Scope of Work: The Scope of Work under taken in this document is expressly limited to the those members, connections, materials, etc. specified herein. All work not specifically specified is by Others and shall not be assumed from this document. The Scope of Work is further limited to only the structural design of the building shell as shown in the plans.

Engineering Disclaimer: The structural analysis, design, and detailing in this document is based on the stated Design Criteria, assumptions, and building code loads. Uses that impose loads in excess of those assumed by the building code are outside the scope of this document; therefore, the Client is responsible for contacting Vilas Engineering LLC immediately if the stated uses are incorrect. This report only applies to the stated Scope of Work, all other work is considered outside the scope of this document. This work is intended solely for the Client(s) named and for the Project(s) named. Any use which a third party makes of the work, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. Client shall indemnify and defend Vilas Engineering LLC against any claims, liabilities, damages, expenses, fees (including reasonable attorney's fees), incurred by Vilas Engineering LLC arising from or in connection with the misuse of the report. No warranty, expressed or implied, is provided that the final construction is in accordance with this document. This document shall be deemed out of date upon notice by Vilas Engineering LLC to client and in any event no later than 2 years after Issue Date.

The Structural Engineer's Role During Construction:
1. Vilas Engineering LLC (a.k.a. Engineer) shall not have control, nor charge of, and shall not be responsible for:
1.1. Construction means, methods, techniques, sequences, or procedures,
1.2. Any safety precautions and programs in connection with the work
1.3. For the acts or omission of the Client, Contractor, Subcontractor, or any other persons performing any work, or for the failure of any of them to carry out the work in accordance with these contract documents.
2. Pertaining to periodic site observation by Vilas Engineering LLC:
2.1. Periodic visits are solely for the purpose of becoming generally familiar with the progress and quality of the work completed and determining, in general, if the work observed is being performed in a manner indicating that the work, when fully completed, will be in accordance with these contract documents.
2.2. These limited site observations should not be construed to as exhaustive or continuous to check the quality or quantity of the work, but rather periodic in an effort to guard the project against defects or deficiencies in the work taking place.
2.3. These visits do not constitute periodic or continuous inspections or observations as required by the Building Code.

Design Criteria

Geometry
Building Length (Parallel to Ridge), L: 36 ft
Building Width (Perpendicular to Ridge), B: 15 ft
Roof Slope: 3 /12
Mean Roof Height, h: 12 ft

General
Building Risk Category: 2
Building Code: 2015 IBC
Wisconsin Commercial Code Amendments: Yes

Wind
Building Exposure Category: B
Wind Speed (Vult): 115 mph
Wind Speed (Vasd): 90 mph
Directionality Factor, Kd: .85
Topographic Factor, Kzt: 1
Enclosure Classification: Open
Roof Type: Monslope

C&C Strength (Ultimate) Loads
Zone 1 - Roof Field: -22 / 16 psf
Zone 2 - Roof Edge: -24 / 16 psf
Zone 3 - Roof Corner: -40 / 16 psf
Zone 4 - Wall Field: -19 / 17 psf
Zone 5 - Wall Corner: -21 / 17 psf

Snow Loads
Ground Snow Load, Pg: 50 psf
Roof Exposure: Partially Exposed
Thermal Factor, Ct: 1.2
Roof Surface: All Other Surfaces
Flat Roof Snow Load: 42 psf
Sloped Roof Snow Load: 42 psf

Dead Loads
Roof: 10 psf
Glulams: Self Weight

Soils
Pressumed Allowable Soil Bearing Pressure: 1500 psf

Delegated Structural Design
Manufactured Roof Trusses
Glulaminated Beams

Client Responsibility:
1. All materials shall be in accordance with the Wisconsin Commercial Building Code.
2. Client is responsible obtaining all permits and inspections required by the local building department.
3. Client is responsible for adhering to all building codes.
3.1. Client is responsible for all environmental detailing such as water management details. Examples, window flashing, air sealing, water resistive barriers, air barriers, mold & rodent remediation, etc.
4. Client is responsible for means and methods of construction, the temporary condition of all structural elements, and safety precautions required by law during construction.
4.1. Client shall fully and properly implement the engineering controls, work practices, and respiratory protection against toxic and hazardous substances, including respirable crystalline silica according to Occupational Safety and Health Administration (OSHA) 29 CFR 1926.1153.
5. Client is responsible for verifying and coordinating dimensions prior to construction.
6. All hardware shall be installed per the manufacturer's installation instructions.
7. Where only hardware capacity is specified the selected hardware shall be submitted to Vilas Engineering LLC for confirmation that it meets the design assumptions. All hardware submitted shall be supported by a Code Evaluation Report. This allows the Client the ability to shop for hardware which might be difficult and costly to attain.
8. Details shall be considered typical and be utilized where similar conditions exist. Where additional information is needed for clarification of a detail a request shall be submitted to Vilas Engineering LLC. Work shall stop until the clarification is provided.
8.1. When these details and code requirements conflict the more restrictive of the two shall be followed.
9. Where loads, loading, and required capacities are specified they shall be considered Allowable Stress Design (ASD). Where Load and Resistance Factor Design (LRFD) is required, the specified loads & capacities shall be multiplied by the applicable Load Factors.
10. Where conditions are not specifically specified here, similar details shall be utilized. Where details are not provided and clarification is needed contact Vilas Engineering LLC for updated details.
11. Verify door and window rough openings with supplier.

