NEW YORK STATE DEPARTMENT OF STATE
DIVISION OF CODE ENFORCEMENT AND ADMINISTRATION

APPLICATION FOR VARIANCE OR APPEAL

UNIFORM FIRE PREVENTION AND BUILDING CODE

06/01/2011

This is an application for a variance or appeal of a local determination regarding applicable provisions of the New York State Uniform Fire Prevention and Building Code. To be deemed complete, the application must be signed by the petitioner or authorized agent, must contain all necessary documentation, be accompanied by the appropriate fee and been reviewed and accepted by a Regional Office.

The completed application including at least one (1) copy of all required documents must be submitted to the appropriate Regional Office. For Board of Review petitions, seven (7) additional copies of all documents shall be delivered to our Central Office in Albany at the address below, after Regional Office review. A hearing will be scheduled when all required documents are received.

PETITION NO: 2016-0269

ROUTINE VARIANCE ☐
BOARD VARIANCE ☐
BOARD APPEAL ☐

(FOR OFFICE USE ONLY)

Department of State
Division of Code Enforcement and Administration
One Commerce Plaza
99 Washington Avenue
Albany, NY 12231-0001
(518) 474-4073

Mailing an application directly to our Central Office without first involving a Regional Office will result in a delay.

REGIONAL OFFICE PHONES:

BUFFALO (north)	(716) 847-7611
BUFFALO (south)	(716) 847-7612
CAPITAL	(518) 477-7497
FINGER LAKES	(315) 587-4563
KINGSTON	(845) 334-9768
LONG ISLAND	(631) 952-4909
NORTHERN NY	(518) 441-1895
PEEKSKILL	(914) 734-1347
ROCHESTER	(585) 533-1058
SOUTHERN TIER	(585) 437-5534
SYRACUSE	(315) 428-4434
UTICA	(315) 793-2526

Certain variance requests may be treated as routine cases as determined by the Department in cooperation with the local code enforcement office. Provide two (2) copies of all required documents to the appropriate Regional Office.

PART 1 - GENERAL INFORMATION

PETITIONER

(Check one) ☐ Owner ☐ Agent ☐ Architect or Engineer ☐ Attorney

Name: Hugh Bahar, Project Manager/Sr. Engineer
Title/Company: Cornell University
Mailing Address: 102 Humpreys Service Building
Ithaca, NY 14853-3701
Telephone: 607.255.3853
e-mail: hrb2@cornell.edu

PROPERTY

☐ City ☐ Town ☐ Village of Ithaca County of Tompkins

Address: 947 University Ave Ithaca NY 14853
Tax Map No.: Tax ID #30.-1-1.2

Owner if other than petitioner

Name: Hugh Bahar, Project Manager/Sr. Eng
Street: Cornell University
Post O: 102 Humpreys Service Building
Teleph: Ithaca, NY 14853-3701
Fax: 607.255.3853
e-mail: hrb2@cornell.edu

Code Enforcement Official

Name: Mike Niechwiadowicz
Street Addre: Director of Code Enforcement
Post Office: 108 E. Green St. 4th Floor
Telephone: Ithaca, NY 14850
Fax: Ph: 607-274-6508 Fx: 607-274-6521
e-mail: MNiechwiadowicz@cityofithaca.org

Addresses for Department of State Regional Offices and tentative hearing dates can be found on our web site at www.dos.state.ny.us or by calling (518) 474-4073 during normal business hours.

PART 2 - MINIMUM BUILDING INFORMATION

Height in Stories: 4 | Gross Area (all floors): 24,577 Sq. Ft. | Construction type: IIB

Occupancy: ☐ One- family Dwelling ☐ Two-family Dwelling ☐ Townhouse ☐ Accessory structure

☐ Other F1 (first floor) + A3 upper floors (Library)

PART 3 - APPLICABLE BUILDING CODE AND RELIEF REQUESTED (Check all that apply)

☐ Title 9 - Uniform Fire Prevention and Building Code - Applicable 1/1/1984 to 12/31/2002

☐ Title 19 - Uniform Fire Prevention and Building Code - Applicable 1/1/2003 to present

☐ Part 1220 Residential ☒ Part 1221 Building ☐ Part 1222 Plumbing ☐ Part 1223 Mechanical

☐ Part 1224 Fuel Gas ☐ Part 1225 Fire ☐ Part 1226 Property Maintenance

☒ Part 1227 Existing Building

☐ Multiple Residence Law (MRL)

On the chart below, list the specific code sections which are the subject of your variance request. (Use separate sheet if necessary).

☐ Variance ☐ Appeal ☒ Appeal / variance

CODE SECTION(S)	TOPIC	RELIEF SOUGHT
2016 NY Code (2015 IBC): #1. Use of four (4) story Type IIB construction in lieu of Type IIA construction: 602.1, 602.2 & Table 601 #2. New Elevator car size not sized for ambulance stretcher floors 3 & 4: 3002.4 #3. Use of alternative for standby power for required atrium smoke control equipment: 404.7, 909.11 and 2702.2.15		

Routine (administrative) variance review process . . . . . $ 50

Board of Review Petitions

Construction, alteration, or renovation of residential or agricultural occupancies no more than one structure; no more than 2 dwelling units. . . . . $ 50

Construction, alteration or renovation of other buildings or structures having a gross area of:

- not more than 8,000 square feet . . . . . $ 100
- more than 8,000 square feet but not more than 25,000 square feet. . . . . $ 300
- more than 25,000 square feet but not more than 50,000 square feet . . . . . $ 500
- more than 50,000 square feet . . . . . $ 1,000

Maintenance or use of buildings or materials and not otherwise provided for above . $ 100

Checks must be made payable to New York State Department of State. Enter amount of check: $300

I make this application pursuant to 19NYCRR Part 1205 and I assert under penalty of perjury that the information furnished by me in support of this application is true and correct to the best of my knowledge.

Previous Action Determination #2013-0456 and #2015-0432

Has any previous action related to the subject property been taken by the Department of State or another administrative agency or a court? (Include any formal interpretations, decisions, orders or informal advisories issued by the Department of State, the Division of Housing and Community Renewal or the Department of Labor.)

☐ No ☒ Yes (Describe below and provide relevant documents.)

☒ I request that a hearing before the Board of Review be scheduled on this application for variance or appeal.

SIGNATURE Hugh Baker PMP **DATE:** 7/12/16

For routine variances, STOP HERE, do not proceed to page 3
For Board of Review variances, or appeals proceed to Part 5 on page 3

PART 5 - ADDITIONAL CONTACT INFORMATION

For Board of Review Variances provide the following names and addresses, if applicable.

Architect or Engineer (if any):	**Fire Marshal or Inspector**
Name Tim DeRuyscher, PE Street GHD Consulting Services Inc. Post O 301 Plainfield Rd Suite 180 Syracuse NY 13212 Teleph 315.314.5642 Fax: 315.445.0958 e-mail tim.deruyscher@ghd.com	Name Fire Chief Tom Parsons Street Ithaca Fire Department Post O 310 West Green St. Ithaca, New York 14850 Teleph Phone:(607)272.1234 c141 Fax: Fax: (607).272.2793 e-mail: Email: tparsons@cityofithaca.org
Fire Department Contact Person Name _____ Street Address see fire inspector Post Office _____ Zip _____ Telephone: ( ) - Fax: ( ) - e-mail: _____	**Other interested person or organization** Name _____ Street Address _____ Post Office _____ Zip _____ Telephone: ( ) - Fax: ( ) - e-mail: _____

(Attach additional pages, if necessary)

PART 6 - BUILDING STATUS AND PROJECT INFORMATION

A. OCCUPANCY CLASSIFICATION (check all that apply for mixed use buildings)

1. Residential Code of New York State [effective 1/1/2003] (See Section 101.2)

☐ One- family Dwelling ☐ Two-family Dwelling ☐ Townhouse

2. Building, Fire, Plumbing, Mechanical, Fuel Gas or Property Maintenance Code of New York State [effective 3oct2016 e Section 303 of the Building Code of New York State)

Assembly	☐ A-1	☐ A-2	☒ A-3	☐ A-4	☐ A-5	
Business	☐ B					
Educational	☐ E					
Factory	☒ F-1 Moderate Hazard			☐ F-2 Low Hazard		
Hazardous	☐ H-1	☐ H-2	☐ H-3	☐ H-4	☐ H-5	
Institutional	☐ I-1	☐ I-2	☐ I-3	☐ I-4		
Mercantile	☐ M					
Residential	☐ R-1	☐ R-2	☐ R-3	☐ R-4	☐ One- or Two-Family Dwelling	☐ Townhouse
Storage	☐ S-1 Moderate Hazard		☐ S-2 Low Hazard			
Utility	☐ U					

Uniform Fire Prevention and Building Code - Title 9B [effective 3oct2016]

Residential

☐ A1 One-family Dwelling ☐ A2 Two-family Dwelling
☐ Multiple Dwelling ☐ B1 ☐ B2 ☐ B3 ☐ B4

Commercial

☐ C1 Business ☐ C2Mercantile
☐ C3 Industrial ☐ C3.1 Low hazard ☐ C3.2 Moderate Hazard ☐ C3.3 High Hazard
☐ C3 Storage ☐ C4.1 Low Hazard ☐ C4.2 Moderate Hazard ☐ C4.3 High Hazard
☐ C5 Assembly ☐ C5.1 ☐ C5.2 ☐ C5.3 ☐ C5.4 (religious) ☐ C5.5 Educational
☐ C6 Miscellaneous (Describe) _____

3. Multiple Residence Law No. of Stories _____ No. of Dwelling units _____ Approximate Age _____ Yrs.

B. BUILDING DESCRIPTION AND PROJECT INFORMATION

Construction type: If more than one is applicable, specify where each occurs in the building. Consult the building code or your building official for assistance.

☐ Residential Code of New York State - ☐ Wood Frame ☐ Other _____

☒ Building Code of New York State [section 602] Type IIB Rand Hall with alternatives for certain areas

☐ Uniform Fire Prevention and Building Code [section 704] _____

Statistics: Number of stories above a basement: 4 _____ (Do not count unfinished attic)

Total floor area of largest story (square feet) 9,300 +/-

Gross floor area of entire building (square feet) 24,577+/-

Date of last Certificate of Occupancy (if available) _____

Project type / status

☐ New building

☒ Addition to existing building

☐ Repair

☐ Alteration level 1

☐ Alteration level 2

☐ Alteration level 3

☒ Change of Occupancy

☐ Other _____

☒ In planning

☐ No official allegation of non-compliance

☐ Work in progress started ___/___/____

☐ Work completed

Permit/Compliance Status

☐ Building Permit Application ___/___/____ (Date)

☐ Building Permit ___/___/____ (Date)

☐ Certificate of Occupancy ___/___/____ (Date)

☐ Orders or Denials

☐ Inspection Report

Note: Attach all pertinent documents

PART 7 - SUBJECT OF THE PETITION (appeal and/or variance, both may be requested)

☐ **APPEAL** (Check if appealing a code official's determination)

An appeal is a request for a Board of Review to review any order or determination, or the failure within a reasonable time to make any such order or determination by a Code Enforcement Official. Describe the order or determination and explain specifically why you believe the order or determination, or failure to act is incorrect, improper or otherwise unwarranted. This should include specific explanations relative to code sections cited.

Specific code and section(s) in question : _____

A. An order or determination, or the failure to make said order or determination in a timely fashion, or the failure to issue a permit or other document in a timely fashion is appealed. A copy of the order or determination is attached as **Exhibit** ___.

Briefly describe the order or determination (additional sheets may be used to do so) _____

B. Attached as **Exhibit** ___ are the reasons why the order or determination should be reversed or modified or why other relief should be fashioned so as to do justice among the parties.

☒ **VARIANCE** (Check if requesting a variance)

REQUIRED ARGUMENTS FOR A VARIANCE

The Board of Review may only grant a variance or modification on the basis of one or more of the following six reasons. To be eligible for a variance, you must document that at least one applies to the requested variance or modification.

Strict compliance with the sections described above would entail practical difficulties, unnecessary hardship, or would otherwise be unwarranted because such (check the statements that apply and provide appropriate documentation):

☐ 1. would create an excessive and unreasonable economic burden.

Reasons are attached in Exhibit ___

☐ 2. would not achieve its intended objective.

Reasons are attached in Exhibit ___

☐ 3. would inhibit achievement of some other important public policy.

Reasons are attached in Exhibit ___

☐ 4. would be physically or legally impracticable.

Reasons are attached in Exhibit ___

☒ 5. would be unnecessary in light of alternatives which, without a loss in the level of safety, achieve the intended objective of the code.

List alternatives and describe in Exhibit A

☒ 6. would entail a change so slight as to produce a negligible additional benefit consonant with the purpose of the code.

Reasons are attached in Exhibit A

PART 8 – DOCUMENTS (For Board cases, provide at least 8 copies)

Required Documents (Supplemental to the petition form)

Summary: Describe the project, the present conditions, the proposed work, the details of the appeal and/or variance requests, and support of the grounds for relief you checked above. see exhibits enclosed

Site Plan: Indicate size and location of all structures on the premises, if applicable.

Building Plans: Drawings in sufficient quantity and quality to clearly describe the requested variance or modification. Such drawings may include dimensioned floor plans, elevations, sections and construction details. Any drawings submitted should be identical to those submitted to the code enforcement official or be noted otherwise.

Supplementary Documents Submit such materials as photographs, charts, reports, detailed descriptions or any other information that can be used to more fully describe the nature of the request. List any such supplementary materials by Exhibit number.

EXHIBIT NUMBER	DESCRIPTION
Exhibit A: GHD Letter Report dated 11july2016 Exhibit B: Determination #2013-0456 & 2015-0432 Exhibit C: Code Drawings Exhibit D: Performance Compliance Method Summary sheets	

A hearing will not be scheduled until all required materials are received by the Division of Code Enforcement and Administration and the appropriate Regional Office has confirmed that the application is complete. All materials must be received at least three (3) weeks prior to a hearing date.

CODES DIVISION
DEPARTMENT OF STATE

State of New York
Department of State
Division of Code Enforcement and Administration

One Commerce Plaza
99 Washington Avenue
Albany, NY 12231-0001

(518) 474-4073
Fax: (518) 486-4487

UNIFORM FIRE PREVENTION AND BUILDING CODE BOARD OF REVIEW PETITION INSTRUCTIONS

Before You Begin: Prior to completing a petition for the Board of Review, you must first contact the Division's regional representative to begin the process. In many cases, an appointment for a site visit is necessary. Failure to first contact a regional representative can result in a delay in the processing of the variance. Our regional office locations and phone numbers can be viewed at: http://www.dos.ny.gov/DCEA/reg_off_cty.html .

Part 1

- Petitioner - The petitioner is the person who signs the form. Indicate whether the petitioner is the owner, agent, etc.
  - Attorneys, architects, engineers, agents and representatives appearing on behalf of any person, firm, corporation, or association and for which a fee is received, must file a notice to that effect as required by Executive Law Section 166. A simple letter stating such is sufficient.
- Property - The actual location of the property, not a mailing address. For a property located in a village or city, give the village or city name. For a property not located in a village or city, give the town name. If a property has a name, such as the "Municipal Tower," include that name.
- Owner - The name given here is the owner of record of the subject property.
- Code Enforcement Official - Give the name and address of the primary code enforcement agency involved in the subject of the petition.

Parts 2, 3 and 6

- The code enforcement official should be able to help provide this information. The listing of code sections involved should be as complete as possible. The Department of State can furnish on request, a free copy of relevant code sections and information on purchasing a copy of the complete code. A free online version of the 2007 Codes of New York State may be viewed at http://publicecodes.citation.com/st/ny/st/index.htm.
- Copies of all applications, permits, certificates, orders, etc. that are relevant to the petition must be included with the application.

Part 4

- All petitions to a regional Board of Review shall be accompanied by the following fees:
  - Petitions involving construction, alteration or renovation of residential or agricultural occupancies involving no more than one structure with no more than two dwelling units. $50
  - Petitions involving construction, alteration or renovation of other buildings and structures:
    - Not more than 8,000 sf. $100
    - More than 8,000 sf but less than 25,000 sf. $300
    - More than 25,000 sf but less than 50,000 sf. $500
    - More than 50,000 sf $1,000
  - Petitions related to maintenance or use of buildings or materials, or any petition not otherwise provided for above. $100
- Enclose a check, money order or voucher (government agencies only) for the appropriate fee payable to the **New York State Department of State**.
- PETITION FEES ARE NON-REFUNDABLE.
- Please provide at least one petition with an original signature.

Part 5

- It is important to provide complete information in this section to insure that affected parties are notified.
- If architects or engineers are involved in this matter, include their names and addresses.
- If there is a separate fire inspector or fire marshal not listed in Part 1, provide this information.
- The name and address of the responding fire department should be available from the code enforcement official or municipal clerk.
- Include here civic organizations such as historical societies or societies for the disabled; government agencies not otherwise listed, neighbors, tenants; co-owners, or their association; or others whose interest may be affected by the

property or subject matter at issue. There is no need to repeat any names and addresses which are otherwise provided in this question.

Part 7

- An appeal is a request for a Board of Review to review any order or determination, or the failure within a reasonable time to make any such order or determination, by an administrative official charged with the enforcement of or purporting to enforce the Uniform Code.
- A variance is a request to deviate from one or more provisions of the Uniform Code.
- To obtain a variance, a showing must be made which will permit a Board to make a finding upon one or more of the six grounds stated in 19 NYCRR 1205.4 and restated on the petition form. On a separate page or pages, state the reasons which support the petition, keeping the following points in mind. If ground one is argued, show by dollars and cents proof, not that it is more expensive to comply, but that the expense is burdensome to the point of being undue. If ground two is argued, show how strict compliance would not obtain that provision's (not your), intended objective. If ground three is argued, show the origin of the competing policy and why the Code should yield to that policy. If ground four is argued, fully describe the impediments and constraints to strict compliance and show why they cannot be overcome. If ground five is argued, clearly state that the proposed alternatives to the Code requirement and show that they are equally safe and proper and do not substantially adversely affect provisions for health, safety, and security. If ground six is argued, show that the incremental change required to comply results in an insubstantial advantage to the Code's objective.
- Be sure to include copies of all relevant documents.

Part 8

- Ordinarily a site plan and building plans should be submitted with the petition. If it is felt that the case can be adequately presented without plans, it is suggested that Codes Division be called. Please note that the State Education Law requires that most plans be signed by and stamped with the seal of a New York State licensed engineer or architect. Exceptions to the requirement signed and stamped plans include agricultural buildings, renovations or additions costing under $10,000 and residential structures 1,500 square feet or less in area. If relief is being sough based in part on the historical nature of the building, full documentation of any relevant designations should be provided.
- The comparison should be made with the latest copy of the site plan or building plans which have been submitted to the code enforcement agency. Any difference should be explained. Attach additional sheets as necessary.
- Include court actions, other actions as local zoning related requests whether approved or denied and especially other appearances before these boards.

Petition #2016-_____ Exhibit A

July 20, 2016

NYS Department of State
Division of Building Standards and Codes
One Commerce Plaza
99 Washington Avenue Suite 1160
Albany, NY 12231-0001

TO: Regional Board of Review

Cornell University Rand Hall (Fine Arts Library)
Fire Protection & Code Consulting
GHD #11110837
NYS Petition #2016-_____

BACKGROUND and FOUR STORY CODE APPROACH

The Rand Hall Fine Arts Library ("FAL") Project located in Ithaca, New York at Cornell University includes the continued and proposed use of the second and third floors of this existing building as a college library. Additions and modifications to the existing delineated second and third floors and the roof of the existing Rand Hall building are now proposed for the 2016 project. These modifications are the same as that submitted for Petition and Determination #2015-0432. Code drawings are included in this package as further information and use as Exhibit C.

Due to project schedule, this existing building addition and alterations will now be reviewed and designed under the provisions of the 2016 New York State Uniform Fire Prevention and Building Code in lieu of the 2010 NY State code provisions. Since the 2016 NYS Code now uses the ICC 2015 Codes (with NY Supplements), any references herein will use the 2015 ICC code references where there are no changes to the ICC 2015 code and the 2016 NYS Supplement for those items/chapters which have been modified for New York.

