



Town of Dover Community Center

Building Committee

- Program Update
- CBA Evaluation

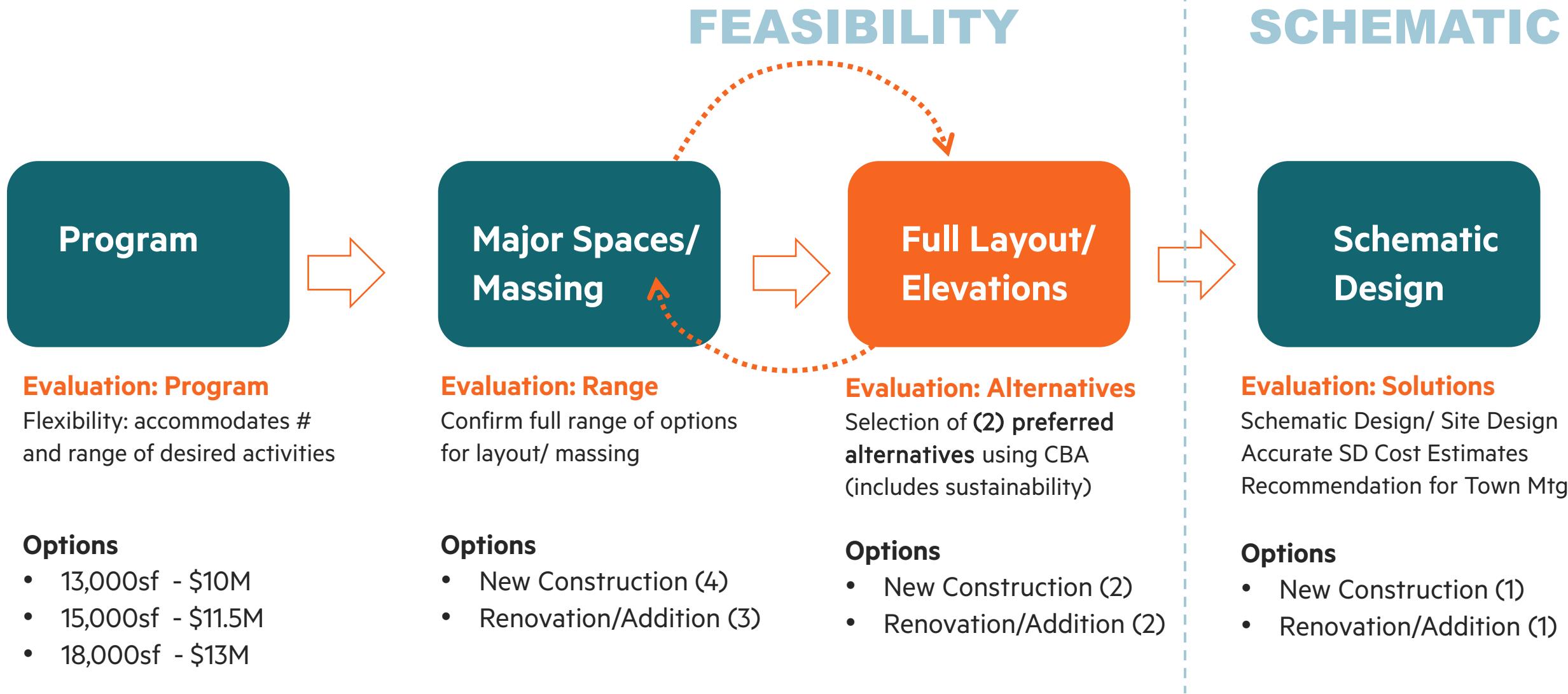
Feb 01, 2021

Building a vision Building consensus

1. Schedule Update
2. Program Re-cap/Budget implications
3. Recommended Program
4. Major CBA Factors
5. Recommended Alternatives for Schematic Design

Schedule Overview: Design Steps

Designing to a Budget



\$13M Project budget = \$9.6M Construction Budget (74%)

Schedule Overview: Design Steps

Schedule

Dec. 1	Public Forum – Program Size
Dec. 7	BC Selects Alternates (4)
Dec. 14	BC Reviews Alts R-1 & N3.1
Dec. 22	BC Reviews Alts R-3 & N2
Dec. 23	Send Cost Estimate Package
Jan. 11	BC Review Plans / Elevations
Jan. 18	BC Reviews CBA Evaluation Matrix
Jan. 18	Initial Cost Estimates
Jan. 25	BC Revises Program to 15,000sf
Feb 1	BC: CBA committee recommendation
Feb 10 th	Public Mtg based on CBA
Feb 15 th	Based on CBA and Public Feedback, BC Selects 2 Alternates for Schematic

FEASIBILITY

Full Layout/ Elevations

Concept Design (RFP)

The Designer shall prepare and submit concept sketches of various design ideas to determine a workable plan solution in terms of the programs, funds available, and as complete an overall design concept as possible including cost estimates

- No Interior walls
- General massing
- Cost Estimates based on \$/sf

SCHEMATIC

Schematic Design

Schematic

Determine adjacencies and size of spaces to develop initial floor plans and elevations

- Interior walls
- SD Cost Estimates based drawings
- Recommendation for Town Mtg.
- Engineering: single line dwgs, detailing is in Construction Documents



Program Re-cap

(Budget Considerations)

13,000 GSF – Base Program

Option #1

Major Features

- Fitness/ Dance
- Large Community Space (shared for Recreation)
- Basic Kitchen
- Age 0-5 Play as GSF

