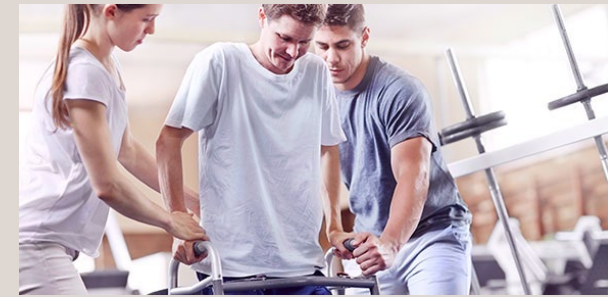
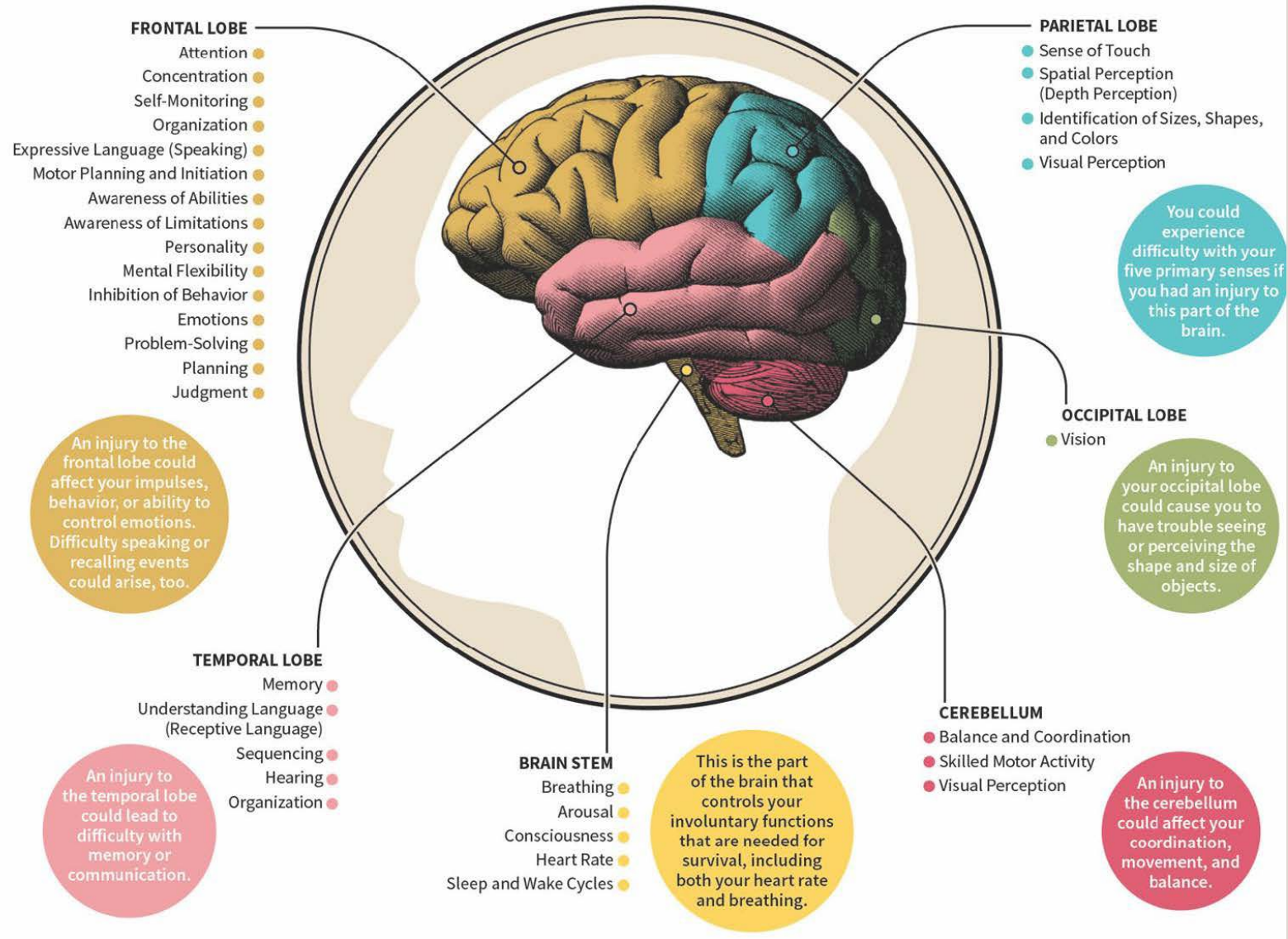


In what ways can architecture create atmospheres that promote brain recovery for patients suffering from TBI?



