

Trinity Repertory Theater

Historic Landmark Building

Trinity Square Repertory Theatre / Majestic Theatre

Constructed in 1916.

Address: 201 Washington Street, Providence

Request:

Provide new addition to existing historic building renovation project without a fire wall to improve building access.

Applicable Codes

- Rhode Island Rehabilitation Building and Fire Code for Existing Buildings and Structures (Rehab Code, SRC-1).
- The Rhode Island State Building Code (RISBC, SBC-1), which adopts and amends the International Building Code – 2018 Edition.
- The Rhode Island Fire Safety Code (RIFSC), which includes:
 - The Rhode Island Fire Code (RIFC), which adopts and amends the National Fire Protection Association (NFPA 1 – 2018) Fire Code (FC); and
 - The Rhode Island Life Safety Code (RILSC), which adopts and amends the National Fire Protection Association (NFPA 101 – 2018) Life Safety Code (LSC)

Existing Building:

- Footprint – 15,000 sq. ft.
- Gross Area – 62,000 sq. ft.

Original			
	0 Basement	15,025	sf
	1 Dowling Lobby	15,025	sf
	2 Trap Room	15,025	sf
	3 Chace Theatre	15,025	sf
	4 Chace Balcony	15,025	sf
	5 Studios	2,803	sf
		62,903	sf

- 5 stories in height with basement
 - Mezzanine Levels provided
 - Non-standard floor levels resulting from original construction as Majestic Theatre as a theater with tiered seating levels.
- Type of Construction
 - Noncombustible exterior walls (masonry and stone).
 - Noncombustible floors and structure
 - Majority is concrete encased steel
 - Portions of existing building has exposed steel without fire protection.
 - Wood stage construction for Chace Theatre with unprotected steel jacks
 - Recent PFD inspection reports reference Type III(200) / Type 3B construction type due to wood stage for Chace Theatre.
- Major Renovation in 1973 created 2 theaters in the original auditorium.
 - Dowling Theatre – 250 occupants (1st Floor)
 - Chace Theatre – 520 occupants (3rd Floor)
- Occupancy Classification:
 - RISBC: Assembly Group A-1 and Business Group B
 - RILSC: Existing Assembly and Existing Business
- Registered Historical National Landmark Building – Nation Parks Services (NPS) and RI Historical Preservation & Heritage Commission (RIHPHC)
- Fire sprinkler system throughout the building (some areas are deficient)
- Municipally connected fire alarm system (MB #3835)

Proposed Addition to Building:

- On east side of the building
- Footprint – 2,500 sq. ft. (22-ft deep x 130-ft long)
 - The size is limited by the available land and Adrian Hall Way.
- Gross Area – 11,960 sq. ft.

Addition			
	1 Dowling Lobby	1,960	sf
	2 Trap Room	2,500	sf
	3 Chace Theatre	2,500	sf
	4 Passage	2,500	sf
	5 Studios	2,500	sf
		11,960	sf

- 5 stories in height with no basement
- Type of Construction
 - Noncombustible structure and exterior walls
 - Type IIA / Type II(111)
- Occupancy Classification:
 - RISBC: New Assembly Group A-3, and Business Group B
 - RILSC: New Assembly and New Business
 - Separated mixed use approach. Using the 1-hour FRR floor between Level 3 and Level 2 to limit the Assembly A-3 use to Levels 1 and 2.
- Building exterior design and massing reflects information provided by National Parks Service and RI Historic Preservation regarding the existing historic building.
- Fire sprinkler system throughout
- Fire alarm system to be extended into building.

Project Fire/Life Safety/Accessibility Improvements

- Remove the combustibile stage floor and nonrated steel columns of Chace Theatre
 - Replace with noncombustible materials provided with 1-hour fire resistance rating (FRR).
 - This changes the type of construction to Type IIB as the building will be constructed on noncombustible materials. The following areas in the building do not have fire protection on the steel (i.e., fireproofing)
 - Main Roof Trusses of Chace Theatre
 - Chace Theatre balcony beams
 - 4th Floor Dressing room floor construction above Workshop 361
- Accessibility enhancements to the main floor and all levels of the building.
- Replace existing elevator with new elevator that services all levels of the building. This provides significant enhancement for movement through the building. The existing building has many changes in elevation that are currently not accessible.
- Modifications to the exit and exit access stairs from the existing theatres to provide continuity of protection in the egress system.
- Fire sprinklers system to be extended throughout the existing building.
- Improvements to the mechanical and electrical systems

Compliance Strategy

As this is an addition to an existing structure, SRC-1 requires the addition to comply with the requirements of SBC-1 for the height and area. The height and areas of the existing building and the new addition are to comply with SBC-1, Chapter 5. Fire separation permitted by SBC-1 can be provided.

- Due to the floor levels in the existing building, a 5-level structure was required to achieve the project goal of improving accessibility and egress by aligning with the existing floor levels.
 - Need 5 stories to line up with the elevation changes in the existing structure to provide accessibility.
- The existing floor levels are not consistent. Refer to the information included on the following sheets. This outlines that the prior project renovations introduced new floor levels at non-typical floor spacing to account for the needs of the building uses, features of the existing tiered seating and fly gallery, and to maintain existing features of the building.
- Modest increase in building size.
 - Existing building occupancies and type of construction does not comply with RISBC.
 - Additional area or stories would extend this condition.
 - Limiting factor is Group A occupancy, this occupancy type is increasing to improve access to the Dowling and Chace Theatres and to serve as a new main entry.
 - Assembly Occupancy on 1st and 2nd floor of addition. This is permitted for Type IIA or IIB construction.
 - Business Occupancy on 3rd thru 5th floor of addition. This is permitted for Type IIA construction.
- The existing exterior masonry wall has a wall thickness that varies from 20-inches at the base to 16-inches at the upper levels. Based on RISBC Table 722.4.1(1) an equivalent thickness of a hollow brick of clay or shale unfilled to achieve a 2-hour fire resistance rating is 3.4 inches. This value has been conservatively selected as it is not known if the existing bricks are solid or hollow. The selected equivalent thickness using hollow tiles to achieve the 2-hour fire resistance rating is the most restrictive. It should be noted that the hollow brick wall thickness of up to 20-inches is not a direct representation of the equivalent thickness, as the void spaces in the hollow bricks would be deducted. Based on historical information, there is reasonable expectation to presume that 3.4 inches of equivalent thickness is present in the existing 16-inch thick wall, and provides a minimum 2-hour fire resistance rating.

