

City of Somerville

Building Renovation & Department Relocation Master Plan

PREFERRED SCHEMATIC REPORT

NOVEMBER 24, 2021



**BEYER
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BELLE**

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1. Detailed Space Needs Program
2. Detailed Cost Estimates
3. Pricing Narrative and Drawings
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Appendix Volume 2

4. Technical Reports & Appendices (continued)

EXECUTIVE SUMMARY

A VISIONARY CITY, PLANNING FOR THE FUTURE

Locally, regionally, and nationally, the City of Somerville is recognized for its ability to craft a vision and implement it, be it forward-thinking approaches to the delivery of city services, far-reaching sustainability initiatives, or advancing the causes of racial and social justice. Now the City is crafting a new vision: to leverage underutilized and aging City-owned building assets in order to create a greatly enhanced civic and educational district focused around historic Central Hill, one which can more effectively serve its administrative and governmental missions and the Somerville community.

Over the city's 150-year history, Somerville's portfolio of buildings housing administrative functions has responded to necessary reorganizations and staff growth in both targeted and organic ways. This has left Somerville with a constellation of buildings and spaces that do not best serve the community nor best support the important work of the City's administrative departments and divisions. The solution to these challenges and opportunities requires a road map to guide near-term reorganization and also allow for flexible growth and transformation over time. The Building Renovation & Department Relocation Master Plan (BMP, or "the Plan") establishes that road map.

THE BUILDINGS IN PLAY

Three buildings—City Hall, the 1895 Building ("1895"), and the former Edgerly School ("Edgerly")—form the primary terrain of the BMP, which contemplates a comprehensive renovation of each of these buildings. Each building poses its own set of unique architectural opportunities and planning challenges in housing city administrative services for the twenty-first century.

THE MASTER PLAN – BUILDING THEMES

The preferred master plan scenario, illustrated at right, evolved from careful programming and quantitative and qualitative analysis of City and constituent operational considerations. **The Plan establishes three distinct thematic hubs for the three buildings in play: City Hall as the seat of government, 1895 as constituent services, and Edgerly as schools and community.** Detailed space-needs programming for all departments and divisions, along with the nature and degree of public interaction and important adjacency considerations between and among departments, drove how groups would ideally be organized within and across buildings. Relative to space capacity, the program of offices, workstations and support spaces (including growth to 2030) is being accommodated.

FROM PLANNING TO DESIGN

To better confirm the feasibility of the preferred planning scenario once it was selected, space planning for the three buildings was explored in greater detail with additional key considerations in mind for future design: sustainability strategies and their impact on interior space allocation; opportunities to incorporate extant historic fabric and interior features; and ideas for how the buildings' existing corridors—oversized and underutilized today—could be activated to provide support spaces and promote greater interaction.

While these early design explorations largely focused on renovating the space within the existing building envelopes, the team also explored design concepts for reinstating the pitched roof and fourth floor at 1895, a key opportunity to capture significant additional space on Central Hill.

COORDINATING WITH THE CSA MASTER PLAN

In the course of developing the space needs program for the BMP, our conversations with departments also highlighted the lack of available space to support important community services and activities. An additional scope of planning work, the Community Services and Activities (CSA) Master Plan, was initiated in June 2021 to create a road map for several City-owned properties, evaluating their potential to facilitate public-facing programs and better serve the community.

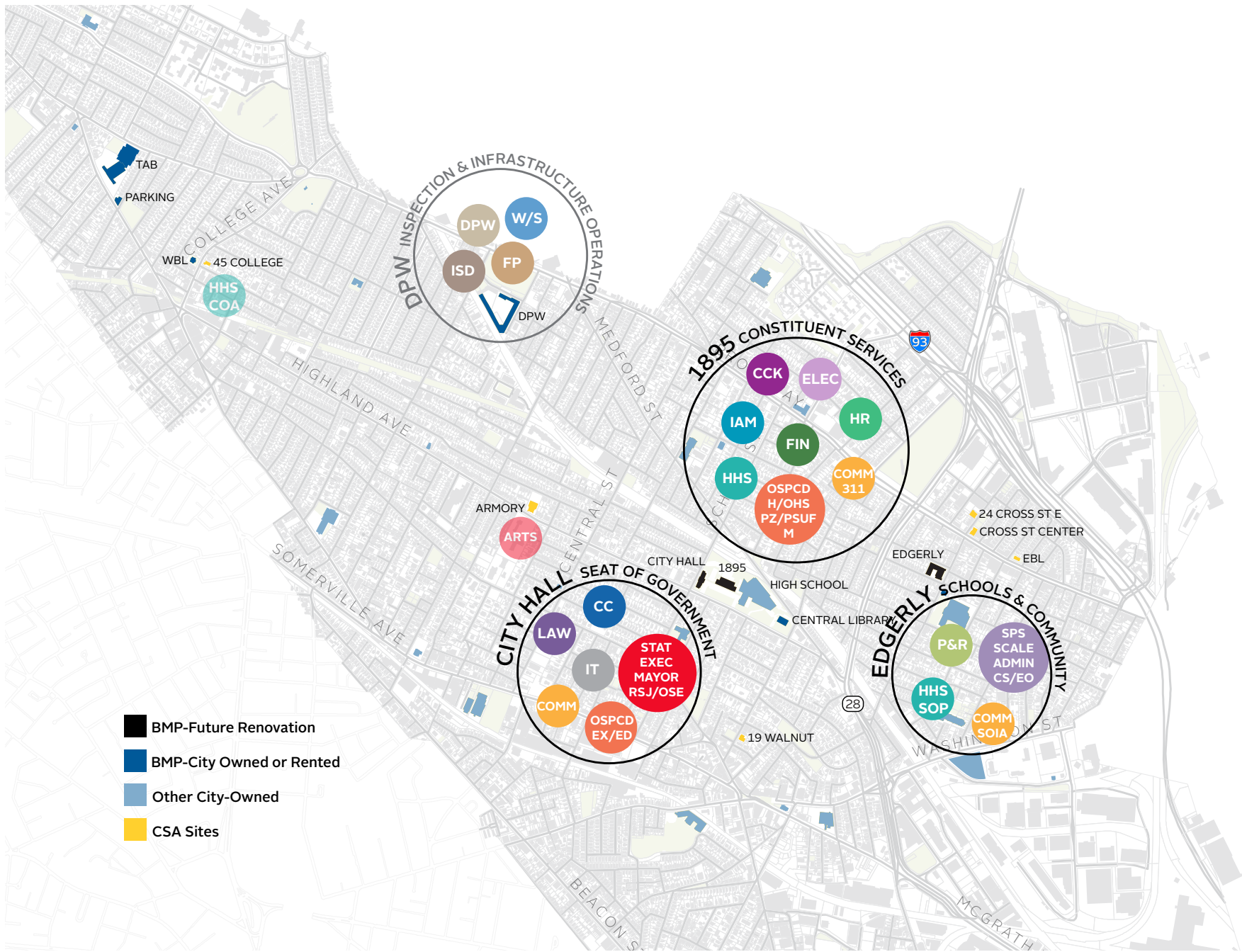
The CSA master plan was explored concurrently to the BMP, and it should be noted that the allocation of some divisions in the BMP buildings will be impacted by CSA outcomes. Additional detailed information can be found in the CSA Master Plan report.

PHASING AND SCHEDULE CONSIDERATIONS

A high-level study of potential construction phasing and resultant departmental moves is included in this report. The preferred master plan scenario outcome is carried through a series of phasing diagrams to model prospective department moves against the backdrop of a conceptual design and construction schedule.

COST ESTIMATES

Master planning-level cost estimates were updated for the three renovation projects contemplated as part of the Master Plan to reflect the specific preferred scenario and design updates. The total estimated costs include both building and site work and contingencies at a magnitude and level of detail appropriate to this stage of pre-design. An overview is provided in the Cost Estimate Summary chapter, with greater detail in the appendix.



THE ADMINISTRATIVE MASTER PLAN PREFERRED SCENARIO: THREE DISTINCTIVE HUBS

THE BUILDINGS IN PLAY

The City of Somerville's full portfolio of buildings that house administrative functions was reviewed for potential use by administrative groups. Three buildings are targeted for extensive renovation and comprise the primary focus of this report. Refer to the prior report, the Preliminary Design Program, for a full overview of the disposition of all City administrative buildings.

CITY BUILDINGS FOR EXTENSIVE RENOVATION

Three key buildings are in play for extensive renovation as part of the Building Master Plan. Comprehensive upgrades are required to the building envelope and mechanical systems, as well as all finishes and furnishings, to achieve City objectives:

- **City Hall:** The historic and future seat of city government, Somerville's iconic City Hall and its renovation are key to the overall Master Planning vision. Its renovation is essential in reflecting the dignity of democratic government, a more inclusive, sustainable city, and as a focus of civic pride.
- **The 1895 Building:** Directly adjacent to City Hall, the 1895 Building is well-sited to act in tandem with a renovated City Hall to consolidate essential city services on Central Hill. With the renovation and adaptive reuse of this landmark historic building, departments that have essential connections on the Hill will be located close to City Hall.
- **The Edgerly Education Center:** As Edgerly is still configured as a school building, a renovation targeted to its proposed administrative use will capitalize on significant unrealized potential. Departmental relationships will play a key role in the creation of a new Edgerly "hub" with a distinct personality, since Edgerly is a short walking distance from Central Hill.

CITY BUILDINGS TO BE VACATED

- **The City Hall Annex:** A former extended-care facility partly adapted for use as overflow administrative offices, the building is not a well-performing asset.
- **19 Walnut (Parks and Recreation):** A historic former courthouse with extensive deferred capital investment and all systems are beyond the end of service life.
- **The Cummings School:** The existing building is beyond its useful life in most respects. Future anticipated use of the site is as a facility for Somerville Public Schools.

CITY BUILDINGS TO REMAIN IN USE

- **1 Franey Road (the DPW Building and Yard):** These structures were not evaluated for renovation. The proposed relocation of some divisions off the site will create an opportunity to address space deficits and better organize uses across the complex.
- **133 Holland (Parking):** Use to remain as-is.
- **42 Cross Street (Archives):** Use to remain as-is.

LEASED SPACE TO BE VACATED EVENTUALLY

- **Tufts Administration Building:** The SPS divisions currently at TAB are expected to remain there until renovation of Edgerly is completed. TAB will continue to be the home of Council on Aging pending future steps in the CSA Master Plan for 45 College Avenue.

LEASED SPACE TO REMAIN IN USE

- **323 Broadway (Retirement):** Use to remain as-is.



Somerville City Hall



The 1895 High School Building



The Edgerly Education Center

PROCESS, METHODOLOGY AND BACKGROUND

PROGRAMMING

The space needs program was authored by the design team and validated by the City of Somerville's Building Renovation & Department Relocation Master Plan Internal Technical Team. It was shaped by input from 50-plus city departments and divisions, and includes projected staff growth to 2030. Additionally, a survey to collect information about each department's frequency and size of meetings was circulated in March 2021, the results of which helped generate a shared space needs program. A summary of overall program space needs is included within this report; the detailed program document and meeting survey analysis can be found in the separate PSR appendix volume II.

EXISTING BUILDING HISTORIC RESEARCH

In-depth archival research on all the buildings was conducted using a broad range of desktop digital sources as well as photographing drawings found in the Massachusetts State Building Inspection Collection (1889-1987), held in the Mass. State Archives; and drawings in Somerville's own Archives Division.

ASSESSMENT OF EXISTING ASSETS

Three buildings were comprehensively assessed as part of the BMP. The documentation and assessment of existing conditions falls into two categories of work: (1) documenting built form through three-dimensional scanning and digital BIM modeling, and (2) assessment across all disciplines to evaluate the material condition of envelope, structure, systems, finishes, and equipment relative to performance, service life, and compatibility with the City's objectives for building assets in its

portfolio. This preliminary, non-invasive round of assessment took place during the winter of 2021.

PRELIMINARY DESIGN PROGRAM

The Preliminary Design Program (PDP) milestone summarized the assessment of existing building conditions and the development of the detailed space needs program. This phase also included the exploration of three scenario options for departmental relocation along with high-level cost estimates for evaluation by the City. The Preliminary Design Program (PDP) phase was completed in June 2021 with a final report summarizing the above deliverables. A preferred planning option (PDP Scenario 4) was selected for further exploration and development in the Preferred Schematic Report (PSR) phase. Refer to the PDP report for background on the initial scenarios and concepts.

EXPLORATORY WORK

During the summer and fall of 2021, exploratory work was conducted to gain a deeper understanding of building conditions and renovation constraints and opportunities. Openings were made in interior finishes to identify existing structural conditions and locate historic decorative elements. On the exterior, probes were made to confirm masonry wall assemblies and remove brick units for WUFI (hygrothermal) laboratory analysis. The results of this analysis will determine how much insulation can be added to the exterior walls without endangering the historic masonry. Test-pits were executed at 1895 to confirm foundation conditions, and sampling was conducted at all the buildings to identify and quantify hazardous materials present.

PREFERRED SCHEMATIC DEVELOPMENT

Following the completion of the PDP, the design team continued to assess the feasibility of the selected master plan scenario through detailed space planning for the three primary buildings. On the programming side, this phase included important validation of all confirmed FY2022 and estimated 2030 staffing levels. Work in this phase provided important additional architectural considerations including the greater resolution of anticipated sustainability strategies and their impact on interior building space allocations, as well as greater integration of existing structural parameters. Finally, this phase included another round of cost estimating and updated phasing and schedule considerations.

RELATIONSHIP TO CSA MASTER PLAN

There is overlap between the BMP and the CSA Master Plan where administrative and community program space are housed in the same building. The buildings and sites evaluated in the CSA Master Plan are:

- **165 Broadway (Cross Street Center)**
Existing home of Project Soup, Council on Aging, Teen Empowerment
- **45 College Avenue**
Vacant property, originally 3rd Universalist Church
- **115 Broadway**
East Branch Library
- **191 Highland (The Armory)**
Home of Arts@The Armory and multiple tenants
- **24 Cross Street East**
Vacant property, former General Insulation Building
- **19 Walnut (Parks and Recreation)**
Parks and Recreation Department

EXEC Mayor & Executive Administration	FIN-AD Finance Auditing	CKK City Clerk	COMM Community Engagement	OSPCD EX Executive & Finance Administration	IAM EX Infrastructure & Asset Mgmt Exec / Admin	HHS Health and Human Services	DPW AD DPW Administration	ISD Inspectional Services Division	SPS ADMIN Schools Administration
STAT Somerset	FIN-P Finance Procurement & Contract Services	ARCH Archives	COMM SOIA Office of Immigrant Affairs	OSPCD ED Economic Development	IAM CP Capital Projects	SOP Somerset Promise	DPW B&G DPW Buildings and Grounds	FP Fire Prevention	SPS ECS Early Childhood Services
OSE Office of Sustainability & Environment	FIN-AS Finance Assessing	ELEC Elections	COMM 311 Constituent Services / 311	OSPCD M Mobility	IAM ENG Engineering	VS Veterans' Services	DPW HWY DPW Highway and Fleet	W/S Water & Sewer	SPS EO Enrollment Office (formerly PIC)
ARTS Arts Council	FIN-T Finance Treasury	LAW Law	IT Information Technology	OSPCD PZ Planning & Zoning		COA Council on Aging	DPW L&L DPW Lights and Lines	PKG Parking	SPS SFLC Family Learning Center Collaborative
RSJ Racial and Social Justice	FIN-G Finance Grants			OSPCD PSUF Public Space & Urban Forestry			DPW S DPW Sanitation	P&R Parks & Recreation	SPS SCALE Center for Adult Learning & Education
CITY COUNCIL	HR Human Resources			OSPCD H Housing					SPS CS Community Schools
	RET Retirement			OSPCD OHS Office of Housing Stability					LIB Libraries (Central, East & West Branches)

"PERIODIC TABLE" OF CITY DEPARTMENTS AND DIVISIONS ADDRESSED IN THE SPACE NEEDS SUMMARY AND MASTER PLAN

Program and Space Needs Summary

SPACE NEEDS SUMMARY

GENERAL NOTES & DEPARTMENTAL SUMMARY

This summary space needs program table highlights the 2022 confirmed and 2030 projected staff counts and overall assignable square feet (ASF) of space needs by department and division for 2030. The space needs program was generated from initial department and division programming interviews in spring of 2021 and has been updated to reflect FY2022 staff numbers confirmed with the City's Internal Technical Team over the summer of 2021 after the completion of the Preliminary Design Program (PDP) report.

Updated itemized breakdowns for each department and internal division are included in the appendix volume to this report. Additional background program information including workspace standards and department and division interview minutes can be found in the PDP report.

While the interviews and resulting space needs program encompassed all City administrative departments and divisions, the preferred scenario in this report only addresses those departments who have been identified for potential relocation to the three buildings under consideration as part of this project (City Hall, the 1895 Building, and the Edgerly School). Relocation of some divisions to these buildings will have an impact on other City properties.

The preferred scenario test fit plans in the following chapter reflect the updated department and division space needs programs for private offices, workstations and support spaces.

