



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

APPLICATION FOR VARIANCE OR APPEAL

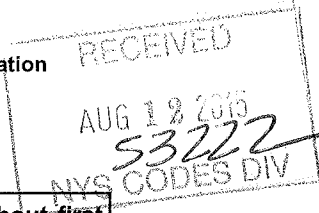
UNIFORM FIRE PREVENTION AND BUILDING CODE

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.

06/01/2011

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.

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



PETITION NO: 2015-0432
ROUTINE VARIANCE [ ]
BOARD VARIANCE [ ]
BOARD APPEAL [ ]
(FOR OFFICE USE ONLY)

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

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.

REGIONAL OFFICE PHONES:

Table with 2 columns: Regional Office Name and Phone Number. Includes Buffalo (north/south), Capital, Finger Lakes, Kingston, Long Island, Northern NY, Peekskill, Rochester, Southern Tier, Syracuse, and Utica.

PART 1 - GENERAL INFORMATION

PETITIONER

(Check one) [X] 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 [X] 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 Office: 102 Humpreys Service Building
Telephone: Ithaca, NY 14853-3701
Fax: 607.255.3853
e-mail: hrb2@cornell.edu

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

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 3 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
EB912.5.1	allow use of a two (2) hour fire resistance rated (FRR) code defined Fire Barrier in lieu of a two or three hour (strictest interpretation of code) code defined Fire Wall between Milstein Hall and Rand Halls in conjunction with additional features outlined herein so the proposed (2015) Rand Hall Fine Arts Library project is code treated and classified as a separate building, completely independent of the Sibley/Milstein complex.	

**PART 4 - FILING**

**NON-REFUNDABLE FILING FEES** (Please review fee schedule with Regional Office)

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

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 \_\_\_\_\_ DATE: \_\_\_\_\_

**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.

<b>Architect or Engineer (if any):</b> Name <u>Tim DeRuyscher, PE</u> Street <u>GHD Consulting Services Inc.</u> Post Office <u>301 Plainfield Rd Suite 180</u> City <u>Syracuse NY 13212</u> Telephone <u>315.314.5642</u> Fax: <u>315.445.0958</u> e-mail <u>tim.deruyscher@ghd.com</u>		<b>Fire Marshal or Inspector</b> Name <u>Fire Chief Tom Parsons</u> Street <u>Ithaca Fire Department</u> Post Office <u>310 West Green St.</u> City <u>Ithaca, New York 14850</u> Telephone <u>Phone:(607)272.1234 c141 Fax:</u> Fax: <u>(607).272.2793</u> e-mail: <u>Email: tparsons@cityofithaca.org</u>	
<b>Fire Department Contact Person</b> Name <u>see fire inspector</u> Street Address _____ Post Office _____ Zip _____ Telephone: (____) _____ - _____ Fax: (____) _____ - _____ e-mail: _____		<b>Other interested person or organization</b> 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 1/1/2003] (See 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 1/1/1984 - 12/31/2002]**

**Residential**

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

**Commercial**

- C1 Business       C2 Mercantile  
 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 for all of Rand Hall
- Uniform Fire Prevention and Building Code [section 704] \_\_\_\_\_

**Statistics:** Number of stories above a basement: 3 (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 23july2015
Exhibit B:	Photos 1-9
Exhibit C:	Site plan
Exhibit D:	Drawings A221.00 & A222.00 floor plan & details at brick wall fire barrier
Exhibit E:	Concept floor plans
Exhibit F:	Project Visual Renderings/Models

**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.**



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

APPLICATION FOR VARIANCE OR APPEAL

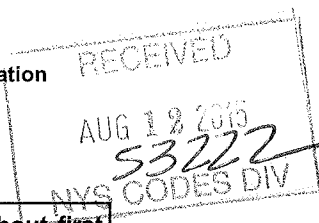
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BUFFALO (north) (716) 847-7611
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CAPITAL (518) 477-7497
FINGER LAKES (315) 587-4563
KINGSTON (845) 334-9768
LONG ISLAND (631) 952-4909
NORTHERN NY (518) 441-1895
PEEKSKILL (914) 734-1347
ROCHESTER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

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

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SIGNATURE \_\_\_\_\_ DATE: \_\_\_\_\_

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<b>Fire Department Contact Person</b> Name: see fire inspector Street Address: Post Office: Zip: Telephone: ( ) - Fax: ( ) - e-mail:		<b>Other interested person or organization</b> 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)**

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 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  
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 Utility           U

**Uniform Fire Prevention and Building Code - Title 9B [effective 1/1/1984 - 12/31/2002]**

**Residential**

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

**Commercial**

- C1 Business       C2 Mercantile  
 C3 Industrial       C3.1 Low hazard     C3.2 Moderate Hazard     C3.3 High Hazard  
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**Project type / status**

- New building
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- 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)
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**Note: Attach all pertinent documents**

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**Specific code and section(s) in question :** \_\_\_\_\_

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\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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.

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- 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.  
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**Required Documents** (Supplemental to the petition form)

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STATE OF NEW YORK  
DEPARTMENT OF STATE

ONE COMMERCE PLAZA  
99 WASHINGTON AVENUE  
ALBANY, NY 12231-0001  
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ANDREW M. CUOMO  
GOVERNOR

CESAR A. PERALES  
SECRETARY OF STATE

CAPITAL REGION – SYRACUSE BOARD OF REVIEW

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

DECISION

PETITION NO. 2015-0432

Upon the application of Cornell University – Rand Hall, filed pursuant to 19 NYCRR 1205 on August 12, 2015, 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 17, 2015, 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 renovation to the existing Rand Hall Fine Arts Library, Type 2B, three story academic building, A3 first and second story occupancy, F1 basement occupancy, constructing a fire barrier to separate Milstein Hall, a two-story 2B academic building, thus creating two legal structures, located at 947 University Avenue, City of Ithaca, County of Tompkins, State of New York.

The petitioner is seeking relief from:

**19 NYCRR Part 1227, The Existing Building Code of New York State, Section 912.5.1**, which states When a change of occupancy classification is made to a higher hazard category as shown in Table 912.5, heights and areas of buildings and structures shall comply with the requirements of Chapter 5 of the *Building Code of New York State* for the new occupancy classification.

**Exception:** In other than Groups H, F-1, I and S-1, in lieu of fire walls, use of fire barriers having a fire-resistance rating of not less than that specified in Table 705.4 of the *Building Code of New York State*, constructed in accordance with Section 706 of the *Building Code of New York State*, shall be permitted to meet area limitations required for the new occupancy in buildings protected throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 of the *Fire Code of New York State*.

[The petitioner requests relief to allow an existing fire barrier to be accepted as a fire wall.]



### FINDINGS OF FACT

1. The Building Code Section Table 705.4 allows that an A occupancy shall be separated from an F1 occupancy with a three hour fire rated separation. Exception allows for fire barrier in lieu of fire walls from exception for F1 occupancy.
2. The petitioner proposes the following alternatives to strict compliance with the Code:
  - A. Maintain two-hour fire barrier between Rand Hall and Milstein hall.
  - B. Provide non-required one-hour horizontal fire barrier to separate the first floor from the second floor.
  - C. Provide increased fire sprinkler flow densities and quick response sprinklers.
  - D. Provide secondary water supply as presented in the documentation.
  - E. Provide additional fire detection exceeding the Code requirements.

### 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 with the provisions of the Uniform Fire Prevention and Building code would entail practical difficulties or unnecessary hardship and would otherwise be unwarranted because such would not achieve the Code's intended objectives.

### DETERMINATION

WHEREFORE IT IS DETERMINED that the application for a variance from 19 NYCRR Part 1227, Section 912.5.1, be GRANTED with the following conditions:

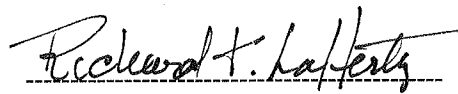
1. That the two-hour fire barrier is maintained between Rand Hall and Milstein Hall.
2. That a non-required one-hour horizontal fire barrier is to be provided to separate the first floor from the second floor.
3. That a sprinkler system be provided with increased fire flows.
4. That a secondary water supply be made available.
5. That additional fire detecting system exceeding Code requirements be installed.
6. That fire shutters and/or fire rated glass windows be installed in Rand Hall.

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.

Chairman Richard Lafferty, and members, Michael Hrab, and Robert Almy all concur.

So ordered.

Capital Region – Syracuse Board of Review

Handwritten signature of Richard H. Lafferty in black ink, written over a horizontal dashed line.

By: Richard Lafferty, Chairman

Date: 10/13/15

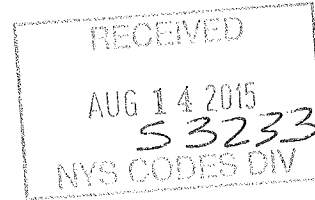
NMC: nc



Petition #2015-~~0456~~ Exhibits A & B

July 23, 2015

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 #8618856/11109212  
Petition #2015-**0432**

**REQUESTED VARIANCE/EQUIVALENCY – Use of Fire Barrier in lieu of Fire Wall for Groups F-1 & A3 & B occupancies (EB912.5.1; B503 & B504; and B715)**

This request is to allow use of a two (2) hour fire resistance rated (FRR) code defined Fire Barrier in lieu of a two or three hour (strictest interpretation of code) code defined Fire Wall between Milstein Hall and Rand Halls in conjunction with additional features outlined herein so the proposed (2015) Rand Hall Fine Arts Library project is code treated and classified as a separate building, completely independent of the Sibley/Milstein complex. This will result in the proposed Rand Hall Fine Arts Library project being code classified as a separate building [three (3) story type IIB as finalized with the City of Ithaca], with an F1 occupancy on floor 1 and A3 occupancy on the upper floors, whereas in the prior petition #2013-0456 the first floor was properly classified at that time as group B (higher education teaching – which hasn't changed other than the designation of the space as a Group F1 occupancy as requested by the City of Ithaca).

The requested equivalency is due to code circumstances which entail circular logic since in this case, the building's primary use is changing from predominately Group B to Group A3, plus the first floor reclassification change from Group B to Group F1. If it weren't for the re-classification of the first floor as Group F1, Chapter 912.5.1 of the 2010 Building Code of New York State would allow a fire barrier in lieu of fire walls and the code equivalency would not be needed. It is due to the re-classification of the first floor to Group F1 which then prohibits by code language use of the fire barrier in lieu of the fire wall for an existing building. This, in conjunction with the difficulty and disruptiveness of building a fire wall when other measures are available to provide equal or better fire protection is the other reason relief is needed.

With the premise the existing NYS Variance Determination #2013-0456 remains unchanged and valid, this separate code equivalency for the Rand Hall building will further clarify and permit the use of a fire barrier and other features within Rand Hall in lieu of the prescriptive code approach using a Fire Wall, all on the basis that Rand Hall continues to be code classified as Type IIB noncombustible construction, Group F-1 on floor 1 and Group A3 on upper floors. We request additional relief from the 2010 Existing Building Code of New York State Chapter 912.5.1 and 2010 Building Code of New York State Chapters 503, 504 and 715 as appropriate and as follows below.

**GHD Consulting Services Inc.**

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**Cornell University Rand Hall (Fine Arts Library)  
Fire Protection & Code Consulting  
GHD#8618856 & NYS Petition #2015-xxxx**

**§EB912.5.1 Height and area for change to higher hazard category.** When a change of occupancy classification is made to a higher hazard category as shown in Table EB912.5, heights and areas of buildings and structures shall comply with the requirements of Chapter 5 of the *Building Code of New York State* for the new occupancy classification.

- **Exception:** In other than Groups H, F-1, I and S-1, in lieu of fire walls, use of fire barriers having a fire-resistance rating of not less than that specified in Table 705.4 of the *Building Code of New York State*, constructed in accordance with §706 of the *Building Code of New York State*, shall be permitted to meet area limitations required for the new occupancy in buildings protected throughout with an automatic sprinkler system in accordance with §F903.3.1.1 of the *Fire Code of New York State*.

## **BACKGROUND**

The Rand Hall Fine Arts Library Project located in Ithaca, New York, includes the continued and proposed use of the second and third floors of this existing building as a college library as further described in the petition documentation previously submitted to the Board of Review. Additions and modifications to the second and third floors and the roof of the existing Rand Hall building are now proposed for the 2015 project and require a code equivalency due to features and reasons described herein.

The Owner (Cornell University) has requested our professional fire protection engineering opinion relative to the impact of a fire within Rand Hall or outside of Rand Hall via exposure from Milstein Hall for the continued use of the second and third floors and additions to this existing Rand Hall building and to clarify the code equivalencies requested for this Project. As such, our fire protection engineering staff has reviewed the information relative to this project and visited the project site and offers the following. Note the additional summary code information is contained in the application for variance and corresponding exhibits.

This requested equivalency is to coordinate and resolve code conflicts so that alternative means for separating Rand Hall from Milstein Hall is documented and approved as constructing a code defined fire wall at this location would be extremely disruptive based upon the current construction and alternatives available and proposed for the Rand Hall project. While this existing building was part of the complex of buildings subject to New York State Building Standards & Codes Variance Determination #2013-0456, a separate and standalone code equivalency is requested to clarify and specifically pertain to the Rand Hall 2015 project.

## **BASIS FOR REQUESTED EQUIVALENCY**

A question affecting this Project is whether the "connection" and fire exposure from Milstein Hall to Rand Hall and from Rand Hall to Milstein Hall with the features proposed materially changes the code intended fire safety for the occupants and continued use of Rand Hall as an A3 Library occupancy on upper floors as proposed by Owner. The use of upper floors and levels as proposed in Rand Hall for a 2015 library and classifying the first floor as an F1 occupancy in lieu of a Group B (higher educational) facility, will not, in our opinion, adversely affect the level of fire safety as compared to meeting the code specified and prescriptive means by use of a Fire Wall to regulate the "separate building" height and area limitations as this change 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:



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***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:***

1. **Maintain 2 Hour Fire Barrier at westerly “brick wall” which is structurally independent of Milstein Hall:** Use the existing constructed approximately twelve inch (12”) thick brick wall (the “brick wall”) between Milstein and Rand Halls which provides a substantially constructed 2+ hour FRR Fire Barrier. The actual wall thickness provides fire ratings in excess of 3 hours and openings can be adequately protected for the expected fire scenarios within Rand Hall as follows. Refer to Exhibits B for photos, Exhibit C site plan and Exhibits E and F for other details.
  - a. Milstein and Rand Halls are two separate stand-alone structures. Exposure from Milstein Hall to Rand Hall has this Fire Barrier acting the same as a code defined Fire Wall since if Milstein Hall were on fire and it “collapses”, the brick wall is expected to remain as no significant structural ties are associated with the Rand Hall brick wall. Thus, 50% of the possible exposure to this brick wall is from the westerly side of the wall and which is not expected to affect the structural stability of the wall from this exposure. In addition, the seismic reinforcing of the Rand Hall structure further helps to improve the level of independence of Rand Hall’s west brick wall from Milstein Hall.
  - b. Exposure from Rand Hall to Milstein Hall has varying degrees of potential exposure to Milstein Hall. Anticipated fire scenarios with fire venting from openings in Rand and above the roof of Milstein Hall have minor to no exposure to Milstein Hall. Fire from the first floor Group F1 adjacent to the brick wall must pass through the brick wall (with greater than 3 hour fire resistance rating) to expose the exterior outdoor walkway of Milstein Hall which is sprinkler protected and has a significant soffit and steel columns arrangements to make fire exposure into Milstein Hall highly improbable, or a near impossibility.
  - c. There is acknowledgement of some potential fire scenarios which may result in the Fire Barrier brick wall being partially breached during an extended fire event under certain multiple failure conditions. These multiple failures may possibly include failure of the detection system or persons to call in a fire condition, failure of Campus Police and Cornell campus staff to respond or use fire extinguishers for incipient fire control or extinguishment, failure of the fire sprinkler system, failure of the wall and a fire large enough and near the brick wall or roof to affect the brick wall, failure of brick wall at second floor to significantly expose the interior of Milstein Hall, failure of the Ithaca Fire Department to respond, failure of the Ithaca FD to place water at the brick wall and failure of the water supply to provide water to the fire event. Partial or multiple failures further show that while possible, it is highly improbable to have significant fire exposure on the second floor (Milstein Hall connection), to have the existing brick wall not to provide a reasonable fire barrier – especially when this existing wall is greater than the code minimum fire ratings and when tied together with the existing floor slab, helps in a more restrained arrangement to keep the wall in place – and as exhibited in real case fires with similar end walls of a building.
  - d. Since this westerly brick wall is existing, rather than new, it will be a substantial and disruptive project to cut off floor slab(s), isolate buried columns (only 1 face is exposed into Rand Hall), and to add additional footers and columns to make this existing brick wall into a free standing Fire Wall. It is





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possible to do this and in fact the Owner has considered this, but in our opinion provides only a marginal increase in overall protection compared to using the existing wall arrangement and enhancing the fire protection within Rand Hall to help mitigate the potential fire size in a more proactive approach as further described below. Existing buried columns within the brick wall will be covered or fire protected to isolate the columns from fire exposure within Rand Hall. For clarity, a Fire Wall is more stringent and has more capabilities than a Fire Barrier, but in this case with the other features proposed and in place, results in equal or better overall fire protection than prescribed by the Code.