Core Spaces 6,900sf

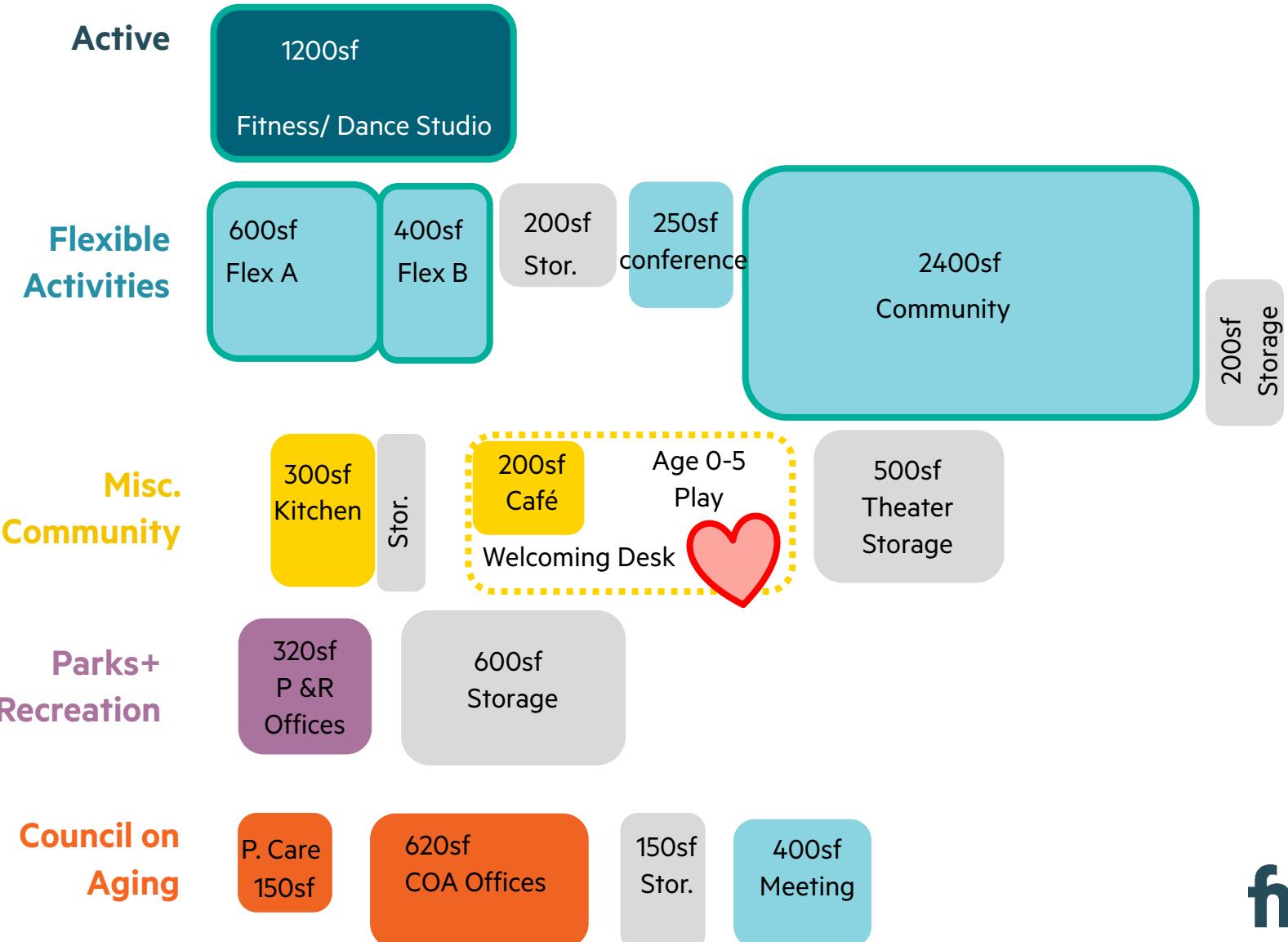
Storage Area 1,780sf

Program Area 8,680sf

Gross Area 13,020sf

Project Cost \$10-12 M

* Based on cost estimate data for site and building



15,000 GSF – Match Existing Recreation

Option #2

Major Features

- Fitness/ Dance
- Recreational – existing size
- Smaller Community Space
- Basic Kitchen

Core Spaces 8,100sf

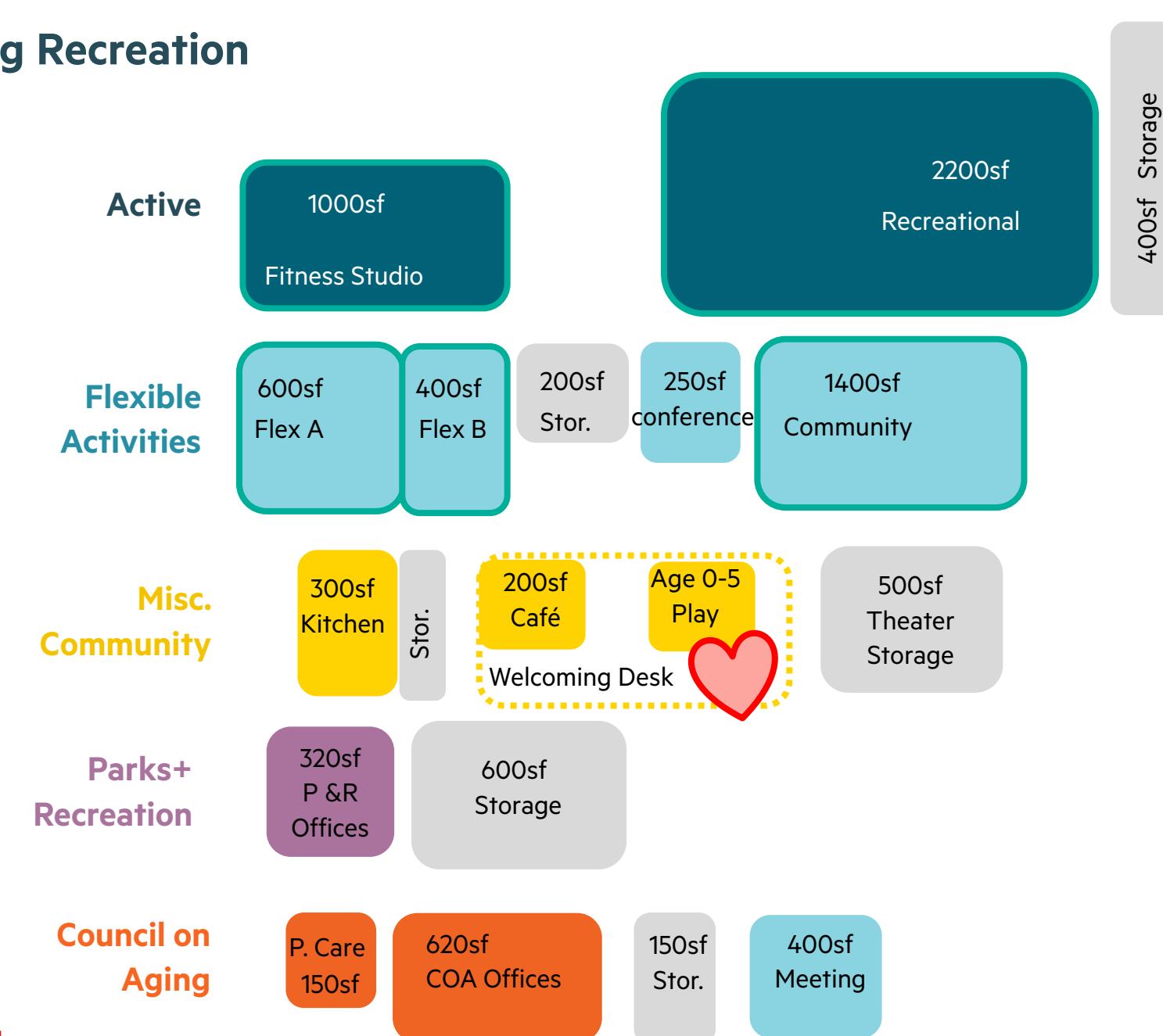
Storage Area 1,980sf

Program Area 10,080sf

Gross Area 15,120sf

Project Cost \$11.5 -13.5 M

* Based on cost estimate data for site and building



18,000 GSF – Expanded Recreation

Option #3

Major Features

- Flexible: Recreation + Fitness
- Medium Community Space
- Expanded Kitchen
- Fitness/ Dance