Possible Changes in Quantity of Work:
1. Bidder understands that the quantities specified herein are approximate and that actual quantities in the field may increase or decrease from the quantities estimated. Bidder hereby agrees to perform all quantities of work as either increased or decreased, as required by Vilas Engineering LLC in accordance with the provisions of the contract documents.

Maintenance Statement:
1. All structures require periodic maintenance to extend the life-span and to ensure structural integrity from exposure to the environment. A planned program of maintenance shall be established by the Building Owner. This program shall include items such as but not limited to painting of structural steel, protective coating for concrete, replacement of failed sealants, caulked joints, expansion joints, control joints, repair of spalls and cracks in concrete, and pressure washing of exposed structural elements exposed to a salt environment or other harsh chemicals.
Responsibility of the Contractor for Construction Loads:
1. The contractor shall not overload the structure during construction. The Contractor is responsible for checking the adequacy of the structure to support any applied construction loads, including those due to construction vehicles, equipment, material handling, storage, shoring, re-shoring, or any other construction activity. The Contractor shall submit calculations signed and sealed by a Professional Engineer licensed in the State of Wisconsin verifying the adequacy of the structure for any proposed construction loads that are in excess of 20 psf. Vilas Engineering LLC is not responsible to design or check the structure for loads applied to the structure for construction activity.

Existing Structure:
1. The design contained in these sheets is based on an assumed structure and load path of the existing structure obtained via a visual inspection of the existing structure prior to construction and demolition commencing. Finishes obscured the exact nature of the structure, load path, and materials.
1.1. These assumptions shall be verified and this design updated, if needed, prior to construction but after the demolition has revealed the exact structure, load path, and materials of the existing structure.
1.2. After demolition has revealed the structure to an adequate degree contact Vilas Engineering LLC to schedule a site visit to verify assumptions.
2. Contractor shall verify all dimensions and conditions of the existing building at the job site and report any discrepancies from assumed conditions shown on the drawings to Vilas Engineering LLC prior to fabrication and erection of any shoring members. Existing dimensions shown on the drawings are for general reference only and should not be used for final construction or detailing.
3. Existing construction shown on the drawings was obtained from limited site observation. The Contractor is responsible for being knowledgeable of information presented and shall field verify all pertinent information.
4. Contractor shall perform a survey to locate all existing utilities prior to the start of construction and take care to protect utilities to remain in service. Existing civil, MEP, Fire Protection, and emergency protection systems services any areas outside the work area shall be maintained in operable condition throughout the duration, and after, of shoring installation. Contractor shall make all necessary temporary connections to maintain existing utilities in service during the work. Temporary, localized, interruptions of these systems shall require Owner's written approval.

Wood Framing:
1. All door and window headers shall be (2) 2x12 members unless noted otherwise.
2. All exterior walls shall be sheathed metal panel sheathing.
3. Posts composed of multiple studs/plies shall be fastened together with screws, of sufficient length to penetrate all plies, 6" o.c. Where the following qty. of screws shall be used:
3.1. For 2x4 plies (1) screw @ 6" o.c.
3.2. For 2x6 plies (2) screws @ 6" o.c.
3.3. For 2x8 plies (3) screws @ 6" o.c.
4. Lumber shall meet the following requirements:
4.1. Solid sawn lumber shall be minimum SPF No. 1/No. 2 grade material.
4.2. LVLs shall be minimum 2950F/b-2.0E LP LVL.
4.3. Lumber shall have the minimum design properties found in Table 1. Better material is permitted to be substituted provided it meets or exceeds these values.
5. Where floor joists run parallel to, and provide support for, walls or bathtubs additional joists shall be installed such that a minimum of (1) extra joist is providing additional support. Blocking/bridging shall be installed between joists to ensure adequate load sharing between joists.
6. Thru bolts shall be machine bolts and have a minimum bending yield strength of 36 ksi. Carriage bolts are not permitted.
7. All hardware shall be installed in accordance with the manufacturer's installation instructions. Fasteners specified by the hardware manufacturer shall be used. All factory created nail holes shall be filled.
8. Subfloor shall be attached to joists with construction adhesive & screws or ring shank nails.
9. Construction adhesive shall:
9.1. Meet ASTM D3498 specifications.
9.2. Be installed in accordance with the manufacturer's instructions. Special attention should be paid to lumber moisture content, temperature during installation, and cure time.
10. Roofing materials shall be installed, attached, and flashed in accordance with the manufacturer's installation instructions and details.
11. Where nails are specified screws of equal, or greater, length are permitted to be substituted.
7. Pertaining to preservative treated lumber:
7.1. Lumber designated as pressure treated shall be preservative treated to protect against moisture, decay, rot, and insects.
7.2. Preservative treated lumber shall be in treated and selected for use in accordance with AWPA U1.
7.3. Fasteners, hangers, and other hardware used in preservative treated lumber shall be hot-dipped zinc-coated galvanized steel, stainless steel, or be certified for such use by the manufacturer.
7.4. Wood shall be at a moisture content of 19% or less before being covered with insulation, interior wall finish, floor covering, or other materials enclosing the members.
8. Wood sheathing shall conform to the requirements for their type in DOC PS1, DOC PS2, or ANSI/APA PRP 210. Wood structural panels shall be designed and fabricated in accordance with the IBC.
9. Structural composite lumber, including LVL, shall have structural capacities established and monitored in accordance with ASTM D5456.
10. Lumber shall not be fire-treated unless specifically noted herein or approved by Vilas Engineering LLC. Fire treatments have the potential of reducing the strength of the lumber and therefore need to be accounted for in the design.
11. Cutting and notching:
11.1. LVL members are not permitted to be cut, notched, or drilled without prior approval from Vilas Engineering LLC.
11.1.1. Pre-drilling for fasteners specified herein is permitted.
11.2. Solid sawn floor joists are permitted to drilled with a round hole.
11.2.1. The diameter of such hole shall be 1/4 the member depth or less.
11.2.2. No part of the hole shall not be located within 2" of the member edge.
12. Standard nails referenced in the plans are as follows:
12.1. 16d = 0.131" x 3"
12.2. 8d = 0.113" x 2-3/8"
13. Framing members running parallel to each other shall not be spliced at the same location to ensure a weak point is not created in the structure.