- e. Existing first floor openings in the westerly brick wall will be infilled with masonry or similar materials to achieve the required fire resistance ratings. Openings on floor 2 at the connection to Milstein will be provided with 2 hour ASTM E-119 fire resistance rated glazing systems and 1.5 hour fire protective rating opening protective (fire doors and dampers). At the second floor, due to the size of existing openings and visual connectivity between Milstein & Rand Halls, it may be necessary to exceed the code's prescriptive defined 25% maximum area, but this will be kept to under 40% area limitations using 1.5 hour (3 hour where available) fire doors, shutters and (HVAC) dampers with the remainder using the ASTM E119 2 hour fire resistance rated wall glazing systems. Openings in the brick wall above the roof of Milstein Hall will be provided with fire windows or masonry infill with the "green roof" vegetation" cut back six (6) feet or more from the brick wall as requested by the Ithaca Fire Department.
  - f. The exterior 1<sup>st</sup> & 2<sup>nd</sup> floor windows on north & south sides of Rand have some potential to expose the exterior 2<sup>nd</sup> floor easterly windows of Milstein Hall (if a fully developed fire were to occur and vent from these windows) and which are in close proximity from these exterior (Rand) windows. To mitigate this fire spread risk, existing fire sprinklers within Milstein Hall spaced within a few feet from Milstein's exterior windows between a beam and the windows and supplied from a separate riser further reduce fire exposure into Milstein Hall during a highly improbable fully developed fire within Rand Hall. In addition, there are some rooms on the first and second floors in Rand Hall which are immediately adjacent to these windows and will be isolated from the rest of the building with one hour walls which reduce the hazard from those windows – even though not required for a Fire Barrier designation. Refer to Exhibit B for photos and proposed protection of these windows using interior window sprinklers, fire windows or isolation by fire rated interior rooms. Any reference to any exterior "fire wall" extensions beyond the north and south ends of Rand Hall's current brick wall would be physically difficult and adversely affect the ability to reasonably provide this feature – and again are not required for a Fire Barrier designation.
  - g. It may be possible to provide an additional steel type 1.5 hour fire shutter at the 2<sup>nd</sup> floor fire rated glazing to further enhance protection of these openings but this does not materially add much in terms of reducing fire exposure to Milstein from Rand Hall at the second floor openings, and thus is not deemed necessary, even with the actual brick wall being greater than a 3 hour fire rating.
2. **Provide Non-required 1 Hour Horizontal Fire Barrier to separate 1<sup>st</sup> Floor:** The existing 2<sup>nd</sup> floor slab and columns in the first floor supporting the floor slab will be treated as a 1 hour fire barrier from 1<sup>st</sup> to 2<sup>nd</sup> floor. This exceeds the prescriptive code provisions as the code does not require a fire resistance rating for Type IIB



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construction, and for this building permits either a separated or non-separated mixed occupancy approach. Although this 1 hour fire barrier to separate the 1<sup>st</sup> floor Group F1 to the 2<sup>nd</sup> level library Group A3 is not code required, it provides a fire separation to the collection of books and persons on the second floor from the code defined potentially more hazardous Group F1 occupancy on the first floor. Refer to Exhibit B for photos, Exhibit C site plan and Exhibits E and F for other details.

- a. This will help isolate a potential fire to the lower 1<sup>st</sup> floor, thus reducing fire exposure to the book stacks on the upper floors and new heavy steel roof structure for the approximate one hour or more time frame even if fire sprinkler protection was not operational. This helps to address the fire protection features where it is most needed due to the first floor lab and shop areas since this area is now being treated as F1 occupancy but still does not require the one hour separated use approach.
  - b. Exposure from the 1<sup>st</sup> floor Group F1 may be either horizontally through the actual brick wall estimated at over 3 hours fire resistance rating to Milstein (per Item 1b. above), or up through the second floor assembly proposed 1 hour fire barrier and then across the 2 hour fire barrier to Milstein Hall – again adding up to a 3 hour duration.
  - c. HVAC penetrations between first and second floors will follow B715 for duct penetrations in a 1 hour fire barrier. Other penetrations will be fire stopped per code provisions.
3. **Provide Increased Fire Sprinkler Flows/Densities/Remote Area & Quick Response Sprinklers:** To further enhance the reduction in a developed fire, the fire sprinkler system in all areas of the building will be designed to flow higher water densities and larger remote areas than code prescribed by NFPA 13-2007. In addition, use of the 2013 edition of NFPA 13 and quick response sprinklers will be used. This will result in a quicker response by the fire sprinkler system to a fire, more rapid fire control or possibly extinguishment to reduce fire exposure to the building structural elements and/or the brick wall fire barrier.
- a. Propose use of 0.25 gpm/sf density over 2,000 to 2,500+ sf remote area of activation (~500-700+ gpm flows) compared to NFPA 13-2007 minimum of 0.15 gpm/sf over 1,500 sf (~225-250 gpm flows). This is a 200% increase in flow demands. In addition, quick response sprinklers on wet pipe systems will be used to allow for must faster activation times resulting in heavier initial delivered water density while the fire size is much smaller, resulting in a higher probability for fire extinguishment rather than control alone.
  - b. The fire sprinkler locations and arrangements for the book stacks area will be designed per NFPA 13-2013 with particular attention provided to water distribution, sprinkler placement and use of quick response sprinklers to protect the collections and documents in the shelving arrangements. Both the Cornell Fire Protection Engineer and FM Global representatives will be reviewing these areas and all sprinkler designs and installations which provide an additional level of quality control not required by code and not found in all projects.
4. **Provide an Additional water supply connection to fire sprinkler system:** The addition of a second separate and remote 8 inch fire main connection to Rand Hall fire sprinkler riser(s) and to the water supply main on the north side of Rand Hall (University Avenue) will serve to increase the reliability of the fire sprinkler system should the primary fire water supply connection on the south side of Rand Hall which is from a fire pump system nearby on campus fail



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- to operate. This non-pumped water supply will serve to provide a backup supply for the minimum NFPA 13 flows (not the increased flows as defined in item 3 above). Refer to Exhibit C site plan.
5. **Provide additional fire detection exceeding code requirements:** Additional fire detection in all areas below ceilings for both the library stack areas and the 1<sup>st</sup> floor areas will be provided. Enhanced smoke detection in appropriate areas such as within the stacks and smoke or heat detection in the Group F1 areas will provide detection capabilities and off premise reporting to emergency responders even if the fire sprinkler flow alarms did not activate.
  6. **Maintain On site trained Campus Police:** As normal protocol, the Cornell Campus Police are available to respond to fire alarms within Rand Hall and there is direct communication to the Ithaca Fire Department to provide updates prior to arrival of the fire department. This allows better initial response data for appropriate Ithaca Fire Department response upgrades when needed. It also allows the ability of campus first responders to readily use incipient fire extinguishers prior to fire department arrival. Both of these features are not contemplated by the Code and are enhancements provided by this Owner which further protects their facility and further reduces fire exposure to the brick fire barrier wall and building structural elements.
  7. **Fire Access and large windows exceed Code to allow manual fire stream penetration within Rand Hall:** Firefighting access along the entire north and south sides and large windows on north and south sides of Rand Hall allow high flow “master streams” and hose lines by the Ithaca Fire Department to penetrate each floor of the building and to operate along the brick wall at openings into Milstein Hall – all while safely operating from the exterior of the fire building. Normally, buildings would not have this extent of openings which can be readily accessed and used for dousing interior building fires. This allows an additional layer of protection for Rand Hall whereby if a larger fire were to occur, elevated or ground level master streams from fire apparatus can be used to reduce a fire size and protect the westerly brick wall – further evidence of the adequacy of the proposed brick wall as a Fire Barrier for this situation. Refer to Exhibit B for photo 8B and Exhibit C site plan.
  8. **First floor is being considered as Code defined Group F1 “Factory”:** The designation of this 1<sup>st</sup> floor as Group F1 presumes the hazard is much higher than what typically exists in this teaching lab and shop area. It is clearly not at the level of activity found in a similar production “factory” facility and this further reduces fire risk. Even while this designation has been requested by the City of Ithaca, the actual use of space, materials present and activities are the same as they have been for many years. Refer to Exhibit B for photos 1A, 1B, 1C and 1D.
  9. **Consistent with prior NYS Determination #2013-0456 findings:** Except for building height, which is still will meet code provisions, the proposed arrangement using the brick wall fire barrier and other features is consistent with the prior discussions and hence does not violate the prior variance. Thus, this proposed code equivalency for the 2015 Rand Hall project can be issued independent of and not nullifying the prior case.
  10. **This is not a life safety issue for occupants:** This is not in any way a life safety issue for occupants of the facility. This is fully related to property protection well over the time for occupants to leave the structure. Occupants can easily be expected to evacuate Rand Hall within 10-12 minutes, well below the threshold for a fire to affect the structure enough to even remotely start to affect the brick Fire Barrier wall. It is only when multiple failures occur as indicated in item 1c above (if fire detection failed or people failed to detect a fire, sprinklers failed, Campus Police didn't show up, Ithaca FD didn't show up, water supplies failed) then we rely on the fire barrier brick wall and then only if a fire exposes the brick wall to cause partial failure to expose Milstein Hall. By then, occupants have long ago evacuated Rand Hall.



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11. **Anticipated Fire Scenarios:** With the premise that a fire threat exists within the first floor or upper floors of Rand Hall and its effect on Rand Hall and the brick wall's ability to reduce fire spread to Milstein Hall, the following are anticipated fire scenarios. The positioning, features and arrangement of the above features within Rand Hall with the indicated fire scenarios represent an equivalent level of fire safety for both Rand Hall and Milstein Hall, and is thus, in our professional opinion, equal to or safer than that contemplated or intended by the code. We expect the following basic activities during the fire scenario within Rand Hall, which can be more fully explained during the presentation to the Board of Review:
- a. Fire starts
  - b. If occupied by staff or students, it can reasonably be expected that fire detection will be by occupants who can either leave or provide additional information to the emergency forces via mobile phones or activating manual fire pull stations.
  - c. If no one is present, or if no one calls prior, the fire detection system activates and notifies occupants and Cornell Campus Police for response;
  - d. Fire continues to grow and depending upon many variables may or may not represent a threat to the building or occupants;
  - e. If fire grows large enough, fire sprinklers are expected to actuate and control or extinguish fire until arrival of Ithaca Fire Department;
  - f. Ithaca Fire Department can be expected to arrive, deploy resources and place a hose stream in the vicinity of the fire about 20 -25 minutes (plus or minus) from fire ignition. This does not mean it takes them 20 minutes to arrive. There is time involved with fire growth, detection, notification of fire forces (via automatic or manual means), dispatch of alarm, personnel response to stations/apparatus, travel time to location, identifying the fire location and access points, set up and deployment of hose lines and personnel. International and domestic fire response studies have confirmed this basic time line for many urban fire departments. Fire control is expected due to the enhanced features within Rand Hall and fire department response.
  - g. If for some remote reason, a fully developed fire with full first floor or upper floor involvement occurred within Rand Hall, additional fire department resources are anticipated to deploy hose and master streams through the exterior windows into the fire floor(s) for fire extinguishment/control, at the first floor 2 hour brick wall at the exterior walk way westerly towards Milstein Hall and at interior door openings at the 2<sup>nd</sup> floor level of Milstein on the other side of the fire windows/masonry wall. The main exposure point into Milstein is at the second floor openings which are protected with fire doors, shutters, dampers and wall infills. It is our opinion that multiple failures of the features present must occur for a full building fire involvement to occur and this is not contemplated by codes/standards or performance based fire safety designs and hence is not reasonably expected or mandated.
  - h. The second floor exposure to Milstein Hall contains multiple skylights for abundant manual breakage by fire fighting forces for heat and smoke venting capability. Exterior glazed walls allow additional venting during extreme events. If smoke or heat is exposed to the interior within Milstein Hall due to failure of fire doors or possibly portions of the brick wall at the Rand/Milstein fire barrier during an



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improbable fully involved fire in Rand Hall, the large open space, firefighting activities, skylight areas and as a last resort breaking exterior glazing within Milstein Hall are expected to relieve smoke/heat to prevent fire travel across Milstein. In addition, due to full sprinkler protection, no significant fire is expected within Milstein Hall and numerous studies and actual fire events (i.e. MGM Grand Hotel, New Jersey Boardwalk fire) have shown the ability of fire sprinkler systems to stop fire spread from large expansive fires (i.e. – fully involved Rand Hall) to a sprinkler protected area such as Milstein Hall or even past a single row of operating sprinklers used to restrict or prevent exterior or interior fire spread. The code recognizes this in B404.5 exception 1, B707.2 exception 2.1 and in NFPA 13-2013 (and prior editions). It should be noted that Milstein Hall already has in place rows of fire sprinklers within a few feet from the easterly glazed wall areas which face Rand Hall....an additional feature of protection from a separate fire sprinkler riser to reduce potential fire spread from Rand to Milstein when using the existing brick wall Fire Barrier.

## 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 existing brick wall at the west end of Rand Hall along with the additional enhanced features and fire protection systems within Rand Hall are sufficient to allow the proposed use of Rand Hall as a separate building from Milstein Hall as intended by the applicable code.

Therefore, based upon the above provisions and features, we respectfully request relief from 2010 Existing Building Code of New York State Chapter 912.5.1 and 2010 Building Code of New York State Chapters 503, 504 and 715 as appropriate to allow the proposed (2015) Rand Hall Fine Arts Library project be code treated and classified as a separate building, completely independent of the Sibley/Milstein complex.

