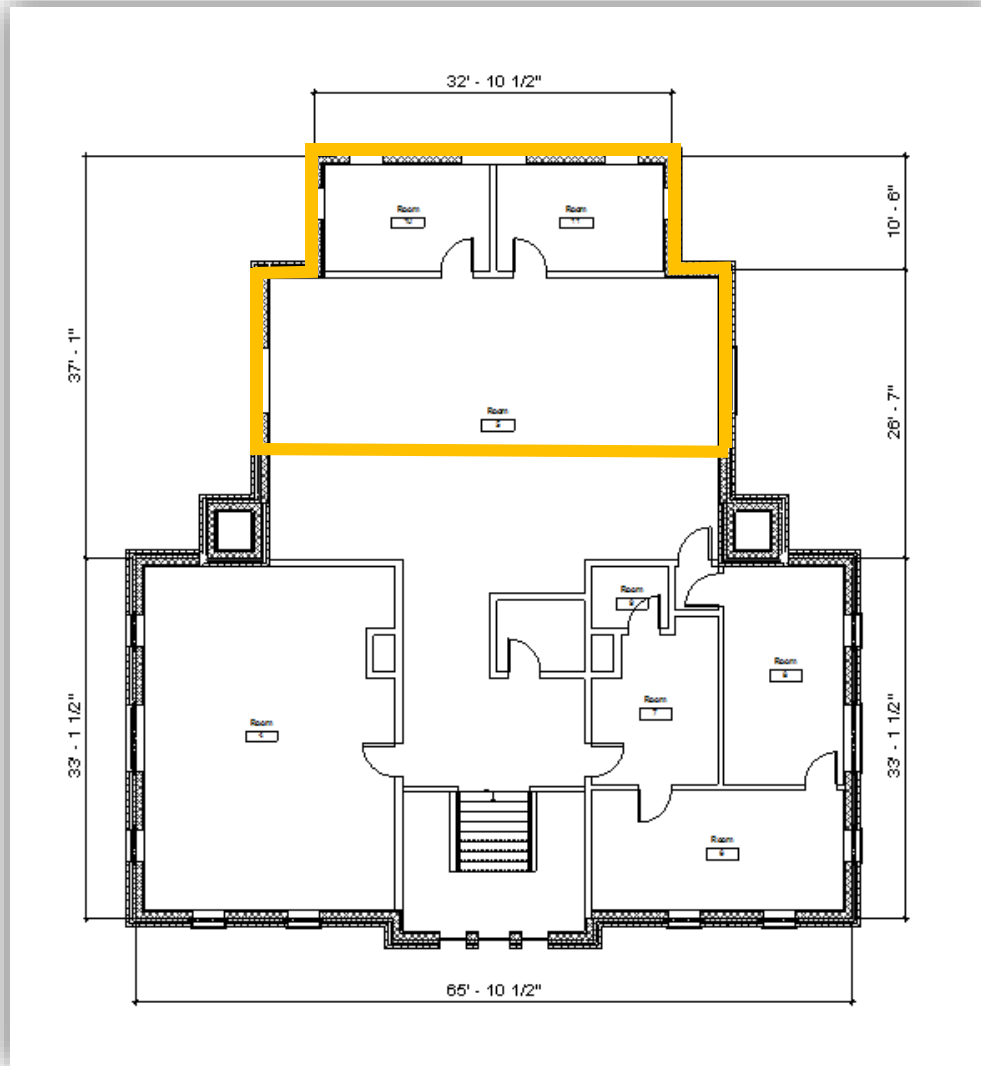
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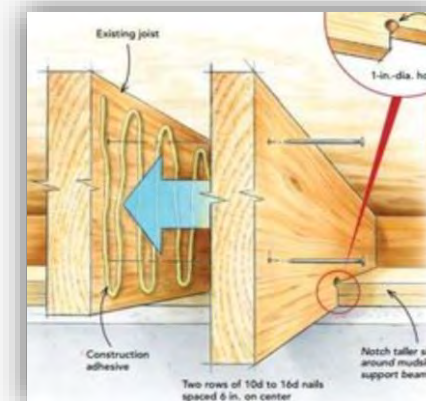
