

Exhibit Y

John F. Kennedy Center for the Performing Arts

2021 Comprehensive Building Plan – Presentation of Facts and Findings



01 Team and Process Overview

02 Findings and Recommendations

1.0 Exterior Envelope

2.0 Life Safety and Security

3.0 Interior and Accessibility

4.0 Building Systems

5.0 Memorial Interpretation

6.0 Parking and Site Circulation

7.0 Operational Recommendations

03 Next Steps

Project Team

DLR Group

Architecture, Engineering, Theater Specialist, AV,
Acoustics

Jensen Hughes

Life Safety, Fire Protection and Security Consultants

Silman

Structural Consultant

Wiss, Janney, Elstner Associates

Building Envelope Consultant

Lerch Bates

Vertical Transportation Consultant

Venue

Cost Estimating Consultant

Wiles Mensch

Landscape and Civil Consultant

Evergreene Architectural Arts

Conservation Consultant

Gorove Slade

Transportation Engineering and Planning Consultant

Process Overview

Survey and Document Existing Conditions

Interview JFKC Personnel

Develop Project List

- Provide Cost Estimates

Provide Implementation Plan

- Refined Cost Estimates

Project Cost Overview

Projects Identified

<u>Priority 1</u>	<u>133</u>	<u>Priority 2</u>	<u>120</u>	<u>Priority 3</u>	<u>70</u>
• Envelope/Structure	21	• Envelope/Structure	23	• Envelope/Structure	7
• Infrastructure	35	• Infrastructure	18	• Infrastructure	20
• Renovations	16	• Renovations	15	• Renovations	11
• Studies/Manuals	13	• Studies/Manuals	11	• Studies/Manuals	6
• Site	2	• Site	9	• Site	0
• Minor Repairs	46	• Minor Repairs	42	• Minor Repairs	28

Project Cost Overview

Projects Identified	Priority 1	133	\$	172,436,661	
	Priority 2	120	\$	54,753,911	
	Priority 3	<u>70</u>	\$	<u>25,586,625</u>	
Total Value of Projects Identified		323	\$	252,777,197	(Capital & Minor Repair)
Value of "Short List" Projects Identified			\$	192,308,436	(2020 \$)
PMO Operations Budget			\$	<u>6,900,000</u>	(22FY-27)
Total Estimated Costs			\$	202,169,483	
Total project cost (escalated through FY2027) <i>assumes 2% per year escalation</i>			\$	227,675,674	*
Budget including carryover and annual appropriations <i>All appropriation values are assumptions</i>			\$	175,389,411	
Delta +/-			\$	(48,951,644)	

* Prior year CBPs did not include escalation

Recommendations: 1.0 Exterior Envelope

1.1.2	Plaza Trench Drain Replacement	\$144,500
1.28.1	Stone Repair Manual and Maintenance Plan	\$25,000
1.28. 2+3	Cleaning Studies Marble & Granite	\$34,000
1.30.1	Exterior Walls at Level A, B, C - Urgent Repair	\$15,000
	- Close Range Survey & Sounding	
1.30.2	Exterior Walls at Level A, B, C - Near Term Repairs	\$427,000
1.30.3	Exterior Wall & Soffits at Level A, B, C Maintenance Plan (5 year)	\$75,000
1.32.1	Marble Fascia & Coping Units - Plaza & Terrace Level Overhangs	\$60,000
	- Close Range Survey	
1.34	Plaza Level Soffit Investigation	\$30,000
1.42	Exterior Door Investigations	\$85,000
1.51.2	Level B/A Service Corridor and Support Spaces Waterproofing Investigation	\$150,000
1.51.3	Level B/A Service Corridor and Support Spaces Waterproofing Repairs	\$440,000
1.54.2	Plaza Level Fountains Waterproofing & Sealant Repairs	\$960,000
1.55.2	Replace Fountain Draining Piping	\$120,000
1.59.1+2	White Single Ply Roofing Replacement	\$2,370,000
1.60.1	Terrace Level Expansion Joints Investigation	\$15,000

Recommendations: 1.0 Exterior Envelope

1.61.1+2	Penthouse Kitchen Exhaust Penetrations Investigate/Repair	\$54,500
1.62.1	Main Roof Maintenance Survey	\$60,000
1.68	General Leak Investigation	\$150,000
1.69	General Leak repairs	\$270,000
1.74.1	Exterior Artwork Assessment and Repair - Don Quixote	\$60,000
1.74.2	Exterior Artwork Assessment and Repair - Untitled	\$37,500
1.74.4	Exterior Artwork Assessment and Repair - America	\$22,500
1.74.5	Exterior Artwork Assessment and Repair - War or Peace	\$37,500
Subtotal		\$5,439,000

Initial Findings: 1.0 Exterior Envelope

Exterior Walls - Marble

- Overall, the marble panels and joint sealant are in fair-to-good condition.
- More concentrated marble and joint sealant distress, previous repairs, and discoloration were observed at:
 - Rock Creek Parkway Overhang
 - Plaza Level Overhang
 - Terrace Level Overhang
- Per 2020 CBP, the last round of facade maintenance repairs were completed in 2010. At the Rock Creek Parkway Overhang, broken panels were replaced in 2005.



Initial Findings: 1.0 Exterior Envelope

Exterior Walls - Marble

- The following distress types were noted:
 - Mild degradation or bowing due to hysteresis
 - Cracks, spalls, incipient spalls
 - Weathered veins and inclusions
 - Erosion and weathered surfaces
 - Failed previous repairs
 - Discrete adhesively failed sealant
- Previous repair types include:
 - Through-face pins
 - Crack repairs
 - Reattached fragments/dutchman
 - Small patch repairs
 - Replacement panels



Initial Findings: 1.0 Exterior Envelope

Exterior Walls - Marble

- The marble discoloration patterns include:
 - Orange-brown – along panel joints, center of panel, building base
 - Dark black at overhang fascia and coping units
 - Efflorescence at planter and fascia units
 - Discrete areas of concentrated yellowing
 - General soiling (atmospheric and biological)
- Previous stone discoloration studies:
 - 1993 Wiss, Janney, Elstner (WJE)*
 - 2009 Gale Associates, Inc. (Gale)
 - 2015 Conservation Solutions, Inc. (CSI)
 - 2010 Exterior Marble Cladding Restoration



*Note: This WJE study is not specifically listed on the JFKC 2020 CBP Previous Studies and Resources list.

Initial Findings: 1.0 Exterior Envelope

Exterior Walls and Soffits – Stucco

Plaza Level Soffits

- Active leaks and staining were observed at discrete stucco panel joints around the building perimeter.

Terrace Level Walls and Soffits

- The metal louvers are in generally good condition.

Penthouse and Main Roof Walls

- Overall, the stucco is in fair condition and the sealant joints are in poor condition.
- The metal louvers are in generally good in condition.

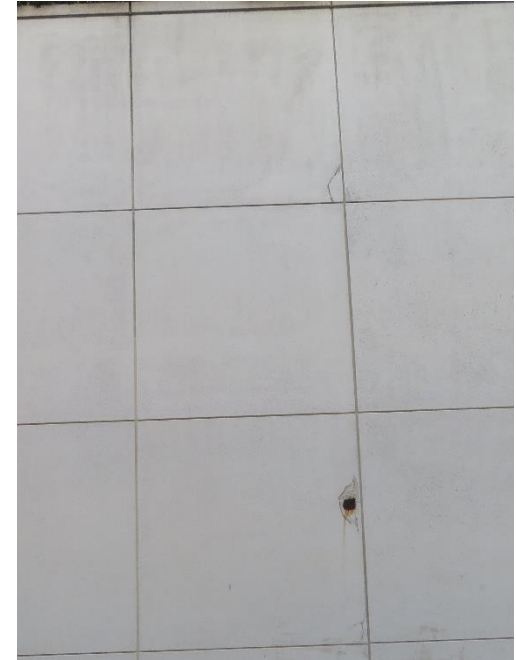


Initial Findings: 1.0 Exterior Envelope

Exterior Walls – Concrete and Precast

Levels Plaza, A, B, and C

- The precast and reinforced concrete walls, retaining walls, and planter walls are generally in good condition with some cracking observed throughout.
- At the north and west facades' precast panels, there are cracks and incipient spalls coincident with anchors that are potential fall hazards.
- There is general soiling (atmospheric and biological) with areas concentrated soiling near plants, roads, and at skyward surfaces.
- There are cohesive and adhesive failures of the joint sealant. The metal louvers are in generally good condition.