What Happens When You Get a Brain Injury in Different Areas?

SmartAdvocate®. "What Happens When You Get a Brain Injury in Different Areas of Your Brain?" Accessed December 11, 2020. <https://www.smartadvocate.com/News/Blog/what-happens-when-you-get-a-braininjury>.

USER GROUP

TBI Survivors, Community, Family

- Level VI - Confused, Appropriate: Moderate Assistance
- Level VII - Automatic, Appropriate: Minimal Assistance for Daily Living Skills
- Level VIII - Purposeful, Appropriate: Stand-By Assistance
- Level IX - Purposeful, Appropriate: Stand-By Assistance on Request
- Level X - Purposeful, Appropriate: Modified Independent

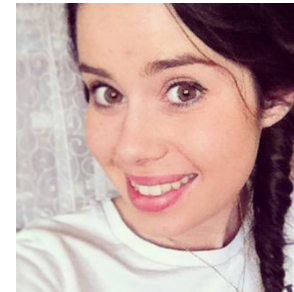
Original Rancho Los Amigos Cognitive Scale co-authored by Chris Hagen, Ph.D., Danese Malkmus, M.A., Patricia Durham, M.A., Rancho Los Amigos Hospital, 1972. Revised 11/15/74 by Danese Malkmus, M.A., and Kathryn Stenderup, O.T.R.



Shan was crossing a road when a car hit her and left her with a 6% chance of survival.



At 11 years old, Joshua was involved in a major bike accident and was told he would never walk or talk again.



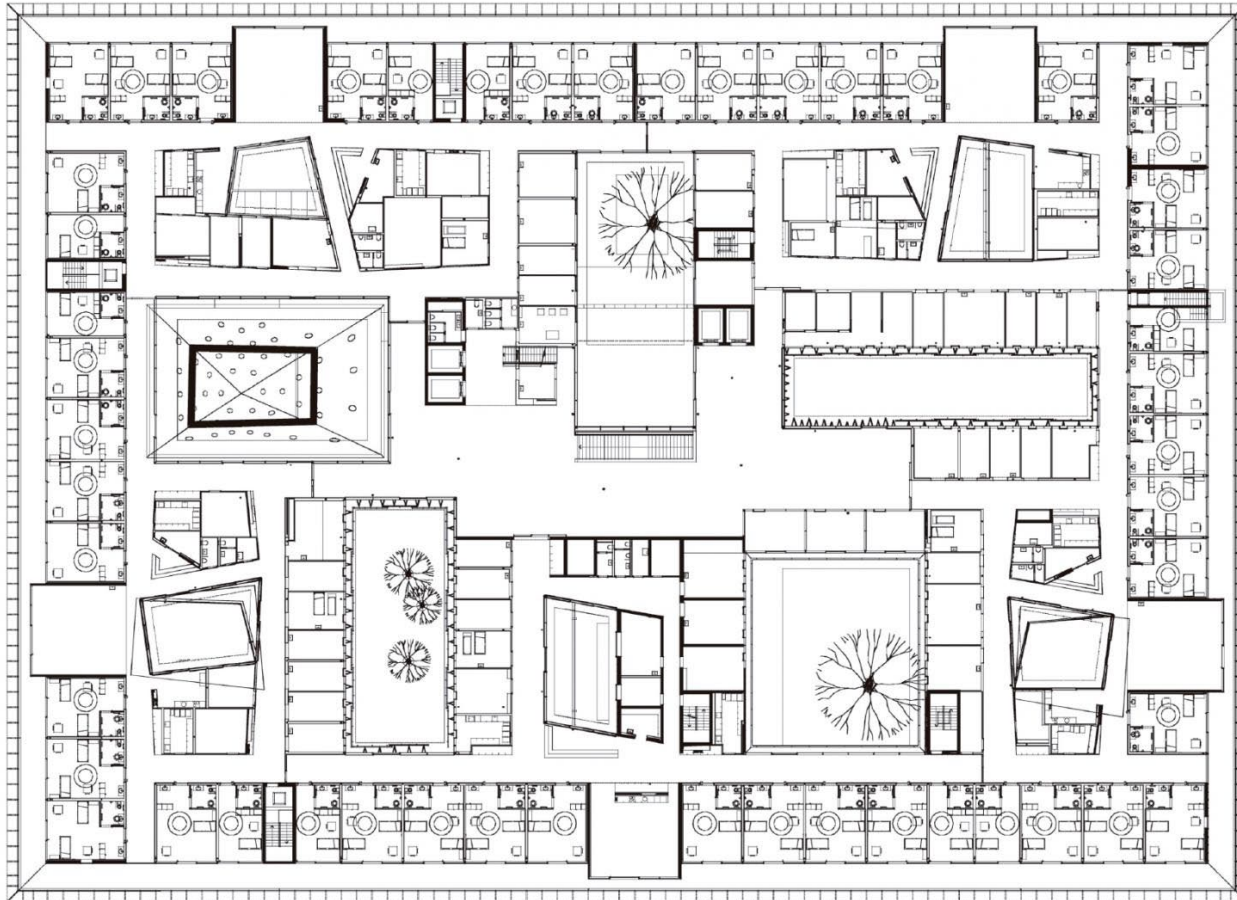
At 17, Megan was the victim of a serious road traffic collision.