Thank you for your consideration.

Sincerely,

GHD Consulting Services Inc.

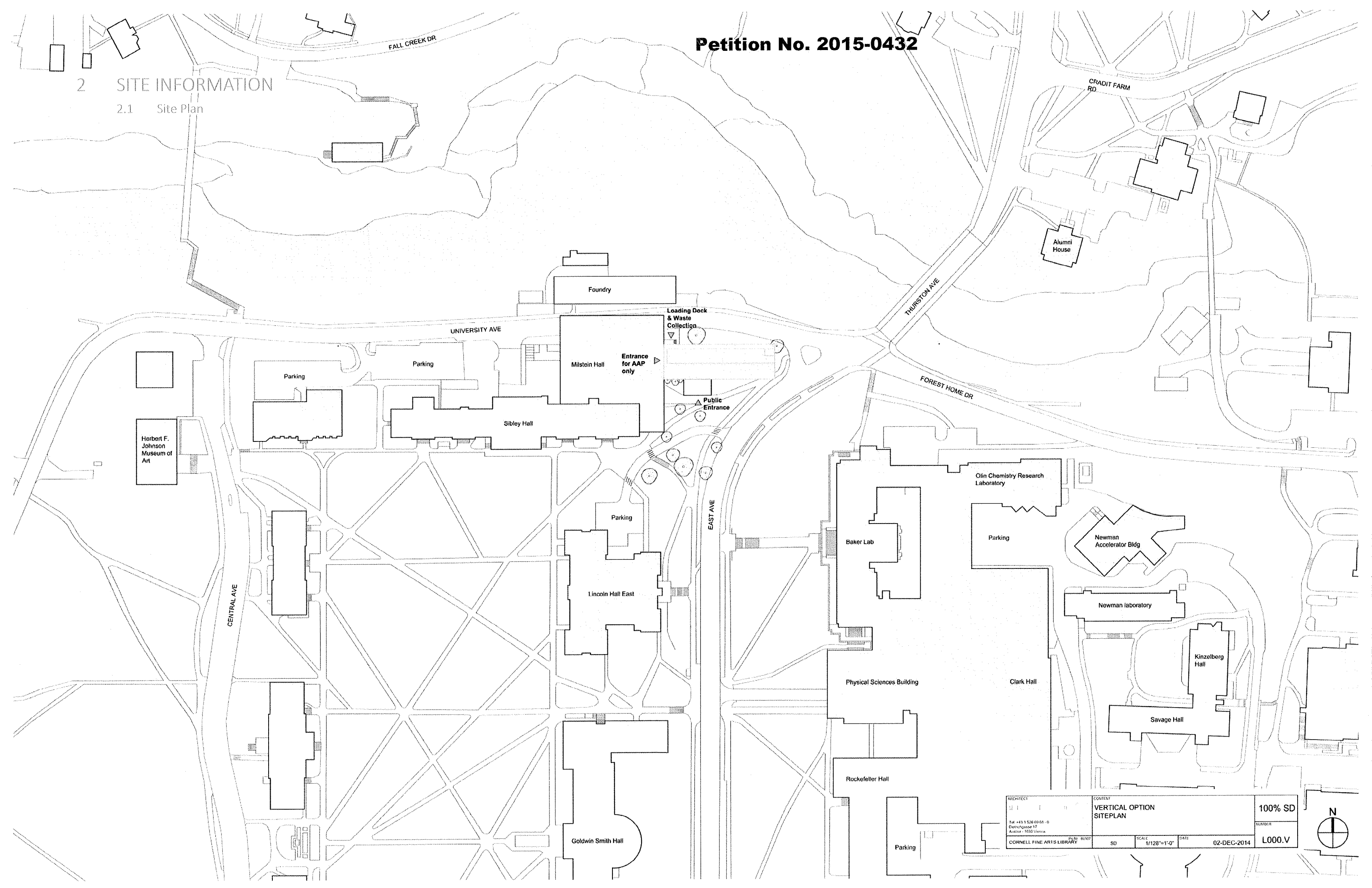
A handwritten signature in black ink that reads "Timothy A. DeRuyscher". The signature is written in a cursive, flowing style.

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

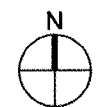
Enclosures: Exhibits  
CC: Hugh Bahar, Cornell Facilities

2 SITE INFORMATION

2.1 Site Plan



ARCHITECT S I I T Tel: +1 520 69 68 - 0 Dietrichgasse 17 Austria - 1030 Vienna	CONTENT VERTICAL OPTION SITEPLAN	100% SD
CORNELL FINE ARTS LIBRARY	SD	NUMBER L000.V
SCALE 1/128"=1'-0"	DATE 02-DEC-2014	

