

Los Alamos County Ice Rink Shade Structure

First Public Meeting (as part of the Parks and Recreation Board Meeting)

January 9, 2025 at 5:30 PM, Municipal Building, Los Alamos, NM

Community Support and Justification Highlights - Provided as Opening Comments from LAHA on Behalf of all Los Alamos Ice Rink User Groups and Patrons

BLUF: A shade structure for the Los Alamos County Ice Rink is a need, not a want.

User Groups and Patrons: LAHA, Roller Derby Community, Adult Hockey Players, Figure Skaters, Public Ice Skaters (local and outside community), Private Rentals and Events, Summer and Winter Camps and Programs

Key Issues

- Excessive solar radiation on the ice during the fall and late winter damages and melts sections of the ice, which limits the skating season
- Inclement weather causes numerous facility closures during the season and limits the ability to attract visitors traveling from long distances due to uncertainty in facility availability, especially for multi-day events such as hockey tournaments
- Snow removal following inclement weather is another problem that has plagued the ice rink facility
- During the winter, occasional periods of higher temperatures and clear skies with direct solar incidence create uneven ice and hazardous conditions for hockey and public skating patrons, which are inherent safety and maintenance concerns for an uncovered, outdoor ice rink
- In the summer, the rink becomes excessively hot, making it uncomfortable for many users and limiting the potential for roller derby, roller skating, roller hockey, summer camp participation, and other recreational activities
- Similarly, intense solar radiation prevailing during the spring and summer seasons limits users and reduces the potential for recreational activities
- Inclement weather during the summer monsoon season creates a constant water removal problem and hazard over an average 6-week period, which further limits the facility availability and user participation for all recreational activities, summer camps, and other potential events

Key Benefits

- Shade structure is estimated to extend the skating season by 1-month at the beginning and end of each season
- Reduce facility closures and lost revenue due to inclement weather while increasing the ability to attract more participants visiting from long distances for additional multi-day tournament events
- Improve ice quality and reduce hazardous conditions for hockey and public skating patrons

- Increased safety for spectators by protecting bleachers and walkways from ice coverage and other weather elements
- Eliminate snow, water, and other falling debris removal issues plaguing facility availability during the skating season and summer months
- Provide patrons with protection of excessively hot conditions and solar radiation exposure during the summer months
- Increase summer recreational activities, camps, and programs at the ice rink such as roller derby, roller skating, roller hockey, and scope of day camp offerings as well as participation numbers
- Facility can be used for other sporting and non-sporting activities such as indoor soccer, indoor lacrosse, indoor basketball, pickle ball, outdoor-protected party events and private rentals, and summer concerts
- Positive economic impact and stimulus on the community shown through nearby, related township studies and surveys
- Reduced on-going operational costs of the ice rink facility by means of increased protection from inclement weather conditions
- Minimize and control future maintenance costs by increasing the lifespan of the Zamboni and efficiency of the refrigeration system and corresponding compressors by eliminating snow removal needs and sun load on the ice as well as board surfaces reflecting heat
- Increase quality of life for Los Alamos County residents as well as residents in surrounding counties and maintain one of the important attractions showcased by LANL in recruiting of new, high-level staff to the lab
- Maintain an open-air outdoor feel of the ice rink with a number of unique shade structure designs available

Other

- A substantial amount of work has already been completed on the research and engineering design front including compilation and study of community survey results and input going back to initial efforts started in 2010
- Numerous conceptual designs, drawings, preliminary vendor and manufacturer cost estimates have resulted from these efforts and multiple shade structure options exist that meet all the needs of current ice rink user groups and patrons
- Relying upon these early achievements and efforts should facilitate a quick and efficient public information phase, design selection, project budget approval, contract bid award, and initiation of project construction that meets all user group needs and is acceptable to the community at large

Previous Conceptual Design Examples Completed

Rink Cover Option 1 – Permanent Cover

CONCEPT

Provide an approximately 20,000 square foot permanent and fixed polytetrafluoroethylene architectural membrane, cables and structural steel truss structure. The new cover includes installation of new lighting, CO₂ monitoring devices from the structure, sound system, and exhaust fans.

