

Town of Dover Community Center

Building Committee

- Program Update
- CBA Evaluation

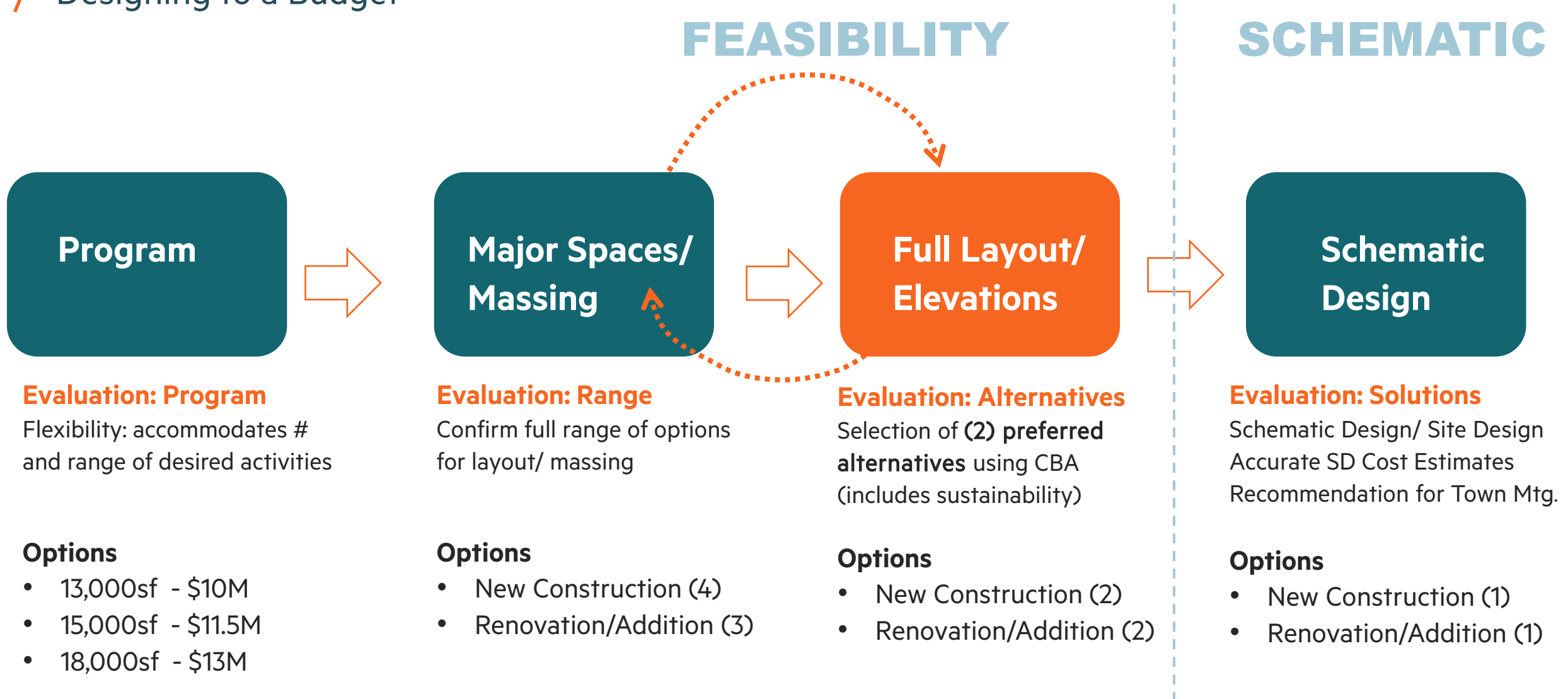
Feb 01, 2021

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

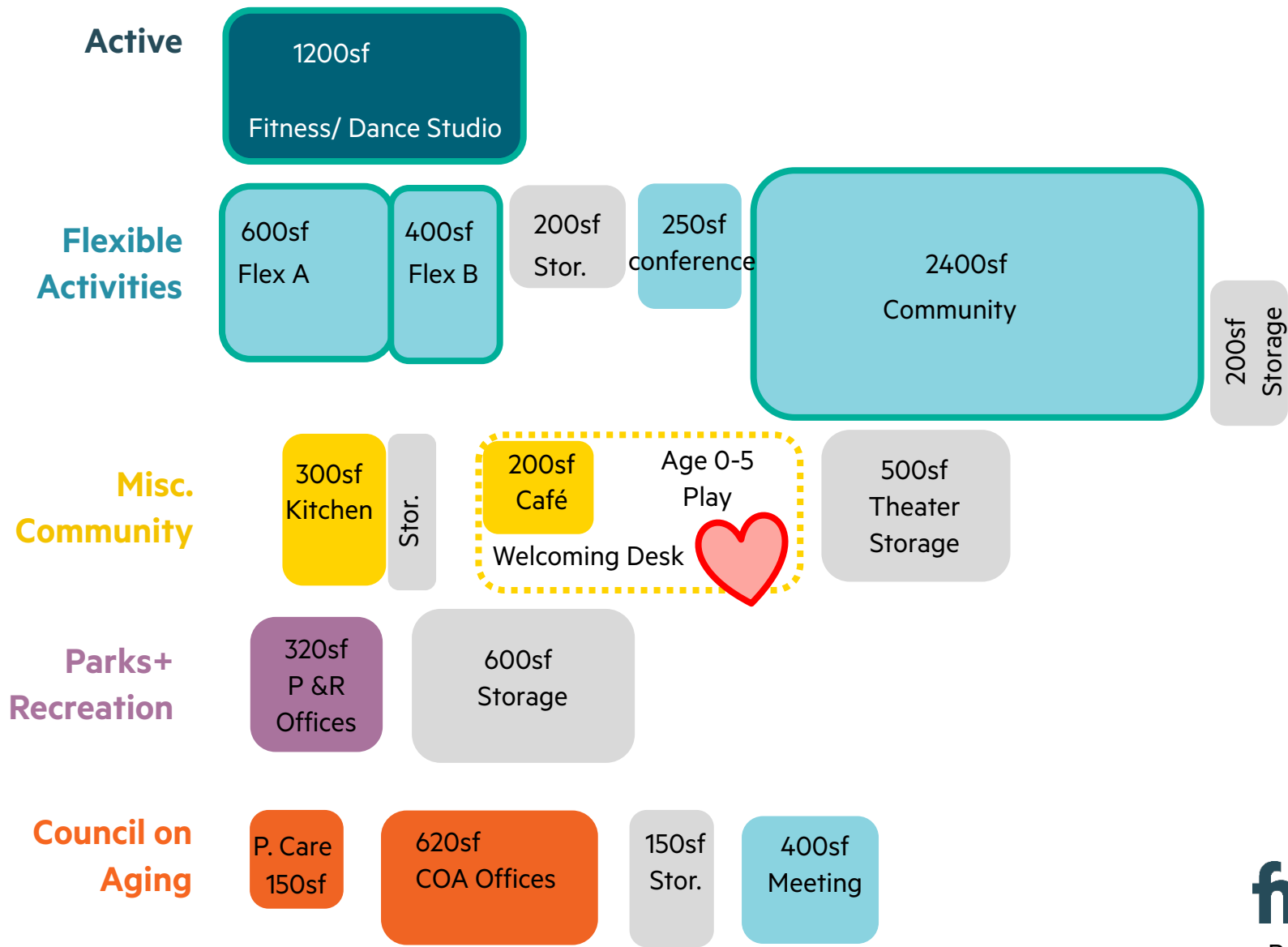
Option #1

