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4-15-2022

### Watseka Pavilion

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# Watseka Pavilion

Jacob Esselstyn, Josh Hagan,  
Geovanni Martinez,  
Elijah Mendoza

# Outline

- Acknowledgements
- Background & Need
- Problem Description
  - Objectives & Metrics
  - Functional Requirements & Specifications
  - Constraints & Codes
- Design Alternatives
- Design Selection & Criteria
- Final Design
- Structural Analysis & Design
- Electrical Analysis & Design
- Design Validation
- Conclusion
- Q&A

# Acknowledgements & Design Team

## Project Sponsor:

- Mayor John Allhands, City of Watseka

## Project Mentor:

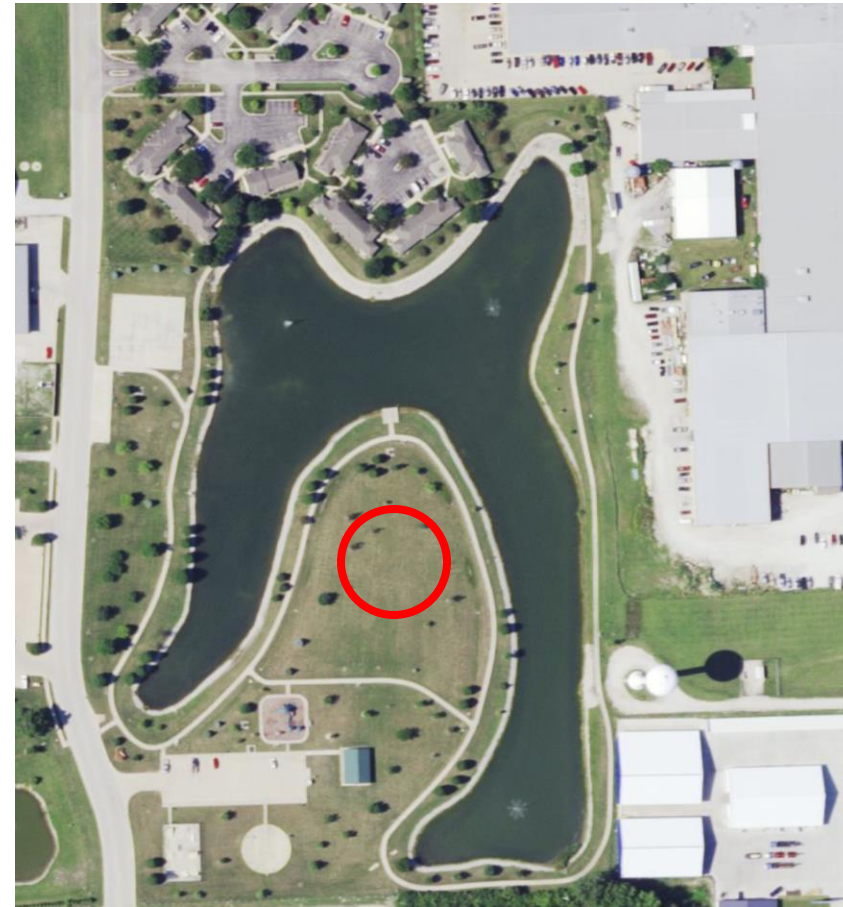
- Professor Quentin Scott Ragan

## Design Team:

- Jacob Esselstyn – Civil / Architectural – Team Leader
- Josh Hagan – Civil – Communications Manager
- Elijah Mendoza – Civil – Technical Research Specialist
- Geovanni Martinez – Civil / Architectural – Electrical Lead

## Background & Need Statement

- Lakeview Park has the potential to become a community hub where events such as small concerts and festivals can be hosted.
- As a result, the sponsor proposed the project to build a pavilion.
- The purpose of our project is to design an open-air pavilion for Lakeview Park with a stage and seating area for holding small events to increase the park's popularity, and complement its growth so far



Lakeview Park, Watseka IL  
Proposed site of new pavilion



## Site Pictures



Future Location of the pavilion



Existing pavilion

# Problem Statement: Objectives and Metrics

## Objectives:

- Economical
- Easy to maintain
- Attractive to the community

## Metrics:

- Cost of construction
- Durability of materials used in construction
- Designs reviewed by Mayor Allhands
  - Aesthetics

# Problem Description: Functional Requirements

## Functional Requirements:

- Provide shelter from rain & sun
- Able to hold an audience for a small event
- Provides lighting and cooling
- Drain stormwater
- Host events on a stage
- Provide extra seating outside of pavilion not on grass



# Problem Description: Constraints

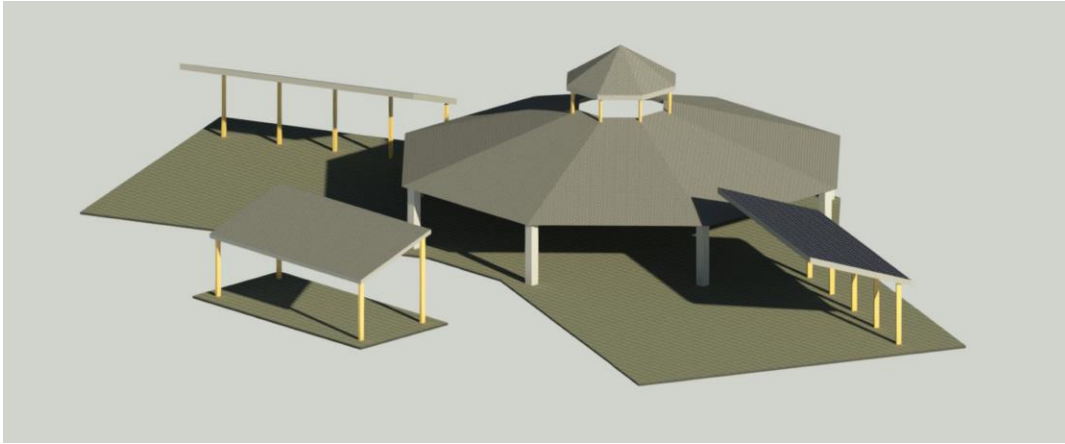
## Constraints:

- Budget: \$200,000
- Dimensions: 60' min to 100' max in length and width for the pavilion
- At least 20' by 30' in area for the stage / platform

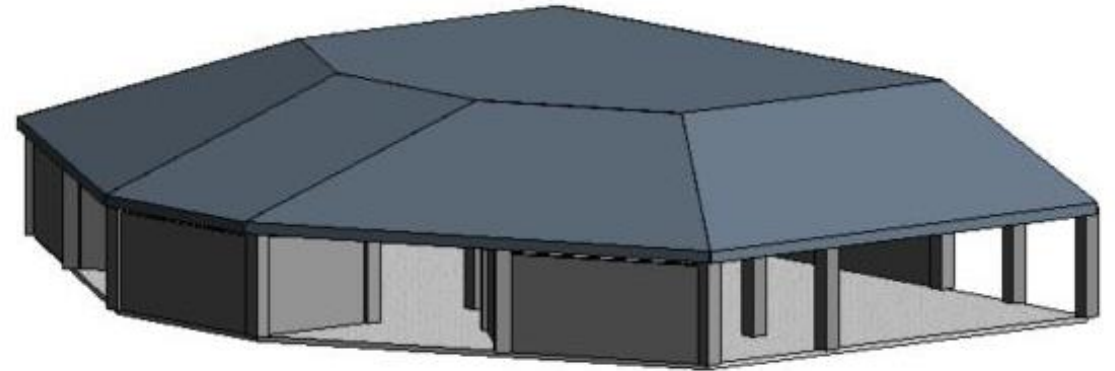
## Codes & Standards:

- ASCE 7-16
- International Building Code (IBC)
- National Design Standard (NDS) for Wood Construction
- ACI 318
- National Electrical Code (NEC)

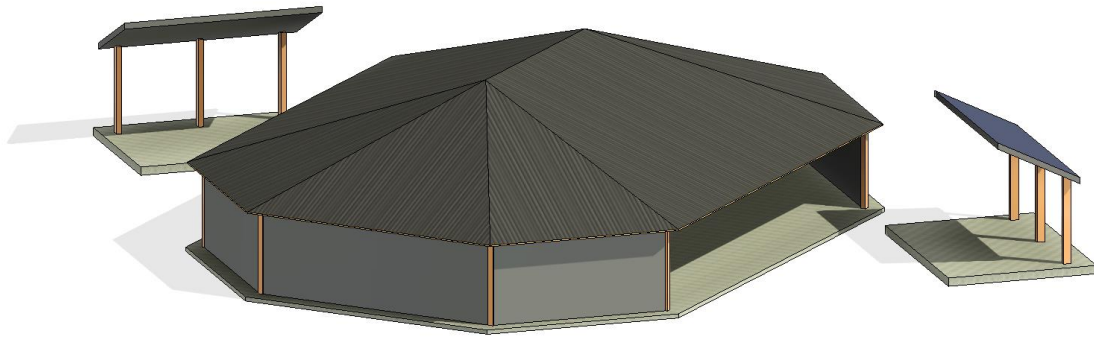
# Architectural Revit Design Alternatives



