

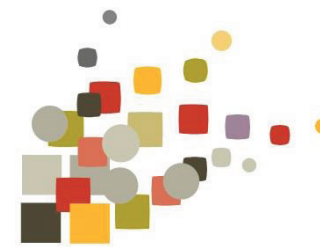
Evanston Public Library – PO # 2024-00000611

CONCEPTUAL PROGRAM AND PLANNING STUDY

October 09, 2024



evanston public library



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1. PROJECT TEAM

OWNER

Owner / Client Evanston Public Library	Evanston Public Library Yolande Wilburn, Executive Director 1703 Orrington Avenue Evanston, IL 60201 Phone 847.448.8655
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CONSULTANT DESIGN TEAM

Architect (Prime Consultant):	MOODY NOLAN 209 S. LaSalle Street, Suite 820 Chicago, IL 60604 Phone: 312.671.2576
MEP Engineering, Fire Protection Design	IMEG Engineering Associates Naperville, IL
Cost Estimating Consultant	The Concord Group Chicago, IL

2. PROJECT SUMMARY

2.1 Project Scope Description:

MOODY NOLAN was contracted by the Evanston Public Library / City of Evanston (Agreement executed on July 22, 2024) to provide professional design services that would be utilized to prepare an estimated construction cost budget for interior renovations, systems maintenance & upgrades, and ancillary construction alternates - for the main library branch located at 1703 Orrington Avenue; Evanston Illinois.

Moody Nolan met with the Evanston Public Library Director (on April 29, 2024) to tour the main library and learn the requested project scope. The Evanston Public Library (EPL) requested to develop a construction budget estimate for extensive renovations and updates to the main library facility, and that construction budget estimate will be used by the Evanston Public Library (EPL) to request funding or municipal bonds at the October 2024 Evanston City Council Meeting.

In order to determine a construction budget estimate, the services to determine those costs will require:

- Survey of the existing facility: including space utilization, overall building and infrastructure conditions.
- Assessment of the current facility program, and defining future program needs.
- Developing a conceptual program, identifying priorities, and a scenario for construction redevelopment.
- Prepare a Cost Estimate.
- Prepare a Final Report.
- Multiple meetings with Library Leadership and Key Stakeholders throughout the project duration.

We understand the existing building design is:

- Four Stories for Library space, approximately 112,000 Sq Ft total floor area.
- Basement/ below grade vehicle parking garage, Approximately 33,000 Sq. Ft area.
- The building is approximately 30 years old (opened in October, 1994).

2.2 Purpose of this Report:

The purpose of this report is to provide the Architecture Conceptual Planning for the proposed renovations, and Building Systems survey for existing systems and proposed maintenance & replacement, and Photograph documentation to represent existing interior space conditions. The contents of this “Conceptual Program and Planning Study” report were used as the basis for preparing the requested Construction Budget Estimate.

3. ARCHITECTURE

3.1 Programming and Conceptual Design Process:

The consultation process leading to this report involved multiple planning meetings between Moody Nolan and the Library Executive Director to discuss: library facility goals, needs and challenges; visioning for the library’s growth and aspirational services for the community; staffing operations and functions to deliver services; and visioning for community partners/ tenants that utilize spaces within the library building.

Meetings occurred on July 15th, July 22nd, July 29th, September 04th, and September 19th - to develop the goals, and workshops for space planning options that led to the final space program & conceptual floor plan layouts represented in this report.

Preparation of the Construction Budget Cost Estimate followed those conceptual design & planning meetings.

4. MECHANICAL, ELECTRICAL, PLUMBING, & FIRE PROTECTION

HVAC SYSTEM

1.1 Existing Ventilation

The building is served by a 100,000 CFM AHU located in the mechanical room on the fourth floor. The AHU is comprised of supply fan array, chilled water coil, sounds attenuator, filters and mixing section using masonry walls. All components are lost components that were installed on site. The two original fans were replaced a few years back with a fan array consisting of eight fans connected to VFDs. The AHU provides conditioning and ventilation air to the spaces via the main supply duct.

Terminal Air Boxes (TABs) provide zone control for each space. There is a combination of standard Variable Air Volume (VAV) and Fan Powered Boxes (FPBS) throughout the building. The TABs will modulate the amount of air delivered to each zone as well as provide reheat as required to maintain space temperature. The building has 85 VAV boxes and 20 FPB. All of the TABs are original to the 1993 building.

There are a total of 11 exhaust fans within the building. The fans serve the garage purge system, electrical rooms and toilet rooms. All of the exhaust fans are original to the 1993 building.

1.2 Existing Heating Water System

A primary secondary heating water system is used for the building. Two 4,000 MBH Fulton Endura+ high efficiency condensing boilers were installed in 2023. Each boiler has a 1/2 HP circulating pump and the system has two 30hp secondary pumps with VFDs. Heating water is routed to TABs, unit heater, cabinets heaters, radiation and snow melt heat exchangers.

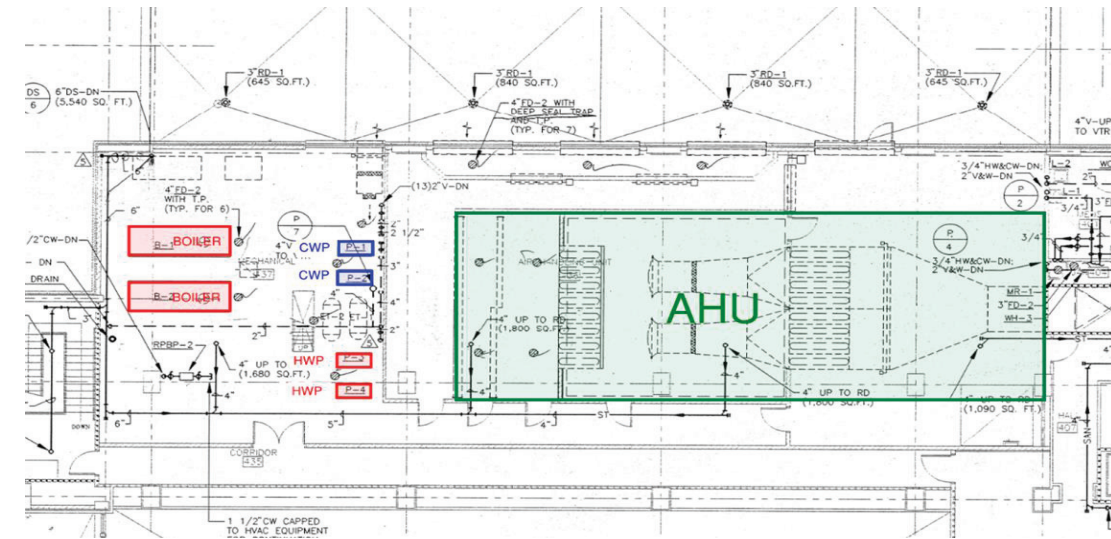
Cabinet Heaters are located within vestibules and entry ways throughout the building. Unit heaters are in storage and mechanical rooms. Radiation is in exterior zones with glass.

A snowmelt system with shell and tube exchanger and 5 hp pump is provided to serve the north and south ramps to the underground parking garage.

1.3 Existing Chilled Water System

Two 182-ton Air Cooled chillers are located on the roof and serve the chilled water coil in the AHU. Two 15hp chilled water pumps are in the mechanical room to serve the chilled water system.

HVAC



Short-Term HVAC Goals (1-5 years)

Repair/replace and unitary equipment.

Review the existing controls system to determine if any controls sequences can be modified to make the overall building more efficient. Possible controls modifications

AHU Economizer

Switch heating water and chilled water system to be variable volume.

Provide reset temperate on heating water system.

Provide reset pressure on duct static.

Review existing building schedule and building warm up.

Medium-Term Goals (5-10 years)

Modify TABs, branch ductwork, piping and diffusers as required for any renovation work. All large duct mains to remain.

Replace unitary equipment (fans/pumps/cabinet heaters, etc.) as it fails.

Long-Term Goals (10+ Years)

Replace large-scale equipment. (Chillers, Boilers, AHU Fans).

PLUMBING

2.1 Existing Domestic Water

An 8" cold water main enters the mechanical room in the northwest corner of the garage level. The 8" main splits to an 8" main to serve the fire protection system and 3" main to serve the domestic water system with a 3" reduced pressure zone backflow preventor. Domestic water is routed to plumbing fixtures throughout the building.

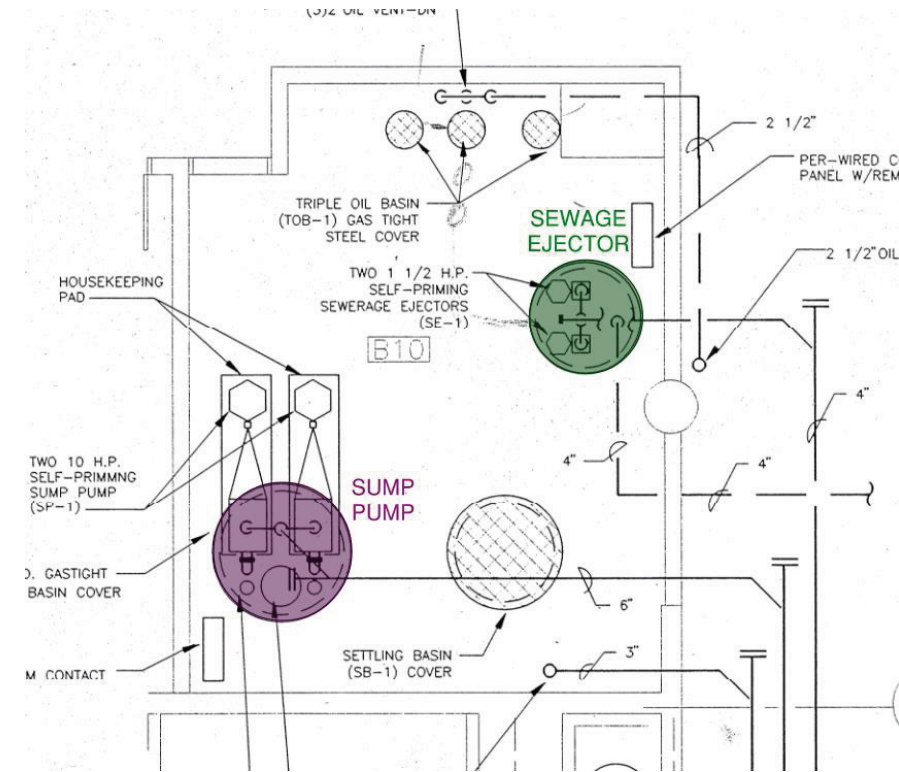
A 120gpm, 60 psi duplex booster pump connected on the cold-water system is located in the mechanical room in the northwest corner of the building.

Hot water is provided by local electric water heaters. The water heaters for each group toilet room are 30-gallon tank style heaters located in the janitor's closet. These have all been replaced within the last year. Individual sinks have small electric tank style heaters located below the sink.

