Flint Center Executive Summary

Background

The Flint Center is a regional performing arts center, currently seating up to 2,461 patrons located on the De Anza Community College campus, part of the Foothill-De Anza Community College District. The district does not manage the facility, but retains responsibility for the overall maintenance of the building in its capacity as the owner of the property. While the Flint Center is not used for District or De Anza College instructional activities, it is generally in operation throughout the year from leasing operations managed by the third party vendor.

In January 2019, due to previous reports regarding structural concerns, the architect firm of Noll & Tam Architects was contracted by the district to complete an overall assessment of the condition of the Flint Center. Included in this assessment are costs for recommended upgrades and repairs to bring the 50-year-old building in compliance with applicable codes. Noll & Tam Architects assembled a team of engineering consultants to review plans, visit the site, and prepare an assessment of the existing facility. These visits occurred in February and March of 2019. Although the Flint Center is not used for the District's instructional purposes, the building was constructed as a part of the De Anza College campus. Therefore, the responsibility for plan review resides with the Division of the State Architect (DSA), which encompasses structural safety, fire/life safety, and accessibility through enforcement of the California Building Code.

The study included a review of facility conditions of the building exterior and interior, utilities, code compliance with fire/life safety requirements, accessibility and structural safety. Theatrical equipment and audiovisual technologies were not reviewed unless there was a structure component that required retrofit recommendations. The Flint Center Annex, Building A8, was constructed as part of the original theater complex. Adjoining to the north wall of the theater, A8 is structurally separated from the theater building; however, exits from the backstage area are maintained through A8.

For the structural component of the assessment, the following items were noted:

- Previous recommendations were based on an ASCE-31 evaluation, which was the standard at the time of review in 2014.
- Current evaluations are based on the current codes and use the current ASCE41-17 for evaluations. The areas of work that require strengthening have increased since the 2014 evaluation based on this ASCE 41-17 evaluation results. Additional structural work was identified to meet current code. The designs to address those structural deficiencies and the DSA structural evaluations for any building renovation work will determine the actual renovation criteria and further work.

Facility Condition

Exterior

- The main building roof is the original built-up system that is in very poor condition due to age. The roof needs to be replaced, and additional roof drainage is required. Tapered insulation should be added for energy efficiency and for better drainage.

- The sides of the building have clay tile mansard roofs. These have not been replaced since new and have not been upgraded to the current campus standard.
- Replacement of existing glazing at the south entry area with new safety glass will be required for seismic and life safety reasons.
- The building exterior requires concrete and stucco repairs along with waterproofing and painting of the structure. Many of the exterior doors should be replaced and new hardware installed.
- The patio concession counter lacks an accessible point-of-service and modifications to the service counter would be required as part of the overall access upgrades to the patio area.
- Removal of the canvas awning covering the patio concession area will be needed to perform recommended exterior painting and waterproofing improvements. Replacement of the current awning products with new, appropriate materials will be required.

<u>Interior</u>

- Building Systems
    - Most of the mechanical and electrical systems are original and replacement is recommended both to assure more reliable operation and to improve energy efficiency.
    - Power infrastructure, lighting and electrical systems are also aging. New lighting control systems are also recommended.
- Stairs
    - While the stairs at the auditorium are compliant, the railings and guardrails are not and will need to be replaced. The stairs at the back stage area are not compliant but may be deemed adequate by DSA but the railings and guardrails will need to be replaced. (more information is covered under Fire/Life Safety)
- Restrooms
    - Due to the age, condition and configuration, full modernization of all bathrooms is required to meet current codes for accessibility.
- Interior Finishes
    - Carpet and paint are in good condition assuming there is no impact from activities to renovate the building. However, the structural work will significantly impact many interior areas and finishes are likely to need replacing.
    - The ceilings were custom installations at the time of original construction. If fire sprinklers are extended into currently unsprinklered areas, modifications to these ceilings would need to comply with current code.
    - Asbestos-containing materials are likely to be present above the ceiling and stairwells and would need to be abated.
- Seating and Stage Curtains
    - Auditorium seating appears to be in excellent condition. These could be removed and re-installed after renovation.
    - The fire retardancy of the stage curtains should be confirmed or they should be re-treated and certified or they should be replaced.
- Signage and Wayfinding
    - Due to revisions in signage code requirements, it is anticipated that replacement of all code-required signage will be necessary.