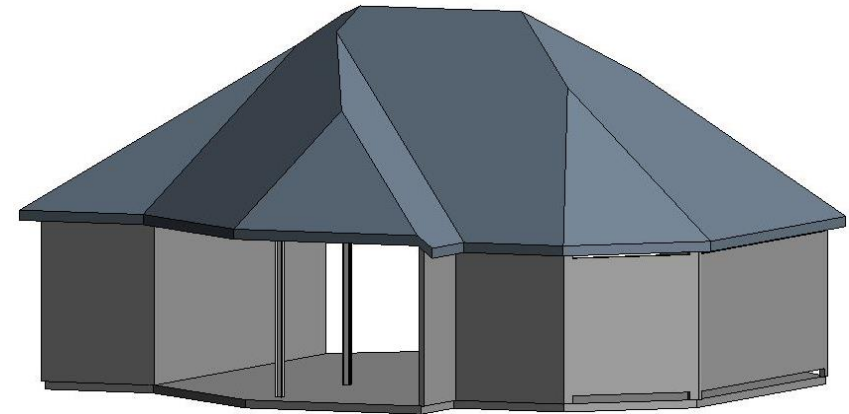
Wing Pavilion



3 Bleachers Pavilion



Combined Pavilion



Dome Pavilion

# Design Selection: Selection Criteria

## Selection Criteria:

- Aesthetically Pleasing
- Easy to Maintain
- Cost (short term and long term)
- Delivery Time / Availability
- Structural strength

## Design Alternatives:

- Structural Framing Material: Wood vs Metal
- Roof Material: Asphalt Shingles vs Metal vs Solar

## Design Selection:

- Aesthetics – Architectural design selected by Mayor Allhands
- Framing & Roofing – Determined by selection matrices

# Design Selection: Decision Matrices

Design Criteria	Weight	Building Material			
		Wood		Steel	
		Rating (1-5)	Score	Rating (1-5)	Score
Sound (vibration)	10%	5	0.5	2	0.2
Cost	30%	4	1.2	2	0.6
Strength	10%	3	0.3	5	0.5
Time (delivery)	5%	4	0.2	2	0.1
Economic (long-term)	25%	2	0.5	4	1
Aesthetic	20%	4	0.8	3	0.6
Total	100%	3.5		3	

Design Criteria	Weight	Roofing Material					
		Solar Panel Roofing		Sheet Roofing		Asphalt Shingles	
		Rating (1-5)	Score	Rating (1-5)	Score	Rating (1-5)	Score
Sound (vibration)	10%	-	-	-	-	-	-
Cost	30%	1	0.3	3	0.9	4	1.2
Strength	10%	-	-	-	-	-	-
Time (delivery)	5%	3	0.15	3	0.15	3	0.15
Economic (long-term)	25%	5	1.25	4	1	2	0.5
Aesthetic	20%	3	0.6	3	0.6	3	0.6
Total	100%	2.3		2.65		2.45	

# Design Selection: Initial Cost Estimates

Pavilion Alternatives (As Designed)	Roof sf	Structure sf	Concrete sf	Type	Cost With Labor (No Solar)	Plus Delivery	Per sq ft	Plus 4kW Solar		Low	High
Wing Pavilion	6880	5023	11068	Metal	\$182,724	\$191,860	\$25	\$200,860	Wing Pavilion		
		Actual: 5743		Wood (Metal Roof)	\$152,586	\$160,215	\$21	\$169,215		\$146,000	\$201,000
		(Reduced for wings)		Wood (Shingles)	\$138,826	\$145,767	\$19	\$154,767			
Flat Wing Pavilion	8146	6823	11068	Metal	\$214,452	\$225,175	\$26	\$234,175	Flat Wing Pavilion		
				Wood (Metal Roof)	\$173,514	\$182,190	\$21	\$191,190		\$165,000	\$234,000
				Wood (Shingles)	\$157,222	\$165,083	\$19	\$174,083			
Dome Pavilion	7890	5622	5900	Metal	\$166,984	\$175,333	\$27	\$184,333	Dome Pavilion		
				Wood (Metal Roof)	\$133,252	\$139,915	\$22	\$148,915		\$123,000	\$184,000
				Wood (Shingles)	\$117,472	\$123,346	\$19	\$132,346			
3 Bleachers/Storage Pavilion	6144	5506	5800	Metal	\$151,024	\$158,575	\$27	\$167,575	3 Bleachers/Storage Pavilion		
				Wood (Metal Roof)	\$117,988	\$123,887	\$21	\$132,887		\$111,000	\$168,000
				Wood (Shingles)	\$105,700	\$110,985	\$19	\$119,985			
Combined Pavilion	5661	4840	5750	Metal	\$138,868	\$145,811	\$27	\$154,811	Combined Pavilion		
				Wood (Metal Roof)	\$109,828	\$115,319	\$21	\$124,319		\$103,000	\$155,000
				Wood (Shingles)	\$98,506	\$103,431	\$19	\$112,431			