Department	Abbreviation	FTE Staff Totals		ASF	Notes
		2022	2030	Proposed	
City Council Legislative Staff	CC	1	5	3,957	
Mayor's Office / Executive Administration	EXEC	6	7	1,466	
Somer Stat	SOS	5	7	454	
Arts Council	ARTS	5	5	708	
Office of Sustainability and Environment	OSE	5	9	560	
Racial and Social Justice	RSJ	9	9	458	
Total - Mayor / Executive		30	31	3,646	
Finance - Procurement & Contract Services	FIN-P	7	9	728	
Finance - Treasury	FIN-T	11.5	11.5	1,244	
Finance - Auditing	FIN-AD	13	16	1,175	
Finance - Assessing	FIN-AS	8	9	866	
Finance - Grants	FIN-G	2	3	234	
Total - Finance		42	49	4,247	
City Clerk	CCK	8	8	1,336	
Archives	ARCH	1	2	1,568	
Total - City Clerk		9	10	2,904	
Communications	COMM	9	10	885	
Somerville Office of Immigrant Affairs	COMM SOIA	6.5	11.5	874	
Constituent Services / 311	COMM 311	15.5	23	922	
Total - Communications		31	45	2,681	
Elections	ELEC	4	4	1,026	
Law	LAW	11	12	1,279	
Human Resources	HR	15	17	1,495	
Information Technology	IT	12	14	1,204	
OSPCD Executive Administration / Finance	OSPCD EK	8.5	8.5	881	
OSPCD Economic Development	OSPCD ED	8	10	550	
OSPCD Mobility	OSPCD M	8	12	684	
OSPCD Planning and Zoning	OSPCD PZ	14.75	18.75	1,180	
OSPCD Public Space and Urban Forestry	OSPCD PSUF	6	7	474	
OSPCD Housing	OSPCD H	14	17	1,204	
OSPCD Office of Housing Stability	OSPCD OHS	7.5	9.5	912	
Total - OSPCD		67	83	5,885	
Health and Human Services	HHS	21	25	1,695	
HHS SomerPromise	HHS SOP	6	8	494	
HHS Veterans' Services	HHS VS	2	2	402	
HHS Council on Aging	HHS COA	10	10	4,993	
TOTAL - HHS		39	45	7,584	
Executive/Administration	IAM EX	6	6	903	
IAM Capital Projects	IAM CP	8	10	394	
IAM Engineering	IAM ENG	12	12	606	
Total - IAM		26	28	1,903	
Inspectional Services Division	ISD	33	47	2,837	
Department of Public Works Administration	DPW AD	9	9	949	
Department of Public Works - Buildings	DPW B	2	2	342	
Department of Public Works - Grounds	DPW G	1	0	100	
Department of Public Works - Highway	DPW HWY	0	1	100	
Department of Public Works - Fleet	DPW FL	0	1	100	
Department of Public Works - Lights and Lines	DPW L&L	0	0	0	
Department of Public Works - Sanitation	DPW S	0	0	0	
Total - DPW		12	13	1,591	
Water / Sewer	WS	14	14	1,225	
Fire Prevention	FP	6	6	392	
Parking	PKG	18	18	5,878	
Retirement	RET	3	3	857	
Parks and Recreation	P&R	9	13	3,397	
SPS Administration	SPS ADMIN	80	95	5,209	Estimated 2030 growth
Early Childhood Services	SPS ECS	9	11	735	Estimated 2030 growth
Somerville Family Learning Collaborative	SPS SFLC	22.5	27	4,198	Estimated 2030 growth
Enrollment Office	SPS EO	5	6	790	Estimated 2030 growth
Somerville Center for Adult Learning and Education	SPS SCALE	14	17	11,928	Estimated 2030 growth
Community Schools	SPS CS	8	10	690	Estimated 2030 growth
Total - Schools		138.5	165	23,550	
Libraries	LIB	35	42	1,961	Estimated 2030 growth
Existing Shared Storage (Est. City Hall 3rd Fl, Annex Bsmt)				3,134	
Total Staff / ASF		555	662	82,633	
Shared Meeting and Support ASF				18,370	
Total ASF				101,003	

All positions without individual workspace needs are not included in staff totals (board members, councilors, field and off-site staff)

		Unit	City Hall		1895**		Ederly		TOTAL		Notes
<i>Key*</i>	SHARED PROGRAM SUMMARY										
	Meeting Rooms	ASF	Count	ASF	Count	ASF	Count	ASF	Count	ASF	
C5	One-on-One Meeting Room: 2 ppl.	80	3	240	3	240	3	240	9		
C4	Meeting / Counseling Room: 3-4 ppl.	120	4	480	5	600	5	600	14		
C3	Small Meeting Room: 6-8 ppl.	200	3	600	4	800	4	800	11		
C2	Medium Meeting Room: 10-14 ppl.	280	1	280	3	840	2	560	6		
C1	Large Meeting Room: 20-24 ppl.	500	1	500	4	2,000	4	2,000	9		
	Community Meeting Room: 35-40 ppl.	720	1	720	1	720	0	0	2		<i>CH request satisfied by Chamber</i>
	Totals		13	2,820	20	5,200	18	4,200	51	12,220	
	Support Spaces										
	Touchdown / hoteling stations	30	10	300	10	300	9	270	29		
K1	Pantry / Kitchenette - Typ.	100	2	200	2	200	2	200	6		
K2	Break Room/ Kitchen (seating for 6)	200	1	200	1	200	1	200	3		
K3	Break Room/ Kitchen (seating for 12)	360	1	360	1	360	1	360	3		
W1	Copy / Work Room - Typ.	100	3	300	3	300	2	200	8		
W2	Copy / Work Room - Large	150	1	150	1	150	1	150	3		
PH1	Phone Booth	50	6	300	8	400	9	450	23		
M1	Mother's Room	100	1	100	1	100	1	100	3		
	Union Records Room	100	1	100	1	100	1	100	3		
S	Shared Storage	TBD		TBD		TBD		TBD			
	Totals			2,010		2,110		2,030	40	6,150	
	Totals - Meeting + Support			4,830		7,310		6,230		18,370	

SHARED SPACES SUMMARY

The total projected space needs for shared meeting and building support spaces are summarized by building for the preferred master plan scenario in the chart above.

The shared meeting space recommendations were informed by the results of a comprehensive survey provided to departments in March 2021, and are based on the design team's recommendation to provide distributed and equitable access to these types of

spaces in each building. Detailed information on the survey can be found in the PDP report.

The preferred scenario test fit plans in the following chapter fully accommodate the desired meeting and support spaces for each building. Additional plan refinements to confirm program quantities and optimal adjacencies and relationships of all departments will be reviewed in the next phases of design.

GUIDING PRINCIPLES

With the help of the Somerville Internal Working Team, BBB established eight guiding principles to steer the Master Plan and future design work. Highlighting the key foundational values that should be reflected in the City's building fabric to help support its mission, these principles establish the evaluation criteria for the subsequent processes in the course of planning and design. The concepts and strategies of the Master Plan were driven by these principles, and as a coordinated framework, the Plan leverages these principles into concrete actionable projects. These guiding principles will continue to serve as evaluation criteria to inform not only those projects contemplated for execution today but any future implementation of recommendations made by the Master Plan.

Constituent-Oriented

Locate departments and plan spaces of public interface to best benefit the Somerville community.

Collaborative

Foster knowledge sharing and collaboration between departments.

Flexible & Future Proof

Plan for an unpredictable future through workplace flexibility and systems resiliency.

Equity & Inclusivity

Support the City's goals of maximizing equity, inclusivity, and community in the workplace.

Honoring Public Service

Create work spaces that honor the dignity of public service.

Reflecting the Ideals of City Government

Through design, express transparency of government and pride of place.

Practical Planning, Sustainable Design

Leverage the City's existing assets before building new. Uphold the visionary goals of SustainaVille and Climate Forward.

Fiscal Prudence

Create the most value for Somerville by making well-considered and well-timed investments in City buildings.

The Master Plan Scenario

TEST FIT PLANNING

THE MASTER PLAN SCENARIO

The stacking diagrams on the facing page illustrate the preferred planning scenario at the conclusion of the PDP (left), and the subsequent updates that are reflected in the following PSR test-fit plans (right). Changes are highlighted with yellow arrows. These changes are summarized as follows:

In City Hall, after careful determination of required space allocation for mechanical systems in the Lower Level, it was determined that an additional administrative group could be housed on that floor with IT. The north half of the Lower Level has full-size windows, tall ceilings, and good access to daylight, making it a natural fit for program spaces. Moving Communications to the Lower Level frees up space on the First Floor, which is backfilled by SomerStat, relocated from the Third Floor. Structural limitations uncovered as part of the exploratory work impacted the planning flexibility and available program space on the Third Floor, putting pressure on the program allocated there at PDP. Moving SomerStat downstairs eases this pressure and allows for the three groups under the Executive umbrella to be co-located together on one floor, just a level below the Mayor's Office.

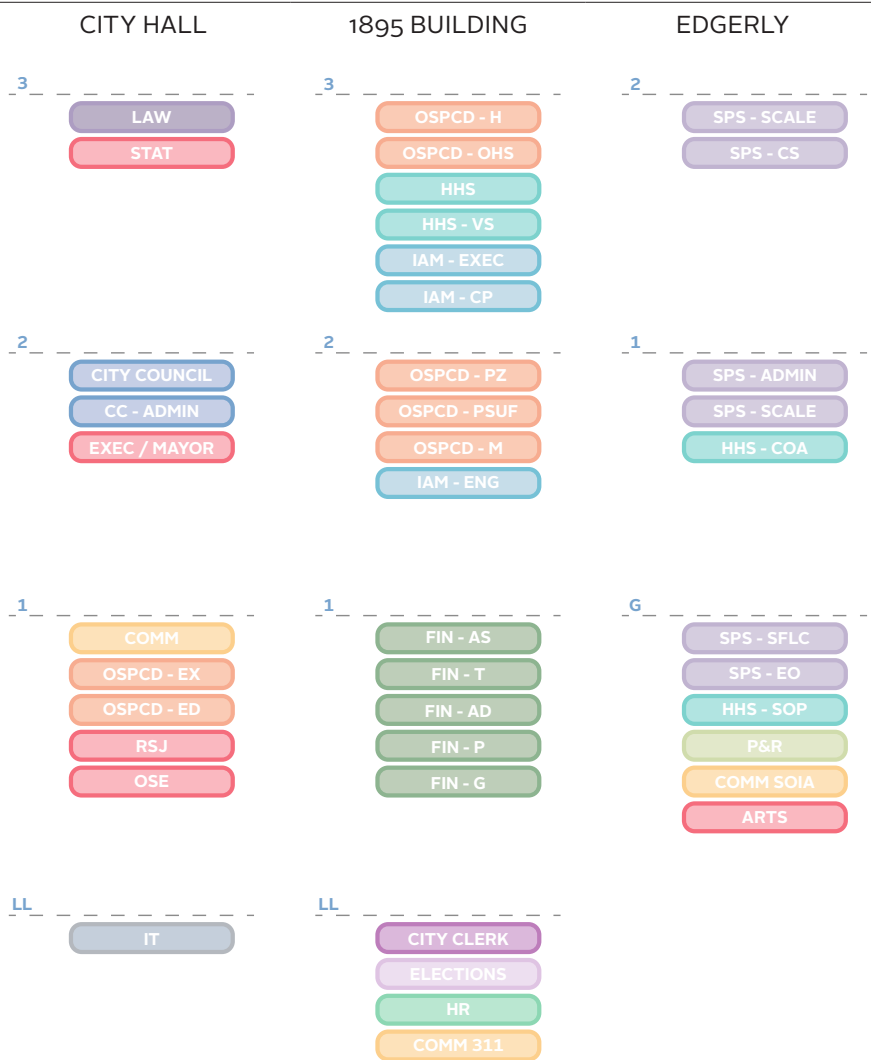
In the 1895 Building, further evaluation of space needs to support a ground source heat pump system resulted in an additional mechanical space allocation at the Lower Level. City Clerk, with its constituent-facing nature and frequent transaction-based interactions with

the public and other departments, was relocated one floor up to the First Floor, creating a beneficial hub of transaction-based city services on that level.

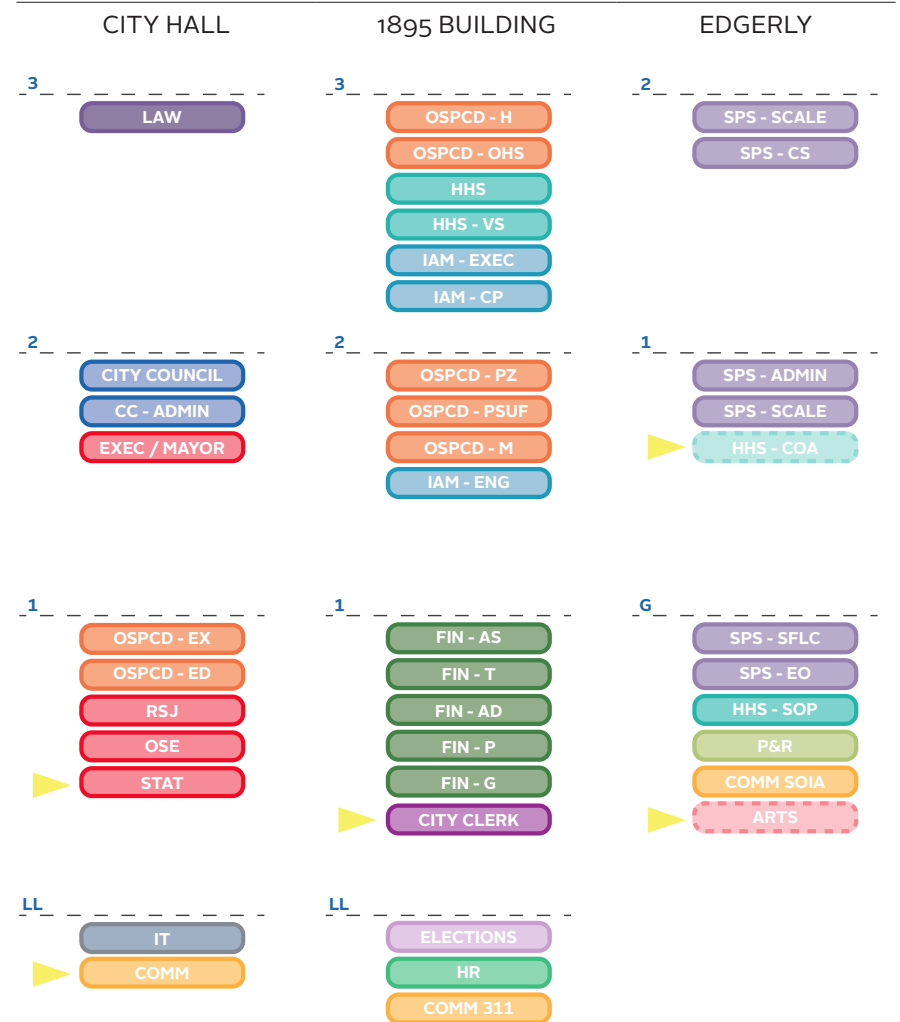
In Edgerly, two groups have been "grayed" out to indicate their removal from planning consideration as part of this master plan exercise. As determined in the CSA master plan, Council on Aging (COA) is anticipated to remain in the TAB building for the near term, eventually co-locating its administrative team and program spaces into a purpose-built home in Davis Square. Additionally, it was determined that the Arts Council will move to the Armory in order to benefit from the availability of public program space and create synergies with Somerville's home for the arts. As follow-up programming interviews after the PDP phase resulted in increased space needs for some divisions, these COA and Arts Council updates will allow for full accommodation of the revised program needs and shared space requirements for the remaining groups in Edgerly.

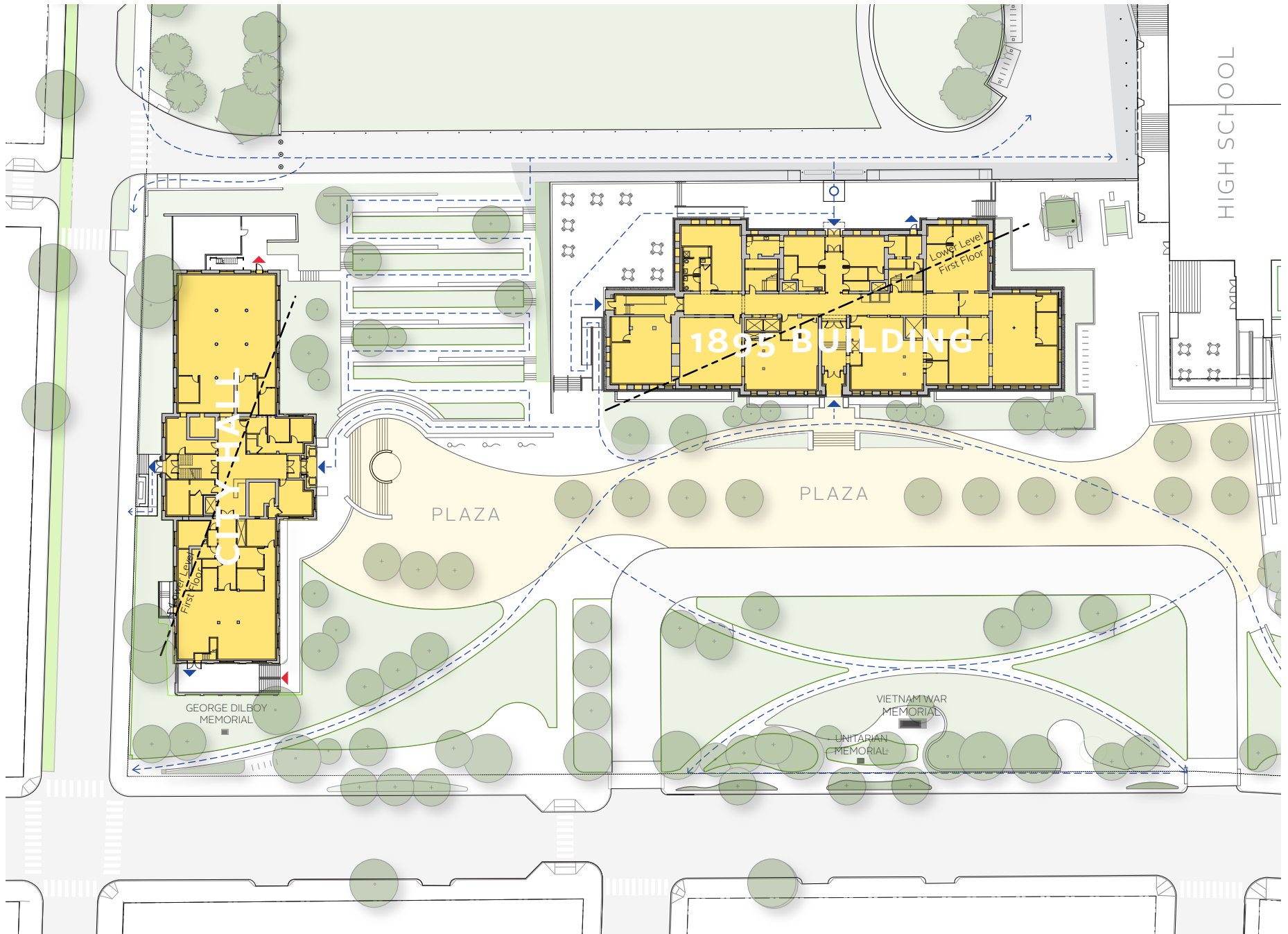
Overall, the program—including growth to 2030—is being adequately accommodated in each of the three buildings. The work to bring the plans to a finer grain of resolution will be an important part of the effort in the next phases of design, including validation of layouts with departments and further refinement of the adjacencies between work and support spaces.

PDP - SCENARIO 4







PSR MASTER PLAN SCENARIO





PROPOSED SITE PLAN - CITY HALL AND THE 1895 BUILDING (REPRODUCED FROM THE 2019 CENTRAL HILL MASTER PLAN, SMMA)

-  NON-ACCESSIBLE ENTRY/EXIT
-  ACCESSIBLE ENTRY/EXIT
-  ACCESSIBLE ROUTE/ELEVATOR
- 

TEST FIT PLANNING - CENTRAL HILL AND BUILDINGS

CENTRAL HILL - SITE CONTEXT

As the proposed plan at left begins to suggest in its relationships of buildings to site, there is an opportunity for a renovated City Hall and repurposed 1895 Building to comprise more than the sum of their parts. While bringing various city departments into closer proximity is a key objective of the BMP, a larger goal is the establishment of a clearly-defined, appropriate identity for Somerville's city government on Central Hill. Landscape design across the Hill will play an essential role in situating these two buildings to each other, to the newly completed Somerville High School, and to the Central Library, achieving a unified sense of place and renewing this historic and cherished precinct of the city.

The proposed landscape design reproduced here comes from the 2019 Central Hill Master Plan (CHP), authored by SMMA. The City initiated the CHP during the design phase of the High School Project, recognizing that the Central Hill site outside the High School limit of work would require a holistic vision to avoid a piecemeal, fragmentary effect once the High School was completed. As the CHP Report introduction states:

The City envisioned an inviting and accessible civic campus that embodies its values for accessibility, inclusion, environmental stewardship, and respect for local history. The plan was developed through interdisciplinary project review, meetings, and a participatory public process; it resulted in a campus plan that provides a cohesive experience throughout and a road map for incrementally implementing the vision.

The objectives set forth in the CHP vision will be developed further by the design team in future phases.

