

May 12, 2021

City of Lee's Summit  
220 South East Green  
Lee's Summit, Missouri 64063

**LAKEWOOD LOCALS  
LEE'S SUMMIT, MISSOURI  
RESPONSE TO COMMENTS**

To Whom it May Concern,

This letter is to address the comments received on May 03, 2021.

The following is in response to the plan review comments. The current design of the Patio is intended to act as a 3 seasons room and not intended to be 100% enclosed or insulated. The images below show how the room is open to the exterior. The intent of the Garage Doors is more for security. Attached also find an egress analysis for the space.



**BUILDING PLAN REVIEW RESPONSES**

4. 2018 IBC 703.2 Fire-resistance ratings. The fire-resistance rating of building elements, components or assemblies shall be determined in accordance with the test procedures set forth in ASTM E 119 or UL 263 or in accordance with Section 703.3. The fire-resistance rating of penetrations and fire-resistant joint systems shall be determined in accordance Sections 714 and 715, respectively.

Action required:

- Provide fire rated assembly (or approved alternate) at abandoned metal door.

**\*\*Without sufficient separation wall a fire suppression sprinkler will be required throughout entire building or fire area.**

- Provide specifications or details for fire assembly pipe/conduit penetrations.

**FP&C Response:** The wall exceeds the thickness of 4.2 inches in accordance with Table 722.3.2 as a 2-hour wall. The existing wall is a multiwythe masonry wall that exceeds 8 inches which will exceed the 2-hour rating requirements in accordance with 722.3.3. A more destructive inspection will need to be performed if the exact rating is needed.

5. 2018 IBC 602.1 General. Buildings and structures erected or to be erected, altered or extended in height or area shall be classified in one of the five construction types defined in Sections 602.2 through 602.5. The building elements shall have a fire-resistance rating not less than that specified in Table 601 and exterior walls shall have a fire resistance rating not less than that specified in Table 602. Where required to have a fire-resistance rating by Table 601, building elements shall comply with the applicable provisions of Section 703.2. The protection for openings, ducts and air transfer openings in building elements shall not be required unless required by other provisions of this code.

Action required: Update code information to show actual construction type which is VB.

- If it is actually your intention to type this addition as a IIIB you will need to provide verification that existing construction is also IIIB or provide actual fire wall (not barrier) between the two spaces. Also, wood would not be allowed for exterior wall construction.

**FP&C Response:** If the building is documented at type V-B we have no objections. FP&C Consultants did not perform a total building evaluation and only looked at the space adjacent to the Patio. This space was witnessed as noncombustible CMU and brick walls with steel roof structure. The addition will match the V-B as documented by the city records to allow the other spaces in the building to remain as originally designed.

6. 2018 IBC 1008.3 Emergency power for illumination. The power supply for means of egress illumination shall normally be provided by the premises' electrical supply.

1008.3.1 General. In the event of power supply failure in rooms and spaces that require two or more means of egress, an emergency electrical system shall automatically illuminate all of the following areas:

1. Aisles.
2. Corridors.
3. Exit access stairways and ramps.

1008.3.2 Buildings. In the event of power supply failure in buildings that require two or more means of egress, an emergency electrical system shall automatically illuminate all of the following areas:

1. Interior exit access stairways and ramps.
2. Interior and exterior exit stairways and ramps.
3. Exit passageways.

4. Vestibules and areas on the level of discharge used for exit discharge in accordance with Section 1028.1.
5. Exterior landings as required by Section 1010.1.6 for exit doorways that lead directly to the exit discharge.

1008.3.3 Rooms and Spaces. In the event of power supply failure an emergency electrical system shall automatically illuminate all of the following areas:

1. Electrical equipment rooms.
2. Fire command centers.
3. Fire pump rooms.
4. Generator rooms.
5. Public restrooms with an area greater than 300 square feet.

Action required: Provide emergency lighting at exterior side of exit doors.

**FP&C Response:** Acknowledge emergency lights will be added per item 5 above.

#### **FIRE PLAN REVIEW RESPONSES**

1. 2018 IFC 1004.3- Posting of occupant load. Every room or space that is an assembly occupancy shall have the occupant load of the room or space posted in a conspicuous place, near the main exit or exit access doorway from the room or space. Posted signs shall be of an approved legible permanent design and shall be maintained by the owner or authorized agent.

Action required: The space of the new space shall be posted.

**FP&C Response:** Acknowledge a posted occupant load sign of 48 will be added on the patio adjacent to the existing door going back into the building.