Green = Final Selection

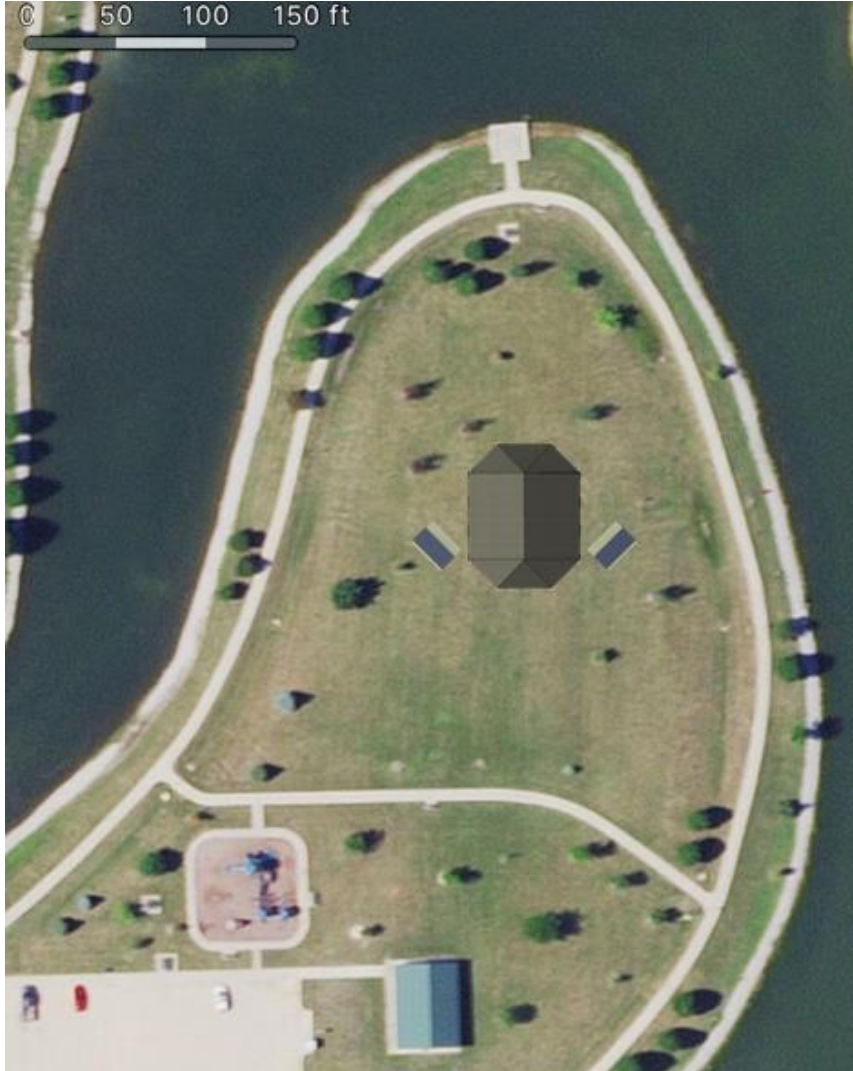
Red = Does not meet cost requirement



# Final Design



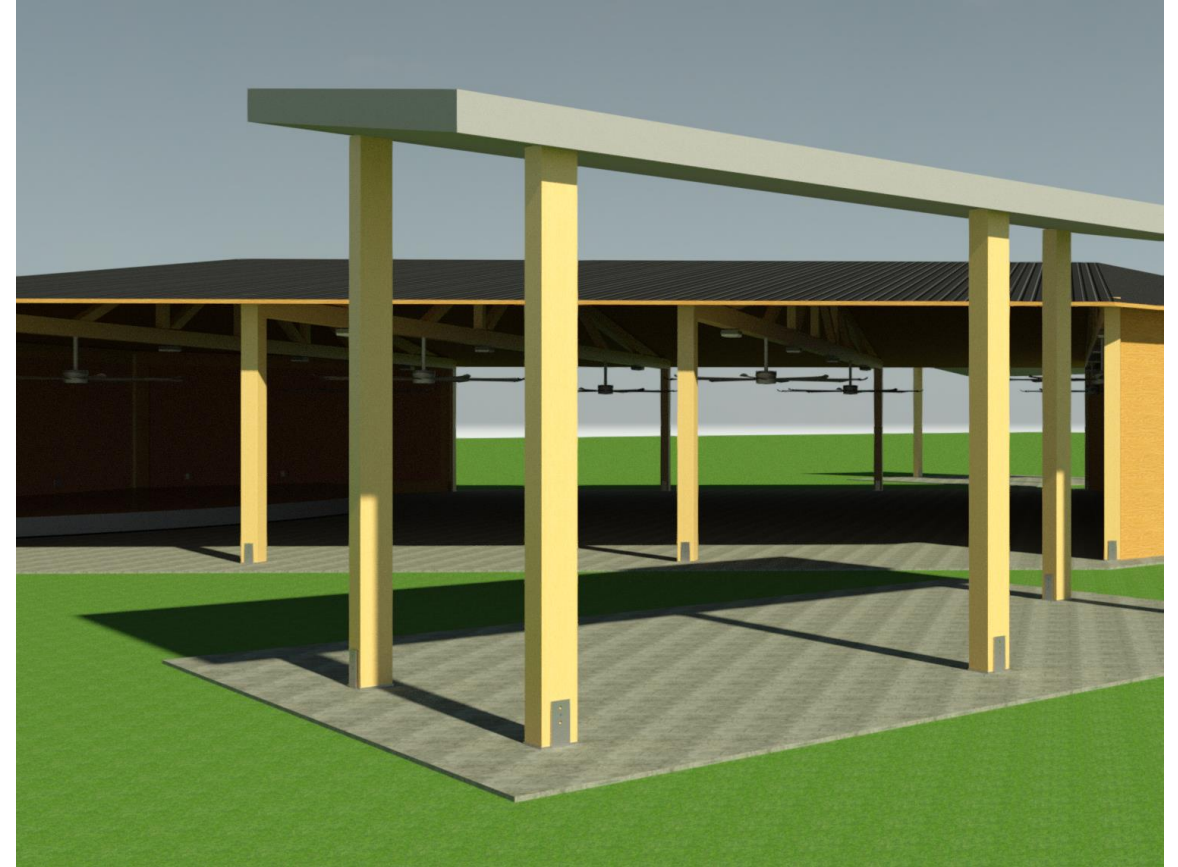
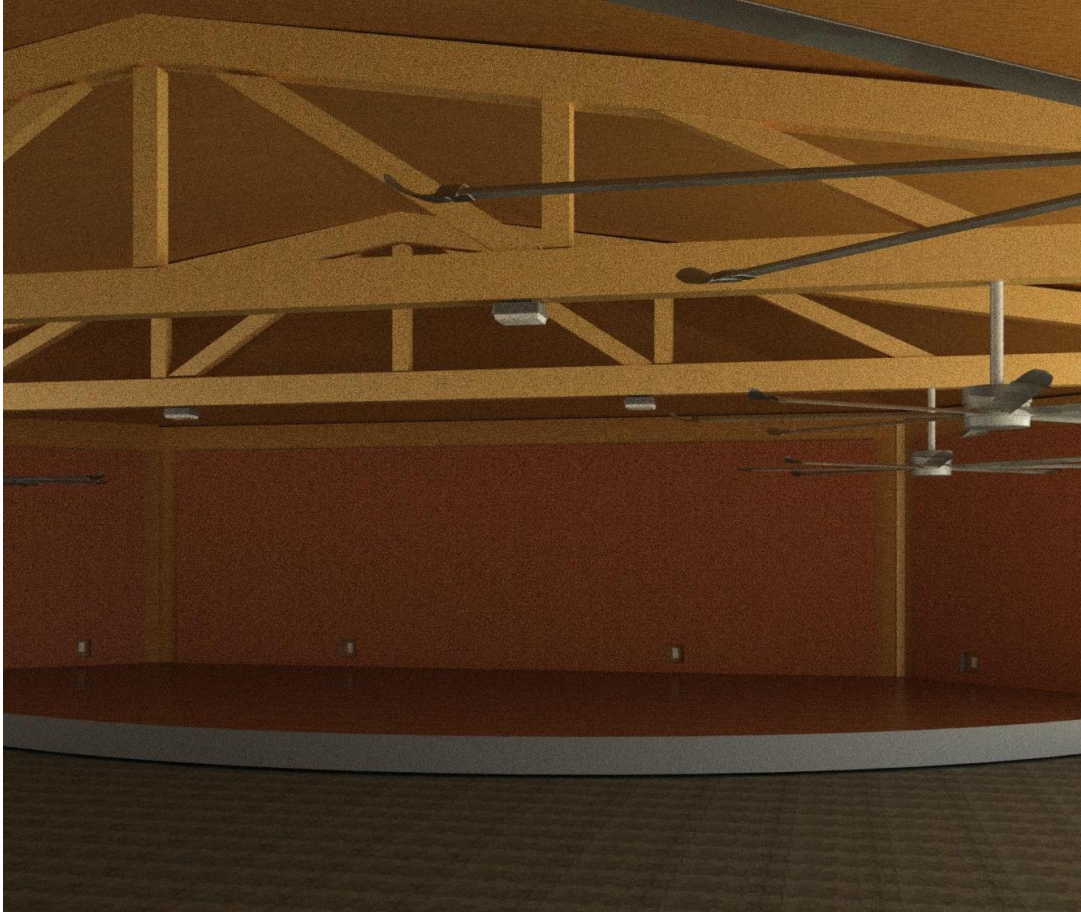
## Final Design: Location



Proposed Location of Pavilion  
within Lakeview Park



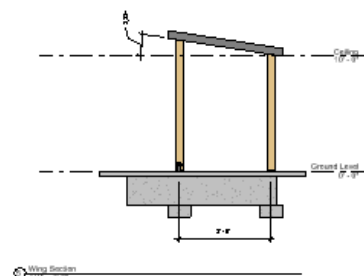
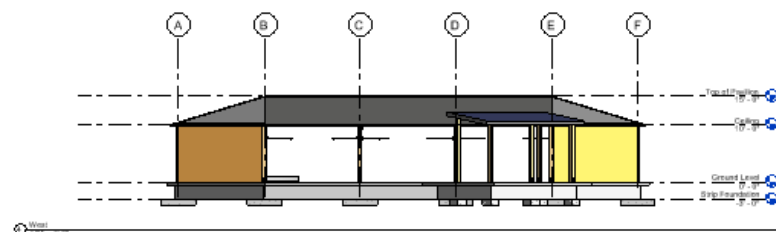
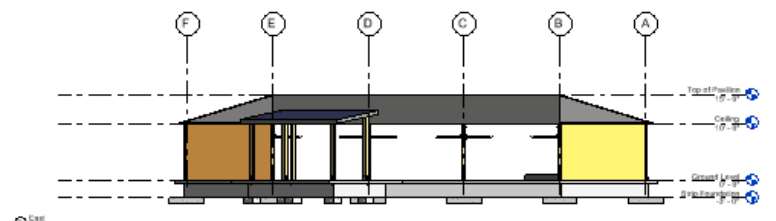
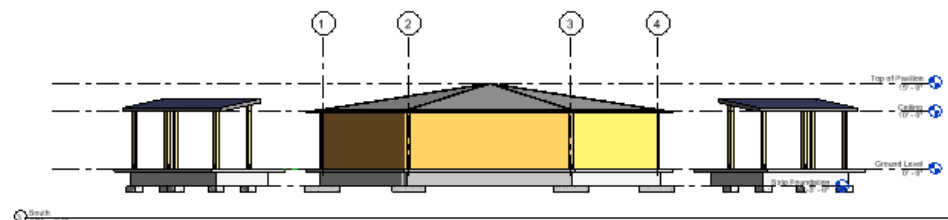
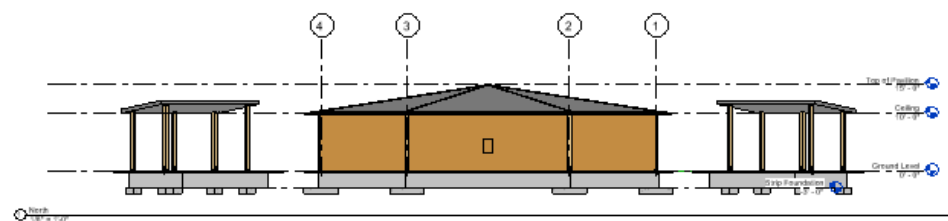
## Final Design: Additional Renderings



