ITEM # __17___
DATE 03-05-19

COUNCIL ACTION FORM

SUBJECT: HOMEWOOD GOLF COURSE CLUBHOUSE DESIGN

BACKGROUND:

The current Homewood Golf Course clubhouse is a converted home that was moved to its current location in 1967. In FY 2017/18 the City Council allocated $50,000 for the design of a new facility and $750,000 in FY 2018/19 for construction. The architect/engineer's initial project cost estimate is $1,089,462 which includes design fees and other soft costs. As a result of this estimate, the City Council approved an additional $250,000 from the General Fund balance for this project, bringing the total funding for the clubhouse project to $1,050,000.

Staff has contracted with Design Alliance, Waukee, Iowa for $50,000 to design the new clubhouse. The project principal architect for Design Alliance is a LEED Accredited Professional. A rendering of the clubhouse design is shown in Attachment A and the floor plan for the basement and first floor can be seen in Attachment B. The current timeline is to bid the project in March, start construction in late summer, and have the clubhouse operational in April 2020.

Through the design process, decisions have been made to make the new clubhouse as energy efficient as possible. For example, geothermal heating and cooling is part of the design. This has been done with City Council's sustainability goal in mind, however, getting LEED certified has not been the focus.

LEED DEFINED:

According to the U.S. Green Building Council (USGBC) website, LEED, or Leadership in Energy and Environmental Design, is the most widely used green building rating system in the world. Available for virtually all building, community and home project types, LEED provides a framework to create healthy, highly efficient and cost-saving green buildings. LEED certification is a globally recognized symbol of sustainability achievement. Projects pursuing LEED certification earn points across several categories, including energy use and air quality. Based on the number of points achieved, a project can earn one of four LEED rating levels: Certified, Silver, Gold or Platinum. The number of points needed, out of 110 possible, for each level is shown below:

- Certified (40-49 points earned)
- Silver (50-59 points earned)

- Gold (60-79 points earned)
- Platinum (80+ points earned)

There have been different versions of LEED certification requirements and the most recent version is LEED v4. Since the first certification in 2000, the requirements have become more difficult to attain. The reason for this is some items that points were awarded for early on are now standard industry practice and/or have become LEED prerequisites. Because of this, USGBC continues to strive for new and innovative practices to be part of the certification process.

There are several categories to identify projects and the clubhouse would fall into the Building Design and Construction (BD+C) New Construction category. Each category may have different criteria based on the type of building it is. For example, a healthcare facility may have different criteria than a commercial facility.

LEED certification involves two steps. The first is the registration process and the second is the certification process. Generally, the registration of a project happens prior to design so the design team understands what is needed and can design accordingly. LEED also assigns an individual to the project to ensure criteria are being met. The certification process is done at the end as the project owner submits the project for certification.

The City has several facilities either LEED certified or currently being evaluated. These are shown below:

Facility	Category	Version	Level	Points Earned	Points Possible
CyRide Office Addition	BD+C: New Construction	v2.2	Gold	39	69
Ames Public Library	BD+C: New Construction	v3	Gold	60	110
Ames Water Treatment Plant	BD+C: New Construction	v3	In Progress	TBD	110
CyRide Bus Expansion	BD+C: New Construction	v3	In Progress	TBD	110
Ames Intermodal Facility	BD+C: New Construction	v3	Certified	43	110

LEED certifications are good for the life of the building and designate the building was designed and constructed to LEED standards. A plaque can be purchased designating the certification level achieved which can be displayed within the facility. The project is also listed on the USGBC website.

LEED EVALUATION OF CURRENT DESIGN AND POTENTIAL IMPLICATIONS:

Design Alliance evaluated the current design based on LEED standards and categorized the possible points into three categories:

- **Yes** – These include items already in the current design or could be added to the design with minimal additional design and construction cost.
- **Maybe** – Items in this category may be achieved at additional design and construction cost.
- **No** – Design Alliance feels these items are not achievable for this project. For example, to earn the Bicycle Facilities point, shower facilities need to be provided and it does not seem feasible to do so for this facility.