In 2015, David suffered from a TBI when a car collided with his bicycle.



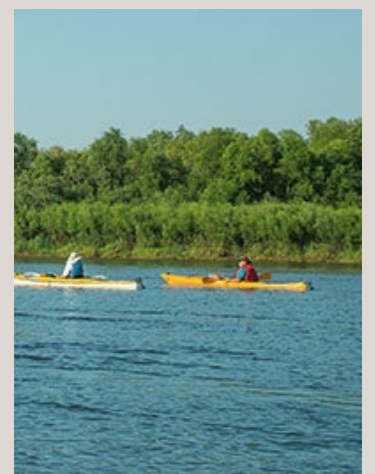
Shirley Ryan
Ability Lab



Planta primera *First floor plan*



Beach Therapy
Horticulture / Gardening Therapy
Recreational Therapy
Nature Meditation
Adventure Therapy





Community Interaction



Innovative Rehabilitation



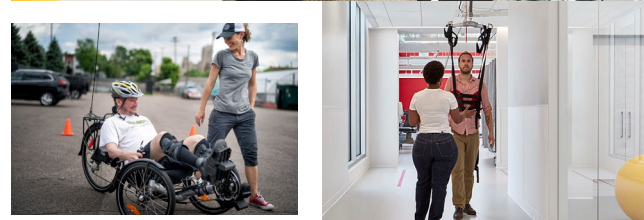
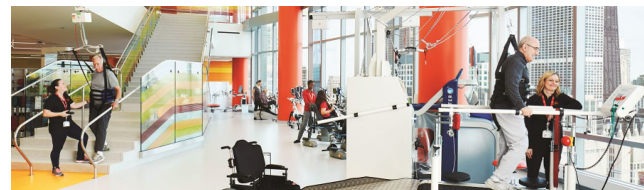
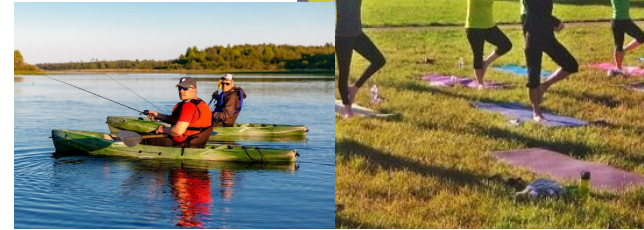
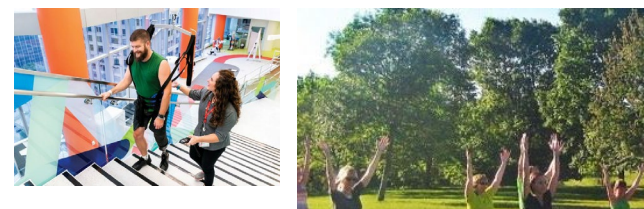
Staff Support