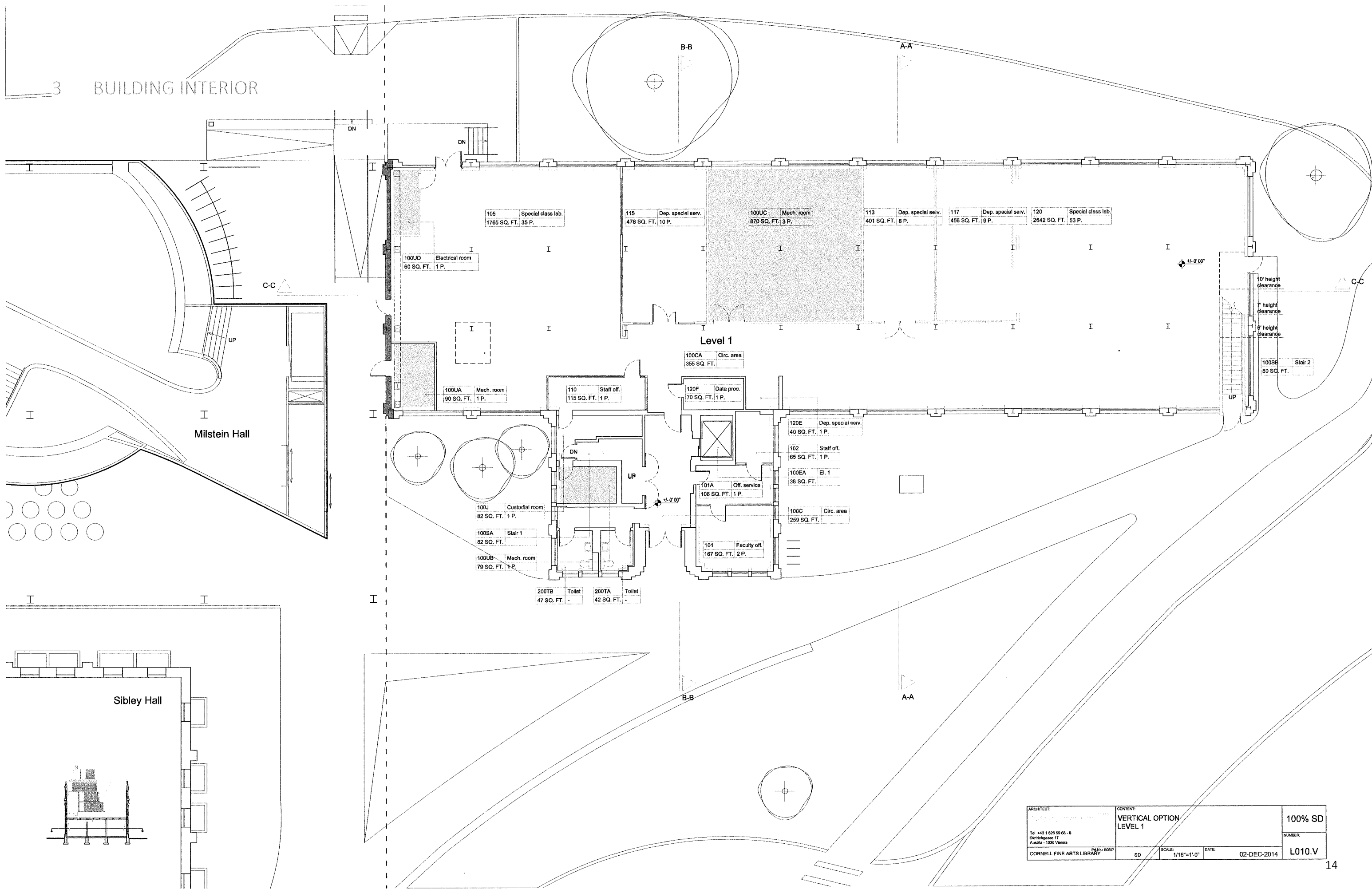






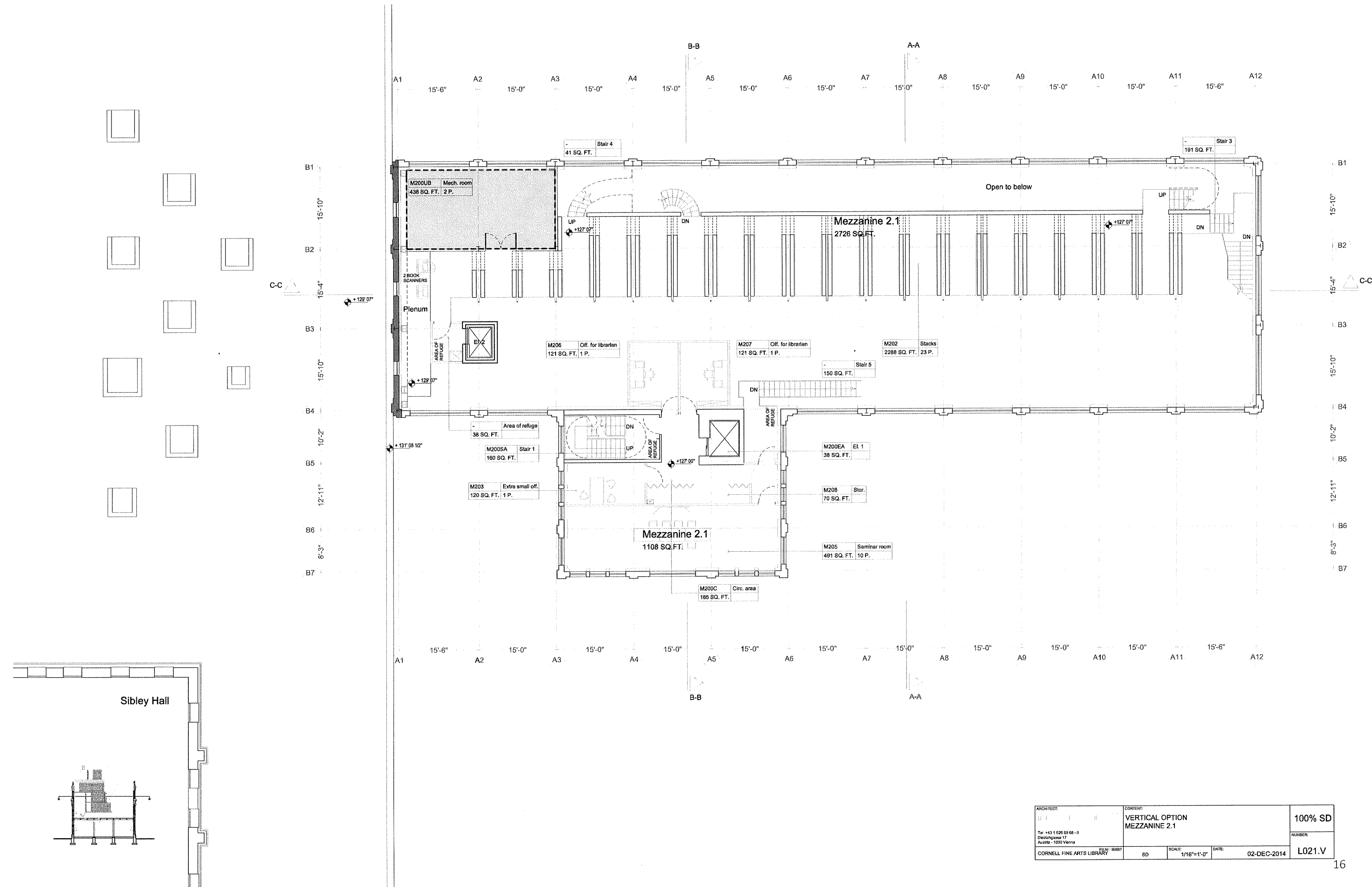


3 BUILDING INTERIOR

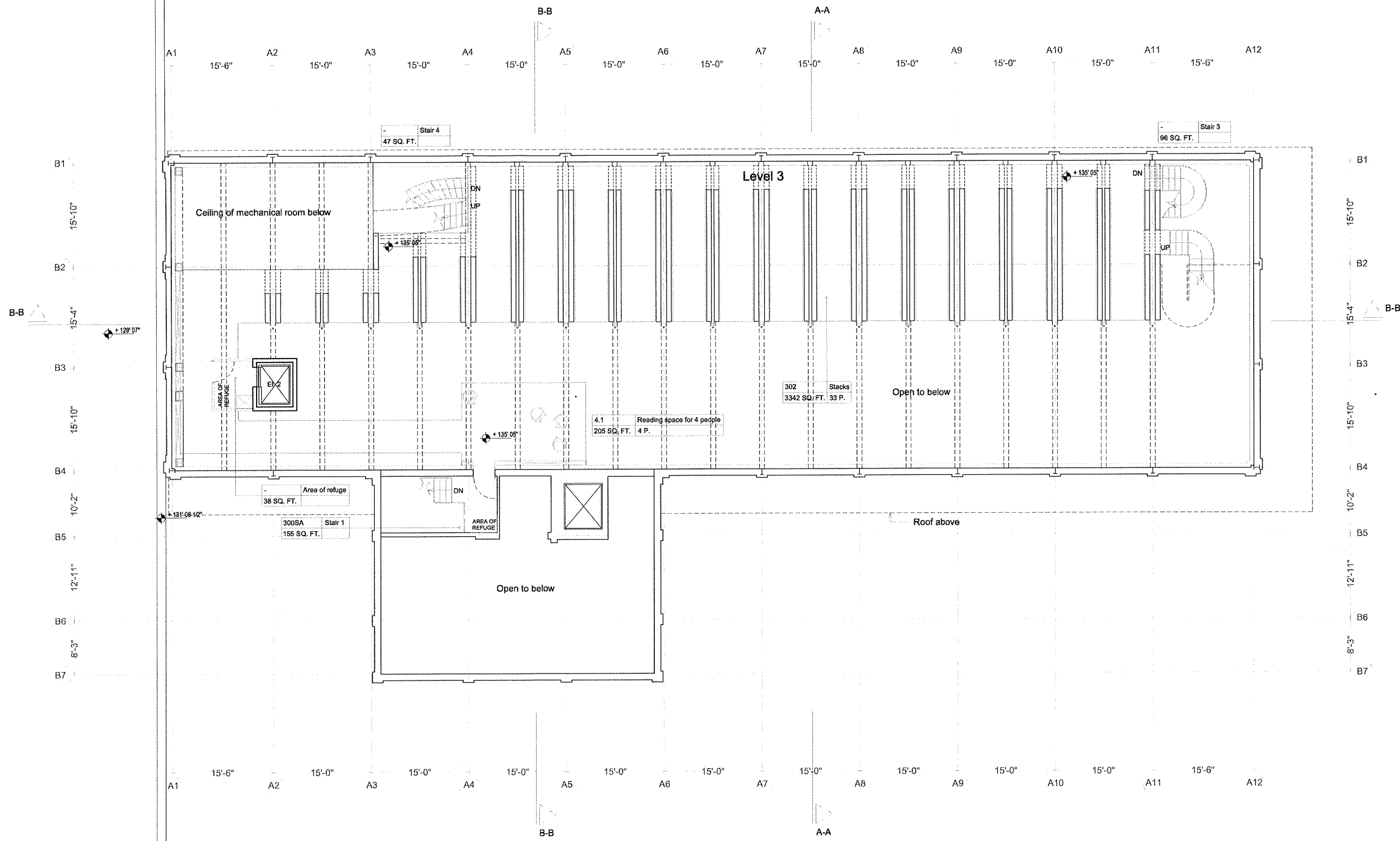
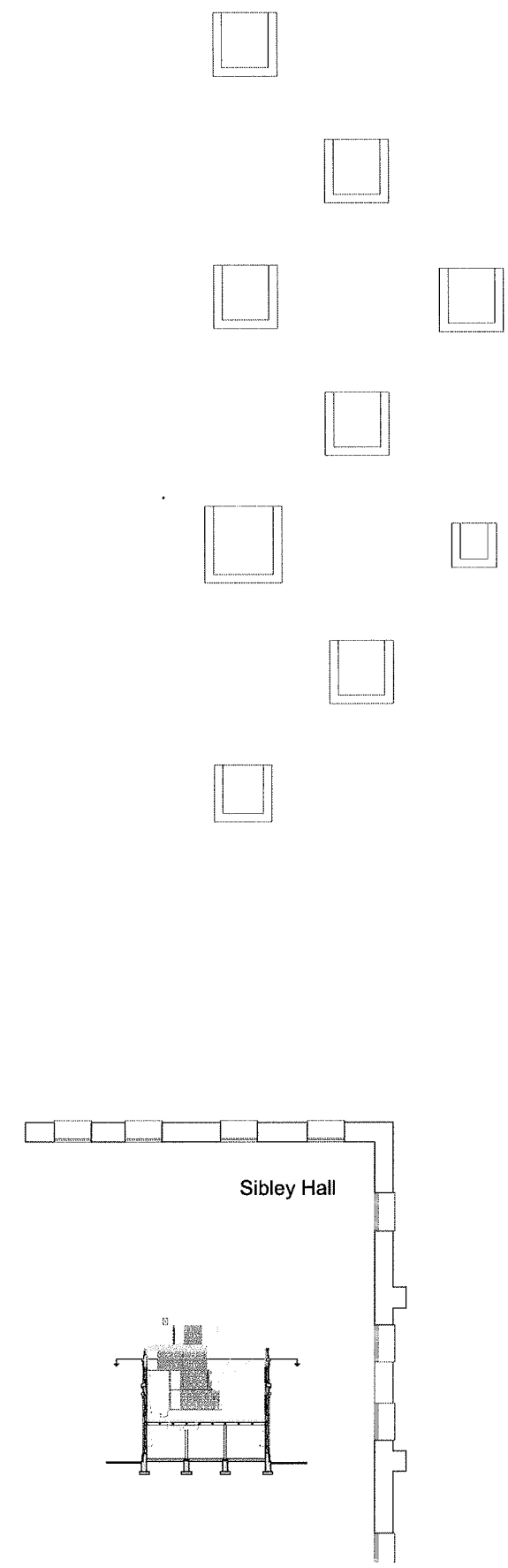


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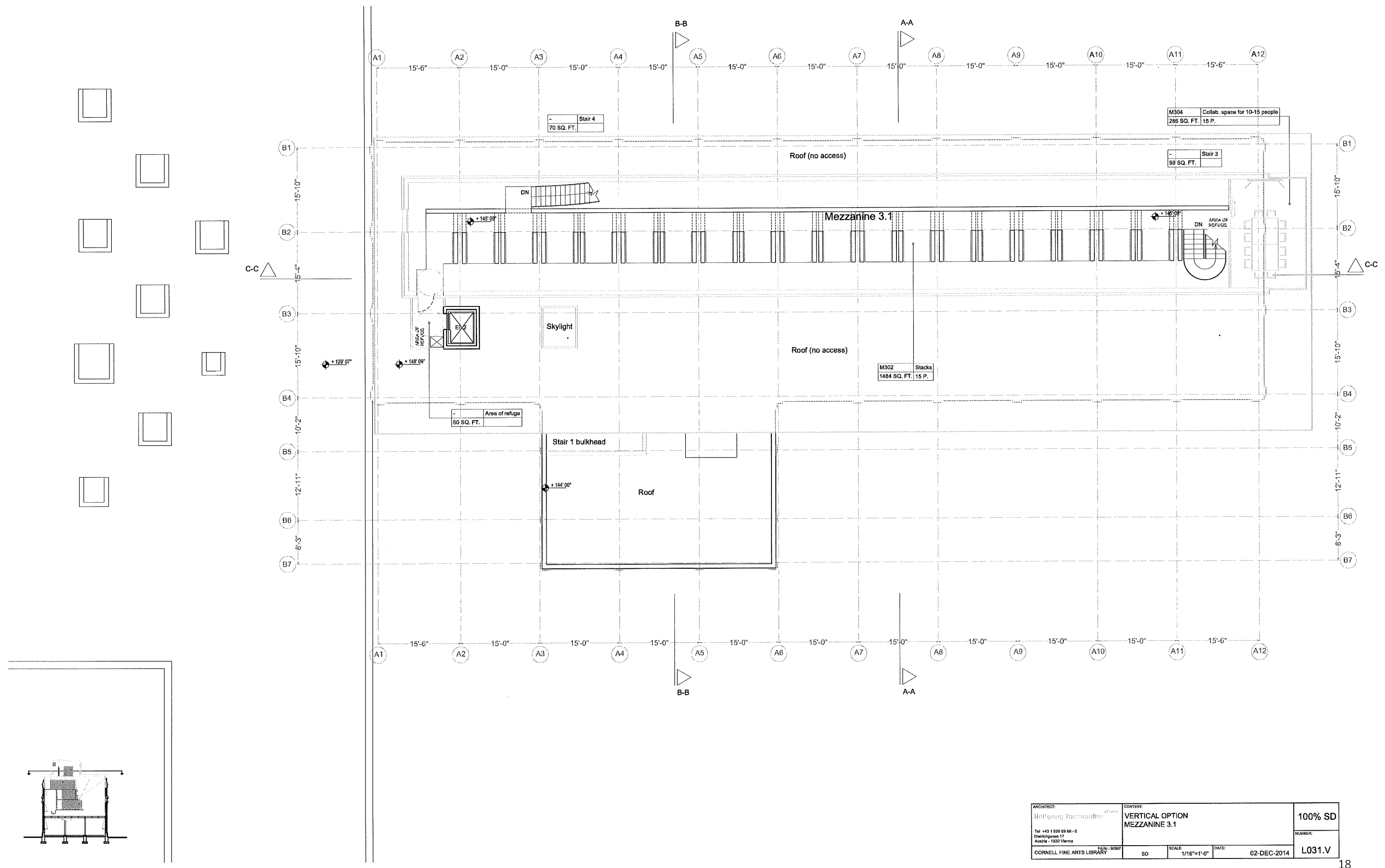




