



908 WEST GORDON AVE., SUITE #3,
LAYTON, UT 84041
(801) 547-8133

October 26, 2018

FIRST REVIEW
WC³ Project #: 218-525-141
Weber County

Weber County
Building Inspection Department
2380 Washington Boulevard, Suite 240
Ogden, Utah 84401
Phone: (801) 399-8374

Attention: Craig Browne Building Official

Subject: Camp Shawnee Pavilion – Plan Review Comments 1st Review

Mr. Browne:

West Coast Code Consultants, Inc. (WC³) has completed the first review of the proposed Camp Shawnee Pavilion project located in Eden, UT. This review was based upon the following:

1. Architectural drawings by Bott Pantone Architects, sealed and signed by G. Brian Bott, Licensed Architect.
2. Plumbing drawings by Davis Engineering, sealed and signed by Leland P Davis, Professional Engineer.
3. Electrical drawings dated 7/27/2018 by Beazer Engineering Inc., sealed and signed by David M Beazer, Licensed Professional Engineer.

The 2015 International Codes and 2017 NEC, as adopted by the State of Utah, were used as the basis of our review. Specific comments regarding this project are enclosed with this cover letter. If you have any questions regarding this review, please contact me.

Sincerely,

Mike Molyneux, P.E.
Senior Plan Review Engineer

Attachment: Comments



Plan Review Comments

Project Name: Camp Shawnee Pavilion

Code Review by: John Saunders

Location(s): 2600 East 5100 North, Eden, UT

Structural by: Mike Molyneux

Checked By: Todd Snider

OCCUPANCY & BUILDING SUMMARY:

Type of Construction	Use Group(s)	Occupant Load	Risk Category	Square Footage	Building Height	Sprinklers
II-B	A-3*	210*	II*	1895 ft ²	1 -story, 10' -feet	No*

* - Items noted with an asterisk may change as a result of the plan review comments.

GENERAL INFORMATION:

The submitted documents for the above-mentioned project, as outlined in the cover letter, have been reviewed. The following comments address areas of concern, non-compliance with the governing code, potential errors, or omissions in the proposed design. The appropriate design professional must address each comment below and submit a written response in addition to revised plans and calculations if necessary. **Please cloud any revisions made to the construction drawings and provide the date of the latest revision on each revised sheet.**

CODE REVIEW COMMENTS:

- A1. Please indicate where the address will be listed on the exterior of the building as required by IBC 501.2.
- A2. Please provide a code analysis. Indicate the Type of Construction per Chapter 6 of the IBC, the Use Group per Chapter 3 of the IBC, the occupant load per IBC 1004.1.2, the building area, and the building height.
 - A. Sheet C811 indicates that this building is a Use Group A-3. Please clarify the intended use and function of this space. If this pavilion is for dining, as appears to be implied with the sinks and the Septic calculations shown on sheet P101, this would be an A-2 Use Group per IBC 303.3.
- A3. Provide an allowable height and area analysis for the building per Chapter 5 of the IBC.
- A4. Please clarify if the building will be provided with Fire Sprinklers per IBC Section 903.
 - A. If this building contains an A-2 Use Group and has an occupant load greater than 100 fire sprinklers will be required per IBC 903.2.1.2
- A5. Please clarify if a Fire Alarm system is required per IBC 907.
- A6. Sheet A101: Please address the following:
 - A. Per IBC 1109.2 and IBC 1109.3, the sink and lavatory are required to be accessible. Please provide details to show compliance with Section 606 of ICC A117.1-09. This includes clear floor space, knee and toe clearance, operable parts, mounting height, etc.



- B. Per IBC 1109.13, the outlets and the counter over which they are located are required to be accessible. It appears that the counter will be too high to meet the requirements of Section 308 of ICC A117.1-09 for reach range.
 - C. Please clarify the location and size of the portable fire extinguishers per IBC 906.3.
- A7. Sheet A103: Please address the following:
- A. The door schedule lists hardware groups but no hardware group appears to be provided. Please clarify the hardware to be provided on doors. Verify that hardware will comply with IBC Section 1010.1.9.
- A8. Per IBC 2902.1, please provide a plumbing fixture calculation for this space.
- A. Please clarify where the restrooms for this facility will be provided. Restrooms should be located to comply with IBC 2902.3.2.
 - I. If an alteration to the 500 feet travel distance is being sought, please provide a written request for an alternate per IBC 104.11. Provide justification for why the travel distance is exceeded.
 - B. Per IBC 1109.2, toilet and bathing facilities are required to be accessible.
 - I. Where existing facilities are being used to provide the toilet rooms please provide details for the existing restrooms to show that they meet the accessibility requirements of Chapter 6 of ICC A117.1-09.
 - a. The restrooms providing the minimum number of toilets and lavatories for each gender are required to be accessible.
 - b. Per IBC 1109.2.1, as this is a recreational facility a minimum of one family or assisted use restroom is required to be provided.