Connection with Nature



Accessibility

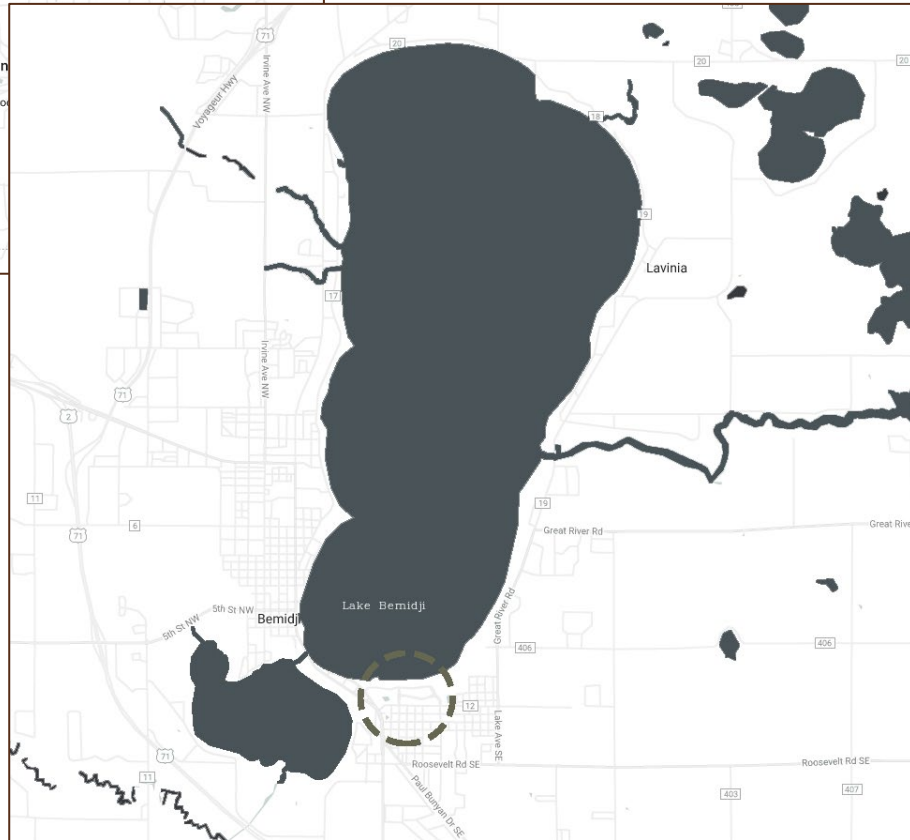
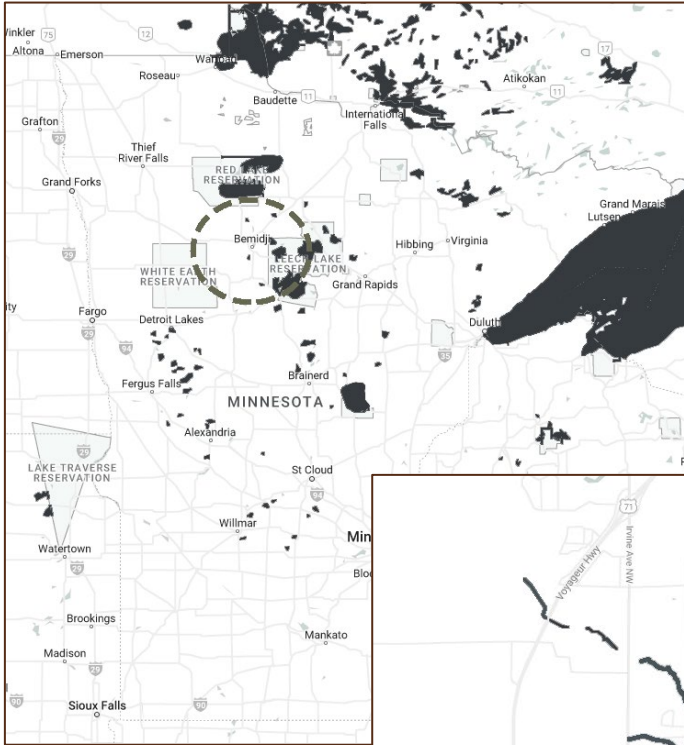