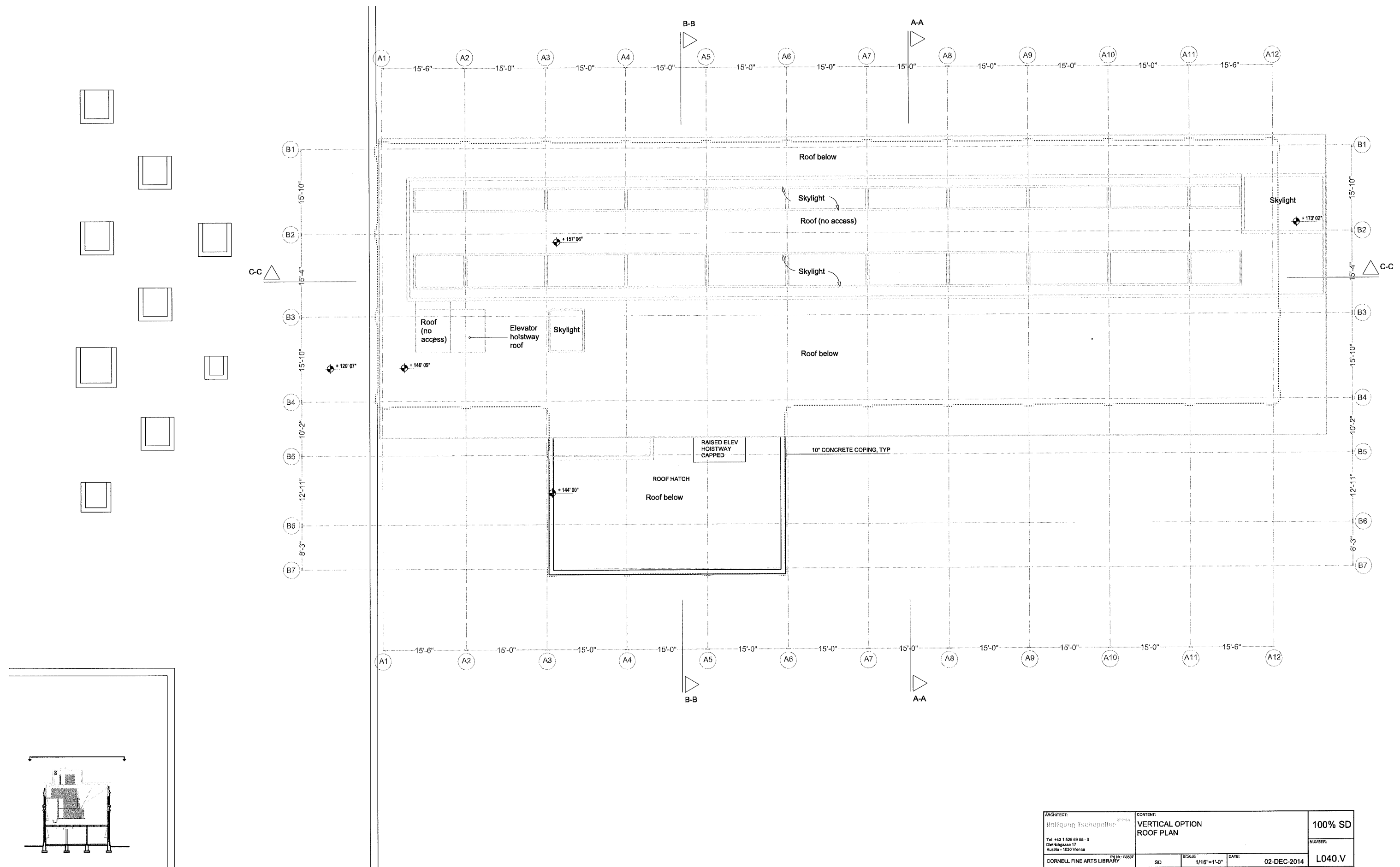
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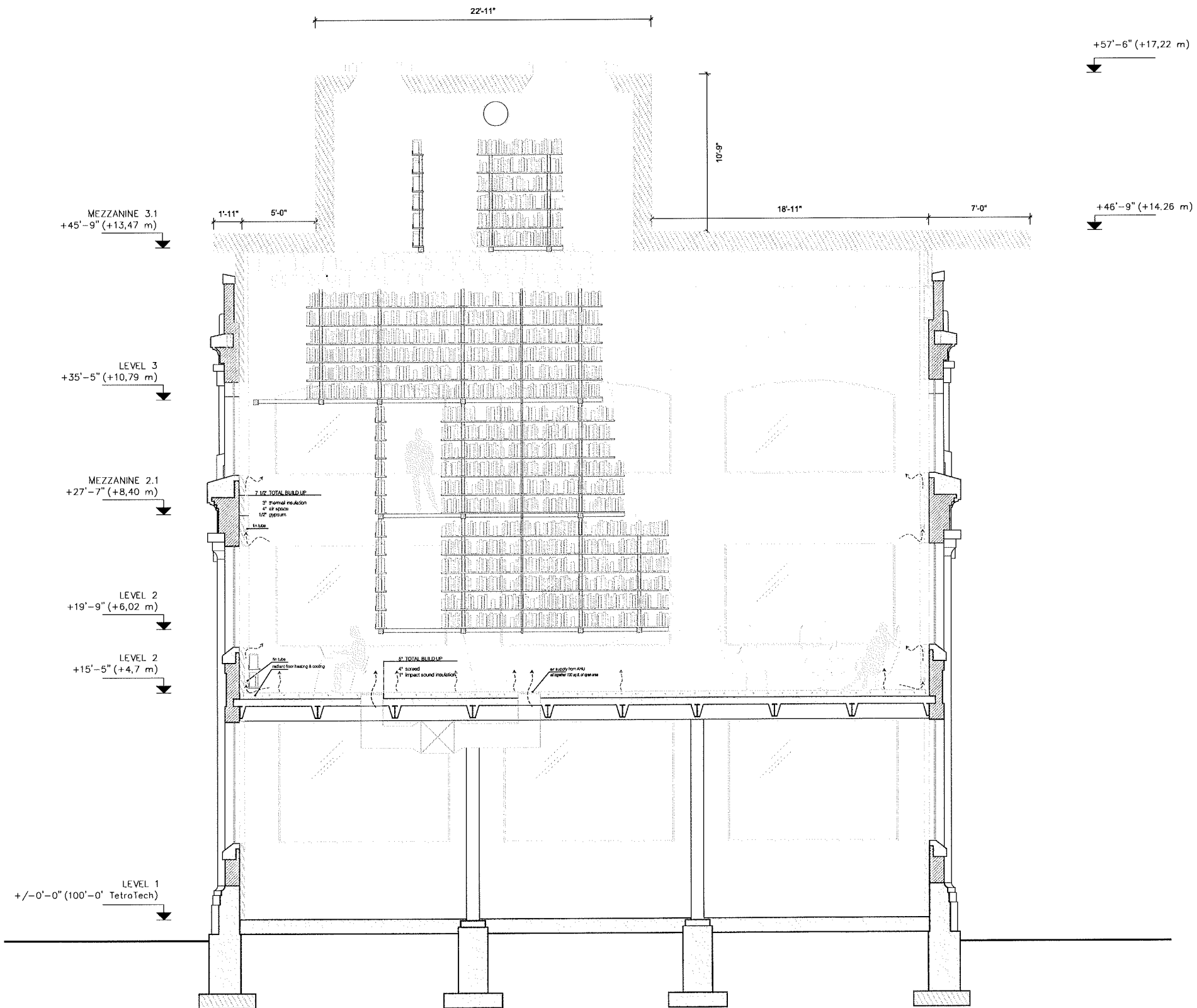
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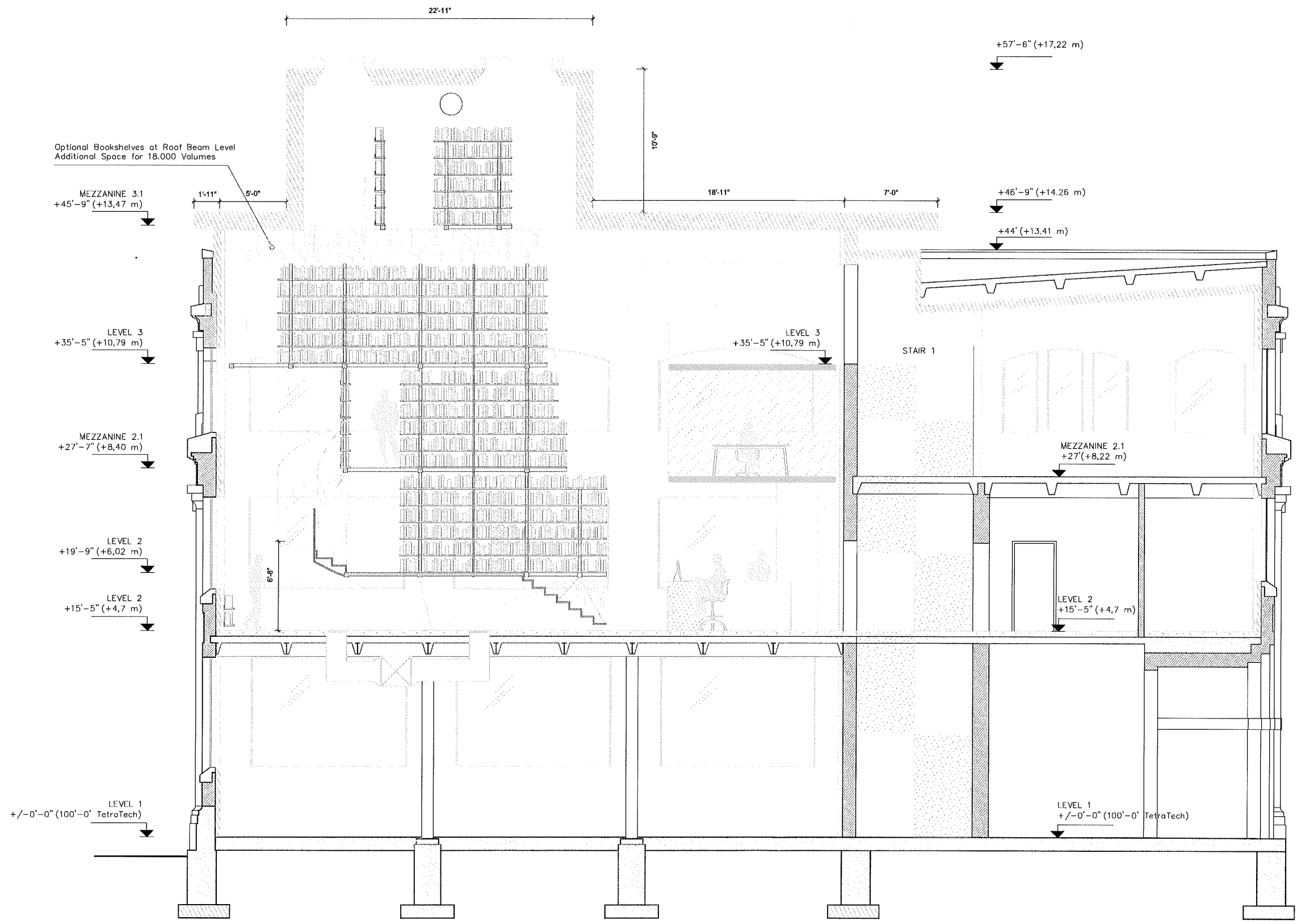
ARCHITECT: Helmut Janda Tel: +43 1 526 69 68-0 Dorotheergasse 17 Austria - 1030 Vienna	CONTENT: VERTICAL OPTION MEZZANINE 3.1	100% SD NUMBER: L031.V
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ARCHITECT: Helmut Jochberger Tel +43 1 526 89 88-0 Dierkhauser 17 Austria - 1030 Vienna	CONTENT: VERTICAL OPTION ROOF PLAN	100% SD NUMBER: L040.V
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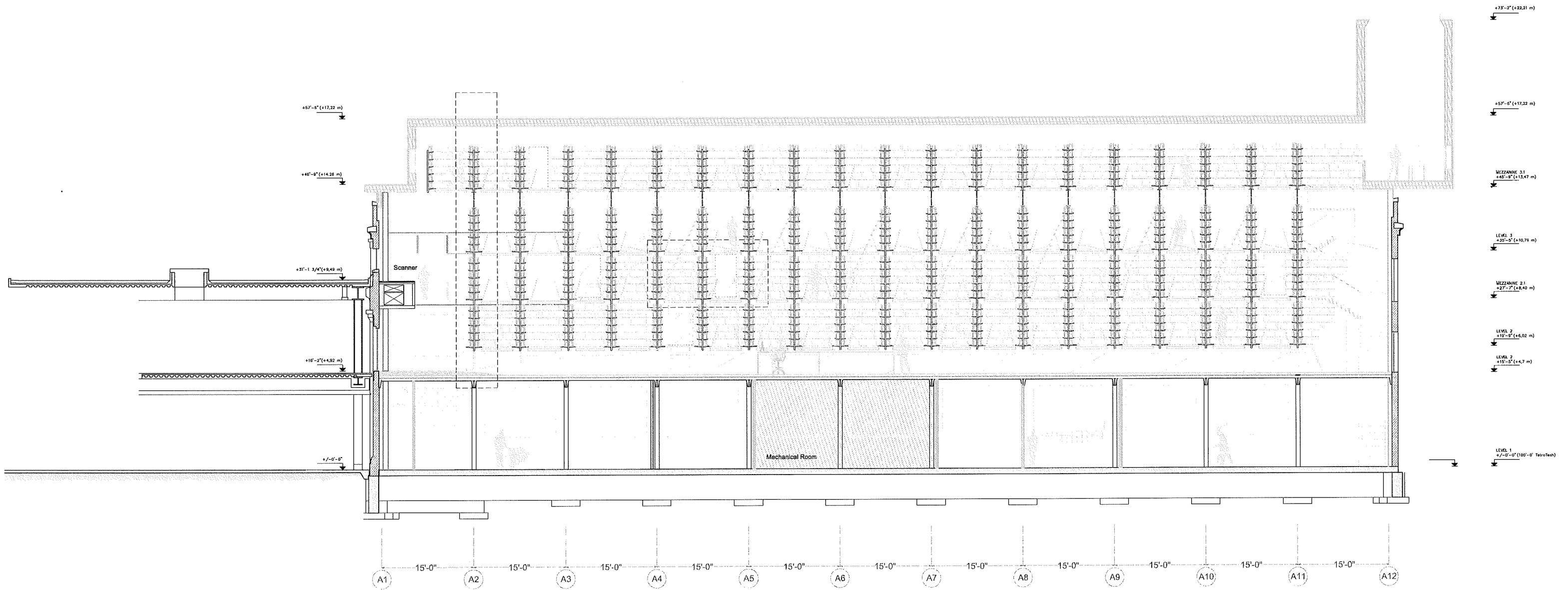
ARCHITECT: Wolfgang Tschuppeler Tel: +43 1 525 69 68 - 0 Dierckhause 17 Austria - 1030 Vienna	CONTENT: VERTICAL OPTION CROSS SECTION A-A	100% SD NUMBER: S01.V
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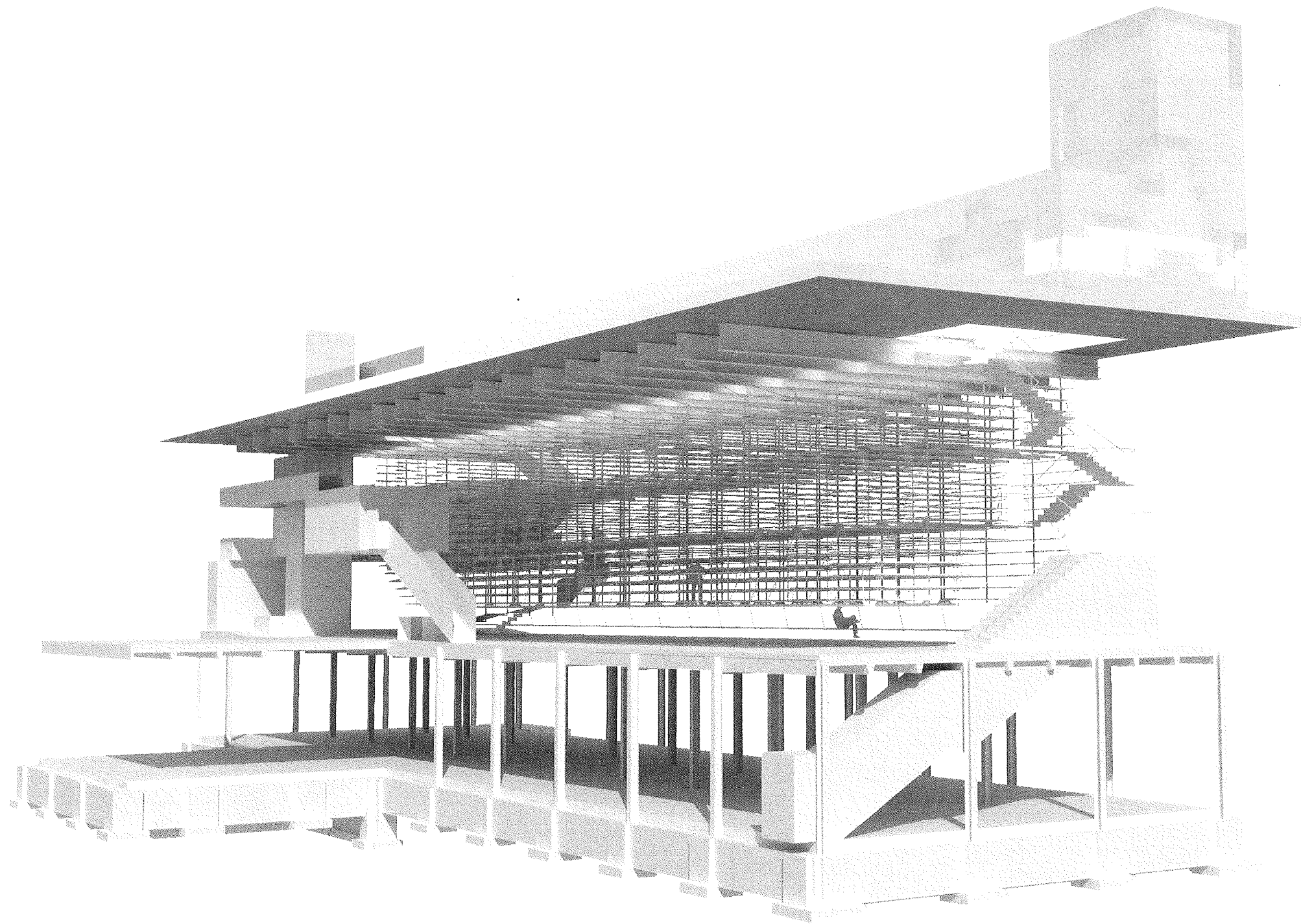
ARCHITECT:  
 Gregor Teichgraber  
 Tel +43 1 528 69 68 - 0  
 Döblichgasse 17  
 A-1030 Vienna  
 P.O. Box: B0507  
 CORNELL FINE ARTS LIBRARY

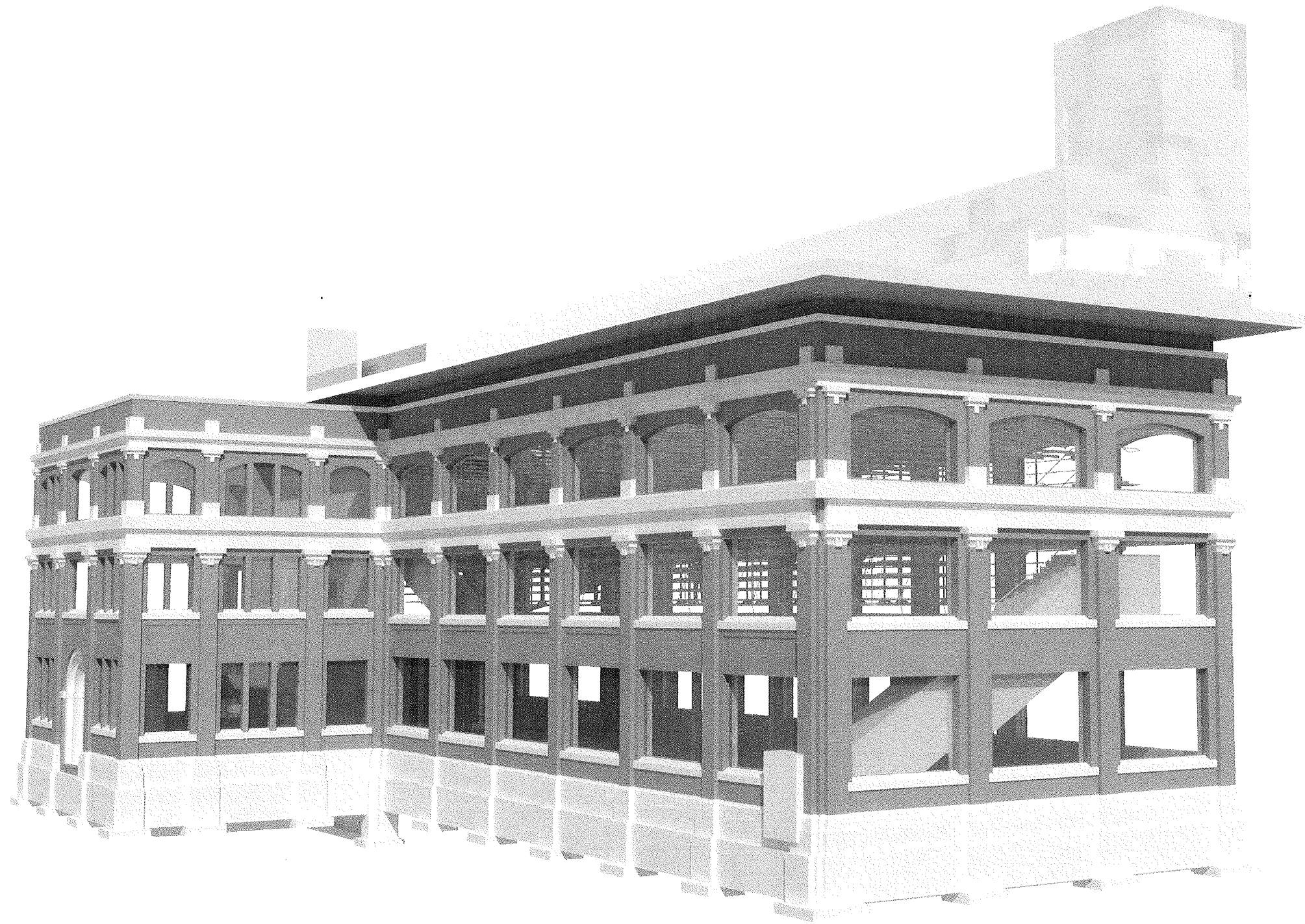
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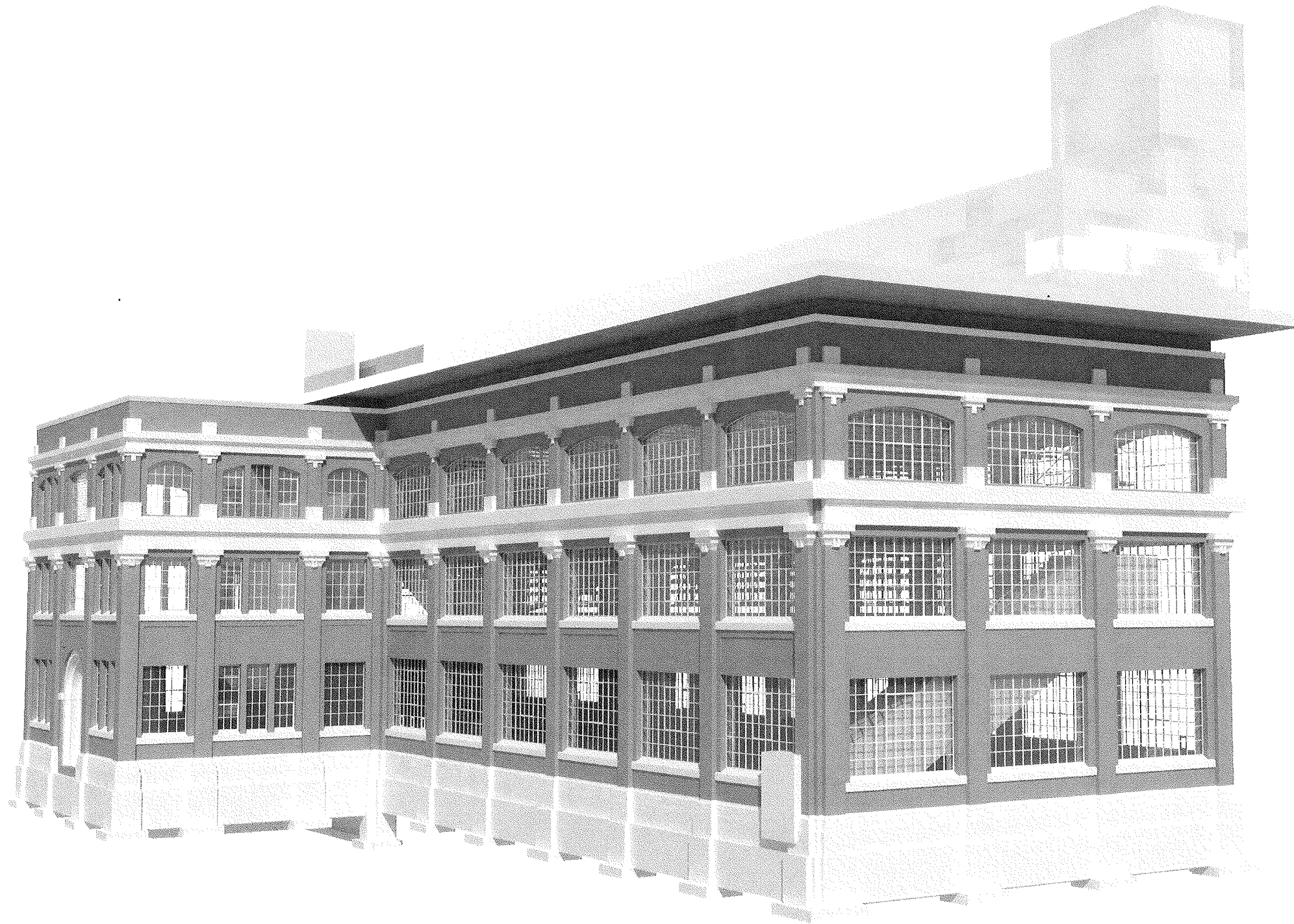