In early 2016, the Owner and the design team presented the three (3) story plus mezzanines code designation for the project to the local City of Ithaca Building and Fire Authorities having jurisdiction (AHJ). The City Fire & Building AHJ's made the determination that the proposed arrangement was a four (4) story building rather than a three (3) story building with the atrium connecting floors 2, 3 and 4 (previously designated as Mezzanine 3.1) which would be designated as stories. This yields 1st floor = 1st story; 2nd floor & raised 2nd floor = 2nd story; 2nd floor mezzanine = mezzanine as part of 2nd floor; 3rd floor = 3rd story; plus previous mezzanine 3.1 = 4th story. However, when a four story designation occurs, there are a number of code driven features required by a four story building designation – most notably use of 1 hour Type IIA construction rather than Type IIB, elevator car size for ambulance stretcher for all floors, standby power for any required smoke control equipment, and affects (if any) on prior issued NYS Determinations #2013-0456 and #2015-0432.

The space will be a Group A-3 assembly on floors 2, 3 and 4 and a Group F-1 on the first floor of this Type IIB construction classification building, and continue to be regulated separately from the adjacent Milstein Hall and other features as per NYS Determination #2015-0432 and not in conflict with NYS Determination #2013-0456.

GHD Consulting Services Inc.
301 Plainfield Road, Suite 180, Syracuse, NY 13212 USA
T 1 315 314 5700 F 1 315 445 0958 E syracuse@ghd.com W www.ghd.com

STV Rand Hall Code Review
(Fine Arts Library at Cornell)
GHD# 11110837

REQUESTED EQUIVALENCIES

Proposed Code Equivalency concepts and request for Variance from NYS for Four (4) stories designation vs. 3 story building with mezzanines:

1. **Use of four (4) story Type IIB construction in lieu of Type IIA construction:** 2010 NYS & 2015 IBC requires Type IIA (1 hour) for a four story Group A-3 building compared to a permitted Type IIB (unprotected) for 3 story [2015 IBC: 602.1, 602.2 and Table 601]: *Type IIA 1 hour traditional fire ratings would be unnecessary in light of alternatives which, without a loss in the level of safety, achieve the intended objective of the code more efficiently, effectively or economically as shown below:*

   - Propose use of 1 hour protected exterior wall columns (from 1st floor up to roof), underside of 1st floor framing/floor. This meets the Type IIA construction requirements on floor 1 and the columns at exterior walls supporting the roof. Determination #2015-0432 only required column fire ratings from 1st floor up to 2nd floor.
   - In lieu of 1 hour traditional fireproofing for roof steel and for book stack steel members, it is proposed to use sprinklers at book shelf columns/shelve longitudinal flues & aisles as used in rack storage provisions of NFPA 13; plus at roof steel it is proposed to use a separate fire sprinkler riser with additional fire sprinklers positioned to spray webs of all large roof steel primary members in lieu of traditional fireproofing methods. Full scale fire tests of library stacks by FM showed success in this protection method. Refer to "Fire Tests of Library Bookstacks" by NFPA Quarterly, April 1960, pages 288-295 which showed temperatures at ceiling levels, at shelves between books and above floors were consistently less than 500 degrees F.
   - 2015 IBC does not recognize the extremely small 1,920 sf area of the designated 4th floor (prior classified as a mezzanine) [2015 IBC 506]: it is proposed to have this designated 4th story to not exceed 1,950 gross square feet and a maximum occupant load of 36 people (calculated with stacks plus reading room set up as tables/chairs).
   - The total area of all stories and mezzanines on all levels is LESS THAN the total code prescribed allowable area for a floor and about 30% of the area permitted for all stories of the entire building [IBC 506.2.4]. This building is quite small compared to the expected allowable size contemplated by the code and when taken in context that the entire building height in feet is below that permitted for a Group A3 type IIB building, the insertion of an additional "story" does not, by itself, make this a higher risk when other protection features are in place. Refer to the Performance Compliance method in Exhibit D.
   - The use of standard fire proofing methods is not readily achievable or easily maintainable for the steel book stack supports, cables, and connections (ongoing maintenance concerns due to proximity to normal wear and tear by people and books movements) and would be adverse to the design of the space.
   - Performance Compliance Method shows use of Type IIB construction works.

2. **Use of an existing large elevator car from floor 1 to 2 and two levels of stairs meet the intent of not traversing more than two floors with an ambulance stretcher as the new small elevator car does not have enough space to fit within the space for floors 2, 3 and 4:** 2010 and 2015 IBC requires the new elevator car must be sized for ambulance stretcher to all floors when classified as four (4) stories [2015 IBC: 3002.4]: use of *a new single smaller elevator in conjunction with an existing larger elevator car would entail a change so slight as to produce a negligible additional benefit consonant with the purpose of the code and would be unnecessary in light of alternatives which, without a loss in the level of safety, achieve the intended objective of the code more efficiently, effectively or economically as further described herein*

   - Propose use of new smaller elevator car serving the 2nd, 3rd and 4th floors plus the 4th mezzanine for accessibility and using the additional and already existing larger elevator car serving the 2nd floor to ground/1st floor to meet the stretcher size code provisions.
   - This would require transport of an ambulance stretcher from the 4th story mezzanine, down to floor 4 and then across a portion of floor four to the west stair 1, and then down stair 1 to the second floor which is immediately adjacent to the existing larger elevator for a stretcher (i.e. – first responders only carry stretcher down 3 flights when code allows 3 flights of stairs if building were considered a three story building (i.e. – big elevator not required until 4 stories).

3. **Deletion of standby power (generator) for the smoke control equipment and use of connection prior to building's electrical service disconnecting means:** 2015 IBC requires standby power for required smoke control equipment (fans, window operators, controls, etc.) [2015 IBC: 404.7, 909.11 and 2702.2.15]: *Standby power via a generator would entail a change so slight as to produce a negligible additional benefit consonant with the purpose of the code and would be unnecessary in light of alternatives which, without a loss in the level of safety, achieve the intended objective of the code more efficiently, effectively or economically as further described herein*

   - A smoke control system and corresponding analysis for the smoke control system will be provided to the City of Ithaca AHJ's for review and approval in accordance with 2015 IBC 909.1-4. If a mechanical system is needed to supplement the natural venting being proposed for this facility (operable windows etc.) then power to these supplemental smoke exhaust fans is proposed by connection prior to the building's electrical service disconnecting means (similar to a fire pump).
   - The Cornell campus electrical utility grid is also supplied by a single circuit from a small electrical cogeneration plant which, may provide some level of electrical power if the utility substation was cut off or not operational. In addition, the electrical utility grid at the campus is regularly maintained with periodic improvements by Cornell Utilities.
   - The reliance upon the smoke control system for the atrium in this space is lesser than what may be considered in other larger facilities as this Fine Arts library is not a publicly accessible building (card access controlled entry), has controlled occupancy and has staff supervision from the library desk at the base of the atrium on the 2nd floor.

- The library desk furniture/fixtures within the atrium space will be framed using fire retardant wood cabinetry (similar to that required by covered mall building kiosk construction) and furnishings within the atrium space will be fire retardant furnishings typically used in more restrictive Group I Institutional occupancies and will be per Fire Code of NYS (F805.2.1.2) which is ASTM E1537 or California Technical Bulletin 133.

CODE CLARIFICATIONS FOR CONCURRENCE:

4. Since this is an existing building, the 2015 Existing Building Code requires compliance with Chapter 301.1 which the applicant can select either a Prescriptive compliance method [2015 IEBC 301.1.1 and follow Chapter 4 of IEBC] OR a Work area compliance method [2015 IEBC Chapters 5-13], OR a Performance compliance method [2015 IEBC Chapter 14]. These provisions take precedent over the 2015 IBC inasmuch as this is an existing building. Up to this time, the Owner has chosen to follow the Work area compliance method which then references the 2015 IBC requirements for additions and alterations in this existing building. However, the Owner is now considering the use of the Performance compliance method which uses the Chapter 14 "Performance Compliance Method" numerical evaluation and rating system for the mandatory "fire Safety", "means of egress" and "General Safety" categories.
   - GHD's review of this method (as shown in Exhibit D) indicates the scores of this existing building when treated as a 4 story type IIB construction of Group A-3 yields 36 points compared to 22 minimum points for Fire Safety; yields 34.3 points compared to 33 minimum points for Means of Egress; yields 36.3 points compared to 33 minimum points for General Safety. These are all passing scores –and shows that even with the classification of a 4th story, the Performance Compliance method shows the number of stories is not as relevant as the total height of the building. It also shows that the codified equivalent means of safety as prescribed by the code has been met.
   - By itself, this would negate the need for any variance as 2015 IEBC Chapter 301.1.3 states "Repairs, alterations, additions, changes in occupancy and relocated buildings complying with Chapter 14 of this code shall be considered compliance with the provisions of this code." See enclosed.
   - However, for elimination of any doubt, the Owner desires to use this as additional supporting information and documentation with the requested items 1 - 3 above to seek a code equivalency/variance from NYS to help ensure that this project and the prior issued determinations #2015-0432 and #2013-0456 remain and are not nullified in any manner.
5. 2015 IBC requires roof access via ladder/ship's ladder or stair to roof [2015 IBC 1011.1.2]: this is a clarification only and it is proposed to use access to the main roof and not to the top elevated roof as appropriate in final design.
6. 2015 IBC requires limitations on the use of open exit access stairs for use as exits [2015 IBC 1019.3 exception 5 and 404.9.3]: this is a clarification only in that the 2015 IBC continues to permit the east stair #3 open exit access stair. As this space is classified as an atrium (inclusive of smoke control) the code permits up to 3 floors open to atrium (2nd, 3rd & 4th). 2015 IBC 404.9.3 and 1019.3 exception 5 continues to permit the open exit access stair as currently designed since Chapter 4 continues to contain provisions which supersedes other provisions in the Code. The 2015 Code now uses a 200 foot exit access travel

distance limitation within the atrium rather than a limitation on the number of floors connected by open exit access stairs (as was contained in the 2010 NYS Building Code which was based on the 2006 IBC). Therefore, the open exit access stair #3 may remain as shown.

7. All prior protection features from the prior issued NYS determinations will remain in place: 2 hour fire barrier between Rand Hall and Milstein Hall; 1 hour horizontal fire barrier to separate 1st floor from 2nd floor; quick response fire sprinkers at 0.25 gpm/sf over 2,000+ sf as minimum; second remote fire sprinkler water service main from north side of Rand Hall; full fire detection throughout building; on site campus Police respond to all fire alarm activations; fire access and large windows all for manual fire stream penetration into Rand Hall; first floor Group F-1 "Factory" is lesser hazard than "F-1" contemplates; building height in feet and actual floor space, number of levels and arrangement is similar or consistent with prior issued determination #2015-0432.
8. Relative to any discussions and or references to a 3 story building for Rand Hall in the 2013-0456 and 2015-0432 determinations, it must be noted that any reference to the 2013 determination did not have any knowledge of any additions would could classify Rand Hall as a four (4) story building. Furthermore, the 2015 Determination contemplated this same building arrangement with the same number and size of levels. As design has progressed, the only change is the determination by the City of Ithaca to call this a 4 story building due to the mezzanines being within the same space/room and how this relates to code language, the physical characteristics, number and size of levels and all else materially remains the same.
9. The prior granted code equivalencies showed Rand Hall as 3 story Type IIB group A3 occupancy rather than a 4 story, the table below shows the primary fire and life safety code features for comparison.

Primary Fire & Life Safety Code features in prior and current applications	**2010 NY Codes & prior Petitions & Determinations from NYS (3 stories)**	**2016 NY Codes for 4 story designation**	**Equivalency Features Proposed or already accepted by NYS**
Rand Hall Fine Arts Building is separate building	Remains, no change	Remains	No change
Construction Type	IIB (unprotected)	IIA 1 hour for 4 story; IIB for 3 story – continue to use IIB code designation with alternative protection features	2015 determination accepted 1 hour 1st to 2nd floor fire barrier. Adding 1 hour columns to roof; add sprinklers within book stacks specifically to protect steel; add separate roof sprinkler zone and spraying into roof steel
Occupancy	A-3 & F-1	same	No change

STV Rand Hall Code Review
(Fine Arts Library at Cornell)
GHD# 11110837

FD access	3 sides with large windows for stream penetration	same	No change
Number of stories	3 stories	4 stories	Designated at 4 stories only due to "mezzanine" calculation clarification – all else materially the same
Height limit in feet	75 feet	same	No change
Height limit in stories	3 stories + 2 mezzanines	4 stories + 1 mezzanine	Requesting 4 story concurrence with Type IIB construction
Floor area limit	9,500 actual vs. 34,485 sf permitted per floor	Same as 3 story; 4 story IIA allows 46,500 per story; actual is 9,500	9,500 actual proposed
Total building area limit	103,455 gsf permitted all levels for type IIB construction	Actual is 24,577 gsf all levels	Actual is 24,577 gsf all levels – no material change
Openings between floors	1 and 2 hours	2 hours when penetrating 4 stories or more; 1 hour when penetrating 3 stories or less	No change
Atriums	2 story atrium without mandatory smoke control	Smoke control per Chapter 909	Smoke control per 909 except proposed standby power delete generator and use connection ahead of building electric service disconnecting means for any required power operated equipment or window operators
Interior Finishes	Class A, B or C	Class A or B	No change
Fire Protection Water	Two fire service feeds	Two fire service feeds	No change

STV Rand Hall Code Review
(Fine Arts Library at Cornell)
GHD# 11110837

Fire Sprinklers	Full protection plus minimum 0.25/2,000	Full protection plus minimum 0.25/2,000	Full protection plus minimum 0.25/2,000 plus proposed sprinklers specifically at book stacks steel and separate riser to roof steel
Special Fire Systems	None	None	No change
Standpipe Systems	Class I manual wet system	Class I manual wet system	No change
Fire Extinguishers	Yes per code	Yes per code	No change
Fire Alarm/Detection & Voice Communication	Fire Detection and voice communication throughout	same	No change
Smoke Control	Not required, but open vents considered	Smoke control per 909 required	Smoke control per 909 with specific electric power arrangement as alternative to generator standby power
Occupant loads & factors	Per code	Per code	No change other than to limit 4th story mezzanine to no more than 36 persons
Number of exits, exit remoteness, exit access, travel distance, common path of travel, dead ends	Per code; 2 exits per floor; all more than 1/3 diagonal remote; maximum 197 feet exit access travel distance; max 75' common path of travel and <30 feet dead ends	Maximum 200 exit access travel distance within atrium for open exit access stairs rather than prior code editions limiting number of stories connected by open exit access stairs	No change
Exit capacity	292 exit capacity per level/story and maximum 256 occupants for all 3 stories within atrium library space concurrently	No change	No change

Exit enclosures	As per code – 1 and 2 hour enclosed	No change	No change
Areas of Refuge & Accessible egress	As per code	Areas of refuge not required for full sprinklered buildings	No change

CONCLUSION

Since the code's intent is for the protection of the health, safety, security and welfare of the public – it is our professional opinion the enclosed proposed features above and beyond what the code prescribes and as allowed by the Performance compliance method of the Existing Building Code of New York State provides an adequate level of appropriate safety as intended by the Code.

Therefore, based upon the above provisions and features, we respectfully request concurrence of this code equivalency approach using the 2015 Existing Building Code of New York State as indicated above to allow the proposed (2016) Rand Hall Fine Arts Library project be code treated and classified as a separate building, four stories in height of type IIB construction and such determinations shall not affect nor alter the prior Determinations as any change (if any) is so small as to be negligible.

Thank you for your consideration.

Sincerely,

GHD Consulting Services Inc.

Timothy A. DeRuyscher

Timothy A. DeRuyscher, P.E., FSFPE
Principal
Service Line Leader – Fire & Life Safety

Enclosures: Exhibit D (Performance Compliance Method)

EXHIBIT B

STATE OF NEW YORK
DEPARTMENT OF STATE
ONE COMMERCE PLAZA
99 WASHINGTON AVENUE
ALBANY, NY 12231-0001

ANDREW M. CUOMO
GOVERNOR

CESAR A. PERALES
SECRETARY OF STATE

CAPITAL REGION – SYRACUSE BOARD OF REVIEW

In the Matter of the Petition of:
CORNELL UNIVERSITY
For a Variance to the New York State
Uniform Fire Prevention and Building Code

DECISION

PETITION NO. 2013-0456

Upon the application of Cornell University, filed pursuant to 19 NYCRR 1205 on October 16, 2013 , and upon taking testimony and hearing argument thereon at a duly noticed hearing before the Capital Region – Syracuse Board of Review held at the Hughes State Office Building, 333 East Washington Street, Syracuse, New York, on November 21, 2013, and upon all other papers in this matter, the Board makes the following determination.

NATURE OF GRIEVANCE AND RELIEF SOUGHT

The petition pertains to an addition to an existing building, Rand Hall, Milstein Hall, East Sibley Hall of B and A-3 mixed occupancy, three story in height, Type 5B construction, approximately 172,486 square feet in gross floor area, and located at 947 University Avenue, City of Ithaca, County of Tompkins, State of New York.

The petitioner is seeking relief from:

19 NYCRR Part 1221, The Building Code of New York State, Section 503.1, which requires states in general, the height and area of a building of different construction types shall be governed by the intended use of the building and shall not exceed the limit in Table 503, except as modified hereafter.

FINDINGS OF FACT

With respect to the petition of Cornell University requesting variance from the following Sections of the Uniform Code:

19 NYCRR Part 1221, The Building Code of New York State, Section 503.1, dealing with height and areas for buildings of different construction types; shall be governed by the intended use of the building and shall not exceed the limits in Section 503 except as modified hereafter; each part of the building included within the exterior walls or the exterior walls at fire walls where provided shall be permitted to be a separate building, and

EXHIBIT B

Code Section 504.2 as included today with respect to increasing the automatic increases for automatic fire sprinkler installations in fire areas, and in addition Code Section 715.1 of the 2010 Building Code of New York State, which is added by the Board of Review, the Board makes the following findings:

1. The petition pertains to alterations to an existing building, Rand Hall, Milstein Hall and East Sibley Hall. East Sibley Hall is three stories in height of type 5B construction. Rand Hall is three stories in height. Milstein Hall is two stories in height. The buildings are properly placed in Occupancy Group B and A-3, and other assembly use is not classified elsewhere in Group A, including but not limited to Libraries. Buildings are approximately 172,000 square feet in gross floor area and located at 947 University Avenue, City of Ithaca, County of Tompkins, State of New York.
2. Rand Hall was built as a three story building for college level instruction in the early 1900's. Rand Hall has construction which would be Type IIB construction as a stand-alone building.
3. Sibley Hall is a three story building of Type V construction as has been determined under strict interpretation of the Code and built in the late 1800's; perhaps 1894, and is a member of the Arts Quad Historic District.
4. In May of 2007 the building department application was filed and a permit subsequently issued by the City of Ithaca for a new addition of Type IIB construction now known as Milstein Hall. The two story Hall connects Rand Hall to the East and Sibley Hall. No fire walls were provided to separate the Sibley Hall construction from the Milstein Hall construction which also connects to Rand Hall.
5. Rand Hall and Milstein Hall were noted as being able to comply with Type IIB construction if they were stand alone buildings. Due to the connection with Sibley Hall, the aggregate building is downgraded to a Type VB construction. The three buildings are considered one building under the Code.
6. The grading of construction type of Rand Hall meant that the Library, A-3 occupancy, cannot be located on the third floor. Table 503 limits an A-3 occupancy in a Type VB being to the first floor. All of the buildings are fully sprinklered, and as per Section 504.2 of the Building Code, an automatic sprinkler system increase would allow the A-3 occupancy on the second floor. Petitioner wishes it to be on the second and third floors.
7. No part of Rand Hall is in physical contact with East Sibley Hall except through Milstein Hall. Between the physical connections of Rand Hall to Sibley Hall are two one hour constructions that separate Rand Hall from East Sibley Hall, one each at the juncture of these buildings with Milstein Hall. There is

EXHIBIT B

approximately 60 feet of separation distance between Rand Hall and East Sibley Hall at their closest point; that measurement continues through Milstein Hall.

8. Constructing a firewall or the equivalent of a firewall to Milstein Hall at Rand Hall would be extremely costly and disruptive. Rebuilding Sibley Hall, a contributing historic structure, to a A-3 construction would not likely to gain approval from the Ithaca Landmark's Preservation Commission and Cornell's own guidelines for treating its historic buildings. Additionally, costs from embellishing the third floor structure and replacing it with a non-combustible construction appears to be excessive and unreasonable given that the building and the adjacent buildings are protected throughout with an automatic fire sprinkler system.