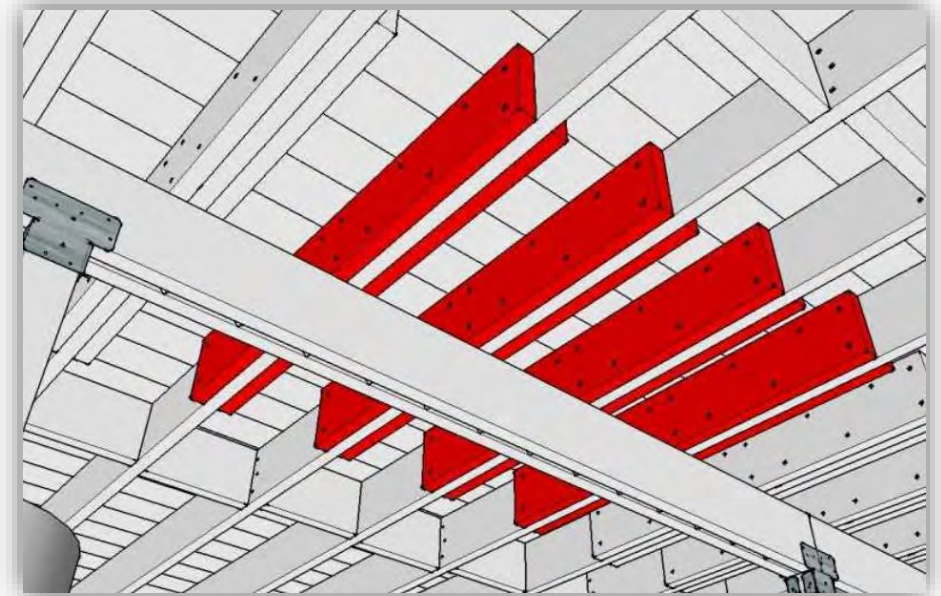
Opinion of Probable
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Second Floor