This breakdown is shown in Attachment C. As you see, there are 25 yes points and 19 maybe points. If all of these were achieved for a total of 44 points, LEED certification is possible, however, there are other implications that need to be considered. Of most concern is the additional cost associated with pursuing LEED certification at this point. Additional costs will come in the way of redesigning some components, additional design/engineering costs, construction material and labor costs, and LEED certification costs. **Attachment D shows the project costs could climb to approximately $1.26 million on the low side to $1.44 million on the high side. This would result in a funding shortfall range of $205,000 to $386,000.**

Another implication will be delaying all aspects of the project. Pursuing LEED would delay bidding until late summer 2019 which is generally not a good time to bid projects. If bids were let by the end of August, a contract wouldn't be awarded until mid to late October which may push the start of construction to spring 2020. This delay may also increase the cost of temporary operations (e.g. office trailer, etc.).

CARBON FOOTPRINT:

Another way to assess the clubhouse design is to determine the estimated carbon footprint for the proposed clubhouse. Design Alliance developed three different scenarios regarding the clubhouse.

Scenario 1: Code Based Building
This building illustrates the amount of carbon consumed **(±75 Tons CO_2/year)** to operate a clubhouse designed to meet the minimum requirements of the 2012 International Energy Conservation Code with standard efficiency forced air furnaces & condensing units, a standard efficiency water heater, and fluorescent lighting.

Scenario 2: Currently Designed Building
This building illustrates the amount of carbon consumed **(±62 Tons CO_2/year)** to operate a clubhouse designed to meet the current considerations which include a geothermal heat pump system (minimum of 15 EER efficiency), a high efficiency water heater, and LED lighting with standard switching and dimming control.

Scenario 3: LEED Certified Level Building
This building illustrates the amount of carbon consumed **(±57 Tons CO_2/year)** to operate a clubhouse designed either informally or formally to meet the LEED Certified number of points.

The reduction of an additional 5 tons of CO_2/year in Scenario 3 compared to Scenario 2 can be attributed to three items which are shown below:

- Geothermal heat pumps (minimum 17.5 EER efficiency):
  - Savings of 4410 KWH/year or ±2.00 Tons CO_2/year. This would add $6,000 to construction costs.
- LED lighting with switching and dimming control, plus additional daylighting controls to reduce lighting with good natural lighting levels:
  - Savings of 4750 KWH/year or ±2.25 Tons CO_2/year. This would add $6,500 to construction costs.
- Added electrical receptacle controls to turn off power at some locations at unoccupied times:
  - Savings of 1550 KWH/year or ±0.75 Tons CO_2/year. This would add $4,500 to construction costs.

By including these three items into the Currently Designed Building, the same carbon footprint can be achieved as if a LEED certification is pursued. Additional cost for these three items is $17,000 compared to the $205,000-$386,000 it will cost to pursue LEED certification.

PARKS AND RECREATION COMMISSION RECOMMENDATION:

The Homewood Clubhouse design was discussed at a Special Commission meeting on January 29, 2019 and the Commission was made aware City Council will make the final determination regarding design. The items below are Commissioner comments from the meeting:

- The city could spend $250,000 pursuing a plaque we don't get.

- Staff could optimize energy performance, but for some reason only qualify for two of the four points in a category.
- Pointed out that the Ames City Council goals do not include pursuing LEED certification, just being as energy efficient as we can.
- Staff has a good eye on energy efficiency and that the LEED Certification seems like a risk.
- We are not gaining that much more energy efficiency and sustainability by pursuing LEED and staff has always been mindful in the design process.
- To fund LEED certification, other projects could be delayed or go away and there are a lot of projects that we need to do for the community.
- A year delay increases costs and delays the income received from facility rental.
- The golf community has waited for this facility for a long time and it is long overdue and there is a need in the community for the meeting space that is included in the project.
- Know staff will pursue all options and we can be energy efficient without LEED Certification.
- Something like solar panels for charging the carts would be really visible and interesting to pursue instead of some of those nit-picky items in the LEED Certification.

The Commission then recommended staff not pursue LEED Certification, but continue with current design and include as many energy efficient options as possible while staying within the one million dollar construction budget.

ALTERNATIVES:

1. Direct staff to continue with the current Homewood Clubhouse design and incorporate as many energy efficient items as the budget allows.