Furthermore, where a continuous air gap or cavity is present between wythes of brick, the fire endurance is greater than the fire endurance of similar brick construction without the air gap. This is Rule 3 of Harmathy's Ten Rules of Fire Endurance Ratings (Fire Technology Vol 1, Iss 2, 1965).

- RISBC 503.1 requires a fire wall be provided to separate the addition from the existing building in order to consider it independent for height and area and type of construction.
- Due to the existing site limitations and the exterior wall construction, a new fire wall per RISBC 706 is not feasible for the project.
- NPS and RIHPHC have requested that the existing exterior wall be visible and remain unconcealed to the maximum extent possible to maintain the historic fabric of the building .
- Based on the information outlined above, the project is requesting a modification as permitted by RISBC 104.10, to permit the use of a 2-hour FRR fire barrier wall to separate the existing building from the proposed 5-story addition. The modification is in compliance with the intent of the code and does not lessen the health, accessibility, life and fire safety or structural requirements.

TRINITY REPERTORY THEATER
201 WASHINGTON ST, PROVIDENCE RI

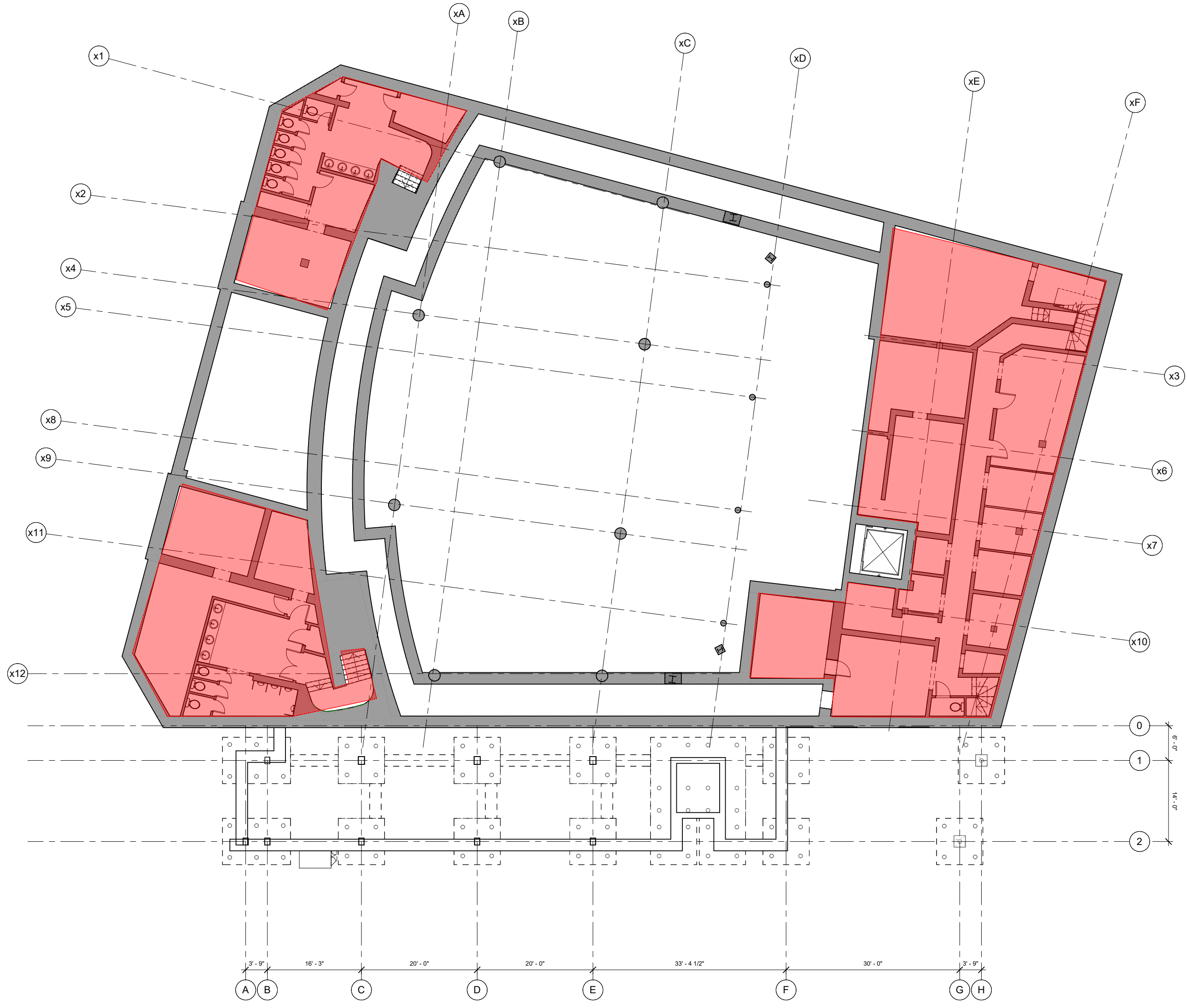
PROPOSED ADDITION AND RENOVATION

PREPARED BY: JOE WATSON, P.E.
JENSEN HUGHES

DATE: JUNE 3, 2024

LEGEND - LEVEL 1

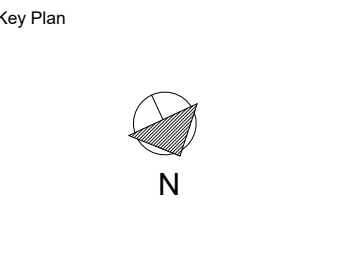
BASEMENT (EXISTING)



REVISIONS	
1	Design Development, 50% 12/22/23
2	Design Development, 95% 01/26/24
3	Design Development, 100% 02/09/24
ISSUE	