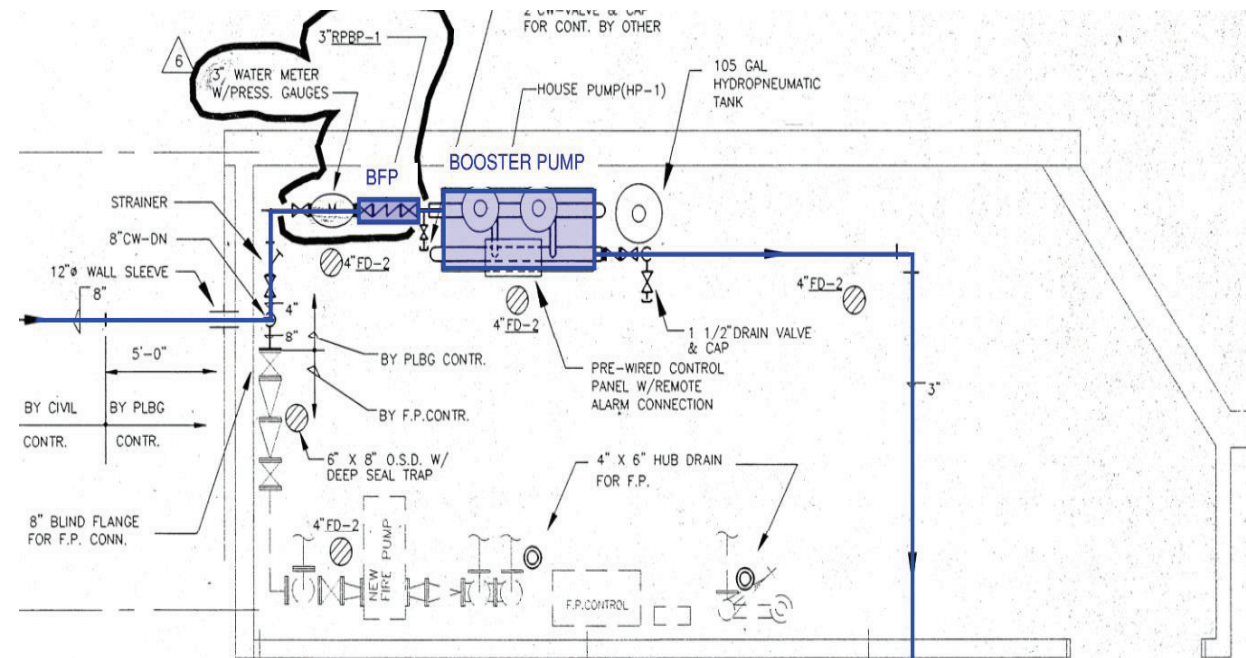
Hard-wired sensor operated plumbing fixtures are located within toilet rooms.

A 6" sanitary sewer exits the southwest corner of the building. All the drains from the garage route to an oil separator and then to duplex sewage ejector with 1-1/2 HP pumps that combines with the main exiting the building.

A 10" storm exits the southwest corner of the building. Drain tile around the exterior of the building and under the garage is routed to duplex sump pump with 10 HP pumps and combines with the storm main exiting the building.



EXISTING PLUMBING



Short-Term Goals (1-5 years)

Repair/replace and unitary equipment.

Medium-Term Goals (5-10 years)

Modify any plumbing as required for any renovation work.

Replace plumbing fixtures as they fails.

Long-Term Goals (10+ Years)

Replace large scale equipment. (Booster Pump, Sewage Ejector, Sump Pump, Water Heaters).

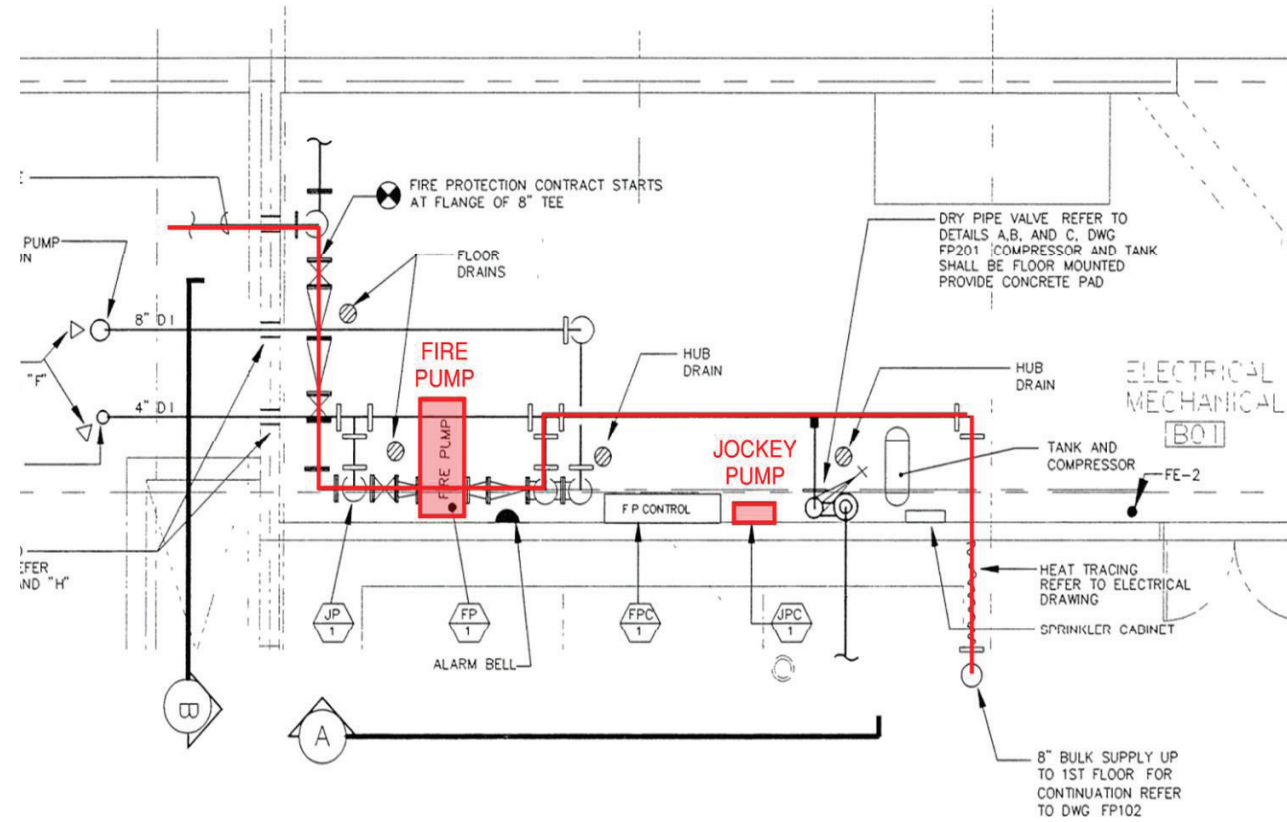
FIRE PROTECTION

3.1 Existing Fire Protection System

An 8" cold water main enters the mechanical room in the northwest corner of the garage level. The 8" main splits to an 8" main to serve the fire protection system. A 125hp fire pump and jockey pump serving the wet sprinkler system.

A dry sprinkler system serves the underground parking garage.

EXISTING FIRE PROTECTION



Short-Term HVAC Goals (1-5 years)

Repair/replace and unitary equipment.

Medium-Term Goals (5-10 years)

Modify any fire protection system as required for any renovation work.

Long-Term Goals (10+ Years)

Replace large scale equipment. (Fire pump, jockey pump, compressor).

ELECTRICAL SYSTEMS

4.1 Existing Distribution System

The building is served by an exterior pad mounted utility transformer which in turn feeds four services.

Service 1: Main service is rated at 480/277V, 3,000 Amp and it feeds the free-standing switchboard. Power is routed throughout the facility. Distribution equipment is mostly located in the electrical rooms on each floor. The step-down transformers are provided for 208/120V distribution.

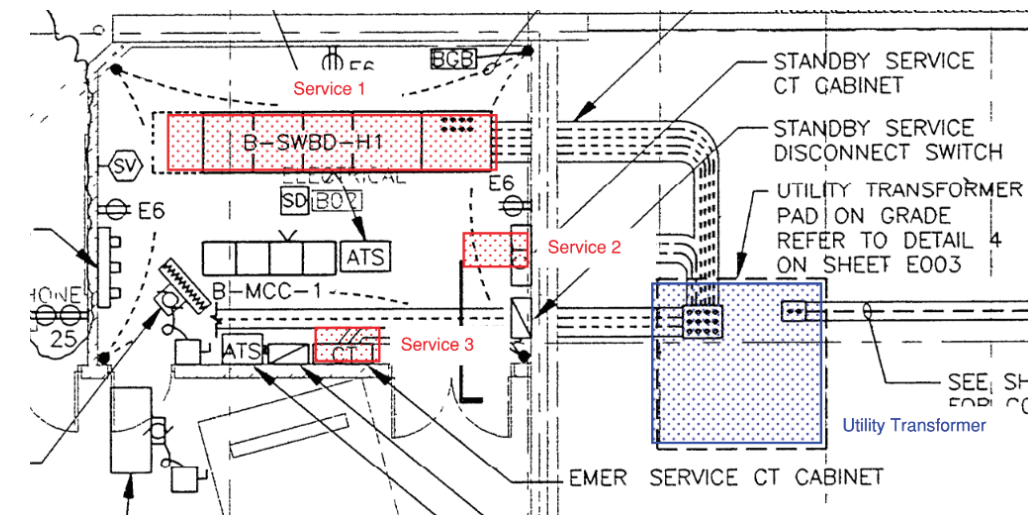
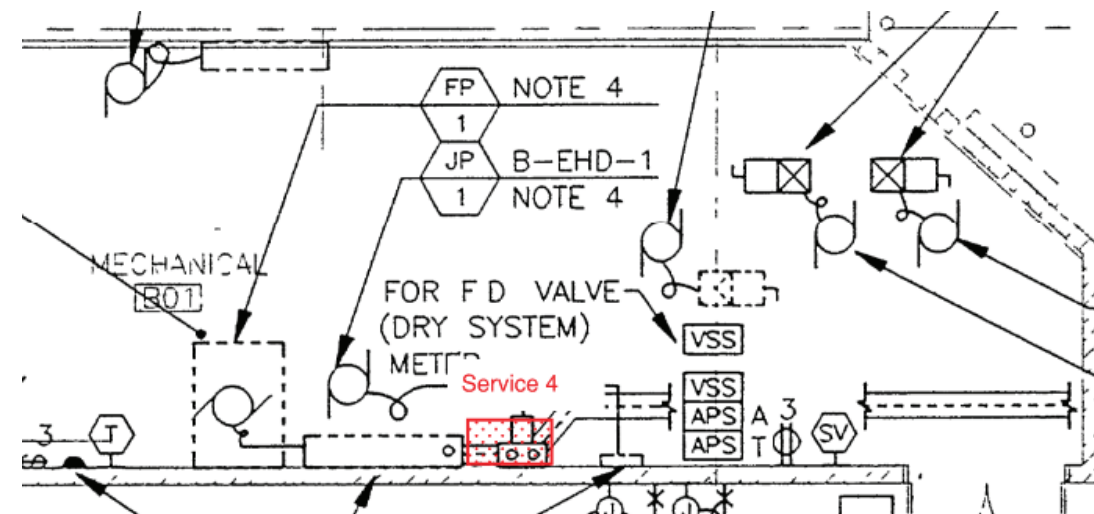
Service 2: Standby Service is rated at 480/277V, 600 Amp and it feeds the distribution panel via an ATS. This service feeds selected mechanical units including air handling units and exhaust fans.