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

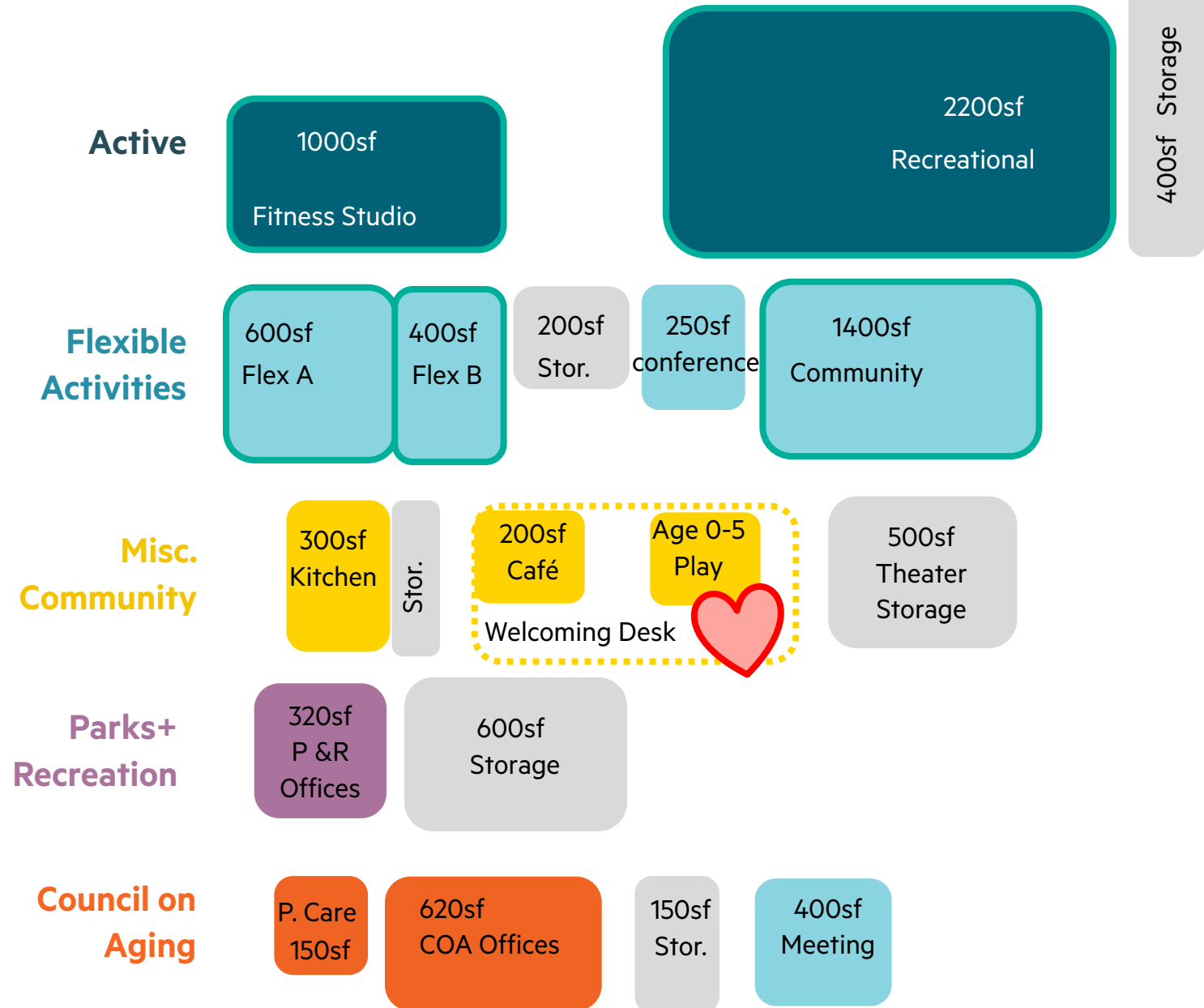
Core Spaces 8,100sf

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

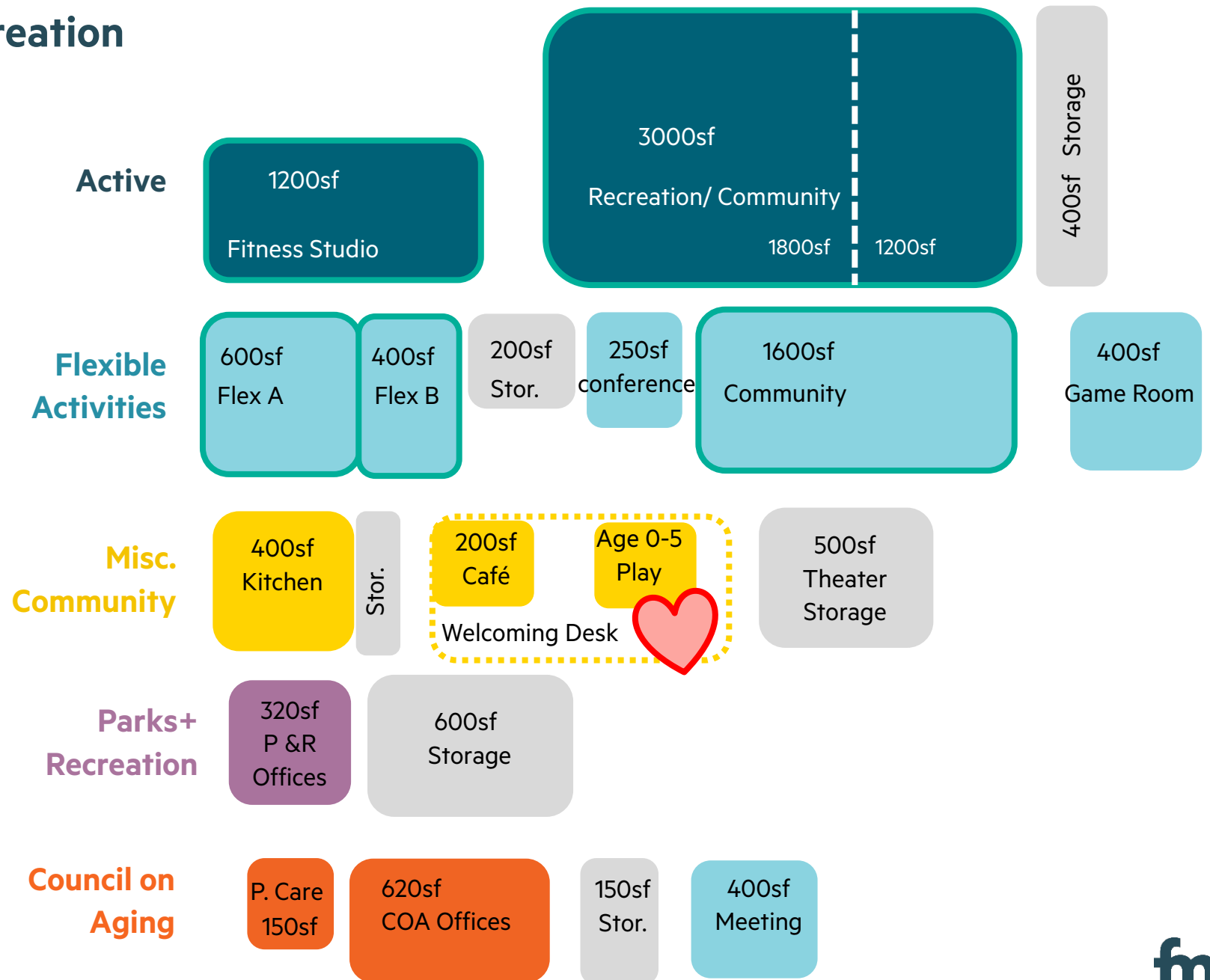
Storage Area 2,025sf

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 (Uniformat)