2. Direct staff to pursue LEED certification for the Homewood Clubhouse.
   This alternative will require the identification of an additional $386,000 to fund the project.

3. Refer back to staff.

MANAGER'S RECOMMENDED ACTION:

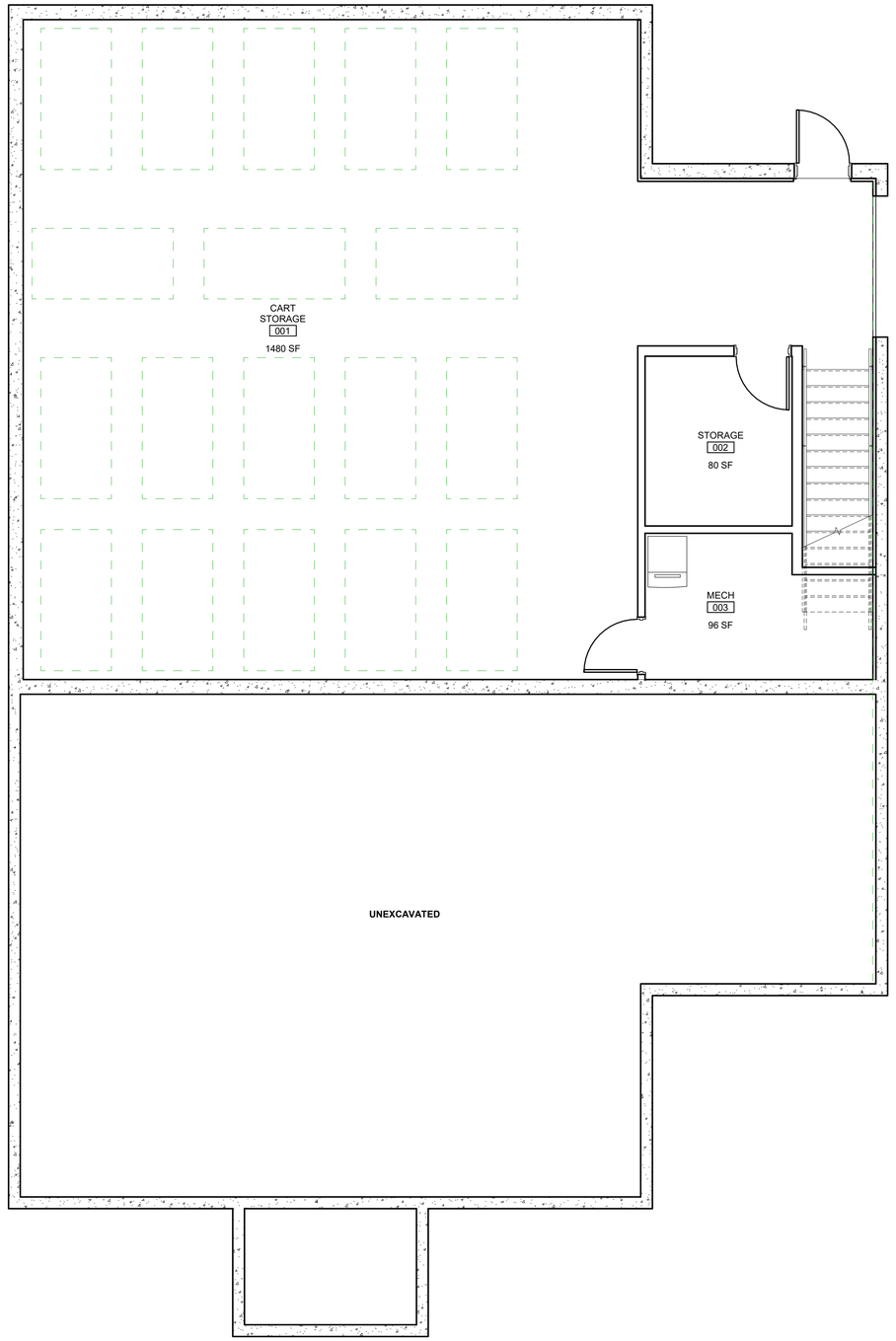
The new Homewood Golf Course Clubhouse will be a great addition and will not only serve golfers, it will provide a community room that can be used year round by Ames residents. Staff has been working with the architect to design a building that is functional, attractive, and energy efficient. Geothermal heating and cooling, LED lighting, and a high

efficiency water heater are some of the items included in the design to keep the building's carbon footprint as low as possible.