2. 2018 IFC 903.2.1.2- Group A-2. An automatic sprinkler system shall be provided for Group A-2 occupancies where one of the following conditions exists: 1. The fire area exceeds 5,000 square feet (465 m<sup>2</sup>); 2. The fire area has an occupant load of 100 or more; or 3. The fire area is located on a floor other than the level of exit discharge.

Action required: The occupant load of the existing space has a discharge into the proposed space, the combined occupant load exceeds the 100-occupant load for the space. Sprinkler the building or provide a separate egress from the existing space with fire separation per the IBC from the proposed space.

**FP&C Response:** Egress is designed in accordance with 1005.5 and the two existing exits are sized to have 50% of the calculated occupant load. Each exit is not required to be designed for 100% of the occupant load. The existing interior building space has a posted occupant load of 90 which means that each exit must serve at a minimum 45 occupants. The new patio space has an occupant load of 48 occupants for a total of 93 occupants.

The provisions of chapter 9 do not consider cumulative occupant load as part of the sprinkler design requirements only the design occupant load of the fire area. If it was intended to assume cumulative, it is still under the 100 allowable.

3. 2018 IFC 906.2- General requirements. Portable fire extinguishers shall be selected, installed and maintained in accordance with this section and NFPA 10.

Action required: A fire extinguisher shall be provided in the proposed space.

**FP&C Response:** Acknowledge.

4. [BE] 1004.2 Cumulative occupant loads. Where the path of egress travel includes intervening rooms, areas or spaces, cumulative occupant loads shall be determined in accordance with this section.

[BE] 1004.2.1 Intervening spaces or accessory areas.

Where occupants egress from one or more rooms, areas or spaces through others, the design occupant load shall be the combined occupant load of interconnected accessory or intervening spaces. Design of egress path capacity shall be based on the cumulative portion of occupant loads of all rooms, areas or spaces to that point along the path of egress travel.

Action required: The occupant load of the existing space has a discharge into the proposed space, the combined occupant load exceeds the 100-occupant load for the space. Sprinkler the building or provide a separate egress from the existing space with fire separation per the IBC from the proposed space.

**FP&C Response:** The original space is provided with two exits and the posted occupant load in the space is 90 occupants, which means each exit serves 45 occupants, the field survey indicated a slightly higher number which is reflected on the drawing. The cumulative occupant load of the space is 47 plus the 48 occupants which is 95 total occupants. This is less than the 100 occupants and in compliance with 1005.5. See response to comment # 5 above for more detail.

5. 2018 IFC 1008.1 Illumination required. The means of egress shall be illuminated at all times the building space served by the means of egress is occupied.

**FP&C Response:** Acknowledge signs and lights will be added.

6. [BE] 1008.3.2 Buildings. In the event of power supply failure, in buildings that require two or more means of egress, an emergency electrical system shall automatically illuminate all of the following areas:

1. Interior exit access stairways and ramps.
2. Interior and exterior exit stairways and ramps.
3. Exit passageways.
4. Vestibules and areas on the level of discharge used for exit discharge in accordance with Section 1028.1.
5. Exterior landings as required by Section 1010.1.6 for exit doorways that lead directly to the exit discharge.

Action required: Provide emergency lighting over exterior exit discharge areas.

**FP&C Response:** Acknowledge signs and lights will be added.

7. 701.5 Maintaining protection. Materials, systems and devices used to repair or protect breaches and openings in fire-resistance-rated construction and construction installed to resist the passage of smoke shall be maintained in accordance with Sections 703 through 707.

Action required: The blocked door shall be removed and the wall restored to the two-hour rating.

**FP&C Response:** The existing door and frame is rated per pictures in the field. The intent is to cover the door with a wall and provide 2-hour separation.



8. 705.2.2 Signs. Where required by the fire code official, a sign shall be permanently displayed on or near each fire door in letters not less than 1 inch (25 mm) high to read as follows:
1. For doors designed to be kept normally open: FIRE DOOR—DO NOT BLOCK.
  2. For doors designed to be kept normally closed: FIRE DOOR—KEEP CLOSED.

705.2.3 Hold-open devices and closers. Hold-open devices and automatic door closers, where provided, shall be maintained. During the period that such device is out of service for repairs, the door it operates shall remain in the closed position.

Action required: Any door opening between fire areas shall be labeled and kept closed unless provided with an approved door release system.

**FP&C Response:** Acknowledge the door will have an automatic closer on it and signage will be added.

9. (Action Required) Add exit and emergency lighting to the West door of the proposed addition.

**FP&C Response:** Acknowledge signs and lights will be added.

If you have any questions or comments, please feel free to contact me.