Stamp

Design Development
100% Design Development



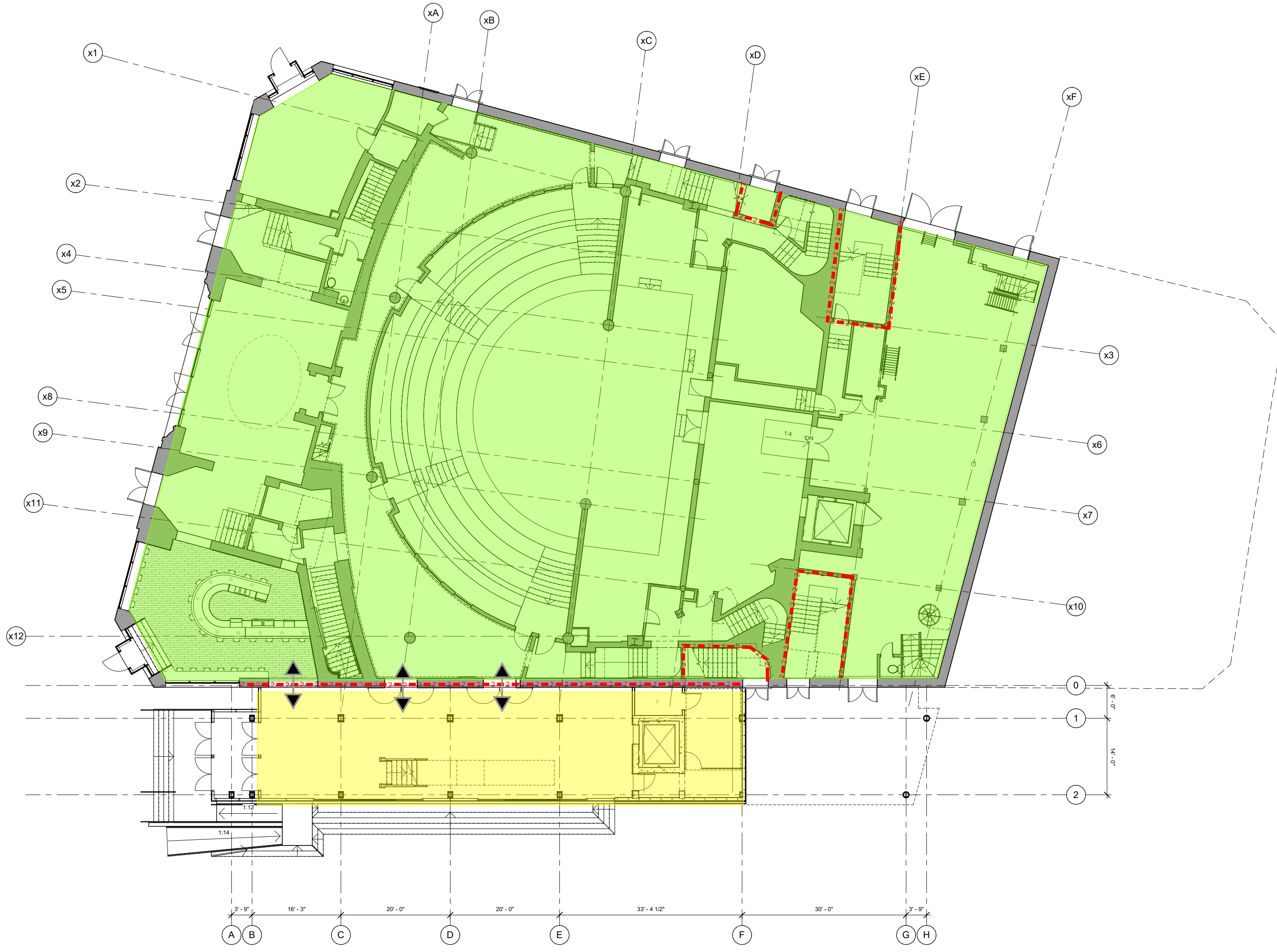
Sheet Title
**Proposed Plan
Basement**

Project ID 2212	Scale 1/8" = 1'-0"
Issue Date 02/09/24	Plot Date 02/09/24

Sheet No.
A1.00

LEGEND - LEVEL 1

- DOWLING LOBBY (EXISTING) - 15,025 SF
- DOWLING LOBBY (NEW) - 1,960 SF
- LEVEL PATHWAY FROM NEW TO EXISTING



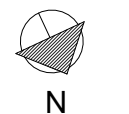
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NO.	DESCRIPTION	DATE
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2	Design Development, 95%	01/26/24
3	Design Development, 100%	02/09/24

Stamp

Design Development
100% Design Development

Key Plan



Sheet Title

**Proposed Plan
Dowling Theatre**

Project ID 2212	Scale 1/8" = 1'-0"
Issue Date 02/09/24	Plot Date 02/09/24

A1.10

LEGEND - LEVEL 1 MEZZANINE

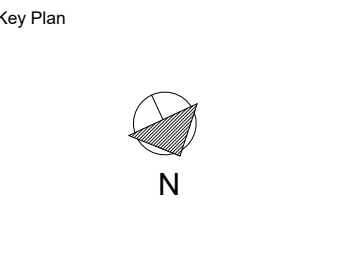
- DOWLING LOBBY (EXISTING) - PART OF LEVEL 1
- DOWLING CONTROL BOOTH (EXISTING) - PART OF LEVEL 1
- DRESS ROOMS - MEZZANINE TO LEVEL 1
- LEVEL PATHWAY FROM NEW TO EXISTING