Service 3: Emergency Service is rated 480/277V, 400 Amp and it feeds the distribution panel via an ATS. This service feeds elevators, sump and ejector pumps and selected lights and exit signs.

Service 4: This service is dedicated to the fire pump. It is rated at 480V, 200 Amps.

The facility does not have an emergency generator. The ATS's are wired so the normal side is fed from the main switchboard and an emergency side is fed from the utility transformer.

EXISTING ELECTRICAL SERVICES



Short-Term Goals (1-5 years)

Add surge protection devices to the main services and panels downstream of the step-down transformers. Total of 8 units.

Replace 3,000 Amp, 480V main service bolted pressure switch with circuit breaker.

Add an emergency generator to serve Standby and Emergency Services.

Medium-Term Goals (5-10 years)

Replace end devices (receptacles) and circuits and modify panels/distribution system as required for any renovation work.

Long-Term Goals (10+ Years)

Replace distribution equipment.

4.2 Existing Lighting System

The lighting system consists of a mix of new and existing fixtures. Some of the lights have been replaced with LED type. Other lights have been retrofitted with new LED bulbs. Exit signs are LED type. Egress lighting consists of wall mounted emergency units with battery backup. These units are original to the building.

Short-Term Goals (1-5 years)

Replace 130 emergency units.

Medium-Term Goals (5-10 years)

Replace lights, controls and circuits for any renovation work.

Long-Term Goals (10+ Years)

Replace rest of the original lights and upgrade controls to the newest IECC.

4.3 Existing Fire Alarm System

The existing main fire alarm control panel has been recently upgraded to the voice system (Simplex 4100ES). New speakers and speakers/strobes have been added throughout the facility. Initiating devices (smoke and heat detectors, pull station, duct smoke detectors) appear to be original to the building. The overall system appears in good condition.

Short-Term Fire Alarm System Goals (1-5 years)

None

Medium-Term Fire Alarm System Goals (5-10 years)

Replace any fire alarm end devices and circuits as required for any renovation work.

Long-Term Goals Fire Alarm System Goals (10+ Years)

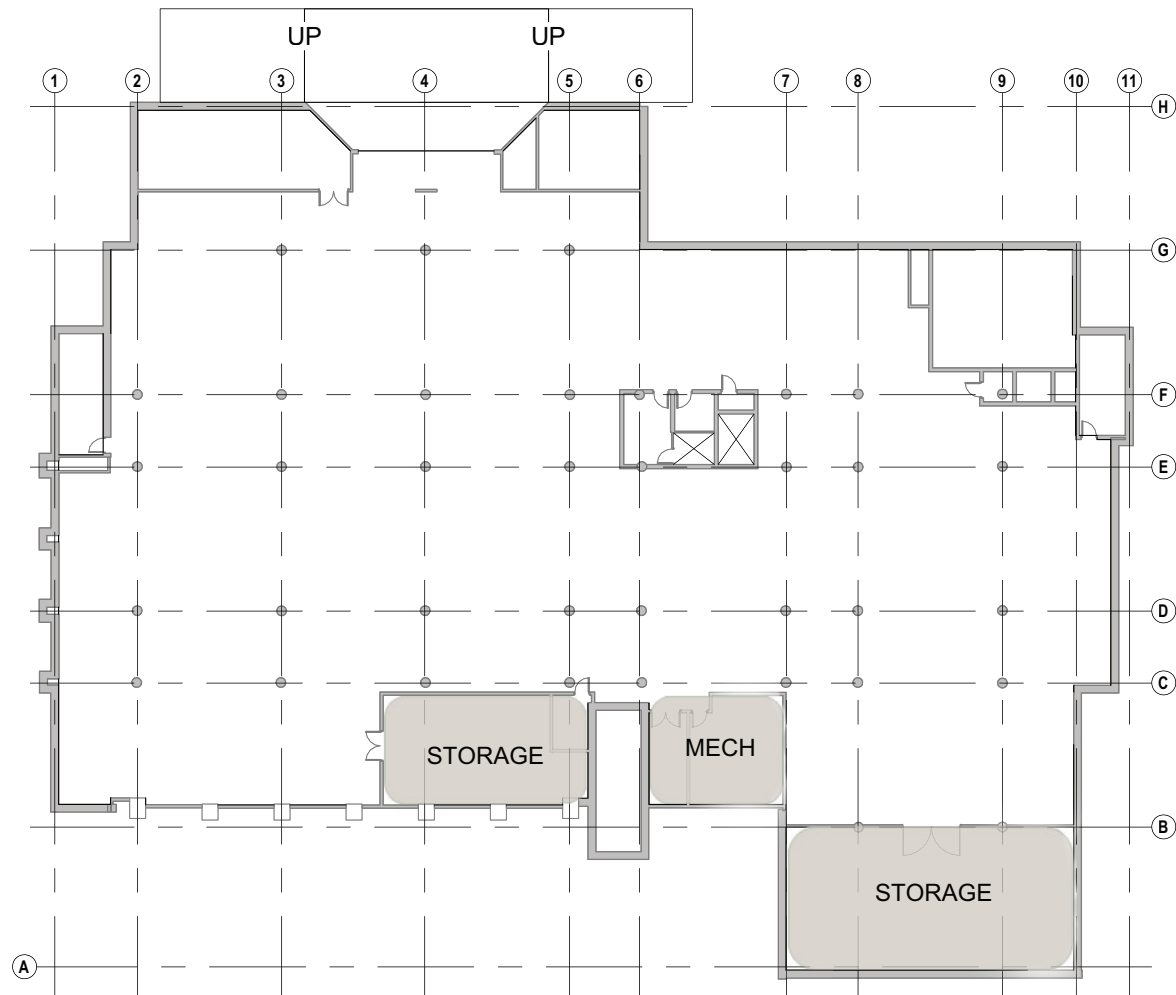
Replace initiating devices.

5. EXHIBITS

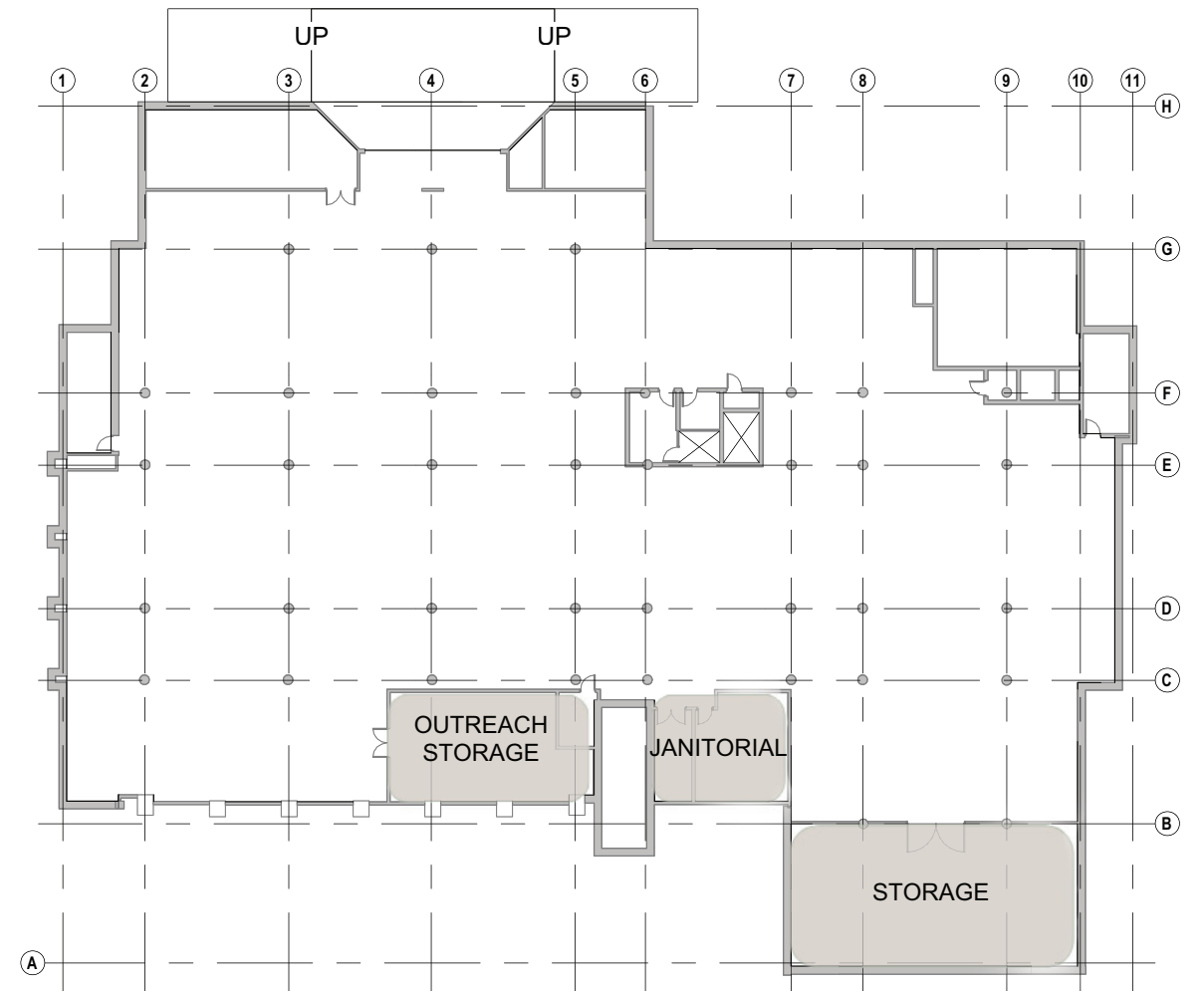
Exhibit A: Architectural Space Plans: Existing and Proposed (Key Floor Plans)

Exhibit B: Architectural Space Plans: Proposed (Overall Floor Plans)

Exhibit C: Existing Condition Photographs



LEVEL 00 - FLOOR PLAN - OVERALL
GARAGE / BASEMENT (EXISTING)