Dover, Ma
Dover Community Center

Feasibility Study (\$000's)		Estimate Analysis							
	A/E Control Budget	Option R1	Difference (Control Budget - R1)	Option R3	Difference (Control Budget - R3)	Option N2	Difference (Control Budget - N2)	Option N3.1	Difference (Control Budget - N3.1)
	5/26/2020	1/15/2021		1/15/2021		1/15/2021		1/15/2021	
Renovated Area (GSF)	0	19,767	(19,767)	9,022	(9,022)	0	0	0	0
New Construction Area (GSF)	18,000	6,233	11,767	10,775	7,225	18,200	(200)	18,200	(1,200)
Construction Total Area (GSF)	18,000	26,000	(8,000)	19,800	(1,800)	18,200	(200)	18,200	(1,200)
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	\$ (59.45)	\$ 693.18	\$ (162.31)	\$ 688.87	\$ (158.00)
I. Building Construction (to 5' beyond perimeter)									
Addition Costs (Separated from Renovation)									
A10 Foundations		\$ 2,649.0	(2,649.0)	\$ 4,041.8	(4,041.8)	\$ -	0.0	\$ -	0.0
A1010 Standard Foundations		\$ 137.2	(137.2)	\$ 47.9	(47.9)	\$ 850.9	(850.9)	\$ 635.4	(635.4)
A1030 Slab on Grade		72.4	-72.4	9.0	-9.0	624.6	-624.6	478.4	-478.4
B10 Superstructure		\$ 109.5	(109.5)	\$ 43.0	(43.0)	\$ 510.4	(510.4)	\$ 583.6	(583.6)
B1010 Floor Construction		84.5	-84.5	18.0	-18.0	0.0	0.0	202.6	-202.6
B1020 Roof Construction		25.0	-25.0	25.0	-25.0	510.4	-510.4	381.0	-381.0
B20 Exterior Enclosure		\$ 355.0	(355.0)	\$ 154.2	(154.2)	\$ 1,575.4	(1,575.4)	\$ 1,912.2	(1,912.2)
B2010 Exterior Walls		140.3	-140.3	64.5	-64.5	1165.4	-1165.4	1418.4	-1418.4
B2020 Exterior Windows		197.7	-197.7	90.2	-90.2	388.7	-388.7	472.5	-472.5
B2030 Exterior Doors		17.0	-17.0	0.0	0.0	21.3	-21.3	21.3	-21.3
B30 Roofing		\$ 284.3	(284.3)	\$ 130.6	(130.6)	\$ 415.1	(415.1)	\$ 298.9	(298.9)
B3010 Roof Coverings		284.3	-284.3	130.6	-130.6	415.1	-415.1	298.9	-298.9
C10 Interior Construction		\$ 664.3	(664.3)	\$ 171.6	(171.6)	\$ 741.4	(741.4)	\$ 807.1	(807.1)
C1010 Partitions		422.2	-422.2	57.2	-57.2	424.3	-424.3	478.1	-478.1
C1020 Interior Doors		116.5	-116.5	40.6	-40.6	109.4	-109.4	113.9	-113.9
C1030 Fittings		124.9	-124.9	73.7	-73.7	207.7	-207.7	215.1	-215.1
C20 Stairs		\$ 61.6	(61.6)	\$ -	0.0	\$ 12.4	(12.4)	\$ 105.9	(105.9)
C2010 Stair Construction		57.3	-57.3	0.0	0.0	7.5	-7.5	98.2	-98.2
C2020 Stair Finishes		4.3	-4.3	0.0	0.0	4.9	-4.9	7.7	-7.7
C30 Interior Finishes		\$ 533.4	(533.4)	\$ 294.7	(294.7)	\$ 521.1	(521.1)	\$ 547.7	(547.7)
C3010 Wall Finishes		100.2	-100.2	99.8	-99.8	136.3	-136.3	144.6	-144.6
C3020 Floor Finishes		225.6	-225.6	100.2	-100.2	193.7	-193.7	201.5	-201.5
C3030 Ceiling Finishes		207.6	-207.6	94.7	-94.7	191.1	-191.1	201.6	-201.6
D10 Conveying		\$ 215.8	(215.8)	\$ -	0.0	\$ -	0.0	\$ 135.8	(135.8)
D1010 Elevators and Lifts		215.8	-215.8	0.0	0.0	0.0	0.0	135.8	-135.8
D20 Plumbing		\$ 266.9	(266.9)	\$ 121.8	(121.8)	\$ 278.0	(278.0)	\$ 252.7	(252.7)
D30 HVAC		\$ 909.3	(909.3)	\$ 415.0	(415.0)	\$ 837.2	(837.2)	\$ 883.2	(883.2)
D40 Fire Protection		\$ 108.7	(108.7)	\$ 49.6	(49.6)	\$ 100.1	(100.1)	\$ 105.6	(105.6)
D4010 Sprinklers		108.7	-108.7	49.6	-49.6	100.1	-100.1	105.6	-105.6
D50 Electrical		\$ 779.6	(779.6)	\$ 441.2	(441.2)	\$ 730.3	(730.3)	\$ 761.8	(761.8)
D5010 Electrical Service and Distribution		243.7	-243.7	184.6	-184.6	235.1	-235.1	240.6	-240.6
D5020 Lighting and Branch Wiring		204.6	-204.6	93.4	-93.4	188.4	-188.4	198.7	-198.7
D5030 Communications and Security		130.7	-130.7	71.6	-71.6	122.1	-122.1	127.6	-127.6
D5090 Other Electrical Systems		200.6	-200.6	91.6	-91.6	184.7	-184.7	194.9	-194.9
E10 Equipment		\$ 107.4	(107.4)	\$ 75.0	(75.0)	\$ 110.0	(110.0)	\$ 110.0	(110.0)
E1010 Commercial Equipment		75.0	-75.0	75.0	-75.0	75.0	-75.0	75.0	-75.0
E1090 Other Equipment		32.4	-32.4	0.0	0.0	35.0	-35.0	35.0	-35.0
E20 Furnishings		\$ 22.1	(22.1)	\$ 3.8	(3.8)	\$ 18.7	(18.7)	\$ 21.7	(21.7)
E2010 Fixed Furnishings		22.1	-22.1	3.8	-3.8	18.7	-18.7	21.7	-21.7
F20 Selective Building Demolition		\$ 946.4	(946.4)	\$ 843.9	(843.9)	\$ 696.5	(696.5)	\$ 696.6	(696.6)
F2010 Building Elements Demolition		548.3	-548.3	445.8	-445.8	298.4	-298.4	298.5	-298.5
F2020 Hazardous Components Abatement		398.1	-398.1	398.1	-398.1	398.1	-398.1	398.1	-398.1
Total Building Construction	7,026.0	8,150.5	(1,120.0)	6,834.1	185.9	7,397.4	(377.4)	7,858.2	(838.2)
II. Related Construction									
A. Sitework (beyond 5' of building)									
G10 Site Preparation		\$ 270.8	(270.8)	\$ 270.8	(270.8)	\$ 270.8	(270.8)	\$ 270.8	(270.8)
G1010 Site Clearing		138.3	-138.3	138.3	-138.3	138.3	-138.3	138.3	-138.3
G1020 Site Demo and Relocation		40.8	-40.8	40.8	-40.8	40.8	-40.8	40.8	-40.8
G1030 Site Earthwork		91.7	-91.7	91.7	-91.7	91.7	-91.7	91.7	-91.7
G20 Site Improvements		\$ 766.4	(766.4)	\$ 766.5	(766.5)	\$ 903.4	(903.4)	\$ 903.4	(903.4)
G2010 Roadways		171.9	-171.9	171.9	-171.9	219.1	-219.1	219.1	-219.1
G2030 Pedestrian Paving		165.4	-165.4	165.9	-165.5	182.9	-182.9	182.9	-182.9
G2040 Site Development		116.7	-116.7	116.7	-116.7	133.9	-133.9	133.9	-133.9
G2050 Landscaping		116.7	-116.7	116.7	-116.7	133.9	-133.9	133.9	-133.9
G30 Site Mechanical Utilities		\$ 801.9	(801.9)	\$ 801.9	(801.9)	\$ 801.9	(801.9)	\$ 802.0	(802.0)
G3010 Water Supply		347.4	-347.4	347.4	-347.4	347.4	-347.4	347.5	-347.5
G3020 Sanitary Sewer		154.5	-154.5	154.5	-154.5	154.5	-154.5	154.5	-154.5
G3030 Storm Sewer		300.0	-300.0	300.0	-300.0	300.0	-300.0	300.0	-300.0
G40 Site Electrical Utilities		\$ 152.0	(152.0)	\$ 152.0	(152.0)	\$ 152.0	(152.0)	\$ 152.0	(152.0)
G4010 Electrical Distribution		73.3	-73.3	73.3	-73.3	73.3	-73.3	73.3	-73.3
G4020 Site Lighting		78.7	-78.7	78.7	-78.7	78.7	-78.7	78.7	-78.7
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 23,600sf