9. It has been testified that the two fire barriers between Sibley and Rand Halls appear to provide better protection than simply having one fire barrier as might be allowed in the Code if built to separate the areas. The approximate 60 foot separation from Rand Hall shall remain as indicated on the exhibits submitted and testified to today.

10. There are exterior fire sprinklers installed under what may be termed an overhang around Milstein Hall at grade level. This further limits the exposure between Milstein Hall and the adjacent areas noted as Rand Hall and Sibley Hall.

11. There are on-site trained campus police available 24 hours a day to respond to fire alarms on the campus and communicate with the Ithaca Fire Department to provide information as determined in their standard operating procedures. There are separate risers for the water supplies for each of these areas for the fire sprinkler systems that protect these three areas throughout the buildings.

12. With reference to Section 715.1, the Code official has stated that the fire barriers are in compliance with the Code. However, even if the installation does not completely meet the rigid standards the Board finds that the existing construction provides protection and acts as a proper fire barrier, fire partition or fire separation that would act between these three areas.

13. These findings include a brief review of the 2010 Building Code of the State of New York, Section 912.5.1, which allows the use of fire barriers for separations. The intended objectives of the Sections of the Existing Building Code of New York State and Building Code of New York State from which the variance is sought are to promote fire safety.

14. The petitioners' position is that keeping a college library use, A-3 in East Sibley Hall, which as a stand-alone would be considered a VB building, and by connection includes Milstein Hall and Rand Hall in that determination.

EXHIBIT B

15. If the Code were literally followed, it does not promote fire safety as much as moving the library to Rand Hall, which as a stand alone building could be classified as a Type IIB building. The petitioner's position is that housing a library in Rand Hall would meet the objectives of the Code better than keeping it in the actual wood framed area of Sibley Hall.

16. By testimony and letter today, the fire department of the city of Ithaca approves of the granting of this variance. The Code official that has testified today approves of the granting of this variance as well.

CONCLUSIONS OF LAW

The Board finds in granting this variance it will have no substantial adverse effect on health, safety and security. Therefore, in accordance with the above findings, the Board finds that strict compliance with the provisions of the New York State Uniform Fire Prevention and Building Code would entail practical difficulties and unnecessary hardship, and would be unnecessary in light of alternatives which ensure the achievement of the Code's intended objective , or in light of alternatives which, without a loss in the level of safety, achieves the Code's intended objective more efficiently, effectively or economically.

DETERMINATION

WHEREFORE IT IS DETERMINED that the application for a variance from 19 NYCRR Part 1221, Sections 503, 504 and 715, as noted above, be and is hereby PROPOSED TO BE GRANTED with the following condition:

1. In all other aspects of the building in its construction shall be in compliance with the applicable codes, rules and regulations.

Furthermore, it should be noted that the decision of the Board is limited to the specific building and application before it, as contained within the petition, and should not be interpreted to give implied approval of any general plans or specifications presented in support of this application.

Acting Chairman Richard Lafferty, and members, Michael Hrab, Mark L. Dedrick and Robert Almy all concur.

So ordered.

Capital Region – Syracuse Board of Review

Richard F Lafferty

By: Richard Lafferty, Acting Chairman

Date: Dec. 21, 2013

TR: nmc

GHD# 11110837

CORNELL RAND HALL 2016
WITH NEW PROJECT FEATURES

TABLE 1401.7
SUMMARY SHEET-BUILDING CODE

Existing occupancy A3/B
Year building was constructed 1911 I
Type of construction IIB
Percentage of open perimeter increase 63 %
Completely suppressed: Yes ✓ No
Compartmentation: Yes No ✓
Fire-resistance rating of vertical opening enclosures 1 HR ≤3 STORIES + 2HR ≥4 STORIES
Type of HVAC system AIR HANDLING, serving number of floors (1) SPACE/ATRIUM
Automatic fire detection: Yes ✓ No
Fire alarm system: Yes ✓ No
Smoke control: Yes ✓ No
Adequate exit routes: Yes ✓ No
Maximum exit access travel distance 197 feet
Means of egress emergency lighting: Yes ✓ No
Standpipes Yes ✓ No
Incidental use Yes ✓ No
Smoke compartmentation less than 22,500 sq. feet (2092 m²) Yes ✓ No

Proposed occupancy A3
Number of stories 4 Height in feet 65
Area per floor 9,500SF (TOTAL ALL FLOORS 24,577 SF)
Corridor wall rating 1 HOUR
Type: EXIT ACCESS CORRIDOR
Required door closers: Yes ✓ No
Type and location THROUGHOUT BUILDING
Type NFPA '72 EMERGENCY VOICE
Type ATRIUM AS PER 909
Dead ends: Yes No ✓
Elevator controls: Yes ✓ No
Mixed occupancies: Yes ✓ No
Patient ability for self-preservation N/A - all mobile
Patient concentration N/A
Attendant-to-patient ratio N/A

SAFETY PARAMETERS	FIRE SAFETY (FS)	MEANS OF EGRESS (ME)	GENERAL SAFETY (GS)
1401.6.1 Building Height	-1	-1	-1
1401.6.2 Building Area	11	11	11
1401.6.3 Compartmentation	0	0	0
1401.6.4 Tenant and Dwelling Unit Separations	0	0	0
1401.6.5 Corridor Walls	0	0	0
1401.6.6 Vertical Openings	2	2	2
1401.6.7 HVAC Systems	5	5	5
1401.6.8 Automatic Fire Detection	6	6	6
1401.6.9 Fire Alarm System	5	5	5
1401.6.10 Smoke control	****	0	0
1401.6.11 Means of Egress	****	0	0
1401.6.12 Dead ends	****	0	0
1401.6.13 Maximum Exit Access Travel Distance	****	.3	.3
1401.6.14 Elevator Control	0	0	0
1401.6.15 Means of Egress Emergency Lighting	****	0	0
1401.6.16 Mixed Occupancies	0	****	0
1401.6.17 Automatic Sprinklers	4	4÷2=2	4
1401.6.18 Standpipes	4	4	4
1401.6.19 Incidental Use	0	0	0
1401.6.20 Smoke compartmentation	0	0	0
1401.6.21.1 Patient ability for self-preservation	****	0	0
1401.6.21.2 Patient concentration	****	0	0
1401.6.21.3 Attendant-to-patient Ratio	****	0	0
Building score—total value	36	34.3	36.3

**** No applicable value to be inserted.

CORNELL RAND HALL 2016 WITH NEW PROJECT FEATURES

Table 1401.7 under Safety Parameter 1401.6.21.1, Patient Ability for Self-preservation, for means of egress and general safety.

TABLE 1401.6.21.1
PATIENT ABILITY VALUES

OCCUPANCY	CATEGORIES		
	a	b	c
I-2	1	2	3

1401.6.21.1.1 Categories. The categories for patient ability for self-preservation are:

1. Category a—(mobile) Patients are capable of self-preservation without assistance.
2. Category c—(not mobile) Patients rely on assistance for evacuation or relocation.
3. Category d—(not movable) Patients cannot be evacuated or relocated.

1401.6.21.2 Patient concentration. Evaluate the concentration of patients in each smoke compartment under Section 1401.6.21.2. Under the categories and occupancies in Table 1401.6.21.2 determine the appropriate value and enter that value in Table 1401.7 under Safety Parameter 1401.6.21.2, Patient Concentration, for means of egress and general safety.

TABLE 1401.6.21.2
PATIENT CONCENTRATION VALUES

OCCUPANCY	CATEGORIES		
	a	b	c
I-2	1	2	3

1401.6.21.3 Attendant-to-patient ratio. Evaluate the attendant-to-patient ratio for each compartment under Section 1401.6.21.3. Under the categories and occupancies in Table 1401.6.21.3 determine the appropriate value and enter that value in Table 1401.7 under Safety Parameter 1401.6.21.3, Attendant-to-patient Ratio, for means of egress and general safety.

1401.6.21.3.1 Categories. The categories for attendant-to-patient concentrations are:

1. Category a—attendant-to-patient concentrations is 1:5.
2. Category b—attendant-to-patient concentrations is 1:6 to 1:10.
3. Category c—attendant-to-patient concentrations is greater than 1:10 or no patients.

TABLE 1401.6.21.3
ATTENDANT-TO-PATIENT RATIO VALUES

OCCUPANCY	CATEGORIES		
	a	b	c
I-2	1	2	3

1401.7 Building score. After determining the appropriate data from Section 1401.6, enter those data in Table 1401.7 and total the building score.

1401.8 Safety scores. The values in Table 1401.8 are the required mandatory safety scores for the evaluation process listed in Section 1401.6.

TABLE 1401.8
MANDATORY SAFETY SCORES[a]

OCCUPANCY	FIRE SAFETY (MFS)	MEANS OF EGRESS (MME)	GENERAL SAFETY (MGS)
A-1	20	31	31
A-2	21	32	32
A-3	22	33	33
A-4, E	29	40	40
B	30	40	40
F	24	34	34
I-2	19	34	34
M	23	40	40
R	21	38	38
S-1	19	29	29
S-2	29	39	39

a. MFS = Mandatory Fire Safety.
MME = Mandatory Means of Egress.
MGS = Mandatory General Safety.

1401.9 Evaluation of building safety. The mandatory safety score in Table 1401.8 shall be subtracted from the building score in Table 1401.7 for each category. Where the final score for any category equals zero or more, the building is in compliance with the requirements of this section for that category. Where the final score for any category is less than zero, the building is not in compliance with the requirements of this section.

TABLE 1401.9
EVALUATION FORMULAS[a]

FORMULA	T1401.7	T1401.8		SCORE	PASS	FAIL
FS - MFS ≥ 0	36 (FS) –	22 (MFS)	=	14	✓	
ME – MME ≥ 0	34.3 (ME) –	33 (MME)	=	1.3	✓	
GS – MGS ≥ 0	36.3 (GS) –	33 (MGS)	=	3.3	✓	

a. FS = Fire Safety.
ME = Means of Egress.
GS = General Safety.
MFS = Mandatory Fire Safety.
MME = Mandatory Means of Egress.
MGS = Mandatory Means of Safety.

BY: T DeRuyscher PE FSFPE
20 JULY '16

STATE OF NEW YORK
DEPARTMENT OF STATE
ONE COMMERCE PLAZA
99 WASHINGTON AVENUE
ALBANY, NY 12231-0001
WWW.DOS.NY.GOV

ANDREW M. CUOMO
GOVERNOR

ROSSANA ROSADO
SECRETARY OF STATE

CAPITAL REGION – SYRACUSE BOARD OF REVIEW

In the Matter of the Petition of:
CORNELL UNIVERSITY FINE ARTS LIBRARY
For a Variance to the New York State
Uniform Fire Prevention and Building Code

DECISION

PETITION NO. 2016-0269

Upon the application of Cornell University Fine Arts Library, filed pursuant to 19 NYCRR 1205 on September 14, 2016, and upon taking testimony and hearing argument thereon at a duly noticed hearing before the Capital Region – Syracuse Board of Review held at the Hughes State Office Building, 333 East Washington Street, Syracuse, New York, on September 15, 2016, and upon all other papers in this matter, the Board makes the following determination.

NATURE OF GRIEVANCE AND RELIEF SOUGHT

The petition pertains to the alterations and additions to the existing Rand Hall Fine Arts Library, academic building, A3 first and second story occupancy, F1 basement occupancy, three stories in height, non-combustible Construction Type 2B, located at 947 University Avenue, City of Ithaca, County of Tompkins, State of New York.

The petitioner is seeking relief from:

2015 International Building Code, Sections 602.1, 602.2 & Table 601, which regulate the construction classifications and fire-resistance rating requirements for building elements;

2015 International Building Code, Section 3002.4, which requires an elevator car to accommodate an ambulance stretcher in buildings of four or more stories;

2015 International Building Code, Sections 404.7, 909.11 & 2702.2.15, which regulates standby power for smoke control systems;

2016 Uniform Code Supplement, as published by the New York Department of State.

[The petitioner requests relief to use a classification of Type 2b construction for a four story building, non-complying elevator car and alternative for standby power for smoke control system.]

FINDINGS OF FACT

1. The petition pertains to the renovation to the existing Rand Hall Fine Arts Library, Type 2B, three story academic building, A3, second and third floor story occupancy, F1 first floor; Type 2b; four story Library space in Rand Hall; thus creating non-conforming space. Refer to previous variance 2015-0432.
2. The existing Building Code, Chapter 14, allows for a compliance method evaluation to access code compliance. When a code compliance method review has been performed, the design professional has provided proof that the structure meets the requirements, then that section is deemed compliant. As provided, GHD has provided such a review.
3. The Board finds that the assessment of the Chapter 14 review offered by the architect GHD, along with the alternatives provided with smoke control and elevator size and distance of travel pertaining thereto; the Board finds the Authority Having Jurisdiction/Fire Department supports the granting of the petition.
4. The City of Ithaca has determined that the alteration constitutes the addition of a fourth floor or story, triggering the requirement for the elevator car to accommodate an ambulance stretcher.
5. The petitioner proposes the following mitigation measures in lieu of standby power for the smoke control system: increase natural ventilation; the analysis of the smoke control with the AHJ and an acceptable remedy; that the campus generates their own power and is connected to the city electrical grid and the failure of both systems is unlikely.

CONCLUSIONS OF LAW

This proposed variance will not substantially adversely affect the Uniform Code's provisions for health, safety and security. Strict compliance Uniform Fire Prevention and Building Code would entail practical difficulties and unnecessary hardship and would be unnecessary in light of alternatives which ensure the achievement of the code's intended objective, or, in light of alternatives which, without a loss in the level of safety, achieve the code's intended objective of the code more efficiently, effectively or economically.

DETERMINATION

WHEREFORE IT IS DETERMINED that the application for a variance from 2015 IBC, Sections 602.1, 602.2, Table 601, 3002.4, 404.7, 909.11, and 2702.2.15, and applicable portions of the 2016 Uniform Code Supplement, be GRANTED with the following condition:

1. That all aspects of the building and construction shall be in compliance with the acceptable codes, rules and regulations.

Furthermore, it should be noted that the decision of the Board is limited to the specific building and application before it, as contained within the petition, and should not be interpreted to give implied approval of any general plans or specifications presented in support of this application.

Acting Chairman Michael Hrab, Michael McQuade, Richard Andrews and Andrew Garlock, all concur. C. Thomas Parsons recused himself.

So ordered.

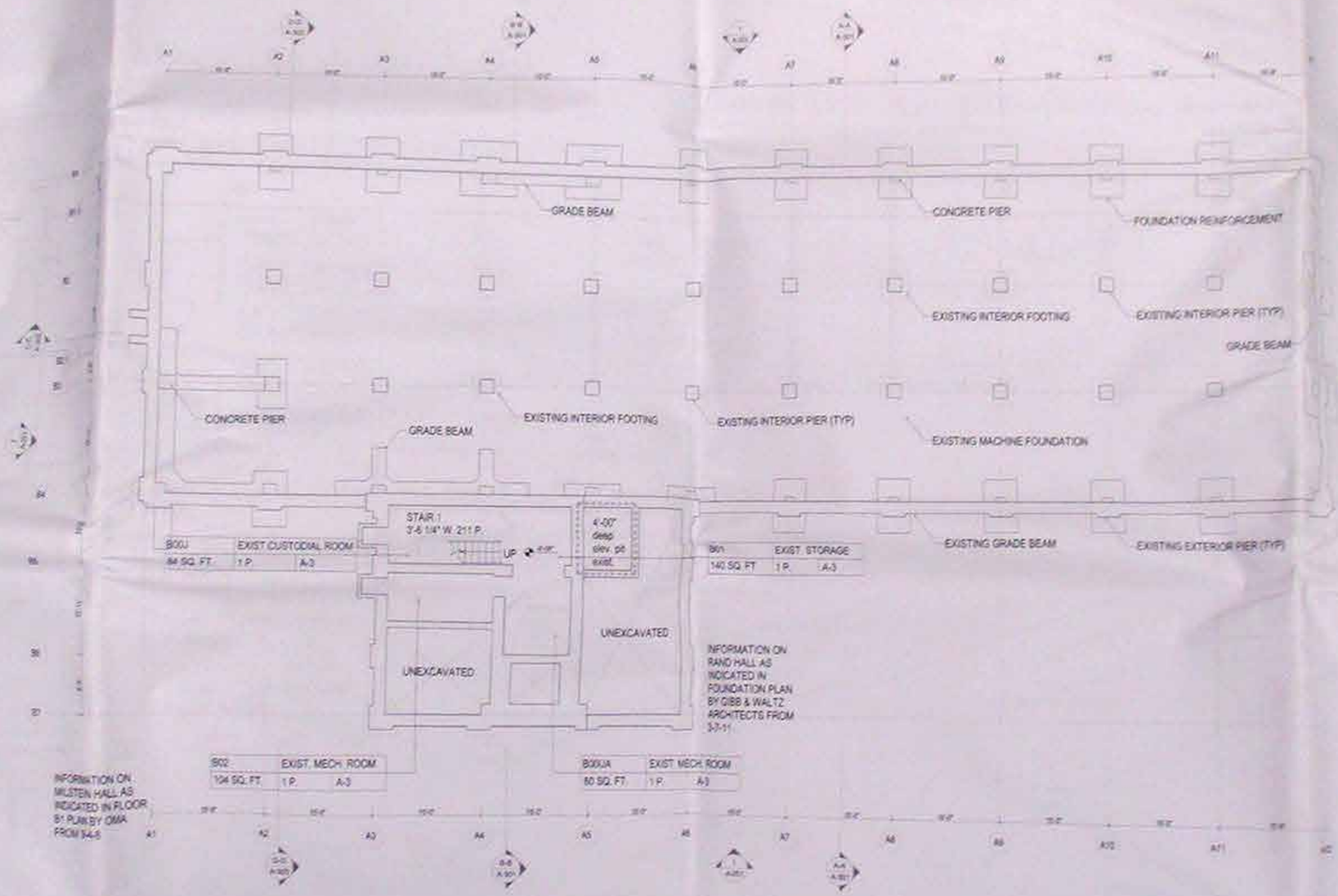
Capital Region – Syracuse Board of Review

By: Michael Hrab, Acting Chairman

Date: 10-11-16

MC: nc

EXHIBIT C



EXISTING OCCUPANT LOAD CALCULATION (TABLE 1004.1.1)

ROOM NO	ROOM NAME	GROSS AREA	NET AREA	FLOOR AREA PER OCC	TOTAL No OF OCC
B00J	CUSTODIAL ROOM	84 FP	-	300 FP	1
B00JA	MECH. ROOM	60 FP	-	300 FP	1
B01	STORAGE	140 FP	-	300 FP	1
B02	MECH. ROOM	104 FP	-	300 FP	1
TOTAL					4

NOTE: THIS FILE IS FOR INFORMATION ONLY - NO CHANGE TO OCCUPANCY, USE OR EGRESS

LEGEND
FIRE RATED WALLS

STV Incorporated
225 Park Avenue South
New York, New York 10003
(212) 777-4400 fax (212) 529-5233
ARCHITECT
Wolfgang Tschapeller