Utilities

In general, the Flint Center and Building A8 are linked to campus utility systems and any modifications to these systems will affect the operation of other buildings on campus.

Storm and sanitary sewer systems are particularly impacted by the location of the Flint Center, near the point of connection to public utilities on Stevens Creek Boulevard.

Fire/Life Safety

- Exiting
    - The slope of the aisles do not provide exits that meet requirements for accessibility.
    - All stairs require upgrades to handrails and guardrails and do not provide exits that meet requirements for accessibility.
    - Removal of seats to create a center aisle is currently required to bring the number of seats per row into alignment with code requirements.
    - Seats need to be removed at the base of the stage to create a cross-aisle leading to exits on either side of the stage.
    - Initial discussions with DSA indicate that a cross-aisle could be required mid-way between the lobby and stage. That Alternate is listed in the Cost Summary.
- Life/Safety Systems (sprinklers, fire alarm, emergency lighting)
    - None of these systems comply fully with current code requirements. Due to the age of the building, full compliance with current codes may not be required but cannot be ruled out.
    - The existing fire alarm system provides only partial coverage. Complete replacement of the fire alarm system, including audible and strobe lighting, is required to provide a fully integrated system consistent with the campus as a whole. The Fire Alarm system needs to be upgraded to current code for any ongoing occupancy.
    - At the time the building was constructed, partial fire sprinklering of the facility was permitted. Extending sprinklers throughout the building including a new water line service would be very expensive; if there is no change in use or occupancy, the existing system may be determined to be acceptable as long as a new fire alarm system is installed, but DSA has authority over any determination.

- Accessibility
    - Floor Levels
        - The Balcony level is not located on an accessible Path of Travel.
        - At the Mezzanine Level is located on an accessible Path of Travel, but no box seating is currently accessible due to steps. ADA seating would need to be addressed for front-facing seating and for access to the box seating.
        - The 9-11% sloping at the Orchestra Level exceeds current code requirements.
        - Because the general floor and aisles slope together continuously at 9-11% slope, there is no direct accessible Path of Travel from the lobby to the front row seats.
        - Exterior ramps, including retaining walls, would be required to establish a continuous exterior Path of Travel from accessible parking and drop-off zones to the plaza and the front of house.
        - A second pair of enclosed stairs serve as a second means of egress from the Mezzanine and Balcony Levels. These stairs cannot conform to

accessibility requirements due to their configuration. Modifications are proposed to be limited to replacement of guardrails and handrails.
        - Back-of-house stairs cannot conform to accessibility requirements due to their configuration. Modifications are proposed to be limited to replacement of guardrails and handrails.
        - A pair of passenger elevators serve the three main levels. A freight elevator serves the back-of-house areas with additional stops at the backstage intermediate floors. None of the elevators are provided with a vestibule. The addition of smoke doors or construction of smoke-proof vestibules at each of the elevators (a total of eleven locations) would be required by the current code.
    - Stage Access
        - Accessibility Path of Travel is required for performers travelling both onto the stage, as well as into the Orchestra Pit. When the pit is in its lowest position (basement level), there is no accessible Path of Travel.
        - Stage access from the audience up to the stage requires the addition of a wheelchair lift.
    - Exterior Amenities and Path of Travel
        - Access to the stage and backstage facilities is currently via the loading dock. This area is not access compliant.
        - There is no accessible Path of Travel to the sunken plaza on the west side of the building that serves as a pre-function and concession area. Nor do the exits on the east and west sides of the building connect to the accessible Path of Travel, as steps occur at each location. New ramps would be required in all of these areas.
    - Accessible Restrooms
        - Bathrooms located at the main building entrance are unlikely to be acceptable under current code interpretation for equivalent facilitation.
        - Several original restrooms are located at the Mezzanine and Balcony levels. Some of these are not located on an accessible Path of Travel, as they're served by stairs or sloped aisles that do not meet accessibility requirements.
        - If renovations are undertaken, it is also anticipated that an accessible Path of Travel via lift will need to be provided to several of the original restrooms. This will trigger a requirement to reconfigure the restrooms to meet current accessibility requirements.
        - Backstage restroom facilities are too small to be brought into compliance at their current locations. It is recommended that accessible backstage dressing rooms and restrooms be provided in Annex A8 where sufficient space is available. Accessible shower facilities may be a desired addition to the dressing rooms.
    - Accessible Seating
        - Not all the currently designated accessible seating complies to current code requirements due to the slope of the auditorium floor and aisles. Therefore, modifications will be required to provide new accessible locations.
        - Seating at the Mezzanine and Balcony levels, if included in accessible seating areas, will be required to be modified to provide forward facing accessible seating and box seating will require modifications to allow for access to two box seating areas on the east and west sides per level.