ARCHITECT: Hänggung Yachthall Tel +43 1 528 69 68 -0 Dierichgasse 17 Austria - 1030 Vienna	CONTENT: VERTICAL OPTION LONGITUDINAL SECTION C-C	100% SD NUMBER: S05.V
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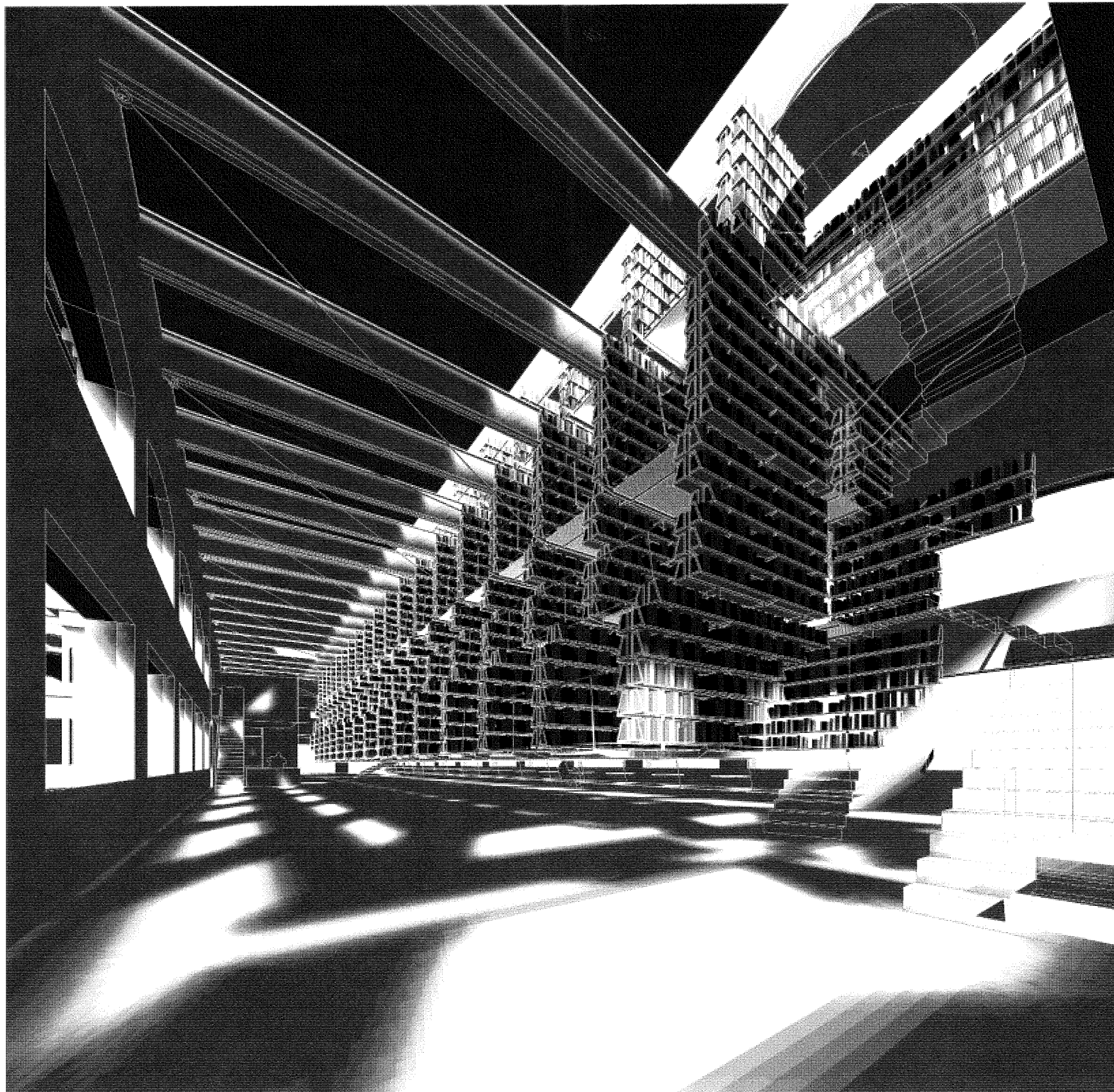









**Petition No.  
2015-0432**



View from a reading chair  
across the library towards  
the circulation and refer-  
ence desk.



A detailed architectural rendering of a library's interior. The scene is dominated by a vast, multi-level structure of bookshelves that rise high into the air, creating a complex, grid-like pattern of light and shadow. The shelves are filled with books, and the overall color palette is a mix of dark greys and bright whites. On the left side, a series of arched openings in a dark wall allows light to filter through, creating a rhythmic pattern of light and shadow on the floor. In the background, a staircase with a simple railing leads to an upper level. The lighting is dramatic, with strong highlights and deep shadows, emphasizing the geometric forms and the scale of the space.

View of the main reading room with bookshelves. Daylight originating from the lantern is penetrating between the girders.

Further in the back, Stair 5 connects to the generous seminar room situated in the entry pavilion. Above the circulation and reference desk, the offices of the librarians are projecting into the space of the reading room.

View from a sitting position towards the working spaces facing the gorge. Visual connection to the studio space of Milstein Hall is given.

The working space area can be equipped alternatively with a continuous bench or single seats and tables.



STATE OF NEW YORK

CAPITAL REGION

SYRACUSE BOARD OF REVIEW

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IN THE MATTER OF THE APPLICATION OF

CORNELL UNIVERSITY - RAND HALL

Petition No. 2015-0432  
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333 East Washington Street  
Syracuse, New York 13202

Thursday, September 17, 2015  
1:00 p.m.

BEFORE:

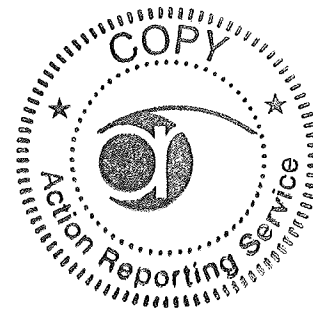
RICHARD T. LAFFERTY  
Chairman

ROBERT ALMY

MICHAEL HRAB, ESQ.

ED FRY, Department of State

TOM DITULLIO, Department of State



REPORTED BY: PAMELA PALOMEQUE, RPR, CRR  
Certified Livenote Reporter



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Jefferson Clinton Commons - 211 W. Jefferson St. - Suite 21  
Syracuse, New York 13202

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## PARTIES PRESENT FOR PETITIONERS:

J. Michael Thompson,  
Senior Project Manager  
Fire Protection  
GHD

Harris Fein  
STV Architects

Hugh Bahar,  
Cornell University  
Project Manager/Senior Engineer

Shirley Egan, Esq.  
Cornell University

Michael Niechwiadowicz  
Building Commissioner  
City of Ithaca

C. Thomas Parsons  
Assistant Fire Chief  
City of Ithaca Fire Prevention

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CHAIRMAN LAFFERTY: Good morning -- it's good afternoon. This is the September 17th, 2015 meeting of the Syracuse Board of Review held in Syracuse, New York. The time now is I'll say 1:00. This hearing is officially open.

The members of the board are Robert Almy to my right, Michael Hrab to my far right. Thomas Parsons has been excused. I'm -- my name is Richard Lafferty, Chairman from the Department of State, we have Ed Fry and Tom Ditullio.

We are now to hear the scheduled hearing. What I'm doing out of the order now is when I read this, I'm going to ask who all will be speaking no matter whatever -- you know. So when you speak, please address the board. Give your name, title, and legal address so the Court Reporter can have all the information requested. We may have to stop from time to time to consult our technical staff.

Now, anyone who wishes to speak, please stand, give me your name, title and address

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so she'll have it. Then when you start your testimony, state your name and give us the testimony. So those who will speak, please give us your name and title.

Don't sit there quietly, stand up and tell me who you are. You're not going to tell me who you are? You just stand there -- I'll go on with my spiel when you tell me your name, title and address and then sit back down.

MR. THOMPSON: My name is Mike Thompson with GHD. I'm a senior project manager in Fire Protection for GHD. Company address is 14585 Adion, A-D-I-O-N, Parkway, Suite 150, Chantilly, Virginia, 20151.

CHAIRMAN LAFFERTY: Who else is speaking?

MR. NIECHWIADOWICZ: Mike Niechwiadowicz, Building Division; I'm Director of Code Enforcement.

CHAIRMAN LAFFERTY: Anyone else? Nobody else is going to offer any comments? Okay. I'll buy that. That's wonderful. I will continue on.

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In making your comments to the board, please provide a descriptive narrative on the matters, referring to your exhibits to enable the Court Reporter to enter them, please, into the -- ah-ah -- stand up, give me your name, address and title. You're going to speak on this? You.

MR. PARSONS: Tom Parsons, Fire Chief, City of Ithaca.

CHAIRMAN LAFFERTY: Address, title?

MR. PARSONS: 310 West Green Street, Ithaca, New York.

CHAIRMAN LAFFERTY: Thank you. You come in late, you get in trouble. For the record, I'm not punchy but this is our fifth hearing of the day.

The hearing is in the matter of petition 2015-0432. The Petitioner is Cornell University and the notice was published -- the petition was published in the August 12th, 2015 edition of the National -- New York State Register.

The petition pertains to the renovation of an existing Rand Hall Fine Arts Library,

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Type 2B construction, three stories, academic building A3, first and second story occupants, and an F1 basement. Now, there's a great debate the basement is a story.

Are you appealing that finding?

MR. THOMPSON: No.

CHAIRMAN LAFFERTY: So we'll call it a three-story building. Constructing a fire barrier to separate Milstein Hall, a two-story type 2B, academic building, thus creating two legal structures.

The subject of the building is located at 947 University Avenue, City of Ithaca, county of Tompkins. The Petitioner is requesting relief from 19 NYCRR part 1227, existing Building Code of New York, state as follows:

EB912.5.1, height and area for changing to a higher occupancy. When a change of occupancy classification is made to a higher category as shown on table 912.5, heights in areas of buildings and structures shall comply with the requirements of Chapter 5 of the Building Code of the State of New York

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for the new occupancy classification.

Exception, in other than group H4(1) --  
F1(i) and S1, in lieu of firewall, use of a  
fire barrier having a fire resistant rating  
of not less than that specified on table  
705.4 of the Building Code of New York State,  
constructed in accordance with section 706 of  
the Building Code of the State of New York  
shall be permitted to meet area limitations  
required for a new occupancy in the building  
protected throughout with an automatic  
sprinkler system in accordance with section  
903.3.1.1 of the Fire Code of the State of  
New York.

There, you have it. Talk to me now.

MR. THOMPSON: All-righty.

CHAIRMAN LAFFERTY: Talk to me.

MR. THOMPSON: Thank you. Good  
afternoon. My name is Mike Thompson with  
GHD. You may have noticed in the application  
Tim Deroucher (ph) is the author of the  
application. I believe you know Tim. He's  
been in front of you several times.  
Unfortunately this conflicted with his

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2015-0432

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vacation in Europe so he asked for the next

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best guy to pinch hit and I came up from

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Chantilly to do just that.

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Like Tim, I'm a fire protection

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engineer. I've been doing code consulting

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for the last almost 35 years up and down the

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East Coast. With me today I have Hugh Bahar

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with Cornell University. He's Project

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Manager, Senior Engineer at the University.

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Shirley Egan is Associate University Counsel

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and Harris Feinn is with STV Architects who

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are involved with this project.

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What we're doing, as you just mentioned,

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is we're asking for a variance to allow an

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existing wall in Rand Hall to be accepted as

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a firewall. It's going to be a fire barrier,

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designed as a fire barrier but we want to

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treat it as a firewall in order to separate

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Rand Hall and treat it as a separate building

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from the adjacent Milstein building, and I'll

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go through a little bit of that in a few

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minutes.