CITY HALL - PAST TO FUTURE

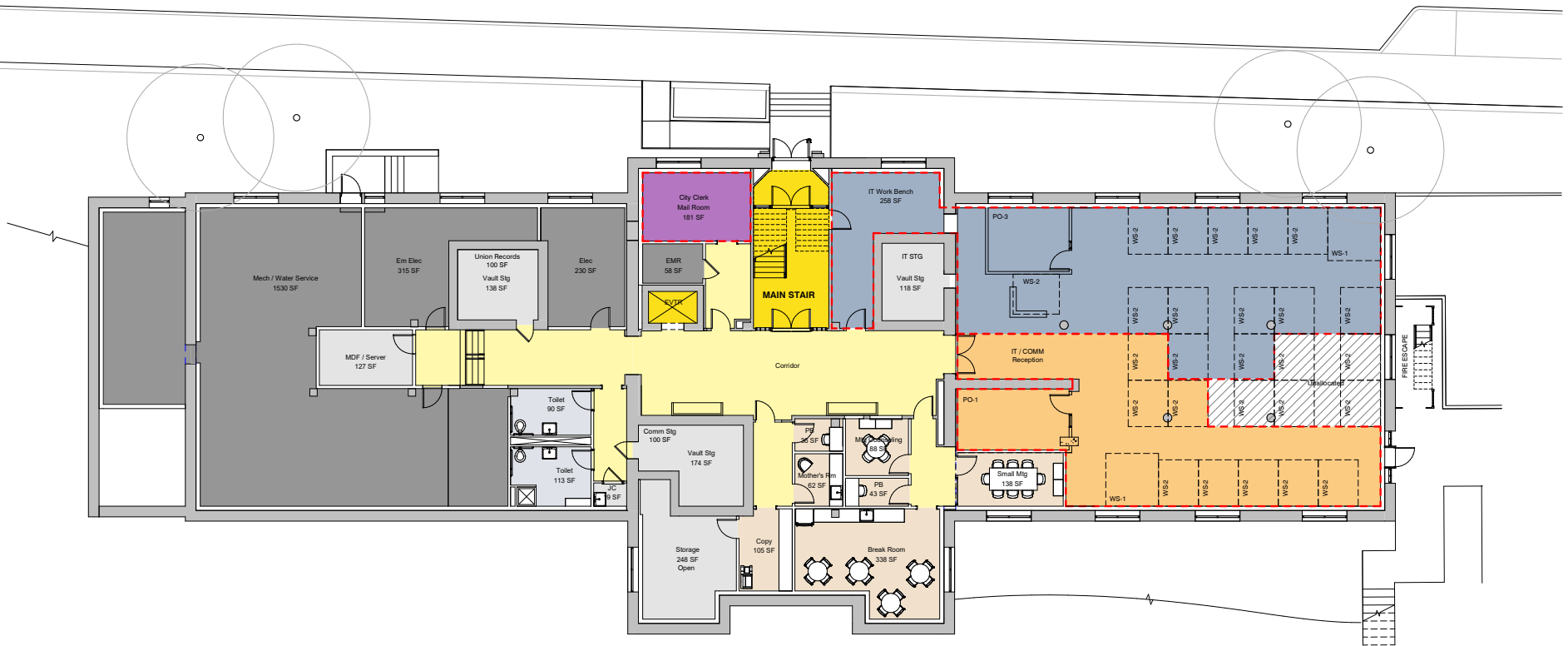
Planning and designing for a successful interior renovation begins with a thorough understanding of the architectural constraints of the existing building and their reasons for being. As detailed in the March 2021 Existing Conditions Assessment, City Hall's built form reflects its unique history, multiple campaigns of expansion, and evolution of uses. It began life as Somerville's first Free High School in 1852. It primarily owes its exterior appearance today to a 1924 renovation and expansion when the north wing, clock tower, central third floor, and portico were all added. Cast-in-place concrete fireproof records vaults were threaded through the levels. A surprising discovery was that the building's internal superstructure also dates to this 1924 campaign; the wood bearing walls and wood structural floors of the older wings were replaced with concrete slabs, beams, and columns. Only the south wing attic's heavy timber trusses and joist floor structure were retained. Today, City Hall retains a relatively high level of finish in its public corridors, Mayor's Office, and City Council Chamber. These finishes will be preserved while more intensive reconfiguration takes place elsewhere.

The classically-inspired symmetrical plan created by the addition of the north wing in 1924 provides clues for the future layouts: open office areas at the ends of the wings, with closed offices and shared spaces clustered at the center of the building. Lower Level mechanical space is located to the south while office space to the north takes advantage of the descending grade for full-height windows. To provide more planning flexibility, the under-utilized vaults in the north and south wings above the Lower Level are proposed to be removed, with all vaults to be removed from the Second Floor upward.



Somerville City Hall (top to bottom): Photograph of the east facade, circa 1900; photograph of the east facade, circa 1924 after the 1923 expansion and renovation (*Images of America*)

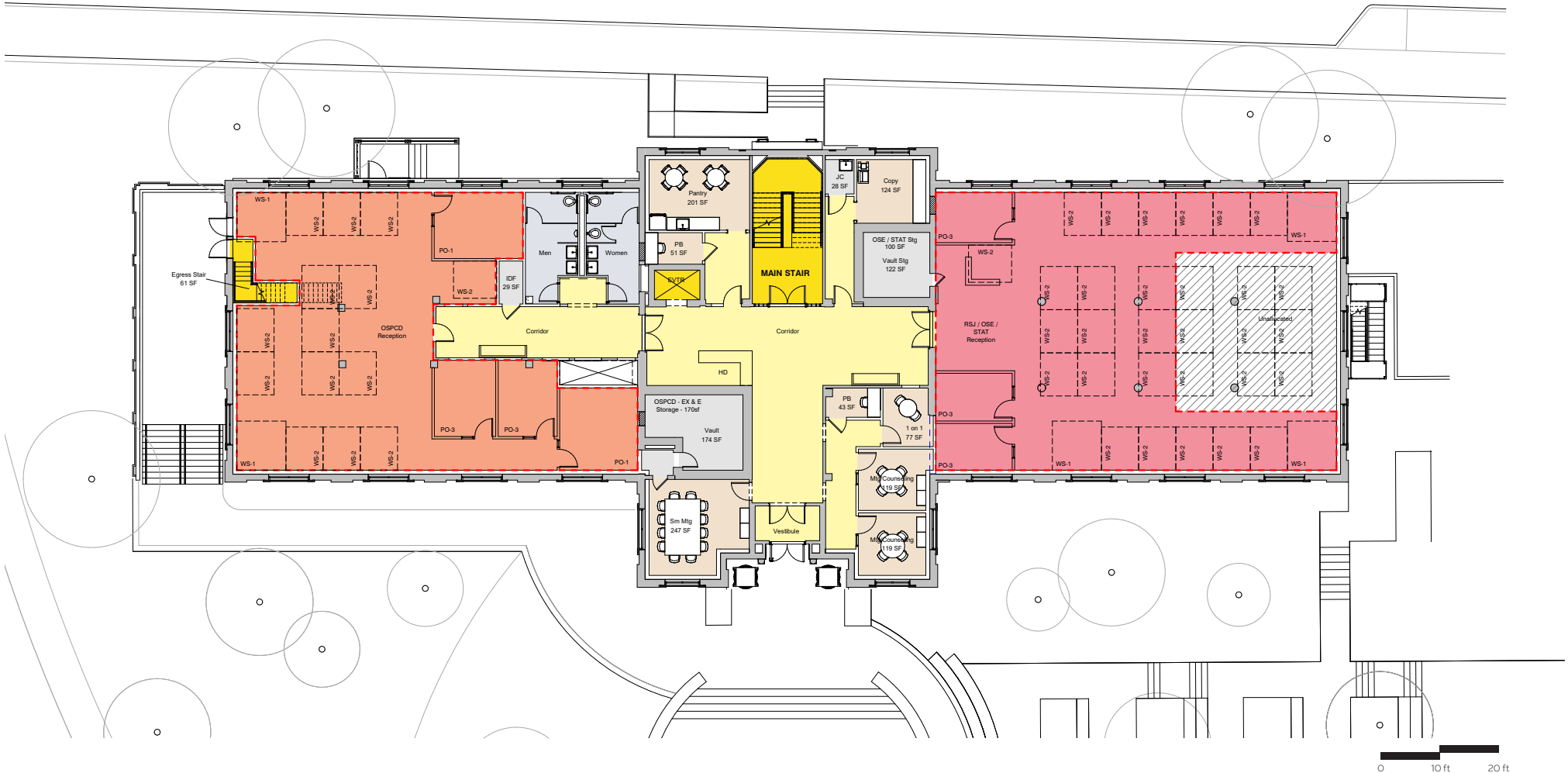
CITY HALL



LOWER LEVEL

The Lower Level of City Hall houses the primary MEP and back-of-house support spaces. Refinement of these needs resulted in the ability to locate an additional division (Communications) on the northeast side of the floor. The IT department and the City Clerk Mail Room

are also located on this level for ease of deliveries and good access to the School Street entrance. Shared program spaces and storage are available on the east side of the building. Unallocated space is identified by the light gray hatched pattern.

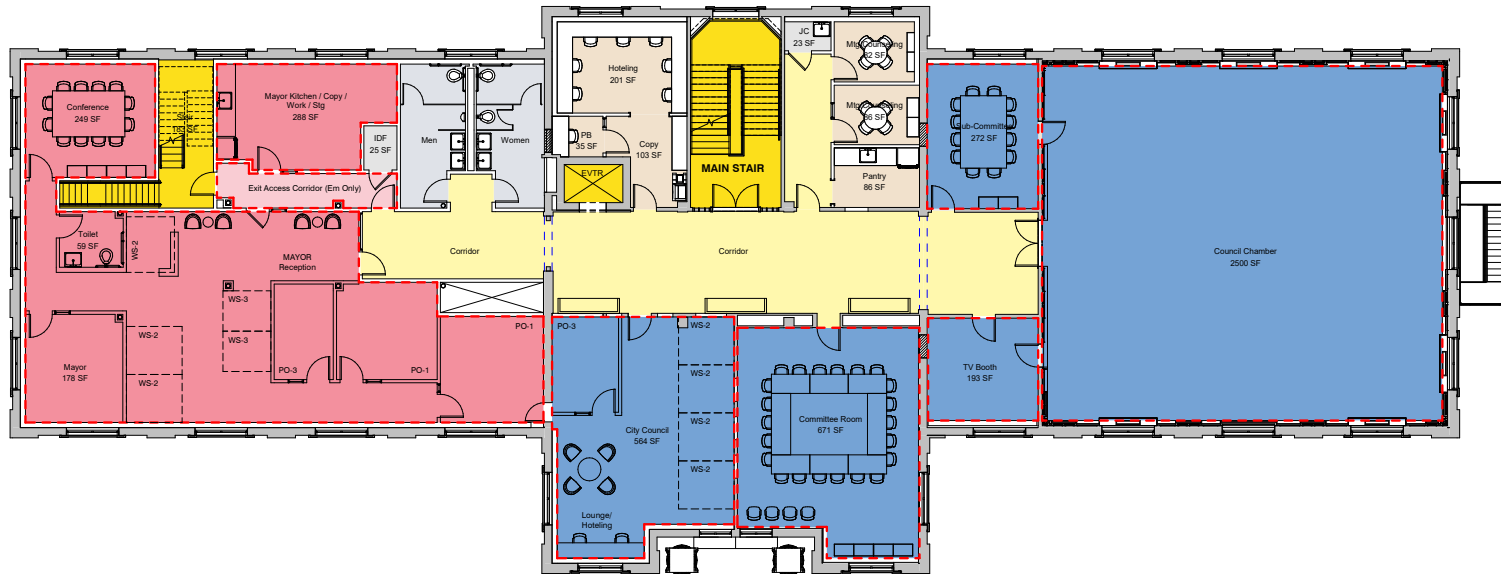


FIRST FLOOR

The First Floor of City Hall is the new home for a number of departments with close policy-making connections to the Mayor's Office. It includes three divisions under the Mayor's Executive Office umbrella (OSE, RSJ, and SomerStat) and two divisions from OSPCD (Executive and Economic Development).

Adopting a common planning strategy throughout the building, shared meeting and support spaces are located in the central east-west bar for ease of access by both staff and visitors. A Help Desk is located off the primary entrance to greet and guide visitors.

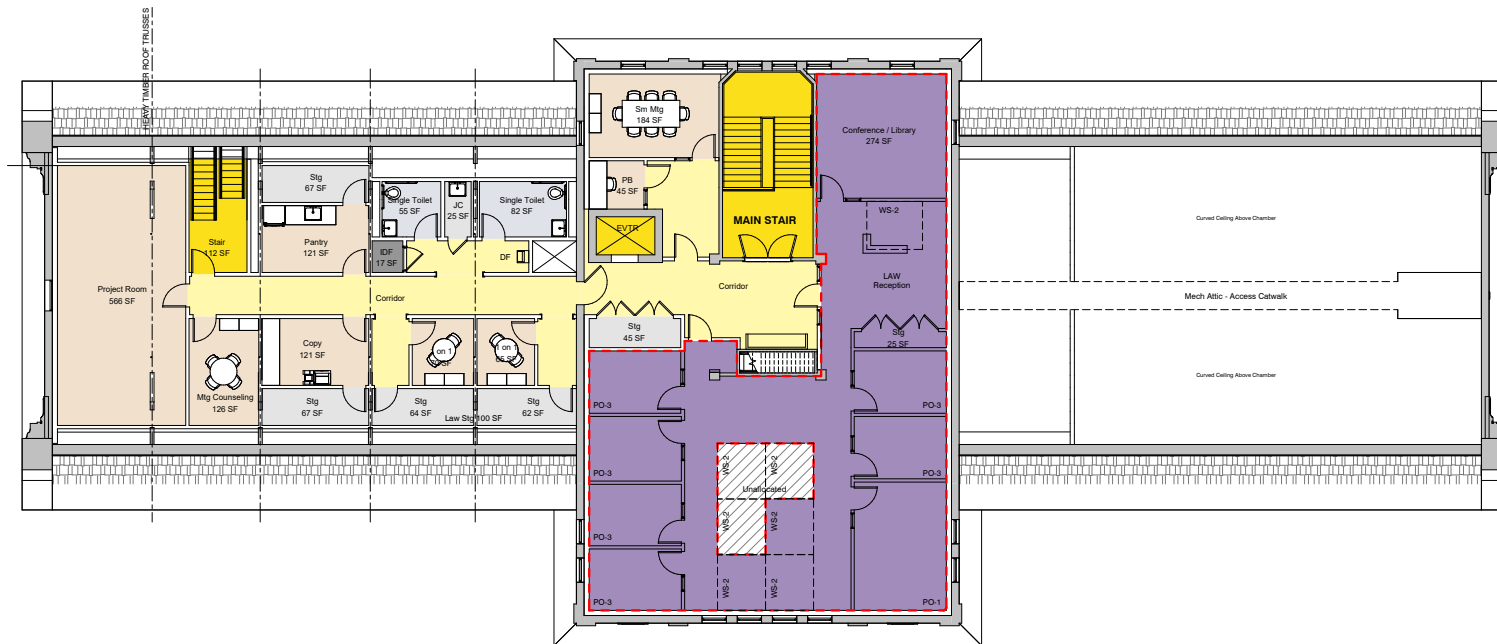
CITY HALL



SECOND FLOOR

The Second Floor of City Hall houses the existing City Council Chamber as well as City Council support functions. The Mayor's Executive Office suite and its supporting functions are relocated to the south side of the floor. The City Council Chamber remains in its

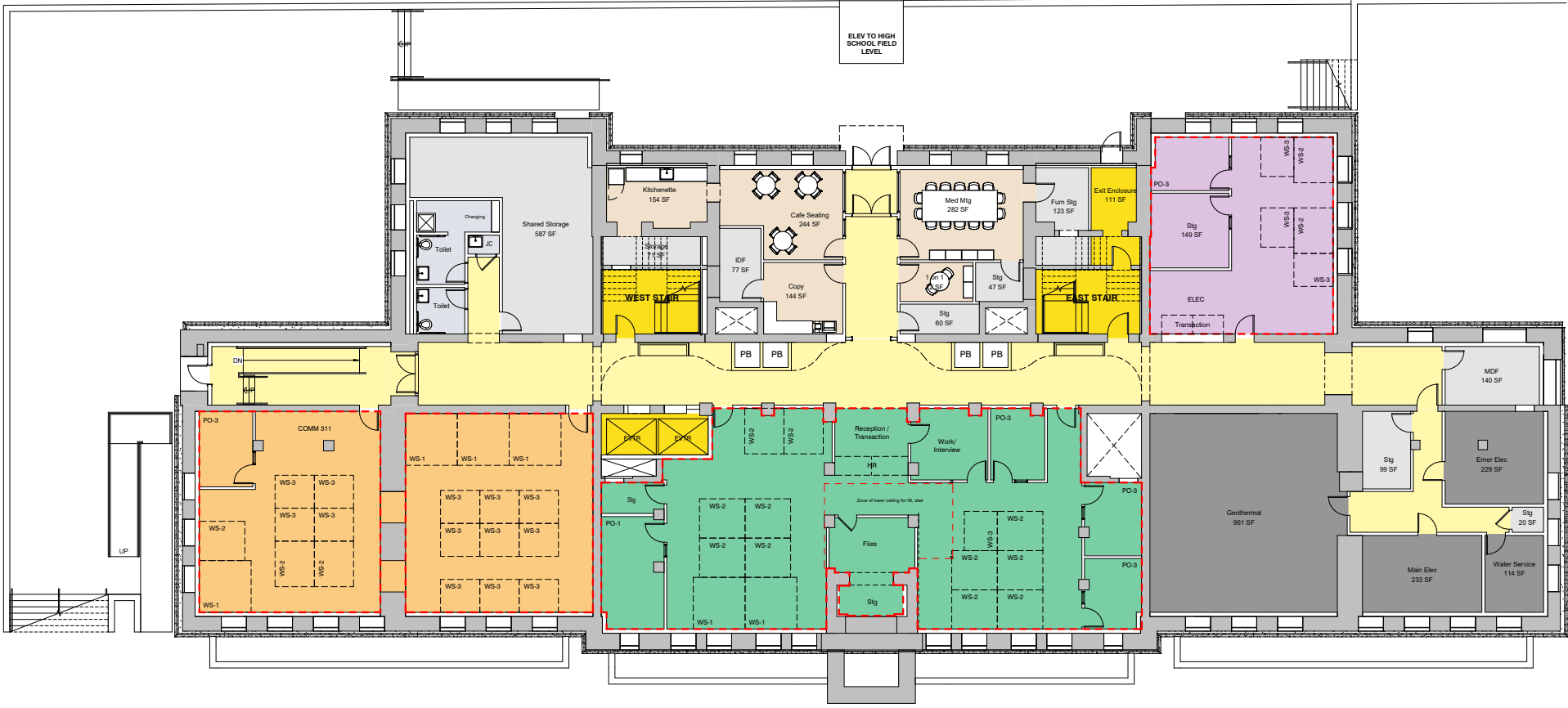
existing footprint and the Committee Room moves to the former Mayor's Office, with the intent to retain the historic character of this space. Support spaces such as hoteling for staff who are visiting the building and small meeting rooms are centrally located.