Design Response

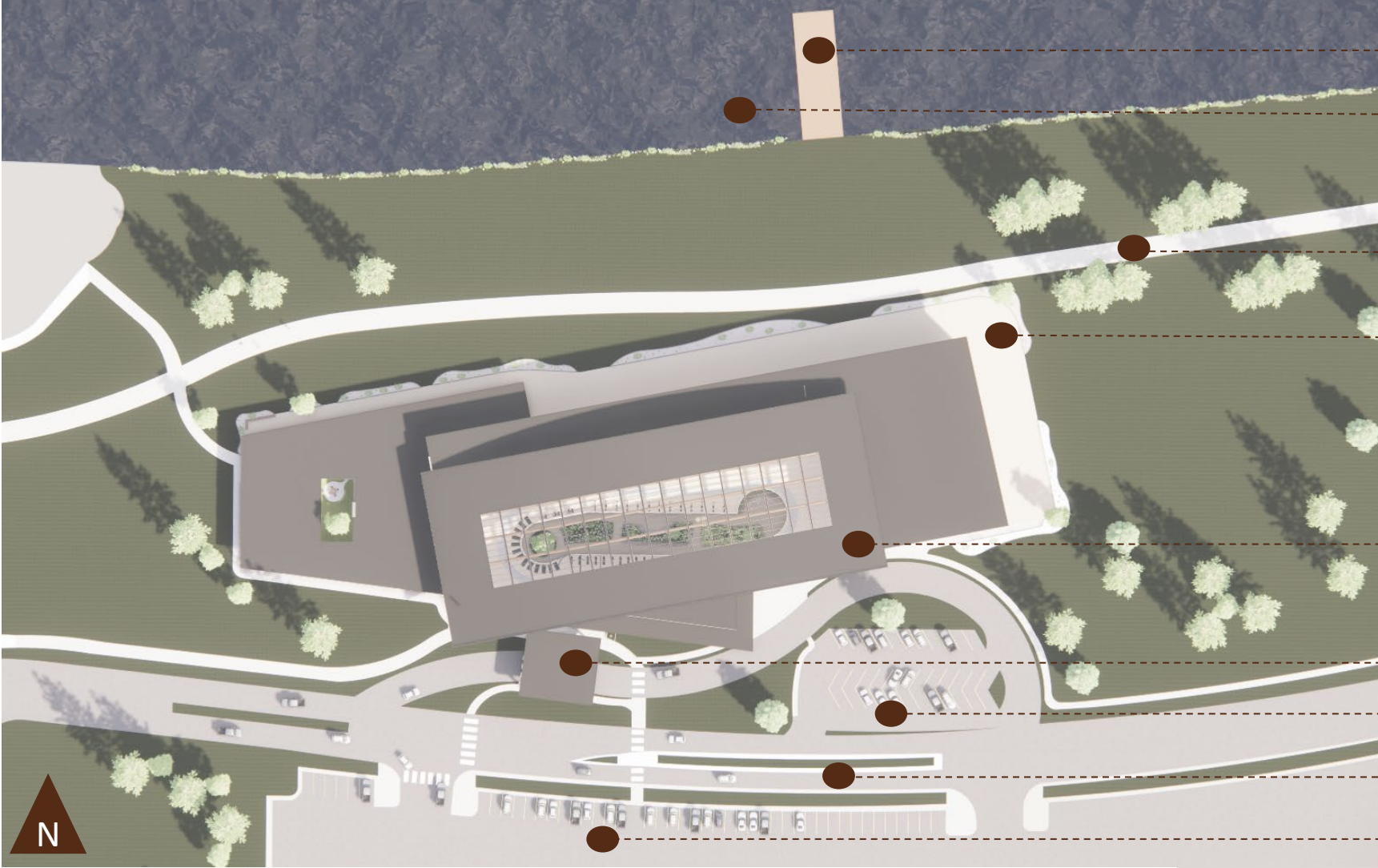
Through design, innovative rehabilitation methods are combined with connections to nature and community to create a holistic and supportive atmosphere for patients to recover from their traumas in this facility. A focus on overall community health and wellness is also provided to benefit a wider population and create space for interaction between TBI patients and the community to assist in breaking stigmas. TBI survivors, family, friends and the broader community will be able to interact and learn in an environment that encompasses whole body wellness.