## Final Design

- Wood frame construction on concrete foundation
- Large semi-circular stage
- Cork panel on north wall
  - (to reduced impact of sound on nearby elderly community)
- Corrugated metal sheet roofing
- Solar panels present on the roof of the wings

# Architectural Design



Scale As indicated

City of Watseka

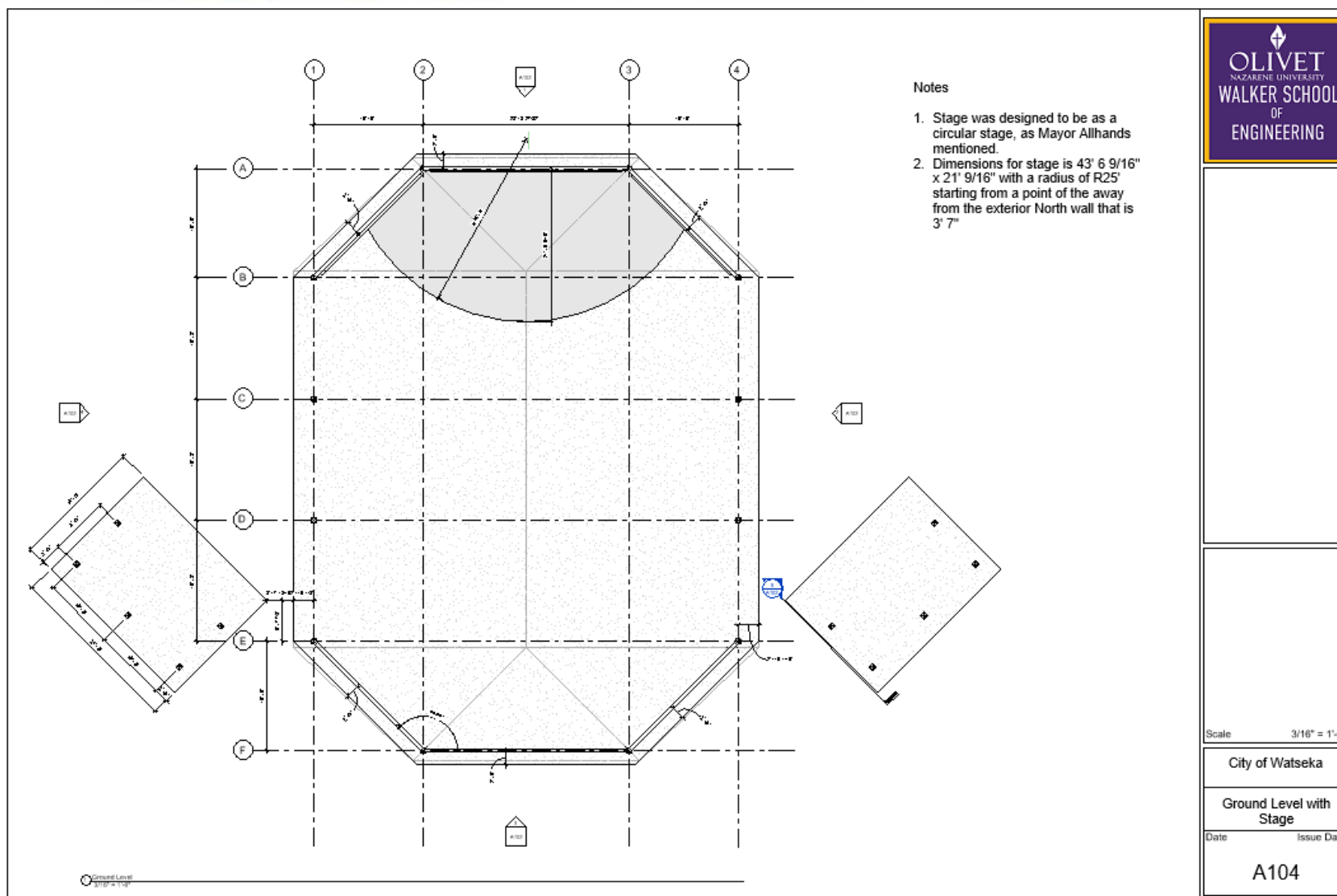
Elevations

Date Issue Date

A102



# Architectural Design



# Structural: Analysis

## Process:

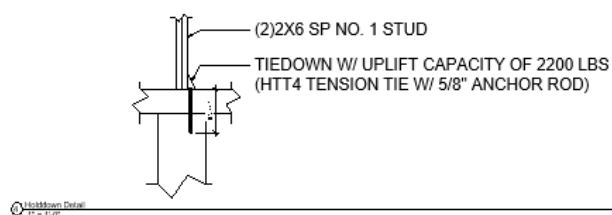
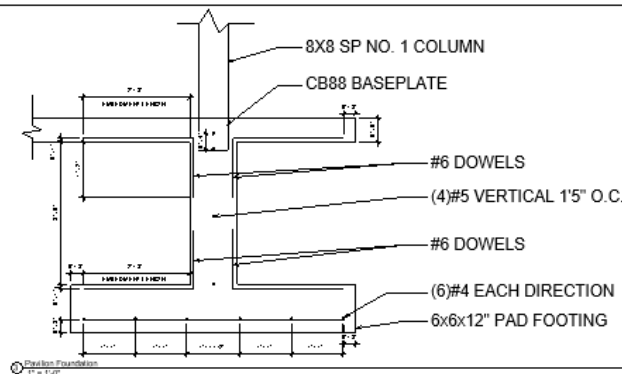
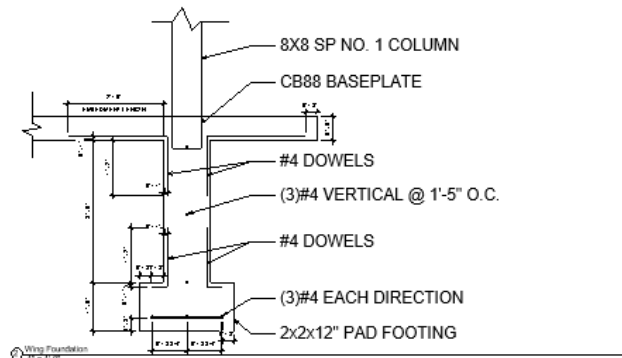
- Determined Structural Loads from ASCE 7-16
- Used ASD and LRFD design methodologies to determine factored load for design of structural members
  - ASD Roof/Columns: -2.4 to 45.8 psf
  - LRFD Roof/Columns: -6 to 68 psf
  - ASD Wall: -7.5 to 15.5 psf
  - LRFD Wall: -13 to 23.5 psf
- Each structural member was then designed to hold the factored load

Type of Load	Load Intensity (psf)
Dead	15-20
Live	20
Roof Live	20
Wind (Wall)	17.5
Wind (Roof)	24
Snow	20

# Structural: Design

Component	Selection
Columns	8"x8" SP No. 1
Beams	2.0E (3) 1-3/4"x16" LVL
Beams (Wings)	2"x10" SP No. 1
Wall Sheathing	3/8" APA Rated Sheathing, 6D nails 4" on center
Roof	3/8" APA Rated Sheathing, 8D nails 6" on center
Shear Wall Tiedown	HTT4 from Simpson Catalog
Connection between Column and Foundation	CB88PC from Simpson Catalog
Connection between Beam and Column	CC88PC from Simpson Catalog
Connection between Beam and Column (Wings)	1/4"x5.25"x16.5" A36 plate with 5/8" x 8" bolts
Roof Trusses	Roof Manufacturer will Design (8.9 kips per truss)
Connection between Truss and Beam	H8 from Simpson Catalog
Foundation for Columns	3,000 psi concrete with (4) #6 dowel bars, (4) #5 longitudinal bars, and (6) #4 reinforcement bars in each direction
Foundation for Columns (Wings)	3,000 psi concrete with (4) #4 dowel bars, (3) #4 longitudinal bars, and (3) #4 reinforcement bars in each direction
Studs	(2) 2x6 SP No 1 at 2' on center

