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Description of document: General Services Administration (GSA) Infrastructure Assessment for the Weaver Building (the HUD Headquarters Building) 2013-2025

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**FOIA Requester Service Center
Office of the General Counsel**

January 06, 2025

This letter is the final response for your Freedom of Information Act (FOIA) request submitted to the U.S. General Services Administration's (GSA) FOIA Requester Service Center on June 08, 2022. Your request number is GSA-2022-001139.

Your request seeks a copy of the most recent written infrastructure assessment of the Weaver Building (Department of Housing and Urban Development's Headquarters Building) describing how the building systems are well past their useful lifespan. Second, a copy of the most recent written Plan for Weaver Building Deferred Maintenance and Modernization.

The records you seek are attached and consist of 614 total pages, with 7 withheld in full and 243 pages released in part. We are providing you with 364 pages, released in full. Each exemption used to withhold information from the pages responsive to your request is indicated on the page and listed below for your reference.

GSA has withheld information pursuant to:

- Exemption (b)(4), which permits the withholding of information of trade secrets and commercial or financial information obtained from a person that is privileged or confidential.
- Exemption (b)(6), which permits the withholding of information about individuals when disclosure would clearly warrant invasion of personal privacy.
- Exemption (b)(7)(F), which permits withholding of security and related information when disclosure of which could reasonably be expected to endanger the life or physical safety of any individual.

GSA has considered the foreseeable harm standard, which was codified by the FOIA Improvement Act of 2016, and the Attorney General's guidance, when processing these records.

If you are not satisfied with our response to your request, you may file an administrative appeal at GSA's Public Access Link (pal.gsa.gov), by email to GSA.FOIA@gsa.gov, or in writing to the following address:

U.S. General Services Administration
FOIA Requester Service Center (LG)
1800 F Street, NW
Washington, DC 20405

Your appeal must be postmarked or electronically transmitted within 90 days of the date of the response to your request. In addition, your correspondence must contain a brief statement regarding the basis of your appeal. Please enclose a copy of your initial request and this response letter. Both the appeal letter and envelope or online appeal submission should be prominently marked, "Freedom of Information Act Appeal."

This completes our action on this FOIA request. You may contact the GSA FOIA Public Liaison, David Eby at (202) 213-2745 or by email at david.eby@gsa.gov for any additional assistance and to discuss any aspect of your FOIA request.

Additionally, you may contact the Office of Government Information Services (OGIS) at the National Archives and Records Administration to inquire about the FOIA mediation services they offer. The contact information for OGIS is as follows: Office of Government Information Services, National Archives and Records Administration, 8601 Adelphi Road-OGIS, College Park, Maryland 20740-6001, email at ogis@nara.gov; telephone at (202) 741-5770; toll free at (877) 684-6448; or facsimile at (202) 741-5769.

Sincerely,

/s/

Amanda Jones
FOIA Program Manager
Senior Assistant General Counsel
Office of the General Counsel
General Services Administration



STRUCTURAL ASSESSMENT REPORT

DATE: August 20, 2021

PROJECT: Department of Housing & Urban development (HUD) Headquarters – Weaver Building
Investigation of Deteriorated Concrete Beams, Floors & Walls

Introduction

The Office of Planning & Design Quality (OPDQ) was requested by Luis Shedrick, GSA Building Manager for HUD to investigate deteriorated Concrete Beams, Floors & Wall in the underground garage for the HUD Headquarters – Weaver Building. In response to the above request, GSA OPDQ Architect (b)(6) AIA and Structural Engineers Dawit Zena & Arash Aghvami, P.E together with (b)(6) GSA ODC Project Manager and Luis Shedrick visited the building. In addition, George Jones & Elisa Scott from HUD building management were also present. The visit occurred in the morning of Thursday, August 27, 2021.

Observations:

The OPDQ structural engineers noted that the concrete beam at the end of the ramp leading to the Eastern part of the Garage had heavy deterioration with wide horizontal cracks, delaminated concrete and exposed and rusted reinforcing bars. The damage to the concrete beams was noticed at all levels of the landing area. There were signs of efflorescence and water infiltration at some areas of the concrete ramp. Adjacent to the Beams, the concrete waffle floor slabs also showed horizontal cracks, delaminated concrete and rusted reinforcing bars. The concrete beams are supported by concrete walls at the landing area. Those concrete walls show vertical cracks that almost go the whole floor height.

Water infiltration along expansion joints, floor trenches and piping penetrations were noted throughout the areas observed around the parking garage ramps on Levels - B and C. There is a large ponding of water at the ramp bottom corner on Level-C (see picture-19) that is not draining properly. There is only one trench drain to capture water flow on the Plaza ramp bottom and there are some cracks around the trench drain (see picture-20).

Findings:

Concrete Repair drawings from 2013 were made available to us by the ODC Small projects team. Those drawings identify the damage to the concrete beams, slabs and waffle floor slabs. The drawings require that the concrete beam be replaced. The drawings also require repair for the top and underside of the ramp slab and waffle floor slabs. However we did not see any notes for the repair of the concrete wall supporting the beam.

The beams with heavy cracks, rusted rebar have a compromised structural integrity. This deficiency was identified in 2013 and replacement in kind was shown in the repair drawings. Even though excessive structural deformation of the beams was not observed, immediate action is required to mitigate this deficiency.

The design for the Plaza level expansion joint repairs was done in 2020. Repairing the Plaza level expansion joints, cracks, and construction joints will help mitigate the amount of water leaks. The trench drain at the bottom of the Plaza ramp on Level-B may not be capturing all of the water flow during heavy rains. It seems



water flow may be overflowing past this trench drain, which continues on Level-B and further down the ramp to Level-C. Water leaks may also be occurring along the cracks at the trench drain, seeping down to the concrete walls and levels below.

RECOMMENDATIONS:

Based on the above observations and findings, the following actions need to be taken:

- 1) Immediately restrict access to the floors below the first below grade level parking.
- 2) Immediately install shoring posts under all landing concrete beams.
- 3) Conduct a thorough study to determine whether the condition shown on the 2013 repair drawings have worsened in severity and quantity. Document any deterioration to the vertical load carrying members (Concrete wall support system).
- 4) Conduct a study and perform the design for solutions on how to repair and strengthen the concrete walls that have been compromised due to cracks.
- 5) Perform periodic inspections of the temporary shoring.
- 6) Conduct a thorough study to determine the cause of the water leaks, ponding, and effectiveness of the one trench drain and drainage system at the bottom of the Plaza ramp. The study should also review the impacts of the water leaks to the structural system and provide recommendations to repair the water leaks.

The following pictures show the Existing Conditions.

Please feel free to contact us if you have any questions.

Sincerely,

Report Prepared by:

(b)(6)

Architect & Structural Engineers (WPDA)

(b)(6)

DATE 08/20/2021



PICTURES



Picture 1: Cracks in Concrete Wall



Picture 2: Cracks in Concrete Wall



Picture 3: Cracks in Concrete Wall



Picture 4: Cracks in Concrete Wall



Picture 5: Cracks in Concrete Wall Beam Intersection



Picture 6: Deteriorated Concrete Beam



Picture 7: Deteriorated Concrete Beam



Picture 8: Deteriorated Concrete Beam



Picture 9: Deteriorated Concrete Beam



Picture 10: Deteriorated Concrete Beam



Picture 11: Deteriorated Concrete Beam



Picture 12: Deteriorated Concrete Slab at Ramp (Efflorescence & Delamination)



Picture 13: Deteriorated Concrete Slab at Ramp (Efflorescence & Delamination)



Picture 14: Deteriorated Concrete Waffle Slab (Cracks & Delamination)



Picture 15: Deteriorated Concrete Waffle Slab (Cracks & Delamination)



Picture 16: Deteriorated Concrete Waffle Slab (Cracks & Delamination)



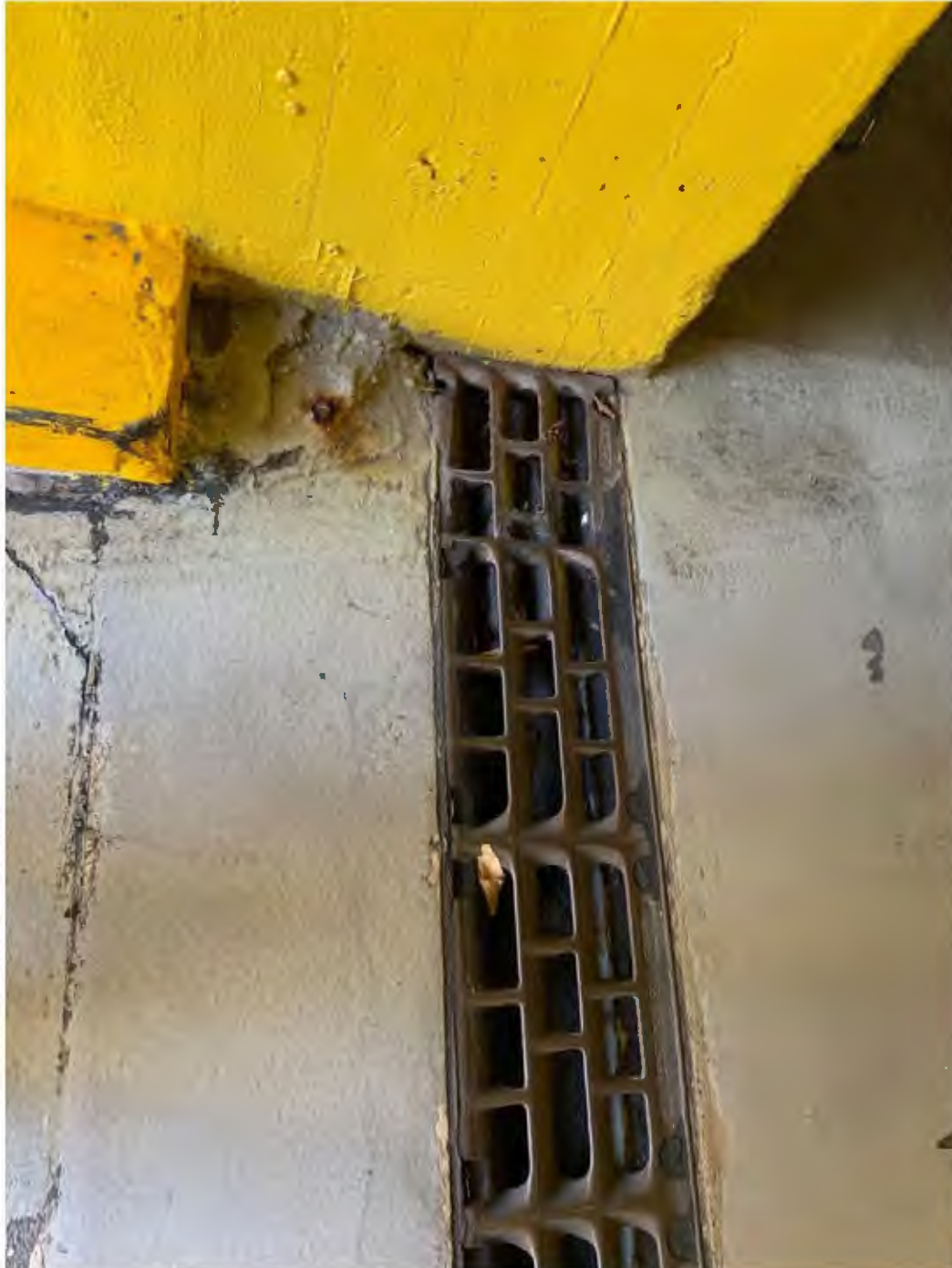
Picture 17: Deteriorated Concrete Waffle Slab (Cracks & Delamination)



Picture 18: Deteriorated Concrete Waffle Slab (Cracks & Delamination)



Picture 19: Large water ponding at Level-C, bottom ramp, that is not properly draining due to no slope in the slab.



Picture 20: Trench drain at ramp bottom at Level-B. Ramp goes up to Plaza level (exterior) and is the only drain to capture flow of water from outside.

Since this report was completed, GSA has executed the Emergency Repair Project #1, to be completed in early 2025. GSA has requested funding for Repair Project #2.



Robert C. Weaver Garage Feasibility Study Final Report Submission

March 21, 2022

Contract No. 47PM1122F0003



SUBMITTED BY:



SUBMITTED TO:



CONTROLLED UNCLASSIFIED INFORMATION

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I. EXECUTIVE SUMMARY

The investigative team was tasked to develop options and recommendations for waterproofing, plumbing, architectural and structural repairs for the myriad leaks and damage around the perimeter of the Robert C. Weaver Federal Building, the headquarters of the Department of Housing and Urban Development (HUD) located at 451 7th Street, SW, Washington DC. To organize our activities and reporting, the building areas were split up as follows:

- A. Loading Dock and West Plaza: The Loading Dock area is directly underneath the upper west planter and part of the West Plaza.
- B. Southwest Wing: This includes the basement and sub-basement levels. The sub-basement runs underneath the Loading Dock access ramps.
- C. Southeast Wing: This includes the basement fitness rooms and open office space, as well as the sub-basement which contains warehouse space.
- D. Northeast Wing: While this wing is not plagued with as many leak locations as others, the basement experiences significant water infiltration in the Training Room.
- E. Northwest Wing: The northwest wing is adjacent to the west plaza. Warehouse space in the sub-basement is most affected.
- F. East Parking Garage and Ramps: The three-level Parking Garage is beneath the East Plaza with vehicular access via ramps from 7th Street.
- G. West Lower Plaza: The lower west plaza extends from the northwest corner of the building to the common wall with the Upper West Plaza. This includes the walkway under the building overhang and just beyond it

Extensive leaking and/or structural damage are present at all of these locations. In some areas, the primary cause of the leaks is related to the storm-water plumbing and in others it is due to either damaged, poorly installed, or deteriorated waterproofing and repairs.

To address the problems detailed in this report, we have recommended two projects: an emergency project to address imminent structural damage that inhibits the safe use of the building & parking garage and a larger, more comprehensive capital project.

- 1. Emergency Project
- 2. Comprehensive Capital Project
- 3. Alternates

II. PURPOSE OF THE STUDY

The purpose of the study is to investigate the building leaks and deteriorated concrete at the Robert C. Weaver Federal Building (HUD Building) and report the findings to the General Services Administration (GSA), in accordance with GSA's scope of work entitled, "Feasibility study to determine the sources of the water leaking and the spalling concrete in the garage", dated October 21, 2021.

III. BACKGROUND

A. MAIN BUILDING


The Robert C. Weaver Federal Building, headquarters of the U.S. Department of Housing and Urban Development (HUD), is located at 451 7th Street, S.W in Washington, DC. It is a 10-story precast and cast-in-place concrete building constructed in 1965. The building footprint is a curvilinear "X" shape creating two long and two short concave elevations. The elevations reflect an expressionism architectural style, characterized by curving rooflines and walls, convex or concave surfaces, and arched or vaulted spaces.

The Robert C. Weaver building was added to the National Register of Historic Places in August of 2008. Designed by French architect Marcel Breuer, this building marked the first use of structural precast and cast-in-place concrete in a federal building. Historic significance is also marked by the Guiding Principles for Federal Architecture set in place by President John F. Kennedy; the HUD building was the first to follow this initiative. (Refer to "Department of Housing and Urban Development (Robert C. Weaver Federal Building)," DC Historic Sites, accessed March 18, 2022, <https://historicsites.dcpreservation.org/items/show/147>)

As part of the Register, any alterations are required to follow the Secretary of the Interior's Standards for the Treatment of Historic Properties. The project team must consider the affect of planned work on the historic fabric of the building and minimize any potential negative impacts.

For the purpose of this report, the prominent areas are referred to as the Southwest Wing, Southeast Wing, Northeast Wing, and the Northwest Wing. The sum of these areas is referred to as the Main Building.

(b)(7)(F)



1. Loading Dock

The Loading Dock is located under the upper west planter between the L'Enfant Plaza complex and the west side of the HUD building. It is elevated and separated from the adjacent West Plaza area by a concrete wall that is approximately 3 feet high. The upper west planter has 7 large rectangular exhaust shafts that vent the Loading Dock directly below it. Access to the Loading Dock is achieved via a ramp entered on Frontage Road and runs beneath the Southwest wing of the building. The basement level opens out to the Loading Dock with 4 large open bays.

2. Southwest Wing

The Southwest Wing is characterized by a large ramp running from street level beneath the first floor into the Loading Dock in the basement. Directly beneath the ramp, the sub-basement has a low-ceiling storage room. All

perimeter walls of the Southwest wing are foundation walls that retain soil behind them except for where the Loading Dock abuts the wing. The structure above the sub-basement is exposed to weather at the Loading Dock driveway.

3. Southeast Wing

The Southeast Wing for the purposes of this report consists of the basement and sub-basement levels. Adjacent to the east side of the wing is the East Parking Garage, while the rest of the exterior walls are foundation walls retaining soil. The East Plaza extends under the building overhang; leaks under the overhang can affect the basement along this edge.

4. Northeast Wing

Similar to the Southeast, the Northeast Wing sits adjacent to the East Parking Garage. While there are fewer leaks in this area, the one present on the basement level is one of the most active.

5. Northwest Wing

The Northwest Wing abuts the Lower West Plaza. The West Plaza extends under the building overhang; leaks under the overhang can affect the basement and sub-basement levels along this edge. The sub-basement level warehouse space has several leaks along the west wall.

6. East Parking Garage and Ramps

The parking levels are beneath the East Plaza and abut the Northeast and Southeast Wings. There are three levels, A, B and C with vehicular access from centrally located ramps at 7th Street. Level A is the top level of the garage with Level B the middle level and level C at the bottom. Pedestrian access is limited to 2 stairwells, one in the Southeast Wing and the other in the Northeast Wing. Due to structural concerns, level A is the only one currently in use.

B. PREVIOUS PROJECTS AND REPORTS

The following reports concerning the HUD Building waterproofing and structural deterioration were obtained and reviewed in preparation of this report:

- 1965 The original building construction documents, entitled “H.H.F.A. Office Building”, dated 1965 by Marcel Breuer and Associates and Nolen Swinburne and Associates, Architects.
- 1977 “Correction of Leaks”, prepared by Burns and Loewe, Architects, Engineers, Planners, dated February 1, 1977. Addressed leaks mainly at the East Plaza with an add alternate at the West Plaza.
- 1989 “HUD Plaza Repairs”, prepared by GNM & Associates, Inc and Seal Engineering, Inc. Included removing and replacing the waterproofing systems for the West Plaza and Upper West Planter in their entirety.
- 1996 “HUD Plaza Waterproofing and Modifications”, prepared by Architrave P.C. Architects, and Martha Schwartz dated 1996. Included removing and replacing the waterproofing systems for the East Plaza in its entirety.
- 1997 “Repair Garage Floors”, prepared by McMullan & Associates, Inc dated July 25, 1997. Major structural repairs to the east garage.
- 2005 The construction documents entitled, “HUD Child Development Center (CDC) – Relocation Project”, prepared by MTFA Architecture Inc., dated December 29, 2005.
- 2008 Survey, “HUD Building Service Area Concrete” report, dated October 1, 2008 prepared by McMullan & Associates, Inc.
- 2012 Study, “Feasibility Study to Determine the Sources of Water Migration, Leaking, and the Spalled Concrete on the Garage”, dated July 6, 2012, prepared by McMullan & Associates, Inc. This study also included the Loading Dock and building basement perimeter areas.
- 2014 Project, “West Plaza and Loading Dock Repairs,” dated September 9, 2014, prepared by McMullan & Associates, Inc. Much of this work was performed, however some was not satisfactory.
- 2014 Project, “East Plaza and Basements Waterproofing and Structural Repairs,” dated September 9, 2014, prepared by McMullan & Associates,

Inc. This project did not occur; some individual leak locations may have been addressed.

IV. METHODOLOGY

The A/E team for this study consists of:

- MTFA Architecture, Architects, (Prime)
- McMullan & Associates, Inc, Structural Engineers
- Seal Engineering, Waterproofing Consultants
- Summer Consultants, Inc. Mechanical, Electrical, Plumbing and Fire Protection Engineers
- R.W. Brown & Associates, Cost Estimator

The waterproofing investigation identified building leak locations and sources through a visual site investigation, flood testing, destructive demolition (test-cuts), reviewing past reports and experience-based analysis.

The structural investigation included a visual survey of all exposed areas and a sounding survey of accessible areas in order to determine the extent of structural deterioration. A lift was used to access the underside of the West Plaza structural framing over the Loading Dock, where previous repair work has been done. It also included reviewing and confirming findings of previous reports.

The mechanical, electrical, plumbing and fire protection surveys investigated what work needed to be performed to allow access for structural and waterproofing repairs. The plumbing investigation also included a visual survey and interviews with agency personnel. A video investigation was performed under the previous effort at suspected areas to determine whether blockages or breaks exist at inaccessible parts of the storm drain pipes.

The report is organized into areas of the building with separate lists of deficiencies, and recommended repairs. A summary at the end of the report discusses recommended projects which combine work on related deficiencies, which may combine work from adjacent areas. The project costs and priorities are also discussed in the summary section. Several appendices follow the report with detailed information including plans, photographs, and the cost estimate.

Deficiencies have been identified on the key plans in Appendix A. Each numeral indicates a location of issue that runs from plaza level thru the basement and sub-basement levels (as applicable). This was done to help show how each leak location relates to each other in section as the source of many leaks in the basement and sub-basement are located on the plaza level.

DESTRUCTIVE INVESTIGATION (TEST-CUTS)

The following is a description of four (4) test cuts taken, to examine the waterproofing membrane systems.

Test Cut TC1: Test Cut TC1 was excavated along the west wall in the Upper West Planter above the Loading Dock. The planter cross-section is comprised of a 1-inch layer of vegetative growth, 5-inches of topsoil, 7 inches of soil, filter fabric, 4-inches of gravel and a waterproofing membrane on the concrete deck. The type of waterproofing membrane was not confirmed. To the best of our assessment, the existing conditions matched those depicted in the drawings of the Upper West Planter waterproofing replacement project (2012).

- a) There are 3-inches of ponding water in the Test Cut hole, which prevented an assessment of the existing waterproofing membrane.

Test Cut TC2: Test Cut TC2 was excavated in the West Plaza at the corner of two expansion joints that have been vertically displaced. The plaza cross-section is comprised of 1-inch bluestone paving, 2-inch mortar bed, 4-inches of lightweight concrete topping slab, 1/8-inch-thick modified asphalt protection sheet and self-adhering rubberized asphalt sheet membrane waterproofing on the structural concrete deck. The expansion joint is constructed of an extruded aluminum frame with integral support flanges and a replaceable gland. The expansion joint is fastened into a concrete curb that is approximately 7-inches high.

- a) The membrane is in fair condition with no indication of deterioration.
- b) The waterproofing membrane is well-bonded to the concrete deck and a trace amount of moisture was present on the membrane.
- c) The base flashing membrane at the expansion joint curb was not well bonded to the curb. The expansion joint curb was sounded with a hammer and found to be in fair-to-poor condition.
- d) Based on the height of the expansion joint curb and its displacement since construction, it is likely that the expansion joint support armature is fastened into the concrete curb only and not the structural slab below.

Test Cut TC3: Test Cut TC3 was excavated in the field of the East Plaza adjacent to a decorative planter. The paving cross-section is composed of architectural cast-in-place concrete sidewalk, 6-inch compacted stone subgrade, 1-inch-thick drainage board, and self-adhering rubberized asphalt sheet membrane waterproofing on the structural concrete deck.

- a) The membrane is in fair condition with no indication of deterioration.

- b) The waterproofing membrane is well-bonded to the concrete deck and a trace amount of moisture was present on the membrane.

Test Cut TC4: Test Cut TC4 was excavated in the Southeast Wing section of the East Plaza adjacent to the Concrete Screen Wall. The paving system was comprised of 1-inch bluestone paving, 2-inch mortar bed, 2-inch-thick compacted gravel subbase on the structural concrete deck. The concrete screen wall is set on a 4-inch-thick concrete footer on compacted gravel subbase.

- a) No waterproofing membrane was observed on the structural concrete deck.
- b) Cracks in the base of the concrete screen wall telegraph through the entire footer of the screen wall.

WATER TESTING

The following is a description of three (3) controlled water tests performed to identify potential causes of existing building leaks;

Water Test W1 (W1): W1 consisted of discharging a hose on the east end of the concrete wall at the north end of the Loading Dock. Water was first sprayed at the base of the Upper West Planter wall where it meets the Lower Plaza, with no leaks occurring on the north wall of the Loading Dock below. The test was then moved to the expansion joint that intersects the east edge of the Upper West Planter wall at the West Plaza level. Shortly after, water began running down the joint at the east end of the north wall of the Loading Dock and the test was concluded.

- a) An expansion joint, not present on the design drawings provided, terminates at the end of the wall.
- b) The leak from the water test aligns with the expansion joint termination.

Water Test W2 (W2): A controlled Water Test (W2) was conducted on a suspected leak location at the plaza level above the fitness room leak location. Team members observed cracks in the concrete screen wall in the approximate location where leaks were known to be occurring below. W2 consisted of discharging a hose onto the crack in the concrete paving adjacent to the screen wall. Water was found to begin leaking into the fitness room below after five (5) minutes of testing.

- a) Building maintenance reported that leaks continued into the fitness room below for the rest of the day following the short test.

- b) The following day, destructive testing was performed at the base of the concrete screen wall (TC4).

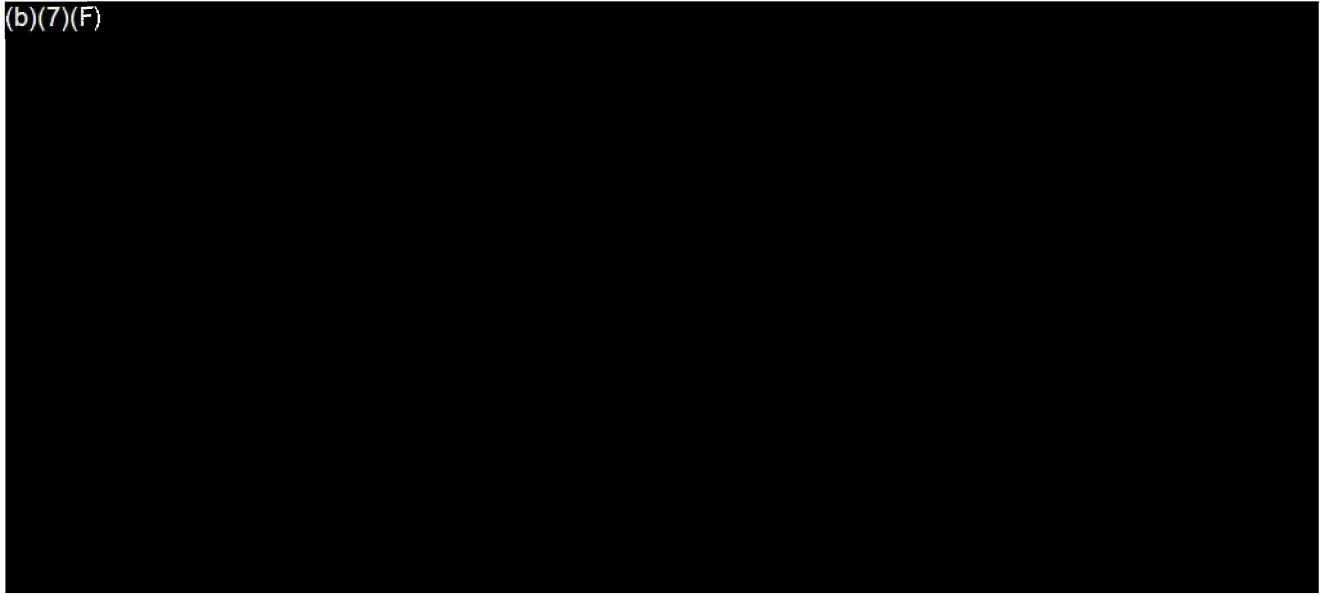
Water Test W3 (W3): Water test W3 consisted of discharging a hose onto the intersection of the north end of the planter wall where it intersects the north Loading Dock wall that projects above grade. Leaks began to occur immediately along the north foundation wall inside the Loading Dock.

- a) Planter wall counterflashing sealant had failed in multiple locations around testing area.
- b) Expansion joint, running east to west and intersecting the planter wall, was not present on any available construction drawings. The sealant at the joint between the expansion joint and the wall had failed.

V. BUILDING AREAS

A. LOADING DOCK AND WEST PLAZA

(b)(7)(F)



The Loading Dock platform is located under the Upper West Plaza. The elevation of the platform matches the elevation of the main building basement and has pedestrian ramps at each end that slope down to the concrete slab on grade.

The Loading Dock Platform and Drive Area have several places where water can enter during periods of rain. Water can enter from the Loading Dock Driveway, the 7 large rectangular vents open to the Upper West Plaza above, the stormwater discharged for the West Plaza trough drain, the discharging foundation drains at the north and west walls and water brought in by vehicle traffic.

The Loading Dock floor is sloped to a series of area drains that are plumbed to the Pump Room in the southeast corner of the building.

Seal Engineering, Inc. performed destructive testing at a select location along the east planter wall within the Upper West Plaza to confirm and inspect the existing waterproofing installed in 2016. Seal Engineering, Inc. was able to verify that the existing waterproofing membrane was installed according to the existing drawings provided from the recent Upper West Planter repair

project, the membrane is in good condition, and is well adhered to the structural slab.

The walk surface of the Upper West Planter is grass and according to the existing construction documents and test cuts, under the grass there is a layer of fill dirt on top of filter fabric, gravel, protection board on self-adhering rubberized asphalt sheet membrane on the structural concrete deck. The drainage system is a network of perforated drain tile, embedded in the gravel layer which is piped to the main storm water system.

The West Plaza above the Loading Dock was re-waterproofed in 2016, including installation of a new expansion joint assembly. The existing paving is bluestone pavers set in a mortar bed on a lightweight concrete topping slab. This is placed over a protection sheet on a self-adhering sheet waterproofing (Bituthene) on top of the structural concrete deck. The pavers near the Child Development Center (CDC) appear to be newer than the pavers to the west of the expansion joint and were likely replaced during CDC construction.

The expansion joint is constructed of an extruded aluminum frame with integral support flanges and a replaceable gland. The expansion joint support flanges are mounted on curbs along either side of the joint. Surface drainage is managed by a series of plaza drains spaced along the west side of the expansion joint which directly discharge into a trough mounted to the underside of the structural concrete deck. The trough is connected to the main storm sewer.

2. LOADING DOCK INVESTIGATION

The Loading Dock underside was surveyed using a combination of visual means and hammer sounding via lift. Concrete spalling or delamination was identified at overhead areas including previously unrepaired concrete and previously repaired concrete. In general, the very severe concrete damage was addressed by the previous repair project; however small areas of deterioration have developed and some of the existing repairs have de-bonded. The current conditions do not pose an immediate life safety issue, but concrete deterioration is ongoing and likely to develop as time passes.

For waterproofing, the Loading Dock was visually surveyed from above and below by the members of the investigative team. At leak locations, water testing was performed. At the underside of the plaza slab, the structure was surveyed by a combination of visual means and sounding. Soil was excavated

at the Upper West Planter wall to observe the 2016 waterproofing installation. A probe was also made on the West Plaza adjacent to the expansion joint curb. The following deficiencies were noted and are listed in approximate order of importance:

Deficiency 2-B North Wall: There are numerous active leaks along the north wall in the Loading Dock. Visual survey found much of the wall to have streaks of water damage at the east end of the foundation wall, with some limited damage to the concrete wall. Two separate controlled Water Tests (W1 and W3) were conducted on the plaza area above. W1 consisted of discharging a hose on the east end of the concrete wall at the north end of the Loading Dock. An expansion joint, not present on the design drawings provided, terminates at the end of the wall. The leak from the water test aligns with the expansion joint termination. W3 consisted of discharging a hose onto the intersection of the north end of the planter wall where it intersects the north Loading Dock wall that project above grade. Leaks began to occur immediately along the north foundation wall inside the Loading Dock. There was also an actively leaking pipe penetration at the north wall.

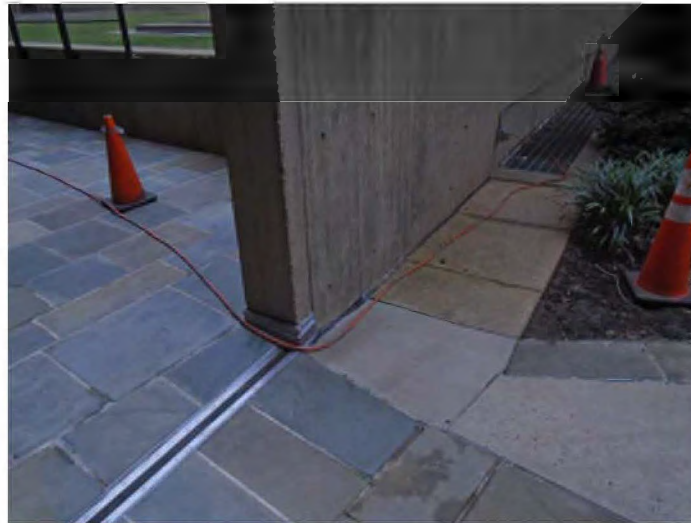


Photo Seal-2: Water Test Location WT1 and WT3
(on back side of wall in photo)

Deficiency 1-B, Expansion Joint: The expansion joint at the east end of the Loading Dock is experiencing several leaks. This water infiltration has led to several areas of concrete damage, including spalled and cracking concrete. A significant amount of damage was found at the intersection of two expansion joints between Columns Q-R. A destructive test cut (TC2) was performed at this expansion joint intersection at the West Plaza above and found that the expansion joint to fastened into an approximately 8-inch-high curb. test cuts through the membrane were not made; however, the membrane surface on the curb was sounded. The membrane is completely delaminated from the curb and the underlying curb was found to be unsound. The curb, waterproofing membrane and expansion joint have suffered damage due to failure of the expansion joint mounting bolts/curb and are allowing water to enter into the system and leak to the Loading Dock.



Photo Seal-2:
Test Cut (TC2) at
displaced
expansion joint in
Loading Dock
area. Exposed
curb was sounded
with a hammer
and found
“unsound.”

Moisture was observed along the length of the expansion joint above the Loading Dock during our survey. The plaza waterproofing and expansion joint replacement project in 2016 include the West Plaza area between the planter wall and the expansion joint, the expansion joint, and an approximate 2-foot-wide tie-in with the waterproofing on the east (building side) of the expansion joint. Leaks at the expansion joint are the result of the “popped” sections, but could also be the result of leaks along the tie-in between the two systems. Similarly, the planter wall is exposed concrete that extends down into the building beyond the waterproofing termination. Water penetrating the exposed concrete planter wall could also be contributing to the moisture observed along the expansion joint.

3. LOADING DOCK DISCUSSION AND ANALYSIS

Active leaks at the north end of the Loading Dock appear to be the result of a poor expansion joint termination/flashing and open sealant at the planter wall intersection with the north Loading Dock wall. The flashing termination at the end of the expansion joints should be modified to provide a water tight connection to the rising concrete wall.

The joint between the planter wall and the north Loading Dock wall should be resealed. A double line of sealant or perhaps a preformed seal may enhance the detail for longer term performance.

Ideally, the leaking pipe penetration at the center of the North Loading Dock wall should be flashed with waterproofing membrane at the exterior side of the foundation wall. Due to the pipe location, that is likely not practical. If exterior access is not possible, the pipe should be sealed by crack injection around the pipe penetration.

The primary failure at the plaza level is at the expansion joints where destructive testing found the expansion joints were “popping” up nearly 4-inches from their original positions due to failure of the expansion joint anchors under the induced loads from the plaza thermal expansion/contraction forces. Aside from causing leaks into the Loading Dock below, the dislocated expansion joint is a tripping hazard on the plaza walking surface. The dislocated expansion joint assembly should be disassembled and partially removed, the underlying curb should be repaired and the expansion joint mounting flange should be reset, with anchors extending through the curb into the structural slab. Alternately, a reinforced concrete curb could be constructed that is tied-in to the structural slab, with mounting flange then secured to the curb with standard length fasteners. Based on the movement of the expansion joints, it can be expected that the expansion joint glands will be broken/ torn and will need to be replaced, in some select locations. This damage cannot be fully known until the expansion joint has been removed. After the mounting flange installation is completed, the expansion joint gland can be reset, the curb re-flashed and the paving system restored.

Leaks along the length of the expansion joint may also be the result of moisture penetration at the planter wall and/or moisture penetration at the old waterproofing/new waterproofing tie-in at the east side of the plaza expansion joints. The exposed wall should have a waterproof coating applied, and the old waterproofing east of the expansion joint should be replaced. The

waterproofing material used on the exposed wall should be a clear penetrating sealant that does not impact/change the appearance of the historic existing concrete finish.

The most recent waterproofing repair project to the West Plaza replaced the waterproofing 3-feet past the expansion joints at the main building. In addition to the expansion joint repair project, the waterproofing at the West Plaza should be completed in its entirety, including sections of the Southwest Wing, Lower Plaza, and Northwest Wing areas.

4. LOADING DOCK RECOMENDATIONS

- A. Reflash end of expansion joint at plaza level intersection with North Loading Dock wall.
- B. Reseal expansion/control joints in planter wall, specifically at intersection with North Loading Dock wall.
- C. Seal pipe penetration at North Loading Dock wall with crack injection around pipe perimeter.
- D. Remove and reset “popped” expansion joint sections. Rebuild curb below and reflash expansion joint when reconstructed. Partially replace expansion joint glands, where found to be damaged. Repair paving removed to facilitate repairs.
- E. Seal exposed Upper West Planter wall with a clear, penetrating sealer.
- F. Replace plaza waterproofing east of the plaza expansion joint.

B. SOUTHWEST WING

1. Southwest Wing Existing Construction

The existing construction consists of concrete basement walls around the perimeter of the building. The slab at the 1st floor level is exposed to weather due to the building setback, so in the basement, the overhead structure around the perimeter is susceptible to leaks from the plaza inside the setback. The 1st floor framing is a concrete joist slab. In the Southwest Wing, the ramp to the Loading Dock penetrates through the basement level, so at the sub-basement, there is an area below the ramp which is susceptible to leaks and concrete deterioration.

The original design drawings by Marcel Breuer and Associates and Nolen Swinburne and Associates, Architects are dated 1965. In 2005, this area was modified by the “HUD Child Development Center (CDC) - Relocation Project,” prepared by MTFA Architecture Inc. This project added walls and a

new finished space to what used to be a pass-through area below the Southwest portion of the main building.

The existing paving for the Southwest Wing is bluestone pavers set in a mortar bed on a lightweight concrete topping slab. This is placed over a protection sheet on a self-adhering sheet waterproofing on top of the structural concrete deck. The plaza area surrounding the Child Development Center was re-waterproofed in 2016.

The plaza expansion joint was replaced as part of the 2016 work and matches the joint described in the West Plaza narrative. Surface drainage is managed by a series of plaza drains spaced along the west side of the expansion joint which directly discharge into a trough mounted to the underside of the structural concrete deck. The trough is connected to the main storm sewer similar to the West Plaza.

2. Southwest Plaza Investigation

The Southwest Plaza was visually surveyed from above and below by the members of the investigative team. At the underside of the plaza slab, the structure was surveyed by a combination of visual means and sounding. No leaks were identified at the basement level immediately below the plaza. Leaks were noted in the sub-basement in the vicinity of the tunnel. As part of the 2016 waterproofing project, a traffic deck coating was applied to the Loading Dock drive lane that is located over occupiable space.

Concrete deterioration was identified visually in areas of wall leaks and underneath the Loading Dock ramp.

The following deficiencies were noted and are listed in approximate order of importance:

Deficiency 17-S, Storage Room Leaks: Water stains and damaged concrete were found to be on the western wall in the Storage Room below the ramp into the Loading Dock that cuts through the building. The columns at each end of the wall had some cracked/ spalled concrete and efflorescence.

Deficiency 18-S, Generator Room Leaks: Water stains and damaged concrete were found to be on the exterior foundation walls in the southwest corner of the Generator Room. Trenches have been cut into the concrete floor to contain the movement of water as it comes into the building and down the

walls. Maintenance staff reported that the leaks are not consistent and only appear during very heavy rain events.

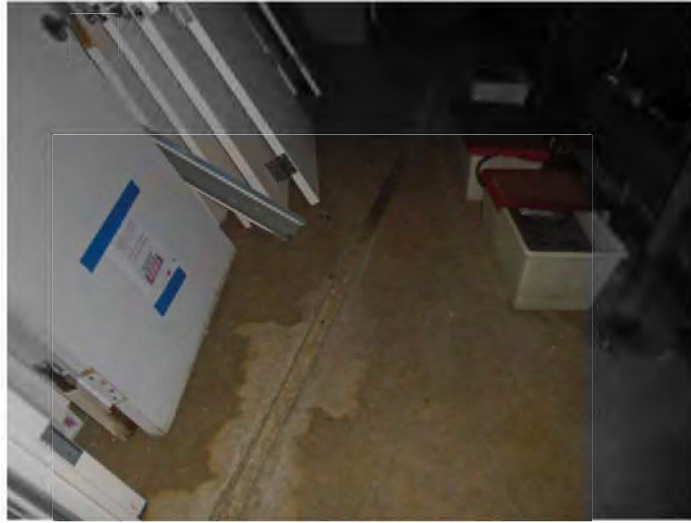


Photo Seal-3:
Trenches cut
into concrete
floor in
Generator
Room

3. Southwest Plaza Discussion and Analysis:

From a waterproofing perspective, the leaks into the Southwest Wing of the building are not excessive and do not require waterproofing repairs on the plaza above. This waterproofing system was replaced as a part of the most recent waterproofing repairs project to the West Plaza in 2016. We suggest damaged concrete walls be repaired and crack injection be performed at locations where water is actively leaking into the building (cracks, pipe penetrations).

Foundation walls are often protected from water infiltration by a foundation waterproofing membrane and/or foundation drainage system. It is not known if either is present on the foundation walls. The best method to eliminate the leaks would be to install or replace the foundation waterproofing system which would involve excavating to expose the exterior face of the wall. Based on the locations of the leaks, excavating down to the Sub-Basement foundation wall would be extremely disruptive and not cost effective.

The alternative to repairing the foundation waterproofing membrane from the exterior is urethane grout injection. The process generally consists of drilling a series of ports (holes) into the concrete structure that are aimed to intercept the leaking joints / cracks at the approximate midpoint of the foundation wall, then pumping a hydrophilic polyurethane grout into the cracks. These types of programs are iterative. Often times, injecting one crack results in adjacent areas leaking, or the same crack leaking. Repeating the process until the leaks

are abated is the best method for treating leaking cracks in walls that are inaccessible from the exterior. The leaks occur in warehouse and storage space with minimal finishes of minor importance. Upon completion of recommendations, the walls can be repainted to present a uniform appearance.

4. Southwest Wing Recommendations:

In order to both repair the existing damage to the concrete structure within the Southwest Wing and prevent future damage from water infiltration, we recommend the following repairs be included in a building-wide scope of work:

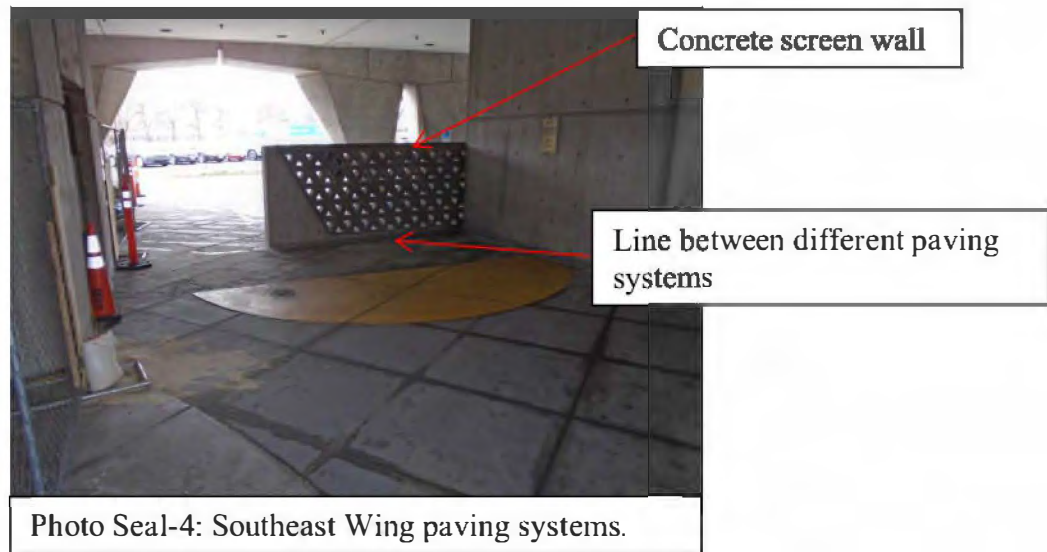
Crack Injection at active leaks in below grade exterior walls.

C. SOUTHEAST WING

1. Southeast Wing Existing Construction

The existing construction consists of concrete basement walls around the perimeter of the building. The slab at the 1st floor level is exposed to weather due to the building setback, so in the basement, the overhead structure is susceptible to leaks from the plaza inside the setback. The 1st floor framing is a concrete joist slab.

The original design drawings by Marcel Breuer and Associates and Nolen Swinburne and Associates, Architects are dated 1965. Several projects since then have addressed waterproofing repairs at portions of the Southeast Wing. The most recent was the "Plaza Waterproofing and Modifications" in 1996 and 1997 by Architrave, PC, Architects and Martha Schwartz which completely replaced the waterproofing and added the current decorative plaza features, including the section of the East Plaza that extends into the Southeast Wing. According to the existing construction documents, the decorative architectural concrete pavement is cast on a lightweight concrete topping slab over the waterproofing system. This system consists of drainage and protection board over hot-applied rubberized asphalt waterproofing applied directly to the structural concrete deck. The limit of this project is clearly distinguishable by the change in paving systems between the East Plaza (decoratively scored/colored concrete paving) and the existing Southeast Wing Plaza (bluestone pavers). The area below the overhanging structure in the Southeast Wing also contains a concrete screen wall structure set in the field of the blue stone paving.



At the plaza level, the Southeast Wing is characterized by rectangular random sized bluestone pavers south of the building centerline and 1996 decorative concrete paving north of the building centerline. Pavers are set in a mortar bed, on a lightweight concrete topping slab, on a protection sheet, on a waterproofing membrane above the structural concrete deck.

Evidence of the leaks are present on both the basement and sub-basement level interior spaces. In the basement, significant water infiltration in the open offices of B100 has damaged the ACT ceiling and gypsum board wall. The area was open with a taped tarp draining into large trashcans. At the time of the survey, there was approximately 4 gallons of water in the trashcan. The ACT panels are stained and bowed, and the associated grid shows deterioration from continued exposure to moisture. The wall board exhibits cracking and some staining also attributed to the leak. Above the ceiling, significant concrete flaking, stains and efflorescence were observed at the underside of the slab and wall seam.

The small fitness room in B114 shows finish deterioration between the two columns along the south wall. The ACT panels and grid are damaged from continued water exposure. The concrete wall and underside of the slab above the ACT show flaking in the drip pattern of the leak. Spalling and efflorescence were also observed. The gypsum wall board has deteriorated and needs to be replaced.

2. Southeast Wing Investigation

The Southeast Wing was visually surveyed from above and below by the members of the investigative team. At a suspected leak location, water testing was performed. The following day after water testing, destructive testing was performed at the concrete screen wall to observe the existing waterproofing conditions.

Concrete deterioration was identified visually in areas of wall leaks. An area of deteriorated concrete joists was also present in the southeast area.

The following deficiencies were noted and are listed in approximate order of importance:

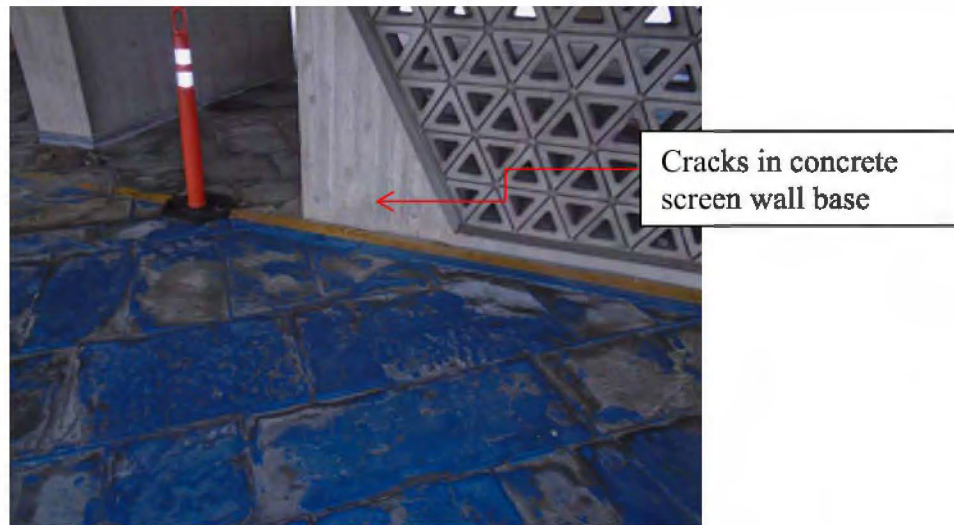


Photo Seal-5: Concrete screen wall at Southeast Wing

Deficiencies 4-B, 5-B, 6-B and 7-B, Leaks in Ceiling of Basement Fitness Rooms: Leaks were reported at several basement level fitness rooms. Upon removal of select drop ceiling panels with leak stains, the underside of the concrete slab was observed to have deterioration at the slab and joists. The damage is associated with the leaks in the plaza above. Drip pans had been installed on the ceiling under leak locations but have become heavily corroded over time. In addition, there are many pipes and ducts between the drop ceiling and the concrete slab that have suffered extensive water damage from the leaks above. A controlled Water Test (W2) was conducted on a suspected

leak location at the plaza level above the fitness room leak locations. Team members observed cracks in the concrete screen wall in the approximate location where leaks were known to be occurring below. W2 consisted of discharging a hose onto the crack in the concrete paving adjacent to the screen wall. Water was found to begin leaking into the fitness room below after five (5) minutes of testing. Building maintenance reported that leaks continued into the fitness room below for the rest of the day following the short test. The following day, destructive testing was performed at the base of the concrete screen wall. No waterproofing was found on top of the concrete structural slab. The subgrade below the bluestone pavers was found to be wet to the touch. Visual survey also found the area to have very poor drainage, as water ponds for days after a rain event.

Deficiency 3-B, Exterior Wall Leak at Large Pipes: Leaks were reported to have been occurring around two large cast iron storm water pipes that penetrate the southern exterior wall in office room B100. Concrete damage and water stains on the wall were associated with water leaking from the pipes above. Building maintenance has installed plastic sheets to keep the water off of the walls and direct it into trash cans for collection. Visual survey of the Plaza Level above found no obvious sources of potential water infiltration.

3. Southeast Wing Discussion and Analysis

Based on the findings from the water tests and destructive testing, the portion of the Southeast Wing without any waterproofing is extremely vulnerable to water intrusion and further damage to the concrete structure below. The leaks have greatly impacted the on-going fitness center operation below, which include a myriad of high-tech gym equipment directly below locations of leaks. In addition, the concrete screen walls on the Southeast Wing were found to be a source of leaks in to the building. Cracks in the screen wall provide a direct pathway below the paving system and ultimately into the building. We suggest the pavers at this section be removed, the structural concrete deck be repaired, and a hot-applied rubberized asphalt waterproofing membrane with protection and drainage board be installed. Following completion of the waterproofing installation, the paving system can be restored.

According to the existing construction drawings, the concrete screen walls consist of precast concrete "blocks" stacked onto a cast-in-place concrete footer. Based on the location of the screen wall, flashing the new waterproofing system to the cast-in-place concrete footer is a reasonable way

to terminate the waterproofing and provide reliable performance while avoiding the cost and potential historic impact associated with removing and rebuilding the screen walls. We recommend removing the concrete screen walls entirely and installing a sloped lightweight concrete topping slab that slopes to floor drains in the paving system.

The leaks in the wall of room B100 appear to be caused either by leaks in the penetrating storm water pipes or leaks around the pipe penetrations through the exterior foundation wall. We recommend installing link-seals at the pipes where they penetrate the exterior walls and crack injecting any wall cracks experiencing water infiltration.

The waterproofing at the east half of the Southeast Wing was last repaired/replaced in 1997. This waterproofing has reached its design life expectancy and should be replaced as a part of the Capital Project.

The leaks occur in warehouse and storage space with minimal finishes of minor importance. Actively leaking cracks in these locations should be repaired by crack injection from the interior. The benefits of this strategy are outlined in the section “Southwest Plaza Discussion and Analysis” of this report. Upon completion of recommendations, the walls can be repainted to present a uniform appearance.

4. Southeast Wing Recommendations

In order to both repair the existing damage to the concrete structure within the Southwest Wing and prevent future damage from water infiltration, we recommend the following repairs be included in a building-wide scope of work;

- A. Remove existing paving system down to the structural concrete deck and install a reinforced hot-applied rubberized asphalt waterproofing system, protection board, drainage board, concrete topping slab and reinstall the existing bluestone pavers.
- B. Terminate new waterproofing on concrete base of screen wall to avoid disassembling and removing the concrete screen wall.
- C. Install three (3) plaza drains in the above area to improve drainage.
- D. Crack injection at below grade walls in Room B100.
- E. Two (2) Link Seals at storm water pipes in Room B100.

- F. Replace ACT grid and panels around the area of the leak in B100 and B114.
- G. Replace and paint the gypsum wallboard directly beneath the active leak in B100 and B114.
- H. Crack inject and actively leaking cracks in the subbasement area and repaint affected rooms.

D. NORTHEAST WING

1. Northeast Wing Existing Construction

The existing construction consists of concrete basement walls around the perimeter of the building. The slab at the 1st floor level is exposed to weather due to the building setback, so in the basement, the overhead structure around the perimeter is susceptible to leaks from the plaza inside the setback. The 1st floor framing is a concrete joist slab.

The original design drawings by Marcel Breuer and Associates and Nolen Swinburne and Associates, Architects are dated 1965. Several projects since then have addressed waterproofing repairs at the East Plaza which extend into the Northeast Wing. The most recent was the “Plaza Waterproofing and Modifications” in 1996 and 1997 by Architrave, PC, Architects and Martha Schwartz which completely replaced the waterproofing and added the current decorative plaza features. This project included the replacement of waterproofing at the Northeast Wing. Surface drainage on the plaza is managed by area drains. A series of area drains is located between the curved north-south expansion joint and the building columns. The northern half of this row of drains discharges into a trough mounted to the underside of the slab that was included in the original building design.

The plaza area over the building basement is supported on a one-way concrete joist slab. The pairs of main building columns exposed at the overhang in the plaza are irregularly shaped and noted as “tree columns” in the original drawings.

The basement floor (sub-basement ceiling) is constructed with concrete joists with a thin 2.5 inch concrete slab between them. The joists span 30 feet between interior concrete beams and the perimeter concrete walls.

The concrete foundation walls are typically 20 inches thick where they are retaining earth at the sub-basement level.

2. Northeast Wing Investigation

Deficiency 16-B, Room B182 Leaks: Water stains and damaged concrete were found on the northern foundation wall within Room B182. Interior finishes at the ceiling, floor and wall have been removed due to extensive water damage. There is a large cast iron pipe that penetrates the wall in the ceiling above that was reported by building maintenance to belong to the District of Columbia (sewer line). Water staining and corrosion were visible around the pipe. Building maintenance noted that leaks often occur approximately one day after a large rain event.



Photo Seal-5: Water damage in Room B182

3. Northeast Wing Discussion and Analysis

The leaks into Room 182 appear to be caused by either a leaking sewer line above or leaks in the north foundation wall. Visual survey of the north lot and East Plaza above found no obvious leak sources in the immediate vicinity of the leaks below. Based on the accounts provided by building maintenance, it would appear that water is leaking through the foundation wall and into the building after heavy rain events. Waterproofing repairs should include crack injection at this wall and around the pipe penetration to limit the amount of water coming in. The benefits of this strategy are outlined in the section “Southwest Plaza Discussion and Analysis” of this report.

The waterproofing at the Northeast Wing was last repaired/ replaced in 1997. This waterproofing has reached its design life expectancy and should be replaced as a part of the Capital Project.

4. Northeast Wing Recommendations

- A. Remove existing paving system down to the structural concrete deck and install a reinforced hot-applied rubberized asphalt waterproofing system, protection board, drainage board, and concrete topping slab.
- B. Perform water testing to verify source of leak (DC Sewer Line/ Exterior Water Infiltration through north foundation wall).
- C. Perform crack injection at north foundation wall.
- D. Replace ACT grid and panels around the area of the leak in B182.
- E. Replace and paint the gypsum wallboard directly beneath the active leak in B182 once the leaks have been identified and corrected.

E. NORTHWEST WING

1. Northwest Wing Existing Construction

The existing construction consists of concrete basement walls around the perimeter of the building. The slab at the 1st floor level is exposed to weather due to the building setback, so in the basement, the overhead structure around the perimeter is susceptible to leaks from the plaza inside the setback.

The original design drawings by Marcel Breuer and Associates and Nolen Swinburne and Associates, Architects are dated 1965. Several projects since then have addressed waterproofing repairs at portions of the Southeast Wing. The most recent was the "Plaza Waterproofing and Modifications" in 1996 and 1997 by Architrave, PC, Architects and Martha Schwartz which replaced the waterproofing and paving up to the east-west centerline of the Northwest Wing. The limit of this project is clearly distinguishable by the change in paving systems between the East Plaza (decoratively scored/colored concrete paving) and the original Northwest Wing Plaza (bluestone pavers). The most recent waterproofing replacement records located for the western portion of the Northwest Wing date to 1989.

The paving and waterproofing system at the Northwest Wing mimic those found at the Southeast Wing - rectangular random sized bluestone pavers south of the wing-centerline and 1996 decorative concrete topping to the north. Pavers are set in a mortar bed, on a lightweight concrete topping slab, on a protection sheet, on a waterproofing membrane above the structural concrete deck. The decorative concrete topping slab rests on a protection sheet and waterproofing membrane above the structural concrete deck. The plaza area over the building basement is supported on a one-way concrete joist slab. The pairs of main building columns exposed at the overhang in the plaza are irregularly shaped and noted as “tree columns” in the original drawings.

2. Northwest Wing Investigation

The Northwest Wing was visually surveyed from above and below by the members of our team.

Concrete deterioration was identified visually in areas of wall leaks.

The following deficiencies were noted and are listed in approximate order of importance:

Deficiency 20-S and 21-S, Leaks in Sub-Basement: Leaks at the foundation walls in the Northwest Corner of the sub-basement are often associated with construction joints from the original construction but can also occur at cracks in the wall. There is sometimes concrete delamination that has occurred along some of the construction joints or cracks. Per the 2012 report, many Sub-Basement leaks at the northwest foundation walls have already been repaired by drilling and injecting the cracks. These areas were reported by building maintenance to still be leaking. There are several sump pumps in and around leak locations that appear to be relatively dry.

3. Northwest Wing Discussion and Analysis

Foundation walls are often protected from water infiltration by a foundation waterproofing membrane and/or foundation drainage system. It is not known if either are present on the foundation walls. The best method to eliminate the leaks would be to install or replace the foundation waterproofing system which would involve excavating to expose the exterior face of the wall. Based on the locations of the leaks, excavating down to the Sub-Basement foundation wall would be extremely disruptive and not cost effective.

The alternative to repairing the foundation waterproofing membrane from the exterior is urethane grout injection. The process generally consists of drilling a series of ports (holes) into the concrete structure that are aimed to intercept the leaking joints / cracks at the approximate midpoint of the foundation wall, then pumping a hydrophilic polyurethane grout into the cracks. These types of programs are iterative. Often times, injecting one crack results in adjacent areas leaking, or the same crack leaking. Repeating the process until the leaks are abated is the best method for treating leaking cracks in walls that are inaccessible from the exterior.

The waterproofing over the Northwest Wing Plaza areas dates back to 1996 and 1989. Although, extensive leaks have not been identified below the main plaza areas, we recommend replacing this waterproofing at the same time the remainder of the plaza level is re-waterproofed due to the age of the waterproofing.

The leaks occur in warehouse and storage space with minimal finishes of minor importance. Any actively leaking cracks at these locations should be repaired by crack injection from the interior. Upon completion of recommendations, the walls can be repainted to present a uniform appearance.

4. Northwest Wing Recommendations

- A. Remove existing paving system down to the structural concrete deck and install a reinforced hot-applied rubberized asphalt waterproofing system, protection board and drainage board. Install finish paving system to match existing (varies by location).
- B. Perform crack injection at any actively leaking foundation wall cracks.
- C. Repair interior finishes in locations where leaks are corrected to match original conditions.

F. PARKING GARAGE AND EAST PLAZA

1. Parking Existing Construction

Two parking ramps are located midway along the east wall, nearest 7th street in a stacked configuration to allow access from the plaza to the three levels of Parking Garage. The ramp slabs are six-inch one-way concrete slabs spanning to the side walls. There are beams at the top and bottom of each ramp, some of which contain a trench drain. Two air shafts extend upwards directly adjacent to the ramps to provide ventilation to the garage. The lower levels of

the garages are currently blocked from access due to shoring posts at the two lower levels of ramp beams and shoring of some joists below the A level slab.

The original design drawings by Marcel Breuer and Associates and Nolen Swinburne and Associates, Architects are dated 1965. A major garage repair project was performed in 1997 to repair damaged concrete.

At the Plaza Level, the East Plaza extends over the garage below. Several projects since the original construction have addressed waterproofing repairs at the East Plaza. The most recent was the “Plaza Waterproofing and Modifications” in 1996 and 1997 by Architrave, PC, Architects and Martha Schwartz which completely replaced the waterproofing and added the current decorative plaza features, including the large circular planters and canopies. According to the 1996-97 construction documents, the decorative architectural concrete pavement is cast on a lightweight concrete topping slab over the waterproofing system. This system consists of drainage and protection board over hot-applied rubberized asphalt waterproofing applied directly to the structural concrete deck. There is a curved expansion joint oriented north-south which separates the plaza over the Parking Garage from the plaza over the main building basement. The plaza is further divided by two east-to-west expansion joints.

Adjacent to the west side of ramp is a large vent shaft. The shaft is split up into north and south sections by an 8-inch concrete wall running in the east/west direction. Both of these sections contain vented openings which penetrate through all three garage levels (located at the north and south ends of the shaft) and which terminate above the Garage Level B storage area (located in the middle of the shaft).

2. Parking Investigation

Similar to the garage, our survey in the ramps was mostly visual with some sounding via chain drag and hammer sounding to identify extents of concrete delamination and deterioration. The work primarily verified and updated quantities from the 2012 study. All the previously noted repairs were still present, though in larger quantities. As evidenced by the shoring of the beams and joists, these elements have deteriorated to the point of being a safety hazard. See repair recommendations for further details.

All three levels of the East Garage were visually surveyed from above and below by the members of the investigative team. At the underside of the

ceiling, floor and vertical walls, the structure was surveyed by a combination of visual means and sounding. Aside from the typical concrete damage observed throughout the garage, the following waterproofing deficiency was noted:

Seal Engineering, Inc. performed destructive testing (TC2) at a field location within the East Plaza. The test cut confirms the following construction was present; architectural concrete cast in a variety of shapes and colors on a lightweight concrete topping slab on a drainage board system on a hot-applied rubberized asphalt waterproofing system on the structural concrete deck. There is a discolored area of the architectural concrete on the East Plaza near the East Parking Garage exiting ramp, which appears to have been replaced.

Deficiency 13-LA, Exhaust Shaft: There is a large exhaust shaft for the garage adjacent to the west wall of the ramps. Overall, the exhaust shaft has significant concrete deterioration, although to varying degrees in different locations. Below, the exhaust shaft shares a wall with an office space that is experiencing concrete damage at the floor in the back of the office.

Deficiency 8-LA, 15-LA, 8-LC and 15-LC, East Plaza Expansion Joint Leaks: Leaks were observed at both the lower level of the Parking Garage and the basement level at the curved expansion joint along the edge of the Main Building. Water staining was present along the adjacent walls within immediate proximity to the leak locations. Limited concrete damage, mainly spalling, was observed around the leak locations. At the plaza level above, the glands of the expansion joints are not flush with the paving, which creates a tripping hazard.

3. Parking Discussion and Analysis

The structural concrete floors at the A and B Levels are protected with a traffic bearing membrane system installed in the 1997 garage project. The C Level floor is exposed concrete slab on grade. The Level A entrance and exit ramps are not protected with a traffic bearing coating system. This is permitting the concrete to absorb moisture which can promote concrete deterioration. In the loop between the ramps at levels A and B, the existing membrane is worn due to the heavier traffic and turning relative to the parking areas. The traffic coating was inspected as a part of the 2012 report and was found to be in very poor condition at that time and has further deteriorated since then. Some spot repairs appear to have been made in select locations,

but overall, the traffic coating has worn thin and has left much of the structural concrete deck exposed.

There are four (4) leaks (8-LA, 15-LA, 8-LC and 15-LC) that are likely the result of failures in the curved expansion joint at the East Plaza level above. According to the existing drawings provided, these expansion joints were replaced as a part of the 1997 waterproofing repairs at the East Plaza. Spalling exists at two main building columns at Level B and at one column at Level C. These are all located near the expansion joint between the garage and the main building. Since this joint has been prone to leaks, water has been allowed to penetrate into side of the columns and cause deterioration. Even though the areas of deterioration are not large or appear to be deep, they do need to be repaired.

As noted in other sections of this report, the waterproofing system on the East Plaza above the Parking Garage has reached its reasonable life expectancy and should be replaced.

The expansion joints installed with the 1996-97 project consist of a winged gland embedded in the concrete topping slab (exposed element) that aligns with a double layered neoprene sheet expansion joint at the membrane/structural slab level. When the expansion joint is replaced, a system similar to the West Plaza expansion joint should be installed – an elevated robust expansion joint assembly (aluminum armature with integrated gland assembly at the paving surface with side flashing flanges integrated into the waterproofing system at the structural slab level) should be installed. Replacing the expansion joint assembly and the plaza waterproofing at the same time is highly recommended to avoid the potential issue with old-to-new waterproofing tie in leaks similar to those being experienced at the West Plaza. Another feature that could be considered is a cover plate to protect the exposed expansion joint gland element; however, they are designed to withstand the type of traffic expected at the East Plaza.

Waterproofing system replacement should occur at the structural slab level to provide the best long-term performance. At the East Plaza, this would mean all of the circular concrete planters (combination of precast concrete and cast-in-place concrete) and other decorative elements installed in 1997 would need to be removed and, if desired, be reconstructed after the waterproofing is replaced. A possible deductive alternate could be to leave the planters in place and detail the waterproofing system to incorporate the existing

structures. Further study of the feasibility and pros/cons of this potential approach should be studied during the plaza waterproofing replacement project design phase. At a minimum, circular planters bisected by the expansion joint will be significantly impacted.

Circular metal framed canopy structures were also installed as part of the 1997 plaza renovation project. At a minimum, the canopy posts will need to be re-flashed.

4. Parking Recommendations

A. Lower Garage Levels: Prepare ramp surfaces and apply 16,000 square feet of heavy-duty commercial traffic bearing coating system. Coordinate with traffic ramp trench drain replacement work.

B. East Plaza Waterproofing:

- a. Remove and replace existing waterproofing and paving system, including removing planter assemblies.
- b. Study the deduct alternate to leave planters in place.

East Plaza Expansion Joints: Remove existing expansion joint assemblies and install new expansion joints (Migutan by Emseal or equal) on elevated curbs structurally connected to the existing plaza structure.

G. PARKING RAMPS

1. Parking Ramps Existing Construction

The ramps in the garage consist of one-way concrete slabs spanning between concrete walls on either side of the ramp. There are concrete beams at the top and the bottom of each ramp. At the top and bottom of the entrance and exit ramps to the plaza have trench drains embedded into the top of them. These trench drains are designed to drain into drain outlets that tie into the building's drainage system.

2. Parking Ramps Investigation

All Parking Ramps of the East Garage were visually surveyed from above and below by the members of the investigative team. At the underside of the ceiling, the structure was surveyed by a combination of visual means and

sounding. The trench drain at the East Plaza level was cleaned and inspected to verify existing conditions.

The following deficiencies were noted and are listed in approximate order of importance:

Deficiencies 10-LA, 14-LA, 10-LB, 14-LB, 10-LC and 14-LC: There are several deficiencies associated with the ramps of the garage which are addressed together in this section. Certain areas of the ceiling structure above all levels of the ramps are delaminated and spalled. One area has evidence of poor consolidation. The worst location of concrete is at the top and bottom of the garage ramps. The bottoms of some of the adjacent concrete joists in the waffle slab are delaminated but the most extreme conditions are at the concrete header beams below each trench. They are severely spalled and the existing reinforcement is exposed and corroded. This has occurred over the years due to problems in the trench drain. It is evident from the existing water stains and leaks that water migrates from the trench through the concrete beam.



Photo Seal-6: Trench drain at Parking Ramp in East Plaza

3. Parking Ramps Discussion and Analysis

The exact leak sources could not be determined because the trench drain troughs and drain piping are encased in the concrete headers and adjacent walls. It was likely that one or both of these components are the leak source. The trench drains that were surveyed were found to be full of debris and

leaves and do not drain properly. There are cracks around the frame of the trench and cracks in the adjacent concrete. Some of the grates are broken. During the visual survey, the team cleaned out a portion of the trench drain at the East Plaza to inspect the existing frame. The drain frame was heavily corroded.

The existing trench drains are cast into the concrete beams that frame the opening of the Parking Garage ramps. Due to their extensive damage, these beams are to be replaced in their entirety (see Structural scope). Therefore, the existing trench drains should be entirely removed and replaced at each level of the Parking Garage ramps. New trench drains should be cast into the new concrete beams, complete with removable grates. Existing trench drain outlets should be replaced.

4. Parking Ramps Recommendations

In order to both repair the existing damage to the concrete structure within the Parking Garage and prevent future damage from water infiltration, we recommend the following repairs be included in a building-wide scope of work and coordinated with the structural repairs to the garage structure:

- A. Remove and replace a total of 192-feet of cast-in-place trench drains and grate at all garage levels. Remove and replace existing trench drain outlet and replace all piping.
- B. Develop a maintenance plan for routine cleaning of the trench drains.
- C. Remove and replace a total of 48-feet of trench drains and grate at all garage levels and consistently clean debris from them. Place a removable stainless-steel screen over the drain outlet. The pipes and the catch basins shall also be cleaned on a consistent basis.

Install traffic deck coating on all ramps.

H. LOWER PLAZA

1. Lower Plaza Existing Construction

The original design drawings by Marcel Breuer and Associates and Nolen Swinburne and Associates, Architects are dated 1965. Several projects since then have addressed waterproofing repairs at portions of the Lower Plaza, the most recent record found being plaza waterproofing replacement in 1989. Within the Lower Plaza area, the West Plaza is characterized by rectangular random sized bluestone pavers. According to the existing construction documents (and confirmed by our investigation), the pavers are set in a mortar bed, on a lightweight concrete topping slab, on a protection sheet, on a self-adhering sheet waterproofing membrane above the structural concrete deck. The Lower Plaza is bounded to the south by the Upper West Planter wall that extends past its adjoining wall running north-south at the east end of the planter. This wall extends down into the Loading Dock. The Lower Plaza is bounded east to west by the rising building wall in the east and the grass covered park to the west.

Within the plaza, the West Plaza contains several expansion joints that separate the bluestone paving system into various sections. The expansion joint is constructed of two aluminum channels with a large bottom support flanges and a replaceable rubber gland between them. West of the north-south joint (beyond the main building) the structural system is a 7-inch concrete slab directly above the Loading Dock platform. East of the north-south joint (under the building overhang) the structure is a concrete joist system with a 2 ½ inch slab between the joists. A concrete planter wall separates the West Plaza from the Upper West Planter area further to the west. There is one expansion joint that was installed between the concrete planter wall and the column to the east that was not depicted on any of the construction drawings provided for this project.

Similar to the East Plaza, surface drainage is managed by a series of plaza drains spaced along the west side of the north-south expansion joint at the main building columns which directly discharge into a trough that is mounted to the underside of the structural concrete deck. The surface drains are paired with subsurface drains to the east side of the expansion joint.

The basement floor (sub-basement ceiling) is constructed with concrete joists with a thin 2.5 inch concrete slab between them. The joists span 30 feet

between interior concrete beams and the perimeter concrete walls. The concrete foundation walls are typically 20 inches thick where they are retaining earth at the sub-basement level.

2. Lower Plaza Investigation

The Lower Plaza was visually surveyed from above and below by the members of our team. At a suspected leak location, water testing was performed. The following deficiencies were noted and are listed in approximate order of importance:

Deficiency 2-B North Wall: This leak is covered in the “Loading Dock” section of this report.

Deficiencies 23-S and 22-S, Sub-Basement Wall Leaks: There are two locations within the sub-basement along the west foundation wall that are experiencing active leaks. Both the walls and floor have been experiencing significant concrete damage as well heavy water staining. Sump pumps have been installed at these locations and appeared to be slightly clogged during the visual survey. A visual survey of the Lower Plaza area above found no obvious sources of water infiltration into the building.

3. Lower Plaza Discussion and Analysis

As discussed in the “Loading Dock” section of this report, the planter wall between the Loading Dock and the Lower Plaza is the source of two separate leaks into the Loading Dock. The recommendations for that wall are addressed in that section.

The most recent waterproofing repair project to the West Plaza replaced the waterproofing to just past the north end of the Upper West Planter. In addition to the expansion joint repair project, the waterproofing at the West Plaza should be completed in its entirety, including sections of the Southwest Wing, Lower Plaza, and Northwest Wing areas. In order to limit the amount of “tie-in” projects, the waterproofing system at the West Plaza should be fully replaced, including the section contained in the Lower Plaza. Review of the original drawings found that the building’s foundation wall extends slightly past the face of the exterior columns. Waterproofing repairs should include turning the waterproofing on the West Plaza down a minimum of 12-inches onto the face of the foundation wall and the removal of the expansion joint at the planter wall if it is found to be obsolete.

Leaks at the foundation's walls on the sub-basement level are due to groundwater pressure exerted on the walls which have begun to infiltrate into the building. We suggest below-grade exterior walls be crack injected at water infiltration locations. The benefits of this strategy are outlined in the section "Southwest Plaza Discussion and Analysis" of this report.

4. Lower Plaza Recommendations

In order to both repair the existing damage to the concrete structure within the Southwest Wing and prevent future damage from water infiltration, we recommend the following repairs be included in a building-wide scope of work:

- A. Remove and replace existing waterproofing and paving system as a part of West Plaza waterproofing repairs. Extend waterproofing down face of foundation wall minimum 12-inches. Crack Injection at the sub-basement foundation walls.
- B. Clean out the clogged sump pumps and implement a regular maintenance program to keep them clear.

VI. SUMMARY OF REPAIR PROJECTS

A. PROJECT #1: EMERGENCY REPAIRS

1. Description

Due to the severity of concrete deterioration at the garage ramp, there is currently shoring in place which blocks access to levels B and C of the garage. Other concrete deterioration in the garage is ongoing, but not yet at a critical point of being a safety hazard. An immediate project to address the ramp and adjacent areas of concern is therefore proposed. By doing the ramp and traffic loop repairs earlier, phasing should be easier for the bigger repair effort in the Parking Garage. This project includes the following recommended work:

(b)(7)(F)



- Demolishing and rebuilding the beams at the tops and bottoms of the ramps. These beams are badly deteriorated and the main cause of the shoring blocking the lower levels. Given how prone to deterioration these beams are, sacrificial anodic protection in the form of zinc anodes attached to the reinforcing steel should be included in these locations.

Ramp beam replacement

Estimated quantity: 72 LF of beam full replacement

- Some of the beams include a trench drain. These should also be rebuilt and associated drain lines replaced. Where the drain line extends beyond the construction area, it should be video inspected and unblocked if possible. The full extent of the blockage is unknown.

Estimated quantity: 48 LF of trench drain

- Note that the work replacing the upper-level ramp beams will impact access to the A Garage Level. The entrance and exit ramps will need to be shut down one at a time and traffic controls used to allow two-way use of the remaining ramp while the work is done. Given that these beams contain trench drains which will require special forming and plumbing connections, it is likely that each entrance and exit ramp will take a week to demolish, replace, and allow for concrete curing even using high-early strength concrete.
- Areas of concrete delamination on the ramp slabs and walls should be repaired. Repairs on the six-inch ramp slab should be full depth. Repairs to the walls should be partial depth using the form and pour method. Some of the wall spalls are located at embedded light fixtures and an electrical panel.



Concrete spall in wall at electrical panel and light.

Estimated quantity: 600 SF of wall repair

Estimated quantity: 800 SF full depth slab repair

- Areas of concrete delamination in the slabs and walls of the rooms within the ramp area and the ventilation shaft is also recommended to be included in this project. While not an immediate safety issue, including these in this project would avoid shutting down the ramps again later on.

Estimated quantity: 200 SF of wall repair

Estimated quantity: 300 SF partial depth slab repair

- Cracked joists in the waffle slab adjacent to the ramp should be repaired. These will be a mix of full depth replacement and joist bottom repair, depending on severity and whether the adjacent slabs require repair.



Severely damaged joists requiring full depth replacement
Estimated quantity: 200 LF of joist full replacement
Estimated quantity 100 LF of joist bottom partial repair

- The thin slab between joists in some cases are cracked or have other deterioration. Where noted, these should be replaced full depth (2.5 inches) and full width from joist to joist.



Estimated quantity: 40 squares @2.5 ft x 2.5 ft each

- The traffic membrane is worn, especially at the ramps and the traffic loop around the ramps. While not a safety issue, replacing this as part of the repair will protect the new repairs and remaining existing concrete in the area from road salts, which is the main cause of the concrete deterioration.

Estimated quantity: 8,000 SF

- Corrosion inhibitor admixture should be included in all new concrete. A penetrating corrosion inhibitor should be applied to the undersides of remaining existing concrete to slow future deterioration.

Estimated quantity: 18,000 SF

- There are several instances where the existing sprinkler branches and main lines are very close to the structural repairs, so temporary rerouting or shut downs will likely be required.



- The two floor drains in the air shafts discharge through the face of the curb onto the garage slab on grade. It is recommended to reroute these lower and tie into the floor drain lines under the slab on grade.

Waterproofing repairs include the following;

A. Parking Garage

- a. Prepare ramp and Parking Garage surfaces and apply heavy commercial traffic bearing coating system.
- b. Remove and replace a total of 192 feet of trench drains and grate at all garage levels and consistently clean them from debris. Install liquid coating at all trench drains in the ramps of the Parking Garage.

- B. Programmed urethane grout injection. The process generally consists of drilling a series of ports (holes) into the concrete structure that are aimed to intercept the leaking joints / cracks at the approximate midpoint of the foundation wall, then pumping a hydrophilic polyurethane grout into the cracks.
 - a. Focus on leak areas within Parking Garage.

Refer to the summary table below for a complete listing of all of the deficiencies that will be repaired under this particular project and the associated cost of the three different types of repairs.

Plumbing repairs on this project will include new drainage systems below the West Plaza (section V. D.) and on top of the Upper West Planter (section V. E), drainage repairs for the walls in the Loading Dock area (V. F.), a relocated drain at the Southwest Plaza (section V. G.), and repaired trench drains in the Loading Dock Driveway (section V. H.).

In addition to the plumbing deficiencies, existing 8" cast iron storm piping is located near ramp locations in two areas which will need to be relocated to allow for the repairs in the area.

The incidental electrical work consists of removing fluorescent lighting fixtures, conduit and wiring and reinstalling or providing new within the area of work to allow access for the structural and waterproofing repairs.

There exists a fire suppression 6" sprinkler main as well as branch sprinkler piping located in the exit ramp areas that will need to be relocated to allow for the structural and waterproofing repairs. This will require a drain down of the sprinkler system. Disconnect the sprinkler main and sprinkler branch line. Provide a new temporary sprinkler main during the work. Fill the sprinkler system. Following the work, disconnect the sprinkler temporary main and provide a new sprinkler pipe in the original location along the wall. Sprinkler heads in the garage area should be provided with sprinkler guards where located in high traffic areas and when mounted below 7'-0".

2. Summary Table

The repairs included under Project #1 are as follows:

(b)(4)



B. LARGER CAPITAL PROJECT

1. Description

The larger capital project includes all other structural repair work in the Parking Garage, Loading Dock, the four wings of the building and the Lower Plaza areas. At the Loading Dock, this includes both new areas of ongoing concrete deterioration that have not been previously repaired and some repairs at existing patches that are delaminated. In the basement areas under the four wings and the Lower West Plaza, the structural work is largely related to ongoing water leaks through the basement walls, although there is one area of joist repair in the Southeast Wing. These were previously noted in the 2014 project documents, but there is some increase in quantity. At the Parking Garage, the repairs beyond the emergency project above include repairs previously noted in the 2014 repair project, though the quantities have increased. Below is a summary of the structural repairs grouped by area.

Loading Dock

- Overhead beam partial depth concrete repairs, both new areas and at existing repairs.

Estimated quantity:
900 SF



- Overhead slab partial depth concrete repairs, both new areas and at existing repairs.

Estimated quantity:
100 SF

- Column partial depth concrete repairs.

Estimated quantity:
40 SF

- Further areas requiring concrete repair may be uncovered where

waterproofing is removed on the topside of the slab.

Estimated quantity: Unknown, depending on waterproofing repairs.

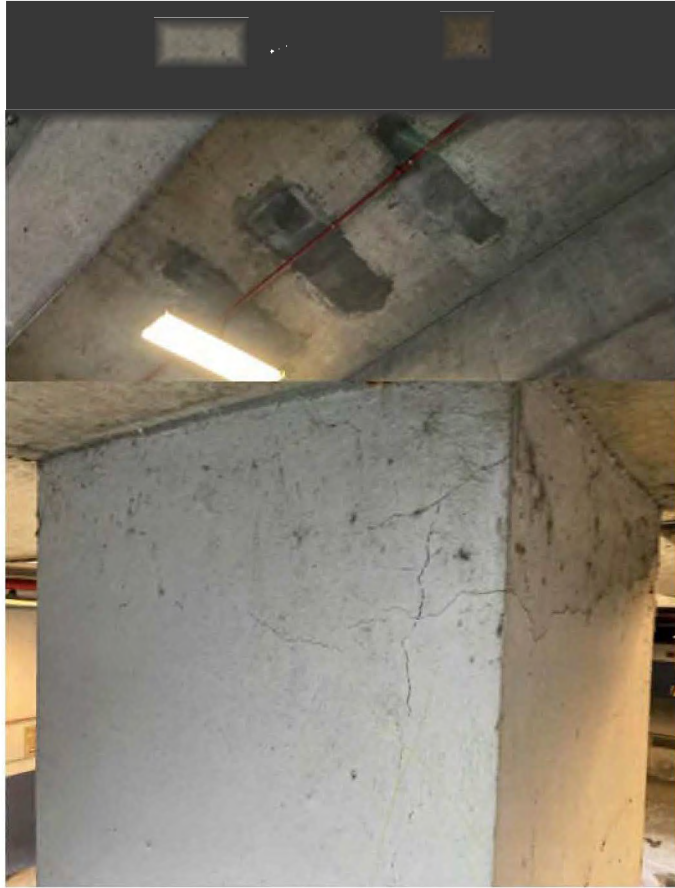
- A penetrating corrosion inhibitor should be applied to the underside of the existing plaza concrete beams, slabs, and columns to slow the rate of deterioration in the concrete framing.

Estimated quantity: 20,000 SF

Lower Plaza

- Limited amounts of partial depth vertical concrete repair at delaminated or spalled walls in conjunction with waterproofing repairs to cracks and joints.

Estimated quantity: 60 SF



- Areas requiring topside concrete repair of the slab may be uncovered where waterproofing is removed.

Estimated quantity: Unknown, depending on waterproofing repairs.

Southwest Wing

- Limited amounts of partial depth vertical concrete repair at delaminated or spalled walls in conjunction with waterproofing repairs to cracks and joints.