Initial Findings: 1.0 Exterior Envelope

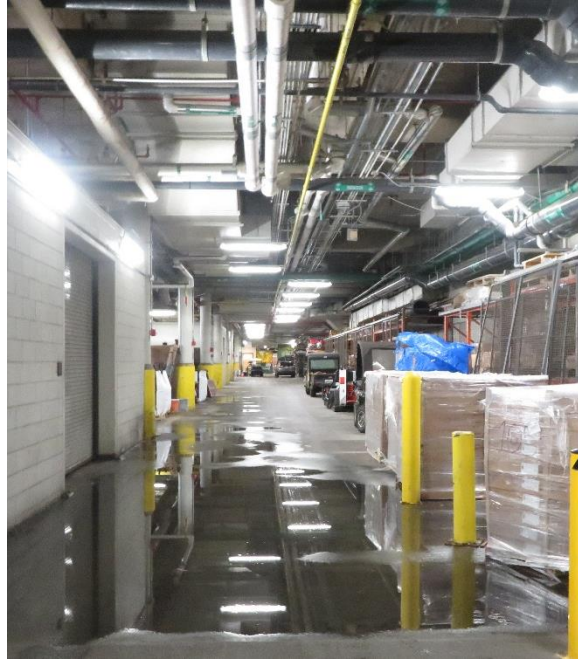
Roofing and Waterproofing

Sub-Grade Spaces

- Staining, concrete distress, corroded steel, and efflorescence indicating past and potentially ongoing water infiltration were observed. At some active leaks, there are metal pans and gutters to help redirect water.

The team observed active leaks at:

- The east transformer vault rooms (as well as north pump rooms)
 - Staining most heavily concentrated on west wall, west ends of beams, and columns of the transformer room.
 - Spalling and cracked concrete at encased steel beams and slab.
- Garage northeast corner (Level B)
- Mechanical ducts/shafts
- Pipes and pipe penetrations
- Expansion joints

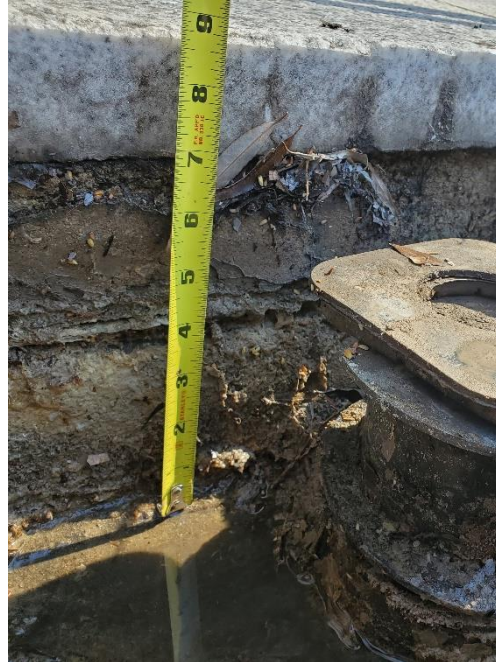


Initial Findings: 1.0 Exterior Envelope

Roofing and Waterproofing

Plaza Level

- The Hot-Fluid-Applied Reinforced Rubberized Asphalt (HRA) membrane and paver assembly was observed at discrete removable pavers (at drainage trenches).
- The paver joints were very tight (less than 1/8 inch) along the trench drains.
- Debris was observed within the trenches and around the drains.
- There are multiple expansion joint cover and filler types throughout the Plaza Level. The joint covers are typically in poor condition. The concealed joint seals at the waterproofing membrane could not be assessed visually.



Initial Findings: 1.0 Exterior Envelope

River Plaza Ponding

- Large areas of ponding observed between planters at River Plaza
- Depth of ponding appear to be up to approximately 3" on day of site visit, during a rain event
- Similar amount of ponding at both north and south planters



Initial Findings: 1.0 Exterior Envelope

Roofing and Waterproofing

Plaza Fountains

- The fountain basin liner coating is in poor condition at all five fountain basins with varying extents of adhesive failure, blistering, splitting, and pinholing evident. East fountain liner coatings are typically worse.
- At the rectangular east reflecting pool, cracks are present in the concrete topping and extend through the liner coating.
- Ferrous pipes exhibit expansive material corrosion, which creates a failure in the waterproofing flashings.
- At the west square-shaped fountains, active leaks were observed below pipe penetrations and along the structural deck expansion joints immediately adjacent to the fountains.
- At the granite units, orange-brown, black, and green discoloration, efflorescence, discrete stone distress, and failed joint sealant were observed.



Initial Findings: 1.0 Exterior Envelope

Roofing and Waterproofing

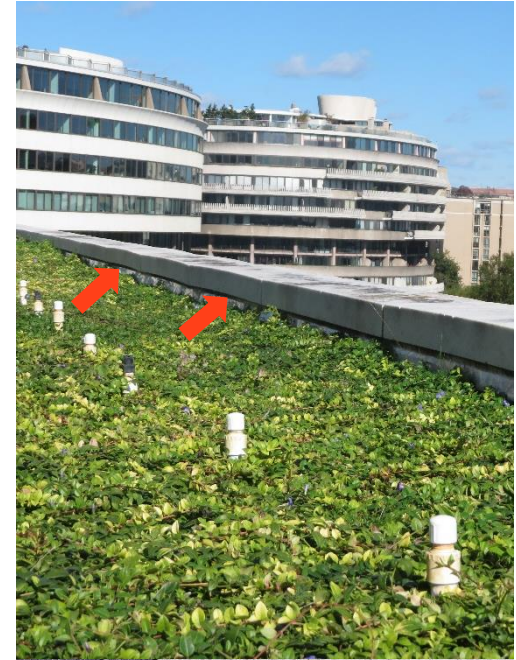
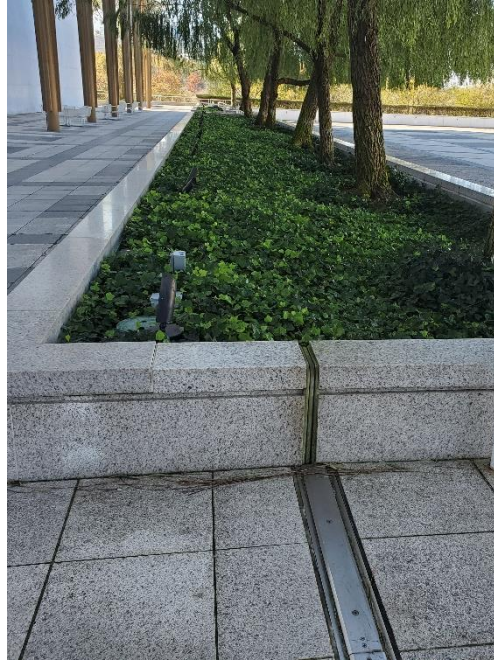
Planters

Plaza Level

- At the granite units, discrete cracks, spalls, efflorescence, orange-brown, black, and green discoloration, and failed joint sealant were observed.
- The planters align with expansion joints.
- Drainage board is not sufficiently UV resistant and is currently at the walls of the planters.

Terrace Level

- At the marble units, bowing, cracks, spalls, abandoned anchors, orange-brown and black discoloration, and efflorescence were observed.
- The sealant is in fair condition with localized bulging and adhesive failures primarily near expansion joints.



Initial Findings: 1.0 Exterior Envelope

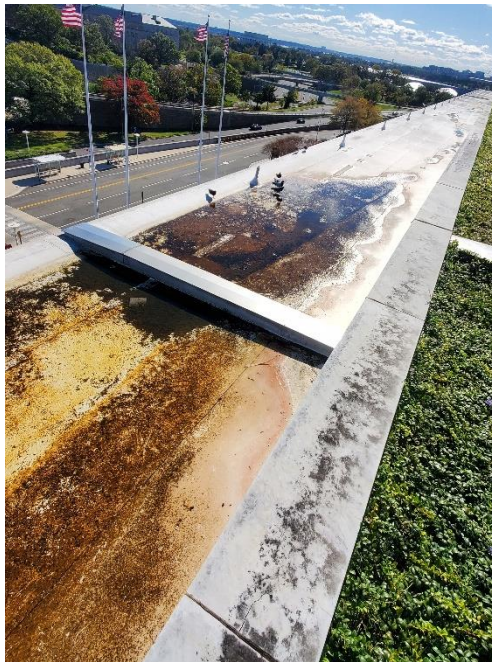
Roofing and Waterproofing

White Single-Ply Overhang Roofs

- Fair condition - Mechanically-attached thermoplastic single-ply roof membrane (ca. 1997). 2-5 years with maintenance.
- The following limited and localized distress was observed:
 - Failed and holed flashings at multiple drains
 - Seam failures
 - Membrane cracking at fastener plates
 - Cohesive and adhesive failures of the joint sealant along the sheet metal expansion joint covers and flashings

Main Roof

- The gravel-surfaced coal tar pitch BUR roof membrane assemblies are in fair condition overall. 10 years with maintenance.
- Approximately 15 to 20 isolated locations requiring near term maintenance include:
 - Failed lead pipe boots
 - Cracked/split membrane penetration and base flashings
 - Field of membrane blisters / brittle "soft spots"
- The joint sealants at the sheet metal expansion joint covers and perimeter flashings are cohesively failed.