Core Spaces **9,860sf**

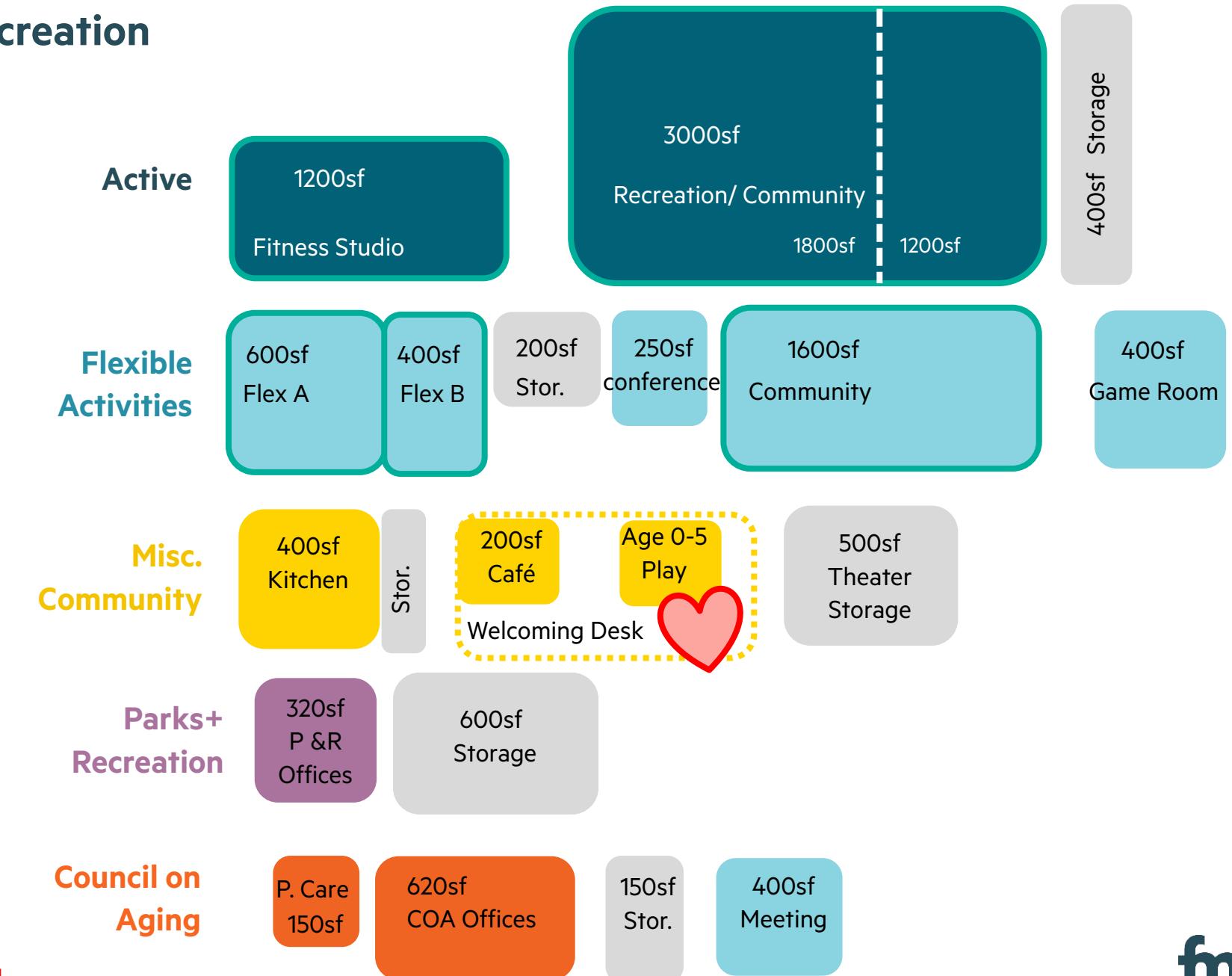
Storage Area **2,025sf**

Program Area **11,885sf**

Gross Area **18-20,000sf**

Project Cost **\$16-18M**

* Based on cost estimate data for site and building



Decisions about Building Size = Program

ESTIMATE ANALYSIS (Unformat)



Dover, Ma Dover Community Center

Feasibility Study (\$000's)															
		January 18, 2021													
		A/E Control Budget	5/26/2020	1/15/2021	Difference (Control Budget - R1)	1/15/2021	Option R3	Difference (Control Budget - R3)	1/15/2021	Option N2	Difference (Control Budget - N2)	1/15/2021	Option N3.1	Difference (Control Budget - N3.1)	1/15/2021
Renovated Area (GSF)			0	19,767	(19,767)	0	9,023	(9,023)	0	0	0	0	0	0	0
New Construction Area (GSF)			18,000	6,233	(11,767)	10,778	7,222	18,200	(209)	19,200	(1,209)	19,200	(1,209)	19,200	(1,209)
Construction Total Area (GSF)			18,000	26,000	(8,000)	19,800	(1,800)	18,200	(209)	19,200	(1,209)	19,200	(1,209)	19,200	(1,209)
Building Construction Current \$/GSF			\$ 390.00	\$ 313.48	\$ 76.52	\$ 345.16	\$ 44.84	\$ 406.45	\$ (16.45)	\$ 409.28	\$ (19.28)				
Total Construction Current \$/GSF			\$ 530.87	\$ 516.61	\$ 14.26	\$ 590.32	\$ (59.46)	\$ 693.18	\$ (162.31)	\$ 688.87	\$ (158.00)				
I. Building Construction (to 5' beyond perimeter) Addition Costs (Separated from Renovation)															
A10 Foundations A110 Standard Foundations A1030 Slab on Grade															
B10 Superstructure B1010 Floor Construction B1020 Roof Construction															
B20 Exterior Enclosure B2010 Exterior Walls B2020 Exterior Windows B2030 Exterior Doors															
B30 Roofing B3010 Roof Coverings															
C10 Interior Construction C1010 Partitions C1020 Interior Doors C1030 Fittings															
C20 Stairs C2010 Stair Construction C2020 Stair Finishes															
C30 Interior Finishes C3010 Wall Finishes C3020 Floor Finishes C3030 Ceiling Finishes															
D10 Conveying D1010 Elevators and Lifts															
D20 Plumbing															
D30 HVAC															
D40 Fire Protection															
D50 Electrical D5010 Electrical Service and Distribution D5020 Lighting and Branch Wiring D5030 Communications and Security D5090 Other Electrical Systems															
E10 Equipment E110 Commercial Equipment E1190 Other Equipment															
E20 Furnishings E2010 Fixed Furnishings															
F20 Selective Building Demolition F2010 Building Elements Demolition F2020 Hazardous Components Abatement															
Total Building Construction			7,020.0	8,150.5	(1,130.5)	6,834.1	1,769.5	7,397.4	(377.4)	7,858.2	(388.2)				
I. Related Construction A. Sitework (beyond 5' of building)															
G10 Site Preparation G1010 Site Clearing G1020 Site Demo and Relocation G1030 Site Earthwork															
G20 Site Improvements G2010 Roadways G2030 Pedestrian Paving G2040 Site Development G2050 Landscaping															
G30 Site Mechanical Utilities G3010 Water Supply G3020 Sanitary Sewer G3030 Storm Sewer															
G40 Site Electrical Utilities G4010 Electrical Distribution G4020 Site Lighting															
Total Related Construction			1,775.0	1,991.1	(216.1)	1,991.2	(216.2)	2,128.1	(353.1)	2,128.2	(353.2)				

