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August 16, 2016
Revised August 18, 2016

Mr. Sam Hubbard
Village of Arlington Heights
33 South Arlington Heights Road
Arlington Heights, IL
60005

RE: Arlington Ale House, 100 W. Campbell, Third Floor, Staff Comments Round #1

Dear Sam,

Building Department.

Comments regarding safe egress, occupancy by IBC and occupancy by IL Plumbing Code.

Maximum number of occupants by egress stair width per BC 2009.

East stair.
50" x .03"/occupant = 166.67 occupants
West stair.
44" x .03"/occupant = 146.67 occupants
313 occupants total

Compliance with IL Plumbing Code.

313 occupants/2 = 157 male occupants
- 2 water closets required (1 provided but complies by substituting per code an additional urinal for a water closet)
- 1 urinal required (4 provided, 1 substituted leaving 3 as additional)
- 2 lavatories required (3 provided)

313 occupants/2 = 157 female occupants
- 4 water closets required (plan complies if the existing unisex powder room is designated female)
- 2 lavatories required (3 provided)

The proposed plan complies.

Compliance with egress provisions of IBC 2009

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Although the building was designed under a previous code, HKM finds no non-compliant egress requirement for the current or proposed space configuration under the current code. The proposed bridge to the parking deck was not considered. For this exercise HKM limited its egress analysis to these items:

Number of exits
Stair width (limits occupancy per above)
Common path of travel
Dead end
Main exit required
Aisle widths at tables and chairs (see diagram)
Travel distance (see diagram)
Separation of exits*

*This is a matter of interpretation. For the proposed roof deck, the separation of the existing exits from the roof deck to the interior work if the code reviewer agrees that 1/3 the diagonal dimension can be used. If the code reviewer finds that ½ the diagonal dimension must be used, the deck can be brought into compliance with some adjustments to its shape. This has to do with requirements for sprinklered vs non-sprinklered spaces as they apply to an outdoor space.

Practical scenarios using an occupancy limit of 313.

1. Ale house + Roof Deck
    a. Classroom 0
    b. Waiting 23
    c. Indoor seating 133
    d. Outdoor seating 128
    e. Standing 17
    f. Staff 12
    g. Total 313 occupants
2. Corporate Conferencing
    a. Classroom 126 seats
    b. Staff and presenters 15
    c. Total 141 occupants

Fire Safety Division

1. Agree. See egress diagram attached.

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2. We believe we comply with separation distance requirements for the outdoor deck without considering the proposed “bridge”. See Compliance with egress provisions of IBC 2009 above.
3. Agree.
4. Agree.
5. See attached diagram regarding travel distance to exits.
6. Agree.
7. Agree.

Engineering Department

No comments.

Fire Department

No comments.

Community Service Bureau

Petitioner agrees with comments and will comply with Agent contact information request upon approval of project.

Disability Services

1. Dining counter and bar accessibility comments. Petitioner agrees to maintain IAC accessibility compliance.

Planning and Community Development

7. Signage, critical to project feasibility, will be pursued on a separate track with Stave Hautzinger, coordinated with the Theater operators.
8. Agree.
9. Agree.
10. Agree. See above.
11. N.A.
12. Petitioner agrees to work with the Fire Department to insure that the operation of the existing smoke vents is not impaired and that they are out of reach of roof deck patrons. That may result in a layout that extends south of the existing vents, but separated by rails and adequate distance.

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13. See exhibits.
14. See exhibits.
15. Background music is a necessary part of the function of the roof deck. A directional sound system will be utilized that will localize most of the sound to the deck area.
16. See exhibits.
17. See exhibits.
18. See exhibits.
19. Agree.
20. Petitioner requests a variation so that a traffic study and parking analysis need not be prepared.

Public Works Department

1. Drainage can be accommodated under concrete roof pavers supported by shims and pedestals. The concept is for a level surface. As the roof slopes down toward the south, the height of the pedestals would adjust to keep the roof surface level. In other conditions, curbs would be installed to support rail and screen wall systems. These can be detailed to allow for proper drainage.
2. The roof structure was designed for such an application. Attached is a letter from the original structural engineer. As the project progresses, the engineer will monitor the true weight of the imposed loads and limit the designs accordingly.
3. The proposed “bridge” is not intended to be part of the required means of egress. It could have a locked gate.
4. With the services of an acoustical engineer, the original roof structure was designed for the acoustic isolation of the theater from car noise in the adjacent parking deck and airplanes, etc and with a future roof deck in mind. It has a double concrete slab with a foam interlayer supported by a metal deck on long span joists. That being said, the final blessing of the current design may need to come from an acoustical engineer.
5. The roof was originally planned for such a purpose.
6. Pavers are loosely installed and can be removed for roof inspection.
7. We think it is close just by observation, but the project elevations need to be surveyed.
8. Properly maintained the “bridge” would not need to be closed in winter, even if the weather precluded the use of the roof deck. Seasonal scheduling has not been determined by the Owner yet.

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9. Drainage from the “bridge” can be directed to the theater roof.
10. Snow from the “bridge” can be pushed into unused areas of the deck if the Owner would decide to maintain a clear path to the indoor space in winter.
11. Agree.