Estimated quantity: 60 SF

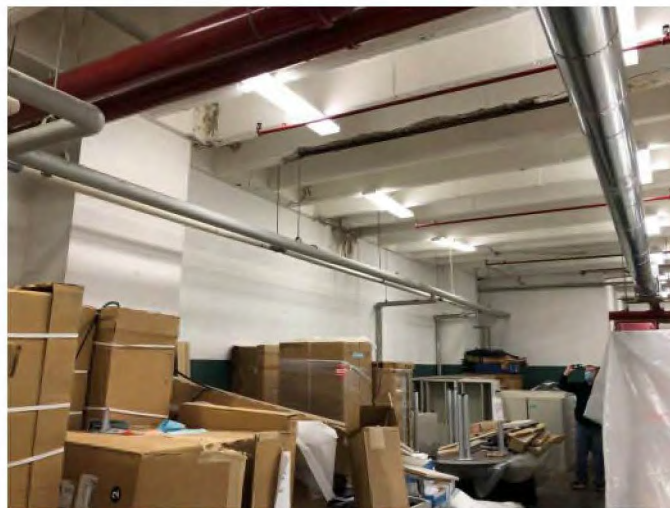
- Areas requiring topside concrete repair of the slab may be uncovered where waterproofing is removed.

Estimated quantity: Unknown, depending on waterproofing repairs.

Southeast Wing

- Limited amounts of partial depth vertical concrete repair at delaminated or spalled walls in conjunction with waterproofing repairs to cracks and joints.

Estimated quantity: 60 SF



- Some joist repairs are required at the basement level.

Estimated quantity: 80 LF of joist bottom repair in occupied space.

- Areas requiring topside concrete repair of the slab may be uncovered where waterproofing is removed.

Estimated quantity: Unknown, depending on waterproofing repairs.

Northeast Wing

- Limited amounts of partial depth vertical concrete repair at delaminated or spalled walls in conjunction with waterproofing repairs to cracks and joints.

Estimated quantity: 60 SF

- Areas requiring topside concrete repair of the slab may be uncovered where waterproofing is removed.

Estimated quantity: Unknown, depending on waterproofing repairs.

Northwest Wing

- Limited amounts of partial depth vertical concrete repair at delaminated or spalled walls in conjunction with waterproofing repairs to cracks and joints.

Estimated quantity: 60 SF

- Areas requiring topside concrete repair of the slab may be uncovered where waterproofing is removed.

Estimated quantity: Unknown, depending on waterproofing repairs.

Parking Garage

- Waffle slab joist bottom repairs. Generally, beyond the emergency repair area, the joist repairs are limited to the bottom of the joist.

Estimated quantity: 200 LF of joist bottom repair

- Waffle slab repairs. Due to the thinness of the concrete, waffle slab elements should be replaced full depth and the full width between joists.

Estimated quantity: 50 squares @2.5 ft x 2.5 ft each

- Underside beam repairs. Many of these are concentrated around the expansion joints around the perimeter of the garage.

Estimated quantity: 300 SF

- Underside partial depth repairs at column drop panels.

Estimated quantity: 300 SF

- Vertical partial depth concrete repairs at walls.

Estimated quantity: 300 SF

- Vertical partial depth concrete repairs at columns.

Estimated quantity: 150 SF

- Areas of remove and replace concrete slab on grade.

Estimated quantity: 1200 SF

- Rout and seal crack repairs at waffle slab and slab on grade.

Estimated quantity: 800 LF

- Remove and replace existing traffic membrane.

Estimated quantity: 50,000 SF

- Apply penetrating corrosion inhibitor to underside of waffle slab.

Estimated quantity: 100,000 SF

- Further areas requiring concrete repair may be uncovered where waterproofing is removed on the topside of the slab.

Estimated quantity: Unknown, depending on waterproofing repairs.

- As noted for the emergency repair project, sprinkler lines are often very close to the underside of slab, likely requiring temporary removal or re-routing.
- Similar problems arise in some areas around the perimeter of the garage where there is existing HVAC ductwork tight to the concrete

slab. These will require removal to make the concrete repairs and subsequent reinstallation.

Waterproofing repairs include the following:

A. Plaza waterproofing replacement:

- a. East Plaza: Remove and replace existing waterproofing and paving system, including removing planter assemblies. This should include waterproofing the foundation wall at the Lower Plaza.
 - i. Include deduct alternate to leave planters in place.
 - ii. East Plaza Expansion Joints: Remove existing expansion joint assemblies and install new expansion joints (Migutan by Emseal or equal) on elevated curbs structurally connected to the existing plaza structure.
- b. West Plaza: Remove and replace existing waterproofing paving system at Lower Plaza and Southwest Wing areas not repaired in 2014 waterproofing project.
 - iii. West Plaza Expansion Joints: Remove and reset “popped” expansion joint sections. Rebuild curb below and reflash expansion joint when reconstructed. Partially replace expansion joint glands, where found to be damaged. Repair paving removed to facilitate repairs.
 - iv. Seal exposed Upper West Planter wall with a clear, penetrating sealer. Replace plaza waterproofing east of the plaza expansion joint.

B. Install waterproofing membrane at Southeast Wing below bluestone paving.

- a. We recommend removing the Concrete Screen Wall from the Southeast Wing. Estimated quantity: 5,600 SF
- b. These should include the following miscellaneous waterproofing repair items;
 - v. Install three (3) plaza drains in the above area to improve drainage.
 - vi. Crack injection at below grade walls in Room B100.
 - vii. Two (2) Link Seals at storm water pipes in Room B100.

- viii. Replace ACT grid and panels around the area of the leak in B100 and B114.
- ix. Replace and paint the gypsum wallboard directly beneath the active leak in B100 and B114.

ESTIMATED QUANTITY: 63,100 SF

- C. Programmed urethane grout injection. The process generally consists of drilling a series of ports (holes) into the concrete structure that are aimed to intercept the leaking joints / cracks at the approximate midpoint of the foundation wall, then pumping a hydrophilic polyurethane grout into the cracks.

The mechanical work is incidental to the overall project effort, specifically the structural and waterproofing repairs, and generally consists of temporarily relocating supply and exhaust ductwork as well as perimeter fin tube heating water piping in various locations where repairs are needed. Ductwork sizes range from 10" runouts above lay-in tile ceiling areas to as large as 60"x36" and 96"x24" in the areas of structural and waterproofing repairs. Detailed location observations are included in Appendix B.

Southwest Sub-Basement Plumbing. This project replaces the existing sumps and related plumbing at the southwest sub-basement area with a working system. In addition, storm and sanitary piping (4" to 8" cast iron or PVC) will need to be relocated in several areas of work where structural and waterproofing repair are required to allow the work to be accomplished.

The incidental electrical work consists of removing fluorescent lighting fixtures, conduit and wiring and reinstalling or providing new within the area of work to allow access for the structural and waterproofing repairs. A separate lighting project should be considered to replace all garage fluorescent lighting with LED fixtures for maintenance and energy considerations.

Fire protection incidental work to allow for the structural and waterproofing repairs include relocating sprinkler piping and heads as well as fire alarm devices and conduit in some of the areas of work. Sprinkler heads in the garage area should be provided with sprinkler guards where located in high traffic areas and when mounted below 7'-0".

2. Summary Table

The repairs included under Project #2 are as follows:

(b)(4)



C. ALTERNATES

1. Add Alternate – LED Light Fixtures

As part of the Emergency Repair Project, incidental electrical work consists of removing fluorescent lighting fixtures, conduit and wiring and reinstalling or providing new within the area of work to allow access for structural and waterproofing repairs.

Add Alternate 1 covers removing fluorescent light fixtures on all three levels of the Parking Garage and replacing with LED fixtures.

(b)(4)

2. Add Alternate – East Plaza Canopies

The waterproofing project and Martha Schwartz art installation introduced the decorative plaza features seen today. These include the circular planters and canopies. During the feasibility survey, it was observed the fabric of the canopies has significantly deteriorated.

Add Alternate 2 covers replacing the fabric on all the canopies at the East Plaza.

(b)(4)

3. Deduct Alternate – East Plaza Waterproofing

Recommendations for the East Plaza include complete removal of the circular planters to replace the waterproofing at the structural slab level. The planters and canopies are considered an important part of the building aesthetic and removal will likely jeopardize that value.

Deduct Alternate 3 provides an approach to replacing the waterproofing at the East Plaza that incorporates the existing planters without removal. Further study of the feasibility and pros/cons of this potential approach should be studied during the plaza waterproofing replacement project design phase.

(b)(4)

APPENDIX A

REPORT KEY PLANS

Basement

Sub-Basement

Parking Level C

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of the Freedom of Information and Privacy Act

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APPENDIX B

MEPFP ISSUE INVENTORY

Summer Consultants Inventory of Issues

MEP Master plans

Mechanical and Plumbing

Electrical

Fire Protection

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Location 1-B (Basement – Loading Dock):

Floor: Basement

Building Location: West Side

Room Type: Loading Dock

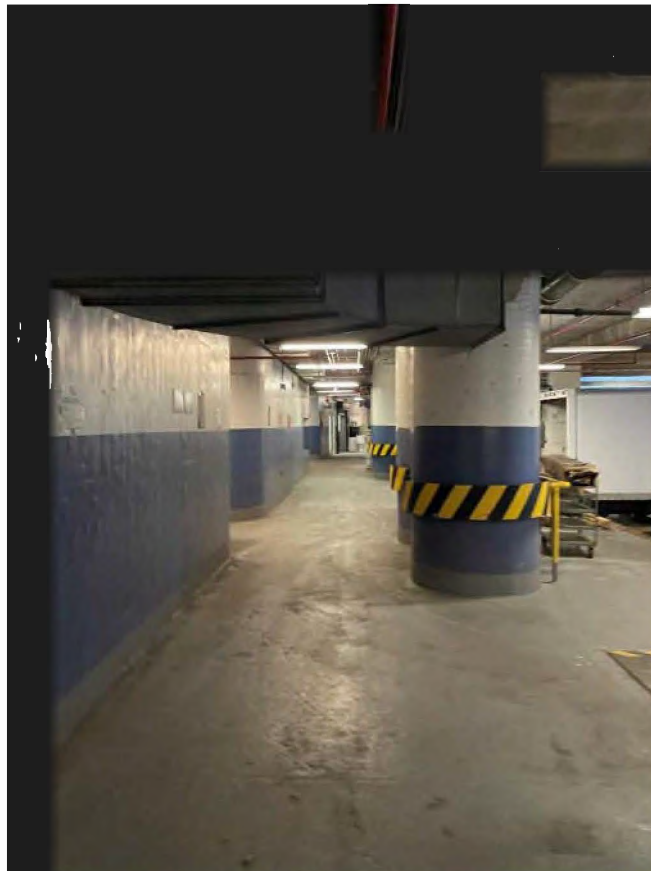
Type of Leak: Leak at ceiling expansion joint between plaza and edge of building above were described as the source of the water leaks.

Building Temporary Measure: It appears (and briefly discussed) that attempts at sealing this area above occurred in the past.

Mechanical/Plumbing Impact/Conflict: 10-12" C.I. Storm 6-8" below the underside of ceiling structure, approximately 1-2 feet in front of building / plaza expansion joint. Storm line serves area drains in plaza and appears to run the length of the expansion joint in the loading dock. (2) exposed metal ducts cross perpendicular to expansion joint at the north end of the loading dock. Both ducts travel below the C.I. Storm line at varying heights. Large duct is roughly 12-18" below storm. Smaller duct is roughly 0-6" below storm. Large duct appears to be roughly 96x24 and the smaller duct appears to be roughly 30x12.

Additional observations: No additional ceiling, slab to slab is exposed.

(IMG_4988)



.Location 3-B (Room B-100);

Floor: Basement

Building Location: Southeast Side

Room Type: Office

Type of Leak: Leaks through wall around (2) duct penetrations and possibly ceiling above were described as the source of water leaks.

Building Temporary Measure: Open up ceiling tiles directly below penetrations and placed plastic sheeting from above ceiling down wall to trash cans to catch water.

Mechanical/Plumbing Impact/Conflict: Small duct penetration is roughly 10-12" round. Large duct penetration appears to be 16-18" round. Additional large duct penetration(s) appear to be located further west along curved wall. Space above ceiling is limited in the area of the reported leak.

Additional observations: Room has suspended drop ceiling.

(IMG_4802)



Location 4-B (Room B-110):

Floor: Basement

Building Location: Southeast Side

Room Type: Fitness Center

Type of Leak: Cracks in the ceiling were described as the source of water leaks.

Building Temporary Measure: Metal pans above ceiling were installed.

Mechanical/Plumbing Impact/Conflict: Area of leaks appear to extend from entrance of space to backwall above bottle water storage area. Multiple Large Metal pans (we counted at least 3) are present below insulated branch ductwork in ceiling running in the same direction and above pans. Space above ceiling is very limited. Flexible duct connections to air devices nearby. Ductwork is blocking visibility to damage on slab above.

Additional observations: Room has suspended drop ceiling.

(IMG_4771, 4772)



.Location 5-B (Room B-114);

Floor: Basement

Building Location: Southeast Side

Room Type: Fitness Center

Type of Leak: Spalding and vertical penetration were described as the source of water leaks.

Building Temporary Measure: Metal pan above ceiling was installed.

Mechanical/Plumbing Impact/Conflict: Unknown uninsulated copper 1" (+/-) pipe penetration through oversized pipe penetration at area of leak. Roughly 16x12 uninsulated branch ductwork running in front of wall and leak location approximately 12" off the face of the columns and tight to structure above. Space is moderately open. Flexible duct connections to air devices nearby.

Additional observations: Room has suspended drop ceiling.

(IMG_4751)



.Location 7-B (Room B-114);

Floor: Basement

Building Location: Southeast Side

Room Type: Fitness Center

Type of Leak: Cracks in the ceiling were described as the source of water leaks.

Building Temporary Measure: Metal pan above ceiling was installed.

Mechanical/Plumbing Impact/Conflict: Roughly 16x12 uninsulated branch ductwork running under leak location approximately 12" off the face of the walls in the corner and tight to structure above. Ductwork and pan below ductwork appear to run the length of the back wall. Unknown uninsulated copper 1" (+/-) pipe cross area at angle. Exposed pipe runs between ductwork and metal pan at one point and then out into more open area above ceiling. Space is moderately open away from pan and duct. Flexible duct connections to air devices nearby. Ductwork is blocking visibility to damage on slab above.

Additional observations: Room has suspended drop ceiling.

(IMG_4734)



Location 16-B (Room B-182):

Floor: Basement

Building Location: Northeast Side

Room Type: Office

Type of Leak: Leaks through wall around main sewer/storm line penetrations were described as the source of water leaks.

Building Temporary Measure: Carpeting in area has been removed. Plastic rolling bin to catch water was present in room but not currently in use. Removeable damming material present at base of furred out wall below penetrations.

Mechanical/Plumbing Impact/Conflict: Sanitary main traveling through wall and over ceiling is approximately 8-10". Insulated Storm main traveling through wall and over ceiling is approximately 10-12". Terminal type unit located above ceiling with flex ducted connections to air devices, armaflex insulated branch piping and condensate drain piping is located 3-5 feet from wall penetration.

Additional observations: Room has suspended drop ceiling.

(IMG_4821, 4827)



.Location [Sub-Basement Storage SB-228];

Floor: Sub-Basement

Building Location: Southwest Side

Room Type: Storage

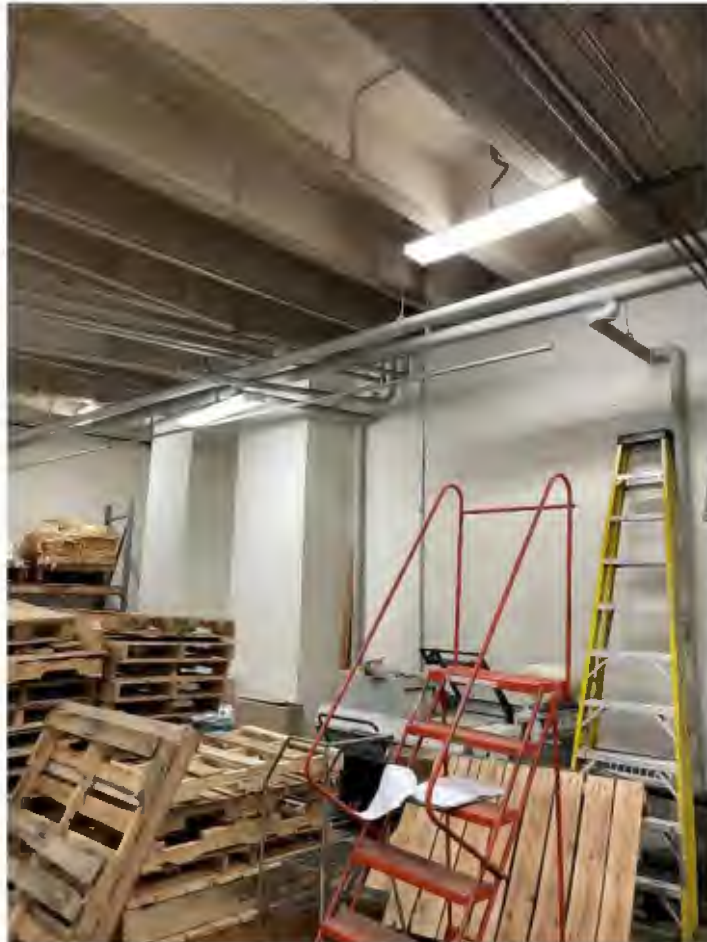
Type of Leak: Leaks on wall were described as the source of water leaks.

Building Temporary Measure: No current measures were observed in space near leak.

Mechanical/Plumbing Impact/Conflict: Vertical DX AC unit is located next to the location of the apparent leak on the wall. Associated equipment and lines serving unit are run vertically on wall at the location of the leak. An approximately 10 foot fin tube radiator with associated runouts is located near (3-5 feet away) apparent wall leak. Heating water branch mains are located roughly 3-4 feet from wall and roughly 2-3 feet below ceiling slab above.

Additional observations: No additional ceiling, slab to slab is exposed. Damage conduit and junction box is located below vertical lines serving unit.

(IMG_4845)



.Location 17-S (Sub-Basement – Storage Room);

Floor: Sub-Basement

Building Location: Southwest Side

Room Type: Storage

Type of Leak: Leaks down the columns were described as the source of water leaks.

Building Temporary Measure: Floor slab has been trenched (shallow cut out) from source of leaks to sump pit with pump.

Mechanical/Plumbing Impact/Conflict: Lower ceiling this area. Loading duct ramp is above. Roughly 60x36 duct is 6-12" below ceiling structure and is tight to corner columns.

Additional observations: No additional ceiling, slab to slab is exposed.

(IMG_4884)



Location 18-S (Sub-Basement - Generator Room):

Floor: Sub-Basement

Building Location: Southwest Side

Room Type: Storage

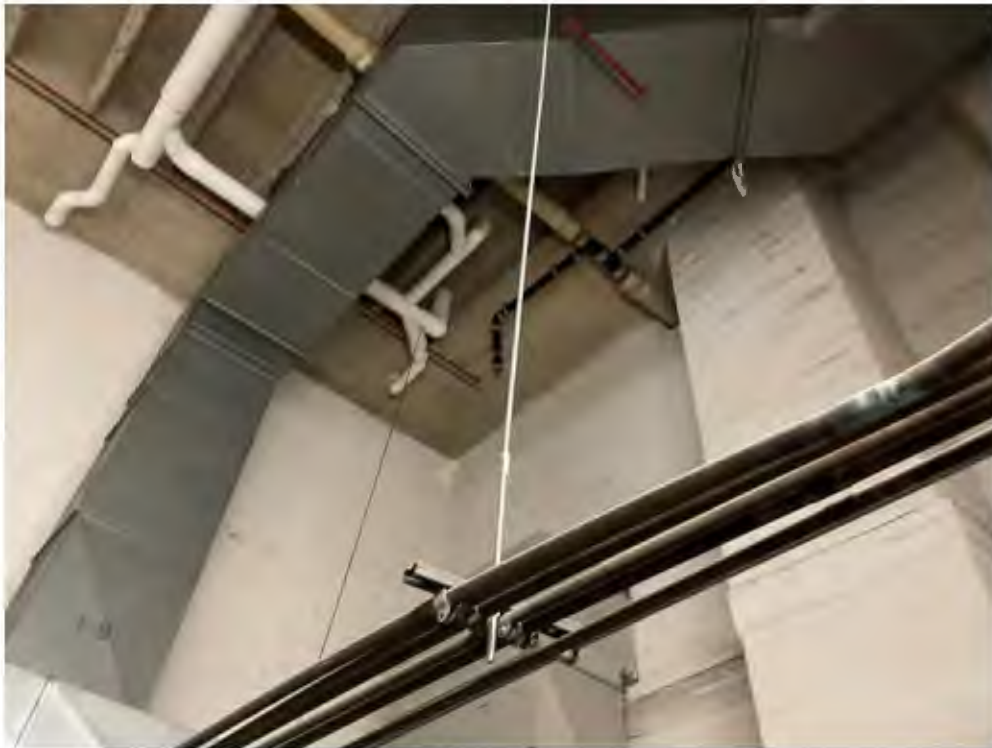
Type of Leak: Leaks on walls were described as the source of water leaks.

Building Temporary Measure: Floor slab has been trenched (shallow cut out) from source of leaks to sump pits with pumps.

Mechanical/Plumbing Impact/Conflict: Very high space. Storm / plumbing drainage piping tight to structure above present in northern bay. Space serves as emergency generator room and storage. Significant ducted mechanical systems are present in northern bay in NW corner access to walls in this area is limited.

Additional observations: No additional ceiling, slab to slab is exposed.

(IMG_4896)



Location 19-S (Sub-Basement - Open Storage):

Floor: Sub-Basement

Building Location: Southeast Side

Room Type: Storage

Type of Leak: Cracks and deterioration of concrete tees and ceiling are sources of water leaks in the area.

Building Temporary Measure: Plastic has been placed over stored items below.

Mechanical/Plumbing Impact/Conflict: A roughly 12" round (believe exhaust) duct run below (roughly 2-3 feet) and perpendicular to damaged concrete tees in center of space. Similarly domestic water mains (cw, hw, hwc) run below (roughly 2-3 feet) and perpendicular to damaged concrete tees in center of space. An approximately 10 foot fin tube radiator with associated runouts is located near (3-5 feet away) damaged upper wall areas. Heating water branch mains are located roughly 3-4 feet from wall and roughly 2-3 feet below ceiling slab above.

Additional observations: No additional ceiling, slab to slab is exposed.

(IMG_4836)



Location 20-S and 21-S (Sub-Basement - Northwest Side);

Floor: Sub-Basement

Building Location: Northwest Side

Room Type: Storage

Type of Leak: Leaks on walls were described as the source of water leaks.

Building Temporary Measure: Sump pit with pump has been located at the base of the wall where leak occurs.

Mechanical/Plumbing Impact/Conflict: Fin tube radiator with associated runouts is located near (3-5 feet away) damaged wall area. Heating water branch mains are located roughly 3-4 feet from wall and roughly 2-3 feet below ceiling slab above.

Additional observations: No additional ceiling, slab to slab is exposed.

(IMG_4966)



Location 20-S (Sub-Basement – Northwest Side):

Floor: Sub-Basement

Building Location: Northwest Side

Room Type: Storage

Type of Leak: Leaks on walls were described as the source of water leaks.

Building Temporary Measure: No current measures were observed in space near leak.

Mechanical/Plumbing Impact/Conflict: An approximately 10-12 foot fin tube radiator is located below damaged wall area. Heating water runouts travel to wall and vertically on wall.

Additional observations: No additional ceiling, slab to slab is exposed.

(IMG_4977)



Location 22-S (Sub-Basement - Open Storage):

Floor: Sub-Basement

Building Location: West Side

Room Type: Storage

Type of Leak: Cracks on wall were described as the primary source of water leaks. Ceiling Expansion joint material appears to have mostly fallen out above for some distance.

Building Temporary Measure: Sump pit with pump has been located at the base of the wall where primary wall leak occurs. Floor slab has been trenched (shallow cut out) for some distance below exposed ceiling expansion joint to sump pit with pump. Large funnel type drain appears high below ceiling expansion joint at wall and is piped to sump.

Mechanical/Plumbing Impact/Conflict: A continuous run of fin tube radiation is located between columns at wall below damaged wall area. Heating water supply branch main and loop is located roughly 3-4 feet from wall and roughly 2-3 feet below ceiling slab above. Additional pipe and duct crossing exist below the exposed ceiling expansion joint but beyond the extent of the shallow trench cut out.

Additional observations: No additional ceiling, slab to slab is exposed. Fin tube radiation housing is significant deterioration below wall leak.

(IMG_4940)



Location 23-S (Sub-Basement - Open Storage):

Floor: Sub-Basement

Building Location: West Side

Room Type: Storage

Type of Leak: Leaks on wall were described as the source of water leaks.

Building Temporary Measure: Sump pit with pump has been located at the base of the wall where leak occurs.

Mechanical/Plumbing Impact/Conflict: Heating water supply branch main is located roughly 3-4 feet from wall and roughly 2-3 feet below ceiling slab above.

Additional observations: No additional ceiling, slab to slab is exposed.

(IMG_4925)



Location 15-LA (A Garage – North Exit);

Floor: Basement (GARAGE A Level)

Building Location: East Side (North end)

Room Type: Garage

Type of Leak: Leaks coming down wall in this area were described as the source of the water leaks. (Believe it is related to the ceiling expansion joint between plaza and edge of building above)

Building Temporary Measure: It appears that a metal gutter system has been installed below the entire length of the ceiling expansion joint between plaza and edge of building above.

Mechanical/Plumbing Impact/Conflict: Roughly 24x12 insulated duct tight to ceiling beam slab structure, approximately 1-2 feet in front of wall in garage. Metal gutter is next to duct on the garage side approximately 2-3 from wall.

Additional observations: No additional ceiling, slab to slab is exposed.

(IMG_5017)



Location 8-LA (A Garage – South Exit);

Floor: Basement (GARAGE A Level)

Building Location: East Side (South end)

Room Type: Garage

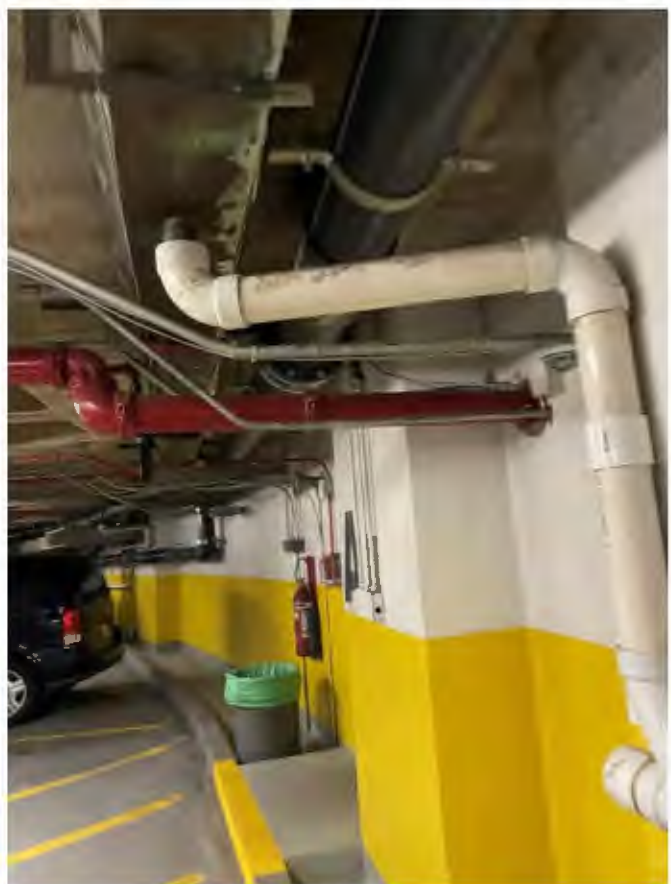
Type of Leak: Leaks coming down wall in this area were described as the source of the water leaks. (Believe it is related to the ceiling expansion joint between plaza and edge of building above)

Building Temporary Measure: It appears that a metal gutter system has been installed below the entire length of the ceiling expansion joint between plaza and edge of building above.

Mechanical/Plumbing Impact/Conflict: Roughly 8-10" black PVC (? Storm pipe) pipe tight to ceiling beam slab structure, approximately 1-2 feet in front of wall in garage. Metal gutter is next to duct on the garage side approximately 2-3 from wall.

Additional observations: No additional ceiling, slab to slab is exposed.

{IMG_5032, 5040}



Location 9-LA (A Garage – MER):

Floor: Basement (GARAGE A Level)

Building Location: East Side

Room Type: MER

Type of Leak: Leaks appear to come from cracks in ceiling above in two locations were described as the source of the water leaks. Ponding water in the back corner where fire/storm pipe risers travel vertically appears to migrate down to C level.

Building Temporary Measure: metal gutters have been installed at the wall below the entire length of the ceiling.

Mechanical/Plumbing Impact/Conflict: 4" CI storm pipe traveling horizontally approximately 12-16" below ceiling and 8-12" below metal gutter. 4" CI storm pipe traveling vertically from A to C level (believe is vertical water path along with large fire pipe to levels below).

Additional observations: No additional ceiling, slab to slab is exposed.

(IMG_5064)



Location 10-LA (A Garage – South Ramp):

Floor: Basement (GARAGE A Level)

Building Location: East Side

Room Type: Garage Ramp

Type of Leak: Leaks appear to come from significant structural cracking and deterioration of overhead concrete beam(s) and ceiling at the transition of the garage floor and the ramp.

Building Temporary Measure: Area has been coned and taped off. Temporary reinforcing of beam at the transition was installed. No current measures appear to be taken for leaks here.

Mechanical/Plumbing Impact/Conflict: 8" C.I. Storm tight to ceiling beam slab structure, approximately 1-2 feet in front of damaged area in garage.

Additional observations: No additional ceiling, slab to slab is exposed.

(IMG_5079)



.Location 8-LB (B Garage – South Exit):

Floor: Basement (GARAGE B Level)

Building Location: East Side (South end)

Room Type: Garage

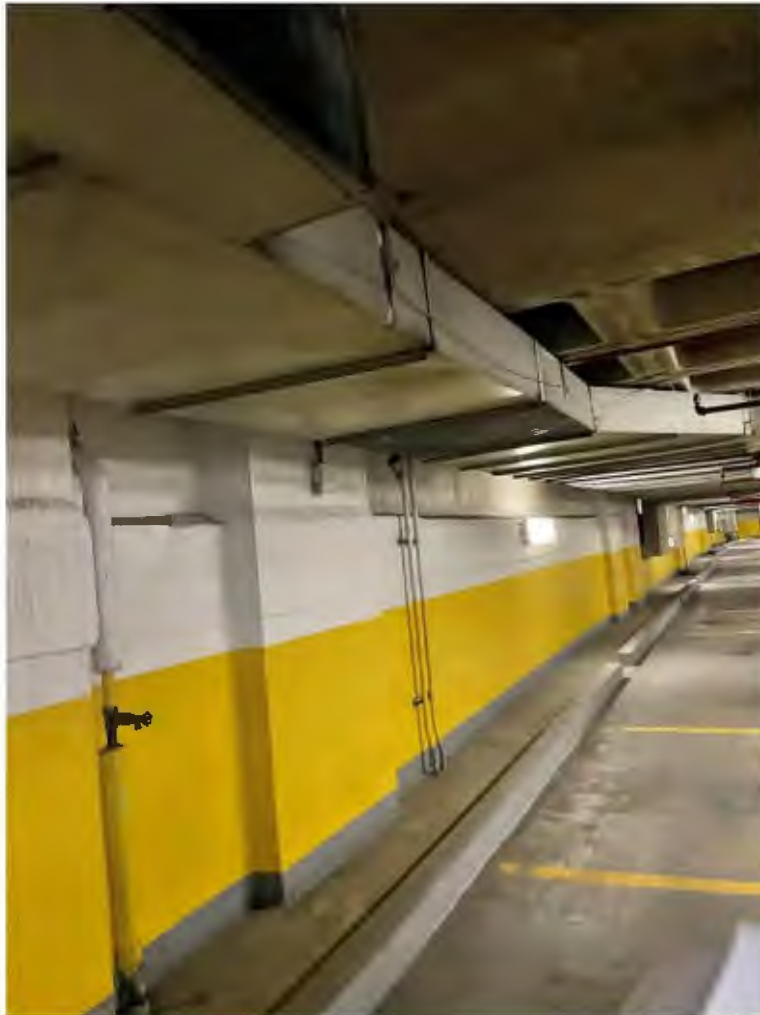
Type of Leak: Leaks appear to be coming down wall in this area where concrete ceiling slab meets the wall. Leaks appear to be related to location on A level.

Building Temporary Measure: No current measures appear to be taken for leaks here.

Mechanical/Plumbing Impact/Conflict: Roughly 96x24 duct tight to ceiling beam slab structure, approximately 2-3 feet in front of wall in garage.

Additional observations: No additional ceiling, slab to slab is exposed.

(IMG_5215)



Location 15-LB (B Garage – North Exit):

Floor: Below Sub-Basement (GARAGE C Level)

Building Location: East Side (North end)

Room Type: Garage

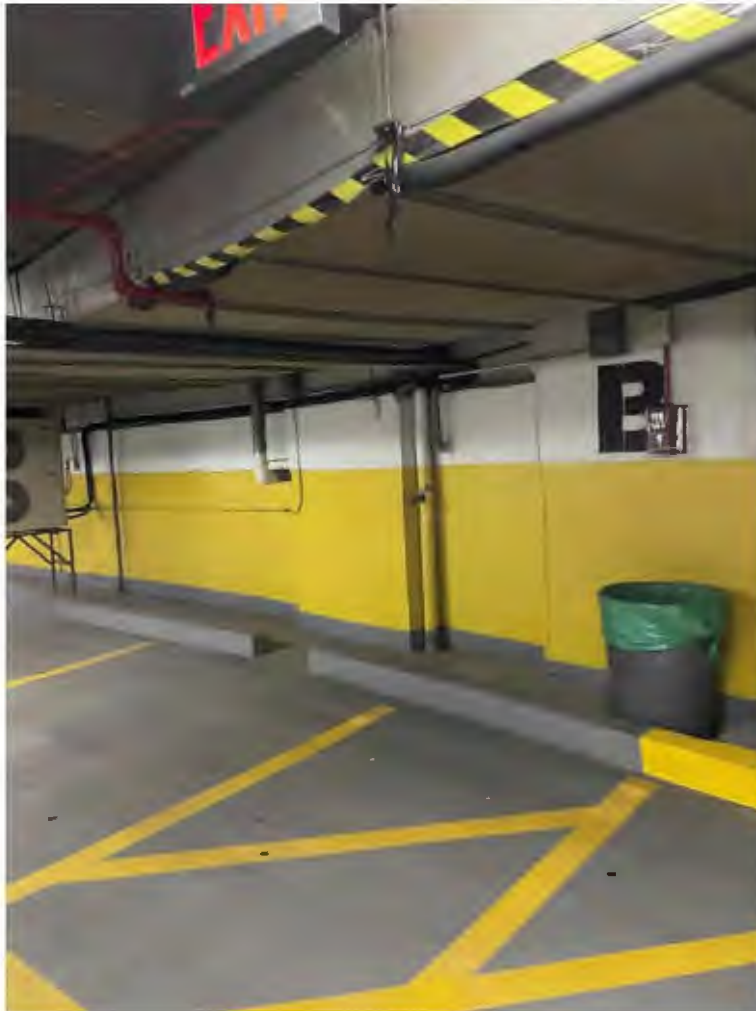
Type of Leak: Leaks appear to be coming down wall in this area where concrete ceiling slab meets the wall. Leaks appear to be related to location on A level.

Building Temporary Measure: No current measures appear to be taken for leaks here.

Mechanical/Plumbing Impact/Conflict: Roughly 96x24 duct tight to ceiling beam slab structure, approximately 2-3 feet in front of wall in garage.

Additional observations: No additional ceiling, slab to slab is exposed.

(IMG_5234)



Location 13-LA (A Garage – Guard Room);

Floor: Basement (GARAGE A Level)

Building Location: East Side

Room Type: Parking Office

Type of Leak: Low leak appears to have damaged the floor along the back wall of space. Ceiling and wall do not appear to be damaged

Building Temporary Measure: No current measures appear to be taken for leaks here.

Mechanical/Plumbing Impact/Conflict: Electric baseboard heating unit above damaged floor area.

Additional observations: Room has suspended drop ceiling.

(IMG_5280)



Location 14-LA (A Garage – North Ramp):

Floor: Basement (GARAGE A Level)

Building Location: East Side

Room Type: Garage Ramp

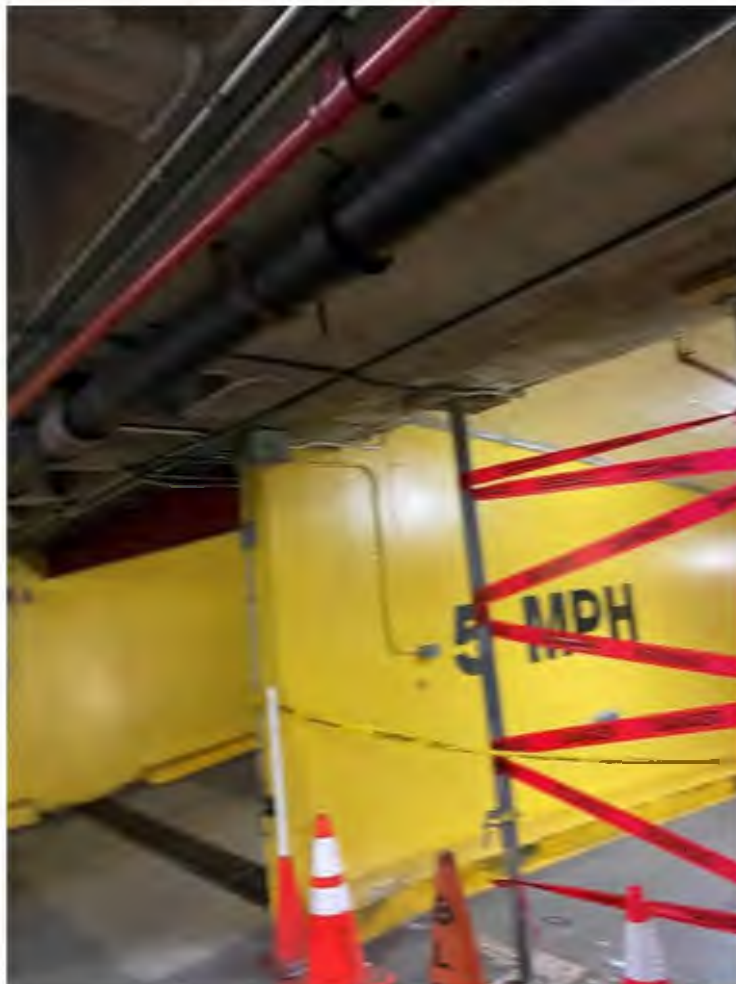
Type of Leak: Leaks appear to come from significant structural cracking and deterioration of overhead concrete beam at the transition of the garage floor and the ramp. Damage and leaks appear to occur only on the western most ramp transition.

Building Temporary Measure: Area has been coned and taped off. Temporary reinforcing of beam at the transition was installed on the western most ramp transition only. No current measures appear to be taken for leaks here.

Mechanical/Plumbing Impact/Conflict: 8" C.I. Storm tight to ceiling beam slab structure, approximately 3-4 feet in front of damaged area in garage.

Additional observations: No additional ceiling, slab to slab is exposed.

(IMG_5261)



Location 1-B (Basement - Loading Dock)

Existing Conditions:

The loading dock is protected by a sprinkler system. A 4" sprinkler main crosses the loading dock to building joint. The 4" sprinkler line protects the loading dock.



Recommendations:

Disconnect and remove the 4" sprinkler line. Provide a new sprinkler line along the wall away from the joint and provide a temporary connection until the work is complete. Remove the temporary pipe and install the main back in its current location.

Location 4-B (Room B-110)

Existing Conditions:

A 2.5" corroded schedule 10 black steel sprinkler cross main runs parallel to the leak capture trays between the tray along the room rear wall. Red fire alarm $\frac{3}{4}$ " conduit runs perpendicular.



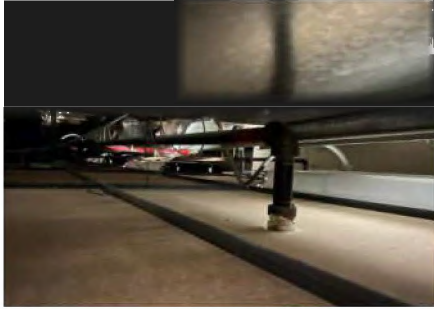
Recommendation:

Remove the corroded 2" cross main and connections to branch lines. Remove the fire alarm conduit and disconnect from existing notification appliances. Cap the sprinkler main. Reconnect the fire alarm equipment following the waterproofing work. Replace the sprinkler main which has been corroded and reconnect to existing branch lines following water proofing. Provide fire watch while sprinkler and fire alarm system are out of service.

Location 7-B (Room B-114-1)

Existing Condition:

A single 5.6 k-factor sprinkler is located under the metal water catch pan. The 1" black sprinkler line elbows down just inches above the ceiling. The line runs back to a red cross sprinkler main towards the room entrance.



Recommendation:

Drain and disconnect the fusible link ordinary temperature sprinkler from the cross main. Take the 1" sprinkler line down back to the cross main. Cap the line and recharge the sprinkler during the patching. Save the sprinkler pipe for reinstallation. Provide a new sprinkler with matching k-factor. Provide fire watch.

Location (Sub-Basement - Storage SB-228)

Existing Conditions:

A 1" sprinkler branch and sprinkler are located adjacent to the area of waterproofing. The sprinkler is located over 5 feet from the wall. There is no fire alarm equipment.

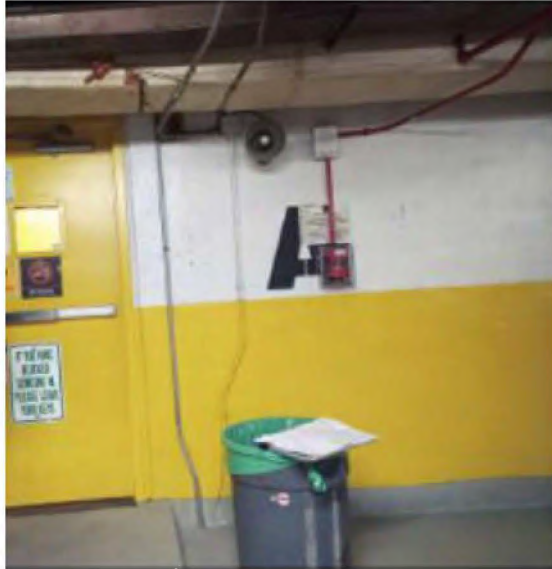


Recommendations: Protect existing sprinkler piping during structural and fireproofing repairs.

Location 15-LA (A Garage North Exit)

Existing Conditions:

A speaker and manual pull station is located on the wall. A conduit runs under the drip pan to the equipment. A sprinkler and 1" branch line is adjacent to the drip pan.



Recommendations:

Depending on the work, the equipment could require removal. The equipment could also be worked around in the right condition. Protect existing equipment to allow for structural and waterproofing repairs.

Location 17-S (Sub-Basement – Storage Room)

Existing Conditions:

A 1" sprinkler line and sprinkler is located under the duct but over 5 feet from the waterproofing section. The sprinkler and branch line will need to be removed if the duct must be removed to correct the waterproofing. There is no fire alarm equipment.



Recommendations:

Remove sprinkler and branch line since ductwork will be removed. Cap branch line and recharge sprinkler system. Provide fire watch during outage. Provide new sprinkler and locate existing branch line back under the ductwork.

Location 20-S (Sub-Basement - Northwest Side-2)

Existing Conditions:

A sprinkler auxiliary drain is located on the wall. The exact location of the water proofing issue was not obvious during survey.



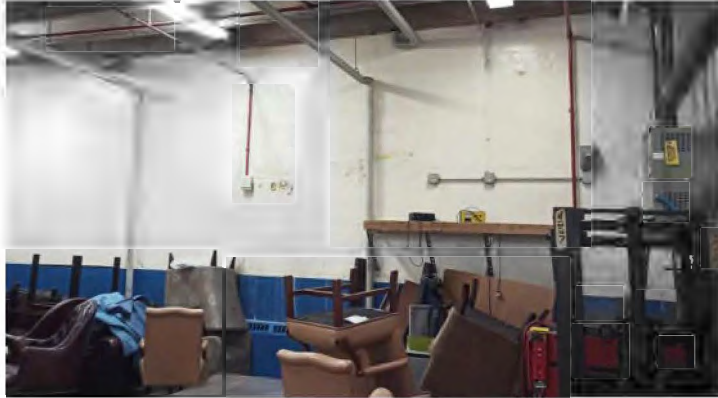
Recommendations:

Remove the sprinkler drain after removing water from the system. Cap drain during work. Provide fire watch during outage. Reinstall existing drain following the work.

Location 21-S (Sub-Basement - Northwest Side-1)

Existing Conditions:

A notification appliance with conduit is located on the wall.



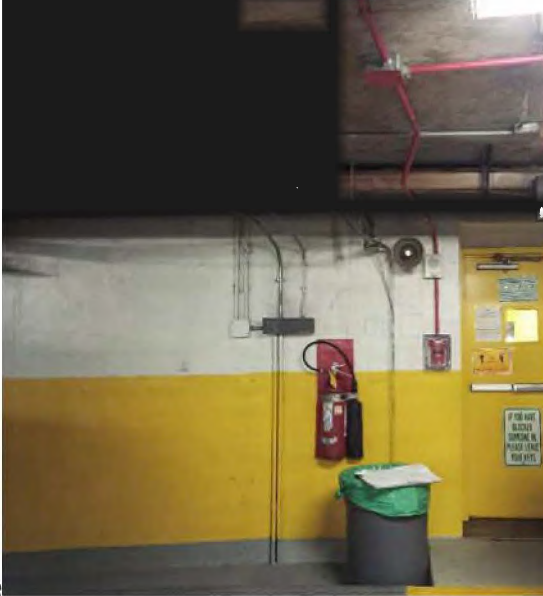
Recommendations:

Depending on the waterproofing correction location, remove the notification appliance and conduit. Reinstall the fire alarm equipment following the work.

Location 8-LA (A Garage South Exit)

Existing Conditions:

A speaker and manual pull station is located on the wall. A conduit runs under the drip pan to the equipment. A sprinkler and 1" branch line is adjacent to the drip pan.



Recommendations:

Depending on the work, the equipment could require removal. The equipment could also be worked around in the right condition. If the equipment cannot be worked around, disconnect and remove the equipment and replace following installation.

Location 9-LA (A Garage MER)

Existing Conditions:

The garage has multiple incoming water lines. There are two 6" fire protection water lines. Neither water line is adjacent to the water proofing, however, there is substantial exterior corrosion.



Recommendations:

Drain down the fire suppression system. Replace the corroded pipe. Provide new fire suppression pipe.

Location 10-LA (Garage A South Ramp)

Existing Conditions:

The fire suppression 6" sprinkler main is located right across the exit. Depending on the waterproofing location a sprinkler main also may need to be addressed.



Recommendations:

Drain down the sprinkler system. Disconnect the sprinkler main and sprinkler branch line. Provide a new temporary sprinkler main during the work. Fill the sprinkler system. Following the work, disconnect the sprinkler temporary main and provide a new sprinkler pipe in the original location along the wall.

Location 11-LA (A Garage Ramp)

Existing Conditions:

A sprinkler branch line goes down the entire ramp. There are seven sprinklers down the ramp.



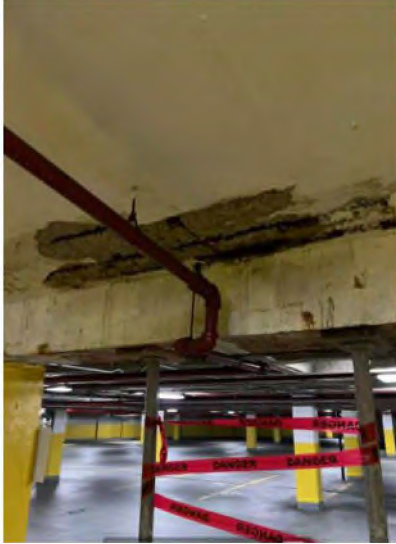
Recommendations:

The sprinkler system will be drained down. The branch line will need to be disconnected and removed. A fire watch will need to be provided during the water proofing. A new sprinkler branch line and sprinklers will need to be provided. Sidewall sprinklers and routing the sprinkler main along the wall, ceiling is suggested.

Location 14-LB (B Garage North Ramp)

Existing Conditions:

A sprinkler branch line goes down the entire ramp. There are seven sprinklers down the ramp. This is the same branch line as location 19.



Recommendations:

The sprinkler system will be drained down. The branch line will need to be disconnected and removed. A fire watch will need to be provided during the water proofing. A new sprinkler branch line and sprinklers will need to be provided. Sidewall sprinklers and routing the sprinkler main along the wall, ceiling is suggested.

Location 10-LC (C Garage South Ramp)

Existing Conditions:

A sprinkler branch line goes down the entire ramp. There are seven sprinklers down the ramp.



Recommendations:

The sprinkler system will be drained down. The branch line will need to be disconnected and removed. A fire watch will need to be provided during the water proofing. A new sprinkler branch line and sprinklers will need to be provided. Sidewall sprinklers and routing the sprinkler main along the wall, ceiling is suggested.

Location 8-LC (C Garage South Exit)

Existing Conditions:

A speaker and manual pull station is located on the wall. A conduit runs under the drip pan to the equipment.



Recommendations:

Depending on the work, the equipment could require removal. The equipment could also be worked around in the right condition. If the equipment cannot be worked around, disconnect and remove the equipment and replace following installation.

Location 15-LC [C Garage North Exit]

Existing Conditions:

A speaker and manual pull station is located on the wall. A conduit runs under the drip pan to the equipment.



Recommendations:

Depending on the work, the equipment could require removal. The equipment could also be worked around in the right condition. If the equipment cannot be worked around, disconnect and remove the equipment and replace following installation.

Location 14-LC (C Garage North Ramp)

Existing Conditions:

A sprinkler branch line goes down the entire ramp. There are seven sprinklers down the ramp.



Recommendations:

The sprinkler system will be drained down. The branch line will need to be disconnected and removed. A fire watch will need to be provided during the water proofing. A new sprinkler branch line and sprinklers will need to be provided. Sidewall sprinklers and routing the sprinkler main along the wall, ceiling is suggested.

Location 10-LB (B Garage South Ramp)

Existing Conditions:

The Sprinkler main is 6".



Recommendations:

The sprinkler main will need to be removed to correct the concrete condition and waterproof. The sprinkler system will be drained down. The sprinkler main and branch line will need to be disconnected and removed. A fire watch will need to be provided during the water proofing. A new sprinkler branch line and sprinklers will need to be provided. Sidewall sprinklers and routing the sprinkler main along the wall, ceiling is suggested.

Location 8-LB (B Garage South Exit)

Existing Conditions:

A speaker and manual pull station is located on the wall. A conduit runs under the drip pan to the equipment.



Recommendations:

Disconnect and remove the fire alarm equipment and replace following installation. Provide a fire watch during outage. Reuse and reinstall the existing equipment.

Location 15-LB (B Garage North Exit)

Existing Conditions:

A speaker and manual pull station is located on the wall. A conduit runs under the drip pan to the equipment.



Recommendations:

Disconnect and remove the fire alarm equipment and replace following installation. Provide a fire watch during outage. Reuse and reinstall the existing equipment.

.Location 12-LA (A Garage Ramp)

Existing Conditions:

A sprinkler branch line goes down the entire ramp. There are seven sprinklers down the ramp.



Recommendations:

The sprinkler system will be drained down. The branch line will need to be disconnected and removed. A fire watch will need to be provided during the water proofing. A new sprinkler branch line and sprinklers will need to be provided. Sidewall sprinklers and routing the sprinkler main along the wall, ceiling is suggested.

Location 14-LA (A Garage North Ramp)

Existing Conditions:

A sprinkler branch line goes down the entire ramp. There are seven sprinklers down the ramp.



Recommendations:

The sprinkler system will be drained down. The branch line will need to be disconnected and removed. A fire watch will need to be provided during the water proofing. A new sprinkler branch line and sprinklers will need to be provided. Sidewall sprinklers and routing the sprinkler main along the wall, ceiling is suggested.

Location 1-B (Basement - Loading Dock)

Existing Conditions:

There are (6) pendant mounted fluorescent lighting fixtures within the area of work to be performed. The lighting fixtures are functional. There is no other electrical or telecommunications wiring in the proposed area of work.



Recommendations:

Disconnect and remove the (6) closest pendant mounted fluorescent lighting fixtures with the area of work. Carefully tag and protect the existing branch circuit wiring for reuse. After the work of the project is complete, provide (6) pendant mounted fluorescent lighting fixtures to match the existing style and type, and install them at the original locations. Connect them to operate as before.

No work is recommended at this location associated with the telecommunications wiring.

Location 3-B (Room B-100)

Existing Conditions:

There is (1) recess mounted compact fluorescent lighting fixture located within the area of work to be performed. The lighting fixture is functional. There is a handful of telecommunications cables that are passing through the area of work.



Recommendations:

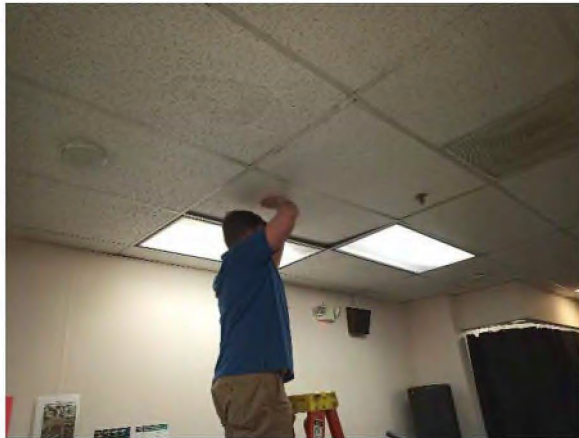
Disconnect and remove the closest recess mounted compact fluorescent lighting fixture to the area of work. Carefully tag and protect the existing branch circuit wiring for reuse. After the work of the project is complete, and the suspended ceiling is repaired, provide (1) compact fluorescent lighting fixture to match the existing style and type, and install it at the original location. Connect it to operate as before.

Carefully pull back and temporarily support all existing telecommunications cables out of the way of the work of the project. If sufficient slack in the existing cables does not exist for them to be significantly pulled away from the area or work, trace the existing telecommunications to both ends. Carefully disconnect each existing telecommunications cable. Remove the cable and tag each end. After the work of the project is complete, provide new telecommunications cables to match the characteristics of the existing cables removed. At this location, estimate a total of (6) existing cables of 75' each.

Location 4-B (Room B-110)

Existing Conditions:

There are (2) 2'x4' recess mounted fluorescent lighting fixtures and one 4' long surface mounted fluorescent lighting fixture in and on the ceiling around the area of work to be performed. The lighting fixtures are functional. There is no other electrical or telecommunications wiring in the ceiling at this location.



Recommendation:

Disconnect and remove the (3) closest fluorescent lighting fixtures to the area of work. Carefully tag and protect the existing branch circuit wiring for reuse. After the work of the project is complete, and the suspended ceiling is repaired, provide (2) recess mounted and (1) surface mounted fluorescent lighting fixtures to match the existing style and type, and install them at the original locations. Connect them to operate as before.

No work is recommended at this location associated with the telecommunications wiring.

Location 5-B (Room B-114)

Existing Condition:

There are (2) 2'x4' recess mounted fluorescent lighting fixtures in the ceiling in or around the area of work to be performed. The lighting fixtures are functional. There is no other electrical or telecommunications wiring in the ceiling at this location.



Recommendation:

Disconnect and remove the (2) closest recess mounted lighting fixtures to the area of work. Carefully tag and protect the existing branch circuit wiring for reuse. After the work of the project is complete, and the suspended ceiling is repaired, provide (2) fluorescent lighting fixtures to match the existing style and type, and install them at the original locations. Connect them to operate as before.

No work is recommended at this location associated with the telecommunications wiring.

Location 7-B (Room B-114-1)

Existing Condition:

There are (2) 2'x4' recess mounted fluorescent lighting fixtures in the ceiling in or around the area of work to be performed. The lighting fixtures are functional. There is no other electrical or telecommunications wiring in the ceiling at this location.



Recommendation:

Disconnect and remove the (2) closest recess mounted lighting fixtures to the area of work. Carefully tag and protect the existing branch circuit wiring for reuse. After the work of the project is complete, and the suspended ceiling is repaired, provide (2) fluorescent lighting fixtures to match the existing style and type, and install them at the original locations. Connect them to operate as before.

No work is recommended at this location associated with the telecommunications wiring.

Location 16-B (Room B-182)

Existing Conditions:

There is (1) 2'x4' recess mounted fluorescent lighting fixture within the area of work to be performed. The lighting fixture is functional. The recess mounted protector screen does not appear to be electric. There is no other electrical or telecommunications wiring in the ceiling at this location.



Recommendations:

Disconnect and remove the closest recess mounted fluorescent lighting fixture within the area of work. Carefully tag and protect the existing branch circuit wiring for reuse. After the work of the project is complete, and the suspended ceiling is repaired, provide a recess mounted fluorescent lighting fixture to match the existing style and type, and install it at the original location. Connect it to operate as before.

No work is recommended at this location associated with the telecommunications wiring.

Location 19-S (Sub-Basement - Open Storage)

Existing Conditions:

There are (2) pendant mounted fluorescent lighting fixtures within the area of work to be performed. The lighting fixtures are functional. There is no other electrical or telecommunications wiring in the proposed area of work.



Recommendations:

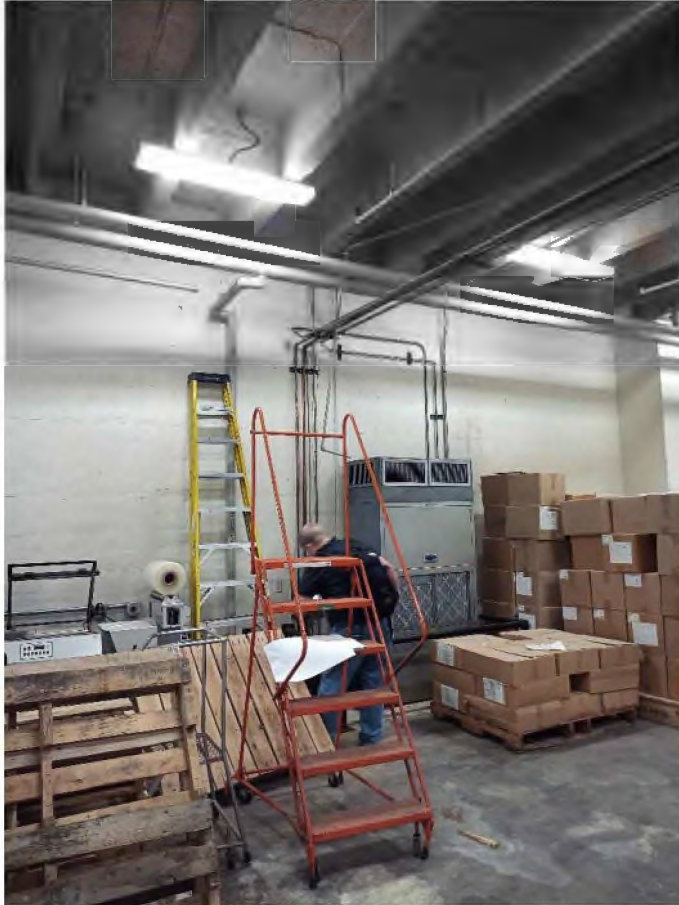
Disconnect and remove the (2) closest pendant mounted fluorescent lighting fixtures with the area of work. Carefully tag and protect the existing branch circuit wiring for reuse. After the work of the project is complete, provide (2) pendant mounted fluorescent lighting fixtures to match the existing style and type, and install them at the original locations. Connect them to operate as before.

No work is recommended at this location associated with the telecommunications wiring.

Location (Sub-Basement - Storage SB-228)

Existing Conditions:

There is (1) pendant mounted fluorescent lighting fixture within the area of work to be performed. The lighting fixture is functional. There is a mechanical unit location directly below the proposed area of work. There is no other electrical or telecommunications wiring in the proposed area of work.



Recommendations:

Disconnect and remove the closest pendant mounted fluorescent lighting fixture within the area of work. Carefully tag and protect the existing branch circuit wiring for reuse. After the work of the project is complete, provide a pendant mounted fluorescent lighting fixture to match the existing style and type, and install it at the original location. Connect it to operate as before.

Provide a hard physical barrier about the existing mechanical unit and all of the existing electrical conduit to protect it from the concrete work of the project.

No work is recommended at this location associated with the telecommunications wiring.

Location 20-S (Sub-Basement - Northwest Side-2)

Existing Conditions:

There are (2) pendant mounted fluorescent lighting fixtures within the area of work to be performed. The lighting fixtures are functional. There is no other electrical or telecommunications wiring in the proposed area of work.



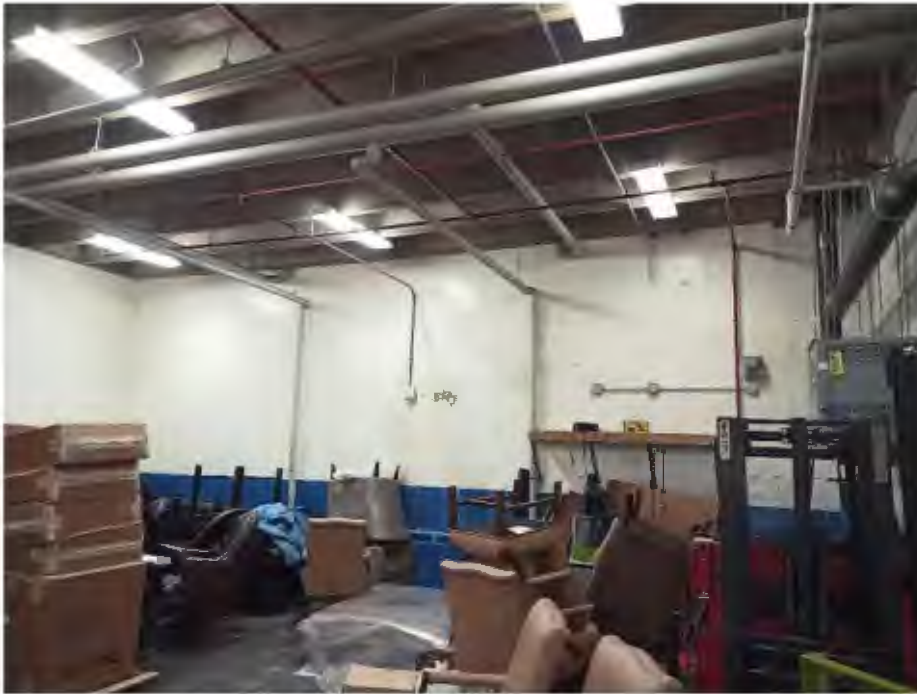
Recommendations:

Disconnect and remove the (2) closest pendant mounted fluorescent lighting fixtures with the area of work. Carefully tag and protect the existing branch circuit wiring for reuse. After the work of the project is complete, provide (2) pendant mounted fluorescent lighting fixtures to match the existing style and type, and install them at the original locations. Connect them to operate as before.

No work is recommended at this location associated with the telecommunications wiring.

Location 21-S (Sub-Basement - Northwest Side-1)**Existing Conditions:**

There are (2) pendant mounted fluorescent lighting fixtures within the area of work to be performed. The lighting fixtures are functional. There is no other electrical or telecommunications wiring in the proposed area of work.

**Recommendations:**

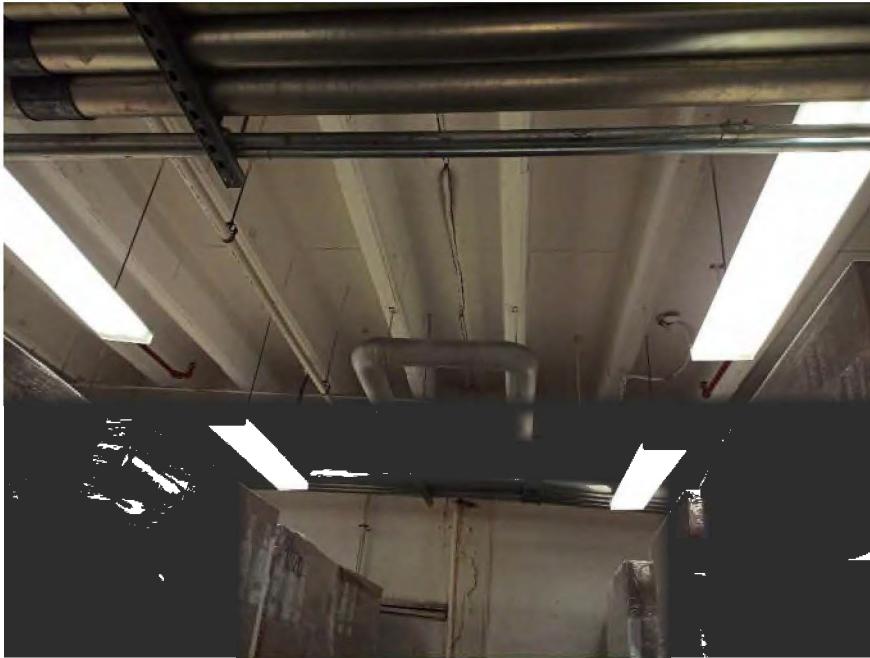
Disconnect and remove the (2) closest pendant mounted fluorescent lighting fixtures with the area of work. Carefully tag and protect the existing branch circuit wiring for reuse. After the work of the project is complete, provide (2) pendant mounted fluorescent lighting fixtures to match the existing style and type, and install them at the original locations. Connect them to operate as before.

No work is recommended at this location associated with the telecommunications wiring.

Location 22-S (Sub-Basement - Open Storage-2)

Existing Conditions:

There are (2) pendant mounted fluorescent lighting fixtures within the area of work to be performed. The lighting fixtures are functional. There is no other electrical or telecommunications wiring in the proposed area of work.



Recommendations:

Disconnect and remove the (2) closest pendant mounted fluorescent lighting fixtures with the area of work. Carefully tag and protect the existing branch circuit wiring for reuse. After the work of the project is complete, provide (2) pendant mounted fluorescent lighting fixtures to match the existing style and type, and install them at the original locations. Connect them to operate as before.

No work is recommended at this location associated with the telecommunications wiring.

Location 23-S (Sub-Basement - Open Storage-1)

Existing Conditions:

There are (2) pendant mounted fluorescent lighting fixtures within the area of work to be performed. The lighting fixtures are functional. There is no other electrical or telecommunications wiring in the proposed area of work.



Recommendations:

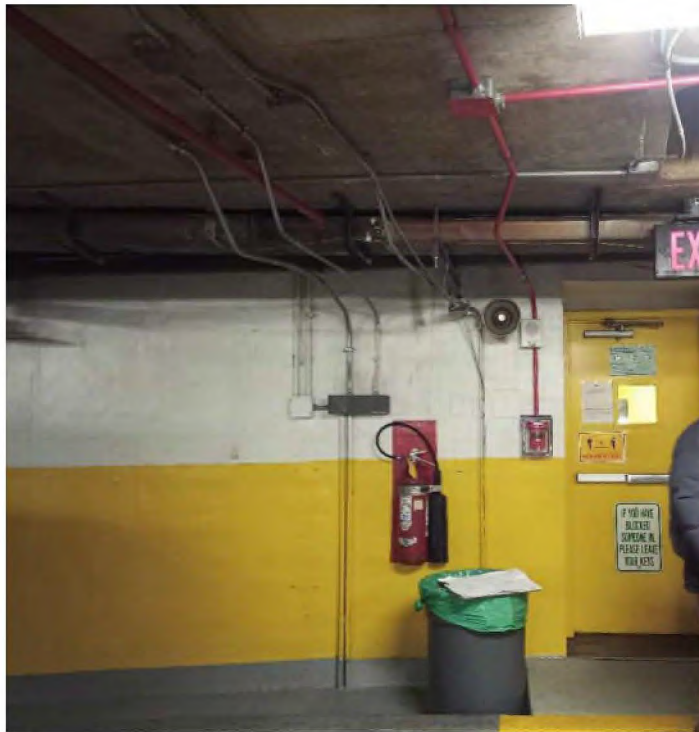
Disconnect and remove the (2) closest pendant mounted fluorescent lighting fixtures with the area of work. Carefully tag and protect the existing branch circuit wiring for reuse. After the work of the project is complete, provide (2) pendant mounted fluorescent lighting fixtures to match the existing style and type, and install them at the original locations. Connect them to operate as before.

No work is recommended at this location associated with the telecommunications wiring.

Location 8-LA (A Garage South Exit)

Existing Conditions:

There are no lighting fixtures at or near the proposed area of work. There are (4) branch circuit conduits located within the area of work. There is a public address speaker surface mounted on the wall near the proposed area of work. There are no other telecommunications cables or wires at or near the proposed area of work.



Recommendations:

There is no lighting work at this location. Circuit trace the (4) existing branch circuit conduits and conductors and identify to the Government prior to the start of construction. Carefully disconnect each existing branch circuit at the nearest existing junction box or device outside the area of work. Tag and protect for reuse. After the work of the project is complete, provide new branch circuit conduit and conductors and reconnect to operate as before.

Carefully disconnect, take down and store the existing surface mounted public address speaker. Tag and protect the associated conduit and conductors to be reused. After the work of the project is done, reinstall the existing speaker and reconnect to operate as before.

Location 9-LA (A Garage MER)

Existing Conditions:

There is (1) surface mounted fluorescent lighting fixture within the area of work to be performed. The lighting fixture is functional. There is a mechanical unit location directly below the proposed area of work. There is no other electrical or telecommunications wiring in the proposed area of work.



Recommendations:

Disconnect and remove the surface mounted fluorescent lighting fixture within the area of work. Carefully tag and protect the existing branch circuit wiring for reuse. After the work of the project is complete, provide a surface mounted fluorescent lighting fixture to match the existing style and type, and install it at the original location. Connect it to operate as before.

No work is recommended at this location associated with the telecommunications wiring.

Location 11-LA (A Garage Ramp)

Existing Conditions:

There is (1) surface mounted fluorescent lighting fixture within the area of work to be performed. The lighting fixture is functional. There is a mechanical unit location directly below the proposed area of work. There is no other electrical or telecommunications wiring in the proposed area of work.



Recommendations:

Disconnect and remove the surface mounted fluorescent lighting fixture within the area of work. Carefully tag and protect the existing branch circuit wiring for reuse. After the work of the project is complete, provide a surface mounted fluorescent lighting fixture to match the existing style and type, and install it at the original location. Connect it to operate as before.

No work is recommended at this location associated with the telecommunications wiring.

Location 12-LA (A Garage Ramp)

Existing Conditions:

There is (1) surface mounted fluorescent lighting fixture within the area of work to be performed. The lighting fixture is functional. There is a mechanical unit location directly below the proposed area of work. There is no other electrical or telecommunications wiring in the proposed area of work.



Recommendations:

Disconnect and remove the surface mounted fluorescent lighting fixture within the area of work. Carefully tag and protect the existing branch circuit wiring for reuse. After the work of the project is complete, provide a surface mounted fluorescent lighting fixture to match the existing style and type, and install it at the original location. Connect it to operate as before.

No work is recommended at this location associated with the telecommunications wiring.

Location 13-LA [A Garage Guard Room]

Existing Conditions:

There is (1) 2'x4' recess mounted fluorescent lighting fixture in and on the ceiling within the area of work to be performed. The lighting fixture is functional. There is no other electrical or telecommunications wiring in the ceiling at this location.



Recommendation:

Disconnect and remove the (1) closest recess mounted fluorescent lighting fixture within the area of work. Carefully tag and protect the existing branch circuit wiring for reuse. After the work of the project is complete, and the suspended ceiling is repaired, provide (1) recess mounted fluorescent lighting fixture to match the existing style and type, and install it at the original locations. Connect them to operate as before.

No work is recommended at this location associated with the telecommunications wiring.

Location 15-LA (A Garage - North Exit)

Existing Conditions:

There are no lighting fixtures at or near the proposed area of work. There are (2) branch circuit conduits located within the area of work. There is a public address speaker surface mounted on the wall near the proposed area of work. There are no other telecommunications cables or wires at or near the proposed area of work.



Recommendations:

There is no lighting work at this location. Circuit trace the (2) existing branch circuit conduits and conductors and identify to the Government prior to the start of construction. Carefully disconnect each existing branch circuit at the nearest existing junction box or device outside the area of work. Tag and protect for reuse. After the work of the project is complete, provide new branch circuit conduit and conductors and reconnect to operate as before.

Carefully disconnect, take down and store the existing surface mounted public address speaker. Tag and protect the associated conduit and conductors to be reused. After the work of the project is done, reinstall the existing speaker and reconnect to operate as before.

Location 8-LB (B Garage South Exit)

Existing Conditions:

There are no lighting fixtures at or near the proposed area of work. There is a single branch circuit conduit located within the area of work. There is a public address speaker surface mounted on the wall near the proposed area of work. There are no other telecommunications cables or wires at or near the proposed area of work



Recommendations:

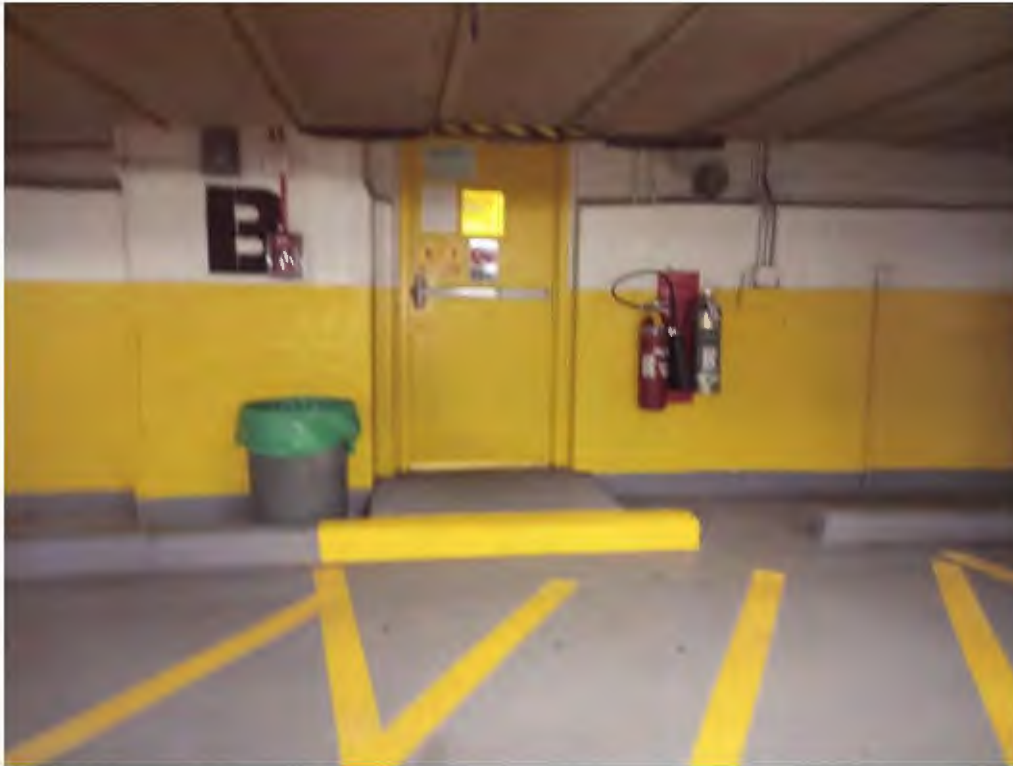
There is no lighting work at this location. Circuit trace the (1) existing branch circuit conduit and conductors and identify to the Government prior to the start of construction. Carefully disconnect each existing branch circuit at the nearest existing junction box or device outside the area of work. Tag and protect for reuse. After the work of the project is complete, provide new branch circuit conduit and conductors and reconnect to operate as before.

Carefully disconnect, take down and store the existing surface mounted public address speaker. Tag and protect the associated conduit and conductors to be reused. After the work of the project is done, reinstall the existing speaker and reconnect to operate as before.

Location 15-LB (B Garage North Exit)

Existing Conditions:

There are no lighting fixtures at or near the proposed area of work. There is a single branch circuit conduit located within the area of work. There is a public address speaker surface mounted on the wall near the proposed area of work. There are no other telecommunications cables or wires at or near the proposed area of work.



Recommendations:

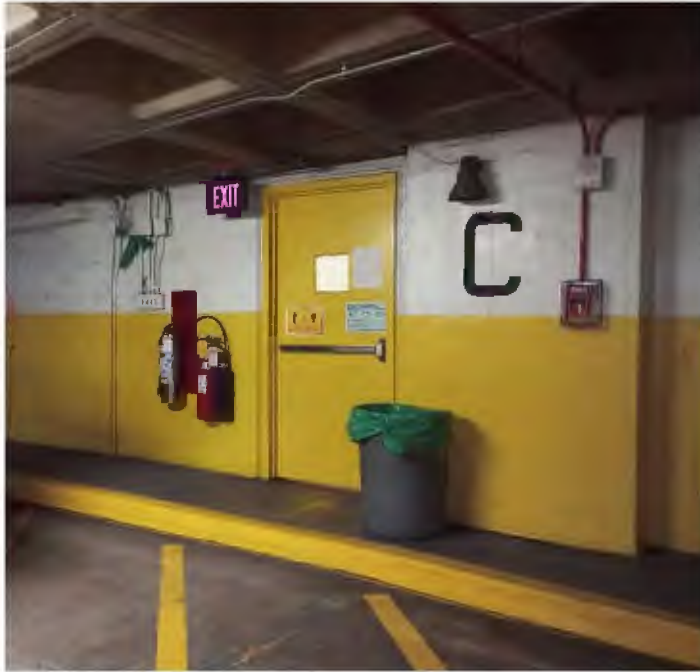
There is no lighting work at this location. Circuit trace the (1) existing branch circuit conduit and conductors and identify to the Government prior to the start of construction. Carefully disconnect each existing branch circuit at the nearest existing junction box or device outside the area of work. Tag and protect for reuse. After the work of the project is complete, provide new branch circuit conduit and conductors and reconnect to operate as before.

Carefully disconnect, take down and store the existing surface mounted public address speaker. Tag and protect the associated conduit and conductors to be reused. After the work of the project is done, reinstall the existing speaker and reconnect to operate as before.

Location 8-LC (C Garage South Exit)

Existing Conditions:

There are no lighting fixtures at or near the proposed area of work. There are (2) branch circuit conduits located within the area of work. There is a public address speaker surface mounted on the wall near the proposed area of work. There are no other telecommunications cables or wires at or near the proposed area of work.



Recommendations:

There is no lighting work at this location. Circuit trace the (2) existing branch circuit conduits and conductors and identify to the Government prior to the start of construction. Carefully disconnect each existing branch circuit at the nearest existing junction box or device outside the area of work. Tag and protect for reuse. After the work of the project is complete, provide new branch circuit conduit and conductors and reconnect to operate as before.

Carefully disconnect, take down and store the existing surface mounted public address speaker. Tag and protect the associated conduit and conductors to be reused. After the work of the project is done, reinstall the existing speaker and reconnect to operate as before.

APPENDIX C

COST ESTIMATE

Feasibility Study Cost Estimate

Robert C. Weaver Garage - Feasibility Study Washington, D.C.

Prepared for:

MTFA Architecture, Inc.

3200 Lee Highway

Arlington, VA 22207

703-524-6616

March 18, 2022

Prepared by:

R.W. Brown & Associates

364 Brandon Lane

Heathsville, Virginia 22473

804-580-3535

email: rwbrownestr@juno.com

CUI
Feasibility Study Cost Estimate

Project: Robert C. Weaver Garage Feasibility Study, Washington, D.C.		Page 1
Architect: MTFA Architecture, Inc.	RWB Job # 22-06-A2	
Estimated by: R.W. Brown & Associates	3/18/22	

NOTES

- 1 Unit costs include subcontractors' overheads and profits.
- 2 Unit prices, provided by suppliers, subcontractors, and past experience, reflect standard construction methods and materials. Sales tax and labor burden are included in the unit prices of each item. Labor prices are based on wage scale conditions but do not reflect overtime. Total estimate considers a competitive bidding process and responsive bids from at least 3 qualified bidders.
- 3 This estimate is based on 100% Report Submission dated March 18, 2022.
- 4 The total cost for the Emergency Work is based on a construction start of Fall 2022. Escalation has been added to the mid-point of construction of Summer 2023 at the
- 5 The total cost is based on a construction start of Fall 2024. Escalation has been added to the mid-point of construction of Fall 2025 at the rate of 7% p.a.
- 6 Exclusions:
 - Architectural and Engineering Fees
 - Furnishings or equipment not itemized in the estimate

CUI
Feasibility Study Cost Estimate

Project: Robert C. Weaver Garage Feasibility Study, Washington, D.C.

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Architect: MTFA Architecture, Inc.

RWB Job # 22-06-A2

Estimated by: R.W. Brown & Associates

3/18/22

(b)(4)



Feasibility Study^{CUI} Cost Estimate

Project: Robert C. Weaver Garage Feasibility Study, Washington, D.C.

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Architect: MTFA Architecture, Inc.

RWB Job # 22-06-A2

Estimated by: R.W. Brown & Associates

3/18/22

b)(4)



(b)(4)

Feasibility Study^{CUI} Cost Estimate

Project: Robert C. Weaver Garage Feasibility Study, Washington, D.C.

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Architect: MTFA Architecture, Inc.

RWB Job # 22-06-A2

Estimated by: R.W. Brown & Associates

3/18/22

(b)(4)



Feasibility Study^{CUI} Cost Estimate

Project: Robert C. Weaver Garage Feasibility Study, Washington, D.C.

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Architect: MTFA Architecture, Inc.

RWB Job # 22-06-A2

Estimated by: R.W. Brown & Associates

3/18/22

(b)(4)



Feasibility Study Cost Estimate

CUI

Project: Robert C. Weaver Garage Feasibility Study, Washington, D.C.

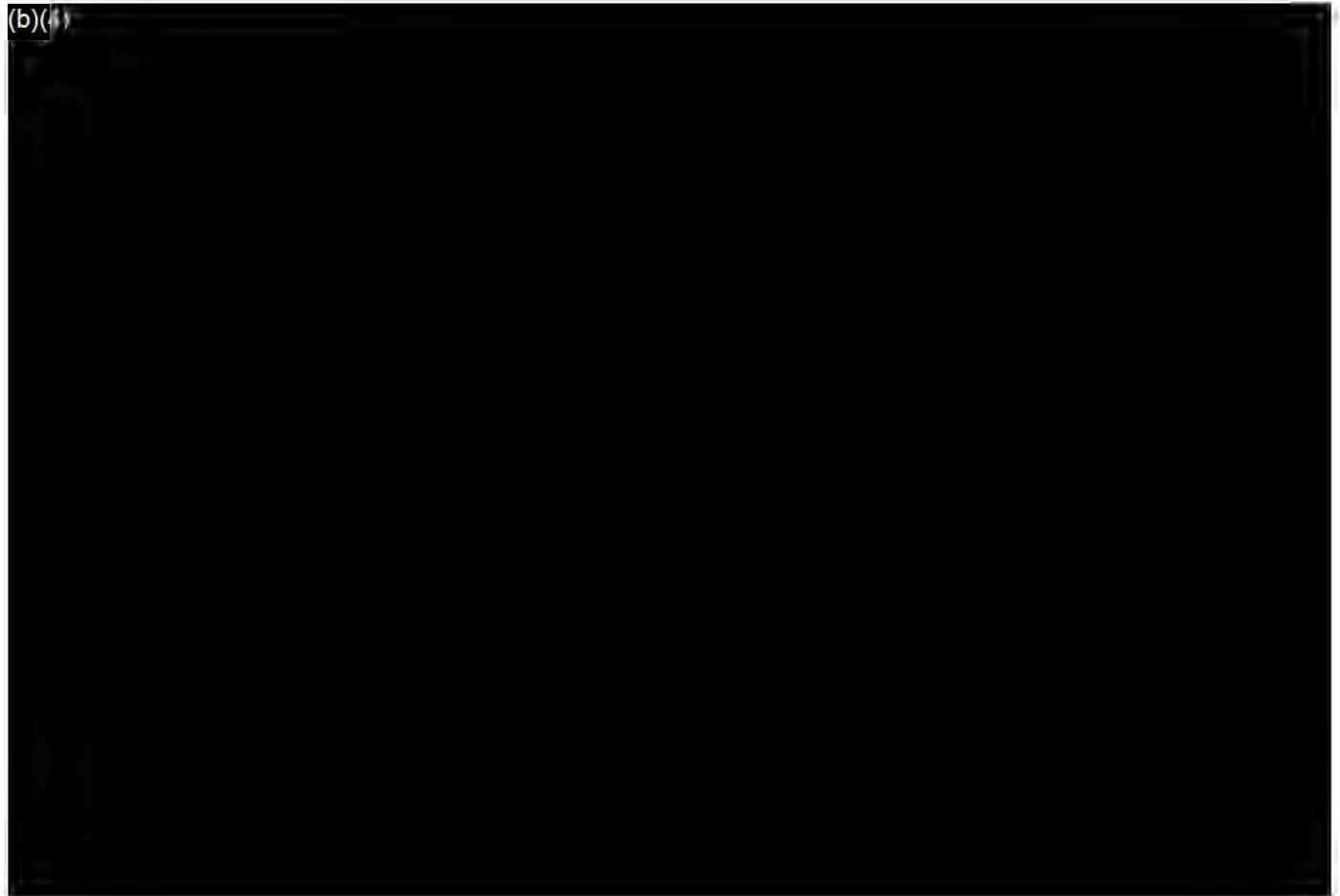
Page 7

Architect: MTFA Architecture, Inc.