- The cumulative effect of modifications to provide dispersed wheelchair seating and the required addition of a center aisle noted above under "Exiting" will result in a reduction of approximately 300 seats.

Structural Safety

- This study, and the associated recommendations and estimates, are based on a voluntary approach to structural reinforcing. Voluntary upgrades are less extensive and can be adjusted to some extent to reflect cost and constructability considerations subject to DSA approval.
- The most significant modifications recommended consist of north/south shear walls extending from new foundations to the underside of the upper Balcony and 5th floor level, to strengthen the narrow floor diaphragms at these locations. The addition of these walls, along with the reinforcement of a series of wall piers along the east and west sides of the auditorium, will require extensive repair to interior finishes and may also affect the distribution of piping and conduits. Other deficient areas include specific concrete shear walls, concrete diaphragms, and concrete spandrel beams. Recommendations for adding shotcrete wall panels or FRP reinforcement to specific areas were provided to determine an estimate for structural repairs.
- The structural report includes other non-compliant items including the potential for catwalk and fly tower platforms attachments to become brittle over time and the counter weights for the arbors over the stage that sit loose on the steel platforms should be anchored.
- Building A8 also requires the addition of concrete shear walls to meet structural safety requirements.

Study Recommendations

This study provides a basis of understanding of the building's function and condition. Because the cost to fully implement the recommendations of the study is quite high, it may be necessary to defer portions of the work until a future date. In doing so, it will be important to select improvements that can be constructed sequentially to avoid duplication of effort and added costs. Many of the necessary upgrades cannot take place when the facility is in use, therefore, any plan of action that is developed must take into consideration structural feasibility, cost, and schedule. Full renovation would likely require a timeframe of at least two years.

Recommendations included in the report are ranked from Level 1 to Level 7.

- Level 1 improvements are related to normal maintenance for a building of this age and would be required if the building is left standing, whether in use or vacant for an extended period.
- Level 2 improvements are directly related to life/safety issues and would need to be completed if there is any intention to continue to use the building in its current capacity.
- Level 3 improvements are repairs or upgrades that would require DSA review to ensure accessibility requirements are met.
- Level 4 improvements address equipment and systems replacement. Both Level 3 and 4 efforts will provide DSA an opportunity to require specific work to be included at their discretion.

- Level 5 are improvements that would encompass campus-wide coordination since other buildings and campus resources would be involved in the project scope.
- Level 6 improvements could include interim closure or demolition of the building.
- Level 7 improvements would include the removal and replacement of the existing building.

Level 1

Maintenance projects and in-kind equipment replacement can generally be performed without DSA review. Regardless of whether the building continues to be used or is placed in closure status pending a future decision, the following would need to be done in order to maintain the integrity of the building for possible future use:

- Building roof replacement
- Inspecting and cleaning storm and sanitary sewer drains
- Exterior painting and waterproofing

Estimated cost: $3.8 million base cost; $7.8 million with contingency costs included
Estimated time: Design, bidding, construction - 12 months

Level 2

As these improvements relate to significant fire/life safety concerns, the district would need to complete these items if it intends to continue to use the building. DSA approval is required, but is anticipated to be relatively straightforward due to the limited scope and direct life/safety benefits. These projects include:

- Replacement of the fire alarm system, including complete coverage of the auditorium.
- Repairs to the fire dampers

Estimated Cost: $576 thousand base cost; $1.175 million with contingency costs included
Estimated time: Design, bidding, construction - 12 months

As Level 1 and Level 2 would be at minimum needed to continue use of the building, the estimated minimum cost is approximately $7.5 to $9 million.