Soils
1. The Client is responsible for verifying the soil properties and allowable load bearing capacity are acceptable for the construction proposed. The IBC minimum allowable soil bearing capacity has been assumed in the design. No provisions have been made for expansive soils.
2. Non-frost susceptible soils are those that are generally granular in nature with less than 6% by mass passing a #200 sieve.

Concrete:
1. All cast in place concrete shall have a minimum 28 day compressive strength of 3,500 psi.
2. Reinforcing steel shall comply with ASTM A615 - Grade 60 and have a minimum yield strength of 60 ksi.
3. For concrete slabs saw cut contraction joints shall be installed such that slab panels have a length to width ratio of 1.5 to 1. L and T shaped panels shall be avoided. The maximum distance between joints shall be 36 times the slab thickness.
4. The sub-grade under concrete shall be prepared such that a sub-grade modulus is 200 pci and the Design Criteria bearing capacity is achieved.
5. Longitudinal reinforcing bars shall be continuous. Lap splicing is permitted provided they are lapped 36 inches.
6. Corner bars of equal size as that of continuous reinforcement shall be installed at all corners. Leg lengths shall be at least 36 inches long.

Energy Conservation:
1. Building shall have a continuous air barrier that is sealed in an approved manner and is constructed or tested in an approved manner. All penetrations shall be sealed in an approved manner.
2. All sources of air leakage in the building thermal envelope are sealed, caulked, gasketed, weather stripped or wrapped with moisture vapor-permeable wrapping material to minimize air leakage.
3. Recessed luminaires in thermal envelope to limit infiltration and be IC rated and labeled. Seal between interior finish and luminaire housing.

General Code Provisions Requiring Extra Attention:
1. IBC 1209.2 - An opening not less than 20"x30" shall be provided to any attic area having a clear height of over 30". A 30" minimum clear headroom in the attic space shall be provided at, or above, the access opening.
2. IECC 303.1.1.1 - The thickness of blown-in or sprayed roof/ceiling insulation (fiberglass or cellulose) shall be written in inches on markers that are installed at least one for every 300 square feet throughout the attic space. The markers shall be affixed to the trusses or joists and marked with the minimum initial installed thickness with numbers not less than 1 inch in height. Each marker shall face the attic access opening. Spray polyurethane foam thickness and installed R-value shall be listed on certification provided by the insulation installer.
3. IECC 303.2.1 - Insulation applied to the exterior of basement walls, crawlspace walls and the perimeter of slab-on-grade floors shall have a rigid, opaque and weather-resistant protective covering to prevent the degradation of the insulation's thermal performance. The protective covering shall cover the exposed exterior insulation and extend not less than 6 inches below grade.
4. IBC 718.4.3 - Draftstopping shall be installed in attics and concealed roof spaces, such that any horizontal area does not exceed 3,000 square feet.
5. IBC 718.3.1 - Draftstopping materials shall be not less than 1/2-inch gypsum board, 3/8-inch wood structural panel, 3/8-inch particleboard, 1-inch nominal lumber, cement fiberboard, batts or blankets of mineral wool or glass fiber, or other approved materials adequately supported. The integrity of draftstops shall be maintained.
6. IBC 1010.1.5 - There shall be a floor or landing on each side of a door. Such floor or landing shall be at the same elevation on each side of the door. Landings shall be level except for exterior landings, which are permitted to have a slope not to exceed 0.25 unit vertical in 12 units horizontal (2-percent slope).

1) This structure is designed using a frost-protected-shallow foundation.
2) The minimum monthly average temperature that this structure must be maintained at is 64 degrees Fahrenheit to avoid frost damage to the foundation.