RWB Job # 22-06-A2

Estimated by: R.W. Brown & Associates

3/18/22



Feasibility Study Cost Estimate

CUI

Project: Robert C. Weaver Garage Feasibility Study, Washington, D.C.

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Architect: MTFA Architecture, Inc.

RWB Job # 22-06-A2

Estimated by: R.W. Brown & Associates

3/18/22

(b)(4)



Feasibility Study^{CUI} Cost Estimate

Project: Robert C. Weaver Garage Feasibility Study, Washington, D.C.

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Architect: MTFA Architecture, Inc.

RWB Job # 22-06-A2

Estimated by: R.W. Brown & Associates

3/18/22

(b)(4)



Since this report was completed, GSA and HUD have executed a number of projects identified in this report.



Consolidated Survey

for the

Robert C. Weaver Building

451 Seventh Street SW,
Washington, DC 20410
Building Number DC0092ZZ



Submitted to **GENERAL SERVICES ADMINISTRATION**
301 7th Street SW, Washington DC 20407

Submitted by **CINNOVAS DEVELOPMENT GROUP, LLC**
1000 Connecticut Avenue NW, Suite 900
Washington, D.C. 20036
Tel. 202-469-3446

Submitted on September 27, 2013

GSA Contract No. GS-11P-11-YA-C-0077



EXECUTIVE SUMMARY

CONSOLIDATED SURVEY

The Robert C. Weaver Building (DC0092ZZ) is located near the National Mall and sits on a 5 ½ acre lot in the southwest quadrant of Washington, D.C. The building was dedicated in 1968 and is ten stories above grade with a basement, sub-basement and three levels of parking below ground. The building contains 1,372,278 gross square feet. The Weaver Building is bordered by D Street to the north, 7th Street to the east, Interstate 395 to the south and L'Enfant Plaza to the west. The building is home to the Department of Housing and Urban Development and is an architecturally significant building. Recommendations for the treatment of repair and maintenance have been addressed within the Consolidated Survey.

1.0 Survey Objectives

Under Contract Number GS-11P-11-YA-C-0077, the Cinnovas Development Group was retained by the U.S. General Services Administration ("GSA") to provide Consolidated Survey Program Services ("Consolidated Survey"). As contained within this survey and (where applicable) the accompanying populated VFA.Facility software system, the Consolidated Survey consists of up to seven reports and/or surveys, as detailed in the following paragraphs.

The objectives of the Consolidated Survey are to provide the GSA with the knowledge and benefit of each of the seven individual reports/surveys while achieving the following benefits:

1. Greater consistency of reports through inter-data flow between each report (i.e. a physical defect considered by the OSH report is included and capitalized within the BER).
2. Reduction in disruption to GSA staff and tenants.
3. Consistency of approach and team.
4. Economy of scale cost savings to the GSA resulting from consolidation of the surveys.

1.1 Web-Building Engineering Report (BER-VFA.Facility)

The Web-Building Engineering Report is a complete and thorough, non-invasive, inspection of the entire building (all systems and elements) and abutting grounds, to determine construction, condition, prioritized and categorized future capital expenditures. Information is entered into the web-based VFA.Facility software system for the building and included in printed form within this report.



1.2 Property Condition Survey (PCS-VFA.Facility)

The PCS, representing a high-level summary of the BER and designed to highlight major expenditures required within the next six years, is data for each building entered into the VFA.Facility system only. The data provided in the software system is not included as a printed document within the Consolidated Survey. It should be noted that, due to the intent of the PCS to capture only major expenditures required over a defined time period, its bottom line dollar values, and those in the BER, may differ. Items of major expenditure within the PCS are included within the above Web-BER summary.

1.3 Safety, Environment and Fire Protection Branch Survey (SEFB-IRIS)

The SEFB survey is an assessment of the entire building to determine compliance, safety and potential expenditures relative to fire protection, facility safety and health, industrial hygiene and environmental management. Information for each building is provided in printed form within this Consolidated Survey. Capital expenditures ("requirements") are captured within the BER and accompanying VFA.Facility software system.

1.4 Occupational Safety and Health Survey (OSH)

The OSH is a survey to determine the presence and extent of any issues that would prevent GSA employees from having safe and healthful working conditions in their occupied spaces and their work sites. Where such spaces utilized primarily by GSA staff are present, information is provided in printed form within this Consolidated Survey. Capital expenditures ("requirements") for each building resulting from the OSH survey are captured both within the OSH survey as findings and within the BER and accompanying VFA.Facility software system.

+ OSH surveys are only included when a Property contains GSA Staff-occupied space. The Weaver Building did not include space utilized regularly by GSA employees. As a result, the attached survey does not include an OSH Survey.

1.5 Child Development Center Survey (CDC)

If the Property contains a Child Development Center, a survey is completed to determine the compliance of that center with Child Development Center Design Guidelines. If the Campus contains such a Child Development Center, a CDC Survey would be completed and contained in printed form within the Consolidated Survey. Capital expenditures ("requirements") resulting from the CDC survey would be captured within the included CDC Survey within the BER and accompanying VFA.Facility software system.

+ CDC surveys are only included when a Property contains a Child Development Center, which is not included within the scope of services for the Consolidated Survey of the Weaver Building. As a result, the attached survey does not include a CDC Survey.



1.6 Operational Review (OR)

A single Operational Review (OR) was completed to assess the present Operations and Maintenance conditions and highlight areas for improvement. The OR was captured within a GSA prescribed format. Where provided, recommendations resulting from the OR typically centered on operational items and did not result in a capital cost. Where a failing cited by the OR has the potential to reduce the remaining useful life (RUL) of equipment, we have assumed that improvements recommended in the OR will be implemented in order to ensure that no reduction in RUL occurs.

1.7 LEED for Existing Building Operations and Maintenance (LEED-EBOM)

LEED of Existing Buildings Operations and Maintenance provides a framework for maximizing operational efficiency while minimizing environmental impacts of buildings. A survey of the building was conducted to determine compliance or measures to achieve compliance, with the Leadership in Energy and Environmental Design for Existing Buildings Operations and Maintenance Rating System (LEED-EBOM). Information regarding the survey results is provided in printed form within this report. Due to the discretionary nature of achieving LEED-EBOM compliance, capital expenditures ("requirements") resulting from the LEED-EBOM survey are not typically captured within the BER and accompanying VFA.Facility software system.

The following paragraphs provide a high-level summary of the findings.

Based on the analysis conducted, this building is capable of achieving a LEED-EBOM Silver or Gold certification level, dependent upon further investigation of some of the "moderate" and "uncertain" credits.

Prerequisites

As shown in Table 2.7.1, based on our evaluation using the LEED 2009 For Existing Buildings: Operations and Maintenance Rating System, the HUD Building is capable of achieving all prerequisites.



Table 2.7.1 Prerequisites - Summary of Completion Status

PREREQUISITE	TITLE	STATUS
WEp1	Minimum Indoor Plumbing Fixture and Fitting Efficiency	Complete
EAp1	Energy Efficiency Best Management Practices	Easy
EAp2	Minimum Energy Performance	Complete
EAp3	Refrigerant Management – Ozone Protection	Complete
MRp1	Sustainable Purchasing Policy	Easy
MRp2	Solid Waste Management Policy	Easy
EQp1	Outdoor Air Introduction and Exhaust Systems	Easy
EQp2	Environmental Tobacco Smoke (ETS) Control	Complete
EQp3	Green Cleaning Policy	Easy

LEED Points

For points, the following was determined.

- Fifty one (51) credit points are ranked in the “completed” and “easy” categories; this alone, is at the Silver level of certification.
- An additional thirteen (13) points are ranked in the “moderate” category.
- Sixteen (16) points are ranked in the “uncertain” category.

A more detailed evaluation or collection of data, that is currently not available, will indicate if Gold certification is viable.

Although the LEED for Existing Buildings rating system is mainly focused on ongoing building operations, it does require that the building hit certain performance thresholds that may require capital expenditures. Should certain credits be pursued, a capital outlay may be necessary to meet the criteria. There are no building requirements necessary for LEED certification, however, many requirements will contribute to LEED certification. The following list outlines possible building infrastructure expenditures to associate consolidated survey requirements that will assist with achieving LEED criteria.

Recommended improvements:

- Install motion sensors for all rooms, particularly any along the perimeter of the building (SSc8)
- Install cooling tower conductivity meters to better manage the cooling tower water use (WEc4.1)
- D2010 – Plumbing fixtures – Replace
The current flush and flow rates would allow the building to earn all fixture and fittings credit points based on the LEED baseline calculations. When the fixtures are improved, the baseline calculation will change. IPC code compliant fixtures would allow the building to meet the prerequisite. However, it would not earn all 5 credit points. When the replacement occurs, consider dual flush 1.28 gpf toilets and .13 gpf urinals.



Current BER recommendations that could contribute to the LEED for Existing Buildings certification through increased building performance, purchasing of LEED compliant products and earning credits with LEED compliant operational practices credits. Examples of these requirements are as follows:

- Requirement Name B2020 - Windows – Replace
- Requirement Name B3011 - Built-Up Roof System - Replace
- Requirement Name D3041 - HVAC Distribution – Replacement
- Many other BER recommendations could contribute to achieving credits based on:
 - Specification of LEED compliant products for building improvements or operations such as cleaning products on the exterior (B2010, B2011, etc.)
 - The timing to the project in conjunction with other projects and the LEED application development
 - The percent of compliant products purchased, example projects include (B2010, B2011, C3012, C3020, C3025, C3032, etc)
 - Recycling rate of construction debris for all projects that involve more than one trade.
 - Install electric sub-meters when working on the electrical system (D5011, D5012, etc.)

LEED Certification Levels

Based on the analysis conducted, this building is capable of achieving a LEED-EBOM Silver, or even Gold certification level.

The following paragraphs provide a high-level summary of the findings.

2.0 Summary of Reports and Surveys

2.1 Web-Building Engineering Reports (BER-VFA.Facility)

Due to the age of the Property and items of deferred maintenance regarding repair and replacement of major systems, the resulting Facility Condition index within the next ten years (considered to be the period of the study) results in significant Repair and Alteration (R&A) expenditures.

- Those of Immediate Concern (Priority 1 – Immediate) relate to Life Safety issues, such as the need to enclose panels and conduits currently exposed in fire stairs, the need to increase the sprinkler water supply line size and the need to enclose exposed 8" storm/sewer lines in fire stairs. Priority 1 concerns also include Building Code issues, such as the lack of firestopping at many floor penetrations and the need to replace fire stair doors which are not code compliant.
- Over the short-term (Priority 2 – 1 to 2 years), actions needed relate to Reliability issues regarding Plaza damage, including West Plaza and Loading Dock repairs, Basement and Sub-Basement structural and waterproofing repairs, and East Garage and East Plaza repairs. Priority 2 concerns include Integrity issues regarding the need to replace medium voltage primary service switchgear and repairing exterior granite facades.



ROBERT C. WEAVER BUILDING, WASHINGTON, DC

Priority 2 concerns also include Beyond Useful Life issues such as the need to replace manual door hardware to meet 2010 ADA Standards for Accessible Design.

- Priority 3 expenditures (years 3 to 5) relate to Beyond Useful Life issues such as the need to replace carpet tile, replace plumbing fixtures, replace elevator electrical switchboard, replace miscellaneous electrical equipment motor control centers and corridor acoustical tile ceiling system replacement. Priority 3 concerns include Building Code issues such as the need to modernize passenger elevators. Other Priority 3 concerns include Functionality issues such as electrical distribution and the need to add new power risers.
- Priority 4 expenditures (years 6+) relate to Integrity and Beyond Useful Life requirement categories. The Integrity category includes fire alarm system replacement and exterior precast sealant replacement. The Beyond Useful Life category consists of repainting interior walls and ceilings.
- Priority 5 (Grandfathered Code Issues) relate to correction of items that do not comply with current Building Code and Life Safety issues. There is a need for stair guard and handrail replacement for all egress stairs with code compliant design. There is a need for stair pressurization in egress stairs. There also is a need for sprinkler installation in many areas throughout the building without adequate coverage.

2.2 Property Condition Surveys (PCS - VFA.Facility)

Findings for the PCS for each building were sourced from the BER as detailed above and can be reviewed on VFA.Facility.

2.3 Safety, Environment and Fire Protection Branch Surveys (SEFB-IRIS)

We identified various expenditures relative to fire protection, facility safety and health, industrial hygiene and environmental management. These concerns can be generally defined as 1) violation of the code in effect at the time of construction or retroactive codes (for example, codes which the building MUST comply with), 2) life cycle related expenditures and c) violation of the presently enforced code (for example, grandfathered issues that should be addressed at the time of renovation).

2.4 Occupational Safety and Health Survey (OSH)

As the building is not occupied by GSA employees, an OSH Survey was not prepared for the Weaver Building.



2.5 Child Development Center Survey (CDC)

A CDC survey had been recently completed and was not included in the survey effort.

2.6 Operational Reviews (OR)

In general, the maintenance operations at HUD are in compliance with GSA and industry standards. The O&M contractor is doing a good job communicating with HUD building staff and tenants. For example, as work orders are completed, follow-up satisfaction emails are sent to the reporting tenant. The building staff meets with the maintenance contractor daily to review complaints and work progress and all appropriate record keeping has been reported for filing purposes. The contractor has a best practices level safety training program and in addition to the required personnel training, employees complete tests to ensure they understand important material. Overall, the building tenants are generally satisfied with the contractor's performance; however, there were observations, listed above, that require attention.

2.7 LEED for Existing Building Operations and Maintenance (LEED-EBOM)

For points the following was determined. Fifty one (51) credit points are ranked in the "completed" and "easy" categories; this alone, is at the Silver level of certification. An additional thirteen (13) points are ranked in the "moderate" category and sixteen (16) points are ranked in the "uncertain" category. A more detailed evaluation or collection of data, that is currently not available, will indicate if Gold certification is viable.

This building is capable of achieving a LEED-EBOM Silver or Gold certification level.

3.0 Personnel

In order to meet the stated objectives, Cinnovas Development Group (Cinnovas) brought together a team of multi-disciplined consultants (hereafter referred to as the survey team) to aid its staff in the completion of the various surveys. Refer to Table 3-1 for a listing of the survey team. Between August 7 – August 23, 2013, the survey team visited the Property to document current conditions, meeting with the following property representatives:

- Mr. George Jones, Director, Headquarters Operations Division, US Department of Housing and Urban Development
- Mr. Larry Pierce, Chief Engineer, US Department of Housing and Urban Development



ROBERT C. WEAVER BUILDING, WASHINGTON, DC

Table 3-1 Survey Team

Project Management / Quality Control			
Company	Staff	Qualification / Registration	Discipline / Role
Cinnozas Development Group	(b)(6)	CCM LEED AP, O+M	Management
Cinnozas Development Group		PE	Management/Quality Control
Cinnozas Development Group		RA	Quality Control
Cinnozas Development Group		RA, AIA, CCM, LEED, Green Associate	Quality Control

Web-Building Engineering Report			
Company	Staff	Qualification / Registration	Discipline / Role
Cinnozas Development Group	(b)(6)	CCM LEED AP, O+M	Architectural, Structural, Accessibility
Cinnozas Development Group		PE	Electrical, Mechanical, Plumbing
Rhino Fire Protection Engineering		PE	Fire Protection, Life Safety



Property Condition Survey (PCS)			
Company	Staff	Qualification / Registration	Discipline / Role
Cinnovas Development Group	(b)(6)	PE	Electrical
Cinnovas Development Group		RA	Architectural, Structural, Accessibility, Site
Summer Consultants		PE	Mechanical, Plumbing

Safety, Environment and Fire Protection Branch Survey (SEFB-IRIS)			
Company	Staff	Qualification / Registration	Discipline / Role
Rhino Fire Protection Engineering	(b)(6)	PE	Production of SEFB
Mabbet & Associates, Inc.		CIH, CSP	Production of SEFB
Mabbett & Associates, Inc.		CIH, CSP	Production of SEFB
Mabbett & Associates, Inc.			Production of SEFB

Operational Review (OR)			
Company	Staff	Qualification / Registration	Discipline / Role
Cinnovas Development Group	(b)(6)	CxA, LEED AP	Production of OR



ROBERT C. WEAVER BUILDING, WASHINGTON, DC

LEED for Existing Building Operations and Maintenance (LEED-EBOM)			
Company	Staff	Qualification / Registration	Discipline / Role
The Compass Group, LLC	(b)(6)	LEED AP, O+M, CEM, CC	Production of LEED

Historic Preservation			
Company	Staff	Qualification / Registration	Discipline / Role
Cinnovas Development Group	(b)(6)	AIA, LEED AP BD+C	Production of Historic impact assessment

ROBERT C. WEAVER BUILDING



BUILDING ENGINEERING REPORT
SAFETY, ENVIRONMENT AND FIRE PROTECTION
BRANCH SURVEY
OPERATIONAL REVIEW
LEED FOR EXISTING BUILDINGS OPERATIONS AND
MAINTENANCE

CONTENTS

0



Building Engineering Report

for the

Robert C. Weaver Building

451 Seventh Street SW,
Washington, DC 20410
Building Number DC0092ZZ



Submitted to **GENERAL SERVICES ADMINISTRATION**
301 7th Street SW, Washington DC 20407

Submitted by **CINNOVAS DEVELOPMENT GROUP, LLC**
1000 Connecticut Avenue NW, Suite 900
Washington, D.C. 20036
Tel. 202-469-3446

Submitted on September 27, 2013

GSA Contract No. GS-11P-11-YA-C-0077

ROBERT C. WEAVER BUILDING



SECTION 1 – EXECUTIVE SUMMARY
SECTION 2 – PROPERTY DESCRIPTION
SECTION 3 – REQUIREMENTS
SECTION 4 – REQUIREMENT ANALYSIS
SECTION 5 – IMAGES
SECTION 6 – APPENDICES
SECTION 7 – SEFB
SECTION 8 – OPERATIONAL REVIEW
SECTION 9 - LEED

ROBERT C. WEAVER BUILDING



CURRENT CONDITIONS ANALYSES

EXECUTIVE SUMMARY

1



EXECUTIVE SUMMARY

BUILDING ENGINEERING REPORT

As part of the overall Consolidated Survey, Cinnovas Development Group, LLC was commissioned by GSA to provide a Building Engineering Report (BER) for the Robert C. Weaver Building, 451 Seventh Street, SW, Washington DC (GSA Building Number DC0092ZZ).

The Robert C. Weaver Building was completed in 1968 and is of noncombustible construction. It is ten stories above grade, with two stories below grade, on a 5.5 acre site near the National Mall and within walking distance of the Capitol and the Federal Triangle. The building is concrete frame with a pre-cast panel façade. There is no vacant space in the building and is occupied by approximately 4,000 employees of the Department of Housing and Urban Development. The building was added to the DC Inventory of Historic Sites in 2008, as well as to the National Register of Historic Places.

The Property was surveyed on August 7 through August 23, 2013. This report is based on on-site findings and investigations by specialized facilities assessment professionals. The objective is to provide an analysis for strategic planning and for future funding requirements.

CURRENT CONDITIONS ANALYSES include the existing facility requirements, deferred maintenance, recommended discretionary improvements and code non-compliance issues.

Condition findings at the building are:

- Current Replacement Value (CRV)
- Current Requirements Action (CRA)
(Priorities 1 through 4)
- Facility Condition Index (FCI)
(Priorities 1 through 4)
- Current Requirements Action (CRA)
(Priorities 2 and 3)
- Facility Condition Index (FCI)
(Priorities 2 and 3)

(b)(4)

0.09

(b)(4)

0.07



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The resulting FCI indicates that within the next one to five years (Priority 2 and 3 requirements), the condition of the Property is in “Good” condition with an FCI of 0.07. When the near term and long term requirements (Priority 1 through 4 requirements) are considered, the condition of the facility remains in the “Good” condition category with an FCI of 0.09.

The FCI indicated above is the total value of a subset of current requirements action (CRA), based on priority, divided by the current replacement value (CRV). Generally speaking, the higher the FCI, the poorer the condition of the facility.

CONDITION LEVELS

<u>Condition</u>	<u>Range</u>
Very Good	0.00 to 0.05
Good	0.051 to 0.10
Fair	0.11 to 0.15
Poor	0.151 and above.

Prime systems accounting for the largest requirements are Interior Construction and Conveyance at 54%, Electrical System at 18% and Structure at 10% of the total costs.

Categories accounting for the largest requirements are Building Code and Beyond Useful Life. Building Code accounts for 32% of the total costs and is attributable to Interior Construction & Conveyance, Fire Protection, Electrical System and HVAC System. Beyond Useful Life, part of the broader category of Integrity, accounts for 25% of the total costs and is attributable to Interior Construction & Conveyance, Electrical System and Plumbing System.

Priorities accounting for the largest requirements are Priority 3, at 48%, and Priority 2, at 25% of the total costs, with Priority 4 requirements accounting for 13% and Priority 1 requirements accounting for 4% of the total costs. Priority 4, 3, 2 and 1 requirements include: Interior Construction and Conveyance, Electrical System, Structure and Exterior Enclosure.

Refer to Appendix A, Assessment Methodology, for definitions of requirement priorities, requirement categories, requirement action and requirement action estimates. Appendix B, Glossary, provides definitions of the terms used in this Report and Appendix C, Expected Useful Lives, provides the average useful life for each of the building elements, as recommended by the Building Owners and Managers Association (BOMA) International.

☐ END OF EXECUTIVE SUMMARY

ROBERT C. WEAVER BUILDING



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PROPERTY DESCRIPTION

2

PROPERTY DESCRIPTION

BACKGROUND

The Robert C. Weaver Building, headquarters of the U.S. Department of Housing and Urban Development (HUD) in Washington, DC, stands out among more than 700 construction projects undertaken by GSA between 1960 and 1976. The design and execution of the HUD building exemplifies the primary tenets of the "Guiding Principles for Federal Architecture" as set forth by President John F. Kennedy's administration in 1962. These guidelines encouraged modern design that would "reflect the dignity, enterprise, vigor and stability of the American National Government," and "embody the finest contemporary American architectural thought." With a tour-de-force design by internationally recognized modernist architect Marcel Breuer, the HUD building bolstered GSA's search for architectural excellence, while symbolically demonstrating the federal government's commitment to urban redevelopment across the nation.

In 1999, the HUD building was officially named to honor Dr. Robert C. Weaver for his service as the first African American cabinet member. Serving as HUD Secretary from 1966-68 under President Lyndon B. Johnson, Weaver, a native Washingtonian, is credited not only with setting the precedent for African Americans at the highest level of government, but also for occupying a policy-making position that benefited all Americans.

SITE PLAN

Located at 451 Seventh Street SW, Washington, D.C., the building sits on a 5-1/2 acre lot. Built to face east across Seventh Street, the HUD building is bordered to the north by D Street; to the west by L'Enfant Plaza/Ninth Street; and to the south by the frontage road along the Southwest Freeway/I-395. The surrounding land use is mostly a concentration of government and private office buildings. There are also hotels, ample commercial facilities and transportation alternatives, which include a Metro stop serving the Blue, Orange, Green and Yellow lines, as well as the VRE commuter trains, in very close proximity.

THE BUILDING PLAN

The Weaver Building is a 13 story, 1,372,278 gross square feet building, designed in "New Brutalism" style and dedicated in 1968. Primarily supporting office space, the building also contains a child care center, fitness center, cafeteria with a dining area and a travel agency.

HUD is a combination of cast-in-place and pre-cast reinforced concrete designed in the shape of a double "Y" or elongated "X," with a central core curving out to the diagonal wings. Additionally, this building has a penthouse, basement, sub-basement, three levels of underground parking located under the east plaza, and a loading dock below the west plaza. The four main facades of the building consist of 1,584 load bearing pre-cast concrete window wall units. Each wall unit is three feet thick, weighs 13 tons and was designed to contain heating units and ducts beneath deeply recessed windows. The units on the second through ninth floors



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are approximately 10 feet wide and 12 feet high; on the tenth floor they are 10 feet wide and 17 feet high. These units are supported by 44 exterior, chamfered, cast-in-place, exposed concrete pilotis (17 feet high, 40 feet long, and 4 feet thick) spaced on 40 feet centers.

HISTORY

The HUD Building was constructed by the General Services Administration for the United States Department of Housing and Urban Development, which has used the building continuously since its completion in 1968. HUD replaced the Housing and Home Finance Agency (HHFA), which was established on July 27, 1947, and was responsible for all Federal activities and programs concerned with housing and urban development. Through the Housing and Urban Development Act of September 1965, the HHFA was re-designated as the Department of Housing and Urban Development.

In 2008, the HUD Building was added to the DC Inventory of Historic Sites, as well as the National Register of Historic Places. The building is significant in the history of American architecture, as well as from an urban design perspective. HUD is one of the two Breuer designed DC buildings (the second is the Hubert Humphrey Building).

As noted in the 1999 Historic Structure's Report (HSR) by Oehrlein & Associates Architects under Quinn Evans/Architects, all building materials of special significance are to be preserved or maintained in place. In addition, the maintaining, repairing, or altering of the building, or original features, are to be protected from damage or alteration. The building has been separated into three distinct preservation zones based on their architectural significance and physical conditions. Specific materials are delineated in Chapter IX: Design Guidelines of the 1999 HSR.

Zone 1

Restoration Zones: Areas of special architectural significance and should be restored as close as possible to their original form and condition.

- All exterior facades (i.e. cast in place pilotis, black anodized aluminum entrance doors, cast-in-place concrete walls)
- First floor public areas
- Elevator lobbies
- Executive office areas (executive office suites on floors four through ten, Secretary and Deputy Secretary's Suites and Departmental Conference Room on the tenth floor)
- Site and landscaping - includes bluestone paving, light standards, concrete stanchions and low screen walls.

Zone 2

Rehabilitation Zones: Areas of lesser importance, but which contain significant architectural details and should be retained and restored as part of any overall repair or alteration project.

- Typical office suites, typical conference rooms, office corridors from the basement through ninth floors, second floor staff dining room (converted to office space)
- Library on the eighth floor
- Stairwells at the ends of wings, cores and garage entrances
- Toilet rooms
- Serving areas in the cafeteria



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- Roof observation deck

Zone 3

Renovation Zones: Areas not considered an integral part of the significant fabric of the building and may be altered as long as the alterations do not have a negative impact on the significant elements outlined in the Restoration and Rehabilitation Zones above.

- Entire sub-basement
- Garage, loading dock, storage rooms, fitness center, machine rooms, offices and mail room in the basement
- Guard's room, electrical closets, storage closets, storage rooms, building management offices on the first floor
- Typical offices and freight elevator lobbies and cabs, storage rooms, data processing rooms on the upper floors
- Penthouse

ARCHITECTURAL CHARACTER

Breuer had a profound influence on the course of architecture in the United States during the second half of the twentieth century, as he was a leader in bringing European Modernism to America and in creating the foundation for the country's Modern architecture movement.

Constructed between 1965-1968, the building is recognized as the first federal building in the country to utilize pre-cast concrete as the primary structural and exterior finish material and the first fully modular design for a federal office building. Strong sculptural forms exhibit the building's Expressionist architectural style. Expressionism is characterized by curving rooflines and walls, convex or concave surfaces, and arched or vaulted spaces. The massive ten story building dominates its site in the shape of a curvilinear "X," creating two long, concave elevations and two shorter elevations at the ends.

The unfinished concrete walls of the long corridors curve in conformity with the building's sweeping exterior. Offices line the corridors, each containing the deeply recessed windows set within the wall units. Elevators and service shafts are located at the building's core, at the intersection of the four wings. Exposed concrete is in the main entrance's lobby and includes sculptor Oskar Stonorov's bust of Catherine Bauer Wurster (influential advocate of the nation's first public housing programs in the 1930's).

In 1990, Martha Schwartz, a nationally recognized Massachusetts-based landscape architect known for her unconventional designs, was commissioned to redesign the plaza. Schwartz's scheme enlivened the plaza with low, rounded, concrete planters containing grass that doubled as seating and whimsical lifesaver-shaped canopies of vinyl covered plastic, set upon 14 ft. stainless steel poles. Schwartz chose the circular motifs to evoke the circular geometry used for the interior screens, walls, and ceilings, while her infusion of levity into the site is a creative interplay between delicate and rough textures and light and heavy massing.

CONSTRUCTION

The building code construction classification is Type 1B, per International Building Code, which equates to Type 1 (332) construction per NFPA 220 (2012). The NFPA occupancy classification is



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mixed use Assembly, Business, Childcare and Storage which equates to an International Building Code classification of Assembly (A-1 and A-3), Business (B), Childcare (I-2) and Storage (S-2).

LIFE SAFETY REVIEW

Applicable Code: NFPA 101 2012 and IBC 2012.

Construction Type: Type 1.

Occupancy Classification: Assembly, Business, Childcare and Storage.

A - SUBSTRUCTURE

A10 FOUNDATIONS

The foundation of the HUD building is comprised of a concrete pile foundation system with concrete pile caps. The substructure is a cast-in-place concrete slab and beam system supported by cast-in-place concrete columns. All walls below grade are poured-in-place concrete.

The lowest floor slab was contained at the Sub-Basement floor level and consisted of a conventionally reinforced mat foundation slab placed over a vapor retarder and a crushed stone sub-grade. Foundation walls at the perimeter consist of cast-in-place reinforced concrete with waterproofing, protection board and gravel fill around the perimeter.

A20 BASEMENT CONSTRUCTION

The Basement and Sub-Basement are concrete construction including foundation walls, elevator, stair and air shafts. Concrete beam depth is generally 24" and slab thickness is typically 8". In the garage, a two-way poured-in-place 36" x 36" waffle slab spans all three levels of the parking garage and is exposed. Total waffle slab depth is 16". The garage ramps, located on the east side, are 7" poured concrete deck with 22" deep support beams that tie into 12" thick cast-in-place reinforced concrete foundation walls. The 1" building expansion joint system is within the elevated waffle slab.

B - SHELL

B10 SUPERSTRUCTURE

The structural system consists of exposed load-bearing pre-cast concrete window wall units for each floor. The walls are substantial and measure three feet thick and weigh nearly 13 tons each. This modular mass is dramatically perched on exposed concrete pilotis (piers) at the Ground level, in robust pairs that taper together to a narrow base. At this level, granite-sheathed concrete walls are recessed to create a sheltered loggia framed by the colonnade of paired pilotis.



The pre-cast panels on the second, third and fourth floors were designed to carry the weight of the building. Pre-cast panels on the eighth, ninth and tenth floors were slightly thinner, because although they were not load-bearing they had to contain HVAC piping. Panels on the middle floors required the least amount of fabrication, as they did not need to bear as much load nor contain much piping. The pre-cast panels have deep angled “pockets” at window openings to afford solar shading and are consistent on all elevations.

The structure’s interior floor system is made of pre-cast concrete. One-way pre-cast double-tee framing is supported on reinforced concrete ledgers at typical floors. Standard bay spacing of 20’-0” occurs on typical office floors with provision made for floor troughs to handle power and telecommunications. Two building expansion joints are located in the east/west direction and are 1” wide. Expansion joints are within the pre-cast wall system as well.

Structural drawings indicate the superstructure was designed for live loads listed below (listed in Pounds per Square Foot: PSF):

- Basement	125 psf
- 1 st Floor	100 psf
- 2 nd Floor	125 psf
- Typical Floor	100 psf
- Main Roof	30 psf
- Penthouse Level	150 psf
- Penthouse Intermediate Level	150 psf
- Penthouse Roof	30 psf
- Garage	100 psf
- Plaza above Garage	125 psf

Floor-to-floor height in the HUD building is as follows:

Sub-Basement to Basement	15’-0”
Basement to 1 st Floor	13’-4”
1 st Floor to 2 nd Floor	19’-0”
2 nd Floor to 10 th Floor	12’-0” per floor
10 th Floor to Penthouse	12’-6”

Floor-to-floor height in the Garage is as follows:

Level C to Level B	9’-4”
Level B to Level A	9’-2”
Level A to 1 st Floor	9’-8”

B20 EXTERIOR ENCLOSURE

B2010 – EXTERIOR WALLS – The exterior facade is a buff color, small aggregate pre-cast concrete, load bearing, punched window wall system starting at the second floor level and extending to the tenth floor. The pre-cast system is typically canted on all four sides of each window and uses a repetitive panel rhythm on all four sides. The interior side of the exterior wall system is painted plaster on metal studs with flush mounted recessed fan coil units below windows. The curtain wall system is on the first floor, at the main north and south entrances and

along the west side adjacent the cafeteria. The original system is bronze anodized with non-insulated glass, full height from the first floor to the underside of the second floor. The storefront system was replaced in recent years at the Child Development Center, in the southwest portion of the first floor, with insulated glass makeup and an anodized finish, which matches the original system. Cast-in-place concrete is exposed in many locations on the first floor and matches the exposed finish pattern of the exterior tree columns. The four end towers, which contain egress stairs, are faced with "Cherry Hill" granite panels, 3" thick supported by galvanized relief angles at every floor with cast-in-place concrete backup. Typical stone panels are 4'-0" high by 6'-6" wide. Granite panels are full height of the building.

B2020 – EXTERIOR WINDOWS – Windows at Levels 2 - 10 are a consistent size on all elevations (6'-0" wide x 3'-6" high). A window replacement project is underway and approximately 65% of the original clear single glazed window units have been replaced. Replacement of the balance of the windows is in progress for the south end of the building. Replacement windows match the anodized finish of original windows. Depth of setback for typical punched windows is approximately 24" from outboard pre-cast face. The original window blind system is 2" metal horizontal with fabric strap support and remains in various locations. The blind system has been replaced on an as-needed basis with a similar 2" vinyl horizontal system.

B2030 – EXTERIOR DOORS – Doors are typically 36" wide swing doors with insulated glass makeup on replacement doors. Original storefront doors remain single glazed. Finish of the exterior doors and frames matches the bronze aluminum exterior window finish. Employee/Visitor entrances are located at the southeast and northeast corners and include ADA automatic doors and vestibules. The northeast entrance also includes two revolving doors. An employee only entrance is located at the northwest corner and includes ADA automatic doors and a vestibule. Exterior service doors at the corner towers are galvanized and painted hollow metal.

B30 ROOFING

B3010 – ROOF COVERINGS – There are two types of roof systems currently in place that were installed in 2013. Both systems provide Energy Star ratings and carry 20 year warranties.

The first roof system, which is the majority of the total roof area, is comprised of a 3-ply SBS (styrene-butadiene-styrene) modified bitumen roof membrane with 3-ply SBS modified flashing. The system includes 40 mil baseply and reinforcing plies, along with modified bituminous base and top flashing sheets.

The second roof system is liquid applied rubberized asphalt, used only below cooling towers, and includes a reinforcing sheet and top flashing.

Both systems include an acrylic elastomeric water based roof coating, which is highly reflective. Extruded polystyrene board insulation is 3" thick in most locations. Cast iron roof drains and stainless steel zinc coated flashing were replaced during the roof replacement. Height of the perimeter parapet is approximately 10". Wall flashing with counter flashing is 8" high at concrete penthouse walls and is continuously caulked. Roof slope is typically pitched from the perimeter exterior wall system and from the penthouse to 5" area spot drains. There were no scuppers or overflow drainage systems.



C-INTERIORS

C10 INTERIOR CONSTRUCTION

C1010 – PARTITIONS – Typical corridor partitions are 4" Concrete Masonry Unit (CMU) with plaster finish on both sides. Office partitions include the original 36" modular painted metal panel wall system. Replacement office partitions are generally 2 ½" metal stud framing with sound attenuation batts and drywall finish. The corridor partition system extends to the underside of the deck above, while office partitions generally extend only to the suspended ceiling line. Service areas, including Mechanical and Electrical Rooms from the Sub-Basement level and up, typically receive exposed CMU full height to the underside of the concrete deck above. On the parking levels below the east plaza, service areas include adjacent stair connectors, which are unpainted CMU and cast-in-place concrete within the garage.

C1020 – INTERIOR DOORS – Door assemblies are primarily painted metal with hollow metal knock-down frames, except at fire doors, which are welded frames. Corridor doors on office floor levels 2 – 10 typically do not include borrowed lites; they include a fixed metal panel above the door, extending the frame to the ceiling line. Door frame color on office floors follow the typical quadrant color scheme as follows:

Northwest – Orange
Northeast – Yellow
Southwest – Blue
Southeast – Black

There are glass and aluminum style doors located in limited areas of the facility, primarily within suite locations and certain delegated program offices. Most door assemblies currently have ADA compliant lever hardware, though there are locations in various office areas which still include original knob hardware.

C20 STAIRS

Egress stairs typically have cast-in-place concrete walls with concrete treads, risers, landings and checker plate nosings. The handrail system is typically round profile wood, with clear finish, a stainless steel post and rail support system, except in egress stair #4 where the rail system is painted metal round pipe. Stair walls are typically not painted. Concrete walls have vertical formwork lines. End walls within the stairs are CMU. Penthouse level service stairs are metal with concrete tread infill and painted metal pipe handrails. Garage stairs have a wood handrail system with a square profile and clear finish on painted metal rectangular profile framing.



C30 INTERIOR FINISHES

C3010 – WALL FINISHES – Typical public corridor and office partitions are painted with no vinyl wall covering. Wall finishes at elevator lobbies are bush hammered concrete walls. Wall finishes in executive suites are typically groove wood paneling. Restrooms are 4 ¼" x 4 ¼" ceramic tile wall wainscots set in a vertical ashlar pattern. Locker rooms in the Basement Fitness Center are ceramic tile walls. Sub-Basement and Garage walls are typically unfinished concrete or CMU. Restroom stalls are floor mounted painted metal.

C3020 – FLOOR FINISHES – Typical floor finish for corridors, elevator lobbies and limited support space on office floor levels 2 – 10, is the original 12" x 12" vinyl tile. Carpet tile is typically in general office spaces. Executive office space and conference rooms receive broadloom carpet. 4" vinyl base is typically with floor finishes, except at elevator lobbies where the bush hammered concrete walls start at the floor line. Public restroom floors are original mosaic ceramic tile. Electrical and Telecommunication service closets have a painted concrete floor finish. There are a few computer rooms which have a raised access floor system with metal floor panels, laminate finish and perforated floor tiles provided for air supply. Bluestone floors are in entry and elevator lobbies on the Ground floor. Basement and Sub-Basement level flooring consists of various finishes, including painted concrete floor finish in service areas, vinyl tile with vinyl base and carpet tile with vinyl base for office areas. The Fitness Center on the Basement level has tongue and groove wood strip flooring in the main exercise room and carpet tile in the weight room. The upper two levels of the Garage are concrete with a grey traffic coating. The lowest level of the Garage is unsealed concrete.

C3030 – CEILING FINISHES – Corridor ceilings on office levels 2-10 are typically 2' x 4' square edge, acoustical suspended tile ceilings with 2' x 4' prismatic lense fluorescent light fixtures. Within the office space, suspended acoustical tile ceiling is 2' x 4' with tegral edges and textured surface with 1' x 4' prismatic lense fluorescent light fixtures. In Secretary and Deputy Secretary executive office areas on Level 10, acoustical ceilings are generally 1' x 1' concealed spline with round fluorescent fixtures. Elevator lobbies are typically cement plaster with a smooth painted finish and include recessed compact fluorescent can lights. Public restroom ceiling finish is painted plaster. Public spaces on Level 1 are generally 2' x 2' tegral acoustical tile ceilings and include the Cafeteria, Servery and the Brooke-Mondale Auditorium.

D SERVICES

D10 CONVEYING

Twenty-two elevators help provide transportation for the structure. There are sixteen public passenger elevators (Numbers 1-16), eight each at the north and south lobby locations serving all floors. The cabs are currently being remodeled with plastic wood, simulated laminate with stainless trim and carpet tile floors.



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There is a handicap lift located on the penthouse level near stairway #5. It is used to go from the penthouse level to the observation deck on the roof.

There are five freight elevators. Two of these (Numbers 17 and 18) are located on the interior side of the north and south lobbies. They serve all floors and have their own freight lobbies.

Freight elevator 19 is located in the south side core, next to the mail conveyor, and travels between the Basement and Sub-basement.

Freight elevators 20 and 21 are for the kitchen and are located in the center of the building. They only travel between the Basement and first floor.

The elevator capacities and speeds are as follows:

Unit	Speed	Capacity
Passengers 1-16	500 FPM	4,000 pounds
Freights 17 and 18	250 FPM	10,000 pounds
Hydraulic freight 19	50 FPM	10,000 pounds
Freight 20 and 21	100 FPM	4,000 pounds
PH Handicap lift	9 FPM	550 pounds

D20 Plumbing

D2010 – PLUMBING FIXTURES – The toilet rooms have not been renovated. Some toilets have been changed to low flow fixtures, but the wall mounted foot pedal flush valves remain. Lavatory fixtures have been changed to automatic low flow type.

The original drinking water chillers have been replaced with Filtrene units that are now 27 years old. The drinking fountains (bubblers) were replaced since the building was built, with stainless steel units fitted with bottle fillers.

D2020 – DOMESTIC WATER DISTRIBUTION – The building receives domestic water supply from the city at 2 different locations, one on the north side of the building and the other on the south side. There are reduced pressure zone back flow preventers between the domestic water system and the HVAC system.

The domestic water system is divided into a low altitude and high altitude system. The high altitude system has two duplex hydro-pneumatic booster pumps and tanks in the first basement mechanical rooms. The booster system, including tanks and pumps, is original to the building. There are separate water heaters for the high and low altitude systems.

The building's domestic hot water system was originally storage tanks with steam fired tube bundles and closed coupled recirculation pumps. The steam bundles have been replaced with water bundles served from the gas fired boiler plant in the penthouse. There are separate hot water systems for the cafeteria, high altitude and low altitude portions of the building. Generally, Floors 3 and below are on the low altitude system, and Floors 4 and up are on the high altitude system.



The domestic water piping runouts are threaded brass throughout the facility and the riser piping is galvanized steel.

D2030 – SANITARY WASTE – The waste and vent piping are generally cast iron with lead and oakum joints. There have been some cracks found in the vent piping which have been repaired.

On the sub-basement level, there are two ejectors for sanitary services. The sump pits are equipped with duplex submersible pumps which are original.

D2040 – RAIN WATER DRAINAGE – The storm water drainage piping is hub-and-spigot cast iron and dates from the original building construction.

On the basement level, there is a sump pit on the south end of the loading dock to handle the storm water drainage associated with the loading dock. The sump pit is equipped with duplex submersible pumps which are original.

On the sub-basement level, there are three ejectors for storm services. The sump pits are equipped with duplex submersible pumps and are original.

D30 Heating, Ventilation and Air Conditioning (HVAC)

D30: This office building is fully heated and air conditioned. There are nine office floors and part of the first floor is occupied. The sub-basement has mechanical equipment and storage spaces, and the basement has two mechanical rooms, as well as office, classroom and television studio space. Mechanical and electrical spaces are ventilated. The HVAC systems of the building include water cooled chillers, cooling towers, hot water boilers, chilled and hot water pumps, air handling units, terminal hot water coils, fan coil units and a direct digital control building automation system (BAS) with pneumatic actuators. The original air distribution system is constant air volume with hot water heat and fan coil units at the perimeters. Under an Energy Service Performance Contract (ESPC), a major overhaul of the mechanical systems is underway. Generally, the ESPC has or will disconnect the building from the GSA steam distribution, replace windows to reduce heat gain, demolish the fan coil units (FCU), install variable air volume (VAV) boxes to greatly increase the number of zones on each floor, add variable frequency drives (VFD) to the cooling towers and primary chilled water pumps, increase the roof insulation to reduce the heat gain and replace the lighting to reduce space loads.

D3020 – HEAT GENERATING SYSTEMS – As a part of the ESPC, the building has been disconnected from the GSA Central Plant steam system. The building heating system includes low temperature hot water boilers, centrifugal base mounted pumps, expansion tanks, air separator, chemical shot feeder, unit heaters and hot water distribution loops. The hot water heating piping systems in the building are original.

The hot water distribution system has multiple loops served by its own set of pumps. The hot water loops are constant flow with some bypass valves in the system to avoid pumping against a dead head. Loop-1 serves the preheat coils, fan coil units and heating coils from the penthouse. Each subsystem has a dedicated lead and lag pump. Loop-2 serves the overhang heating system with a lead and lag pump. Loop-3 serves the fan coil units and heating coils

with a lead and lag pump. Loops 4, 5 & 6 have been taken out of service. Loop-7 serves duct mounted heating coils.

The steam condensate from the building is returned to the main condensate tank for return to the GSA Central Plant. This equipment has been deactivated, but not demolished.

D3030 – COOLING GENERATING SYSTEMS – The Central Chilled Water Plant is on the penthouse level. The chilled water system has three York centrifugal water-cooled packaged chillers, three base-mounted constant speed primary chilled water pumps, expansion tank and a chemical shot feeder. The chilled water loop is constant flow, primary with three-way modulating valves at the cooling coil for air handling units. Under the ESPC, the three-way valves are being replaced with two-way valves, and the refrigeration plant is being converted to a variable flow primary type by adding VFDs to the pumps, flow and pressure controls.

The two large chillers are 1560 tons each and the small chiller is 780 tons. All machines were installed in 1995. The chillers are using environmentally neutral refrigerant R-123. The three base-mounted primary chilled water pumps are 75-HP each for the large chillers and 40-HP for the small chiller. Each primary pump is dedicated to a chiller. The chilled water system is designed to operate at 15 degrees Fahrenheit temperature difference. All of the chillers are electric driven, at 4160 Volts.

The chiller room is equipped with a refrigerant leak detection system and exhaust system as required by building code.

The central cooling plant cycles off during unoccupied hours. The chilled water plant capacity was sized to operate the building at 79 degrees Fahrenheit, with the largest machine out of service. This is in accordance with the P-100 requirements in place in 1994 when the sizing criteria was established.

The chilled water distribution system in the building is welded carbon steel, insulated with molded fiberglass insulation.

Condenser Water System: The condenser water system consists of five one-cell stainless steel packaged cooling towers, two 25-HP circulation pumps for the large chillers and one 15-HP circulation pump for the small chiller, chemical treatment unit and condenser water piping. The condenser water pumps and cooling towers were installed in 1995. The towers are configured with two cells dedicated to each large chiller and one cell dedicated to the small chiller. Under the ESPC project, the cooling towers are provided with VFDs.

D3040 – DISTRIBUTION SYSTEMS – Air Distribution Systems: The air distribution system has 18 central station air-handling units, ductwork, air devices and two-pipe/four-pipe fan coil units.

There are 18 original air handling units serving the occupied floors. The cooling coils in all of the units were replaced in 1995 with the chilled water plant renovation project.

The central station air-handling units are single wall packaged units with internally mounted fan motors, spring isolators and flexible connectors. The return fans are double wide and double inlet drawing from a plenum chamber. One opening to the fan wheel is typically very close to the plenum wall. The air handlers have been adapted with VFDs for both the supply and return fans, which were adjusted seasonally. Typically, relief-air bleeds off at the return-air duct before making it to air-handling-units and leaves the building. The original ventilation in the building

does not comply with current ASHRAE62.1-2010/ IMC-2012, Section 403.1. The ESPC project is converting the constant volume systems to VAV and controlling the fan speed based on duct pressure. The ESPC will also adjust the ventilation air based on return air carbon dioxide (CO₂) to further reduce energy use. As a part of the ESPC VAV conversion, the ductwork in the spaces is being replaced and new diffusers installed. It is unclear if the ESPC project is updating the air handling units to meet current P-100 requirements, including installing UV-C emitters on the downstream side of cooling coils.

Room B-282 has been converted to classroom space and Mini-Mates were added to handle the cooling required.

Telephone and electrical closets are not ventilated; therefore warm.

Exhaust Ventilation Systems: The exhaust system in the building can be divided into three categories: kitchen exhaust systems; parking deck exhaust system; and general building exhaust systems. Kitchen ventilation systems are discussed under "Kitchen Exhaust Systems."

The building exhaust systems are generally plenum mounted centrifugal fans. The general building exhaust systems serve toilets, locker rooms, storage rooms, generator rooms and the fitness center. There are six floor/plenum mounted centrifugal exhaust fans serving the general building exhaust systems. The garage and loading dock are ventilated with floor mounted centrifugal fans. The fans operate per the building occupancy schedule.

The mechanical equipment and transformer rooms are typically ventilated through the propeller type fans.

The basement garages are ventilated and provided make-up air by heating and ventilating air handling units in the basement. These units are no longer in service because the location of the intakes violates the AT/FP requirements of GSA P-100. There are two exhaust fans at the sub-basement level to serve both of the garage levels. The fans are original to the building. The garage exhaust system is constant speed and has no carbon monoxide/nitrous oxide sensors. The loading dock has a dedicated exhaust fan in the southwest corner.

The existing stairways are not pressurized. The International Building code-2012 Section 403.5.4 requires smokeproof enclosures for all exit stairways of a new building serving occupants of a floor level located more than 75 feet above the level of exit discharge, or located more than 30 feet below the level of exit discharge.

There are spaces adjacent to the loading dock that have been adapted for storage of cleaning chemicals and supplies.

Kitchen Exhaust Systems: The kitchen facility is no longer a full service cafeteria, but houses two franchise food outlets.

D3050 – TERMINAL AND PACKAGE UNITS – The perimeter is equipped with fan coil units. The south face of the building has four-pipe fan coil units and the east, north and west have two-pipe fan coil units. Under the ESPC, the FCUs are being demolished.

D3060 – BUILDING AUTOMATION SYSTEMS – Building Automation Systems and Controls: The original building automation system is an open protocol BACnet Siemens system. As a part of the ESPC, the Siemens system is being partially removed and a LONworks Honeywell system is

being installed. In reviewing the ESPC documentation, it appears that some of the auxiliary systems monitored by the Siemens system are not being incorporated into the new system.

The pneumatic system serves the old valve and damper actuators for the central station equipment and the controls for the remaining fan coil units. Each control panel has a local coalescing filter to remove moisture and oil and these are maintained regularly. As the ESPC takes control of air handling units, the control valves and actuators are being replaced with two-way valves and electronic actuators.

The automatic control valves' actuators are pneumatic with transducers to communicate with the Siemens BAS system. These actuators will be replaced with electronic as a part of the ESPC.

D40 FIRE PROTECTION

The Weaver building is equipped with two 8" incoming fire mains served from the city domestic water main on 7th Avenue. The 8" incoming main enters the building at the sub-basement level, along the east wall. The 8" sprinkler mains serve the stairwell standpipes and building sprinklers via a 1500 GPM fire pump and a jockey pump located adjacent to the incoming main. A dry pipe sprinkler main, fed from the building's wet pipe main, serves the loading dock area. A dry pipe main is in the garage. A sprinkler drain riser system is also installed. In addition to the building's wet pipe and dry pipe mains, a chemical extinguishing system serves the kitchen's cook-tops and deep fryers.

The sprinkler mains are complete with alarmed flow stations and tamper switches. Sprinkler and standpipe fire department connections are also along the north and west walls, and on the roof. With the exception of those items listed in the deficiencies, the internal sprinkler head distribution appears to be consistent with the space use and wall configurations.

D50 ELECTRICAL SYSTEMS

D5010 – ELECTRICAL SERVICE AND DISTRIBUTION – The HUD building receives power through four 13.8KV utility lines from PEPCO 14637, 14638, 14639 and 14640. These lines enter at a 1200A medium voltage metal clad switchgear that distributes 13.8KV power to the three substations.

Substations A & B each have four oil filled 13.8KV:480/277V, 3 Ph., 1500KVA network protected transformers. These transformers feed double ended switchboards rated at 277/480V, 4000A, with a 4000A tiebreaker. Two of the transformers feed each side of a switchgear, while the other two transformers feed the second side in a mirror configuration of the first. These switchgears were replaced in 1993.

The third substation contains four oil filled 13.8KV:4160/2400V, 3 Ph, 1000KVA network protected transformers. These four transformers each feed one 4180V, 200A, switchboard, which in turn, feed two 4160V compressor motors.

D5020 – LIGHTING AND BRANCH WIRING – ELECTRICAL DISTRIBUTION: General power distribution in this building is handled primarily through four busduct risers, which run through all floors. Each switchboard feeds two busduct risers. For purposes of this description, a riser consists of a vertical group of electric closets with a common or similar configuration of panels.

The typical arrangement per riser, per floor, has one 277/480V, 225A, 42 circuit panel board, fed from a busduct riser mounted disconnect switch. This panel feeds a 30 or 45KVA 480/120/208V transformer within the same room or another electric room on the same floor, which feeds panels on that floor and panels on the next two floors. The majority of the 120/208V panels are 100A, 42 circuits. An additional riser was installed in electric closets A, B, C, D, and E in 1990. These panels are 120/208V, 42 circuit and either 100A or 200A.

LIGHTING: The basic building lighting fixture consists of a 2 x 4 recessed fixture, with T8 lamps, and prismatic lenses. Exceptions occur in mechanical spaces that use industrial type fixtures. There is also a moderate use of incandescent lamps throughout the building for accent lighting.

Emergency lighting from the emergency generator, although not marked, appears to be installed mainly in the corridors and elevator lobbies. Interior offices, in limited cases, use emergency battery units to furnish emergency lighting.

D5090 – EMERGENCY POWER – The building has an emergency power distribution system backed by a 1500 kW, 277/480 volt diesel generator located in the sub-basement. There are 3 - 275 gallon diesel fuel tanks located in the same room as the generator. The main emergency distribution panel is a SQD panel rated at 277/480V, 2000A. Besides lighting miscellaneous power, this switchboard also feeds equipment such as elevators, fire pump, exhaust for the generator room, security and emergency panels located throughout the building.

D5037 FIRE ALARM & LIFE SAFETY

The Weaver building uses a EST3 Fire Alarm Control system. The main panel is located in the fire alarm control room on the basement of the building with an annunciator located on the 5th floor. It was noted that the system is remotely monitored. The detection system consists of manual pull stations, smoke detectors and duct smoke detectors. Occupant notification is by strobe/speaker units installed throughout the building. An elevator recall system is installed and interlocked with the fire alarm system.

Lighted exit signs mark egress pathways and points of egress. Emergency lights, to illuminate the egress paths to a public way, are a mixture of low voltage fixtures with battery backup and fixtures on the emergency generator backup.

The building has a 1500kW diesel emergency generator with an automatic transfer switch to support life/safety systems. This system is located in an enclosed space in the sub-basement level of the building.

G – BUILDING SITEWORK

G20 SITE IMPROVEMENT

G2010 – ROADWAYS – Vehicular pavement/barriers - Pavement for garage access consists of scored concrete deck leading to a cast-in-place concrete ramp system. Painted metal bollards with chains are at the entry and exit ramps to define vehicle zones. Lift-arm gates are at the top of ramps along 7th Street. Asphalt parking areas are along the north and south sides of the plaza with circular pre-cast concrete barriers in front of open bays of the building.



ROBERT C. WEAVER BUILDING, WASHINGTON, DC

Security booths and retractable barricades are in these surface parking locations. Along the south service entrance are lift-arm gates and a security booth.

G2030 – PEDESTRIAN PAVING – The paving system for the plaza consists of New York State bluestone flagging with a natural cleft surface. Paving stones are laid in European bond, which is a random width pattern. Deck expansion joints occur within the bluestone paving. Bluestone is on the west and south sides of the building. The north and east sides have concrete pavement. The east side utilizes two colors within the pavement, working with a circular pattern.

G2040 – SITE DEVELOPMENT – In the northwest corner, there is a 7' high grille fence system to enclose the Childcare outdoor play area. On the west courtyard raised plaza, there are seven large steel grates utilized for air ventilation of the loading dock below. The raised area also includes grass and picnic tables. On the east side, there are seven circular canopies set on stainless steel poles over low, rounded concrete planters with seating. At the northwest corner there is a covered bicycle storage area with a chain link fence.

G2050 – LANDSCAPING – Grass areas are on the west raised plaza and below the round canopies on the east side. There are street trees on the north, east and south sides. Minimal site landscaping exists in miscellaneous areas of the site.

ROBERT C. WEAVER BUILDING



THE REQUIREMENTS ARE ENTERED
SEQUENTIALLY ACCORDING TO THEIR
UNIFORMAT II CATEGORY

REQUIREMENTS

3



Requirement Detail Report

By Asset Name and Requirement Prime System

DRAFT

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: A20

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	A2020 - Plaza Damage - Repair	Action Date	Aug 7, 2015
Linked System		Date Inspected	Aug 7, 2013
Category	Reliability	Finish Date	
Prime System	A2020 - Basement Walls	Status	Open
Priority	2 - Within 1 to 2 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

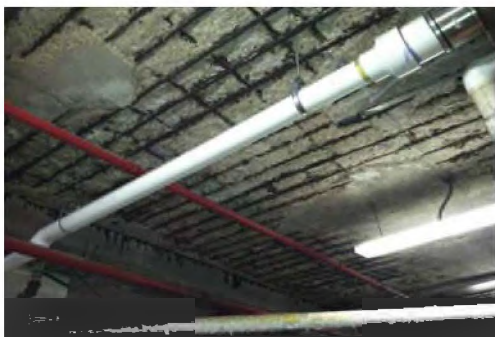
CONDITION/PROBLEM. Spalling concrete occurs in various locations on the underside of concrete decks and at concrete beam framing. Very large areas of concrete have spalled and bottom rebar has been left exposed, especially at the Basement loading dock area.

LOCATION/EXTENT. West Plaza, Loading Dock, East Garage Ramps, Basement and Sub-Basement and East Plaza.

CAUSE. Water seepage and age.

CODE/REGULATION. Reinforcement must have 1 1/2" minimum coverage. Reference IBC 1907.7.1 Details for Reinforcement.

Linked Photos



A2020 - Structural Slab Spalling - Repair

Actions

Action Name	A2020 - Plaza Damage - Repair
Option	Conventional
Prime Action	Yes
Description	<p>REMEDY. Plaza Repairs project is underway to address this requirement. The most recent submission from McMullan and Associates is 90% Construction Document Submission. 4/9/13. The submission is broken down into phases with estimated costs:</p> <p>Phase 1 - West Plaza and Loading Dock Repairs (b)(4) Scope addresses deteriorated structure over the loading dock and includes waterproofing and plumbing repairs in the west plaza, southwest plaza and upper west planter.</p>

Phase 3 - East Plaza Plumbing Repairs (b)(4) Scope addresses plumbing related leaks and code deficiencies at the East Plaza.

Phase 4 - Basement and Sub-Basement Structural and Waterproofing Repairs (b)(4) Scope addresses minor structural repairs and leaks in slabs and foundation walls throughout the basement and sub-basement perimeter. The existing sprinkler system will need to be removed and replaced.

Phase 5 - East Garage and East Plaza Repairs (b)(4) Scope includes remaining structural and waterproofing repairs at the east garage and plaza. Portions of the existing sprinkler lines will need to be removed and reinstalled while work is being done.

Phase 6 - Sub-Basement Plumbing (b)(4) Scope includes replacement of existing sumps and related plumbing at the southwest sub-basement area.

IMPLEMENTATION. Coordinate work with the Building Manager to minimize disruption to loading dock and garage traffic.

Estimate

Code Label	Line Item Description	Quantity	Unit	Unit Cost	Total Cost
	Phase #1 - West Plaza and Loading Dock Repairs	1.00		(b)(4)	
	Phase #3 - East Plaza Plumbing Repairs	1.00			
	Phase #4 - Basement and Sub-Basement Structural and Waterproofing Repairs	1.00			
	Phase #5 - East Garage and East Plaza Repairs	1.00			
	Phase #6 - Sub-Basement Plumbing	1.00			

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: A20

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	A2022 - Foundation Walls - Patch	Action Date	Aug 7, 2015
Linked System		Date Inspected	Aug 7, 2013
Category	Life Safety	Finish Date	
Prime System	A2022 - Moisture Protection	Status	Open
Priority	2 - Within 1 to 2 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. Moisture migration through cracks in concrete foundation wall.

LOCATION/EXTENT. Various locations in Basement and Sub-Basement.

CAUSE. Failure of waterproofing system on foundation wall or plaza deck combined with hydrostatic pressure.

CODE/REGULATION. Not applicable.

Linked Photos



A2022 - Foundation Walls - Patch

Actions

Action Name A2022 - Foundation Walls - Patch

Option Conventional

Prime Action Yes

Description REMEDY. Repair walls where cracking has occurred.

IMPLEMENTATION. Clean and prep interior side of concrete walls for epoxy grout injection. Patch prepared wall surfaces using high strength grout.

COST EQUIVALENCE. In the following estimate, substitutions have been made. This has occurred because the needed line item does

not occur in the RS Means version provided in the program. The substitution is based on the equivalent value.
-- SUBSTITUTION, Surface Preparation - masonry, brick & block
-- FOR, Surface Preparation - concrete

Estimate

Code Label	Line Item Description	Quantity	Unit
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	30.00	M.S.F.
024119190700	Selective demolition, rubbish handling, dumpster, 10 C.Y., 3 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	4.00	Week
024119200100	Selective demolition, dump charges, typical urban city, building construction materials, includes tipping fees only	1.00	Ton
030130622200	Patching concrete, walls, epoxy grout, 3/4" deep, including chipping, cleaning and epoxy grout	900.00	S.F.
030130711750	Concrete crack repair, structural repair by epoxy injection (ACI RAP-1), suitable for horizontal, vertical and overhead repairs, up to 1/4" (0.25") wide x 12" deep, pneumatic injection with 2-part bulk epoxy, excludes prep	1,800.00	L.F.
099103400750	Surface preparation, interior, walls, wash, masonry, brick & block, smooth	3,000.00	S.F.
CEFU	Cement Finishers (Inside Foreman)	80.00	hour
CEFU	Cement Finishers	300.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: B10

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	B1012 - Rusting Plaza Grates - Refinish	Action Date	Aug 7, 2016
Linked System		Date Inspected	Aug 7, 2013
Category	Reliability	Finish Date	
Prime System	B1012 - Upper Floors Construction	Status	Open
Priority	3 - Within 3 to 5 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. The (7) large exterior air gratings on the ground level are rusting.

LOCATION/EXTENT. West plaza, within the grass area.

CAUSE. Steel grate was only primed, not galvanized.

CODE/REGULATION. Not applicable.

Linked Photos



B1012 - Rusting Plaza Grates - Refinish

Actions

Action Name	B1012 - Rusting Plaza Grates - Refinish
Option	Conventional
Prime Action	Yes
Description	<p>REMEDY. Remove rust from 1 1/2" deep grate system. Provide zinc chromate paint protection.</p> <p>IMPLEMENTATION. Wire brush all corroded metal surfaces and repaint exposed surfaces.</p> <p>COST EQUIVALENCE. In the following estimate, substitutions have been made. This has occurred because the needed line item does not occur in the RS Means version provided in the program. The substitution is based on the equivalent value.</p>

--SUBSTITUTION, Surface Preparation, exterior, siding...
--FOR, Surface Preparation, exterior, steel grate.

HISTORIC PRESERVATION REPAIR PROCEDURES. The grates are included in the restoration zone and are to be restored and maintained in place. The grates as well as the adjacent materials are to be protected from damage or alteration. Submit all product information, construction protection plan and work plan for Regional Historic Preservation Officer's approval prior to commencing work. All work is to meet the Secretary of Interior's Standards for the treatment of historic buildings.

Estimate

Code Label	Line Item Description	Quantity	Unit
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	10.00	M.S.F.
099103300770	Surface preparation, exterior, siding, wire brush, aluminum, heavy	3,000.00	S.F.
099113429000	Paints & coatings, misc. exterior, minimum labor/equipment charge	1.00	job
099710104700	Paints & coatings, metal, zinc chromate, in 5 gallon lots	6.00	Gal.
099713236100	Paints and protective coatings, cold galvanizing in field, brush	3,000.00	S.F.
PSSTA	Painters, Structural Steel	80.00	hour
PSSTJ	Painters, Structural Steel	40.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: B10

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional Actions

Requirement Name	B1015 - Exterior Plaza Handrail Falloff Protection - Add	Action Date	Aug 7, 2023
Linked System		Date Inspected	Aug 7, 2013
Category	Life Safety	Finish Date	
Prime System	B1015 - Exterior Stairs and Fire Escapes	Status	Open
Priority	5: Does Not Meet Current Codes/Standards	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. The exterior metal handrail does not meet code requirements in regard to falloff protection. The original system is only a 2 pipe rail system and 31" above top of concrete wall. Falloff height is approximately 40", which exceeds the maximum 30" allowed by code. The adjacent wood stair and wood handrail do not meet code either.

LOCATION/EXTENT. West side of building at raised plaza retaining wall and at west property line abutting L'Enfant Plaza.

CAUSE. Deterioration due to weathering and insufficient maintenance.

CODE/REGULATION. International Building Code (IBC) 2012 - Section 1012, Handrails; National Fire Protection Association (NFPA). 2012 - 101. Life Safety Code. 7.2.2.4.1 Handrails. 7.2.2.4.4 Handrail Details; Architectural Barriers Act (ABA) 505 Handrails.

Linked Photos



B1015 - Exterior Plaza Handrail Falloff Protection - Add

Actions

Action Name	B1015 - Exterior Plaza Handrail Falloff Protection - Add
Option	Conventional
Prime Action	Yes
Description	REMEDY. Refinish original painted metal rail system, as it is considered historic in the Historic Structures Report. The existing rail system is rusting, but is stable, and needs refinishing. Provide infill mesh and add top rail to achieve 42" height. Extension shall

match rectangular profile of existing handrail system.

IMPLEMENTATION. Wire brush existing corroded handrail system, weld rail extension to existing system, replace wood stair with metal stair. Finish coat system to match original color.

COSTEQUIVALENCE. In the following estimate, substitutions have been made. This has occurred because the needed line item does not occur in the RS Means version provided in the program. The substitution is based on the equivalent value.

--SUBSTITUTION, Wrought Iron Railings

--FOR, Galvanized Railings

--SUBSTITUTION, Surface Preparation...pedestrian gate

--FOR, Surface Preparation... handrail system

HISTORIC PRESERVATION REPAIR PROCEDURES. The railings are included in the restoration zone and are to be restored and maintained in place. Any modifications to the railing to meet current Life Safety Codes are to be reviewed and approved by GSA's Life Safety Engineer as well as GSA's Regional Historic Preservation Officer. Submit all product information, design, construction protection plan, and work plan for Regional Historic Preservation Officer's approval prior to commencing work. All work is to meet the Secretary of Interior's Standards for the treatment of historic buildings.

Estimate

Code Label	Line Item Description	Quantity	Unit
01741320052	Cleaning up, cleanup of floor area, continuous, per day, during construction	10.00	M.S.F.
024119190700	Selective demolition, rubbish handling, dumpster, 10 C.Y., 3 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	4.00	Week
055213502010	2-line pipe rail with pickets and attached handrail, aluminum, satin finish, 1-1/2" pipe, 1/2" pickets @ 4-1/2" O.C., 42" high, shop fabricated, straight & level	450.00	L.F.
055213509000	Railing, pipe, steel, shop fabricated, minimum labor/equipment charge	1.00	Job
099103301310	Surface preparation, exterior, misc., wire brush, metal, pedestrian gate	900.00	S.F.
099113420190	Paints & coatings, misc. exterior, wrought iron railings, brushwork, zinc chromate, primer, 60" high, 1" rail, 1/2" sq. verticals, 6" O.C.	500.00	L.F.
099113420200	Paints & coatings, misc. exterior, wrought iron railings, brushwork, zinc chromate, 1 finish coat, 60" high, 1" rail, 1/2" sq. verticals, 6" O.C.	500.00	L.F.
099113420210	Paints & coatings, misc. exterior, wrought iron railings, brushwork, zinc chromate, 1 additional finish coat, 60" high, 1" rail, 1/2" sq. verticals, 6" O.C.	500.00	L.F.
099113420310	Paints & coatings, misc. exterior, stair stringers, exterior, metal, roll & brush, zinc chromate, each coat, to 14"	200.00	L.F.
C20101100640	Stairs, steel, grate type w/nosing & rails, 12 risers, with landing	0.50	Flight
FORDI	Painters, Ordinary	60.00	hour
SKWKJ	Skilled Workers Average (35 trades) (Journeyman)	160.00	hour
SKWKO	Skilled Workers Average (35 trades) (Outside Foreman)	60.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: B10

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	B1015 - Garage Ramp Falloff Protection - Add	Action Date	Aug 7, 2023
Linked System		Date Inspected	Aug 7, 2013
Category	Life Safety	Finish Date	
Prime System	B1015 - Exterior Stairs and Fire Escapes	Status	Open
Priority	5: Does Not Meet Current Codes/Standards	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. The cast-in-place concrete walls at the garage ramps are only 35" high and do not provide adequate fall-off protection from the plaza.

LOCATION/EXTENT. East side of building.

CAUSE. Code revision since original construction.

CODE/REGULATION. International Building Code (IBC) 2012 - Section 1012, Handrails; National Fire Protection Association (NFPA), 2012 - 101, Life Safety Code, 7.2.2.4.1 Handrails, 7.2.2.4.4 Handrail Details; Architectural Barriers Act (ABA) 505 Handrails.

Linked Photos



B1015 - Garage Ramp Falloff Protection - Add

Actions

Action Name	B1015 - Garage Ramp Falloff Protection - Add
Option	Conventional
Prime Action	Yes
Description	REMEDY. Add handrail to top of concrete wall. Finish will match adjacent stainless steel canopy columns. Top of rail will be 42" minimum (at high point of plaza pavement tie-in).

IMPLEMENTATION. Coordinate with vehicular and pedestrian use.

HISTORIC PRESERVATION REPAIR PROCEDURES. The cast-in-place walls are original features of the building that are included in the restoration zone and are to be preserved and maintained in place. Any modifications or additions to the wall to meet current Life Safety Codes are to be reviewed and approved by GSA's Life Safety Engineer as well as GSA's Regional Historic Preservation Officer. Submit all product information, design, construction protection plan, and work plan for Regional Historic Preservation Officer's approval prior to commencing work. All work is to meet the Secretary of Interior's Standards for the treatment of historic buildings.

Estimate

Code Label	Line Item Description	Quantity	Unit	(b)(4)
015433101100W	Rent core drill, electric, 2.5 H.P. 1" to 8" bit diameter (Weekly)	1.00	Ea.	
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	10.00	M.S.F.	
030130622150	Patching concrete, walls, epoxy grout, 1/2" deep, including chipping, cleaning and epoxy grout	20.00	S.F.	
038213100300	Concrete core drilling, core, reinforced concrete slab, 3" diameter, up to 6" thick slab, includes bit, layout and set up	50.00	Ea.	
055213500955	Railing, pipe, stainless steel, wall rail, #4 finish, 1-1/2" diam., shop fabricated	200.00	L.F.	
079123100052	Pre-formed joint seals, backer rod, polyethylene, 1/2" dia	30.00	L.F.	
079213204300	Joint sealants, caulking and sealants, silicone rubber, bulk, in place, 1/4" x 1/2"	30.00	L.F.	
SKWK1	Skilled Workers Average (35 trades) (JourneyMan)	40.00	hour	
SKWKO	Skilled Workers Average (35 trades) (Outside Foreman)	20.00	hour	

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: B10

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	B1019 - Parking Decks - Repair	Action Date	Aug 7, 2015
Linked System		Date Inspected	Aug 7, 2013
Category	Life Safety	Finish Date	
Prime System	B1019 - Other Floor Construction	Status	Open
Priority	2 - Within 1 to 2 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM: Cracking has occurred in numerous locations of the garage slab-on-grade. The traffic coating system, applied in 2000, for the garage is deteriorated in high-traffic areas, such as ramps.

LOCATION/EXTENT: Parking levels A, B and C.

CAUSE: Traffic coating deterioration is due to age and use. Cracking within the slab on grade appears to have occurred years ago.

CODE/REGULATION: Not applicable.

Linked Photos



B1019 - Parking Decks - Repair

Actions

Action Name	B1019 - Parking Decks - Repair
Option	Conventional
Prime Action	Yes
Description	<p>REMEDY: Repair cracks in parking garage level C by epoxy injection. Prepare and provide traffic coating in deteriorated locations.</p> <p>IMPLEMENTATION: Clean and prep cracks and deck. Coordinate work with Building Manager.</p> <p>COST EQUIVALENCE: In the following estimate, substitutions have been made. This has occurred because the needed line item does</p>

not occur in RS Means version provided in the program. The substitution is based on the equivalent value.

-- SUBSTITUTION, Composition flooring, polyurethane...

-- FOR, Garage traffic deck coating system, polyurethane.

-- SUBSTITUTION, Skilled Workers Average - labor

-- FOR, Prep/scoring concrete cracks.

Estimate

Code Label	Line Item Description	Quantity	Unit
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	10.00	M.S.F.
030130629000	Patching concrete, minimum labor/equipment charge	1.00	job
030130711710	Concrete crack repair, structural repair by epoxy injection (ACI RAP-I), suitable for horizontal, vertical and overhead repairs, up to 1/4" (0.25") wide x 4" deep, pneumatic injection with 2-part bulk epoxy, excludes prep	2,400.00	L.F.
096713134500	Composition flooring, polyurethane, with suspended vinyl chips, max	4,200.00	S.F.
321723130203	Painted pavement markings, acrylic waterborne, white or yellow, parking striping	5,400.00	L.F.
CEFI	Cement Finishers (Inside Foreman)	40.00	hour
CEFI	Cement Finishers	80.00	hour
SKWKJ	Skilled Workers Average (35 trades) (JourneyMan)	240.00	hour

(b)(6)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: B20

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	B2010 - Exterior Granite Facades - Repair	Action Date	Aug 7, 2015
Linked System		Date Inspected	Aug 7, 2013
Category	Integrity	Finish Date	
Prime System	B2010 - Exterior Walls	Status	Open
Priority	2 - Within 1 to 2 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. The facades' endwall granite panel system has mortar joints which are generally in poor condition with deterioration increasing in height. There are limited instances of granite panel cracking, chipping or spalling. Sealant joints at relief angles at each floor need replacement; these joints are missing weep holes as well.

LOCATION/EXTENT. At the four end corners of the building.
-- Historic Zone I

CAUSE. Deterioration due to aging, wear and tear.

CODE/REGULATION. 2012 International Building Code, Chapter 21 (Masonry), Subsection 2103 (Masonry Construction Materials). ASTM C270, Standard Specification for Mortar for Unit Masonry

Linked Photos



B2010 - Exterior Granite Facades - Repair

Actions

Action Name	B2010 - Exterior Granite Facades - Repair
Option	Conventional
Prime Action	Yes
Description	REMEDY. Rake out and replace deteriorated mortar joints. At floor lines, stainless steel relieving angles are caulked with silicone which also needs replacement. Weep holes are missing and should be provided at these soft joints. Repair cracked, chipped or spalled granite where possible. If repair is not feasible, replace damaged portion of panel with granite to match color, texture and

tooling of original material.

IMPLEMENTATION. Review all planned repair actions with the GSA Historic Preservation Office. From grade, a ground-based lift or building-mounted swing stage, access each façade and repair damaged stone and deteriorated mortar and sealant. Complete Dutchman repairs, piecing in small areas of stone to match the existing in locations of spalling. Clean joints and apply mortar of design and color matching adjacent mortar.

COORDINATION. Liaise with GSA historic Preservation Office.

HISTORIC PRESERVATION REPAIR PROCEDURES. The exterior granite panels are included in the restoration zone and are to be restored and maintained in place. In addition, in the maintaining, repairing or altering of the building, original features of the building are to be protected from damage or alteration. Refer to the Guideline Specifications from the 1999 Historic Structures Report for mortar analysis and recommendations for repair to façade. Submit all product information, design, construction protection plan and work plan to Regional Historic Preservation Office's approval prior to commencing work. All work is to meet the Secretary of Interior's Standards for the treatment of historic buildings.

Estimate

Code Label	Line Item Description	Quantity	Unit
015423701800	Scaffolding, steel tubular, regular, accessory, plank, buy, 2" x 10" x 16' long	2,340.00	Ea.
015423702200	Scaffolding, steel tubular, regular, frame, rent/mo, 6'-4" high x 5' wide	2,438.00	Ea.
015423704300	Scaffolding, steel tubular, regular, labor only to setup & dismantle, bldg ext. 6' -4" x 5' frames, 10 stories, excl. planks	90.00	C.S.F.
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	180.00	M.S.F.
024119190800	Selective demolition, rubbish handling, dumpster, 30 C.Y., 7 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	24.00	Week
024119200100	Selective demolition, dump charges, typical urban city, building construction materials, includes tipping fees only	15.00	Ton
040120200700	Pointing masonry, stonework, hard mortar	16,740.00	L.F.
040120209000	Pointing masonry, minimum labor/equipment charge	4.00	Job
040130200840	Cleaning masonry, high pressure wash, heavy soil, biological and mineral staining, paint, water and chemical, excludes scaffolding	46,080.00	S.F.
044310450950	Granite veneer, cut to size, polished, high price, red, black, 2-1/2" to 4" thick	600.00	S.F.
044310459000	Granite, minimum labor/equipment charge	8.00	Job
079123100092	Pre-formed joint seals, backer rod, polyethylene, 1" dia	1,860.00	L.F.
079213100300	Masonry joint sealants, silicone, 1/2" x 1/2" joint, re-caulk only, excludes scaffolding	1,860.00	L.F.
STONJ	Stone Masons	1,200.00	Hr.

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: B20

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	B2010 - Exterior Precast Levels 2-10 - Clean		
	Action Date	Aug 7, 2023	
Linked System	Date Inspected	Aug 7, 2013	
Category	Appearance	Finish Date	
Prime System	B2010 - Exterior Walls	Status	Open
Priority	4 - 5+ Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. The facades' precast window panels are beginning to show staining on portions of the coffered areas. The bottom sloped and vertical surfaces are already dirty in many locations. The precast panels were last cleaned in 2001.

LOCATION/EXTENT. All facades of the building.

CAUSE. Due to rainfall, dirt washes from vertical surfaces, deposits on horizontal ledges and continues to wash down adjacent vertical surfaces. Biological growth occurs.

CODE/REGULATION. None.

Linked Photos



B2010 - Exterior Precast Levels 2-10 - Clean

Actions

Action Name B2010 - Exterior Precast Levels 2-10 - Clean

Option Conventional

Prime Action Yes

Description REMEDY. Clean the facades. The precast and tree columns were last cleaned in 2001.

IMPLEMENTATION. Apply a water-based cleaning agent, and where warranted, biocide treatment, over each façade, followed by low pressure washing. Utilize additional cleaning agents if needed.

COST EQUIVALENCE. In the following estimate, substitutions have been made. This has occurred because the needed line item does not occur in RS Means version provided in the program. The substitution is based on the equivalent value.

-- SUBSTITUTION, Paints & Coatings, walls, concrete masonry units (CMU)...

-- FOR, Paints & Coatings, walls, precast concrete....

HISTORIC PRESERVATION REPAIR PROCEDURES. The exterior precast panels are included in the restoration zone and are to be restored and maintained in place. In addition, in the maintaining, repairing or altering of the building, original features of the building are to be protected from damage or alteration. Refer to the Guideline Specifications (Chapter X) as well as the Materials Cleaning Analysis (Chapter VIII) from the 1999 Historic Structures Report for cleaning. Submit all product information, design, construction protection plan and work plan for Regional Historic Preservation Officer's approval prior to commencing work. All work is to meet the Secretary of Interior's Standards for the treatment of historic buildings.

Estimate

Code Label	Line Item Description	Quantity	Unit
015426501010	Swing staging, bosun's chair or work basket, electric powered, rent/mo, 300' height, 3' x 3.5'	12.00	Ea.
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	40.00	M.S.F.
040130200840	Cleaning masonry, high pressure wash, heavy soil, biological and mineral staining, paint, water and chemical, excludes scaffolding	162,000.00	S.F.
040130204000	Cleaning masonry, add for masking doors and windows	16,200.00	S.F.
099113900470	Paints & Coatings, walls, concrete masonry units (CMU), smooth surface, first coat, waterproof sealer, spray	162,000.00	S.F.
099113900480	Paints & Coatings, walls, concrete masonry units (CMU), smooth surface, second coat, waterproof sealer, spray	162,000.00	S.F.

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: B20

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	B2010 - Exterior Tree Columns - Clean	Action Date	Aug 7, 2015
Linked System		Date Inspected	Aug 7, 2013
Category	Appearance	Finish Date	
Prime System	B2010 - Exterior Walls	Status	Open
Priority	2 - Within 1 to 2 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. The facades' cast-in-place concrete structural tree system at Level 1 has staining on all facades. The tree system was last cleaned in 2001.

LOCATION/EXTENT. All surfaces of concrete structure at Level 1 require cleaning. The vertical face of the tree structure, immediately below the precast panels, needs the most cleaning.

CAUSE. Due to rainfall, dirt washes from vertical surfaces, deposits on horizontal ledges and continues to wash down adjacent vertical surfaces. Biological growth occurs.

CODE/REGULATION. None.

Linked Photos



B2010 - Exterior Tree Columns - Clean

Actions

Action Name	B2010 - Exterior Tree Columns - Clean
Option	Conventional
Prime Action	Yes
Description	<p>REMEDY. Clean the facades. The precast and tree columns were last cleaned in 2001.</p> <p>IMPLEMENTATION. Apply a water-based cleaning agent, and where warranted, biocide treatment, over each façade, followed by low pressure washing. Utilize additional cleaning agents if needed.</p>

COSTEQUIVALENCE. In the following estimate, substitutions have been made. This has occurred because the needed line item does not occur in RS Means version provided in the program. The substitution is based on the equivalent value.

-- SUBSTITUTION, Paints & Coatings, walls, concrete masonry units (CMU)...

-- FOR, Paints & Coatings, walls, precast concrete...

HISTORIC PRESERVATION REPAIR PROCEDURES. The exterior tree columns are included in the restoration zone and are to be restored and maintained in place. In addition, in the maintaining, repairing or altering of the building, original features of the building are to be protected from damage or alteration. Refer to the Guideline Specifications (Chapter X) as well as the Materials Cleaning Analysis (Chapter VIII) from the 1999 Historic Structures Report for cleaning. Submit all product information, design, construction protection plan and work plan for Regional Historic Preservation Officer's approval prior to commencing work. All work is to meet the Secretary of Interior's Standards for the treatment of historic buildings.

Estimate

Code Label	Line Item Description	Quantity	Unit
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	32.00	M.S.F.
040130200840	Cleaning masonry, high pressure wash, heavy soil, biological and mineral staining, paint, water and chemical, excludes scaffolding	30,000.00	S.F.
040130204000	Cleaning masonry, add for masking doors and windows	3,000.00	S.F.
099113900600	Paints & Coatings, walls, concrete masonry units (CMU), porous, first coat, waterproof sealer, spray	30,000.00	S.F.
099113900610	Paints & Coatings, walls, concrete masonry units (CMU), porous, second coat, waterproof sealer, spray	30,000.00	S.F.