THIRD FLOOR

The Third Floor of City Hall provides the home for the Law Department. This group similarly has close policy-making connections with the Mayor’s Office, but is less public in nature and requires additional considerations for confidentiality. The south side of the floor provides

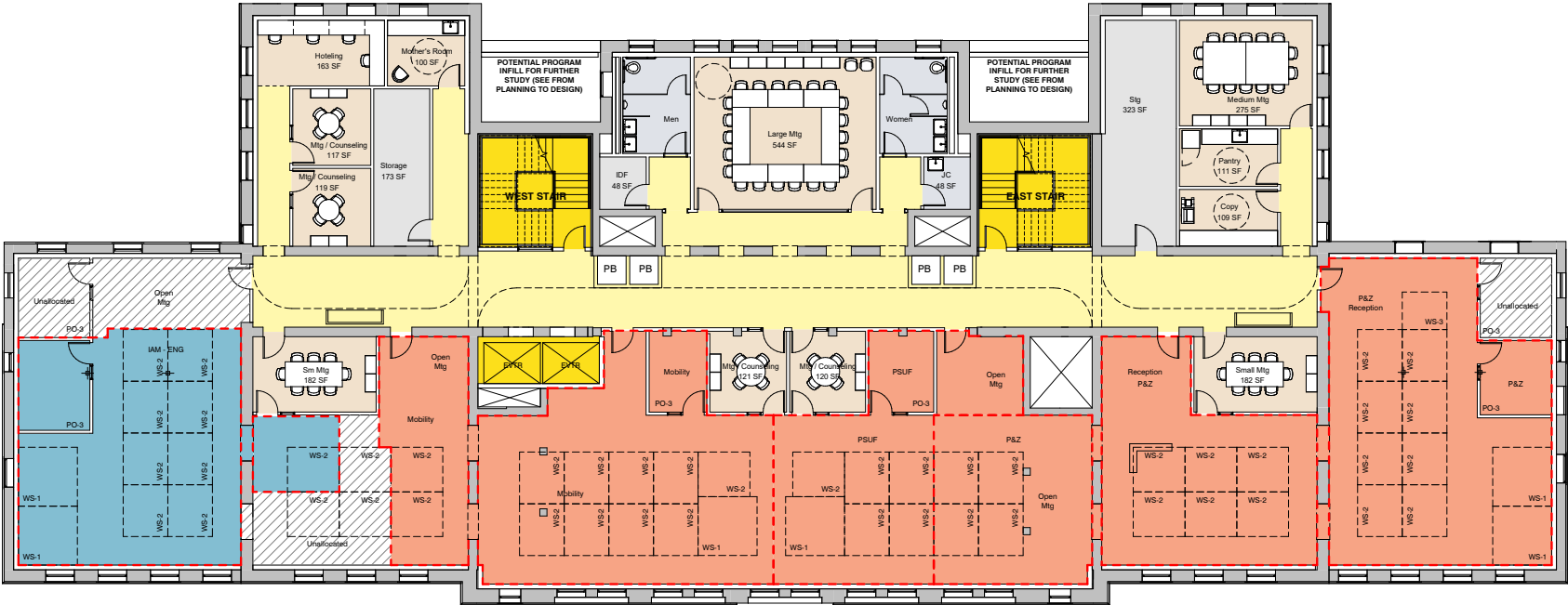
meeting and support spaces along with a multi-use Project Room for use on a flexible basis across administrative groups. Unallocated space is identified by the light gray hatched pattern.



LOWER LEVEL

The Lower Level of 1895 provides two accessible entries: one adjacent to the exterior elevator leading from the High School field level and Gilman Square Station beyond, and a west accessible entry oriented toward City Hall. This "desire line" connection will help City Hall and 1895 to operate in tandem as Somerville's

civic district on Central Hill. The Lower Level houses building mechanical and electrical equipment. Support and meeting space needs are organized primarily in the north center-section of the building on all floors. These elements vary slightly by floor based on the departments and divisions allocated for each level.

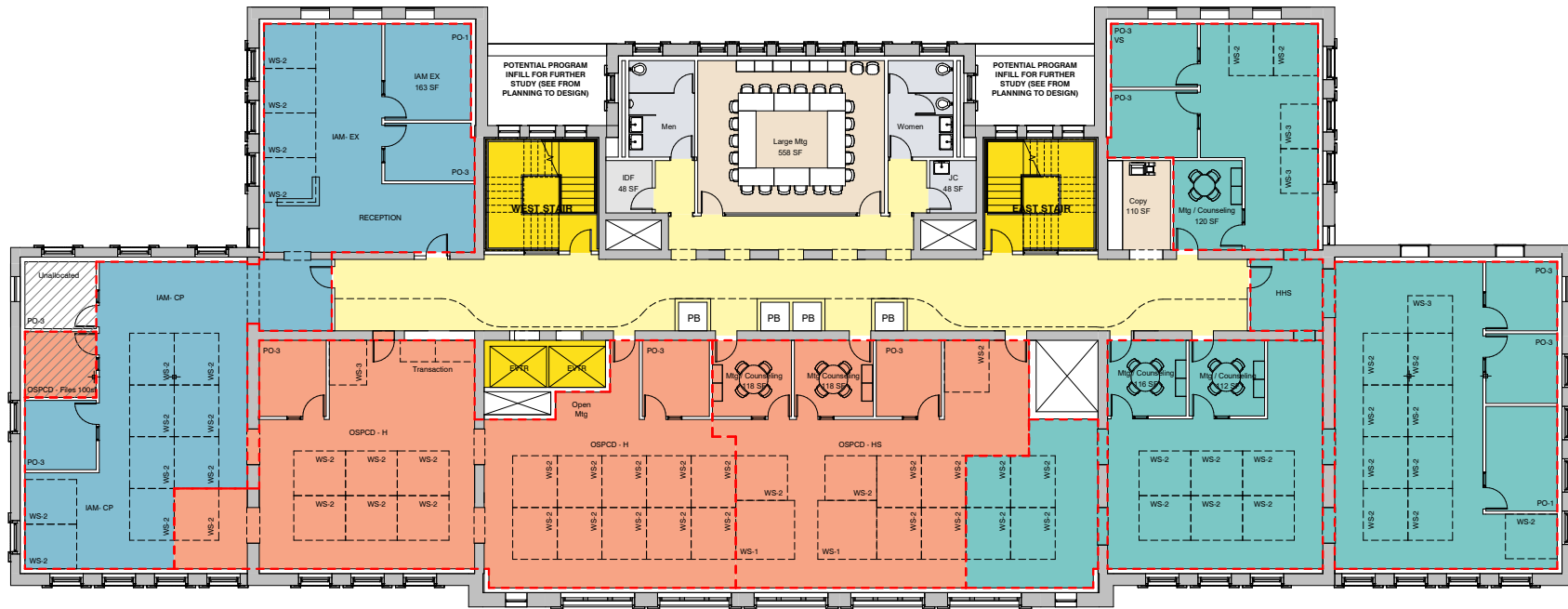


SECOND FLOOR

The Second Floor of 1895 houses three divisions of OSPCD (Mobility, PSUF and P&Z) and IAM-Engineering. These departments are co-located to capitalize on desired adjacencies between the OSPCD divisions to one another and to Engineering. The reduced number

of groups at this level provides for additional expanded meeting and support space on the floor. Meeting and Counseling Rooms are also allocated in certain department program suites but can be accessed from either the suite or public corridor.

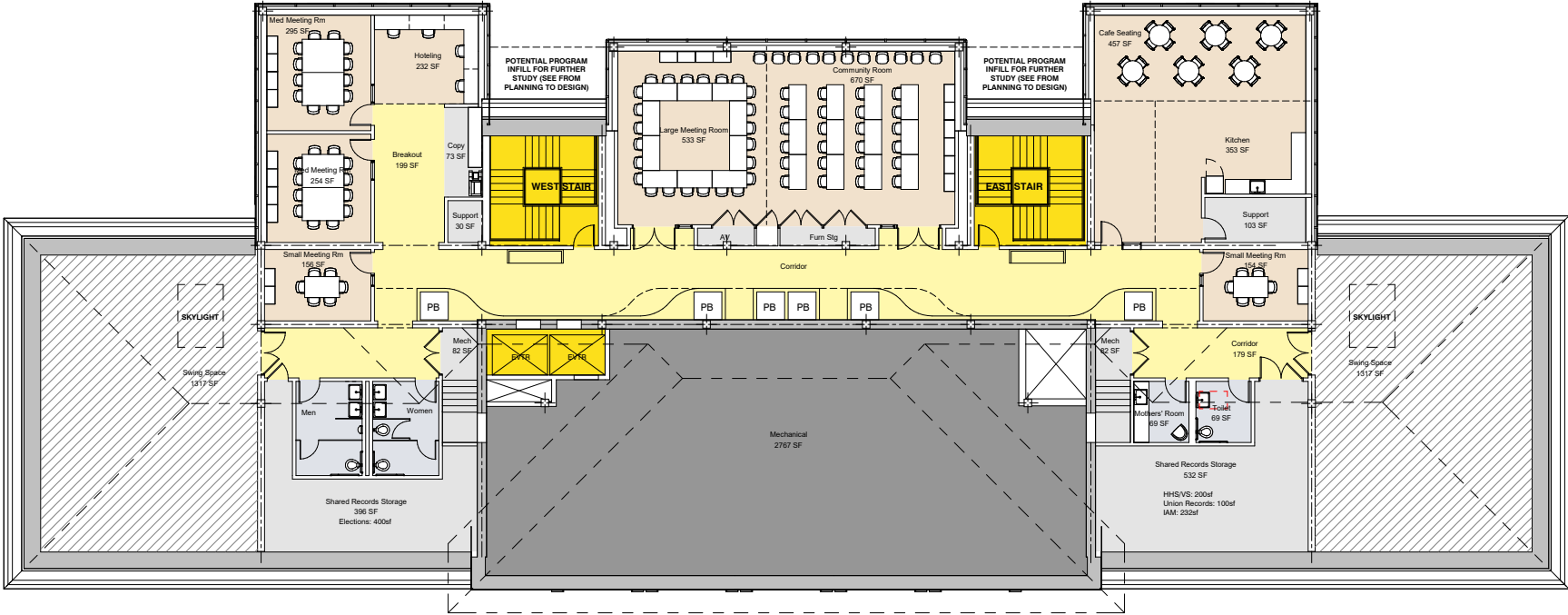
1895 BUILDING



THIRD FLOOR

The Third Floor of 1895 houses two divisions of IAM (Executive and Capital Projects), stacking the divisions of this department directly above Engineering on the floor below. OSPCD (Housing and Housing Stability) are co-located with HHS and VS to capitalize on their desired adjacency and working relationship. The

demands for more staff on this floor result in less available shared space, but additional support spaces can be found one floor above and below. Similar to the Second Floor, Meeting and Counseling Rooms are also allocated in certain department program suites but can be accessed from either the suite or public corridor.



FOURTH FLOOR

The rebuilt Fourth Floor of 1895 is essential to fulfilling the space needs program, addressing support and meeting space needs for City staff during the business day while hosting Board, Commission, and Committee meetings and community events in the evenings. The proximity of City Hall to 1895 means this floor can also support the needs of City Hall departments. Community

partners and City departments beyond the two buildings could also use these spaces by reservation; Central Library programming is one example.

The two central meeting rooms can be combined to create a single larger space for programs as needed. A break room to the east can support staff during the day while providing pre-function or food service support in

the evenings. To maintain the historic roof massing, the south half of the plan will have no access to daylight, making these spaces ideal for mechanical and storage while freeing up valuable daylit Lower Level space. At each end of the building, 1300 SF of space below the eaves, lit by a skylight, is held for future uses. Possible uses include swing offices, project rooms, or storage.

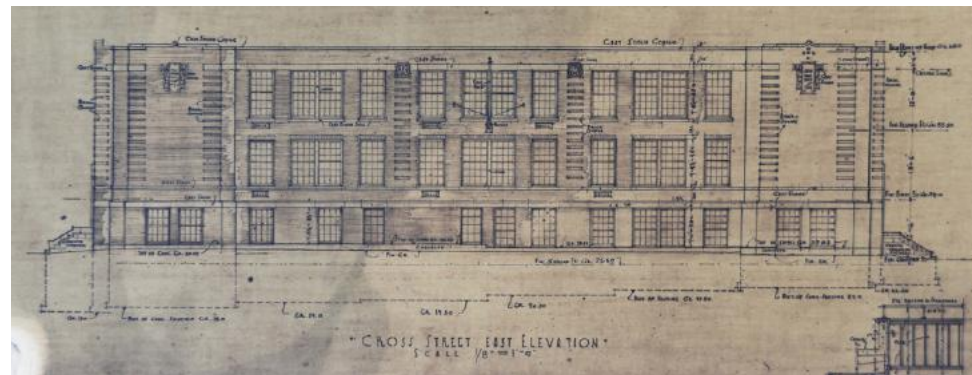
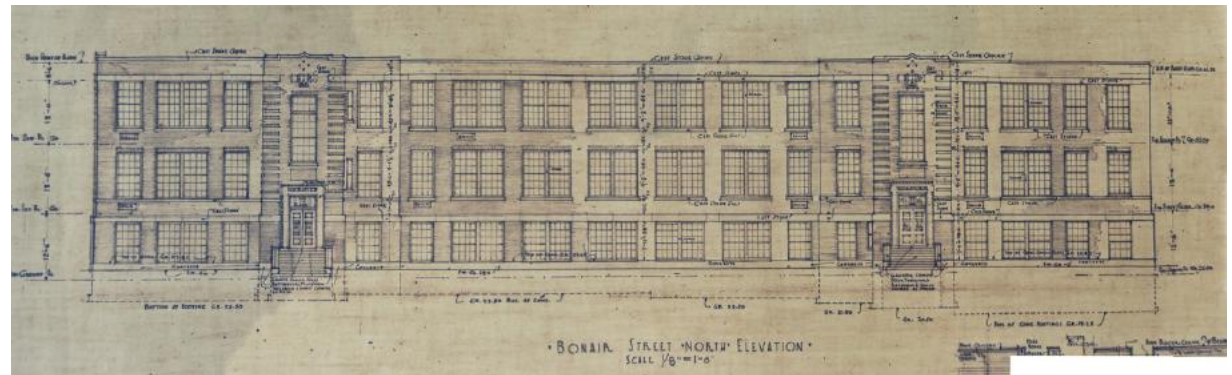
TEST FIT PLANNING - EDGERLY

EDGERLY - PAST TO FUTURE

In contrast to City Hall and the 1895 Building, with their nineteenth-century roots, Edgerly is an all-concrete and brick masonry school building dating from the 1930s. Purpose-built as a combination vocational and continuing high school, Edgerly's design incorporated several different planning models for instruction, from traditional classrooms of approximately 700 SF off a double-loaded corridor, mostly in the north and east wings, to large open-plan spaces served by column grids in the west wing. These large spaces originally contained vocational instruction workshops such as auto repair and machining. Edgerly contains three floors but no basement; the level of the "Ground Floor" was set approximately two feet below grade, with the First Floor and Second Floor above.

Like the 1895 Building, the superstructure sets clear parameters for replanning: the long-span concrete pan joist floor slabs are not easily modifiable, and the existing corridor walls are load-bearing. The existing exterior doors, which lead directly into egress stairwells at the half landing, do little to announce a welcoming place of entry or support wayfinding. The building's function will be significantly improved by a new primary entrance on the east facade, establishing a new building identity on Cross Street, achieving universal accessibility, and providing a common entry sequence to the entire building.

Shared spaces are clustered centrally in the north wing while classroom and continuing education programs lend themselves to being located in the east wing. The open flexibility of the west wing is very favorable for workspace planning. Edgerly's "gymnasium" with its existing gymnasium fit-out and a raised stage is proposed to remain and be refurbished.



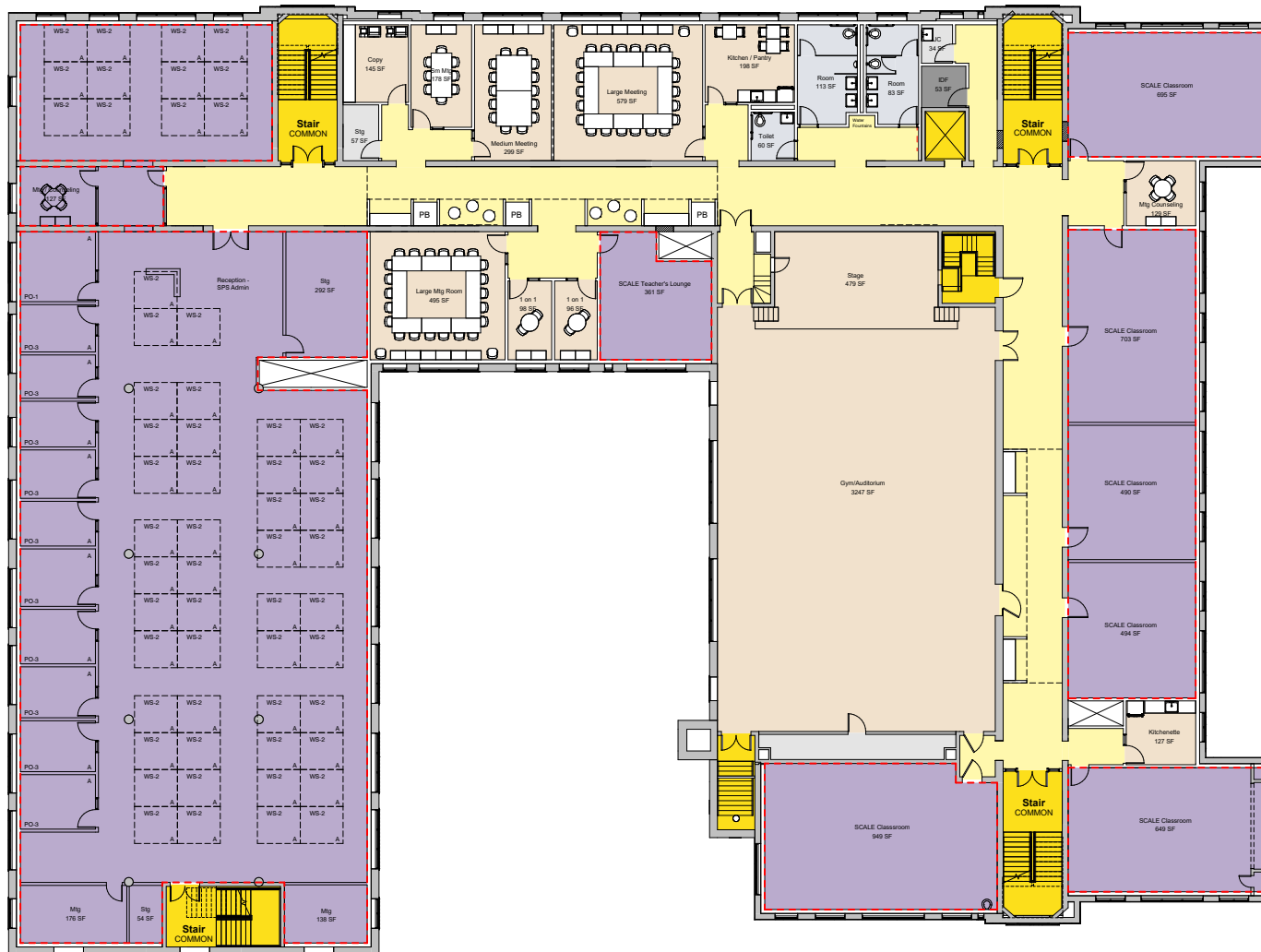
Edgerly Original Construction Drawings (top to bottom): Bonair Street North Elevation, Cross Street East Elevation
Massachusetts State Archives, State Building Inspection Office Plan Collection

GROUND FLOOR

As illustrated, the plan for the Ground Floor of Edgerly is oriented around the opportunity for a new entry sequence on the east side of the building. SFLC, EO and SOP are co-located together as divisions that work closely in their departmental missions. Parks and Recreation is located in the west bar of the building,

with an option for direct access off the west driveway or the parking lot for ease of deliveries. SOIA is also located on the Ground Floor for ease of access by visiting clients and constituents. The north center bar provides shared meeting and support spaces for all groups.