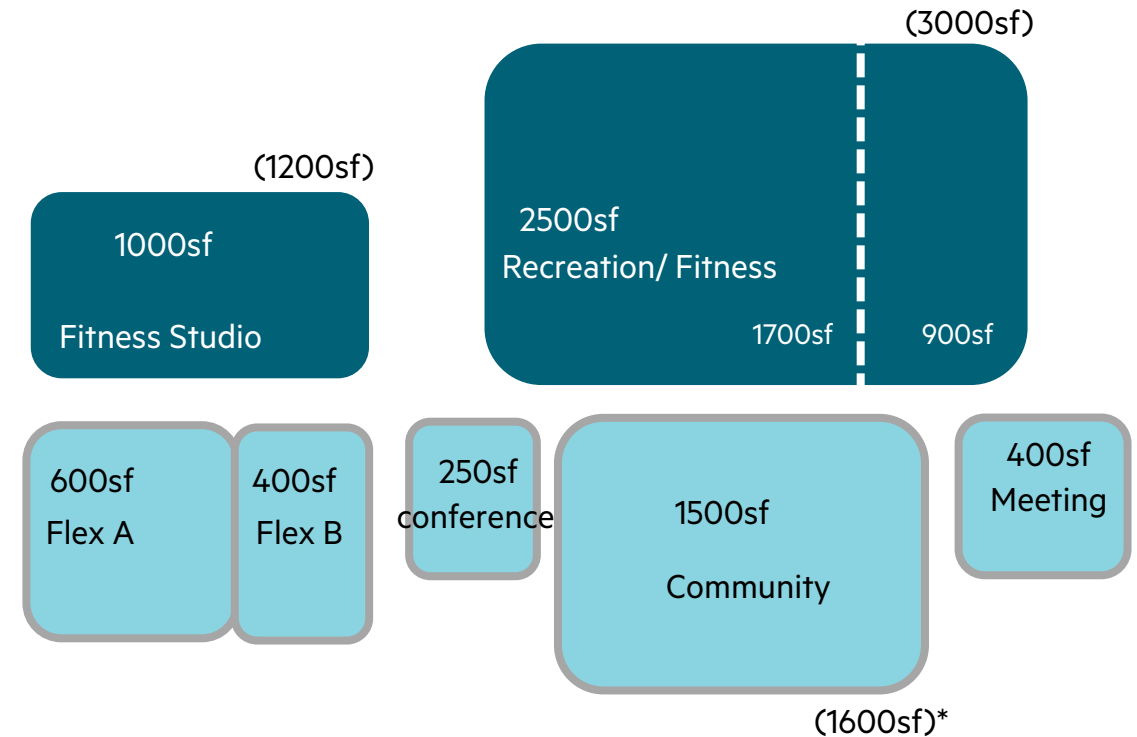
Save the 1910 (R3): \$345/SF = 17,500sf 17,400sf (on target)

\$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

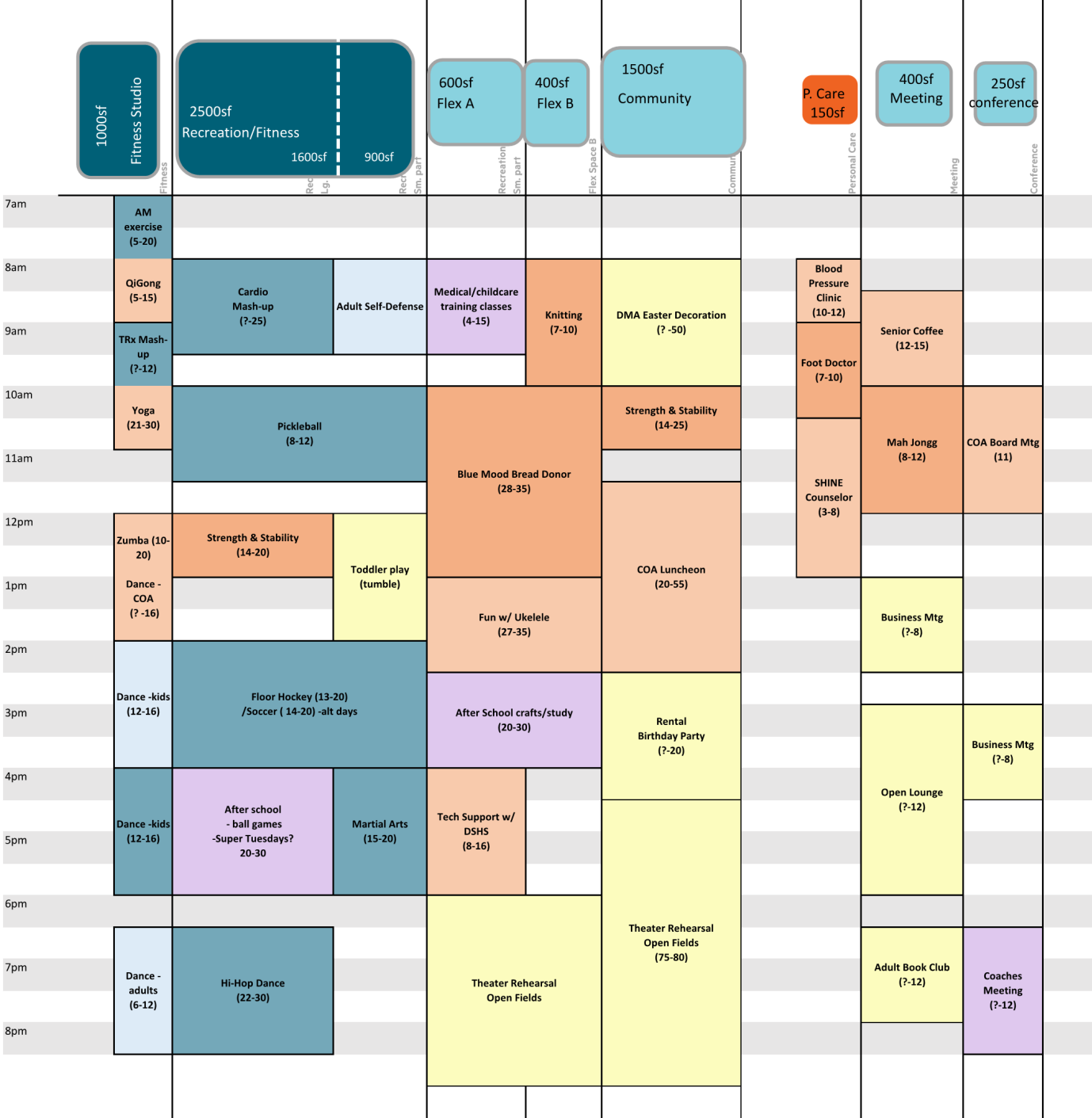
- COA weighted towards mornings
- Parks & Rec mostly afternoons
- Theater Groups evenings
- Looked to enlarge Active spaces
- But need 8 spaces for maximum flexibility