Council has a sustainability goal promotes energy efficiency and staff has been working with the architect to achieve this goal. The question has been raised as to whether or not staff should pursue LEED certification for this building. As shown in the CAF, the cost of LEED certification could be almost $400,000 more than what is allocated for this project. The impact on the carbon footprint of pursuing LEED is estimated to be a reduction of ±5 Tons CO_2/year. This same reduction in the buildings carbon footprint can be achieved by including the items highlighted in the CAF at a cost of $17,000.

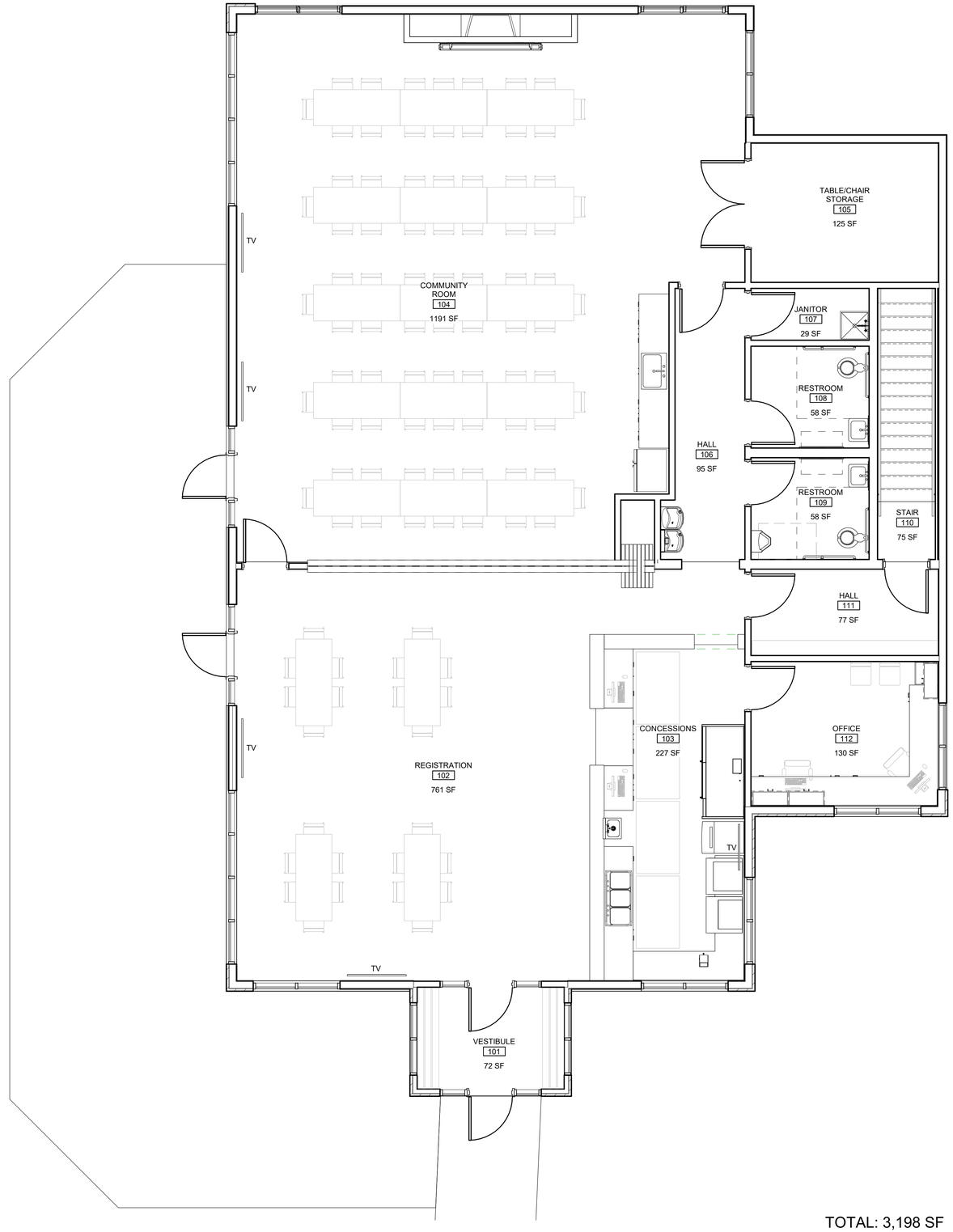
Therefore, it is the recommendation of the City Manager that the City Council support Alternative #1, which directs the staff to continue with the current Homewood Clubhouse designer to incorporate as many energy efficient items as the budget allows, without pursuing LEED certification.