EDGERLY



FIRST FLOOR

The west bar of the First Floor of Edgerly is the primary location for Somerville Public Schools' administrative staff. Not all staff can be accommodated on a single floor; additional SPS staff are stacked directly above on the Second Floor. SCALE classroom spaces are located

on the east side of the building and stack with the balance of the classrooms on the Second Floor. Shared meeting and support spaces are located in the north bar. The gymnasium space will remain for operation by Parks and Recreation.



SECOND FLOOR

The Second Floor of Edgerly houses the remaining administrative groups of Somerville Public Schools in the west bar. The staff are co-located with SCALE and Community Schools staff. SCALE classrooms are located in the east and north bars, along with additional

SCALE lounge spaces for students and staff. The north bar is shared support and meeting space for these administrative groups.



From Planning to Design

FROM PLANNING TO DESIGN - SUSTAINABILITY



INTRODUCTION - LEED PLATINUM & NET-ZERO READY

During the course of Building Master Plan work, the design team and the City's Internal Technical Team convened on several occasions to validate the key values of the City's sustainability vision and establish specific objectives for the three building renovation projects contemplated in the BMP. Internally, the design team also conducted multi-disciplinary charrettes to ensure that the opportunities and constraints of each site were well-understood, to review sustainability strategies at a planning level for conformance with the City's vision, and to coordinate design intent to advance the overall approach while also supporting the Master Plan conceptual cost estimating effort.

These projects will strive to be exemplars of high-performance, sustainable design by reducing energy use, greenhouse gas emissions, storm water runoff, and potable water use to the greatest extent possible. To align with these goals, ***the buildings will be all-electric, with no fossil fuel combustion on-site. Some renewable energy production will be located on-site, with the potential to fully offset operating energy with off-site renewables and achieve Net Zero Emissions.***

At this stage of design, it is also understood that these buildings will be renovated to meet or exceed the sustainability requirements of Somerville's Zoning Ordinance (a non-binding benchmark for City-owned properties). As such, the projects will be designed to achieve Leadership in Energy and Environmental Design (LEED) Platinum certification under LEED v4 Building Design and Construction (BD+C): New Construction (NC) and Major Renovation Program. Preliminary LEED scorecards for each building can be found in the technical appendix.



HIGH PERFORMANCE ENVELOPE

A high-performance envelope is critical to meeting the projects' energy efficiency and Net Zero Emissions goals. As such, the masonry exterior walls of each building will be insulated and air-sealed from the inside to reduce infiltration of outside air, air exfiltration, and provide a tight envelope with high thermal resistance. The existing windows will be rehabilitated or replaced with units utilizing double- and triple-glazing and all roofs will be insulated to reduce heat gains and losses.

Hygrothermal (WUFI) analysis will be conducted using real-world material samples from the buildings to model various wall assembly modifications. This will help determine the most appropriate approach and the maximum amount of insulation that can be added to the exterior walls without endangering the historic masonry.



ENERGY EFFICIENCY

Mechanical systems and fixtures will be designed and specified to use the least amount of energy feasible while optimizing occupant comfort. By implementing a mix of both passive and active conditioning strategies, including system selection and advanced control mechanisms, these projects will dramatically reduce the amount of energy spent on heating, cooling, fans, and pumping. Decoupled mechanical systems will include dedicated outdoor air systems with enthalpy heat recovery. A geothermal well field shared by City Hall and 1895 will serve ground-source heat pumps in each of these two buildings for heating and cooling. All other buildings will use air-source heat pumps due to site constraints.



CARBON EMISSIONS

Addressing both operational and embodied carbon emissions is crucial to setting a course for a net zero future. Through a combination of energy efficiency measures, on-site photovoltaics, and off-site renewable credits, each project has the potential to fully offset its operating emissions when measured on an annual basis.

Each project will also seek to maximize the sourcing of materials from appropriate distances for each specific material type to minimize carbon emissions from material transport and to contribute to the local materials economy. Wood products will come from forests where responsible forestry is practiced, and whenever possible, local or regional forests. At least 75% of construction waste will be diverted from landfills towards recycling or re-use. (This criterion is aligned with LEED NC-v4 credit requirements.)

The reuse of building fabric is the primary strategy to reduce the overall embodied carbon of a project. When specifying new materials, selection of products that disclose embodied carbon through product-specific Environmental Product Declarations (EPDs) and minimize embodied carbon will be prioritized. The embodied carbon associated with the construction and materials installed in each project will not exceed 500 kg CO₂e/m². This criterion is aligned with the ILFI Zero Carbon certification requirements.



SITE AND LANDSCAPE

The targets for site design are to provide a visual connection to nature from within the building wherever possible, enhance the ecological function of the site,

filter water on site, minimize the urban heat island effect, minimize light pollution, and create comfortable outdoor microclimates. A range of strategies to be utilized include: reducing impervious hardscape surfaces and using high-albedo paving materials, using native and drought-resistant vegetation, specifying and locating trees to shade paved areas and help reduce building energy consumption, and designing site lighting to minimize light trespass beyond the site while ensuring sufficient lighting for security.



STORMWATER MANAGEMENT / WATER EFFICIENCY

Each project is committed to managing stormwater on-site. By reducing the stormwater run-off volume and improving the quality of the water leaving the site, negative impacts are lessened on surrounding waterways. A number of on-site stormwater management strategies are currently being explored including reduced impervious areas, permeable pavement, stormwater bio-retention, subsurface detention, and green infrastructure.

Conservation of potable water is a key element of the overall sustainability strategy. Indoor water use reduction will be addressed through the selection of low-flow plumbing fixtures and thoughtful landscape design will reduce outdoor water demand. In addition, stormwater will be harvested from the building roofs and reused for fixture flushing and irrigation needs. Reuse of stormwater reduces both potable water demand and stormwater runoff throughout the year.



LIGHTING

Lighting design for each building renovation will focus on visual quality, energy efficiency, sustainability, and aesthetics. With the specification of LED lighting fixtures and advanced lighting controls, these renovations will create high quality, energy-efficient interiors that improve the health satisfaction and productivity of the building occupants. The target for lighting sustainability is a 20% reduction from ASHRAE 90.1-2016. Some of the specific strategies for lighting sustainability include vacancy sensors in offices, break rooms, and meeting rooms; occupancy sensors in corridors, lobbies, restrooms and storage rooms; daylight dimming sensors with continuous control in all daylight/perimeter spaces; and site/exterior architectural lighting to be on separate control circuits and controlled by astronomical schedule or photocell.



INDOOR ENVIRONMENTAL QUALITY

Careful material selection with a consideration toward installation methodology will contribute to a high-quality indoor environment. Interior product selection criteria will focus on durable, low-toxicity, low-emitting products to safeguard the health of not only building occupants but anyone associated with the material throughout its life cycle, from product manufacturing through on-site construction to eventual disposal.



METERING

To guarantee that the design intent is being met, building performance will be measured and verified during construction and occupancy through Enhanced Commissioning and Measurement and Verification programs. These programs, to be further defined in a subsequent design phase, will require the use of submeters to break down building energy and water consumption into different end-uses. These submeters should be combined with a digital dashboard or online interface for real-time review of energy and water use.

FROM PLANNING TO DESIGN - INTERIOR ARCHITECTURE

INTRODUCING SPACE STANDARDS

As the space needs program was developed and refined, the necessity for broad standardization of office and workstation types and sizes across City departments became clear for multiple reasons: parity, space efficiency, ease of maintenance, and flexibility of assignment or use as departments grow, shrink or consolidate in future years. This led to the development of a set of program space standards. Detailed information on and illustration of the standards used to inform the master plan layouts can be found in the June 2021 BMP PDP report as a reference.

OPTIMIZATION OF BUILDING LAYOUTS

Additionally, the design team conceptualized the program elements as a constellation of space types with specific qualities: open (workstation areas), closed (offices, meeting rooms), specialty (Council Chamber, Mayor), support (storage and mechanical) and circulation (stairs and corridor). Independent of program, idealized notions for how these space types would overlay onto the existing buildings were mapped, informed by issues of proportion, clarity of planning, code, daylighting, and sustainability. Concept diagrams of these ideas can also be found in the BMP PDP report.

The three primary buildings in play were analyzed for the ability to provide a more universal approach to building fit-out. Demising walls between departments are minimized in favor of an open work environment to the extent possible, again to provide for future flexibility to re-arrange.

THE FIRST IMPRESSION

Improving the entry experience in each of the buildings to be renovated is key to the City's mission of establishing an inclusive, welcoming and accessible civic identity oriented toward constituents and the community. The test fit plans begin to do this by locating a central "help desk" near the primary entrance of each building. In addition to well-designed signage and clear wayfinding, visitors are greeted with a friendly face, available to answer questions and to help direct users to the services they need. The design of these elements will be further explored in the next phases of design.

CORRIDOR ACTIVATION

The primary corridors in the buildings in play have generous widths and footprints, particularly in the two former school buildings - 1895 and Edgerly. The test fit plans in this report propose conceptual ideas about how these types of spaces could be activated to maximize utilization of the spaces, to provide department and division support such as "phone booths" and informal break-out meeting areas. The images at right are precedent illustrations of these types of approaches the design team has used in other projects. These concepts will also be further explored in the next phases of design.

HIGH QUALITY WORKSPACE BENEFITS ALL

The successful renovation of these existing historic buildings moving forward is grounded in the importance of providing the most inspiring and functionally supportive work environment for City staff in their mission to provide essential services to constituents and

the community.

A key element is the introduction of biophilic design (increased connectivity to the natural world that measurably contributes to building occupant health and productivity), in particular providing glare-free daylight and views to the outdoors in all staff spaces.

HISTORIC FOUND AND SALVAGED FEATURES

In the course of the summer 2021 exploratory activities, several historic in-situ features were discovered in the buildings. The design team sees good potential to incorporate and showcase these found elements in the interior architecture to the extent possible. As additional exploratory and removal work is done, particularly in the 1895 Building, we hope to uncover more existing fabric which can help tell the story of this building's past and future. An example is shown in the image at right of a terra cotta rosette, enclosed behind hundred-year-old plaster. This terra cotta portal formed the west entrance of the original building prior to the addition of the 1914 classroom extensions.

Additionally, a number of exterior decorative elements were salvaged from the 1929 A-Wing and C-Wing before these wings were demolished. A Memorandum of Agreement (MOA) was signed between the City and the Massachusetts Historical Commission as a condition of demolition approval. The MOA states that selected terra cotta, cast iron, and cast stone decorative elements were to be removed and saved for reuse as part of the new construction, ideally in either the new High School or the 1895 Building renovation. In the subsequent design phases, the design team will survey and assess the salvaged materials and evaluate the best opportunities for their reuse in the 1895 interior fitout.



BBB Projects (clockwise from top left): Denison Bryant Arts Center, University of Chicago's Chicago Innovation Exchange, Lehigh Williams Hall, MIT Building E52



Salvaged and In-situ (from top to bottom): 1929 A-Wing facade with decorative elements; 1895 Building rosette, cast iron column

FROM PLANNING TO DESIGN - THE 1895 BUILDING FOURTH FLOOR & ROOF

AN OPPORTUNITY TO ADD NEW SPACE ON CENTRAL HILL

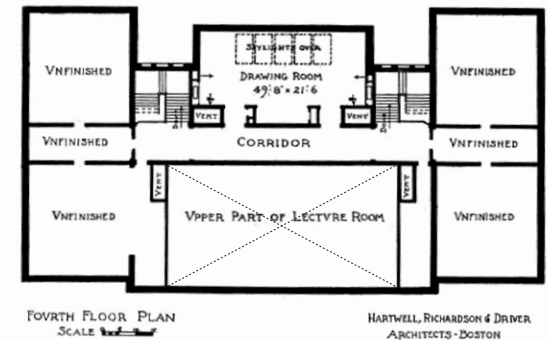
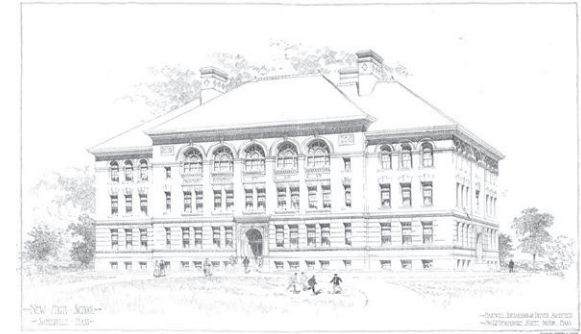
The present 1895 Building has undergone dramatic alterations of form over its 125 years. This structure, originally built as the Somerville English High School, witnessed two campaigns of expansion, countless interior alterations, a fire leading to the removal of the original roof and attic story, and most recently, full demolition of the adjacent 1929 A-Wing, C-Wing, and Auditorium Wing. The design concepts on the following pages propose an exciting new chapter for the building.

The building was originally capped by a monumental hipped roof with deep soffits and ornamental eaves punctuated by large decorated chimneys, character-defining features of the building's high style. The 1895 Building's architects, Hartwell, Richardson & Driver, were prominent in a nationwide architectural movement that began in the Boston area in the late 19th century: Richardsonian Romanesque. Their handsome design for 1895 artfully deployed the style's principal hallmarks from its robust roof massing to its deeply recessed arched openings, earth-toned brick and terra cotta masonry, and decorative foliate motifs throughout. Fire damage at the roof in the 1950s led to its complete removal. A flat roof and plain parapet were installed above the three remaining stories.

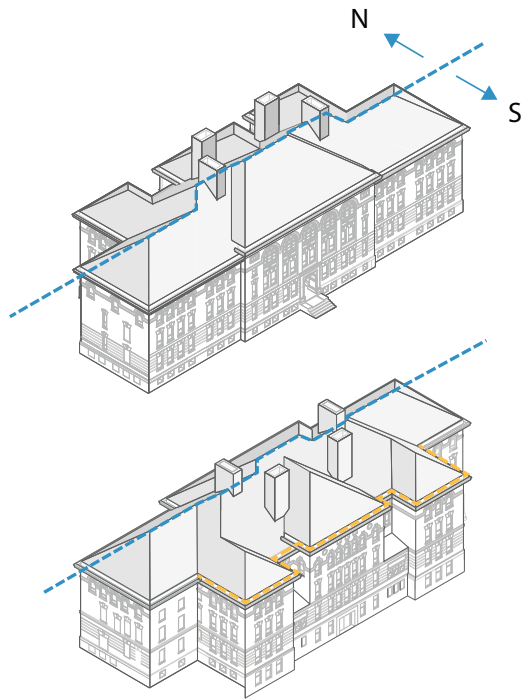
The recent demolition of the 1929 auditorium, part of the High School Project scope, has also impacted the original building. Significant portions of its north facade are exposed again after remaining concealed for 90 years. These areas were altered beyond recognition as part of the 1929 expansion: openings were bricked in, trim and ornament removed, and large openings inserted. The masonry is in a deteriorated state, and exposed once again to the elements. At present, this cherished city landmark is worse for the wear.



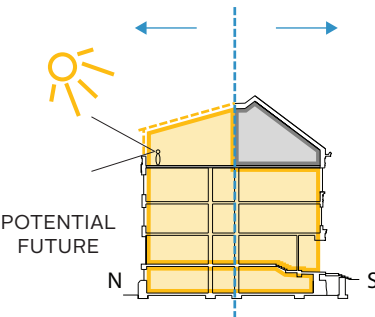
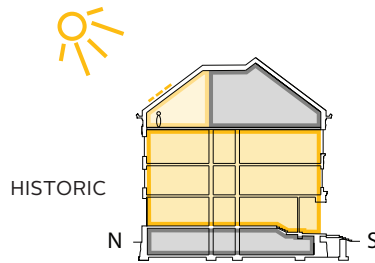
Existing photos of the south (top) and north facades



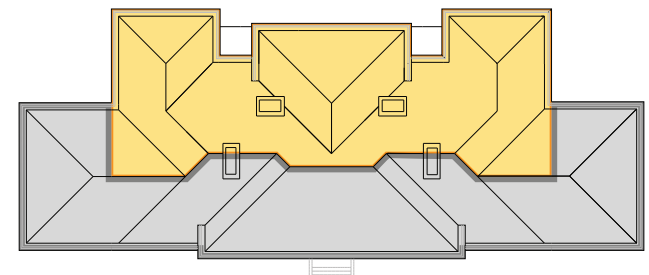
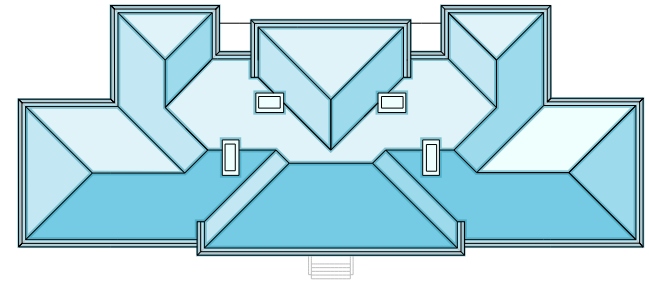
Somerville English High School (top to bottom): Architect's Rendering; Fourth Floor Plan; Photograph of fourth floor "Drawing Room", the only space with daylight on that level



ROOF RIDGE DEFINING FRONT VS. REAR OF BUILDING



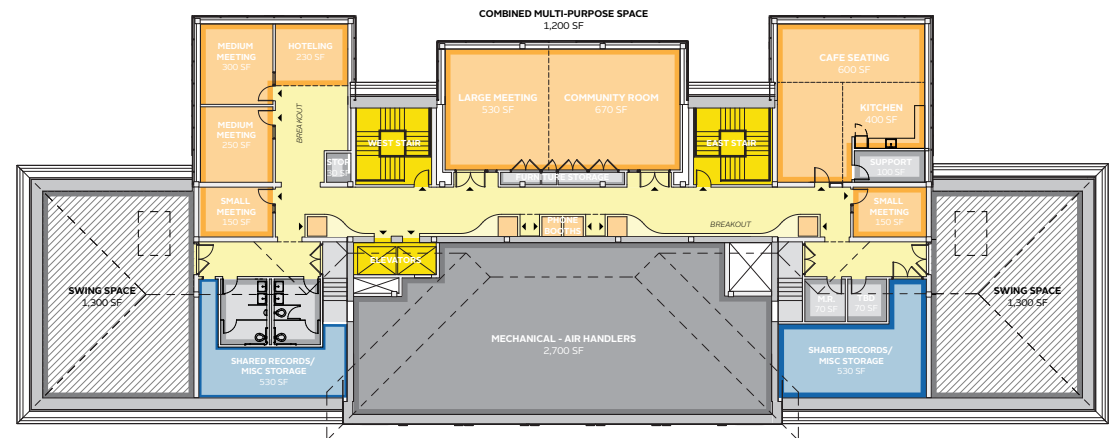
CENTERLINE BUILDING SECTIONS:
4TH FLOOR LIGHT AND VIEWS



ROOF PLANS (FROM TOP): HISTORIC PLAN; SKETCH DIAGRAM OF
TARGET AREA FOR PROGRAM SPACE DAYLIGHTING (YELLOW)

While comprehensive rehabilitation of the facades is needed at minimum, Somerville has an extraordinary opportunity to reconstruct the building's iconic original silhouette while reinstating an entire floor, adding significant interior square footage on Central Hill. These twin objectives, restoring the historic roof shape to make the building whole again, and creating optimized new floor area for City and community use, must be carefully balanced.