MECHANICAL REVIEW COMMENTS:

No mechanical review comments.

PLUMBING REVIEW COMMENTS:

- P1. All hose bibs need to be protected with backflow preventers as per Section 608.15 of the IPC.
- P2. IPC 416.5 requires that tempered water be provided at lavatories. Please provide information for an approved water-temperature limiting device which conforms with ASSE 1070 for lavatories.
- P3. Please indicate the maximum allowable flow rates for fixture in accordance with IPC 604.4 (e.g. 2.2 GPM at the lavatory).
- P4. Please clarify the materials for the water supply piping and connections per IPC 605.3.
- P5. Please clarify the materials for the DWV per IPC Section 702.
- P6. Please clarify how freezing protection will be provided for piping per IPC 305.4.

ELECTRICAL REVIEW COMMENTS:

- E1. Please provide complete and detailed available fault current calculations (in accordance with NEC 110.9 and 110.10) and show the following on the plans:



- A. Specify the KVA rating and impedance of the utility transformer. If this information cannot be obtained from the power company, please base the calculations on the worst-case scenario per the infinite bus method using the largest KVA rated transformer required for the service and figure such transformer with an impedance of 2% or less. As an alternate, please provide documentation from the power company clearly noting what the starting fault current is on the secondary side of their transformer.
 - B. Show lengths and types of all conductors in the calculations and specify the resistance of such conductors.
 - C. Specify the amount of available fault current that could be provided to each panel and each piece of electrical equipment based on the calculations.
 - D. Show the fault current rating of each switchgear and each panelboard.
 - E. Specify on the plans the short circuit current ratings of all overcurrent protection devices or add a note on the plans that all overcurrent protection devices will have the same fault current rating as the rating of the panel or switchgear they are located within.
- E2. Sheet E101: Please address the following:
- A. Per NEC 250.50, all grounding electrode systems present in the building are required to be bonded. Please specify all of these electrodes and how they will be bonded. It appears that this building may contain the following: metal underground water pipe, concrete encased electrodes, and metal in ground support structures.
 - B. Please specify the size of the bonding jumper or grounding electrode conductors to each of the grounding electrodes per NEC 250.66.
- E3. Please provide information for the existing meter. Verify that it is adequately sized for an additional 100 amp breaker to be provided for this building. This includes verifying that the service conductors are sized to supply the existing meter and new feeders.

ENERGY REVIEW COMMENTS:

- N1. Per IECC 404.5.1 the maximum distance of pipe from the hot water source to the lavatory cannot exceed 6 feet maximum, as such it appears that either instantaneous water heaters or recirculating systems are required.
- N2. It appears that the building may be required to have recirculating hot water system. Please address the following:
 - A. Indicate the insulation requirements for the piping in accordance with IECC C404.4.
 - B. Verify that automatic shutoff will be provided, in accordance with IECC C404.6.1, when there is limited hot water demand and when the temperature in the recirculating pipe reaches the design temperature.
- N3. For lighting not controlled by occupancy sensors please address the following:
 - A. Please clarify how automatic lighting shutoff, as required by IECC C405.2.2.1, will be provided. Provide information for the occupant override in accordance with this Section as well.



- B. Please clarify how lighting controls are provided for each area to allow for a minimum of 50% uniform lighting reduction as required by IECC C405.2.2.2.
- N4. IECC C405.2.3 requires that independent daylight responsive (photo-sensor) controls be provided for luminaires within day light zones. Please address.
- N5. Please provide a lighting power analysis for the interior lighting (i.e. COMcheck) in accordance with IECC C405.5.1. The information shown in this document needs to match what is shown in the Lighting Fixture Schedule. Fixtures P, R, S, T or U are not shown in the analysis. Please address.
- N6. Please provide a lighting power analysis for the exterior lighting (i.e. COMcheck) in accordance with IECC C405.6.2.
- N7. IECC C406.1 requires that in addition to meeting the standard requirements of the IECC, an additional efficiency package option must be selected. One of the below packages must be selected for the project. Please indicate which method is being used and show conformance with the applicable Section.
- A. As this building is not conditioned and has no mechanical systems, it appears that either on-site power or higher efficiency lighting will be required.

STRUCTURAL COMMENTS:

- S1. Please clarify the occupant load for this building. Per IBC 1604.5, as the primary function of this building is assembly if the occupant load exceeds 300 it will be Risk Category III structure.
- S2. The plans must provide a “Statement of Special Inspections” per IBC 1704.2.3 and as defined in IBC 1704.3. Not only should this list all special inspection and structural testing items that are required by the IBC, but detail the extent and frequency of the inspections/tests. Please address.

If you have any questions regarding the above comments, please contact Mike Molyneux at mikem@wc-3.com or by phone at (801) 547-8133.

[END]