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: B20

Currency: USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	B2011 - Exterior Tree Columns Spalling – Repair	Action Date	Aug 7, 2016
Linked System		Date Inspected	Aug 7, 2013
Category	Reliability	Finish Date	
Prime System	B2011 - Exterior Wall Construction	Status	Open
Priority	3 - Within 3 to 5 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. The cast-in-place concrete pilots around the building perimeter have been spalling for many years. Reinforcement is exposed in many locations on the face of the trees as well as the underside.

LOCATION/EXTENT. All sides. Level 1.

CAUSE. When the columns were originally poured, portions of some of the reinforcement bars were not set back the code required minimum distance from formwork. Other locations, such as corner conditions, have been damaged over time and rebar is exposed.

CODE/REGULATION. Reinforcement must have 3/4" minimum coverage at columns. Reference IBC 1907.7.1 Details for Reinforcement.

Linked Photos



B2011 - Exterior Tree Columns Spalling - Repair

Actions

Action Name	B2011 - Exterior Tree Columns Spalling - Repair
Option	Conventional
Prime Action	Yes
Description	REMEDY. Prep exposed rebar with epoxy coating before patching concrete. Provide test mock-up to confirm finish color and texture blend with existing finish.

IMPLEMENTATION. Coordinate work with Building Manager.

HISTORIC PRESERVATION REPAIR PROCEDURES. The cast-in-place pilotis are included in the restoration zone and are to be restored and maintained in place. In addition, in the maintaining, repairing or altering of the building, original features of the building are to be protected from damage or alteration. Refer to the Guideline Specifications from the 1999 Historic Structures Report for concrete repair (p. 671). Submit all product information, design, construction protection plan and work plan for Regional Historic Preservation Officer's approval prior to commencing work. All work is to meet the Secretary of Interior's Standards for the treatment of historic buildings.

Estimate

Code Label	Line Item Description	Quantity	Unit	(b)(4)
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	10.00	M.S.F.	
024119168500	Selective demolition, cutout, remove, minimum labor/equipment charge	1.00	Job	
024119190700	Selective demolition, rubbish handling, dumpster, 10 C.Y., 3 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	4.00	Week	
024119200500	Selective demolition, dump charges, typical urban city, reclamation station, usual charge, includes tipping fees only	1.00	Ton	
030130622200	Patching concrete, walls, epoxy grout, 3/4" deep, including chipping, cleaning and epoxy grout	800.00	S.F.	
030130629000	Patching concrete, minimum labor/equipment charge	1.00	Job	
CLABA	Common Building Laborers (Apprentice)	240.00	hour	
CLABO	Common Building Laborers (Outside Foreman)	120.00	hour	

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: B20

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	B2011 - Exterior Wall Expansion Joint – Replace	Action Date	Aug 7, 2015
Linked System		Date Inspected	Aug 7, 2013
Category	Reliability	Finish Date	
Prime System	B2011 - Exterior Wall Construction	Status	Open
Priority	2 - Within 1 to 2 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. The 1" building expansion joints in the exterior wall system are failing in specific locations.

LOCATION/EXTENT. Exterior precast walls at Level 1, both east and west sides. Two building expansion joints are provided on each facade. The expandable material in the limestone wall system at Level 1 is vertically cracked and requires replacement. The expansion joint in the precast is a different system and appears in reasonable condition, with exception at Level 2 where the expansion joint is loose between precast panels and requires rework to be installed properly.

CAUSE. Deterioration due to normal aging and expansion/contraction.

CODE/REGULATION. Not Applicable.

Linked Photos



B2011 - Exterior Wall Expansion Joint - Replace

Actions

Action Name	B2011 - Exterior Wall Expansion Joint - Replace
Option	Conventional
Prime Action	Yes
Description	REMEDY. Replace expansion joints in the first floor wall system. Repair expansion joint at Level 2. IMPLEMENTATION. Coordinate work with Building Manager. Coordinate with pedestrian traffic.

COST EQUIVALENCE.

- Cost for removal of existing expansion joint is provided as "Selective demolition, saw cutting...to 1" thick" as there is no RS Means description for expansion joint removal.

HISTORIC PRESERVATION REPAIR PROCEDURES. The precast exterior walls are included in the restoration zone and are to be restored and maintained in place. In addition, in the maintaining, repairing or altering of the building, original features of the building are to be protected from damage or alteration. Submit all product information, design, construction protection plan and work plan for Regional Historic Preservation Officer's approval prior to commencing work. All work is to meet the Secretary of Interior's Standards for the treatment of historic buildings.

Estimate

Code Label	Line Item Description	Quantity	Unit
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	5.00	M.S.F.
024119168500	Selective demolition, cutout, remove, minimum labor/equipment charge	1.00	Job
024119190700	Selective demolition, rubbish handling, dumpster, 10 C.Y., 3 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	2.00	Week
024119200500	Selective demolition, dump charges, typical urban city, reclamation station, usual charge, includes tipping fees only	1.00	Ton
024119255000	Selective demolition, saw cutting, wood sheathing, on walls, to 1" thick	90.00	L.F.
077129100400	Expansion joint, butyl or neoprene center with foam insulation, metal flanges, aluminum, .032" thick, for joint openings to 2-1/2"	90.00	L.F.
079513500000	Expansion joint assemblies, minimum labor/equipment charge	1.00	Job
CLABA	Common Building Laborers (Apprentice)	80.00	hour
CLABO	Common Building Laborers (Outside Foreman)	40.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: B20

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	B2011 – Exterior Precast Sealant - Replace	Action Date	Aug 7, 2023
Linked System		Date Inspected	Aug 7, 2013
Category	Integrity	Finish Date	
Prime System	B2011 - Exterior Wall Construction	Status	Open
Priority	4 - 5+ Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. Sealant at precast panel joints is beginning to show signs of aging with alligator cracking occurring in limited locations. Sealant replacement will likely be necessary in the long term. Precast sealant joints were last replaced in 2001.

LOCATION/EXTENT. Building exterior load bearing precast panel joints. Scope does NOT include window sealant replacement, as this is a current project in place.

CAUSE. Deterioration due to age and weathering.

CODE/REGULATION. IBC Section 1403 Exterior Walls Performance Requirements.

Linked Photos



B2011 – Exterior Precast Sealant - Replace

Actions

Action Name B2011 – Exterior Precast Sealant - Replace

Option Conventional

Prime Action Yes

Description REMEDY. Replace sealant joints in precast wall system. Reseal with silicone sealant which carries a long life.

IMPLEMENTATION. Remove existing sealant and backer rods at all precast panel joints. Clean joint substrate, install new backer rod and apply sealant. Prepare substrate to receive replacement sealant. Phase the work with the Building Manager to minimize impact to public.

HISTORIC PRESERVATION REPAIR PROCEDURES. The precast exterior walls are included in the restoration zone and are to be restored and maintained in place. In addition, in the maintaining, repairing or altering of the building, original features of the building are to be protected from damage or alteration. Submit all product information, design, construction protection plan and work plan for Regional Historic Preservation Officer's approval prior to commencing work. All work is to meet the Secretary of Interior's Standards for the treatment of historic buildings.

Estimate

Code Label	Line Item Description	Quantity	Unit
015426500710	Swing staging, lightweight (not for masons), powered (electric or air), rent/mo, 150' height, 2' wide x 24' long	2.00	Ea.
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	60.00	M.S.F.
024119190800	Selective demolition, rubbish handling, dumpster, 30 C.Y., 7 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	4.00	Week
070505100020	Selective demolition, thermal and moisture protection, caulking/sealant, to 1" x 1" joint	42,700.00	L.F.
079123100092	Pre-formed joint seals, backer rod, polyethylene, 1" dia	42,700.00	L.F.
079213100300	Masonry joint sealants, silicone, 1/2" x 1/2" joint, re-caulk only, excludes scaffolding	42,700.00	L.F.
CLAB1	Common Building Laborers (JourneyMan)	160.00	hour
CLAB0	Common Building Laborers (Outside Foreman)	60.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: B20

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	B2023 - Storefront Inserts - Install	Action Date	Aug 7, 2015
Linked System		Date Inspected	Aug 7, 2013
Category	Operations	Finish Date	
Prime System	B2023 - Storefronts	Status	Open
Priority	2 - Within 1 to 2 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

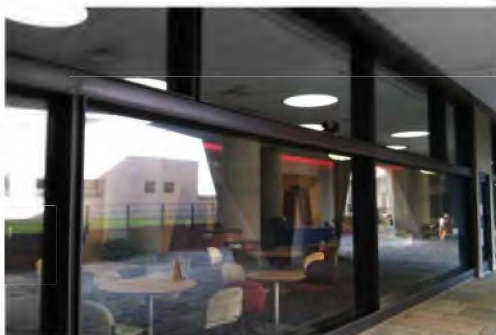
CONDITION/PROBLEM. The original unadorned storefronts are single-pane glazed. Due to the historical significance of the storefronts, replacement is not an option.

LOCATION/EXTENT. Level 1 west side at Cafeteria.
-- Historic Zone 2

CAUSE. Deterioration due to aging, wear and tear; revisions to energy conservation regulations since original construction.

CODE/REGULATION. PBS P100 Facilities Standards for the Public Building Service, 3.14 Exterior Building Elements - Fenestration Elements.

Linked Photos



B2023 - Storefront Inserts - Install

Actions

Action Name B2023 - Storefront Inserts - Install

Option Conventional

Prime Action Yes

Description **REMEDY.** Insert interior windows, leaving the original storefront system intact. Match finish and coordinate inserts with storefront profile and fin tube radiators. Include blast film to match replacement windows provided on upper levels.

IMPLEMENTATION. Submit window design and materials for approval by the Historic Preservation Office before commencing work. Coordinate work with the Building Manager to limit disruption to the building occupants. Install custom-made energy-efficient

anodized aluminum-framed, thermal-paned window inserts on the interior side of existing storefront. Match material and appearance of existing storefront.

COORDINATION: Liaise with GSA Historic Preservation Office.

HISTORIC PRESERVATION REPAIR PROCEDURES. This section of the storefront system is original to the building and is an architecturally significant feature of the design. The storefront is included in the restoration zone and should remain in place taking care not to damage the original material. Submit all product information, design, construction protection plan, and work plan for the new storefront insert to the Regional Historic Preservation Officer's approval prior to commencing work. All work is to meet the Secretary of Interior's Standards for treatment of historic buildings.

Estimate

Code Label	Line Item Description	Quantity	Unit
01741320052	Cleaning up, cleanup of floor area, continuous, per day, during construction	120.00	M.S.F.
024119190700	Selective demolition, rubbish handling, dumpster, 10 C.Y., 3 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	4.00	Week
085113102950	Windows, aluminum sash, stock, grade C, for single glazing, add	4,320.00	S.F.
088723160410	Security film, clear, 32000 psi tensile strength, .007" thick, install for anchorage, adhered to glass	4,320.00	S.F.
GLAZI	Glaziers (Inside Foreman)	80.00	hour
GLAZI	Glaziers (JourneyMan)	240.00	hour
U 085113102100	Windows, aluminum sash, custom, grade 3, excl. glazing, max	4,320.00	S.F.

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: B30

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	B3011 - Roof System Fall Protection - Add	Action Date	Aug 7, 2015
Linked System		Date Inspected	Aug 7, 2013
Category	Integrity	Finish Date	
Prime System	B3011 - Roof Finishes	Status	Open
Priority	2 - Within 1 to 2 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. Davit tie-offs are not provided near the roof perimeter to afford fall protection. Instead, there are davits provided at the center of the main roof, too far from the perimeter. At the setback Penthouse wall, there is a cable system with eyebolts anchored to the concrete wall.

LOCATION/EXTENT. Main building roof.

CAUSE. Code requirements at time of construction did not require this type of fall protection.

CODE/REGULATION. OSHA 1926 Subpart M - Fall Protection Standards. ANSI T-14.1-2001 Window Cleaning Safety (2001).

Linked Photos



B3011 - Roof System Fall Protection - Add

Actions

Action Name	B3011 - Roof System Fall Protection - Add
Option	Conventional
Prime Action	Yes
Description	<p>REMEDY. Add roof top fall protection pedestal tiebacks, approximately 10' behind the parapet. Anchor galvanized pedestals securely to concrete roof deck. Pull-out testing must be performed to ensure compliance with applicable standards.</p> <p>IMPLEMENTATION. Replacement will include roofing rework around added penetrations.</p>

COSTEQUIVALENCE. In the following estimate, substitutions have been made. This has occurred because the needed line item does not occur in the RS Means version provided in the program. The substitution is based on the equivalent value.

-- SUBSTITUTION, Column, structural tubing...

-- FOR, Pedestal tieback.

HISTORIC PRESERVATION REPAIR PROCEDURES. The roof is in the renovation zone and may be altered as long as the alterations do not have a negative impact on the significant elements outlined in the Restoration and Rehabilitation Zones above. Submit all product information, design, construction protection plan and work plan for Regional Historic Preservation Officer's approval prior to commencing work. All work is to meet the Secretary of Interior's Standards for the treatment of historic buildings.

Estimate

Code Label	Line Item Description	Quantity	Unit	(b)(4)
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	25.00	M.S.F.	
024119190840	Selective demolition, rubbish handling, dumpster, 40 C.Y., 10 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	4.00	Week	
024119200100	Selective demolition, dump charges, typical urban city, building construction materials, includes tipping fees only	8.00	Ton	
051223174500	Column, structural tubing, square, 4" x 4" x 1/4" x 12'-0", incl shop primer, cap & base plate, bolts	100.00	Ea.	
051223650450	Steel plate, structural, for connections & stiffeners, 3/4" T, shop fabricated, incl shop primer	140.00	S.F.	
075216101500	SBS modified bituminous membrane, granule surface cap sheet, glass fiber reinforced, 160 mils, mopped	800.00	S.F.	
075216102000	SBS modified bituminous membrane, granular surface flashing, 160 mils	800.00	S.F.	
076510109200	Sheet metal flashing, stainless steel, flexible sheets, .025" thick, 24 gauge, including up to 4 bends	250.00	S.F.	
B30101204000	Roofing, single ply membrane, mb, sbs modified, granule surf cap sheet, mopped, 150 mils	800.00	S.F.	
SKWKJ	Skilled Workers Average (35 trades) (JourneyMan)	240.00	hour	
SKWKO	Skilled Workers Average (35 trades) (Outside Foreman)	80.00	hour	

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: C10

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	C1011 - Electrical Closet Shaft Opening - Add Rated Separation	Action Date	Aug 7, 2014
Linked System		Date Inspected	Aug 7, 2013
Category	Life Safety	Finish Date	
Prime System	C1011 - Fixed Partitions	Status	Open
Priority	1 - Immediate / First Year	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM: There is a shaft opening inside an electrical closet which requires rated separation.

LOCATION/EXTENT: Electrical Closet 6N5.

CAUSE: Unknown.

CODE/STANDARD: NFPA 101 (2012): Section 8.3.5.1.

Linked Photos



C1011 - Electrical Closet Shaft Opening - Add Rated Separation

Actions

Action Name	C1011 - Electrical Closet Shaft Opening - Add Rated Separation
Option	Conventional
Prime Action	Yes
Description	REMEDY: Provide a rated partition separation around the shaft opening. IMPLEMENTATION: Coordinate partition location with affected trades.

Estimate

Code Label	Line Item Description	Quantity	Unit	(b)(4)
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	9.00	M.S.F.	
024119190700	Selective demolition, rubbish handling, dumpster, 10 C.Y., 3 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	1.00	Week	
024119200100	Selective demolition, dump charges, typical urban city, building construction materials, includes tipping fees only	0.50	Ton	
099103400660	Surface preparation, interior, walls, sand, gypsum board and plaster, light	400.00	S.F.	
099123740800	Paints & Coatings, walls & ceilings, interior, concrete, drywall or plaster, zero voc latex, 2 coats, smooth finish, brushwork	80.00	S.F.	
099123740840	Paints & Coatings, walls & ceilings, interior, concrete, drywall or plaster, zero voc latex, 2 coats, smooth finish, roller	400.00	S.F.	
C10101266200	Metal partition, 5/8" fire rated gypsum board face, 5/8" fire rated gypsum board base, 3-5/8" @ 24", same opposite face, no insulation	400.00	S.F.	
SKWKJ	Skilled Workers Average (35 Trades) (JourneyMan)	70.00	hour	

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: C10

Currency: USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	C1011 - Exposed 8" Storm/Sewer Lines in Stairs - Add Rated Separation	Action Date	Aug 7, 2014
Linked System		Date Inspected	Aug 7, 2013
Category	Life Safety	Finish Date	
Prime System	C1011 - Fixed Partitions	Status	Open
Priority	1 - Immediate / First Year	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. The 8" storm/sewer lines located in four of the egress stairs are exposed.

LOCATION/EXTENT. Stairs 5, 6, 7 and 8.

CAUSE. Original design did not require separation.

CODE/STANDARD. NFPA 101 (2012); Section 7.1.

Linked Photos



C1011 - Exposed 8 StormSewer Lines in Stairs - Add Rated Separation

Actions

Action Name	C1011 - Exposed 8" Storm/Sewer Lines in Stairs - Add Rated Separation
Option	Conventional
Prime Action	Yes
Description	REMEDY. Provide a rated partition separation to enclose the storm/sewer lines. IMPLEMENTATION. Coordinate partition location with required egress clearance within stair.

Estimate

Code Label	Line Item Description	Quantity	Unit	(b)(4)
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	190.00	M.S.F.	
024119190800	Selective demolition, rubbish handling, dumpster, 30 C.Y., 7 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	4.00	Week	
024119200100	Selective demolition, dump charges, typical urban city, building construction materials, includes tipping fees only	3.00	Ton	
099103400660	Surface preparation, interior, walls, sand, gypsum board and plaster, light	12,000.00	S.F.	
099123740800	Paints & Coatings, walls & ceilings, interior, concrete, drywall or plaster, zero voc latex, 2 coats, smooth finish, brushwork	1,200.00	S.F.	
099123740840	Paints & Coatings, walls & ceilings, interior, concrete, drywall or plaster, zero voc latex, 2 coats, smooth finish, roller	12,000.00	S.F.	
C10101266200	Metal partition, 5/8" fire rated gypsum board face, 5/8" fire rated gypsum board base, 3-5/8" @ 24", same opposite face, no insulation	12,000.00	S.F.	
SKWKI	Skilled Workers Average (35 trades) (Inside Foreman)	240.00	hour	
SKWKJ	Skilled Workers Average (35 trades) (JourneyMan)	930.00	hour	

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: C10

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	C1011 - Fire Pump Room - Add Rated Separation	Action Date	Aug 7, 2014
Linked System		Date Inspected	Aug 7, 2013
Category	Life Safety	Finish Date	
Prime System	C1011 - Fixed Partitions	Status	Open
Priority	1 - Immediate / First Year	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. The fire pump is not enclosed in a rated room.

LOCATION/EXTENT. Sub-Basement floor, southwest side.

CAUSE. Unknown.

CODE/STANDARD. IBC (2012); Section 913.2.1

Linked Photos



C1011 - Fire Pump Room - Add Rated Separation 1



C1011 - Fire Pump Room - Add Rated Separation 2

Actions

Action Name	C1011 - Fire Pump Room - Add Rated Separation
Option	Conventional
Prime Action	Yes
Description	REMEDY. Provide a rated separation for the fire pump from the rest of the mechanical room. IMPLEMENTATION. Coordinate partition location with affected trades.

Estimate

Code Label	Line Item Description	Quantity	Unit	(b)(4)
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	20.00	M.S.F.	
024119190700	Selective demolition, rubbish handling, dumpster, 10 C.Y., 3 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	2.00	Week	
024119200100	Selective demolition, dump charges, typical urban city, building construction materials, includes tipping fees only	0.50	Ton	
099123350140	Paints & coatings, interior latex, doors, flush, both sides, roll & brush, primer + 2 coats, incl. frame & trim	1.00	Ea.	
099123740800	Paints & Coatings, walls & ceilings, interior, concrete, drywall or plaster, zero voc latex, 2 coats, smooth finish, brushwork	300.00	S.F.	
099123740840	Paints & Coatings, walls & ceilings, interior, concrete, drywall or plaster, zero voc latex, 2 coats, smooth finish, roller	1,400.00	S.F.	
260523201850	Fire alarm cable, FEP teflon, 150 volt, to 200 Deg.C, #18, 1 pair	1.00	C.L.F.	
260533160150	Outlet boxes, pressed steel, 4" square	1.00	Ea.	
260533160250	Outlet boxes, pressed steel, covers, blank, 4" square	1.00	Ea.	
283146505240	Detection Systems, smoke detector, addressable type, excl. wires & conduit	1.00	Ea.	
C10101266200	Metal partition, 5/8" fire rated gypsum board face, 5/8" fire rated gypsum board base, 3-5/8" @ 24", same opposite face, no insulation	700.00	S.F.	
C10201166960	Labeled metal door/metal frame, hollow, 1-1/2 hr, 18 ga vision, 6'-0" x 7'-0", KD frame, 4-7/8"	1.00	Ea.	
ELEC	Electricians (JourneyMan)	40.00	hour	
SKWKI	Skilled Workers Average (35 trades) (Inside Foreman)	30.00	hour	
SKWKJ	Skilled Workers Average (35 trades) (JourneyMan)	100.00	hour	

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: C10

Currency: USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	C1011 - Firestopping @ Floor Penetrations - Repair		
	Action Date	Aug 7, 2014	
Linked System	Date Inspected	Aug 7, 2013	
Category	Building Code	Finish Date	
Prime System	C1011 - Fixed Partitions	Status	Open
Priority	1 - Immediate / First Year	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. Penetrations have been made in the 2-hour rated floors of the telephone and electrical closets, as well as the transformer vault.

LOCATION/EXTENT. Telephone and electrical closets located throughout the entire building.

CAUSE. Contractors and in-house personnel create penetrations in rated assemblies and do not properly seal them.

CODE/REGULATION. NFPA 101 (2012); Section 8.3.5.1.

Linked Photos



C1011 - Firestopping @ Floor Penetrations - Repair

Actions

Action Name	C1011 - Firestopping @ Floor Penetrations - Repair
Option	Conventional
Prime Action	Yes
Description	<p>REMEDY. Provide firestopping as required on both sides of floor penetrations.</p> <p>IMPLEMENTATION. Survey building to determine exact locations. Upon identification of locations, remove any debris from around the existing penetration. Install a listed firestopping material per the manufacturer's listing. Install a listed firestopping caulk where all conduit and cable are penetrating the rated assemblies.</p>

Estimate

Code Label	Line Item Description	Quantity	Unit
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	200.00	M.S.F.
024119190700	Selective demolition, rubbish handling, dumpster, 10 C.Y., 3 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	6.00	Week
024119200100	Selective demolition, dump charges, typical urban city, building construction materials, includes tipping fees only	3.00	Ton
078413100250	Firestopping, metallic piping, insulated, through floors, 4" dia	1,500.00	Ea.
CARPJ	Carpenters	210.00	Hr.
CLABA	Common Building Laborers	400.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: C10

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	C1011 - Panels and Conduits Exposed in Stairs - Add Rated Separation	Action Date	Aug 7, 2014
Linked System		Date Inspected	Aug 7, 2013
Category	Life Safety	Finish Date	
Prime System	C1011 - Fixed Partitions	Status	Open
Priority	1 - Immediate / First Year	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. Large 3" electrical conduits and panels are exposed in various fire stairs.

LOCATION/EXTENT. Stairs 5, 6, 7 and 8.

CAUSE. Unknown.

CODE/STANDARD. NFPA 101 (2012); Section 7.2.2.

Linked Photos



C1011 - Panels and Conduits Exposed in Stairs - Add Rated Separation

Actions

Action Name	C1011 - Panels and Conduits Exposed in Stairs - Add Rated Separation
Option	Conventional
Prime Action	Yes
Description	<p>REMEDY. Provide a rated partition separation to enclose conduits and panels.</p> <p>IMPLEMENTATION. Coordinate partition location with required egress clearance within stair.</p> <p>COSTEQUIVALENCE. In the following estimate, substitutions have been made. This has occurred because the needed line item</p>

does not occur in RS Means version provided in the program. The substitution is based on the equivalent value.

-- SUBSTITUTION, Underlayment, plywood, underlayment grade, 1/2" thick

-- FOR, Underlayment, fire resistant treated plywood, 1/2" thick

Estimate

Code Label	Line Item Description	Quantity	Unit	(b)(4)
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	405.00	M.S.F.	
024119190700	Selective demolition, rubbish handling, dumpster, 10 C.Y., 3 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	16.00	Week	
061626100100	Underlayment, plywood, underlayment grade, 1/2" thick	24,000.00	SF Fir.	
083113101200	Doors, specialty, access, fire rated, with lock, metal, 24" x 24"	60.00	Ea.	
099103400660	Surface preparation, interior, walls, sand, gypsum board and plaster, light	24,000.00	S.F.	
099123740800	Paints & Coatings, walls & ceilings, interior, concrete, drywall or plaster, zero voc latex, 2 coats, smooth finish, brushwork	2,400.00	S.F.	
099123740840	Paints & Coatings, walls & ceilings, interior, concrete, drywall or plaster, zero voc latex, 2 coats, smooth finish, roller	24,000.00	S.F.	
C10101266200	Metal partition, 5/8" fire rated gypsum board face, 5/8" fire rated gypsum board base, 3-5/8" @ 24", same opposite face, no insulation	24,000.00	S.F.	
SKWKI	Skilled Workers Average (35 trades) (Inside Foreman)	440.00	hour	
SKWKJ	Skilled Workers Average (35 trades) (JourneyMan)	1,850.00	hour	

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: C10

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	C1011 - Standpipes Not Enclosed - Add Rated Separation	Action Date	Aug 7, 2014
Linked System		Date Inspected	Aug 7, 2013
Category	Life Safety	Finish Date	
Prime System	C1011 - Fixed Partitions	Status	Open
Priority	1 - Immediate / First Year	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. The standpipes on the first floor are not enclosed with fire resistant construction.

LOCATION/EXTENT. Level 1.

CAUSE. Unknown.

CODE/STANDARD. NFPA 101 (2012); Section 7.1.

Linked Photos



C1011 - Standpipes Not Enclosed - Add Rated Separation

Actions

Action Name C1011 - Standpipes Not Enclosed - Add Rated Separation
Option Conventional
Prime Action Yes
Description REMEDY. Provide a rated partition separation to enclose the standpipes.
 IMPLEMENTATION. Coordinate with Building Manager.

Estimate

Code Label	Line Item Description	Quantity	Unit
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	25.00	M.S.F.
024119190700	Selective demolition, rubbish handling, dumpster, 10 C.Y., 3 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	2.00	Week
024119200100	Selective demolition, dump charges, typical urban city, building construction materials, includes tipping fees only	0.50	Ton
099103400660	Surface preparation, interior, walls, sand, gypsum board and plaster, light	300.00	S.F.
099123740800	Paints & Coatings, walls & ceilings, interior, concrete, drywall or plaster, zero voc latex, 2 coats, smooth finish, brushwork	30.00	S.F.
099123740840	Paints & Coatings, walls & ceilings, interior, concrete, drywall or plaster, zero voc latex, 2 coats, smooth finish, roller	300.00	S.F.
C10101266200	Metal partition, 5/8" fire rated gypsum board face, 5/8" fire rated gypsum board base, 3-5/8" @ 24", same opposite face, no insulation	300.00	S.F.
SKWKI	Skilled Workers Average (35 trades) (Inside Foreman)	40.00	hour
SKWKJ	Skilled Workers Average (35 trades) (JourneyMan)	140.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: C10

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	C1020 - Doors Not Code Compliant - Replace	Action Date	Aug 7, 2015
Linked System		Date Inspected	Aug 7, 2013
Category	Building Code	Finish Date	
Prime System	C1020 - Interior Doors	Status	Open
Priority	2 - Within 1 to 2 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

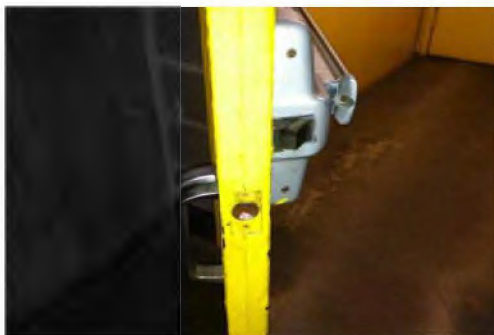
CONDITION/PROBLEM. Integrity of various doors throughout the building has been compromised over the years, due to changes in hardware, and in various cases, high usage. In some cases, door latch sets have been removed and replaced with emergency egress hardware, resulting in the lack of latch devices within the door and strike plates within the frame. In some cases, high-use doors do not close and latch properly.

LOCATION/EXTENT. Garage Levels A, B and C, both north and south stairs, where two original hollow metal doors in sequence create a 3 hour separation between the Garage and main building. Other locations include freight elevator doors on all floors, due to high usage with traffic carts, and various other service locations such as mechanical rooms in the Sub-Basement.

CAUSE. Deterioration due to high usage and modification of door hardware over time.

CODE/REGULATION. International Building Code (IBC) 2012 - Section 715.4; National Fire Protection Association (NFPA) 2012 - 80 Fire Rated Doors - Section 5.2.4.2 paragraph 4.

Linked Photos



C1020 - Doors Not Code Compliant - Replace

Actions

Action Name	C1020 - Doors Not Code Compliant - Replace
Option	Conventional
Prime Action	Yes
Description	REMEDY. Replace existing door leaves with fire rated door assemblies.

IMPLEMENTATION. Coordinate work with the Building Manager to limit disruption. Ensure that fire exit access is maintained during construction.

HISTORIC PRESERVATION REPAIR PROCEDURES. The doors listed are in the renovation zone and may be altered as long as the alterations do not have a negative impact on the significant elements outlined in the Restoration and Rehabilitation Zones above. Submit all product information, design, construction protection plan and work plan for Regional Historic Preservation Officer's approval prior to commencing work. All work is to meet the Secretary of Interior's Standards for the treatment of historic buildings.

Estimate

Code Label	Line Item Description	Quantity	Unit	(b)(4)
01741320052	Cleaning up, cleanup of floor area, continuous, per day, during construction	60.00	M.S.F.	
024119190800	Selective demolition, rubbish handling, dumpster, 30 C.Y., 7 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	4.00	Week	
024119200100	Selective demolition, dump charges, typical urban city, building construction materials, includes tipping fees only	20.00	Ton	
080505100200	Door demolition, exterior door, single, 3' x 7' high, 1-3/4" thick, remove	116.00	Ea.	
081213130100	Frames, steel, knock down, hollow metal, single, 16 ga., up to 5-3/4" deep, 7'-0" h x 3'-0" w	22.00	Ea.	
081213130140	Frames, steel, knock down, hollow metal, double, 16 ga., up to 5-3/4" deep, 7'-0" h x 6'-0" w	36.00	Ea.	
081313150080	Doors, fire, steel, flush, "B" label, 90 minute, full panel, 20 ga., 3'-0" x 7'-0"	58.00	Ea.	
087120304000	Door hardware, door closer, rack and pinion, backcheck, overhead concealed, all sizes, regular arm	40.00	Ea.	
087120350020	Door hardware, panic device, for rim locks, single door, outside key and pull	58.00	Ea.	
087120500020	Door hardware, doorstops, holder and bumper, floor or wall	58.00	Ea.	
087120900012	Door hardware, hinges, full mortise, average frequency, steel base, USP, 4-1/2" x 4-1/2"	40.00	Pr.	
087120950020	Door hardware, kick plate, stainless steel, .05", 16 ga, 8" x 28"	58.00	Ea.	
087121103820	Astragals, one piece overlapping, flexible stainless steel housing, pile insert, 3/4" door	18.00	L.F.	
099103400660	Surface preparation, interior, walls, sand, gypsum board and plaster, light	23,200.00	S.F.	
099123350140	Paints & coatings, interior latex, doors, flush, both sides, roll & brush, primer + 2 coats, incl. frame & trim	116.00	Ea.	
099123740800	Paints & Coatings, walls & ceilings, interior, concrete, drywall or plaster, zero voc latex, 2 coats, smooth finish, brushwork	2,320.00	S.F.	
099123740840	Paints & Coatings, walls & ceilings, interior, concrete, drywall or plaster, zero voc latex, 2 coats, smooth finish, roller	23,200.00	S.F.	
CLAB1	Common Building Laborers (Inside Foreman)	60.00	hour	
CLAB1	Common Building Laborers (JourneyMan)	200.00	hour	

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: C10

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	C1020 - Fire Stair Doors Not Code Compliant - Replace	Action Date	Aug 7, 2014
Linked System		Date Inspected	Aug 7, 2013
Category	Building Code	Finish Date	
Prime System	C1020 - Interior Doors	Status	Open
Priority	1 - Immediate / First Year	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

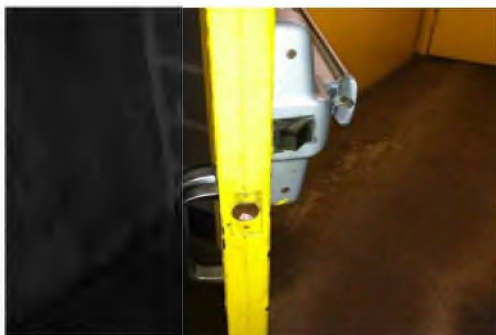
CONDITION/PROBLEM. Various fire stair doors do not close and latch.

LOCATION/EXTENT. Stair 6 (second floor), Stair 5 (third floor), Stair 2 (Garage levels) and Stairs 7 & 8 (Penthouse).

CAUSE. Deterioration due to high usage and modification of door hardware over time.

CODE/REGULATION. National Fire Protection Association (NFPA) 2012 - 101, Section 7.2.

Linked Photos



C1020 - Doors Not Code Compliant - Replace

Actions

Action Name	C1020 - Fire Stair Doors Not Code Compliant - Replace
Option	Conventional
Prime Action	Yes
Description	<p>REMEDY. Replace existing doors, frames and hardware with fire rated door assemblies.</p> <p>IMPLEMENTATION. Coordinate work with the Building Manager to limit disruption. Ensure that fire exit access is maintained during construction.</p>

STATEMENT OF EFFECT. The corrective action described poses NO ADVERSE EFFECT on this property listed on the National Register for Historic Places.

Estimate

Code Label	Line Item Description	Quantity	Unit
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	30.00	M.S.F.
024119190800	Selective demolition, rubbish handling, dumpster, 30 C.Y., 7 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	3.00	Week
024119200100	Selective demolition, dump charges, typical urban city, building construction materials, includes tipping fees only	8.00	Ton
080505100200	Door demolition, exterior door, single, 3' x 7' high, 1-3/4" thick, remove	7.00	Ea.
081213130100	Frames, steel, knock down, hollow metal, single, 16 ga., up to 5-3/4" deep, 7'-0" h x 3'-0" w	7.00	Ea.
081313150080	Doors, fire, steel, flush, "B" label, 90 minute, full panel, 20 ga., 3'-0" x 7'-0"	7.00	Ea.
087120304000	Door hardware, door closer, rack and pinion, backcheck, overhead concealed, all sizes, regular arm	7.00	Ea.
087120350020	Door hardware, panic device, for rim locks, single door, outside key and pull	7.00	Ea.
087120500020	Door hardware, doorstops, holder and bumper, floor or wall	7.00	Ea.
087120900012	Door hardware, hinges, full mortise, average frequency, steel base, USP, 4-1/2" x 4-1/2"	11.00	Pr.
087120950020	Door hardware, kick plate, stainless steel, .05", 16 ga. 8" x 28"	7.00	Ea.
099103400660	Surface preparation, interior, walls, sand, gypsum board and plaster, light	1,400.00	S.F.
099123390140	Paints & coatings, interior latex, zero voc, doors, flush, both sides, roll & brush, primer + 2 coats, incl. frame & trim	7.00	Ea.
099123740800	Paints & Coatings, walls & ceilings, interior, concrete, drywall or plaster, zero voc latex, 2 coats, smooth finish, brushwork	140.00	S.F.
099123740840	Paints & Coatings, walls & ceilings, interior, concrete, drywall or plaster, zero voc latex, 2 coats, smooth finish, roller	1,400.00	S.F.
CLABJ	Common Building Laborers (Inside Foreman)	20.00	hour
CLABJ	Common Building Laborers (Journeyman)	60.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: C10

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	C1023 - Door Hardware - Replace	Action Date	Aug 7, 2015
Linked System		Date Inspected	Aug 7, 2013
Category	Beyond Useful Life	Finish Date	
Prime System	C1023 - Interior Door Hardware	Status	Open
Priority	2 - Within 1 to 2 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

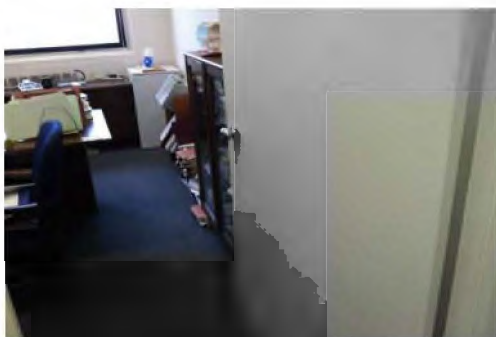
CONDITION/PROBLEM. A significant amount of manual door hardware is original knob type and does not conform to 2010 ADA Standards. Expected useful life for door hardware is 30 years. Hardware should be replaced in the near term.

LOCATION/EXTENT. Various locations on all floors. In frequent cases, knob type hardware has already been replaced with lever type.

CAUSE. Does not meet current code requirements.

CODE/REGULATION. 2010 ADA Standards for Accessible Design, 309.4 Operation.

Linked Photos



C1023 - Door Hardware - Replace

Actions

Action Name C1023 - Door Hardware - Replace

Option Conventional

Prime Action Yes

Description REMEDY. Replace manual door hardware. Finish to match original satin chrome finish for consistency.

IMPLEMENTATION. Replace door hardware including locksets, closers, pulls, push plates, hinges, thresholds and seals. Modify doors and frames to extent required for replacement hardware.

HISTORIC PRESERVATION REPAIR PROCEDURES. The non-original door hardware and hardware in renovation zone areas may be replaced. Door hardware in all restoration and rehabilitation zones should be retained and repaired when possible and if not possible, replaced to match original. Submit all product information, design, construction protection plan and work plan for GSA's Life Safety Engineer and Regional Historic Preservation Officer's approval prior to commencing work. All work is to meet the Secretary of Interior's Standards for the treatment of historic buildings.

Estimate

Code Label	Line Item Description	Quantity	Unit	(b)(4)
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	40.00	M.S.F.	
024119190800	Selective demolition, rubbish handling, dumpster, 30 C.Y., 7 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost,	18.00	Week	
024119200100	Selective demolition, dump charges, typical urban city, building construction materials, includes tipping fees only	40.00	Ton	
087120100020	Door hardware, bolts, flush, standard, concealed	30.00	Ea.	
087120308100	Door hardware, door closer, surface mounted, standard duty, parallel arm, modern	600.00	Ea.	
087120356500	Door hardware, panic device, trim, mortise, cylinder, pull and thumb piece	40.00	Ea.	
087120420100	Door hardware, mortise lockset, commercial, wrought knobs and full escutcheon trim, keyed, office/entrance/apartment, minimum	800.00	Ea.	
087120500020	Door hardware, doorstops, holder and bumper, floor or wall	80.00	Ea.	
087120650100	Thresholds, aluminum, 8" wide x 1/2" thick	20.00	Ea.	
087120750060	Door accessories closing coordinator, 48" (for paired openings up to 84")	20.00	Ea.	
087120754500	Door accessories, rubber door silencers	2,400.00	Ea.	
087120900040	Door hardware, hinges, full mortise, average frequency, steel base, US26D, 4-1/2" x 4-1/2"	1,200.00	Pr.	
087120950040	Door hardware, kick plate, stainless steel, .05", 16 ga, 8" x 34"	80.00	Ea.	
CLABJ	Common Building Laborers (Inside Foreman)	60.00	hour	
CLABJ	Common Building Laborers (Journeyman)	160.00	hour	

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: C10

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	C1037 - Window Blind System - Replace	Action Date	Aug 7, 2023
Linked System		Date Inspected	Aug 7, 2013
Category	Reliability	Finish Date	
Prime System	C1037 - General Fittings and Misc. Metals	Status	Open
Priority	4 - 5+ Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

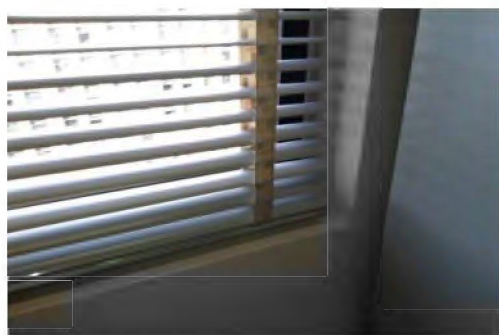
CONDITION/PROBLEM. The original 2" horizontal metal blind system with fabric lift straps remains in many locations on various floors. It has been replaced on an as-needed basis in the past with a similar 2" blind system.

LOCATION/EXTENT. Levels 2 - 10.

CAUSE. Condition is due to aging/wear and tear.

CODE/REGULATION. Not applicable.

Linked Photos



C1037 - Window Blind System - Replace

Actions

Action Name	C1037 - Window Blind System - Replace
Option	Conventional
Prime Action	Yes
Description	<p>REMEDY. Blinds have already been replaced over the years for approximately 40% of the building. Further blind replacement should be considered an ongoing replacement process and should only occur where necessary, per referenced Historic Structures Report. There are a total of 1,584 window openings with blinds.</p> <p>IMPLEMENTATION. Phase the work with the Building Manager and tenant to limit disruption to building occupants.</p>

HISTORIC PRESERVATION REPAIR PROCEDURES. The window blinds are included in the restoration zone and are to be restored and maintained in place. As the blinds are no longer serviceable and cannot be repaired, the window blinds can be replaced-in-kind. Refer to the Guideline Specifications from the 1999 Historic Structures Report for additional information. Submit all product information, design, construction protection plan and work plan for Regional Historic Preservation Officer's approval prior to commencing work. All work is to meet the Secretary of Interior's Standards for the treatment of historic buildings.

Estimate

Code Label	Line Item Description	Quantity	Unit
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	48.00	M.S.F.
024119190800	Selective demolition, rubbish handling, dumpster, 30 C.Y., 7 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	16.00	Week
024119200100	Selective demolition, dump charges, typical urban city, building construction materials, includes tipping fees only	50.00	Ton
122113130500	Blinds, interior, horizontal, solid color, stock, 2" aluminum slats, maximum	34,200.00	S.F.
CLABA	Common Building Laborers (Apprentice)	120.00	hour
CLABJ	Common Building Laborers (Journeyman)	60.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: C20

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	C2010 - Loading Dock Handrails - Provide Guards		
Linked System	Action Date	Aug 7, 2023	
Category	Date Inspected	Aug 7, 2013	
Prime System	Building Code	Finish Date	
Priority	C2010 - Stair Construction	Status	Open
Inspector	5: Does Not Meet Current Codes/Standards	Actual Cost	0
	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. There are no guards provided on the ramp in the Loading Dock area. Existing height of concrete wall does not meet the height requirement of 42".

LOCATION/EXTENT. Basement Loading Dock, both south and north ramps.

CAUSE. Revisions to code requirements since original construction.

CODE/REGULATION. National Fire Protection Association (NFPA), 2012 - 101. Life Safety Code. 7.2.2.4.4 Handrail Details.

Linked Photos



C2010 - Loading Dock Handrails - Provide Guards

Actions

Action Name	C2010 - Loading Dock Handrails - Provide Guards
Option	Conventional
Prime Action	Yes
Description	REMEDY. Design and install new guards that meet the current standard. IMPLEMENTATION. Coordinate work with Building Manager.

Estimate

Code Label	Line Item Description	Quantity	Unit	(b)(4)
015433407700D	Rent arc welder electric 200 amp	1.00	Ea.	
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	10.00	M.S.F.	
024119190700	Selective demolition, rubbish handling, dumpster, 10 C.Y., 3 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	1.00	Week	
024119200100	Selective demolition, dump charges, typical urban city, building construction materials, includes tipping fees only	0.50	Ton	
055213500935	Railing, pipe, steel, wall rail, galvanized, 1-1/4" dia, shop fabricated	60.00	L.F.	
064316109000	Railings, minimum labor/equipment charge	1.00	Job	
099123525350	Paints & coatings, miscellaneous interior, pipe, paint 2 coats, oil base, brushwork, 1 - 4" dia	60.00	L.F.	
CARPA	Carpenters	30.00	hour	
CARPI	Carpenters	20.00	hour	
SSWLI	Welders, Structural Steel	20.00	hour	

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: C20

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	C2014 - Stair Guards and Handrails - Replace	Action Date	Aug 7, 2023
Linked System		Date Inspected	Aug 7, 2013
Category	Building Code	Finish Date	
Prime System	C2014 - Stair Handrails and Balustrades	Status	Open
Priority	5: Does Not Meet Current Codes/Standards	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. The existing handrails in the stairs do not meet the current requirements for graspability and the stair door handles do not meet ADA.

LOCATION/EXTENT. All enclosed stairs.

CAUSE. Revisions to code requirements since original construction.

CODE/REGULATION. National Fire Protection Association (NFPA), 2012 - 101, Life Safety Code. 7.2.2.4.4 Handrail Details.

Linked Photos



C2014 - Stair Guards and Handrails - Replace

Actions

Action Name	C2014 - Stair Guards and Handrails - Replace
Option	Conventional
Prime Action	Yes
Description	<p>REMEDY. Replace the guards, handrails and door levers.</p> <p>IMPLEMENTATION. Remove existing handrails and replace with code compliant rails. Design and replace the guards and handrails that meet the graspability requirements.</p>

STATEMENT OF EFFECT. The existing handrails are original features of the building that are included in the restoration zone and are to be preserved and maintained in place. Any modifications or additions to the wall to meet current Life Safety Codes are to be reviewed and approved by GSA's Life Safety Engineer as well as GSA's Regional Historic Preservation Officer. Submit all product information, design, construction protection plan, and work plan for Regional Historic Preservation Officer's approval prior to commencing work. All work is to meet the Secretary of Interior's Standards for the treatment of historic buildings.

Estimate

Code Label	Line Item Description	Quantity	Unit
015433407700D	Rent arc welder electric 200 amp	24.00	Ea.
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	400.00	M.S.F.
024119190800	Selective demolition, rubbish handling, dumpster, 30 C.Y., 7 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	36.00	Week
024119200100	Selective demolition, dump charges, typical urban city, building construction materials, includes tipping fees only	16.00	Ton
055213500940	Railing, pipe, steel, wall rail, primed, 1-1/2" dia, shop fabricated	9,200.00	L.F.
055213502050	2-line pipe rail with pickets and attached handrail, steel, primed, 1-1/2" pipe, 1/2" pickets @ 4-1/2" O.C., 42" high, shop fabricated, straight & level	2,100.00	L.F.
060505203140	Selective demolition, millwork and trim, railings and balusters	9,200.00	L.F.
064316109000	Railings, minimum labor/equipment charge	30.00	Job
087120350400	Door hardware, panic device, bar and concealed rod	60.00	Ea.
087120914600	Door hardware, special hinges, spring hinge, single acting, steel, 6" flange	12.00	Ea.
099123525350	Paints & coatings, miscellaneous interior, pipe, paint 2 coats, oil base, brushwork, 1 - 4" dia	9,200.00	L.F.
C10309100600	Partitions, woven wire, wall panel, 4' x 7' high	850.00	Ea.
CARPA	Carpenters	650.00	hour
CARPI	Carpenters	650.00	hour
SSWU	Welders, Structural Steel	110.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: C30

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	C3012 - Interior Walls and Ceilings – Repaint	Action Date	Aug 7, 2023
Linked System		Date Inspected	Aug 7, 2013
Category	Beyond Useful Life	Finish Date	
Prime System	C3012 - Wall Finishes to Interior Walls	Status	Open
Priority	4 - 5+ Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

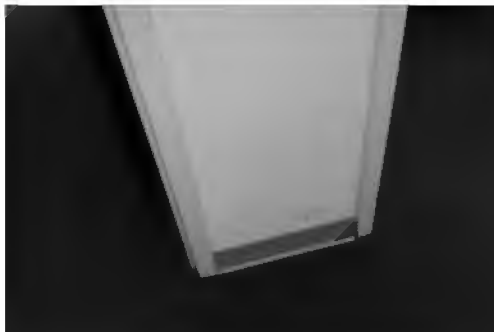
CONDITION/PROBLEM. At the current time, the painted finishes of walls and ceilings are in relatively good condition overall. There are locations of marked, dirty or damaged surfaces in various locations. Repainting walls and ceilings should only be required in the long term.

LOCATION/EXTENT. Open office areas, offices, corridors, lobbies and other public spaces.

CAUSE. Deterioration due to normal aging/wear and tear.

CODE/REGULATION. Not Applicable.

Linked Photos



C3012 - Interior Walls and Ceilings - Repaint

Actions

Action Name	C3012 - Interior Walls and Ceilings – Repaint
Option	Conventional
Prime Action	Yes
Description	REMEDY. Repaint walls and ceilings.

IMPLEMENTATION. Phase the work with the Building Manager and tenant to limit disruption to building occupants. Swing may be necessary for the temporary relocation of work area occupants. Clean and prepare wall and ceiling surfaces. Protect adjacent door.

frame, ceiling and wall surfaces, as well as tenant furnishings.

HISTORIC PRESERVATION REPAIR PROCEDURES. Refer to the Paint Analysis (Chapter V) as well as the Guideline Specifications (Chapter X) from the 1999 Historic Structures Report for paint colors and finishes. Submit all product information, design, construction protection plan and work plan for Regional Historic Preservation Officer's approval prior to commencing work. All work is to meet the Secretary of Interior's Standards for the treatment of historic buildings.

Estimate

Code Label	Line Item Description	Quantity	Unit
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	240.00	M.S.F.
099103200510	Paint preparation, sanding & puttying interior trim, surface protection, placement & removal, basic drop cloths	788,343.00	S.F.
099103400660	Surface preparation, interior, walls, sand, gypsum board and plaster, light	78,834.00	S.F.
099123740800	Paints & Coatings, walls & ceilings, interior, concrete, drywall or plaster, zero voc latex, 2 coats, smooth finish, brushwork	78,834.00	S.F.
099123740840	Paints & Coatings, walls & ceilings, interior, concrete, drywall or plaster, zero voc latex, 2 coats, smooth finish, roller	788,343.00	S.F.
PORDI	Painters, Ordinary (Inside Foreman)	440.00	hour
PORDJ	Painters, Ordinary (Journeyman)	1,200.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: C30

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	C3020 - Concrete Floor - Reseal	Action Date	Aug 7, 2015
Linked System		Date Inspected	Aug 7, 2013
Category	Reliability	Finish Date	
Prime System	C3020 - Floor Finishes	Status	Open
Priority	2 - Within 1 to 2 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM: The concrete floor paint finish is flaking in many locations.

LOCATION/EXTENT: Various service locations including Mechanical Rooms, Switchgear Rooms, Electrical Rooms, Generator Room, Hydro Rooms and open storage areas on the Sub-Basement level. Other areas include Electrical and Telephone closets on typical office floors. Penthouse Mechanical and Elevator Machine Room floors also need resealing.

CAUSE: The paint appears to be original in many locations. Condition is due to aging/wear and tear.

CODE/REGULATION: None.

Linked Photos



C3020 - Concrete Floor - Reseal

Actions

Action Name C3020 - Concrete Floor - Reseal

Option Conventional

Prime Action Yes

Description REMEDY: Reseal floor paint system.

IMPLEMENTATION: Prep existing slab by removing loose paint before recoating. Patch slab where required. Provide sealer coat and epoxy finish coat.

Estimate

Code Label	Line Item Description	Quantity	Unit
01741320052	Cleaning up, cleanup of floor area, continuous, per day, during construction	60.00	M.S.F.
019313030330	Prepare and re-surface old or coated concrete floor, epoxy/silica finish, 1/8" thick, rolled, includes medium shot blast & cleaning	51,840.00	S.F.
030130620150	Patching concrete, floors, small area, epoxy grout, 1/4" thick	800.00	S.F.
099123400330	Paints & coatings, floors, interior, acrylic sealer, one coat	51,840.00	S.F.
PORDI	Painters, Ordinary (Inside Foreman)	40.00	hour
PORDJ	Painters, Ordinary (JourneyMan)	120.00	hour

(b)(4)



Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: C30

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	C3024 - Kitchen Servery Sheet Flooring – Repair	Action Date	Aug 7, 2015
Linked System		Date Inspected	Aug 7, 2013
Category	Beyond Useful Life	Finish Date	
Prime System	C3024 - Flooring	Status	Open
Priority	2 - Within 1 to 2 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. Sheet vinyl flooring in the Kitchen Servery requires repair where the system abuts the floor expansion joint and at heat welded joints. Heat welded seams are missing in several locations and the sheet flooring is badly damaged where it abuts the floor expansion joint.

LOCATION/EXTENT. Level 1 Kitchen Servery and Prep area.

CAUSE. Separation may be due to either original installation procedure or liquid spills that have seaped into joints. A more appropriate type of expansion joint is needed to lap over the sheet vinyl.

CODE/REGULATION. Not applicable.

Linked Photos



C3024 - Kitchen Servery Sheet Flooring - Repair

Actions

Action Name	C3024 - Kitchen Servery Sheet Flooring – Repair
Option	Conventional
Prime Action	Yes
Description	<p>REMEDY. Repair damaged areas of sheet vinyl flooring and heat welded joints.</p> <p>IMPLEMENTATION. Coordinate work with the Building Manager to limit disruption.</p>

Estimate

Code Label	Line Item Description	Quantity	Unit
01741320052	Cleaning up, cleanup of floor area, continuous, per day, during construction	10.00	M.S.F.
024119190840	Selective demolition, rubbish handling, dumpster, 40 C.Y., 10 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	2.00	Week
024119200100	Selective demolition, dump charges, typical urban city, building construction materials, includes tipping fees only	1.00	Ton
079513500500	Expansion joint assemblies, floor cover, aluminum, 2" space	60.00	L.F.
079513509000	Expansion joint assemblies, minimum labor/equipment charge	1.00	Job
090505200800	Flooring demolition, resilient, sheet goods	800.00	S.F.
096516108250	Resilient flooring, vinyl sheet goods, hacked, .125" thick, max	800.00	S.F.
096516108700	Resilient flooring, adhesive cement, 1 gallon per 200-300 S.F.	3.00	Gal.
096516108800	Resilient flooring, asphalt primer, 1 gallon per 300 S.F.	3.00	Gal.
096516108900	Resilient flooring, emulsion, 1 gallon per 140 S.F.	6.00	Gal.
096516109000	Flooring, welding, vinyl seams, add	240.00	L.F.
CRPTA	Carpet & Linoleum Layers	60.00	hour
CRPTJ	Carpet & Linoleum Layers	30.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: C30

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	C3025 - Broadloom Carpet – Replace	Action Date	Aug 7, 2016
Linked System		Date Inspected	Aug 7, 2013
Category	Beyond Useful Life	Finish Date	
Prime System	C3025 - Carpeting	Status	Open
Priority	3 - Within 3 to 5 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. Broadloom carpet is generally in good condition, but is beginning to show signs of wear and is stained in some areas. Carpet is shampooed on a scheduled basis and is rippled in many locations throughout, even after thoroughly drying. In some locations it becomes a tripping hazard.

LOCATION/EXTENT. Locations include executive office suites throughout. Action assumes broadloom carpet is 5% of total carpeted area and that 50% of broadloom carpet requires replacement in the mid-term.

CAUSE. Deterioration due to usage and aging/wear and tear.

CODE/REGULATION. Not Applicable.

Linked Photos



C3025 - Broadloom Carpet - Relace

Actions

Action Name C3025 - Broadloom Carpet – Replace

Option Conventional

Prime Action Yes

Description REMEDY. Replace broadloom carpet in the mid-term.

IMPLEMENTATION. Remove existing carpet. Clean/prepare subfloor and install new broadloom carpet and replacement rubber base.

Estimate

Code Label	Line Item Description	Quantity	Unit
01741320052	Cleaning up, cleanup of floor area, continuous, per day, during construction	70.00	M.S.F.
024119190840	Selective demolition, rubbish handling, dumpster, 40 C.Y., 10 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	8.00	Week
024119200100	Selective demolition, dump charges, typical urban city, building construction materials, includes tipping fees only	80.00	Ton
090505200400	Flooring demolition, carpet, bonded, includes surface scraping	14,940.00	S.F.
096810109101	Carpet pad, sponge rubber, 6' w x 60' roll, max	14,940.00	S.F.
096816103101	Carpet, commercial grades, direct cement, nylon, plush, 42 oz., medium to heavy traffic	14,940.00	S.F.
C30234180010	Replace rubber cove base	1,163.00	L.F.
CRPTA	Carpet & Linoleum Layers	160.00	hour
CRPTI	Carpet & Linoleum Layers	80.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: C30

Currency : US\$

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	C3025 - Carpet Tile – Replace	Action Date	Aug 7, 2016
Linked System		Date Inspected	Aug 7, 2013
Category	Beyond Useful Life	Finish Date	
Prime System	C3025 - Carpeting	Status	Open
Priority	3 - Within 3 to 5 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

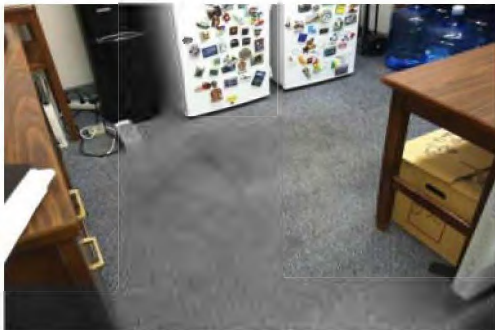
CONDITION/PROBLEM. Carpet tile is worn and stained in many places. Replacement carpet tiles have been provided to some areas on an as-needed basis. In some locations, provision of replacement carpet tiles is obviously different than adjacent carpet tiles.

LOCATION/EXTENT. Office, conference room and support spaces. Action assumes carpet tile replacement is 70% of total floor area, comprised of office space, horizontal circulation and conference/training areas.

CAUSE. Deterioration due to aging/wear and tear.

CODE/REGULATION. Not Applicable.

Linked Photos



C3025 - Carpet Tile - Replace

Actions

Action Name	C3025 - Carpet Tile – Replace
Option	Conventional
Prime Action	Yes
Description	REMEDY. Replace carpet tile in the mid-term.

IMPLEMENTATION. Remove existing vinyl base and carpet tile. Coordinate the work with the Building Manager, phasing all activities so as to minimize disruption to the building occupants. Use of swing space is required to temporarily relocate occupants during the

work.

Estimate

Code Label	Line Item Description	Quantity	Unit
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	200.00	M.S.F.
019309501700	Moving equipment, remove and reset, 100' distance, no obstructions, assembly or leveling unless noted, desk with chair	1,800.00	Ea.
019309502600	Moving equipment, remove and reset, 100' distance, no obstructions, assembly or leveling unless noted, file cabinet	1,800.00	Ea.
019309507040	Moving equipment, remove and reset, 100' distance, no obstructions, assembly or leveling unless noted, storage cabinet, metal, large	1,000.00	Ea.
024119190840	Selective demolition, rubbish handling, dumpster, 40 C.Y., 10 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	26.00	Week
024119193040	Selective demolition, rubbish handling, 50' haul, loading & trucking, hand loading truck, cost to be added to demolition cost.	1,100.00	C.Y.
024119200100	Selective demolition, dump charges, typical urban city, building construction materials, includes tipping fees only	140.00	Ton
090505200560	Carpet Tile, permanent adhesive, removal	376,503.00	S.F.
096813105060	Carpet tile, tufted nylon, 42 oz., 18" x 18" or 24" x 24"	44,158.00	S.Y.
C30234180010	Replace rubber cove base	29,300.00	L.F.
CLAMA	Common Maintenance Laborer	160.00	hour
CRPTA	Carpet & Linoleum Layers	320.00	hour
CRPTJ	Carpet & Linoleum Layers	200.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: C30

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	C3032 - Corridor Acoustical Tile Ceiling - Replace	Action Date	Aug 7, 2016
Linked System		Date Inspected	Aug 7, 2013
Category	Beyond Useful Life	Finish Date	
Prime System	C3030 - Ceiling Finishes	Status	Open
Priority	3 - Within 3 to 5 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

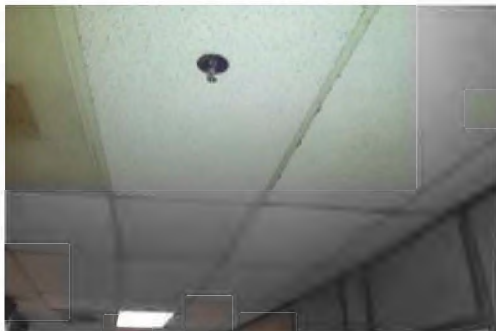
CONDITION/PROBLEM. The existing acoustical ceiling tile and grid system in building corridors and freight elevator lobbies is the original 2' x 4' module. Over time, damaged and water stained tiles have been replaced where necessary. However, replacement tiles in many locations are of a different texture and manufacturer, leaving the visual appearance of the ceilings as non-uniform. The tee grid system appears worn from its original color as well.

LOCATION/EXTENT. Corridors on Office levels 2 - 10.

CAUSE. Deterioration of acoustical ceiling tiles is due to building system leaks or repairs, moisture infiltration, or impact damage by building occupants.

CODE/REGULATION. Not applicable.

Linked Photos



C3032 - Corridor Acoustical Tile Ceiling - Replace

Actions

Action Name	C3032 - Corridor Acoustical Tile Ceiling - Replace
Option	Conventional
Prime Action	Yes
Description	REMEDY. Replace original acoustical ceiling system in its entirety. IMPLEMENTATION. Remove and dispose of stained/damaged ceiling tile. Coordinate with tenants to arrange corridor ceiling work

in affected areas.

COST EQUIVALENCE. In the following estimate, substitutions have been made. This has occurred because the needed line item does not occur in RS Means version provided in the program. The substitution is based on the equivalent value.

-- SUBSTITUTION, Electricians (JourneyMan)

-- FOR, Resetting existing 2x4 corridor light fixtures

-- SUBSTITUTION, Sheet Metal Workers (JourneyMan)

-- FOR, Resetting existing diffusers

Estimate

Code Label	Line Item Description	Quantity	Unit	(b)(4)
01741320052	Cleaning up, cleanup of floor area, continuous, per day, during construction	120.00	M.S.F.	
024119190840	Selective demolition, rubbish handling, dumpster, 40 C.Y., 10 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	36.00	Week	
024119193040	Selective demolition, rubbish handling, 50' haul, loading & trucking, hand loading truck, cost to be added to demolition cost.	320.00	C.Y.	
024119200100	Selective demolition, dump charges, typical urban city, building construction materials, includes tipping fees only	140.00	Ton	
C30331080020	Replace acoustic tile ceiling, non fire-rated	1,222.00	C.S.F.	
ELECJ	Electricians (JourneyMan)	200.00	hour	
SHEET	Sheet Metal Workers (JourneyMan)	200.00	hour	

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D10

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	D1011 - Passenger Elevators - Modernize	Action Date	Aug 7, 2016
Linked System		Date Inspected	Aug 7, 2013
Category	Building Code	Finish Date	
Prime System	D1011 - Passenger Elevators	Status	Open
Priority	3 - Within 3 to 5 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. With continued use and changing technology, the sixteen elevators, last modernized in 1980, have become deteriorated and the technology is now obsolete.

LOCATION/EXTENT. The elevator system equipment for passenger elevators including controllers, car top equipment, ropes and hoistway machines, in the elevator machine rooms and shafts.

CAUSE. Deterioration due to aging, wear and obsolescence.

CODE/REGULATION. International Building Code (IBC) Chapter 30, Elevators and Conveying Systems; Architectural Barriers Act Section 407, Elevators.

Linked Photos



D1011 - Passenger Elevators - Modernize

Actions

Action Name D1011 - Passenger Elevators - Modernize

Option Conventional

Prime Action Yes

Description REMEDY. Modernize the passenger elevator equipment.

IMPLEMENTATION. Remove existing controllers and replace with non-proprietary units. Remove car and governor ropes and replace with ropes of same size. Re-groove machine sheaves, replace governors. Replace bearings, brushes and other operable components at hoistway machines. Replace fan, sensors, call station and other operable components at car top.

HISTORIC PRESERVATION REPAIR PROCEDURES. The original cabs and hoistway indicators have been replaced. New cab interiors and "up" and "down" indicator lights should be replaced to match the original design per original drawings and photographs.

Estimate

Code Label	Line Item Description	Quantity	Unit
015419500500	Crane crew, daily use for small jobs, 80-ton truck-mounted hydraulic crane, portal to portal	4.00	Day
024119190800	Selective demolition, rubbish handling, dumpster, 30 C.Y., 7 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	40.00	Week
024119200100	Selective demolition, dump charges, typical urban city, building construction materials, includes tipping fees only	30.00	Ton
140505200050	Elevator, cab, track and equipment, removal	210.00	Stop
142123101625	Electric Traction Passenger Elevators, base unit, standard finish, 2000 lb, 200 fpm, 4 stop	16.00	Ea.
142123101650	Electric Traction Passenger Elevators, base unit, standard finish, for 2500 lb capacity, add	16.00	Ea.
142123101900	Electric Traction Passenger Elevators, base unit, standard finish, for increased speed, 500 fpm, gearless electric, add	128.00	Ea.
142810103000	Elevator options, passenger, automatic controls, 2 car group	16.00	Ea.
142810103250	Elevator options, passenger, side opening 2 speed doors	16.00	Ea.

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D20

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	D2010 - Plumbing fixtures - Replace	Action Date	Aug 7, 2016
Linked System		Date Inspected	Aug 7, 2013
Category	Beyond Useful Life	Finish Date	
Prime System	D2010 - Plumbing Fixtures	Status	Open
Priority	3 - Within 3 to 5 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM: The restroom plumbing fixtures have exceeded their useful life in. They are not low flow units as required by GSA P100.

LOCATION/EXTENT: All restrooms throughout the building.

Cause: Construction prior to code adoption and age.

Code Reference: ADA 4.15 through 4.24, GSA P100 5.20.

Linked Photos



D2010 - Plumbing fixtures - Replace

Actions

Action Name	D2010 - Plumbing fixtures - Replace
Option	Conventional
Prime Action	Yes
Description	<p>REMEDY: Remove non-compliant plumbing fixtures. Install ADA compliant fixtures. Submit catalog cuts for approval prior to ordering.</p> <p>IMPLEMENTATION: Coordinate with building manager. Remove fixtures one floor at a time.</p>

Estimate

Code Label	Line Item Description	Quantity	Unit
220505101220	Fixture, counter top lavatory, disconnect and remove	260.00	Ea.
220505101401	Fixture, water closet, floor mounted, selective demolition	340.00	Ea.
220505101520	Fixture, urinal, wall mounted, selective demolition, includes 10' piping	100.00	Ea.
220505102001	Pipe, metal pipe, to 1-1/2" diam., selective demolition	3,500.00	L.F.
220719100265	Insulation, insulated protectors (ADA), for exposed piping under sinks or lavatories, vinylcoated foam, velcro tabs, valve and supplycover, 1/2", 3/8", and 7/16" pipe size	260.00	Ea.
224213303300	Urinal, wall hung, rough-in, supply, waste and vent	100.00	Ea.
224213403300	Water closet, bowl only, floor mounted, includes flush valve and seat	340.00	Ea.
224239102810	Faucets/fittings, lavatory faucet, automatic sensor and operator, with faucet head, commercial	240.00	Ea.
224316106710	Lavatory, wall hung, vitreous china, white, hospital type, contoured splash shield, 20" x 18", excludes trim (see Section 22 41 39.10 - MF95 15410-300)	260.00	Ea.
D20131100050	Replace wax ring gasket for tankless water closet	340.00	Ea.

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D20

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	D2018 - Drinking Fountain Filtration Equipment - Replace	Action Date	Aug 7, 2016
Linked System		Date Inspected	Aug 7, 2013
Category	Reliability	Finish Date	
Prime System	D2018 - Drinking Fountains and Coolers	Status	Open
Priority	3 - Within 3 to 5 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. The drinking water filters are 27 years old and are approaching the end of their useful life.

LOCATION/EXTENT. Basement.

CAUSE. Normal operation of the equipment and the age.

CODE/REGULATION. Not applicable.

Linked Photos



D2018 - Drinking Fountain Filtration Equipment - Replace

Actions

Action Name	D2018 - Drinking Fountain Filtration Equipment - Replace
Option	Conventional
Prime Action	Yes
Description	REMEDY. Replace reverse osmosis filtration system.

IMPLEMENTATION. Schedule and phase work with the Building Manager and Operations Manager. Disconnect filtration system from the drinking fountain water supply. Remove filtration system and dispose. Install new reverse osmosis filtration system.

COORDINATION. For related requirements, see:
-- D2018 - Drinking Fountain Water Cooler - Replace
-- D2018 - Drinking Fountains - Replace

Estimate

Code Label	Line Item Description	Quantity	Unit
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	2.00	M.S.F.
050505100370	Selective metals demolition, manufactured or fabricated specialty item, 81 - 120 lb, remove whole or cut up into smaller pieces, excl shoring, bracing, cutting, loading, hauling, dumping	5.00	Ea.
220505109360	Water filter, commercial, 2" thru 2-1/2" size, selective demolition	1.00	Ea.
223219109320	Water filter, commercial, fully automatic or push button automatic, taste and odor removal, 57 GPM, 2" pipe size	1.00	Ea.
PLUMA	Plumbers	16.00	hour
PLUMI	Plumbers	16.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D20

Currency : US\$

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	D2018 - Drinking Fountain Water Cooler - Replace	Action Date	Aug 7, 2016
Linked System		Date Inspected	Aug 7, 2013
Category	Reliability	Finish Date	
Prime System	D2018 - Drinking Fountains and Coolers	Status	Open
Priority	3 - Within 3 to 5 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

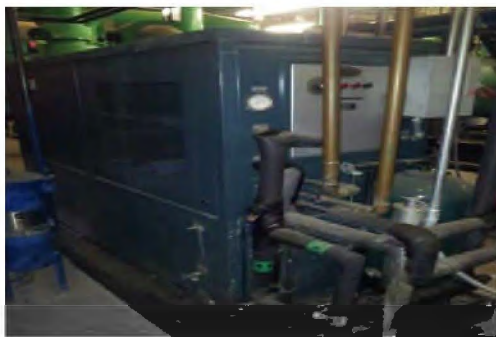
CONDITION/PROBLEM. The drinking fountain water cooling units are beyond their useful life and will likely fail in the near future.

LOCATION/EXTENT. The water cooling units for the drinking fountain system located in the Central Utility Plant

CAUSE. Age and normal operation.

CODE/REGULATION. Not applicable.

Linked Photos



D2018 - Drinking Fountain Water Cooler - Replace

Actions

Action Name	D2018 - Drinking Fountain Water Cooler - Replace
Option	Conventional
Prime Action	Yes
Description	REMEDY. Replace the two water cooling units.

IMPLEMENTATION. Schedule and phase work with the Building Manager and Operations Manager. Disconnect water coolers from the drinking fountain water supply. Remove coolers and dispose. Install two new packaged water coolers.

COORDINATION. For related requirements, see:
-- D2018 - Drinking Fountains - Replace
-- D2018 - Drinking Fountain Filtration Equipment - Replace

Estimate

Code Label	Line Item Description	Quantity	Unit
017413200050	Cleaning up, cleanup of floor area, continuous, per day, during construction	2.00	M.S.F.
024119200100	Selective demolition, dump charges, typical urban city, building construction materials, includes tipping fees only	1.00	Ton
230505108000	Water chiller, up thru 10 ton, selective demolition	2.00	Ea.
236433108040	Water chiller, direct expansion, shell and tube type, for built-up systems, 10 ton, includes standard controls	2.00	Ea.

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D20

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	D2018 - Drinking Fountains - Repair	Action Date	Aug 7, 2016
Linked System		Date Inspected	Aug 7, 2013
Category	Reliability	Finish Date	
Prime System	D2018 - Drinking Fountains and Coolers	Status	Open
Priority	3 - Within 3 to 5 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM: Many of the drinking fountains are inoperable or the pressure needs to be adjusted, some of the drinking fountains are pulling away from the wall.

LOCATION/EXTENT: The drinking fountains in the common corridors.

CAUSE: Age and normal operation.

CODE/REGULATION: Not applicable.

Linked Photos



D2018 - Drinking Fountains - Repair

Actions

Action Name: D2018 - Drinking Fountains - Repair

Option: Conventional

Prime Action: Yes

Description: REMEDY: Repair or replace drinking fountains as necessary.

IMPLEMENTATION: Schedule and phase work with the Building Manager and Operations Manager. Survey drinking fountains to determine operational status. Turn off water supply and repair drinking fountain.

COORDINATION. For related requirements, see:
-- D2018 - Drinking Fountain Water Cooler - Replace
-- D2018 - Drinking Fountain Filtration Equipment - Replace

Estimate

Code Label	Line Item Description	Quantity	Unit
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	20.00	MS.F.
050505100360	Selective metals demolition, manufactured or fabricated specialty item, 41 - 80 lb, remove whole or cut up into smaller pieces, excl shoring, bracing, cutting, loading, hauling, dumping	40.00	Ea.
224713102820	Drinking fountain, wall mounted, non-recessed, stainless steel, dual level for handicapped type, single bubbler, for connection to cold water supply	40.00	Ea.
D20138100010	Check / minor repairs drinking fountain	20.00	Ea.
D20138100020	Repair internal leaks drinking fountain	20.00	Ea.
D20138100030	Correct water pressure drinking fountain	20.00	Ea.
D20138100050	Repair drain leak drinking fountain	20.00	Ea.
PLUMA	Plumbers	40.00	hour
PLUMU	Plumbers	40.00	hour

(b)(4)



Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D20

Currency : US\$

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	D2020 - Restroom Water Pressurization System - Replace	Action Date	Aug 7, 2014
Linked System		Date Inspected	Aug 7, 2013
Category	Beyond Useful Life	Finish Date	
Prime System	D2020 - Domestic Water Distribution	Status	Open
Priority	1 - Immediate / First Year	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM: The existing restroom water pressurization system is well beyond its useful life and is constantly breaking down, leaving the restrooms with no water.

EXTENT/LOCATION: Sub Basement

Cause: Age and normal use.

CODE/STANDARD: None

Linked Photos



D2020 - Restroom Water Pressurization System - Replace 2



D2020 - Restroom Water Pressurization System - Replace 1

Actions

Action Name	D2020 - Restroom Water Pressurization System - Replace
Option	Conventional
Prime Action	Yes
Description	REMEDY. Replace the existing the restroom water supply pressurization system. IMPLEMENTATION. Coordinate work with bldg manager. Provide temporary compressors and plumbing while replacing the existing system.

Estimate

Code Label	Line Item Description	Quantity	Unit
015433400195W	Rent air compressor, portable, 6.5 cfm, electric (Weekly)	4.00	Ea.
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	10.00	M.S.F.
024119200100	Selective demolition, dump charges, typical urban city, building construction materials, includes tipping fees only	5.00	Ton
111113100650	Air compressor, automotive, electric, dual controls, 5 HP, 115/230V	4.00	Ea.
220505100420	Air compressor, 10 H.P. thru 15 H.P., selective demolition	2.00	Ea.
220505102000	Pipe, metal pipe, to 1-1/2" diam., selective demolition	200.00	L.F.
220523201070	Valves, bronze, angle, rising stem, threaded, 150 lb., 3/4"	20.00	Ea.
221113440570	Pipe, steel, black, threaded, 3/4" diameter, schedule 40, Spec. A-53, includes coupling and clevis hanger assembly sized for covering, 10' OC	300.00	L.F.
221513101730	Compressor accessory, dryer, air, refrigerated, 50 CFM, includes ambient air filters	2.00	Ea.
221513104140	Compressor accessory, couplers, air line, sleeve type, male, 3/4" NPT	20.00	Ea.
221519106100	Compressor, air, reciprocating, tank mounted, pressure lubricated, heavy duty, 2 stage, 3 phase, capacity rated at 175 PSIG, 76.7 SCFM, 20 H.P., 120 gallon tank	2.00	Ea.
ELEC1	Electricians (Inside Foreman)	80.00	hour
PLUMA	Plumbers (Apprentice)	160.00	hour
PLUM1	Plumbers (Inside Foreman)	40.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D20

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	D2034 - Sewer Ejector Pumps - Replace	Action Date	Aug 7, 2016
Linked System		Date Inspected	Aug 7, 2013
Category	Beyond Useful Life	Finish Date	
Prime System	D2034 - Sanitary Waste Equipment	Status	Open
Priority	3 - Within 3 to 5 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

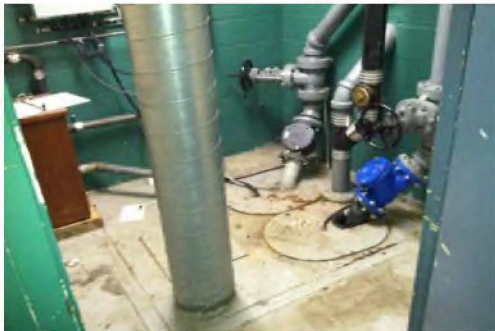
CONDITION/PROBLEM. The sewer ejector pumps will reach the end of its useful life and become unreliable during the study period.

LOCATION/EXTENT. Basement mechanical rooms.

CAUSE. Age and obsolescence.

CODE/REGULATION. Not applicable.

Linked Photos



D2034 - Sewer Ejector Pumps - Replace

Actions

Action Name D2034 - Sewer Ejector Pumps - Replace
Option Conventional
Prime Action Yes
Description REMEDY. Replace sewer ejector pumps

IMPLEMENTATION. Remove and dispose of existing pumps and motors. Provide new pumps and motors. Provide reconnection of piping and electrical services.

COORDINATION.

For related requirements, see:

D2043 – Rain Water Sump Pumps – Replace

Estimate

Code Label	Line Item Description	Quantity	Unit
024119190700	Selective demolition, rubbish handling, dumpster, 10 C.Y., 3 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	2.00	Week
028120103110	Hazardous waste cleanup/pickup/disposal, liquid pickup, vacuum truck, stainless steel tank, 2200 gallons, minimum charge, 4 hours, 1 compartment	16.00	Hr.
220505102050	Pipe, metal pipe, 2" to 3-1/2" diam., selective demolition	60.00	L.F.
220505103000	Pump, submersible sump, selective demolition	6.00	Ea.
221113250200	Elbow, 90 Deg., copper, wrought, copper x copper, 4"	6.00	Ea.
221113250380	Elbow, 45 Deg., copper, wrought, copper x copper, 4"	6.00	Ea.
221316202160	Pipe, cast iron soil, one hub, service weight, 4" diameter, lead and oakum joints 10' OC, includes clevis hanger assemblies 5' OC	50.00	L.F.
221329143300	Pump, sewage ejector, system accessories, for alarm horn and lights, 115 V mercury switch, add	6.00	Ea.
221329143340	Pump, sewage ejector, system accessories, for switch, magnetic contactor, alarm bell, light, 3 level control, add	6.00	Ea.
221429130800	Pump, pedestal sump, iron base, 21 GPM, 1/3 H.P., at 15' head, includes float control	6.00	Ea.
230523302280	Valves, iron body, gate, non-rising stem, flanged, 125 lb., 4"	6.00	Ea.
ELECJ	Electricians	32.00	Hr.

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D20

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	D2043 - Rain Water Sump Pumps - Replace	Action Date	Aug 7, 2016
Linked System		Date Inspected	Aug 7, 2013
Category	Beyond Useful Life	Finish Date	
Prime System	D2043 - Rainwater Drainage Equipment	Status	Open
Priority	3 - Within 3 to 5 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. The sump pumps have reached the end of their useful life.

LOCATION/EXTENT. The sump pump system located in the basement mechanical rooms.

CAUSE. Age.

CODE/REGULATION. Not applicable.

Linked Photos



D2043 - Rain Water Sump Pumps - Replace

Actions

Action Name	D2043 - Rain Water Sump Pumps - Replace
Option	Conventional
Prime Action	Yes
Description	REMEDY. Replace sump pumps

IMPLEMENTATION. Remove and dispose of existing packaged pumps and motors. Provide skid packaged domestic water booster system. Provide reconnection of piping and electrical services. Coordinate work with Building Manager to limit service disruption.

COORDINATION. For related requirements, see:

-- D2030 - Sewer Ejector Pumps - Replace

Estimate

Code Label	Line Item Description	Quantity	Unit
024119190700	Selective demolition, rubbish handling, dumpster, 10 C.Y., 3 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	1.00	Week
028120103110	Hazardous waste cleanup/pickup/disposal, liquid pickup, vacuum truck, stainless steel tank, 2200 gallons, minimum charge, 4 hours, 1 compartment	32.00	Hr.
220505102050	Pipe, metal pipe, 2" to 3-1/2" diam., selective demolition	50.00	L.F.
220505103000	Pump, submersible sump, selective demolition	4.00	Ea.
221113250200	Elbow, 90 Deg., copper, wrought, copper x copper, 4"	4.00	Ea.
221113250380	Elbow, 45 Deg., copper, wrought, copper x copper, 4"	4.00	Ea.
221316202160	Pipe, cast iron soil, one hub, service weight, 4" diameter, lead and oakum joints 10' OC, includes clevis hanger assemblies 5' OC	50.00	L.F.
221429167560	Pump, submersible sump, automatic, cast iron, 1/2 H.P., 1-1/4" discharge	4.00	Ea.
221429169000	Pump, submersible sump, minimum labor/equipment charge	4.00	Job
230523302280	Valves, iron body, gate, non-rising stem, flanged, 125 lb., 4"	4.00	Ea.
ELECJ	Electricians	16.00	Hr.
PLUHI	Plumber Helpers	32.00	hour
PLUMJ	Plumbers	32.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D30

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	D3042 - Battery Room Ventilation - Install	Action Date	Aug 7, 2015
Linked System		Date Inspected	Aug 7, 2013
Category	Building Code	Finish Date	
Prime System	D3042 - Exhaust Ventilation Systems	Status	Open
Priority	2 - Within 1 to 2 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

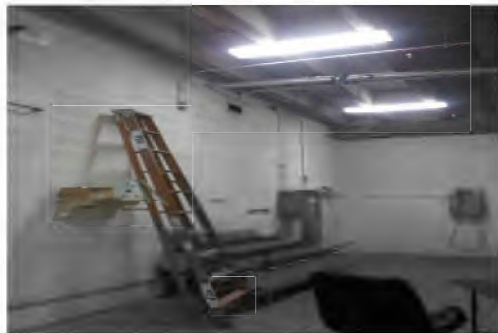
CONDITION/PROBLEM: The Battery Room doesn't have proper ventilation.

LOCATION/EXTENT: Basement.

CAUSE: Incorrect design.

CODE/STANDARD: NFPA 70 Section 480

Linked Photos



D3042 - Battery Room Ventilation - Install

Actions

Action Name	D3042 - Battery Room Ventilation - Install
Option	Conventional
Prime Action	Yes
Description	REMEDY: Install required battery room ventilation and fire dampers. IMPLEMENTATION: Calculate necessary ventilation system needs and then install system.

Estimate

Code Label	Line Item Description	Quantity	Unit
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	2.00	M.S.F.
092910203600	Gypsum Board, for taping & finishing joints, add	30.00	S.F.
099123750250	Dry fall painting, walls, wallboard and smooth plaster, two coats, spray	30.00	S.F.
233313164680	Duct accessories, fire/smoke combination damper, louver type, 24" x 12", U.L. label	2.00	Ea.
C10101280700	Gypsum board, 1 face only, exterior sheathing, fire resistant, 5/8"	10.00	S.F.
D30903101020	Fume hood exhaust system, 4 FT long, 2000 CFM	1.00	Ea.