PROS

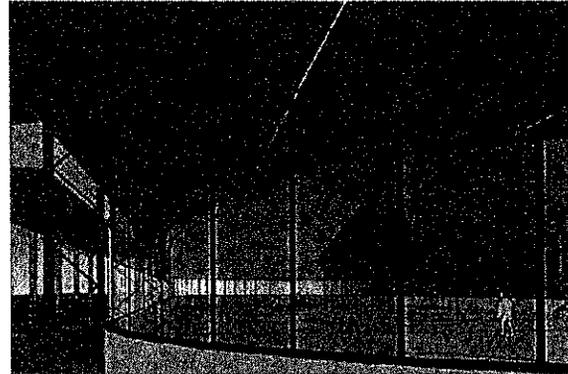
- Shelters rink surface from overhead inclement weather as well as overhead solar exposure.
- Provides view to existing scoreboard from spectator bleachers.
- Provides structure for lighting, sound system, exhaust fans and CO₂ monitoring devices.
- Provides area for signage on north side
- Life Expectancy - 30 years

CONS

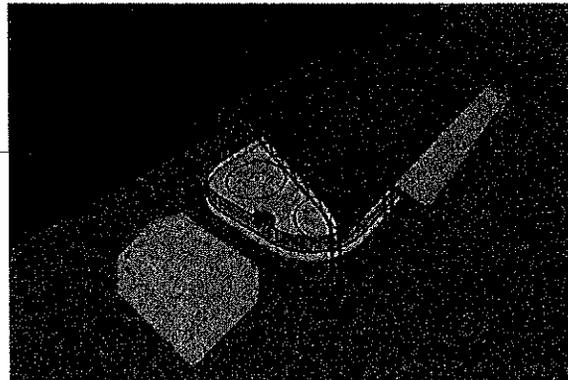
- East and West ends of shelter are exposed to driving rain and low angle solar exposure.
- Partial obstruction of scoreboard from players on ice.
- Possible condensation from truss structure

COST ESTIMATE

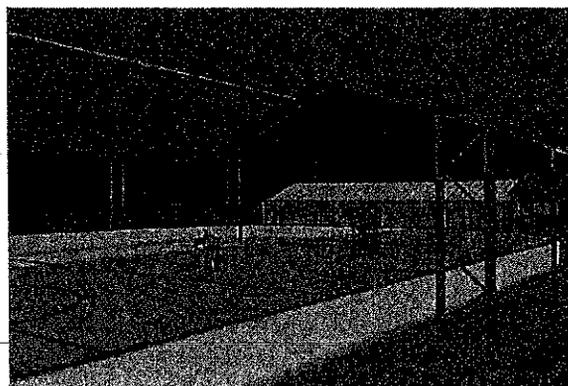
- \$2.70 million
 - Includes: membrane cover, structure, lighting, CO₂ monitoring devices, sound system, exhaust fans, foundation, and spectator bleacher cover.
- Maintenance Cost - \$1,000.00 Annually



View looking east



Aerial View



View looking west from bleachers

**Rink Cover Option 2 – Retractable Cover
CONCEPT**

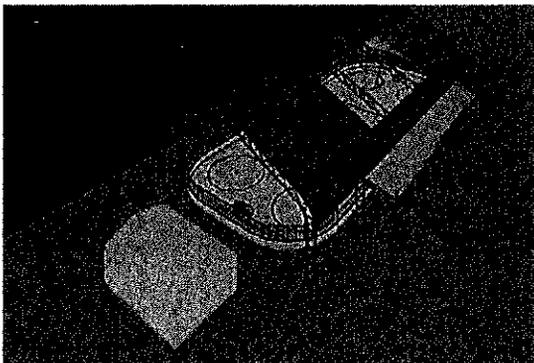
Provide an approximately 20,000 square foot permanent and fixed polytetrafluoroethylene architectural membrane, cables and structural steel truss structure. The new cover includes installation of new lighting, sound system, exhaust fans and CO₂ monitoring devices from the structure. The cover will have retractable panels to allow for views to sky.