WISCONSIN
KEVIN J MUICH
E-45833
MADISON, WI
PROFESSIONAL ENGINEER

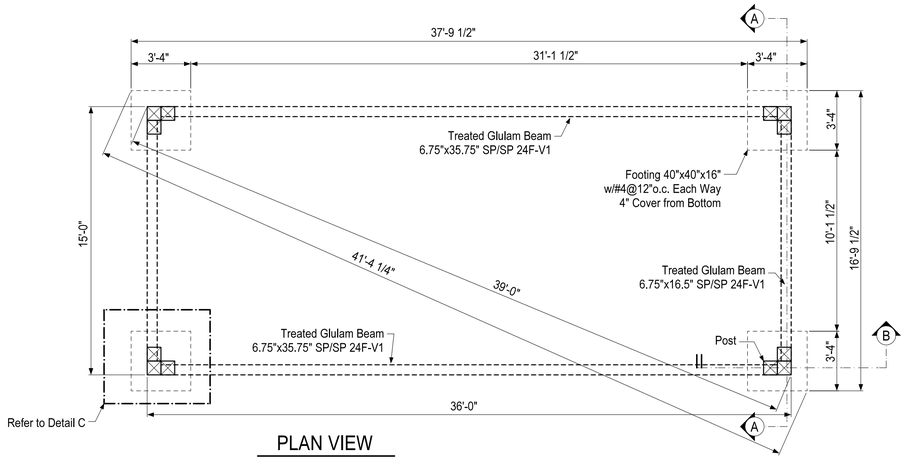
August 19, 2022

Vilas Engineering LLC
1112 Vilas Ave.
Madison, WI 53715
608-301-5896
info@vilasengineering.com

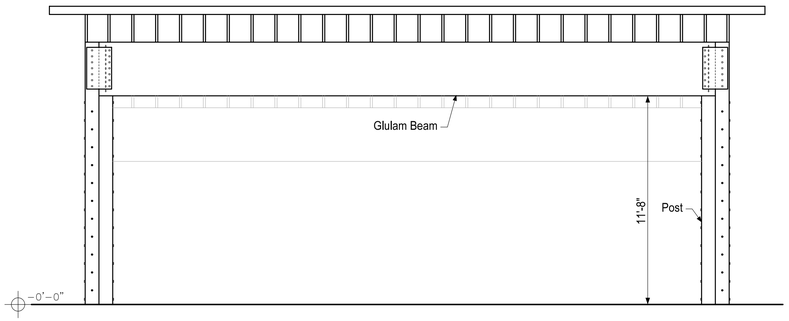
Architectural Design LLC
W7121 Red River Rd. - Antigo WI 54409
wi0258bean@frontier.com
715-489-3721 Jeff Bean

JOB NAME
PEACEFUL VALLEY PAVILION

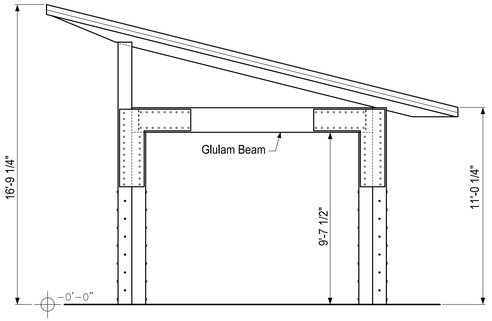
DATE: 8/18/2022
PROJECT #: 750-0-ILLUS
SCALE: 1" = 1'-0" UNLESS NOTED
DRAWN BY: JB
PAGE A 1 OF 4



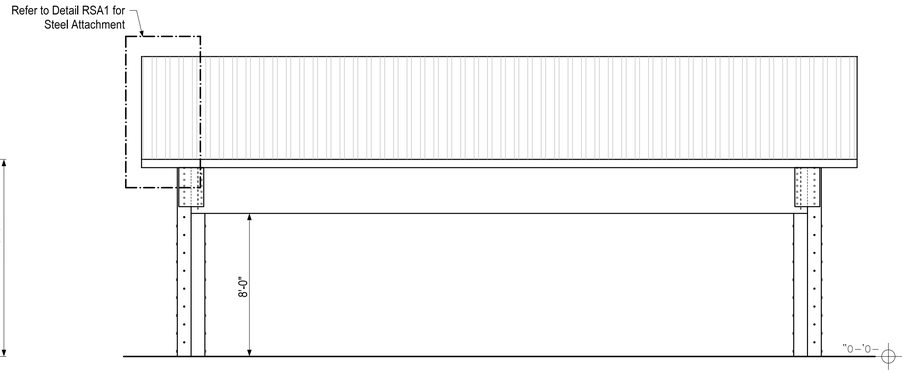
PLAN VIEW



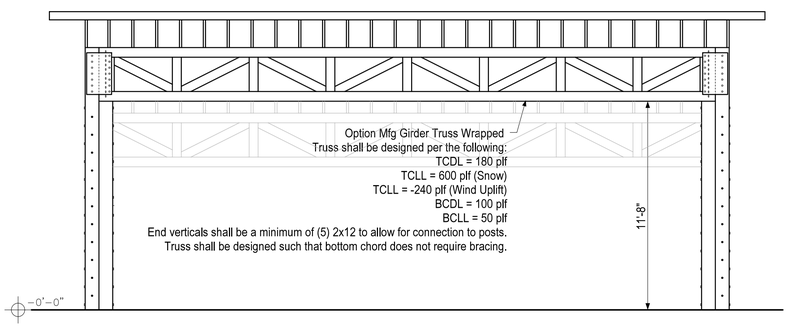
FRONT ELEVATION



SIDE ELEVATION



REAR ELEVATION



OPTION FRONT ELEVATION

WISCONSIN
KEVIN J
MUICH
E-45833
MADISON,
WI
PROFESSIONAL ENGINEER

August 19, 2022

Vilas Engineering LLC
1112 Vilas Ave.
Madison, WI 53715
608-301-5896
info@vilasengineering.com

