

# The Existing Facility Evaluation Framework Report for the Long-Range Plan to Renovate Existing School Facilities

Advisory Council on School Facilities and Capital Programs (FAC) and  
the Joint Facilities Advisory Commission (JFAC)

March 13, 2023

- FY 2023-2032 CIP Timeline – Long-Range Plan to Renovate Existing School Facilities
- Advisory Council on School Facilities and Capital Programs (FAC) – Contributions for the Long-Range Plan to Renovate Existing School Facilities
- Architecture and Engineering Services – Bid Selection
- Overall Project Timeline
- Stage 1 – Facility Condition Assessment (FCA)
- Stage 1 - Facility Condition Index (FCI) – Methodology
- Stage 1 - Facility Condition Index (FCI) – Building Systems
- Stage 1 - Facility Condition Index (FCI) – Rating System
- Stage 1 - Building Characteristics Index (BCI) – Methodology
- Stage 1 - Building Characteristics Index (BCI) – Building Systems
- Stage 1 – Metrics & Reporting
- Stage 1 – Metrics & Reporting, Continued
- Stage 1 – Capital Needs Forecast
- Next Steps

For purposes of this document, Long-Range Plan to Renovate Existing School Facilities will be colloquially referred to as the Plan.

# FY 2023-2032 CIP Timeline – Long-Range Plan to Renovate Existing School Facilities

Date	Forum	Subject
8/26/2021	School Board Meeting	<a href="#">2021-22 Planning Update</a>
9/21/2021	Work Session	<a href="#">CIP Direction</a>
10/14/2021	School Board Meeting	<a href="#">CIP Direction</a>
10/28/2021	School Board Meeting	<a href="#">CIP Direction</a>
5/12/2022	Work Session	<a href="#">Superintendent's Proposed FY 2023-32 CIP</a>
		<b>Information Item</b>
5/17/2022	Work Session	<a href="#">CIP Work Session #1</a>
5/31/2022	Work Session	<a href="#">CIP Work Session #2</a>
6/7/2022	Work Session	<a href="#">CIP Work Session #3</a>
		FAC & <a href="#">JFAC CIP Feedback</a>
6/9/2022	School Board Meeting	<a href="#">School Board's Proposed FY 2023-32 CIP</a>
		<a href="#">Attachment B</a>
		<b>Information Item</b>
6/13/2022	Public Hearing	<a href="#">School Board's Proposed FY 2023-32 CIP</a>
6/23/2022	School Board Meeting	<a href="#">CIP Adoption</a>
		<a href="#">Attachment B</a>
		<b>Action Item</b>
11/8/2022	Election Day	<a href="#">School Board Referendum</a>
		<a href="#">Election Results</a>

Date	Forum	Additional Materials
11/08/2021	FAC Meeting	<a href="#">Agenda</a> & <a href="#">Minutes</a>
11/29/2021	FAC Subcommittee Meeting	<a href="#">Video</a> & <a href="#">Transcript</a>
12/06/2021	FAC Subcommittee Meeting	<a href="#">Video</a> & <a href="#">Transcript</a>
12/13/2021	FAC Meeting	<a href="#">Agenda</a> & <a href="#">Minutes</a>
<i>01/10/2022</i>	<i>FAC Meeting</i>	<i><a href="#">Agenda</a> &amp; <a href="#">Minutes</a></i>
01/11/2022	FAC Subcommittee Meeting	<a href="#">Video</a> & <a href="#">Transcript</a>
02/07/2022	FAC Subcommittee Meeting	
02/14/2022	FAC Meeting	<a href="#">Agenda</a> & <a href="#">Minutes</a>
<i>03/14/2022</i>	<i>FAC Meeting</i>	<i><a href="#">Agenda</a> &amp; <a href="#">Minutes</a></i>
04/04/2022	FAC Meeting	<a href="#">Agenda</a> & <a href="#">Minutes</a>
04/05/2022	FAC Subcommittee Meeting	

*Text in italics includes meetings and agendas that did not include the Long-Range Plan to Renovate Existing School Facilities, but the subject was discussed through liaison reports or related CIP projects.*

November 2022

Prime Consultant

- [MTFA Architecture](#)

Supporting Roles

- [Facility Engineering Associates, P.C.](#)
  - Facility Evaluation Expertise
- [CMTA](#)
  - MPE Systems Expertise
  - Existing knowledge with APS Systems