# Structural Design

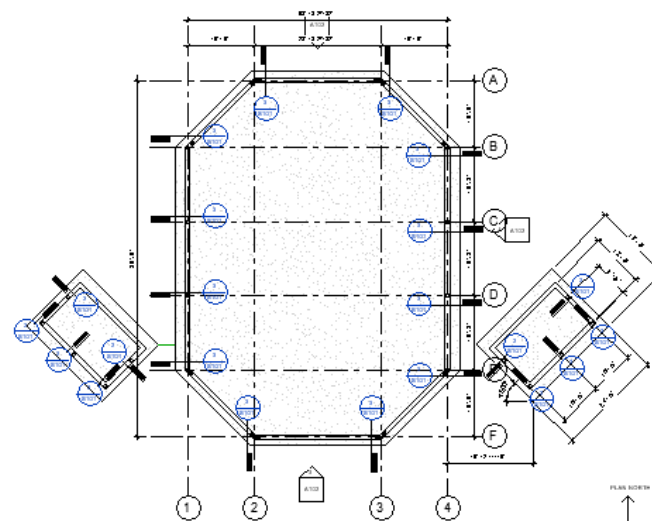


## FOUNDATION PLAN NOTES:

1. SEE S-001 FOR GENERAL STRUCTURAL NOTES.
2. DESIGN SOIL BEARING PRESSURE IS 1500 PSF. SEE GEOTECHNICAL REPORT, CIVIL, AND EARTHWORK SPECIFICATION FOR SITE SUBGRADE PREPARATION REQUIREMENTS INCLUDING BUT NOT LIMITED TO REMEDIATION OF SOIL 36" BELOW FOOTING BEARING. FOOTING SHALL BEAR A MINIMUM OF 46" BELOW FINISHED GRADE. ADJUST T/FTG ELEVATION AS REQ'D.
3. SEE ARCHITECTURAL FOR DIMENSIONS NOT SHOWN.
4. ALL FOUNDATION WALLS ARE TO BE 3'-0" DEEP WITH 1'-0" PAD FOOTING AT BASE.
5. ANCHOR EMBED. DEPTH SHALL BE MEASURED FROM TOP OF SLAB.
6. INDICATES HOLDDOWN WITH MIN. CAPACITY = 3000 LBS, W/ (2)2x6 STUD ABOVE: ●
7. SEE 3/S-101 FOR HOLD DOWN DETAIL.

## Foundation Plan Notes

1'10" = 1'-0"



Foundation  
1'10" = 1'-0"

Scale As indicated

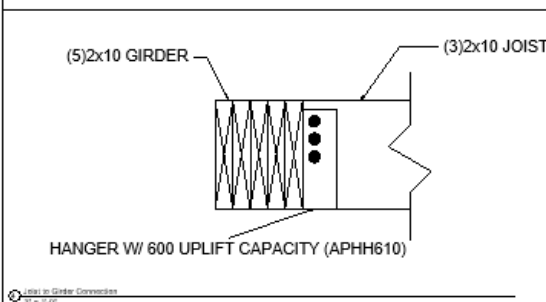
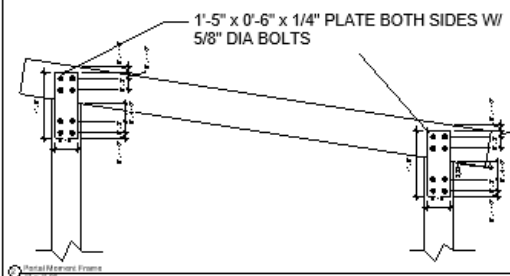
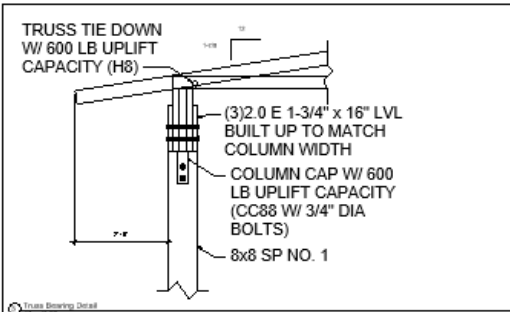
City of Watseka

Foundation Plan

Date Issue Date

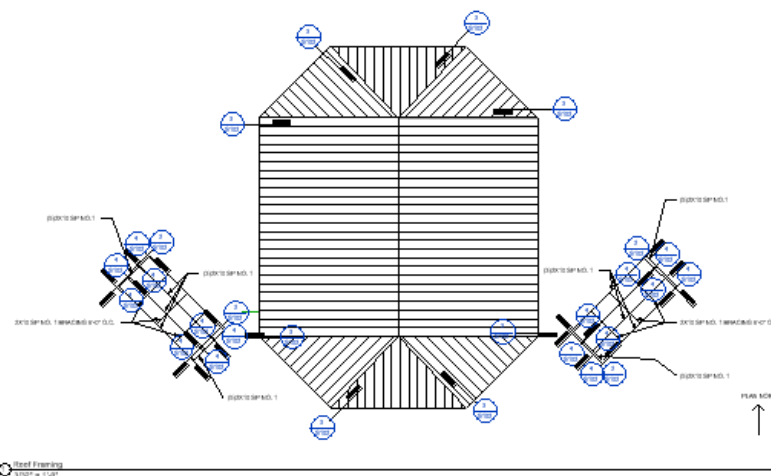
S101

# Structural Design



## FRAMING PLAN NOTES:

1. SEE S001 FOR GENERAL STRUCTURAL NOTES.
2. ROOF SHEATHING: 3/8" APA RATED SHEATHING - 8d @ 6" O.C. W/ 1-1/2" MIN PENETRATION ALONG PANELEDGES AND 8d @ 6" O.C. IN THE FIELD.
3. WALL SHEATHING SHALL BE AS FOLLOWS (ALL WALLS ARE SHEAR WALLS): 3/8" APA RATED SHEATHING ON BOTH FACES & BLOCKING AT ALL UNSUPPORTED EDGES. NAILING SHALL BE 6d @ 4" W/ MIN 1-1/4" PENETRATION @ SHEATHING PANEL EDGES, 6d @ 4" O.C. IN THE FIELD.
4. HEADERS: TYPICAL BEARING WALL HEADER SHALL BE (3)2.0 E 1-3/4x16 LVL.
5. ALL EXTERIOR ANCHORS, PLATES, & CONNECTORS SHALL BE GALVANIZED.
6. ALL EXTERIOR WOOD SHALL BE SOUTHERN PINE #1.
7. WOOD TRUSSES, TRUSS TO TRUSS CONNECTIONS, AND TRUSS BRACING SHALL BE DELEGATED DESIGN BY THE TRUSS MANUFACTURER @ 2'-0" O.C.
8. TYP. BEARING WALL IS (2)2x6 STUDS @ 24" O.C.
9. CORRUGATED METAL ROOFING NAILING SHALL BE 8d @ 6" O.C.
10. ALL COLUMNS ARE 8x8 SP NO. 1



Scale As indicated

City of Watseka

Roof Framing Plan

Date Issue Date

S102



# Electrical Analysis: Fans

Which solution to display?

Fan type	Ø (ft)	# fans	Min airspeed (fpm)	Cooling effect (°F) at min	Avg airspeed (fpm)	Max airspeed (fpm)	Cooling effect (°F) at max	Uniformity
ExampleE	7.0	4	117	4.1	224	425	7.7	0.28
ExampleE	7.0	6	154	4.9	243	425	7.7	0.36
ExampleE	7.0	9	146	4.7	267	425	7.7	0.34
ExampleE	7.0	12	213	5.8	286	425	7.7	0.50
ExampleE	7.0	15	183	5.3	304	425	7.7	0.43
ExampleE	7.0	16	175	5.2	309	425	7.7	0.41
ExampleE	7.0	20	236	6.1	329	425	7.7	0.55

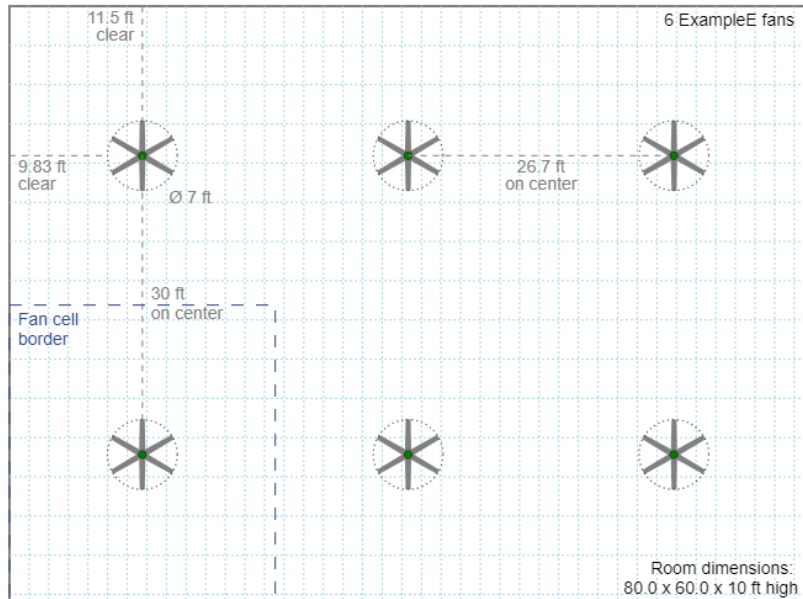
Showing 1 to 7 of 7 entries

Display: **Floor plan**

Cell plan

Cell section

Display settings



("CBE Fan Tool", 2022)

- Used information from "CBE Fan Design Guide" for safety requirements (Berkeley University of California)
- Used "CBE Fan Tool"

Total Floor Area of Outdoor Space (Square Feet)	Outdoor Fan Size (Blade Span)
Up to 100 square feet	52 inch
100 to 225 square feet	60 inch
225 to 400 square feet	72 inch
400 to 625 square feet	84 inch
More than 625 square feet	Use multiple fans of any of the above sizes

Outdoor ceiling fan size chart

(Charles John, 2021)

# Electrical Analysis: Lighting

4/4/22, 2:40 PM Visual Interior Tool

Visual Interior Tool™ AcuityBrands.