Building Reduction Breakdown

\$13M Project budget = \$9.6M Construction Budget (74%)

Abatement + Bdg Demo + Sitework = \$2.7M - \$2.9M

Escalation = \$800K (\$400K if STM / Spring 2022 Bid)

Total Non-Building = \$3.45- \$3.7M

Target Size Reduction (based on avg const. cost) Current Size

New One-Story (N2): \$410/SF = 15,000sf 15,240sf **(+240sf)**

New Two-Story (N3.1): \$410/SF = 14,900sf 15,570sf **(+670sf)**

Save the Most (R1): **\$248/SF** = 23,600sf

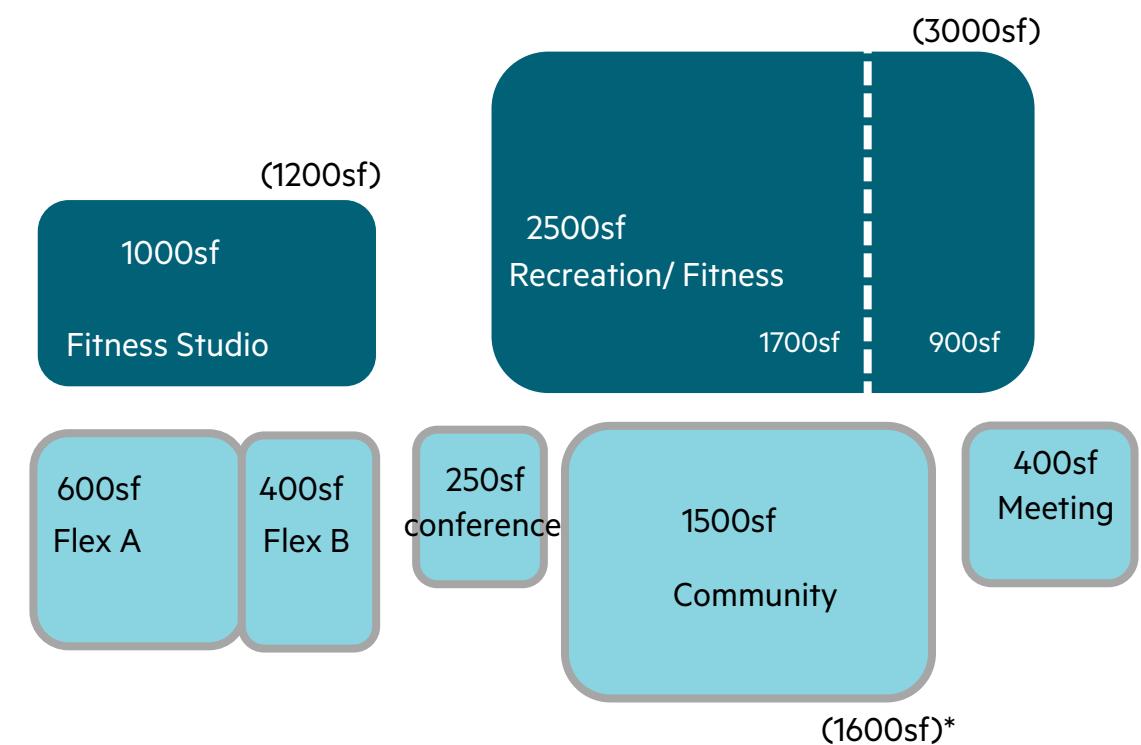
Save the 1910 (R3): \$345/SF = 17,500sf 17,400sf **(on target)**

\$13M Project budget for all four options

Design Adjustments

Other Reductions

- Mech / Water Entry 650sf -> 300sf
- No Fire Suppression Rm with ext. pump chamber 300sf-> 0sf
- Review restrooms, circulation, etc. for efficiency
- Storage 2,025sf -> 1410 sf
- Reduced program areas
 - Delete Game Room (400sf)
 - Reduced Kitchen (from 400sf to 300sf)
 - Reduced Large Recreation
 - Reduced Fitness slightly
 - Reduced Common Room Slightly



* previous sizes

Program Analysis

Idealized Daily Schedule

Observations

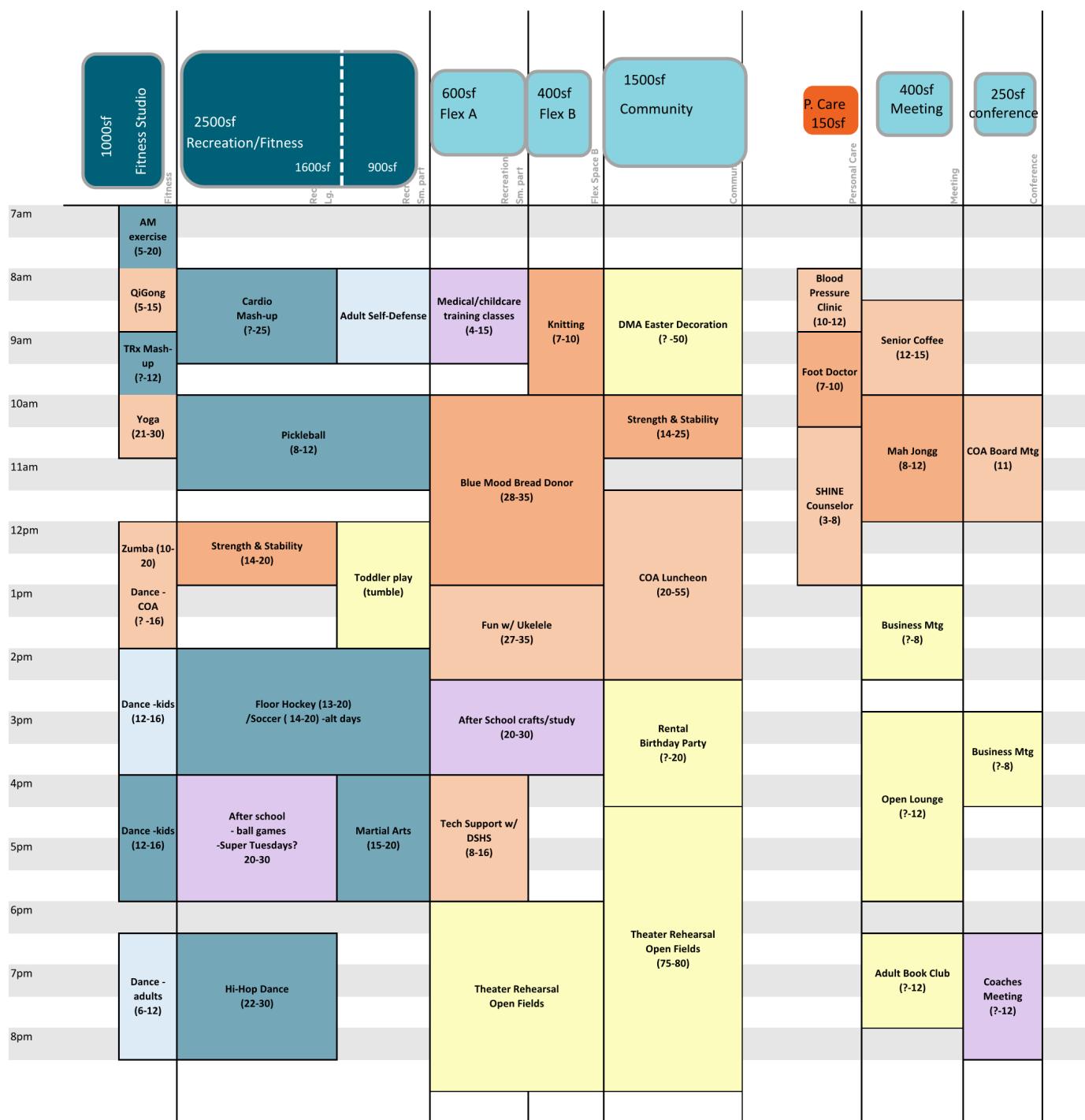
- COA weighted towards mornings
- Parks & Rec mostly afternoons
- Theater Groups evenings
- Looked to enlarge Active spaces
- But need 8 spaces for maximum flexibility