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D30

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	D3042 - Garage Exhaust Ventilation System - Upgrade	Action Date	Aug 7, 2014
Linked System		Date Inspected	Aug 7, 2013
Category	Functionality	Finish Date	
Prime System	D3042 - Exhaust Ventilation Systems	Status	Open
Priority	1 - Immediate / First Year	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. The three level garage is ventilated and provided make-up air by fans with heating coils through a ventilation shaft through the center of the outboard wall of the garage. The air discharges through deck grates on the East (7th Street SW) side of the building. The fans are aged and in need of repair. Additionally, provisions exist to maintain positive pressure in the three stairway exits (three levels) to the garage to obviate the flow of undesirable exhaust fumes from entering the building; but the remote dampers and controls are unreliable, and at the time of inspection, the fumes entering at the upper garage level were strong and highly irritating.

LOCATION/EXTENT. Sub-basement garage mechanical room.

CAUSE. Original design limitations.

CODE/REGULATION. Not applicable.

Linked Photos



D3042 - Garage Exhaust Ventilation System - Upgrade

Actions

Action Name	D3042 - Garage Exhaust Ventilation System - Upgrade
Option	Conventional
Prime Action	Yes
Description	REMEDY. Study the garage exhaust system, with the intent of providing multiple fans or dampers on the existing inlets to segment the garage, with each fan or damper controlled by a CO monitoring system.

IMPLEMENTATION. Provide the study, and then implement the resulting recommendations.

Estimate

Code Label	Line Item Description	Quantity	Unit
013113200160	Field personnel, general purpose laborer, average	4.00	Week
024119200100	Selective demolition, dump charges, typical urban city, building construction materials, includes tipping fees only	1.00	Ton
230593101000	Balancing, air, heating and ventilating equipment, centrifugal fans, utility sets, (Subcontractor's quote including material & labor)	4.00	Ea.
230593101400	Balancing, air, heating and ventilating equipment, roof exhaust fan, (Subcontractor's quote including material & labor)	4.00	Ea.
230593103000	Balancing, air conditioning equipment, supply, return, exhaust, registers and diffusers, average ceiling height, (Subcontractor's quote including material & labor)	6.00	Ea.
230593200800	Balancing, water, main and duct re-heat coils, (Subcontractor's quote including material & labor)	4.00	Ea.
230953100606	Control component, carbon monoxide detector system, panel	1.00	Ea.
230953100610	Control component, carbon monoxide detector system, sensor	3.00	Ea.
230953109750	Control component, electronic system, misc, components, accessory power supply	1.00	Ea.
233313163260	Duct accessories, fire damper, curtain type, vertical, 24" x 14", U.L. label, 1-1/2 hour rated	12.00	Ea.
233313251138	Duct accessories, exhaust vent damper, automatic, opposed blade, 18" x 8", includes electric actuator	12.00	Ea.
233323139900	Duct accessories, minimum labor/equipment charge	6.00	Job
233416104320	Fans, centrifugal, airfoil, double width wheel, belt drive, capacities at 2000 fpm, 2.5" S.P. for motor size indicated, 90,160 CFM, 50 H.P., excludes motor	2.00	Ea.
260505109000	Electrical demolition, minimum labor/equipment charge	16.00	Job
D50201550680	Motor feeder systems, three phase, feed to 200 V 20 HP, 230 V 25 HP, 460 V 50 HP, 575 V 60 HP	50.00	L.F.
D50201700520	Motor connections, three phase, 200/230/460/575 V, up to 50 HP	2.00	Ea.
	Allowance for misc.	1.00	Ea.

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D30

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	D3042 – Stair Pressurization – Install	Action Date	Aug 7, 2023
Linked System		Date Inspected	Aug 7, 2013
Category	Life Safety	Finish Date	
Prime System	D3042 - Exhaust Ventilation Systems	Status	Open
Priority	5: Does Not Meet Current Codes/Standards	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM: Design and install a stair pressurization system for the stairs. The fire alarm system will need additional smoke detectors and relays to activate the stair pressurization system automatically.

LOCATION/EXTENT: All stairwells throughout the building.

CAUSE: Changes to code since original construction.

CODE/REGULATION: NFPA 101 (2012), Section 39.2.2.4.

Linked Photos



D3042 – Stair Pressurization – Install

Actions

Action Name	D3042 – Stair Pressurization – Install
Option	Conventional
Prime Action	Yes
Description	REMEDY: Install stair smokeproof enclosures.

IMPLEMENTATION: Design and install pressurization systems for the stairs that provide egress from the 1st floor through penthouse. The system should consist of supply fans and two-hour fire-rated supply air duct shafts, with the supply air introduced into the stairs

at every other floor. The duct shafts should be constructed of fire-rated shaft-wall materials, for ease of construction, to provide the required fire-rating. A vent should be provided at the top of the stairs to relieve excess pressure. Provide electrical service from the recommended on-site emergency power system to the fans and to smoke detectors at each floor level outside of the stairs to initiate the pressurization of the stairwells. Provide all required interconnections to the building's fire alarm system.

Estimate

Code Label	Line Item Description	Quantity	Unit
024119190800	Selective demolition, rubbish handling, dumpster, 30 C.Y., 7 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	40.00	Week
024119200100	Selective demolition, dump charges, typical urban city, building construction materials, includes tipping fees only	200.00	Ton
038116500820	Concrete sawing, concrete walls, rod reinforcing, per inch of depth	520.00	L.F.
092116230060	Shaft Wall, cavity type on 25 gal. J track & C-H studs, 24" O.C., 1" thick coreboard wall liner on shaft side, 2 hour assembly w/double layer, 5/8" fire rated gypsum board on room side	1,200.00	S.F.
092116230900	Shaft Wall, for taping & finishing, add per side	2,400.00	S.F.
092216132000	Metal stud partition, non-load bearing, galvanized, 10' high, 1-5/8" wide, 25 gauge, 16" O.C., includes top & bottom track	1,200.00	S.F.
099123720240	Paints & coatings, walls & ceilings, interior, concrete, drywall or plaster, latex paint, primer or sealer coat, smooth finish, roller	1,200.00	S.F.
099123720840	Paints & coatings, walls & ceilings, interior, concrete, drywall or plaster, latex paint, 2 coats, smooth finish, roller	1,200.00	S.F.
233113130570	Metal ductwork, fabricated rectangular, galvanized steel, 2000 to 5000 lb., includes fittings, joints, supports and allow for a flexible conn. field sketches, excludes as-built dwgs. and insul.	2,000.00	Lb.
233313138260	Duct accessories, multi-blade dampers, parallel blade, 30" x 18"	36.00	Ea.
233416103540	Fans, centrifugal, airfoil, motor and drive complete, 2000 CFM, 1 H.P.	36.00	Ea.
233723105700	Ventilator, relief vent, rectangular, aluminum, galvanized curb, intake/exhaust, 0.033" S.P., 5000 CFM, 20" x 72", includes base and damper	40.00	Ea.
260505109000	Electrical demolition, minimum labor/equipment charge	80.00	Job
260519901000	Wire, copper, stranded, 600 volt, #14, type THWN-THHN, in raceway	120.00	C.L.F.
260523201850	Fire alarm cable, FEP teflon, 150 volt, to 200 Deg.C, #18, 1 pair	80.00	C.L.F.
260533135000	Electric metallic tubing (EMT), 1/2" diameter, to 15' high, incl 2 terminations, 2 field bend elbows, 11 beam clamps, and 11 couplings per 100 LF	6,000.00	L.F.
260533160150	Outlet boxes, pressed steel, 4" square	72.00	Ea.
260533160200	Outlet boxes, pressed steel, extension rings, 4" square	72.00	Ea.
260533160250	Outlet boxes, pressed steel, covers, blank, 4" square	72.00	Ea.
262416201200	Circuit breakers, ground fault, 14 k A I.C., 1 pole, 277 volt, 15 - 30 amp	72.00	Ea.
262416302600	Panelboards, 3 phase 4 wire, main circuit breaker, 277/480 V, 225 amp, 30 circuits, NEHB, incl 20 A 1 pole plug-in breakers	4.00	Ea.
283123504175	Detection system, fire alarm control panel, addressable	36.00	Ea.

(b)(4)

Code Label	Line Item Description	Quantity	Unit
	interface device, excluding wires & conduits		
283146505240	Detection Systems, smoke detector, addressable type, excl. wires & conduit	36.00	Ea.
D50102300280	Feeder installation 600 V, including RGS conduit and XHHW wire, 200 A	800.00	LF.
D50201650360	Safety switch, 30 A fused, 3 phase, 15 HP, 460 V or 20 HP, 575 V	36.00	Ea.
ELEC	Electricians	1,640.00	hour
SHEE	Sheet Metal Workers	1,640.00	hour
SKWK	Skilled Workers Average (35 trades)	1,640.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D40

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	D4010 - Arm Over Sprinkler Supports - Install	Action Date	Aug 7, 2015
Linked System		Date Inspected	Aug 7, 2013
Category	Building Code	Finish Date	
Prime System	D4010 - Sprinklers	Status	Open
Priority	2 - Within 1 to 2 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

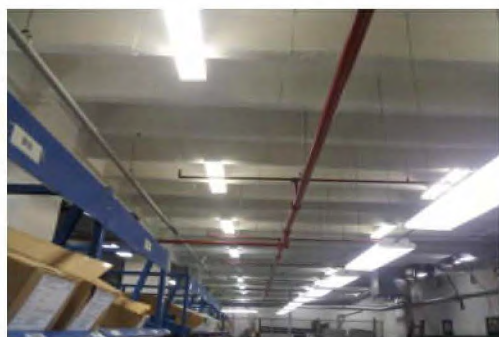
CONDITION/PROBLEM. There are many arm-overs for the sprinklers throughout the basement that are greater than 12" and are unsupported.

LOCATION/EXTENT. Basement.

CAUSE. Incorrect installation.

CODE/STANDARD. NFPA 13

Linked Photos



D4010 - Arm Over Sprinkler Supports - Install

Actions

Action Name	D4010 - Arm Over Sprinkler Supports - Install
Option	Conventional
Prime Action	Yes
Description	REMEDY. Provide proper support for arm over sprinklers. IMPLEMENTATION. Install overhead anchors and install rated supports for the arm over sprinklers.

Estimate

Code Label	Line Item Description	Quantity	Unit
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	10.00	M.S.F.
050519200500	Anchor, expansion shield, zinc, 3/8" dia x 2" L, double, in concrete, brick or stone, excl layout & drilling	100.00	Ea.
220529100320	Pipe hanger / support, C-clamp, 3/8" threaded rod size, for mounting on steel beam flange, type number 23 per MSS-SP58, includes locknut	100.00	Ea.
260529202600	Threaded rod, steel, painted, 3/8" diameter	1,000.00	L.F.
SPRIA	Sprinkler Installers (Apprentice)	100.00	hour
SPRII	Sprinkler Installers (Inside Foreman)	40.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D40

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	D4010 - Sprinklers - Install	Action Date	Aug 7, 2023
Linked System		Date Inspected	Aug 7, 2013
Category	Building Code	Finish Date	
Prime System	D4010 - Sprinklers	Status	Open
Priority	5: Does Not Meet Current Codes/Standards	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

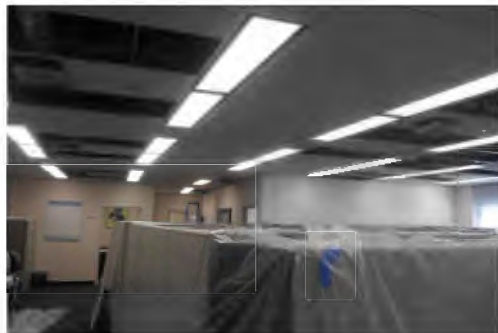
CONDITION/PROBLEM. There are many areas throughout the building without sprinkler coverage due to lack of sprinklers, over-spacing and obstructions.

LOCATION/EXTENT. Lack of coverage(5142 file area, 6208, 6282 "corridor", 9253 "corridor", above the elevator shafts, 7122, 7108, 8260, 9162, 9182, 9140 "corridor", 10120 Deputy Secretary's copy room, 10130 copy room, janitor's closet basement level near Stair 2), overspacing of sprinklers (2214, 7286, 8256, 8286, 9286, 10151), and obstruction of sprinklers (ducts near stair 2 in the basement, elevator 19 machine room, 3143, 4282, 5th floor elevator lobby, 5162, corridor outside of 7158, 7154, 8154, 9162, penthouse electrical room, penthouse storage area).

CAUSE. The building was constructed prior to current code changes requiring rated corridors for unsprinklered buildings.

CODE/REGULATION. NFPA 13

Linked Photos



D4010 - Sprinklers - Install

Actions

Action Name	D4010 - Sprinklers - Install
Option	Conventional
Prime Action	Yes
Description	REMEDY. Design and install a sprinkler system. IMPLEMENTATION. Remove portions of the ceiling and install, branch lines, arm-overs, drops, etc. Provide new or patch the existing

ceiling to match. Provide the new fire alarm system devices to monitor the sprinkler system. Commission system to ensure proper operation.

COORDINATION. Liaise with GSA Historic Preservation Office. Coordinate with requirements:

- D4010 - Concealed Sprinkler Covers - Replace
- D4010 - Standpipes - Install
- D4021 - Standpipe Water Supply - Replace

HISTORIC PRESERVATION REPAIR PROCEDURES. Work occurs in all preservation zones. Care must be taken to protect original materials from damage during sprinkler piping installation. Submit all product information, design, construction protection plan, and work plan for Regional Historic Preservation Officer's approval prior to commencing work. All work is to meet the Secretary of Interior's Standards for the treatment of historic buildings.

Estimate

Code Label	Line Item Description	Quantity	Unit
024119162600	Selective demolition, cutout, gypsum block, to 4 S.F. opening, 2" thick, excludes loading and disposal	200.00	Ea.
024119190800	Selective demolition, rubbish handling, dumpster, 30 C.Y., 7 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	10.00	Week
024119200100	Selective demolition, dump charges, typical urban city, building construction materials, includes tipping fees only	30.00	Ton
061636102852	Sheathing, gypsum, weatherproof, 1/2" thick	3,600.00	S.F.
090170100130	Gypsum wallboard, repairs, fill and sand, dents, 2" to 4" square	55.00	Ea.
090170100170	Gypsum wallboard, repairs, cut square, patch, sand and finish, holes, 8" to 12" square	60.00	Ea.
095123100300	Suspended acoustic ceiling tiles, fiberglass boards, film faced, 2' x 2' or 2' x 4' x 5/8" thick	7,000.00	S.F.
210523509990	Water-Based Fire Suppression Piping, minimum labor/equipment charge	15.00	Job
D40104101100	Wet pipe sprinkler systems, steel, ordinary hazard, 1 floor, 50,000 SF	15,000.00	S.F.
D40104101240	Wet pipe sprinkler systems, steel, ordinary hazard, each additional floor, 50,000 SF	100,000.00	S.F.
SPRIA	Sprinkler Installers	1,000.00	hour
SPRII	Sprinkler Installers	1,000.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D40

Currency : US\$

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	D4010 – Fire Sprinklers Electrical Rooms - Modify		
	Action Date	Aug 7, 2023	
Linked System	Date Inspected	Aug 7, 2013	
Category	Code Compliance	Finish Date	
Prime System	D4010 - Sprinklers	Status	Open
Priority	5: Does Not Meet Current Codes/Standards	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. Sprinkler branch lines and sprinkler heads are located directly above electrical equipment. A leak from the sprinkler system could severely impair the operation of the facility and be hazardous to the occupants.

LOCATION/EXTENT. In the electrical vaults in the basement.

CAUSE. Inadequate design and/or installation oversight.

CODE/REGULATION. National Fire Protection Association, NFPA 13 Standard for the Installation of Sprinkler Systems and NFPA 70 National Electrical Code.

Linked Photos



D4010 – Fire Sprinklers Electrical Rooms - Modify

Actions

Action Name	D4010 – Fire Sprinklers Electrical Rooms - Modify
Option	Conventional
Prime Action	Yes
Description	REMEDY. Reroute the sprinkler systems. IMPLEMENTATION. Design and install electrical room sprinkler systems without routing the sprinkler system lines over the electrical

equipment. Inspect, test and commission all system modifications to ensure proper operation.

COORDINATION. Coordinate with requirements:

-- D4010 - Fire Sprinklers - Install Additional

COSTEQUIVALENCE. In the following estimate, substitutions have been made. This has occurred because the needed line item does not occur in the RS Means version provided in the program. The substitution is based on the equivalent value.

-- SUBSTITUTION, Field personnel, field engineer.

-- FOR, Fire sprinkler system design engineer.

-- SUBSTITUTION, Instrumentation PM.

-- FOR, Field inspection and testing of fire sprinkler systems.

Estimate

Code Label	Line Item Description	Quantity	Unit
013113200140	Field personnel, field engineer, maximum	2.00	Week
019313151530	Instrumentation PM, rule of thumb; annual cost per instrument for calibration & trouble shooting, incl. flow meters, analytical transmitters, flow control chemical feed systems, recorders & distribution control systems	10.00	Ea.
211313501970	Sprinkler system components, connector for sprinkler heads, 72" length	20.00	Ea.
211313502360	Sprinkler system components, sprinkler head escutcheons, standard, chrome, 1" size	15.00	Ea.
211313503740	Sprinkler system components, sprinkler heads, standard spray, pendent or upright, brass, 135 to 286 degrees F, 1/2" NPT, 1/2" orifice, excludes supply piping	15.00	Ea.
211313506000	Sprinkler system components, sprinkler head guards, bright zinc, 1/2" NPT, excludes supply piping	50.00	Ea.
220505101910	Pipe fittings with a single connection, 2" thru 4" diameter, selective demolition	6.00	Ea.
230523305250	Valves, iron body, valve sprocket with chain for globe, OS&Y, for 2-1/2" valve	1.00	Ea.
PLUM1	Plumbers	80.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D40

Currency : US\$

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	D4011 - Sprinkler Water Supply - Increase size of supply		
Linked System	Action Date	Aug 7, 2014	
Category	Date Inspected	Aug 7, 2013	
Prime System	Finish Date		
Priority	Status	Open	
Inspector	Actual Cost	0	
	Estimated Cost	(b)(4)	

Requirement Description

CONDITION/PROBLEM. The existing supply does not provide enough flow and pressure for the sprinkler system. Increasing the size of the pump will only cause the pump to cavitate and fail.

LOCATION/EXTENT. Basement.

CAUSE. Insufficient service capacity caused by increased usage in local.

CODE/STANDARD. NFPA 20 Section 11.2.6.2

Linked Photos



D4011 - Sprinkler Water Supply - Increase size of supply

Actions

Action Name	D4011 - Sprinkler Water Supply - Increase size of supply
Option	Conventional
Prime Action	Yes
Description	<p>REMEDY. Provide larger supply lines so that the fire pump is able to reach 150% capacity. Replace the gauges. Replace the fire pump controller if it is not working properly. Repair or replace the VIC fitting outside of SB5-13.</p> <p>IMPLEMENTATION. Perform a study and design to determine service size needed. Coordinate work with property manager to supply</p>

temporary water source during cutover.

COST EQUIVALENT: Two hours of Skilled Workers Average (35 trades) (Outside Foreman) is equal to one hour of AE design time.

Estimate

Code Label	Line Item Description	Quantity	Unit
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	200.00	M.S.F.
024113380090	Selective demolition, water & sewer piping & fittings, concrete pipe, 4"-10", diameter, excludes excavation	200.00	L.F.
024210209010	Deconstruction process support equipment, as needed, daily use, 12-ton truck-mounted hydraulic crane, portal to portal, includes operator, includes operator	20.00	Day
213113504200	Fire pumps, electric, 3500 GPM, 100 psi, 300 HP, 1770 RPM, 10" pump, including controller, fittings and relief valve	1.00	Ea.
A20101102360	Excavate and fill, 1000 SF 16' deep, clay excavation, bank run gravel borrow for backfill	200.00	S.F.
G30101103170	Water distribution piping, ductile iron class 250, Tyton joint, 10" diameter, excludes excavation and backfill	100.00	L.F.
G30101227115	Waterline, 10" push on joint ductile iron, 7' deep, including common earth excavation, backfill, bedding & compaction	250.00	L.F.
PLUMA	Plumbers (Apprentice)	1,000.00	hour
PLUMJ	Plumbers (JourneyMan)	200.00	hour
PLUMO	Plumbers (Outside Foreman)	100.00	hour
SKWKO	Skilled Workers Average (35 trades) (Outside Foreman)	400.00	hour
SPRIA	Sprinkler Installers (Apprentice)	100.00	hour
SPRII	Sprinkler Installers (Inside Foreman)	40.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D40

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	D4024 - Fire Hose Valve - Install	Action Date	Aug 7, 2014
Linked System		Date Inspected	Aug 7, 2013
Category	Building Code	Finish Date	
Prime System	D4024 - Fire Hose Equipment	Status	Open
Priority	I - Immediate / First Year	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM: Stair 7 doesn't have a fire hose valve on the basement level.

LOCATION/EXTENT: Basement level of stairwell 7.

CAUSE: Incorrect installation.

CODE/STANDARD: NFPA 101 Section 9.7.4.2

Linked Photos



D4024 - Fire Hose Valve - Install

Actions

Action Name	D4024 - Fire Hose Valve - Install
Option	Conventional
Prime Action	Yes
Description	REMEDY: Install a new fire hose valve in stairwell seven. IMPLEMENTATION: Isolate and drain the standpipe. Extend the existing standpipe and provide a fire hose valve.

Estimate

Code Label	Line Item Description	Quantity	Unit
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	2.00	M.S.F.
211223700090	Fire Valves, angle, wheel handle, 300 lb, 2-1/2"	1.00	Ea.
221113440819	Pipe, steel, black, threaded, 2" diameter, schedule 40, A-106, grade A/B seamless, includes coupling and clevis hanger assembly sized for covering, 10' OC	20.00	LF.
PLUMI	Plumbers (Inside Foreman)	20.00	hour

(b)(4)



Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D40

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	D4095 – Electrical Vault Ducts – Install Dampers	Action Date	Aug 7, 2014
Linked System		Date Inspected	Aug 7, 2013
Category	Life Safety	Finish Date	
Prime System	D4095 - Hood and Duct Fire Protection	Status	Open
Priority	1 - Immediate / First Year	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

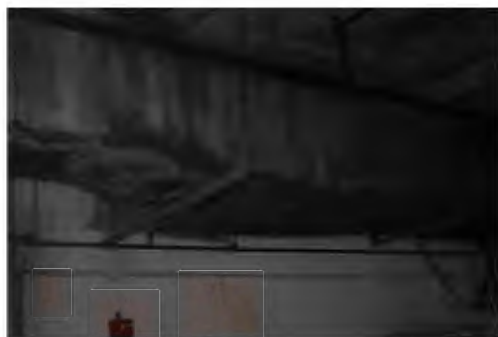
CONDITION/PROBLEM. There are no fire dampers in the ducts in the rated walls enclosing the transformer vault.

LOCATION/EXTENT. Basement.

CAUSE. The building was most likely retrofitted with additional HVAC and ducts were added without providing fire dampers.

CODE/REGULATION. IBC (2009); section 716.

Linked Photos



D4095 – Electrical Vault Ducts – Install Dampers

Actions

Action Name	D4095 – Electrical Vault Ducts – Install Dampers
Option	Conventional
Prime Action	Yes
Description	<p>REMEDY. Procure , design and install new fire dampers where the ducts penetrate the rated wall.</p> <p>IMPLEMENTATION. Provide a 2– hour rated fire damper where the HVAC ducts penetrate the walls and install rated construction around the ducts.</p>

Estimate

Code Label	Line Item Description	Quantity	Unit
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	4.00	M.S.F.
233313135990	Duct accessories, multi-blade dampers, opposed blade, 8" x 6"	4.00	Ea.
SHEE1	Sheet Metal Workers	150.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D50

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	D5011 - Medium Voltage Primary Service Switchgear - Replace	Action Date	Aug 7, 2015
Linked System		Date Inspected	Aug 7, 2013
Category	Integrity	Finish Date	
Prime System	D5011 - High Tension Service and Dist.	Status	Open
Priority	2 - Within 1 to 2 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM: The Primary Service Equipment is approaching 50 years in age and is beyond its useful life expectancy. Parts are no longer readily available and the installation does not meet current NEC and OSHA requirements.

LOCATION/EXTENT: Basement Electrical Room.

CAUSE: Age.

CODE/REGULATION: NEC 110.26, 110.27
408, 490

Linked Photos



D5011 - Medium Voltage Primary Service Switchgear - Replace

Actions

Action Name	D5011 - Medium Voltage Primary Service Switchgear - Replace
Option	Conventional
Prime Action	Yes
Description	REMEDY: Replace the switchgear. IMPLEMENTATION: Replace entire service. Install a new switchgear to replace non-compliant & aging switchgear. Replace existing

Medium Voltage Primary Switchgear as well as obsolete feeders & branch circuits with deteriorated or degraded insulation should be replaced.

Trace all circuits & provide legends for all panelboards, switches, transformers and other equipment as required (panel replacement project should already include most costs for this). Test all existing feeders and branch circuits throughout the premises. Fill out circuit schedules & legends for each switchboard and panelboard and mark all feeder and branch circuits at the overcurrent device with the actual load served. This should include all emergency panels & all switchgear. Additionally, a plug-in test should be run on all outlets to determine if they are properly grounded. Installation to meet all applicable ADA, NFPA, NEC, BOCA

COORDINATION.

- D5012 - Electrical Busduct - Replace
- D5012 - Electrical Panelboards - Replace
- D5012 - Electrical Transformers - Replace
- D5012 - Motor Control Centers - Replace

Estimate

Code Label	Line Item Description	Quantity	Unit
013113200120	Field personnel, field engineer, average	4.00	Week
013113200160	Field personnel, general purpose laborer, average	4.00	Week
260505101700	Pull boxes & cabinets, sheet metal, 36" x 36" x 8", electrical demolition, remove, including removal of supports and terminations	6.00	Ea.
260526802200	Water pipe ground clamps, heavy duty, bronze, 2-1/2" to 3" diameter	2.00	Ea.
260526803800	Insulated ground wire, copper, stranded, 2/0	4.00	C.L.F.
260526805130	Copper Electrolytic ground rod system, straight vertical type, 2" diameter, 8.5' long, incl exothermic weld connection	4.00	Ea.
260913100900	Switchboard instruments, 3 current transformers, 1000 to 1500 amp	9.00	Ea.
261316100900	Cable lugs, for 2 feeders, 4.8 kV or 13.8 kV	30.00	Ea.
261316101700	Lightning arresters, station class, 13.8 kV	9.00	Ea.
261316105400	Circuit breaker, 3 pole, 125 to 400 amp, type LA	3.00	Ea.
323113104764	Chain link fences & gates, gate, chain link, galvanized steel, double gate, 3 strand barbed wire, 10' x 10', excludes excavation	1.00	Ea.
323113209000	Fence, chain link industrial, minimum labor/equipment charge	2.00	Job
323113307975	Chain link fence gates and posts, auger fence post hole, rock, rock drill, 3' deep, includes excavation	6.00	Ea.
323113350050	Fence, interior, chain link, galvanized steel, post 10' O.C., 1-5/8" rail, 6 ga. wire, 6' high, excludes excavation	30.00	L.F.
323113351000	Fence, interior, chain link, galvanized steel, excludes excavation, add for 3" diam corner post	6.00	Ea.
323113352000	Fence, interior, chain link, gate for fence, galvanized steel, 1-5/8" frame, 3' wide, 6' high, excludes excavation	2.00	Ea.
337126234050	Station capacitors, current transformers, 13 to 26 kV	3.00	Ea.
337126264100	Station capacitors, potential transformers, 13 to 26 kV	3.00	Ea.
337233439120	Conversion equipment, battery chargers	3.00	Ea.
337513132100	Substation equipment, power circuit breakers, air, 13 to 26 kV	3.00	Ea.
337536138250	Fuses, 13 to 26 kV	9.00	Ea.
337553133350	Disconnecting switches, single pole switches, 13 to 26 kV	9.00	Ea.
337983137500	Grounding systems	400.00	Lb.
D50101100520	High voltage cable, neutral & conduit included, copper	1,200.00	L.F.

(b)(4)



11/12/15

Code Label	Line Item Description	Quantity	Unit
	2/0, 15 KV		
D50101200560	Service installation, includes breakers, metering, 20' conduit & wire, 3 phase, 4 wire, 120/208 V, 2000 A	9.00	Ea.
ELECJ	Electricians	500.00	Hr.

(b)(4)



Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D50

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	D5012 - Electric Distribution - Add New Power Risers	Action Date	Aug 7, 2016
Linked System		Date Inspected	Aug 7, 2013
Category	Functionality	Finish Date	
Prime System	D5012 - Low Tension Service and Dist.	Status	Open
Priority	3 - Within 3 to 5 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. Existing panels do not have spare circuits, and existing transformers are "buzzing" from overloading.

LOCATION/EXTENT. Electrical closets throughout the building.

CAUSE. Increased electrical loads.

CODE/STANDARD. NEC 220

Linked Photos



D5012 - Electric Distribution - Add New Power Risers

Actions

Action Name Electrical distribution; Add

Option Conventional

Prime Action Yes

Description REMEDY. Add additional electrical capacity.

IMPLEMENTATION. Furnish and install five new electrical risers. This will include circuit breakers, transformers, panelboards, and feeders. Disconnect existing circuits from existing panels and reconnect to new panelboards to help balance the distribution system loading.

Estimate

Code Label	Line Item Description	Quantity	Unit
0784.13100560	Firestopping, multi trade openings, through floors, 6" x 12"	300.00	Ea.
260505109000	Electrical demolition, minimum labor/equipment charge	200.00	Job
260526800100	Grounding rod, copper clad, 10' long, 3/4" diameter	6.00	Ea.
260526800271	Ground wire, ground bare armored, #6-1 conductor	400.00	L.F.
262213104860	Transformer, dry-type, 3 phase 480 V primary 120/208 V secondary, 45 kVA, K-4 rated	28.00	Ea.
262413200300	Switchboards, main lugs only, 3 pole, 4 wire, to 480 volt, 1600 amp	2.00	Ea.
262413201500	Switchboards, main ground fault protector, 1200 - 2000 amp	2.00	Ea.
262413201650	Switchboards, busway connection, 1600 amp	16.00	Ea.
262413201740	Switchboards, shunt trip for remote operation, 1200-2000 amp	2.00	Ea.
262413300600	Switchboards, distribution section, aluminum bus bars, 4 W, 120/208 or 277/480 V, 1600 amp, excl breakers	4.00	Ea.
262413400410	Circuit breaker, 3 pole, 600 V, 100 amp, FA frame, for feeder section	28.00	Ea.
262416303360	Panelboards, 3 pole 4 wire, main circuit breaker, 120/208 V, 100 amp	78.00	Ea.
262816204400	Safety switches, heavy duty, 3 pole, fusible, 600 volt, 100 amp, NEMA 1	28.00	Ea.
D50102300240	Feeder installation 600 V, including RGS conduit and XHHW wire, 100 A	7,400.00	L.F.
D50102300520	Feeder installation 600 V, including RGS conduit and XHHW wire, 1600 A	400.00	L.F.
	Means R-1 crew to disconnect and reconnect circuits	20.00	Ea.
	Means R-2 Crew for installation	5.00	Ea.

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D50

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	D5012 - Electrical Equipment Covers Missing - Replace	Action Date	Aug 7, 2014
Linked System		Date Inspected	Aug 7, 2013
Category	Building Code	Finish Date	
Prime System	D5012 - Low Tension Service and Dist.	Status	Open
Priority	1 - Immediate / First Year	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

PROBLEM/CONDITION. There are multiple junction boxes, light switches, and receptacles that do not have covers attached, therefore exposing the wiring inside the box. Also many panels are missing blank circuit covers.

LOCATION/EXTENT. Electrical, telephone, and janitor closets, as well as electrical and mechanical rooms that do not have covers attached, therefore exposing the wiring inside the box.

CAUSE. Poor maintenance.

CODE/STANDARD. NEC 370-28(3)(c).

Linked Photos



D5012 - Electrical Equipment Covers Missing - Replace

Actions

Action Name	D5012 - Electrical Equipment Covers Missing - Replace
Option	Conventional
Prime Action	Yes
Description	REMEDY. Furnish and install covers as required. IMPLEMENTATION. During regular maintenance cycles replace missing covers.

Estimate

Code Label	Line Item Description	Quantity	Unit
260533160250	Outlet boxes, pressed steel, covers, blank, 4" square	300.00	Ea.
260533169000	Outlet boxes, minimum labor/equipment charge	50.00	Job
260533180500	Pull boxes, sheet metal, type SC, 20" W x 24" H x 8" D, NEMA 1	20.00	Ea.
262726202800	Wall plate, stainless steel, 2 gang	80.00	Ea.
262726203160	Wall plate, anodized aluminum, 1 gang	60.00	Ea.

(b)(4)



Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D50

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	D5012 - Electrical Panels Clearance- Modify	Action Date	Aug 7, 2015
Linked System		Date Inspected	Aug 7, 2013
Category	Accessibility	Finish Date	
Prime System	D5012 - Low Tension Service and Dist.	Status	Open
Priority	2 - Within 1 to 2 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. Electrical panels do not have the required working clearance in front of them.

LOCATION/EXTENT. Electrical closets throughout the building.

CAUSE. Incorrect installation.

CODE/REGULATION. NEC 110.26.

Linked Photos



D5012 - Electrical Panels Clearance- Modify

Actions

Action Name	D5012 - Electrical Panels - Modify
Option	Conventional
Prime Action	Yes
Description	REMEDY. Provide proper working clearance by relocating electrical equipment as necessary. IMPLEMENTATION. Relocate panels, transformers and safety switches during weekends and evenings.

Estimate

Code Label	Line Item Description	Quantity	Unit
01741320052	Cleaning up, cleanup of floor area, continuous, per day, during construction	1,000.00	M.S.F.
051223401200	Continuous slotted channel framing system, field fabricated, incl cutting & welding, maximum	1,500.00	Lb.
260505101140	Safety switches, 250 or 600 V, 100 amp, electrical demolition, remove, including disconnection of wire & conduit terminations	6.00	Ea.
260505101270	Panelboards, 4 wire, 120/208 V, 200 amp, to 42 circuits, electrical demolition, remove, including removal of all breakers, conduit terminations & wire connections	10.00	Ea.
26051990031	Wire, copper solid, 600 volt, #12, type THW, in raceway	40,000.00	L.F.
260519900140	Wire, copper, stranded, 600 volt, #8, type THW, in raceway	600.00	C.L.F.
260519900220	Wire, copper, stranded, 600 volt, #2, type THW, in raceway	60.00	C.L.F.
260529202700	Threaded rod, steel, painted, 1/2" diameter	1,000.00	L.F.
260529203100	Nuts, galvanized steel, 1/2" diameter	4.00	C
260529203350	Washers, galvanized steel, 1/2" diameter	4.00	C
260529203600	Lock washers, galvanized steel, 1/2" diameter	4.00	C
260529203900	Channels, steel, 1-1/2" x 1-1/2"	200.00	L.F.
260529204300	Spring nuts, steel channel, long, 1/2"	400.00	Ea.
260529204950	Continuous concrete insert, steel channel, 1-1/2" deep, 2' long	100.00	Ea.
260533130500	Aluminum conduit, 3/4" diameter, to 15' H, incl 2 terminations, 2 elbows, 11 beam clamps, and 11 couplings per 100 LF	4,000.00	L.F.
260533131050	Aluminum conduit, 2" diameter, to 15' H, incl 2 terminations, 2 elbows, 11 beam clamps, and 11 couplings per 100 LF	1,000.00	L.F.
262213103500	Transformer, dry-type, ventilated, 3 phase 480 V primary 120/208 V secondary, 45 kVA	10.00	Ea.
262213103700	Transformer, dry-type, ventilated, 3 phase 480 V primary 120/208 V secondary, 75 kVA	15.00	Ea.
262416105700	Load centers, 3 phase, 4 wire, main breaker, rainproof, 120/208 V, 200 amp, 42 circuits, incl 20 A 1 pole plug-in breakers	28.00	Ea.
262816202100	Safety switches, heavy duty, 3 pole, nonfusible, 600 volt, 400 amp, NEMA 1	6.00	Ea.
ELECA	Electricians	1,600.00	hour
ELECI	Electricians	400.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D50

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	D5012 - Elevator Electrical Switchboard - Replace	Action Date	Aug 7, 2016
Linked System		Date Inspected	Aug 7, 2013
Category	Beyond Useful Life	Finish Date	
Prime System	D5012 - Low Tension Service and Dist.	Status	Open
Priority	3 - Within 3 to 5 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. The 480 volt elevator switchboards are beyond their reliable life.

LOCATION/EXTENT. Elevator machine rooms.

CAUSE. Age.

CODE/STANDARD. None

Linked Photos



D5012 - Elevator Electrical Switchboard - Replace

Actions

Action Name	D5012 - Elevator Electrical Switchboard - Replace
Option	Conventional
Prime Action	Yes
Description	REMEDY. Replace the existing 600amp elevator switchboards located in the elevator machine rooms. IMPLEMENTATION. Estimates as shown reflect simple replacement of existing equipment.

Estimate

Code Label	Line Item Description	Quantity	Unit
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	100.00	M.S.F.
050505100390	Selective metals demolition, manufactured or fabricated specialty item. 501 - 1000 lb, remove whole or cut up into smaller pieces, excl shoring, bracing, cutting, loading, hauling, dumping	50.00	Ea.
260913100100	Switchboard instruments, 3 phase 4 wire, AC indicating, ammeter & switch	18.00	Ea.
260913100200	Switchboard instruments, 3 phase 4 wire, AC indicating, voltmeter & switch	18.00	Ea.
260913100700	Switchboard instruments, ground fault protection, ground return path	2.00	Ea.
262213103100	Transformer, dry-type, ventilated, 3 phase 480 V primary 120/208 V secondary, 15 kVA	2.00	Ea.
262413300200	Switchboards, distribution section, aluminum bus bars, 4 W, 120/208 or 277/480 V, 600 amp, excl breakers	8.00	Ea.
262413400430	Circuit breaker, 3 pole, 480 V, 125 to 400 amp, LA frame, for feeder section	22.00	Ea.
262416302100	Panelboards, 3 phase 4 wire, main circuit breaker, 120/208 V, 100 amp, 30 circuits, NQOD, incl 20 A 1 pole plug-in breakers	2.00	Ea.
263623100200	Automatic transfer switches, enclosed, 3 pole, 480 volt, 60 amp	2.00	Ea.

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D50

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	D5012 - Existing Electrical Busduct - Recondition	Action Date	Aug 7, 2015
Linked System		Date Inspected	Aug 7, 2013
Category	Integrity	Finish Date	
Prime System	D5012 - Low Tension Service and Dist.	Status	Open
Priority	2 - Within 1 to 2 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. The existing electrical busduct running up through the buildings electrical closets need to be reconditioned. This should include megger testing, checking connections for tightness, and checking equipment directly connected onto the duct.

LOCATION/EXTENT. Throughout the building.

CAUSE. Age

CODE/STANDARD. NFPA 70E

Linked Photos



D5012 - Existing Electrical Busduct - Recondition

Actions

Action Name	D5012 - Existing Electrical Busduct - Recondition
Option	Conventional
Prime Action	Yes
Description	REMEDY. Recondition existing busducts, as well as equipment and connections to the duct. IMPLEMENTATION. Perform work during nights and weekends.

Estimate

Code Label	Line Item Description	Quantity	Unit
019313161010	Electrical Facilities Maintenance, distribution systems and equipment, install or repair a breaker in power panels, up to 200 amps	78.00	Ea.
019313161100	Electrical Facilities Maintenance, distribution systems and equipment, megger test MCC (each stack)	16.00	Ea.
260505109000	Electrical demolition, minimum labor/equipment charge	30.00	Job

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D50

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	D5012 - Mechanical Room Panels - Replace	Action Date	Aug 7, 2015
Linked System		Date Inspected	Aug 7, 2013
Category	Beyond Useful Life	Finish Date	
Prime System	D5012 - Low Tension Service and Dist.	Status	Open
Priority	2 - Within 1 to 2 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM: Many of the low voltage branch panels in the Mechanical Rooms were made by manufacturers that are now out of business and have exceeded their useful life.

LOCATION/EXTENT: Basement and Penthouse mechanical spaces.

CAUSE: Age and normal use.

CODE/STANDARD: None

Linked Photos



D5012 - Mechanical Room Panels - Replace

Actions

Action Name	D5012 - Mechanical Room Panels - Replace
Option	Conventional
Prime Action	Yes
Description	REMEDY: Replace original HVAC branch panels.

IMPLEMENTATION: Provide temporary power to critical circuits. Remove existing panel interiors and install new replacement interiors. Reconnect circuits.

Estimate

Code Label	Line Item Description	Quantity	Unit
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	10.00	M.S.F.
024119200100	Selective demolition, dump charges, typical urban city, building construction materials, includes tipping fees only	2.00	Ton
D50102501080	Panelboard, 4 wire w/conductor & conduit, NQOD, 120/208 V, 225 A, 0 stories, 0' horizontal	6.00	Ea.
D50102504020	Panelboard, 4 wire w/conductor & conduit, NEHB, 277/480 V, 100 A, 0 stories, 0' horizontal	6.00	Ea.
ELECA	Electricians (Apprentice)	240.00	hour
ELECI	Electricians (Inside Foreman)	40.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D50

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	D5012 - Misc Electrical Equipment Motor Control Centers - Replace		
	Action Date	Aug 7, 2016	
Linked System	Date Inspected	Aug 7, 2013	
Category	Beyond Useful Life	Finish Date	
Prime System	D5012 - Low Tension Service and Dist.	Status	Open
Priority	3 - Within 3 to 5 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM: While most of the electrical distribution was replaced in the last ten years, there were some MCCs that were used as transition devices and then never taken out of service.

LOCATION/EXTENT: Basement and penthouse.

CAUSE: Age and normal use.

CODE/REGULATION: NEC 110-22 and 26. NEC 430

Linked Photos



D5012 - Misc Electrical Equipment Motor Control Centers - Replace 2



D5012 - Misc Electrical Equipment Motor Control Centers - Replace

Actions

Action Name D5012 - Misc Electrical Equipment Motor Control Centers - Replace

Option Conventional

Prime Action Yes

Description REMEDY. Replace obsolete motor control centers.

IMPLEMENTATION. Remove abandoned in place motor control centers. Identify all panelboards, switches, junction boxes, pull box covers, conduit bodies. Install new motor control centers. New installations to meet all applicable ADA, NFPA and NEC.

Estimate

Code Label	Line Item Description	Quantity	Unit	(b)(4)
013113200120	Field personnel, field engineer, average	0.50	Week	
013113200160	Field personnel, general purpose laborer, average	0.50	Week	
024119190700	Selective demolition, rubbish handling, dumpster, 10 C.Y., 3 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	1.00	Week	
024119190800	Selective demolition, rubbish handling, dumpster, 30 C.Y., 7 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	0.50	Week	
078413100210	Firestopping, metallic piping, insulated, through walls, 4" dia	40.00	Ea.	
078413100250	Firestopping, metallic piping, insulated, through floors, 4" dia	20.00	Ea.	
260505101160	Safety switches, 250 or 600 V, 200 amp, electrical demolition, remove, including disconnection of wire & conduit terminations	12.00	Ea.	
260505101180	Safety switches, 250 or 600 V, 400 amp, electrical demolition, remove, including disconnection of wire & conduit terminations	30.00	Ea.	
260505101700	Pull boxes & cabinets, sheet metal, 36" x 36" x 8", electrical demolition, remove, including removal of supports and terminations	4.00	Ea.	
262419301000	Motor control center, structures, 22,000 rms, takes any combination of starters, back to back, 600 amp, 72" front & 46" back	8.00	Ea.	
262419301100	Motor control center, for copper bus add per structure	8.00	Ea.	
262419301700	Motor control center, for pilot lights, add per starter	40.00	Ea.	
262419301800	Motor control center, for push button, add per starter	40.00	Ea.	
262419301900	Motor control center, for auxiliary contacts, add per starter	40.00	Ea.	

Code Label	Line Item Description	Quantity	Unit
262419400700	Motor starter, combination, with motor circuit protectors, size 0, 5 HP, NEMA I	20.00	Ea.
262419400800	Motor starter, combination, with motor circuit protectors, size 1, 10 HP, NEMA I	20.00	Ea.
262419400900	Motor starter, combination, with motor circuit protectors, size 2, 25 HP, NEMA I	5.00	Ea.
262419401000	Motor starter, combination, with motor circuit protectors, size 3, 50 HP, NEMA I	5.00	Ea.
CLAB1	Common Building Laborers	200.00	hour
D50102300400	Feeder installation 600 V, including RGS conduit and XHHW wire, 800 A	1,000.00	L.F.
ELEC1	Electricians	200.00	Hr.

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D50

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	D5021 - Rooftop Electrical Outlets and Misc. - Repair	Action Date	Aug 7, 2023
Linked System		Date Inspected	Aug 7, 2013
Category	Integrity	Finish Date	
Prime System	D5021 - Branch Wiring Devices	Status	Open
Priority	4 - 5+ Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. Receptacles roof near the Cooling Towers were exposed to the weather, and did not have WP covers. There were als several pieces of abandoned equipment and material left unsecured and rusting.

LOCATION. Penthouse Roof.

CAUSE. Age and obsolescence.

CODE/STANDAR. None

Linked Photos



D5021 - Rooftop Electrical Outlets and Misc - Repair

Actions

Action Name	D5021 - Rooftop Electrical Outlets and Misc. - Repair
Option	Conventional
Prime Action	Yes
Description	REMEDY. Provide weather proof covers for exterior receptacles and remove abandoned equipment. IMPLEMENTATION. Assess abandoned equipment and remove as necessary.

Estimate

Code Label	Line Item Description	Quantity	Unit
050505100170	Selective metals demolition, lightweight framing members, 81 - 120 lb, remove whole or cut up into smaller pieces, excel shoring, bracing, cutting, loading, hauling, dumping	100.00	Ea.
260505100120	Conduit, rigid galvanized steel, 1-1/4" to 2" diameter, electrical demolition, remove conduit to 15' high, including fittings & hangers	50.00	L.F.
260505101740	Handy boxes, electrical demolition, remove, including removal of supports and terminations	30.00	Ea.
262726204980	Receptacle cover plate, weatherproof, NEMA 7-23	12.00	Ea.
262726209000	Wiring devices, minimum labor/equipment charge	6.00	Job
ELECA	Electricians (Apprentice)	100.00	hour
ELECJ	Electricians (JourneyMan)	20.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D50

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	D5037 - Fire Alarm System - Replace	Action Date	Aug 7, 2023
Linked System		Date Inspected	Aug 7, 2013
Category	Integrity	Finish Date	
Prime System	D5037 - Fire Alarm Systems	Status	Open
Priority	4 - 5+ Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. The fire alarm system needs replacement (other than the EST3 which was replaced two years ago) due to the following reasons: older style strobes are located throughout the building; there is insufficient strobe coverage throughout the building (i.e., lack of strobes in copy rooms, workrooms, and conference rooms, overspacing in bathrooms, corridors and open offices, etc.); strobes are located above 80" in many locations throughout the building; older style conventional system that is no longer manufactured; no smoke detectors are provided in any of the mechanical, electrical, or telephone rooms/closets; the pull stations at the central stairs are located at 62" – well above the maximum height; the duct smoke detectors are not working; the garage dry sprinkler system is not currently monitored; the penthouse only has two bells – one of which is damaged.

LOCATION/EXTENT. Throughout the building.

CAUSE. Revisions to code requirements since original design, construction and obsolescence of equipment.

CODE/REGULATION. International Building Code, Chapter 9, Fire Protection Systems

Linked Photos



D5037 - Fire Alarm System - Replace 1



D5037 - Fire Alarm System - Replace 2

Actions

Action Name	Replace the fire alarm system
Option	Conventional
Prime Action	Yes
Description	REMEDY. Replace the fire alarm system.

IMPLEMENTATION. Replace the fire alarm system with a new integrated code compliant fire alarm system. Replace all initiating and alarm devices. Install additional initiating and alarm devices where required by the latest code. Provide fireman's telephones throughout the building in the stairs and elevator lobbies. Provide speakers throughout the building for audibility/intelligibility purposes. Provide strobe alarm devices in all common areas and in mechanical areas with ambient noise levels above 85 dBA. Coordinate the fire alarm device locations and installation with surrounding electrical, mechanical and plumbing systems.

HISTORIC PRESERVATION REPAIR PROCEDURES. Work occurs in all preservation zones. Care must be taken to protect original materials from damage during fire alarm replacement installation. Submit all product information, design, construction protection plan, and work plan for Regional Historic Preservation Officer's approval prior to commencing work. All work is to meet the Secretary of Interior's Standards for the treatment of historic buildings.

Estimate

Code Label	Line Item Description	Quantity	Unit
260523201750	Fire alarm cable, FEP teflon, 150 volt, to 200 Deg.C, #22, 8 pair	300.00	C.L.F.
280505101210	Fire alarm horn and strobe light, electrical demolition, remove	650.00	Ea.
280505101220	Flame detector, electrical demolition, remove	1,000.00	Ea.
280505101230	Mist detector, electrical demolition, remove	24.00	Ea.
280505101240	Smoke detector, electrical demolition, remove	2,000.00	Ea.
280505101250	Fire alarm pull station, electrical demolition, remove	200.00	Ea.
280505101270	Fire alarm control panel, 12 to 16 zone, electrical demolition, remove	1.00	Ea.
283123504170	Detection system, fire alarm control panel, addressable with voice, up to 400 points, excluding wires & conduits	1.00	Ea.
283123505610	Detection system, strobe & horn, ADA type, excluding wires & conduits	650.00	Ea.
283123508000	Detection system, remote annunciator, 12 zone lamp, excluding wires & conduits	1.00	Ea.
283123508200	Detection system, annunciator panel, 16 zone lamp, excluding wires & conduits	1.00	Ea.
283143505010	Detection system, fire alarm, detector, heat (addressable type), excl. wires & conduit	1,000.00	Ea.
283146505240	Detection Systems, smoke detector, addressable type,	2,000.00	Ea.

(b)(4)

Code Label	Line Item Description	Quantity	Unit
	excl. wires & conduit		
283910100100	Mass notification system, wireless command center, PC based, 10,000 devices database	1.00	Ea.
283910100200	Mass notification system, option, email notification	1.00	Ea.
283910100210	Mass notification system, option, remote device supervision & monitor	1.00	Ea.
283910100300	Mass notification system, antenna VHF or UHF, for medium range, magnetic mount	1.00	Ea.
283910100420	Mass notification system, transmitter, 100 watt	1.00	Ea.
283910100500	Mass notification system, wireless receiver/control module for speaker	150.00	Ea.

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D50

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	D5091 - Emergency Grounding System Study - Perform	Action Date	Aug 7, 2014
Linked System		Date Inspected	Aug 7, 2013
Category	Life Safety	Finish Date	
Prime System	D5091 - Grounding Systems	Status	Open
Priority	1 - Immediate / First Year	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. The generator and Life Safety automatic transfer switches do not appear to be properly grounded.

LOCATION/EXTENT. Basement and the entire Life Safety Power System.

CAUSE. Incorrect design and/or installation.

CODE/STANDARD. NEC 250

Linked Photos



D5091 - Emergency Grounding System Study - Perform

Actions

Action Name	D5091 - Emergency Grounding System Study - Perform
Option	Conventional
Prime Action	Yes
Description	<p>REMEDY. Perform a study to determine if Life Safety System is properly grounded.</p> <p>IMPLEMENTATION. Contract with an Electrical Design firm to perform study.</p> <p>COST EQUIVALENCE. Two hours of Skilled Workers Average (35 trades) (Outside Foreman) is equivalent to one hour of design time.</p>

Estimate

Code Label	Line Item Description	Quantity	Unit	
SKWKO	Skilled Workers Average (35 trades) (Outside Foreman)	400.00	hour	(b)(4)



Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D50

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	D5091 - Lightning Protection System – Install	Action Date	Aug 7, 2015
Linked System		Date Inspected	Aug 7, 2013
Category	Reliability	Finish Date	
Prime System	D5091 - Grounding Systems	Status	Open
Priority	2 - Within 1 to 2 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. There is no protection of lightning strikes to the building. Lightning strikes can cause serious electrical and physical damage to the building and its infrastructure.

LOCATION/EXTENT. This affects the entire building and should be installed on the roof of the building.

CAUSE. Poor design.

CODE/REGULATION. NFPA 780- Standard for the installation of lightning protection systems.

Linked Photos



D5091 - Lightning Protection System – Install

Actions

Action Name	D5091 - Lightning Protection System – Install
Option	Conventional
Prime Action	Yes
Description	<p>REMEDY. Perform a lightning strike assessment per NFPA 780 and if necessary install a master label certified lightning protection system.</p> <p>IMPLEMENTATION. This can be done as a completely stand alone system by installing lightning arrestors on the perimeter of the roof</p>

and all high points including equipment on the roof. The arrestors are then tied together by bare conductors to a conductor ring around the roof edge, which in turn is connected to down conductors to a ground ring or ground rods.

COST EQUIVALENCE. In the following Estimate substitutions have been made. This has occurred because either the needed line item within the RSM means version provided in the program provides insufficient project cost, based upon market conditions or the program did not provide an equivalent project.

-- SUBSTITUTION, Electricians (Outside Foreman)

-- FOR, Retain Professional Engineer to perform lightning strike assessment per NFPA

HISTORIC PRESERVATION REPAIR PROCEDURES. The roof is in the renovation zone and may be altered as long as the alterations do not have a negative impact on the significant elements outlined in the Restoration and Rehabilitation Zones above. Submit all product information including attachment method, physical dimensions of arrestors and air terminal, construction protection plan, and work plan for Regional Historic Preservation Officer's approval prior to commencing work. All work is to meet the Secretary of Interior's Standards for the treatment of historic buildings.

Estimate

Code Label	Line Item Description	Quantity	Unit
260326800100	Grounding rod, copper clad, 10' long, 3/4" diameter	100.00	Ea.
264113130520	Air terminal and base, copper, 1/2" dia x 24", over 75' h	300.00	Ea.
264113132000	Lightning protection cable, copper, 220 lb per thousand feet, to 75' h	10,000.00	L.F.
ELECO	Electricians	150.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D50

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	D5094 - Master Clock System - Replace	Action Date	Aug 7, 2016
Linked System		Date Inspected	Aug 7, 2013
Category	Obsolescence	Finish Date	
Prime System	D5094 - Other Special Systems and Devices	Status	Open
Priority	3 - Within 3 to 5 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. The existing master clock system is obsolete and beyond its useful life. Parts are no longer available and most of the functions such as Daylight Savings Time reset do not work.

EXTENT/LOCATION. Basement control room and the entire building.

CAUSE. Age and normal use.

CODE/STANDARD. None

Linked Photos



D5094 - Master Clock System - Replace

Actions

Action Name	D5094 - Master Clock System - Replace
Option	Conventional
Prime Action	Yes
Description	REMEDY. Replace the existing Simplex Master Clock system. IMPLEMENTATION. Coordinate work with building management.

Estimate

Code Label	Line Item Description	Quantity	Unit
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	2.00	M.S.F.
260505109000	Electrical demolition, minimum labor/equipment charge	1.00	Job
275313501800	Master time clock system, master controller, clocks & bells, 50 room, excl. wires & conduits	1.00	Ea.

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: G20

Currency: USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	G2031 - Bluestone Paver System – Repair		
	Action Date	Aug 7, 2015	
Linked System	Date Inspected	Aug 7, 2013	
Category	Reliability	Finish Date	
Prime System	G2031 - Paving and Surfacing	Status	Open
Priority	2 - Within 1 to 2 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. The mortar joint system of the bluestone flagging paver system is badly deteriorated and requires replacement. Mortar joints have crumbled throughout the plaza. In several locations, the bluestone is raised, apparently due to thermal expansion, creating a potential tripping hazard.

LOCATION/EXTENT. West and south sides of plaza.

CAUSE. Cracked mortar joints are due to moisture penetration and freeze/thaw cycle and spacing of control joints.

CODE/REGULATION. Not Applicable.

Linked Photos



G2031 - Bluestone Paver System - Repair

Actions

Action Name: G2031 - Bluestone Paver System – Repair

Option: Conventional

Prime Action: Yes

Description: REMEDY. The paver/waterproofing system was replaced in 1990. Current makeup is 1" bluestone pavers over 1 1/2" mortar setting bed above a tapered fill slab over 2" rigid insulation and waterproof membrane, above the original structural slab. The mortar setting bed likely needs replacement along with the bluestone mortar joint system. Sealant at pavement control joints also needs replacement. Also, there is leakage occurring in the Basement level below in spot locations and origination appears to be at the adjacent expansion joint, which needs replacement.

IMPLEMENTATION. Remove mortar setting bed and replace, providing positive drainage to area drain. Reset bluestone pavers with control joints at 20' spacing, instead of the current 30' spacing, to prevent heaving from recurring.

COST EQUIVALENCE.

- Cost for removal of existing bluestone pavers and setting bed is provided as "Selective Demolition, walks, steps and pavers, mortar set brick paving" as there is no RS Means description for bluestone.

HISTORIC PRESERVATION REPAIR PROCEDURES. The bluestone pavers are architecturally and historically significant features of the building that are included in the restoration zone and are to be preserved and maintained in place. Special care is to be taken for the removal, storage and reinstallation of the pavers to minimize damage to the original material. Submit all product information, design, construction protection plan and work plan for Regional Historic Preservation Officer's approval prior to commencing work. All work is to meet the Secretary of Interior's Standards for the treatment of historic buildings.

Estimate

Code Label	Line Item Description	Quantity	Unit	(b)(4)
01741320052	Cleaning up, cleanup of floor area, continuous, per day, during construction	180.00	M.S.F.	
024113841600	Selective demolition, walks, steps and pavers, mortar set brick paving	21,900.00	S.F.	
024119190840	Selective demolition, rubbish handling, dumpster, 40 C.Y., 10 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	12.00	Week	
024119200500	Selective demolition, dump charges, typical urban city, reclamation station, usual charge, includes tipping fees only	60.00	Ton	
040513302100	Mortar, portland cement and lime, 1:1/4:3 mix, type M	2,740.00	C.F.	
044310100100	Bluestone paving, cut to size, natural cleft, to 4' long, 1" thick	1,095.00	S.F.	
071213200700	Membrane waterproofing, on slabs, glass fiber fabric, 3 ply, mopped	5,000.00	S.F.	
077129100700	Expansion joint, butyl or neoprene center with foam insulation, metal flanges, copper, 16 ounce, for joint openings to 2-1/2"	450.00	L.F.	
079123100050	Pre-formed joint seals, backer rod, polyethylene, 1/2" dia	29.00	C.L.F.	
079213204300	Joint sealants, caulking and sealants, silicone rubber, bulk, in place, 1/4" x 1/2"	2,910.00	L.F.	
SKWKJ	Skilled Workers Average (35 trades) (Journeyman)	1,200.00	hour	
SKWKO	Skilled Workers Average (35 trades) (Outside Foreman)	400.00	hour	

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: G20

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	G2049 - East Plaza Mushroom Covers – Repair	Action Date	Aug 7, 2015
Linked System		Date Inspected	Aug 7, 2013
Category	Reliability	Finish Date	
Prime System	G2049 - Miscellaneous Structures	Status	Open
Priority	2 - Within 1 to 2 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. The seven round mushroom covers over seating areas are in need of repair. Gasketing between sections of the cover system is either missing or falling out in many locations. The original plastic cover (laminated to the top and bottom of the mushrooms) is peeling on the top surface.

LOCATION/EXTENT. East side of plaza.

CAUSE. Failure of the joint system is due to system age, as the mushrooms were installed in the early 1990's.

CODE/REGULATION. Not Applicable.

Linked Photos



G2049 - East Plaza Mushroom Covers - Repair

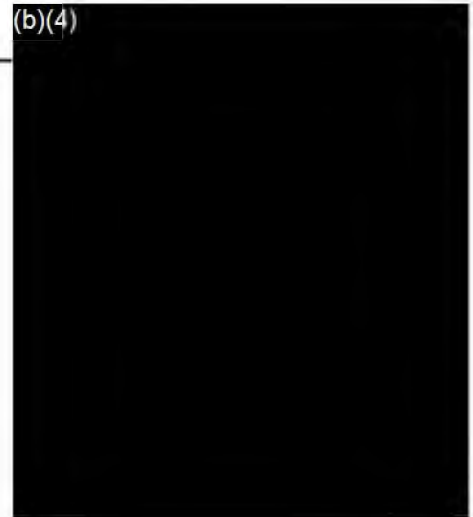
Actions

Action Name	G2049 - East Plaza Mushroom Covers – Repair
Option	Conventional
Prime Action	Yes
Description	<p>REMEDY. Replace gasketing and adhered plastic protective cover in their entirety, both top and bottom of mushrooms. Provide cleaning of acrylic covers.</p> <p>IMPLEMENTATION. Coordinate work with Building Manager. Provide public protection around sitework.</p>

Estimate

Code Label	Line Item Description	Quantity	Unit
01741320052	Cleaning up, cleanup of floor area, continuous, per day, during construction	70.00	M.S.F.
024119190700	Selective demolition, rubbish handling, dumpster, 10 C.Y., 3 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	4.00	Week
024119200500	Selective demolition, dump charges, typical urban city, reclamation station, usual charge, includes tipping fees only	0.50	Ton
079116104800	Pre-formed joint seals, joint gaskets, neoprene, closed cell, 3/4" x 1-1/2", adhered	5,040.00	L.F.
SKWKJ	Skilled Workers Average (35 trades) (JourneyMan)	240.00	hour
SKWKO	Skilled Workers Average (35 trades) (Outside Foreman)	80.00	hour

(b)(4)



ROBERT C. WEAVER BUILDING



REQUIREMENT LIST REPORTS

- ☐ BY SYSTEM
- ☐ BY CATEGORY
- ☐ BY PRIORITY

REQUIREMENT SUMMARY REPORTS

- ☐ BY SYSTEM
- ☐ BY CATEGORY
- ☐ BY PRIORITY

REQUIREMENT CROSSTABS

- ☐ BY SYSTEM + PRIORITY
- ☐ BY CATEGORY + PRIORITY
- ☐ BY CATEGORY + SYSTEM



Requirement List Report

By Prime System

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Requirement List Report
By Prime System

Region Name: 11 - National Capital Region

Service_Center Name: DC Service Center

Asset Name: ROBERT C. WEAVER BUILDING-DC0092ZZ

Reporting Currency : USD

Prime System : All

Requirement Priority : All

Requirement Category: All

Requirements Included: All

Prime System	Requirement Name	Requirement Category	Priority	Action Year	Action Date	Finish Date	Status	Linked System	(b)(4)
A2020 - Basement Walls	A2020 - Plaza Damage - Repair	Reliability	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open		
A2020 - Basement Walls									
A2022 - Moisture Protection	A2022 - Foundation Walls - Patch	Life Safety	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open		
A2022 - Moisture Protection									
B1012 - Upper Floors Construction	B1012 - Rusting Plaza Grates - Refinish	Reliability	3 - Within 3 to 5 Years	2016	Aug 7, 2016		Open		
B1012 - Upper Floors Construction									



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Requirement List Report
By Prime System

Prime System	Requirement Name	Requirement Category	Priority	Action Year	Action Date	Finish Date	Status	Linked System	(b)(4)
B1015 - Exterior Stairs and Fire Escapes	B1015 - Exterior Plaza Handrail Falloff Protection - Add	Life Safety	5: Does Not Meet Current Codes/Standards	2023	Aug 7, 2023		Open		
B1015 - Exterior Stairs and Fire Escapes	B1015 - Garage Ramp Falloff Protection - Add	Life Safety	5: Does Not Meet Current Codes/Standards	2023	Aug 7, 2023		Open		
B1015 - Exterior Stairs and Fire Escapes									
B1019 - Other Floor Construction	B1019 - Parking Decks - Repair	Life Safety	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open		
B1019 - Other Floor Construction									
B2010 - Exterior Walls	B2010 - Exterior Granite Facades - Repair	Integrity	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open		
B2010 - Exterior Walls	B2010 - Exterior Tree Columns - Clean	Appearance	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open		
B2010 - Exterior Walls	B2010 - Exterior Precast Levels 2-10 - Clean	Appearance	4 - 5+ Years	2023	Aug 7, 2023		Open		
B2010 - Exterior Walls									



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Requirement List Report
By Prime System

Prime System	Requirement Name	Requirement Category	Priority	Action Year	Action Date	Finish Date	Status	Linked System
B2011 - Exterior Wall Construction	B2011 - Exterior Tree Columns Spalling – Repair	Reliability	3 - Within 3 to 5 Years	2016	Aug 7, 2016		Open	
B2011 - Exterior Wall Construction	B2011 – Exterior Precast Sealant - Replace	Integrity	4 - 5+ Years	2023	Aug 7, 2023		Open	
B2011 - Exterior Wall Construction	B2011 - Exterior Wall Expansion Joint – Replace	Reliability	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open	
B2011 - Exterior Wall Construction								
B2023 - Storefronts	B2023 - Storefront Inserts - Install	Operations	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open	
B2023 - Storefronts								
B3011 - Roof Finishes	B3011 - Roof System Fall Protection - Add	Integrity	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open	
B3011 - Roof Finishes								
C1011 - Fixed Partitions	C1011 - Firestopping @ Floor Penetrations - Repair	Building Code	1 - Immediate / First Year	2014	Aug 7, 2014		Open	
C1011 - Fixed Partitions	C1011 - Electrical Closet Shaft Opening - Add Rated Separation	Life Safety	1 - Immediate / First Year	2014	Aug 7, 2014		Open	
C1011 - Fixed Partitions	C1011 - Fire Pump Room - Add Rated Separation	Life Safety	1 - Immediate / First Year	2014	Aug 7, 2014		Open	
C1011 - Fixed Partitions	C1011 - Panels and Conduits Exposed in Stairs - Add Rated Separation	Life Safety	1 - Immediate / First Year	2014	Aug 7, 2014		Open	

(b)(4)



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Requirement List Report
By Prime System

Prime System	Requirement Name	Requirement Category	Priority	Action Year	Action Date	Finish Date	Status	Linked System	(b)(4)
C1011 - Fixed Partitions	C1011 - Standpipes Not Enclosed - Add Rated Separation	Life Safety	1 - Immediate / First Year	2014	Aug 7, 2014		Open		
C1011 - Fixed Partitions	C1011 - Exposed 8" Storm/Sewer Lines in Stairs - Add Rated Separation	Life Safety	1 - Immediate / First Year	2014	Aug 7, 2014		Open		
C1011 - Fixed Partitions									
C1020 - Interior Doors	C1020 - Doors Not Code Compliant - Replace	Building Code	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open		
C1020 - Interior Doors	C1020 - Fire Stair Doors Not Code Compliant - Replace	Building Code	1 - Immediate / First Year	2014	Aug 7, 2014		Open		
C1020 - Interior Doors									
C1023 - Interior Door Hardware	C1023 - Door Hardware - Replace	Beyond Useful Life	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open		
C1023 - Interior Door Hardware									
C1037 - General Fittings and Misc. Metals	C1037 - Window Blind System - Replace	Reliability	4 - 5+ Years	2023	Aug 7, 2023		Open		
C1037 - General Fittings and Misc. Metals									



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Requirement List Report

By Prime System

Prime System	Requirement Name	Requirement Category	Priority	Action Year	Action Date	Finish Date	Status	Linked System	(b)(4)
C2010 - Stair Construction	C2010 - Loading Dock Handrails - Provide Guards	Building Code	5: Does Not Meet Current Codes/Standards	2023	Aug 7, 2023		Open		
C2010 - Stair Construction									
C2014 - Stair Handrails and Balustrades	C2014 - Stair Guards and Handrails - Replace	Building Code	5: Does Not Meet Current Codes/Standards	2023	Aug 7, 2023		Open		
C2014 - Stair Handrails and Balustrades									
C3012 - Wall Finishes to Interior Walls	C3012 - Interior Walls and Ceilings – Repaint	Beyond Useful Life	4 - 5+ Years	2023	Aug 7, 2023		Open		
C3012 - Wall Finishes to Interior Walls									
C3020 - Floor Finishes	C3020 - Concrete Floor - Reseal	Reliability	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open		
C3020 - Floor Finishes									
C3024 - Flooring	C3024 - Kitchen Servery Sheet Flooring – Repair	Beyond Useful Life	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open		
C3024 - Flooring									



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Requirement List Report
By Prime System

Prime System	Requirement Name	Requirement Category	Priority	Action Year	Action Date	Finish Date	Status	Linked System	(b)(4)
C3025 - Carpeting	C3025 - Broadloom Carpet – Replace	Beyond Useful Life	3 - Within 3 to 5 Years	2016	Aug 7, 2016		Open		
C3025 - Carpeting	C3025 - Carpet Tile – Replace	Beyond Useful Life	3 - Within 3 to 5 Years	2016	Aug 7, 2016		Open		
C3025 - Carpeting									
C3030 - Ceiling Finishes	C3032 - Corridor Acoustical Tile Ceiling - Replace	Beyond Useful Life	3 - Within 3 to 5 Years	2016	Aug 7, 2016		Open		
C3030 - Ceiling Finishes									
D1011 - Passenger Elevators	D1011 - Passenger Elevators - Modernize	Building Code	3 - Within 3 to 5 Years	2016	Aug 7, 2016		Open		
D1011 - Passenger Elevators									
D2010 - Plumbing Fixtures	D2010 - Plumbing fixtures - Replace	Beyond Useful Life	3 - Within 3 to 5 Years	2016	Aug 7, 2016		Open		
D2010 - Plumbing Fixtures									
D2018 - Drinking Fountains and Coolers	D2018 - Drinking Fountain Water Cooler - Replace	Reliability	3 - Within 3 to 5 Years	2016	Aug 7, 2016		Open		
D2018 - Drinking Fountains and Coolers	D2018 - Drinking Fountain Filtration Equipment - Replace	Reliability	3 - Within 3 to 5 Years	2016	Aug 7, 2016		Open		
D2018 - Drinking Fountains and Coolers	D2018 - Drinking Fountains - Repair	Reliability	3 - Within 3 to 5 Years	2016	Aug 7, 2016		Open		



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Requirement List Report
By Prime System

Prime System	Requirement Name	Requirement Category	Priority	Action Year	Action Date	Finish Date	Status	Linked System	(b)(4)
D2018 - Drinking Fountains and Coolers									
D2020 - Domestic Water Distribution	D2020 - Restroom Water Pressurization System - Replace	Beyond Useful Life	1 - Immediate / First Year	2014	Aug 7, 2014		Open		
D2020 - Domestic Water Distribution									
D2034 - Sanitary Waste Equipment	D2034 - Sewer Ejector Pumps - Replace	Beyond Useful Life	3 - Within 3 to 5 Years	2016	Aug 7, 2016		Open		
D2034 - Sanitary Waste Equipment									
D2043 - Rainwater Drainage Equipment	D2043 - Rain Water Sump Pumps - Replace	Beyond Useful Life	3 - Within 3 to 5 Years	2016	Aug 7, 2016		Open		
D2043 - Rainwater Drainage Equipment									
D3042 - Exhaust Ventilation Systems	D3042 - Battery Room Ventilation - Install	Building Code	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open		
D3042 - Exhaust Ventilation Systems	D3042 - Stair Pressurization - Install	Life Safety	5: Does Not Meet Current Codes/Standards	2023	Aug 7, 2023		Open		
D3042 - Exhaust Ventilation Systems	D3042 - Garage Exhaust Ventilation System - Upgrade	Functionality	1 - Immediate / First Year	2014	Aug 7, 2014		Open		
D3042 - Exhaust Ventilation Systems									
D4010 - Sprinklers	D4010 - Arm Over Sprinkler Supports - Install	Building Code	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open		



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Requirement List Report

By Prime System

Prime System	Requirement Name	Requirement Category	Priority	Action Year	Action Date	Finish Date	Status	Linked System	(b)(4)
D4010 - Sprinklers	D4010 - Sprinklers - Install	Building Code	5: Does Not Meet Current Codes/Standards	2023	Aug 7, 2023		Open		
D4010 - Sprinklers	D4010 - Fire Sprinklers Electrical Rooms - Modify	Code Compliance	5: Does Not Meet Current Codes/Standards	2023	Aug 7, 2023		Open		
D4010 - Sprinklers									
D4011 - Sprinkler Water Supply	D4011 - Sprinkler Water Supply - Increase size of supply	Life Safety	1 - Immediate / First Year	2014	Aug 7, 2014		Open		
D4011 - Sprinkler Water Supply									
D4024 - Fire Hose Equipment	D4024 - Fire Hose Valve - Install	Building Code	1 - Immediate / First Year	2014	Aug 7, 2014		Open		
D4024 - Fire Hose Equipment									
D4095 - Hood and Duct Fire Protection	D4095 - Electrical Vault Ducts - Install Dampers	Life Safety	1 - Immediate / First Year	2014	Aug 7, 2014		Open		
D4095 - Hood and Duct Fire Protection									
D5011 - High Tension Service and Dist.	D5011 - Medium Voltage Primary Service Switchgear - Replace	Integrity	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open		
D5011 - High Tension Service and Dist.									
D5012 - Low Tension Service and Dist.	D5012 - Mechanical Room Panels - Replace	Beyond Useful Life	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open		



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Requirement List Report
By Prime System

Prime System	Requirement Name	Requirement Category	Priority	Action Year	Action Date	Finish Date	Status	Linked System	(b)(4)
D5012 - Low Tension Service and Dist.	D5012 - Electrical Equipment Covers Missing - Replace	Building Code	1 - Immediate / First Year	2014	Aug 7, 2014		Open		
D5012 - Low Tension Service and Dist.	D5012 - Existing Electrical Busduct - Recondition	Integrity	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open		
D5012 - Low Tension Service and Dist.	D5012 - Electric Distribution - Add New Power Risers	Functionality	3 - Within 3 to 5 Years	2016	Aug 7, 2016		Open		
D5012 - Low Tension Service and Dist.	D5012 - Elevator Electrical Switchboard - Replace	Beyond Useful Life	3 - Within 3 to 5 Years	2016	Aug 7, 2016		Open		
D5012 - Low Tension Service and Dist.	D5012 - Electrical Panels Clearance- Modify	Accessibility	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open		
D5012 - Low Tension Service and Dist.	D5012 - Misc Electrical Equipment Motor Control Centers - Replace	Beyond Useful Life	3 - Within 3 to 5 Years	2016	Aug 7, 2016		Open		
D5012 - Low Tension Service and Dist.									
D5021 - Branch Wiring Devices	D5021 - Rooftop Electrical Outlets and Misc. - Repair	Integrity	4 - 5+ Years	2023	Aug 7, 2023		Open		
D5021 - Branch Wiring Devices									
D5037 - Fire Alarm Systems	D5037 - Fire Alarm System - Replace	Integrity	4 - 5+ Years	2023	Aug 7, 2023		Open		
D5037 - Fire Alarm Systems									



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Requirement List Report

By Prime System

Prime System	Requirement Name	Requirement Category	Priority	Action Year	Action Date	Finish Date	Status	Linked System	(b)(4)
D5091 - Grounding Systems	D5091 - Lightning Protection System – Install	Reliability	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open		
D5091 - Grounding Systems	D5091 - Emergency Grounding System Study - Perform	Life Safety	1 - Immediate / First Year	2014	Aug 7, 2014		Open		
D5091 - Grounding Systems									
D5094 - Other Special Systems and Devices	D5094 - Master Clock System - Replace	Obsolescence	3 - Within 3 to 5 Years	2016	Aug 7, 2016		Open		
D5094 - Other Special Systems and Devices									
G2031 - Paving and Surfacing	G2031 - Bluestone Paver System – Repair	Reliability	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open		
G2031 - Paving and Surfacing									
G2049 - Miscellaneous Structures	G2049 - East Plaza Mushroom Covers – Repair	Reliability	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open		
G2049 - Miscellaneous Structures									
ROBERT C. WEAVER BUILDING-DC0092ZZ									
DC Service Center									
11 - National Capital Region									
Summary									



Requirement List Report

By Category

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Requirement List Report By Category

Region Name: 11 - National Capital Region

Service_Center Name: DC Service Center

Asset Name: ROBERT C. WEAVER BUILDING-DC0092ZZ

Reporting Currency : USD

Prime System : All

Requirement Priority : All

Requirement Category : All

Requirements Included: All

Category	Requirement Name	Prime System	Priority	Action Year	Action Date	Finish Date	Status	Linked System	(b)(4)
Accessibility	D5012 - Electrical Panels Clearance- Modify	D5012 - Low Tension Service and Dist.	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open		
Accessibility									
Appearance	B2010 - Exterior Tree Columns - Clean	B2010 - Exterior Walls	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open		
Appearance	B2010 - Exterior Precast Levels 2-10 - Clean	B2010 - Exterior Walls	4 - 5+ Years	2023	Aug 7, 2023		Open		
Appearance									
Beyond Useful Life	D5012 - Misc Electrical Equipment Motor Control Centers - Replace	D5012 - Low Tension Service and Dist.	3 - Within 3 to 5 Years	2016	Aug 7, 2016		Open		



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Requirement List Report By Category

Category	Requirement Name	Prime System	Priority	Action Year	Action Date	Finish Date	Status	Linked System	(b)(4)
Beyond Useful Life	C3032 - Corridor Acoustical Tile Ceiling - Replace	C3030 - Ceiling Finishes	3 - Within 3 to 5 Years	2016	Aug 7, 2016		Open		
Beyond Useful Life	C3012 - Interior Walls and Ceilings – Repaint	C3012 - Wall Finishes to Interior Walls	4 - 5+ Years	2023	Aug 7, 2023		Open		
Beyond Useful Life	C1023 – Door Hardware - Replace	C1023 - Interior Door Hardware	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open		
Beyond Useful Life	C3025 - Broadloom Carpet – Replace	C3025 - Carpeting	3 - Within 3 to 5 Years	2016	Aug 7, 2016		Open		
Beyond Useful Life	D2020 - Restroom Water Pressurization System - Replace	D2020 - Domestic Water Distribution	1 - Immediate / First Year	2014	Aug 7, 2014		Open		
Beyond Useful Life	C3025 - Carpet Tile – Replace	C3025 - Carpeting	3 - Within 3 to 5 Years	2016	Aug 7, 2016		Open		
Beyond Useful Life	C3024 - Kitchen Servery Sheet Flooring – Repair	C3024 - Flooring	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open		
Beyond Useful Life	D5012 - Mechanical Room Panels - Replace	D5012 - Low Tension Service and Dist.	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open		
Beyond Useful Life	D2043 - Rain Water Sump Pumps - Replace	D2043 - Rainwater Drainage Equipment	3 - Within 3 to 5 Years	2016	Aug 7, 2016		Open		
Beyond Useful Life	D2034 - Sewer Ejector Pumps - Replace	D2034 - Sanitary Waste Equipment	3 - Within 3 to 5 Years	2016	Aug 7, 2016		Open		



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Requirement List Report By Category

Category	Requirement Name	Prime System	Priority	Action Year	Action Date	Finish Date	Status	Linked System
Beyond Useful Life	D5012 - Elevator Electrical Switchboard - Replace	D5012 - Low Tension Service and Dist.	3 - Within 3 to 5 Years	2016	Aug 7, 2016		Open	
Beyond Useful Life	D2010 - Plumbing fixtures - Replace	D2010 - Plumbing Fixtures	3 - Within 3 to 5 Years	2016	Aug 7, 2016		Open	
Beyond Useful Life								
Building Code	D3042 - Battery Room Ventilation - Install	D3042 - Exhaust Ventilation Systems	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open	
Building Code	D4010 - Sprinklers - Install	D4010 - Sprinklers	5: Does Not Meet Current Codes/Standards	2023	Aug 7, 2023		Open	
Building Code	C1020 - Doors Not Code Compliant - Replace	C1020 - Interior Doors	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open	
Building Code	C1011 - Firestopping @ Floor Penetrations - Repair	C1011 - Fixed Partitions	1 - Immediate / First Year	2014	Aug 7, 2014		Open	
Building Code	D1011 - Passenger Elevators - Modernize	D1011 - Passenger Elevators	3 - Within 3 to 5 Years	2016	Aug 7, 2016		Open	
Building Code	C2014 - Stair Guards and Handrails - Replace	C2014 - Stair Handrails and Balustrades	5: Does Not Meet Current Codes/Standards	2023	Aug 7, 2023		Open	
Building Code	D4010 - Arm Over Sprinkler Supports - Install	D4010 - Sprinklers	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open	
Building Code	D5012 - Electrical Equipment Covers Missing - Replace	D5012 - Low Tension Service and Dist.	1 - Immediate / First Year	2014	Aug 7, 2014		Open	

(b)(4)



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Requirement List Report By Category

Category	Requirement Name	Prime System	Priority	Action Year	Action Date	Finish Date	Status	Linked System	(b)(4)
Building Code	C1020 - Fire Stair Doors Not Code Compliant - Replace	C1020 - Interior Doors	1 - Immediate / First Year	2014	Aug 7, 2014		Open		
Building Code	C2010 - Loading Dock Handrails - Provide Guards	C2010 - Stair Construction	5: Does Not Meet Current Codes/Standards	2023	Aug 7, 2023		Open		
Building Code	D4024 - Fire Hose Valve - Install	D4024 - Fire Hose Equipment	1 - Immediate / First Year	2014	Aug 7, 2014		Open		
Building Code	D4010 - Fire Sprinklers Electrical Rooms - Modify	D4010 - Sprinklers	5: Does Not Meet Current Codes/Standards	2023	Aug 7, 2023		Open		
Code Compliance	D3042 - Garage Exhaust Ventilation System - Upgrade	D3042 - Exhaust Ventilation Systems	1 - Immediate / First Year	2014	Aug 7, 2014		Open		
Functionality	D5012 - Electric Distribution - Add New Power Risers	D5012 - Low Tension Service and Dist.	3 - Within 3 to 5 Years	2016	Aug 7, 2016		Open		
Functionality	D5037 - Fire Alarm System - Replace	D5037 - Fire Alarm Systems	4 - 5+ Years	2023	Aug 7, 2023		Open		
Integrity	B2011 - Exterior Precast Sealant - Replace	B2011 - Exterior Wall Construction	4 - 5+ Years	2023	Aug 7, 2023		Open		



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Requirement List Report By Category

Category	Requirement Name	Prime System	Priority	Action Year	Action Date	Finish Date	Status	Linked System	(b)(4)
Integrity	D5021 - Rooftop Electrical Outlets and Misc. - Repair	D5021 - Branch Wiring Devices	4 - 5+ Years	2023	Aug 7, 2023		Open		
Integrity	D5011 - Medium Voltage Primary Service Switchgear - Replace	D5011 - High Tension Service and Dist.	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open		
Integrity	B3011 - Roof System Fall Protection - Add	B3011 - Roof Finishes	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open		
Integrity	D5012 - Existing Electrical Busduct - Recondition	D5012 - Low Tension Service and Dist.	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open		
Integrity	B2010 - Exterior Granite Facades - Repair	B2010 - Exterior Walls	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open		
Integrity									
Life Safety	D3042 - Stair Pressurization - Install	D3042 - Exhaust Ventilation Systems	5: Does Not Meet Current Codes/Standards	2023	Aug 7, 2023		Open		
Life Safety	C1011 - Standpipes Not Enclosed - Add Rated Separation	C1011 - Fixed Partitions	1 - Immediate / First Year	2014	Aug 7, 2014		Open		
Life Safety	B1015 - Exterior Plaza Handrail Falloff Protection - Add	B1015 - Exterior Stairs and Fire Escapes	5: Does Not Meet Current Codes/Standards	2023	Aug 7, 2023		Open		
Life Safety	C1011 - Panels and Conduits Exposed in Stairs - Add Rated Separation	C1011 - Fixed Partitions	1 - Immediate / First Year	2014	Aug 7, 2014		Open		



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Requirement List Report By Category