File Help Tools

Settings  
Units: Feet - Footcandles

Room Dimensions  
Length [X]: 60 ft  
Width [Y]: 80 ft  
Height [Z]: 10 ft  
Workplane: 2.5 ft  
Ceiling Type: Open

Room Reflectances  
Ceiling: 40 %  
Walls: 40 %  
Floor: 25 %

Criteria  
Illuminance: 10 fc  
Power Density: W/ft²  
Quantity:

Constraints  
Spacing X [SC+9.2]: 15 ft  
Spacing Y [SC+9.2]: 15 ft  
Rows: 4  
Columns: 4

Calculation Results [A]  
Illuminance: 10 fc  
Power Density: 0.12 W/ft²  
Quantity: 16

Spacing Results [A]  
Spacing: 15 x 15 ft  
Arrangement: 4 x 4  
Outside Spacing X: 7.08 ft  
Outside Spacing Y: 17.08 ft

Display  
Dimensions Room ☒ Layout ☐  
Show Zonal Cavity Info [-]

Project Information

Lithonia Lighting  
[A] - CNY LED P1 40K MVOLT

Light Loss Factor: 0.8  
Suspension Length: 0  
Orientation: 0

Symbol Shape: Rectangular  
Symbol Length: .85  
Symbol Width: .85

Lamp Quantity: 108  
Lumens Per Lamp: 4476  
Wattage: 35.4

CNY LED P1 40K MVOLT

0° H 90° H

- Used information from the class of electrical building systems
- Used Visual Analysis 3D's "Visual Interior Tool" to determine spacing and quantity for desired illuminance of 10 foot-candles.

# Electrical: Design

- Lights:
  - 16 CNY LED Lights
- Fans:
  - 8x 7-ft ceiling fans rated for wet weather
  - Airspeed: 270 fpm (min) to 425 fpm (max)
- Outlets:
  - 6 wall electrical outlets near stage, 2 floor outlets on the stage, and 6 outlets on south wall

## Electrical Equipment Notes:

### Lighting

Lithonia Lights (CNY LED P1 40K MVOLT)

### Dimensions

10" x 4 11/16" x 10"

### Spacing Results

Spacing 15' x 15'  
Arrangement 4 x 4

### Calculation Results

Quantity	16	
Illuminance	10	fc
Power Density	0.12	W/ft <sup>2</sup>
Light Loss Factor	0.8	
Lumens per Lamp	4476	
Wattage	35.4	

### Fans

Universal Fan (dependent on Mayor Allhands decision)  
Wet / Damp Resistant

### Dimensions

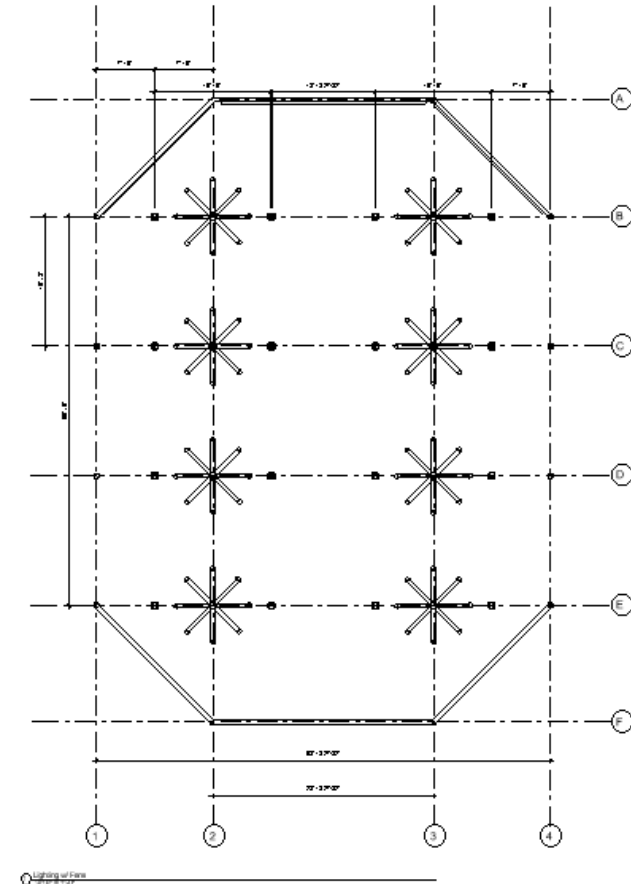
Diameter 7 ft

### Spacing Results

Spacing 28' - 3 27/32" x 15'  
Arrangement 4 x 2

### Calculation Results

Quantity	8
Air speed	min 270 fpm max 425 fpm



# Utility Specifications – National Electrical Codes (NEC)

THWN Wire



Type UF Cable



Intermediate Metallic Conduit (IMC)



GFCI Outdoor Receptable



Outdoor Break Panel



# Design Validation

## Functional Requirements

- Primarily verified by inspection
- Analysis performed for lighting and cooling

## Constraints

- Budget: \$200,000
- Dimensions: 60' min to 100' max in length and width
- At least 20' by 30' in area for the stage
- Design Codes (ASCE 7, ACI 318, IBC, NDS, NEC)

Requirements	Inspection	Analysis	Pass/Fail
Provide Shelter from Rain and Sun	x		PASS
Provide Lighting		x	PASS
Provide Cooling		x	PASS
Drain Stormwater	x		PASS
Stage (with size requirements)	x		PASS
Size Requirements	x		PASS
Within Budget	X		PASS
Provide extra space outside of main structure	x		PASS
Easy to Maintain	x		PASS
Aesthetically Pleasing	x		PASS
ASCE 7		x	PASS



# Design Validation

## Level of Accomplishment of Objectives

- Aesthetics & Attractive to the Community – Good Level of Achievement
  - Architectural design was selected and approved by Mayor Allhands
  - Metal roof will compliment existing pavilion
  - Solar panels makes the pavilion appear more modern
- Easy to Maintain – Good Level of Achievement
  - Concrete floor should be easy to clean with a pressure washer
  - Metal roof provides increased durability
  - Wood Framing will need to be treated to protect against weather occasionally
- Economical – Good Level of Achievement
  - Estimated cost is approximately \$15,000 under budget

## Design Validation: Final Cost Estimate

Concrete	\$	20,296
Steel Reinforcement	\$	3,982
Beams	\$	5,271
Columns	\$	2,160
Engineered Trusses	\$	15,900
Walls	\$	7,045
Roof	\$	33,600
Nails	\$	656
Connections	\$	10,164
Electrical	\$	11,602
Solar Panels	\$	14,400
Sub Total	\$	125,075
Delivery (10%)	\$	12,508
Tax (6.25%)	\$	7,817
Labor (30%)	\$	37,523
Total	\$	182,923
Estimate		\$175,000-190,000

Initial Recommended Budget:  
\$200,000

Total Estimated Cost:  
\$175,000-\$190,000

The estimated cost is less than initial estimates provided to Mayor Allhands for a metal pavilion about 60-ft in diameter (about \$190,000)

## Conclusion

### Benefits:

- The completed pavilion should provide a new space for the people of Watseka and neighboring communities to gather for events.
- As a public project, the real benefit of this project depends on how much do the people like this pavilion and how much use does the city get out of the structure

### Recommendations/Future Steps:

- Should the park see an increase in use after the pavilion is built:
  - Add restrooms
    - Water fountain
  - Expand wings/pavilion
  - Add pathway for easy access to the pavilion



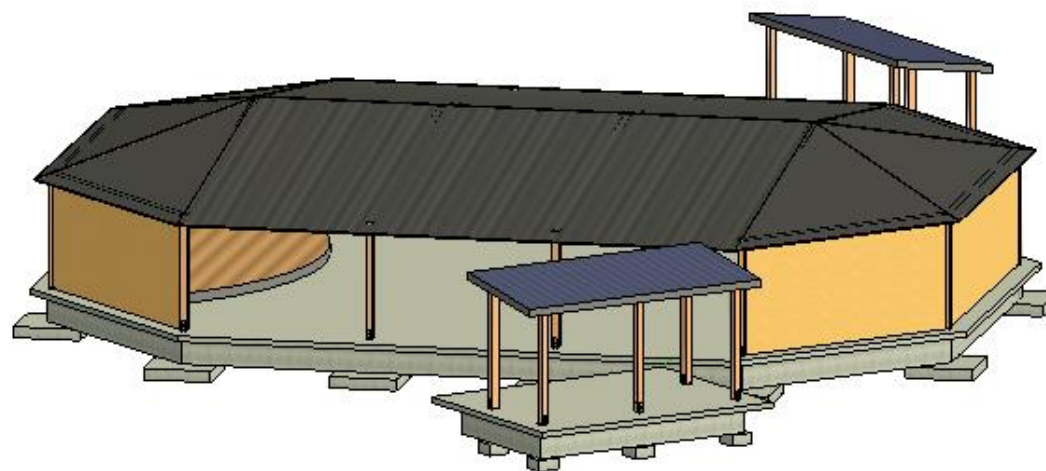
Thanks for Attending!