SITE LOCATION



Lake Bemidji

SITE LOCATION



Private Dock

Lake Bemidji

Paul Bunyan State Trail

Outdoor Therapy Deck

Rehabilitation and
Wellness Center

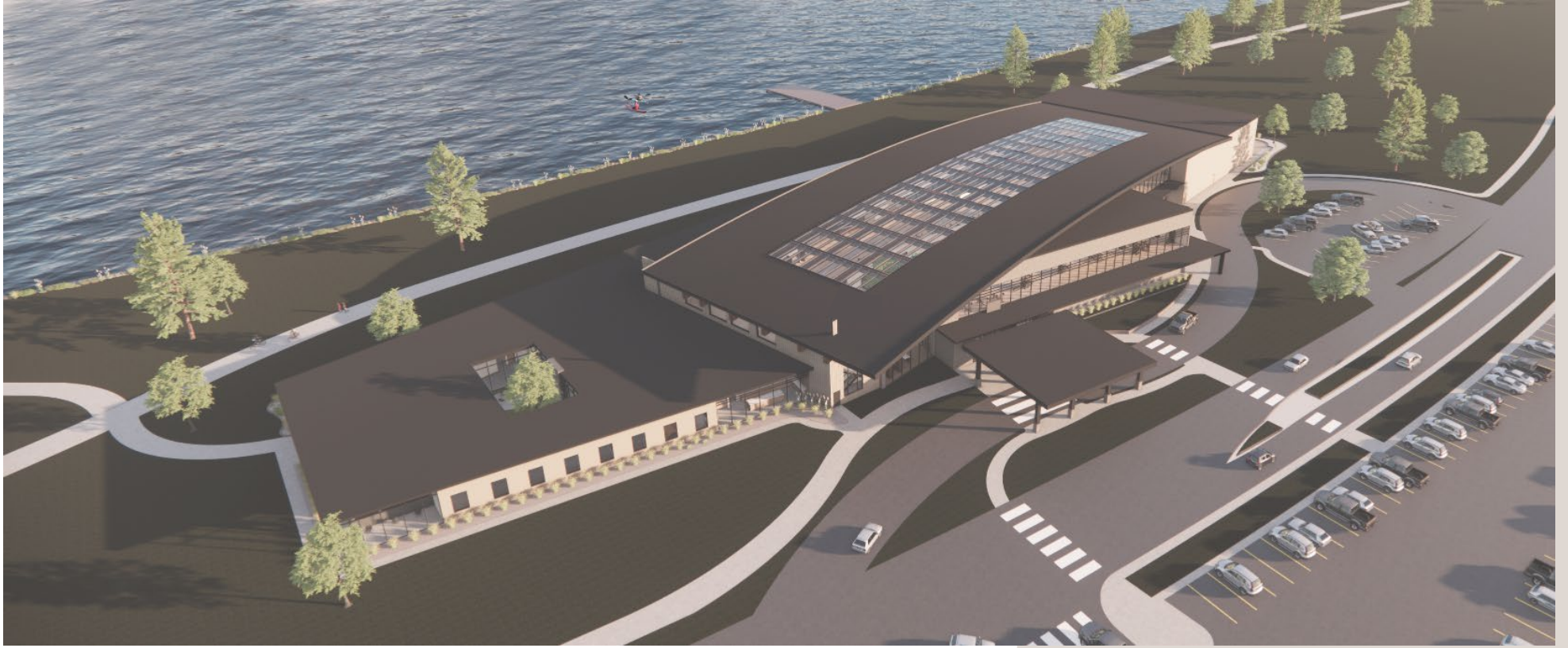
Main Entrance - covered

Patient Parking

Lake Shore Dr NE

Existing Parking

SITE LOCATION — bird eye view



FIRST FLOOR PLAN



Clinic Zone



Nurse Zone



Therapy Zone



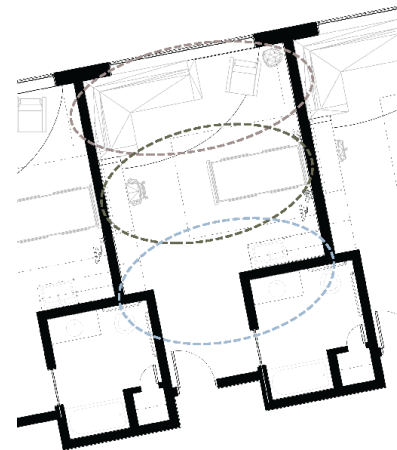
Administration Zone



CLINIC ZONE



CLINIC ZONE



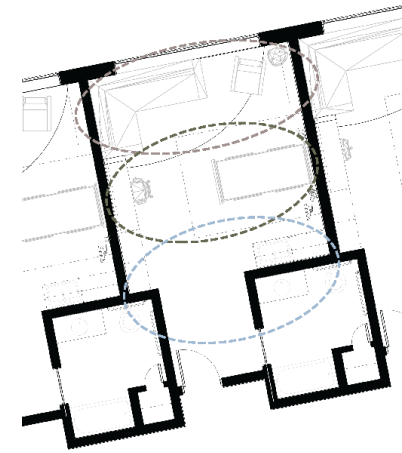
- Family Zone
- Patient Zone
- Nurse Zone