Initial Findings: 1.0 Exterior Envelope

Exterior Columns

Plaza Level

- Mild surface corrosion and flaking paint was observed at the base of approximately 50% of the columns.
- Additional distress types noted include:
 - Chipped, scratched, and missing paint
 - Chalking and discoloration
 - Cracked paint along fin joints
 - Discrete bent, separated, and corroded metal fin bases
 - Bird droppings and bird proofing



Terrace Level

- Some chipped, scratched, and missing paint with discrete corrosion at chipped paint at column bases
- Discrete streaking and discoloration

Initial Findings: 1.0 Exterior Envelope

Exterior Windows & Doors

Plaza Level and Terrace Level Windows

- Overall, 2010 curtain wall is in excellent condition with some light corrosion on cable components at Plaza Level and one broken IGU at west elevation.
- There are three bays of older assemblies with migration of the black glazing at the Terrace Level.

First Tier and Second Tier/House Ceiling Windows

- The existing single-pane windows are in good condition with some migration of the glazing material and discoloration of the sealant.

Exterior Sliding and Hinged Bronze Doors

- The doors are functional and are in good condition except for weatherstripping and discrete missing components.
- Per the 2020 CBP, the bronze doors were replaced in 2011 and the sliding doors were replaced in 2010 (Plaza) and 2006 (Terrace).

Exterior Metal Doors

- The doors are functional and are in good condition except for weatherstripping, discrete missing components, and some surface corrosion.



Initial Findings: 1.0 Exterior Envelope

Roof Leaks at Kitchen Exhaust

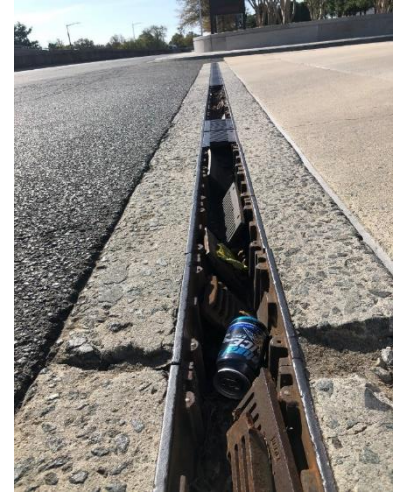
- Active water infiltration at kitchen exhaust in MER 11. Water observed dripping through on a rainy day and collecting on tarp at floor level
- Staining and spalled or loose concrete at concrete slab edge
- Minor corrosion of steel framing at opening



Initial Findings: 1.0 Exterior Envelope

Existing trench drains

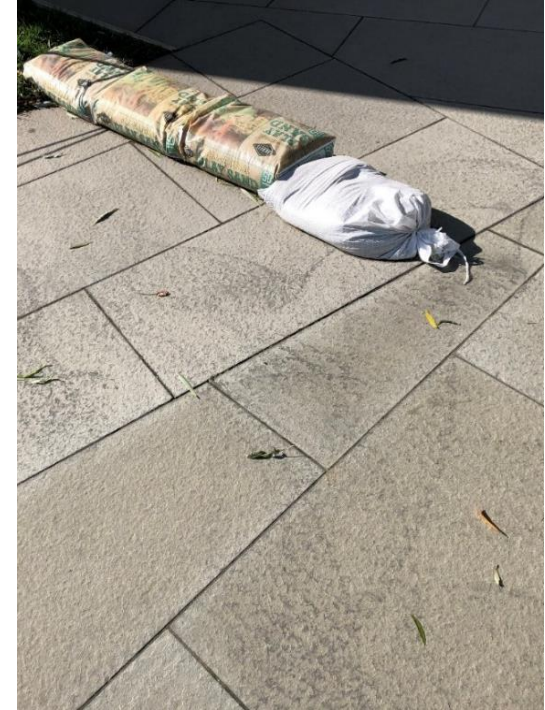
- The existing drains along the sidewalks and courtyard area were observed to have leaves and trash.
- The existing trench drains between the plaza and main road were observed to be severely broken and full of trash and debris.



Initial Findings: 1.0 Exterior Envelope

Standing water in plaza

- Standing water and sedimentation observed in plaza between the main building and The Reach.
- The existing grades in this area is recommended to be analyzed for regrading to mitigate flooding and standing water after a rain event.
- A build up of foliage and debris was observed at the drain tops.
- Sandbags were placed to help redirect runoff towards the existing drains.



Initial Findings: 1.0 Exterior Envelope

North Plaza, East Plaza and River Plaza

- Willows are old and in decline. Some have been severely pruned or removed already. Others have been reinforced with cables.
- Pavers in pedestrian area show signs of wear: chipped edges, staining, crumbling mortar.
- Ivy is dying back in planting area by vehicle entrance. Grass is growing through Liriope. Inkberry Hollies are over pruned and leggy.
- Railings at ramps have chipping paint and rust stains at connections to concrete.
- Concrete is cracked in multiple locations and there is general staining. There are cracks in the concrete walls at lights.



Initial Findings: 1.0 Exterior Envelope

Roof Terrace

- The paint on the railings is chippings and showing signs of wear.
- Terrace pavers are stained near building and air vents.
- Some pavers on the roof terrace have uneven gap spaces.
- Vinca in the northwest corner planter is struggling, probably because of wind and harsh conditions. Weeds have grown in.
- Irrigation valves in the roof terrace perimeter planter have broken or missing covers.



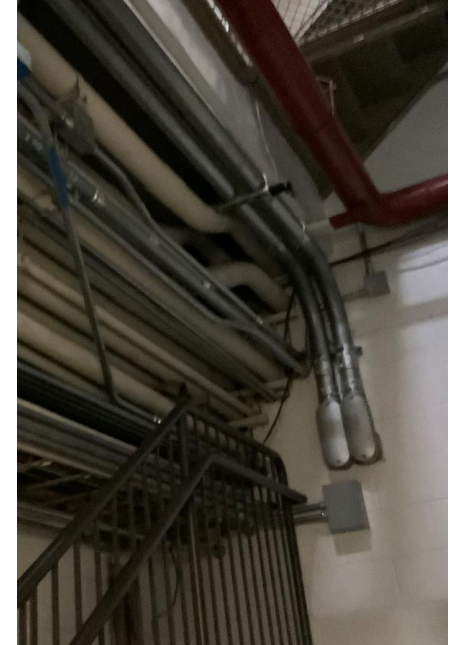
Recommendations: 2.0 Life Safety and Security

2.3	Fire Alarm System Upgrade	\$8,000,000
2.10	Life Safety: NFPA Mandated Fire Door Testing	\$5,250
2.11.1	Life Safety: Seal Penetrations in Rated Walls	\$355,000
2.11.2	Life Safety: Interior Steel Fireproofing Review & Repair: Atrium	\$112,500
2.11.3	Life Safety: Interior Steel Fireproofing Review & Repair: Garages	\$487,500
2.13	Sprinkler System: Dry pipe investigation in parking garages	\$87,000
2.16	Sprinkler System: Design and Installation	\$41,250
	- areas not appropriately sprinklered	
2.27	Vehicle Force Protection – Vehicle wedge barriers	\$690,000
2.3	Ballistic Hardening – Level SOC	\$390,000
Subtotal		\$10,168,500

Initial Findings: 2.0 Life Safety and Security

Fire Protection

- The fire alarm system is obsolete and requires replacement – design project is currently underway to address the issue.
- Dry-pipe sprinkler system in Garage is being repaired as it begins to leak. Remediation could be adversely affecting performance of sprinkler system.
- There are non-permitted penetrations in exit enclosures.
- Various areas of the building, such as the paint spray booth, need a sprinkler system.
- Several components in existing sprinkler system need to be replaced or repaired.
- Fire pump room on Level A does not have emergency lighting – design project is underway to address the issue.