Architectural Design LLC
W7121 Red River Rd. - Antigo WI 54409
w10258bean@frontier.com
715-489-3721 Jeff Bean

JOB NAME

PEACEFUL VALLEY PAVILION

DATE: **8/18/2022**

PROJECT #: **750-0-ILLUS**

SCALE: **1/4" = 1'-0"** UNLESS NOTED

DRAWN BY: **JB**

PAGE A **2** OF 4

MINIMUM FASTENER SCHEDULE TABLE

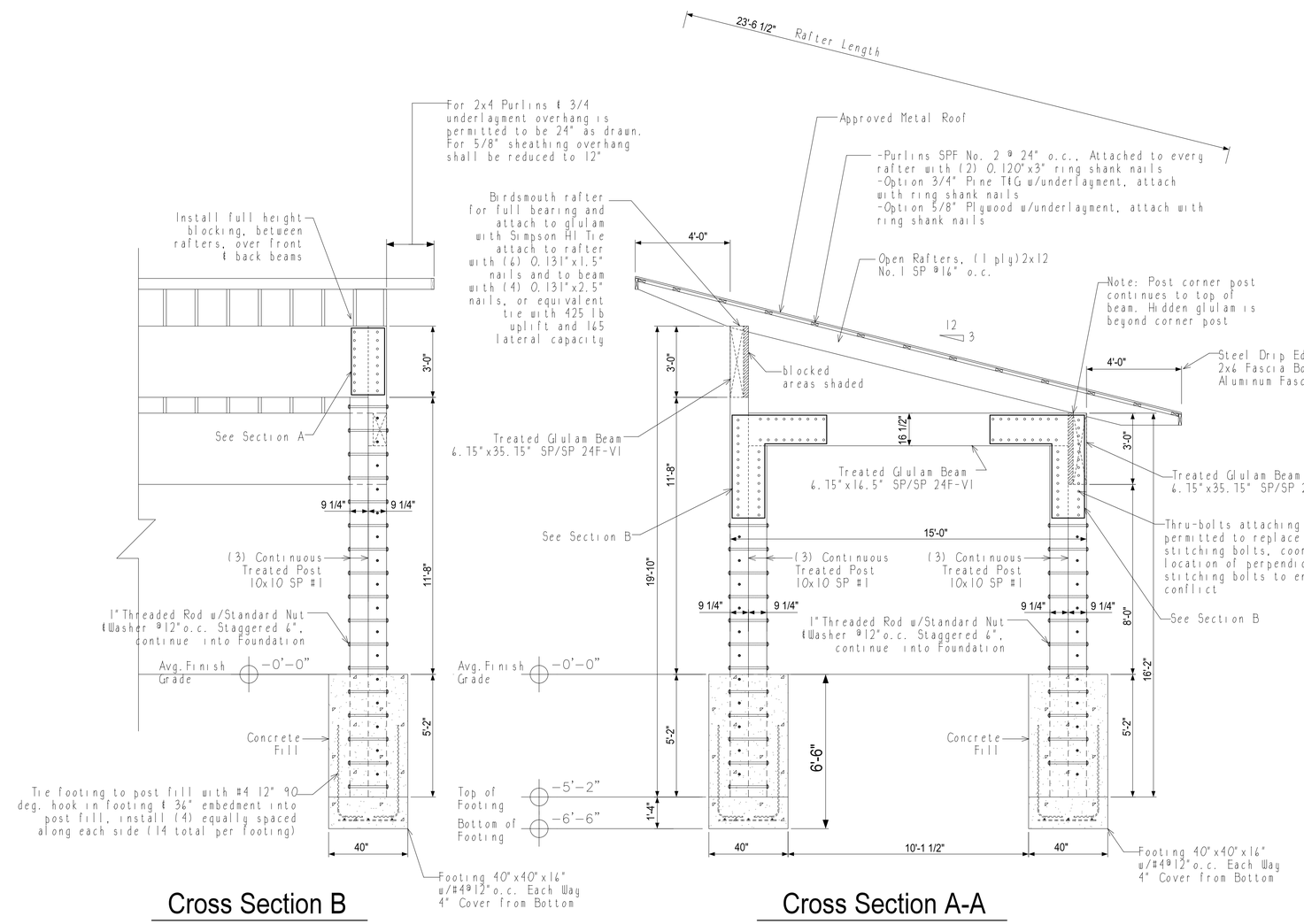
Other interior and exterior panel products and finishes installed per manufacturer requirements.
For engineered connectors, use manufacturer's specified fasteners.