DATE: 01/10/19



TOTAL: 1,826 SF

A1 FURNITURE FLOOR PLAN - BASEMENT
1/4" = 1'-0"



TOTAL: 3,198 SF

A2 FURNITURE FLOOR PLAN - MAIN FLOOR
1/4" = 1'-0"

DESIGN ALLIANCE

Design Alliance Inc.
14225 University
Suite 110
Waukee, Iowa 50263

TEL 515.225.3469
FAX 515.225.9649

PROGRESS PRINT
NOT FOR CONSTRUCTION
01/14/19

HOMEWOOD GOLF COURSE CLUBHOUSE

401 E. 20TH STREET - AMES, IOWA 50010

OWNER
CITY OF AMES

TITLE
FURNITURE, FURNISHINGS & EQUIPMENT PLANS

PROJECT NUMBER
218028

DATE

REVISIONS
1
2

FFE.1

LEED v4 for BD+C: New Construction and Major Renovation

Project Checklist

Project Name: Homewood Golf Course Clubhouse
Date: 01/14/19

Y	?	N				Fee	Cost	Remarks
		1	Credit	Integrative Process	1			
1	**1**	**14**	**Location and Transportation**		**16**			
			Credit	LEED for Neighborhood Development Location	16			
1			Credit	Sensitive Land Protection	1	0	0	
		2	Credit	High Priority Site	2			
		5	Credit	Surrounding Density and Diverse Uses	5			
		5	Credit	Access to Quality Transit	5			
		1	Credit	Bicycle Facilities	1			
		1	Credit	Reduced Parking Footprint	1			
	1		Credit	Green Vehicles	1	0	Y	ETI
1	**3**	**6**	**Sustainable Sites**		**10**			
Y			Prereq	Construction Activity Pollution Prevention	Required	0	0	CGA
	1		Credit	Site Assessment	1	Y	0	Hire a Level 1 Environmental Study?
		2	Credit	Site Development - Protect or Restore Habitat	2			
		1	Credit	Open Space	1			
	2	1	Credit	Rainwater Management	3	Y	Y	CGA
		2	Credit	Heat Island Reduction	2			
1			Credit	Light Pollution Reduction	1	0	0	ETI
4	**1**	**6**	**Water Efficiency**		**11**			
Y			Prereq	Outdoor Water Use Reduction	Required	0	0	
Y			Prereq	Indoor Water Use Reduction	Required	0	0	ETI
Y			Prereq	Building-Level Water Metering	Required	0	0	ETI
2			Credit	Outdoor Water Use Reduction	2	0	0	
2		4	Credit	Indoor Water Use Reduction	6	0	Y	ETI
		2	Credit	Cooling Tower Water Use	2			
	1		Credit	Water Metering	1	Y	Y	ETI
11	**7**	**15**	**Energy and Atmosphere**		**33**			
Y			Prereq	Fundamental Commissioning and Verification	Required	Y	Y	ETI
Y			Prereq	Minimum Energy Performance	Required	0	0	ETI
Y			Prereq	Building-Level Energy Metering	Required	0	Y	ETI
Y			Prereq	Fundamental Refrigerant Management	Required	0	0	ETI
	3	3	Credit	Enhanced Commissioning	6	Y	Y	3rd Party CxA + ETI + DAI
8	4	6	Credit	Optimize Energy Performance	18	0/Y	0/Y	ETI; Do we need to do energy model?
1			Credit	Advanced Energy Metering	1	Y	Y	ETI
1		1	Credit	Demand Response	2	0	Y	ETI
		3	Credit	Renewable Energy Production	3		?	Purchase Points?
1			Credit	Enhanced Refrigerant Management	1	0	0	ETI
		2	Credit	Green Power and Carbon Offsets	2		?	Purchase Points?