Initial Findings: 2.0 Life Safety and Security

Security Systems

- Property and building access has limited resistance to vehicular and ballistic threats. Limited responses.
- Ballistic Hardening to SOC Level
- Video Surveillance System is inconsistent in capabilities and application
- Egress doors aren't monitored
- System lifecycle maintenance and replacement plans are insufficiently documented



Initial Findings: 2.0 Life Safety and Security

Life Safety

- Extent of missing/damaged fire proofing in garage levels and roof terrace level atrium needs to be investigated.
- Fireproofing needs to be provided at existing steel trusses where not currently encased or spray applied.
- There is storage in corridors that impede intended egress widths.
- There are door hardware and maintenance deficiencies.
- There are locks on intermediate egress doors in necessary egress paths.
- Exit signs need to be added, removed, or replaced in several areas.
- NFPA 80 mandated fire door assembly inspections is needed.
- There are headroom obstructions that need additional signage and marking.



Recommendations: 3.0 Interior and Accessibility

3.1.1	Concert Hall Acoustical Improvements Phase I	\$15,000,000
3.2	Concert Hall Seating and Carpet Replacement	\$3,105,000
3.4	Opera House and Eisenhower Theater Rigging Replacement	\$9,135,000
3.5	Opera House Pit Lift Replacement	\$2,280,000
3.6	Opera House Seating and Finish Upgrades	\$3,067,500
3.7.1	Office Space Improvements Study	\$240,000
3.7.2	Office Space Renovation	\$12,306,240
3.7.3	Eisenhower Theater Second Tier Balcony – Enclose for Offices	\$1,194,000
3.8.4	Create Quiet Space for Patrons near theaters	\$419,250
3.9.1	Backstage Improvements Study	\$240,000
3.9.2	Renovate Eisenhower Theater Green Room	\$309,000
3.14	Improvements to Parking Level Lobbies – Improve Visitor Experience	\$4,389,000
3.17.1	Bathroom Upgrades	\$10,565,220
3.18	Assistive Listening Systems Upgrades	\$562,000
3.23	Art Assessment & Conservation	\$81,000
	Level A Connection to the REACH	\$3,100,000
Subtotal		\$65,993,210

Initial Findings: 3.0 Interior and Accessibility

Concert Hall Acoustics and Finishes

- Limited flexibility for amplified and spoken word uses – excessive reverberation and loudness on stage
- Limited space for musicians on stage, stage floor nearing end of life, can no longer be refinished.
- Riser configuration causes some on stage hearing issues, lift machinery requires replacement
- Unwanted acoustic reflections from balcony face
- Reflector canopy allows for limited flexibility and has inadequate lighting; replacement lamps are no longer available
- Fixed seating, carpet appear worn, wood panels and railings are scratched



Initial Findings: 3.0 Interior and Accessibility

Concert Hall Audiovisual and Theatrical Items

- The existing recording rack in the attic space is difficult to access, and should be in a clean and better controlled environment to preserve the life of the electronics
- The Box Front of House Mix Position is inadequate for large-scale live sound events
- The Central Line Array Speaker Assembly is currently positioned to fire into the chandeliers blocking coverage to upper seating areas



Initial Findings: 3.0 Interior and Accessibility

Opera House

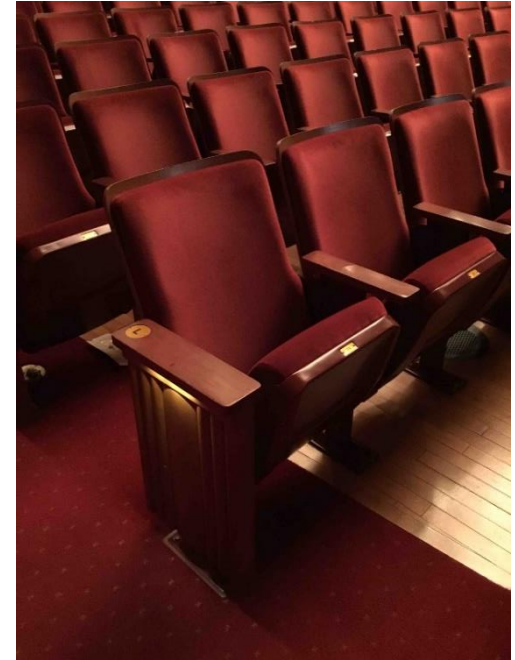
- Existing double-purchase counterweight rigging systems are aging and are time and labor-intensive to use.
- Existing orchestra pit lift controls and safety interlocks are aging, obsolete, and in some cases failing.



Initial Findings: 3.0 Interior and Accessibility

Opera House

- Fixed seating appears worn
- Existing carpet is fraying, particularly at cable pathways



Initial Findings: 3.0 Interior and Accessibility

Eisenhower Theater

- Existing double-purchase counterweight rigging systems are aging and are time and labor-intensive to use.
- Limited flexibility for music performance, space is acoustically too "dry"



Initial Findings: 3.0 Interior and Accessibility

Backstage

- Back-of-house and backstage space could be used more efficiently
- Eisenhower Theater Green Room:
 - finishes and furnishings are worn, appearance is not of a green room of a premier arts institution
 - Small kitchenette counter was added but space needs adequate kitchen space



Initial Findings: 3.0 Interior and Accessibility

Office Space

- Office space is dispersed throughout the facility including converted attic, garage and closet space.
- Access to daylight is limited to a few office suites
- Office layout is often inefficient, and many workspaces lack adequate desk space and storage
- Team workspace and team meeting space and conference space is lacking
- Acoustical privacy is an issue as is thermal comfort
- Office space doesn't have consistent brand identity



Initial Findings: 3.0 Interior and Accessibility

Motor Lobbies

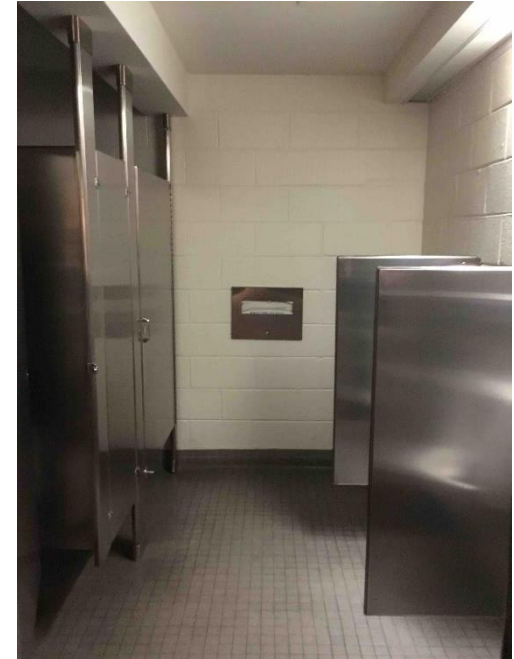
- Motor lobbies provide the first impression to JFKC patrons – they should reflect the identity of JFKC as a premier arts organization. The stairs are well designed and appropriate for main entry to the facility, but the motor lobbies are not
- Restrooms adjacent to motor lobbies are worn and dated and in need of an upgrade – design project currently underway to renovate restrooms
- Accessibility improvements include:
 - Install detectable warnings at stair landings
 - Access from garage:
 - Provide curb cuts and ramps at North and South doors
 - Access from garage: Provide railing at level changes