Description of Building Materials/Connection	Number and Type of Fastener[1 2 3]
Floor Framing	
Joist to joist, face nailed over support	3–8d
Joist to sill or girder, toe nail	3–8d
Band or rim joist to joist, end nail	3–16d
Band or rim joist to sill or top plate	2–16d at 16″ o.c.
Bridging to joist, toe nail each end	2–8d
Built–up girder and beams, top loaded	10d at 32" o.c. at top and bottom and staggered and two at ends and at each splice
Built–up girder and beams, side–loaded	16d at 16" o.c. at top and bottom and staggered and two at ends and at each splice
Ledger strip to beam, face nail	3–16d each joist
Joist on ledger to beam, toe nail	3–8d
Wall Framing	
Sole plate to joist or blocking, face nail	2–16d at 16″ o.c.
Top or sole plate to stud, end nail	2–16d
Stud to sole plate, toe nail	3–8d or 2–16d
Doubled studs, face nail	10d at 24″ o.c.
Doubled top plates, face nail	10d at 24″ o.c.
Doubled top plates, minimum 24–inch offset of end joints, face nail in lapped area	8–16d
Top plates, laps and intersections, face nail	2–10d
Continuous header, two pieces	16d at 16″ o.c. along each edge
Continuous header to stud, toe nail	4–8d
1″ corner brace to each stud and plate, face nail	2–8d or 2 staples, 1¾″
Built–up corner studs	10d at 24″ o.c.
Description of Building Materials/Connection	**Number and Type of Fastener[1 2 3]**
Roof/Ceiling Framing	
Ceiling joists to plate, toe nail	3–8d
Ceiling joist, laps over partitions, face nail	3–10d
Ceiling joist to parallel rafters, face nail	3–16d
Rafter to plate, toe nail (maximum 6 rafter span, engineered connector for longer)	2–16d
Roof rafters to ridge, valley or hip rafters, toe nail	4–16d
Roof rafters to ridge, valley or hip rafters, face nail	3–16d
Collar ties to rafters, face nail	3–8d
Boards and planks	
1″ x 6″ subfloor or less to each joist, face nail	2–8d or 2 staples, 1¾″
Wider than 1″ x 6″ subfloor toe to each joist, face nail	3–8d or 4 staples 1¾″
2″ subfloor to joist or girder, blind and face nail	2–16d
1″ x 6″ roof or wall sheathing to each bearing, face nail	2–8d or 2 staples, 1¾″
1″ x 8″ roof or wall sheathing to each bearing, face nail	2–8d or 3 staples, 1¾″
Wider than 1″ x 8″ roof sheathing to each bearing, face nail	3–8d or 4 staples, 1¾″
2″planks	2–16d at each bearing

Panel Sheathing

Material	Fastener	Spacing of Fastener: Edges	Spacing of Fastener: Intermediate Supports
Engineered wood panel for subfloor and roof sheathing and wall corner wind bracing to framing			
5/16″ to ½″	6d common or deformed nail or staple, 1½″	6″	12″ [4]
5/8″ to ¾″	8d smooth or common, 6d deformed nail, or staple, 14 ga. 1¾″	6″	12″ [4]
7/8″ to 1″	8d common or deformed nail	6″	12″
1 1/8″ to 1¼″	10d smooth or common, or 8d deformed nail	6″	12″
Combination subfloor/ underlay-ment to framing			
¾″ or less	6d deformed or 8d smooth or common nail	6″	12″
7/8″ to 1″	8d smooth, common or deformed nail	6″	12″
1 1/8″ to 1 ¼″	10d smooth or common or 8d deformed nail	6″	12″
Wood panel siding to framing			
½″ or less	6d corrosion–resistant siding and casing nails	6″	12″
5/8″	8d corrosion–resistant siding and casing nails	6″	12″
½″ structural cellulosic fiberboard sheathing	1½″ galvanized roofing nail; 8d common nail; staple 16 ga., 1½″ long	3″	6″
25/32″ structural cellulosic fiberboard sheathing	1¾″ galvanized roofing nail; 8d common nail; staple 16 ga., 1¾″ long	3″	6″
½″ gypsum sheathing[5]	1½″ galvanized roofing nail; 6d common nail; staple galvanized 1½″ long; 1¼″ screws, Type W or S	4″	8″
5/8″ gypsum sheathing[5]	1¾″ galvanized roofing nail; 8d common nail; staple galvanized 1 5/8″ long; 1 5/8″ screws, Type W or S	7″	7″

1 All nails are smooth–common, box or deformed shank except where otherwise stated.
2 Nail is a general description and may be T–head, modified round head or round head.
3 Staples are 16–gauge wire, unless otherwise noted, and have a minimum 7/16″ o.d. crown width.
4 Staples shall be spaced at not more than 10″ o.c. at intermediate supports for floors.