We hope this helps! We are ready to discuss when needed.

Submitted,

Mark Hopkins
Principal

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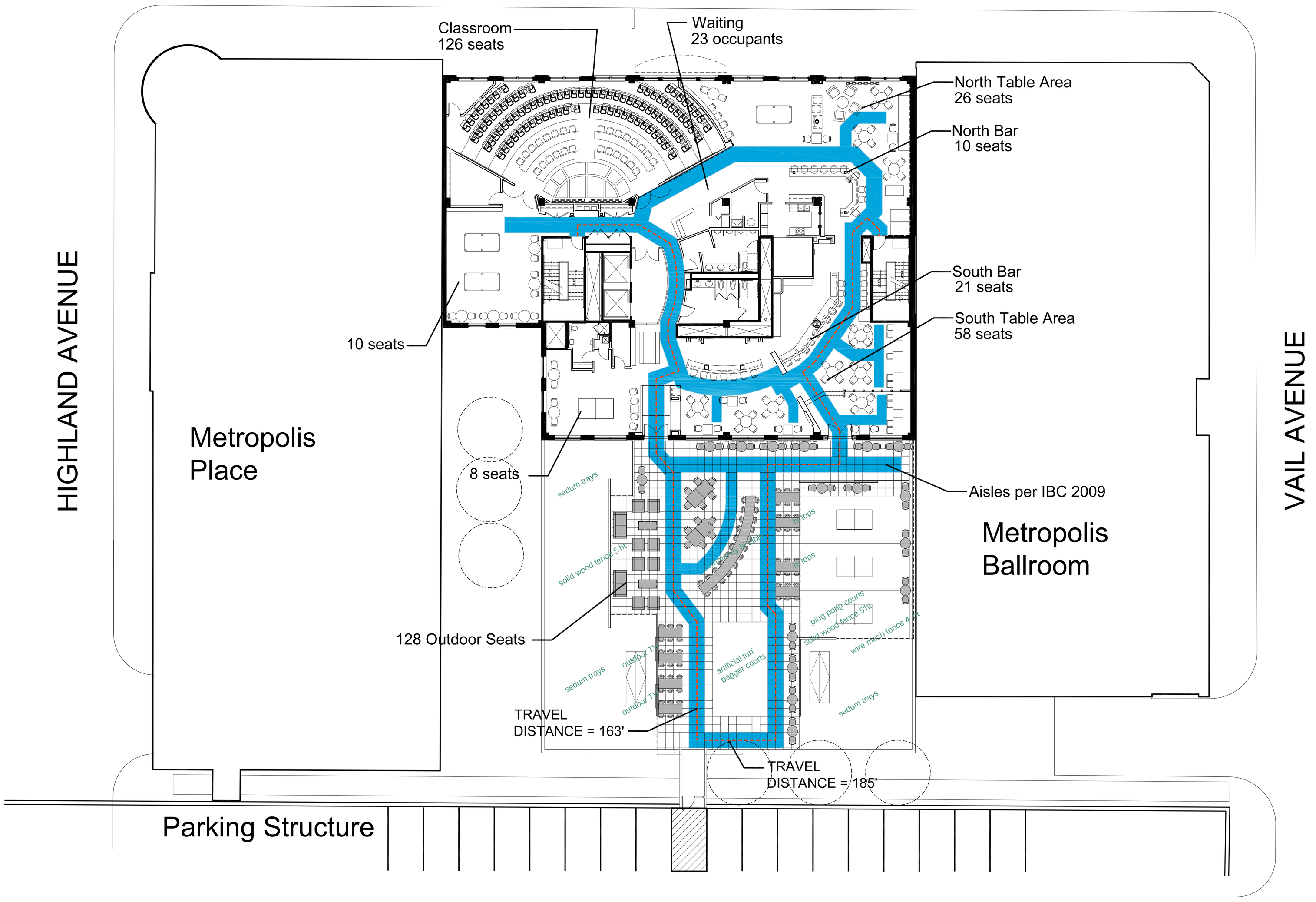

Proposed Modifications - EGRESS

Lindsay & Associates, Inc.

Consulting Structural Engineers

July 5, 2016

Mr. Mark W. Hopkins
HKM Architects + Planners, Inc.
43 S. Vail Avenue
Arlington Heights Illinois 60005

Project: Metropolis Project Theater / Office
Theater Roof Structure at Office 3rd Floor Level
Arlington Heights, Illinois
Lindsay Project No. pHKM20160701 Client Project No.

Dear Mark:

Lindsay & Associates, Inc. has completed the review of structural capacity of the Theater Roof Structure based upon the information presented on Sheet T-S2.3 dated 09-24-99 of the original structural drawings prepared for the above referenced project.

The existing Theater Roof Structure has been designed to safely support an assembly Live Load of 100psf in addition to the total Dead Load of 145psf (105psf structure self-weight + 40psf super-imposed dead load).

If you have any questions or comments concerning the above information, or if we can be of further assistance, please do not hesitate to call us at your earliest convenience.

Sincerely,

LINDSAY & ASSOCIATES, INC.

Terrence M. Lindsay, PE, SE, SECB
President

TML: psd
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