Initial Findings: 3.0 Interior and Accessibility

Public and Back-of-House Bathrooms

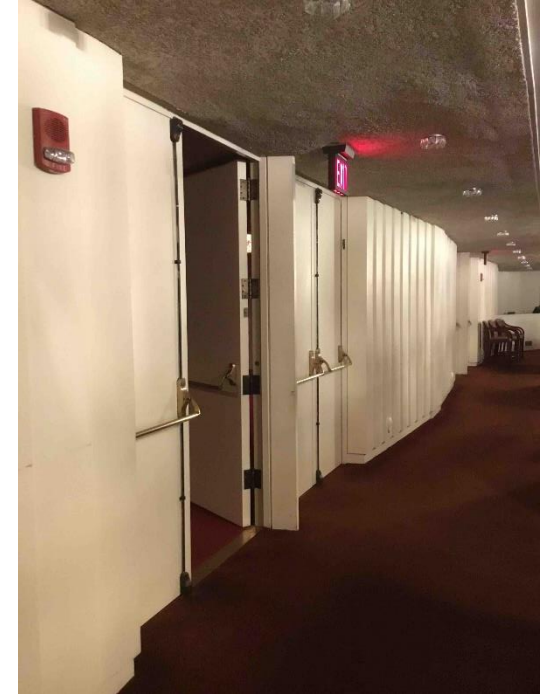
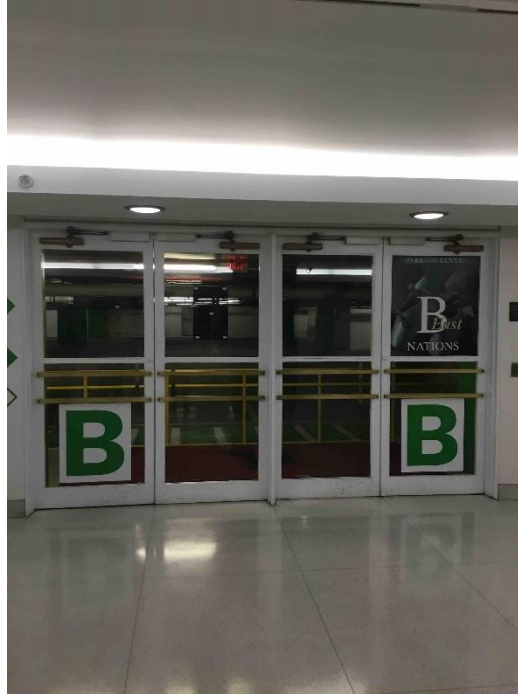
- some bathrooms throughout the facility do not meet ADA maneuvering clearances and mounting heights
- many plumbing fixtures, light fixtures, wall and floor finishes and countertops appear worn and dated
- many bathrooms are not properly ventilated



Initial Findings: 3.0 Interior and Accessibility

Door Hardware

- Door hardware throughout the facility is a concern for persons with disabilities and for elderly patrons – many swinging doors are very heavy and difficult to open and do not have automatic openers



Initial Findings: 3.0 Interior and Accessibility

Nations Gallery Ceiling

- The ceiling of the Nations Gallery has a network of fine cracks throughout the finish
- Similar cracks were not observed in the States Gallery
- No signs of large cracks or movement



Initial Findings: 3.0 Interior and Accessibility

Interior CMU Partition Cracks

- Mechanical rooms and backstage areas typically have exposed CMU partitions, which are non-load bearing walls
- At many locations where beams pass through walls, the gap between the beam and wall has been grouted or sealed, resulting in load transfer and cracking through the wall
- Several duct penetrations through the CMU walls in MER spaces are unframed (no lintel) and have step cracks forming near opening



Recommendations: 4.0 Building Systems

Mechanical / Plumbing / Electrical

4.1	Return Fan Upgrades	\$201,000
4.6	Return Air System Upgrades	\$3,484,500
4.8	MEP Modernization Phase 3	\$8,018,000
4.9	Hydronic System Optimizations	\$5,800,000
4.16.2	HVAC in Switchgear Rooms	\$71,250
4.17	Sanitary System Upgrades – replace all piping	\$6,750,000
4.18	Domestic Water System Upgrade	\$6,375,000
4.28	Electrical Power Distribution Study	\$120,000
4.29	Electrical Distribution Upgrade – replace feeders	\$6,600,000
4.30	Electrical Distribution Upgrade – grounding	\$450,000
4.32	Electrical Distribution Upgrade – replace dist. equipment	\$6,450,000
4.35	Lighting System Upgrade – exterior lighting controls	\$592,000
4.37	Lighting System Upgrade – disconnect PEPCO feeds	\$90,000
4.42	Generator System Upgrade – study for replacement	\$180,000
4.43	Generator System Replacement	\$1,200,000
4.50	Study to Locate All Unused Electrical Equipment	\$45,000

Recommendations: 4.0 Building Systems

AV / IT Production

4.62	Cyclical Replacement Program for Stage Tech Equipment	\$5,866,601
4.63	Moving Light Fixture Replacement	\$1,725,000
Elevator / Escalator Repairs		\$5,140,000
Subtotal		\$59,158,351

Initial Findings: 4.0 Building Systems

- Garage exhaust fan refurbishment needed, including variable speed drive work
- Continued work required on heating and cooling plant due to aging equipment, including eventual chiller and condenser water filtration component replacement.



Initial Findings: 4.0 Building Systems

- Increased winter cooling demand requires additional plate and frame economizer capacity.
- Boiler plant flue noted to have leakage. To allow preventative maintenance, providing a smaller summer boiler allows operating flexibility.
- A dedicated cooling and dehumidification system for the main condenser water pump room will help protect newly installed equipment.



Initial Findings: 4.0 Building Systems

General HVAC

- Spot ACM remediation recommended to allow full access to piping components, like strainers.
- Allowance for replacement of DX systems, due to age.



Initial Findings: 4.0 Building Systems

General HVAC

- The balance of AHU upgrade work is recommended to complement previously completed work on coil and supply fan components. Existing original return air section cabinets are in poor condition.
- No longer used electric boiler and hot water heating equipment takes up space area that can be used for other purposes, like storage.



Initial Findings: 4.0 Building Systems

General HVAC

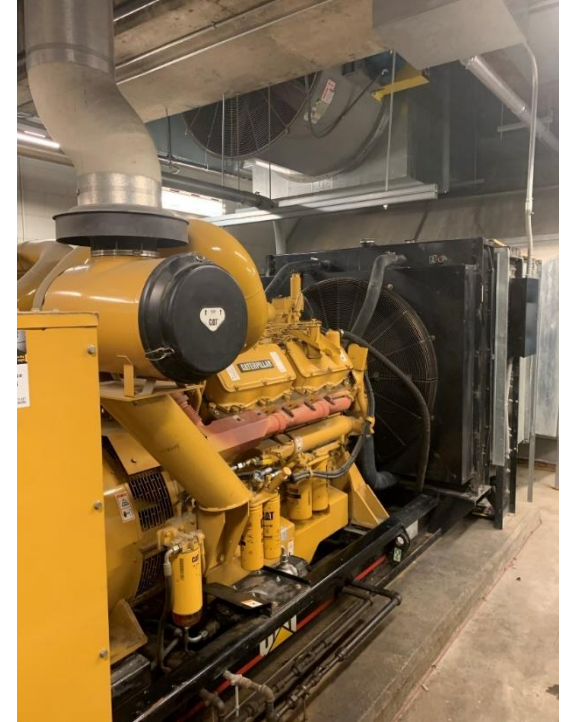
- Return fans are in fair condition – allowances for spot motor replacement are recommended.
- Existing terminal boxes are difficult to access for maintenance in some mechanical rooms.



Initial Findings: 4.0 Building Systems

HVAC Studies

- Primary performance venues will benefit from a cooling, ventilation, and heating load analysis to right-size/rebalance systems.
- Review ventilation balance for generator for reliable performance.



Initial Findings: 4.0 Building Systems

Plumbing

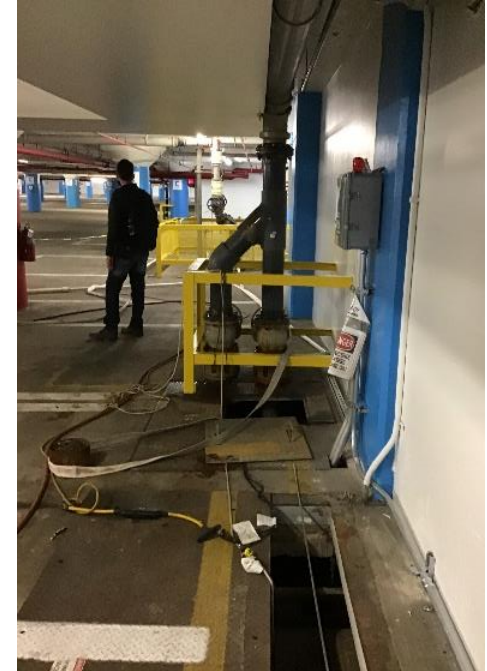
- Original sanitary system piping is at end of life and requires modernization.
- Original domestic water distribution systems are at end of life and require modernization.
- Stormwater sump pumps require replacement.