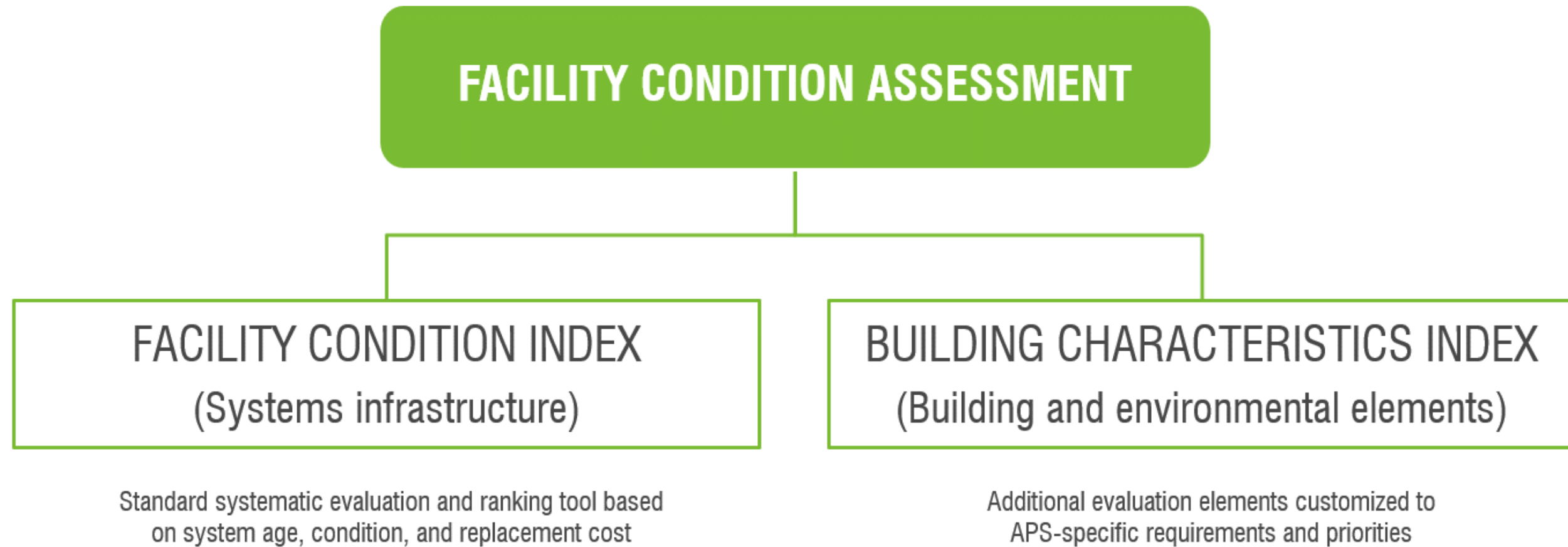


MTFA Architecture | [www.mtfa.net](http://www.mtfa.net)  
3200 Langston Boulevard – Arlington, VA 22207  
703-524-6616



TIER 1	<p><b>STAGE 1</b></p> <ul style="list-style-type: none"> <li>● Project team met with APS several times in January and February to develop the methodology and evaluation criteria.</li> <li>● Initial pilot test site assessments were performed in early February. Data input and analysis followed.</li> <li>● A draft Evaluation Framework Report will be submitted at the end of February for review and comment by APS in March.</li> <li>● <b>The project team will present the overall process to the APS Facility Advisory Committee in mid-March.*</b></li> <li>● The Final Evaluation Framework Report anticipated to be submitted April 2023.</li> </ul>
	<p><b>STAGE 2</b></p> <ul style="list-style-type: none"> <li>● Notice to proceed Stage 2 and begin the draft Facility Evaluation Report.</li> <li>● Perform remaining site assessments anticipated to occur during Summer 2023.</li> <li>● A draft Facility Evaluation Report will be submitted at the end of August 2023 for review and comment by APS.</li> <li>● The final project report and data are anticipated to be submitted at the end of September 2023.</li> </ul>
TIER 2	<p><u>NOT PART OF THIS PROJECT “Deeper Dive”</u></p> <p>A future effort that involves additional measurement, testing, analysis, or study to further evaluate the highest priority needs and deficiencies identified in the Tier 1 assessment.</p>

\*Our current location along the project timeline.



The proposed Facility Condition Assessment (FCA) for each school provides:

- Overview of the school buildings relative to each building's age and current condition.
- A measure to “index” the condition of each building against other district schools using industry recognized metrics.