Level 3/4

Because the Flint Center was designed and built with limited building code requirements for accessibility, there are many non-compliant conditions that cannot readily be corrected. A partial list of the major items to bring this area into compliance would include:

- Structural strengthening of foundations, shear walls and lateral piers and spandrel beams
- Fire sprinkler upgrades and added fire sprinklers for the auditorium and south entry areas
- Modification of accessible seating, including front aisle, center-aisle and possible cross-aisle
- Accessible seating in the Orchestra and Mezzanine levels
- Improvements to exterior Path of Travel access including ramps, retaining walls, signage
- Accessible dressing rooms and restrooms backstage at A8
- Wheelchair lifts
- Accessible restrooms

- Stairway improvements
- Replacement of air handling units and fans
- Replacement of hot water heating systems
- Upgrades to aging electrical equipment and distribution

Estimated Cost: $11.2 million base costs; $23.5 million with contingency costs included
Estimated Time: Design, DSA, bidding, construction – 24 to 30 months

Level 5

These improvements would encompass the needs of multiple buildings in addition to providing improvements to the Flint Center building. Some projects require DSA approval, others will not.

- Projects not likely requiring DSA approval
    - Replacement of utilities, distribution, controls
    - Energy efficiency upgrades
- Projects requiring DSA approval
    - Replacement of mechanical and electrical system components like boilers, chillers, motor control centers, generators, etc.
    - Exterior retaining walls, walkways and ramps
    - Signage and wayfinding

Estimated Cost: $3.0 million base cost; $6.3 million with contingency costs included
Estimated Time: Design, DSA, bidding, construction – 24 to 30 months

The completion of all recommendations through Level 5 is estimated at $24.2 million for hard construction costs, though as noted throughout the report there are many areas that were not specifically reviewed that may have an effect on the estimate. An actual estimate of full costs include the addition of a Design Contingency to allow for defining unknowns during design, a Construction Contingency for typical construction items found during the course of construction not discovered by destructive investigation during design, a cost for Market Conditions due to current influences of the south bay area construction impacts, an escalation factor to account for the time a project is estimated until the time it is actually constructed and a Soft Costs line for Architect and Engineering fees, DSA fees, Inspection and Special Inspection fees, construction management costs, etc. A brief summary of those costs are as follows:

	Base Cost, w/tbd mark-up	**Base Cost, w/out mark-up (A)**	**Contingencies & Soft Costs (B)**	**Total Estimated Costs (A+B)**
Flint Center Assessment	$24,274,640	$17,339.029	$18,268,603	$35,607,632
Site Work	$4,565,892	$3,261,351	$3,436,198	$6.697.549
Estimated Subtotals	**$28,840,532**	**$20,600,380**	**$21,704,801**	**$42,305,181**
Alternates:				
1-Cross Aisle Modifications-Full	$334,640	$188,000	$198,079	$386,863
2-Balcony Level Accessibility	$564,175	$316,952	$333,944	$652,218
3-LED Lighting, Power Supply Upgrades	$5,449,203	$3,061,350	$3,225,474	$6,299,586
Estimated Subtotals	**$6,348,018**	**$3,566,302**	**$3,757,497**	**$7,323,799**
Estimated Totals	**$35,188,550**	**$24,166,682**	**$25,462,298**	**$49,628,980**

Level 6

Leaving the facility in place while a determination of the building's future is being considered carries a cost burden, as the facility requires to be operated to maintain systems and to review the building's condition on a scheduled basis.

Estimated Cost: $28,000 per month

Level 7

The selection of this option would entail the managed removal of the Flint Center and the on-site recycling of concrete, steel, etc. after a removal of any lead-based or asbestos-containing materials. Those materials would then be taken from the campus to properly dispose of at an appropriate, legal facility. The site would be left clear of materials and the utilities cut and capped at appropriate locations. The A8 facility could be maintained if the A-Quad buildings remain in use and would require added work to enclose the south portion where the Flint Center wall was removed. Given that the A8 utilities are aged and will require replacement in the near future, consideration should be carefully reviewed as to the intended use of that area of campus.

Estimated Cost: $4 million base cost; ~$8.4 million with contingency costs included
Estimated Time: Design, bidding, construction – 12 to 16 months

Level 8

The selection of this option would entail removing the existing building and replacing it with a new performing arts center of similar size. The A8 facility could be maintained if the A-Quad buildings remain in use. Given that the A8 utilities are aged and will require replacement in the near future, consideration should be carefully reviewed as to the intended use of that area of campus.

Estimated Cost: $65.8 million base cost; ~$150 million with contingency costs included
Estimated Time: Design, bidding, construction – 24 to 36 months minimum