Initial Findings: 4.0 Building Systems

Plumbing

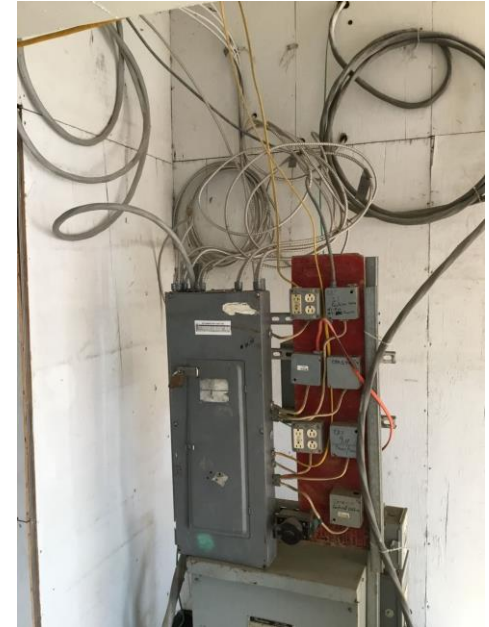
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Initial Findings: 4.0 Building Systems

Power Distribution

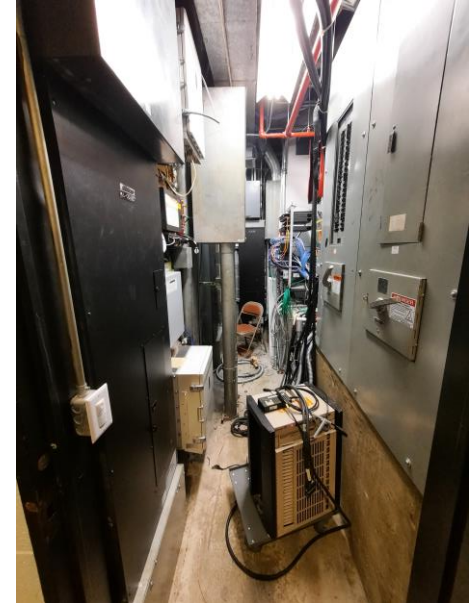
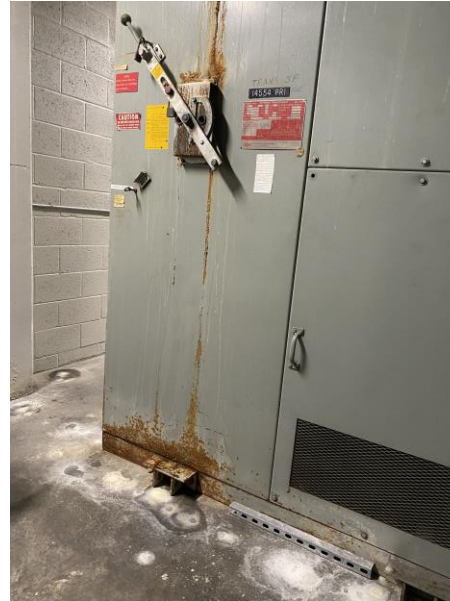
- Feeder insulation is deteriorating. Aluminum feeders are not passing the Meggar test.
- Distribution equipment (switchboards, panels, etc...) are damaged and rusted in many areas throughout the building.
- Wiring and organization of various electrical installs and electrical rooms are unordered and do not meet NEC code.
- THE REACH is powered from the JFK main building causing maintenance and voltage drop issues.



Initial Findings: 4.0 Building Systems

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Initial Findings: 4.0 Building Systems

Lighting

- Lighting system is not centrally controlled at one single location. Central control would reduce maintenance for interior and exterior fixtures.
- Site street lighting control by JFK but powered by PEPCO.
- Many decorative fixtures have incandescent lamps that can be replaced with LED.
- Garage lighting does not follow most recent code ASHRAE 90.1.



Initial Findings: 4.0 Building Systems

Generator

- Study may be needed to confirm correct genset size. Genset does not seem large enough to power all emergency and standby loads in the building. Generator and fuel storage may need to be upsized.
- Fire pump not served from an emergency source.



Initial Findings: 4.0 Building Systems

Miscellaneous Electrical Items

- Electrical equipment near boilers has water damage/rust. Equipment is located in an area that has danger of water sprays when boilers are undergoing maintenance.
- Exterior camlock enclosures are NEMA 1 rated.
- Some circuits on lighting control panels that are not lighting related.
- Various ground mounted transformers are not installed on top of concrete pads.



Initial Findings: 4.0 Building Systems

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Initial Findings: 4.0 Building Systems

Miscellaneous Electrical Items

- Equipment/material not associated with electrical system is being stored in front of electrical equipment.
- Areas with abandoned electrical equipment, controls, conduit, raceway, and wiring.



Initial Findings: 4.0 Building Systems

Cyclical Replacement Program

- Current allocation of \$1M is exhausted each year and is insufficient to maintain state of the art, competitive technical inventory in keeping with the quality and stature of work produced by the Kennedy Center.

Moving Light Fixtures

- Current inventory of moving light fixtures has reached or passed its end-of-life manufacturer support

Broadcast Production Operations

- The process to deploy internal broadcast for live or recorded events is challenging
 - Complete Setup Required per event
 - No Centralized Location for Video Control, Mixing, or editing video

Assisted Listening System

- The current Assisted Listening System is aging, and inconsistent between venues making it difficult to manage for large multi-venue events



Initial Findings: 4.0 Building Systems

Entertainment Systems

- The current projection inventory is aging and reaching end of life and better large format video solutions shall need to be addressed for future events
- The current fiber-optic infrastructure is insufficient to support the future needs of all event locations. The internal staff is not able to certify what they are able to pull and terminate for approved use by outside groups
- The Millenium Stages have temporary fiber-optic connectivity between stages and FOH, making it difficult to remove and reset the FOH position when necessary
- The existing intercom inventory is aging, and inconsistent between venues, making inter-venue production communication difficult
- Inconsistent systems are currently utilized to track and inventory miscellaneous equipment that is checked in and out for both performance and building operations



Initial Findings: 4.0 Building Systems (Elevators)

Elevators are in varying conditions based on past repairs and maintenance. Obsolete equipment that should be replaced with next round of renovations include:

- Original Geared Traction Elevator Machines
- Obsolete Otis I-Motion II Door Operators
- Missing Hitch Plate Covers
- Original Counterweight “Pull Out” Safeties
- Original Car Safeties
- Original Otis Flyball Speed Governor
- Original Machine Deflector Sheaves
- Original Governor Car/Counterweight Tension Sheaves
- Original Car and Counterweight Sheaves



Initial Findings: 4.0 Building Systems (Elevators)

Elevator refurbishment recommended by 2027 in order of priority:

- Canteen Elevators (3E4 & 3E5)
- North & South Opera House Chair Lifts
- Opera House North Elevator (3E1)
- Opera House Stage Lift (3E2)
- Opera House Dressing Rooms (3E3)
- Opera House South Elevator (3E6)
- Eisenhower Stage Door (2E7)
- Opera House Freight Elevator



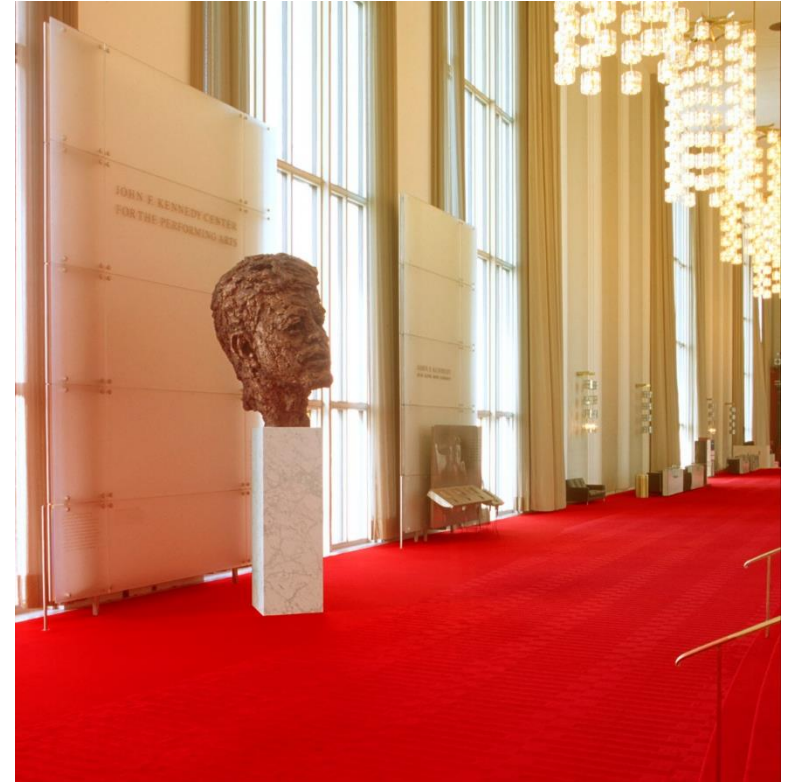
Recommendations: 5.0 Memorial Interpretation

