
EXECUTIVE SUMMARY

TITLE: Westwood Hills Nature Center Project – Schematic Design

RECOMMENDED ACTION: Staff and consultants will present the Schematic Design for the Westwood Hills Nature Center project. Based on the outcome of the discussion the Council may be asked to approve the Schematic Design at its December 18 meeting

POLICY CONSIDERATION: Does the schematic design meet the Council’s expectations? Does Council want to continue to work towards a Zero Energy building design knowing that the project cost will increase above original estimates?

SUMMARY: On May 23, 2016, Council approved the master plan for Westwood Hills Nature Center (WHNC). On June 19, 2017 Council authorized staff to enter into an agreement with Hammel, Green and Abrahamson, Inc. (HGA) to design a new interpretive center. RJM Construction will be providing construction management services for this project.

The HGA design team has been using the Master Plan as a guide to create a schematic design. Sustainability strategies and energy analysis have been developed and sustainability rating systems have been reviewed. Based on Council input, the design team is working towards a “Zero Energy” certified building, which means one hundred percent of the building’s energy needs on a net annual basis are supplied by on-site renewable energy <https://www.living-future.org/net-zero/certification/>. Generally, zero energy is accomplished through maximizing passive climatic opportunities, choosing efficient mechanical systems, and continuing to fine tune the building’s operation to reduce energy loads dramatically. Offsite energy may need to be used during some years as elements that are beyond our control (weather) play a huge role in meeting our sustainability goals.

FINANCIAL OR BUDGET CONSIDERATION: At the time the Master Plan was presented to the Council, the initial estimated budget was \$12 million, which assumed a building that was energy efficient and met programmatic needs. Based on Council input it became clear that something more than just an energy efficient building was expected, which resulted in the goal of working towards creating a Zero Energy certified building. It’s been determined through the design process that meeting a zero energy goal will increase the cost of the building. At this point in the schematic design, the cost estimate for a building that meets the program needs and works toward zero energy is \$13.5 million. Of this, the estimated cost of the zero energy strategies, as currently being considered, total about \$1,850,000.

VISION CONSIDERATION: St. Louis Park is committed to being a leader in environmental stewardship. We will increase environmental consciousness and responsibility in all areas of city business.

SUPPORTING DOCUMENTS: Discussion
Site Plan
Landscape Plan

Prepared by: Jason T. West, Recreation Superintendent
Cynthia S. Walsh, Operations and Recreation Director

Approved by: Tom Harmening, City Manager

DISCUSSION

BACKGROUND: On May 23, 2016 Council approved the master plan for Westwood Hills Nature Center (WHNC). The poor conditions of this facility along with the success of the programs we offer at this site, with limited program space, were the impetus behind a master planning process. When it rains, water seeps through the walls causing puddles to form on the floor. The heating system is in poor condition and doesn't function properly.

As a part of the Master Plan work, an extensive public process took place which included public meetings, surveys at special events, online surveys, etc. Citizen input played a key role in shaping this plan. There have also been recent events conducted where input was gathered from the community in regards to the master plan and the proposed interpretive center.

FINDINGS FROM THE MASTER PLAN: The common themes that emerged from the master plan are as follows:

- Moving the building location closer to the parking lot for convenience and accessibility yet keeping it tucked into the trees to keep a more natural setting as much as possible.
- Create a gathering space where people can use the indoor space without interfering with the classrooms.
- Increasing the size of meeting rooms to allow for accommodating 50 people in each small multi-purpose rooms and allowing them to open up to have capacity for 150 participants for special events and large gathering space.
- Increasing the number of parking stalls to accommodate all the users of the building and outside amenities.
- Design the interpretive center building to be energy efficient.
- Current interpretive center location would be repurposed as an outdoor education/community gathering space.

SCHEMATIC DESIGN COMPONENTS: The proposed schematic design addresses the program and space desires of the Master Plan. Included in the attached schematic design are spaces for: four to five mews for raptors, three classrooms that facilitate 50 people and open up into one larger space that can be used for programs or rentals with room for 150, a catering kitchen for use by people renting the classrooms, exhibit and gathering space, a small lounge area for people to sit and observe nature, a conference room for use by staff or small neighborhood/resident gatherings, staff offices and all the back of house space for storage, mechanical, raptor and animal care etc.

This schematic design was presented to the Parks and Recreation Advisory Commission at their November 29th meeting. The Commissioners provided great suggestions about pedestrian flow and trail circulation. They were supportive of a design that works towards zero energy hoping that those elements could be used as teaching tools. They recommended that the schematic design be presented to the City Council.

WORK IN PROGRESS: Split Rock Studios has been chosen to design the exhibits with the intent to integrate the building, site and exhibit design to support the nature center educational programming. Designing the exhibits appropriately is important as we consider working towards zero energy since they can be one of the largest energy users.

Staff has also been working with consultants to complete the following:

- Wetland delineation
- Site survey
- Trees located within survey area
- All utilities
- The proposed new building site has been staked