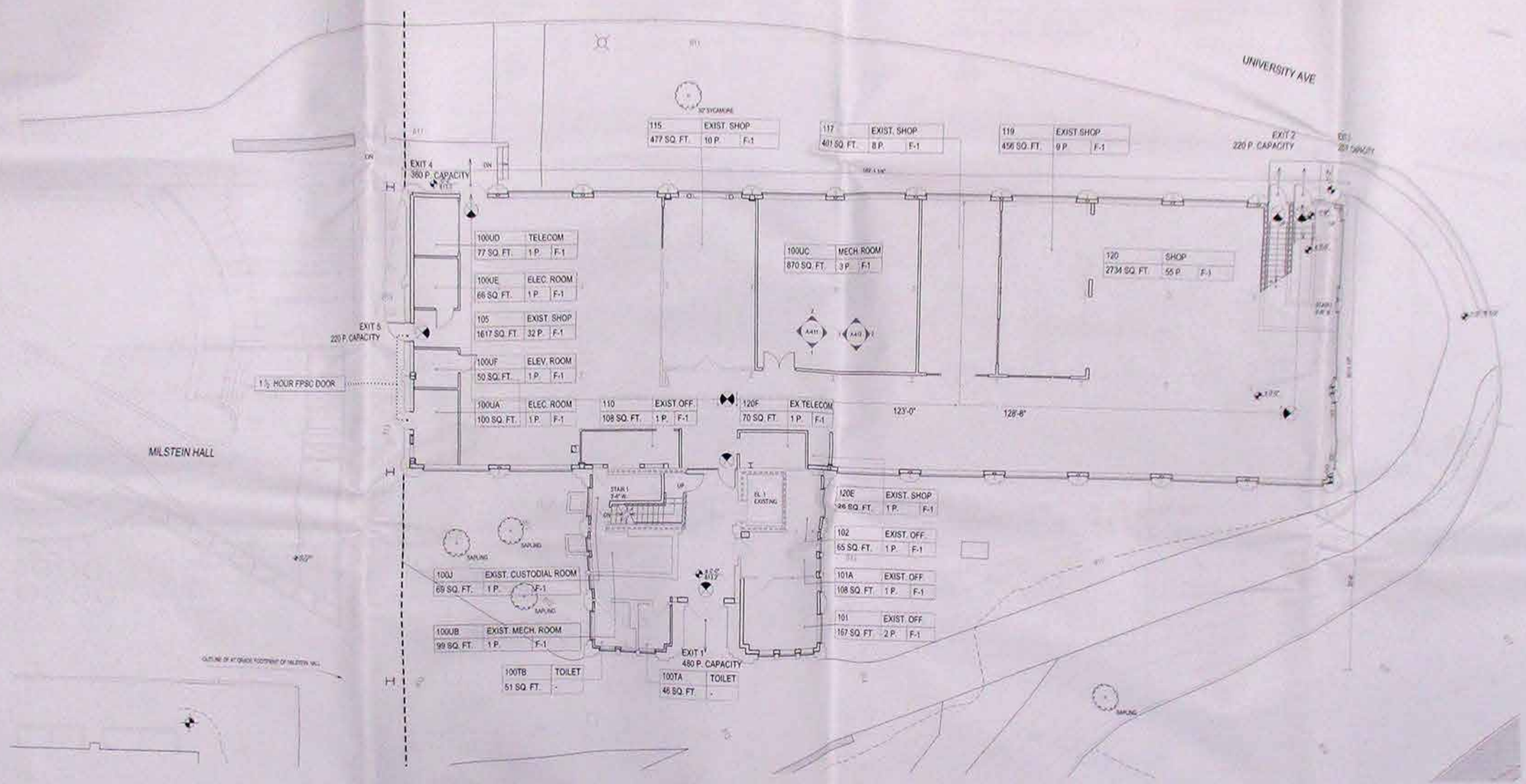
PROJECT TITLE
CORNELL FINE ARTS LIBRARY
CORNELL UNIVERSITY
Ithaca, New York 14853
SCALE
SEAL/SIGN
Drawn By:
Designed By:
Checked By:
Approved By:
Date Issued:
Scale:
Drawing Title:

BASEMENT
CODE DRAWING

03/10/2017

Drawing No.
B1004.00

EXHIBIT C



EXISTING OCCUPANT LOAD CALCULATION (TABLE 1004.1.1)

ROOM No	ROOM NAME	GROSS AREA	NET AREA	FLOOR AREA PER OCC.	TOTAL No OF OCC.
100J	EXIST. CUSTOD. ROOM	69 FT²	-	300 FT²	1
100UA	ELECTRICAL ROOM	100 FT²	-	300 FT²	1
100UB	EXIST MECH. ROOM	99 FT²	-	300 FT²	1
100UC	MECH. ROOM	870 FT²	-	300 FT²	3
100UD	TELECOM	77 FT²	-	300 FT²	1
100UE	ELECTRICAL ROOM	66 FT²	-	300 FT²	1
100UF	ELEVATOR ROOM	50 FT²	-	300 FT²	1
101	EXISTING OFFICE	167 FT²	-	100 FT²	2
101A	EXISTING OFFICE	108 FT²	-	100 FT²	1
102	EXISTING OFFICE	65 FT²	-	100 FT²	1
105	EXISTING SHOP	-	1617 FT²	50 FT²	32
110	EXISTING OFFICE	108 FT²	-	100 FT²	1
115	EXISTING SHOP	-	477 FT²	50 FT²	10
117	EXISTING SHOP	-	401 FT²	50 FT²	8
119	EXISTING SHOP	-	456 FT²	50 FT²	9
120	SHOP	-	2734 FT²	50 FT²	55
120E	EXISTING SHOP	-	26 FT²	50 FT²	1
120F	EXISTING TELECOM	70 FT²	-	300 FT²	1
TOTAL					130

NOTE: CUSTODIAL ROOM 100J, OFFICE 101, OFFICE 101A, OFFICE 102 AND OFFICE 110 SHALL BE CONSIDERED ACCESSORY OCCUPANCY TO THE MAIN OCCUPANCY OF THE OCCUPANCY OF THE PORTION OF THE BUILDING, THEREOF (F-1) SINCE THE AGGREGATE AREA THEREOF DOESN'T EXCEED 10% OF THE AREA OF THE FIRST STORY AS PER SECTION 508.3.1.
537 FT²/8709.98 FT²=6.16%

EGRESS CALCULATION (TABLE 1005.1)

EXIT No	STAIR WIDTH	INCHES PER OCC.	CAPACITY	DOOR WIDTH NOM	DOOR WIDTH CLEAR	INCHES PER OCC.	CAPACITY	MAX. CAPACITY OF EXIT
1	-	0.2	-	6'-4"	6'-0"	0.15	480	480
3	3'-8"	0.2	220	3'-0"	2'-9"	0.15	220	220
4	-	0.2	-	5'-3"	4'-6"	0.15	360	360
5	-	-	-	3'-0"	2'-9"	0.15	220	220
TOTAL								1280

TOILET FACILITIES CALCULATIONS (TABLE 2902.1)

ROOM No	No OF OCC.	REQ. WC	PROV. WC	PROV URINALS	REQ. LAVATORIES	PROV LAVATORIES	REQ. DRINK FOUNTAINS	PROV DRINK FOUNTAINS	REQ. SERVICE SINK	PROV. SERVICE SINK
MEN	65	1	1	-	1	1	1	1	1	1
WOMEN	65	1	1	-	1	1	1			

LEGEND
FIRE RATED WALLS

STV Incorporated
225 Park Avenue South
New York, New York 10003
(212) 777-4466 fax (212) 529-5237
ARCHITECT
Wolfgang Tschapeller

PROJECT TITLE
CORNELL FINE ARTS LIBRARY
CORNELL UNIVERSITY
Ithaca, New York 14853
SEALS
Submittal
Drawn By:
Designed By:
Checked By:
Approved By:
Date Issued:
Scale:
Drawing Title:
1ST STORY
CODE DRAWING
Drawing No:
B1005.00

03/10/2017

EXHIBIT C

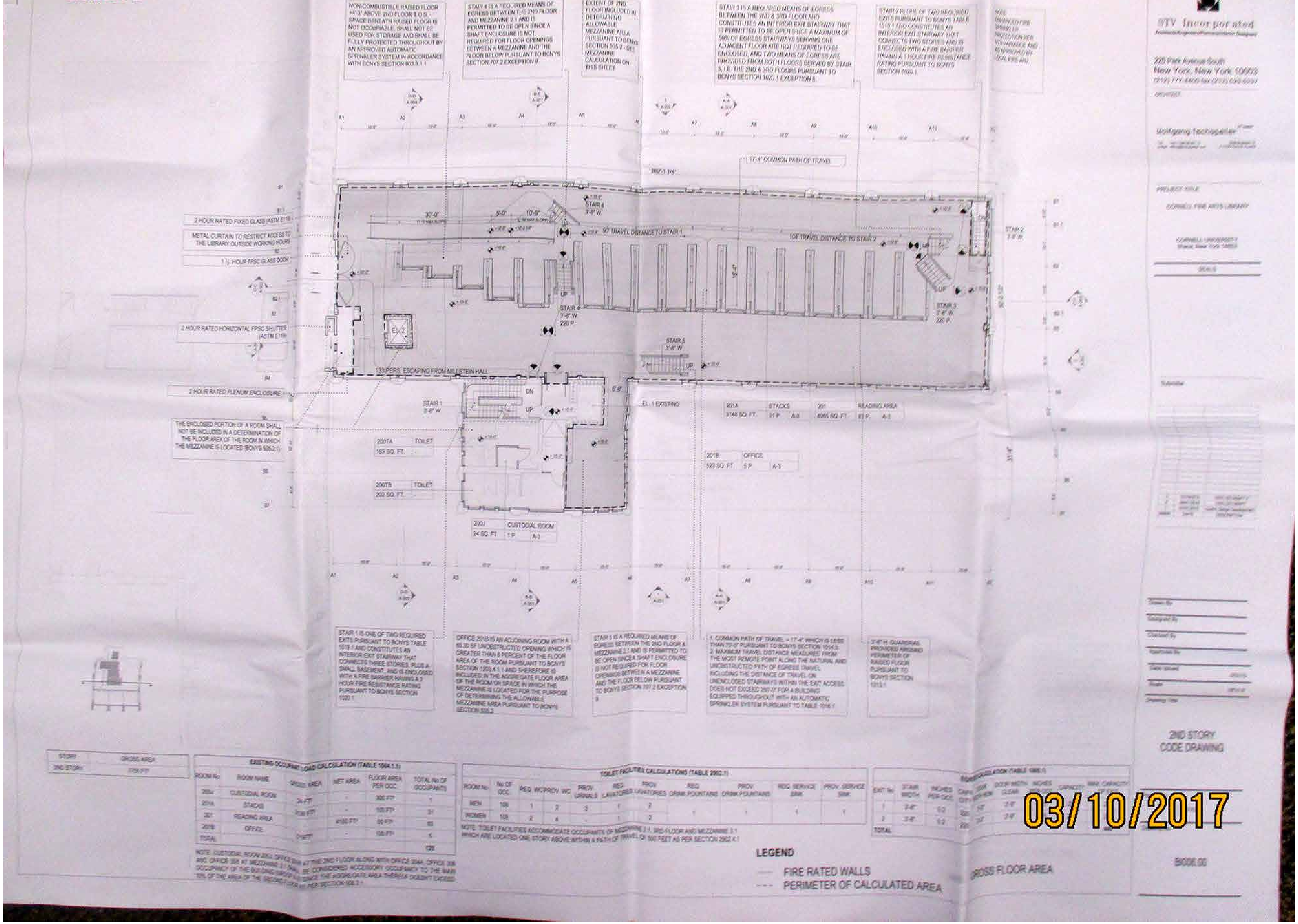
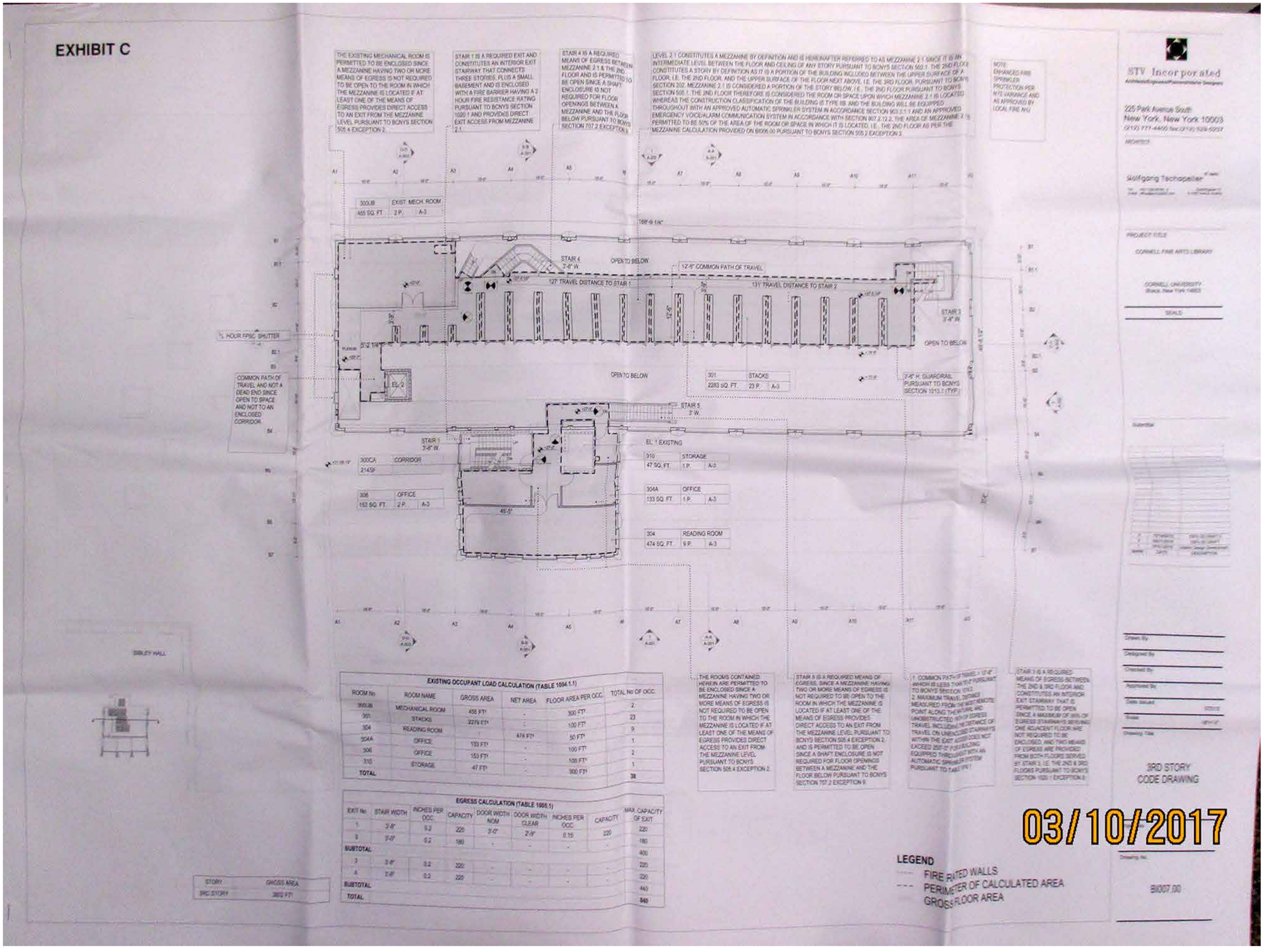

NON-COMBUSTIBLE RAISED FLOOR +4'-3" ABOVE 2ND FLOOR T.O.S. - SPACE BENEATH RAISED FLOOR IS NOT OCCUPIABLE, SHALL NOT BE USED FOR STORAGE AND SHALL BE FULLY PROTECTED THROUGHOUT BY AN APPROVED AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH BCNYS SECTION 903.3.1.1
STAIR 4 IS A REQUIRED MEANS OF EGRESS BETWEEN THE 2ND FLOOR AND MEZZANINE 2.1 AND IS PERMITTED TO BE OPEN SINCE A SHAFT ENCLOSURE IS NOT REQUIRED FOR FLOOR OPENINGS BETWEEN A MEZZANINE AND THE FLOOR BELOW PURSUANT TO BCNYS SECTION 707.2 EXCEPTION 9
EXTENT OF 2ND FLOOR INCLUDED IN DETERMINING ALLOWABLE MEZZANINE AREA PURSUANT TO BCNYS SECTION 505.2 - SEE MEZZANINE CALCULATION ON THIS SHEET
STAIR 3 IS A REQUIRED MEANS OF EGRESS BETWEEN THE 2ND & 3RD FLOOR AND CONSTITUTES AN INTERIOR EXIT STAIRWAY THAT IS PERMITTED TO BE OPEN SINCE A MAXIMUM OF 50% OF EGRESS STAIRWAYS SERVING ONE ADJACENT FLOOR ARE NOT REQUIRED TO BE ENCLOSED, AND TWO MEANS OF EGRESS ARE PROVIDED FROM BOTH FLOORS SERVED BY STAIR 3, I.E. THE 2ND & 3RD FLOORS PURSUANT TO BCNYS SECTION 1020.1 EXCEPTION 6
STAIR 2 IS ONE OF TWO REQUIRED EXITS PURSUANT TO BCNYS TABLE 1019.1 AND CONSTITUTES AN INTERIOR EXIT STAIRWAY THAT CONNECTS TWO STORIES AND IS ENCLOSED WITH A FIRE BARRIER HAVING A 1 HOUR FIRE RESISTANCE RATING PURSUANT TO BCNYS SECTION 1020.1
17'-4" COMMON PATH OF TRAVEL
2 HOUR RATED FIXED GLASS (ASTM E119)
METAL CURTAIN TO RESTRICT ACCESS TO THE LIBRARY OUTSIDE WORKING HOURS
1 1/2 HOUR FPSC GLASS DOOR
2 HOUR RATED HORIZONTAL FPSC SHUTTER (ASTM E119)
2 HOUR RATED PLENUM ENCLOSURE
THE ENCLOSED PORTION OF A ROOM SHALL NOT BE INCLUDED IN A DETERMINATION OF THE FLOOR AREA OF THE ROOM IN WHICH THE MEZZANINE IS LOCATED (BCNYS 505.2.1)
STAIR 4 3'-8" W
97' TRAVEL DISTANCE TO STAIR 1
196' TRAVEL DISTANCE TO STAIR 2
STAIR 2 7'-8" W
STAIR 3 3'-8" W 220 P.
STAIR 6 3'-8" W 220 P.
STAIR 5 3'-6" W
EL 2
133 PERS. ESCAPING FROM MILLSTEIN HALL
STAIR 1 3'-8" W
EL. 1 EXISTING
201A STACKS 3148 SQ. FT. 31 P. A-3
201 READING AREA 4085 SQ. FT. 82 P. A-3
200TA TOILET 163 SQ. FT.
200TB TOILET 202 SQ. FT.
201B OFFICE 523 SQ. FT. 5 P. A-3
200J CUSTODIAL ROOM 24 SQ. FT. 1 P. A-3
STAIR 1 IS ONE OF TWO REQUIRED EXITS PURSUANT TO BCNYS TABLE 1019.1 AND CONSTITUTES AN INTERIOR EXIT STAIRWAY THAT CONNECTS THREE STORIES, PLUS A SMALL BASEMENT, AND IS ENCLOSED WITH A FIRE BARRIER HAVING A 2 HOUR FIRE RESISTANCE RATING PURSUANT TO BCNYS SECTION 1020.1
OFFICE 201B IS AN ADJOINING ROOM WITH A 65.30 SF UNOBSTRUCTED OPENING WHICH IS GREATER THAN 8 PERCENT OF THE FLOOR AREA OF THE ROOM PURSUANT TO BCNYS SECTION 1203.4.1.1 AND THEREFORE IS INCLUDED IN THE AGGREGATE FLOOR AREA OF THE ROOM OR SPACE IN WHICH THE MEZZANINE IS LOCATED FOR THE PURPOSE OF DETERMINING THE ALLOWABLE MEZZANINE AREA PURSUANT TO BCNYS SECTION 505.2
STAIR 5 IS A REQUIRED MEANS OF EGRESS BETWEEN THE 2ND FLOOR & MEZZANINE 2.1 AND IS PERMITTED TO BE OPEN SINCE A SHAFT ENCLOSURE IS NOT REQUIRED FOR FLOOR OPENINGS BETWEEN A MEZZANINE AND THE FLOOR BELOW PURSUANT TO BCNYS SECTION 707.2 EXCEPTION 9
1. COMMON PATH OF TRAVEL = 17'-4" WHICH IS LESS THAN 75'-0" PURSUANT TO BCNYS SECTION 1014.3
2. MAXIMUM TRAVEL DISTANCE MEASURED FROM THE MOST REMOTE POINT ALONG THE NATURAL AND UNOBSTRUCTED PATH OF EGRESS TRAVEL INCLUDING THE DISTANCE OF TRAVEL ON UNENCLOSED STAIRWAYS WITHIN THE EXIT ACCESS DOES NOT EXCEED 250'-0" FOR A BUILDING EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM PURSUANT TO TABLE 1016.1
3'-6" H. GUARDRAIL PROVIDED AROUND PERIMETER OF RAISED FLOOR PURSUANT TO BCNYS SECTION 1013.1
EXISTING OCCUPANT LOAD CALCULATION (TABLE 1004.1.1)
TOILET FACILITIES CALCULATIONS (TABLE 2902.1)
LEGEND
FIRE RATED WALLS
PERIMETER OF CALCULATED AREA
GROSS FLOOR AREA
STV Incorporated
225 Park Avenue South
New York, New York 10003
PROJECT TITLE
CORNELL FINE ARTS LIBRARY
CORNELL UNIVERSITY
2ND STORY CODE DRAWING
B006.00
03/10/2017

