



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

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August 9, 2017

FIRST REVIEW  
WC<sup>3</sup> Project #: 217-525-137

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

Attention: Craig Browne, Building Official

Subject: Summit Powder SFD, Bldg 11 – Plan Review Comments

Mr. Browne:

West Coast Code Consultants, Inc. (WC<sup>3</sup>) has completed the first review of the proposed Summit Powder SFD Bldg 11 project located in Eden, UT. This review was based upon the following:

1. Civil drawings dated 7/14/2017 by Talisman, sealed and signed by Ryan W Cathey, Professional Engineer.
2. Structural drawings and calculations dated 7/21/2017 by Dynamic Structures, sealed and signed by Jay D Adams, Professional Structural Engineer.
3. Mechanical and plumbing drawings dated 3/13/2017 by SMD Engineering, sealed and signed by Scott M Deakins, Professional Engineer.
4. Electrical drawings dated 7/1/2016 by Salmon, sealed and signed by Joshua Oakeson, Professional Engineer.

The 2015 IRC, 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 do not hesitate to contact me.

Sincerely,

Mike Molyneux  
Attachment: Comments



## Plan Review Comments

**Project Name:** Summit Powder SFD Bldg 11

**Code Review by:** Jason vonWeller

**Location(s):** 7760 East Horizon Bldg 11, Eden, UT

**Structural by:** Mike Molyneux

**Checked By:** DeAnn Wilde

### SQUARE FOOTAGE SUMMARY:

Main Level	Upper Level	Finished Basement	Unfinished Basement	Deck(s)	Covered Patio(s)	Garage	Carport
578- ft <sup>2</sup>	595- ft <sup>2</sup>	-	-	-	-	-	-

### GENERAL INFORMATION:

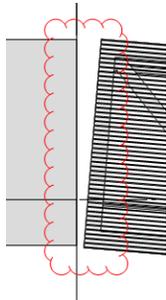
The submitted documents for the above-mentioned project, as outlined in the cover letter, have been reviewed. The following comments address areas of concern, non-compliance with the governing code, potential errors, or omissions in the proposed design. The appropriate design professional must address 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:

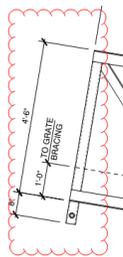
- A1. A geotechnical report is required for the new construction. Please provide.
- A2. General Note: Common walkways, stairs, handrails, guards and associated structures and elements for the site shall be by separate permit and engineering application per Weber County policy and are not part of this review.
  - A. Sheet 2.00: Keynote 1 states rockery wall to be constructed per “rockery construction for wet conditions.” This statement is insufficient for construction. Any retaining walls exceeding 4-feet in height or a 1:2 slope shall be engineered. A complete design prepared by a Utah-licensed geotechnical engineer will be required for the retaining walls throughout the PRUD development, and are required to be submitted to Weber County for review and approval prior to installation. Additionally:
    - I. Sheet 3.00 and A300: The elevations do not detail a retaining wall for the specific building, however the overall site plan does. Please note and address on the architectural plans:
      - a. Retaining walls specific to an adjacent structure require detailed engineering and review as part of the building permit per Weber County policy. Please specify, detail graphically, and provide required retaining wall engineering.
        - i. Retaining walls that support cut or filled slopes as well as those that may support footings from ascending or descending slopes shall be designed for such loads, per IRC R403.1.7.
      - b. Please note, the Weber County Building Official may require an investigation and inspection, at no expense to the jurisdiction, and by approved authorities, to ensure the intent of Section R403.1.7 is met. R109.1.5. Such report shall include the

consideration of material, height of slope, slope gradient, load intensity and erosion characteristics.

- A3. Sheets A001, A500 and A510 provide exterior wall assembly details. Where do the floor plans identify which wall type is to be used on each of the exterior walls? Please clarify and make necessary corrections.
- A4. Sheet A100: A note on the site plan states “line of separation between building – see 1/A002 for fire separation distance requirements”. Sheet A002 is not a part of the submitted plan set it appears that this should be referencing Sheet A101.
- A5. Sheet A101: The code analysis has been based upon the 2015 IBC. Per IBC 101.2 Exception, single family dwellings shall comply with the International Residential Code. Please make all necessary corrections to the plans to ensure the 2015 IRC and Utah State Amendments have been utilized for the design of the single-family dwelling.
- A6. Sheet A200: Please address the following:
  - A. The elevation drawings provide keyed numbers for the doors and windows; however, a door and window schedule does not appear to be a part of the plans. Please provide.
  - B. Where do the double doors from Bedroom 1 on the lower level lead to. The elevation drawings provided on Sheet A300 and do not appear to show doors on the lower level. Please clarify in writing and make necessary corrections to the plans.
  - C. A ramp is shown on Detail 2. Sheets A700 and S6.1 show the ramp. However, there is no information in the plans detailing how the ramp is being attached to the structure. Please provide complete details.