Sincerely,

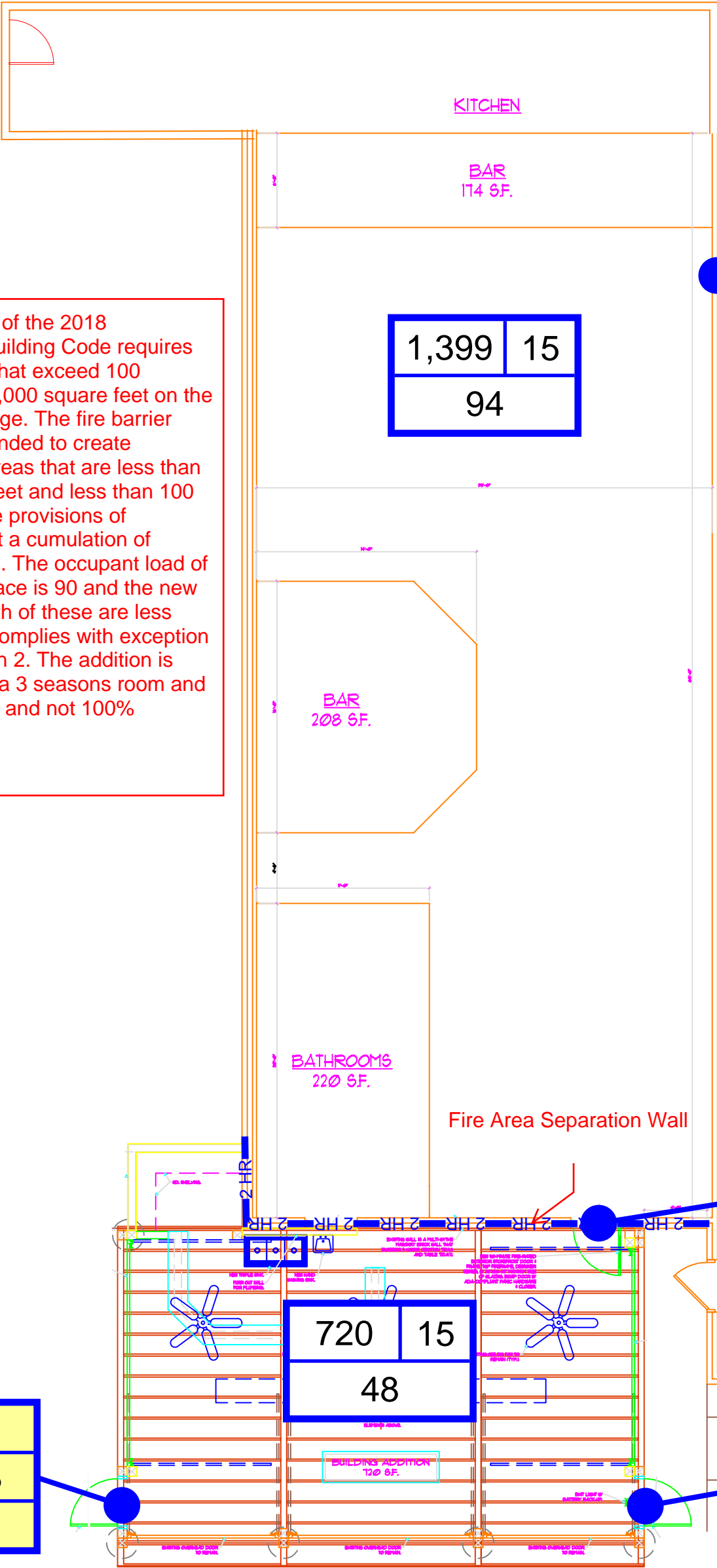
**FP&C Consultants KC, LLC**



Justin Burton

JB/mmww

Attachment



47
168
2.8

Total Square footage of the Space is approximately 2,500

Total Square footage of Seating Area is approximately 1,399

Total Square footage with Patio Area is approximately 3,220

47
168
2.8

47
168
2.8

47
168
2.8

The provisions of the 2018 International Building Code requires A-2 fire areas that exceed 100 occupants or 5,000 square feet on the level of discharge. The fire barrier upgrade is intended to create separate fire areas that are less than 5,000 square feet and less than 100 occupants. The provisions of 903.2.1.2 is not a cumulation of occupant loads. The occupant load of the existing space is 90 and the new space is 48 both of these are less than 100 and complies with exception 1 and exception 2. The addition is intended to be a 3 seasons room and is not insulated and not 100% enclosed.