5.1	Atrium Renovation & Exhibit	\$16,000,000
5.2	Upgrade Grand Foyer	\$11,000,000
5.3	JFK Memorial Interpretation – additional renovations	\$14,000,000
Subtotal		\$41,000,000

Initial Findings: 5.0 Memorial Interpretation

Kennedy Center is currently working on several Projects based on the 2019 Memorial Interpretation & Visitor Experience Master Plan

- Atrium Renovation and Exhibit
- Plaza Level Improvements (Finishes)
- Plaza Level Improvements (Memorial)



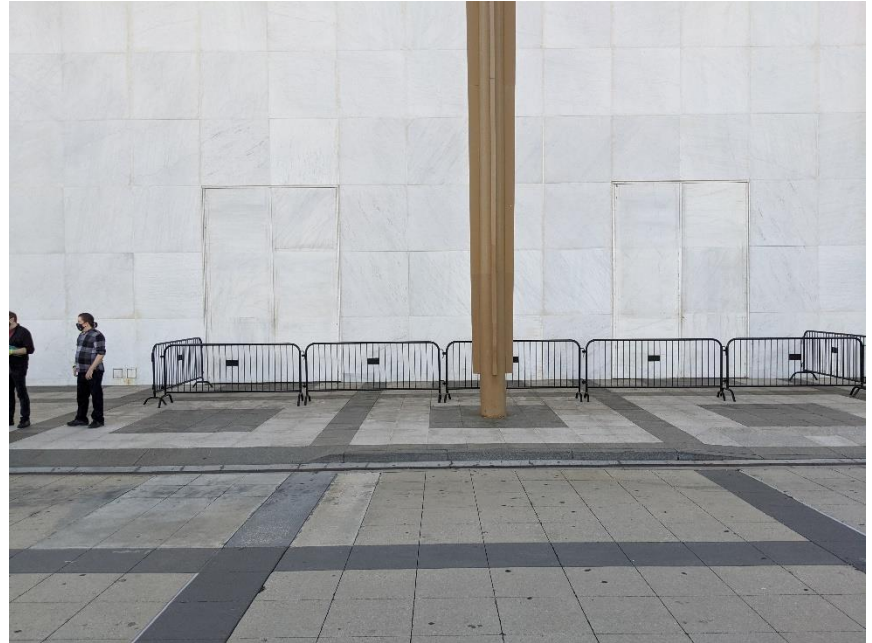
Recommendations: 6.0 Parking and Site Circulation

6.2	Rock Creek Overhang – Parking Garage Fireproofing Repairs	\$54,000
6.3	Loading Dock #1 & #2 Concrete Repairs – Slabs and Beam Encasement	\$2,565,000
6.7.2	Exterior Dock Lift @ OH and Eisenhower Loading Dock	\$543,000
Subtotal		\$3,162,000

Initial Findings: 6.0 Parking and Site Circulation

Loading at Opera House and Eisenhower Theater

- Opera House and Eisenhower Theater loading is through exterior doors from front plaza using forklifts. This is a safety issue.
- Dock lift recessed in pavement should be considered.



Initial Findings: 6.0 Parking and Site Circulation

Rock Creek Parkway Overhang Structure

- Local areas of missing fireproofing and spalled concrete encasement
- Minor corrosion of large steel plate girders, and some corrosion of ends of infill beams framing to girders
- Deterioration primarily concentrated near expansion joints



Initial Findings: 6.0 Parking and Site Circulation

Loading Dock Concrete

- Spalled & cracked concrete at underside of slab above loading docks
- Exposed and corroded rebar at beam encasement (concrete-encased steel beams) and concrete slabs
- Signs of water infiltration & staining
- Minor cracks/spalled observed nearby at slab above service tunnel



Initial Findings: 6.0 Parking and Site Circulation

Concrete Repair at Expansion Joints

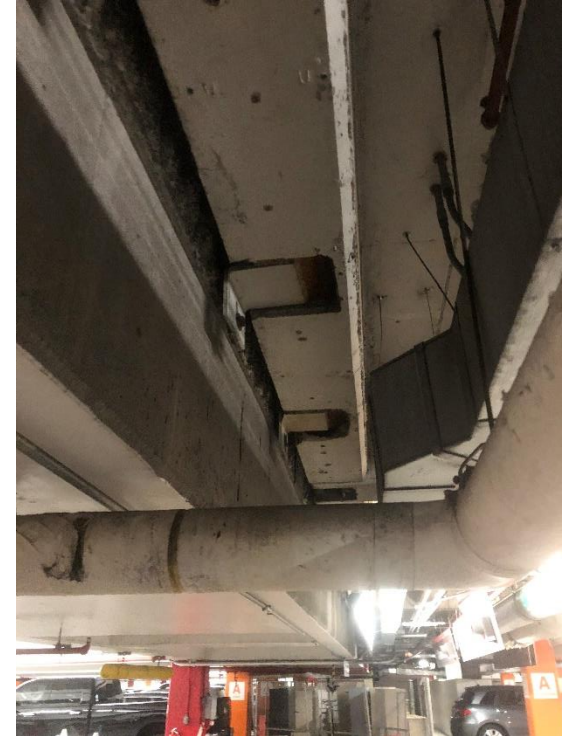
- Concrete encasement and concrete slabs directly adjacent to expansion and isolation joints is typically cracked and/or spalled.
- Several of these locations are already marked in spray paint
- Similar cracks observed at building expansion joints and at isolation joints surrounding each theater
- Concrete cracks/spalls observed at each garage level



Initial Findings: 6.0 Parking and Site Circulation

East & West Expansion Joints

- Exposed disconnected steel clips at bottom of steel beams at original east and west foundation walls (It appears that clips originally connected to foundation wall: now expansion joint to north and south plaza)
- Clips are not serving a structural purpose anymore, but are not encased or fireproofed and are located near potential point of water infiltration at expansion joint
- Some signs of minor corrosion at bottom of steel beam near clips



Recommendations: 7.0 Operational Recommendations

	Project Management Office	\$6,000,000
	Comprehensive Plan Development	\$900,000
7.1.1	Document Management	\$112,500
7.1.2	Comprehensive Life Safety Analysis	\$150,000
7.2.8	Comprehensive Catalog of Artwork	\$22,500
7.3	Visitor Impact Plan – Interior Art	\$0 (internally completed)
7.4	Develop Maintenance Plan for Interior Decorative Finishes	\$82,500
7.5.1	Exterior Art Maintenance Plan	\$60,000
7.5.2	Restoration / Refurbishment of Exterior Sculptures	\$225,000
	Minor Repair	\$6,847,375
	Subtotal	\$14,399,875