						Fee	Cost	Remarks
0	**4**	**9**	**Materials and Resources**		**13**			
Y			Prereq	Storage and Collection of Recyclables	Required			Does this even make sense?
Y			Prereq	Construction and Demolition Waste Management Planning	Required			Maybe?
		5	Credit	Building Life-Cycle Impact Reduction	5			
	2		Credit	Building Product Disclosure and Optimization - Environmental Product Declarations	2	Y	Y	
	1	1	Credit	Building Product Disclosure and Optimization - Sourcing of Raw Materials	2	Y	Y	
	1	1	Credit	Building Product Disclosure and Optimization - Material Ingredients	2	Y	Y	
		2	Credit	Construction and Demolition Waste Management	2			
8	**2**	**6**	**Indoor Environmental Quality**		**16**			
Y			Prereq	Minimum Indoor Air Quality Performance	Required	0	0	ETI
Y			Prereq	Environmental Tobacco Smoke Control	Required	0	0	
1		1	Credit	Enhanced Indoor Air Quality Strategies	2	Y	Y	ETI + DAI
	1	2	Credit	Low-Emitting Materials	3	Y	Y	DAI
1			Credit	Construction Indoor Air Quality Management Plan	1	Y	Y	ETI + DAI
1		1	Credit	Indoor Air Quality Assessment	2	Y	Y	ETI
1			Credit	Thermal Comfort	1	0	0	ETI
2			Credit	Interior Lighting	2	0	Y	ETI
1		2	Credit	Daylight	3	Y	0	ETI; Do we need to do the modeling?
1			Credit	Quality Views	1			DAI
	1		Credit	Acoustic Performance	1	Y	Y	ETI
0	**1**	**5**	**Innovation**		**6**			
		5	Credit	Innovation	5			
	1		Credit	LEED Accredited Professional	1	0	0	LEED AP, not BD+C
0	**0**	**4**	**Regional Priority**		**4**			
		1	Credit	Regional Priority: Specific Credit	1			
		1	Credit	Regional Priority: Specific Credit	1			
		1	Credit	Regional Priority: Specific Credit	1			
		1	Credit	Regional Priority: Specific Credit	1			

25	**19**	**66**	**TOTALS**	Possible Points: **110**

Certified: 40 to 49 points, **Silver:** 50 to 59 points, **Gold:** 60 to 79 points, **Platinum:** 80 to 110

44 Potential (YES + MAYBE-?) Points

Homewood Clubhouse - LEED Budget Range Illustration
Date: 01/28/19
By: Design Alliance, Inc.

		Low	High
A) Current Construction Budget Range:		$823,163	$943,675
1) Green Building Cost Average:	15.00%	$946,637	$1,085,226
2) Green Building Cost Higher :	25.00%	$1,028,954	$1,179,594
3) Third Party Commissioning Fees:		$8,200	$15,200
B) Current Owner Soft Costs * :		$140,967	$145,787
1) Pursue informally ±25 LEED Points (Design Fees):		$6,000	$7,500
2) Pursue informally ±42 LEED Points (Design Fees):		$21,000	$26,500
3) Pursue Formal LEED Certified (±45 Points) (Design Fees):		$77,000	$95,500
C) Current Total Project Budget Range:	(A+B):	$964,130	$1,089,462
1) Pursue informally ±25 LEED Points:	(A+A3+B+B1):	$978,330	$1,112,162
2) Pursue informally ±42 LEED Points:	(A1+A3+B+B2):	$1,116,804	$1,272,713
3) Pursue Formal LEED Certified (±45 Points) :	(A2+A3+B+B3):	$1,255,121	$1,436,081

* Owner Soft Costs Include:
- Architect/Engineering Fees
- Geotechnical Engineering Investigation & Report
- Construction Phase - Testing & Inspections
- Furniture, Furnishings & Equipment (Budget)
- Construction Phase - Change Order Contingency