Cross Section B

Cross Section A-A

General Notes:

1. Plans prepared by owners requested specifications.
2. It is the contractor and owners responsibility to maintain all applicable Codes.
3. Contractor to verify all window and door rough opening sizes with supplier.
4. Contractor to verify all existing conditions and dimensions on job site prior to construction. Any discrepancies shall be brought to the designer's attention immediately.
5. Contractor is responsible for coordinating plans and existing conditions prior to starting construction.
6. All Site Preparations and Grade Verification Responsibility of Owner and Contractor.
7. Furnishings by Owner
Refer to ICC/ANSI Section 900 Built In Furnishing And Equipment for more detail.
8. Slab Contraction joints the responsibility of the contractor.
9. Frost adequacy verification is the responsibility of the contractor.
10. Emergency Lighting Locations by Electrician.
11. IBC 1008.1.9.1 Hardware. Door handles, pulls, latches, locks, and other operating devices on doors required to be accessible by Chapter 11 shall not require tight grasping, tight pinching or twisting of the wrist to operate.
IBC 1008.1.9.5 Unlatching. The unlatching of any door or leaf shall not require more than one operation.
12. Construction classification: Wood Framed Unprotected (VB)
13. Construction of footings over utility lines or any service pipe is prohibited. Note: Call the utility provider before digging.

Timber Framing Notes:

1) Treated lumber typically comes from mills with an excessive moisture content. When this lumber dries over time it has a tendency to warp. This warping can cause both structural and aesthetic issues. This problem is exacerbated in Southern Pine lumber and members that are not attached along their length, such as posts. To mitigate this issue the Contractor is encouraged to perform one of the following:
1a) Purchase lumber that has been kiln dried after treatment.
1b) Purchase an excess amount of lumber with sufficient lead time such that the material can be stored in a dry environment and allowed to dry to a moisture content of less than 19%. Members that experience excessive warping, twisting, or bowing can then be discarded.
2) Posts shall be preservative treated as Permanent Wood Foundations in accordance with AWPA Standard U1 for Use Category UC4B.
3) Glulam Beams and rafters shall be preservative treated in accordance with AWPA Standard U1 for Use Category UC3B.
4) All fasteners/bolts/nuts/washers/etc. into treated lumber, or exposed to weather, shall be hot dipped galvanized or stainless steel to mitigate corrosion.
5) Steel connector plates shall be hot dipped galvanized and painted per the Owner's specifications.
6) Machine bolts are permitted to replace threaded rods when adequate sizes are available. Carriage bolts are not permitted.

WISCONSIN
KEVIN J MUICH
E-45833
MADISON, WI
PROFESSIONAL ENGINEER

August 19, 2022

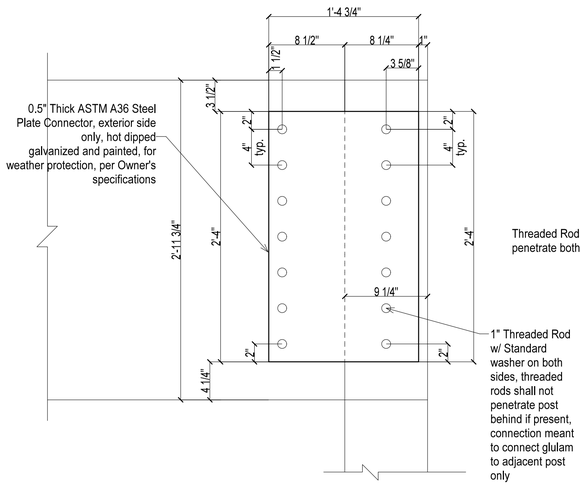
Vilas Engineering LLC
1112 Vilas Ave,
Madison, WI 53715
608-301-5896
info@vilasengineering.com

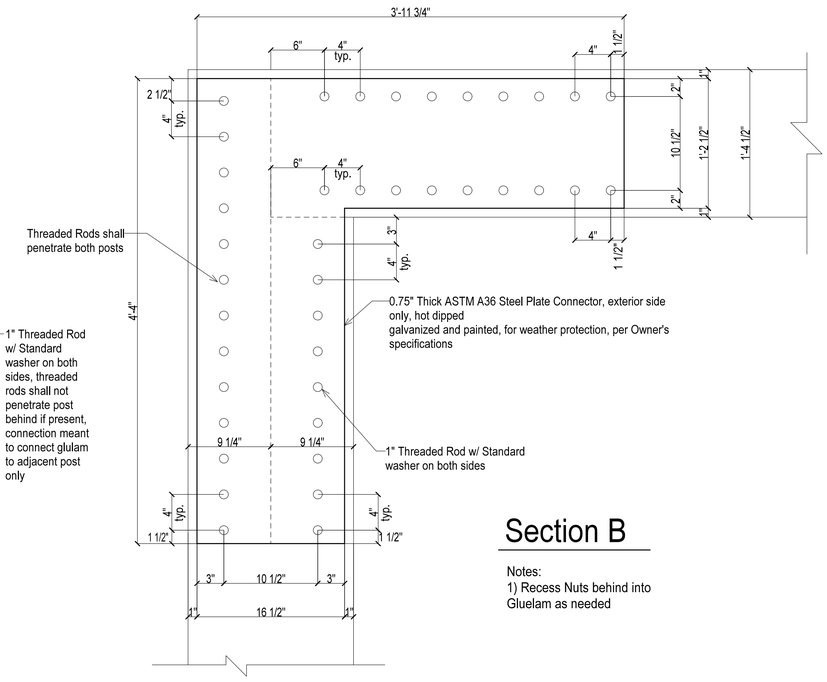
Architectural Design LLC
W7121 Red River Rd. - Antigo WI 54409
w10258bean@frontier.com
715-489-3721 Jeff Bean