As these diagrams indicate, faithfully reconstructing the silhouette from the south facade up to the ridge could reinstate the principal view of the building, while to the north, the massing of the central zone could be modified from the historic geometry to support the program and forge a different architectural identity, telling a new story about the building's adaptive reuse.



4TH FLOOR CONCEPT BLOCKING DIAGRAM



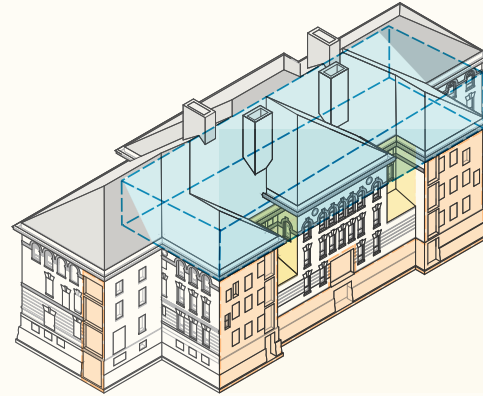
1895 BUILDING SKETCHBOOK: CONTRAST & COMPATIBILITY

NEW EXPRESSION FROM EXISTING CONTEXT




While in-depth, iterative design investigations with City and stakeholder input will be an integral part of future design phases, when it comes to design, it is the appropriate role and responsibility of a master planning effort to imagine the world of what *could* be. Here, we set the stage for future design directions by asking how two thematic elements of the existing architecture— (1) a language of resolved, folded roof planes, and (2) a hewn, chiseled effect in massing and materials that implies solidity and permanence—might inspire a new emergent form for the fourth floor on the north. This design concept aims to achieve several objectives:

- Responding to the geometry and massing context of the historic roof profile, while also reflecting and expressing the passage of time.
- Addressing the neighborhood's evolving landscape with the new High School to the east and Gilman Square redevelopment to the north.
- Offering the opportunity for well-functioning, inspiring interior spaces that house the program, address the plan's Guiding Principles, and orient users with a strong sense of place.
- Maximizing potential for daylighting and dramatic Somerville views to the north over Gilman Square.
- Telling an important, complex story about this building and the roof reconstruction, which makes reference to the historic form but is 100% new.
- Prioritizing, through material choices and detailing, a design that is economical to build and maintain.

The diagrams at right indicate the series of geometric operations that led to the illustrated design concept.



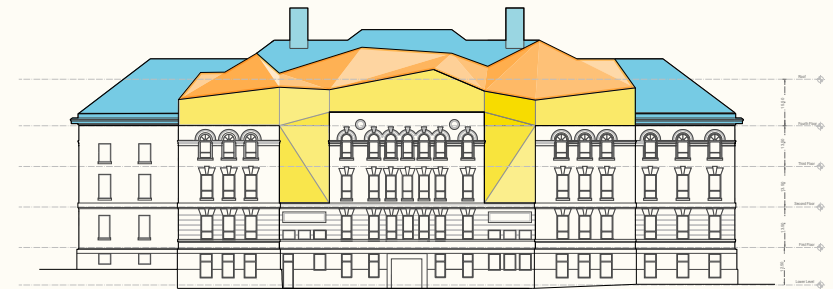
ZONES OF OPPORTUNITY

-  OPPORTUNITY FOR EXPRESSING 4TH FLOOR
-  OPPORTUNITY FOR RECONSTRUCTION
-  OPPORTUNITY FOR INFILL & FLOOR AREA

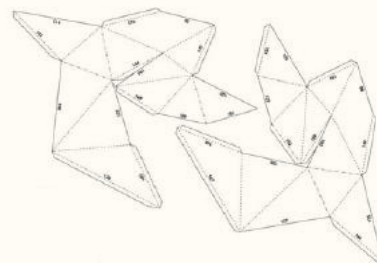


MATERIAL, SCALE, AND TEXTURE: A STYLE WITH A HEWN EFFECT

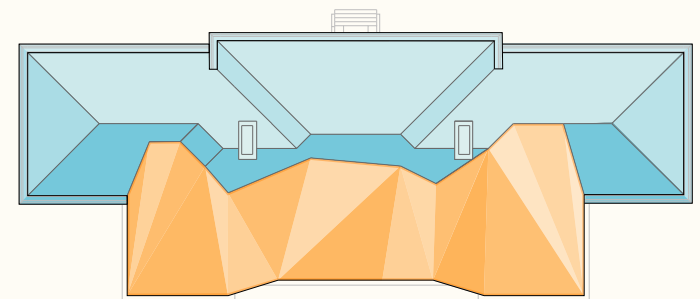
SEVER HALL, HARVARD UNIVERSITY;
COMPLETED 1880, H.H. RICHARDSON, ARCHITECT



NORTH ELEVATION - PROPOSED CONCEPT DIAGRAM

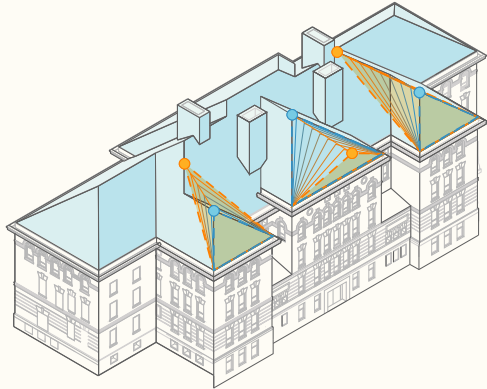


ROOFS: A LANGUAGE OF RESOLVED PLANES

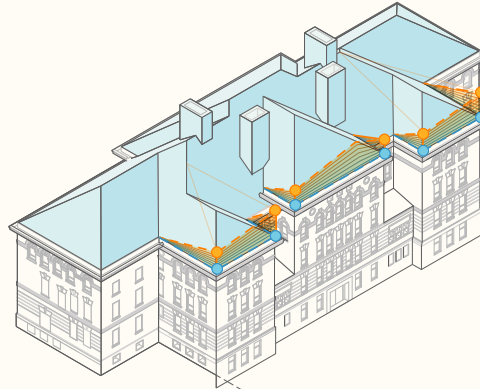


ROOF PLAN - PROPOSED CONCEPT DIAGRAM

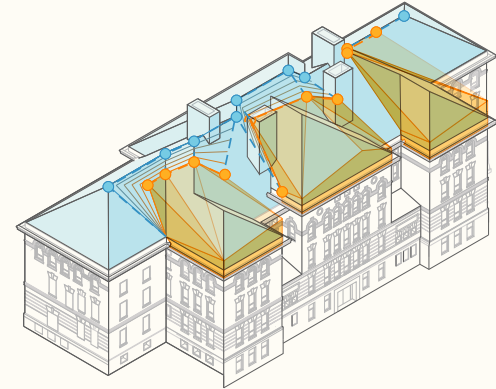




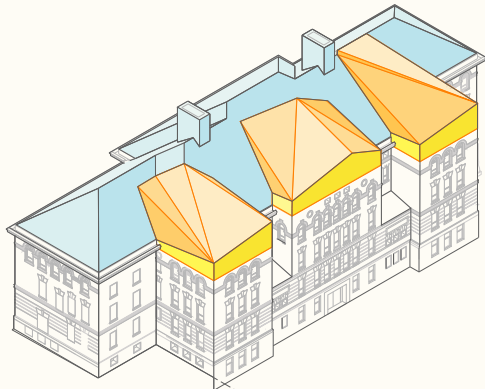
1. SHIFT/MORPH KEY VERTICES OF REAR ROOF HIP



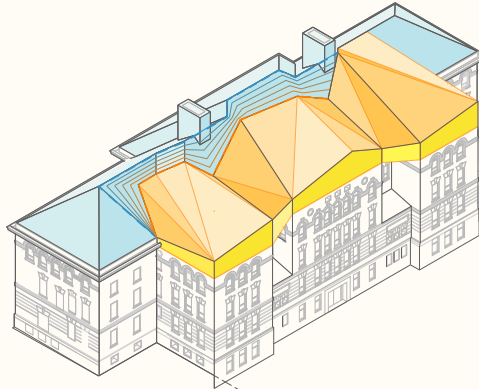
2. PEEL UP EDGES AT EAVES FOR DAYLIGHTING



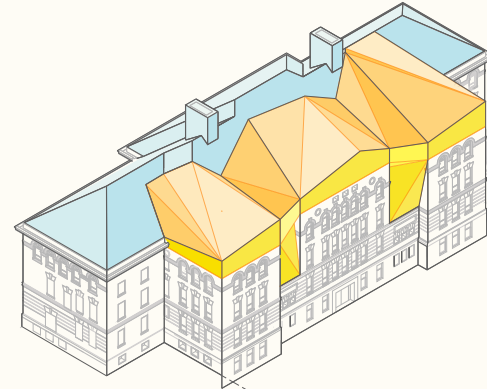
3. CONNECT BACK TOWARD HIGH ROOF RIDGES



4. MASSING: THREE PAVILION ELEMENTS



5. BRIDGE LINKS: UNITING THREE ELEMENTS AS ONE

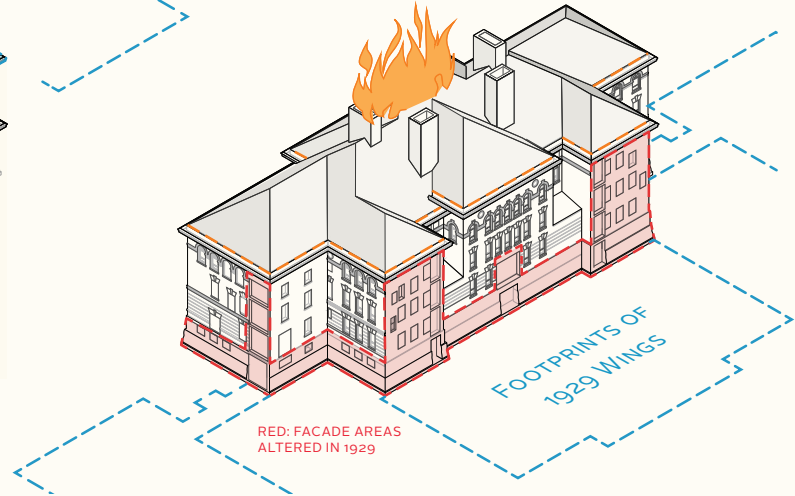
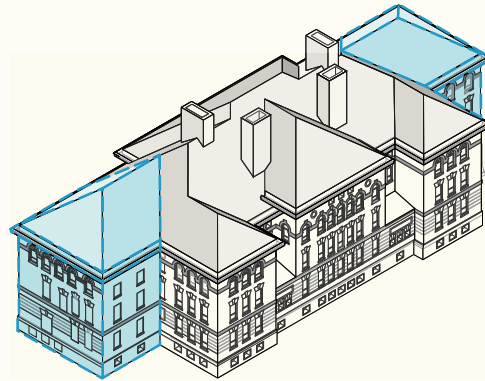
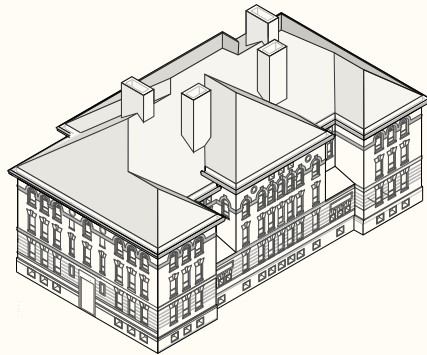
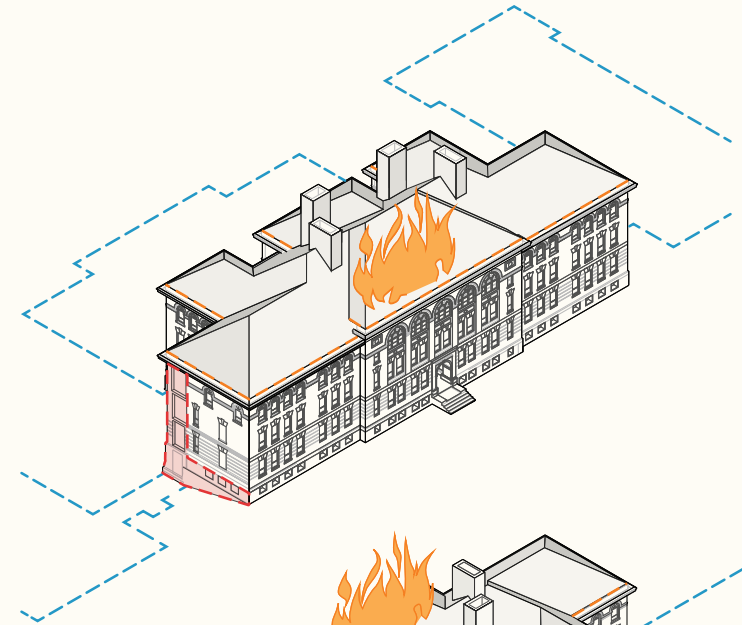
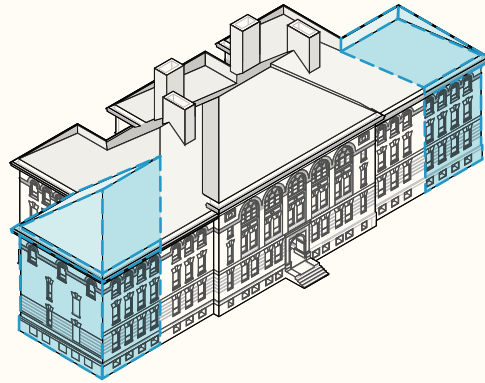
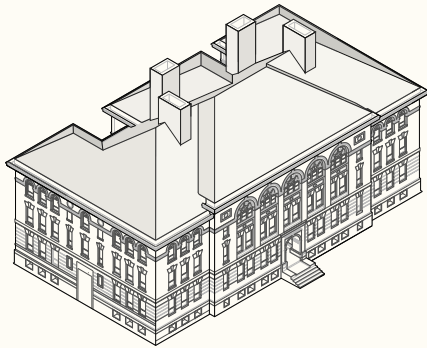


6. FOUND SPACE: INFILL OPEN LIGHTWELLS AT STAIRS

GEOMETRIC OPERATIONS
DEVELOPMENT OF MASSING IN SIX STEPS

1895 BUILDING SKETCHBOOK: TIMELINE - 1895 TO 2025

BUILDING FRONT SOUTH AND WEST FACADES



BUILDING REAR EAST AND NORTH FACADES

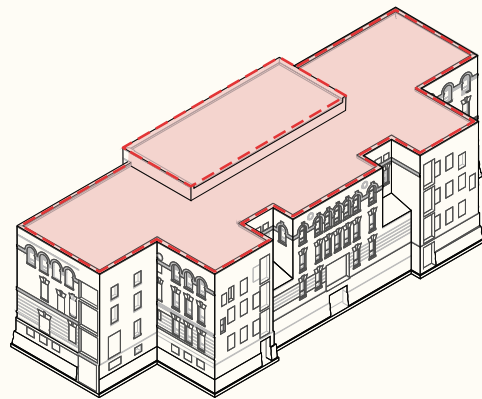
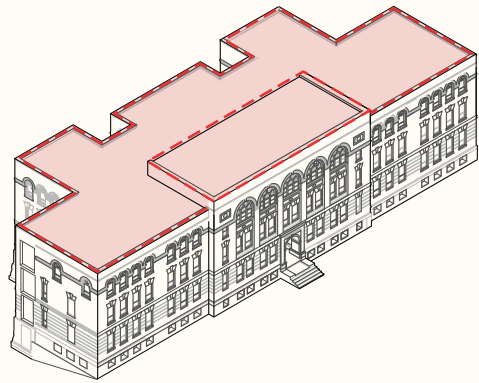
1895 - ORIGINAL CONSTRUCTION

CA. 1914-1916 - CLASSROOM EXTENSIONS ADDED,
ROOF, E & W FACADES SIGNIFICANTLY ALTERED

1929 - AUDITORIUM EXTENSION, WINGS A & C ADDED,
N, E, & W FACADES SIGNIFICANTLY ALTERED;

CA. 1950s - SIGNIFICANT FIRE IN 4TH FLOOR/ATTIC

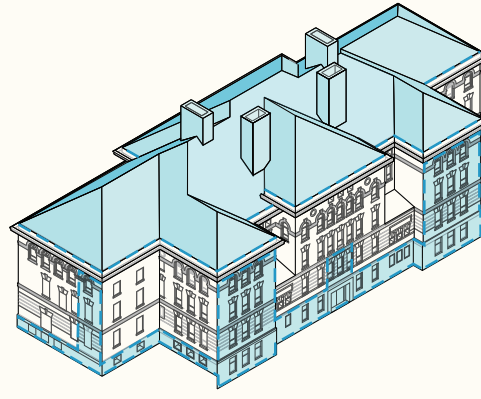
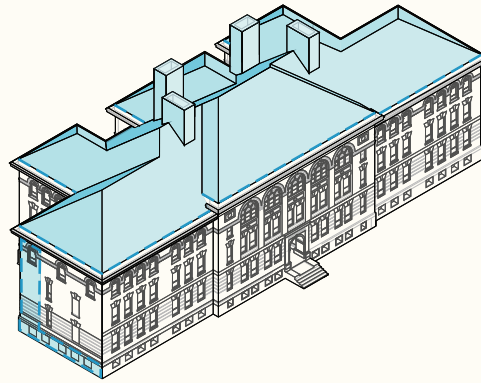
→ PRESENT-DAY



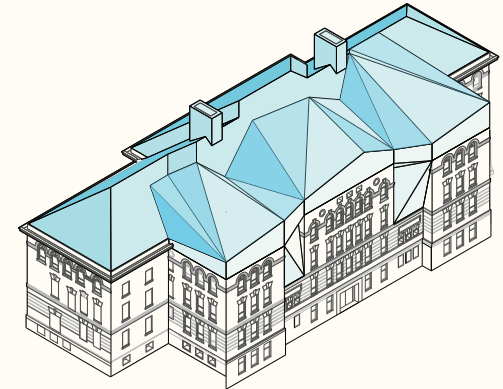
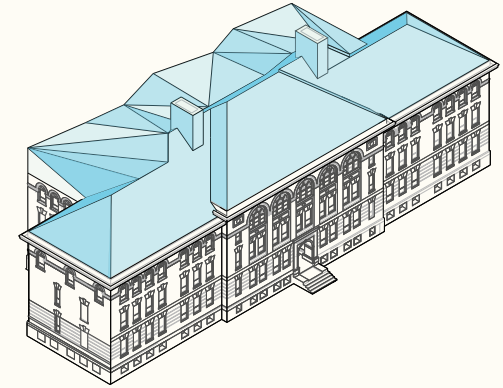
RED: MODERN ROOF AND
PARAPET CONSTRUCTION

CA. 1950s - FIRE-DAMAGED ROOF REMOVED;
NEW PARAPET AND FLAT ROOF ADDED
(EXISTING CONDITION TODAY)