Category	Requirement Name	Prime System	Priority	Action Year	Action Date	Finish Date	Status	Linked System	(b)(4)
Life Safety	B1015 - Garage Ramp Falloff Protection - Add	B1015 - Exterior Stairs and Fire Escapes	5: Does Not Meet Current Codes/Standards	2023	Aug 7, 2023		Open		
Life Safety	C1011 - Fire Pump Room - Add Rated Separation	C1011 - Fixed Partitions	1 - Immediate / First Year	2014	Aug 7, 2014		Open		
Life Safety	A2022 - Foundation Walls - Patch	A2022 - Moisture Protection	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open		
Life Safety	D4095 - Electrical Vault Ducts - Install Dampers	D4095 - Hood and Duct Fire Protection	1 - Immediate / First Year	2014	Aug 7, 2014		Open		
Life Safety	D5091 - Emergency Grounding System Study - Perform	D5091 - Grounding Systems	1 - Immediate / First Year	2014	Aug 7, 2014		Open		
Life Safety	C1011 - Electrical Closet Shaft Opening - Add Rated Separation	C1011 - Fixed Partitions	1 - Immediate / First Year	2014	Aug 7, 2014		Open		
Life Safety	C1011 - Exposed 8" Storm/Sewer Lines in Stairs - Add Rated Separation	C1011 - Fixed Partitions	1 - Immediate / First Year	2014	Aug 7, 2014		Open		
Life Safety	D4011 - Sprinkler Water Supply - Increase size of supply	D4011 - Sprinkler Water Supply	1 - Immediate / First Year	2014	Aug 7, 2014		Open		
Life Safety	B1019 - Parking Decks - Repair	B1019 - Other Floor Construction	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open		
Life Safety									



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Requirement List Report By Category

Category	Requirement Name	Prime System	Priority	Action Year	Action Date	Finish Date	Status	Linked System	(b)(4)
Obsolescence	D5094 - Master Clock System - Replace	D5094 - Other Special Systems and Devices	3 - Within 3 to 5 Years	2016	Aug 7, 2016		Open		
Obsolescence									
Operations	B2023 - Storefront Inserts - Install	B2023 - Storefronts	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open		
Operations									
Reliability	G2031 - Bluestone Paver System – Repair	G2031 - Paving and Surfacing	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open		
Reliability	B2011 - Exterior Tree Columns Spalling – Repair	B2011 - Exterior Wall Construction	3 - Within 3 to 5 Years	2016	Aug 7, 2016		Open		
Reliability	C3020 - Concrete Floor - Reseal	C3020 - Floor Finishes	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open		
Reliability	D2018 - Drinking Fountains - Repair	D2018 - Drinking Fountains and Coolers	3 - Within 3 to 5 Years	2016	Aug 7, 2016		Open		
Reliability	G2049 - East Plaza Mushroom Covers – Repair	G2049 - Miscellaneous Structures	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open		
Reliability	C1037 - Window Blind System - Replace	C1037 - General Fittings and Misc. Metals	4 - 5+ Years	2023	Aug 7, 2023		Open		
Reliability	D5091 - Lightning Protection System – Install	D5091 - Grounding Systems	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open		
Reliability	B2011 - Exterior Wall Expansion Joint – Replace	B2011 - Exterior Wall Construction	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open		



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Requirement List Report By Category

Category	Requirement Name	Prime System	Priority	Action Year	Action Date	Finish Date	Status	Linked System	(b)(4)
Reliability	B1012 - Rusting Plaza Grates - Refinish	B1012 - Upper Floors Construction	3 - Within 3 to 5 Years	2016	Aug 7, 2016		Open		
Reliability	D2018 - Drinking Fountain Water Cooler - Replace	D2018 - Drinking Fountains and Coolers	3 - Within 3 to 5 Years	2016	Aug 7, 2016		Open		
Reliability	A2020 - Plaza Damage - Repair	A2020 - Basement Walls	2 - Within 1 to 2 Years	2015	Aug 7, 2015		Open		
Reliability	D2018 - Drinking Fountain Filtration Equipment - Replace	D2018 - Drinking Fountains and Coolers	3 - Within 3 to 5 Years	2016	Aug 7, 2016		Open		
Reliability	ROBERT C. WEAVER BUILDING-DC0092ZZ								
	DC Service Center								
	11 - National Capital Region								
	Summary								



Requirement List Report

By Priority

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Requirement List Report By Priority

Region Name: 11 - National Capital Region

Service_Center Name: DC Service Center

Asset Name: ROBERT C. WEAVER BUILDING-DC0092ZZ

Reporting Currency : USD

Prime System : All

Requirement Priority : All

Requirement Category: All

Requirements Included: All

Priority	Requirement Name	Requirement Category	Prime System	Action Year	Action Date	Finish Date	Status	Linked System
1 - Immediate / First Year	D5091 - Emergency Grounding System Study - Perform	Life Safety	D5091 - Grounding Systems	2014	Aug 7, 2014		Open	
1 - Immediate / First Year	D2020 - Restroom Water Pressurization System - Replace	Beyond Useful Life	D2020 - Domestic Water Distribution	2014	Aug 7, 2014		Open	
1 - Immediate / First Year	D3042 - Garage Exhaust Ventilation System - Upgrade	Functionality	D3042 - Exhaust Ventilation Systems	2014	Aug 7, 2014		Open	
1 - Immediate / First Year	D4024 - Fire Hose Valve - Install	Building Code	D4024 - Fire Hose Equipment	2014	Aug 7, 2014		Open	
1 - Immediate / First Year	C1020 - Fire Stair Doors Not Code Compliant - Replace	Building Code	C1020 - Interior Doors	2014	Aug 7, 2014		Open	

(b)(4)



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Requirement List Report By Priority

Priority	Requirement Name	Requirement Category	Prime System	Action Year	Action Date	Finish Date	Status	Linked System
1 - Immediate / First Year	D4095 – Electrical Vault Ducts – Install Dampers	Life Safety	D4095 - Hood and Duct Fire Protection	2014	Aug 7, 2014		Open	
1 - Immediate / First Year	C1011 - Fire Pump Room - Add Rated Separation	Life Safety	C1011 - Fixed Partitions	2014	Aug 7, 2014		Open	
1 - Immediate / First Year	C1011 - Panels and Conduits Exposed in Stairs - Add Rated Separation	Life Safety	C1011 - Fixed Partitions	2014	Aug 7, 2014		Open	
1 - Immediate / First Year	C1011 - Standpipes Not Enclosed - Add Rated Separation	Life Safety	C1011 - Fixed Partitions	2014	Aug 7, 2014		Open	
1 - Immediate / First Year	C1011 - Firestopping @ Floor Penetrations - Repair	Building Code	C1011 - Fixed Partitions	2014	Aug 7, 2014		Open	
1 - Immediate / First Year	D4011 - Sprinkler Water Supply - Increase size of supply	Life Safety	D4011 - Sprinkler Water Supply	2014	Aug 7, 2014		Open	
1 - Immediate / First Year	C1011 - Exposed 8" Storm/Sewer Lines in Stairs - Add Rated Separation	Life Safety	C1011 - Fixed Partitions	2014	Aug 7, 2014		Open	
1 - Immediate / First Year	C1011 - Electrical Closet Shaft Opening - Add Rated Separation	Life Safety	C1011 - Fixed Partitions	2014	Aug 7, 2014		Open	
1 - Immediate / First Year	D5012 - Electrical Equipment Covers Missing - Replace	Building Code	D5012 - Low Tension Service and Dist.	2014	Aug 7, 2014		Open	
1 - Immediate / First Year								
2 - Within 1 to 2 Years	B2023 - Storefront Inserts - Install	Operations	B2023 - Storefronts	2015	Aug 7, 2015		Open	
2 - Within 1 to 2 Years	B3011 - Roof System Fall Protection - Add	Integrity	B3011 - Roof Finishes	2015	Aug 7, 2015		Open	

(b)(4)



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Requirement List Report By Priority

Priority	Requirement Name	Requirement Category	Prime System	Action Year	Action Date	Finish Date	Status	Linked System
2 - Within 1 to 2 Years	D5091 - Lightning Protection System – Install	Reliability	D5091 - Grounding Systems	2015	Aug 7, 2015		Open	
2 - Within 1 to 2 Years	C3024 - Kitchen Servery Sheet Flooring – Repair	Beyond Useful Life	C3024 - Flooring	2015	Aug 7, 2015		Open	
2 - Within 1 to 2 Years	D5012 - Mechanical Room Panels - Replace	Beyond Useful Life	D5012 - Low Tension Service and Dist.	2015	Aug 7, 2015		Open	
2 - Within 1 to 2 Years	D5011 - Medium Voltage Primary Service Switchgear - Replace	Integrity	D5011 - High Tension Service and Dist.	2015	Aug 7, 2015		Open	
2 - Within 1 to 2 Years	D5012 - Electrical Panels Clearance- Modify	Accessibility	D5012 - Low Tension Service and Dist.	2015	Aug 7, 2015		Open	
2 - Within 1 to 2 Years	B2011 - Exterior Wall Expansion Joint – Replace	Reliability	B2011 - Exterior Wall Construction	2015	Aug 7, 2015		Open	
2 - Within 1 to 2 Years	C1023 – Door Hardware - Replace	Beyond Useful Life	C1023 - Interior Door Hardware	2015	Aug 7, 2015		Open	
2 - Within 1 to 2 Years	D5012 - Existing Electrical Busduct - Recondition	Integrity	D5012 - Low Tension Service and Dist.	2015	Aug 7, 2015		Open	
2 - Within 1 to 2 Years	B2010 - Exterior Tree Columns - Clean	Appearance	B2010 - Exterior Walls	2015	Aug 7, 2015		Open	
2 - Within 1 to 2 Years	G2049 - East Plaza Mushroom Covers – Repair	Reliability	G2049 - Miscellaneous Structures	2015	Aug 7, 2015		Open	
2 - Within 1 to 2 Years	A2020 - Plaza Damage - Repair	Reliability	A2020 - Basement Walls	2015	Aug 7, 2015		Open	
2 - Within 1 to 2 Years	G2031 - Bluestone Paver System – Repair	Reliability	G2031 - Paving and Surfacing	2015	Aug 7, 2015		Open	

(b)(4)



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Requirement List Report By Priority

Priority	Requirement Name	Requirement Category	Prime System	Action Year	Action Date	Finish Date	Status	Linked System	(b)(4)
2 - Within 1 to 2 Years	D4010 - Arm Over Sprinkler Supports - Install	Building Code	D4010 - Sprinklers	2015	Aug 7, 2015		Open		
2 - Within 1 to 2 Years	A2022 - Foundation Walls - Patch	Life Safety	A2022 - Moisture Protection	2015	Aug 7, 2015		Open		
2 - Within 1 to 2 Years	C3020 - Concrete Floor - Reseal	Reliability	C3020 - Floor Finishes	2015	Aug 7, 2015		Open		
2 - Within 1 to 2 Years	C1020 - Doors Not Code Compliant - Replace	Building Code	C1020 - Interior Doors	2015	Aug 7, 2015		Open		
2 - Within 1 to 2 Years	B2010 - Exterior Granite Facades - Repair	Integrity	B2010 - Exterior Walls	2015	Aug 7, 2015		Open		
2 - Within 1 to 2 Years	D3042 - Battery Room Ventilation - Install	Building Code	D3042 - Exhaust Ventilation Systems	2015	Aug 7, 2015		Open		
2 - Within 1 to 2 Years	B1019 - Parking Decks - Repair	Life Safety	B1019 - Other Floor Construction	2015	Aug 7, 2015		Open		
2 - Within 1 to 2 Years									
3 - Within 3 to 5 Years	C3025 - Carpet Tile - Replace	Beyond Useful Life	C3025 - Carpeting	2016	Aug 7, 2016		Open		
3 - Within 3 to 5 Years	D2018 - Drinking Fountains - Repair	Reliability	D2018 - Drinking Fountains and Coolers	2016	Aug 7, 2016		Open		
3 - Within 3 to 5 Years	B1012 - Rusting Plaza Grates - Refinish	Reliability	B1012 - Upper Floors Construction	2016	Aug 7, 2016		Open		
3 - Within 3 to 5 Years	C3032 - Corridor Acoustical Tile Ceiling - Replace	Beyond Useful Life	C3030 - Ceiling Finishes	2016	Aug 7, 2016		Open		



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Requirement List Report By Priority

Priority	Requirement Name	Requirement Category	Prime System	Action Year	Action Date	Finish Date	Status	Linked System	(b)(4)
3 - Within 3 to 5 Years	B2011 - Exterior Tree Columns Spalling – Repair	Reliability	B2011 - Exterior Wall Construction	2016	Aug 7, 2016		Open		
3 - Within 3 to 5 Years	D2043 - Rain Water Sump Pumps - Replace	Beyond Useful Life	D2043 - Rainwater Drainage Equipment	2016	Aug 7, 2016		Open		
3 - Within 3 to 5 Years	D5012 - Elevator Electrical Switchboard - Replace	Beyond Useful Life	D5012 - Low Tension Service and Dist.	2016	Aug 7, 2016		Open		
3 - Within 3 to 5 Years	D2018 - Drinking Fountain Filtration Equipment - Replace	Reliability	D2018 - Drinking Fountains and Coolers	2016	Aug 7, 2016		Open		
3 - Within 3 to 5 Years	D5094 - Master Clock System - Replace	Obsolescence	D5094 - Other Special Systems and Devices	2016	Aug 7, 2016		Open		
3 - Within 3 to 5 Years	D5012 - Electric Distribution - Add New Power Risers	Functionality	D5012 - Low Tension Service and Dist.	2016	Aug 7, 2016		Open		
3 - Within 3 to 5 Years	D2010 - Plumbing fixtures - Replace	Beyond Useful Life	D2010 - Plumbing Fixtures	2016	Aug 7, 2016		Open		
3 - Within 3 to 5 Years	D5012 - Misc Electrical Equipment Motor Control Centers - Replace	Beyond Useful Life	D5012 - Low Tension Service and Dist.	2016	Aug 7, 2016		Open		
3 - Within 3 to 5 Years	D2034 - Sewer Ejector Pumps - Replace	Beyond Useful Life	D2034 - Sanitary Waste Equipment	2016	Aug 7, 2016		Open		
3 - Within 3 to 5 Years	D1011 - Passenger Elevators - Modernize	Building Code	D1011 - Passenger Elevators	2016	Aug 7, 2016		Open		



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Requirement List Report By Priority

Priority	Requirement Name	Requirement Category	Prime System	Action Year	Action Date	Finish Date	Status	Linked System
3 - Within 3 to 5 Years	D2018 - Drinking Fountain Water Cooler - Replace	Reliability	D2018 - Drinking Fountains and Coolers	2016	Aug 7, 2016		Open	
3 - Within 3 to 5 Years	C3025 - Broadloom Carpet – Replace	Beyond Useful Life	C3025 - Carpeting	2016	Aug 7, 2016		Open	
3 - Within 3 to 5 Years								
4 - 5+ Years	C1037 - Window Blind System - Replace	Reliability	C1037 - General Fittings and Misc. Metals	2023	Aug 7, 2023		Open	
4 - 5+ Years	D5037 - Fire Alarm System - Replace	Integrity	D5037 - Fire Alarm Systems	2023	Aug 7, 2023		Open	
4 - 5+ Years	B2011 – Exterior Precast Sealant - Replace	Integrity	B2011 - Exterior Wall Construction	2023	Aug 7, 2023		Open	
4 - 5+ Years	D5021 - Rooftop Electrical Outlets and Misc. - Repair	Integrity	D5021 - Branch Wiring Devices	2023	Aug 7, 2023		Open	
4 - 5+ Years	C3012 - Interior Walls and Ceilings – Repaint	Beyond Useful Life	C3012 - Wall Finishes to Interior Walls	2023	Aug 7, 2023		Open	
4 - 5+ Years	B2010 - Exterior Precast Levels 2-10 - Clean	Appearance	B2010 - Exterior Walls	2023	Aug 7, 2023		Open	
4 - 5+ Years								
5: Does Not Meet Current Codes/Standards	C2014 - Stair Guards and Handrails - Replace	Building Code	C2014 - Stair Handrails and Balustrades	2023	Aug 7, 2023		Open	
5: Does Not Meet Current Codes/Standards	C2010 - Loading Dock Handrails - Provide Guards	Building Code	C2010 - Stair Construction	2023	Aug 7, 2023		Open	

(b)(4)



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Requirement List Report By Priority

Priority	Requirement Name	Requirement Category	Prime System	Action Year	Action Date	Finish Date	Status	Linked System
5: Does Not Meet Current Codes/Standards	B1015 - Garage Ramp Falloff Protection - Add	Life Safety	B1015 - Exterior Stairs and Fire Escapes	2023	Aug 7, 2023		Open	
5: Does Not Meet Current Codes/Standards	D3042 – Stair Pressurization – Install	Life Safety	D3042 - Exhaust Ventilation Systems	2023	Aug 7, 2023		Open	
5: Does Not Meet Current Codes/Standards	D4010 – Fire Sprinklers Electrical Rooms - Modify	Code Compliance	D4010 - Sprinklers	2023	Aug 7, 2023		Open	
5: Does Not Meet Current Codes/Standards	D4010 - Sprinklers - Install	Building Code	D4010 - Sprinklers	2023	Aug 7, 2023		Open	
5: Does Not Meet Current Codes/Standards	B1015 - Exterior Plaza Handrail Falloff Protection - Add	Life Safety	B1015 - Exterior Stairs and Fire Escapes	2023	Aug 7, 2023		Open	
5: Does Not Meet Current Codes/Standards								
ROBERT C. WEAVER BUILDING-DC0092ZZ								
DC Service Center								
11 - National Capital Region								
Summary								

(b)(4)



Requirement Summary Report

By System Group

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Requirement Summary Report By System Group

Region:

11 - National Capital Region

Service_Center:

DC Service Center

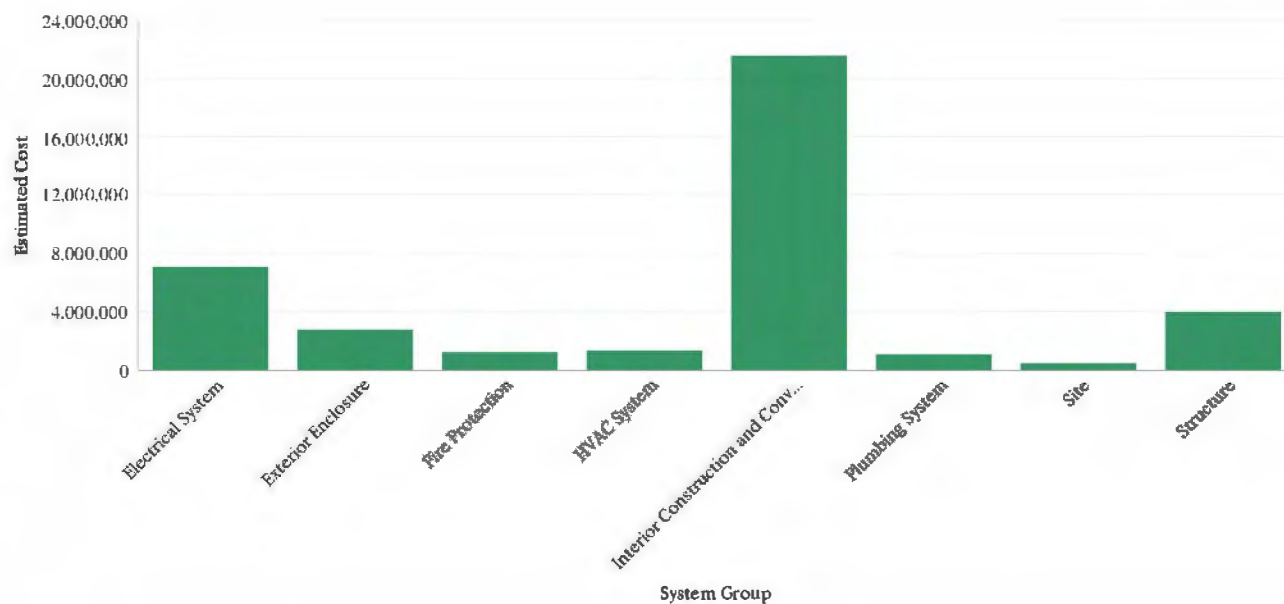
Asset:

ROBERT C. WEAVER BUILDING-DC0092ZZ

Currency: USD

System Group	Percentage of Total Cost
Electrical System	18%
Exterior Enclosure	7%
Fire Protection	3%
HVAC System	3%
Interior Construction and Conveyance	54%
Plumbing System	3%
Site	1%
Structure	10%
Total	

(b)(4)





Requirement Summary Report

By Category

DRAFT



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Requirement Summary Report By Category

Region:

11 - National Capital Region

Service_Center:

DC Service Center

Asset:

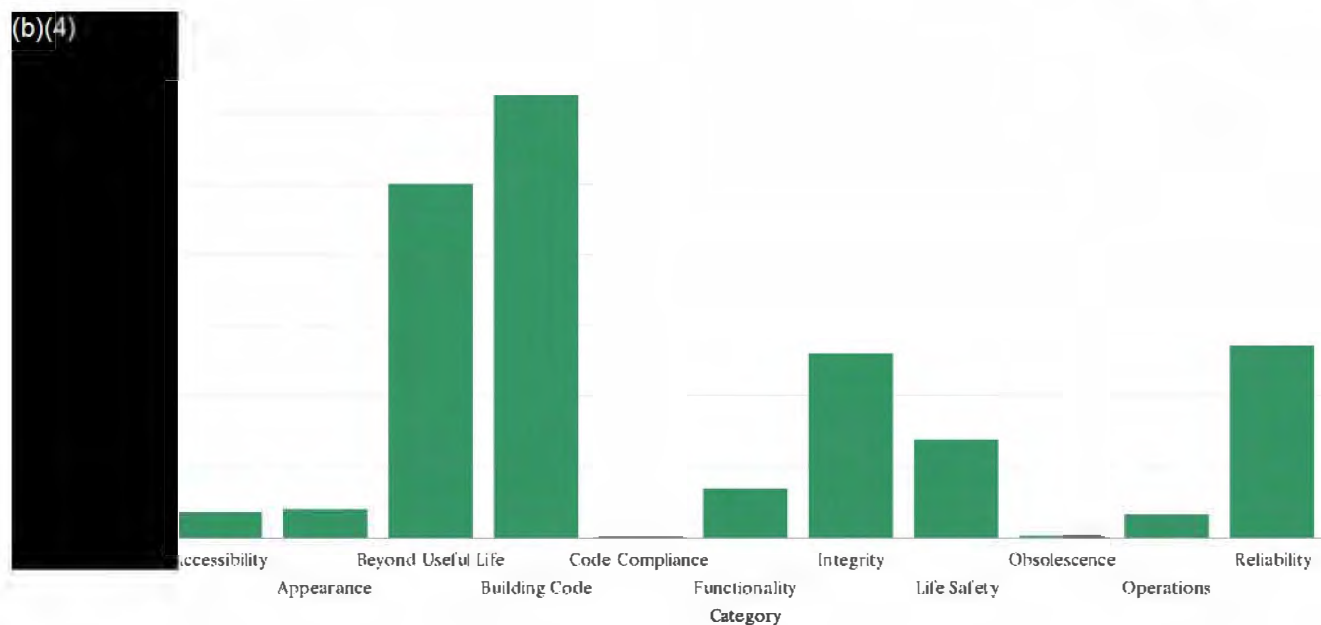
ROBERT C. WEAVER BUILDING-DC0092ZZ

Currency: USD

Category	Percentage of Total Cost
Accessibility	2%
Appearance	2%
Beyond Useful Life	25%
Building Code	32%
Code Compliance	0%
Functionality	3%
Integrity	13%
Life Safety	7%
Obsolescence	0%
Operations	2%
Reliability	14%
Total	

(b)(4)

(b)(4)





Requirement Summary Report

By Priority

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Requirement Summary Report By Priority

Region:

11 - National Capital Region

Service_Center:

DC Service Center

Asset:

ROBERT C. WEAVER BUILDING-DC0092ZZ

Currency: USD

Priority

1 - Immediate / First Year

2 - Within 1 to 2 Years

3 - Within 3 to 5 Years

4 - 5+ Years

5: Does Not Meet Current Codes/Standards

Total

Percentage of Total Cost

4%

25%

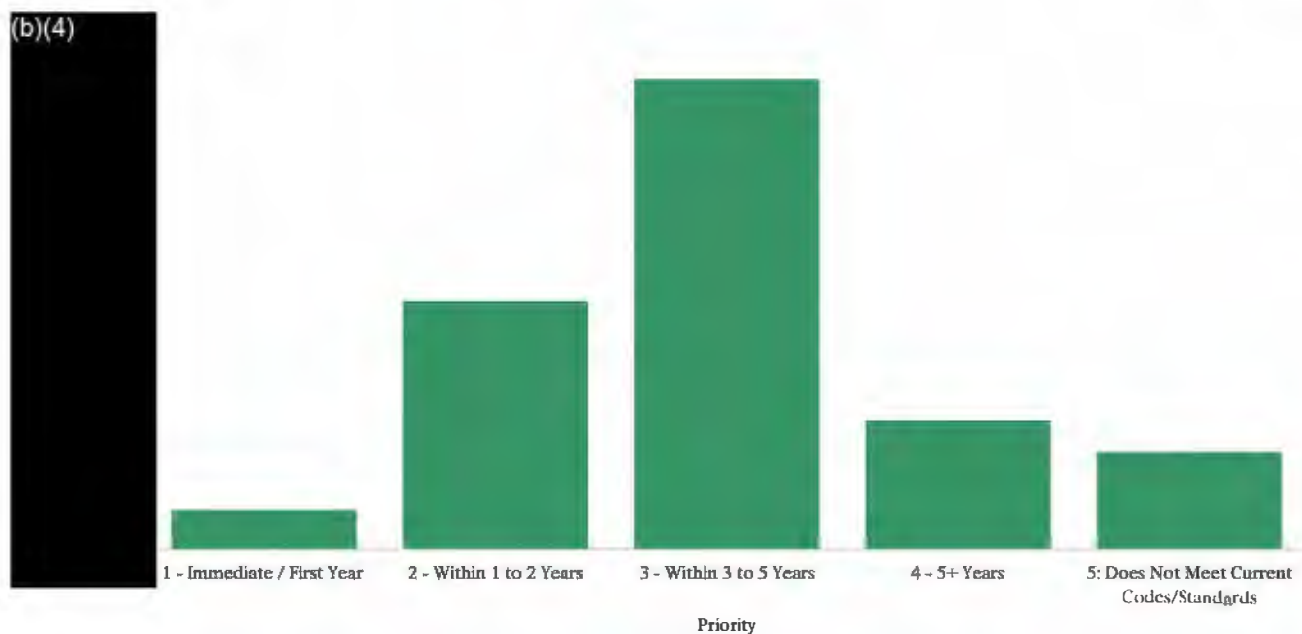
48%

13%

10%

(b)(4)

(b)(4)





Requirements Crosstab Report

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Requirements Crosstab Report *by System Group and Priority*

Region:

11 - National Capital Region

Service_Center:

DC Service Center

Asset:

ROBERT C. WEAVER BUILDING-DC0092ZZ

Reporting Currency : USD

Prime System : A2020 - Basement Walls, A2022 - Moisture Protection, B1012 - Upper Floors Construction, B1015 - Exterior Stairs and Fire Escapes, B1019 - Other Floor Construction, B2010 - Exterior Walls, B2011 - Exterior Wall Construction, B2023 - Storefronts, B3011 - Roof Finishes, C1011 - Fixed Partitions, C1020 - Interior Doors, C1023 - Interior Door Hardware, C1037 - General Fittings and Misc. Metals, C2010 - Stair Construction, C2014 - Stair Handrails and Balustrades, C3012 - Wall Finishes to Interior Walls, C3020 - Floor Finishes, C3024 - Flooring, C3025 - Carpeting, C3030 - Ceiling Finishes, D1011 - Passenger Elevators, D2010 - Plumbing Fixtures, D2018 - Drinking Fountains and Coolers, D2020 - Domestic Water Distribution, D2034 - Sanitary Waste Equipment, D2043 - Rainwater Drainage Equipment, D3042 - Exhaust Ventilation Systems, D4010 - Sprinklers, D4011 - Sprinkler Water Supply, D4024 - Fire Hose Equipment, D4095 - Hood and Duct Fire Protection, D5011 - High Tension Service and Dist., D5012 - Low Tension Service and Dist., D5021 - Branch Wiring Devices, D5037 - Fire Alarm Systems, D5091 - Grounding Systems, D5094 - Other Special Systems and Devices, G2031 - Paving and Surfacing, G2049 - Miscellaneous Structures

Requirement Priority : 1 - Immediate / First Year, 2 - Within 1 to 2 Years, 3 - Within 3 to 5 Years, 4 - 5+ Years, 5: Does Not Meet Current Codes/Standards

Requirement Category : Accessibility, Appearance, Beyond Useful Life, Building Code, Code Compliance, Functionality, Integrity, Life Safety, Obsolescence, Operations, Reliability

Requirements Included: - ALL -

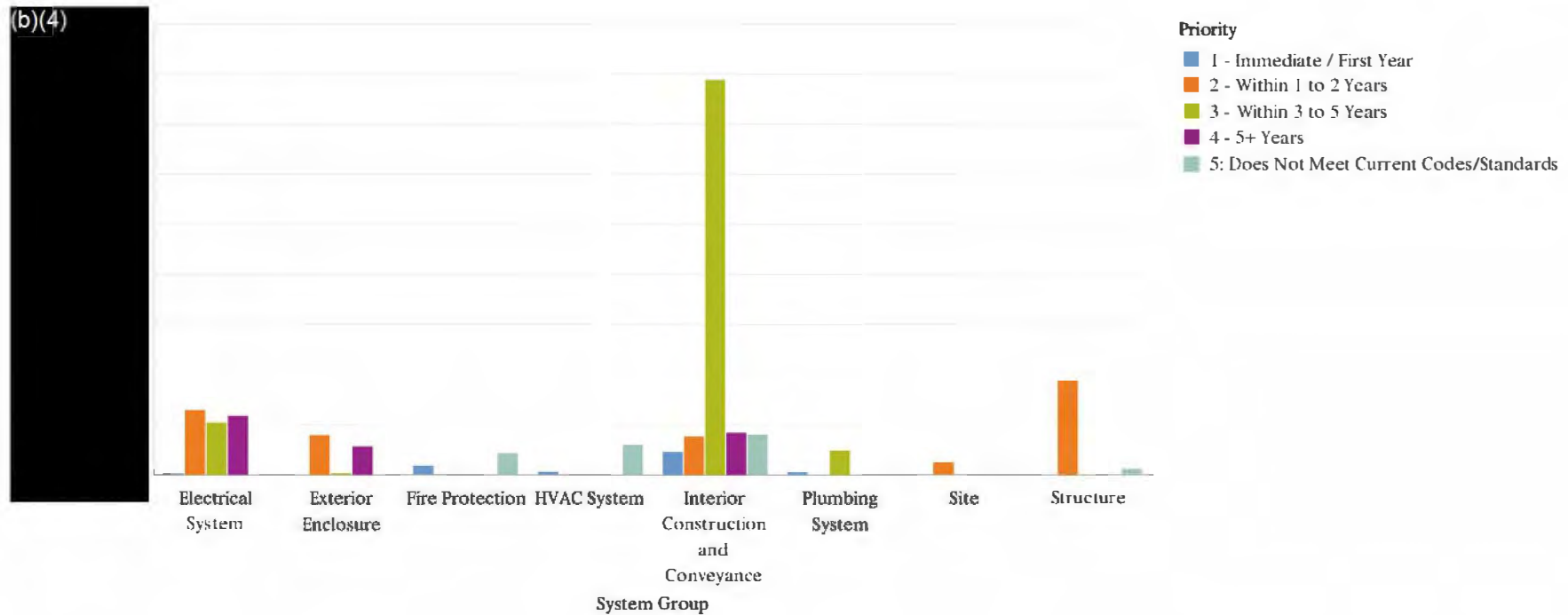


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Requirements Crosstab Report *by System Group and Priority*

System Group and Priority	1 - Immediate / First Year	2 - Within 1 to 2 Years	3 - Within 3 to 5 Years	4 - 5+ Years	5: Does Not Meet Current Codes/Standards	Total
Electrical System	(b)(4)					
Exterior Enclosure						
Fire Protection						
HVAC System						
Interior Construction and Conveyance						
Plumbing System						
Site						
Structure						
Total						

Requirements Crosstab Report by System Group and Priority



Notes:

- If "Requirements Included" is All, then costs shown reflect all existing Requirements that are not closed. If "Requirements Included" is Only Requirements contributing to FCI, then costs shown reflect those of Requirements that are not closed, which have a Category included in the FCI Settings, and which have a Requirement Action Date within the timeframe indicated by "Years Included" in the FCI Settings.
- Requirements with Action Dates prior to the current date are included in the costs shown.



Requirements Crosstab Report

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Requirements Crosstab Report *by Category and Priority*

Region:

11 - National Capital Region

Service_Center:

DC Service Center

Asset:

ROBERT C. WEAVER BUILDING-DC0092ZZ

Reporting Currency : USD

Prime System : A2020 - Basement Walls, A2022 - Moisture Protection, B1012 - Upper Floors Construction, B1015 - Exterior Stairs and Fire Escapes, B1019 - Other Floor Construction, B2010 - Exterior Walls, B2011 - Exterior Wall Construction, B2023 - Storefronts, B3011 - Roof Finishes, C1011 - Fixed Partitions, C1020 - Interior Doors, C1023 - Interior Door Hardware, C1037 - General Fittings and Misc. Metals, C2010 - Stair Construction, C2014 - Stair Handrails and Balustrades, C3012 - Wall Finishes to Interior Walls, C3020 - Floor Finishes, C3024 - Flooring, C3025 - Carpeting, C3030 - Ceiling Finishes, D1011 - Passenger Elevators, D2010 - Plumbing Fixtures, D2018 - Drinking Fountains and Coolers, D2020 - Domestic Water Distribution, D2034 - Sanitary Waste Equipment, D2043 - Rainwater Drainage Equipment, D3042 - Exhaust Ventilation Systems, D4010 - Sprinklers, D4011 - Sprinkler Water Supply, D4024 - Fire Hose Equipment, D4095 - Hood and Duct Fire Protection, D5011 - High Tension Service and Dist., D5012 - Low Tension Service and Dist., D5021 - Branch Wiring Devices, D5037 - Fire Alarm Systems, D5091 - Grounding Systems, D5094 - Other Special Systems and Devices, G2031 - Paving and Surfacing, G2049 - Miscellaneous Structures

Requirement Priority : 1 - Immediate / First Year, 2 - Within 1 to 2 Years, 3 - Within 3 to 5 Years, 4 - 5+ Years, 5: Does Not Meet Current Codes/Standards

Requirement Category : Accessibility, Appearance, Beyond Useful Life, Building Code, Code Compliance, Functionality, Integrity, Life Safety, Obsolescence, Operations, Reliability

Requirements Included: - ALL -

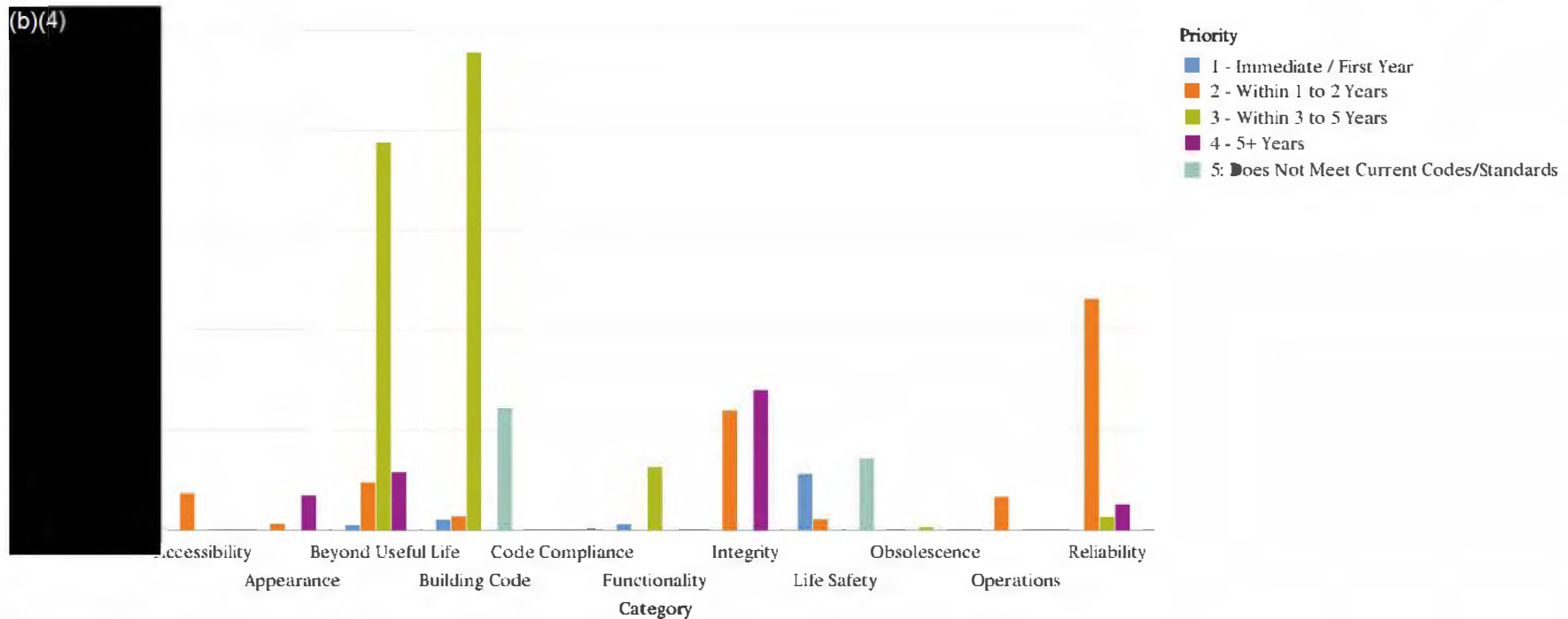


DRAFT

Requirements Crosstab Report *by Category and Priority*

Category and Priority	1 - Immediate / First Year	2 - Within 1 to 2 Years	3 - Within 3 to 5 Years	4 - 5+ Years	5: Does Not Meet Current Codes/Standards	Total
Accessibility	(b)(4)					
Appearance						
Beyond Useful Life						
Building Code						
Code Compliance						
Functionality						
Integrity						
Life Safety						
Obsolescence						
Operations						
Reliability						
Total						

Requirements Crosstab Report by Category and Priority



Notes:

- If “Requirements Included” is All, then costs shown reflect all existing Requirements that are not closed. If “Requirements Included” is Only Requirements contributing to FCI, then costs shown reflect those of Requirements that are not closed, which have a Category included in the FCI Settings, and which have a Requirement Action Date within the timeframe indicated by “Years Included” in the FCI Settings.
- Requirements with Action Dates prior to the current date are included in the costs shown.



Requirements Crosstab Report

DRAFT



DRAFT

Requirements Crosstab Report *by Category and System Group*

Region:

11 - National Capital Region

Service_Center:

DC Service Center

Asset:

ROBERT C. WEAVER BUILDING-DC0092ZZ

Reporting Currency : USD

Prime System : A2020 - Basement Walls, A2022 - Moisture Protection, B1012 - Upper Floors Construction, B1015 - Exterior Stairs and Fire Escapes, B1019 - Other Floor Construction, B2010 - Exterior Walls, B2011 - Exterior Wall Construction, B2023 - Storefronts, B3011 - Roof Finishes, C1011 - Fixed Partitions, C1020 - Interior Doors, C1023 - Interior Door Hardware, C1037 - General Fittings and Misc. Metals, C2010 - Stair Construction, C2014 - Stair Handrails and Balustrades, C3012 - Wall Finishes to Interior Walls, C3020 - Floor Finishes, C3024 - Flooring, C3025 - Carpeting, C3030 - Ceiling Finishes, D1011 - Passenger Elevators, D2010 - Plumbing Fixtures, D2018 - Drinking Fountains and Coolers, D2020 - Domestic Water Distribution, D2034 - Sanitary Waste Equipment, D2043 - Rainwater Drainage Equipment, D3042 - Exhaust Ventilation Systems, D4010 - Sprinklers, D4011 - Sprinkler Water Supply, D4024 - Fire Hose Equipment, D4095 - Hood and Duct Fire Protection, D5011 - High Tension Service and Dist., D5012 - Low Tension Service and Dist., D5021 - Branch Wiring Devices, D5037 - Fire Alarm Systems, D5091 - Grounding Systems, D5094 - Other Special Systems and Devices, G2031 - Paving and Surfacing, G2049 - Miscellaneous Structures

Requirement Priority : 1 - Immediate / First Year, 2 - Within 1 to 2 Years, 3 - Within 3 to 5 Years, 4 - 5+ Years, 5: Does Not Meet Current Codes/Standards

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Requirements Included: - ALL -

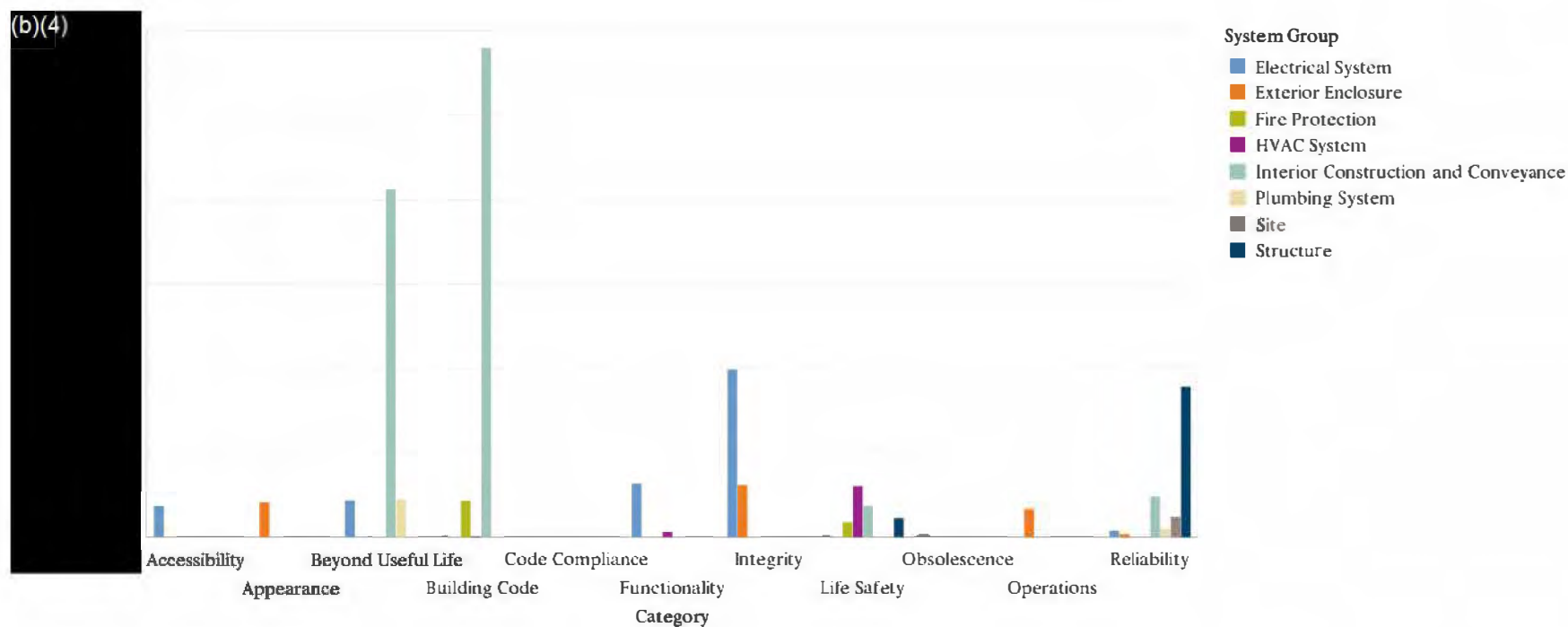


DRAFT

Requirements Crosstab Report *by Category and System Group*

Category and System Group	Electrical System	Exterior Enclosure	Fire Protection	HVAC System	Interior Construction and Conveyance	Plumbing System	Site	Structure	Total
Accessibility	(b)(4)								
Appearance									
Beyond Useful Life									
Building Code									
Code Compliance									
Functionality									
Integrity									
Life Safety									
Obsolescence									
Operations									
Reliability									
Total									

Requirements Crosstab Report by Category and System Group



Notes:

- If "Requirements Included" is All, then costs shown reflect all existing Requirements that are not closed. If "Requirements Included" is Only Requirements contributing to FCI, then costs shown reflect those of Requirements that are not closed, which have a Category included in the FCI Settings, and which have a Requirement Action Date within the timeframe indicated by "Years Included" in the FCI Settings.
- Requirements with Action Dates prior to the current date are included in the costs shown.

ROBERT C. WEAVER BUILDING



GENERAL VIEWS

IMAGES

5



Photographs

11 - National Capital Region

DC Service Center

ROBERT C. WEAVER BUILDING-DC0092ZZ



A2020 - Structural Slab Spalling - Repair



B1012 - Rusting Plaza Grates - Refinish



A2022 - Foundation Walls - Patch



B1015 - Exterior Plaza Handrail Falloff Protection - Add



B1015 - Garage Ramp Falloff Protection - Add



B2010 - Exterior Granite Facades - Repair



B1019 - Parking Decks - Repair



B2010 - Exterior Precast Levels 2-10 - Clean



B2010 - Exterior Tree Columns - Clean



B2011 - Exterior Tree Columns Spalling - Repair



B2011 - Exterior Precast Sealant - Replace



B2011 - Exterior Wall Expansion Joint - Replace



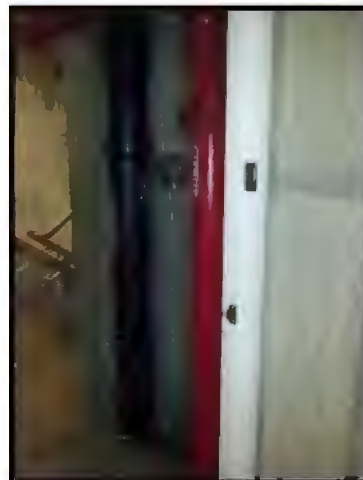
B2023 - Storefront Inserts - Install



C1011 - Electrical Closet Shaft Opening - Add Rated Separation



B3011 - Roof System Fall Protection - Add



C1011 - Exposed 8 StormSewer Lines in Stairs - Add Rated Separation



C1011 - Fire Pump Room - Add Rated Separation 1



C1011 - Firestopping @ Floor Penetrations - Repair



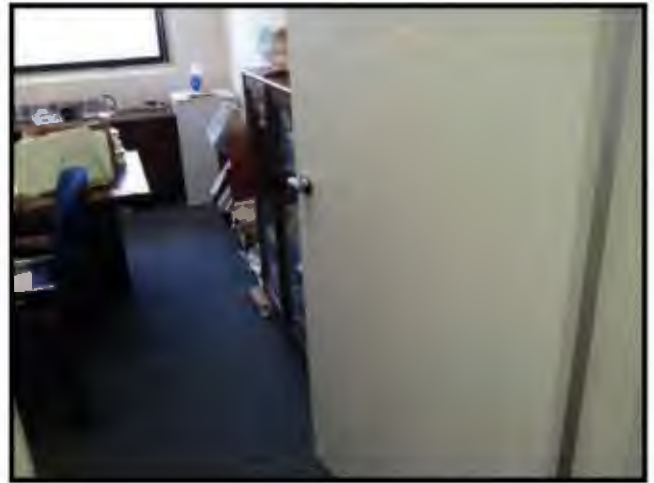
C1011 - Fire Pump Room - Add Rated Separation 2



C1011 - Panels and Conduits Exposed in Stairs - Add Rated Separation



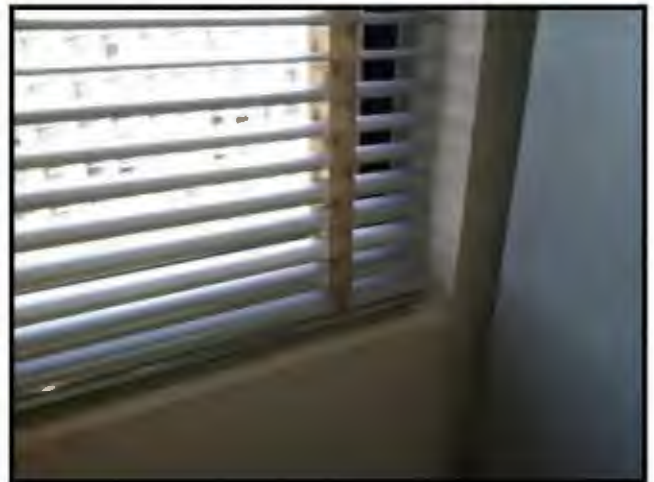
C1011 - Standpipes Not Enclosed - Add Rated Separation



C1023 - Door Hardware - Replace



C1020 - Doors Not Code Compliant - Replace



C1037 - Window Blind System - Replace



C2010 - Loading Dock Handrails - Provide Guards



C3012 - Interior Walls and Ceilings - Repaint



C2014 - Stair Guards and Handrails - Replace



C3020 - Concrete Floor - Reseal



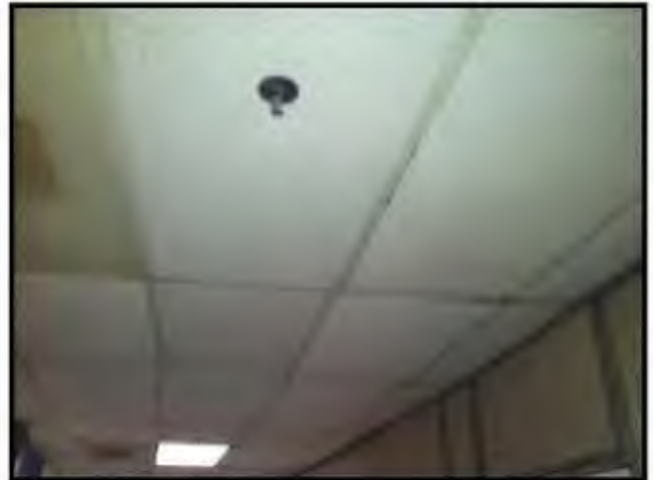
C3024 - Kitchen Servery Sheet Flooring - Repair



C3025 - Carpet Tile - Replace



C3025 - Broadloom Carpet - Relace



C3032 - Corridor Acoustical Tile Ceiling - Replace



D1011 - Passenger Elevators - Modernize



D2018 - Drinking Fountain Filtration Equipment - Replace



D2010 - Plumbing fixtures - Replace



D2018 - Drinking Fountain Water Cooler - Replace



D2018 - Drinking Fountain Water Cooler - Replace



D2020 - Restroom Water Pressurization System - Replace 1



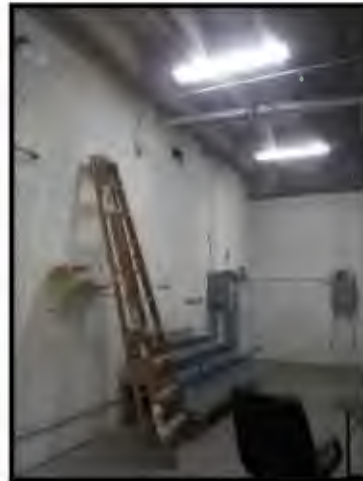
D2018 - Drinking Fountains - Repair



D2020 - Restroom Water Pressurization System - Replace 2



D2034 - Sewer Ejector Pumps - Replace



D3042 - Battery Room Ventilation - Install



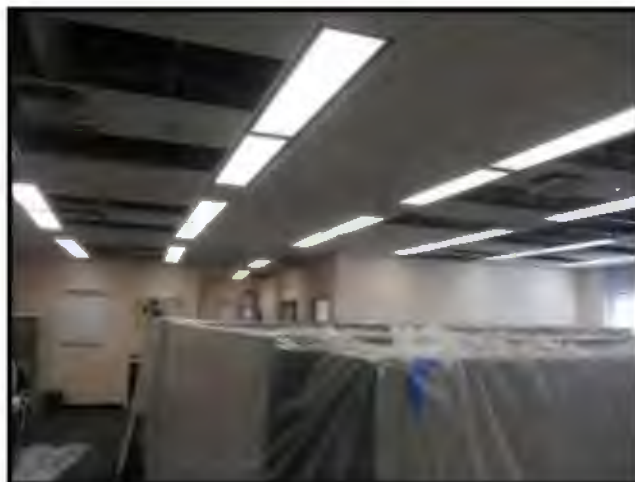
D2043 - Rain Water Sump Pumps - Replace



D3042 - Garage Exhaust Ventilation System - Upgrade



D3042 – Stair Pressurization – Install



D4010 - Sprinklers - Install



D4010 - Arm Over Sprinkler Supports - Install



D4010 – Fire Sprinklers Electrical Rooms - Modify



D4011 - Sprinkler Water Supply - Increase size of supply



D4095 - Electrical Vault Ducts - Install Dampers



D4024 - Fire Hose Valve - Install



D5011 - Medium Voltage Primary Service Switchgear - Replace



D5012 - Electric Distribution - Add New Power Risers



D5012 - Electrical Panels Clearance- Modify



D5012 - Electrical Equipment Covers Missing - Replace



D5012 - Elevator Electrical Switchboard - Replace



D5012 - Existing Electrical Busduct - Recondition



D5012 - Misc Electrical Equipment Motor Control Centers - Replace



D5012 - Mechanical Room Panels - Replace



D5012 - Misc Electrical Equipment Motor Control Centers - Replace 2



D5021 - Rooftop Electrical Outlets and Misc - Repair



D5037 - Fire Alarm System - Replace 2



D5037 - Fire Alarm System - Replace 1



D5091 - Emergency Grounding System Study - Perform



D5091 - Lightning Protection System – Install



G2031 - Bluestone Paver System - Repair



D5094 - Master Clock System - Replace



G2049 - East Plaza Mushroom Covers - Repair

11 - National Capital Region	i
DC Service Center	i
ROBERT C. WEAVER BUILDING-DC0092ZZ	i

ROBERT C. WEAVER BUILDING



6A ASSESSMENT METHODOLOGY
6B GLOSSARY
6C EXPECTED USEFUL LIFE

APPENDICES

6



APPENDIX 6A

ASSESSMENT METHODOLOGY

INITIAL PROJECT SETUP

The assessment team meets with the GSA staff at the start of the project to establish criteria to be used in evaluating the property. Discussions are conducted to identify particular problems previously encountered, corrective solutions used and their effectiveness, also to learn of anticipated future projects. Existing building requirements and sensible improvements are noted.

PROPERTY SURVEY

The assessment team may include, but not be limited to, an architect, a preservation architect (if required), a mechanical engineer, a fire protection engineer and an electrical engineer. They will meet with the GSA representatives and personnel responsible for the property maintenance to understand known issues. After reviewing the construction documents, the team makes a walk-through. No destructive or intrusive testing is made.

REQUIREMENTS

These are the items noted that will need attention to maintain the condition and operability of the property. These are sometimes referred to as deficiencies. Each identified Requirement details the condition, the how, when, where and why. This is followed by the Action needed to rectify this condition. This in turn is followed by the Estimate, an itemized list for the probable cost of the remedial Action.

The Requirements are classified in several ways. Each is assigned a Priority, a Prime System and a Category.

REQUIREMENT PRIORITIES

PRIORITY ONE – CRITICAL OR IMMEDIATE.

This is for emergencies. As these are dealt with promptly by the GSA Service Center, they are typically a non-issue in this report and Priority one is seldom used.

PRIORITY TWO – POTENTIALLY CRITICAL OR SHORT TERM CONCERNS, Potentially Critical, or Short Term Concerns within years 1 and 2.

PRIORITY THREE – NECESSARY – NOT YET CRITICAL OR LONG TERM CONCERNS. Within years 3 to 5.

PRIORITY FOUR – NOT TIME CRITICAL. More than 5 years. Items requiring appropriate attention to preclude predictable deterioration or potential downtime and the associated damage or higher costs if deferred further.

PRIORITY FIVE – DOES NOT MEET CURRENT CODES/STANDARDS. Legacy Priority. Items do not conform to existing codes, but are grand-fathered in their existing condition. No immediate action is required, although the items will need to be addressed if any significant work is performed in the building.

REQUIREMENT CATEGORIES

CODE COMPLIANCE

ACCESSIBILITY. Violation of ADA / ABA requirements.

BUILDING CODE. Violation of building, plumbing, mechanical and electrical codes.



LIFE SAFETY. Violation of NFPA 101 Life Safety Code.

OPERATIONS

ENERGY. Conditions adversely affecting energy use.

MAINTENANCE. Items require routine maintenance.

SECURITY. Conditions compromising protection of assets or occupants.

FUNCTIONALITY

MISSION. Failure to meet standards of the organization.

MODERNIZATION. Replacement of outdated components.

PLANT ADAPTATION. Changes due to new or adapted use.

OBSOLESCENCE. Components or systems that are becoming obsolete.

CAPACITY/DESIGN. Problems keeping up with demand load.

INTEGRITY

APPEARANCE. Deteriorating ambiance.

RELIABILITY. Components or systems that cannot be depended on.

BEYOND USEFUL LIFE. Components or systems beyond their expected useful life.

ENVIRONMENTAL

AIR/WATER QUALITY. Conditions affecting environmental quality.

ASBESTOS. Visible observance of suspected asbestos containing materials.

LEAD. Visible observance of suspected lead-based paint.

PCB. Visible observance of suspected PCB use.

MISCELLANEOUS

SPACE UTILIZATION

OSHA

REQUIREMENT PRIME SYSTEMS

UNIFORMAT Level 4

REQUIREMENT - ACTION

For every Requirement there is an associated Action. This outlines a remedy for the requirement with reference to implementation and coordination. In historic buildings 50 years and older it may include a Statement of Effect that the corrective action described poses NO ADVERSE EFFECT on the property.

The RS Means costs used in the program do not always include items needed. Non-Means items are not to be used as they would not be modified when the costs are automatically updated. Overtime the use of Non-Means prices would result in an increasingly inaccurate cost. To overcome this creeping error, a line item has to be substituted of an equivalent cost. Such a substitution needs to be identified and recorded in Action under a heading COST SUBSTITUTION.

REQUIREMENT – ACTION – ESTIMATE

The total cost in the program includes subcontractors' overhead and profit. It does NOT include the General Contractor's overhead and profit that needs to be added by the appropriate project manager. The cost estimate shall include all line items to cover the complete action. The recommended procedure is to use the systems available in the program. These systems are generic and some line items may need to be changed to suite the project conditions.

Another aspect to consider is that General Conditions have to be added as required. Sometimes this may appear to be double pricing and will need the project manager's attention. For example two different Requirements may have a cost for scaffolding with different priorities. It may be possible to coordinate the two requirements and save one set of scaffolding. When this coordination is not possible two sets of scaffolding will be required. Projects will usually require the



rental of a dumpster, haulage to the landfill and a tip fee. Discretion is needed, as small jobs may not have much trash and as it can be removed on the contractor's truck.

The costs are modified according to the project location. Another adjustment factor is added to the estimate of each requirement the sum of the following items as appropriate.

Design and Management Fees	0.15 or 15.0%
Work in Occupied Space	0.20 or 20.0%
Work in Security Areas	0.07 or 7.0%
Work in an Historic Structure	0.088 or 8.8%

REQUIREMENTS INDEX versus FACILITY CONDITION INDEX

The Requirements Index (RI) is the total sum of all Requirements divided by the Replacement Value. The Facility Condition Index (FCI) is the total value of a subset of Requirements, (either based on category or priority), divided by the current replacement value. For GSA the RI = FCI.

CONDITION LEVELS

Condition	Range
Very Good	0.00 to 0.05
Good	0.051 to 0.10
Fair	0.11 to 0.15
Poor	0.151 and above.

REPLACEMENT VALUE

Within the program there are a series of cost templates for different asset types. The templates include a square foot cost for each asset. The target overall replacement cost (total \$/SF) are derived from the functional replacement values obtained from the GSA. Individual systems \$/SF are derived from industry standard costs such as RS Means and the teams' professional experience. Each asset is assigned a cost

template that reflects its use. The program multiplies the \$/SF with the gross area entered for each asset and determines the replacement cost of that asset. The individual assets are then added to determine the replacement value of the plant.

CODES

The detailed on-site assessment of property included a review of all major building systems for code compliance. The codes used were:

- PBS P100 FACILITIES STANDARDS for the Public Buildings Service, revised 2010.
- UNIFORM FEDERAL ACCESSIBILITY STANDARDS (UFAS), Federal standard 795, April, 1988 and PL 90-460.
- AMERICANS WITH DISABILITIES ACT (ADA), 1991 Title III Regulations (28 CFR Part 36, Revised 1994). GSA policy encourages compliance with the requirements of the Americans with Disabilities Act Accessibility Guidelines (ADAAG) where those requirements are stricter than UFAS.
- ARCHITECTURAL BARRIERS ACT (ABA), Federal facilities' accessibility standards, 1968, amended 42 U.S.C. §§4151 et seq.
- ENERGY POLICY ACT OF 1992 (P.L. 102-486, 106 Stat. 2776)
- THE SECRETARY OF THE INTERIOR STANDARDS FOR REHABILITATING HISTORIC BUILDINGS, Revised 1992 (36 CFR 67)
- ENERGY CONSERVATION REFIT STUDY, if applicable.
- HISTORIC STRUCTURE REPORT, if applicable.
- HISTORIC BUILDING PRESERVATION PLAN (HBPP), if applicable.
- HAZMAT REPORTS, if applicable.



- 2012 INTERNATIONAL BUILDING CODE, maintained by the International Code Council (ICC) (Except for Chapter 10 - use NFPA 101 for egress requirements)
- 2012 INTERNATIONAL EXISTING BUILDING CODE
- 2012 INTERNATIONAL MECHANICAL CODE
- 2012 INTERNATIONAL PLUMBING CODE
- 2012 NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 101, LIFE SAFETY CODE, including Egress Requirements
- 2010 NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 101A, GUIDE TO ALTERNATIVE APPROACHES TO LIFE SAFETY
- 2011 NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 70, NATIONAL ELECTRIC CODE (NEC). NEC requirements have been adopted by GSA in lieu of the electrical requirements of the national model building codes.
- 2013 NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 72, NATIONAL FIRE ALARM AND SIGNALING CODE
- OTHER NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) codes as referenced by the 2012 International Building Code.
- ASTM E2018-08 Standard Guide for Property Condition Assessments

□ END OF ASSESSMENT METHODOLOGY

APPENDIX 6B

GLOSSARY

ACTION

A strategy for correcting a requirement that includes the work to be done, along with an estimate of the probable construction cost.

For each requirement, you can enter information about possible actions and identify one as the prime action to be used in the calculation of the FCI and RI. Each action can include information about its difficulty and its estimated cost. Cost line items can be entered automatically, or manually.

ADJUSTMENT FACTOR

A number assigned to an action signifying the complexity and/or resources required to fix a requirement. The requirement factor is multiplied against the line items for the total action cost.

ASSEMBLY

A component of an asset, such as a window or roofing.

You can enter information about any system assemblies in an asset, such as name and location. You can then link assemblies and requirements, rooms, or photos.

ASSET

A freestanding structure, a portion of a structure, or any other part of facility infrastructure that is distinguishable from its surroundings by date of construction, construction type, and/or the systems that serve it. Assets are grouped together into a service center. You can enter information about each asset, including its name,

number, cost and condition, and assign a cost model to it.

ASSET TYPE

The role that the asset has in the facility. For example, an asset can be a building, a utility, or an outdoor structure.

The Asset Type field allows the asset record to be customized to capture information about a variety of buildings and infrastructure that can exist in a facility.

ASSET USE

The primary organizational function that a specific asset serves.

BACKLOG DETERIORATION RATE

The increase in cost from year to year of delaying a remedy of a requirement, independent of inflationary increases in construction costs.

CAPITAL IMPROVEMENT

A change to a facility's assemblies, finishes, fixtures, equipment, systems, and/or program that is not required for its most basic function. In addition, a change that is required to bring a facility into conformance with existing codes is considered an improvement as long as it is grandfathered in the existing condition.

CITY COST INDEX

A factor used to adjust RSMeans Construction Data to a specific city. The appropriate CCI can be selected from a list compiled by RSMeans that includes most major U.S. and Canadian cities.

COMMISSION DATE

The date an asset is included in a facility. Assets can be entered prior to this date.

COMPONENT

An asset assembly, finish, fixture, equipment or other system that makes up an asset.

COMPUTER AIDED DESIGN (CAD)

A program for creating and manipulating electronic drawings stored in a computer.

CONSTRUCTION TYPE

The type of construction relative to structural elements and their fire protection. See Building Code.

DECOMMISSION DATE

The date an asset is no longer a part of a facility.

DISTRIBUTION CURVE

The distribution of component renewal costs over the specified Renewal Period

ESTIMATOR

The actual person who estimates the cost the cost of an action for a requirement.

EXTENDED

An action, the total calculated for each line item (quantity multiplied by unit price), including the Overhead and Profit for the given trade.

FACILITY CONDITION INDEX (FCI)

An industry standard created to measure the relative condition of assets. The total value, or subset, of requirements divided by the current replacement value for the asset produces the FCI. Generally speaking, the higher the FCI is, the poorer the condition of the facility. The set of the requirements used to calculate FCI depends upon the method of FCI calculation that is used. FCI for the site is configured by an administrator. For the GSA, the Facility Condition Index (FCI) equals the Requirements Index (RI). See *Requirements Index*.

FACILITY RENEWAL FORECAST

A forecast that models the estimated renewal costs for all asset components as they approach the end of their useful lives.

FCI

See *Facility condition Index*.

FISCAL PLAN

A financial schedule for the correction of requirements.

FISCAL YEAR

An accounting period lasting 365 days (or 366 days) that does not necessarily mirror the calendar year. In VFA *facility*, forecasts and FCI calculations are reset at the beginning of each financial year. For GSA the beginning date of the fiscal year is October 1st.

FLOOR

All the contiguous occupiable space within an asset that shares the same elevation or floor level.

FUNDING DISTRIBUTION CURVE

The costs of repairing different types of systems are distributed differently across time. Some systems require no repair and are just replaced. Others are continually repaired. Some systems fall fairly predictably at the end of their expected useful life; others vary considerably.

The funding distribution curve specifies the shape of the distribution around the estimated end of life of the system. The percentage specifies how much variation is anticipated around the expected end of life. For example, a system that is expected to be replaced very close to the expected end of life, with little repair costs along the way, would best be by Spiky 25%, indicating that all costs would occur very close to expected end of life. Systems with unpredictable life times and distributed costs might use Bell 50%, giving the broadest distribution of costs.

FUNDING SCENARIO

A strategy for expending funds to remedy physical plant requirements, expressed as a statement of how much is to be funded in each future year; these amounts vary from year to year.

HISTORICAL CATEGORY

The historical significance of an asset that can be selected from a customizable list, if applicable.

INFRASTRUCTURE

The elements and systems included in a facility. A piece of facility infrastructure is entered into VFA.facility as an asset. When an asset record is created, specified asset type identifies the type of infrastructure, and customizes the asset record's fields in order to collect type-appropriate data.

INSPECTOR

The actual person who observed and investigated the current requirement and/or entered the observed data and requirement into VFA.facility.

LIFETIME

The number of years a new asset component is expected to be useful. This is also referred to be the component's expected useful life (EUL).

LINE ITEM

A discrete cost in an action. It includes the class, the code, the description, the number of units, the unit of measurement, a unit cost, and a total cost that includes the Overhead and Profit for the given trade.

LIST

A list has records in rows, and attributes in columns. A record and an attribute intersect in a field, or cell. You can access the records by selecting them from the list.

LOGICAL SERVICE CENTER

A service center that contains only specific assets based on proximity, like East or West, or other criteria.

OP TOTAL

An action, the total calculated for each unit in a line, including the Overhead and Profit for the given trade (under the heading "Each").

PHYSICAL SERVICE CENTER

A service center that contains all the assets within its boundaries.

PRIME ACTION

The action chosen above other methods of action. The prime action's cost is included in the total cost requirements.

PRIME SYSTEM

The single construction assembly or mechanical system that contributes to a requirement.

PRIORITY

The severity of a requirement, and the time frame during which it should be scheduled for correction.

REGION

The first level of division for facility management: a geographical area of the country. Regions are divided into service centers.

RS MEANS

See CCI.

RECORD

A single row of information in a list. It contains all the information for an item, such as service center or asset.

RENEWAL PERIOD

The period of time for which an individual asset component may need to be replaced. It is expressed as a percentage of the asset component's useful life. This

parameter is set before calculating the Facility Renewal Forecast.

REPLACEMENT VALUE

The amount of funds required to replace a specific asset in like kind. It is the result of multiplying the cost per square foot from the appropriate asset template by the number of square feet (gross area).

RESOURCE

The appropriate type of labor for a specific service center. The labor rates for each RS Means line item within a correction are affected by the resource type selected.

REQUIREMENT

A deficient characteristic of an assembly, fixture, piece of equipment, or any other asset system. A requirement indicates an asset system is any of the following.

- Broken or unsafe in any aspect.
- No longer performing intended functions.
- Approaching or exceeding its useful life.
- Not conforming to current codes or equivalent standards.
- Outdated from a functional, organizational or aesthetic perspective.

REQUIREMENT CATEGORY

Information about the type of issues that must be addressed for a requirement.

REQUIREMENTS INDEX (RI)

An index that uses all the requirements, regardless of category or priority, to measure an asset's relative condition. The total value of all requirements divided by the current replacement value for the asset produces the RI. Generally speaking, the higher the RI is, the poorer the condition of the facility. For the GSA, the Requirement Index (RI) equals the Facility Condition Index (FCI).

SERVICE CENTER

An entity that manages a group of assets.

SERVICE CENTER MAP COORDINATE

An identifier for the location of an asset on a service center map or site plan.

SIZE

The gross area of the asset. The accuracy of the size calculation affects the asset's replacement value.

SYMMETRICAL DISTRIBUTION

A distribution curve in which some of the renewal costs occur before the end of a component's useful life, and some occur after.

SYSTEM MODEL

An asset's systems or components with relevant cost information. System models calculate an asset's cost per unit of measurement, this determines the asset's replacement value.

TERM

The term of a forecast is the number of years in the projection. Also known as the Evaluation Period.

UNIFORMAT II

A standard classification of building elements.

☐ END OF GLOSSARY

APPENDIX 6C - EXPECTED USEFUL LIVES

The following list is the average Expected Useful Life (EUL) recommended by the Building Owners and Managers Association (BOMA) International. This list is sorted by the Uniformat II Number.

Unif.	Name	Yrs	Unif.	Name	Yrs
Exterior Structure			Interior Structure		
A1010	Standard Foundations	100	C1010	Partitions	40
A1020	Special Foundations	100	C1020	Interior Doors	40
A1030	Slab on Grade	100	C1030	Fittings	40
A2020	Basement Walls	100	C2010	Stair Construction	40
Superstructure			Wall Finishes		
B1010	Steel Frame	LOB	C3010	Wall Finishes	10
B1010	Concrete Frame	LOB	C3012	Vinyl Wall Covering	10
B1010	Wood Frame	LOB	C3012	Painted	5
B1010	Floor Construction	100	C3012	Wall Paper	4
B1011	Parking - Basement	LOB	C3012	Epoxi (two part)	7
B1012	Parking Deck - Exposed	30	C3012	Fabric	5
B1012	Parking Deck - Covered	40	C3012	Wood	15
B1020	Roof Construction	100	Flooring		
Ext Wall Construction			C3020	Floor Finishes	15
B2010	Exterior Walls	100	C3023	Concrete	50
B2011	Brick, Block, or Stone	LOB	C3024	Vinyl - Tile	12
B2011	Concrete - Poured-in-Place	LOB	C3024	Vinyl - Sheet	12
B2011	Metal Curtain Wall	LOB	C3024	Stone - Granite 7	75+
B2011	Glass Curtain Wall	30	C3024	Stone - Marble	50
B2011	Precast Panels	35	C3024	Terrazzo	50
B2011	Stone Veneer	35	C3024	Wood	15
Windows			C3025	Carpet - Broad Loom	5
B2020	Exterior Windows	25	C3025	Carpet - Tiles	5
Doors			C3025	Carpet - Loop Pile	7
B2030	Exterior Doors	25	Ceiling		
B2031	Door Hardware - Entry Lockset	5	C3030	Ceiling Finishes	20
B2031	Door Hardware - Closer	5	C3032	Suspended - Spline System	20
B2031	Door Hardware - Automatic Garage Dr	5	C3032	Suspended - Lay-In System	25
Roofing			C3032	Suspended - Ceiling tiles	13
B3010	Roof Coverings	15	C3033	Plaster/Gypsum Board with skim coat	30
B3011	Asphalt - Dead Level	18	C3033	Metal	25
B3011	Asphalt -	25	C3033	Wood	30
B3011	Cold Tar	35	Conveying		
B3011	Hot Applied Rubberized Asphalt	30	D1010	Elevators and Lifts	30
B3011	Mod. Bit. Mopped Down - Dead level	15	Plumbing		
B3011	Mod. Bit. Mopped - Sloped 1/4" in 1'	20	D2010	Plumbing Fixtures	30
B3011	EPDM - Dead Level	15	D2020	Domestic Water Distribution	30
B3011	EPDM - Sloped 1/4" in 1 foot	20	D2030	Sanitary Waste	30
B3011	Thermoplastic (Hypalon, PVC)	15	D2040	Rain Water Drainage	30
B3011	Mod. Bit. Torched On - Dead level	10	D2090	Other Plumbing Systems	30
B3011	Mod. Bit. Torched On - Sloped 1/4" in 1'	15	HVAC		
B3011	Structural Roof Panels - Galv. steel	25	D3010	Energy Supply	25
B3011	Arch. Roof Panels - Alum/Galv.Stl	25	D3020	Heat Generating Systems	25
B3011	Custom Non-fer. Standing Seam Rfg 7	75+	D3030	Cooling Generating Systems	25
B3011	Custom Non-fer. Flat Seam Roofing 5	50+	D3040	HVAC Distribution Systems	25
B3011	Asphalt Shingles - 15 year	15	D3050	Terminal & Package Units	25
B3011	Asphalt Shingles - 20 year	20	D3060	HVAC Controls & Instrumentation	25
B3011	Asphalt Shingles - 25 year	25	D3090	Other HVAC Systems/Equip	25
B3011	Asphalt Shingles - 30 year	30	Life/Fire Safety		
B3011	Slate - S-1 1	100	D4010	Sprinklers	25
B3011	Slate - S-2	75	D4020	Standpipes	25
B3011	Slate - S-3	50	D4030	Fire Protection Specialties	25
B3011	Clay or Concrete Tile 5	50+	D4090	Other Fire Protection Systems	25
B3011	Spray-On Polyurethane Foam Roofing	10	Electrical		
B3020	Roof Openings	20	D5010	Electrical Service/Distribution	30
			D5020	Lighting and Branch Wiring	20
			D5030	Communications and Security	10
			D5090	Other Electrical Systems	30

Safety, Environment and Fire Protection Branch Survey

for the

Robert C. Weaver Building

451 Seventh Street SW,
Washington, DC 20410
Building Number DC0092ZZ



Submitted to **GENERAL SERVICES ADMINISTRATION**
301 7th Street SW, Washington DC 20407

Submitted by **CINNOVAS DEVELOPMENT GROUP, LLC**
1000 Connecticut Avenue NW, Suite 900
Washington, D.C. 20036
Tel. 202-469-3446

Submitted on September 27, 2013

GSA Contract No. GS-11P-11-YA-C-0077

SAFETY, ENVIRONMENT AND FIRE PROTECTION BRANCH SURVEY

Robert C. Weaver Building
(DC0092ZZ)

451 7th Street SW
Washington, DC 20410

Prepared by Rhino Fire Protection Engineering, PLLC
and
Mabbett & Associates, Inc.

Task Order No. GS 11P 11 YA C 0077
NCR Historic Building: No
Lease Expires: GOVT OWNED
FSES ANALYSIS RESULTS

	Fire Control	Egress	General Fire Safety
Provided	15.0	11.0	19.0
Required	7.5	5.0	6.0
Equivalency	7.5	6.0	13.0

NEW FINDINGS BY RAC LEVEL	
RAC1	0
RAC2	0
RAC3	5
RAC4	13
Minor	33

September 27, 2013



ROBERT C. WEAVER BUILDING, WASHINGTON, DC SAFETY, ENVIRONMENT AND FIRE PROTECTION BRANCH SURVEY

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ROBERT C. WEAVER BUILDING, WASHINGTON, DC SAFETY, ENVIRONMENT AND FIRE PROTECTION BRANCH SURVEY

1.0 EXECUTIVE SUMMARY

The Robert C. Weaver Building at 451 7th Street, SW, Washington, DC is located adjacent to L'Enfant Plaza and has 10 levels above grade, a mechanical penthouse and elevator machine rooms located at the roof level, and a basement and sub-basement level below grade. The building is occupied by the Federal Government, with the Department of Housing and Urban Development (HUD) occupying the entire building.

Based on the fire safety analysis, the building is deemed safe to occupy. Eighteen new items (fire and life safety items 5 through 22) were noted, with a capital cost. The remaining items should be corrected as part of routine maintenance and operational improvements. There were thirty-six existing open items (fire and safety items) listed in the IRIS database findings. There were twenty-two new fire protection and life safety findings that were identified ranging between RAC 1 and minor: the findings were identified as four minor findings and eighteen RAC 3 and 4 findings. Twenty-seven new minor facility safety related items were noted. Two environmental related items were noted. The minor findings should be corrected immediately and funded as an operational cost (i.e. non capital), and therefore have not been included within the accompanying Building Engineering Report.

Fire and Life Safety Related

There were twenty-two fire and life safety related findings (RAC1 to RAC4 and minor):

1. The fire extinguishers are not marked as being inspected for monthly – minor issue.
2. There is storage of boxes and general items in the electrical closet on the 5th floor in 5S9 – minor issue.
3. The emergency exit light by 8S2 on the 8th floor is not working – minor issue.
4. There is storage in the stairs – minor issue.
5. The stair doors at Stair 6 (second floor), Stair 5 (3rd floor), Stair 2(garage levels), Stair 7 & 8 (Penthouse) do not close – RAC 4.
6. There are no fire dampers in the ducts in the rated walls enclosing the transformer vault – RAC 4.
7. There are many areas throughout the building without sprinkler coverage due to lack of sprinklers, overspacing of sprinklers, and obstruction of sprinklers – RAC 3.
8. There are many arm-overs for the sprinklers throughout the basement that are greater than 12" and are unsupported – RAC 4.
9. No stair pressurization systems are provided for the stairs in the building - RAC 3.
10. The fire alarm system needs replacement (other than the EST 3 which was replaced two years ago) due to the following reasons: older style strobes are located throughout the building; there is insufficient strobe coverage throughout the building (i.e. lack of strobes in copy rooms, workrooms, and conference rooms, overspacing in bathrooms, corridors, and open offices, etc.); strobes are located above 80" in many locations throughout the building; older style conventional system that is no longer manufactured; no smoke detectors are provided in any of the mechanical, electrical, or telephone rooms/closets; the pull stations at the central stairs are located at 62" – well above the maximum height; the duct smoke detectors are not working; the garage dry sprinkler system is not currently monitored; the penthouse only has two bells – one of which is damaged - RAC 3.
11. The fire pump is not separated from other mechanical equipment by 2-hour construction and the door rating is not visible – RAC 4.
12. There are no fire penetration sealants at the floor penetrations throughout the electrical and telephone closets or at the transformer room – RAC 4.



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13. There are automatic sprinklers and branchlines located directly over the switchgear on The Sub-Basement Level transformer electrical vault – RAC 4.
14. The stair handrails and guards do not meet the graspability and openness requirements and the stair door handles do not meet ADA – RAC 4.
15. There is a shaft opening in the electrical closet on the 6th floor in 6N5 – RAC 4.
16. There are no guards provided (need approximately 30' of guards) on the ramp in the basement loading dock do not meet the height requirement of 42" – RAC 4.
17. The standpipes on the first floor are not enclosed with fire resistant construction – RAC 4.
18. The 8" storm/sewer lines are located in Stairs 5, 6, 7, and 8 – RAC 4.
19. The Battery Room doesn't have proper ventilation – RAC 4.
20. Stair 7 doesn't have a fire hose valve on the basement level – RAC 4.
21. Large electrical conduits (3") and panels are located in stairs 5, 6, 7, and 8 – RAC 3.
22. Fix the issues associated with the recent fire pump inspection and 8" supply line – RAC 3.

Safety Related

There were 27 minor safety related findings:

1. Illumination measurements collected in several areas were below levels recommended in 41 CFR 102-74-180 – minor issue.
2. Junction box covers were missing in the following locations: SB-155, 4S10, 4N14, 4145, 5N15, 7S2, 7N9, and 8N9 – minor issue.
3. Light switch cover plates were missing or broken in the following locations: 3N5, 5N15, 5910, 6N5, and 10N5 – minor issue.
4. Outlet cover plates were missing in room B229 – minor issue.
5. Power strips were daisy chained together in the following locations: 4170, 4178, 8147, 8100, and 9162- minor issue.
6. Electrical panel covers were missing in the following electrical closets: 2145, 4145, 5145 and 7N14 – minor issue.
7. Electrical panels were improperly locked and tagged out in the following locations: 4145, 4N2, 4N9 – minor issue.
8. Electrical closet 7S9 electrical panel had an opening without a breaker switch or cover – minor issue.
9. Fan in conference room 9164 had a missing guard – minor issue.
10. A fire exit was blocked by a coat rack in room 8147 – minor issue.
11. A hole was in the floor causing a potential tripping hazard in the office of Justin Brock in suite 7256 – minor issue.
12. Cords across a walkway caused a potential tripping hazard in room 10155 – minor issue.
13. Pipes and hoses in a walkway caused a potential tripping hazard in penthouse mechanical room – minor issue.
14. Fire extinguishers were not wall-mounted in penthouse room 9-16, elevator 17 room, B-157-B and outside the transformer vault – minor issue.
15. Access to fire extinguisher in room B-157-B was blocked –minor issue.
16. Fire extinguishers were not inspected monthly –minor issue.
17. Air handler A-11-3 had a chilled water pipe leaking causing a slip hazard –minor issue.
18. Access to air handler room A-11-24 electrical panel was blocked –minor issue.



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19. Multiple potential tripping hazards were not appropriately identified on the upper roof –minor issue.
20. Hydraulic hoist on the upper roof was not being inspected and documented –minor issue.
21. Electrical outlet below TV cable box 5 on upper roof was not securely mounted –minor issue.
22. Water in condensate cooling troughs was observed to be discolored with a visible foam- minor issue.
23. Eyewash station in chiller plant, sub-basement and room S-B-168 were not being inspected – minor issue.
24. No personal protective equipment (PPE) was available in battery room of S-B-168 –minor issue.
25. Stained ceiling tiles were observed in room B229 –minor issue.
26. Loading dock cleaning storage room had no eyewash –minor issue.
27. Batteries, chemicals and miscellaneous materials were stored improperly in the storm ejection room –minor issue.

Environmental Related

There were two environmental related findings:

1. A broken fluorescent light bulb was found in electrical closet 4145 – minor issue.
2. Light bulbs that may contain mercury were stored in electrical closets 6S4 and 5S9- minor issue.

2.0 INTRODUCTION

Under Contract No. GS11P11YAC0077 with the General Services Administration (GSA) CINNOVAS is tasked to provide Facility and Fire Safety and Occupational Health and Safety Surveys of Federally occupied buildings in the National Capital Region. This report details the results of the Facility and Fire Safety Survey of the Robert C. Weaver Building that is located at 451 7th Street SW, Washington, DC 20140 that was conducted under Task Order No. GS 11P 11 YA C 0077. The survey was conducted on August 7th through August 9th, 2013 by Craig P. Thompson, P.E. and Fernando A. Escalante, of Rhino Fire Protection Engineering, PLLC on behalf of CINNOVAS Development Group. Occupational safety and environmental portions of this study were completed by Damien Hammond and Lindsay Mahoney of Mabbett and Associates, Inc. on the same dates. The lead in water testing was completed by Damien Hammond on August 9th, 2013.

There were a total of fifty-one (51) findings resulting from this survey. There were twenty-two new fire and life safety findings relating to the fire pump separation, egress, fire extinguishers, sprinkler systems, exit lights, and the fire alarm system. For safety issues, there were twenty-seven items regarding low illumination levels, guards, smoke hoods, SCBA's, appliances, electrical panels, eye-wash stations, leaks, tripping hazards, and mold. Two environmental issues were identified related to a crushed fluorescent bulb and improper storage of fluorescent bulbs.