INPATIENT ROOM



CLINIC ZONE



- Family Zone
- Patient Zone
- Nurse Zone



INPATIENT ROOM



COMMUNITY AREA

CLINIC ZONE



NURSE WORKSTATION



Therapy/Admin Zone



Therapy/Admin Zone



THERAPY ZONE



Therapy/Admin Zone



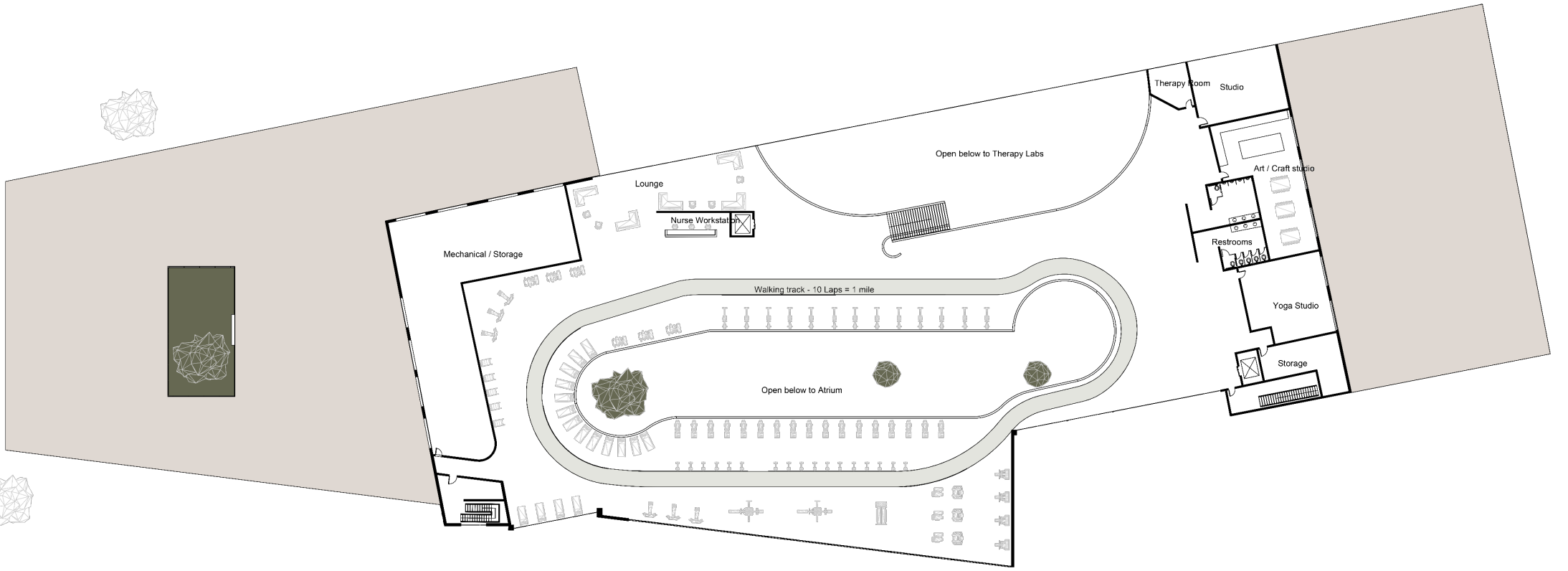
THERAPY ZONE



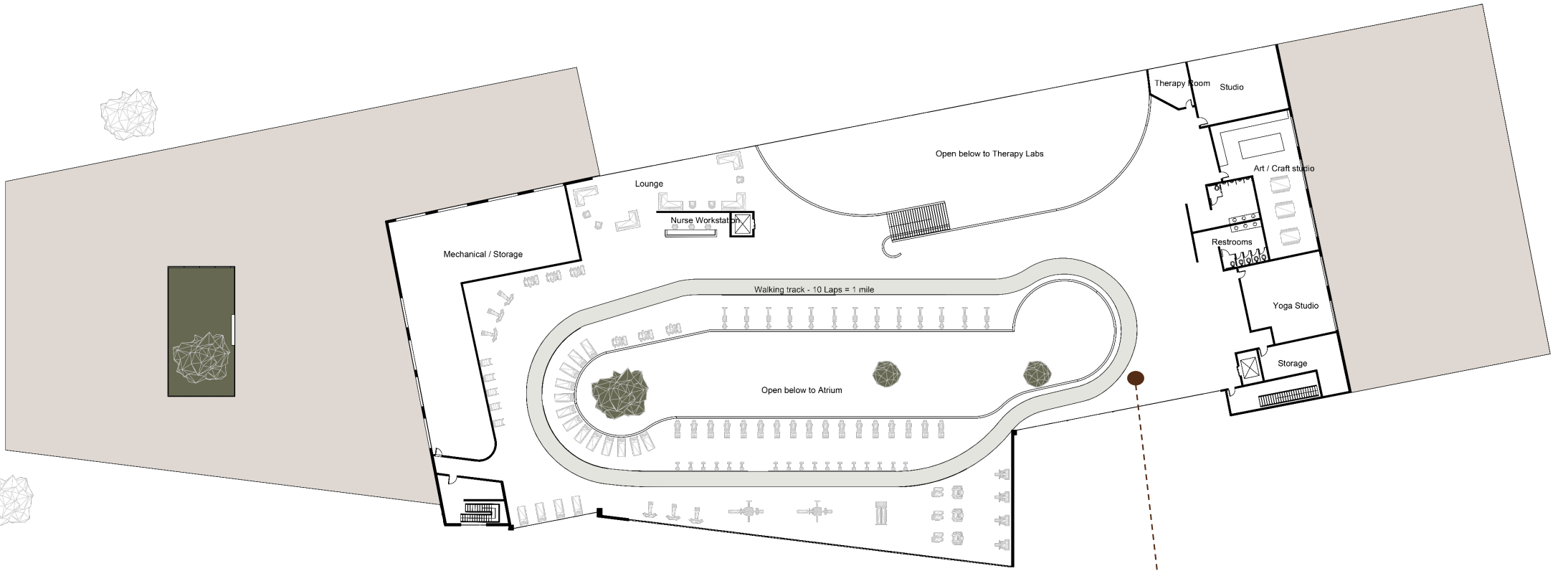
ATRIUM



SECOND FLOOR



Second Floor



Materials / Elevations



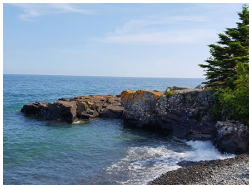
Idaho Drystack



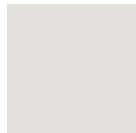
Minnesota Fieldstone - Huron



Native MN Grass



Blue Stem Grass



North Elevation



West Elevation



South Elevation



East Elevation



SquareOne Rehabilitation and Wellness Center



THANK YOU



Traumatic Brain Injury, TBI, is an injury that affects how the brain works. These injuries may impact individuals' behavior, mobility, memory, language, problem solving and empathy. TBI patients also tend to feel isolated because cognitive, physical, and social disabilities prevent them from engaging in their pre-injury activities in a normalized way. Depending on how severe one's injuries may be, one may recover from a traumatic brain injury. However, most will live with permanent effects from their injuries. Recovery at any level may involve years of relearning how to do daily tasks. Throughout a TBI survivor's recovery process, they will need substantial support to learn, live and work with their disability. Healthcare professionals along with community, family and friends can help the survivor regain confidence when returning to the outside world to live and work with their disability.

Through design, innovative rehabilitation methods are combined with connections to nature and community to create a holistic and supportive atmosphere for patients to recover from their traumas in this facility. A focus on overall community health and wellness is also provided to benefit a wider population and create space for interaction between TBI patients and the community to assist in breaking stigmas. TBI survivors, family, friends and the broader community will be able to interact and learn in an environment that encompasses whole body wellness.

SquareOne Rehabilitation and Wellness Center

The Effects Architecture has on treating TBI



Community Interaction

Open spaces for community interaction support physical and mental wellness. Opportunities to meet and interact with others (patients, staff, and community) are provided. Community spaces are designed to be inclusive and accessible to all.

Facility will include the opportunity for community interaction with TBI patients, staff, and visitors alike.

Innovative Rehabilitation