JOB NAME
PEACEFUL VALLEY PAVILION

DATE: 8/18/2022
PROJECT #: 750-0-ILLUS
SCALE: 3/8" = 1'-0" UNLESS NOTED
DRAWN BY: JB

Table 1 - Minimum Reference Design Values (psi)														
Material		LVL LP 2950F_h-2.0E	LVL LP 2900F_h-2.0E	LVL Global 3300F_h-2.0E	LVL Microllam 2900F_h-2.0E	LVL Minimum	SPF Spruce-Pine-Fir No. 1/No. 2	DF Douglas Fir Larch No. 2	DF Douglas Fir Larch No. 1	SP No. 2 2x12	SP No. 1 2x6	SP No. 2 2x6	SP No. 1 2x10	SP No. 2 2x10	
F_b	Joist/Beam	2,950	2,900	3,300	2,900	2,140	875	900	1,000	750	1,350	1,000	1,050	800	
	Plank	2,950	2,900	3,300	2,865	2,200	875	900	1,000	750	1,350	1,000	1,050	800	
F_t		1,800	1,800	2,300	2,025	1,350	450	575	675	450	875	600	700	475	
F_v	Joist/Beam	290	285	290	285	220	135	180	180	175	175	175	175	175	
	Plank	140	140	150	190	140	135	180	180	175	175	175	175	175	
F_c		3,200	3,200	2,700	2,635	2,100	1,150	1,350	1,500	1,250	1,550	1,400	1,450	1,300	
F_{c_perp}	Joist/Beam	750	750	575	750	475	425	625	625	565	565	565	565	565	
	Plank	550	550	500	680	280	425	625	625	565	565	565	565	565	
E		2,000,000	2,000,000	2,000,000	2,000,000	1,500,000	1,400,000	1,600,000	1,700,000	1,400,000	1,600,000	1,400,000	1,600,000	1,400,000	



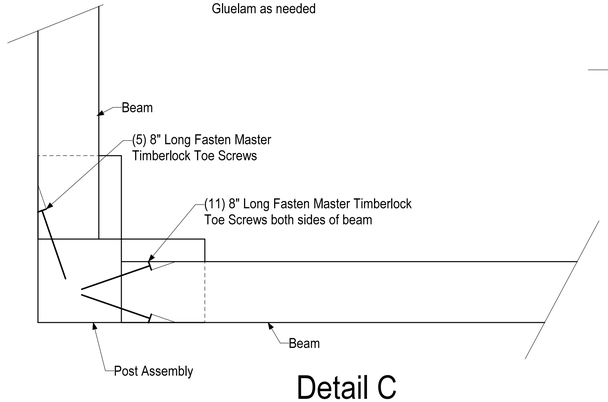


Section A

Notes:
1) Recess Nuts behind into Gluelam as needed

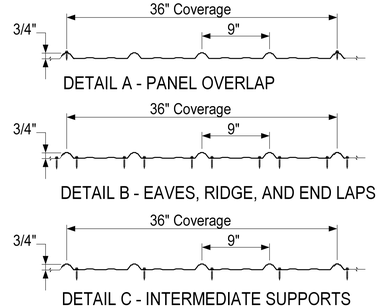
Section B

Notes:
1) Recess Nuts behind into Gluelam as needed

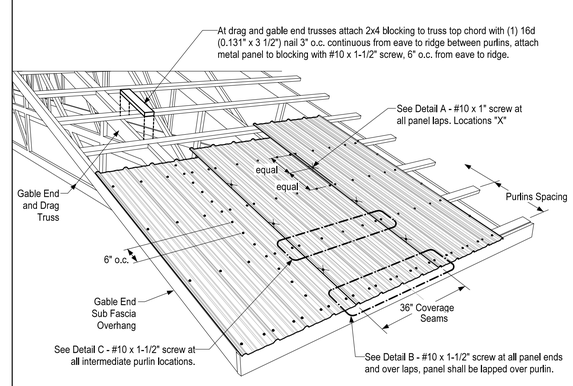


Detail C

Notes:
1) Toe screws shall penetrate members equally and be installed at a 30 deg. angle.



Note: Solid blocking noted shall be attached to all members (studs, top/bottom plate, purlins/girts) with (1) 16d (0.131"x 3 1/2") nail 3" o.c.



RSA1 - Roof Steel Attachement - With Gable and Eave Overhang

WISCONSIN PROFESSIONAL ENGINEER
KEVIN J MUICH
E-45833
MADISON, WI

August 19, 2022

Vilas Engineering LLC
1112 Vilas Ave.
Madison, WI 53715
608-301-5896
info@vilasengineering.com

Architectural Design LLC
W7121 Red River Rd. - Antigo WI 54409
w10258bean@frontier.com
715-489-3721 Jeff Bean

JOB NAME
PEACEFUL VALLEY PAVILION

DATE: 8/18/2022
PROJECT #: 750-0-ILLUS
SCALE: 1 1/2" = 1" UNLESS NOTED
DRAWN BY: JB
PAGE A 4 OF 4