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

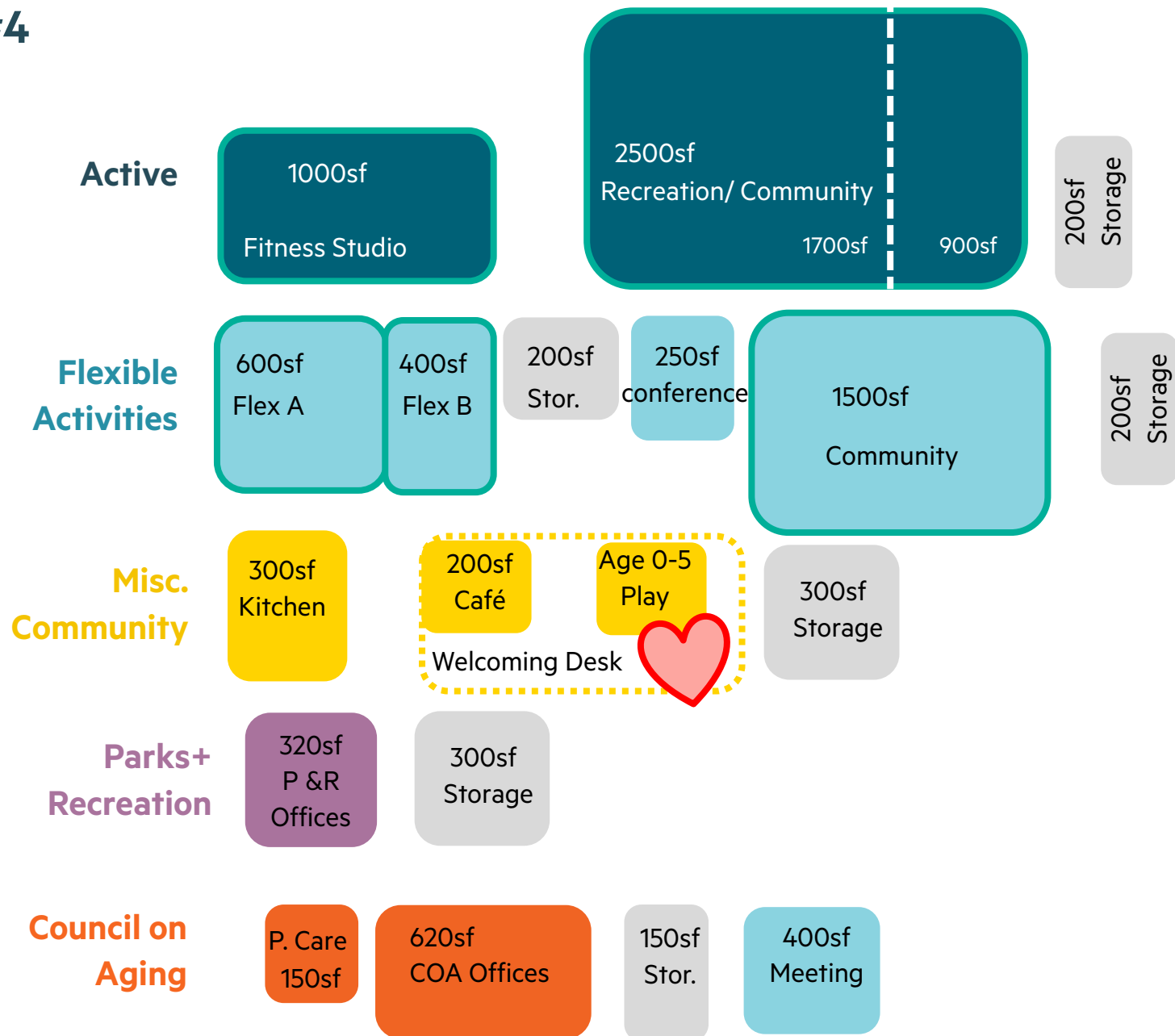
Core Spaces 8,515sf

Storage Area 1,410sf

Program Area 9,925sf

Gross Area 15-17,000sf

Project Cost \$13M





Major CBA Factors

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

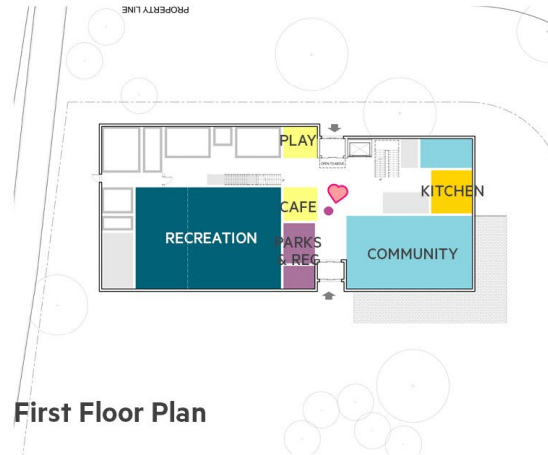


Floor Plan

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



First Floor Plan

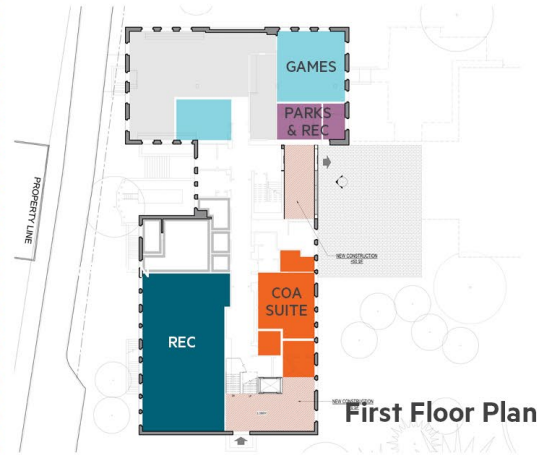
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Second Floor Plan



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**



First Floor Plan

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Second Floor Plan



Save the 1910 (R3)

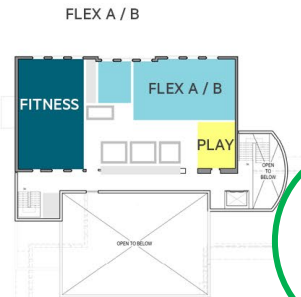
Flex A/B: 1040 SF
Community Room: 1504 SF
Fitness: **1228 SF**
Rec: 2520 SF
Meeting: 440 SF
Conference: 230 SF
COA: **956 SF**



First Floor Plan

100

Second Floor Plan



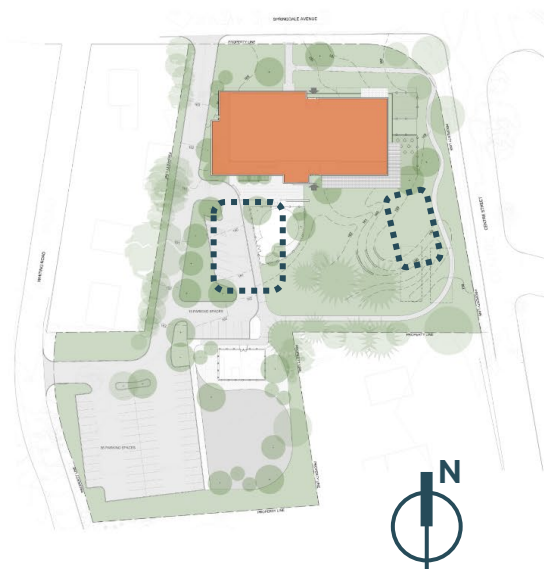
#4 Compactness/ Expansion

Single Story (N2)