The estimated square footage of the space in this facility is 1,372,279 gross square feet. Minor findings are in Appendix A, the building profile is in Appendix B and the FSES Analysis for the building is in Appendix C. Findings with a RAC of 1, 2, 3, or 4 are recorded in Section 5.0 and the IRIS Open Condition Report is located in Appendix D of this report. Water test results are contained in Appendix E. RAC 1-4 cost breakdowns are in Appendix F.



3.0 SURVEY METHODOLOGY

3.1 OPENING CONFERENCE

CINNOVAS survey representatives arrived on site at the Hubert Humphrey Building, and an opening conference was held with Mr. Bruce Carter, HUD, Ms. Elisa Scott, HUD, Mr. Mark Lebel, HUD, Mr. George Jones, HUD, Mr. Harold Stevens, HUD, Mr. David Wolff, General Services Administration (GSA), and Mr. Peter Johnson, GSA. The representatives reviewed the purpose of the visit and the procedures to be used during the conduct of the survey effort.

3.2 APPLICABLE STANDARDS

During the conduct of the inspection, the following standards and guidelines were used to evaluate the fire safety conditions at the aforementioned facility:

Latest National Fire Protection Association (NFPA) Codes as of contract date (2012). Applicable Codes include:

- NFPA 13 (2013) – Standard for the Installation of Sprinkler Systems
- NFPA 25 (2011) – Standard for the Inspection, Testing, and Maintenance of Water Based Fire Protection Systems
- NFPA 70 (2011) – National Electric Code
- NFPA 72 (2013) – National Fire Alarm and Signaling Code
- NFPA 101 (2012) – Life Safety Code
- NFPA 101A (2010) – Guide to Alternative Approaches to Life Safety

- 29 CFR part 1910 Occupational Safety and Health Standards
- 41 CFR Public Contracts and Property Management
- IBC (2012) International Building Code for new construction and renovations
- IMC (2012) International Mechanical Code
- GSA PBS P 100 (2010) Facilities Standards for the Public Buildings
- American National Standards – Occupational Health & Safety Management Systems (Z10-2005)



3.3 INSPECTION PROCEDURES

The walk through survey consisted of observing the condition of facilities and inspecting the condition of equipment, the storage of materials, and any operations in progress that may affect the physical facility or GSA owned or leased equipment. Surveyors took note of the layout of the equipment/materials in the facilities as they relate to fire safety. In addition, a review of the building's fire protection features, e.g., fire detection/alarm systems, fire suppression systems (both fixed and portable), fire divisions and doors, emergency lighting and exit signs, and means of egress was conducted. Where potential hazards were identified, these were brought to the attention of the appropriate facility personnel and discussions of possible remedies were held.

3.4 DESCRIPTION OF FACILITY

The Robert C. Weaver Building that is located at 451 7th Street SW, Washington, DC 20410, was built (completed) in 1967 per the documents. It is a publicly owned building consisting of ten levels above grade and two levels of storage/mechanical/electrical/garage below that. The Department of Housing and Urban Development (HUD) occupies the entire building. The building is approximately 130 feet high for fire department access to the tenth floor (highest occupiable floor).

The building is protected by a sprinkler system and a separate standpipe. Portable dry chemical fire extinguishers are provided in the building office and the mechanical spaces. The building has a protected steel framed roof, concrete columns and interior load bearing walls and floors were constructed of reinforced concrete. These structural features are 2 hour rated construction, allowing a worst-case of type 1B construction per the IBC, which equates to type I (332) construction per NFPA 220 (2012). The NFPA occupancy classification is mixed use Assembly, Daycare, Business, and Storage, which equates to an International Building Code classification of Assembly (A-1 and A-3), Daycare (I-2), Business (B), and Storage (S-2).

4.0 RESULTS

Highlights of the facility and fire safety survey are contained in this section. Section 4.1 highlights the facility safety findings; Section 4.2 highlights the fire safety findings; and Section 4.3 highlights the environmental management findings. Many of the findings associated with these categories are described here as well as in Appendix A.

4.1 FINDINGS FACILITY SAFETY SURVEY

There were six open safety conditions in the IRIS database for the building areas surveyed.

4.1.1 WALKING/WORKING SURFACES

The walking and working surfaces throughout the facility consisted of carpet, concrete, Terrazzo and vinyl composite tile.

There were eight minor findings:



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1. A hole was in the floor causing a tripping hazard in the office of Justin Brock in suite 7256- minor issue.
2. Cords across a walkway caused a potential tripping hazard in room 10155- minor issue.
3. Pipes and hoses in a walkway caused a potential tripping hazard in penthouse mechanical room-minor issue.
4. Air handler A-11-3 had a chilled water pipe leaking causing a potential slip hazard- minor issue.
5. Multiple potential tripping hazards were not appropriately identified on the upper roof- minor issue.
6. Stained ceiling tiles were observed in room B229- minor issue.
7. Hydraulic hoist on the upper roof was not being inspected and documented- minor issue.
8. Water in condensate cooling troughs was observed to be discolored with a visible foam- minor issue.

4.1.2 ELECTRICAL SYSTEMS

The building is equipped with a standard three-wire grounded electrical system. Over current protection is provided by breakers located in an electrical closet on each floor and the mechanical room in the basement and penthouse.

There were nine minor findings:

1. Junction box covers were missing in the following locations: SB-155, 4S10, 4N14, 4145, 5N15, 7S2, 7N9, and 8N9- minor issue.
2. Light switch cover plates were missing or broken in the following locations: 3N5, 5N15, 5910, 6N5, and 10N5- minor issue.
3. Outlet cover plates were missing in room B229- minor issue.
4. Power strips were daisy chained together in the following locations: 4170, 4178, 8147, 8100, and 9162- minor issue.
5. Electrical panel covers were missing in the following electrical closets: 2145, 4145, 5145 and 7N14- minor issue.
6. Electrical panel was improperly locked and tagged out in the following locations: 4145, 4N2, 4N9- minor issue.



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7. Electrical closet 759 electrical panel had an uncovered breaker switch opening - minor issue.
8. Electrical outlet below TV cable box 5 on upper roof was not securely mounted- minor issue.
9. Access to air handler room A-11-24 electrical panel was blocked – minor issue.

4.1.3 MACHINE GUARDING

Fixed machinery in this facility consisted of the equipment associated with the HVAC system. This equipment is maintained and secured by the building contract maintenance personnel.

There was one minor finding:

1. Fan in conference room 9164 had a missing guard- minor issue.

4.1.4 EMERGENCY FIRST AID EQUIPMENT

There was a medical unit on the second floor staffed by nurses. The medical unit is open from 8 AM to 4 PM Monday through Friday.

There were three minor findings:

1. Loading dock cleaning storage room had no eyewash- minor issue.
2. Eyewash station in chiller plant, sub-basement and room S-B-168 were not being inspected- minor issue.
3. No personal protective equipment (PPE) was available in battery room of S-B-168- minor issue.

4.1.5 MATERIAL HANDLING & STORAGE

Tenant storage throughout the building is incidental to office spaces and consists of paper and office supplies in cabinets and on shelves.

There was one minor finding:

1. Batteries, chemicals and miscellaneous materials were stored improperly in the storm ejection room – minor issue.

4.1.6 NOISE



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Hearing protection required signs were posted in B level generator room. Chiller plant was a potential high noise area. No signs were posted and no ear plugs were available.

There was one minor finding:

1. Noise in the chiller plant was perceived to be excessive, and the area was not posted as a high noise area and there was hearing protection available.

4.1.7 ILLUMINATION

The lighting criterion was obtained from 41 CFR 102-74-180, The Federal Property Management Regulations. The required light levels are:

- 50 foot-candles for work surfaces (taken to mean areas where reading is required)
- 30 foot-candles for work areas (taken to mean areas not requiring reading)
- 10 foot-candles for non-work surfaces (taken to mean aisles, corridors, etc.)
- 5 foot-candles for walking surfaces

Lighting in common areas consisted of fluorescent and incandescent light fixtures. Illumination levels measured are summarized in the following table.

Table 1 - Illumination Level Measurement Summary

(Measurements Collected on August 8, 2013)

Measurement Location	Lighting Level (foot candles)	FPMR Compliant
10th Floor Office 10264	38.2	No
10th Floor Office 10142	19.2	No
10th Floor Office 10120	38.8	No
9th Floor Office 9176 lobby	59.5	Yes
9th Floor Office 9182 by Venida Brown	50.1	Yes
9th Floor Corridor by 9272	15.3	Yes
9th Floor Office by Elevator Bank	34.5	No
8th Floor Office 8154 Evelyn Wrin	83.1	Yes



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8th Floor Library	35.6	No
8th Floor Office 8208 Cubicle Karimsetti	58.8	Yes
7th Floor Lobby 7244	39.9	Yes
7th Floor 7272 Conference Room	42.2	No
7th Floor Office 7172 of Slade	52.4	Yes
7th Floor 7136 Office Lobby	41.3	Yes
6th Floor Lobby 6210	54.1	Yes
6th Floor Office Cubicle Area 6142	54.1	Yes
6th Floor Conference Room 6100	41	No
6th Floor Elevator Lobby by 6S11	12.1	No
5th Floor Suite 5256 Printer Area	49.6	No
5th Floor 5150 Conference Area	52.3	Yes
5th Floor Suite 5133	23.2	No
5th Floor Corridor Outside 5204	10.4	Yes
4th Floor Suite 4228 Lobby Area	44.6	Yes
4th Floor 4216 Conference Table	51.9	Yes
4th Floor 4130 Break Area	38.4	Yes
4th Floor 4182 Cubicle	36.1	No
3rd Floor 3182 Office Space	29.9	No
3rd Floor Dunkin Donuts Snack Area	30.7	Yes
3rd Floor 3128 Lobby Area	45.2	Yes
3rd Floor Elevator Lobby	14.4	Yes
2nd Floor Cubicle Area 2210	24.1	No



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2nd Floor Conference Area 2130	56.7	Yes
2nd Floor Corridor by 2180	6.0	No
2nd Floor Kitchenette by 2N10	74.2	Yes
Basement Guard Shack by Loading Dock	24.8	No
Basement Elevator Bank	24.6	Yes
Basement Print Shop	38.2	No
1st Floor Southeast Elevator Lobby	13.1	Yes
1 st Floor Cafeteria	13.8	No

Light levels were measured using the Exotech Model 401027, Light Meter.

There was one minor finding:

1. Illumination measurements collected in several areas were below levels recommended in 41 CFR 102-74-180 – minor issue.

4.1.8 CONFINED SPACE ENTRY

There were no confined spaces identified at the time of the survey.

4.2 FINDINGS FIRE SAFETY SURVEY

There were nineteen fire and life safety open findings in the IRIS database. There were twenty-two new fire and life safety findings. The findings were considered RAC 3, RAC 4 and minor in severity related to the fire pump separation, egress, fire extinguishers, sprinkler systems, exit signs and the fire alarm system. The FSES Analysis indicates that this building does provide an equivalent level of protection as specified by NFPA 101.

4.2.1 MEANS OF EGRESS

The building has ten floors located above grade and two floors of garage/parking/storage/mechanical below grade. The building is approximately 1,372,269 gsf. The first floor is approximately 47,390 GSF. The second through tenth floors are approximately 100,350 GSF. The mechanical penthouse is approximately 33,520 GSF. The basement is approximately 159,670 GSF. The sub-basement is approximately 135,910 GSF. The building has eight exits from each floor for floors 2 through ten and the basement levels, which is sufficient to accommodate 1,360 occupants (compared to the maximum calculated occupant load of 1,004 people for floors 2 – 10 and 532 for the basement level). The penthouse has 3 exits stairs sufficient to accommodate a maximum occupant load of 680 (compared with the



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maximum calculated occupant load of 112). The first floor has 13 egress doors that lead directly to a public way sufficient to accommodate 2,210 occupants (compared to the maximum calculated occupant load of 1,253). The exits from each floor can be considered remote. The building has 16 passenger elevators and three freight elevator. The elevators are provided with primary (first floor) and alternate (second floor level) recall.

The building's primary occupancy type per NFPA 101 can be considered Business. Utilizing the occupant load factor of 100 ft²/person provided by that code the occupant load was calculated to determine the required egress capacity for the floors in the paragraph above. The remaining occupancies loads were based on their corresponding load factors (i.e. Assembly at 7 sq. ft. and 15 sq. ft. per person and Storage at 300 sq. ft. per person).

The maximum dead end corridor length allowed per NFPA 101 (2012); section 39.2.5 is 50 feet and 20 ft. section 13.2.5. The building does not have any dead end corridors. The maximum allowable travel distance to an exit from any portion of this sprinklered building is 300 feet for Business Areas and 200 feet for the Assembly areas. The maximum travel distance in the building to an exit was found to be about 200 feet (the typical floor), well within code prescribed limits. Common path of travel cannot exceed 100 feet from any point in the building. The maximum common path was found to be 30 feet – the seventh floor office area.

There were seven new findings in this area:

1. There is storage in the stairs – minor issue.
2. The stair doors at Stair 6 (second floor), Stair 5 (3rd floor), Stair 2(garage levels), Stair 7 & 8 (Penthouse) do not close – RAC 4.
3. No stair pressurization systems are provided for the stairs in the building - RAC 3.
4. The stair handrails and guards do not meet the graspability and openness requirements and the stair door handles do not meet ADA – RAC 4.
5. There are no guards provided (need approximately 30' of guards) on the ramp in the basement loading dock do not meet the height requirement of 42" – RAC 4.
6. The 8" storm/sewer lines are located in Stairs 5, 6, 7, and 8 – RAC 4.
7. Large electrical conduits (3") and panels are located in stairs 5, 6, 7, and 8 – RAC 3.

4.2.2 SPRINKLER, STANDPIPE, AND SPECIALIZED EXTINGUISHING SYSTEMS

The building is fully sprinklered and does include a standpipe system (standpipes are in the stairs with hose valves in the stairs and corridors). The water supply for the sprinkler system enters the building at the Sub-Basement Level in the fire pump room and is fed by city water. The incoming lines are an 8" lines on the southeast "side" of the building.

Flow switches are located at the B2 level where the system is connected to the sprinkler incoming supply line and at each floor level. The dry system valves are all located in the garage. The OS&Y control valves are electrically supervised by the fire alarm system. There is a fire department connection with caps on the exterior of the building. The sprinklers throughout the building are a standard response type (some of the recently renovated office suites have quick response sprinklers).



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There were five new findings in this area:

1. There are many areas throughout the building without sprinkler coverage due to lack of sprinklers, overspacing of sprinklers, and obstruction of sprinklers – RAC 3.
2. There are many arm-overs for the sprinklers throughout the basement that are greater than 12" and are unsupported – RAC 4.
3. There are automatic sprinklers and branchlines located directly over the switchgear on The Sub-Basement Level transformer electrical vault – RAC 4.
4. Stair 7 doesn't have a fire hose valve on the basement level – RAC 4.
5. Fix the issues associated with the recent fire pump inspection and 8" supply line – RAC 3.

4.2.3 FIRE SEPARATIONS

The fire separations of concern are the floor/ceiling assemblies, enclosure of the shafts, including elevators, stairs, other vertical openings, elevator machine room, switchgear room, and mechanical rooms containing equipment. The stairways and elevator shafts are enclosed by minimum 2 hour rated construction.

There were four new findings in this area:

1. There is storage of boxes and general items in the electrical closet on the 5th floor in 5S9 – minor issue.
2. There are no fire dampers in the ducts in the rated walls enclosing the transformer vault – RAC 4.
3. The fire pump is not separated from other mechanical equipment by 2-hour construction and the door rating is not visible – RAC 4.
4. There are no fire penetration sealants at the floor penetrations throughout the electrical and telephone closets or at the transformer room – RAC 4.
5. There is a shaft opening in the electrical closet on the 6th floor in 6N5 – RAC 4.
6. The standpipes on the first floor are not enclosed with fire resistant construction – RAC 4.
7. The Battery Room doesn't have proper ventilation – RAC 4.

4.2.4 FIRE EXTINGUISHERS

Dry chemical, multipurpose fire extinguishers with a rating of 4 A: 80 B:C are located throughout the corridor system and building areas. Travel distance to a fire extinguisher varied greatly from area to area, but appeared to be within a 75' travel distance. The fire extinguishers are visually inspected on 30 day intervals with the exception of the fire extinguisher in the Basement Level Two.

There was one new finding in this area:

1. The fire extinguishers throughout are not being visually inspected – minor issue.



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4.2.5 EMERGENCY LIGHTING AND POWER

The building is provided with emergency power via the roof mounted diesel emergency generator. It is understood that this generator in turn provides emergency power to life safety equipment (fire alarm and fire pump), elevators, egress and emergency lighting.

There was one new finding in this area:

1. The emergency exit light by 8S2 on the 8th floor is not working – minor issue.

4.2.6 EXIT SIGNS

The exit signs in the building are internally illuminated. There are no decorations, furnishings, or equipment that would impair visibility of an exit sign. Exit signs are generally well placed and readily visible in the open areas. Standby power is provided from the emergency generator.

4.2.7 FIRE ALARM SYSTEM

The existing fire alarm system is an EST 3 fire alarm system (the FACP is located in the Basement – B253), with speakers and strobes for notification and pull stations, flow and tamper switches, duct smoke detectors and smoke detectors and heat detectors for elevator recall. Fireman's phones are not provided. The system's notification appliances throughout the building include speakers and older 15/75 candela strobes (with ADA compliant strobes in some newly renovated areas that are in compliance with ADA requirements for equal facilitation). The original strobes were the older style with 15/75 candela ratings and no synchronization.

Batteries and the emergency generator will provide standby power for the fire alarm system. Remote signaling transmits alarm, supervisory, and trouble conditions to the central station (DHS Mega Center).

There was one new finding in this area:

1. The fire alarm system needs replacement (other than the EST 3 which was replaced two years ago) due to the following reasons: older style strobes are located throughout the building; there is insufficient strobe coverage throughout the building (i.e. lack of strobes in copy rooms, workrooms, and conference rooms, overspacing in bathrooms, corridors, and open offices, etc.); strobes are located above 80" in many locations throughout the building; older style conventional system that is no longer manufactured; no smoke detectors are provided in any of the mechanical, electrical, or telephone rooms/closets; the pull stations at the central stairs are located at 62" – well above the maximum height; the duct smoke detectors are not working; the garage dry sprinkler system is not currently monitored; the penthouse only has two bells – one of which is damaged - RAC 3.

4.2.8 DOCUMENTATION OF TESTING



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The fire protection systems are primarily maintained by contractors (National Fire Protection) paid for by the building owner. Suppression and fire alarm testing is performed in accordance with NFPA. Records are kept in on site and electronically.

4.2.9 FIRE SAFETY SUMMARY

There were no conditions observed that could lead to a higher risk of fire occurrence. The existing systems are being tested and maintained and the electrical system seems to be well maintained.

4.3 FINDINGS ENVIRONMENTAL MANAGEMENT

There were no open environmental management conditions in the IRIS database.

4.3.1 AIR POLLUTION CONTROL

There were no operations or processes in the building in need of air pollution control, and there were no air pollution controls present in the building.

Emergency generators are tested monthly and ran for 30 minutes to one hour.

4.3.2 ASBESTOS MANAGEMENT

Pipe fittings throughout the building contain asbestos. An operations and maintenance plan were in place and on file in the safety office.

4.3.3 WATER POLLUTION CONTROL

No processes or practices were observed in the building or on the grounds that created a surface water, storm water, or groundwater pollution risk. There were no water pollution control permits.

Drinking water is supplied by the municipal water system. The drinking water was tested for lead content during this survey. Lead in drinking water sampling results are summarized in the following table.

Table 2 Lead in Drinking Water Sampling Results Summary (Samples Collected on August 9, 2013)			
Sample Location	Sample Number*	Lead Levels (µg/L)	EPA Compliant
Basement Level Water Fountain by Room B229	1A	1.8	Yes



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Table 2 Lead in Drinking Water Sampling Results Summary (Samples Collected on August 9, 2013)			
Sample Location	Sample Number*	Lead Levels (µg/L)	EPA Compliant
	1B	ND	Yes
Basement Level Water Fountain by Room B100	2A	ND	Yes
	2B	ND	Yes
1 st Floor Water Fountain by Room 1S14	3A	0.61	Yes
	3B	ND	Yes
1st Floor Water Fountain by Room 1N14	4A	1.0	Yes
	4B	ND	Yes
2 nd Floor Kitchenette Room 2156A	5A	3.9	Yes
	5B	0.55	Yes
2nd Floor Water Fountain by 2126	6A	0.79	Yes
	6B	ND	Yes
3 rd Floor Water Fountain by 3245	7A	1.1	Yes
	7B	ND	Yes
3 rd Floor Water Fountain by Room 3145	8A	3.0	Yes
	8B	0.66	Yes
4 th Floor Water Fountain by Room 4160	9A	1.7	Yes
	9B	ND	Yes



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Table 2 Lead in Drinking Water Sampling Results Summary (Samples Collected on August 9, 2013)			
Sample Location	Sample Number*	Lead Levels (µg/L)	EPA Compliant
4 th Floor Water Fountain by Room 4260	10A	6.0	Yes
	10B	ND	Yes
5 th Floor Water Fountain by Room 5226	11A	1.4	Yes
	11B	ND	Yes
5 th Floor Water Fountain by Room 5282	12A	2.0	Yes
	12B	ND	Yes
6 th Floor Water Fountain by Room 6260	13A	3.1	Yes
	13B	0.61	Yes
6 th Floor Water Fountain by 6126	14A	0.82	Yes
	14B	ND	Yes
7 th Floor Water Fountain by Room 7126	15A	0.68	Yes
	15B	ND	Yes
7 th Floor Water Fountain by Room 7260	16A	1.6	Yes
	16B	ND	Yes
8 th Floor Water Fountain by Room 8226	17A	0.65	Yes
	17B	ND	Yes
8 th Floor Water Fountain by Room 8126	18A	1.5	Yes

Table 2 Lead in Drinking Water Sampling Results Summary (Samples Collected on August 9, 2013)			
Sample Location	Sample Number*	Lead Levels (µg/L)	EPA Compliant
	18B	ND	Yes
9 th Floor Water Fountain by Room 9126	19A	1.2	Yes
	19B	ND	Yes
9 th Floor Water Fountain by Room 9260	20A	3.1	Yes
	20B	ND	Yes
10 th Floor Water Fountain by Room 10160	21A	1.1	Yes
	21B	ND	Yes
10th Floor Water Fountain by Room 10226	22A	1.2	Yes
	22B	0.53	Yes

ug/L= micrograms per liter, ND = none detected, WF =water fountain

* Sample numbers with 'A' are first draw samples, and sample numbers with 'B' are second draw samples

The current U.S. Environmental Protection Agency (EPA) National Primary Drinking Water Regulation (NPDWR) action level for lead in drinking water is 15 micrograms per liter (µg/L). All samples analyzed were below the NPDWR.

4.3.4 NON-HAZARDOUS WASTE MANAGEMENT

There were no reported special wastes generated or stored in the building. The building does have a recycling program in place for paper, glass, and plastic.

4.3.5 HAZARDOUS WASTE MANAGEMENT

No hazardous waste was reported generated by the tenant agencies in the building.

4.3.6 UNIVERSAL WASTE MANAGEMENT



The facility uses fluorescent light bulbs that may contain mercury. These bulbs are packed and shipped whole. G4S periodically creates universal waste when consolidating mercury containing lamps. The waste is disposed of by a universal waste management company contracted by G4S.

There were two minor environmental findings:

1. A broken fluorescent light bulb was found in electrical closet 4145 - minor issue.
2. Light bulbs that may contain mercury were stored in electrical closets 654 and 559 - minor issue.

4.3.7 UNDERGROUND STORAGE TANKS

There were no underground storage tanks identified at the time of the survey.

4.3.8 PCB MANAGEMENT

No PCB containing transformers were reported in the building.

4.3.9 PESTICIDE CONTROL

A pest control contractor services the facility once a week.

4.3.10 SPECIAL OCCUPANCIES

There was a health unit on the second floor.

4.3.11 ENVIRONMENTAL MANAGEMENT SUMMARY

Environmental practices in this building appeared to be in compliance. No environmental deficiency was observed at the time of this survey.

4.4 FINDINGS – INDOOR AIR QUALITY

4.4.1 MEASUREMENTS

Indoor Air Quality measurements were collected with the TSI Q-Trak Indoor Air Quality meter, Model 8575.

- Temperature measurements collected in the occupied spaces were within the ranges recommended by ASHRAE and the Federal Property Management Regulations (FPMR). The temperature by the guard shack in the loading dock was slightly above recommended levels, but the loading dock doors were open allowing outside air to enter. Carbon dioxide (CO₂) levels were within ASHRAE recommended levels. Relative humidity measured exceeded the ASHRAE recommended levels for indoor environments in some areas, and was attributed to outside conditions. Carbon

monoxide was below the Occupational Safety and Health Administration (OSHA) permissible exposure limit (PEL).

- According to ASHRAE recommendations, an indoor-to-outdoor CO₂ differential of less than 700 parts per million (ppm) and below 1,000 ppm are indicators of adequate ventilation. For example, with an average outdoor CO₂ level of 400 ppm, indoor ventilation is considered acceptable when indoor CO₂ levels are less than 1,100 ppm.
- The ASHRAE recommended humidity and temperature range for indoor environment for summer months is between 30-60% and 72.5-80 degrees Fahrenheit, respectively.
- The current OSHA PEL for carbon monoxide is 50 ppm as an 8-hour time weighted average (TWA).

Indoor air quality measurements are summarized in the following table.

Table 3 - Indoor Air Quality Measurement Summary (Measurements Collected on August 8, 2013)				
Measurement Location	Temperature (°F)	Relative Humidity (%)	CO₂ (ppm)	CO (ppm)
Outdoors on 7 th St SW	88	62.3	320	0
10th Floor Office 10264	71.4	58	386	0
10th Floor Office 10142	69.8	71.1	418	0
10th Floor Office 10120	70.6	69.1	573	0
9th Floor Office 9176 lobby	70	65.5	573	0
9th Floor Office 9182 by Venida Brown	70.6	64.8	473	0
9th Floor Corridor by 9272	71.2	66.6	511	0
9th Floor Office by Elevator Bank	69.9	68.2	511	0
8th Floor Office 8154 Evelyn Wrin	70.6	48.4	406	0
8th Floor Library	70.6	48.4	406	0
8th Floor Office 8208	70.7	67.2	600	0



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Table 3 - Indoor Air Quality Measurement Summary

(Measurements Collected on August 8, 2013)

Measurement Location	Temperature (°F)	Relative Humidity (%)	CO₂ (ppm)	CO (ppm)
Cubicle Karimsetti				
7th Floor Lobby 7244	69.8	66	550	0
7th Floor 7272 Conference Room	69.6	64.5	553	0
7th Floor Office 7172 of Slade	73.5	67.2	715	0
7th Floor 7136 Office Lobby	70.3	71.7	528	0
6th Floor Lobby 6210	70.5	63.7	528	0
6th Floor Office Cubicle Area 6142	70.9	66.9	596	0
6th Floor Conference Room 6100	71.1	68.5	500	0
6th Floor Elevator Lobby by 6S11	70.7	67.7	724	0
5th Floor Suite 5256 Printer Area	71.1	64.3	521	0
5th Floor 5150 Conference Area	70.2	65.3	546	0
5th Floor Suite 5133	70.4	71.2	531	0
5th Floor Corridor Outside 5204	71.1	64.5	603	0
4th Floor suite 4228 Lobby Area	70.5	65.8	540	0

Table 3 - Indoor Air Quality Measurement Summary

(Measurements Collected on August 8, 2013)

Measurement Location	Temperature (°F)	Relative Humidity (%)	CO₂ (ppm)	CO (ppm)
4th Floor 4216 Conference Table	70.8	63	866	0
4th Floor 4130 Break Area	71.1	70.3	536	0
4th Floor 4182 Cubicle	70	65	596	0
3rd Floor 3182 Office Space	71.4	63	558	0
3rd Floor Dunkin Donuts Snack Area	72.1	68.9	522	0
3rd Floor 3128 Lobby Area	71.2	65.1	543	0
3rd Floor Elevator Lobby	70.5	62.8	681	0
2nd Floor Cubicle Area 2210	72.1	62.2	622	0
2nd Floor Conference Area 2130	71.3	66.3	880	0
2nd Floor Corridor by 2180	71.6	62.2	513	0
2nd Floor Kitchenette by 2N10	71.8	60.9	500	0
Basement Guard Shack by Loading Dock	83.3	58.5	539	0
Basement Elevator Bank	73.5	50.1	507	1
Basement Print Shop	74.3	58.9	740	0
1st Floor Southeast Elevator Lobby	72.7	62	544	0
1 st Floor Cafeteria	72.2	62.5	543	0



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ppm = parts per million

4.4.2 POTENTIAL CONTAMINATION SOURCES

The loading dock was a potential contamination source for carbon monoxide migration into the building.

4.4.3 MAINTENANCE

According to building maintenance personnel, the HVAC filters were replaced on an as needed basis. Interior components of air handling equipment were inspected when the filters were changed, and any additional cleaning or maintenance was performed at that time.

5.0 ABATEMENT REPORT FINDINGS AND RECOMMENDATIONS

5.1 FIRE PROTECTION

Eighteen new fire protection issues with a RAC of 1-4 were identified. RAC 1 - 4 items are considered to be those that are generally non-recurring, require an engineering design to abate, and/or cost over (b)(4) to correct.

Finding # 1: The fire pump is not enclosed in a rated room.

Reference: IBC (2012); Section 913.2.1

Recommendation: Provide a rated separation for the fire pump from the rest of the mechanical room.

Condition Type: Construction

Category: C1011 (Fixed Partitions)

Responsible for Abatement: Building Manager

Probability: D

Scope: local.

Building Wide Severity of Hazard: II

RAC Code: 4

Date Identified: 08/07/2013

(b)(4)

Finding # 2: The existing stairs (8) are not provided as smoke proof enclosures.

Reference: NFPA 101 39.2.2.4 (2012)

Recommendation: Design and install a stair pressurization system for the stairs. The fire alarm system will need additional smoke detectors and relays to activate the stair pressurization system automatically.

Condition Type: Construction



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Category: C2010 (Stair Construction)

Responsible for Abatement: Building Owner

Probability: D

Scope: Building

Building Wide Severity of Hazard: II

RAC Code: 4

Date Identified: 08/08/2013

(b)(4)

Finding # 3: The fire alarm system needs replacement (other than the EST 3 which was replaced two years ago) due to the following reasons: older style strobes are located throughout the building; there is insufficient strobe coverage throughout the building (i.e. lack of strobes in copy rooms, workrooms, and conference rooms, overspacing in bathrooms, corridors, and open offices, etc.); strobes are located above 80" in many locations throughout the building; older style conventional system that is no longer manufactured; no smoke detectors are provided in any of the mechanical, electrical, or telephone rooms/closets; the pull stations at the central stairs are located at 62" – well above the maximum height; the duct smoke detectors are not working; the garage dry sprinkler system is not currently monitored; the penthouse only has two bells – one of which is damaged - RAC 3.

Reference: NFPA 72 (2013)

Recommendation: Provide new ADA strobes, speakers, and fire alarm devices throughout the building.

Condition Type: Construction

Category: D5037 (Fire Alarm)

Responsible for Abatement: Building Owner

Probability: C

Scope: Building.

Building Wide Severity of Hazard: III

RAC Code: 3

Date Identified: 08/08/2013

(b)(4)

Finding # 4: Penetrations have been made in the 2-hour rated floors of the telephone and electrical closets throughout the building as well as the transformer vault.

Reference: NFPA 101 (2012); section 8.3.5.1.

Recommendation: Provide firestopping as required on both sides of floor penetrations.

Condition Type: Construction

Category: C1011 (Fixed Partitions and rated floors)

Responsible for Abatement: Building Manager

Probability: C

Scope: Building

Building Wide Severity of Hazard: III



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RAC Code: 4

Date Identified: 08/07/2013

(b)(4)

Finding # 5: Large electrical conduits (3") and panels are located in stairs 5, 6, 7, and 8.

Reference: NFPA 101 (2009); Section 7.2.2.

Recommendation: Enclose the existing conduit and terminal cabinets in stair with rated construction so that it separated from the stair. Provide rated access panels in order for the existing terminal cabinets to be maintained.

Condition Type: Construction

Category: C2010 (Stairs)

Responsible for Abatement: Building Manager

Probability: C

Scope: Building Wide

Building Wide Severity of Hazard: II

RAC Code: 3

Date Identified: 08/08/2013

(b)(4)

Finding # 6: There are no guards provided (need approximately 30' of guards) on the ramp in the basement loading dock do not meet the height requirement of 42".

Reference: NFPA 101 (2012); Section 7.2.2.4.4

Recommendation: Design and install new guards that meet the current standard.

Condition Type: Construction

Category: C2010 (Stairs)

Responsible for Abatement: Building Manager

Probability: D

Scope: Local

Building Wide Severity of Hazard: II

RAC Code: 4

Date Identified: 08/08/2013

(b)(4)

Finding # 7: The existing stair handrails do not meet the current requirements for graspability and the stair door handles do not meet ADA – RAC4.

Reference: NFPA 101 (2012); Section 7.2.2.4.4

Recommendation: Provide handrails and guards to meet graspability requirements and fall protection.



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Condition Type: Construction
Category: C2010 (Stairs)
Responsible for Abatement: Building Manager
Probability: D
Scope: Local
Building Wide Severity of Hazard: III
RAC Code: 4
Date Identified: 08/08/2013

(b)(4)

Finding # 8: The electrical vault on the sub-basement level has sprinklers and sprinkler piping directly over the transformers and electrical equipment.

Reference: NFPA 70 (2012) – 110.26

Recommendation: Design and modify the sprinkler system in the areas where the electrical equipment is located.

Condition Type: Construction
Category: D4010 (Sprinklers)
Responsible for Abatement: Building Manager
Probability: C
Scope: Local
Building Wide Severity of Hazard: III
RAC Code: 4
Date Identified: 08/07/2013

(b)(4)

Finding # 9: There is a shaft opening in the electrical closet on the 6th floor at closet 6N5.

Reference: NFPA 101 (2012); section 8.3.5.1.

Recommendation: Provide a rated partition to enclose the shaft.

Condition Type: Construction
Category: C1011 (Fixed Partitions and rated floors)
Responsible for Abatement: Building Manager
Probability: C
Scope: Local
Building Wide Severity of Hazard: III
RAC Code: 4
Date Identified: 8/08/2013

(b)(4)



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Finding # 10: There are many areas throughout the building without sprinkler coverage due to lack of sprinklers (5142 file area, 6208, 6282 "corridor", 9253 "corridor", above the elevator shafts, 7122, 7108, 8260, 9162, 9182, 9140 "corridor", 10120 Deputy Secretary's copy room, 10130 copy room, janitor's closet basement level near Stair 2), overspacing of sprinklers (2214, 7286, 8256, 8286, 9286, 10151), and obstruction of sprinklers (ducts near stair 2 in the basement, elevator 19 machine room, 3143, 4282, 5th floor elevator lobby, 5162, corridor outside of 7158, 7154, 8154, 9162, penthouse electrical room, penthouse storage area).

Reference: NFPA 13 Section 6.1

Recommendation: Design and install additional sprinklers.

Condition Type: Construction

Category: D4010 (Sprinklers)

Responsible for Abatement: Building Manager

Probability: C

Scope: Building wide.

Building Wide Severity of Hazard: II

RAC Code: 3

Date Identified: 08/08/2013

(b)(4)

Finding # 11: There are no fire dampers in the ducts in the rated walls enclosing the transformer vault.

Reference: IBC (2012); section 716.

Recommendation: Procure Design and install new fire dampers where the ducts penetrate the rated partitions.

Condition Type: Construction

Category: D4090 (Other Fire Protection Systems)

Responsible for Abatement: Building Manager

Probability: C

Scope: Localized

Building Wide Severity of Hazard: III

RAC Code: 4

Date Identified: 08/07/2013

(b)(4)

Finding # 12: The stair doors at Stair 6 (second floor), Stair 5 (3rd floor), Stair 2 (garage levels), Stair 7 & 8 (Penthouse) do not close.

Reference: NFPA 101 Section 7.2 (2012)

Recommendation: Repair the rated doors at the stairs in question or replace the existing stair door exit hardware so that stair doors close and latch properly.

Condition Type: Construction



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Category: C2010 (Stair Construction)

Responsible for Abatement: Building Owner

Probability: C

Scope: Building

Building Wide Severity of Hazard: III

RAC Code: 4

Date Identified: 8/08/2013

(b)(4)

Finding # 13: There are many arm-overs for the sprinklers throughout the basement that are greater than 12" and are unsupported.

Reference: NFPA 13 Section 6.1

Recommendation: Install additional hangars for the support of the sprinkler system.

Condition Type: Construction

Category: D4010 (Sprinklers)

Responsible for Abatement: Building Manager

Probability: C

Scope: Localized

Building Wide Severity of Hazard: III

RAC Code: 4

Date Identified: 08/07/2013

(b)(4)

Finding # 14: The 8" storm/sewer lines are located in Stairs 5, 6, 7, and 8.

Reference: NFPA 101 Section 7.1 (2012)

Recommendation: Enclose the storm/sewer lines so that they are enclosed in rated construction.

Condition Type: Construction

Category: C2010 (Stair Construction)

Responsible for Abatement: Building Owner

Probability: C

Scope: Building

Building Wide Severity of Hazard: III

RAC Code: 4

Date Identified: 8/08/2013

(b)(4)

Finding # 15: The standpipes on the first floor are not enclosed with fire resistant construction.



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Reference: NFPA 101 Section 7.1 (2012)

Recommendation: Enclose the standpipes so that they are protected/enclosed in rated construction.

Condition Type: Construction

Category: C2010 (Stair Construction)

Responsible for Abatement: Building Owner

Probability: C

Scope: Building

Building Wide Severity of Hazard: III

RAC Code: 4

Date Identified: 8/08/2013

(b)(4)

Finding # 16: The Battery Room doesn't have proper ventilation.

Reference: NFPA 70 Section 480 (2012)

Recommendation: Provide ventilation and fire dampers.

Condition Type: Construction

Category: D3090 (HVAC Construction)

Responsible for Abatement: Building Owner

Probability: C

Scope: Local

Building Wide Severity of Hazard: III

RAC Code: 4

Date Identified: 8/07/2013

(b)(4)

Finding # 17: Stair 7 doesn't have a fire hose valve on the basement level.

Reference: NFPA 101 Section 9.7.4.2 (2012)

Recommendation: Extend the existing standpipe and provide a fire hose valve.

Condition Type: Construction

Category: D4020 (Standpipes)

Responsible for Abatement: Building Owner

Probability: C

Scope: Local

Building Wide Severity of Hazard: III

RAC Code: 4

Date Identified: 8/07/2013

(b)(4)

Finding # 18: Fix the issues associated with the recent fire pump inspection and 8" supply line.



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Reference: NFPA 20 Section 11.2.6.2 (2012)

Recommendation: Provide larger supply lines so that the fire pump is able to reach 150% capacity.

Replace the gauges. Replace the fire pump controller if it is not working properly. Repair or replace the VIC fitting outside of SB5-13.

Condition Type: Construction

Category: D4030 (Fire Protection Specialties)

Responsible for Abatement: Building Owner

Probability: C

Scope: Local

Building Wide Severity of Hazard: II

RAC Code: 3

Date Identified: 8/07/2013

(b)(4)

5.2 SAFETY

There were no RAC 1-4 safety findings.

5.3 ENVIRONMENTAL MANAGEMENT

There were no RAC 1-4 environmental management findings.



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APPENDIX A

MINOR FINDINGS



ROBERT C. WEAVER BUILDING, WASHINGTON, DC
SAFETY, ENVIRONMENT AND FIRE PROTECTION BRANCH SURVEY

Draft X

Final__

Sheet# 1 of 6

MINOR SURVEY FINDINGS REPORT FORM

To: (b)(6)

Date: August 23, 2013

From: GSA

BUILDING NAME/LOCATION: Robert C. Weaver Building, Washington, DC

PRINTED NAME OF RECIPIENT: (b)(6)

SIGNATURE OF RECIPIENT: (b)(6)

The following list of items has been identified for correction as a result of a Safety and Environmental Management Survey conducted on the date(s) indicated above. Please indicate the corrective action taken and provide your name in the space provided. Please forward the completed form to the Safety, Environment and Fire Protection Branch (WPYG). Please complete the form within 60 calendar days of receipt of final.

Finding #1: Illumination measurements collected in several areas were below levels recommended in 41 CFR 102-74-180. Increase illumination levels in areas to recommended levels using task and/or general lighting.

Reference: Federal Property Management Regulations 41 CFR 102-74-180

CORRECTIVE ACTION:

DATE:

BY:

Finding #2: Junction box covers were missing in the following locations: SB-155, 4S10, 4N14, 4145, 5N15, 7S2, 7N9, and 8N9. Replace junction box covers.

Reference: 29 CFR 1910.305(b)(3)(ii)

CORRECTIVE ACTION:

DATE:

BY:

Finding #3: Light switch cover plates were missing or broken in the following locations: 3N5, 5N15, 5910, 6N5, and 10N5. Replace light switch cover plates.

Reference: 29 CFR 1910.305(c)(4)

CORRECTIVE ACTION:

DATE:

BY:

Finding #4: Outlet cover plates were missing in room B229. Replace cover plates.

Reference: 29 CFR 1910.305(b)(2)(i)

CORRECTIVE ACTION:

DATE:

BY:

September 27, 2013

CINNOVAS Development Group, LLC

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Finding #5: Power strips were daisy chained together in the following locations: 4170, 4178, 8147, 8100, and 9162. Plug power strips directly into wall outlet.

Reference: 29 CFR 1910.303(a)

CORRECTIVE ACTION:	DATE:	BY:
--------------------	-------	-----

Finding #6: Electrical panel covers were missing in the following electrical closets: 2145, 4145, 5145 and 7N14. Replace electrical panel covers. Replace electrical panels.

Reference: 29 CFR 1910.305(b)(2)(i)

CORRECTIVE ACTION:	DATE:	BY:
--------------------	-------	-----

Finding #7: A broken fluorescent light bulb was found in electrical closet 4145. Remove the broken light bulb.

Reference: Environmental Protection Agency EPA530-R-09-001

CORRECTIVE ACTION:	DATE:	BY:
--------------------	-------	-----

Finding #8: Light bulbs that may contain mercury were stored in electrical closets 6S4 and 5S9. Remove light bulbs and store them with other universal waste.

Reference: Environmental Protection Agency EPA530-R-09-001

CORRECTIVE ACTION:	DATE:	BY:
--------------------	-------	-----

Finding #9: Electrical panel was improperly locked and tagged out in the following locations: 4145, 4N2, 4N9. Follow proper lock out tag out procedures.

Reference: 29 CFR 1910.147(c)(5)(ii)(C)(1)

CORRECTIVE ACTION:	DATE:	BY:
--------------------	-------	-----

Finding #10: Electrical closet 7S9 electrical panel had an uncovered breaker switch opening. Cover opening.

Reference: 29 CFR 1910.303(b)(7)(i)

CORRECTIVE ACTION:	DATE:	BY:
--------------------	-------	-----

Finding #11: Fan in conference room 9164 had a missing guard. Replace fan guard.

Reference: 29 CFR 1910.212(a)(5)

CORRECTIVE ACTION:	DATE:	BY:
--------------------	-------	-----



Finding #12: A fire exit was blocked by a coat rack in room 8147. Allow proper egress to fire exits.

Reference: 29 CFR

CORRECTIVE ACTION:	DATE:	BY:
--------------------	-------	-----

Finding #13: A hole was in the floor causing a tripping hazard in office of Justin Brock in suite 7256. Repair hole in ground.

Reference: 29 CFR 1910.22(a)(3)

CORRECTIVE ACTION:	DATE:	BY:
--------------------	-------	-----

Finding #14: Cords across a walkway caused a potential tripping hazard in room 10155. Move cords to no longer cause a tripping hazard.

Reference: 29 CFR 1910.22(b)(1)

CORRECTIVE ACTION:	DATE:	BY:
--------------------	-------	-----

Finding #15: Pipes and hoses in a walkway caused a potential tripping hazard in penthouse mechanical room. Move pipes and hoses or appropriately mark to identify a tripping hazard.

Reference: 29 CFR 1910.22(b)(1)

CORRECTIVE ACTION:	DATE:	BY:
--------------------	-------	-----

Finding #16: Fire extinguishers were not wall mounted in penthouse room 9-16, elevator 17 room, B-157-B and outside the transformer vault. Mount all fire extinguishers to the wall.

Reference: 29 CFR 1910.157(c)(1)

CORRECTIVE ACTION:	DATE:	BY:
--------------------	-------	-----

Finding #17: Access to fire extinguisher in room B-157-B was blocked. Remove items blocking fire extinguisher.

Reference: 29 CFR 1910.157(c)(1)

CORRECTIVE ACTION:	DATE:	BY:
--------------------	-------	-----

Finding #18: Fire extinguishers were not being inspected monthly. Inspect all fire extinguishers monthly.

Reference: 29 CFR 1910.157(e)(2)



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CORRECTIVE ACTION:

DATE:

BY:

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Finding #19: Air handler A-11-3 had a chilled water pipe leaking causing a slip hazard. Repair leaking pipe.

Reference: 29 CFR 1910.22(b)(1)

CORRECTIVE ACTION:

DATE:

BY:

Finding #20: Access to air handler room A-11-24 electrical panel was blocked. Remove items in front of electrical panel.

Reference: 29 CFR 1910.303(g)(1)(vi)(B)

CORRECTIVE ACTION:

DATE:

BY:

Finding #21: Multiple potential tripping hazards were not appropriately identified on the upper roof. Paint tripping hazards yellow to identify.

Reference: 29 CFR 1910.144(a)(3)

CORRECTIVE ACTION:

DATE:

BY:

Finding #22: Hydraulic hoist on the upper roof was not being inspected and documented. Inspect the hydraulic hoist and document appropriately.

Reference: 29 CFR 1910.179(j)(1)(ii)

CORRECTIVE ACTION:

DATE:

BY:

Finding #23: Electrical outlet below TV cable box 5 on upper roof was not securely mounted. Secure electrical outlet to the wall.

Reference: 29 CFR 1910.303(b)(8)(i)

CORRECTIVE ACTION:

DATE:

BY:

Finding #24: Water in condensate cooling troughs was observed to be discolored with a visible foam- minor issue.

Reference: 29 CFR 1910.22(a)(1)

CORRECTIVE ACTION:

DATE:

BY:



Finding #25: Eyewash station in chiller plant, sub-basement and room S-B-168 were not being inspected. Inspect eyewash stations monthly.

Reference: ANSI Z3581.1-2009

CORRECTIVE ACTION: _____ DATE: _____ BY: _____

Finding #26: No personal protective equipment (PPE) was available in battery room of S-B-168. Provide PPE for employees exposed to hazards.

Reference: 29 CFR 1910.132(a)

CORRECTIVE ACTION: _____ DATE: _____ BY: _____

Finding #27: Stained ceiling tiles were observed in room B229. Replace stained ceiling tiles.

Reference: 29 CFR 1910.22(a)(1)

CORRECTIVE ACTION: _____ DATE: _____ BY: _____

Finding #28: Loading dock cleaning storage room had no eyewash. Install eyewash station in loading dock cleaning storage.

Reference: 29 CFR 1910.151(c)

CORRECTIVE ACTION: _____ DATE: _____ BY: _____

Finding #29: Batteries, chemicals and miscellaneous materials were stored improperly in the storm ejection room. Remove all batteries, chemicals and materials and store in a proper location.

Reference: 29 CFR 1910.176(b)

CORRECTIVE ACTION: _____ DATE: _____ BY: _____

Finding #30: The fire extinguishers in the building are not being inspected on a monthly basis

Provide visual inspection of the extinguishers on a monthly basis.

Reference: NFPA 10, Section 4.3

CORRECTIVE ACTION: _____ DATE: _____ BY: _____



Finding #31: There is storage of boxes and general items in the electrical closet on the 5th floor in 5S9. Relocate the stored items to an area designed to accommodate storage.

Reference: NFPA 101 – Section 6.2

CORRECTIVE ACTION: _____ DATE: _____ BY: _____

Finding #32: There is storage of boxes and general items in the stairs. Have the maintenance contractor relocate the storage to an area designed to accommodate storage.

Reference: NFPA 101 – Section 6.2

CORRECTIVE ACTION: _____ DATE: _____ BY: _____

Finding #33: The emergency exit light by 8S2 on the 8th floor is not working. Have the maintenance contractor Replace the exit light.

Reference: NFPA 101 – Section 7.9

CORRECTIVE ACTION: _____ DATE: _____ BY: _____



APPENDIX B

GENERAL BUILDING INFORMATION

FIRE PROTECTION INFORMATION

GENERAL SAFETY AND HEALTH DOCUMENTATION



ROBERT C. WEAVER BUILDING, WASHINGTON, DC SAFETY, ENVIRONMENT AND FIRE PROTECTION BRANCH SURVEY

GENERAL BUILDING INFORMATION

1. Building name and address: Robert C. Weaver Building, 7th Street SW, Washington, DC 20410
2. Lessor/realty company contact:
 - Name: N/A
 - Telephone: N/A
 - Address: N/A
3. Number of Stories of building:
 - Above grade: 10
 - Below grade: 2
4. Floors the Federal Government occupies: All
5. Height of highest Federal occupied floor above the lowest level of fire department access: 130ft
6. Federal occupancies on each floor (NFPA 101 Classification): Business on 2 - 10, Assembly 1, Storage/Parking on Basement and Sub-Basement.
7. Types of non-Federal hazardous occupancies on each floor: None
8. Approximate gross area per floor: total –1,372,279 GSF. First floor - 47,390 GSF. Second – Tenth – 100,352 GSF. Penthouse – 33,520 GSF. Basement – 159,670 GSF. Sub-Basement – 135,910 GSF.

FIRE PROTECTION INFORMATION

9. Construction Type (NFPA 220 Classification): Type I (332)
 - a. Describe floor/ceiling construction: Reinforced Concrete
 - b. Describe roof construction: Fire Proofed Steel
 - c. Describe column construction: concrete encased steel columns/reinforced columns
10. Describe fire rated subdivision of floors: Stairways and shafts are enclosed.
11. Fire suppression capability (described as listed below):
 - a. Sprinkler location(s): Fully Sprinklered
 - b. Water flow alarm(s), type and location: Vane-type located at zone control assemblies and dry-pipe valves
 - c. Control valves, type and typical location: Butterfly type valves on risers, OS&Y at control assemblies
 - d. Valve tamper switches, type and typical location: All control valves are electronically supervised and connected to the main fire alarm control panel
 - e. Standpipe, riser size, location, and number: 6" standpipes in stairs
 - f. Location(s) and manufacturer/model of, dry chemical and I or halon fire suppression systems: Water extinguishers located throughout.
 - g. Fire pump data: 1500 GPM Patterson Pump 75 psi boost – Southeast Corner of Sub-Basement
 - h. Water Supply: Dual 8 inch line
 - i. Maintenance Conforms to NFPA: Yes
 - j. Who performs maintenance: GSA Contractor (National Fire Protection)
12. Fire Alarm System:



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- a. Type of fire alarm system (general, pre signal, coded with limited number of rounds, etc.): Floor, Floor Above/Below
 - b. Central station (company name): DHS Megacenter
 - c. Control Panel Information:
 - Location: Basement – B253
 - Manufacturer/model: EST 3
 - Operating voltage: 24 volt dc
 - d. Describe secondary power source: Batteries, Emergency Generator
 - e. Style of alarm initiating circuit wiring: Class B
 - f. Manual station location: throughout egress paths
 - g. Smoke Detector:
 - Locations: Elevator machine room, elevator lobbies, and above fire alarm control equipment.
 - Type: Photoelectric
 - Appropriate for intended use: Yes
 - Heat Detector:
 - Locations: Elevator Machine Room
 - Type: Indeterminate from visual survey
 - Appropriate for intended use: yes
 - h. Other Detectors:
 - Type and manufacturer: None
 - Appropriate type for intended use: N/A
 - Location: N/A
 - Describe connection to building fire alarm system: N/A
 - i. Style of alarm notification circuit wiring: Class B
 - j. Type of alarm notification appliances and locations (visual and/or audible): Speakers and Strobes
 - k. Notification system:
 - i. Entire building; floor, above and below; or other: floor, above and below
 - ii. Type devices that actuate general alarm (list all types): Pull Stations, water flow, heat detectors, smoke detectors, duct detectors
 - l. Emergency telephone system: None
 - m. Maintenance per NFPA: Yes
 - n. Who performs maintenance: GSA Contractor
 - o. Computer room/Essential Electronic or Fiber optic equipment rooms: N/A
13. Computer room/Essential Electronic or Fiber Optic equipment rooms: Yes
- a. Describe suppression system(s): ON/Off Sprinklers
 - Control Equipment Mfg: N/A
 - Control Equipment Location:
 - Type of Detection and Location: Smoke Detection
 - Monitored by Building FACP: FCI Panel in the computer room
 - b. Detection systems: Smoke detectors above and below the floor
 - c. Approximate area: about 10,000 fourth floor rooms



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- d. Raised floor (height, plenum?): 12"
 - e. Air Distribution for room/area (i.e. Liebert Units): A/C
 - f. Fire Rated Enclosure?: No
14. Kitchen Suppression System: Wet Chemical – currently needs inspection – Open IRIS item.
15. Emergency lighting:
- a. Type: Battery Powered fixtures
 - b. Locations: renovated spaces and egress paths
 - c. Secondary source of power: Emergency Generator
 - d. Maintenance conforms to NFPA: Yes
 - e. Who performs maintenance: GSA
16. Exit signs:
- a. Locations: Throughout the path of egress
 - b. Secondary source of power: emergency generator
17. Emergency Generator:
- a. Power source: 1 diesel generator
 - b. Capacity: 1500kW
 - c. Location: sub-basement level
18. Means of egress:
- a. Number of exits: 8
 - b. Where do the exits discharge: Four to the exterior – and four to the interior main lobby on the first floor
 - c. Exit capacity: 2,210 at the 1st floor, 1360 from the second floor through tenth floor and the basement levels, and 680 from Penthouse.
 - d. Exit remoteness:
Maximum overall diagonal dimension of typical floor (identify for others if different than typical floors):
587'
Exit door separation distance: 520'
How is distance measured: straight line method
 - e. Exit access: egress corridors and stairwells within the building system
 - f. Exit enclosure
 - i. Exit discharge protection: none
 - ii. Exit dimensions (width, riser, tread): (56", 7.5", 11.5")
 - iii. Handrails: 34"
 - g. Dead ends: Maximum 50' – N/A
 - h. Common path of travel: Maximum 30'
19. Elevator features
- a. Number of elevators (passenger and freight): 19 (16/3)
 - b. Emergency elevator operation:
 - i. Phase I operation (automatic and manual recall): Yes
 - ii. Phase II operation (firefighter's service): Yes
 - iii. Designated recall level: Ground Floor
 - iv. Alternate recall level: Second floor



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- v. List all fire alarm devices that cause elevator recall: Smoke Detectors in Elevator lobbies, shafts, and machine rooms
 - vi. Location of the elevator machine room: Roof/Attic, adjacent to elevator
 - vii. Is the elevator machine room sprinkled?: Yes
 - viii. What devices cause shunt tripping of elevators?: Yes
 - ix. Is there an elevator smoke detection control panel: Yes - FCI
 - x. Type and location of detectors: Smokes in EMR and lobbies
 - c. Certificate date: 2013
 - d. Telephone in cab: Yes
 - i. Who answers telephone: DHS Megacenter
20. Hazard of exposure buildings: None
21. Local fire department pre-fire plan: Unknown – invited, but normally don't come to the fire drills
22. HVAC system design
- a. Source of heat: Steam (GSA Heating District)
 - b. Source of chilled water: Central Plant Chillers in the CUP
 - c. Location of fans: Penthouse Level
 - d. Presence of fire dampers: Yes
 - e. Presence of duct smoke detectors: Yes
 - f. Return air routing: Ducted
 - g. Supply air routing: Ducted
 - h. Smoke control features: No
 - i. Rated cable if used in plenum: N/A
23. Boiler inspection:
- a. Certificate (s) No Boilers
 - b. Date(s): NA
24. Locations of other special occupancies (Describe any fire protection features of these occupancies.):
- a. Laboratories: n/a
 - b. Printing plants: n/a
 - c. Parking garages: n/a
 - d. Storage areas over 1000 square feet: n/a
 - e. Computer rooms: Fourth Floor, standard wet pipe system with on/off sprinklers
 - f. Telephone frame rooms: n/a
25. Occupant Emergency Plan (OEP):
- a. Date of last revision/update: April 2013
 - b. Are the persons designated in the plan current and are they trained?: Yes
 - c. Does it contain procedures to evacuate physically disabled?: Yes
 - d. Date of last fire drill: Within the last year, according to escort.

GENERAL SAFETY AND HEALTH DOCUMENTATION

26. Check applicable areas:



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Area of Interest	NA
a. Asbestos	N/A
b. PCBs	NA
c. Confined Spaces	N/A
d. Battery Charging	NA
e. Laboratories	NA
f. X Ray Equipment	Security Stations (main entrance and dock)
g. Indoor Firing Ranges	NA
h. Significant Hazmat Storage	NA
i. Photo Processing	NA
j. Incinerators	NA
k. Printing Plants	NA
l. Significant Noise	Chiller Plant
m. Other Specify	NA
n. Lead based Paint	N/A

Functional Area	Square Footage
Office Space	905,000
Laboratories	N/A
Parking Garage	260,000
Battery Charging	N/A
Printing Shops	N/A
Firing Range	N/A
Warehousing	N/A
Flammable Materials Storage	N/A
Computer Rooms	10,000
Machine and Carpenter Shops	N/A
Utility/Mechanical	N/A
Confined Space	N/A
Vehicular Repair	N/A
Radiation	N/A
PCBs	N/A
Photo Labs	N/A
Etching/Plating Shops	N/A
Welding/Sheet Metal Shops	N/A
Paint Spray Booths	N/A
Designated or Recommended	N/A
Noise Hazard Areas	Chiller Plant
Areas Requiring Respiratory Protection	N/A

27. Battery Charging:

- a. Adequacy of ventilation: N/A
- b. Eyewash protection: N/A

28. Other Special Occupancies:

- a. Laboratories: N/A
- b. Printing plants: N/A



ROBERT C. WEAVER BUILDING, WASHINGTON, DC SAFETY, ENVIRONMENT AND FIRE PROTECTION BRANCH SURVEY

- c. Parking garages: N/A
- 29. Noise and Vibration:
 - a. Locations: N/A
 - b. Protection provided: N/A
 - c. Standards compliance: N/A
- 30. OSHA standards compliance: Yes
- 31. Motor pool service areas: N/A
- 32. X ray equipment and other radiation producing or storage areas: N/A
- 33. Indoor target ranges: NA
- 34. Warehouses or areas storing hazardous materials: N/A
- 35. Photo processing or graphic arts facilities: N/A
- 36. Incinerators (and note compliance per local/state codes and EPA regulations: N/A
- 37. Printing plants: N/A
- 38. Spray painting operations: N/A
- 39. Posting of hazardous areas requiring PPE: N/A
- 40. Storage areas for firearms, ammunition, explosives: N/A
- 41. Communications equipment, roof mounted antennas: N/A



APPENDIX C

FSES ANALYSIS



FIRE SAFETY EVALUATION SYSTEM

The Fire Safety Evaluation System (FSES) Analysis presented in this Appendix follows the approach outlined in NFPA 101A (2010), Guide on Alternate Approaches to Life Safety. NFPA 101A stipulates that the FSES must take into consideration any deficiencies in systems.

The evaluation can be based on the entire building. However, portions of the building may also be evaluated as zones. A zone must be one or more complete fire or smoke zones and must meet other criteria as presented in the methodology. For GSA purposes, a single zone is used to evaluate all of the Federal occupancy in this building. The highest government occupied floor is considered the height of the building. The Safety Parameters, justification for their selection and their values are as defined in Worksheet 8.6.2. and are as follows:

- 1) Construction Safety Parameter value = 2 (Type I 332 construction)
- 2) Segregation of hazards safety parameter value = 0 (no deficiencies)
- 3) Vertical openings Safety Parameter value= 1 (0 deficiencies present)
- 4) Sprinklers Safety Parameter value = 10 (sprinklered)
- 5) Fire alarm system Safety parameter value= 4 (fire alarm)
- 6) Smoke detection Safety Parameter value = 0 (no smoke detection throughout – mech/elec.)
- 7) Interior finish Safety Parameter value = 1
- 8) Smoke control Safety Parameter value = 0 (no smoke control/evac)
- 9) Exit access Safety Parameter value = 0 (max dead end <50 less than 200' of travel)
- 10) Egress route Safety Parameter value = 0 (multiple routes not deficient – not smoke proof)
- 11) Corridor/room separation Safety Parameter value = 0 (smoke resistive, w/o door closer)
- 12) Occupant emergency program Safety Parameter value = 1 (1 to 2 fire drills per year)

Notes to Worksheet 8.6.2 Safety Parameters:

- A. Use 0 if building is one level.
- B. In any sprinkler protected spaces, consider flame spread rating to be 25 or 75 if the interior finish material flame spread does not exceed 75 or 200, respectively.
- C. Increase 200 to 300 if Parameter 4 is 10 or more.
- D. Rate separation as 20 minutes (or use actual separation, if greater) if Parameter 4 is 10 or more.
Rate separation as "smoke resistive" if Parameter 1 is based on Construction Type II (000), III (200), or V (000) and Parameter 4 value is < 10.
- E. Use only if all vertical openings have more than 1 hour enclosure and meet the requirements of 7 1.3 and 38 3.1 or 39 3.1 of NFPA 101, Life Safety Code.
- F. Use (20ft.) for new construction and 50 ft. for existing buildings.
- G. Use (3) if Parameter 4 value is equal or greater than 10.



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Worksheet 8.6.2 Safety Parameters (NFPA 101A, 2010 Edition)

Safety Parameters	Parameter Values						
1. Construction	Noncombustible				Combustible		
NFPA 220 Bldg. Constr. Types	Type I {443} or {332}	Type II (111)	Type II {000}	Type III {211} {200}	Type IV (2HH)	Type V {111} {000}	
1 2 stories							
3 stories							
4 5 stories but ≤ 75'							
>5 stories but ≤ 75'							
> 75' but < 150'	2						
150'							
2. Segregation of hazards	Exposed exit system			Segregation from exit routes			None or no
2. Segregation of hazards	Double Def.	Single Def.	Double Def.	Single Def.			None or no
2. Segregation of hazards						0	
3. Vertical openings ^A	Open (or incomplete enclosure)				Enclosed		
3. Vertical openings ^A	Connects 5 or more floors	4 flrs.	3 flrs.	2 flrs.	< 30 min.	30 min. to 1 hr.	> 1 hr
3. Vertical openings ^A							1
4. Sprinklers	None	Corridors	All but corridors and lobbies			Total building	
4. Sprinklers	Only		Standard	Fast resp.	Standard	Fast resp.	
4. Sprinklers					10		



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5. Fire alarm system	None		w/o fire department notification		w/ fire department notification	
5. Fire alarm system			W/O Voice Commun.		W/O voice communication	W/ Voice Communication
5. Fire alarm system						4
6. Smoke detection	None	Corridor	Rooms		Total bldg. (zone)	
6. Smoke detection	0					
7. Interior finish	Flame spread ratings					
exit routes	> 75 to ≤ 200		> 25 to ≤ 75		≤ 25	
rooms / suites	> 75 to ≤ 200	≤ 75	> 75 to ≤ 200	≤ 75	> 25 to ≤ 200	≤ 25
			1			
8. Smoke control	None		Passive		Active	
8. Smoke control	0					
9. Exit access	Max. dead ends		No dead end > 50 ft. & travel is:			
9. Exit access	> 75' to ≤ 100'	> 50' (20') H < 75'	C > 200'	> 100' 200' C	> 50' 100'	≤ 50'
9. Exit access			0			
10. Egress route			Multiple routes		Smokeproof	Direct
10. Egress route	Single	Deficient	Not Deficient		Smokeproof	Direct
10. Egress route			0			
11. Corridor/room separation	Separation exists and level of protection is:					No separation or single tenant or par. 4
11. Corridor/room separation	Smoke resistive E		E > 20 min.		1 hr. or More E	No separation or single tenant or par. 4 10
11. Corridor/room separation (Compartmentation)	Incomplete	w/o door closer	w/ door closer	w/o door closer	w/ door closer	No separation or single tenant or par. 4 10
11. Corridor/room separation	0					
12. Occupant	Number of fire drills conducted per year					
emergency	0		1 to 2		> 2	
program			1			

Worksheet 8.6.3 Individual Safety Evaluation			
Safety Parameters	Fire Control (S ₁)	Egress Provided (S ₂)	General Fire Safety Provided (S ₃)
1. Construction	2		2
2. Segregation of Hazards	0	0	0
3. Vertical Openings	1/2 = 0.5	1	1
4. Sprinklers	10	10/2 = 5	10
5. Fire Alarm	4/2 = 2	4	4
6. Smoke Detection	0/2 = 0	0	0
7. Interior Finish	1/2 = 0.5		1
8. Smoke Control		0/2 = 0	0
9. Exit Access		0	0
10. Exit System		0	0
11. Corridor/Room Separation	0/2 = 0	0/2 = 0	0
12. Occupant Emergency Program		1	1
Total	S ₁ = 15	S ₂ = 11	S ₃ = 19

(NFPA 101A, 2010 Edition)



ROBERT C. WEAVER BUILDING, WASHINGTON, DC SAFETY, ENVIRONMENT AND FIRE PROTECTION BRANCH SURVEY

Worksheet 8.6.4 Mandatory Requirements

Building Height	Control Requirement (Sa)		Egress Requirement (Sb)		General Fire safety (Sc)	
	New	Exist.	New	Exist.	New	Exist.
1 story						
2 stories						
3 stories						
>3 stories and < 75 ft.						
> 75 ft. but < 150 ft.		7.5		5		6
> 150 ft.						

(NFPA 101A, 2010 Edition)

Worksheet 8.6.5 Equivalency Evaluation						Yes	No
Control	Required	$S_1 - S_a =$					
	Provided (S_1) minus Control (S_a) = 0	15.0	-7.5	=	7.5	Yes	
Egress	Required	$S_2 - S_b =$					
	Provided (S_2) minus Egress (S_b) = 0	11.0	-5	=	6.0	Yes	
General Fire	Required General	$S_3 - S_c =$					
Safety (S_3)	minus Fire Safety (S_c) = 0	19.0	-(6.0)	=	13.0	Yes	

(NFPA 101A, 2010 Edition)



Worksheet 8.6.6 Facility Fire Safety Requirements Worksheet			
Considerations	Met	Not Met	Not Applicable
A. Building utilities conform to the requirements of Section 9. 1 of NFPA 101, <i>Life Safety Code</i> .	met		
B. The air conditioning, heating, and ventilating systems conform to Section 9. 2 of NFPA 101, <i>Life Safety Code</i> , except for enclosure of vertical openings, which have been considered in Safety Parameter 3 of Worksheet 8.6.2.	met		
C. Elevator installations are made in accordance with the requirements of Section 9. 4 of NFPA 101, <i>Life Safety Code</i> .	met		
D. Rubbish chutes, incinerators, and laundry chutes are installed in accordance with Section 9.5.			n/a
E. Portable fire extinguishers are installed and maintained in accordance with the requirements of 38 3.5/39 3.5 and 9.7.4.1 of NFPA 101, <i>Life Safety Code</i> .		Not met	
F. Standpipes are provided in all new high rise buildings as required by 38. 4.2.	met		

Equivalency

All of the checks in worksheet 8.6.5 are in the “yes” column. The equivalency covered by this worksheet alone includes the majority of considerations covered by NFPA 101 *Life Safety Code*. There are some considerations that are not evaluated by this method. These must be considered separately. These additional considerations are covered in Worksheet 8.6.6, Facility Fire Safety Requirements Worksheet.



APPENDIX D

IRIS OPEN CONDITION REPORT

DC0092ZZ - Robert Weaver - HUD - IRIS Open Conditions

SURVEY TYPE	BUILDING NUMBER	WORKPLACE NUMBER	CONDITION NUMBER	CONDITION STATUS	CONDITION DESCRIPTION	CONDITION CATEGORY	COND. SCOPE	HAZARD SEVERITY	RAC	RESPONSIBLE OFFICE	BM NOTIFIED	ABATEMENT PLAN APPROVED	SURVEY CLASSIFICATION	CONDITION PROBABILITY CODE
KIT	DC0092ZZ	0	2	O -Open	Deficiencies were found in the kitchen exhaust hood. Details on all deficiencies are found in the report Fire Protection Inspection of Cafeteria Kitchens in Federally Owned Buildings.	Misc - Miscellaneous	L	II -Substantial	3	BM -Building Manager	N	N	AdHoc	C
KIT	DC0092ZZ	0	1	O -Open	Deficiencies were found in the kitchen suppression systems. Details on all deficiencies are found in the report Fire Protection Inspection of Cafeteria Kitchens in Federally Owned Buildings.	SupSv- Suppression System	L	II -Substantial	3	BM -Building Manager	N	N	AdHoc	C
SEM	DC0092ZZ	0	14	O -Open	No shunt tripping provided for the elevator machine room and sprinklers are turned off	Sprin-Sprinklers	B	II -Substantial	3	BM -Building Manager	N	N	Scheduled	C
SEM	DC0092ZZ	0	16	O -Open	Wall pack emergency lights have dead batteries	Egres-Means of Egress	B	III-Minor	4	BM -Building Manager	N	N	Scheduled	C
SEM	DC0092ZZ	0	17	O -Open	Exit signs in Basement Mail Center have non-lit (sticker) exit signs	Egres-Means of Egress	L	IV -Negligible	4	BM -Building Manager	N	N	Scheduled	B
SEM	DC0092ZZ	0	26	O -Open	Fitness center has sprinklers with less than 1 inch clearance to escutcheon	Sprin-Sprinklers	L	III-Minor	4	BM -Building Manager	N	N	Scheduled	C
SEM	DC0092ZZ	0	12	O -Open	There are unsealed penetrations in fire rated assemblies in electrical and telephone rooms	FRCon-Fire Rated Construction	B	III-Minor	4	BM -Building Manager	N	N	Scheduled	C
SEM	DC0092ZZ	0	4	O -Open	Electrical panel doors are missing or open in various areas	Elect-Electrical	B	III-Minor	5	BM -Building Manager	N	N	Scheduled	D
SEM	DC0092ZZ	0	5	O -Open	The receptacles adjacent to the sink in Room B253 were not equipped with ground fault circuit interrupter (GFCI) protection.	Elect-Electrical	B	III-Minor	4	BM -Building Manager	N	N	Scheduled	C
SEM	DC0092ZZ	0	25	O -Open	On/Off Sprinklers located in Main Elec Vault Battery Room and 4th Floor Computer Room	Sprin-Sprinklers	L	III-Minor	4	BM -Building Manager	N	N	Scheduled	C
SEM	DC0092ZZ	0	23	O -Open	Rooms 6210, B137, B151, B160, 9120 and 9110 have unsprinklered alcoves	Sprin-Sprinklers	L	II -Substantial	4	BM -Building Manager	N	N	Scheduled	D
SEM	DC0092ZZ	0	24	O -Open	Room 9204, sprinklers are too close	Sprin-Sprinklers	L	III-Minor	4	BM -Building Manager	N	N	Scheduled	C
SEM	DC0092ZZ	0	28	O -Open	Visible microbial growth on fan coil heating unit in Rooms 4138- 4142	AirQu-Indoor Air Quality	L	III-Minor	4	BM -Building Manager	N	N	Scheduled	C
SEM	DC0092ZZ	0	21	O -Open	Door to compactor room are held open.	Safe -General Building Safety	L	III-Minor	4	BM -Building Manager	N	N	Scheduled	C
SEM	DC0092ZZ	0	20	O -Open	Fire Extinguishers are more than 1 year out of service	Rout - Maintenance / Routine	B	III-Minor	4	BM -Building Manager	N	N	Scheduled	C
SEM	DC0092ZZ	0	2	O -Open	Fan guards on the AHUs in the SB were installed backwards exposing the fan belt.	MachG-Machine Guarding	L	II -Substantial	3	BM -Building Manager	N	N	Scheduled	C
SEM	DC0092ZZ	0	8	O -Open	Many office suite spaces do not have visual fire alarm devices	Alarm-Fire Alarms	B	II -Substantial	3	BM -Building Manager	N	N	Scheduled	C
SEM	DC0092ZZ	0	9	O -Open	Many doors into stairs do not latch properly	Egres-Means of Egress	B	II -Substantial	3	BM -Building Manager	N	N	Scheduled	C
SEM	DC0092ZZ	0	10	O -Open	No panic bars in rooms with electrical loads over 1200A	Egres-Means of Egress	B	II -Substantial	3	BM -Building Manager	N	N	Scheduled	C
SEM	DC0092ZZ	0	15	O -Open	Wall Pack Emergency Lights are turned downward and not onto the path of egress	Egres-Means of Egress	B	III-Minor	4	BM -Building Manager	N	N	Scheduled	C
SEM	DC0092ZZ	0	6	O -Open	Open electrical junction boxes were identified throughout	Elect-Electrical	B	II -Substantial	4	BM -Building Manager	N	N	Scheduled	D
SEM	DC0092ZZ	0	11	O -Open	Stair 7 has no gate preventing occupants from traveling below level of exit discharge	Egres-Means of Egress	L	II -Substantial	3	BM -Building Manager	N	N	Scheduled	C
SEM	DC0092ZZ	0	18	O -Open	Sign on Stair 3 in Basement says the stair is for Day Care only, Day Care has moved	Egres-Means of Egress	L	III-Minor	4	BM -Building Manager	N	N	Scheduled	C
SEM	DC0092ZZ	0	22	O -Open	Elevator lobbies are missing sprinkler protection on one side due to architectural feature	Sprin-Sprinklers	B	II -Substantial	4	BM -Building Manager	N	N	Scheduled	D
SEM	DC0092ZZ	0	19	O -Open	Fire Extinguishers are not inspected monthly	Rout - Maintenance / Routine	B	III-Minor	4	BM -Building Manager	N	N	Scheduled	C
SEM	DC0092ZZ	0	1	O -Open	Compressed gas cylinders in B136 were not stored in upright positions and immobilized by chains or other means to prevent them from being knocked over	Safe -General Building Safety	L	II -Substantial	3	BM -Building Manager	N	N	Scheduled	C
SEM	DC0092ZZ	0	7	O -Open	The tops of batteries were not protected against inadvertent contact.	Safe -General Building Safety	L	II -Substantial	4	BM -Building Manager	N	N	Scheduled	D
SEM	DC0092ZZ	0	13	O -Open	Many doors with fire ratings do not latch	FRCon-Fire Rated Construction	B	II -Substantial	3	BM -Building Manager	N	N	Scheduled	C
SEM	DC0092ZZ	0	27	O -Open	All corridors have directional signs hung too close to sprinkler heads	Sprin-Sprinklers	B	III-Minor	4	BM -Building Manager	N	N	Scheduled	C
SEM	DC0092ZZ	0	29	O -Open	Ceiling tiles, wallboard, insulation and paper files were water damaged during roof leak	AirQu-Indoor Air Quality	L	III-Minor	4	BM -Building Manager	N	N	Scheduled	C
SEM	DC0092ZZ	0	3	O -Open	In Room 4130, the glass partition above the door is loose and rattles when the door is opened or closed.	Safe -General Building Safety	L	II -Substantial	3	BM -Building Manager	N	N	Scheduled	C
CCC	DC0092ZZ	2	1	O -Open	The humidity levels were slightly below recommended levels	AirQu-Indoor Air Quality	B	III-Minor	4	BM -Building Manager	N	N	Scheduled	C
CCC	DC0092ZZ	2	3	O -Open	Various cords in rooms 117 and 118 are considered strangulation hazards. The Assistant Director stated that the tables were recently moved and the cords were properly secured un until very recently	Safe -General Building Safety	L	III-Minor	4	DCare-Day Care	N	N	Scheduled	C
CCC	DC0092ZZ	2	5	O -Open	Lack Of Required Labeling. Structures Are Missing The Warning Labels As Well As The Label For Age Appropriateness.	Misc - Miscellaneous	L	III-Minor	4	DCare-Day Care	N	N	Scheduled	C
CCC	DC0092ZZ	3	1	O -Open	Escutcheons for sprinkler heads are missing in the Toddler,s room and Pre-K room.	Sprin-Sprinklers	L	III-Minor	4	BM -Building Manager	N	N	Scheduled	C
CCC	DC0092ZZ	3	2	O -Open	A pinch guard was broken on a half-height door in the Two,s room.	Safe -General Building Safety	L	III-Minor	4	BM -Building Manager	N	N	Scheduled	C



APPENDIX E

WATER SAMPLING TEST RESULTS

Analytical Report for
Mabbett & Associates
Certificate of Analysis No.: 13080913

Project Manager: Damien Hammond
Project Name : HUD Building
Project Location: Washington, DC
Project ID : 2011024.021



August 13, 2013
Phase Separation Science, Inc.
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Baltimore, MD 21228
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PHASE SEPARATION SCIENCE, INC.



August 13, 2013

(b)(6)

Mabbett & Associates

5 Alfred Circle

Bedford, MA 01730

Reference: PSS Work Order(s) No: **13080913**

Project Name: HUD Building

Project Location: Washington, DC

Project ID.: 2011024.021

Dear (b)(6)

This report includes the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Work Order(s) numbered **13080913**.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on September 13, 2013. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt, the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 5 years, after which time it will be disposed of without further notice, unless prior arrangements have been made.

We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or info@phaseonline.com.

Sincerely,

(b)(6)



Sample Summary

Client Name: Mabbett & Associates
Project Name: HUD Building

Work Order Number(s): 13080913

Project ID: 2011024.021

The following samples were received under chain of custody by Phase Separation Science (PSS) on 08/09/2013 at 02:30 pm

Lab Sample Id	Sample Id	Matrix	Date/Time Collected
13080913-001	1A	DRINKING WATER	08/09/13 07:43
13080913-002	1B	DRINKING WATER	08/09/13 07:45
13080913-003	2A	DRINKING WATER	08/09/13 07:38
13080913-004	2B	DRINKING WATER	08/09/13 07:40
13080913-005	3A	DRINKING WATER	08/09/13 07:25
13080913-006	3B	DRINKING WATER	08/09/13 07:27
13080913-007	4A	DRINKING WATER	08/09/13 07:30
13080913-008	4B	DRINKING WATER	08/09/13 07:33
13080913-009	5A	DRINKING WATER	08/09/13 07:51
13080913-010	5B	DRINKING WATER	08/09/13 07:52
13080913-011	6A	DRINKING WATER	08/09/13 07:57
13080913-012	6B	DRINKING WATER	08/09/13 07:59
13080913-013	7A	DRINKING WATER	08/09/13 08:10
13080913-014	7B	DRINKING WATER	08/09/13 08:13
13080913-015	8A	DRINKING WATER	08/09/13 08:06
13080913-016	8B	DRINKING WATER	08/09/13 08:07
13080913-017	9A	DRINKING WATER	08/09/13 08:22
13080913-018	9B	DRINKING WATER	08/09/13 08:24
13080913-019	10A	DRINKING WATER	08/09/13 08:18
13080913-020	10B	DRINKING WATER	08/09/13 08:19

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.

Notes:

1. The presence of a common laboratory contaminant such as methylene chloride may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. The following analytical results are never reported on a dry weight basis: pH, flashpoint, moisture and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].
4. The analyses of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA 524.2 and calcium, magnesium, sodium and iron by EPA 200.8 are not currently promulgated for use in testing to meet the Safe Drinking Water Act and as such cannot be used for compliance purposes. The listings of the current promulgated methods for testing in compliance with the Safe Drinking Water Act can be found in the 40 CFR part 141.1, for the primary drinking water contaminants, and part 141.3, for the secondary drinking water contaminants.
5. The analyses of chlorine, pH, dissolved oxygen, temperature and sulfite for non-potable water samples tested for compliance for Virginia Pollution Discharge Elimination System (VDPES) permits and Virginia Pollutant Abatement (VPA) permits, have a maximum holding time of 15 minutes established by 40CFR136.3.



Sample Summary

Client Name: Mabbett & Associates
Project Name: HUD Building

Work Order Number(s): 13080913

Standard Flags/Abbreviations:

- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- C** Results Pending Final Confirmation.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- Fail** The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.
- J** The target analyte was positively identified below the reporting limit but greater than the LOD.
- LOD** Limit of Detection. An estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte and matrix specific.
- ND** Not Detected at or above the reporting limit.
- RL** PPS Reporting Limit.
- U** Not detected.



Case Narrative Summary

Client Name: Mabbett & Associates

Project Name: HUD Building

Work Order Number(s): 13080913

Project ID: 2011024.021

Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

Sample Receipt:

Two coolers were received. All sample receipt conditions were acceptable. The temperatures observed were 21 and 24 degrees C.

NELAP accreditation was held for all analyses performed unless noted below. See www.phaseonline.com for complete PSS scope of accreditation.