REVISIONS	
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ISSUE	

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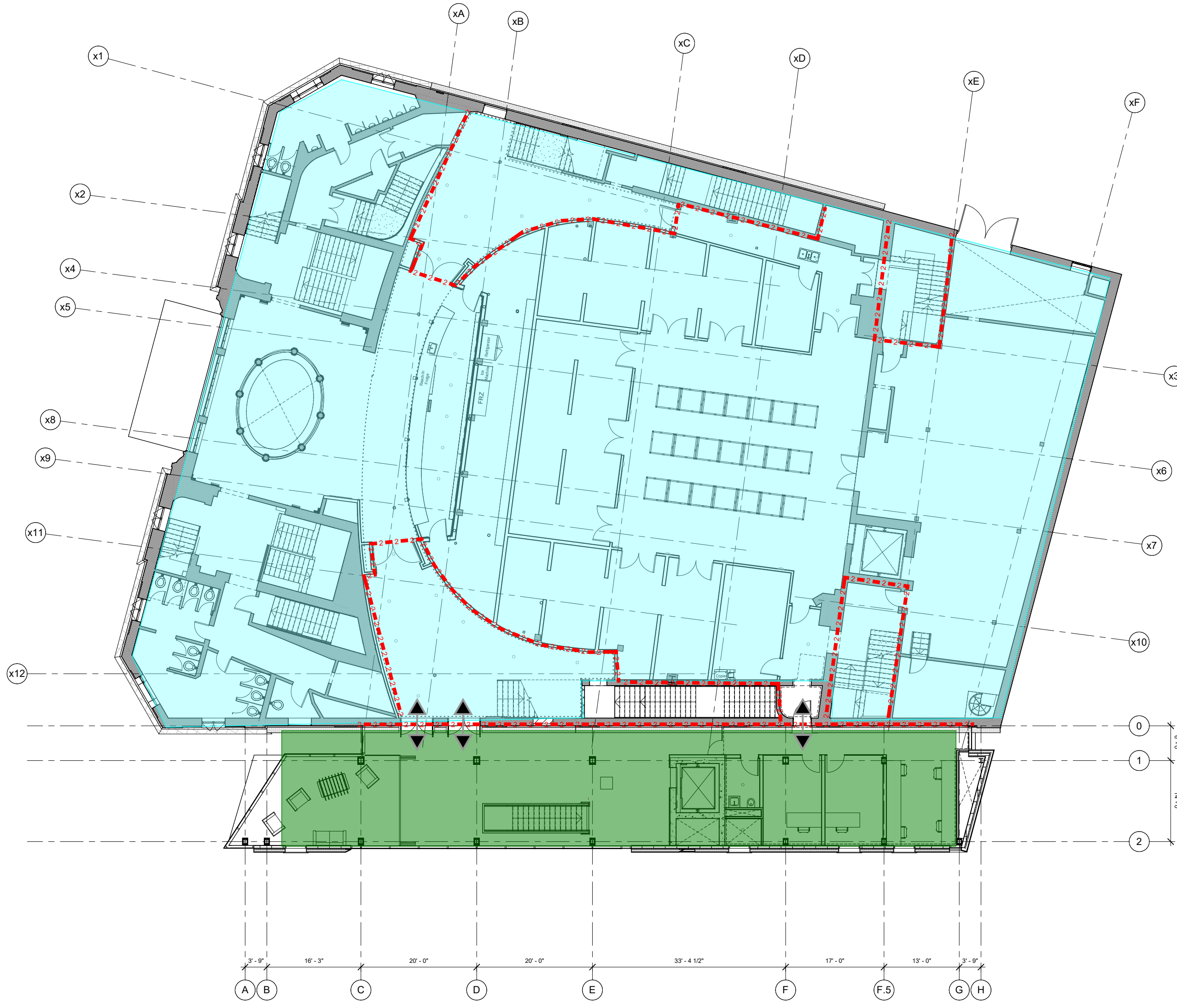
Sheet Title
**Proposed Plan
Dowling Mezzanine**

Project ID 2212	Scale 1/8" = 1'-0"
Issue Date 02/09/24	Plot Date 02/09/24

Sheet No.
A1.15

LEGEND - LEVEL 2

- TRAP ROOM (EXISTING) - 15,025 SF
- TRAP ROOM (NEW) - 2,500 SF
- LEVEL PATHWAY FROM NEW TO EXISTING



REVISIONS

1	Design Development, 50%	12/22/23
2	Design Development, 95%	01/26/24
3	Design Development, 100%	02/09/24

ISSUE

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Design Development
100% Design Development

Key Plan



Sheet Title

**Proposed Plan
Chace Traproom**

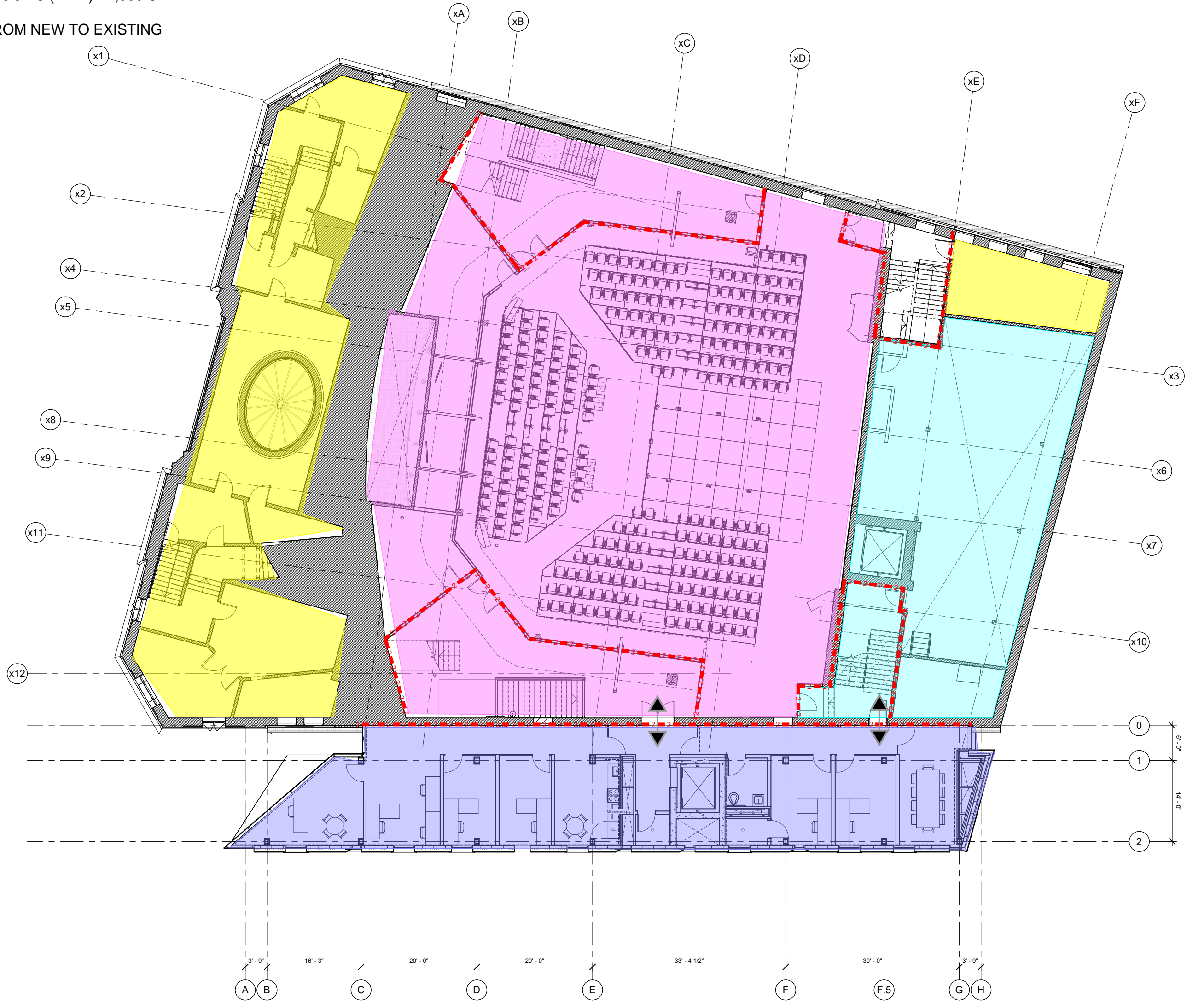
Project ID 2212	Scale 1/8" = 1'-0"
Issue Date 02/09/24	Plot Date 02/09/24