Open spaces for innovative rehabilitation support physical and mental wellness. Opportunities to meet and interact with others (patients, staff, and community) are provided. Community spaces are designed to be inclusive and accessible to all.

Facility will include the opportunity for community interaction with TBI patients, staff, and visitors alike.

Staff Support

Open spaces for staff support support physical and mental wellness. Opportunities to meet and interact with others (patients, staff, and community) are provided. Community spaces are designed to be inclusive and accessible to all.

Facility will include the opportunity for community interaction with TBI patients, staff, and visitors alike.

Connection with Nature

Open spaces for connection with nature support physical and mental wellness. Opportunities to meet and interact with others (patients, staff, and community) are provided. Community spaces are designed to be inclusive and accessible to all.

Facility will include the opportunity for community interaction with TBI patients, staff, and visitors alike.

Accessibility

Open spaces for accessibility support physical and mental wellness. Opportunities to meet and interact with others (patients, staff, and community) are provided. Community spaces are designed to be inclusive and accessible to all.

Facility will include the opportunity for community interaction with TBI patients, staff, and visitors alike.

Innovative Therapy Labs

Think and Speak Labs will work on one's ability to think, reason, process, make an, talk and interact with others.

Arise and Heals will work on moving and strengthening complex hand skills involving fine motor skills and gross motor skills.

Legs and Walking will focus on advanced track, pelvic and leg function along with movement and balance.

Strength and endurance will focus on high level activities of daily living such as cooking, cleaning, parking and open.

BOARDS

USER GROUP

TBI Survivors, family members and the community

This facility will serve cognitive TBI levels: Mild/Confused, Appropriate, Moderate Assistance > N/A/Purposeful, Appropriate, Modified Independence

Level I - Cognitive, Appropriate, Moderate Assistance

Level II - Purposeful, Appropriate, Modified Independence

Location: Bemidji, Minnesota

Lake Shore Dr NE
(South Shore Park - Nymore Beach)

The site chosen for this thesis is located on the south end of Lake Bemidji in Minnesota. Locating this facility along the lake will provide multiple views of nature along with having access to outdoor based therapies. These outdoor therapies will include fishing, kayaking, hiking, biking along with water activities such as canoeing, rowing, cross country skiing, and ice fishing. Keeping this facility within Bemidji will benefit patients and the community when traveling to the facility.