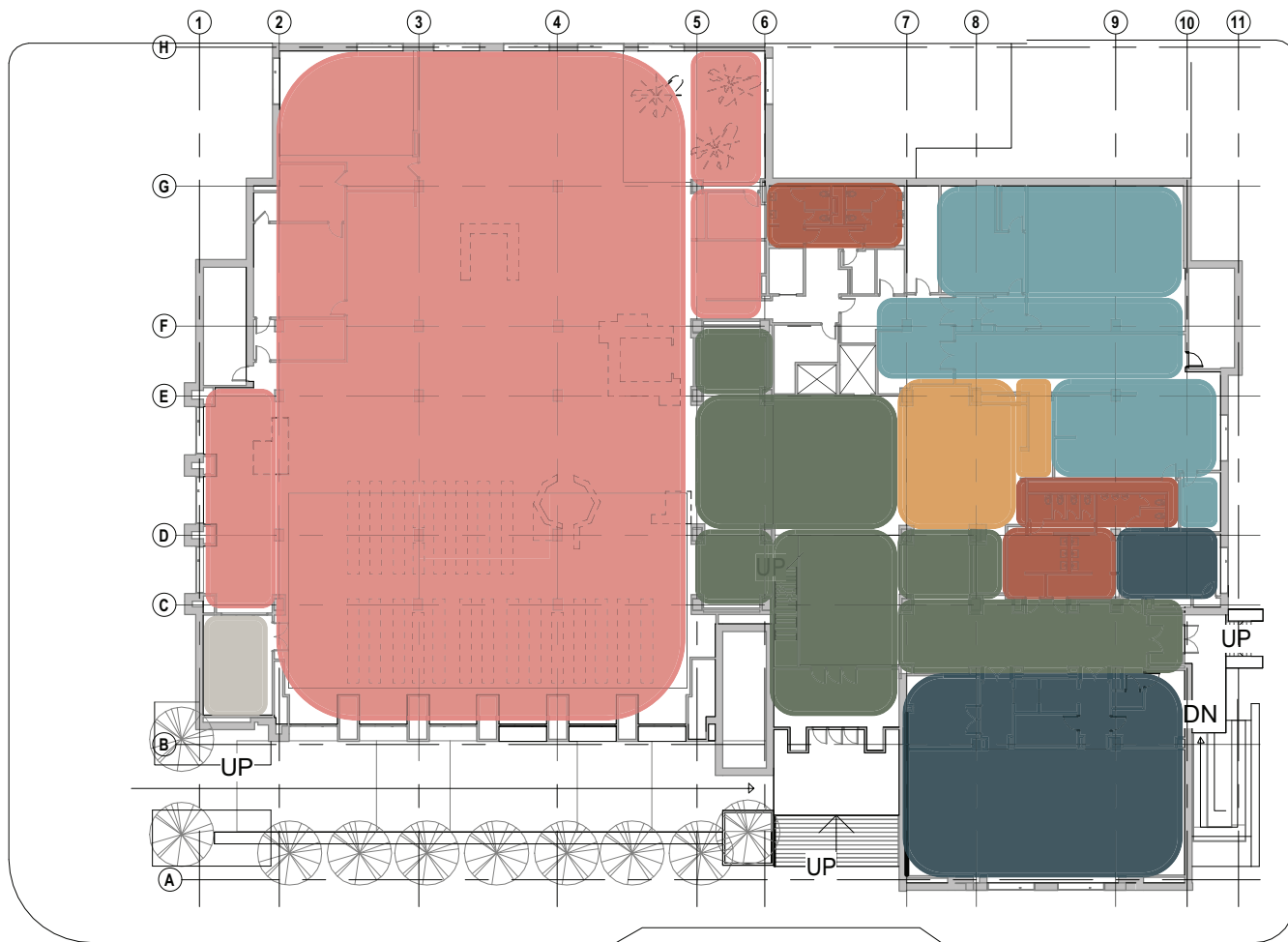


LEVEL 00 - PROPOSED FLOOR PLAN - OVERALL

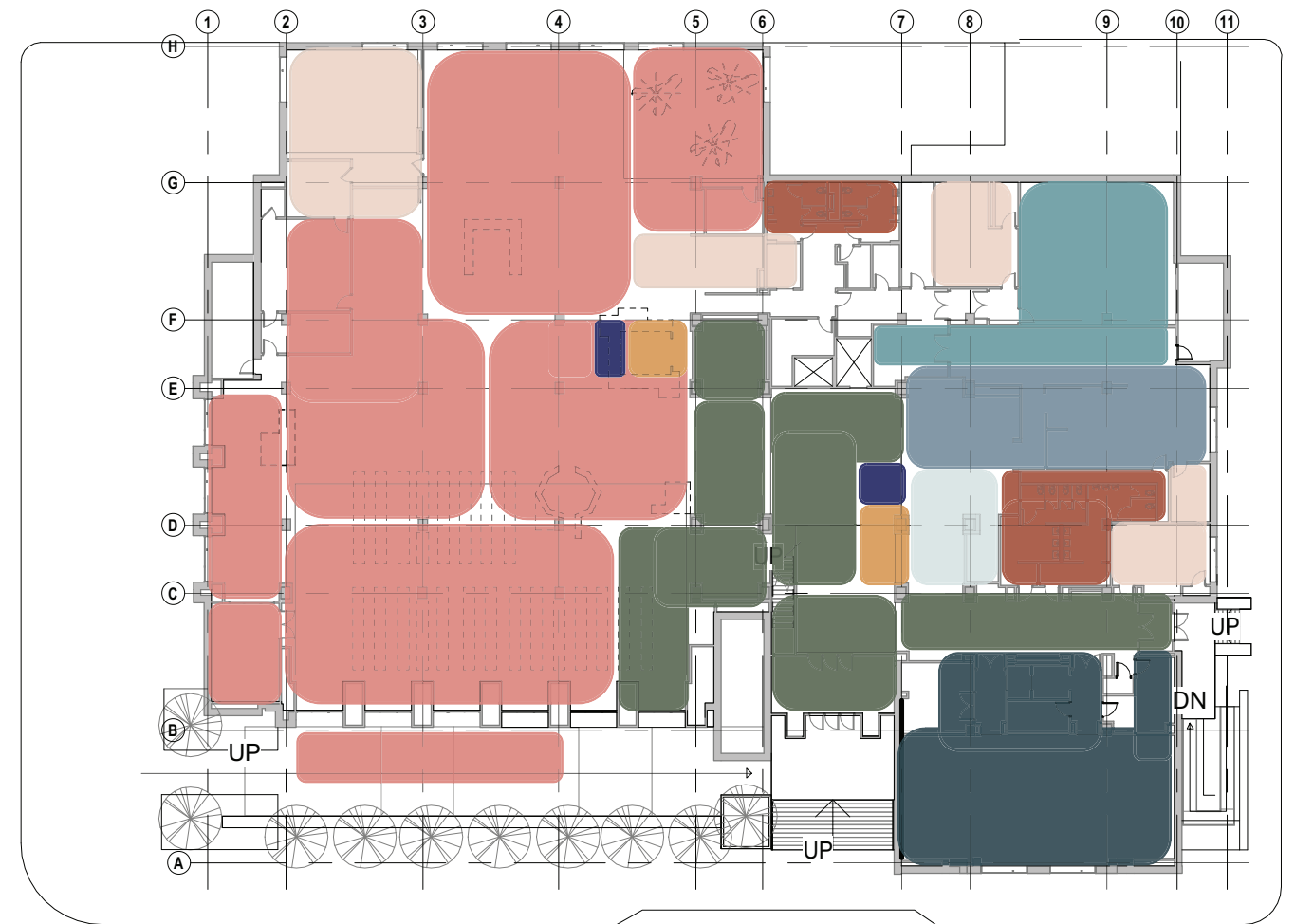
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Exhibit A:
Architectural Space Plans:
Existing and Proposed (Key Floor Plans)



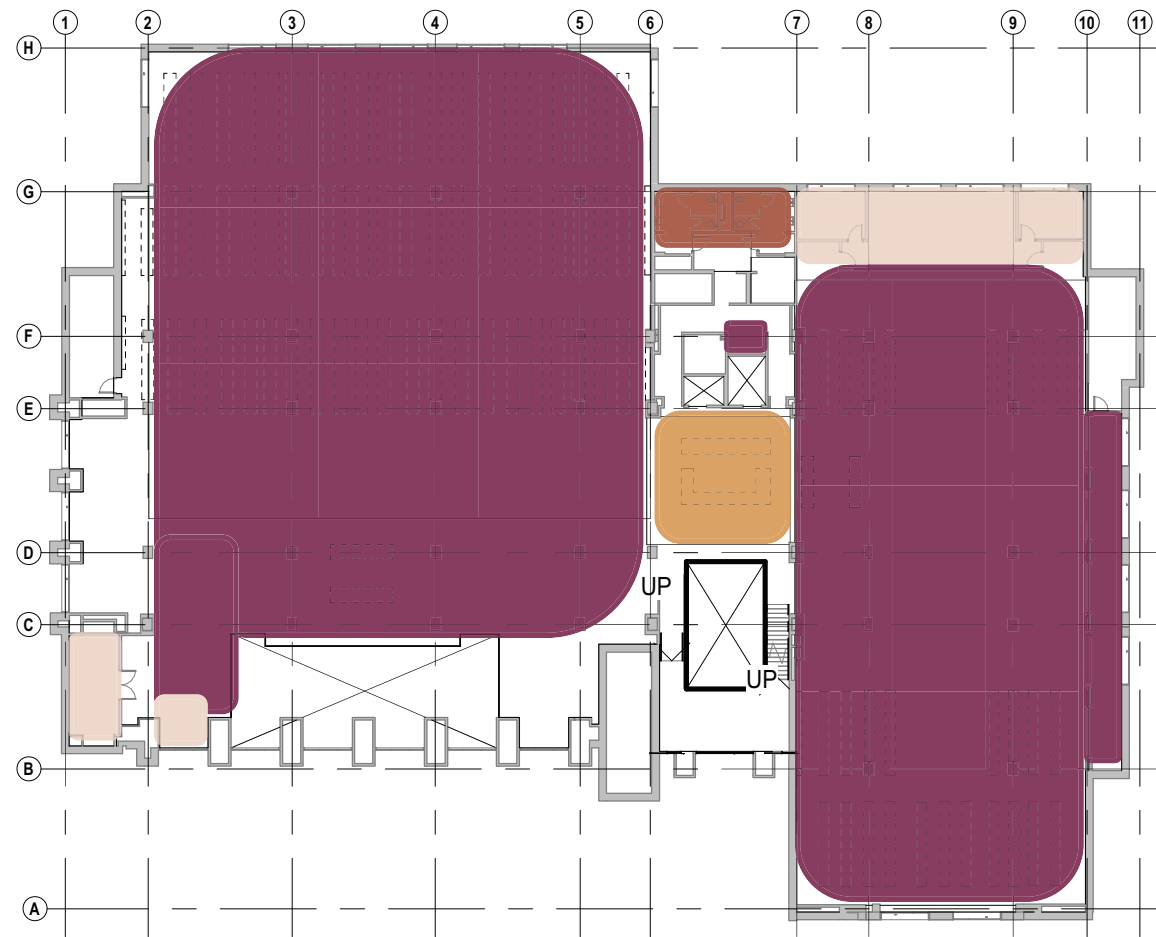
LEVEL 01 - FLOOR PLAN - OVERALL
(EXISTING)