EXHIBIT C


THE EXISTING MECHANICAL ROOM IS PERMITTED TO BE ENCLOSED SINCE A MEZZANINE HAVING TWO OR MORE MEANS OF EGRESS IS NOT REQUIRED TO BE OPEN TO THE ROOM IN WHICH THE MEZZANINE IS LOCATED IF AT LEAST ONE OF THE MEANS OF EGRESS PROVIDES DIRECT ACCESS TO AN EXIT FROM THE MEZZANINE LEVEL PURSUANT TO BCNYS SECTION 505.4 EXCEPTION 2.
STAIR 1 IS A REQUIRED EXIT AND CONSTITUTES AN INTERIOR EXIT STAIRWAY THAT CONNECTS THREE STORIES, PLUS A SMALL BASEMENT AND IS ENCLOSED WITH A FIRE BARRIER HAVING A 2 HOUR FIRE RESISTANCE RATING PURSUANT TO BCNYS SECTION 1020.1 AND PROVIDES DIRECT EXIT ACCESS FROM MEZZANINE 2.1.
STAIR 4 IS A REQUIRED MEANS OF EGRESS BETWEEN MEZZANINE 2.1 & THE 2ND FLOOR AND IS PERMITTED TO BE OPEN SINCE A SHAFT ENCLOSURE IS NOT REQUIRED FOR FLOOR OPENINGS BETWEEN A MEZZANINE AND THE FLOOR BELOW PURSUANT TO BCNYS SECTION 707.2 EXCEPTION 9.
LEVEL 2.1 CONSTITUTES A MEZZANINE BY DEFINITION AND IS HEREINAFTER REFERRED TO AS MEZZANINE 2.1 SINCE IT IS AN INTERMEDIATE LEVEL BETWEEN THE FLOOR AND CEILING OF ANY STORY PURSUANT TO BCNYS SECTION 502.1. THE 2ND FLOOR CONSTITUTES A STORY BY DEFINITION AS IT IS A PORTION OF THE BUILDING INCLUDED BETWEEN THE UPPER SURFACE OF A FLOOR, I.E. THE 2ND FLOOR, AND THE UPPER SURFACE OF THE FLOOR NEXT ABOVE, I.E. THE 3RD FLOOR. PURSUANT TO BCNYS SECTION 202, MEZZANINE 2.1 IS CONSIDERED A PORTION OF THE STORY BELOW, I.E., THE 2ND FLOOR PURSUANT TO BCNYS SECTION 505.1. THE 2ND FLOOR THEREFORE IS CONSIDERED THE ROOM OR SPACE UPON WHICH MEZZANINE 2.1 IS LOCATED WHEREAS THE CONSTRUCTION CLASSIFICATION OF THE BUILDING IS TYPE IIB, AND THE BUILDING WILL BE EQUIPPED THROUGHOUT WITH AN APPROVED AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE SECTION 903.3.1.1 AND AN APPROVED EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM IN ACCORDANCE WITH SECTION 907.2.13.2. THE AREA OF MEZZANINE 2.1 IS PERMITTED TO BE 50% OF THE AREA OF THE ROOM OR SPACE IN WHICH IT IS LOCATED, I.E., THE 2ND FLOOR AS PER THE MEZZANINE CALCULATION PROVIDED ON #0006.00 PURSUANT TO BCNYS SECTION 505.2 EXCEPTION 2.
NOTE: UNWANED FIRE SPRINKLER PROTECTION PER NYS VARIANCE AND AS APPROVED BY LOCAL FIRE INJ.
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New York, New York 10003
Wolfgang Tschapeller
PROJECT TITLE
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Ithaca, New York 14853
SEALS
Submittal
300UB EXIST. MECH. ROOM
455 SQ. FT. 2 P. A-3
188'-9 1/4"
STAIR 4
3'-6" W.
OPEN TO BELOW
12'-6" COMMON PATH OF TRAVEL
127' TRAVEL DISTANCE TO STAIR 1
131' TRAVEL DISTANCE TO STAIR 2
STAIR 3
3'-6" W.
OPEN TO BELOW
1 HOUR FRSC SHUTTER
COMMON PATH OF TRAVEL AND NOT A DEAD END SINCE OPEN TO SPACE AND NOT TO AN ENCLOSED CORRIDOR.
EL. 2
OPEN TO BELOW
301 STACKS
2283 SQ. FT. 23 P. A-3
3'-6" H. GUARDRAIL PURSUANT TO BCNYS SECTION 1013.3 (TYP.)
STAIR 5
3' W.
STAIR 1
3'-6" W.
EL. 1 EXISTING
300CA CORRIDOR
2145F
310 STORAGE
47 SQ. FT. 1 P. A-3
304A OFFICE
133 SQ. FT. 1 P. A-3
306 OFFICE
153 SQ. FT. 2 P. A-3
304 READING ROOM
474 SQ. FT. 9 P. A-3
45'-5"
SIBLEY HALL
EXISTING OCCUPANT LOAD CALCULATION (TABLE 1004.1.1)
ROOM No | ROOM NAME | GROSS AREA | NET AREA | FLOOR AREA PER OCC. | TOTAL No OF OCC.
300UB | MECHANICAL ROOM | 455 FT² | - | 300 FT² | 2
301 | STACKS | 2276 FT² | - | 100 FT² | 23
304 | READING ROOM | - | 474 FT² | 50 FT² | 9
304A | OFFICE | 133 FT² | - | 100 FT² | 1
306 | OFFICE | 153 FT² | - | 100 FT² | 2
310 | STORAGE | 47 FT² | - | 300 FT² | 1
TOTAL | | | | | 38
EGRESS CALCULATION (TABLE 1005.1)
EXIT No | STAIR WIDTH | INCHES PER OCC. | CAPACITY | DOOR WIDTH NOM | DOOR WIDTH CLEAR | INCHES PER OCC. | CAPACITY | MAX. CAPACITY OF EXIT
1 | 3'-6" | 0.2 | 220 | 3'-0" | 2'-9" | 0.15 | 220 | 220
5 | 3'-0" | 0.2 | 180 | - | - | - | - | 180
SUBTOTAL | | | | | | | | 400
3 | 3'-6" | 0.2 | 220 | - | - | - | - | 220
4 | 3'-6" | 0.2 | 220 | - | - | - | - | 220
SUBTOTAL | | | | | | | | 440
TOTAL | | | | | | | | 840
THE ROOMS CONTAINED HEREIN ARE PERMITTED TO BE ENCLOSED SINCE A MEZZANINE HAVING TWO OR MORE MEANS OF EGRESS IS NOT REQUIRED TO BE OPEN TO THE ROOM IN WHICH THE MEZZANINE IS LOCATED IF AT LEAST ONE OF THE MEANS OF EGRESS PROVIDES DIRECT ACCESS TO AN EXIT FROM THE MEZZANINE LEVEL PURSUANT TO BCNYS SECTION 505.4 EXCEPTION 2.
STAIR 5 IS A REQUIRED MEANS OF EGRESS. SINCE A MEZZANINE HAVING TWO OR MORE MEANS OF EGRESS IS NOT REQUIRED TO BE OPEN TO THE ROOM IN WHICH THE MEZZANINE IS LOCATED IF AT LEAST ONE OF THE MEANS OF EGRESS PROVIDES DIRECT ACCESS TO AN EXIT FROM THE MEZZANINE LEVEL PURSUANT TO BCNYS SECTION 505.4 EXCEPTION 2, AND IS PERMITTED TO BE OPEN SINCE A SHAFT ENCLOSURE IS NOT REQUIRED FOR FLOOR OPENINGS BETWEEN A MEZZANINE AND THE FLOOR BELOW PURSUANT TO BCNYS SECTION 707.2 EXCEPTION 9.
1. COMMON PATH OF TRAVEL = 12'-6" WHICH IS LESS THAN 75'-0" PURSUANT TO BCNYS SECTION 1014.3
2. MAXIMUM TRAVEL DISTANCE MEASURED FROM THE MOST REMOTE POINT ALONG THE NATURAL AND UNOBSTRUCTED PATH OF EGRESS TRAVEL INCLUDING THE DISTANCE OF TRAVEL ON UNENCLOSED STAIRWAYS WITHIN THE EXIT ACCESS DOES NOT EXCEED 250'-0" FOR BUILDING EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM PURSUANT TO TABLE 1017.2
STAIR 3 IS A REQUIRED MEANS OF EGRESS BETWEEN THE 2ND & 3RD FLOOR AND CONSTITUTES AN INTERIOR EXIT STAIRWAY THAT IS PERMITTED TO BE OPEN SINCE A MAXIMUM OF 90% OF EGRESS STAIRWAYS SERVING ONE ADJACENT FLOOR ARE NOT REQUIRED TO BE ENCLOSED, AND THUS MEANS OF EGRESS ARE PROVIDED FROM BOTH FLOORS SERVED BY STAIR 3, I.E. THE 2ND & 3RD FLOORS PURSUANT TO BCNY'S SECTION 1020.1 EXCEPTION 3.
STORY | GROSS AREA
3RD STORY | 3802 FT²
LEGEND
FIRE RATED WALLS
PERIMETER OF CALCULATED AREA
GROSS FLOOR AREA
Drawn By
Designed By
Checked By
Approved By
Date Issued
Scale
Drawing Title
3RD STORY
CODE DRAWING
03/10/2017
Drawing No.
#0007.00

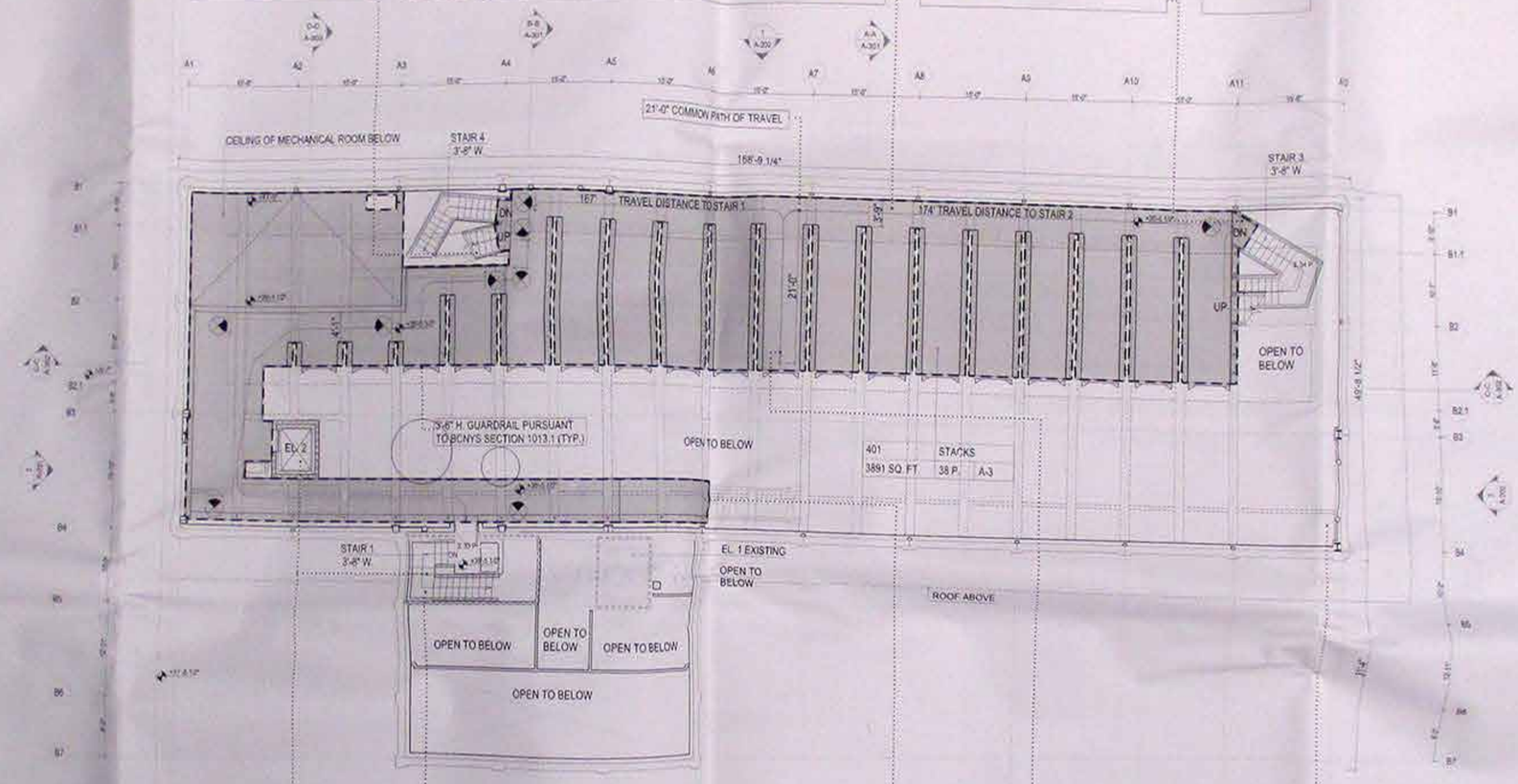
EXHIBIT C

STAIR 4 IS A REQUIRED MEANS OF EGRESS BETWEEN THE 3RD FLOOR AND MEZZANINE 3.1 AND IS PERMITTED TO BE OPEN SINCE A SHAFT ENCLOSURE IS NOT REQUIRED FOR FLOOR OPENINGS BETWEEN A MEZZANINE AND THE FLOOR BELOW PURSUANT TO BCNYS SECTION 707.2 EXCEPTION 6.

THE 3RD FLOOR CONSTITUTES A STORY BY DEFINITION AS IT IS A PORTION OF THE BUILDING INCLUDED BETWEEN THE UPPER SURFACE OF A FLOOR, I.E. THE 3RD FLOOR, AND THE ROOF ABOVE PURSUANT TO BCNYS SECTION 202. MEZZANINE 3.1 IS CONSIDERED A PORTION OF THE STORY BELOW, I.E., THE 3RD FLOOR PURSUANT TO BCNYS SECTION 505.1. THE THIRD FLOOR THEREFORE IS CONSIDERED THE ROOM OR SPACE UPON WHICH MEZZANINE 3.1 IS LOCATED. WHEREAS THE CONSTRUCTION CLASSIFICATION OF THE BUILDING IS TYPE IIB, AND THE BUILDING WILL BE EQUIPPED THROUGHOUT WITH AN APPROVED AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE SECTION 903.3.1.1 AND AN APPROVED EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM IN ACCORDANCE WITH SECTION 907.2.12.2. THE AREA OF MEZZANINE 3.1 IS PERMITTED TO BE 50% OF THE AREA OF THE ROOM OR SPACE IN WHICH IT IS LOCATED, I.E., THE 3RD FLOOR AS PER THE MEZZANINE CALCULATION PROVIDED ON THIS SHEET PURSUANT TO BCNYS SECTION 505.2 EXCEPTION 2.

STAIR 3 IS ONE OF TWO REQUIRED EXITS PURSUANT TO BCNYS TABLE 1019.1 AND CONSTITUTES AN INTERIOR EXIT STAIRWAY THAT CONNECTS LESS THAN FOUR STORIES AND IS PERMITTED TO BE OPEN SINCE A MAXIMUM OF 50% OF EGRESS STAIRWAYS SERVING ONE ADJACENT FLOOR ARE NOT REQUIRED TO BE ENCLOSED AND TWO MEANS OF EGRESS ARE PROVIDED FROM BOTH FLOORS SERVED BY STAIR 3, I.E., THE 3RD @ 2ND FLOORS PURSUANT TO BCNYS SECTION 1020.1 EXCEPTION 8.

NOTE:
ENHANCED FIRE SPRINKLER PROTECTION PER NYS VARIANCE AND AS APPROVED BY LOCAL FIRE AHJ



MEZZANINE CALCULATION (TABLE 505.2)

STORY	GROSS AREA	%
4TH STORY	3891 FT²	100
4TH STORY MEZZ.	1918 FT²	49.29

THE ENCLOSED PORTION OF A ROOM SHALL NOT BE INCLUDED IN A DETERMINATION OF THE FLOOR AREA OF THE ROOM IN WHICH THE MEZZANINE IS LOCATED (BCNYS 505.2.1)

STAIR 1 IS ONE OF TWO REQUIRED EXITS PURSUANT TO BCNYS TABLE 1019.1 AND CONSTITUTES AN INTERIOR EXIT STAIRWAY THAT CONNECTS THREE STORIES, PLUS A SMALL BASEMENT, AND IS ENCLOSED WITH A FIRE BARRIER HAVING A 2 HOUR FIRE RESISTANCE RATING PURSUANT TO BCNYS SECTION 1020.1.

COMMON PATH OF TRAVEL AND NOT A DEAD END SINCE OPEN TO SPACE AND NOT TO AN ENCLOSED CORRIDOR.

1. COMMON PATH OF TRAVEL = 21'-0" WHICH IS LESS THAN 75'-0" PURSUANT TO BCNYS SECTION 1014.3.
2. MAXIMUM TRAVEL DISTANCE MEASURED FROM THE MOST REMOTE POINT ALONG THE NATURAL AND UNOBSTRUCTED PATH OF EGRESS TRAVEL INCLUDING THE DISTANCE OF TRAVEL ON UNENCLOSED STAIRWAYS WITHIN THE EXIT ACCESS DOES NOT EXCEED 250'-0" FOR A BUILDING EQUIPPED THROUGHOUT WITH AN AUTOMATIC APRINKLER SYSTEM PURSUANT TO TABLE 1016.1

THE 3RD FLOOR IS PERMITTED TO BE OPEN TO THE 2ND FLOOR AND DOES NOT REQUIRE A SHAFT ENCLOSURE PURSUANT TO BCNYS SECTION 707.2 EXCEPTION 7.

EXISTING OCCUPANT LOAD CALCULATION (TABLE 1004.1.1)

ROOM No	ROOM NAME	GROSS AREA	NET AREA	FLOOR AREA PER OCC.	TOTAL No OF OCCUPANTS
401	STACKS	3891 FT²	-	100 FT²	39
TOTAL					39

EGRESS CALCULATION (TABLE 1005.1)

EXIT No	STAIR WIDTH	INCHES PER OCC.	CAPACITY	DOOR WIDTH NOM.	DOOR WIDTH CLEAR	INCHES PER OCC.	CAPACITY	MAX. CAPACITY OF EXIT
1	3'-6"	0.2	220	3'-0"	2'-9"	0.15	220	220
3	3'-6"	0.2	220	-	-	-	-	220
TOTAL								440

NOTE: STAIR 4 IS NOT REQUIRED MEANS OF EGRESS FROM THIS LEVEL

NOTE: TOILET FACILITIES ARE PROVIDED ON THE 2ND FLOOR WHICH IS LOCATED ONE STORY BELOW WITHIN A PATH OF TRAVEL OF 500 FEET AS PER SECTION 2902.3.2

LEGEND

- FIRE RATED WALLS
- PERIMETER OF CALCULATED AREA
- GROSS FLOOR AREA

STV Incorporated
Architects/Engineers/Planners/Interior Designers
225 Park Avenue South
New York, New York 10003
(212) 777-4400 fax (212) 529-5237
ARCHITECT:
Wolfgang Tschapeller

PROJECT TITLE
CORNELL FINE ARTS LIBRARY

CORNELL UNIVERSITY
Ithaca, New York 14853

SCALE

Submittal

MARK	DATE	DESCRIPTION
2	10/19/2016	100% DD DRAWT 4
1	09/21/2016	100% DD DRAWT
	07/14/2016	Interim Design Development

Drawn By
Designed By
Checked By
Approved By
Date Issued 07/01/16
Scale 1/8"=1'-0"
Drawing Title

4TH STORY
CODE DRAWING

03/10/2017

Drawing No.