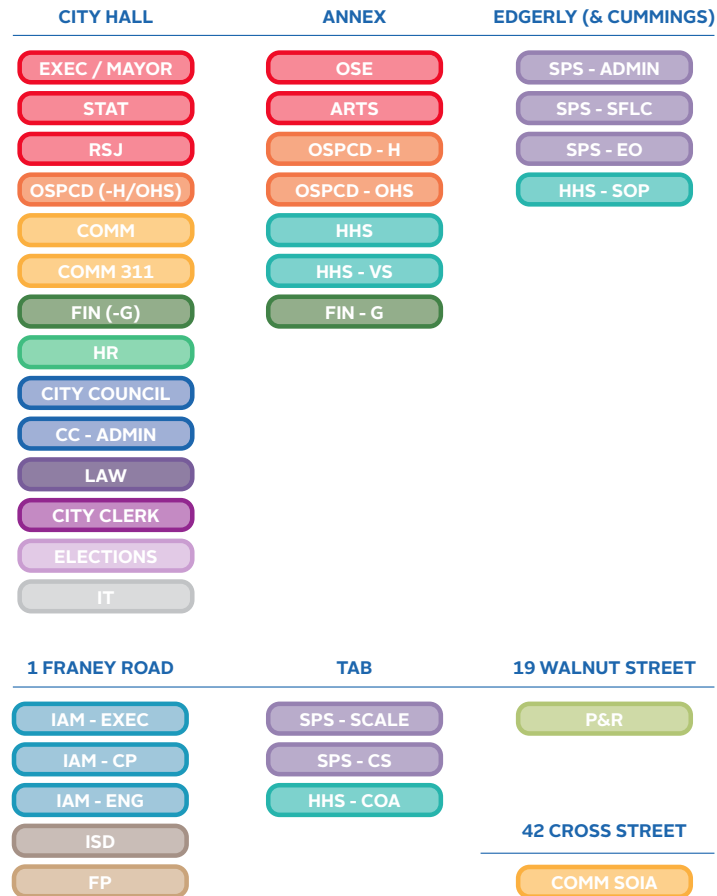
FUTURE →



DESIGN PRINCIPLE 1 - RESTORE/REBUILD DAMAGED
FACADES AND RECONSTRUCT ROOF GEOMETRY



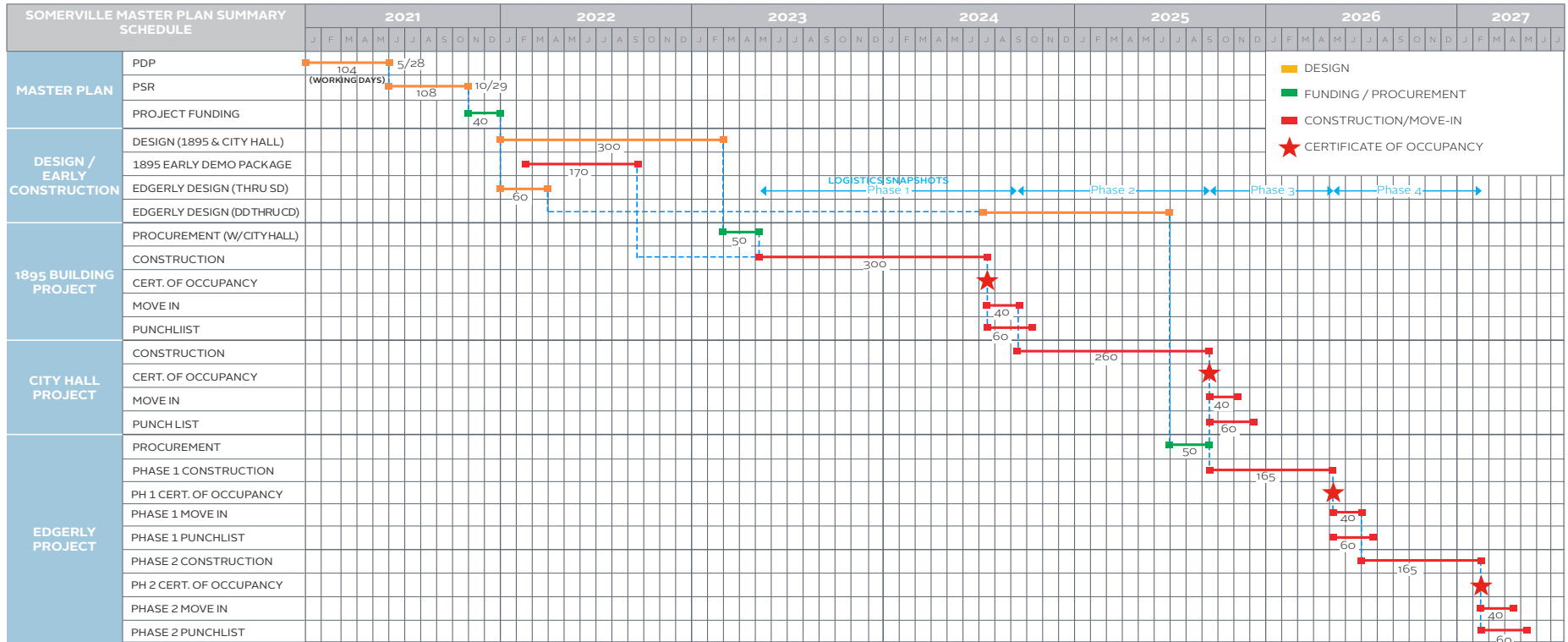
DESIGN PRINCIPLE 2 - CREATE A NEW
EXPRESSION ON THE NORTH FACADE TO
SERVE THE NEW 4TH FLOOR PROGRAM



PHASING & LOGISTICS:
 DEPARTMENTS SLATED FOR RELOCATION OR IMPACTED BY
 RELOCATION - CURRENT DISPOSITION

Phasing & Logistics

SCHEDULING, PHASING & SWING SPACE CONSIDERATIONS



CONCEPTUAL "CRITICAL PATH" SCHEDULE FOR DESIGN AND CONSTRUCTION OF ALL THREE RENOVATION PROJECTS (DURATIONS COURTESY PMA)
 The schedule shown above is the shortest possible duration of sequencing, independent of external factors such as funding or other City priorities. Since the creation of this schedule and the development of the cost estimates in the following chapter, there has been an initial delay of design start to spring 2022. However, the schedule above has been retained without further edits in order to match the escalation calculations in the cost estimate detail.

The City's objectives and the current disposition of buildings provides a relatively straightforward road map for the phasing of the building renovation projects, departmental moves, and other preparatory efforts.

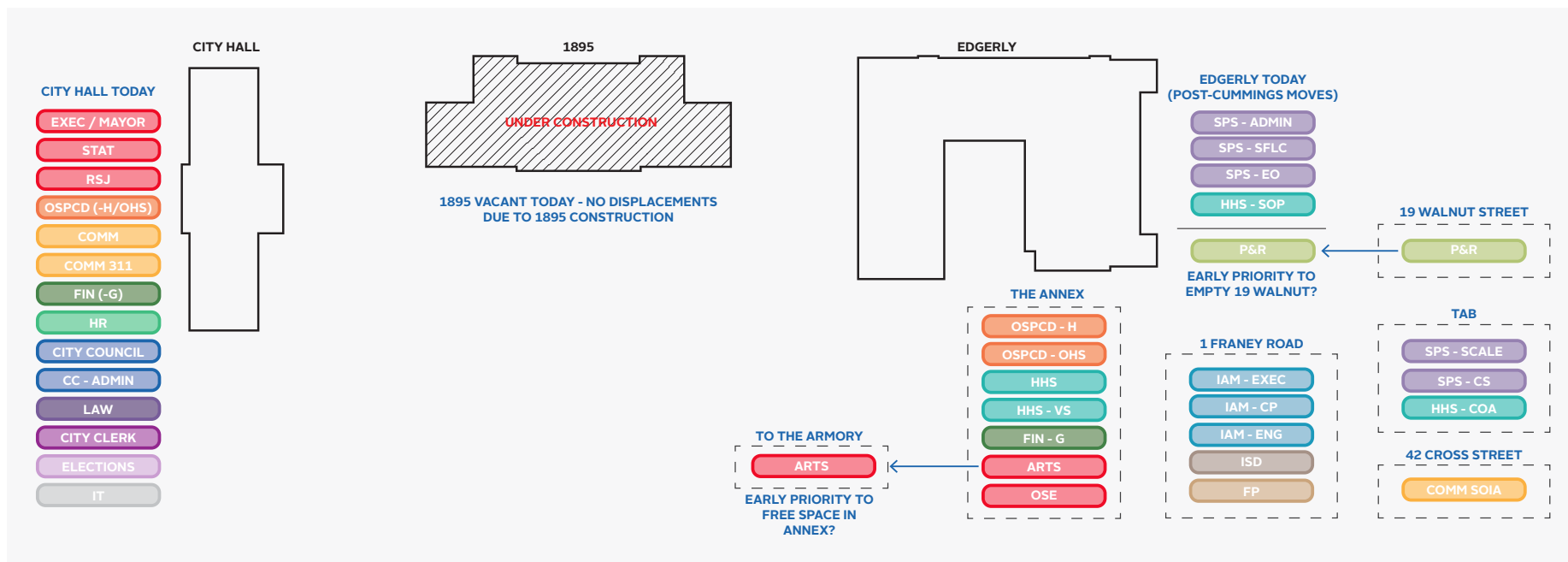
Because the 1895 Building is vacant today, there are no departments within which need to be vacated or swung elsewhere prior to construction, and once completed, 1895 has the potential to be used as swing space for the projects to follow. The building is also in a state of poor condition that requires near-term

intervention to arrest deterioration. It is therefore clear that 1895 should go first.

Which sequence follows deserves some consideration. While it is conceivable that 1895 could act as swing space for both the City Hall and Edgerly work, or Edgerly could advance in the schedule to take place before City Hall, both outcomes produce additional complexity and the latter scenario would further delay the completion of City Hall. At this stage of planning, it is therefore anticipated that the City Hall renovation would

immediately follow 1895, with renovated 1895 working as swing space either in whole or in part.

For several reasons, 1895 is not an ideal candidate as Edgerly swing space, nor have other City buildings been identified as feasible for this use. Edgerly is also partially vacant. As such, the client and design team have agreed on a working assumption that Edgerly will be a two-phase project, wherein the current occupants of Edgerly consolidate to one half of the building while the other half is renovated, and then move into newly renovated



SNAPSHOT - PHASE 1: 1895 UNDER CONSTRUCTION

With 1895 under construction, departments generally remain as they are today. One consideration illustrated here is the value of an early move of P&R to Edgerly (either to temp space or early fit-out) in order to vacate 19 Walnut in the near term, and a move of Arts Council to the Armory in order to free space in the Annex. Note that outcome of the Community Services and Activities Master Plan will influence some of the phasing and relocation decisions.

space (as a swing strategy for some divisions) while the second half of the building is renovated. Due to the comprehensive systems upgrades contemplated, the phased approach will add complexity and cost but may be a savings over short-term leased office space.

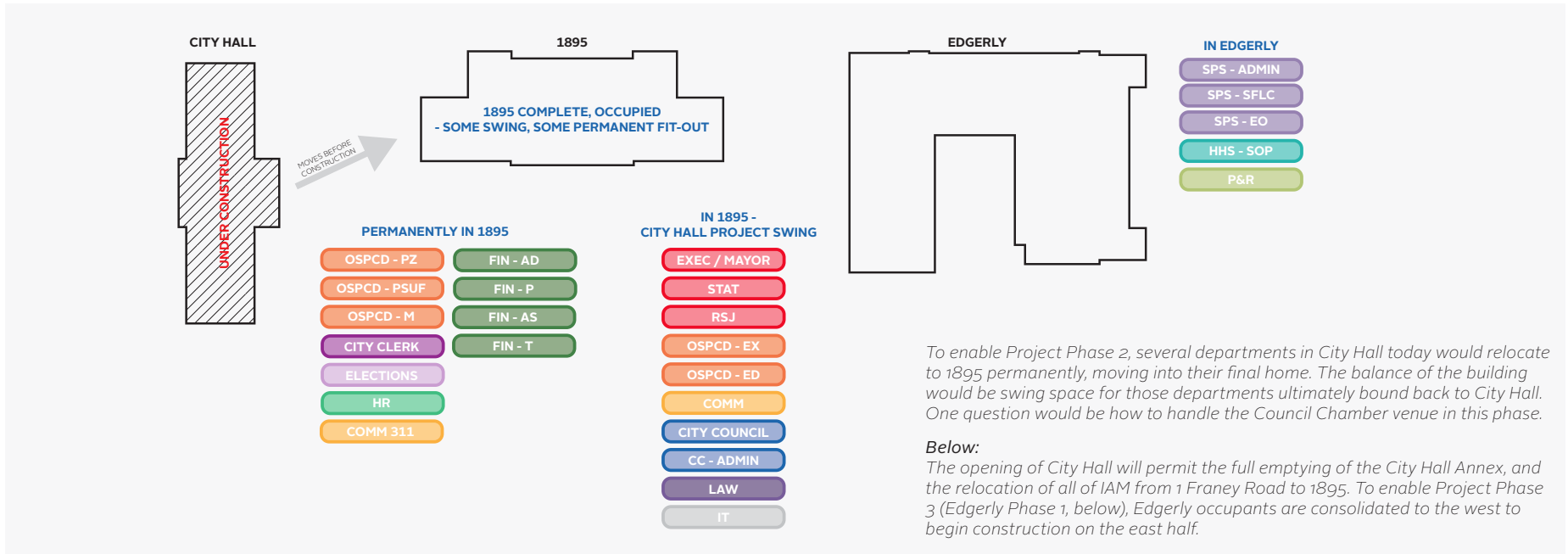
The facing page illustrates an initial design and construction schedule representing a best-case scenario for how quickly all three projects could be completed from the perspective of design, procurement, and construction. The schedule was developed to

conceptualize departmental moves and calculate escalation rates for the cost estimates, and is subject to external factors such as funding availability and regulatory approvals.

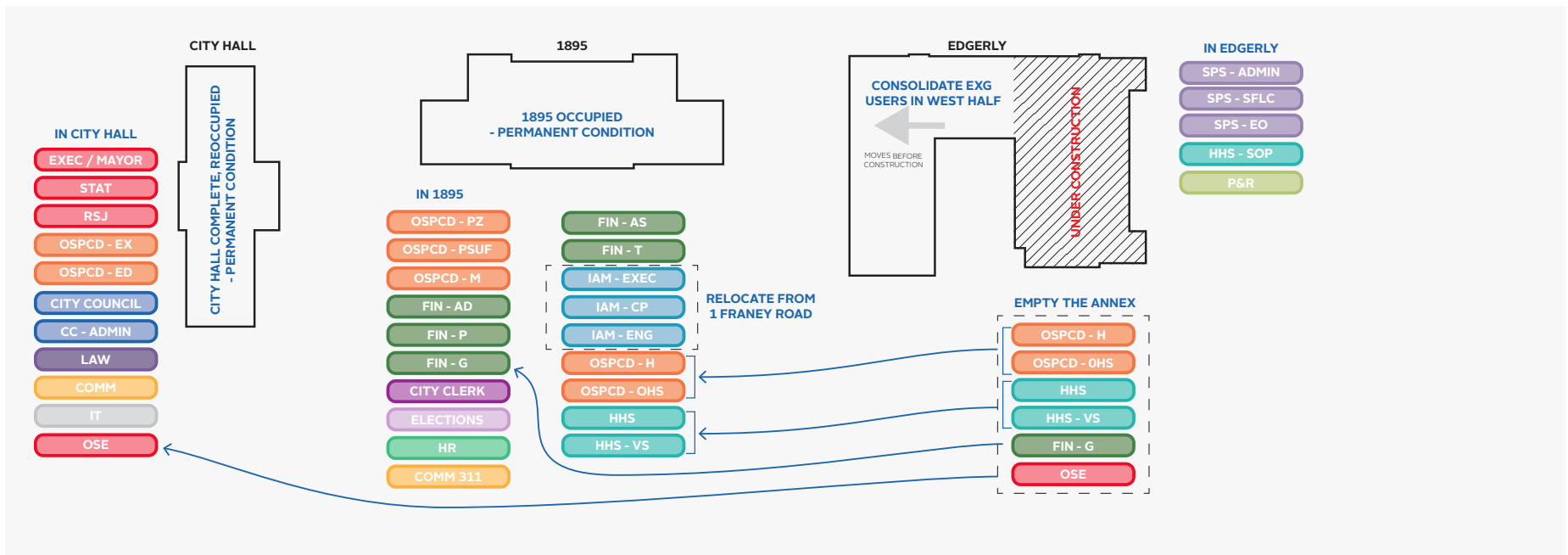
Above and on the following pages are five phasing diagrams, illustrating a scenario that aims to mitigate complicated or excessive departmental moves.

This preliminary analysis indicates that in the sequence of moves modeled here to support the Master Plan outcome, **22 departments/divisions only have to**

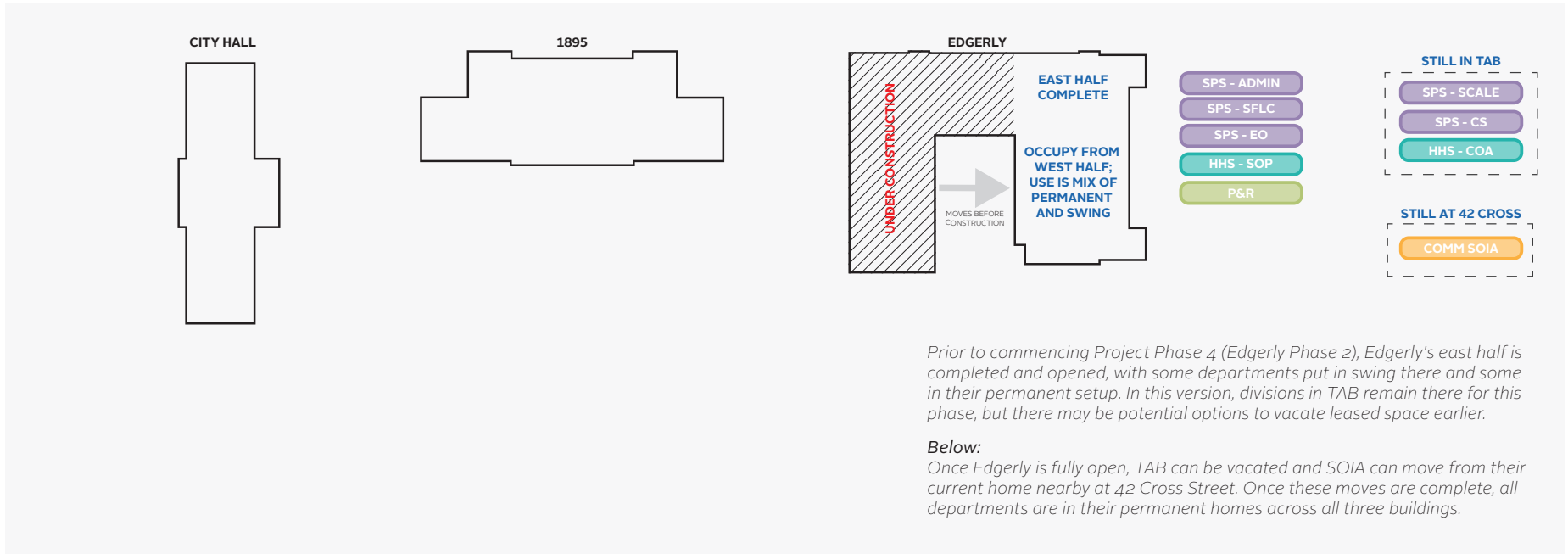
move a single time, 15 departments move to swing space once before moving to their permanent home, and 1 department may require two swing locations before settling in their final location. Note that these figures are contingent on City decisions for when other various City-owned or rented properties are to be vacated.