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Rand Hall Fine Arts Library project it's

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an existing 2015 design project, ongoing

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right now. It's a three-story building. I'm not sure where this basement came in but it is a three story building, type 2B construction. It's about 9,000 square feet per floor so it's not a big building at all. It was built I believe in 1912 so it's an old historic building. The second and third floors currently are used as a library. We continue to use it as, the second and third floor, as a library, no change in use group there, and the first floor is student shops, and I'll go into that in a couple minutes and I'll show you exactly what's going on on that floor.

It's a little bit complicated what we're trying to do, a little complicated to try to explain but what we're going to do is we want to document compliance for separating Rand Hall from Milstein, and you can follow me in the handout I gave you. I'm going to go through some of these things and what happened was in the past Rand Hall had been classified as a B use group, and as part of this project we're going back and



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reclassifying it appropriately, correctly as an A3 for the second and third floor as assembly and F1 for the first floor.

Now, when we reclassify it, we got to go back and look at the existing Building Code. And the existing Building Code says if we reclassify an occupancy, and it's one of the use groups other than H and F1 and it's not going to a higher class for this table out of existing Building Code 912.5.1. We can treat a fire barrier, the separation between the buildings as a fire barrier and not a firewall. There's a distinction -- a difference between a fire barrier and a firewall and the primary difference is the firewall has got to be structurally independent to allow collapse on both sides. I just wanted you to know that.

So this exception is except use groups F1, H1, S and the (i): In lieu of a firewall, we can use a fire barrier for our separation in these existing buildings. Unfortunately we re-classified the first floor as F1; therefore, we don't fall in that

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exception and technically we have to go with the firewall separation between Milstein Hall and Rand Hall.

So that's where we came -- that's where -- why we ended up here. What we have is this 12-inch plus masonry brick wall that we're talking about on the west side of Rand Hall. It is structurally independent from Milstein but it is not structurally independent from the floors of Rand Hall. So if we have collapse in Rand Hall, we could technically have some structural collapse of the wall from a fire inside of Rand Hall.

To go back and construct this wall as a code compliant firewall would be very difficult. Basically all the floor slabs would have to be cut off the wall. There's columns embedded in the wall on the Rand Hall side. They're exposed in Rand Hall. Those would have to be cut out. The floors would have to be independently supported and so forth and we believe there's alternatives to address this issue which will provide at least the equivalent level of protection in

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the building, safety in the building, or maybe even a higher level.

Let's talk about the variance points. First one is we want to maintain the two-hour fire barrier between Rand Hall and Milstein Hall. If you refer to Exhibit B for photos, specifically photo 6 through 9 on page 16 through 22 of the variance request, I'll show you some of these photos. This is photo -- I'm referring to photo 8B right now. This is the wall. I'm pointing to the wall between Milstein, which is this glass/steel structure, and the brick Rand Hall. This is the wall we are talking about that's separating the two buildings and you can see it's a pretty substantial masonry wall.

Photo 8-C -- photo 8-A and 6-C, I'm sorry, on page 18, again this is showing us -- this wall that we are talking about between Rand Hall on your left and Milstein Hall. This is the west wall, for the record, of Rand Hall, greater than 12 inches thick, solid brick. Milstein Hall was built a couple years ago, totally independent from

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this wall. So you can see the columns supporting Milstein Hall and you have a slight cantilever over to Rand Hall.

So Milstein, like I said, is structurally independent and would collapse without any impact on this wall should there be a fire in Milstein. This wall is technically acting as a firewall from exposure fire from the Milstein side. It's the exposure of a fire inside of Rand that is at issue. So the two, both stand-alone buildings structurally independent. The exposure of Rand Hall to Milstein we're addressing in this variance and we can provide any openings that we'd have in this wall, and we do have a cross-over on the second floor which will be maintained. We can provide the protection, code compliant protection on all the openings as if it were a firewall and we'll go through and address those.

Number 2 variance point is provide non-required one-hour horizontal fire barrier to separate the first floor from the second

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floor. So what we're going to do is provide

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a one-hour floor slab separating the first

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from the second. That's going to entail

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upgrading the columns supporting the floor to

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one hour and any horizontal structural

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member. Not required by code. There's

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nothing providing us to do that in the code

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other than we're providing this as a

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compensating feature.

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So we will be exceeding code

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requirements for this type 2B construction.

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Type 2B construction would not require us to

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rate that floor slab and the building is

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being designed as a non-separated mixed use.

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So separating the F1 from the A3 would not be

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required by the code.

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Now, if we have a fire on this first

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floor, our exposure to Milstein, Milstein

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will be through this 12-inch thick block wall

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and if you go through and look at the

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existing Building Code and take a look at the

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archaic materials and you'll see that this

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12-inch block or 12-inch brick wall is going

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to provide us in excess of three hours.

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We're going to be well over what a code would provide for a firewall separation.

Vertically our exposure to Milstein would be -- let's see here. I don't have the exact drawing. Here we have Rand Hall and we have Milstein over here. This is the wall coming up so we have this, as I mentioned before, this three-hour fire separation through the wall. Vertically you would go through the one-hour floor slab and then we would go horizontally between a two-hour fire barrier that's existing. So conceivably the one hour plus the two hour gives us at least three hours anyhow.

According to the T.Z. Harmathy Rules of Fire Endurance which are referenced in the existing Building Code, if I have a one-hour fire barrier and a two-hour fire barrier, one hour plus two hours is going to give us at least three hours or greater than three hours. So we do have a fire separation there.

CHAIRMAN LAFFERTY: We're looking at drawing A222.00.

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MR. THOMPSON: Right.

CHAIRMAN LAFFERTY: Fire barrier elevation section?

MR. THOMPSON: Correct. I'm sorry, I forgot to mention the reference.

CHAIRMAN LAFFERTY: You need to do that. Go ahead.

MR. THOMPSON: Variance point number 3: Provide increased fire sprinkler flows/ densities and QRS sprinklers.

What we're proposing to do is, first of all, we're going to be using the 2013 NFPA 13. One of the things in that edition of the code, it requires us to use quick response sprinklers, standard response sprinklers. We will be requiring quick-response sprinklers. Sprinklers react faster. Insist in quicker knock-down of fire if we don't even extinguishment.

Second thing is we're going to propose 0.25 gallons per minute per square foot over a design area of 2,000 or 2,500 square feet depending on what section of the building sprinkler design. Normally NFPA would only

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require .25 gallons per minute per square

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over 1,500 square feet. We're going to

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almost double the amount of water that we'll

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be discharging into the building in terms of

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the sprinkler system designed;

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And, thirdly, add a little bit of an

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additional level of quality control, this

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building will be reviewed not only by the

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Cornell fire protection engineer but Factory

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Mutual Global as well. They'll be a part of

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the design review and so forth. Just an

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increase in the sprinkler design that would

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normally be required by code.

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Variance point number 4 would be a

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secondary water supply. Primary water supply

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for this building will be through a fire pump

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system on the campus in a nearby building

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which will provide us all of our flows and

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pressures for the sprinkler system. That

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pumping system will be used to provide the

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enhanced density and areas of coverage.

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What we're proposing to do is provide a

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secondary water supply from the north side of

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the building. The primary supply comes from



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the south side. The secondary supply will come from the north side of the building. This supply will not be on the pump system and the sprinkler system will be designed following NFPA 13 requirements, not the enhanced requirements. In other words, we're going to have designs -- will have to look at two different water supplies, do one water supply with the fire pump system which will be the enhanced densities in coverage and then we do a second design proving that the secondary water supply will meet the NFPA 3 requirements. So if we were to lose the fire pumps, we still have a NFPA 13 code-compliant sprinkler system in the building.

Variance point number 5 is we will provide full protection in the building. Full protection is going to consist of smoke detection and heat detection as appropriate. We'd like to put smoke detection throughout the building but I don't think we want to start putting smoke detectors in a welding lab, for example, so where smoke detection wouldn't be appropriate, we will be putting

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in heat detection.

With the smoke detection we're going to get early detection of a fire with the hope that the fire will be in the incipient stage. First responders will be able to extinguish the fire before it even becomes an issue.

Variance 6 is maintain on-site trained campus police. Like a lot of buildings, this is a campus setting where we have primary first responders, campus police. Trained campus police I might say. They're trained as first responders who will come in, operate fire extinguishers, whatever it takes to extinguish the fire in the incipient stage. The police force on the campus does have direct communication with the Ithaca Fire Department so they can provide updates as the Ithaca Fire Department is responding and so forth.

Variance point number 7: Fire access and large windows allow for manual fire stream penetration into Rand Hall. Should everything fail up to this point, the fire department gets there and we have a

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full-blown fire in this building, the nice thing about this building is we have full access on three sides and we have very large windows. Again, referring back to picture 8B.

CHAIRMAN LAFFERTY: Sorry to bother you a second but if we look at L000V, point out the three-sided protection access.

MR. THOMPSON: (Witness complies.) Down through here, which is the south side of the building, through this fire lane which gives us full access on the side. We have access here and we have access here on the north. So it will be the north side, south side, east side. West sides abuts up against Milstein.

CHAIRMAN LAFFERTY: Thank you.

MR. THOMPSON: Referring to photo 8-B, this is the south side of the building and you can see these large open windows along the building. And again referring to photo 6-A, which will be the north side of the building, again three floors of large open windows. That will allow the fire department

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to operate master streams into the building.

Another thing to keep in mind, I believe the building is only 48 or 49 feet deep so there's -- it's pretty much a wide open floor plan so operating master streams and access into the building from the exterior is not an issue. Conceivably it will still be code compliant. This could be a windowless building where there's no fire department access and there wouldn't be any different code requirements that would apply to the building. That's a point we would like to make. Okay.

Variance point number 8, the first floor being considered as a code-defined group F1. This is why we're really here is because we're reclassifying the floor to an F1 factory. I refer you to pages 9 through 11 of the appeal. If you take a look at the photos, 1-A, 1-B, 1-C and 1-D, it kind of gives you an idea what we're talking about in terms of a factory, these little labs and shops that the students use.

The designation F1 presumes that a

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hazard is much, much higher than what typically exists in these teaching labs and what you can see in the photos. A car manufacturing plant, a furniture manufacturing plant, that would be an F1 occupancy as well and we'd be -- we're meeting the same requirements as something like that.

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Our biggest thing is you can see these are small labs and some of the labs are not much different than what you may have in your basement in your home. Not labs but I'm sorry shops, not much different than the shop we would have in our garage at home. So in terms of a real, real super hazard, we're just not that type.

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CHAIRMAN LAFFERTY: How many students occupy that space at one time?

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MR. THOMPSON: I'd have to ask the University that question. I'm not sure. When I visited the building, I've probably seen ten people in the building.

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CHAIRMAN LAFFERTY: I want to know a class, how it runs. That's why these other

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people are here and they didn't get up and say we're going to testify but if they're going to say something, they're going to have to get up and say it and I wanted to know how many people -- because there's an awful lot of them sitting here that did not get up and say, like that guy right out there who I think is the state fire chiefs.

MR. NIECHWIADOWICZ: State Fire, yeah.

CHAIRMAN LAFFERTY: Give your name and address to her now because you'll ask -- you have to wait until he gives that.

MR. WELCH: Brett Welch, Deputy Chief, New York State Office of Fire Prevention and Control from the Binghamton office. My address is 44 Hawley Street, Binghamton, New York 13901.

CHAIRMAN LAFFERTY: Thank you. Now give me your name and address.

MR. BAHAR: Hugh Bahar, Project Manager of Cornell University and my address is 102 Humphreys Service Building, Ithaca, 14853.

CHAIRMAN LAFFERTY: The question was how

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many students will be in this basement when occupied?

MR. BAHAR: The basement space, the maximum occupancy is probably about 25 students.

CHAIRMAN LAFFERTY: Thank you.

MR. THOMPSON: Okay. Brings up the variance point 9, this request is consistent with a prior New York State determination, 2013-0456, findings, which I believe was presented two years ago where the Rand, Milstein and Sibley building, which is on the other side of Milstein complex. When they built the Milstein building they look at this one area and everybody agreed through the variance with the alternatives that were provided that this wall separating Milstein and Rand would be a two-hour fire barrier so we're not changing that. We're still keeping the two-hour fire barrier. We're providing additional improvements in Rand and looking at this as a fire barrier.

I think one of the things I failed to mention -- let me just run back real quick.

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On the -- in reference to the point 1, maintaining the two-hour fire barrier, we do have a series of pictures in the variance request showing how we are proposing to provide opening protection. Even though it's only going to be looked at as a fire barrier, not a firewall, we are providing opening protection as if it were a firewall.

For example, if you refer to photo 6-A in the document, you can see the existing Milstein Hall has a row of sprinklers interior along the window line. There's about 12, 14 inches off the glass, I believe, and then the exposure of this window on the first floor, which is the factory floor, F1 floor, either we'll put a shutter over the window or use interior water curtain on the window glass itself or the fire-rated window glass I should say instead of the shutter.

On the roof, we have some openings on the roof that overlook the Milstein roof, which is a green roof, and I believe the fire department has requested that the green roof be pulled back six feet from the Rand wall



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but the windows, again, sprinklers inside and across the entire second floor south, third floor south windows of Rand Hall, and then the proposed fire shutters over the roof that actually sit above the window openings over the -- that sit above the roof of Milstein. We'll put fire shutters on those and then the window glass or the window sprinklers or the fire glass on the windows that are at 90 degrees from the Milstein building and that's referring again to picture photo 9 in the documents. Any questions?

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CHAIRMAN LAFFERTY: You're talking about the roof lines, drawing number 42, computer-generated, shows proposed extension of the roof area?

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MR. THOMPSON: The roof of Rand Hall is proposed to be raised. We're not adding stories. We are increasing the roof height of the building.

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CHAIRMAN LAFFERTY: I will debate that when we get back a little bit. What is the protection now?

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MR. THOMPSON: It will be two-hour

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separation.

CHAIRMAN LAFFERTY: No windows over there?

MR. THOMPSON: No windows. There's no additional windows. We have an existing.

CHAIRMAN LAFFERTY: Now, this other stuff is coming over the top of it?

MR. THOMPSON: Going up above it.

CHAIRMAN LAFFERTY: It's going to be solid wall?

MR. THOMPSON: It's going to be code compliant, 100 percent code compliant for any openings if we were to have openings but I don't believe we have any openings proposed. It's just going to be solid wall and the existing openings will be protected code compliance wise with two-hour separation.

CHAIRMAN LAFFERTY: We didn't get to 10, did we?

MR. THOMPSON: I'm sorry?

CHAIRMAN LAFFERTY: Are you going to get to 10?

MR. THOMPSON: Yes, point 10, just make the point -- this is really not a life safety

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issue. If we have a fire in the building, the occupants, the students, they will be out of the building in 10 to 12 minutes. Quite frankly this 9,000 square foot -- they'll probably be out of the building in 3 minutes if there's any fire. It's strictly related to property protection. This is two hours after the fire started that this wall is going to stand up and prevent any type of exposure into Milstein.

We're not trying to address any type of egress issues, no role in terms of egress protection or occupancy protection, and then the wall only becomes a factor when we have this multitude of failures, which includes fire detection not detecting a fire, people not detecting the fire that are in the building and responding to the fire within its incipient stages, basically extinguishing the fire. Sprinkler system will have to fail to suppress the fire or control the fire. Campus police will have to fail to respond, and if they do respond they have to fail to put the fire out or the Ithaca Fire

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Department will fail to respond and then the water supply has to fail. All these things have to happen before we have a fire that's going to sit there and burn for two hours that's going to impact Milstein Hall.