B1008.00

EXHIBIT C

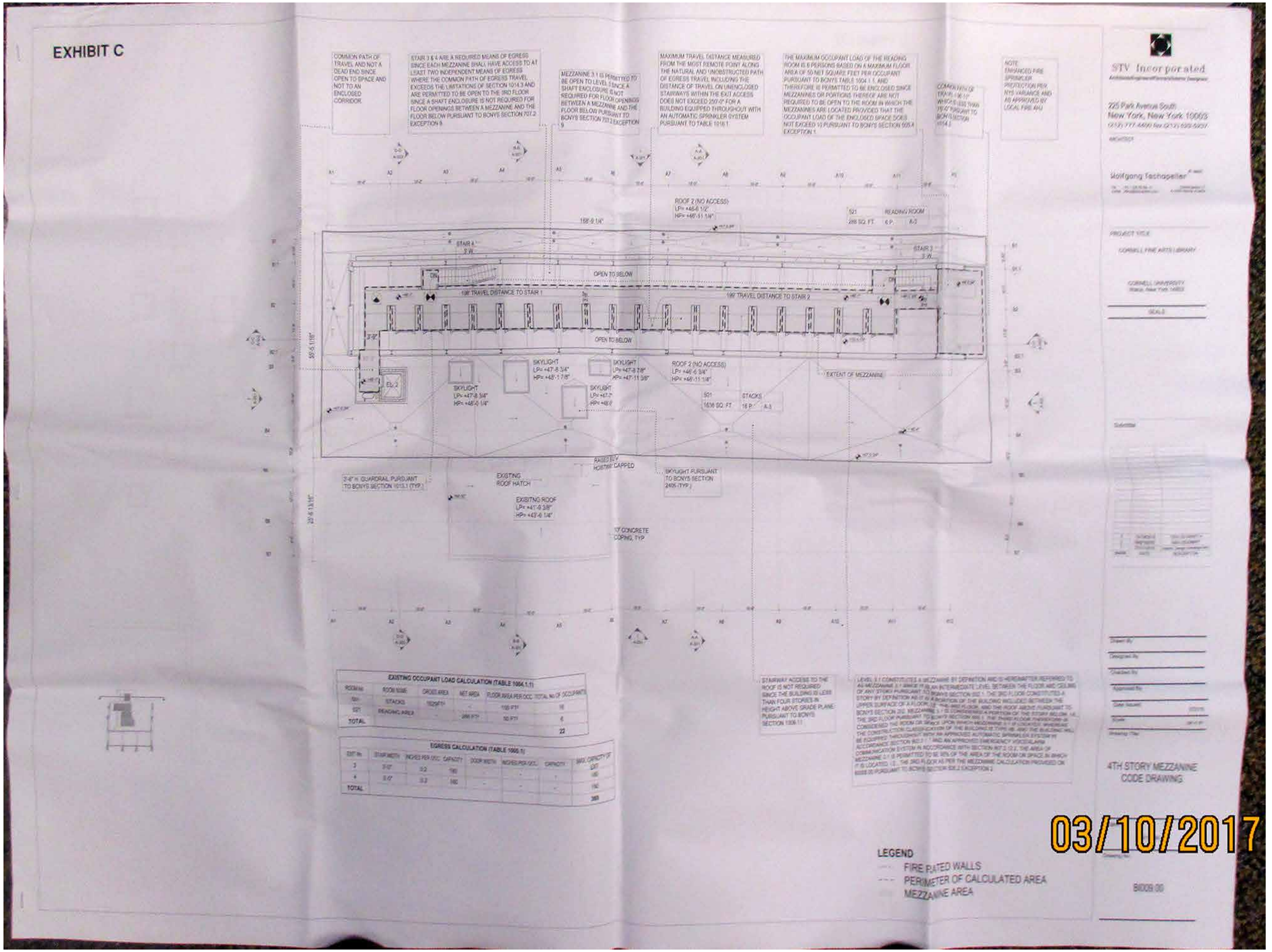
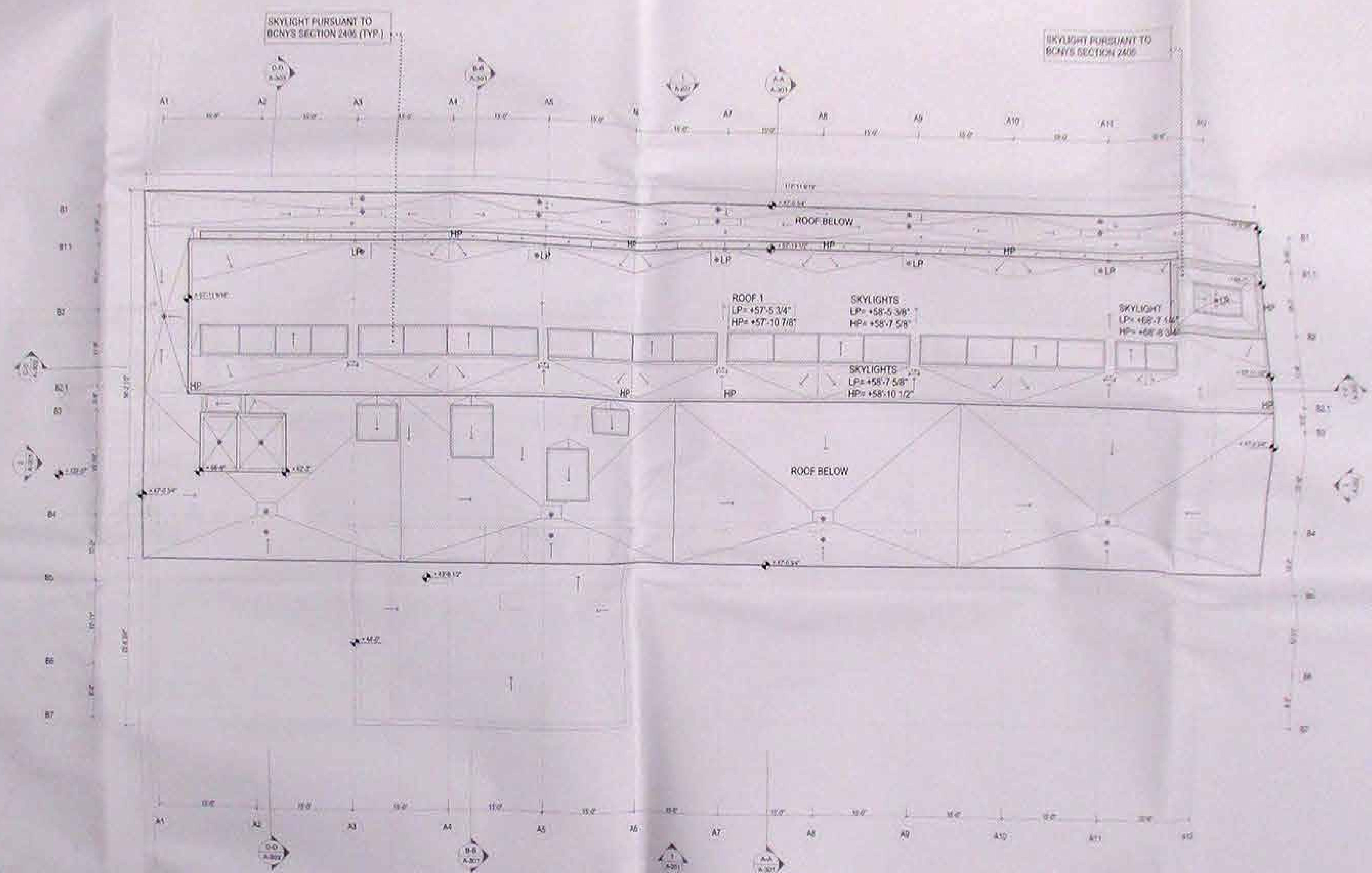

COMMON PATH OF TRAVEL AND NOT A DEAD END SINCE OPEN TO SPACE AND NOT TO AN ENCLOSED CORRIDOR.
STAIR 3 & 4 ARE A REQUIRED MEANS OF EGRESS SINCE EACH MEZZANINE SHALL HAVE ACCESS TO AT LEAST TWO INDEPENDENT MEANS OF EGRESS WHERE THE COMMON PATH OF EGRESS TRAVEL EXCEEDS THE LIMITATIONS OF SECTION 1014.3 AND ARE PERMITTED TO BE OPEN TO THE 3RD FLOOR SINCE A SHAFT ENCLOSURE IS NOT REQUIRED FOR FLOOR OPENINGS BETWEEN A MEZZANINE AND THE FLOOR BELOW PURSUANT TO BCNYS SECTION 707.2 EXCEPTION 9
MEZZANINE 3.1 IS PERMITTED TO BE OPEN TO LEVEL 3 SINCE A SHAFT ENCLOSURE IS NOT REQUIRED FOR FLOOR OPENINGS BETWEEN A MEZZANINE AND THE FLOOR BELOW PURSUANT TO BCNYS SECTION 707.2 EXCEPTION 9
MAXIMUM TRAVEL DISTANCE MEASURED FROM THE MOST REMOTE POINT ALONG THE NATURAL AND UNOBSTRUCTED PATH OF EGRESS TRAVEL INCLUDING THE DISTANCE OF TRAVEL ON UNENCLOSED STAIRWAYS WITHIN THE EXIT ACCESS DOES NOT EXCEED 250'-0" FOR A BUILDING EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM PURSUANT TO TABLE 1016.1
THE MAXIMUM OCCUPANT LOAD OF THE READING ROOM IS 6 PERSONS BASED ON A MAXIMUM FLOOR AREA OF 50 NET SQUARE FEET PER OCCUPANT PURSUANT TO BCNYS TABLE 1004.1.1, AND THEREFORE IS PERMITTED TO BE ENCLOSED SINCE MEZZANINES OR PORTIONS THEREOF ARE NOT REQUIRED TO BE OPEN TO THE ROOM IN WHICH THE MEZZANINES ARE LOCATED PROVIDED THAT THE OCCUPANT LOAD OF THE ENCLOSED SPACE DOES NOT EXCEED 10 PURSUANT TO BCNYS SECTION 505.4 EXCEPTION 1.
NOTE: ENHANCED FIRE SPRINKLER PROTECTION PER NYS VARIANCE AND AS APPROVED BY LOCAL FIRE AHJ
STV Incorporated
225 Park Avenue South
New York, New York 10003
(212) 777-4400 fax (212) 633-5727
Wolfgang Tschapeller
PROJECT TITLE
CORNELL FINE ARTS LIBRARY
CORNELL UNIVERSITY
Ithaca, New York 14853
SEAL
Submittal
ROOF 2 (NO ACCESS)
LP= +46'-6 1/2"
HP= +48'-11 1/4"
158'-9 1/4"
521 READING ROOM
288 SQ. FT. 6 P. A-3
STAIR 4
3 W.
STAIR 3
3 W.
OPEN TO BELOW
198' TRAVEL DISTANCE TO STAIR 1
198' TRAVEL DISTANCE TO STAIR 2
OPEN TO BELOW
55'-5 11/16"
SKYLIGHT
LP= +47'-8 3/4"
HP= +48'-1 7/8"
SKYLIGHT
LP= +47'-8 7/8"
HP= +47'-11 3/8"
SKYLIGHT
LP= +47'-8 3/4"
HP= +48'-0 1/4"
SKYLIGHT
LP= +47'-7"
HP= +48'-0"
ROOF 2 (NO ACCESS)
LP= +46'-6 3/4"
HP= +48'-11 1/4"
EXTENT OF MEZZANINE
521 STACKS
1636 SQ. FT. 16 P. A-3
EL. 2
3'-6" H. GUARDRAIL PURSUANT TO BCNYS SECTION 1013.3 (TYP.)
EXISTING ROOF HATCH
EXISTING ROOF
LP= +41'-9 3/8"
HP= +43'-0 1/4"
RAISED EV. HOISTWAY CAPPED
SKYLIGHT PURSUANT TO BCNYS SECTION 2405 (TYP.)
12" CONCRETE COPING, TYP.
25'-6 13/16"
EXISTING OCCUPANT LOAD CALCULATION (TABLE 1004.1.1)
ROOM No. | ROOM NAME | GROSS AREA | NET AREA | FLOOR AREA PER OCC. | TOTAL No. OF OCCUPANTS
521 | STACKS | 1636FT² | - | 100 FT² | 16
521 | READING AREA | - | 288 FT² | 50 FT² | 6
TOTAL | | | | | 22
EGRESS CALCULATION (TABLE 1005.1)
EXIT No. | STAIR WIDTH | INCHES PER OCC. CAPACITY | DOOR WIDTH | INCHES PER OCC. | CAPACITY | MAX. CAPACITY OF EXIT
3 | 5'-0" | 0.2 | 160 | - | - | - | 160
4 | 5'-0" | 0.2 | 160 | - | - | - | 160
TOTAL | | | | | | | 320
STAIRWAY ACCESS TO THE ROOF IS NOT REQUIRED SINCE THE BUILDING IS LESS THAN FOUR STORIES IN HEIGHT ABOVE GRADE PLANE PURSUANT TO BCNYS SECTION 1509.11
LEVEL 3.1 CONSTITUTES A MEZZANINE BY DEFINITION AND IS HEREINAFTER REFERRED TO AS MEZZANINE 3.1 SINCE IT IS AN INTERMEDIATE LEVEL BETWEEN THE FLOOR AND CEILING OF ANY STORY PURSUANT TO BCNYS SECTION 202.1. THE 3RD FLOOR CONSTITUTES A STORY BY DEFINITION AS IT IS A PORTION OF THE BUILDING INCLUDED BETWEEN THE UPPER SURFACE OF A FLOOR, I.E. THE 3RD FLOOR, AND THE ROOF ABOVE PURSUANT TO BCNYS SECTION 202. MEZZANINE 3.1 IS CONSIDERED A PORTION OF THE STORY BELOW I.E. THE 3RD FLOOR PURSUANT TO BCNYS SECTION 505.1. THE THIRD FLOOR THEREFORE IS CONSIDERED THE ROOM OR SPACE UPON WHICH MEZZANINE 3.1 IS LOCATED. MEZZANINE THE CONSTRUCTION CLASSIFICATION OF THE BUILDING IS TYPE 1B AND THE BUILDING WILL BE EQUIPPED THROUGHOUT WITH AN APPROVED AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE SECTION 903.2.1.1 AND AN APPROVED EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM IN ACCORDANCE WITH SECTION 907.2.12.2. THE AREA OF MEZZANINE 3.1 IS PERMITTED TO BE 10% OF THE AREA OF THE ROOM OR SPACE IN WHICH IT IS LOCATED I.E. THE 3RD FLOOR AS PER THE MEZZANINE CALCULATION PROVIDED ON SHEET G0.00 PURSUANT TO BCNYS SECTION 505.2 EXCEPTION 2.
4TH STORY MEZZANINE CODE DRAWING
03/10/2017
LEGEND
FIRE RATED WALLS
PERIMETER OF CALCULATED AREA
MEZZANINE AREA
G0.00

EXHIBIT C



STV Incorporated

Architects/Engineers/Planners/Interior Designers

225 Park Avenue South
New York, New York 10003

ARCHITECT

Wolfgang Tschapeller

PROJECT TITLE

CORNELL FINE ARTS LIBRARY

CORNELL UNIVERSITY
Ithaca, New York 14853

SEALS

Submittal

Drawn By

Designed By

Checked By

Approved By

Date Issued

Scale

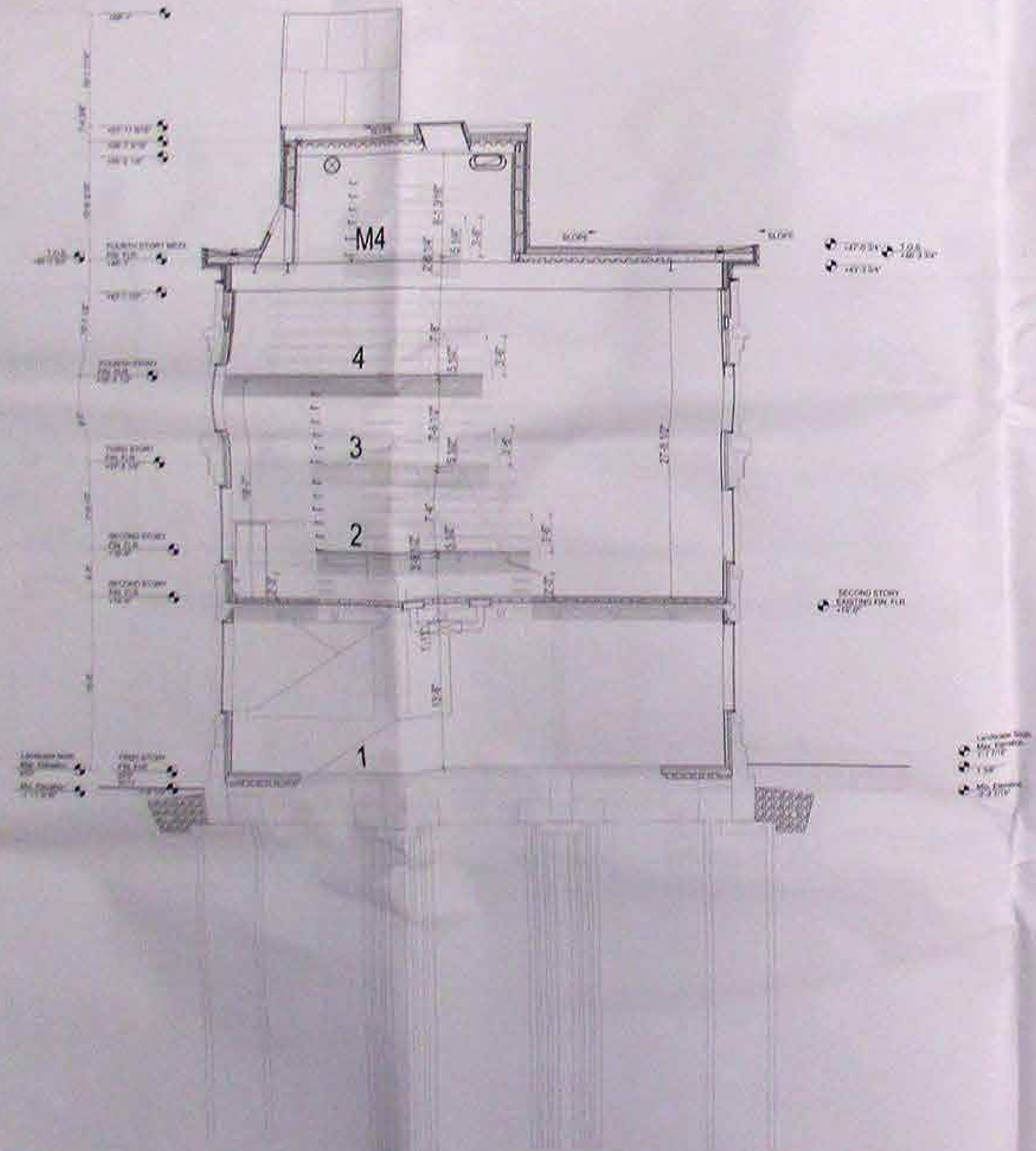
Drawing Title

ROOF PLAN
CODE DRAWING

03/10/2017

BI010.00

EXHIBIT C



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Drawn By

Designed By

Checked By

Approved By

Date Issued

Scale

Drawing Title

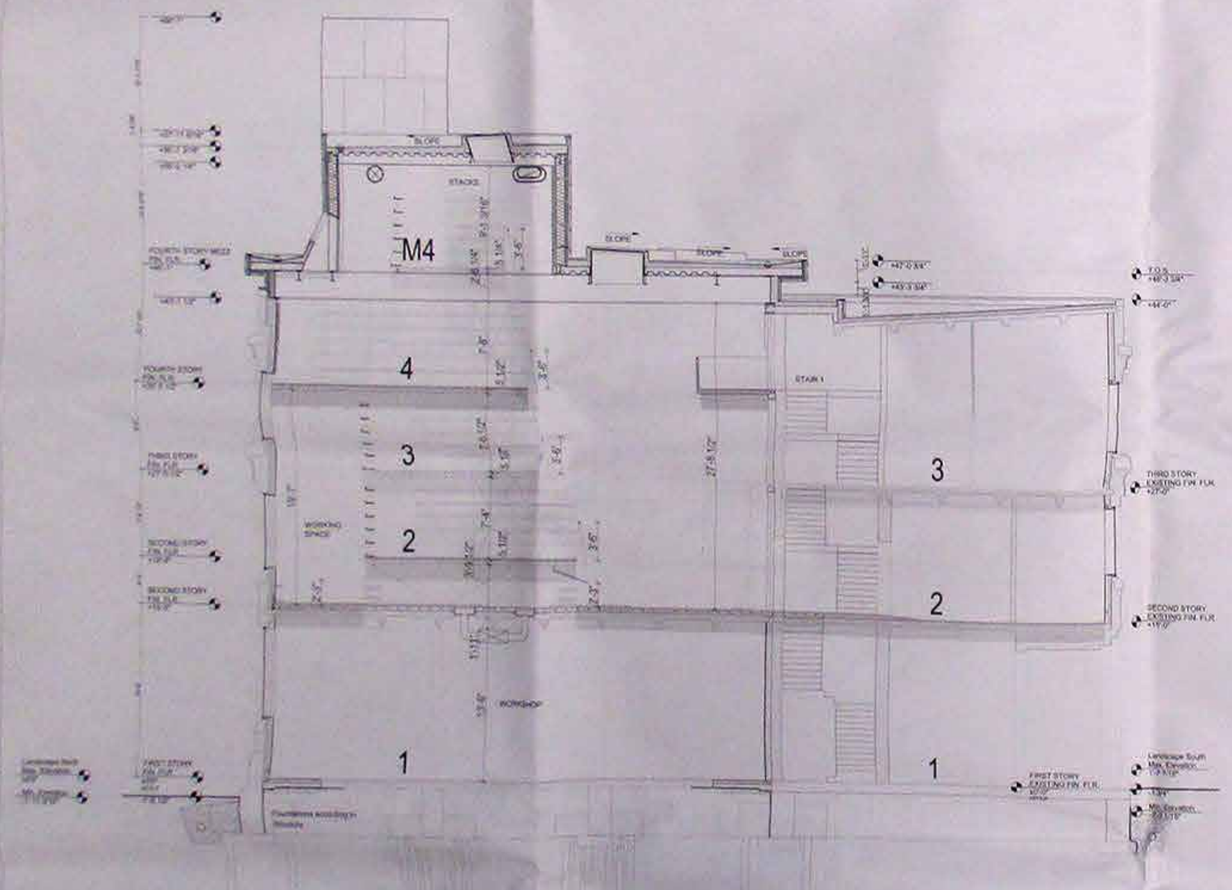
SECTION A-A
CODE DRAWING

03/10/2017

Drawing No.