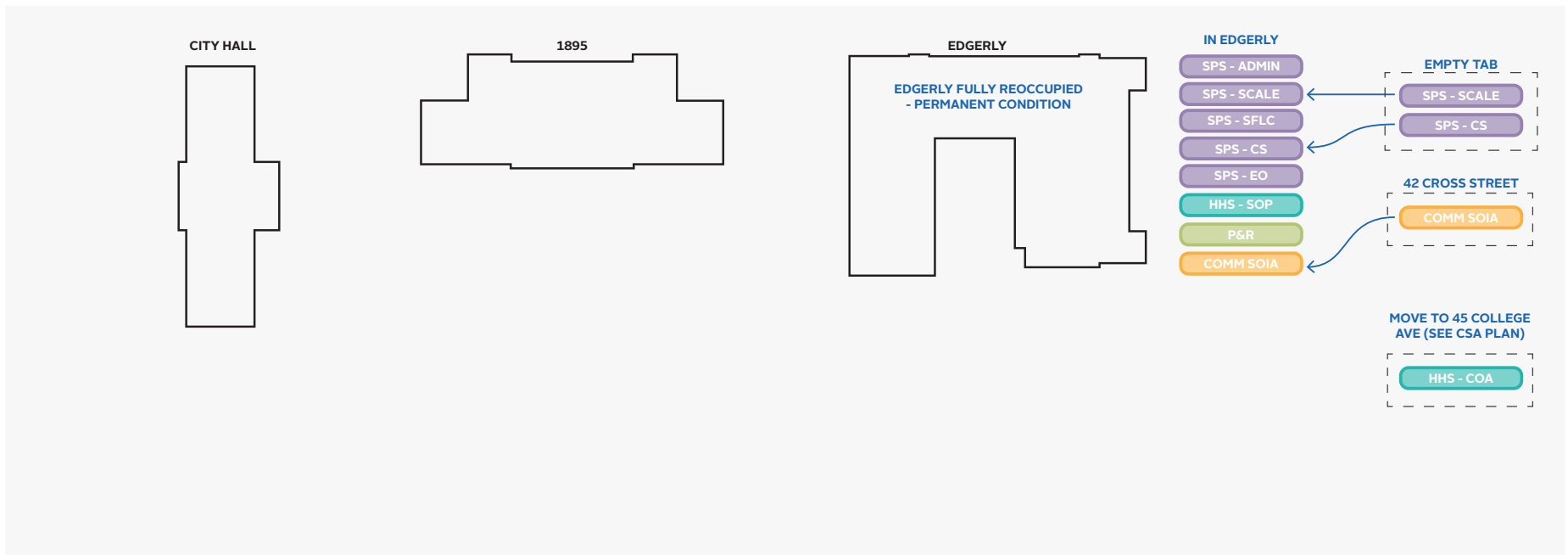
SNAPSHOT PHASE 2: CITY HALL UNDER CONSTRUCTION



SNAPSHOT PHASE 3: EDGERLY PHASE 1 UNDER CONSTRUCTION



SNAPSHOT PHASE 4: EDGERLY PHASE 2 UNDER CONSTRUCTION



ALL PROJECTS COMPLETE; DEPARTMENTS IN FINAL LOCATIONS

Cost Estimate Summary

INTRODUCTION TO COST ESTIMATES

COST OVERVIEW

The summary table below provides a high-level overview of the current cost estimate values at the PSR milestone, with the PDP estimate delta in the rightmost column for reference. The qualifications and full backup for the cost estimates up through the escalated GMP values is contained in the appendix, while the build-up to Total Project Cost with percentages is found in the table on page 56. The design team drawings and narratives used by the estimators can be found in the appendix.

METHODOLOGY: DEVELOPING COST ESTIMATES IN THE PDP

An initial milestone round of cost estimating was conducted at the conclusion of the PDP phase in May 2021. Using existing drawings and design team narratives, augmented by sketch mark-ups, the estimators calculated trade-level costs based on a range of current installed unit costs, cost-per-square-foot

benchmarks, and itemized allowances appropriate to this pre-design stage.

All applicable exterior renovation construction, existing building MEP replacement, and core renovation work were estimated in UniFormat detail. The model then predicts allowances for interior space fit-out based on approximate anticipated proportions of program type, subject to greater design resolution in the future.

Corollary to the estimating of trade costs is modeling the build-up to an estimated hard cost, starting with an appropriate level of embedded contingencies for future design. This present-dollar hard cost number is then escalated per projections to the midpoint of construction and represents the "full" hard cost, or projected Guaranteed Maximum Price (GMP) at time of bid. Below the line, soft cost allowances and percentage build-ups were developed in coordination with the City's project manager and Internal Technical Team. The escalated GMP, owner's soft costs, and owner's internal budgeting contingencies are all summed to determine an estimated Total Project Cost (TPC).

For the purposes of the PDP estimate, it was agreed with the City that each of the three planning scenarios did not need to be estimated individually; while the disposition of departments varied, the proportion of space-types remained relatively constant to a degree that the cost model would not be measurably impacted.

REVISITING ESTIMATES IN THE PSR PHASE

At the conclusion of the PSR phase, the master plan concepts had progressed to a greater level of design resolution: the design team was in a position to provide the estimators with conceptual demo and proposed floor layouts, detailed elevation markups, site and utility sketches, structural mark-ups, and concepts for the 1895 Fourth Floor. Geotechnical and hazardous materials reports helped capture the expected level of work in these areas, while exploratory work over the summer of 2021 helped fill in a number of information gaps and better direct the design scope. The estimators went line by line through the PDP estimates to make

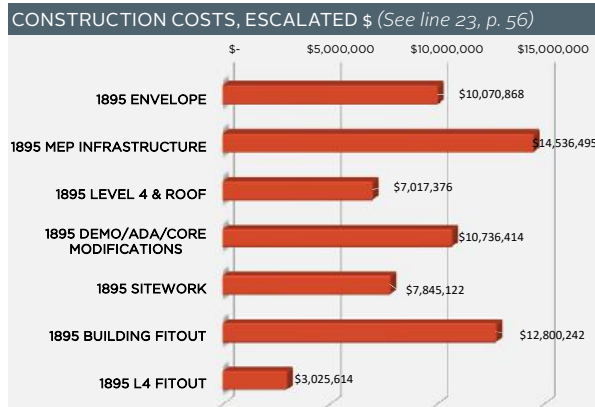
PDP COST ESTIMATES	1895 Building		City Hall		Elderly		TOTALS		DELTA FROM PDP
<i>Project Gross Sq Ft</i>	75,000 GSF	\$/SF	40,000 GSF	\$/SF	80,000 GSF	\$/SF	195,000 GSF	\$/SF	+2,000 SF**
Construction Cost (Oct '21 \$)	\$59,900,000	\$799	\$30,000,000	\$750	\$49,000,000	\$613	\$138,900,000	\$712	+\$3.9M**
+ Projected Escalation	\$6,170,000	10.3%	\$3,500,000	11.7%	\$11,650,000	23.8%	\$21,320,000	15.4%	(\$2.1M)
Construction Cost (Escalated*)	\$66,000,000	\$880	\$33,500,000	\$838	\$60,600,000	\$758	\$160,100,000	\$821	+\$1.8M
+ Soft Costs / Owner Contingencies	\$26,500,000	\$353	\$13,300,000	\$333	\$24,900,000	\$311	\$64,700,000	\$332	+\$1.6M
Total Project Cost (Escalated*)	\$92,500,000	\$1,233	\$46,800,000	\$1,170	\$85,500,000	\$1,069	\$224,800,000	\$1,153	+\$3.4M

*Escalation is calculated to the midpoint of construction for each building project; see conceptual schedule for sequencing of BMP projects on page 48 and calculations from Trade-level cost to TPC on page 56.

**2,000 additional GSF was added to the 4th floor of 1895 in the PSR. The PDP estimate basis used here includes the PDP Add-Alt for a ground-source heat pump system at 1895/City Hall.

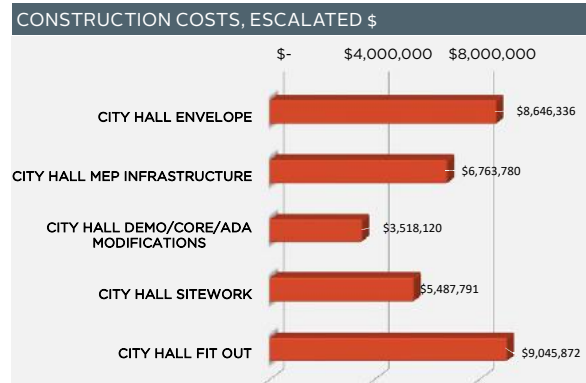
CONSTRUCTION COSTS BY SCOPE AREA

1895 BUILDING



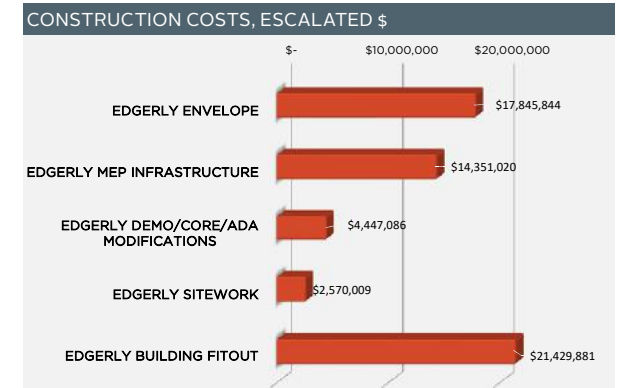
COST ELEMENT	GSF	\$/SF	CONST \$ (ESCALATED)
1895 ENVELOPE	75,240	\$ 134	\$ 10,070,868
1895 MEP INFRASTRUCTURE	75,240	\$ 193	\$ 14,536,495
1895 LEVEL 4 & ROOF	14,850	\$ 473	\$ 7,017,376
1895 DEMO/ADA/CORE MODIFICATIONS	60,390	\$ 178	\$ 10,736,414
1895 SITEWORK	71,570	\$ 110	\$ 7,845,122
1895 BUILDING FITOUT	60,390	\$ 212	\$ 12,800,242
1895 L4 FITOUT	14,850	\$ 204	\$ 3,025,614
TOTAL CONSTRUCTION COSTS	75,240	\$878	\$ 66,032,131

CITY HALL



COST ELEMENT	GSF	\$/SF	CONST \$ (ESCALATED)
CITY HALL ENVELOPE	40,000	\$ 216	\$ 8,646,336
CITY HALL MEP INFRASTRUCTURE	40,000	\$ 169	\$ 6,763,780
CITY HALL DEMO/CORE/ADA MODIFICATIONS	40,000	\$ 88	\$ 3,518,120
CITY HALL SITEWORK	48,828	\$ 112	\$ 5,487,791
CITY HALL FIT OUT	40,000	\$ 226	\$ 9,045,872
TOTAL COSTS	40,000	\$837	\$ 33,461,899

EDGERLY



COST ELEMENT	GSF	\$/SF	CONST \$ (ESCALATED)
EDGERLY ENVELOPE	80,000	\$ 223	\$ 17,845,844
EDGERLY MEP INFRASTRUCTURE	80,000	\$ 179	\$ 14,351,020
EDGERLY DEMO/CORE/ADA MODIFICATIONS	80,000	\$ 56	\$ 4,447,086
EDGERLY SITEWORK	20,710	\$ 124	\$ 2,570,009
EDGERLY BUILDING FITOUT	80,000	\$ 268	\$ 21,429,881
TOTAL CONSTRUCTION COSTS	80,000	\$758	\$ 60,643,840

Excerpts from the cost model Executive Summaries indicating escalated construction costs by scope area

updates based on revised design direction, material takeoffs, or current market pricing.

Several key variables impacted the change of estimate values from PDP to PSR. Design scope was revised based on client or exploratory feedback, or better clarified by drawings vs. earlier narratives. This increase in the quality of information that could be provided to the estimators led to a modest decrease in the design contingency, from 12% to 11%. At the same

time, the highly volatile construction market over the last five months meant that materials and labor costs increased while the outlook on escalation evolved.

The bar graphs and tables above are extracted from the Executive Summaries of the Cost Estimates, and indicate the cost of key elements in each project at an escalated hard cost (GMP) level. The escalated cost per square foot is also provided, a function of the gross square footage of each building or area of work (note

that for the site work, the SF denominator used is site area defined by the limit of work, with the building footprint excluded).

On the following page, additional detail on the build-up from trade-level cost to Total Project Cost is provided.

BUILD-UPS TO TOTAL CONSTRUCTION COST

		A1			A2			A3			A1+A2+A3		
		1895 Building			City Hall			Ederly			Total		
		220			100			200			520		
		10/29/2021			10/29/2021			10/29/2021			10/29/2021		
1		Rates											
2	Concept-Level Workspace Count by Building (PSR Plans)												
3													
4	TOTAL CONSTRUCTION - GMP, Current Dollars [from line 19]	\$	59,865,215		\$	29,958,707		\$	48,991,436		\$	138,815,358	
5	TOTAL CONSTRUCTION GSF		75,000			40,000			80,000			195,000	
6	TOTAL CONSTRUCTION \$/GSF, Current Dollars		\$798			\$749			\$612			\$712	
7													
8	1. Hard Costs												
9	SUBTOTAL TRADE COST (includes embedded 5% General Reqs.)	\$	45,350,350		\$	22,568,736		\$	35,765,102		\$	103,684,188	
10	Design Contingency [% applied to line 9]	11.0%	\$ 4,988,538		\$ 2,482,561		\$ 3,934,161		\$ 1,190,978	3.0%	\$ 1,190,978		
11	Phasing Allowance [% applied to sum of lines 9-10]		-		-		\$ 1,190,978		\$ 1,840,061		\$ 5,232,619		
12	Construction Contingency [% applied to sum of lines 9-11]	4.5%	\$ 2,265,250		\$ 1,127,308		\$ 1,840,061		\$ 2,960,861	6.9%	\$ 7,951,117	6.5%	
13	General Conditions [calculated; resultant % = line 13/lines 9-12]	Varies	\$ 3,228,300	6.1%	\$ 1,761,956	6.7%	\$ 2,960,861	6.9%	\$ 2,960,861	6.9%	\$ 7,951,117	6.5%	
14	COST OF THE WORK [sum of lines 9-13]		\$ 55,832,437		\$ 27,940,561		\$ 45,691,163		\$ 129,464,162		\$ 129,464,162		
15	Permits [Excluded]	0.0%	\$ -		\$ -		\$ -		\$ -		\$ -		
16	Insurances - 1.35% GL, 1.25% Sub Default [% applied to line 14]	2.6%	\$ 1,451,643		\$ 726,455		\$ 1,187,970		\$ 3,366,068		\$ 3,366,068		
17	Bond [% applied to line 14]	1.5%	\$ 837,487		\$ 419,108		\$ 685,367		\$ 1,941,962		\$ 1,941,962		
18	CM Fee [% applied to sum of lines 14 & 15-17]	3.0%	\$ 1,743,647		\$ 872,584		\$ 1,426,935		\$ 4,043,166		\$ 4,043,166		
19	GMP BEFORE ESCALATION - 5/2021 Dollars [sum of lines 14 & 15-18]		\$ 59,865,215		\$ 29,958,707		\$ 48,991,436		\$ 138,815,358		\$ 138,815,358		
20	Multiplier: Pre-Escalated GMP markup over (Trade Cost+Design Contingency)		1.19		1.20		1.23		1.21		1.21		
21	Projected Construction Midpoint		12/1/2023		3/15/2025		6/15/2026						
22	Escalation [calculated to midpoint of construction; % of line 19 for ref.]	Varies	\$ 6,166,915	10.3%	\$ 3,503,191	11.7%	\$ 11,652,403	23.8%	\$ 21,322,509	15.4%	\$ 21,322,509	15.4%	
23	ESCALATED GMP [lines 19 + 22]		\$ 66,032,131		\$ 33,461,899		\$ 60,643,840		\$ 160,137,870		\$ 160,137,870		
24	2. Soft Costs												
25	Owner's Soft Costs - A/E Team, SD thru CA [% applied to line 23]	10.0%	\$ 6,603,213		\$ 3,346,190		\$ 6,064,384		\$ 16,013,787		\$ 16,013,787		
26	Owner's Soft Costs - OPM, SD thru CA [% applied to line 23]	3.5%	\$ 2,311,125		\$ 1,171,166		\$ 2,122,534		\$ 5,604,825		\$ 5,604,825		
27	Owner's Soft Costs - Other Misc Costs [% applied to line 23]	6.5%	\$ 4,292,089		\$ 2,175,023		\$ 3,941,850		\$ 10,408,962		\$ 10,408,962		
28	Owner's Soft Costs - FFE & AV/IT [\$12K Allowance per occupant, line 2]		\$ 2,640,000		\$ 1,200,000		\$ 2,400,000		\$ 6,240,000		\$ 6,240,000		
29	Owner's Soft Costs - Photovoltaic installations [\$4/W installed, kW listed per bldg]		\$ 400,000	100	\$ 200,000	50	\$ 800,000	200	\$ 1,400,000		\$ 1,400,000		
30	Owner's Soft Costs - Police Details [calculated rate x project duration]		\$ 300,000		\$ 260,000		\$ 330,000		\$ 890,000		\$ 890,000		
31	SOFT COSTS SUBTOTAL, Escalated [% indicated is a resultant % of line 23]		\$ 16,546,426	25.1%	\$ 8,352,380	25.0%	\$ 15,658,768	25.8%	\$ 40,557,574	25.3%	\$ 40,557,574	25.3%	
32	3. Owner's Project Contingencies												
33	Owner's Construction Contingency [% applied to line 23]	12.0%	\$ 7,923,856		\$ 4,015,428		\$ 7,277,261		\$ 19,216,544		\$ 19,216,544		
34	Owner's Soft Cost Contingency [% applied to line 31]	12.0%	\$ 1,985,571		\$ 1,002,286		\$ 1,879,052		\$ 4,866,909		\$ 4,866,909		
35	4. Total Project Costs												
36	TOTAL PROJECT COST, Escalated [lines 23+31 and 33-34]		\$ 92,487,985		\$ 46,831,992		\$ 85,458,921		\$ 224,778,897		\$ 224,778,897		

Next Steps

NEXT STEPS

The primary next step for the BMP is City Council approval to move ahead into the architectural design phases. Should the project be approved to proceed, an early task will be to present the renovation plans and solicit stakeholder feedback. This could take place in a range of venues and formats including community meetings with constituents or smaller working sessions with focus groups and specific stakeholders.

At the start of the design phase, the design team will also revisit the preferred scenario test fit plans with the departments and divisions to refine program needs, particularly as it relates to reception, constituent-facing spaces, storage, and filing. With the detailed test-fit planning under way, the quantitative space needs program on paper can be more clearly evaluated. Engagement with specific City subject-matter experts will also take place to review approaches to sustainability, MEP equipment/infrastructure and other building systems such as information technology and security.

The design team will continue with various exploratory efforts, including the following potential work: an early-phase non-structural interior demolition for the 1895 Building; test wells to confirm geothermal heating and cooling yield on Central Hill, scoping of existing water, storm, and sanitary piping, and test pits to determine storm water infiltration rates.

These are just some of the early tasks as we launch into the traditional phases of A/E documentation, on the way to creating a bid set, with milestones along the way for public and stakeholder input and feedback.