Structural Analysis and Design



Existing Conditions

Design Constraints

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Opinion of Probable
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Transportation & Site Analysis



Existing Conditions

Design Constraints

Preliminary Designs
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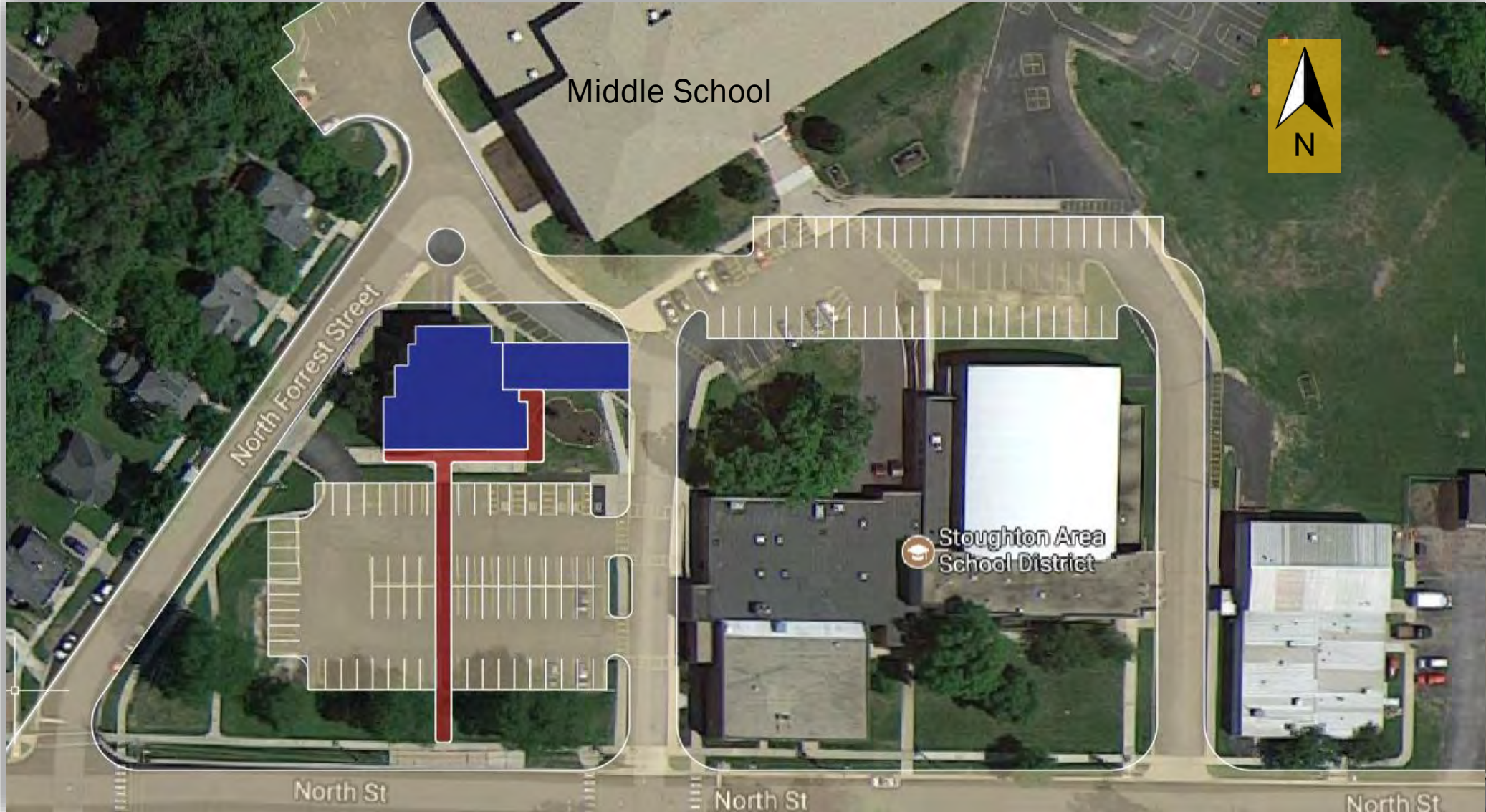
Final Design

Opinion of Probable
Cost

Life Cycle Costs

Construction
Schedule

100 feet



Existing Conditions

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Solutions

Final Design

Opinion of Probable
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Life Cycle Costs

Construction
Schedule

100 feet





Transportation & Site Analysis



Existing Conditions

Design Constraints

Preliminary Designs
Solutions

Final Design

Opinion of Probable
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Construction
Schedule