BI012.01

EXHIBIT C



STV Incorporated
Architects/Engineers/Planners/Interior Designers
225 Park Avenue South
New York, New York 10003
(212) 777-4400 fax (212) 529-5237
ARCHITECT
Wolfgang Tschapeller

PROJECT TITLE
CORNELL FINE ARTS LIBRARY

CORNELL UNIVERSITY
Ithaca, New York 14853

SEALS

Submittal

Drawn By
Designed By
Checked By
Approved By
Date Issued
Scale
Drawing Title

SECTION B-B
CODE DRAWING

03/10/2017

Drawing No.
B/012.02

STATE OF NEW YORK

CAPITAL REGION SYRACUSE BOARD OF REVIEW

In the Matter of the Application of

CORNELL UNIVERSITY - FINE ARTS LIBRARY

Petition 2016-0269,

HEARING in the above matter conducted at the Hughes State Office Building, 333 East Washington Street, Syracuse, New York before, JOHN F. DRURY, CSR, Notary Public in and for the State of New York, on September 15, 2016, 9:30 a.m.

BOARD MEMBERS PRESENT:

C. THOMAS PARSONS, Chairman (recused)

MICHAEL J. HRAB, ESQ., Acting Chairman

MICHAEL J. McQUADE

ANDREW GARLOCK

RICHARD ANDREWS (from Buffalo Board)

NYS CODE ENFORCEMENT:

Charles P. Bliss

Thomas Ditullio

FOR THE PETITIONER:

SHIRLEY K. EGAN, Associate University Counsel
300 CCC Building, Garden Avenue
Ithaca, New York 14853-2601

TIMOTHY DERUYSCHER, PE, SFPE from GHD 250 Mill St.
Rochester, New York 14614.

ANDREW L. MAGRE, AIA Cornell University Architect
102 Humphreys Service Bldg.
Ithaca, NY 14853-3701

HUGH R. BAHAR, PMP, Project Manager of the
Cornell Library
102 Humphreys Service Bldg.
Ithaca, NY 14853-3701

HARRIS C. FEINN, RA, LEED AP from STV Architects
225 Park Avenue South
New York, NY 10003-1604.

CODE ENFORCEMENT CITY OF ITHACA:

MICHAEL NIECHWIADOWICZ,
City Hall 108 E. Green St.
Ithaca, NY 14850-5690.

NEW YORK STATE FIRE SERVICE:

HEATHER ROTH 333 E. Washington St.
Syracuse, NY 13202

G. TARBELL 333 E. Washington St.
Syracuse, NY 13202

INDEX TO WITNESS

EXHIBITS

NUMBER	DESCRIPTION	MARKED:
E	Three renderings of proposed bldg.	7

Acting Chairman

CHAIRMAN PARSONS: I'll excuse myself.

(Chairman exited the room).

MR. HRAB: Good morning, ladies and gentlemen. This is the September 15, 2016 meeting of the Syracuse Board of Review, held in Syracuse, New York. The time is 9:30, and this hearing is officially opened. I'm Mike Hrab, I'm Acting Chairman for this hearing. Tom Parsons is the chairman, and he had to recuse himself for this hearing.

The members of the Board are Rick Andrews, welcome. Andrew Garlock, Michael McQuade. And from the Department of State Tom Ditullio and Charlie Bliss.

We'll now hear the scheduled petition. When you speak, please address the Board, give your us your name, legal address, so our official reporter can have all the information requested. We may have to stop you from time to time to consult with our

technical staff. In making comments to the Board, please provide a descriptive narrative on matters referring to your exhibits, to enable the court reporter to enter these on the record.

First hearing is in the matter of Petition Number 2016-0269. The Petitioner is Cornell University, Fine Arts Library. Public notice of the petition was published in the September 14, 2016 edition of the New York State Register. Anyone here on behalf of the Applicant wishing to speak?

MS. EGAN: Yes, hello. My name is Shirley Egan, I'm Associate University Counsel. I wanted to introduce the Petitioner's, the Applicant's team here. Starting there in the back we have Hugh Bahar, senior engineer and project manager. And next to him is Andrew Magre, who is director of project administration at Cornell University. We have our architect, Harris Feinn, from STV. And in the back we have Tyler

Tamblin, who is with GHD Consulting Services. And here in the front next to Harris, we have Tim Deruyscher, a principal, GHD Consulting Services, who will do most of the talking.

THE ACTING CHAIRMAN: Mr. Deruyscher.

MR. DERUYSCHER: Tim Deruyscher with GHD Consulting Engineers. I'm a fire protection engineering and principal of the Fire and Life Safety Discipline for GHD in North America. Today I'd like to talk a little bit about this project and hopefully keep it as simple as we can. And I'll try to give a little bit of background, because this is the third time we've been to this Board. There is a variety of circumstances of why that's all occurred. I'll try to go through that as quickly and easily as I can. If there are questions, please let me know, and we'll stop and go through those.

I'm going to hand out a couple of additional exhibits, just because of some clarity, and I have a copy for each

one. What I'll be handing out will be named as Exhibit E as in Edward, which are three photographs, or renderings I should say, of the proposed building. These are the same renderings which were used in previous petitions, in 2013 and 2015.

So today I'll try to go through a brief introduction of what the project is, why we're here, the requested basis for equivalency for the variance. And then finally what our conclusions and such are on this.

When you're looking at the Exhibit E, this project is a renovation of an existing building that in the first photograph shows a view from the east end. The second photograph also shows a view from the east end. And the third rendering is an interior, and that's probably the one that we'll use most of the time so you can understand the interior of the building. And that third rendering shows the Library book

stacks up on the second floor, which is the floor that you're looking at in the rendering.

So keeping those in mind, the top level, the roof is a new roof, and that is part of the discussion for today. The prior two variances dealt specifically with the ability of this building to be treated as a separate building. That was done in 2013 and 2015. Those two determinations were based upon the building being classified as a three story building.

These same renderings, the same type of arrangement with a number of floor levels inside the building is the same in 2015 as it is today. The project is still under design, still in the design development stage, it is not finished. And that's why we're here to go through some of those.

Certainly with a new code, the updated code coming into effect, this project will be faced with a new code

instead of the 2010 building code of New York. This project does essentially renovate the entire building. The first floor is used for shops for architectural students, that they do their little models and/or kinds of things in there. And then the second, third and fourth floor, in the upper floors, which is in Exhibit E I'm pointing to, is the space we're really talking about today, and the primary issues and the primary questions. Those are consistent to what we're asking for today.

The building hasn't changed, the proposed number of levels inside have not changed. The only thing that's changed is the determination by the City of Ithaca in discussion with them in early 2016, that this should be treated as a four story building rather than as a three story building.

So the reason we're here is based upon that determination. As soon as we

go past the threshold of three stories we go to four stories, other code parameters kick in. We also wanted to make sure that the previously granted determinations in 2013 and the one in 2015 are not nullified, voided or having any kind of problems treating this building as a separate building.

In Exhibit A, it was in the packet, just so you can get a perspective. I'll point to in Exhibit A, the first story code drawing, just so we can get oriented in the right directions here. When I'm speaking to the west, I'm looking at the left-hand side of this drawing, and that's connected to Milstein Hall, which is an exterior wall, to which is the discussion of the previous determination. The other three sides of the building, the north, top of the sheet in Exhibit C, the east is on the right side of the drawing, and the south is on the bottom side of Exhibit C, first story code drawing.

Deruyscher

So there is access around all three sides, and in fact there is a lower level that you can physically walk underneath Milstein Hall, there is a big large air gap. So I'm just trying to get you a little bit of a feeling for this building, while it's connected it does have a fire barrier that's based upon 2015 determinations. It is isolated, and in that determination this building is being treated as a separate standalone structure. Standalone building structurally, and for the purposes of code.

So the items today that we're talking about specifically is because of the four story determination, this building currently, and as designed, is using Type 2B non-protected structural steel, concrete construction. When we go to four stories, in table 601, 602.1 and 602.2, we have to get into a Type 2A construction, when we're using that portion of the building code. So that's

what item I'll talk about.

Second item that we'll talk about is the size of an elevator car. As soon as we go to four stories, we have a provision in the code that talks about an elevator car size being large enough to accommodate an ambulance stretcher. And we'll talk about that. That's out of Section 3002.4.

And the third item we'll talk about is an alternative power supply arrangement for smoke control equipment, because in Exhibit E, in this photograph, this Library space is indeed classified and treated as an atrium. And that's out of Section 404.7, 909.11 and 2702.15.

When you're looking at Exhibit E, the first rendering, this building is not very big. Just trying to get a bit of a feel for it, it's only about 9,000 square feet per floor. It's not huge. And as a matter of fact it's quite small relative to permitted areas. As I said before, will continue to be used as

first floor student shops, that was classified as an F1, based upon discussions with the previous determinations, even though it's a student kind of shop. In the upper floors, 2 through 4 plus the mezzanine are classified as a Group A3.

The owner and the design team, based upon having the previous variances and determinations using three stories, and the discussion with the City Building Department and Fire Department, does it get classified as a three story building or does it get classified as a four story building? There was discussion amongst that, and it related to how we actually measure the upper levels in relationship to a second floor versus a second floor plus a mezzanine, third floor, that was the question. Long story short, it was determined that it was a four story building. So again that's why we're here.

But it should be noted that that

determination, we didn't change anything inside the facility as far as additional square footages, more levels than what we had from the 2015 determination. It was just that's what someone says, this is what we have to do. And we want to make sure that we don't have any issues with prior determinations. And if there are any changes they are so small, you know, might have been a little bit of a jut out in one portion, it is essentially the same, so small as to be negligible.

So in this review there is an exhibit in the handout called Exhibit D, as in David. Exhibit D consists of two pages. And it shows some handwritten analysis for Chapter 14 of the existing Building Code of New York, in the 2016 provisions. The code itself allow us to use Chapter 14 in the existing Building Code of New York as a compliance method. It also allow us to use the various chapters for alterations, which then refers

us to the Building Code. And that's at the choice of the Applicant.

We decided to look at that and did that analysis. And the analysis shows by Chapter 14, and you know while this is a two page summary, there is a lot of discussion and effort that goes into reviewing all of this. The second page of Exhibit D shows that we do indeed have positive results down at the bottom, which in fact is quite high for a lot of the ratings. We have a plus 14 for fire safety, 1.3 for means of egress. And general safety I think is the last one, is 3.3. So we're all positive above zero. Zero or above. That by itself is the basis for code compliance.

And we all have concurred the City has, to the best of our knowledge, we discussed this with them and they reviewed that with us, that that's a method that we could use for this building. But again, as I said before,

because of the prior variances and determinations we thought it was in the interest of all parties to go through and deal with three different issues, the construction classification, the use of Type 2B construction instead of Type 2A, which is one hour construction. The second one is the elevator car. And the last one is alternative means for power.

At this point before I get into those specifics, I would ask if there is any questions related to previous portions, previous work? I know some members that were familiar with that and other ones were not. I would try to address any of those questions, because it's pertinent to why we're doing specific things here and what we're trying to clear up. So there is no confusion to any parties that may be interested in this specific project.

BY MR. McQUADE:

Q. When you came to the Board back in 2013, 2015 was this the same plan? Was this the same?

A. In 2013 there was no design for that building. And that specifically dealt with two buildings away.

Q. So that was to make the determination of separation?

A. Yes.

Q. To make it one separate building?

A. In fact in the first, the 2013 provision, determination there was no design of adding, upraising the roof, doing anything like that in this building. And that determination was specific to the separations between Rand and Milstein, which is immediately adjacent. And plus another building that connects up in this big conglomeration of buildings.

The 2015, which is actually almost to the day, September of 2015, as a matter of fact September 17th, specifically dealt with allowing Rand to be treated as a completely separate building for Building Code purposes based on fire barriers. And that had the same arrangements with these upper changes, the interior portions, the number of levels and the size and the renovations is the same as it was in the 2015 determination a

year ago. There is no change other than we're calling it four stories with a mezzanine versus three stories with a mezzanine.

Q. So we didn't catch it in 2015?

A. No, it was discussed at that point that it looked like, and our determination and our discussion was that it looked that way. The City did go through, and this is a very fine, I want everybody to understand, it's a very fine detail of exactly how those measurements are done. We had an opinion, that we met the code. The City said, not sure. It went to a number of different people, and I guess I would let the City talk about that specific item if there was a question.

Q. And so this project has not started?

A. No, it's under design, the design is not even completed yet.

Q. So in actuality, we're going to be using the 2016 code?

A. Correct. And that's what we're dealing with now, the 2016 code.

MR NIECHWIADOWICZ: I'm Mike Niechwiadowicz, Director of Code Enforcement for the City of Ithaca, 108

East Green Street, Ithaca, New York. Indeed when the University came last time they were positioning themselves to move the Fine Arts Library into the second and upper levels.

At that time there was some preliminary designs, but a full review was not done. However, they wanted to move that Library at that time, without even doing all of this work. So the Library was moved over, we needed the variance for Rand Hall to be a separate building at that time.

And as the design developed after that, there was some very preliminary drawings submitted at that time, but there was no real design. It was simply to allow the Fine Arts Library to move in.

After reviewing the design that came up later, I looked, I'm the one that made the determination that the levels 2 and above resulted in three stories as opposed to two stories. And the reason

being is that per Building Code section 505.2.1, a mezzanine is limited to one-third of the area -- of the floor area of the room or space containing the mezzanine or mezzanines. There is an exception that allows that to go to half of that floor area of the room or space. And indeed this building meets that exception.

However, if you combine any two of the levels in that atrium space, and since all the levels are interconnected, I have an atrium space, only one space, rather than individual stories, any two levels combined exceed that half of the limitation. So therefore only one of the levels, the upper level, lantern, can be considered a mezzanine. The other three must be considered story.

So it's basically that definition of mezzanine that we looked at more carefully as the design developed. And I came back with the determination that indeed we have three stories within this

atrium, and now making it a four story building.

The facade of the building does not change, other than the lantern at the top. And that lantern at the top is referred to as a lantern, has no connection to Milstein Hall, the adjoining building. The connections, the relationship between the two buildings is exactly the same. This additional mezzanine level, relatively small, really has no impact on the adjoining building. So the City of Ithaca, both the Building Division and the Fire Department are supportive for continuing to look at this as a separate building, because of the substantial separations that we have, the structural independence that continues to be there. None of that has changed. Thank you.

BY MR. ANDREWS:

Q. Could you please come forward for a second. The analysis, have you gone through that?

A. (Deruyscher) Yes, I reviewed that

analysis and it's accurate. So therefore the 2A versus 2B construction we don't consider an issue, because effectively we met the requirements using the compliance performance method.

Q. These numbers are numbers and if you haven't checked?

A. Oh, no, we looked at it.

MR. DERUYSCHER: May I say, on the summary compliance method sheets, I personally did that. We were conservative in many of those numbers. Assumed that we had nothing when in fact we do have something that we could have taken more points. So with the protection that's built in, the numbers are very good. And intuitively that was a discussion with the City at that time, because of the space, it is small, and the protection features that are there. We do, we had an intuitive feeling that it was going to be fine. And then with all the extra protection features that we've done in the previous determination, plus what we're proposing for this, it

makes it even better.

So in Exhibit C as in Charlie, there is a section, the drawing is entitled Section BB Code Drawing, and that's pretty much near the end. And that shows the relationships of stories and floors of what we're calling stories and such at this point. First floor being essentially at grade, second floor is the second floor, next level up is the third floor, next level up is the fourth floor. And this lantern area, which is up on top, what we're calling is the mezzanine of the fourth floor. So that's how we're dealing with that.

When you look at Exhibit E, the last portion or the last rendering, that you're looking up to the underside of the roof, looking up into the mezzanine area that goes up above, with skylights going up.

MR. ANDREWS: So in addition to this analysis you've also provided numerous things as alternatives. You've rated

steel, you've put special sprinklers, is that correct?

MR. DERUYSCHER: Yes. So what I'll do is I'll talk about those. Let me run through those real quickly and specifically for the use of the four story Type 2B instead of 2A, the one hour rating.

The analysis for the performance based design, the number of points that we received for construction type was essentially received because the building is still underneath the height and feet limit. Its way underneath the square footage per floor, and the combined total of all the areas. The only thing that's changing is, we say we're going to have another story. When you do that analysis, the numbers come out very high, because the area is small.

If we were increasing the height in feet or the area beyond the limits of what the code would talk about, we would

not have received those numbers. So because it's small, we're inserting another floor, they're saying in the performance alternative, what extra risk is there? So that's just a little bit of background.

But what we have proposed is additional protection even above and beyond what we did during the 2015 pieces. Again, looking at Exhibit E, the last page shows the rendering looking up at the roof steel and shows an exterior wall. So we're going to be providing one hour fire rated columns in the exterior wall going all the way down to grade. Previously they were only graded up to the first floor, now we're going to continue that all the way up to the roof, on the exterior walls.

And when you're looking at this building, the roof steel supports the stacks, the book stacks. Basically the book stacks hang down from the roof structure, so that's Number 1.

Number 2, we're providing a separate sprinkler riser dedicated just to the roof of this atrium space with sprinkler spraying directly into these larger steel members, to provide additional reliability of the sprinkler service and water spray going directly into the beams.

Third, within the book stacks, because this is a square tubular structure that's hanging down, structural steel hanging down from the roof, we're providing sprinklers, I'm going to call them in-rack sprinklers, if you will, inside the book shelves. There is what we call a longitudinal fluid. Goes the length of the book stacks, and there is, you know, whatever size space that structural member is, we have sprinklers in between, in those spaces, just like rack stores that we provide in warehouses. And that's recognized in the NFPA standards. We'll have those sprinklers also spraying

those vertical members that are supporting those stacks themselves.

The fourth point, the fourth floor and the fourth floor mezzanines are very small. And in fact the fourth floor mezzanine, while it shows in Exhibit C is only having in the neighborhood of 22 people, we've increased it to say what if we had extra people up in the top mezzanine? And we're saying right now we're limiting that to a maximum of 36 occupants. That's above and beyond what the code was calculated at. So we only have 36 people at the upper floor, the fourth floor mezzanine.

Number 5, as I've talked about, the combined area of all the floors in the area per floors is quite small, and in fact only about a third of what's permitted. This same building or the same code provisions would have applied to a building three times the size of the footprint, 30 plus thousand square feet. We're less than 9,000 per floor.

Number 6. We looked at how could we go through and provide fireproofing on any of these members? The stacks are essentially open. There is grating in between the floors. In the stacks, you can look up and down. You can see the steel, the steel is on the edges, right built in with the book shelves. It's very difficult, if not impossible, to properly fireproof those structural steel members. Even with thin film. And then all of that is exposed to people.

And like in my house I go around the corner, everybody is grabbing one spot of the door, there is a dirt mark, pretty soon it gets, you know, whatever worn down. So being able to maintain that over a period of time becomes virtual impossible. So that's another reason.