Sheet No.

A1.20

LEGEND - LEVEL 3

- CHACE THEATRE (EXISTING) -15,025 SF
- TRAP ROOM - PART OF LEVEL 2
- OFFICE SUPPORT ROOMS - MEZZANINE TO LEVEL 2
- OFFICE SUPPORT ROOMS (NEW) - 2,500 SF
- LEVEL PATHWAY FROM NEW TO EXISTING



Additions and Renovations to the Lederer Theater

Trinity Repertory Company
201 Washington Street
Providence, Rhode Island 02903

FLANSBURGH

77 NORTH WASHINGTON STREET
BOSTON, MA 02114-1910
FLANSBURGH.COM

Civil Engineer
Narragansett Engineering Inc.
3102 East Main Road
Portsmouth, RI 02871
401.683.6630

Structural Engineer
Boston Building Consultants
85 Ardsmoor Rd.
Melrose, MA 02176
617.542.3933

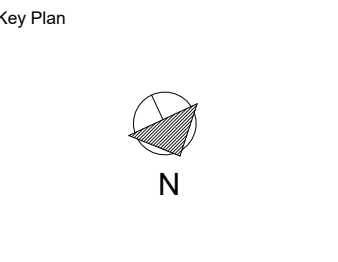
MEP, Fire Protection Engineers
Buro Happold
11 Beacon St, Suite 400
Boston, MA 02108
617.419.2284

Theater Consultant
Theater Projects
47 Water Street
South Norwalk, CT 06854
203.299.0830

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ISSUE	

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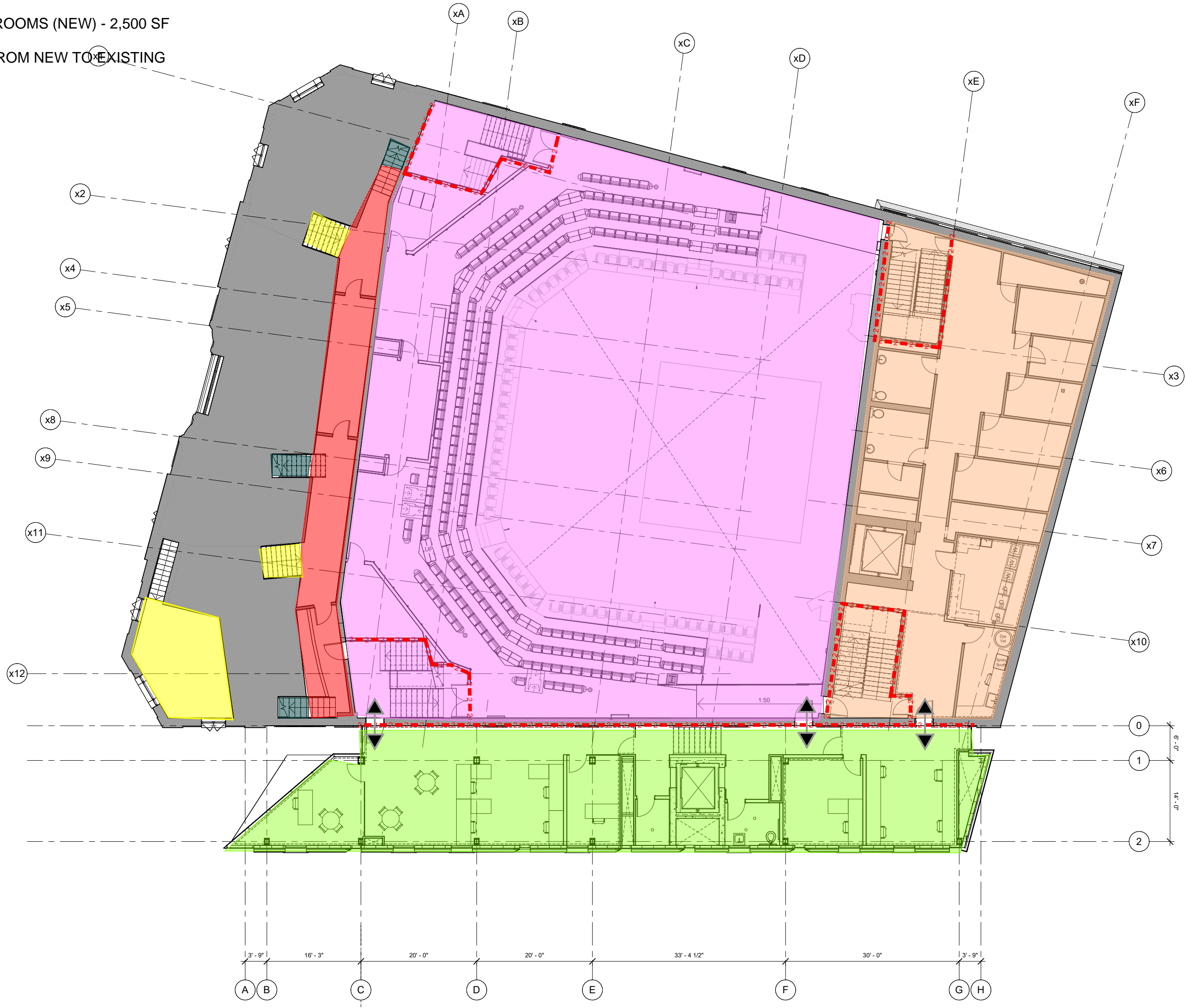
Sheet Title
**Proposed Plan
Chace Theatre**