Any Questions?



## Watseka Pavilion

City of Watseka, Illinois



Pavilion Designed by Olivet Nazarene University  
Engineering Students

Jacob Esselstyn  
Joshua Hagan  
Geovanni Martinez

### Index of Drawings

#### Architectural

A100 Renderings  
A101 Site plan  
A102 Elevations  
A103 3D View  
A104 Ground Level  
With Stage  
A105 Details

#### Electrical

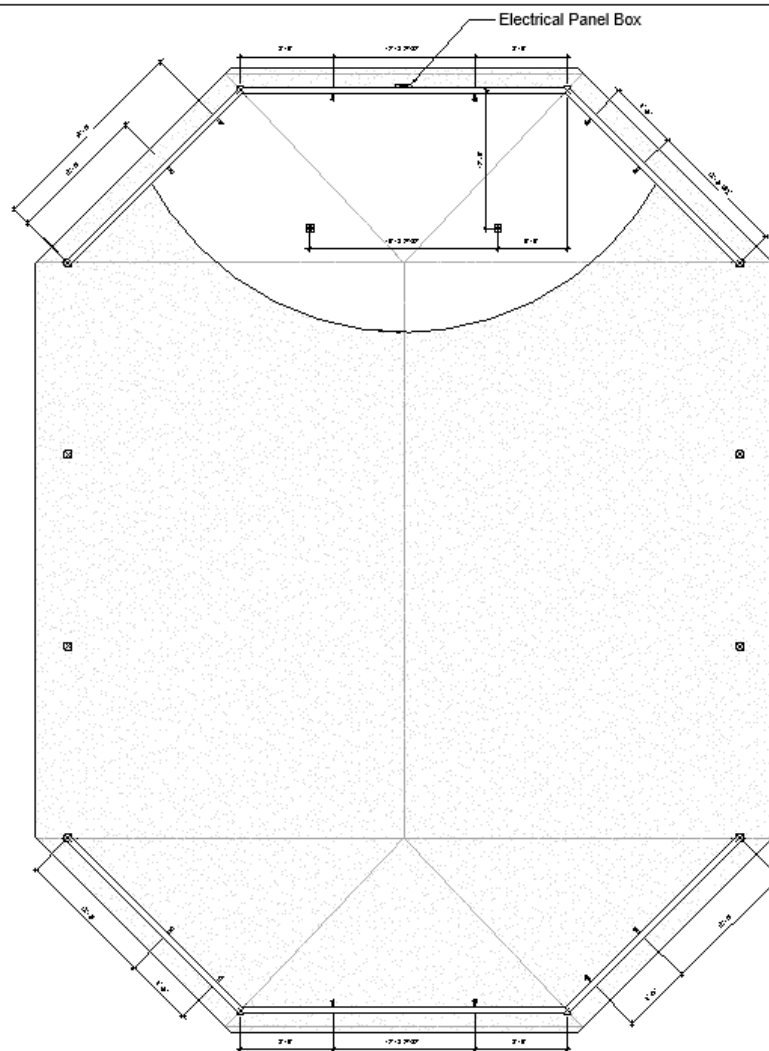
E101 Ground Level  
E102 Ceiling

#### Structural

S001 General Structural Notes  
S101 Foundation Plan  
S102 Roof Framing Plan

STRUCTURAL DESIGN			
THE STRUCTURAL DESIGN DESIGN IS BASED ON AND ACCORDANCE WITH THE FOLLOWING CODE INTERNATIONAL BUILDING CODE - 2012			
1. UNLESS OTHERWISE SHOWN OR NOTED ON THE DRAWINGS, THE STRUCTURAL DESIGNER IS BASED ON THE FOLLOWING TYPICAL UNIFORM LOADS:			
DEAD LOADS	ROOF TOP (INCHES)	= 75	PSF
	ROOF BOTTOM (INCHES)	= 5	PSF
WIND LOADS	ROOF TOP (INCHES)	= 35	PSF
	ROOF BOTTOM (INCHES)	= 5	PSF
SNOW LOADS	$P_g$	= 25	PSF
	$P_s$	= 24	PSF
	$P_r$	= 12	PSF
	$P_t$	= 11	PSF
WIND DRIFT LOADS	$P_d$	= 12	PSF
SUPPLEMENT CATEGORY	III	= 12	PSF
COMMENTS AND CLASSING			
ZONE	AFFECTOR		
1	WIND AREA (SF)		
	10	= +0.0218	
	20	= +0.0436	
	30	= +0.0654	
	100	= +0.2182	
2	10	= +0.0436	
	20	= +0.0872	
	30	= +0.1308	
	100	= +0.4363	
3	10	= +0.0218	
	20	= +0.0436	
	30	= +0.0654	
	100	= +0.2182	
4	10	= +0.0218	
	20	= +0.0436	
	30	= +0.0654	
	100	= +0.2182	
5	10	= +0.0218	
	20	= +0.0436	
	30	= +0.0654	
	100	= +0.2182	
STRUCTURE DESIGN DATA			
BUILDING AREA CATEGORY	I		
	10	= 0.50	
	20	= 0.50	
	30	= 0.50	
	100	= 0.50	
BASE DESIGN FORCE-RESISTING SYSTEM			
	10	= 0.50	
	20	= 0.50	
	30	= 0.50	
	100	= 0.50	
ANALYSIS PROCEDURE			
	10	= 0.50	
	20	= 0.50	
	30	= 0.50	
	100	= 0.50	

# Ground Electrical



Scale 1/4" = 1'-0"

City of Watseka

Ground Level

Date Issue Date

E101

# Final Cost Estimate (Detailed)

Components			Unit	Unit Cost	Cost
Concrete		amount	yd^3		
	Wall Square Footings	12	16.000	125	2000.00
	Wing Square Footings	10	1.481481481	125	185.19
	Wall Strip Foundation	243	27.000	125	3375.00
	Wing Strip Footings	120	13.333	125	1666.67
	Floor	5646	104.556	125	13069.44
					20296.30
Steel Reinforcement			ft		
	#4 bars	1292.666667	1.2	1551.2	
	#5 bars	980	2	1960	
	#6 bars	168	2.8	470.4	
					3981.6
Beams			amount		
	3 1.75"x16" x 18' Glulam LVL 2.0E	6	675	4050	
	2x10 x 10' SP No 1	37	33	1221	
					5271
Columns			amount		
	8x8 SP No 1	12	180	2160	
Engineered Trusses			truss		
	60' span	25	300	7500	
	15' span	60	140	8400	
					15900
Walls			amount		
	Cork Board Tiles (per sq ft)	725	1.7	1232.5	
	3/8" APA Rated Sheathing 4x8	116	32	3712	
	Studs (2)2x6 SP No.1 x10' 2' oc	72	25	1800	
	Blocking 2 lines of 2x6 (if bought at 10')	12	25	300	
					7044.5

Roof			amount		
	3/8" APA Rated Sheathing 4x8	150	32	4800	
	Corrugated Metal Roof (per sq ft)	4800	6	28800	
					33600
Solar Panels			amount		
	Residential - about 65" x 40"	24	600	14400	
Nails			amount		
	6d (for Walls every 4" )	9744	0.035	341.04	
	8d (for Roof every 6")	9000	0.035	315	
					656.04
Connections			amount		
	HTT4 with 5/8" anchor rod (wall tiedown)	12	33	396	
	CB88PC (column to floor)	20	150	3000	
	CC88PC (column to beam)	20	234	4680	
	1/4" x 5.25" x 16.5" (wing column to beam)	4	20	80	
	APHH610 Heavy Joist	16	100	1600	
	5/8" Bolts 8" long	32	5	160	
	H8 (truss to beam)	124	2	248	
					10164
Electrical			amount or ft		
	CNY LED P1 40K MVOLT DDB M2	16	140	2240	
	7' Wet-Rated Fans	8	590	4720	
	Outlets	16	12	192	
	Panel	1	450	450	
	Wire	ft	500	3	1500
	Conduit	ft	500	5	2500
					11602.00