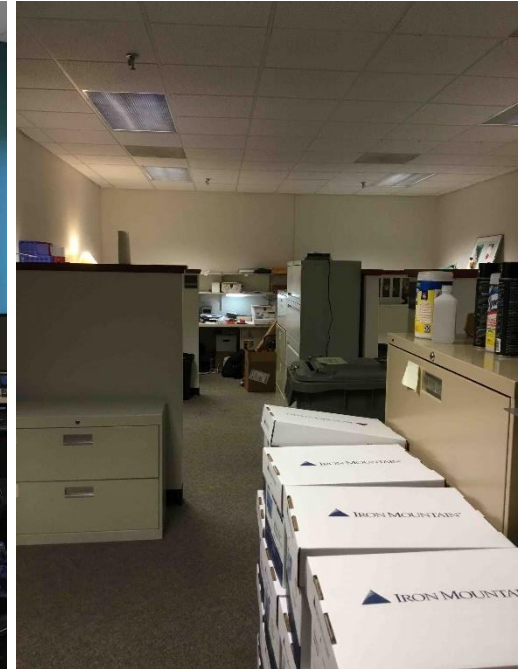
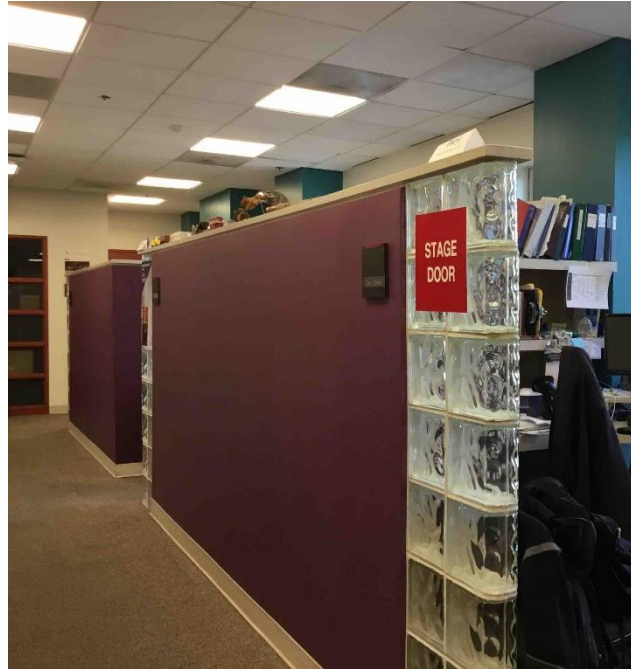
Initial Findings: 7.0 Operational Recommendations

Document management

- Partial renovations and improvements have been completed since original building was completed – no comprehensive current building model including building systems or set of documents exist
- Comprehensive life safety assessment of current conditions is needed

Design standards

- Project specifications vary from project to project resulting in variations of models and manufacturers of products (e.g. light fixtures, door hardware, ceiling tile etc.)



Initial Findings: Exterior Artwork

Exterior Sculpture, 1.74.1,2,4,5: Exterior Envelope

- Reviewed exterior statues *Don Quixote*, *Untitled*, *Amerika*, and *War or Peace*
- Conservation issues observed:
 - Discoloration of bronze patinas and stonework
 - Coating deterioration and failures – Bronze and Aluminum
 - Atmospheric soiling
- Recommendations:
 - Perform conservation treatments to clean and stabilize exterior sculptures



Initial Findings: Interior Artwork

Interior Artwork Conservation

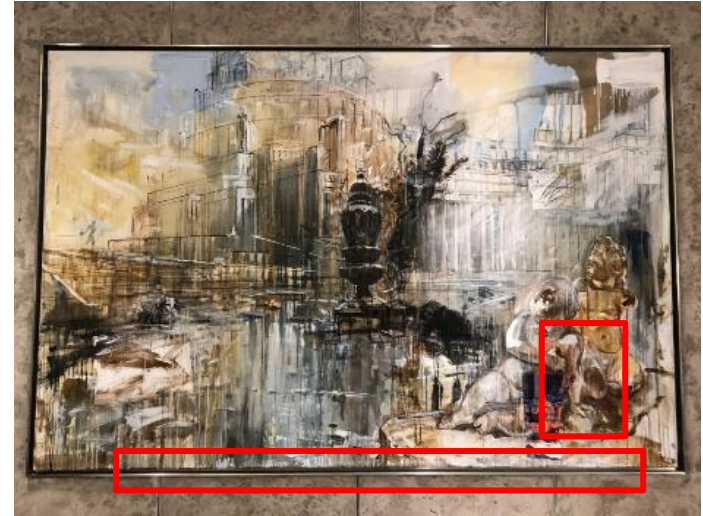
Pastoral and Ideal Landscape, 3.23.1-3 Interior and Accessibility:

Pastoral, Opera House, Russian Lounge

- Improper stretching of the canvas
- Recommendations:
 - Perform conservation to resolve canvas sagging

Ideal Landscape, Opera House, Russian Lounge

- Minor delamination of paint on center canvas
- Recommendations:
 - Assess severity of delamination and cracking and monitor cracking



Initial Findings: Interior Artwork

Interior Artwork Conservation

Eight Panel Screen, 3.23.5 Interior and Accessibility:
Concert Hall, Bird Room

- Conservation issues observed
 - Paint loss and flaking on bottom edge, folding edge, and feet
 - Soiling
 - Broken hinge between 7th and 8th panel
- Recommendations
 - Perform conservation treatments to clean and stabilize failing paint and hinge.



Initial Findings: Interior Artwork

Interior Artwork Conservation

Dimitri Shostakovich Bust, 3.23.7: Interior and Accessibility

Concert Hall Lobby, First Tier

- Conservation issues observed
 - Coating failure
 - Irregular oxidation of bronze
 - Soiling
- Recommendations
 - Perform conservation treatments to clean and stabilize bronze bust



Initial Findings: 7.0 Operational Recommendations

Maintenance Plan, 7.2.5: Operational Recommendations:

Interior artwork/decorative finishes conservation issues:

- Dirt and particle build up
- Paint failure/Coating aging
- Brass/bronze discoloration/tarnishing
- Undesirable interaction with visitors/staff
- Scratches and damage to mirror reflective coating (Opera House Hallway)

Recommendation:

- Develop an maintenance plan for interior artwork and decorative finishes



Initial Findings: 7.0 Operational Recommendations

Exterior Sculptures Maintenance Plan, 7.2.7:
Operational Recommendations:

Conservation Issues:

- Lack of maintenance promoted deterioration (soiling, staining, coating failure, vandalism)

Sculptures Assessed: Don Quixote, Untitled, Amerika, War or Peace, and Blue

Recommendations:

- Develop an exterior art and sculpture maintenance plan



Initial Findings: 7.0 Operational Recommendations

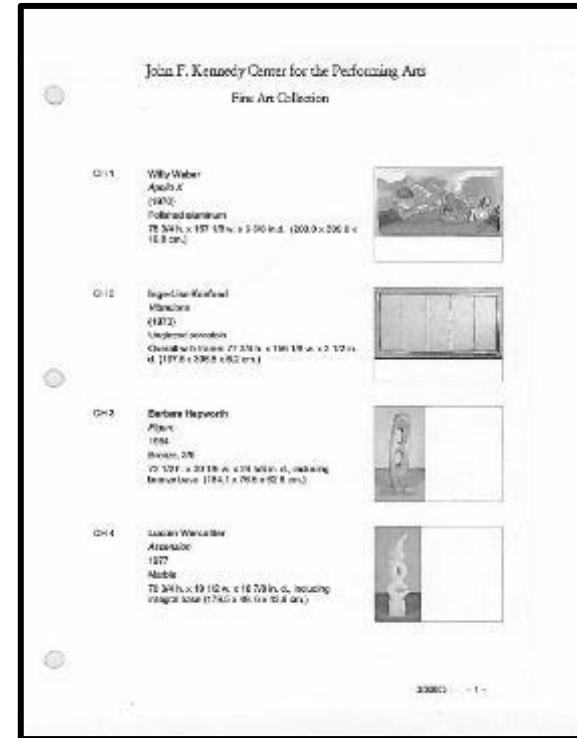
Comprehensive artwork catalogue, 7.2.8: Operational Recommendations:

Conservation issues:

- Current catalogue is out of date
 - Some artworks listed are no longer on display

Recommendations:

- Update the current catalogue to match what is on display at the JFKC



Initial Findings: 7.0 Operational Recommendations

Visitor impact Plan, 7.3: Operational Recommendations:

Conservation Issues:

- Visible evidence where visitors have kicked, touched, and moved furniture into the artwork on display

Recommendations:

- Develop a Visitor Impact Plan to minimize future damages



Project Cost Overview

Projects Identified	Priority 1	133	\$	172,436,661	
	Priority 2	120	\$	54,753,911	
	Priority 3	<u>70</u>	\$	<u>25,586,625</u>	
Total Value of Projects Identified		323	\$	252,777,197	(Capital & Minor Repair)
Value of “Short List” Projects Identified			\$	192,308,436	(2020 \$)
PMO Operations Budget			\$	<u>6,900,000</u>	(22FY-27)
Total Estimated Costs			\$	202,169,483	
Total project cost (escalated through FY2027) <i>assumes 2% per year escalation</i>			\$	227,675,674	*
Budget including carryover and annual appropriations <i>All appropriation values are assumptions</i>			\$	175,389,411	
Delta +/-			\$	(48,951,644)	

* Prior year CBPs did not include escalation

Next Steps

Provide Implementation Plan

Final Deliverables

- Kennedy Center 2021 CBP
- Kennedy Center 2021 Facility Condition Report

Final Presentation of the CBP

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