COMPACTNESS / OPTIMIZED FOR EXPANSION

Footprint is least compact,
but still has space for expansion



Footprint :
15,240 SF

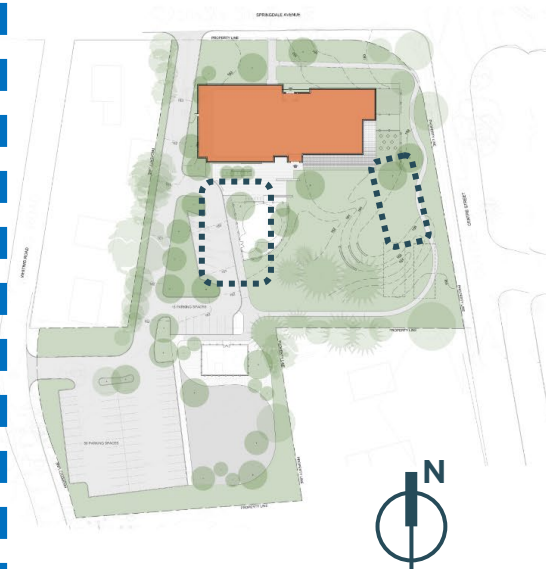
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Two Story (N3.1)



COMPACTNESS / OPTIMIZED FOR EXPANSION

Footprint is most compact
Most Room for expansion



Footprint :
10,330 SF

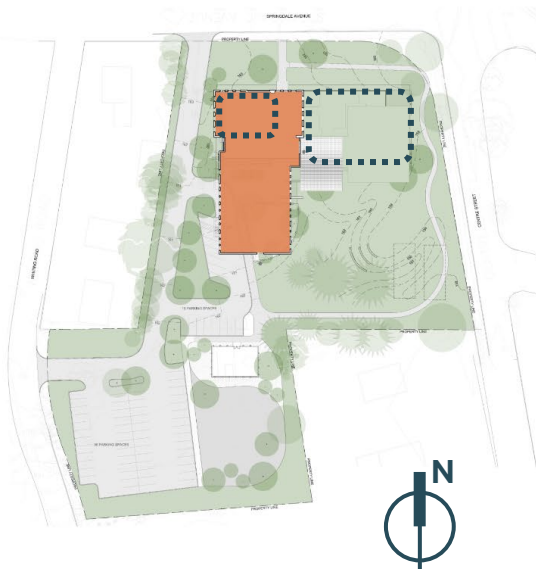
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Save the Most (R1)



COMPACTNESS / OPTIMIZED FOR EXPANSION

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



Footprint :
12,600 SF

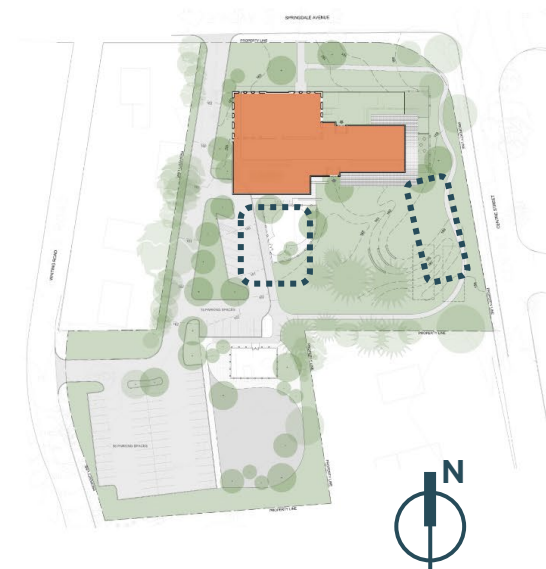
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Save the 1910 (R3)



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)



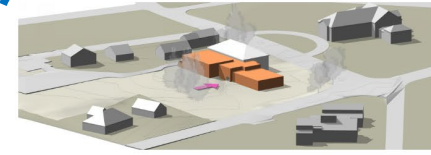
New: Two Story (N3.1)



Reno: Save the Most (R1)

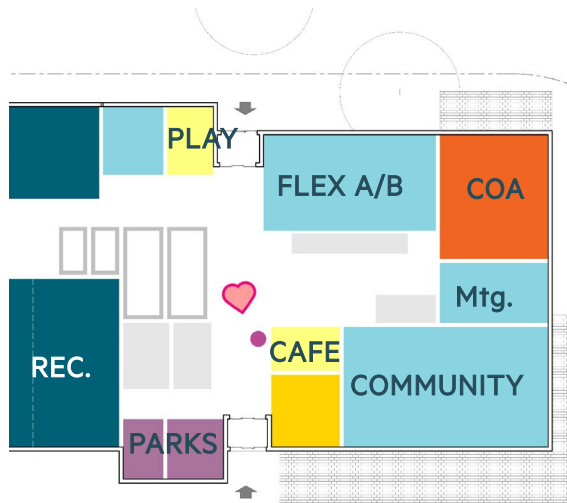


Reno: Save the 1910 (R3)



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



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



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



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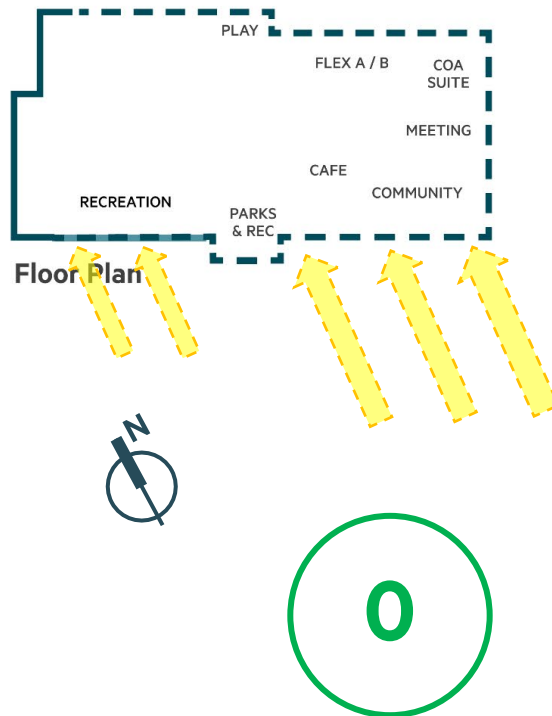
Two levels, one heart (which will be well lit). COA is on main level



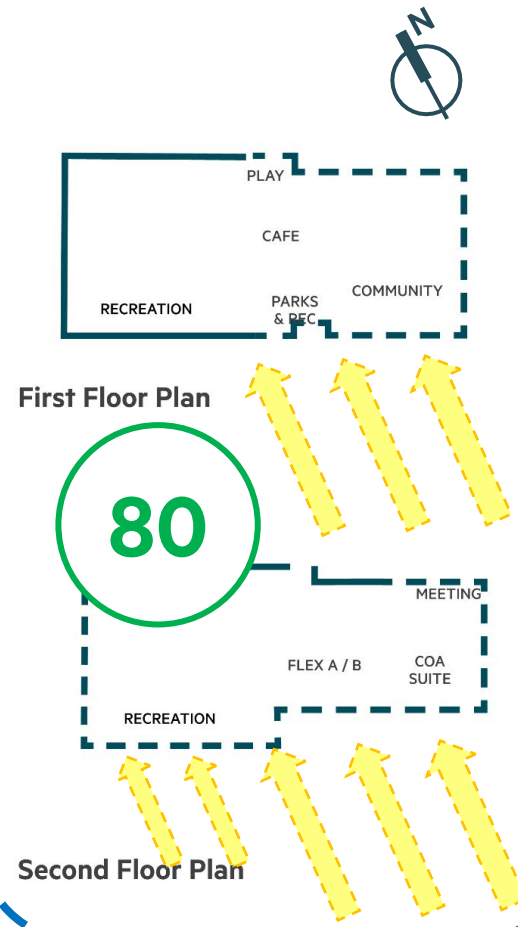
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#8 Daylighting and Views to Outside