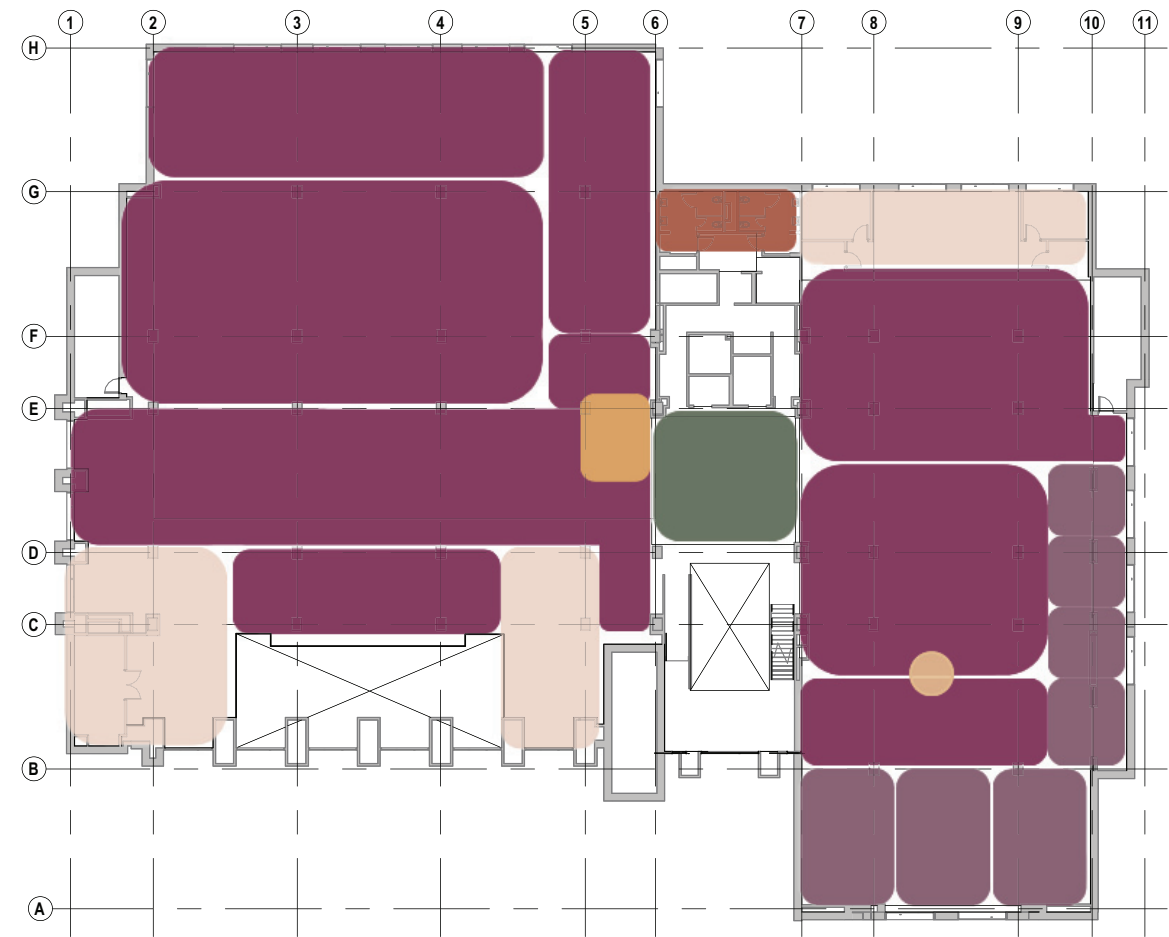
LEVEL 01 - PROPOSED FLOOR PLAN - OVERALL



- | | | | |
|--------------------------------|------------------------------|---------------------|------------------------|
| ENTRY | SERVICE POINT (SP) | LOADING & RECEIVING | STAFF WORKROOM/OFFICES |
| COMMUNITY ROOM (MULTI-PURPOSE) | THE PERCH | CHILDREN'S AREA | MANAGERS OFFICE |
| STUDY ROOMS | SELF-CHECKOUT | TEEN AREA | STAFF BREAKROOM |
| RESTROOMS (PUBLIC) | MATERIAL HANDLING AREA (MHA) | ADULT AREA | RESTROOMS (STAFF) |



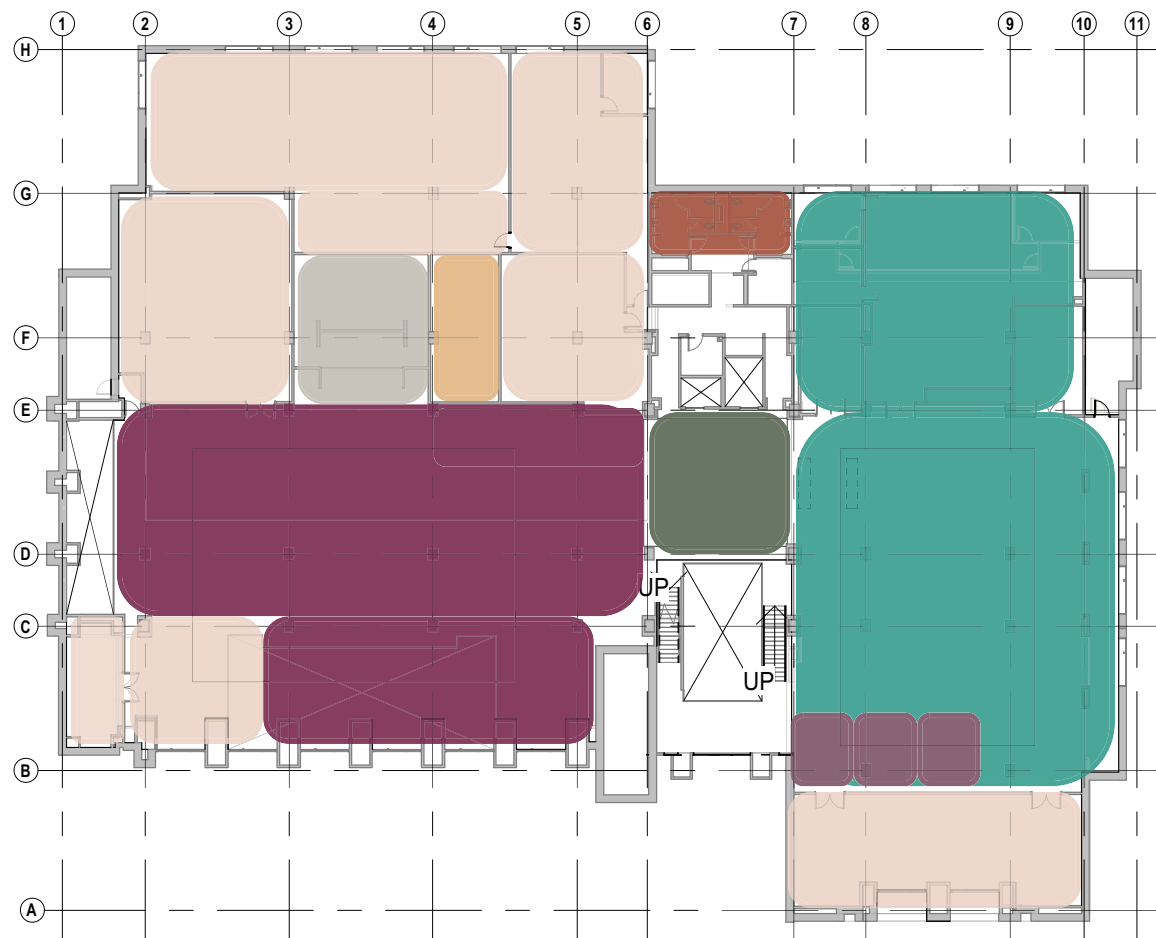
LEVEL 02 - FLOOR PLAN - OVERALL
(EXISTING)



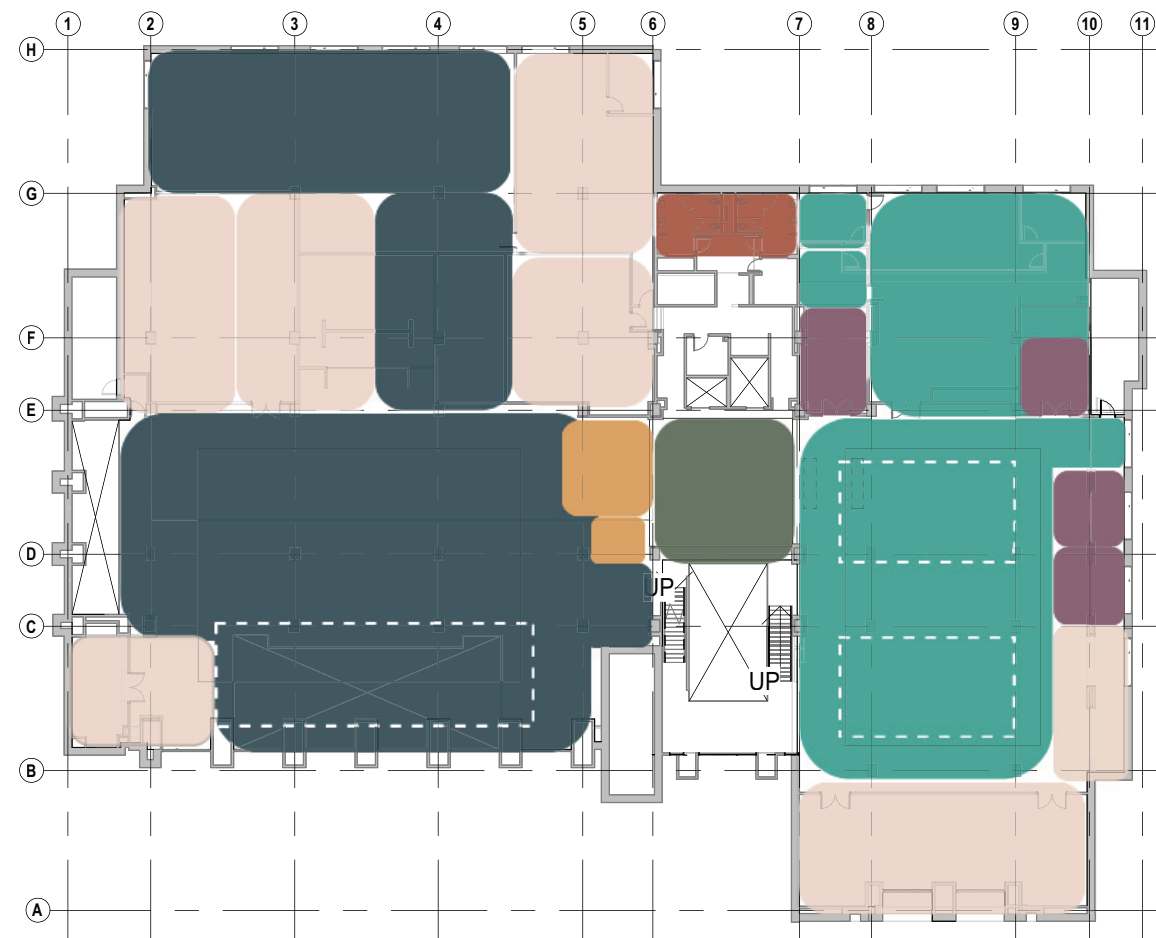
LEVEL 02 - PROPOSED FLOOR PLAN - OVERALL



- | | | | |
|--------------------------------|------------------------------|---------------------|------------------------|
| ENTRY | SERVICE POINT (S.P.) | LOADING & RECEIVING | STAFF WORKROOM/OFFICES |
| COMMUNITY ROOM (MULTI-PURPOSE) | THE PERCH | CHILDREN'S AREA | MANAGERS OFFICE |
| STUDY ROOMS | SELF-CHECKOUT | TEEN AREA | STAFF BREAKROOM |
| RESTROOMS (PUBLIC) | MATERIAL HANDLING AREA (MHA) | ADULT AREA | RESTROOMS (STAFF) |