Council on Aging

Parks & Recreation

Active programs

Miscellaneous



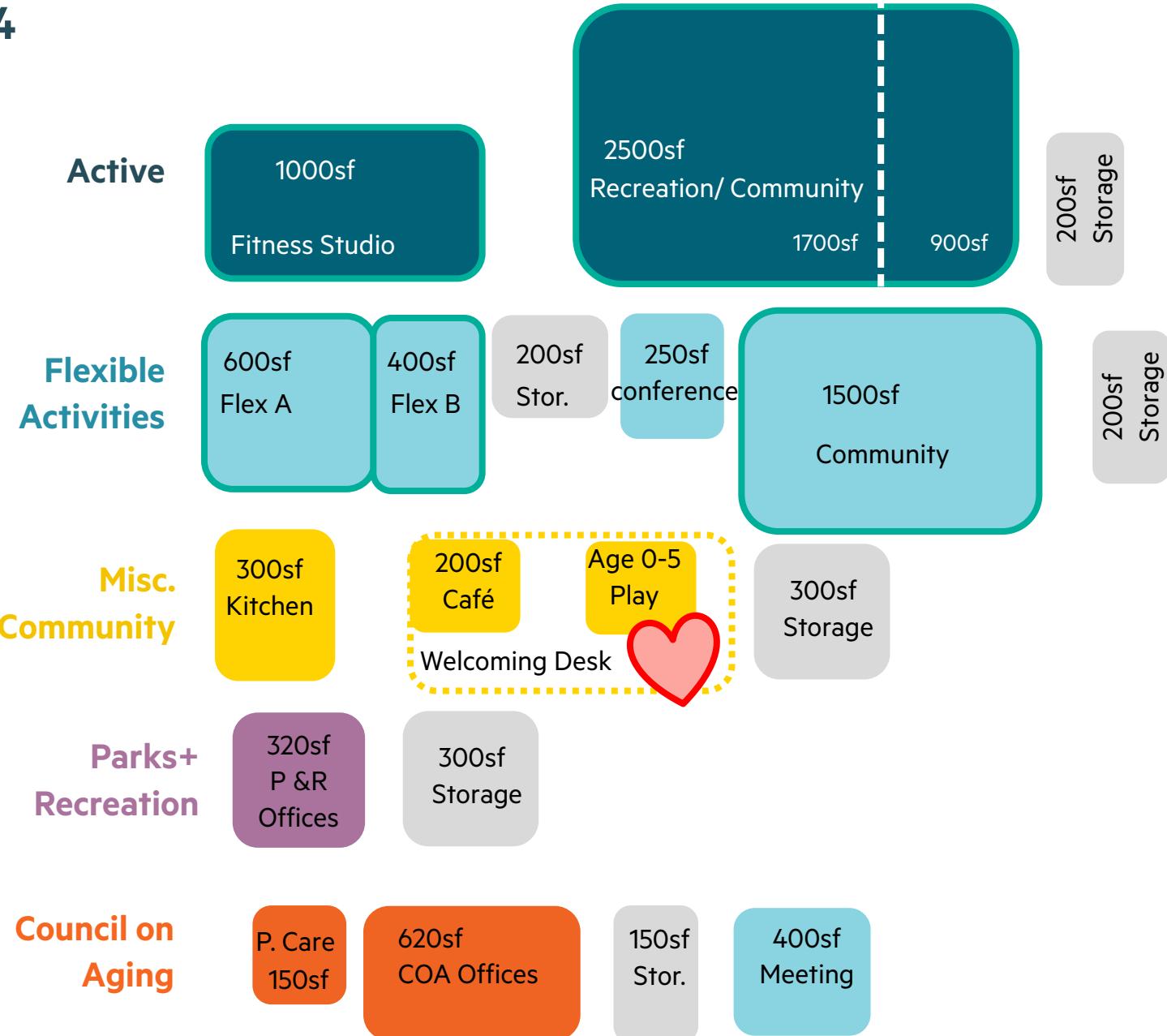
15,000 GSF - Space Option #4

“Recommended”

Major Features

- Flexible: Recreation + Fitness
- Medium Community Space
- Expanded Kitchen
- Fitness/ Dance

Core Spaces	8,515sf
Storage Area	1,410sf
Program Area	9,925sf
Gross Area	15-17,000sf
Project Cost	\$13M





Major CBA Factors

#2 Program Adherence to Ideal

Single Story (N2)

Flex A/B: 1032 SF
 Community Room: 1530 SF
 Fitness: **1081 SF**
 Rec: 2520 SF
 Meeting: 405 SF
 Conference: 255 SF
 COA: 837 SF



75

Two Story (N3.1)

Flex A/B: 1050 SF
 Community Room: 1560 SF
 Fitness: **1068 SF**
 Rec: 2520 SF
 Meeting: 450 SF
 Conference: 258 SF
 COA: 860 SF

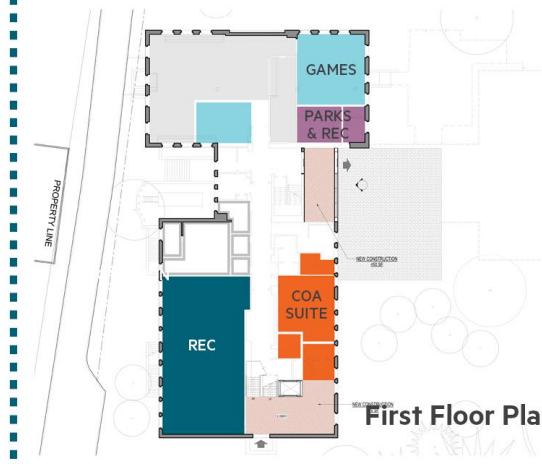


85

Second Floor Plan

Save the Most (R1)