Single Story (N2)



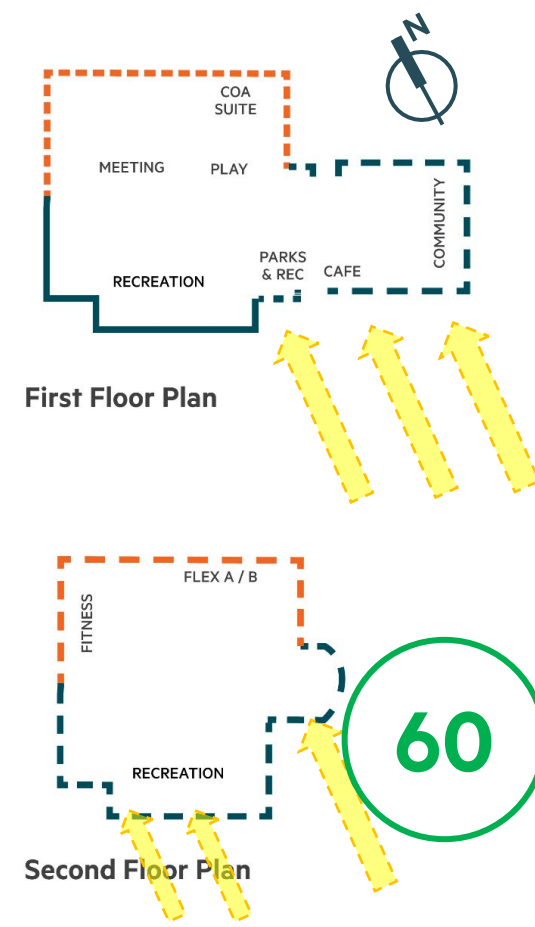
Two Story (N3.1)



Save the Most (R1)

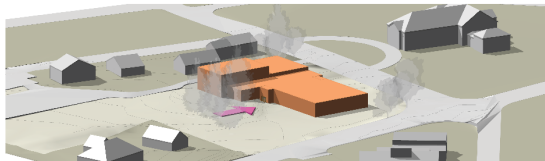


Save the 1910 (R3)

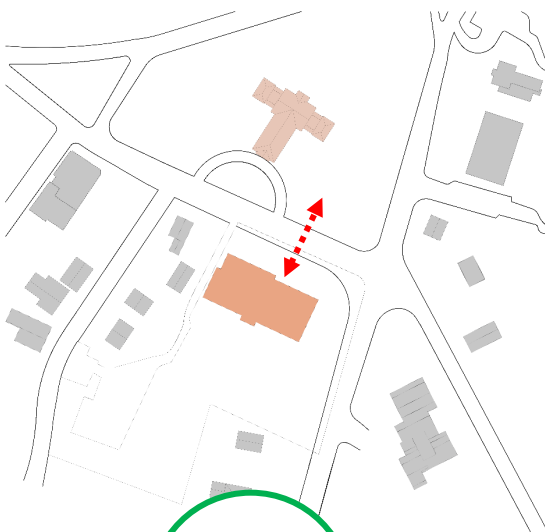


#9 Relationship to Town Center

Single Story (N2)



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

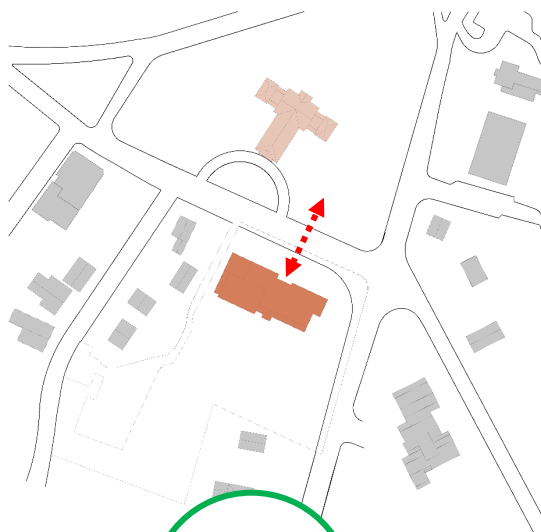


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Two Story (N3.1)



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

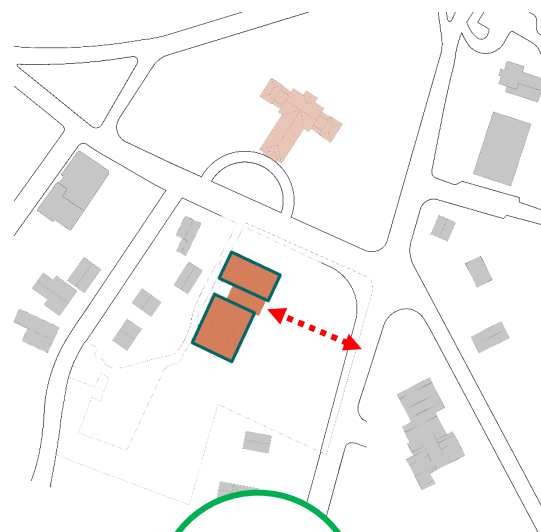


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Save the Most (R1)



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

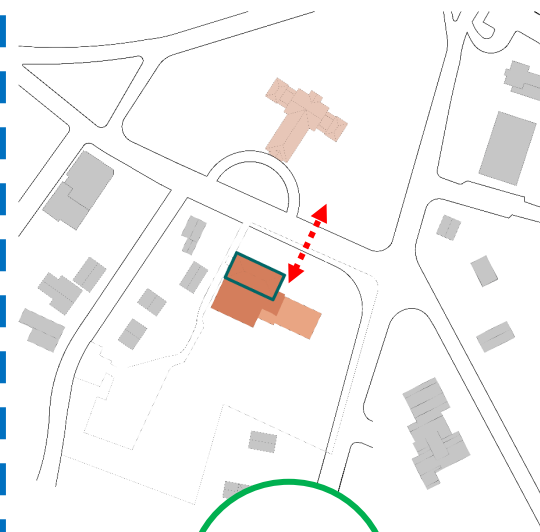


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Save the 1910 (R3)