Project ID 2212	Scale 1/8" = 1'-0"
Issue Date 02/09/24	Plot Date 02/09/24

Sheet No.
A1.30

LEGEND - LEVEL 4

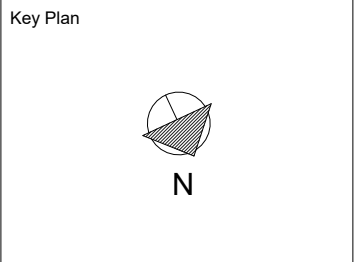
- CHACE THEATRE BLACONY (EXISTING) - PART OF LEVEL 3
- PASSAGE CORRIDOR - PART OF LEVEL 4
- OFFICE/STAIRS - PART OF LEVEL 2
- DRESSING ROOMS - 3,050 SF - PART OF LEVEL 3
- OFFICE SUPPORT ROOMS (NEW) - 2,500 SF
- LEVEL PATHWAY FROM NEW TO EXISTING



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ISSUE	

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Sheet Title
**Proposed Plan
 Chace Balcony**

Project ID 2212	Scale 1/8" = 1'-0"
Issue Date 02/09/24	Plot Date 02/09/24

Sheet No.
A1.40

LEGEND - LEVEL 5

- CHACE THEATRE THEATRICAL PRODUCTION AREA (EXISTING) - PART OF LEVEL 3
- BLACK AND WHITE STUDIOS (EXISTING)- 3,111 SF - PART OF LEVEL 4
- BLACK STUDIO CONTROL BOOTH (EXISTING)
- NELSON STUDIO (EXISTING) - 2,800 SF - PART OF LEVEL 4
- DIMMER EQUIPMENT (EXISTING)
- OFFICE SUPPORT / COSTUME SHOP (NEW) - 2,500 SF
- LEVEL PATHWAY FROM NEW TO EXISTING