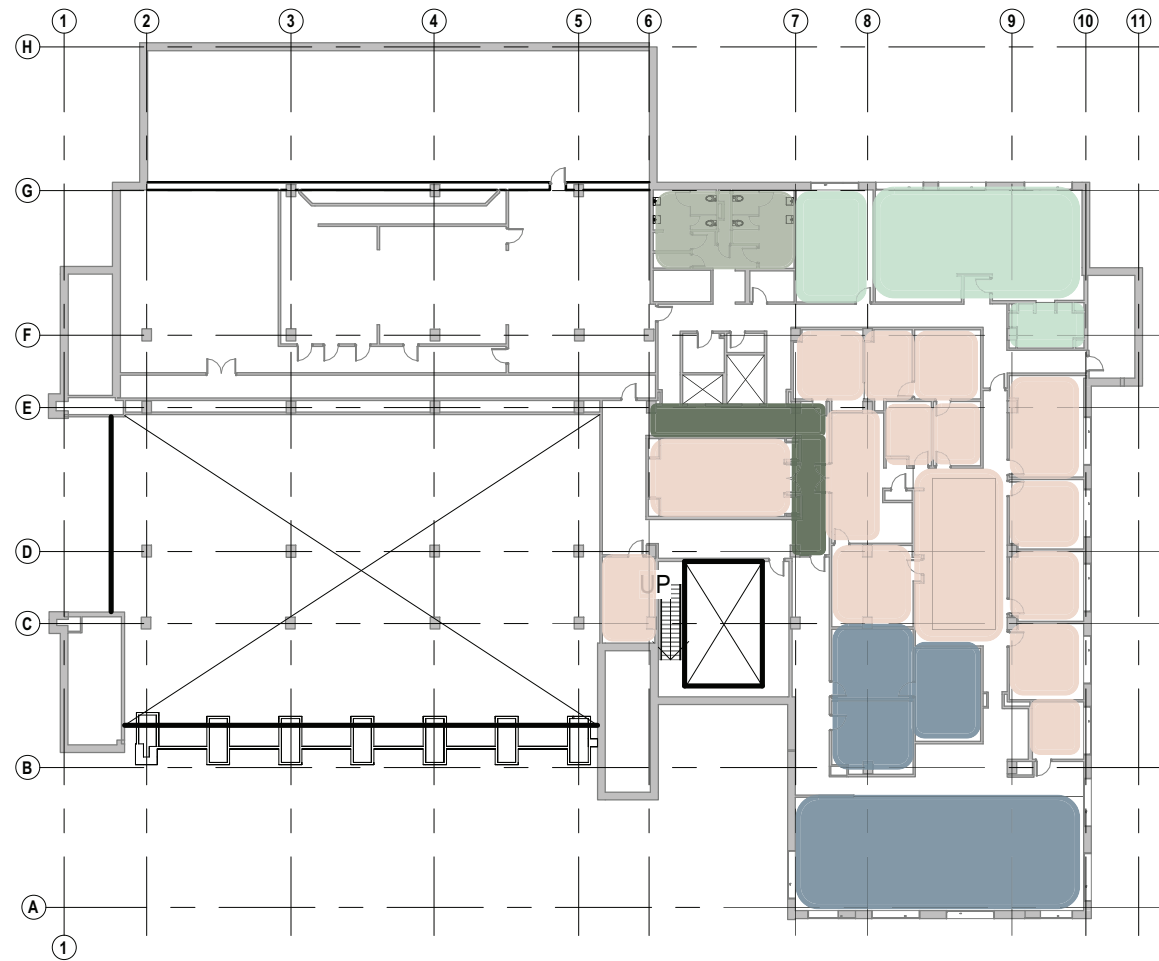


LEVEL 03 - FLOOR PLAN - OVERALL
(EXISTING)

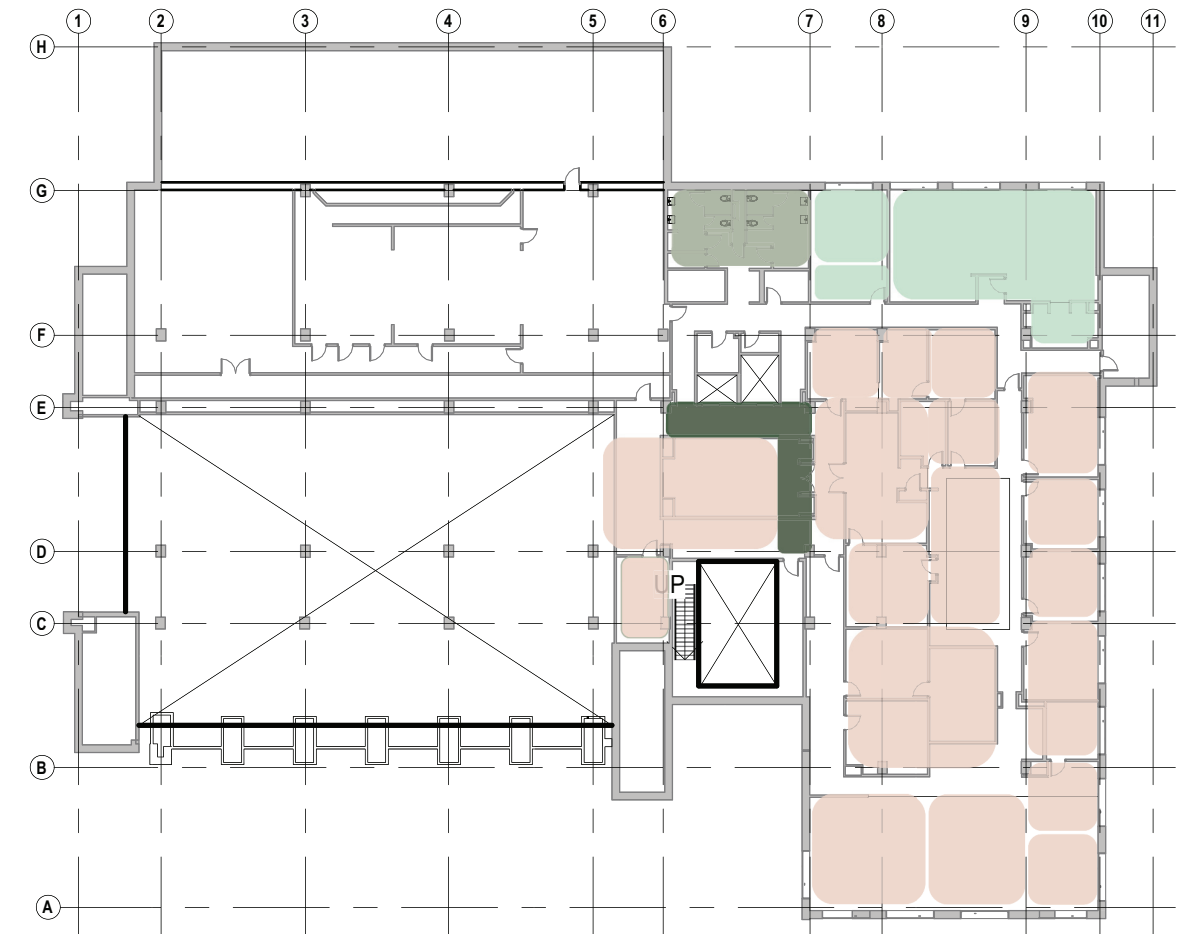


LEVEL 03 - PROPOSED FLOOR PLAN - OVERALL





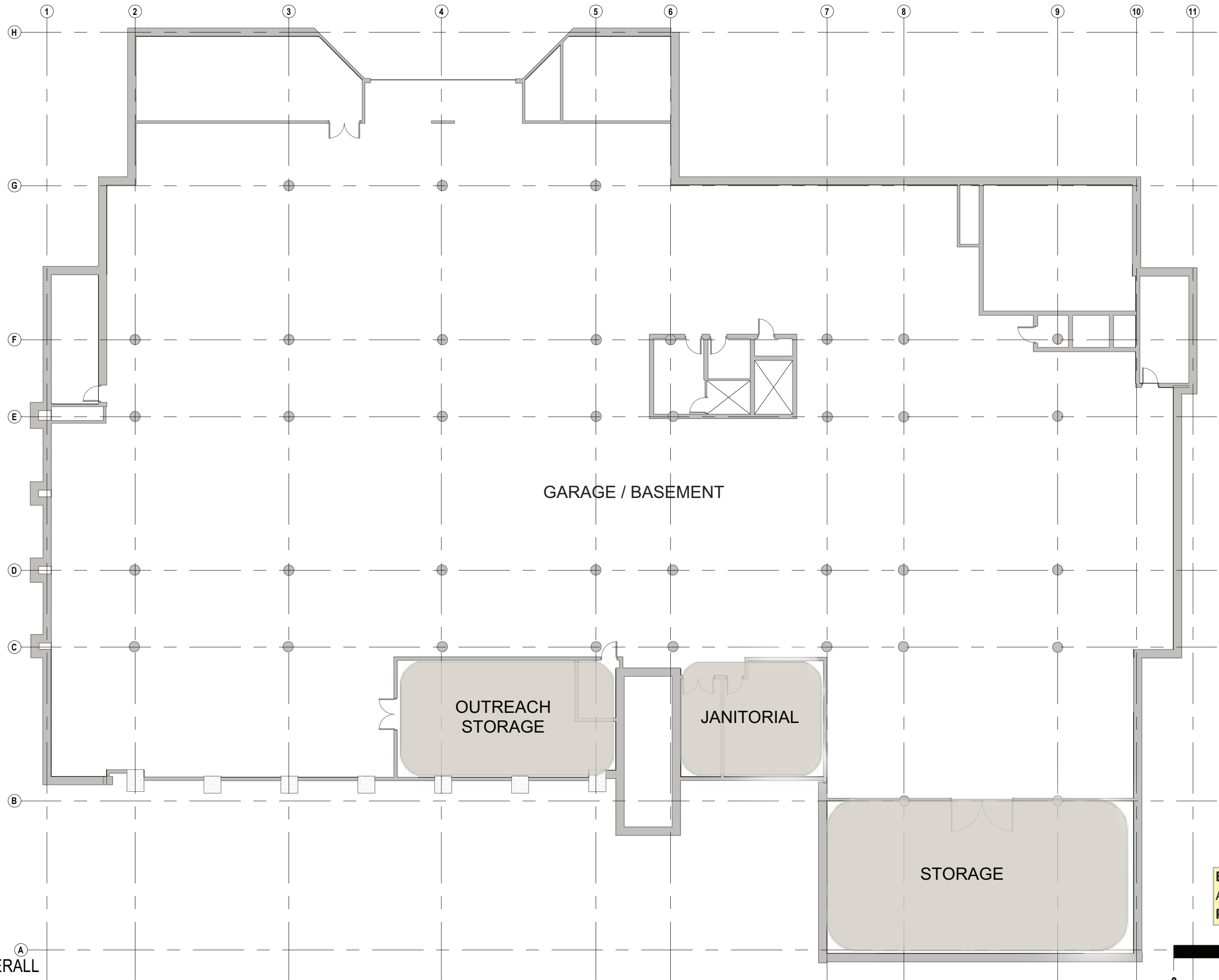
LEVEL 04 - FLOOR PLAN - OVERALL
(EXISTING)



LEVEL 04 - PROPOSED FLOOR PLAN - OVERALL



- | | | | |
|--------------------------------|------------------------------|---------------------|------------------------|
| ENTRY | SERVICE POINT (SP) | LOADING & RECEIVING | STAFF WORKROOM/OFFICES |
| COMMUNITY ROOM (MULTI-PURPOSE) | THE PERCH | CHILDREN'S AREA | MANAGERS OFFICE |
| STUDY ROOMS | SELF-CHECKOUT | TEEN AREA | STAFF BREAKROOM |
| RESTROOMS (PUBLIC) | MATERIAL HANDLING AREA (MHA) | ADULT AREA | RESTROOMS (STAFF) |