Lakeview Park Pavilion  
Watseka, IL

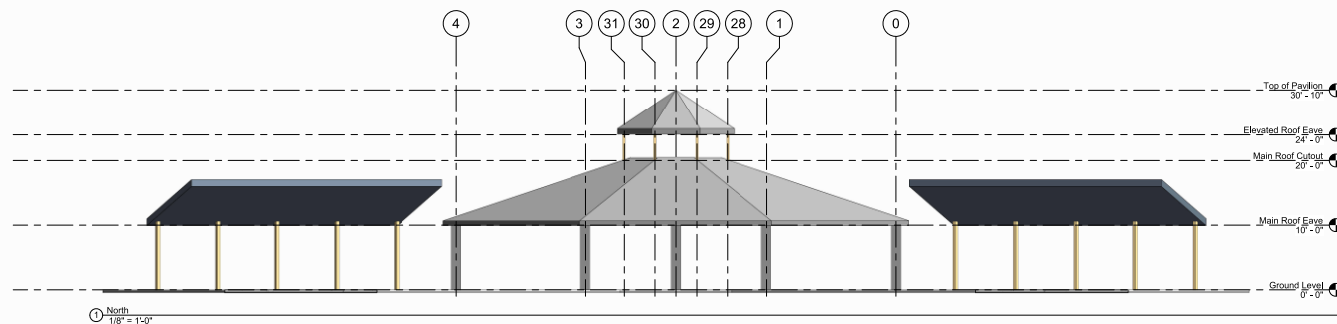
Scale 1/8" = 1'-0"

City of Watseka

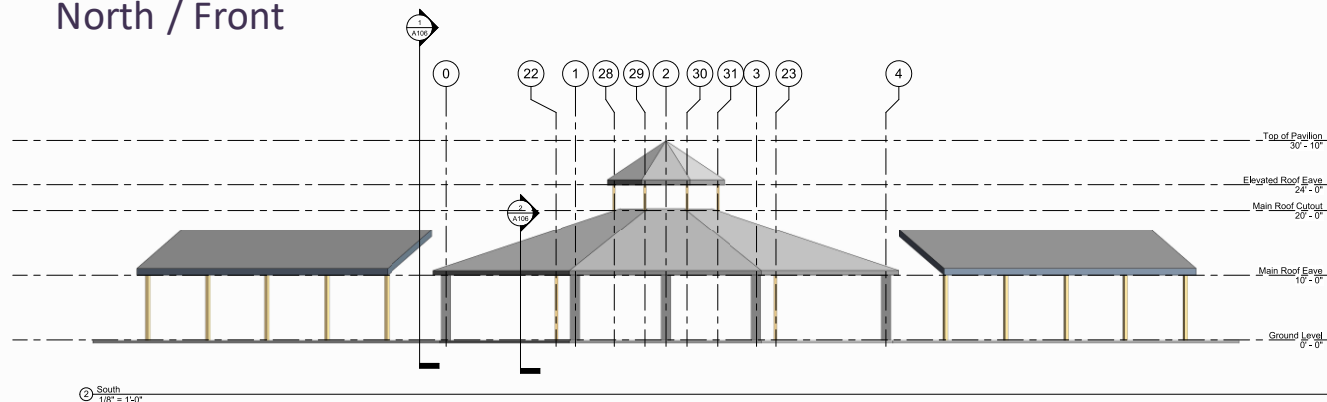
Elevations

Date 12/4/2021

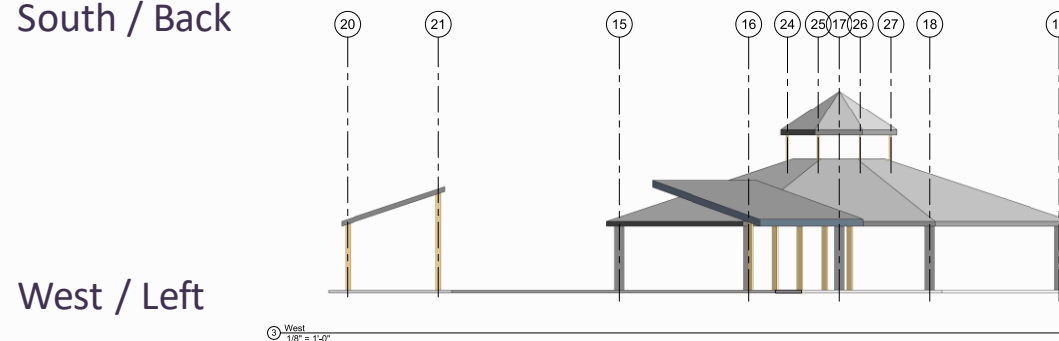
A105



North / Front



South / Back



West / Left

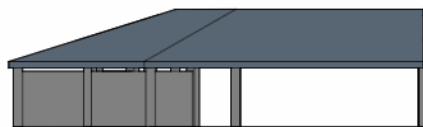
# Wing Pavilion Elevations

North/Back



1 North  
1/8" = 1'-0"

East/Right



2 East  
1/8" = 1'-0"

South/Front



3 South  
1/8" = 1'-0"

West/Left



4 West  
1/8" = 1'-0"



Lakeview Park Pavilion  
Watseka, IL

Scale 1/8" = 1'-0"

City of Watseka

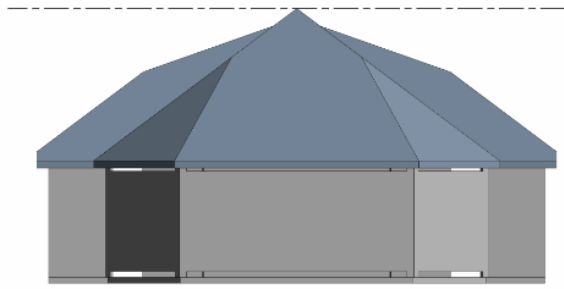
Elevations

Date Issue Date

A103

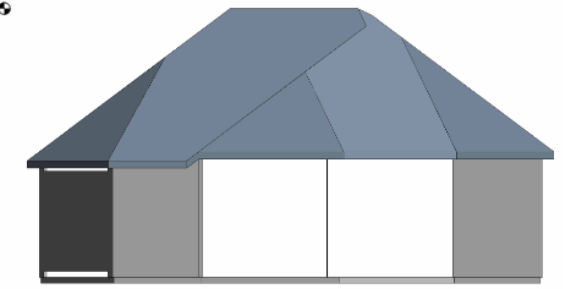
## 3 Bleachers Pavilion Elevations

North/Back



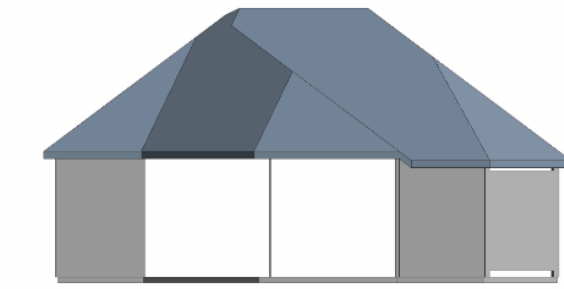
North  
1/8" = 1'-0"

West/Left



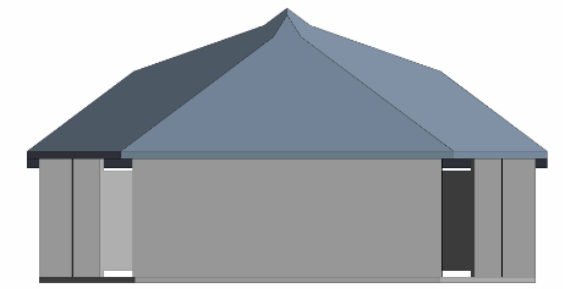
West  
1/8" = 1'-0"

East/Right

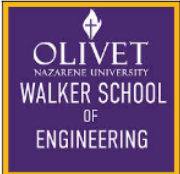


East  
1/8" = 1'-0"

South/Front



South  
1/8" = 1'-0"



OLIVET  
NAZARENE UNIVERSITY  
WALKER SCHOOL  
OF  
ENGINEERING

Lakeview Park Pavilion  
Watseka, IL

Geovanni Martinez

Elevations

Date Issue Date

A101

# Dome Pavilion Elevations