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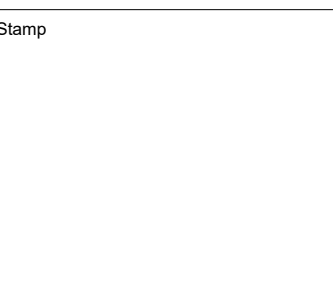
Civil Engineer
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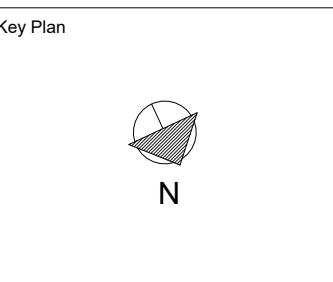
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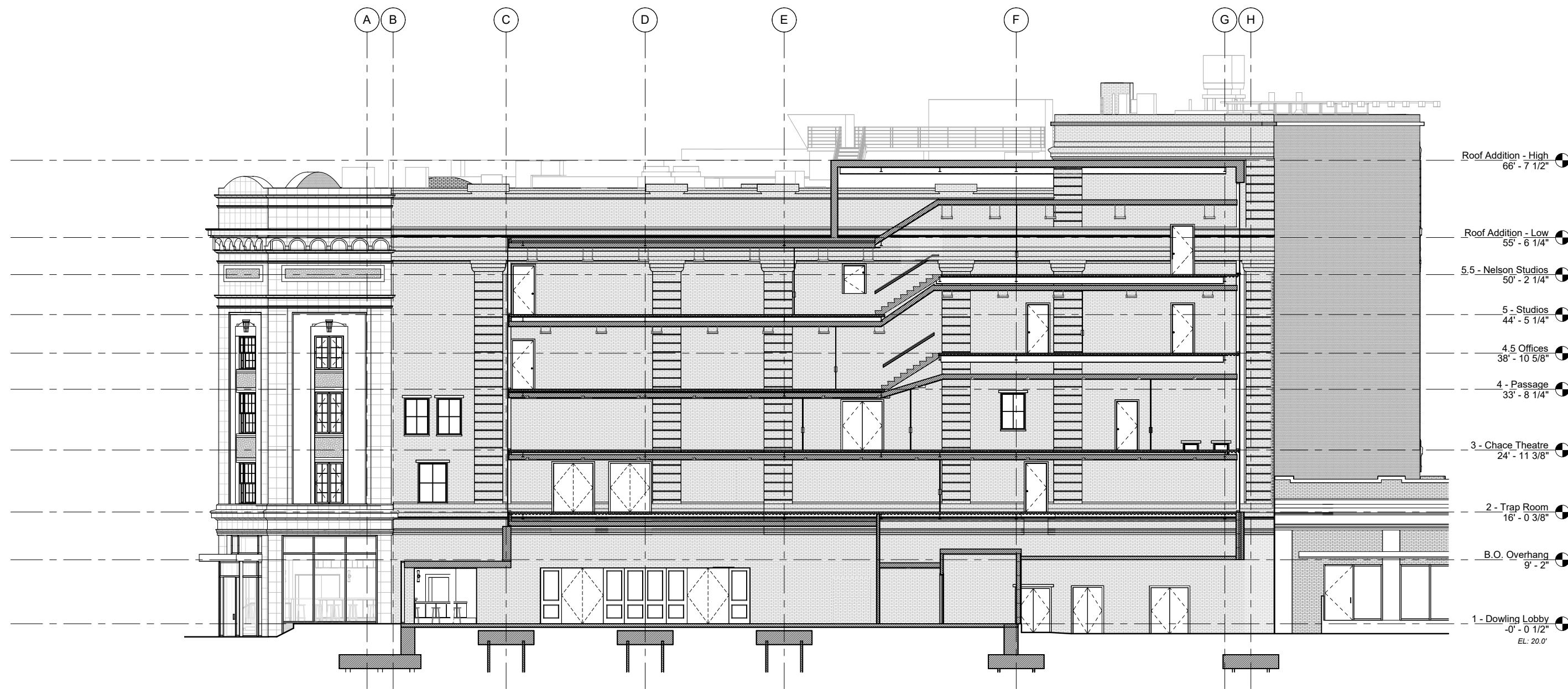
Design Development
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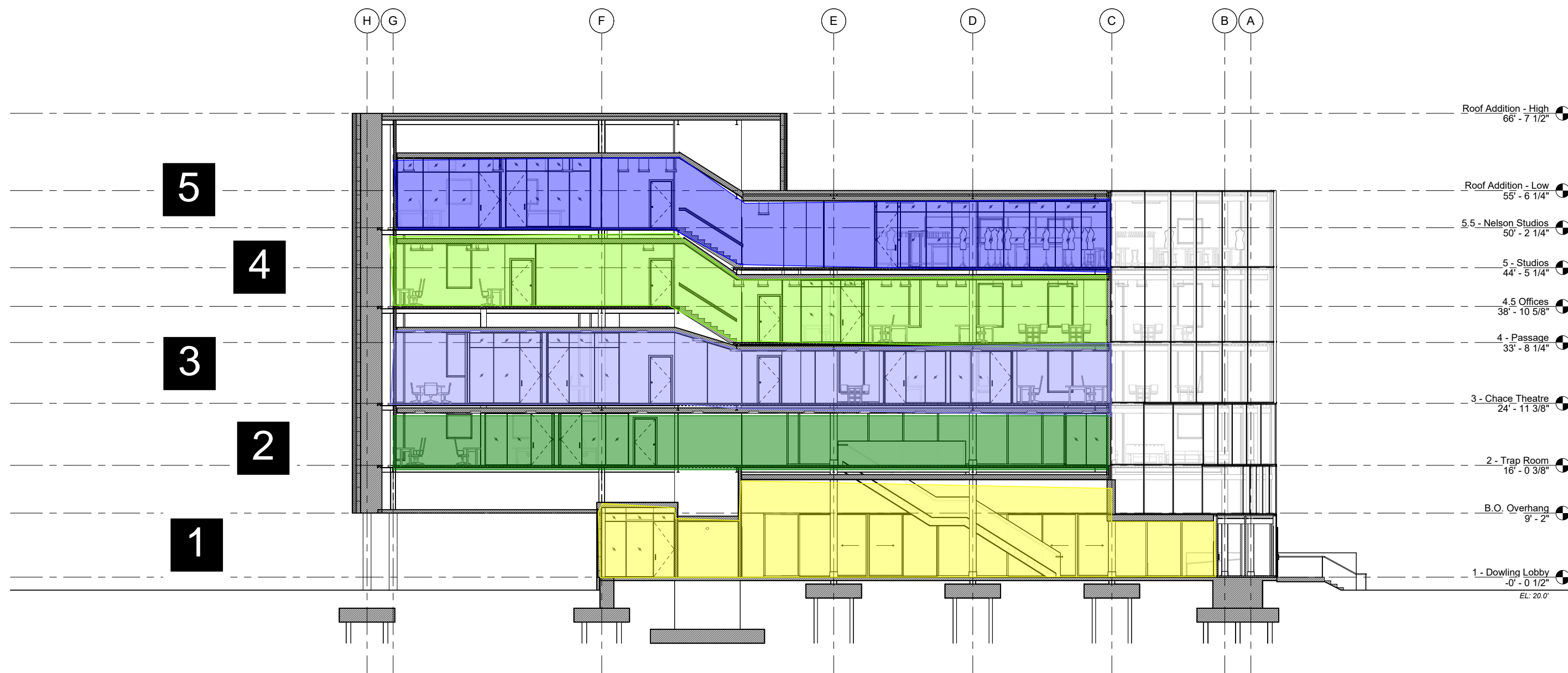
Sheet Title
Proposed Plan Studios

Project ID 2212	Scale 1/8" = 1'-0"
Issue Date 02/09/24	Plot Date 02/09/24
Sheet No.	