And the last, but not least, is certainly the Chapter 14 says, because we're so small, we're just inserting

another level, it's not an issue. So that's what we're talking about for the construction classification.

The continued use of Type 2B construction doesn't represent any more risk now than it did in 2015. It's just because of what we're calling it. But the owner is willing, and wants to provide additional means of protection, just in case.

I'll go on to the next request. Is the use of a combination of two elevators to go down to grade, with an ambulance stretcher or one large elevator from one and two, and then using the stairs from upper levels. That will be looking at Exhibit C, Section BB code drawing, which shows a section of the building. The top level being a mezzanine 4. The next floor down and shown in the green is floor 4, the light blue is floor 3 and then the blue is floor 2.

We have reviewed this with the City

of Ithaca, and what we have here is this. We have a location, the mezzanine 4, which is under 2,000 square feet, that if someone needed to be brought down outside of the building, it would require first responders to take an ambulance stretcher down three flights of stairs and then down and out. So we would go from mezzanine 4 down to floor 4, down to floor 3, down to 2, traverse across floor 2, which in Exhibit E, the last rendering is the main floor of the atrium. From that level we go over to level 2, and there is a large existing elevator that is more than adequate for a stretcher, plus a whole lot of other equipment.

So what we have in this building, the code requirements, as soon as we go to four story is, an elevator on every floor. Here what we have is three levels of stairs, no different than a three story building that you have no elevator that size. Then we traverse

the same floor level over to a larger elevator to go down from there. I don't think there is any issues with the City and I would let them discuss that. And I guess that's what is the proposal for that.

We tried to see if we could fit another larger elevator in there. There is physically no space to do that. And if this was 30 or 40,000 square feet, but it's not, it's 9, it's very compact.

BY MR. ANDREWS:

Q. What is the actual size of the car?

A. Which one?

Q. The smaller one, the largest dimensions?

MR. DERUYSCHER: Hold on a minute, I'll ask my architect.

MR. FEINN: It's about four and-a-half to five and-a-half feet.

MR. ANDREWS: I measured off the plan, it was around five, five and-a-half, six feet.

MR. DERUYSCHER: So four and-a-half to five feet square plus or minus,

handicapped accessible. Now, in the fire service I know we take chairs and other things inside and bring things up. Could it work that way? Sure it could.

MR. ANDREWS: I did a little research on it, and the local ambulance said the 56, 54 inches, the new modern gurneys do fold in. So I mean that's a good thing.

MR. DERUYSCHER: But it doesn't meet what the code requirement says.

And then the final request is an alternative power, standby power requirement for atrium smoke control. So this space is an atrium, we have all determined that. There will be a smoke control system in this atrium. Design, as I said before is still underway, not been finalized. Could be open type vents, it could be mechanical, it could be a combination.

When we look at the performance alternative you'll notice on there that it took zero points for smoke control.

I said there isn't any smoke control here. And the numbers work. When you look at the Building Code for atrium it says, you have an atrium, you will have a smoke control system, you will have a standby power supply. Typically everybody thinks of that as a generator. Although there are other means and methods.

The code has specific requirements. I'm not here to talk about that. But those same requirements apply to this small little space, the same as it would be to a 50 story open atrium that might be a large hotel with exit access corridors exposed to the middle of the atrium.

Our numbers in the performance based design clearly shows we're not relying on smoke control for that system to work, because it is a very small space and there is very few people that are there. What we're proposing instead of not doing anything though, is a real

simple method, is fire pumps.

Fire pumps, we connect the electrical power ahead of the building service disconnecting means. So when the fire service comes and shuts the power off the building, there is still power going to a fire pump, or if there was smoke control fans or operators or something else that we needed here, that's what we're proposing here.

We will submit everything to the City. The question of the type and how we're doing smoke control, that will be dealt with at the local level. Because of the small size of this atrium we don't rely upon it the same as we would for a larger big atrium.

Other factors include that this facility is not necessarily public. I couldn't just walk in there. It's card access controlled for students. There is direct supervision from the library desk. That library desk sits basically on the second floor. You can see in

this Exhibit E in this main area. So they can essentially see everything that's going on inside the space. It's almost like an indirect or a direct supervision correctional facility. Not that that's what this place is, just as a side note. And we're not really relying on that smoke control for occupancy.

The last and final item in here is that Cornell, the furnishings and fixtures that are here, any desks that are built in or furnishings that are brought in for somebody sitting down, relaxing, reading a book, will be -- any constructed materials will use fire retardant treated wood as required for Type 2B construction.

We'll also have what we call a California 133 Bulletin. Or you know, the Fire Code 805.2.1.2 is fire retardant furnishings that are typical for what we see in institutional hospital, health care and other

facilities. So it becomes very difficult to ignite, say a big easy chair or some kind of a lounger or something similar to that.

So that, based upon the other features that we have in the building, in our opinion, provides more than ample protection for occupants. We're not relying on it. The code, by the performance provisions, say we don't need it. But we want to do something. And it's just another way to do that in an effective manner.

Lastly, to summarize, I did not go through all of the other features that are in here, in this facility. When you look at Exhibit A on pages 5 through 8, there is a little chart that talks about the previous variances and what we're providing and what we're adding in here.

We are 2B construction, but in reality we're a lot closer to Type 2A construction. But we can't call it Type 2A because we don't have every single

member traditionally done. The occupancy stays the same. The fire department access still stays the same. You can see in these renderings in Exhibit E, there is giant windows with three side accessible, so the fire department can do all sorts of water stream into the building.

The number of floors and the height is the same as it was in 2015. We're underneath the height limit in feet. When we classified as a four story, we get a request, which is what we talked about today. The floor area stays the same. The building area stays the same. Openings between floors, it's still an atrium, it still stays the same.

Interior finishes are all Class A or B. We have two separate water supply services from the previous. One coming from a pump, the other one from the City supply. We've got very heavy sprinkler protection, plus we've got in-rack sprinklers. There is a standpipe

system. There is extinguishers throughout.

We have full detection on top of that. That's a Cornell standard. So what you might see in here is beam smoke detectors which are very effective at quickly picking up a fire incident. It may be video, depending on what the final design is. There is a voice communication system here. The occupant loads are actually quite small. Travel distance in means of egress is very simple. Going down and out two stairways, one at the east and one at the west. We have the ability to simultaneously egress everybody from floor 2 all the way up to the top using the two stairways. Which is above and beyond what the code would normally look at.

So in summary, we're asking for these points to be granted so that the building can continue in its design, continue to be treated as an independent

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building, not affect the prior variances or determinations, for the reasons stated above. So any questions I guess we would entertain those and see if we can address any items that you may have.

BY MR. ANDREWS:

Q. I just have a couple. First of all, excellent presentation, you covered all the bases completely. I appreciate that.

A. Thank you.

Q. There was mention in the analysis that there was a letter from the City that everything was acceptable. I didn't see that in my packet. Is that still the case, is that in the record?

THE ACTING CHAIRMAN: The city testified.

MR. NIECHWIADOWICZ: I can address that, it unfortunately didn't get to the packet, however, let me get into slightly more detail. As far as the 2A, 2B construction is concerned, we feel it's code compliant because of the compliance performance method used. And it shows we get sufficient points. So

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for us that's not an issue.

As far as the elevator goes, the travel distance is so small in this building. And yes, that type of elevator would be required, however in discussions with the Fire Department and the Building Division, and we've been discussing this, this design since the last variance. So we've been involved in cooperatively working with Cornell and the designers, so we're very aware of what's going on here. We feel that's acceptable, because the short distances again. And we have an elevator that will do the job partially.

As far as the power supply. The emergency power loads in this building are going to be minimal. The University actually has a redundant system, so it doesn't even have to rely on the public utility to provide all its power, it can generate its own power. Okay, if the power lines are cut to the building, even that won't make it. However, we do

feel there is an added level of protection here.

So basically our concern and what we ask of the Board is to make it clear in the variance that this can continue to function as a separate building. That Rand Hall can continue to function as a separate building.

And again, both the Building Division and the Fire Department support all the requests and the variance to continue it as a separate building. We've actually added additional safety features over and beyond granting it as a separate building last time. And we're in favor of those features.

We worked closely with Cornell and the designers to develop those features and will continue to do so. So all in all we support the variance.

MR. ANDREWS: Appreciate that, thank you.

BY MR. ANDREWS:

Q. Tim, one other question. So could the

smoke control system be powered shut so that if there was a power failure they would be opened, if you go to that type venting?

A. (Deruyscher) If we have, if we do have and if we do use open type vents, it's possible that we could have that to open upon power loss. It's typically not a great idea to do it that way because of your climate, and the number of holes that we would have in the roof.

Q. If you want a roof system versus the louver system?

A. Yes, so there is a combination of things that we're going to be looking at. One is open type vents of the roof which would probably work out quite well here. Everything is opened, and you've got a roof and open up some portion of the roof, let the smoke out and let some air coming in.

It may be a combination of some fans that are mounted on the roof or near the roof. The ability to provide standby power through this alternative means just basically connection ahead of the disconnecting means, I think works well. If we have hatches and some other things it's

likely, I'm not going to say for sure, it's likely most of that could be done by battery and/or UPSs so that we could still open those during a non-power event.

But we would probably, just from a normal, you know, the life span of the building, you get into a lot of problems while it's great from a safety standpoint, it becomes more problematic because it's always opening up when there is a power loss. So people don't like that. Not to say Cornell would do this, I know that, but a lot of people just go through and try to subterfuge, I don't want those things open any more. And that's the last thing we want to try to do here.

Q. Last question is just a question for you, it's on your analysis, the last page of Exhibit A, page 8. Mentioned the area of refuge. Did they change that in the new code? That if it's fully sprinklered you no longer need those?

A. (Niechwiadowicz) Yes, it's gone in the new code. Only sprinklered building, the area refuge are no longer required.

MR. ANDREWS: Very good, thank you,

and that's all I have.

BY MR. GARLOCK:

Q. I have a quick question. On the new elevator, that doesn't go down to the ground floor. The start is of the second floor?

A. (Deruyscher) Yes, that's correct. It starts the second floor, because this is sort of like a different space from a use standpoint.

Q. So that elevator pit will be, I mean how will that work with the hoist-way going down?

MR. DERUYSCHER: I will defer to the architect, Mr. Feinn.

A. (Feinn) We have a high floor and often the first floor, about 15 feet, and the type of elevator we're planning to use or thinking about using, only requires a pit that's about three feet deep. So we'll have space below it. It will have to be formed up and concrete, but it will be space below so the shop area would still be able to function.

Q. So really the only space, only floor space you'll lose if you're to upsize the elevator is on the second floor?

A. (Feinn) That's correct.

Q. Because behind the elevator is opened on every floor above there?

A. (Feinn) Correct.

MR. GARLOCK: Thank you.

BY MR. ANDREWS:

Q. Tim, just for the record, I think you mentioned it in your presentation, the F1 and the A3 are separated by one hour, is that correct?

A. (Deruyscher) Correct, and that was from the 2015. So we're upgrading the structural fire resistance ratings on the first floor from the underside coming up. So it is isolated, yes. Even though all the analyses for areas and square footages were based on non-separated use groups.

MR. ANDREWS: Thank you.

ACTING CHAIRMAN: Thank you. Anybody wishing to speak in favor of this application? Anybody else in the audience wishing to speak?

MS. ROTH: Heather Roth, from the office of Fire Prevention and Control. I just, I haven't seen the floor plan so I'm going to apologize if some of my questions are answered within some more

information that the Board has. But I truly just have a few questions. I'm neither speaking in favor nor against the proposal. We're just here as an interested party, because we do inspections on all the colleges and universities within the State of New York. So whatever is decided today are things that our staff is going to have to understand and live with once the building is opened and the college is moving forward.

So I know Tim mentioned a lot of reliance on the sprinkler system within the building. We all know that they'll be tampered, based on the requirements of the Fire Code of the State of New York. Are there also any additional requirements, are the risers within a locked building or is it Cornell's policy to lock and chain risers associated with that?

My question being, because the last thing we want to see is a well meaning

staff member shutting down the sprinkler system that has been deemed essential for this building, because of something that they think is an accidental discharge as opposed to an actual fire. Because we've seen buildings fail and sprinkler systems fail in the past, specifically because of that reason. Well meaning, you know, they'll think because there is sprinklers in the stack, that a student just knocked the head off again, I'm going to run over and shut the sprinkler system off, when there truly is a fire within the building. So that's my first question.

The second one has to do with some electrical safety. We talked about, Tim talked a lot about smoke control system and tying it into the power prior to the shut off on the building. We know that smoke controlled systems can be a lot more complicated than our fire pump systems. So we want to make sure that if that is the case, as we start looking

at all of the parts and pieces associated with the smoke control system, that everything is labeled properly and known to the staff and known to the fire department of where it's tied in to the electrical grid or to the power in the system.

Because a lot of times the smoke control system will do something like open doors. Will automatically open the doors for that make up area, even on a natural ventilation type system. If I'm the maintenance person that was just hired a month ago, and I go to do some work on the doors and I shut off what I think is powering those doors, and now they're powered by some other means or method, there is a potential for safety risk. And that goes into emergency response situations as well.

My other question is, you mentioned both a renovation and a change of occupancy. I think your numbers probably work either way. But again,

I'm just a little bit, if you could clarify which you're looking at that.

When you look at your Chapter 14 check sheet, you talked specifically about the proposed occupancy being an A3. I was wondering if you looked at it also from the F occupancy and if the numbers all work out for that.

And then again, this one might be answered within the plans, it mentioned furniture in the atrium space. Are there also stacks within the atrium space or is that truly just the furniture, seating area, more of a lower a hazard that we addressed with making some accommodations with that? So those are just my questions.

ACTING CHAIRMAN: Thank you. Would you like to?

MR. DERUYSCHER: I think Point Number 1 was the question on risers and valves, if they were locked in the open position or in the proper position. I think most, well all of the main valves

here would be down in the mechanical room, that's to my knowledge completely locked from the student access.

MR. FEINN: Right, it is.

MR. ANDREWS: With tamper switches?

MR. DERUYSCHER: All of them are tampered. Cornell policy is they have probably one of the best maintenance and inspection attesting programs in any campus that I've seen. But I know that they, those specific ones for this building would be locked. And I would absolutely offer that any valve in this entire building be locked and chained open or in the proper position in addition to the tamper switches. That's a real easy issue to go through and deal with.

I think one of the other questions was the analysis of an A3 occupancy versus an F1 for the equivalency. The A3 was more restrictive. I did do the F1, and it's only that first floor. So the A3 becomes the driving factor for

the performance based design.

Somebody else remind what the other questions were.

MS. ROTH: Electric safety, and renovation.

MR. ANDREWS: Disconnect.

MR. DERUYSCHER: All the electrical pieces will follow all the code requirements. It's all going to be new, it's going to be following the new code from electrical safety. And I know that project management and the details that they get into will get specifically into details on how to label, where to put things, so people understand what it is and how it's done.

Just because there is a connection ahead of the building service disconnect, is really no different than if you might have a generator, because in many cases you have another alternative power supply wiggling its way through the building. It's important to obviously label everything

and have it properly identified. That will all be taken care of as the normal course of the National Electric Code Requirement Act.

Change in occupancy. The only change in occupancy per se, was really the determination that the first floor, previously used as a Group B classification, was changed to an F1, only to make it a more restrictive. But the actual use of the space, what they do there, it's still exactly the same as it was 25 years ago. It's going there and they have shops and they do their teaching and they, you know, do models and all these other kind of things on the first floor.

So again, somewhat semantics, it was changed to an F1 to accommodate the needs of those worst case scenario variance requests. But the actual use is not. So there is no issue from an F1 from the previous portions. As a matter of fact it makes it more restrictive,

and that's been accommodated here. So I think that answers all the questions.

MS. ROTH: Yes.

MR. ANDREWS: I think most of her questions would be handled by the local code enforcement, the fire service.

MR. NIECHWIADOWICZ: Indeed. We have our own electrical inspector, we don't even rely on outside inspection services. And our electrical inspector will be going through this building very carefully. I will be going through the building, my inspectors will be going through the building. We have a redundant system of double checks and checks and balances. Fire department goes through the building as well. So that's even a third level of checks.

We do comprehensive testing of all the systems at the end. Blackout tests, tests of the fire and smoke detection, sprinkler systems, as well as the smoke evac systems. There have been contractors that have said, "only in

Ithaca." We follow the code carefully. We take this very seriously and we make sure that that code is met, and it isn't simply someone saying oh, yes, we did it. It's, we trust, but we require verification.

MR. ANDREWS: Thank you.

ACTING CHAIRMAN: Anybody else wishing to speak? Anything to add? Okay, I'm going to adjourn this hearing for a few moments. And we'll call you back once we've reached a decision. I'll ask everybody that does not have any affiliation with this Board to leave the room momentarily. Thank you.

(All parties exited room).

(Executive session off the record).

(All participants reentered room).

ACTING CHAIRMAN: I would like to reopen this hearing, and would entertain a motion.

MR. McQUADE: I would like to make a motion, Mike.

MR. HRAB: Mr. McQuade.

Motion

MOTION BY MR. McQUADE: With respect to the petition of Cornell University, Petition Number 2016-0269, requesting a variance to the following sections of the Uniform Code.

Use of the four story Type 2B construction in lieu of Type 1A construction, Section 602.1, 602.2 and Table 601, four stories in height. New elevator car size not sized for ambulance stretchers floors 3 and 4, Section 302.4. Number 3: Use of alternative for standby power for required atrium smoke control equipment, Section 404.7, Section 909.11 and Section 2702.2.15.

The Board makes the following FINDINGS. This petition pertaining to Cornell University, 102 Humphreys Service Building, Ithaca, New York, zip code 14853.

Potential FINDINGS of FACT. The building, the subject of this petition and properly classified under

Motion

19 NYCRR Part 1219, Building Code Section 303. Proposed use of F1 occupancy on the first floor and second and third floor, B occupancy, properly classified per section 602 as a Type 2B four story building.

Petition pertains to the renovation of, renovation to the existing Rand Hall Fine Arts Library Type 2B, three story academic building, A3, second and third floor story occupancy, F1 first floor Type 2B four story Library space in Rand Hall. Thus creating non-conforming space. See 2015-0432 variance.

The existing Building Code, Chapter 14 allow for a compliance method evaluation to access code compliance. When a code compliance method review has been performed, the design professional has provided proof that the structure meets the requirements, then that section is deemed compliant. As provided, GHD has provided such review.

Including, the Board finds that the

assessment of the Chapter 14 review offered by the architect, GHD, along with the alternatives provided with smoke control and elevator size and distance of travel pertaining to, the Board finds the Code Enforcement Officer Fire Department supports this request.

The granting of the variance will not substantially adversely affect the code provision for safety, health and security of the public. In accordance with the above findings, the Board finds that the case before it, strict compliance with provision of New York State Uniform Fire Prevention and Building Code would entail practical difficulties and unnecessary hardships and would be unnecessary in light of alternatives which ensure the achievement of the codes intended objective or in light of alternatives, which without a loss of level of safety achieve the codes intended objective more efficiently, effectively and

economically.

Therefore, I move that the above petition be granted. That all aspects of the building and construction shall be in compliance with the acceptable codes, rules and regulations.

Furthermore, it should be noted that the decision of the Board is limited to the specific building and application therefore contained within the petition. And should not be interpreted to give implied approval of any general plans, specifications presented in the support of this application.

MR. ANDREWS: Can we amend the motion for Number 5, to be added to the findings of fact?

MR. HRAB: 4 and 5.

MR. ANDREWS: Yes, 4 and 5.

MR. McQUADE: Please amend that the new determination by the City of Ithaca, establishing the new altered space of four story versus three stories triggers the ambulatory elevator requirement.

Motion

5. The Petitioner proposes the following mitigation measure in lieu of standby power for the smoke control system. Increase the natural ventilation. The analysis of the smoke control with the AHJ and an acceptable remedy. The campus generates their own power, is connected to the City electrical grid, and the failure of both systems is unlikely.

MR. ANDREWS: And I'll second that motion.

ACTING CHAIRMAN: Seconded by Mr. Rick Andrews. I will poll the Board.

POLLING THE BOARD BY ACTING CHAIRMAN:

Q. Mr. Garlock, how do you vote?

A. In favor.

Q. Mr. McQuade?

A. Aye.

Q. Mr. Andrews?

A. Aye.

ACTING CHAIRMAN: And Mr. Hrab votes aye. The variance and determination is passed. Thank you, very much.