MOBY POOL REPLACEMENT PROJECT SUMMARY
FOR PRELIMINARY BOARD OF GOVERNOR’S APPROVAL
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1. Existing conditions

Moby Pool is in the C-wing of the Moby Complex. It has six lanes and two diving boards, 1 meter and 3 meters. The pool also seats several hundred fans and features an electronic scoreboard. It does not meet current NCAA standards to host competitions.

The pool opened in 1966. General maintenance has been accomplished over the years, however the pool is at the end of its useful life. In 2018 CSU personnel observed water seeping through the basement wall of the pool. Additionally, an area of spalled concrete had delaminated and broken loose that was approximately 6”x18” in size and approximately 1 ½” in depth. A consultant was retained to review the pool’s structural integrity and make recommendation for repairs. The consultant performed petrographic analysis on concrete core samples, which indicated severe damage from alkali-silica reaction (ASR). ASR is a reaction between the alkali present in the concrete cement paste and the silica found in the concrete aggregates. These elements, when exposed to water, create a reaction which results in an internal expansive force that creates small cracks within the concrete. The testing performed on multiple samples and in multiple tests indicate that the pool walls have already experienced damage due to ASR in the form of internal expansion resulting in micro-cracking. Additionally, the tests indicate that there is potential for approximately three times the damage currently seen. Given the function of the pool wall and the absence of a watertight liner, there is a strong possibility that the rate of damage could greatly accelerate. If this acceleration of damage occurs, the deterioration of the pool wall and the ability of the pool wall to hold water could be compromised in a relatively short amount of time.

The spalling and areas of damage that were found within the pool walls have been repaired and the pool is functioning. The consultant did not believe installation of a pool liner would stop the progression of ASR, as there is significant moisture in the surrounding environment on both sides of the pool wall, as well as moisture which is currently trapped within the wall. Consultant recommended quarterly inspections and planning for replacement.
2. **Opportunity**

The replacement of the Natatorium could be accomplished with an extension to the north of Moby C wing as shown below. Alternatively, it may proceed as a stand-alone structure after further design development.

![Diagram of Natatorium replacement options](image)

3. **Impact**

Moby Pool is a championship aquatics venue that trains CSU swimmers and divers year-round. It is also utilized for youth sports camps. Eventual replacement of the pool is required due to safety concerns, overall age and structural issues. The planned upgrade will provide additional swim lanes and a diving pool to meet NCAA standards.

4. **Space Needs**

Conceptual design indicates a 38,000-40,000 gsf complex would be required to accommodate the program.

5. **Cost**

Natatorium construction costs were estimated by Facilities Management at $635-$645/sf. The estimated cost for the Moby Pool Replacement is $25M-$28M, depending on when the project receives final approval. Funding is anticipated to be from university resources and donors.