A1.50



1 Long 1
1/8" = 1'-0"



2 Long 2
1/8" = 1'-0"

REVISIONS	
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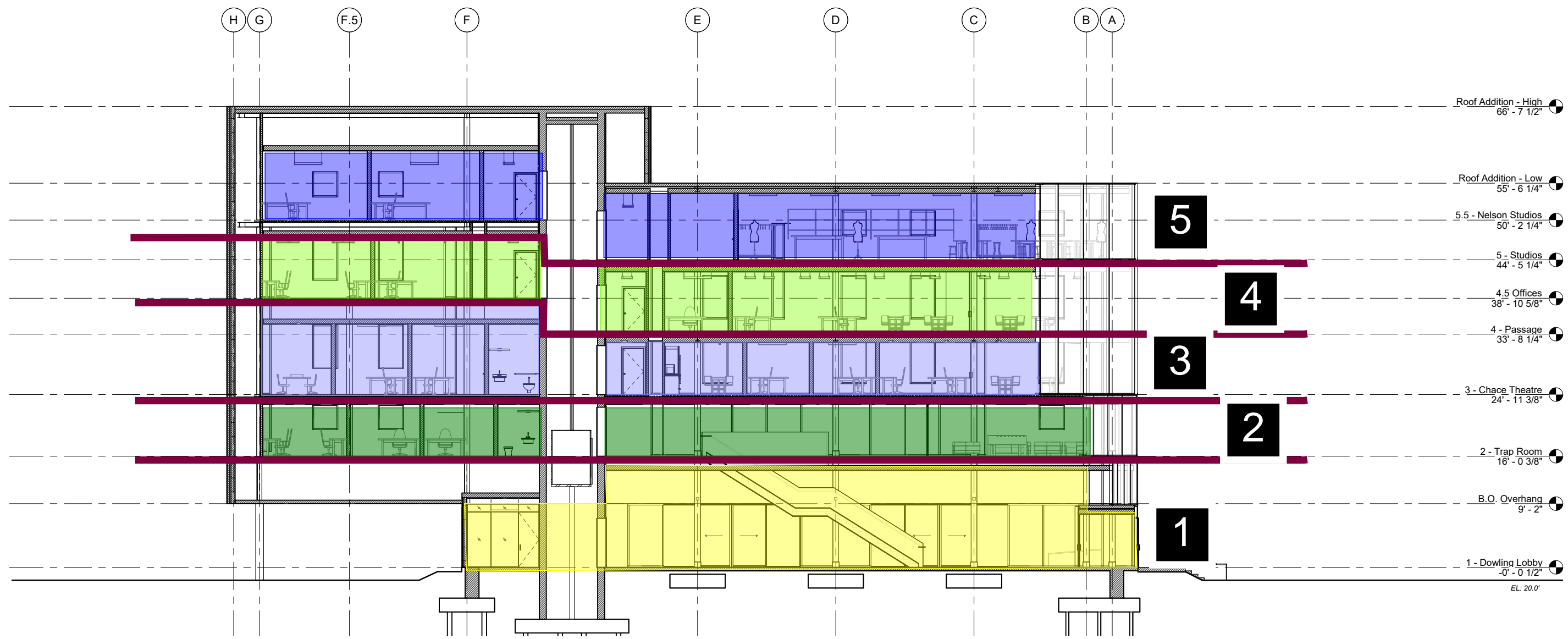
Design Development
100% Design Development

Key Plan

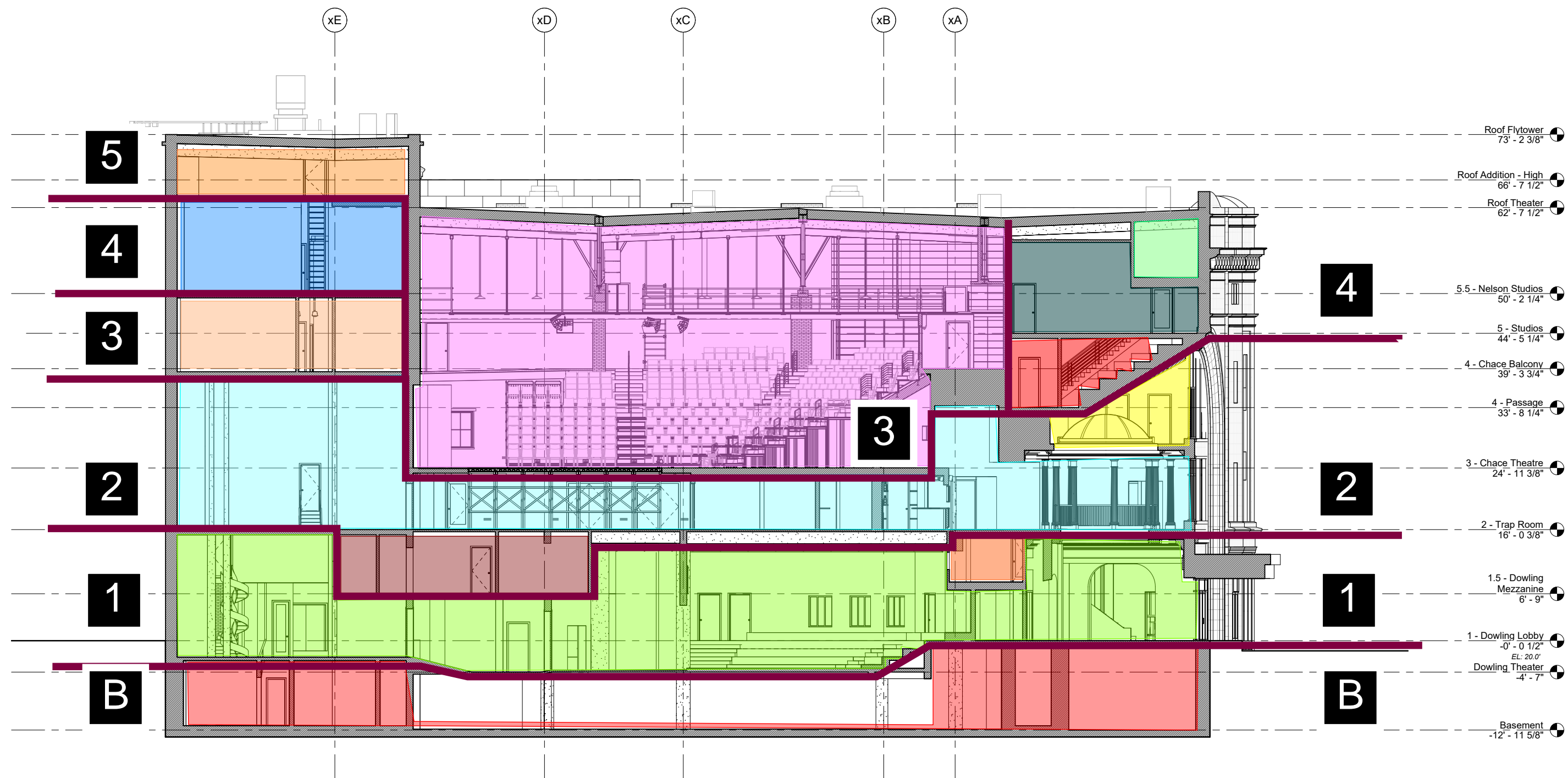
Sheet Title
Proposed Sections

Project ID 2212	Scale 1/8" = 1'-0"
Issue Date 02/09/24	Plot Date 02/09/24
Sheet No.	

A3.20



1 Addition Long Cut
1/8" = 1'-0"



2 Building Section : Longitudinal
1/8" = 1'-0"

REVISIONS		
1	Design Development, 50%	12/22/23
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ISSUE		

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Key Plan

Sheet Title
Proposed Sections

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A3.40