The output of the proposed Facility Condition Assessment:

- A projection of capital needs based on observations of system age and condition observed during site visit.

## Facility Condition Index (FCI):

- Evaluates major systems infrastructure.
- Standard systematic evaluation and ranking tool.
- Based on system age, condition, and replacement cost.
- Evaluation criteria are standard categories per ASTM Uniformat II, Level 3.
- Deferred maintenance (DM) as measured against the estimated current replacement value (CRV).
  - DM = What hasn't been done in the past but needs to be done?
- Accumulated degradation (AD) as measured against the estimated current replacement value (CRV).
  - AD = What's going to expire in the future?
- Each system element evaluated on degradation curve over the course of the expected useful life (EUL)
  - EUL = age, operation, environment, and maintenance
- Each system element is rated on a scale from 1-5 (1 is crisis/failure, 5 is excellent)



Summary of select building systems evaluated in FCI include but not limited to:

- Exterior Systems - roofs, walls, window systems, doors.
- Interior Construction - walls, doors, flooring, classroom casework.
- Interior Finishes: Flooring, ceiling, wall finishes.
- Fire and Life Safety systems.
- Heating, Ventilation and Air Conditioning.
- Plumbing systems.
- Electrical and service distribution.
- Fire detection and suppression systems.

# Stage 1 - Facility Condition Index (FCI) – Rating System

Rating	Condition	% Deficiencies Allowed
5	Excellent	0-5%
4	Good	5-10%
3	Fair	10-25%
2	Poor	25-50%
1	Crisis/Failure	>50%

Rating	Condition	Remaining Useful Life - Typical Curve																			
		System Age		New	1/3				1/2				2/3				Failure				
5	Excellent	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
4	Good				Light Green	Light Green	Light Green	Light Green	Light Green	Light Green	Light Green	Light Green	Light Green	Light Green	Light Green	Light Green	Light Green	Light Green	Light Green	Light Green	Light Green
3	Fair							Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
2	Poor														Red	Red	Red	Red	Red	Red	Red
1	Crisis/Failure																Dark Red	Dark Red	Dark Red	Dark Red	Dark Red

## Building Characteristics Index (BCI):

- Evaluates other buildings and environmental elements.
- Includes elements not covered by the FCI.
- Customized to APS-specific requirements and priorities.
- Based on framework produced by FAC and presented as part of the Fiscal Year 2023-32 Capital Improvement Plan (CIP)
  - [Attachment B](#)
-

Summary of select building systems evaluated in BCI include but not limited to:

- Indoor Air Quality (IAQ)
- Ventilation
- Filtration
- Specialty Ventilation Requirements
- Interior/Exterior Lighting
- Water Efficient Fixtures
- Water Use Intensity
- Energy Use Intensity

FCI industry-utilized metrics include:

- Age and condition of each building system.
- The accumulated degradation of each system based on its estimated and remaining useful life.
- Near-term (1-3 year) projects that are required to correct significant deficiencies

FCI provides a relative measure of the condition of a building within a portfolio of buildings.


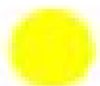
FCI is depicted as Good/Fair/Poor



A system rating of 5 or 4 generally indicates that the system has a significant remaining service life and is in good condition.

A system rating of 1 or 2 generally indicates that the system needs repairs or replacement, either within the next capital renewal cycle (rating of 1), or within the near term of the next few years (system rating 2).

System rating of 3 generally indicates that the system is in the middle of its expected service life.

	System rating 5-4
	System rating 3
	System rating 2-1

FCI range can be used, along with other factors such as building system condition and other building characteristics, by the APS to refer to existing building age and condition to inform decisions about building condition relative to programming changes and other factors for decision-making in the master planning process.

The forecast of future needs expressed in the tables are reflective of building system “raw” costs

Not intended to predict actual bid costs for projects and are do not currently have a cost multiplier applied.

The conversion of anticipated future needs (raw costs) to anticipated repair/replacement costs (project costs) can be made using a cost multiplier.

Raw cost multipliers include:

- Labor cost factors such as labor pool availability, travel and living expenses and commuting.
- AE Design Fees and construction oversight fees
- Contractor General Requirements, Overhead and Profit
- Owner-imposed costs
- Contingencies
- Existing conditions mark-ups

- Approve the Final Evaluation Framework Report
- Draft Facility Evaluation Report
- Approve Facility Evaluation Report
- School Board to select facilities for inclusion in Tier 2 as part the Fiscal Year 2025-34 Capital Improvement Plan (CIP)

Q&A