Transportation & Site Analysis



Existing Conditions

Design Constraints

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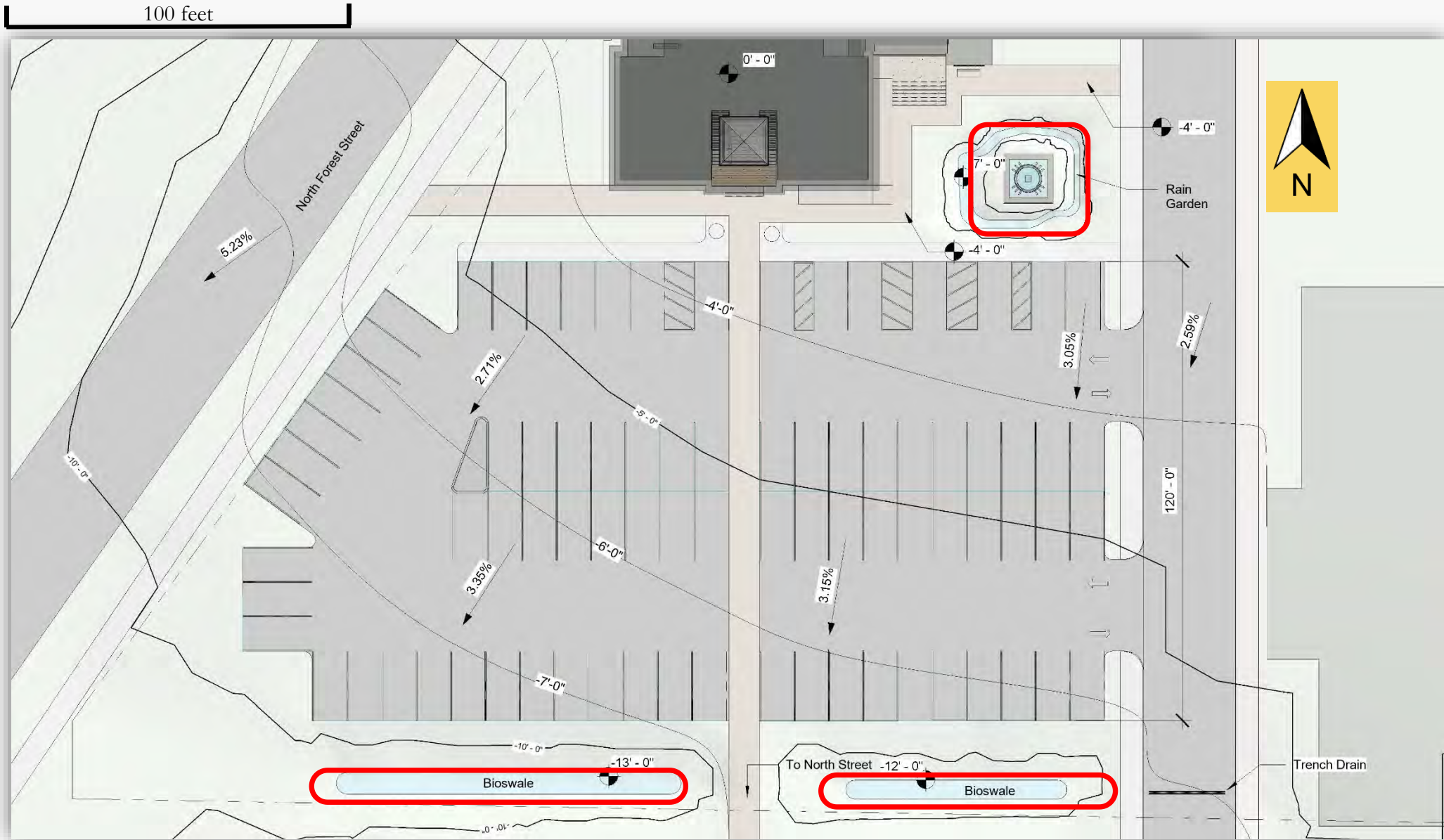
Opinion of Probable
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Opinion of Probable Cost



Existing Conditions

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**Opinion of Probable
Cost**

Life Cycle Costs

Construction
Schedule

Design Component	Total
Interior	\$2,000,000
Exterior	\$60,000
Site	\$200,000
MEPFP	\$1,250,000
Heritage Consultants Design (10%)	\$350,000
Contingency (5%)	\$180,000
Contingency (15%)	\$530,000
Total Cost	\$4,570,000 ± 0.5M

Existing Conditions

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Life Cycle Costs

Construction Schedule

Item	Unit	Quantity	Cost per Unit	Life Expectancy	Total Cost per Year
Asphalt Crack Repairs	SF	3,416	\$1.95	15 years	\$6,500
Building Maintenance & Operations	SF	17,873	\$2.20	20 years	\$39,300
Hydrologic Maintenance	SF	6,680	\$0.75	20 years	\$5,000
Total					\$51,000





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