PROS

- Shelters rink surface from overhead inclement weather as well as overhead solar exposure.
- Allows for rink cover to be open to overhead sky.
- Provides view to existing scoreboard from spectator bleachers.
- Provides structure for lighting, sound system, exhaust fans and CO₂ monitoring devices.
- Provides area for signage on north side.
- Life Expectancy - 30 years



View looking east



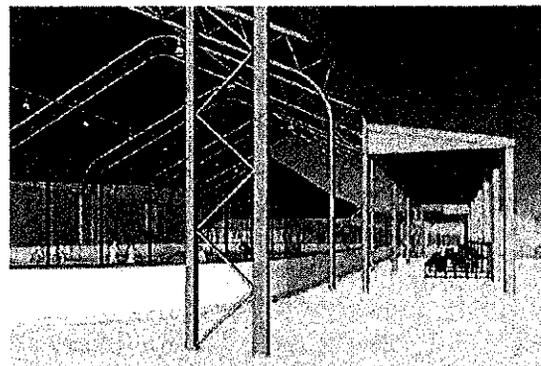
Aerial View

CONS

- East and West ends of shelter are exposed to driving rain and low angle solar exposure.
- Partial obstruction of scoreboard from players on ice.
- Possible condensation from truss structure.
- Possible maintenance issues with retractable cover parts.

COST ESTIMATE

- \$3.21 million
 - o Includes: membrane cover, structure, retractable panels and motor, lighting, CO₂ devices, sound system, exhaust fans, foundation, and spectator bleacher cover.
- Maintenance Cost - \$1,000.00 Annually



View looking west

Rink Cover Option 3 – Cantilever Cover

CONCEPT

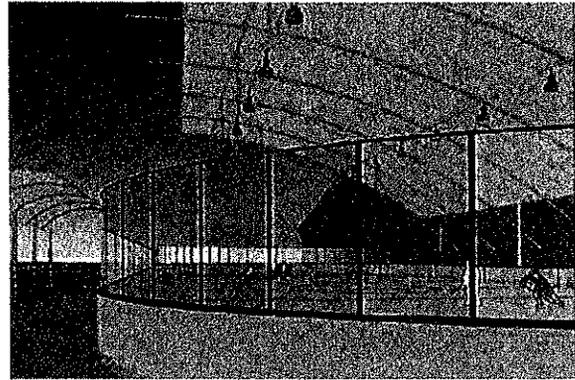
Provide an approximately 20,000 square foot permanent and fixed polytetrafluoroethylene architectural membrane, cables and structural steel truss structure. The new cover includes installation of new lighting, sound system, exhaust fans and CO₂ monitoring devices from the structure.

PROS

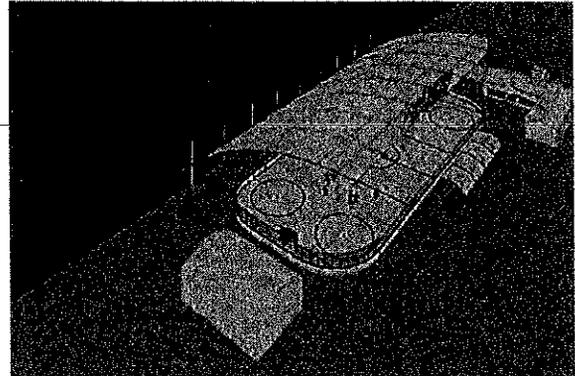
- Provides a cover that compliments the uniqueness of the outdoor rink.
- Shelters rink surface from overhead inclement weather as well as overhead solar exposure.
- Provides view to existing scoreboard from spectator bleachers and participants on the ice.
- Provides structure for lighting, sound system, exhaust fans and CO₂ monitoring devices.
- Provides area for signage on north side
- Life Expectancy - 30 years

CONS

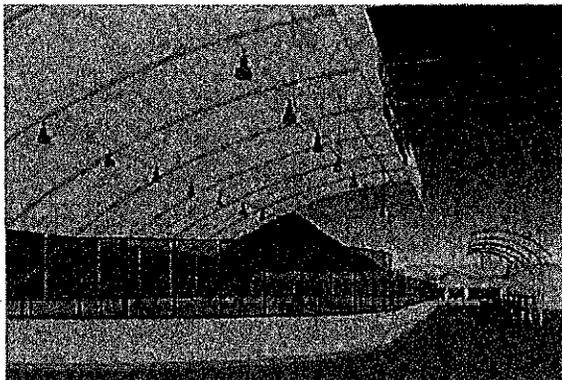
- East and West ends of shelter are exposed to driving rain and low angle solar exposure.
- North end is open to driving rain.
- Possible condensation from truss structure.



View looking west



Aerial View



View looking east

COST ESTIMATE

- \$3.29 million
 - Includes: membrane cover, structure, lighting, CO₂ monitoring devices, foundation, sound system, exhaust fans, and spectator bleacher cover.
- Maintenance Cost - \$1,000.00 Annually