So having -- in summary, I think what we're proposing from our professional opinion, we're providing quite a bit of additional protection for the building and, again, not for the occupants. I think they're very well protected. We feel this is above, equal to or greater than meeting the intent of the codes.

CHAIRMAN LAFFERTY: How will the library function? How does it function.

MR. THOMPSON: How will the library function as far as --

CHAIRMAN LAFFERTY: Are you guys going to be back again when the addition gets firmed up?

MR. THOMPSON: What we're asking for is when we have this wall accepted as a firewall, we'll look at Rand Hall as being a separate and distinct building from the rest

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of the Milstein complex. Now that we have that, this is granted, then anything in the future I anticipate will be code compliant as a Rand Hall building.

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CHAIRMAN LAFFERTY: As it has been

presented to us through the things that you have provided us, the use of the term, the term mezzanines, pluralizing it, not calculating it into the fire area of the space that is occupied becomes a question.

There's a lot -- first of all, you force me to do an awful lot of research on mezzanines. I even went to ICC on mezzanines and all I get is it can't be more than one-third of the floor area. As I look at what is going on potentially, you're going to be before us again.

MR. THOMPSON: Let me address that.

Definition of a mezzanine is an intermediate level between two floors and that's the way it is defined, it's not defined as a story and it's not defined as a floor, just an intermediate level. For purposes of building area, the mezzanine is part of the floor

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below and the -- and by definition of a mezzanine, it cannot exceed one-third of the area that it opens into except when we have full automatic sprinkler protection and voice fire alarm, we can go to 50 percent.

CHAIRMAN LAFFERTY: So add up all the mezzanines.

MR. THOMPSON: Now that you said that --

CHAIRMAN LAFFERTY: Add up all the mezzanines.

MR. THOMPSON: I will hand out -- we have done those calculations in anticipation that this question may come up. And what we have done is provided the calculation -- the first drawing, I'm going to refer to drawing L030.v -- excuse me, let me back up. Refer to drawing L020.v which is the second floor in the dark blue, that is the open area of that floor. All that area is entirely open. Square footage is 77,715 square feet.

I'll refer to the mezzanine, second floor mezzanine, drawing L021.v and the blue area again is the actual mezzanine floor area that is open to the floor below. It right

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now is designed as 3,830 square feet, and it is a .49 -- .4996 percent. It is maxed out. We have not exceeded the 50 percent and if you go to the third floor --

CHAIRMAN LAFFERTY: Let me just interrupt a second.

MR. THOMPSON: Sure.

CHAIRMAN LAFFERTY: You have an elevator there.

MR. THOMPSON: We have an elevator there, correct.

CHAIRMAN LAFFERTY: All these things become handicapped accessible, all the mezzanines.

MR. THOMPSON: Correct.

CHAIRMAN LAFFERTY: Do you have an -- what do you call it, a rescue?

MR. THOMPSON: Rescue assistance?

CHAIRMAN LAFFERTY: Yes.

MR. THOMPSON: Yes, we do.

CHAIRMAN LAFFERTY: So the elevator and all of that is not really part of that blue area. That's a completely separate item.

MR. THOMPSON: I thought it was on the

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drawing. Oh, if you look at the elevator,  
the interior elevator --

CHAIRMAN LAFFERTY: I'm seeing the door  
swinging into it and that's a rated wall all  
the way around that and it has nothing to do  
with any area computation.

MR. THOMPSON: Are you looking at the  
elevator -- correct.

CHAIRMAN LAFFERTY: Right there. That's  
an enclosure.

MR. THOMPSON: No, it's not. It's --

CHAIRMAN LAFFERTY: It's an enclosure,  
two-hour enclosure, minimum.

MR. THOMPSON: Okay.

CHAIRMAN LAFFERTY: All right.

MR. THOMPSON: Okay.

CHAIRMAN LAFFERTY: That's one point.  
Keep going.

MR. THOMPSON: Is there a question  
associated with it or --

CHAIRMAN LAFFERTY: It's not part of the  
mezzanine.

MR. THOMPSON: It's included in the  
floor calculation.



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CHAIRMAN LAFFERTY: It shouldn't be.

MR. THOMPSON: Shouldn't be?

CHAIRMAN LAFFERTY: It's a separate story. Keep going. Keep going.

MR. THOMPSON: Then the third floor is similar, a similar situation in calculation. You have the third floor as 4,020 square feet and then you have the mezzanine at 1,820 square feet, which is .496 percent, less than 50.

CHAIRMAN LAFFERTY: 49 percent. If you look at the section provided here --

MR. THOMPSON: Okay. I'll refer to the section that's provided.

CHAIRMAN LAFFERTY: -- the third floor is being penetrated.

MR. THOMPSON: We have -- there is a vertical opening between the second and third floors, correct. This vertical opening is in full compliance with 707.2 of the Building Code, I believe number 1, which says we are allowed to have two stories open without protection and not have to meet the atrium provisions.

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Atrium provisions is another exception in 707.2 and again it says, specifically says in the code two stories. The code specifically defines mezzanine, not a story but an intermediate level associated with the story below so having two stories open, having two mezzanines on each of those stories is fully code compliant.

CHAIRMAN LAFFERTY: What is this space all for?

MR. THOMPSON: To tell you the truth, I'm not too sure. I believe that's -- it's -- it might be something associated with the area underneath the book stacks, holding up the book stacks.

CHAIRMAN LAFFERTY: Looks like an open space.

MR. FEINN: It's unusable space.

MR. THOMPSON: Basically unusable space, it's part of the structure of the book racks only. So it's going to be unusable. If it's accessible by any means for storage, then it would be sprinkler protected, and we would provide full code compliance but it's just

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kind of a raised floor section for the second floor.

CHAIRMAN LAFFERTY: When you penetrate the roof, you've got another floor up there.

MR. THOMPSON: It's not a floor. What you're looking at, that little blue section is mezzanine, third floor mezzanine.

CHAIRMAN LAFFERTY: It looks like a floor to me.

MR. THOMPSON: It's open to the floor below.

CHAIRMAN LAFFERTY: That means you have a shaft completely open.

MR. THOMPSON: It's a two-story shaft.

CHAIRMAN LAFFERTY: That's a three-story shaft as it's shown now so -- okay. We're not -- you're only -- I understand what you're saying but you gave us too damn much information. When you give me computer drawings -- I don't have any problem with that but when you get the -- what's it all about? Come on. I don't need that.

So back to this, basically as long as you don't come back to us ever, we will be

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happy to fix the wall. You answered my question on that one. Enclosed stairs from the -- from your second --

MR. THOMPSON: And third floor mezzanine?

CHAIRMAN LAFFERTY: Yes. No, not mezzanine, enclosed stairs from the present two floors. Are they enclosed?

MR. THOMPSON: The existing two floors enclosed?

CHAIRMAN LAFFERTY: Yes.

MR. THOMPSON: Yes, there are two enclosed stairs.

CHAIRMAN LAFFERTY: Just point them out to me. Was there any distance travel problem?

MR. THOMPSON: I'll show you. This is one of your enclosed stairs right here.

CHAIRMAN LAFFERTY: Looking at LO30.v, third floor, that is the closed stair.

MR. THOMPSON: That is on the south side of the building.

CHAIRMAN LAFFERTY: Okay. And then on the -- where is the other one? I apologize.

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The existing other stair is not shown on these drawings.

MR. PARSONS: East side of the building?

MR. THOMPSON: Which is on the east end of the building. Going back to your drawing you just referenced, the third floor, you have these open stairs which are allowed, down.

CHAIRMAN LAFFERTY: Why do you say "allowed"?

MR. THOMPSON: Code it allows open stairs. We have one enclosed in a two-story building, two stories.

CHAIRMAN LAFFERTY: It's a three-story building.

MR. THOMPSON: But we're actually separated.

CHAIRMAN LAFFERTY: It doesn't change it being three stories.

MR. THOMPSON: You're allowed to have a -- let's see. Here is the enclosed going down from floor 2, referring to the second floor drawing. I believe this open stair off the third floor down to the second floor and

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into the stair goes to the outside. It has been looked at and it's been interpreted to be fully code compliant as an open stair, as an exit access stair off the third floor and onto the second floor and out. I could give a minute --

CHAIRMAN LAFFERTY: Do you have a code section by any chance?

MR. THOMPSON: I refer you to section 1020 of the building code, exception number 8: In other than groups H and I occupancies, a maximum of 50 percent of egress stairways serving one adjacent floor are not required to be enclosed provided at least two means of egress are provided from both floors served by the unenclosed stairway. Any such interconnected floors shall not be open to other floors. Unenclosed exit stairways shall be remotely located as defined by section 5.2.

So that's the section that we are meeting, the stairway access stairways, the two are opposite ends of the floor, remotely located.

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CHAIRMAN LAFFERTY: You're actually proposing a book depository. I don't know what that means in the code at all.

MR. THOMPSON: A book depository?

CHAIRMAN LAFFERTY: That's what you're doing, stacking up all these books. Does Cornell have any other precedent for that kind of operation vertically? Go ahead.

MR. BAHAR: The E.B. White Library on campus is a similar stacked design, multi-storied stacked books, similar. It's bottom supported instead of being top suspended like this library is being proposed but the E.B. White Library is a similar library.

CHAIRMAN LAFFERTY: Okay.

MR. THOMPSON: I might add, if you have concerns with this openness and the second and third floor being opened with these mezzanines and everything, keep in mind our egress travel distances are well under the code requirements, a 9,000 square foot opening, and from a fire protection engineering point of view, where we have

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2 these two-story openings, two levels of --  
3 two stories, I would much rather personally  
4 be in something like that and know exactly  
5 what's going on on those two floors should  
6 there be a fire than being inside of a  
7 one-story building with a double-loaded  
8 corridor, not knowing what's happening down  
9 at the end of the corridor that's blocked  
10 from egress, and this is big opening.

11 CHAIRMAN LAFFERTY: We're not talking  
12 about that issue whatsoever. Do you have  
13 anything else to offer?

14 MR. THOMPSON: No. Do have anymore  
15 questions?

16 CHAIRMAN LAFFERTY: Any comment? I  
17 think there's one coming up.

18 MR. PARSONS: Tom Parsons, Fire Chief  
19 City of Ithaca.

20 CHAIRMAN LAFFERTY: We got that.

21 MR. PARSONS: You got that, thanks.  
22 With respect to the variance in respect to  
23 treating Rand Hall as a separate building  
24 from Milstein, on behalf of the fire  
25 department, I am in support of the variance



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and the mitigations as proposed. With regard to the question about whether the extra floor is a mezzanine or a floor, I don't think that speaking for my colleague, the building commissioner, we've actually had a chance to make that determination. If we determine it as a fourth floor, the applicant certainly has an opportunity to appeal our determination. At this time we don't have enough information to make that determination. Thanks.

CHAIRMAN LAFFERTY: Any comment?

MR. NIECHWIADOWICZ: As Tom stated, I have not seen that drawing and I would like to thank Chairman Lafferty for asking a lot of the same questions I did regarding the mezzanine levels. I am not convinced at this point that they are mezzanine levels and not a story. But we will deal with that and make sure it's code compliant.

As far as Rand being a separate building based on a fire barrier, the building division supports the variance.

CHAIRMAN LAFFERTY: Anybody else want to

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make a comment?

(No response.)

CHAIRMAN LAFFERTY: We'll adjourn this and call you back. You can leave your things here. We'll call you back when we have a decision.

(A recess was then taken.)

CHAIRMAN LAFFERTY: I'll reopen the hearing in the matter of petition 2015-0432, Petitioner Cornell University, Rand Hall. Do I have a motion, Mr. Almy?

MR. ALMY: Yes. With respect to the petition of Cornell University Facilities Department, Ithaca, New York, petition number 2015-0432, the petition pertains to the renovation to the existing Rand Hall Fine Arts Library, type 2B, three-story academic building, A3 first and second story occupancy, F1 basement occupancy, constructing a fire barrier to separate Milstein Hall, a two-story 2B academic building, thus creating two legal structures.

The subject building is located at 947 University Ave, City of Ithaca, in

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Tompkins County. The Petitioner requests relief from 19 NYCRR part 1227, the existing Building Code of New York State as follows: EB912.5.1, height and area for change to higher hazard category. When a change of occupancy classification is made to a higher hazard category as shown in table 912.5, heights and areas of buildings and structures shall comply with the requirements of Chapter 5 of the Building Code of New York State for the new occupancy classification.

Exception, in other than groups H, Fl, I and S1, in lieu of fire walls, use of fire barriers having a fire resistance rating of not less than that specified in table 705.4 of the Building Code of New York State, constructed in accordance with section 706 of the Building Code of New York State shall be permitted to meet area limitations required for the new occupancy in buildings protected throughout with an automatic sprinkler system in accordance with section 903.3.1.1 of the Fire Code of New York State.

The board makes the following findings:

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The building that is the subject of this petition is properly classified under 19 NYCRR part 1219 Building Code section 303, proposed use of F1 occupancy at first floor and second and third floor B occupancy, properly classified per section 602 as a type 2B three-story building.

The petition pertains to renovations to the existing Rand Hall Fine Arts Library, type 2B, three-story academic building, A3 second and third-story occupancy, F1 first floor occupancy, consisting -- constructing a three-hour fire barrier to separate Milstein Hall, a two-story 2B type academic building using the existing masonry end wall of Rand Hall, thus creating two legal structures. The Building Code section table 705.4 allows that an A occupancy shall be separated from an F1 occupancy with a three-hour fire separation.

Exception allows for fire barrier in lieu of fire walls from exception for F1 occupancy.

The Petitioner proposes to follow the

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following mitigation measures: Maintain two-hour fire barrier between Rand Hall and Milstein Hall, provide non-required one-hour horizontal fire barrier to separate first floor from second floor, provide increased fire sprinkler flow densities and quick response sprinklers, provide secondary water supply as presented in the documentation, provide additional fire detection exceeding the code requirements.

In accordance with the above findings, the board finds that in the case before it, strict compliance with the provisions of the Uniform Fire Prevention and Building Code would entail practical difficulties or unnecessary hardship and would not achieve the code's intended objectives; therefore, I move that the above petition be granted with the following conditions: That the two-hour fire barrier is maintained between Rand Hall and Milstein Hall; that a non-required one-hour horizontal fire barrier is to be provided to separate the first floor from the second floor; that a sprinkler system to be

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provided with increased fire sprinkler flows, densities and quick response sprinklers; that a secondary water supply be made available and provide additional fire protection -- detection exceeding code requirements and that there are fire shutters installed and/or fire glass rated windows installed in Rand Hall.

CHAIRMAN LAFFERTY: At the roof, right?

MR. ALMY: At the roof. This variance will not substantially adversely affect provisions for health, safety, and security. The building shall comply in all other aspects with applicable requirements of the New York State Uniform Fire Prevention and Building Code.

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. I so move.

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CHAIRMAN LAFFERTY: Do I have a second?

MR. HRAB: Second.

CHAIRMAN LAFFERTY: Seconded by  
Mr. Hrab. Mr. Hrab?

MR. HRAB: Aye.

CHAIRMAN LAFFERTY: Mr. Almy?

MR. ALMY: Aye.

CHAIRMAN LAFFERTY: Mr. Lafferty, aye.  
Three ayes, no nays. Petition granted.

MR. THOMPSON: Thank you.

MS. EGAN: Thank you.

\* \* \*