Flex A/B: **1646 SF**
 Community Room: **1343 SF**
 Fitness: **750 SF + 750 SF**
 Rec: **2226 SF**
 Meeting: **340 SF**
 Conference: 386 SF
 COA: **984 SF**



0

Second Floor Plan

Save the 1910 (R3)

Flex A/B: 1040 SF
 Community Room: 1504 SF
 Fitness: **1228 SF**
 Rec: 2520 SF
 Meeting: 440 SF
 Conference: 230 SF
 COA: **956 SF**



100

Second Floor Plan

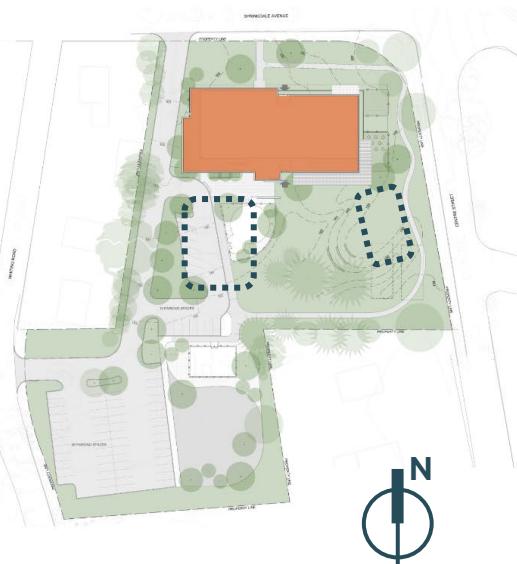
#4 Compactness/ Expansion

Single Story (N2)



COMPACTNESS / OPTIMIZED FOR EXPANSION

Footprint is least compact,
but still has space for expansion



Footprint :
15,240 SF

85

Two Story (N3.1)



COMPACTNESS / OPTIMIZED FOR EXPANSION

Footprint is most compact
Most Room for expansion



Footprint :
10,330 SF

95

Save the Most (R1)



COMPACTNESS / OPTIMIZED FOR EXPANSION

Footprint is very compact
Expansion either to east or inside
But split level complicates expansion



Footprint :
12,600 SF

0

Save the 1910 (R3)



COMPACTNESS / OPTIMIZED FOR EXPANSION

Footprint is very compact
Less room to south of Recreation for
expansion



Footprint :
12,270 SF

80

#7 Creates Heart of the Community

New: Single Story (N2)



New: Two Story (N3.1)



Reno: Save the Most (R1)

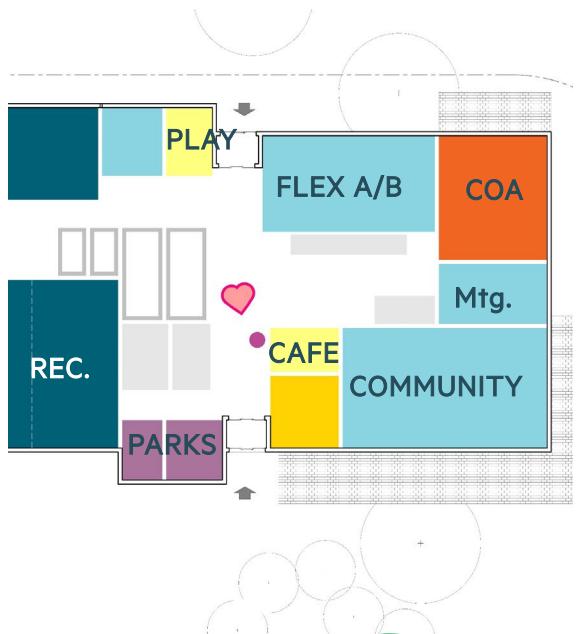


Reno: Save the 1910 (R3)

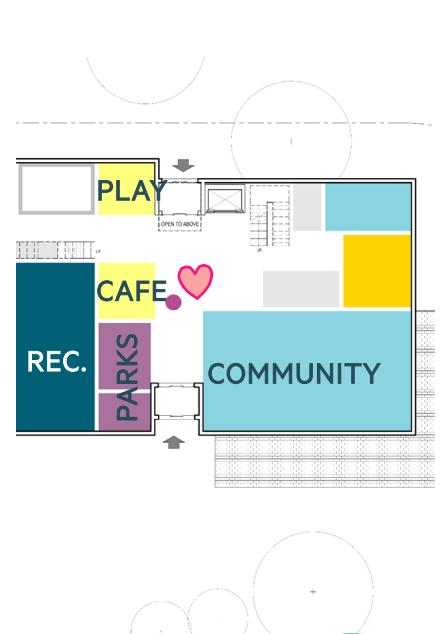


Creates an open environment that encourages residents to meet, network and work

One level and one heart, but will have darker central space due to deep floorplate



Two levels, one heart (good proportions for natural light)
COA is upstairs (remote)