Sheet A700

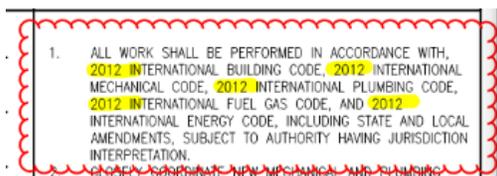


Sheet S6.1

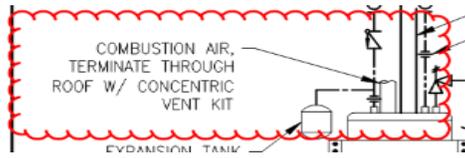
- A7. Please verify that bedroom windows will meet the minimum openable area for emergency escape and rescue openings, per R310.2.

**MECHANICAL REVIEW COMMENTS:**

- M1. Sheet MH001: Per Utah Code *Title 15A* please correct details to reflect the currently adopted 2015 IRC.

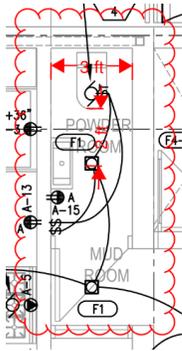


- M2. Sheet PP501: Per the specifications provided on Sheet PP601, the detail shown below is inaccurate. Please clarify whether high efficiency water heaters are being used.



**PLUMBING REVIEW COMMENTS:**

- P1. Please provide a note that trenching installed parallel to footings and walls shall not extend into the bearing plane of the footing or wall, per P2604.4
- P2. A water closet shall not be set closer than 30" center to center to adjacent fixtures. Additionally, there shall be a minimum of 21 inches in front of a water closet. Please note and clarify this condition throughout the plans, per P2705.



**ELECTRICAL REVIEW COMMENTS:**

- E1. Sheet E300: Please address the following:
  - A. Detail on the plans the dishwasher branch circuit shall be protected by GFCI, per E3902.9.
  - B. Please note on the plans all 125-volt, single phase, 15- and 20-amp receptacles in laundry areas shall have GFCI protection, per E3902.9.
  - C. Please note that a dedicated 20-amp branch circuit for the bathroom receptacle outlets is required. This circuit cannot supply any other receptacles, lights, fans, etc.
  - D. Please note that electrical outlets in floors shall not be counted as part of the required number of receptacle outlets, except where located within 18" of walls, per E3901.2.3.
  - E. Detail on the plans the location of all required smoke detectors, per IRC R314.
  - F. Detail on the plans the location of all required carbon monoxide detectors, per IRC G2407.12.
  - G. Detail on the plans outlets for receptacles rated at 125 volts, 15- and 20-amps are required to be tamper-resistant.

**ENERGY REVIEW COMMENTS:**

- N1. RESCheck: Please address the following:



- A. The REScheck identifies compliance at 0.4% better than code. Per IECC Section R401.2 and the Utah State Amendments, compliance may be shown by demonstrating a result, using REScheck 2012 Utah Energy Conservation Code, and after January 1, 2017, shall pass at 3 percent better than code.
- B. The square footage for Building 11 is 1,173 square feet. The REScheck identifies the floor area as 1,709 square feet. The REScheck needs to address the actual thermal envelope for Building 11. Please clarify.
- N2. Please indicate the U-factor for the windows on the plans. Include a note which clarifies that all U-factors shall be determined by testing in accordance with NFRC 100 and labeled as such by the manufacturer, per Section 102.1.3.
- N3. Please note that a permanent certificate shall be completed and located in an approved location that lists the predominant R-values of the insulation installed in the ceiling/roof, walls, foundation and ducts outside conditioned spaces, and U-factors for fenestration.
- N4. Please provide notes and details on the plans showing the air barrier and vapor retarder, as required by IRC R702.7. Information on construction documents shall be sufficient in detail to indicate that all work proposed will conform to the provisions of IRC N1101.5.

## **STRUCTURAL COMMENTS:**

### **Structural Drawings:**

- S1. Please add a note to the plans stating that all fasteners (i.e. nails, screws, anchor bolts, etc.) which are to be installed in preservative treated wood (i.e. sill plates) shall meet the requirements of IBC 2304.10.5.
- S2. There is a potential soft story per Table 12.3-2 of ASCE 7-10. Please see Section 12.3.3.1 of ASCE 7-10.
- S3. Sheet S0.1: The design criteria lists the exposure as category B. It appears that this could potentially be an exposure category C. Please justify the use of B.

### **Structural Calculations:**

- S4. There is an in-plane discontinuity as defined in Table 12.3-2 of ASCE 7-10 along gridline C'. Please address.
- S5. The steel beam calculations are per the AISC 360-05. Please verify that the calculations meet the requirements of AISC 360-10.
- S6. The footing calculations consider an allowable bearing pressure of 2600psf. Please clarify how this bearing pressure was obtained.
- S7. The calculations for the bridge use A992 material for all structural members. This is a grade 50 steel. Please verify that the appropriate material is used for all structural members (A36, A500, etc.).

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]