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			Most important advantage for each factor			Paramount Advantage - most important advantage from all advantages		
Feasibility Study - Selecting 1 New and 1 Renovation Alternatives			Alternatives: New Construction			Alternatives: Renovation of Existing Building(s)		
			N2 - New Single Story		N3.1 New - Two Story	R1 - Renovation Vertical Lobby		R3 - Renovation Save 1910
1	Factor	Universal Design	Attrib.:	no stairwell, no elevator		Attrib.:	2 stairs, 1 elevator	
	Criterion	Fewest level changes with stairs, ramps & elevators	Advant.:	Best	IMP. 40	Attrib.:		IMP. 0
2	Factor	Program Adherence to Space Option 4	Attrib.:	New construction: right-sized rooms in configuration for maximum flexibility		Attrib.:	1 switchback stairwell, 1 triple run stair, 1 elevator. Least Preferred	
	Criterion	Matches desired program requirements & flexibility	Advant.:	Good	IMP. 75	Attrib.:		IMP. 0
3	Factor	Advantageous Adjacencies	Attrib.:	CoA abuts main gathering, One level so no overhead noises, Parks & Rec next to entry		Attrib.:	Addition/ Renovation construction allows best match to program(larger Fitness and COA areas) and flexibility	
	Criterion	Most qualities: CoA near Community Room, Good Separation of Noisy Activities, Parks & Rec near entrance	Advant.:	Good	IMP. 60	Attrib.:	Best	IMP. 100
4	Factor	Compactness / Optimized for Expansion	Attrib.:	Footprint is least compact, but still has space for expansion		Attrib.:	Light renovation requires re-use of existing rooms, not right size and not flexible	
	Criterion	The most compact building is best, ability to expand a large program space is best	Advant.:	Better	IMP. 85	Attrib.:		IMP. 0
5	Factor	Relation of entry and drop-off / Accessible parking	Attrib.:	Medium-sized forecourt and limited view of Entry		Attrib.:	CoA separate level from Community Room. Some overhead noise, Parks & Rec far from entry. Least Preferred	
	Criterion	Largest forecourt & best view to main entrance	Advant.:	Better	IMP. 70	Attrib.:		IMP. 0
6	Factor	Visual Control of entry (ies)	Attrib.:	Footprint is most compact. Most space for expansion		Attrib.:	Footprint is very compact. Less room to south of Recreation for expansion	
	Criterion	Central control point nearest to Parks & Rec Offices	Advant.:	Better	IMP. 70	Attrib.:		IMP. 0
7	Factor	Creates heart of community	Attrib.:	Central Location separate from main parks & rec offices (same level)		Attrib.:	Footprint is very compact. Least room to south of Recreation for expansion	
	Criterion	Quality and connectivity of central space (fewer hearts & fewer levels are better)	Advant.:	Better	IMP. 75	Attrib.:		IMP. 0
8	Factor	Daylighting, ventilation & connection to outdoors	Attrib.:	Medium-sized forecourt and limited view of Entry		Attrib.:	Smallest forecourt but clear view of Entry. Least Preferred	
	Criterion	Largest ratio of perimeter to program space with windows & largest size of windows	Advant.:	Better	IMP. 70	Attrib.:		IMP. 0
9	Factor	Town Center	Attrib.:	Central Location separate from main parks & rec offices (2nd floor)		Attrib.:	No Central Location and separate from main parks & rec offices (lower level). Least Preferred	
	Criterion	Building Massing (height) Consistent with Town Center, Orientation engages Springdale Ave.	Advant.:	Better	IMP. 70	Attrib.:	Best	IMP. 80
10	Factor	Resiliency: Co-location of shelter spaces	Attrib.:	One level and one heart, but will be darker central space due to deep floorplate		Attrib.:	Three levels and two hearts. This option lacks a central meeting place. Least Preferred	
	Criterion	Adjacency of COA suite, Community Room, Kitchen, Meeting and Flex Rooms to run efficiently	Advant.:	Better	IMP. 75	Attrib.:		IMP. 0
Total Importance of Advantages (IoAs)			Total IOA 525		Total IOA 685	Total IOA 75		Total IOA 705

Single Story (N2)



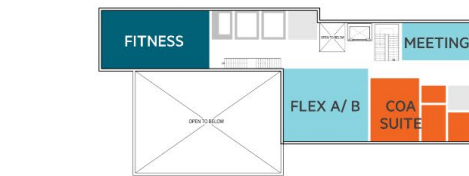
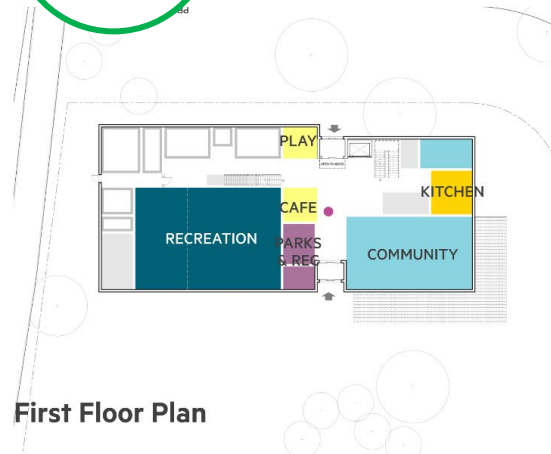
525



Two Story (N3.1)



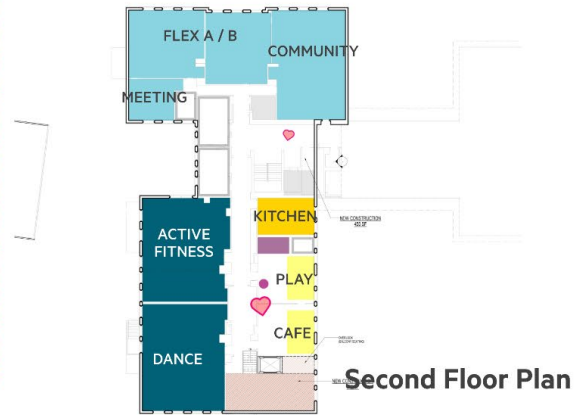
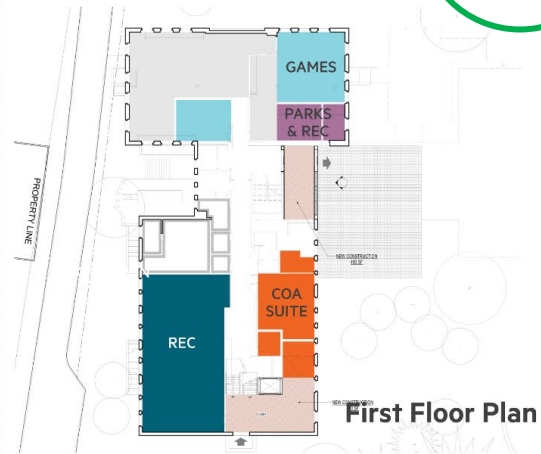
685



Save the Most (R1)



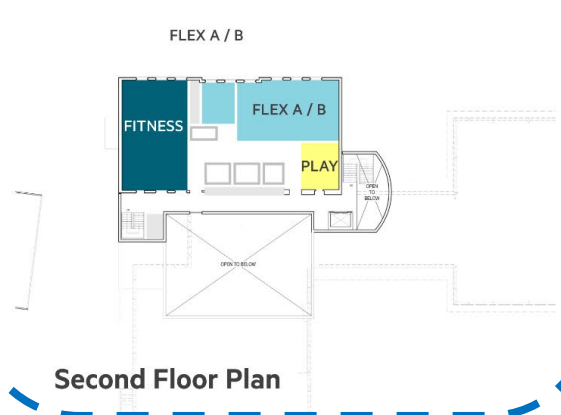
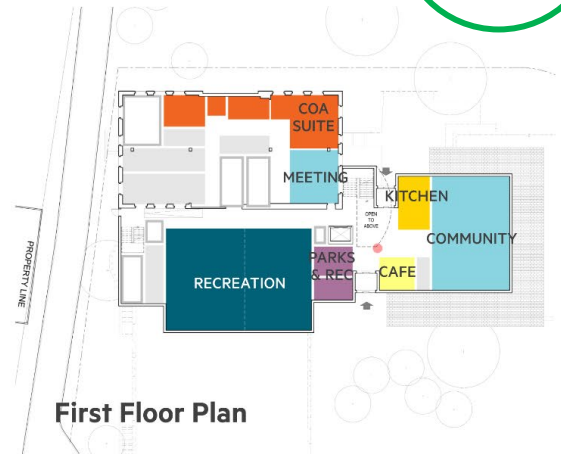
75



Save the 1910 (R3)



705





Questions for Public Mtg