Three levels, two hearts
This option lacks a central meeting place



Two levels, one heart (which will be well lit). COA is on main level

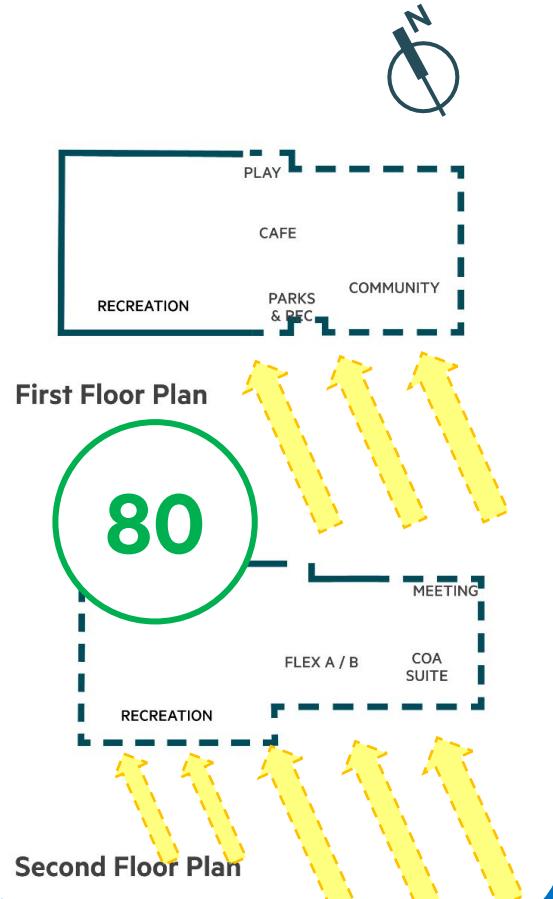


#8 Daylighting and Views to Outside

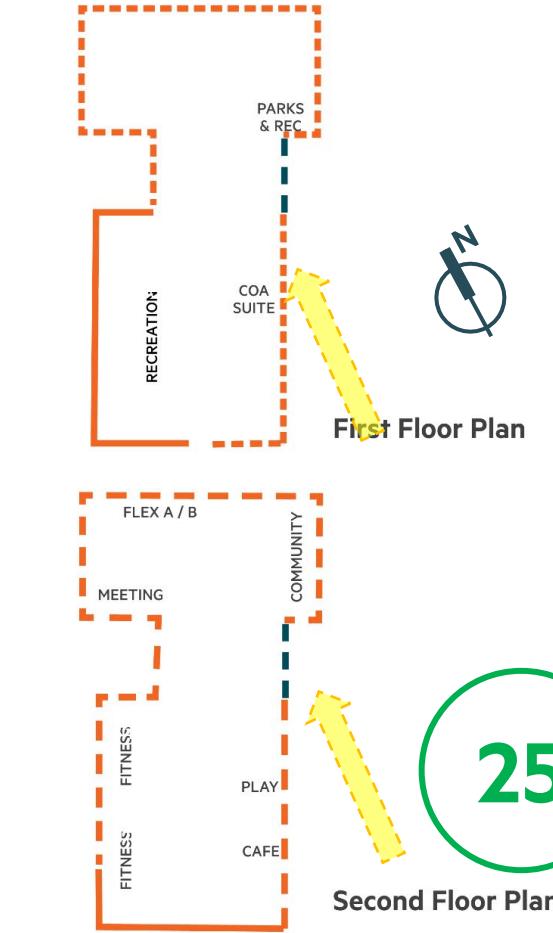
Single Story (N2)



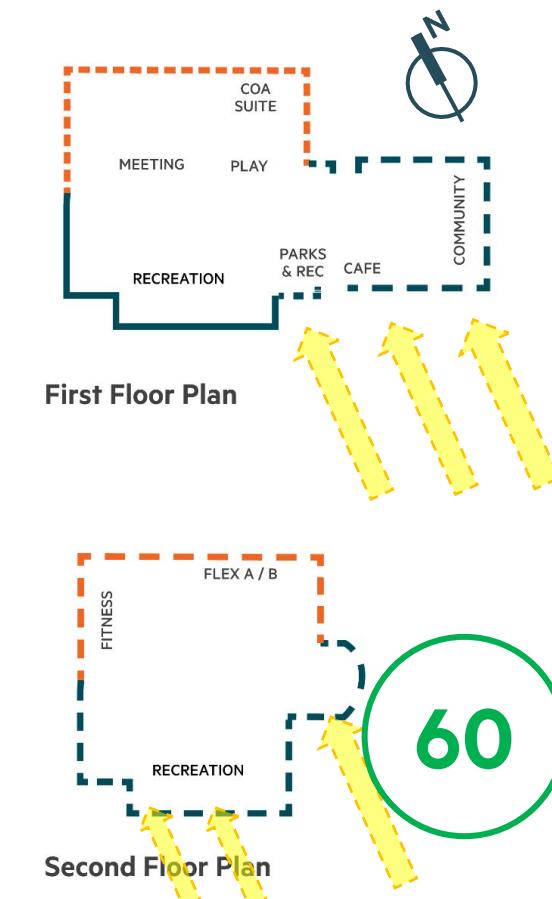
Two Story (N3.1)



Save the Most (R1)

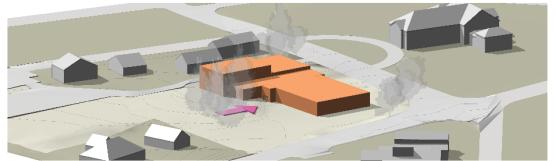


Save the 1910 (R3)

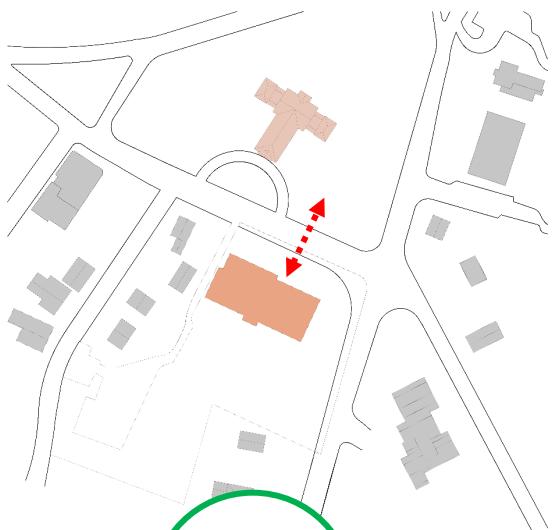


#9 Relationship to Town Center

Single Story (N2)



Low pancake massing, unlike 2 story construction of other buildings in Town Center, engages Springdale Ave.



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Two Story (N3.1)



2 Story massing responds to Town House and engages with Springdale Ave.

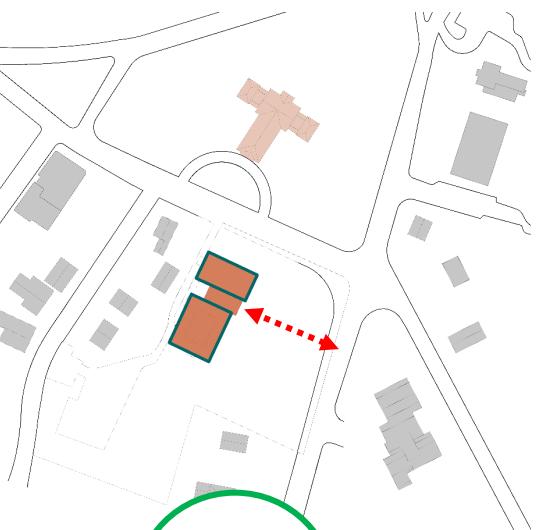


80

Save the Most (R1)



2 Story responds to Town House and saves 1910 building, does not engage Springdale Ave.



50

Save the 1910 (R3)



2 story massing and saves historic 1910 building relates well to Town House and Town Center, engages Springdale Ave.