GARAGE / BASEMENT

OUTREACH
STORAGE

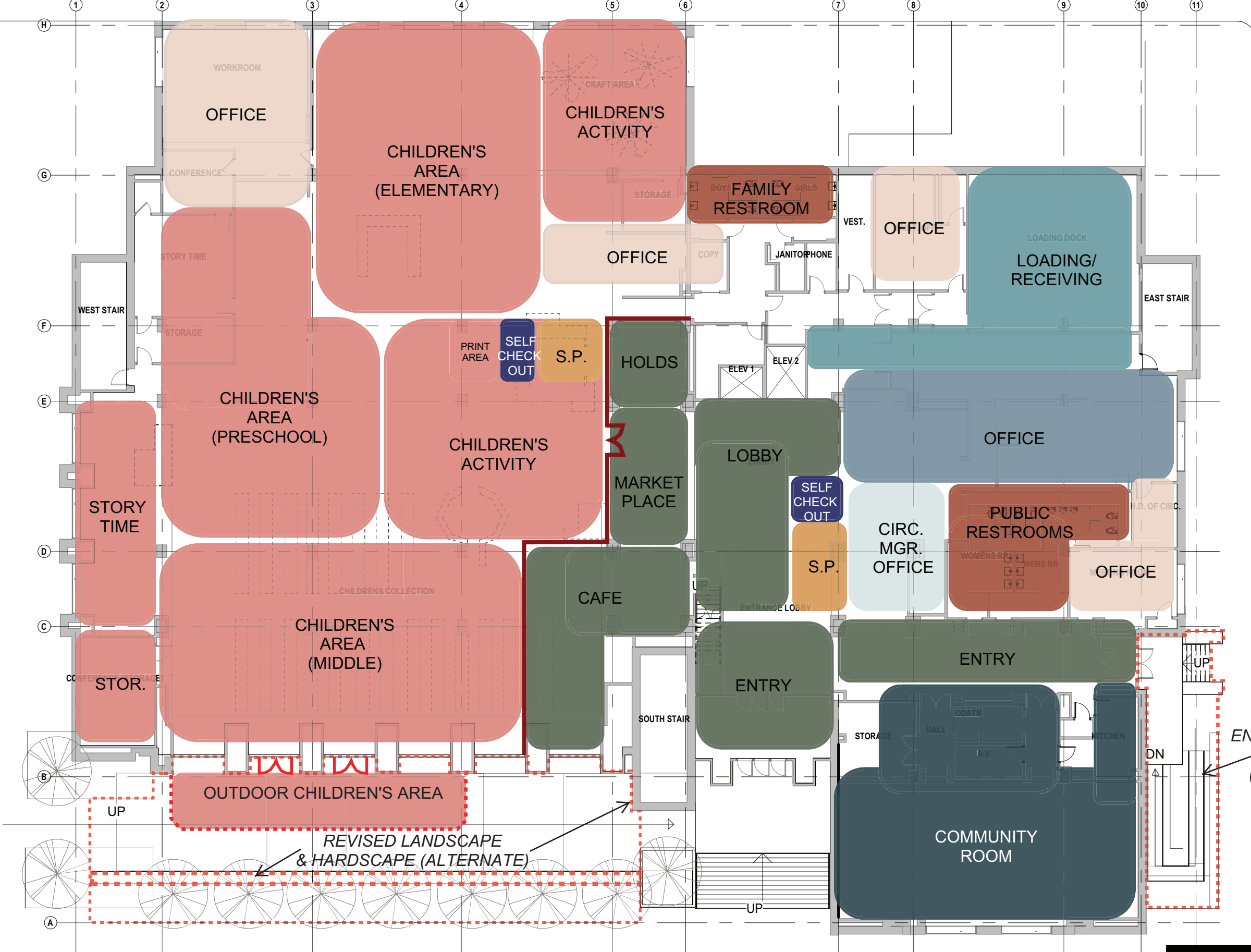
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STORAGE

Exhibit B:
Architectural Space Plans:
Proposed (Overall Floor Plans)

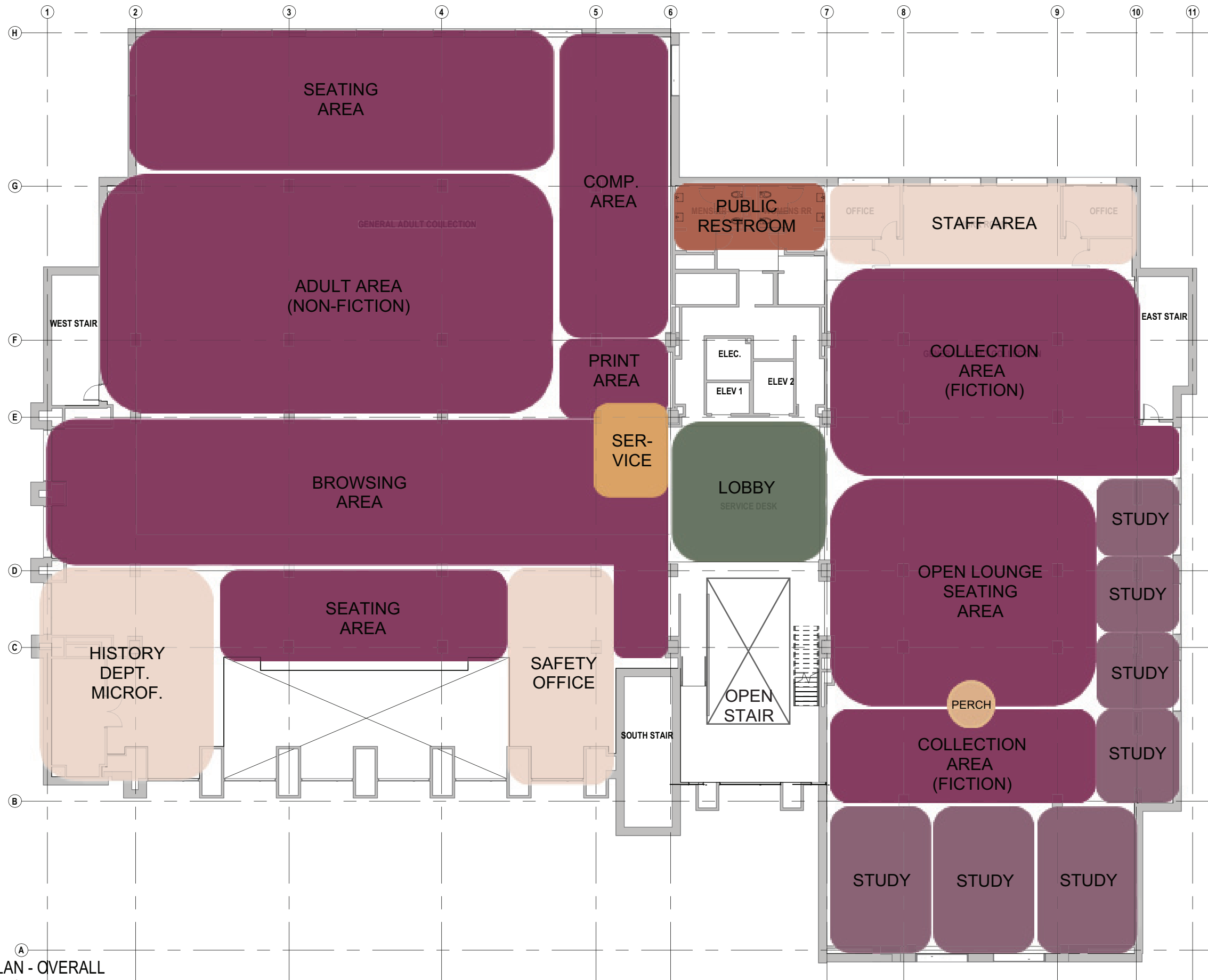


LEVEL 00 - FLOOR PLAN - OVERALL
(PROPOSED)



ENTRY	4,477 sq ft
COMMUNITY ROOM (MULTI-PURPOSE)	2,533 sq ft
STUDY ROOMS	N/A
RESTROOMS (PUBLIC)	1,087 sq ft
SERVICE POINT (S.P.)	380 sq ft
THE PERCH	N/A
SELF-CHECKOUT	189 sq ft
MATERIAL HANDLING AREA (MHA)	N/A
LOADING & RECEIVING	1,633 sq ft
CHILDREN'S AREA	11,563 sq ft
TEEN AREA	N/A
ADULT AREA	N/A
STAFF WORKROOM/OFFICES	3,394 sq ft
MANAGERS OFFICE	568 sq ft
STAFF BREAKROOM	N/A
RESTROOMS (STAFF)	N/A

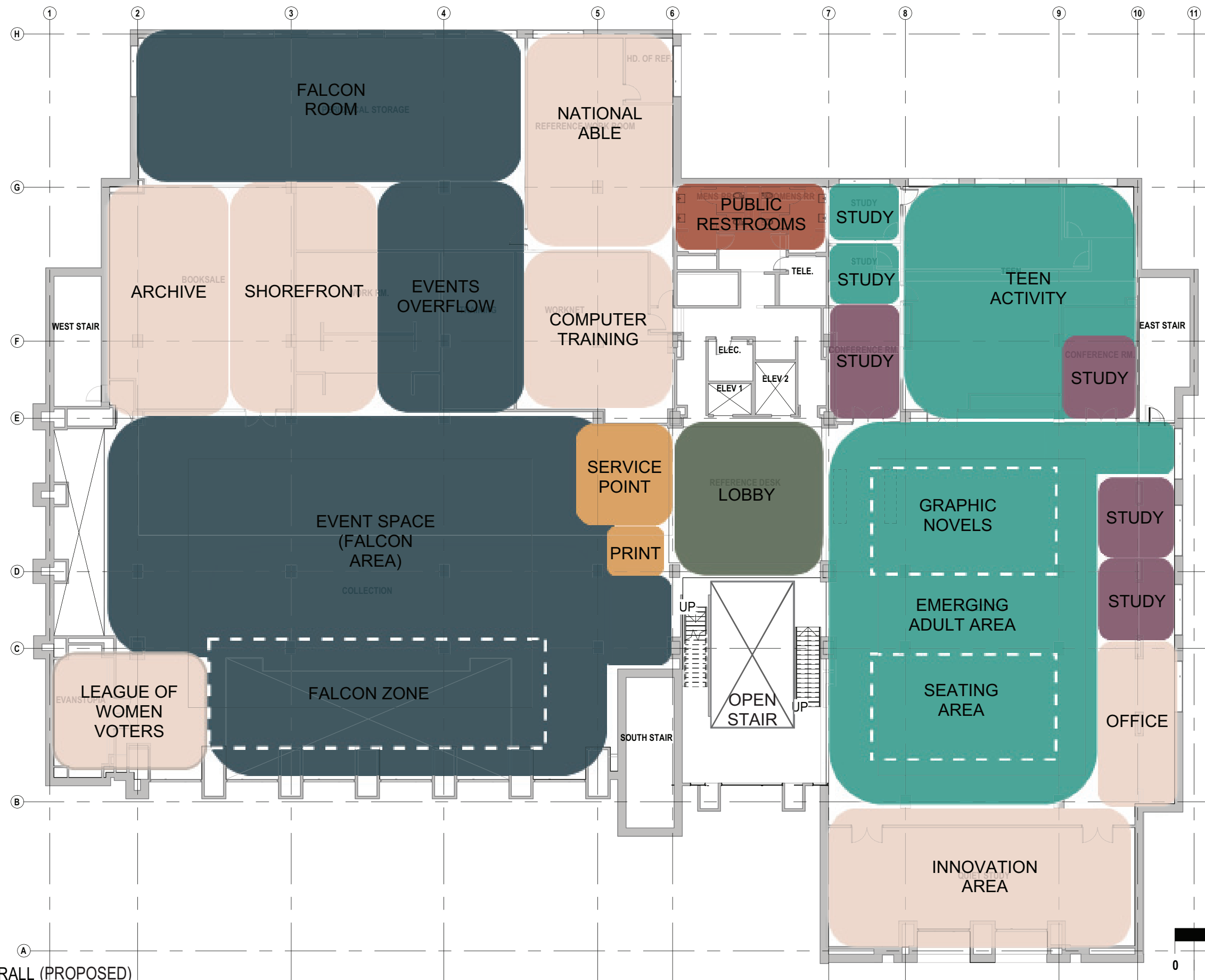
LEVEL 01 - FLOOR PLAN - OVERALL (PROPOSED)