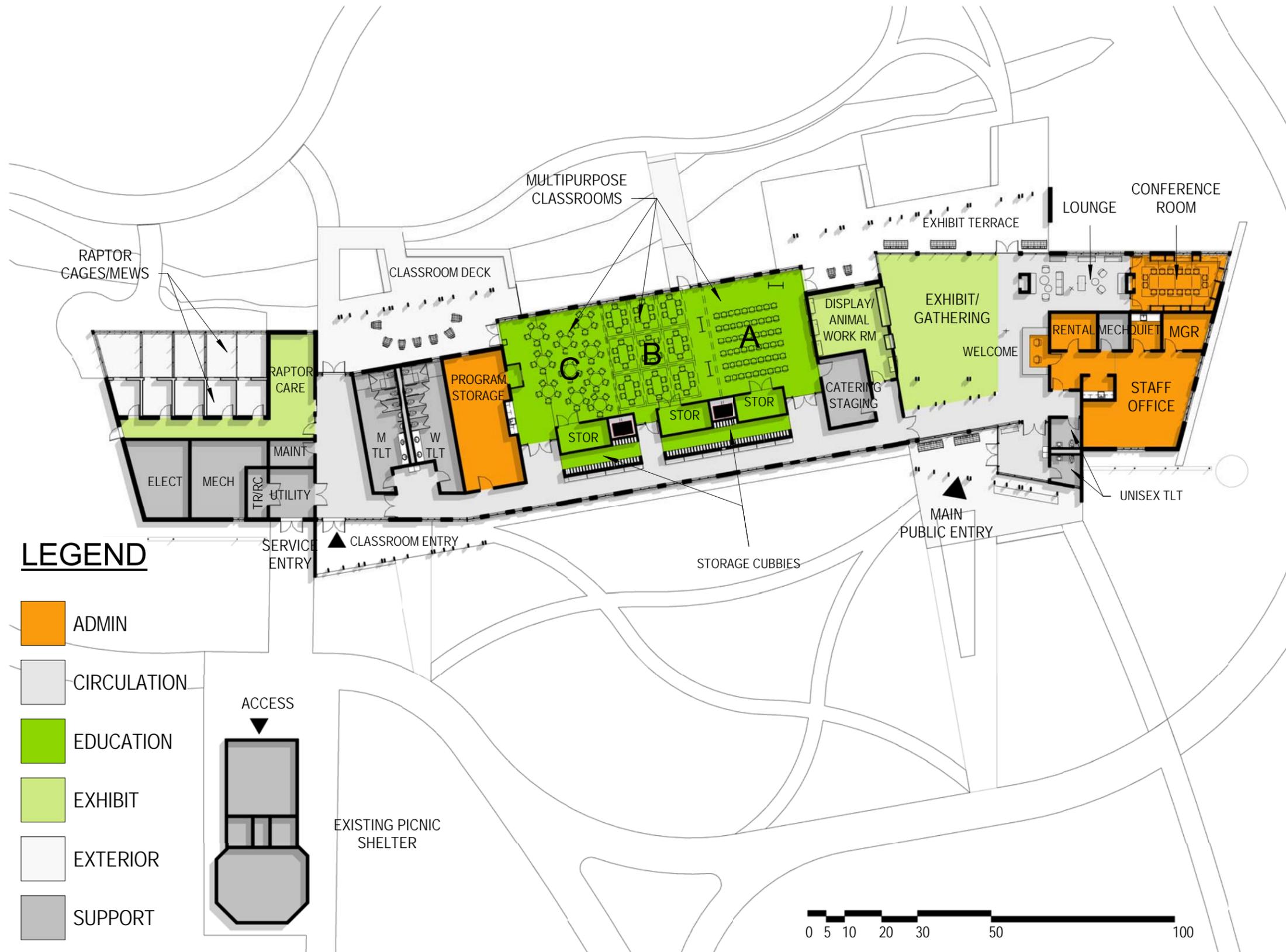
SUSTAINABILITY GOAL: As a firm, HGA brings a wealth of knowledge in the area of sustainable design. HGA has also brought on consultant Chris Piche' from Integral Group. Chris brings a broad understanding of high performance building engineering systems to this project. His approach is rooted in the philosophy that environmentally responsible design must constantly evolve to suit the technology available in balance with the project. To that end, the design of this building currently includes sustainable design that integrates HVAC, plumbing, solar, and a number of other elements to achieve Zero Energy status. As noted earlier in this report, original estimates did not assume the integration of the components necessary to achieve a zero energy building. Staff needs direction from Council on how it wishes to balance the cost of doing so with the realities of the current \$12 million budget.

Zero Energy buildings are highly energy efficient buildings in which the total consumption of energy from all sources is balanced by onsite renewable energy generation on an annual basis. The Zero Energy Building Certification (ZE) is a newly available certification (as of March 2017), and builds on years of leadership towards zero energy building design from both the International Living Future's Institute (ILFI) and the New Building Institute (NBI). ILFI is the organization behind the Living Building Challenge –which is arguably the most progressive green building certification available for buildings today. The New Building's Institute has been a third-party auditor and verifier for zero energy buildings since 2009 and is also responsible for establishing an industry-wide definition for Zero Energy buildings, as well as documenting these projects through the Zero Energy Database.

ZE buildings are among the most progressive sustainable design projects in the world today. Due to the new and innovative nature of this goal, St. Louis Park has the opportunity to create a project which is among the first (or perhaps be the first) non-residential Zero Energy Project in Minnesota-leading the way for future sustainable design work in our cold-climate region.

NEXT STEPS: If directed by Council, staff would move forward with this project by engaging in the design development phase. Staff will check in with the City Council midway through the design development phase and affirm direction to move to keep proceeding through this next step.

1. December 18, 2017: Schematic Design presented to City Council
2. January 2018: Design Development commences (with Council approval)
3. Early Fall of 2018: Construction Documents are created and bids let
4. 2019: Construction commences
5. 2020: Finished project





Site Plan

- 1 Main Entry Porch
- 2 Group Entry Porch
- 3 Bus Drop-Off
- 4 Service Entry
- 5 Paved Parking Lot (69)
- 6 Overflow "Green" Parking
- 7 Picnic & Play
- 8 Bridge
- 9 Patio
- 10 Classroom Deck
- 11 Turtle Pond Connection
- 12 Bird Watching
- 13 Primary Trail Connections
- 14 "Threshold" Prairie
- 15 Forest "Threshold"
- 16 Landscape Classroom