90



CBA Evaluation

Choosing by Advantages – Sub-committee Update

Factor illustrated in presentation		Alternatives: New Construction		Alternatives: Renovation of Existing Building(s)	
Feasibility Study - Selecting 1 New and 1 Renovation Alternatives		N2 - New Single Story		N3.1 New - Two Story	
General		R1 - Renovation Vertical Lobby		R3 - Renovation Save 1910	
1	Factor Universal Design	Attrib.: no stairwell, no elevator	Attrib.: 2 stairs, 1 elevator	Attrib.: <u>1 switchback stairwell, 1 triple run stair, 1 elevator</u> Least Preferred	Attrib.: 2 stairs, 1 elevator
	Criterion Fewest level changes with stairs, ramps & elevators	Advant.: Best IMP. 40	Attrib.: Better IMP. 30	Attrib.: IMP. 0	Attrib.: Good IMP. 30
Functionality					
2	Factor Program Adherence to Space Option 4	Attrib.: New construction: right-sized rooms in configuration for maximum flexibility	Attrib.: New construction: right-sized rooms in configuration for maximum flexibility	Attrib.: <u>Light renovation requires re-use of existing rooms: not right size and not flexible</u>	Attrib.: Addition/ Renovation construction allows best match to program(larger Fitness and COA areas) and flexibility
	Criterion Matches desired program requirements & flexibility	Advant.: Good IMP. 75	Advant.: Better IMP. 85	Advant.: IMP. 0	Advant.: Best IMP. 100
3	Factor Advantageous Adjacencies	Attrib.: CoA abuts main gathering. One level so no overhead noises, Parks & Rec next to entry	Attrib.: CoA has separate area, away from noises, Parks & Rec next to entry	Attrib.: <u>CoA separate level from Community Room, Some overhead noise, Parks & Rec far from entry</u> Least Preferred	Attrib.: CoA distinct area, but accessible, no overhead noise, Parks & Rec next to entry
	Criterion Most qualities: CoA near Community Room, Good Separation of Noisy Activities, Parks & Rec near entrance	Advant.: Good IMP. 60	Advant.: Best IMP. 85	Advant.: IMP. 0	Advant.: Better IMP. 80
4	Factor Compactness / Optimized for Expansion	Attrib.: Footprint is least compact, but still has space for expansion	Attrib.: Footprint is most compact. Most space for expansion	Attrib.: <u>Footprint is very compact. Expansion either to east or inside, but split level complicates expansion</u>	Attrib.: Footprint is very compact. Less room to south of Recreation for expansion
	Criterion The most compact building is best, ability to expand a large program space is best	Advant.: Better IMP. 85	Advant.: Best IMP. 95	Advant.: IMP. 0	Advant.: Better IMP. 80
5	Factor Relation of entry and drop-off / Accessible parking	Attrib.: Medium-sized forecourt and limited view of Entry	Attrib.: Large forecourt and clear view of Entry	Attrib.: <u>Smallest forecourt but clear view of Entry</u> Least Preferred	Attrib.: Large Forecourt and good view of Entry
	Criterion Largest forecourt & best view to main entrance	Advant.: Better IMP. 70	Advant.: Best IMP. 75	Advant.: IMP. 0	Advant.: Good IMP. 60
6	Factor Visual Control of entry (ies)	Attrib.: Central Location separate from main parks & rec offices (same level)	Attrib.: Central Location separate from main parks & rec offices (2nd floor)	Attrib.: <u>No Central Location and separate from main parks & rec offices (lower level)</u> Least Preferred	Attrib.: Central Location next to main parks & rec offices
	Criterion Central control point nearest to Parks & Rec Offices	Advant.: Better IMP. 70	Advant.: Good IMP. 60	Advant.: IMP. 0	Advant.: Best IMP. 80
Experiential (user experience)					
7	Factor Creates heart of community	Attrib.: One level and one heart, but will be darker central space due to deep floorplate	Attrib.: Two levels, one heart (good proportions for lighting). COA upstairs (remote)	Attrib.: <u>Three levels and two hearts This option lacks a central meeting place</u> Least Preferred	Attrib.: Two levels and one heart, which is well lit.COA is on main level
	Criterion Quality and connectivity of central space (fewer hearts & fewer levels are better)	Advant.: Better IMP. 75	Advant.: Good IMP. 60	Advant.: IMP. 0	Advant.: Best IMP. 85
8	Factor Daylighting, ventilation & connection to outdoors	Attrib.: All new window openings, but deep floorplate limits solar penetration, Least Preferred	Attrib.: Best ratio perimeter to program spaces, all new window openings and most spaces with southern exposure	Attrib.: Existing windows well sized (2nd floor), but minimal southern exposure. Lots of eastern exposure (bad)	Attrib.: Good ratio perimeter to program spaces - combination exist/new, but more north facing spaces.
	Criterion Largest ratio of perimeter to program space with windows & largest size of windows	Advant.: IMP. 0	Advant.: Best IMP. 80	Advant.: Good IMP. 25	Advant.: IMP. 60
Community					
9	Factor Town Center	Attrib.: <u>Low pancake massing, unlike 2 story construction of other buildings in Town Center</u> Least Preferred	Attrib.: 2 Story massing responds to Town House and engages with Springdale Ave.	Attrib.: 2 Story responds to Town House and saves 1910 building, does not engage Springdale Ave.	Attrib.: 2 story massing and saves historic 1910 building, so relates well to Town House and Town Center. Engages Springdale Ave.
	Criterion Building Massing (height) Consistent with Town Center, Orientation engages Springdale Ave.	Advant.: IMP. 0	Advant.: Better IMP. 80	Advant.: Good IMP. 50	Advant.: Best IMP. 90
Sustainability					
10	Factor Resiliency: Co-location of shelter spaces	Attrib.: No elevator required, COA/ Kitch/ Comm Room/ Meeting & Flex are contiguous	Attrib.: Elevator required as COA is upstairs. Kitch/ Comm Room/ Meeting are contiguous (Flex is upstairs)	Attrib.: <u>Elevator required. COA on different level from Kitch/ Comm Room/ Meeting & Flex</u> Least Preferred	Attrib.: Elevator optional. COA next to Meeting, but separate from Kitch/ Comm Room (Flex upstairs)
	Criterion Adjacency of COA suite, Community Room, Kitchen, Meeting and Flex Rooms to run efficiently	Advant.: Best IMP. 50	Advant.: Good IMP. 35	Advant.: IMP. 0	Advant.: Better IMP. 40
Total Importance of Advantages (IoAs)		Total IOA 525		Total IOA 685	
		Total IOA 75		Total IOA 705	



Single Story (N2)



525



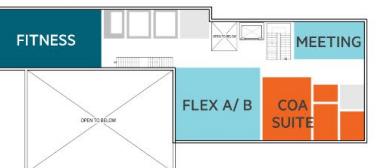
Two Story (N3.1)



685



Second Floor Plan



Save the Most (R1)



75



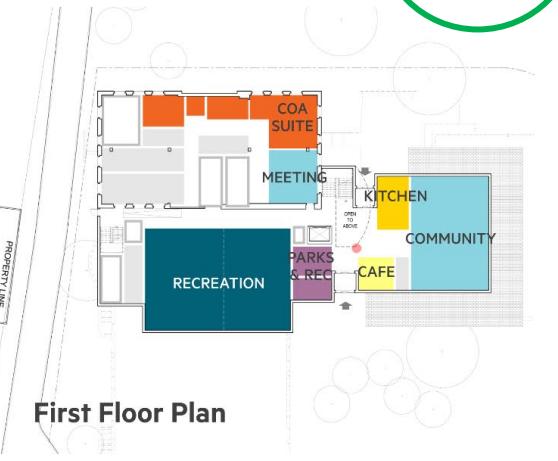
Second Floor Plan



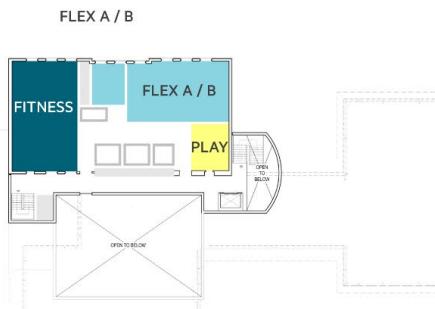
Save the 1910 (R3)



705



Second Floor Plan





Questions for Public Mtg