ENTRY	817 sq ft
COMMUNITY ROOM (MULTI-PURPOSE)	N/A
STUDY ROOMS	2,740 sq ft
RESTROOMS (PUBLIC)	411 sq ft
SERVICE POINT (SP)	279 sq ft
THE PERCH	64 sq ft
SELF-CHECKOUT	N/A
MATERIAL HANDLING AREA (MHA)	N/A
LOADING & RECEIVING	N/A
CHILDREN'S AREA	N/A
TEEN AREA	N/A
ADULT AREA	17,988 sq ft
STAFF WORKROOM/OFFICES	3,266 sq ft
MANAGERS OFFICE	N/A
STAFF BREAKROOM	N/A
RESTROOMS (STAFF)	N/A

LEVEL 02 - FLOOR PLAN - OVERALL (PROPOSED)



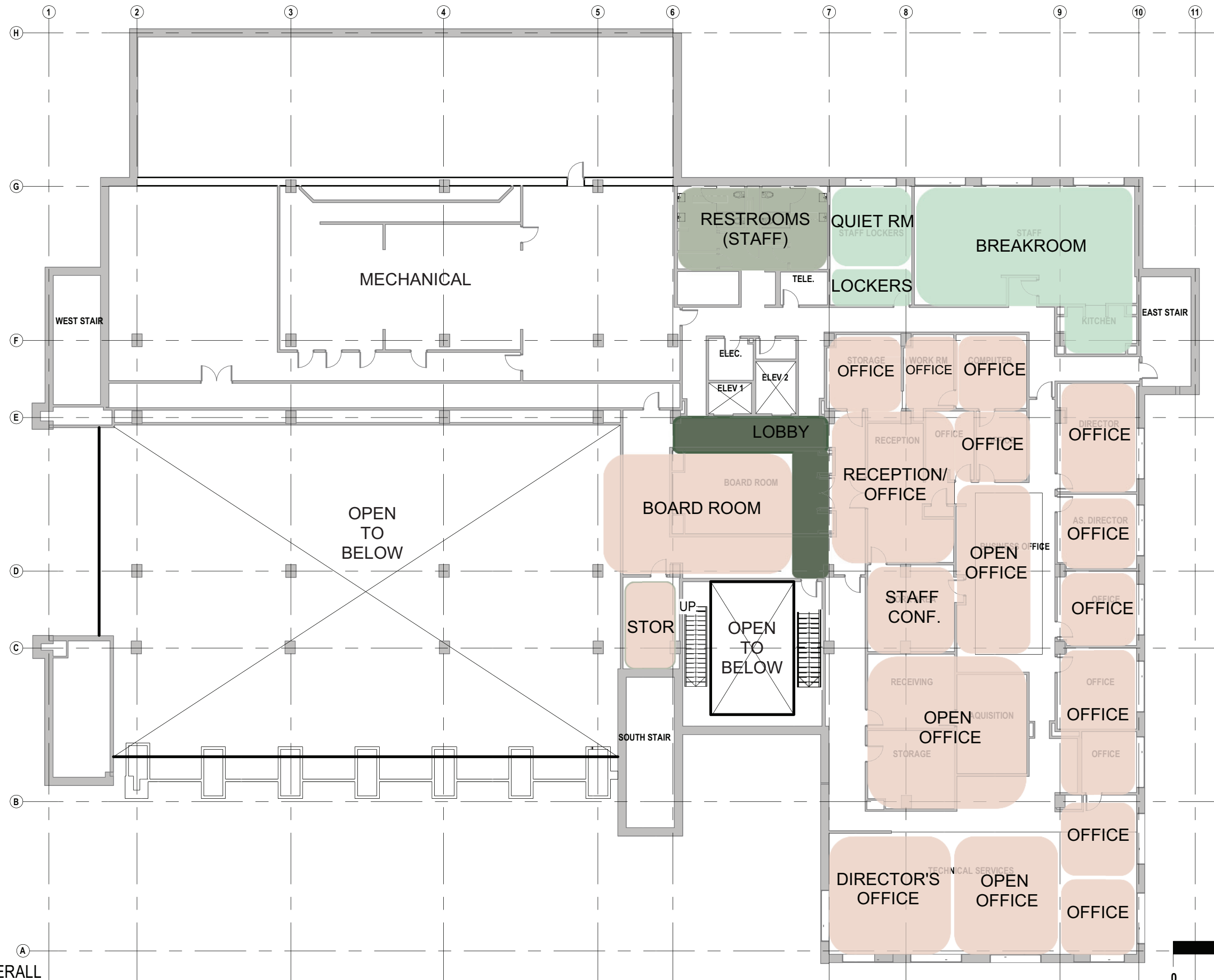


ENTRY	879 sq ft
COMMUNITY ROOM (MULTI-PURPOSE)	9,911 sq ft
STUDY ROOMS	1,071 sq ft
RESTROOMS (PUBLIC)	453 sq ft
SERVICE POINT (S.P.)	547 sq ft
THE PERCH	N/A
SELF-CHECKOUT	N/A
MATERIAL HANDLING AREA (MHA)	N/A
LOADING & RECEIVING	N/A
CHILDREN'S AREA	N/A
TEEN AREA	4,344 sq ft
ADULT AREA	N/A
STAFF WORKROOM/OFFICES	2,090 sq ft
MANAGERS OFFICE	N/A
STAFF BREAKROOM	N/A
RESTROOMS (STAFF)	N/A

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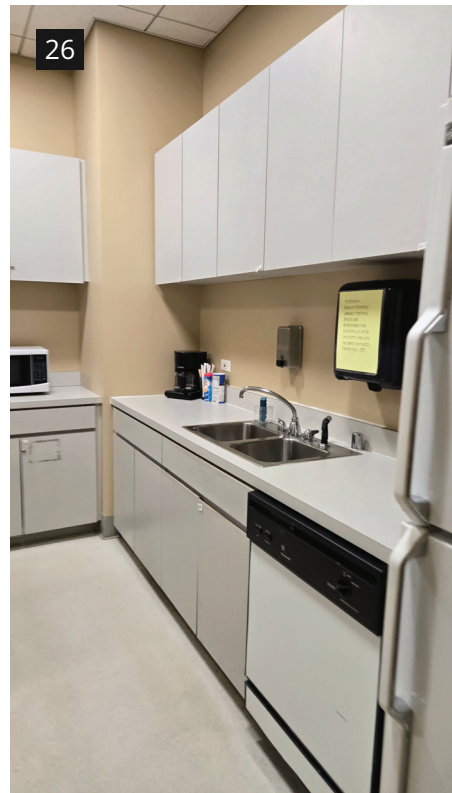
LEVEL 03 - FLOOR PLAN - OVERALL (PROPOSED)



ENTRY	379 sq ft
COMMUNITY ROOM (MULTI-PURPOSE)	N/A
STUDY ROOMS	N/A
RESTROOMS (PUBLIC)	N/A
SERVICE POINT (S.P.)	N/A
THE PERCH	N/A
SELF-CHECKOUT	N/A
MATERIAL HANDLING AREA (MHA)	N/A
LOADING & RECEIVING	N/A
CHILDREN'S AREA	N/A
TEEN AREA	N/A
ADULT AREA	N/A
STAFF WORKROOM/OFFICES	6,551 sq ft
MANAGERS OFFICE	N/A
STAFF BREAKROOM	1,481 sq ft
RESTROOMS (STAFF)	474 sq ft



LEVEL 04 - FLOOR PLAN - OVERALL (PROPOSED)

**LEGEND of IMAGES:**

Photos represent examples of Existing Conditions throughout the Library, and Comments to consider for Renovations and Re-planning.

1. REMOVE COMPARTMENTALIZED AREAS IN CHILDREN'S DEPARTMENT.
2. REPLACE CEILING TILE.
3. CLEAN REGISTERS AND DIFFUSERS.
4. STRIP, CLEAN, AND POLISH EXISTING TERRAZZO FLOORS / RESURFACE AS NEEDED.
5. ENTRY TO BE RECONFIGURED.
6. REMOVE AND RE-PLAN THE STORY-TIME ROOM.
7. EXPAND "CAFE" AREA.
8. ADD KEYCARD CONTROLS TO EXITS.
9. INVENTORY AND REMOVE OLD EQUIPMENT.
10. RE-PLAN USE OF AREAS WITH NATURAL LIGHT.
11. REPLACE ALL CARPET.
12. WORN AND DATED CARPET.
13. REVISE MEETING ROOM LAYOUT SPACE IN TEEN AREA.
14. RELOCATE HOLDINGS AREA.
15. REMOVE UNNECESSARY STACKS / SHORTEN FOR BETTER SIGHT & SECURITY CONTROL
16. STORAGE ROOM AREAS TO BE RE-PLANNED AND UTILIZED FOR PUBLIC/ PATRON USES.
17. RE-PLAN OVER-CAPACITY STAFF OFFICES IN CHILDREN'S LIBRARY AREA.
18. TEEN LOCKERS AREAS ARE WORN, NEED TO BE REFURBISHED AND RE-PLANNED.
19. FRONT DESK TO BE REIMAGINED FOR MORE EFFICIENT WORKFLOW AND AREA USE.
20. EMERGING ADULT AREA TO BE RE-PLANNED FOR UPDATED AND EFFICIENT USE.
21. TEEN ROOM FINISHES ARE WORN, NEED TO BE REFURBISHED.
22. TEEN STUDY ROOMS ARE WORN, NEED TO BE REFURBISHED.
23. WORN CARPET BETWEEN STACKS.
24. WORN CARPET AND FINISHES.
25. MOSAIC ART FOUNTAIN TO BE REMOVED / REPURPOSED ELSEWHERE.
26. STAFF KITCHENETTE REQUIRES UPDATES/ RENOVATION.
27. INTERIOR FINISHES ARE WORN FROM AGE, NEED TO BE REFURBISHED.
28. WORN CARPET BETWEEN STACKS.

Exhibit C:
Existing Condition Photographs