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 13080913

Mabbett & Associates, Bedford, MA

August 13, 2013

Project Name: HUD Building

Project Location: Washington, DC

Project ID: 2011024.021

Sample ID: 1A	Date/Time Sampled: 08/09/2013 07:43	PSS Sample ID: 13080913-001
Matrix: DRINKING WATER	Date/Time Received: 08/09/2013 14:30	

Total Lead	Analytical Method: EPA 200.8	Preparation Method: 200.8
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	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead	1.8	ug/L	1.0		1	0.5	08/12/13	08/12/13 23:56	1033

Sample ID: 1B	Date/Time Sampled: 08/09/2013 07:45	PSS Sample ID: 13080913-002
Matrix: DRINKING WATER	Date/Time Received: 08/09/2013 14:30	

Total Lead	Analytical Method: EPA 200.8	Preparation Method: 200.8
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	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead	ND	ug/L	1.0		1	0.5	08/12/13	08/13/13 00:02	1033

Sample ID: 2A	Date/Time Sampled: 08/09/2013 07:38	PSS Sample ID: 13080913-003
Matrix: DRINKING WATER	Date/Time Received: 08/09/2013 14:30	

Total Lead	Analytical Method: EPA 200.8	Preparation Method: 200.8
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	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead	ND	ug/L	1.0		1	0.5	08/12/13	08/13/13 00:05	1033

Sample ID: 2B	Date/Time Sampled: 08/09/2013 07:40	PSS Sample ID: 13080913-004
Matrix: DRINKING WATER	Date/Time Received: 08/09/2013 14:30	

Total Lead	Analytical Method: EPA 200.8	Preparation Method: 200.8
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	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead	ND	ug/L	1.0		1	0.5	08/12/13	08/13/13 00:07	1033

Sample ID: 3A	Date/Time Sampled: 08/09/2013 07:25	PSS Sample ID: 13080913-005
Matrix: DRINKING WATER	Date/Time Received: 08/09/2013 14:30	

Total Lead	Analytical Method: EPA 200.8	Preparation Method: 200.8
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	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead	0.61	ug/L	1.0	J	1	0.5	08/12/13	08/13/13 00:09	1033

Sample ID: 3B	Date/Time Sampled: 08/09/2013 07:27	PSS Sample ID: 13080913-006
Matrix: DRINKING WATER	Date/Time Received: 08/09/2013 14:30	

Total Lead	Analytical Method: EPA 200.8	Preparation Method: 200.8
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	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead	ND	ug/L	1.0		1	0.5	08/12/13	08/13/13 00:18	1033

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 13080913

Mabbett & Associates, Bedford, MA

August 13, 2013

Project Name: HUD Building

Project Location: Washington, DC

Project ID: 2011024.021

Sample ID: 4A **Date/Time Sampled: 08/09/2013 07:30** **PSS Sample ID: 13080913-007**
Matrix: DRINKING WATER **Date/Time Received: 08/09/2013 14:30**

Total Lead

Analytical Method: EPA 200.8

Preparation Method: 200.8

	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead	1.0	ug/L	1.0		1	0.5	08/12/13	08/13/13 00:20	1033

Sample ID: 4B **Date/Time Sampled: 08/09/2013 07:33** **PSS Sample ID: 13080913-008**
Matrix: DRINKING WATER **Date/Time Received: 08/09/2013 14:30**

Total Lead

Analytical Method: EPA 200.8

Preparation Method: 200.8

	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead	ND	ug/L	1.0		1	0.5	08/12/13	08/13/13 00:22	1033

Sample ID: 5A **Date/Time Sampled: 08/09/2013 07:51** **PSS Sample ID: 13080913-009**
Matrix: DRINKING WATER **Date/Time Received: 08/09/2013 14:30**

Total Lead

Analytical Method: EPA 200.8

Preparation Method: 200.8

	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead	3.9	ug/L	1.0		1	0.5	08/12/13	08/13/13 00:24	1033

Sample ID: 5B **Date/Time Sampled: 08/09/2013 07:52** **PSS Sample ID: 13080913-010**
Matrix: DRINKING WATER **Date/Time Received: 08/09/2013 14:30**

Total Lead

Analytical Method: EPA 200.8

Preparation Method: 200.8

	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead	0.55	ug/L	1.0	J	1	0.5	08/12/13	08/13/13 00:26	1033

Sample ID: 6A **Date/Time Sampled: 08/09/2013 07:57** **PSS Sample ID: 13080913-011**
Matrix: DRINKING WATER **Date/Time Received: 08/09/2013 14:30**

Total Lead

Analytical Method: EPA 200.8

Preparation Method: 200.8

	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead	0.79	ug/L	1.0	J	1	0.5	08/12/13	08/13/13 00:29	1033

Sample ID: 6B **Date/Time Sampled: 08/09/2013 07:59** **PSS Sample ID: 13080913-012**
Matrix: DRINKING WATER **Date/Time Received: 08/09/2013 14:30**

Total Lead

Analytical Method: EPA 200.8

Preparation Method: 200.8

	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead	ND	ug/L	1.0		1	0.5	08/12/13	08/13/13 00:31	1033

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 13080913

Mabbett & Associates, Bedford, MA

August 13, 2013

Project Name: HUD Building

Project Location: Washington, DC

Project ID: 2011024.021

Sample ID: 7A		Date/Time Sampled: 08/09/2013 08:10					PSS Sample ID: 13080913-013			
Matrix: DRINKING WATER		Date/Time Received: 08/09/2013 14:30								
Total Lead		Analytical Method: EPA 200.8					Preparation Method: 200.8			
		Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead		1.1	ug/L	1.0		1	0.5	08/12/13	08/13/13 00:33	1033
Sample ID: 7B		Date/Time Sampled: 08/09/2013 08:13					PSS Sample ID: 13080913-014			
Matrix: DRINKING WATER		Date/Time Received: 08/09/2013 14:30								
Total Lead		Analytical Method: EPA 200.8					Preparation Method: 200.8			
		Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead		ND	ug/L	1.0		1	0.5	08/12/13	08/13/13 00:35	1033
Sample ID: 8A		Date/Time Sampled: 08/09/2013 08:06					PSS Sample ID: 13080913-015			
Matrix: DRINKING WATER		Date/Time Received: 08/09/2013 14:30								
Total Lead		Analytical Method: EPA 200.8					Preparation Method: 200.8			
		Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead		3.0	ug/L	1.0		1	0.5	08/12/13	08/13/13 00:44	1033
Sample ID: 8B		Date/Time Sampled: 08/09/2013 08:07					PSS Sample ID: 13080913-016			
Matrix: DRINKING WATER		Date/Time Received: 08/09/2013 14:30								
Total Lead		Analytical Method: EPA 200.8					Preparation Method: 200.8			
		Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead		0.66	ug/L	1.0	J	1	0.5	08/12/13	08/13/13 00:46	1033
Sample ID: 9A		Date/Time Sampled: 08/09/2013 08:22					PSS Sample ID: 13080913-017			
Matrix: DRINKING WATER		Date/Time Received: 08/09/2013 14:30								
Total Lead		Analytical Method: EPA 200.8					Preparation Method: 200.8			
		Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead		1.7	ug/L	1.0		1	0.5	08/12/13	08/13/13 00:48	1033
Sample ID: 9B		Date/Time Sampled: 08/09/2013 08:24					PSS Sample ID: 13080913-018			
Matrix: DRINKING WATER		Date/Time Received: 08/09/2013 14:30								
Total Lead		Analytical Method: EPA 200.8					Preparation Method: 200.8			
		Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead		ND	ug/L	1.0		1	0.5	08/12/13	08/13/13 00:51	1033

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 13080913

Mabbett & Associates, Bedford, MA

August 13, 2013

Project Name: HUD Building

Project Location: Washington, DC

Project ID: 2011024.021

Sample ID: 10A **Date/Time Sampled: 08/09/2013 08:18** **PSS Sample ID: 13080913-019**

Matrix: DRINKING WATER **Date/Time Received: 08/09/2013 14:30**

Total Lead

Analytical Method: EPA 200.8

Preparation Method: 200.8

	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead	6.0	ug/L	1.0		1	0.5	08/12/13	08/13/13 00:53	1033

Sample ID: 10B **Date/Time Sampled: 08/09/2013 08:19** **PSS Sample ID: 13080913-020**

Matrix: DRINKING WATER **Date/Time Received: 08/09/2013 14:30**

Total Lead

Analytical Method: EPA 200.8

Preparation Method: 200.8

	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead	ND	ug/L	1.0		1	0.5	08/12/13	08/13/13 00:55	1033



SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM

PHASE SEPARATION SCIENCE, INC.

www.phaseonline.com
email: info@phaseonline.com

1 *CLIENT: <u>Mabbett</u> *OFFICE LOC: <u>Alexandria, VA</u>		PSS Work Order #: <u>13080913</u> PAGE <u>1</u> OF <u>5</u>	
*PROJECT MGR: <u>[REDACTED]</u> *PHONE NO: <u>[REDACTED]</u>		Matrix Codes: SW=Surface Wtr DW=Drinking Wtr GW=Ground Wtr WW=Waste Wtr O=Oil S=Soil L=Liquid SOL=Solid A=Air WI=Wipe	
EMAIL: <u>[REDACTED]</u> FAX NO.: <u>[REDACTED]</u>		No. CONTAINERS	
*PROJECT NAME: <u>HUD building</u> PROJECT NO.: <u>201024.021</u>		SAMPLE TYPE	
SITE LOCATION: <u>Washington, DC</u> P.O. NO.:		C = COMP 3	
SAMPLER(S): <u>ACG, TEC</u> DW CERT NO.:		G = GRAB	
2		Preservatives Used	
LAB NO.		Analysis/Method Required	
*SAMPLE IDENTIFICATION		REMARKS	
*DATE (SAMPLED)			
*TIME (SAMPLED)			
MATRIX (See Codes)			
1	1A WF Rm B229	9 AUG 13	0743 DW
2	1B WF Rm B229		0745
3	2A WF Rm B100		0738
4	2B WF Rm B100		0740
5	3A WF Rm 1B14		0725
6	3B WF Rm 1B14		0727
7	4A WF Rm 1N14		0730
8	4B WF Rm 1N14		0733
9	5A K Rm 2156A		0751
10	5B K Rm 2156A		0752
5		4	
*Requested TAT (One TAT per COC)		# of Coolers: <u>2</u>	
<input type="checkbox"/> 5-Day <input type="checkbox"/> 3-Day <input checked="" type="checkbox"/> 2-Day		Custody Seal: <u>ABS</u>	
<input type="checkbox"/> Next Day <input type="checkbox"/> Emergency <input type="checkbox"/> Other		Ice Present: <u>ABS</u> Temp: <u>21, 24°C</u>	
Data Deliverables Required: COA QC SUMM CLP LIKE OTHER		Shipping Carrier: <u>TTE</u>	
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Special Instructions:	
Reinquished By: (4) Date Time Received By:		DW COMPLIANCE? YES <input type="checkbox"/> EDD FORMAT TYPE STATE RESULTS REPORTED TO: MD DE PA VA WV OTHER	

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The client (Client Name), by signing, or having client's agent sign, this "Sample Chain of Custody/Agreement Form", agrees to pay for the above requested services per the latest version of the Service Brochure or PSS-provided quotation including any and all attorney's or other reasonable fees if collection becomes necessary. * = REQUIRED



SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM

PHASE SEPARATION SCIENCE, INC.

www.phaseonline.com
email: info@phaseonline.com

1 *CLIENT: <u>Alabham</u>		*OFFICE LOC. <u>Alexandria, VA</u>		PSS Work Order #: <u>13080913</u>		PAGE <u>2</u> OF <u>5</u>																																																					
*PROJECT: <u>(b)(6)</u>		*PHONE NO.: <u>(b)(6)</u>		Matrix Codes: SW=Surface Wtr DW=Drinking Wtr GW=Ground Wtr WW=Waste Wtr O=Oil S=Soil L=Liquid SOL=Solid A=Air WI=Wipe																																																							
EMAIL: <u>(b)(6)</u>		FAX NO.: <u>()</u>		<table border="1"><tr><td rowspan="4">No. CONTAINERS</td><td rowspan="4">SAMPLE TYPE</td><td rowspan="4">Preservatives Used</td><td colspan="12"></td><td rowspan="4">REMARKS</td></tr><tr><td colspan="12"></td></tr><tr><td colspan="12"></td></tr><tr><td colspan="12"></td></tr></table>				No. CONTAINERS	SAMPLE TYPE	Preservatives Used													REMARKS																																				
No. CONTAINERS	SAMPLE TYPE	Preservatives Used													REMARKS																																												
*PROJECT NAME: <u>HUD building</u>		PROJECT NO.: <u>2011024021</u>																																																									
SITE LOCATION: <u>Washington, DC</u>		P.O. NO.:																																																									
SAMPLER(S): <u>ACG, TEC</u>		DW CERT NO.:																																																									
2																																																											
LAB NO.	*SAMPLE IDENTIFICATION	*DATE (SAMPLED)	*TIME (SAMPLED)	MATRIX (See Codes)																																																							
11	6A WF Rm 2126	9 Aug 13	0757	DW	1	G	X																																																				
12	6B WF Rm 2126		0759		1																																																						
13	7A WF Rm 3245		0810		1																																																						
14	7B WF Rm 3245		0813		1																																																						
15	8A WF Rm 3145		0806		1																																																						
16	8B WF Rm 3145		0807		1																																																						
17	9A WF Rm 4160		0822		1																																																						
18	9B WF Rm 4160		0824		1																																																						
19	10A WF Rm 4260		0818		1																																																						
20	10B WF Rm 4260		0819		1																																																						
3																																																											
*Requested TAT (One TAT per COC) <input type="checkbox"/> 5-Day <input type="checkbox"/> 3-Day <input checked="" type="checkbox"/> 2-Day <input type="checkbox"/> Next Day <input type="checkbox"/> Emergency <input type="checkbox"/> Other																																																											
# of Coolers: <u>2</u>																																																											
Custody Seal: <u>ABJ</u>																																																											
Data Deliverables Required: COA QC SUMM CLP LIKE OTHER <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>																																																											
Ice Present: <u>ABJ</u> Temp: <u>21.24°C</u>																																																											
Shipping Carrier: <u>TTE</u>																																																											
Special Instructions:																																																											
DW COMPLIANCE? YES <input type="checkbox"/>																																																											
EDD FORMAT TYPE																																																											
STATE RESULTS REPORTED TO: MD DE PA VA WV OTHER <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>																																																											

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The client (Client Name), by signing, or having client's agent sign, this "Sample Chain of Custody/Agreement Form", agrees to pay for the above requested services per the latest version of the Service Brochure or PSS-provided quotation including any and all attorney's or other reasonable fees if collection becomes necessary. * = REQUIRED



Phase Separation Science, Inc

Sample Receipt Checklist

Work Order #	13080913	Received By	(b)(6)
Client Name	Mabbett & Associates	Date Received	08/09/2013 02:30:00 PM
Project Name	HUD Building	Delivered By	Trans Time Express
Project Number	2011024.021	Tracking No	Not Applicable
Disposal Date	09/13/2013	Logged In By	(b)(6)

Shipping Container(s)

No. of Coolers	1	Ice	Absent
Custody Seal(s) Intact?	N/A	Temp (deg C)	21
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

Documentation

COC agrees with sample labels?	Yes
Chain of Custody	Yes

Sampler Name	(b)(6)
MD DW Cert. No.	N/A

Sample Container

Appropriate for Specified Analysis?	Yes
Intact?	Yes
Labeled and Labels Legible?	Yes

Custody Seal(s) Intact?	Not Applicable
Seal(s) Signed / Dated	Not Applicable

Total No. of Samples Received 20

Total No. of Containers Received 20

Preservation

Metals	(pH<2)	Yes
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, COD, Phenols	(pH<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	N/A
Do VOA vials have zero headspace?		N/A

Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Two coolers were received. All sample receipt conditions were acceptable. The temperatures observed were 21 and 24 degrees C.

Samples Inspected/Checklist Completed By:

Date: 08/09/2013

PM Review and Approval:

Date: 08/12/2013

Analytical Report for
Mabbett & Associates
Certificate of Analysis No.: 13080914

Project Manager: Damien Hammond
Project Name : HUD Building
Project Location: Washington, DC
Project ID : 2011024.021



August 13, 2013
Phase Separation Science, Inc.
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PHASE SEPARATION SCIENCE, INC.



August 13, 2013

(b)(6)

Mabbett & Associates

5 Alfred Circle

Bedford, MA 01730

Reference: PSS Work Order(s) No: **13080914**

Project Name: HUD Building

Project Location: Washington, DC

Project ID.: 2011024.021

Dear (b)(6):

This report includes the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Work Order(s) numbered **13080914**.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on September 13, 2013. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt, the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 5 years, after which time it will be disposed of without further notice, unless prior arrangements have been made.

We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or info@phaseonline.com.

Sincerely,

(b)(6)



Sample Summary

Client Name: Mabbett & Associates
Project Name: HUD Building

Work Order Number(s): 13080914

Project ID: 2011024.021

The following samples were received under chain of custody by Phase Separation Science (PSS) on 08/09/2013 at 02:30 pm

Lab Sample Id	Sample Id	Matrix	Date/Time Collected
13080914-001	11A	DRINKING WATER	08/09/13 07:26
13080914-002	11B	DRINKING WATER	08/09/13 07:26
13080914-003	12A	DRINKING WATER	08/09/13 07:31
13080914-004	12B	DRINKING WATER	08/09/13 07:31
13080914-005	13A	DRINKING WATER	08/09/13 07:36
13080914-006	13B	DRINKING WATER	08/09/13 07:36
13080914-007	14A	DRINKING WATER	08/09/13 07:41
13080914-008	14B	DRINKING WATER	08/09/13 07:41
13080914-009	15A	DRINKING WATER	08/09/13 07:45
13080914-010	15B	DRINKING WATER	08/09/13 07:45
13080914-011	16A	DRINKING WATER	08/09/13 07:51
13080914-012	16B	DRINKING WATER	08/09/13 07:51
13080914-013	17A	DRINKING WATER	08/09/13 08:00
13080914-014	17B	DRINKING WATER	08/09/13 08:00
13080914-015	18A	DRINKING WATER	08/09/13 07:56
13080914-016	18B	DRINKING WATER	08/09/13 07:56
13080914-017	19A	DRINKING WATER	08/09/13 08:03
13080914-018	19B	DRINKING WATER	08/09/13 08:03
13080914-019	20A	DRINKING WATER	08/09/13 08:08
13080914-020	20B	DRINKING WATER	08/09/13 08:08
13080914-021	21A	DRINKING WATER	08/09/13 08:13
13080914-022	21B	DRINKING WATER	08/09/13 08:13
13080914-023	22A	DRINKING WATER	08/09/13 08:18
13080914-024	22B	DRINKING WATER	08/09/13 08:18

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.

Notes:

1. The presence of a common laboratory contaminant such as methylene chloride may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. The following analytical results are never reported on a dry weight basis: pH, flashpoint, moisture and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].
4. The analyses of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA 524.2 and calcium, magnesium, sodium and iron by EPA 200.8 are not currently promulgated for use in testing to meet the Safe Drinking Water Act and as such cannot be used for compliance purposes. The listings of the current promulgated methods for testing in compliance with the Safe Drinking Water Act can be found in the 40 CFR part 141.1, for the primary drinking water contaminants, and part 141.3, for the secondary drinking water contaminants.
5. The analyses of chlorine, pH, dissolved oxygen, temperature and sulfite for non-potable water samples tested for compliance for Virginia Pollution Discharge Elimination System (VDPES) permits and Virginia Pollutant Abatement (VPA) permits, have a maximum holding time of 15 minutes established by 40CFR136.3.



Sample Summary

Client Name: Mabbett & Associates
Project Name: HUD Building

Work Order Number(s): 13080914

Standard Flags/Abbreviations:

- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- C** Results Pending Final Confirmation.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- Fail** The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.
- J** The target analyte was positively identified below the reporting limit but greater than the LOD.
- LOD** Limit of Detection. An estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte and matrix specific.
- ND** Not Detected at or above the reporting limit.
- RL** RSS Reporting Limit.
- U** Not detected.



Case Narrative Summary

Client Name: Mabbett & Associates

Project Name: HUD Building

Work Order Number(s): 13080914

Project ID: 2011024.021

Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

Sample Receipt:

Two coolers were received. All sample receipt conditions were acceptable. The temperatures observed were 21 and 24 degrees C.

NELAP accreditation was held for all analyses performed unless noted below. See www.phaseonline.com for complete PSS scope of accreditation.

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 13080914

Mabbett & Associates, Bedford, MA

August 13, 2013

Project Name: HUD Building

Project Location: Washington, DC

Project ID: 2011024.021

Sample ID: 11A **Date/Time Sampled: 08/09/2013 07:26** **PSS Sample ID: 13080914-001**
Matrix: DRINKING WATER **Date/Time Received: 08/09/2013 14:30**

Total Lead

Analytical Method: EPA 200.8

Preparation Method: 200.8

	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead	1.4	ug/L	1.0		1	0.5	08/12/13	08/13/13 01:12	1033

Sample ID: 11B **Date/Time Sampled: 08/09/2013 07:26** **PSS Sample ID: 13080914-002**
Matrix: DRINKING WATER **Date/Time Received: 08/09/2013 14:30**

Total Lead

Analytical Method: EPA 200.8

Preparation Method: 200.8

	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead	ND	ug/L	1.0		1	0.5	08/12/13	08/13/13 01:19	1033

Sample ID: 12A **Date/Time Sampled: 08/09/2013 07:31** **PSS Sample ID: 13080914-003**
Matrix: DRINKING WATER **Date/Time Received: 08/09/2013 14:30**

Total Lead

Analytical Method: EPA 200.8

Preparation Method: 200.8

	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead	2.0	ug/L	1.0		1	0.5	08/12/13	08/13/13 01:21	1033

Sample ID: 12B **Date/Time Sampled: 08/09/2013 07:31** **PSS Sample ID: 13080914-004**
Matrix: DRINKING WATER **Date/Time Received: 08/09/2013 14:30**

Total Lead

Analytical Method: EPA 200.8

Preparation Method: 200.8

	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead	ND	ug/L	1.0		1	0.5	08/12/13	08/13/13 01:23	1033

Sample ID: 13A **Date/Time Sampled: 08/09/2013 07:36** **PSS Sample ID: 13080914-005**
Matrix: DRINKING WATER **Date/Time Received: 08/09/2013 14:30**

Total Lead

Analytical Method: EPA 200.8

Preparation Method: 200.8

	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead	3.1	ug/L	1.0		1	0.5	08/12/13	08/13/13 01:25	1033

Sample ID: 13B **Date/Time Sampled: 08/09/2013 07:36** **PSS Sample ID: 13080914-006**
Matrix: DRINKING WATER **Date/Time Received: 08/09/2013 14:30**

Total Lead

Analytical Method: EPA 200.8

Preparation Method: 200.8

	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead	0.61	ug/L	1.0	J	1	0.5	08/12/13	08/13/13 01:34	1033

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 13080914

Mabbett & Associates, Bedford, MA

August 13, 2013

Project Name: HUD Building

Project Location: Washington, DC

Project ID: 2011024.021

Sample ID: 14A	Date/Time Sampled: 08/09/2013 07:41	PSS Sample ID: 13080914-007
Matrix: DRINKING WATER	Date/Time Received: 08/09/2013 14:30	

Total Lead	Analytical Method: EPA 200.8	Preparation Method: 200.8
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	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead	0.82	ug/L	1.0	J	1	0.5	08/12/13	08/13/13 01:36	1033

Sample ID: 14B	Date/Time Sampled: 08/09/2013 07:41	PSS Sample ID: 13080914-008
Matrix: DRINKING WATER	Date/Time Received: 08/09/2013 14:30	

Total Lead	Analytical Method: EPA 200.8	Preparation Method: 200.8
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	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead	ND	ug/L	1.0		1	0.5	08/12/13	08/13/13 01:38	1033

Sample ID: 15A	Date/Time Sampled: 08/09/2013 07:45	PSS Sample ID: 13080914-009
Matrix: DRINKING WATER	Date/Time Received: 08/09/2013 14:30	

Total Lead	Analytical Method: EPA 200.8	Preparation Method: 200.8
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	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead	0.68	ug/L	1.0	J	1	0.5	08/12/13	08/13/13 01:41	1033

Sample ID: 15B	Date/Time Sampled: 08/09/2013 07:45	PSS Sample ID: 13080914-010
Matrix: DRINKING WATER	Date/Time Received: 08/09/2013 14:30	

Total Lead	Analytical Method: EPA 200.8	Preparation Method: 200.8
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	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead	ND	ug/L	1.0		1	0.5	08/12/13	08/13/13 01:43	1033

Sample ID: 16A	Date/Time Sampled: 08/09/2013 07:51	PSS Sample ID: 13080914-011
Matrix: DRINKING WATER	Date/Time Received: 08/09/2013 14:30	

Total Lead	Analytical Method: EPA 200.8	Preparation Method: 200.8
------------	------------------------------	---------------------------

	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead	1.6	ug/L	1.0		1	0.5	08/12/13	08/13/13 01:45	1033

Sample ID: 16B	Date/Time Sampled: 08/09/2013 07:51	PSS Sample ID: 13080914-012
Matrix: DRINKING WATER	Date/Time Received: 08/09/2013 14:30	

Total Lead	Analytical Method: EPA 200.8	Preparation Method: 200.8
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	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead	ND	ug/L	1.0		1	0.5	08/12/13	08/13/13 01:47	1033

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 13080914

Mabbett & Associates, Bedford, MA

August 13, 2013

Project Name: HUD Building

Project Location: Washington, DC

Project ID: 2011024.021

Sample ID: 17A		Date/Time Sampled: 08/09/2013 08:00					PSS Sample ID: 13080914-013			
Matrix: DRINKING WATER		Date/Time Received: 08/09/2013 14:30								
Total Lead		Analytical Method: EPA 200.8					Preparation Method: 200.8			
		Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead		0.65	ug/L	1.0	J	1	0.5	08/12/13	08/13/13 01:49	1033
Sample ID: 17B		Date/Time Sampled: 08/09/2013 08:00					PSS Sample ID: 13080914-014			
Matrix: DRINKING WATER		Date/Time Received: 08/09/2013 14:30								
Total Lead		Analytical Method: EPA 200.8					Preparation Method: 200.8			
		Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead		ND	ug/L	1.0		1	0.5	08/12/13	08/13/13 01:51	1033
Sample ID: 18A		Date/Time Sampled: 08/09/2013 07:56					PSS Sample ID: 13080914-015			
Matrix: DRINKING WATER		Date/Time Received: 08/09/2013 14:30								
Total Lead		Analytical Method: EPA 200.8					Preparation Method: 200.8			
		Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead		1.5	ug/L	1.0		1	0.5	08/12/13	08/13/13 01:59	1033
Sample ID: 18B		Date/Time Sampled: 08/09/2013 07:56					PSS Sample ID: 13080914-016			
Matrix: DRINKING WATER		Date/Time Received: 08/09/2013 14:30								
Total Lead		Analytical Method: EPA 200.8					Preparation Method: 200.8			
		Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead		ND	ug/L	1.0		1	0.5	08/12/13	08/13/13 02:01	1033
Sample ID: 19A		Date/Time Sampled: 08/09/2013 08:03					PSS Sample ID: 13080914-017			
Matrix: DRINKING WATER		Date/Time Received: 08/09/2013 14:30								
Total Lead		Analytical Method: EPA 200.8					Preparation Method: 200.8			
		Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead		1.2	ug/L	1.0		1	0.5	08/12/13	08/13/13 02:04	1033
Sample ID: 19B		Date/Time Sampled: 08/09/2013 08:03					PSS Sample ID: 13080914-018			
Matrix: DRINKING WATER		Date/Time Received: 08/09/2013 14:30								
Total Lead		Analytical Method: EPA 200.8					Preparation Method: 200.8			
		Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead		ND	ug/L	1.0		1	0.5	08/12/13	08/13/13 02:06	1033

OFFICES:
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ROUTE 40 WEST
BALTIMORE, MD 21228
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800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 13080914

Mabbett & Associates, Bedford, MA

August 13, 2013

Project Name: HUD Building

Project Location: Washington, DC

Project ID: 2011024.021

Sample ID: 20A		Date/Time Sampled: 08/09/2013 08:08					PSS Sample ID: 13080914-019			
Matrix: DRINKING WATER		Date/Time Received: 08/09/2013 14:30								
Total Lead		Analytical Method: EPA 200.8					Preparation Method: 200.8			
		Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead		3.1	ug/L	1.0		1	0.5	08/12/13	08/13/13 02:08	1033
Sample ID: 20B		Date/Time Sampled: 08/09/2013 08:08					PSS Sample ID: 13080914-020			
Matrix: DRINKING WATER		Date/Time Received: 08/09/2013 14:30								
Total Lead		Analytical Method: EPA 200.8					Preparation Method: 200.8			
		Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead		ND	ug/L	1.0		1	0.5	08/12/13	08/13/13 02:10	1033
Sample ID: 21A		Date/Time Sampled: 08/09/2013 08:13					PSS Sample ID: 13080914-021			
Matrix: DRINKING WATER		Date/Time Received: 08/09/2013 14:30								
Total Lead		Analytical Method: EPA 200.8					Preparation Method: 200.8			
		Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead		1.1	ug/L	1.0		1	0.5	08/12/13	08/12/13 18:08	1034
Sample ID: 21B		Date/Time Sampled: 08/09/2013 08:13					PSS Sample ID: 13080914-022			
Matrix: DRINKING WATER		Date/Time Received: 08/09/2013 14:30								
Total Lead		Analytical Method: EPA 200.8					Preparation Method: 200.8			
		Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead		ND	ug/L	1.0		1	0.5	08/12/13	08/12/13 18:14	1034
Sample ID: 22A		Date/Time Sampled: 08/09/2013 08:18					PSS Sample ID: 13080914-023			
Matrix: DRINKING WATER		Date/Time Received: 08/09/2013 14:30								
Total Lead		Analytical Method: EPA 200.8					Preparation Method: 200.8			
		Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead		1.2	ug/L	1.0		1	0.5	08/12/13	08/12/13 18:20	1034
Sample ID: 22B		Date/Time Sampled: 08/09/2013 08:18					PSS Sample ID: 13080914-024			
Matrix: DRINKING WATER		Date/Time Received: 08/09/2013 14:30								
Total Lead		Analytical Method: EPA 200.8					Preparation Method: 200.8			
		Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Lead		0.53	ug/L	1.0	J	1	0.5	08/12/13	08/12/13 18:26	1034



SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM

PHASE SEPARATION SCIENCE, INC.

www.phaseonline.com

email: info@phaseonline.com

1 *CLIENT: <u>Mabbett</u>		*OFFICE LOC: <u>Alexandria, VA</u>		PSS Work Order #: <u>13080914</u>		PAGE <u>3</u> OF <u>5</u>	
*PROJECT MGR: <u>(b)(6)</u>		*PHONE NO.: <u>(b)(6)</u>		Matrix Codes: SW=Surface Wtr DW=Drinking Wtr GW=Ground Wtr WW=Waste Wtr O=Oil S=Soil L=Liquid SOL=Solid A=Air WL=Wipe			
EMAIL: <u>(b)(6)</u>		FAX NO.: <u>()</u>		No. CONTAINERS			
*PROJECT NAME: <u>HUD Bldg</u>		2011024, 021 PROJECT NO.:		SAMPLE TYPE			
SITE LOCATION: <u>Washington, DC</u>		P.O. NO.:		C = COMP			
SAMPLER(S): <u>ACG, TEC</u>		DW CERT NO.:		G = GRAB			
2				Preservatives Used			
LAB NO.	*SAMPLE IDENTIFICATION	*DATE (SAMPLED)	*TIME (SAMPLED)	MATRIX (See Codes)			ANALYSIS/METHOD REQUIRED
1	11A WF Rm 5226	8/9/13	07:26	DW	1	G	X
2	11B WF Rm 5226		07:26		1		
3	12A WF Rm 5282		07:31		1		
4	12B WF Rm 5282		07:31		1		
5	13A WF Rm 6260		07:36		1		
6	13B WF Rm 6260		07:36		1		
7	14A WF Rm 6126		07:41		1		
8	14B WF Rm 6126		07:41		1		
9	15A WF Rm 7126		07:45		1		
10	15B WF Rm 7126		07:45		1		
				* Requested TAT (One TAT per COC) <input type="checkbox"/> 5-Day <input type="checkbox"/> 3-Day <input checked="" type="checkbox"/> 2-Day <input type="checkbox"/> Other			
				Data Deliverables Required: COA QC SUMM CLP LIKE OTHER			
				Ice Present: <u>ABS</u> Temp: <u>21, 24°</u>			
				Shipping Carrier: <u>JTE</u>			
				Special Instructions:			
Relinquished By: <u>(4)</u>		Date	Time	Received By:		DW COMPLIANCE? YES <input type="checkbox"/>	
						EDD FORMAT TYPE	
						STATE RESULTS REPORTED TO: MD DE PA VA WV OTHER	

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The client (Client Name), by signing, or having client's agent sign, this "Sample Chain of Custody/Agreement Form", agrees to pay for the above requested services per the latest version of the Service Brochure or PSS-provided quotation including any and all attorney's or other reasonable fees if collection becomes necessary. * = REQUIRED



Page 11 of 13
Final 1.000
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ESSA-2022-001139 1/6/2021

The client (Client Name), by signing, or having client's agent sign, this "Sample Chain of Custody/Agreement Form", agrees to pay for the above requested services per the latest version of the Service Brochure or PSS-provided quotation including any and all attorney's or other reasonable fees if collection becomes necessary. * = REQUIRED



SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM

PHASE SEPARATION SCIENCE, INC.

www.phaseonline.com

email: info@phaseonline.com

1 *CLIENT: <u>Mahieu</u>		*OFFICE LOC. <u>Alexandria, VA</u>		PSS Work Order #: <u>13080914</u>		PAGE <u>5</u> OF <u>5</u>																																													
*PROJECT MGF: [REDACTED]		*PHONE NO: [REDACTED]		Matrix Codes: SW=Surface Wtr DW=Drinking Wtr GW=Ground Wtr WW=Waste Wtr O=Oil S=Soil L=Liquid SOL=Solid A=Air WI=Wipe																																															
EMAIL: [REDACTED]		FAX NO.: ()		<table border="1"><tr><td rowspan="4">No. CONTAINERS</td><td rowspan="4">SAMPLE TYPE</td><td rowspan="4">Preservatives Used</td><td colspan="10"></td><td rowspan="4">REMARKS</td></tr><tr><td colspan="10"></td></tr><tr><td colspan="10"></td></tr><tr><td colspan="10"></td></tr></table>				No. CONTAINERS	SAMPLE TYPE	Preservatives Used											REMARKS																														
No. CONTAINERS	SAMPLE TYPE	Preservatives Used											REMARKS																																						
*PROJECT NAME: <u>HUD Bldg</u>		2011024, 021 PROJECT NO.:																																																	
SITE LOCATION: <u>Washington, DC</u>		P.O. NO.:																																																	
SAMPLER(S): <u>ACG, TEC</u>		DW CERT NO.:																																																	
2																																																			
LAB NO.	*SAMPLE IDENTIFICATION	*DATE (SAMPLED)	*TIME (SAMPLED)	MATRIX (See Codes)																																															
21	21A WF Rm 10160	8/9/13	08:13	DW	1	G	X																																												
22	21B WF Rm 10160		08:13		1																																														
23	22A WF Rm 10220		08:18		1																																														
24	22B WF Rm 10226		08:18		1																																														
<div>*Requested TAT (One TAT per COC) <input type="checkbox"/> 5-Day <input type="checkbox"/> 3-Day <input checked="" type="checkbox"/> 2-Day <input type="checkbox"/> Next Day <input type="checkbox"/> Emergency <input type="checkbox"/> Other Data Deliverables Required: COA <input type="checkbox"/> QC <input type="checkbox"/> SUMM <input type="checkbox"/> CLP <input type="checkbox"/> LIKE <input type="checkbox"/> OTHER # of Coolers: <u>2</u> Custody Seal: <u>AGS</u> Ice Present: <u>AGS</u> Temp: <u>21.24°C</u> Shipping Carrier: <u>TTE</u> Special Instructions: DW COMPLIANCE? YES <input type="checkbox"/> EDD FORMAT TYPE: STATE RESULTS REPORTED TO: MD <input type="checkbox"/> DE <input type="checkbox"/> PA <input type="checkbox"/> VA <input type="checkbox"/> WV <input type="checkbox"/> OTHER</div>																																																			

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The client (Client Name), by signing, or having client's agent sign, this "Sample Chain of Custody/Agreement Form", agrees to pay for the above requested services per the latest version of the Service Brochure or PSS-provided quotation including any and all attorney's or other reasonable fees if collection becomes necessary. * = REQUIRED



Phase Separation Science, Inc

Sample Receipt Checklist

Work Order #	13080914	Received By	(b)(6)
Client Name	Mabbett & Associates	Date Received	08/09/2013 02:30:00 PM
Project Name	HUD Building	Delivered By	Trans Time Express
Project Number	2011024.021	Tracking No	Not Applicable
Disposal Date	09/13/2013	Logged In By	(b)(6)

Shipping Container(s)

No. of Coolers	1	Ice	Absent
Custody Seal(s) Intact?	N/A	Temp (deg C)	21
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

Documentation

COC agrees with sample labels?	Yes
Chain of Custody	Yes

Sampler Name	(b)(6)
MD DW Cert. No.	N/A

Sample Container

Appropriate for Specified Analysis?	Yes
Intact?	Yes
Labeled and Labels Legible?	Yes

Custody Seal(s) Intact?	Not Applicable
Seal(s) Signed / Dated	Not Applicable

Total No. of Samples Received 24

Total No. of Containers Received 24

Preservation

Metals	(pH<2)	Yes
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, COD, Phenols	(pH<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	N/A
Do VOA vials have zero headspace?		N/A

Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Two coolers were received. All sample receipt conditions were acceptable. The temperatures observed were 21 and 24 degrees C.

Samples Inspected/Checklist Completed By:

Date: 08/09/2013

PM Review and Approval:

Date: 08/12/2013



APPENDIX F

RAC 1-4 COST BREAKDOWNS

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: C10

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	C1011 - Electrical Closet Shaft Opening - Add Rated Separation	Action Date	Aug 7, 2014
Linked System		Date Inspected	Aug 7, 2013
Category	Life Safety	Finish Date	
Prime System	C1011 - Fixed Partitions	Status	Open
Priority	1 - Immediate / First Year	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. There is a shaft opening inside an electrical closet which requires rated separation.

LOCATION/EXTENT. Electrical Closet 6N5.

CAUSE. Unknown.

CODE/STANDARD. NFPA 101 (2012): Section 8.3.5.1.

Linked Photos



C1011 - Electrical Closet Shaft Opening - Add Rated Separation

Actions

Action Name	C1011 - Electrical Closet Shaft Opening - Add Rated Separation
Option	Conventional
Prime Action	Yes
Description	REMEDY. Provide a rated partition separation around the shaft opening. IMPLEMENTATION. Coordinate partition location with affected trades.

Estimate

Code Label	Line Item Description	Quantity	Unit	(b)(4)
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	9.00	M.S.F.	
024119190700	Selective demolition, rubbish handling, dumpster, 10 C.Y., 3 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	1.00	Week	
024119200100	Selective demolition, dump charges, typical urban city, building construction materials, includes tipping fees only	0.50	Ton	
099103400660	Surface preparation, interior, walls, sand, gypsum board and plaster, light	400.00	S.F.	
099123740800	Paints & Coatings, walls & ceilings, interior, concrete, drywall or plaster, zero voc latex, 2 coats, smooth finish, brushwork	80.00	S.F.	
099123740840	Paints & Coatings, walls & ceilings, interior, concrete, drywall or plaster, zero voc latex, 2 coats, smooth finish, roller	400.00	S.F.	
C10101266200	Metal partition, 5/8" fire rated gypsum board face, 5/8" fire rated gypsum board base, 3-5/8" @ 24", same opposite face, no insulation	400.00	S.F.	
SKWKJ	Skilled Workers Average (35 Trades) (JourneyMan)	70.00	hour	

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: C10

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	C1011 - Exposed 8" Storm/Sewer Lines in Stairs - Add Rated Separation	Action Date	Aug 7, 2014
Linked System		Date Inspected	Aug 7, 2013
Category	Life Safety	Finish Date	
Prime System	C1011 - Fixed Partitions	Status	Open
Priority	1 - Immediate / First Year	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. The 8" storm/sewer lines located in four of the egress stairs are exposed.

LOCATION/EXTENT. Stairs 5, 6, 7 and 8.

CAUSE. Original design did not require separation.

CODE/STANDARD. NFPA 101 (2012); Section 7.1.

Linked Photos



C1011 - Exposed 8 StormSewer Lines in Stairs - Add Rated Separation

Actions

Action Name	C1011 - Exposed 8" Storm/Sewer Lines in Stairs - Add Rated Separation
Option	Conventional
Prime Action	Yes
Description	REMEDY. Provide a rated partition separation to enclose the storm/sewer lines. IMPLEMENTATION. Coordinate partition location with required egress clearance within stair.

Estimate

Code Label	Line Item Description	Quantity	Unit	(b)(4)
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	190.00	M.S.F.	
024119190800	Selective demolition, rubbish handling, dumpster, 30 C.Y., 7 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	4.00	Week	
024119200100	Selective demolition, dump charges, typical urban city, building construction materials, includes tipping fees only	3.00	Ton	
099103400660	Surface preparation, interior, walls, sand, gypsum board and plaster, light	12,000.00	S.F.	
099123740800	Paints & Coatings, walls & ceilings, interior, concrete, drywall or plaster, zero voc latex, 2 coats, smooth finish, brushwork	1,200.00	S.F.	
099123740840	Paints & Coatings, walls & ceilings, interior, concrete, drywall or plaster, zero voc latex, 2 coats, smooth finish, roller	12,000.00	S.F.	
C10101266200	Metal partition, 5/8" fire rated gypsum board face, 5/8" fire rated gypsum board base, 3-5/8" @ 24", same opposite face, no insulation	12,000.00	S.F.	
SKWKI	Skilled Workers Average (35 trades) (Inside Foreman)	240.00	hour	
SKWKJ	Skilled Workers Average (35 trades) (JourneyMan)	930.00	hour	

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: C10

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	C1011 - Fire Pump Room - Add Rated Separation	Action Date	Aug 7, 2014
Linked System		Date Inspected	Aug 7, 2013
Category	Life Safety	Finish Date	
Prime System	C1011 - Fixed Partitions	Status	Open
Priority	1 - Immediate / First Year	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. The fire pump is not enclosed in a rated room.

LOCATION/EXTENT. Sub-Basement floor, southwest side.

CAUSE. Unknown.

CODE/STANDARD. IBC (2012); Section 913.2.1

Linked Photos



C1011 - Fire Pump Room - Add Rated Separation 1



C1011 - Fire Pump Room - Add Rated Separation 2

Actions

Action Name C1011 - Fire Pump Room - Add Rated Separation

Option Conventional

Prime Action Yes

Description REMEDY. Provide a rated separation for the fire pump from the rest of the mechanical room.

IMPLEMENTATION. Coordinate partition location with affected trades.

Estimate

Code Label	Line Item Description	Quantity	Unit
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	20.00	M.S.F.
024119190700	Selective demolition, rubbish handling, dumpster, 10 C.Y., 3 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	2.00	Week
024119200100	Selective demolition, dump charges, typical urban city, building construction materials, includes tipping fees only	0.50	Ton
099123350140	Paints & coatings, interior latex, doors, flush, both sides, roll & brush, primer + 2 coats, incl. frame & trim	1.00	Ea.
099123740800	Paints & Coatings, walls & ceilings, interior, concrete, drywall or plaster, zero voc latex, 2 coats, smooth finish, brushwork	300.00	S.F.
099123740840	Paints & Coatings, walls & ceilings, interior, concrete, drywall or plaster, zero voc latex, 2 coats, smooth finish, roller	1,400.00	S.F.
260523201850	Fire alarm cable, FEP teflon, 150 volt, to 200 Deg.C, #18, 1 pair	1.00	C.L.F.
260533160150	Outlet boxes, pressed steel, 4" square	1.00	Ea.
260533160250	Outlet boxes, pressed steel, covers, blank, 4" square	1.00	Ea.
283146505240	Detection Systems, smoke detector, addressable type, excl. wires & conduit	1.00	Ea.
C10101266200	Metal partition, 5/8" fire rated gypsum board face, 5/8" fire rated gypsum board base, 3-5/8" @ 24", same opposite face, no insulation	700.00	S.F.
C10201166960	Labeled metal door/metal frame, hollow, 1-1/2 hr, 18 ga vision, 6'-0" x 7'-0", KD frame, 4-7/8"	1.00	Ea.
ELEC	Electricians (JourneyMan)	40.00	hour
SKWKI	Skilled Workers Average (35 trades) (Inside Foreman)	30.00	hour
SKWKJ	Skilled Workers Average (35 trades) (JourneyMan)	100.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: C10

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	C1011 - Firestopping @ Floor Penetrations - Repair		
	Action Date	Aug 7, 2014	
Linked System	Date Inspected	Aug 7, 2013	
Category	Building Code	Finish Date	
Prime System	C1011 - Fixed Partitions	Status	Open
Priority	1 - Immediate / First Year	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

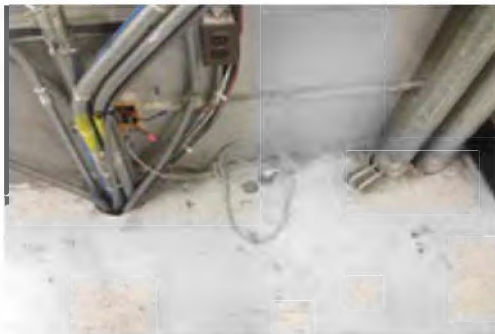
CONDITION/PROBLEM. Penetrations have been made in the 2-hour rated floors of the telephone and electrical closets, as well as the transformer vault.

LOCATION/EXTENT. Telephone and electrical closets located throughout the entire building.

CAUSE. Contractors and in-house personnel create penetrations in rated assemblies and do not properly seal them.

CODE/REGULATION. NFPA 101 (2012); Section 8.3.5.1.

Linked Photos



C1011 - Firestopping @ Floor Penetrations - Repair

Actions

Action Name	C1011 - Firestopping @ Floor Penetrations - Repair
Option	Conventional
Prime Action	Yes
Description	REMEDY. Provide firestopping as required on both sides of floor penetrations.

IMPLEMENTATION. Survey building to determine exact locations. Upon identification of locations, remove any debris from around the existing penetration. Install a listed firestopping material per the manufacturer's listing. Install a listed firestopping caulk where all conduit and cable are penetrating the rated assemblies.

Estimate

Code Label	Line Item Description	Quantity	Unit
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	200.00	M.S.F.
024119190700	Selective demolition, rubbish handling, dumpster, 10 C.Y., 3 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	6.00	Week
024119200100	Selective demolition, dump charges, typical urban city, building construction materials, includes tipping fees only	3.00	Ton
078413100250	Firestopping, metallic piping, insulated, through floors, 4" dia	1,500.00	Ea.
CARPJ	Carpenters	210.00	Hr.
CLABA	Common Building Laborers	400.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: C10

Currency: USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	C1011 - Panels and Conduits Exposed in Stairs - Add Rated Separation	Action Date	Aug 7, 2014
Linked System		Date Inspected	Aug 7, 2013
Category	Life Safety	Finish Date	
Prime System	C1011 - Fixed Partitions	Status	Open
Priority	1 - Immediate / First Year	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. Large 3" electrical conduits and panels are exposed in various fire stairs.

LOCATION/EXTENT. Stairs 5, 6, 7 and 8.

CAUSE. Unknown.

CODE/STANDARD. NFPA 101 (2012); Section 7.2.2.

Linked Photos



C1011 - Panels and Conduits Exposed in Stairs - Add Rated Separation

Actions

Action Name	C1011 - Panels and Conduits Exposed in Stairs - Add Rated Separation
Option	Conventional
Prime Action	Yes
Description	<p>REMEDY. Provide a rated partition separation to enclose conduits and panels.</p> <p>IMPLEMENTATION. Coordinate partition location with required egress clearance within stair.</p> <p>COSTEQUIVALENCE. In the following estimate, substitutions have been made. This has occurred because the needed line item</p>

does not occur in RS Means version provided in the program. The substitution is based on the equivalent value.

-- SUBSTITUTION, Underlayment, plywood, underlayment grade, 1/2" thick

-- FOR, Underlayment, fire resistant treated plywood, 1/2" thick

Estimate

Code Label	Line Item Description	Quantity	Unit
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	405.00	M.S.F.
024119190700	Selective demolition, rubbish handling, dumpster, 10 C.Y., 3 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	16.00	Week
061626100100	Underlayment, plywood, underlayment grade, 1/2" thick	24,000.00	SF Flr.
083113101200	Doors, specialty, access, fire rated, with lock, metal, 24" x 24"	60.00	Ea.
099103400660	Surface preparation, interior, walls, sand, gypsum board and plaster, light	24,000.00	S.F.
099123740800	Paints & Coatings, walls & ceilings, interior, concrete, drywall or plaster, zero voc latex, 2 coats, smooth finish, brushwork	2,400.00	S.F.
099123740840	Paints & Coatings, walls & ceilings, interior, concrete, drywall or plaster, zero voc latex, 2 coats, smooth finish, roller	24,000.00	S.F.
C10101266200	Metal partition, 5/8" fire rated gypsum board face, 5/8" fire rated gypsum board base, 3-5/8" @ 24", same opposite face, no insulation	24,000.00	S.F.
SKWKI	Skilled Workers Average (35 trades) (Inside Foreman)	440.00	hour
SKWKJ	Skilled Workers Average (35 trades) (JourneyMan)	1,850.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: C10

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	C1011 - Standpipes Not Enclosed - Add Rated Separation	Action Date	Aug 7, 2014
Linked System		Date Inspected	Aug 7, 2013
Category	Life Safety	Finish Date	
Prime System	C1011 - Fixed Partitions	Status	Open
Priority	1 - Immediate / First Year	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. The standpipes on the first floor are not enclosed with fire resistant construction.

LOCATION/EXTENT. Level 1.

CAUSE. Unknown.

CODE/STANDARD. NFPA 101 (2012); Section 7.1.

Linked Photos



C1011 - Standpipes Not Enclosed - Add Rated Separation

Actions

Action Name	C1011 - Standpipes Not Enclosed - Add Rated Separation
Option	Conventional
Prime Action	Yes
Description	REMEDY. Provide a rated partition separation to enclose the standpipes. IMPLEMENTATION. Coordinate with Building Manager.

Estimate

Code Label	Line Item Description	Quantity	Unit
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	25.00	M.S.F.
024119190700	Selective demolition, rubbish handling, dumpster, 10 C.Y., 3 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	2.00	Week
024119200100	Selective demolition, dump charges, typical urban city, building construction materials, includes tipping fees only	0.50	Ton
099103400660	Surface preparation, interior, walls, sand, gypsum board and plaster, light	300.00	S.F.
099123740800	Paints & Coatings, walls & ceilings, interior, concrete, drywall or plaster, zero voc latex, 2 coats, smooth finish, brushwork	30.00	S.F.
099123740840	Paints & Coatings, walls & ceilings, interior, concrete, drywall or plaster, zero voc latex, 2 coats, smooth finish, roller	300.00	S.F.
C10101266200	Metal partition, 5/8" fire rated gypsum board face, 5/8" fire rated gypsum board base, 3-5/8" @ 24", same opposite face, no insulation	300.00	S.F.
SKWKI	Skilled Workers Average (35 trades) (Inside Foreman)	40.00	hour
SKWKJ	Skilled Workers Average (35 trades) (JourneyMan)	140.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: C10

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	C1020 - Fire Stair Doors Not Code Compliant - Replace	Action Date	Aug 7, 2014
Linked System		Date Inspected	Aug 7, 2013
Category	Building Code	Finish Date	
Prime System	C1020 - Interior Doors	Status	Open
Priority	1 - Immediate / First Year	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

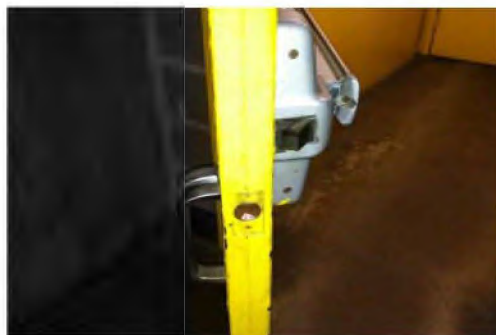
CONDITION/PROBLEM. Various fire stair doors do not close and latch.

LOCATION/EXTENT. Stair 6 (second floor), Stair 5 (third floor), Stair 2 (Garage levels) and Stairs 7 & 8 (Penthouse).

CAUSE. Deterioration due to high usage and modification of door hardware over time.

CODE/REGULATION. National Fire Protection Association (NFPA) 2012 - 101, Section 7.2.

Linked Photos



C1020 - Doors Not Code Compliant - Replace

Actions

Action Name	C1020 - Fire Stair Doors Not Code Compliant - Replace
Option	Conventional
Prime Action	Yes
Description	<p>REMEDY. Replace existing doors, frames and hardware with fire rated door assemblies.</p> <p>IMPLEMENTATION. Coordinate work with the Building Manager to limit disruption. Ensure that fire exit access is maintained during construction.</p>

STATEMENT OF EFFECT. The corrective action described poses NO ADVERSE EFFECT on this property listed on the National Register for Historic Places.

Estimate

Code Label	Line Item Description	Quantity	Unit
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	30.00	M.S.F.
024119190800	Selective demolition, rubbish handling, dumpster, 30 C.Y., 7 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	3.00	Week
024119200100	Selective demolition, dump charges, typical urban city, building construction materials, includes tipping fees only	8.00	Ton
080505100200	Door demolition, exterior door, single, 3' x 7' high, 1-3/4" thick, remove	7.00	Ea.
081213130100	Frames, steel, knock down, hollow metal, single, 16 ga., up to 5-3/4" deep, 7'-0" h x 3'-0" w	7.00	Ea.
081313150080	Doors, fire, steel, flush, "B" label, 90 minute, full panel, 20 ga., 3'-0" x 7'-0"	7.00	Ea.
087120304000	Door hardware, door closer, rack and pinion, backcheck, overhead concealed, all sizes, regular arm	7.00	Ea.
087120350020	Door hardware, panic device, for rim locks, single door, outside key and pull	7.00	Ea.
087120500020	Door hardware, doorstops, holder and bumper, floor or wall	7.00	Ea.
087120900012	Door hardware, hinges, full mortise, average frequency, steel base, USP, 4-1/2" x 4-1/2"	11.00	Pr.
087120950020	Door hardware, kick plate, stainless steel, .05", 16 ga, 8" x 28"	7.00	Ea.
099103400660	Surface preparation, interior, walls, sand, gypsum board and plaster, light	1,400.00	S.F.
099123390140	Paints & coatings, interior latex, zero voc, doors, flush, both sides, roll & brush, primer + 2 coats, incl. frame & trim	7.00	Ea.
099123740800	Paints & Coatings, walls & ceilings, interior, concrete, drywall or plaster, zero voc latex, 2 coats, smooth finish, brushwork	140.00	S.F.
099123740840	Paints & Coatings, walls & ceilings, interior, concrete, drywall or plaster, zero voc latex, 2 coats, smooth finish, roller	1,400.00	S.F.
CLAB1	Common Building Laborers (Inside Foreman)	20.00	hour
CLAB1	Common Building Laborers (Journey Man)	60.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: C20

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	C2010 - Loading Dock Handrails - Provide Guards		
Linked System	Action Date	Aug 7, 2023	
Category	Date Inspected	Aug 7, 2013	
Prime System	Building Code	Finish Date	
Priority	C2010 - Stair Construction	Status	Open
Inspector	5: Does Not Meet Current Codes/Standards	Actual Cost	0
	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. There are no guards provided on the ramp in the Loading Dock area. Existing height of concrete wall does not meet the height requirement of 42".

LOCATION/EXTENT. Basement Loading Dock, both south and north ramps.

CAUSE. Revisions to code requirements since original construction.

CODE/REGULATION. National Fire Protection Association (NFPA), 2012 - 101. Life Safety Code. 7.2.2.4.4 Handrail Details.

Linked Photos



C2010 - Loading Dock Handrails - Provide Guards

Actions

Action Name	C2010 - Loading Dock Handrails - Provide Guards
Option	Conventional
Prime Action	Yes
Description	REMEDY. Design and install new guards that meet the current standard. IMPLEMENTATION. Coordinate work with Building Manager.

Estimate

Code Label	Line Item Description	Quantity	Unit
015433407700D	Rent arc welder electric 200 amp	1.00	Ea.
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	10.00	M.S.F.
024119190700	Selective demolition, rubbish handling, dumpster, 10 C.Y., 3 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	1.00	Week
024119200100	Selective demolition, dump charges, typical urban city, building construction materials, includes tipping fees only	0.50	Ton
055213500935	Railing, pipe, steel, wall rail, galvanized, 1-1/4" dia, shop fabricated	60.00	L.F.
064316109000	Railings, minimum labor/equipment charge	1.00	Job
099123525350	Paints & coatings, miscellaneous interior, pipe, paint 2 coats, oil base, brushwork, 1 - 4" dia	60.00	L.F.
CARPA	Carpenters	30.00	hour
CARPI	Carpenters	20.00	hour
SSWLI	Welders, Structural Steel	20.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: C20

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	C2014 - Stair Guards and Handrails - Replace	Action Date	Aug 7, 2023
Linked System		Date Inspected	Aug 7, 2013
Category	Building Code	Finish Date	
Prime System	C2014 - Stair Handrails and Balustrades	Status	Open
Priority	5: Does Not Meet Current Codes/Standards	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. The existing handrails in the stairs do not meet the current requirements for graspability and the stair door handles do not meet ADA.

LOCATION/EXTENT. All enclosed stairs.

CAUSE. Revisions to code requirements since original construction.

CODE/REGULATION. National Fire Protection Association (NFPA), 2012 - 101, Life Safety Code. 7.2.2.4.4 Handrail Details.

Linked Photos



C2014 - Stair Guards and Handrails - Replace

Actions

Action Name	C2014 - Stair Guards and Handrails - Replace
Option	Conventional
Prime Action	Yes
Description	<p>REMEDY. Replace the guards, handrails and door levers.</p> <p>IMPLEMENTATION. Remove existing handrails and replace with code compliant rails. Design and replace the guards and handrails that meet the graspability requirements.</p>

STATEMENT OF EFFECT. The existing handrails are original features of the building that are included in the restoration zone and are to be preserved and maintained in place. Any modifications or additions to the wall to meet current Life Safety Codes are to be reviewed and approved by GSA's Life Safety Engineer as well as GSA's Regional Historic Preservation Officer. Submit all product information, design, construction protection plan, and work plan for Regional Historic Preservation Officer's approval prior to commencing work. All work is to meet the Secretary of Interior's Standards for the treatment of historic buildings.

Estimate

Code Label	Line Item Description	Quantity	Unit
015433407700D	Rent arc welder electric 200 amp	24.00	Ea.
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	400.00	M.S.F.
024119190800	Selective demolition, rubbish handling, dumpster, 30 C.Y., 7 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	36.00	Week
024119200100	Selective demolition, dump charges, typical urban city, building construction materials, includes tipping fees only	16.00	Ton
055213500940	Railing, pipe, steel, wall rail, primed, 1-1/2" dia, shop fabricated	9,200.00	L.F.
055213502050	2-line pipe rail with pickets and attached handrail, steel, primed, 1-1/2" pipe, 1/2" pickets @ 4-1/2" O.C., 42" high, shop fabricated, straight & level	2,100.00	L.F.
060505203140	Selective demolition, millwork and trim, railings and balusters	9,200.00	L.F.
064316109000	Railings, minimum labor/equipment charge	30.00	Job
087120350400	Door hardware, panic device, bar and concealed rod	60.00	Ea.
087120914600	Door hardware, special hinges, spring hinge, single acting, steel, 6" flange	12.00	Ea.
099123525350	Paints & coatings, miscellaneous interior, pipe, paint 2 coats, oil base, brushwork, 1 - 4" dia	9,200.00	L.F.
C10309100600	Partitions, woven wire, wall panel, 4' x 7' high	850.00	Ea.
CARPA	Carpenters	650.00	hour
CARPI	Carpenters	650.00	hour
SSWU	Welders, Structural Steel	110.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D30

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	D3042 - Battery Room Ventilation - Install	Action Date	Aug 7, 2015
Linked System		Date Inspected	Aug 7, 2013
Category	Building Code	Finish Date	
Prime System	D3042 - Exhaust Ventilation Systems	Status	Open
Priority	2 - Within 1 to 2 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

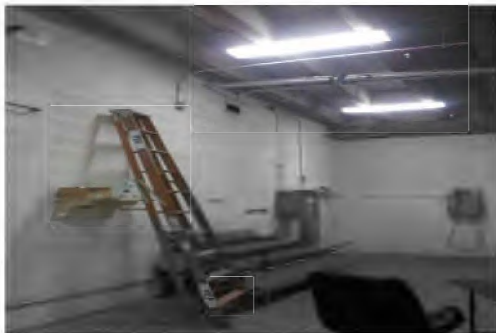
CONDITION/PROBLEM: The Battery Room doesn't have proper ventilation.

LOCATION/EXTENT: Basement.

CAUSE: Incorrect design.

CODE/STANDARD: NFPA 70 Section 480

Linked Photos



D3042 - Battery Room Ventilation - Install

Actions

Action Name	D3042 - Battery Room Ventilation - Install
Option	Conventional
Prime Action	Yes
Description	REMEDY: Install required battery room ventilation and fire dampers. IMPLEMENTATION: Calculate necessary ventilation system needs and then install system.

Estimate

Code Label	Line Item Description	Quantity	Unit
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	2.00	M.S.F.
092910203600	Gypsum Board, for taping & finishing joints, add	30.00	S.F.
099123750250	Dry fall painting, walls, wallboard and smooth plaster, two coats, spray	30.00	S.F.
233313164680	Duct accessories, fire/smoke combination damper, louver type, 24" x 12", U.L. label	2.00	Ea.
C10101280700	Gypsum board, 1 face only, exterior sheathing, fire resistant, 5/8"	10.00	S.F.
D30903101020	Fume hood exhaust system, 4 FT long, 2000 CFM	1.00	Ea.

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D30

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	D3042 – Stair Pressurization – Install	Action Date	Aug 7, 2023
Linked System		Date Inspected	Aug 7, 2013
Category	Life Safety	Finish Date	
Prime System	D3042 - Exhaust Ventilation Systems	Status	Open
Priority	5: Does Not Meet Current Codes/Standards	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM: Design and install a stair pressurization system for the stairs. The fire alarm system will need additional smoke detectors and relays to activate the stair pressurization system automatically.

LOCATION/EXTENT: All stairwells throughout the building.

CAUSE: Changes to code since original construction.

CODE/REGULATION: NFPA 101 (2012), Section 39.2.2.4.

Linked Photos



D3042 – Stair Pressurization – Install

Actions

Action Name	D3042 – Stair Pressurization – Install
Option	Conventional
Prime Action	Yes
Description	REMEDY: Install stair smokeproof enclosures.

IMPLEMENTATION: Design and install pressurization systems for the stairs that provide egress from the 1st floor through penthouse. The system should consist of supply fans and two-hour fire-rated supply air duct shafts, with the supply air introduced into the stairs

at every other floor. The duct shafts should be constructed of fire-rated shaft-wall materials, for ease of construction, to provide the required fire-rating. A vent should be provided at the top of the stairs to relieve excess pressure. Provide electrical service from the recommended on-site emergency power system to the fans and to smoke detectors at each floor level outside of the stairs to initiate the pressurization of the stairwells. Provide all required interconnections to the building's fire alarm system.

Estimate

Code Label	Line Item Description	Quantity	Unit	(b)(4)
024119190800	Selective demolition, rubbish handling, dumpster, 30 C.Y., 7 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	40.00	Week	
024119200100	Selective demolition, dump charges, typical urban city, building construction materials, includes tipping fees only	200.00	Ton	
038116500820	Concrete sawing, concrete walls, rod reinforcing, per inch of depth	520.00	L.F.	
092116230060	Shaft Wall, cavity type on 25 gal. J track & C-H studs, 24" O.C., 1" thick coreboard wall liner on shaft side, 2 hour assembly w/double layer, 5/8" fire rated gypsum board on room side	1,200.00	S.F.	
092116230900	Shaft Wall, for taping & finishing, add per side	2,400.00	S.F.	
092216132000	Metal stud partition, non-load bearing, galvanized, 10' high, 1-5/8" wide, 25 gauge, 16" O.C., includes top & bottom track	1,200.00	S.F.	
099123720240	Paints & coatings, walls & ceilings, interior, concrete, drywall or plaster, latex paint, primer or sealer coat, smooth finish, roller	1,200.00	S.F.	
099123720840	Paints & coatings, walls & ceilings, interior, concrete, drywall or plaster, latex paint, 2 coats, smooth finish, roller	1,200.00	S.F.	
233113130570	Metal ductwork, fabricated rectangular, galvanized steel, 2000 to 5000 lb., includes fittings, joints, supports and allow for a flexible conn. field sketches, excludes as-built dwgs. and insul.	2,000.00	Lb.	
233313138260	Duct accessories, multi-blade dampers, parallel blade, 30" x 18"	36.00	Ea.	
233416103540	Fans, centrifugal, airfoil, motor and drive complete, 2000 CFM, 1 H.P.	36.00	Ea.	
233723105700	Ventilator, relief vent, rectangular, aluminum, galvanized curb, intake/exhaust, 0.033" S.P., 5000 CFM, 20" x 72", includes base and damper	40.00	Ea.	
260505109000	Electrical demolition, minimum labor/equipment charge	80.00	Job	
260519901000	Wire, copper, stranded, 600 volt, #14, type THWN-THHN, in raceway	120.00	C.L.F.	
260523201850	Fire alarm cable, FEP teflon, 150 volt, to 200 Deg.C, #18, 1 pair	80.00	C.L.F.	
260533135000	Electric metallic tubing (EMT), 1/2" diameter, to 15' high, incl 2 terminations, 2 field bend elbows, 11 beam clamps, and 11 couplings per 100 LF	6,000.00	L.F.	
260533160150	Outlet boxes, pressed steel, 4" square	72.00	Ea.	
260533160200	Outlet boxes, pressed steel, extension rings, 4" square	72.00	Ea.	
260533160250	Outlet boxes, pressed steel, covers, blank, 4" square	72.00	Ea.	
262416201200	Circuit breakers, ground fault, 14 k A I.C., 1 pole, 277 volt, 15 - 30 amp	72.00	Ea.	
262416302600	Panelboards, 3 phase 4 wire, main circuit breaker, 277/480 V, 225 amp, 30 circuits, NEHB, incl 20 A 1 pole plug-in breakers	4.00	Ea.	
283123504175	Detection system, fire alarm control panel, addressable	36.00	Ea.	

Code Label	Line Item Description	Quantity	Unit
	interface device, excluding wires & conduits		
283146505240	Detection Systems, smoke detector, addressable type, excl. wires & conduit	36.00	Eu.
D50102300280	Feeder installation 600 V, including RGS conduit and XHHW wire, 200 A	800.00	LF.
D50201650360	Safety switch, 30 A fused, 3 phase, 15 HP, 460 V or 20 HP, 575 V	36.00	Eu.
ELECJ	Electricians	1,640.00	hour
SHEET	Sheet Metal Workers	1,640.00	hour
SKWKI	Skilled Workers Average (35 trades)	1,640.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D40

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	D4010 - Arm Over Sprinkler Supports - Install	Action Date	Aug 7, 2015
Linked System		Date Inspected	Aug 7, 2013
Category	Building Code	Finish Date	
Prime System	D4010 - Sprinklers	Status	Open
Priority	2 - Within 1 to 2 Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

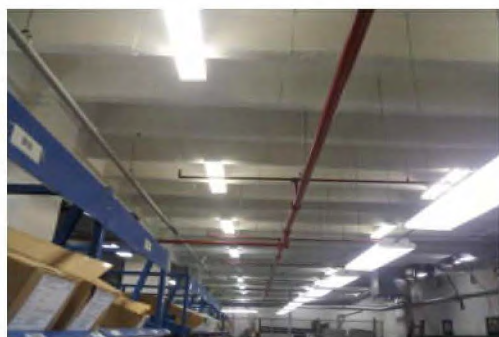
CONDITION/PROBLEM. There are many arm-overs for the sprinklers throughout the basement that are greater than 12" and are unsupported.

LOCATION/EXTENT. Basement.

CAUSE. Incorrect installation.

CODE/STANDARD. NFPA 13

Linked Photos



D4010 - Arm Over Sprinkler Supports - Install

Actions

Action Name	D4010 - Arm Over Sprinkler Supports - Install
Option	Conventional
Prime Action	Yes
Description	REMEDY. Provide proper support for arm over sprinklers. IMPLEMENTATION. Install overhead anchors and install rated supports for the arm over sprinklers.

Estimate

Code Label	Line Item Description	Quantity	Unit
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	10.00	M.S.F.
050519200500	Anchor, expansion shield, zinc, 3/8" dia x 2" L, double, in concrete, brick or stone, excl layout & drilling	100.00	Ea.
220529100320	Pipe hanger / support, C-clamp, 3/8" threaded rod size, for mounting on steel beam flange, type number 23 per MSS-SP58, includes locknut	100.00	Ea.
260529202600	Threaded rod, steel, painted, 3/8" diameter	1,000.00	L.F.
SPRIA	Sprinkler Installers (Apprentice)	100.00	hour
SPRII	Sprinkler Installers (Inside Foreman)	40.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D40

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	D4010 - Sprinklers - Install	Action Date	Aug 7, 2023
Linked System		Date Inspected	Aug 7, 2013
Category	Building Code	Finish Date	
Prime System	D4010 - Sprinklers	Status	Open
Priority	5: Does Not Meet Current Codes/Standards	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

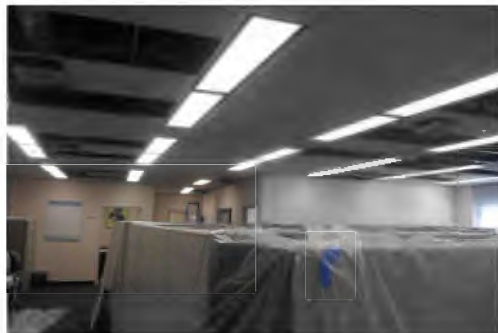
CONDITION/PROBLEM. There are many areas throughout the building without sprinkler coverage due to lack of sprinklers, over-spacing and obstructions.

LOCATION/EXTENT. Lack of coverage(5142 file area, 6208, 6282 "corridor", 9253 "corridor", above the elevator shafts, 7122, 7108, 8260, 9162, 9182, 9140 "corridor", 10120 Deputy Secretary's copy room, 10130 copy room, janitor's closet basement level near Stair 2), overspacing of sprinklers (2214, 7286, 8256, 8286, 9286, 10151), and obstruction of sprinklers (ducts near stair 2 in the basement, elevator 19 machine room, 3143, 4282, 5th floor elevator lobby, 5162, corridor outside of 7158, 7154, 8154, 9162, penthouse electrical room, penthouse storage area).

CAUSE. The building was constructed prior to current code changes requiring rated corridors for unsprinklered buildings.

CODE/REGULATION. NFPA 13

Linked Photos



D4010 - Sprinklers - Install

Actions

Action Name	D4010 - Sprinklers - Install
Option	Conventional
Prime Action	Yes
Description	REMEDY. Design and install a sprinkler system. IMPLEMENTATION. Remove portions of the ceiling and install, branch lines, arm-overs, drops, etc. Provide new or patch the existing

ceiling to match. Provide the new fire alarm system devices to monitor the sprinkler system. Commission system to ensure proper operation.

COORDINATION. Liaise with GSA Historic Preservation Office. Coordinate with requirements:

- D4010 - Concealed Sprinkler Covers - Replace
- D4010 - Standpipes - Install
- D4021 - Standpipe Water Supply - Replace

HISTORIC PRESERVATION REPAIR PROCEDURES. Work occurs in all preservation zones. Care must be taken to protect original materials from damage during sprinkler piping installation. Submit all product information, design, construction protection plan, and work plan for Regional Historic Preservation Officer's approval prior to commencing work. All work is to meet the Secretary of Interior's Standards for the treatment of historic buildings.

Estimate

Code Label	Line Item Description	Quantity	Unit
024119162600	Selective demolition, cutout, gypsum block, to 4 S.F. opening, 2" thick, excludes loading and disposal	200.00	Ea.
024119190800	Selective demolition, rubbish handling, dumpster, 30 C.Y., 7 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost.	10.00	Week
024119200100	Selective demolition, dump charges, typical urban city, building construction materials, includes tipping fees only	30.00	Ton
061636102852	Sheathing, gypsum, weatherproof, 1/2" thick	3,600.00	S.F.
090170100130	Gypsum wallboard, repairs, fill and sand, dents, 2" to 4" square	55.00	Ea.
090170100170	Gypsum wallboard, repairs, cut square, patch, sand and finish, holes, 8" to 12" square	60.00	Ea.
095123100300	Suspended acoustic ceiling tiles, fiberglass boards, film faced, 2' x 2' or 2' x 4' x 5/8" thick	7,000.00	S.F.
210523509990	Water-Based Fire Suppression Piping, minimum labor/equipment charge	15.00	Job
D40104101100	Wet pipe sprinkler systems, steel, ordinary hazard, 1 floor, 50,000 SF	15,000.00	S.F.
D40104101240	Wet pipe sprinkler systems, steel, ordinary hazard, each additional floor, 50,000 SF	100,000.00	S.F.
SPRIA	Sprinkler installers	1,000.00	hour
SPRII	Sprinkler installers	1,000.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D40

Currency : US\$

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	D4010 – Fire Sprinklers Electrical Rooms - Modify		
	Action Date	Aug 7, 2023	
Linked System	Date Inspected	Aug 7, 2013	
Category	Code Compliance	Finish Date	
Prime System	D4010 - Sprinklers	Status	Open
Priority	5: Does Not Meet Current Codes/Standards	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. Sprinkler branch lines and sprinkler heads are located directly above electrical equipment. A leak from the sprinkler system could severely impair the operation of the facility and be hazardous to the occupants.

LOCATION/EXTENT. In the electrical vaults in the basement.

CAUSE. Inadequate design and/or installation oversight.

CODE/REGULATION. National Fire Protection Association, NFPA 13 Standard for the Installation of Sprinkler Systems and NFPA 70 National Electrical Code.

Linked Photos



D4010 – Fire Sprinklers Electrical Rooms - Modify

Actions

Action Name	D4010 – Fire Sprinklers Electrical Rooms - Modify
Option	Conventional
Prime Action	Yes
Description	REMEDY. Reroute the sprinkler systems. IMPLEMENTATION. Design and install electrical room sprinklersystems without routing the sprinkler system lines over the electrical

equipment. Inspect, test and commission all system modifications to ensure proper operation.

COORDINATION. Coordinate with requirements:

-- D4010 - Fire Sprinklers - Install Additional

COSTEQUIVALENCE. In the following estimate, substitutions have been made. This has occurred because the needed line item does not occur in the RS Means version provided in the program. The substitution is based on the equivalent value.

-- SUBSTITUTION, Field personnel, field engineer.

-- FOR, Fire sprinkler system design engineer.

-- SUBSTITUTION, Instrumentation PM.

-- FOR, Field inspection and testing of fire sprinkler systems.

Estimate

Code Label	Line Item Description	Quantity	Unit	(b)(4)
013113200140	Field personnel, field engineer, maximum	2.00	Week	(b)(4)
019313151530	Instrumentation PM, rule of thumb; annual cost per instrument for calibration & trouble shooting, incl. flow meters, analytical transmitters, flow control chemical feed systems, recorders & distribution control systems	10.00	Ea.	
211313501970	Sprinkler system components, connector for sprinkler heads, 72" length	20.00	Ea.	
211313502360	Sprinkler system components, sprinkler head escutcheons, standard, chrome, 1" size	15.00	Ea.	
211313503740	Sprinkler system components, sprinkler heads, standard spray, pendent or upright, brass, 135 to 286 degrees F, 1/2" NPT, 1/2" orifice, excludes supply piping	15.00	Ea.	
211313506000	Sprinkler system components, sprinkler head guards, bright zinc, 1/2" NPT, excludes supply piping	50.00	Ea.	
220505101910	Pipe fittings with a single connection, 2" thru 4" diameter, selective demolition	6.00	Ea.	
230523305250	Valves, iron body, valve sprocket with chain for globe, OS&Y, for 2-1/2" valve	1.00	Ea.	
PLUM1	Plumbers	80.00	hour	

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D40

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	D4011 - Sprinkler Water Supply - Increase size of supply	Action Date	Aug 7, 2014
Linked System		Date Inspected	Aug 7, 2013
Category	Life Safety	Finish Date	
Prime System	D4011 - Sprinkler Water Supply	Status	Open
Priority	1 - Immediate / First Year	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. The existing supply does not provide enough flow and pressure for the sprinkler system. Increasing the size of the pump will only cause the pump to cavitate and fail.

LOCATION/EXTENT. Basement.

CAUSE. Insufficient service capacity caused by increased usage in local.

CODE/STANDARD. NFPA 20 Section 11.2.6.2

Linked Photos



D4011 - Sprinkler Water Supply - Increase size of supply

Actions

Action Name	D4011 - Sprinkler Water Supply - Increase size of supply
Option	Conventional
Prime Action	Yes
Description	<p>REMEDY. Provide larger supply lines so that the fire pump is able to reach 150% capacity. Replace the gauges. Replace the fire pump controller if it is not working properly. Repair or replace the VIC fitting outside of SB5-13.</p> <p>IMPLEMENTATION. Perform a study and design to determine service size needed. Coordinate work with property manager to supply</p>

temporary water source during cutover.

COST EQUIVALENT: Two hours of Skilled Workers Average (35 trades) (Outside Foreman) is equal to one hour of AE design time.

Estimate

Code Label	Line Item Description	Quantity	Unit
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	200.00	M.S.F.
024113380090	Selective demolition, water & sewer piping & fittings, concrete pipe, 4"-10", diameter, excludes excavation	200.00	L.F.
024210209010	Deconstruction process support equipment, as needed, daily use, 12-ton truck-mounted hydraulic crane, portal to portal, includes operator, includes operator	20.00	Day
213113504200	Fire pumps, electric, 3500 GPM, 100 psi, 300 HP, 1770 RPM, 10" pump, including controller, fittings and relief valve	1.00	Ea.
A20101102360	Excavate and fill, 1000 SF 16' deep, clay excavation, bank run gravel borrow for backfill	200.00	S.F.
G30101103170	Water distribution piping, ductile iron class 250, Tyton joint, 10" diameter, excludes excavation and backfill	100.00	L.F.
G30101227115	Waterline, 10" push on joint ductile iron, 7' deep, including common earth excavation, backfill, bedding & compaction	250.00	L.F.
PLUMA	Plumbers (Apprentice)	1,000.00	hour
PLUMJ	Plumbers (JourneyMan)	200.00	hour
PLUMO	Plumbers (Outside Foreman)	100.00	hour
SKWKO	Skilled Workers Average (35 trades) (Outside Foreman)	400.00	hour
SPRIA	Sprinkler Installers (Apprentice)	100.00	hour
SPRII	Sprinkler Installers (Inside Foreman)	40.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D40

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name D4024 - Fire Hose Valve - Install

Action Date Aug 7, 2014

Linked System

Date Inspected Aug 7, 2013

Category Building Code

Finish Date

Prime System D4024 - Fire Hose Equipment

Status Open

Priority 1 - Immediate / First Year

Actual Cost 0

Inspector (b)(6)

Estimated Cost (b)(4)

Requirement Description

CONDITION/PROBLEM: Stair 7 doesn't have a fire hose valve on the basement level.

LOCATION/EXTENT: Basement level of stairwell 7.

CAUSE: Incorrect installation.

CODE/STANDARD: NFPA 101 Section 9.7.4.2

Linked Photos



D4024 - Fire Hose Valve - Install

Actions

Action Name D4024 - Fire Hose Valve - Install

Option Conventional

Prime Action Yes

Description REMEDY: Install a new fire hose valve in stairwell seven.

IMPLEMENTATION: Isolate and drain the standpipe. Extend the existing standpipe and provide a fire hose valve.

Estimate

Code Label	Line Item Description	Quantity	Unit
017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	2.00	M.S.F.
211223700090	Fire Valves, angle, wheel handle, 300 lb, 2-1/2"	1.00	Ea.
221113440819	Pipe, steel, black, threaded, 2" diameter, schedule 40, A-106, grade A/B seamless, includes coupling and clevis hanger assembly sized for covering, 10' OC	20.00	L.F.
PLUMI	Plumbers (Inside Foreman)	20.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D40

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	D4095 – Electrical Vault Ducts – Install Dampers	Action Date	Aug 7, 2014
Linked System		Date Inspected	Aug 7, 2013
Category	Life Safety	Finish Date	
Prime System	D4095 - Hood and Duct Fire Protection	Status	Open
Priority	1 - Immediate / First Year	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. There are no fire dampers in the ducts in the rated walls enclosing the transformer vault.

LOCATION/EXTENT. Basement.

CAUSE. The building was most likely retrofitted with additional HVAC and ducts were added without providing fire dampers.

CODE/REGULATION. IBC (2009); section 716.

Linked Photos



D4095 – Electrical Vault Ducts – Install Dampers

Actions

Action Name D4095 – Electrical Vault Ducts – Install Dampers

Option Conventional

Prime Action Yes

Description REMEDY. Procure , design and install new fire dampers where the ducts penetrate the rated wall.

IMPLEMENTATION. Provide a 2– hour rated fire damper where the HVAC ducts penetrate the walls and install rated construction around the ducts.

Estimate

Code Label	Line Item Description	Quantity	Unit
01741320052	Cleaning up, cleanup of floor area, continuous, per day, during construction	4.00	M.S.F.
233313135990	Duct accessories, multi-blade dampers, opposed blade, 8" x 6"	4.00	Ea.
SHEET	Sheet Metal Workers	150.00	hour

(b)(4)

Requirement Detail Report

By Asset Name and Requirement Prime System

Region: 11 - National Capital Region
Service_Center: DC Service Center

Asset: ROBERT C. WEAVER BUILDING
Asset Number: DC0092ZZ

Prime System: D50

Currency : USD

Requirements: All Requirements

Actions: Both Green and Conventional
Actions

Requirement Name	D5037 - Fire Alarm System - Replace	Action Date	Aug 7, 2023
Linked System		Date Inspected	Aug 7, 2013
Category	Integrity	Finish Date	
Prime System	D5037 - Fire Alarm Systems	Status	Open
Priority	4 - 5+ Years	Actual Cost	0
Inspector	(b)(6)	Estimated Cost	(b)(4)

Requirement Description

CONDITION/PROBLEM. The fire alarm system needs replacement (other than the EST3 which was replaced two years ago) due to the following reasons: older style strobes are located throughout the building; there is insufficient strobe coverage throughout the building (i.e., lack of strobes in copy rooms, workrooms, and conference rooms, overspacing in bathrooms, corridors and open offices, etc.); strobes are located above 80" in many locations throughout the building; older style conventional system that is no longer manufactured; no smoke detectors are provided in any of the mechanical, electrical, or telephone rooms/closets; the pull stations at the central stairs are located at 62" – well above the maximum height; the duct smoke detectors are not working; the garage dry sprinkler system is not currently monitored; the penthouse only has two bells – one of which is damaged.

LOCATION/EXTENT. Throughout the building.

CAUSE. Revisions to code requirements since original design, construction and obsolescence of equipment.

CODE/REGULATION. International Building Code, Chapter 9, Fire Protection Systems

Linked Photos



D5037 - Fire Alarm System - Replace 1



D5037 - Fire Alarm System - Replace 2

Actions

Action Name	Replace the fire alarm system
Option	Conventional
Prime Action	Yes
Description	REMEDY. Replace the fire alarm system.

IMPLEMENTATION. Replace the fire alarm system with a new integrated code compliant fire alarm system. Replace all initiating and alarm devices. Install additional initiating and alarm devices where required by the latest code. Provide fireman's telephones throughout the building in the stairs and elevator lobbies. Provide speakers throughout the building for audibility/intelligibility purposes. Provide strobe alarm devices in all common areas and in mechanical areas with ambient noise levels above 85 dBA. Coordinate the fire alarm device locations and installation with surrounding electrical, mechanical and plumbing systems.

HISTORIC PRESERVATION REPAIR PROCEDURES. Work occurs in all preservation zones. Care must be taken to protect original materials from damage during fire alarm replacement installation. Submit all product information, design, construction protection plan, and work plan for Regional Historic Preservation Officer's approval prior to commencing work. All work is to meet the Secretary of Interior's Standards for the treatment of historic buildings.

Estimate

Code Label	Line Item Description	Quantity	Unit
260523201750	Fire alarm cable, FEP teflon, 150 volt. to 200 Deg.C. #22, 8 pair	300.00	C.L.F.
280505101210	Fire alarm horn and strobe light, electrical demolition, remove	650.00	Ea.
280505101220	Flame detector, electrical demolition, remove	1,000.00	Ea.
280505101230	Mist detector, electrical demolition, remove	24.00	Ea.
280505101240	Smoke detector, electrical demolition, remove	2,000.00	Ea.
280505101250	Fire alarm pull station, electrical demolition, remove	200.00	Ea.
280505101270	Fire alarm control panel, 12 to 16 zone, electrical demolition, remove	1.00	Ea.
283123504170	Detection system, fire alarm control panel, addressable with voice, up to 400 points, excluding wires & conduits	1.00	Ea.
283123505610	Detection system, strobe & horn, ADA type, excluding wires & conduits	650.00	Ea.
283123508000	Detection system, remote annunciator, 12 zone lamp, excluding wires & conduits	1.00	Ea.
283123508200	Detection system, annunciator panel, 16 zone lamp, excluding wires & conduits	1.00	Ea.
283143505010	Detection system, fire alarm, detector, heat (addressable type), excl. wires & conduit	1,000.00	Ea.
283146505240	Detection Systems, smoke detector, addressable type,	2,000.00	Ea.

(b)(4)

Code Label	Line Item Description	Quantity	Unit
	excl. wires & conduit		
283910100100	Mass notification system, wireless command center, PC based, 10,000 devices database	1.00	Ea.
283910100200	Mass notification system, option, email notification	1.00	Ea.
283910100210	Mass notification system, option, remote device supervision & monitor	1.00	Ea.
283910100300	Mass notification system, antenna VHF or UHF, for medium range, magnetic mount	1.00	Ea.
283910100420	Mass notification system, transmitter, 100 watt	1.00	Ea.
283910100500	Mass notification system, wireless receiver/control module for speaker	150.00	Ea.

(b)(4)



Operational Review
for the

Robert C. Weaver Building

451 Seventh Street SW,
Washington, DC 20410
Building Number DC0092ZZ



Submitted to **GENERAL SERVICES ADMINISTRATION**
301 7th Street SW, Washington DC 20407

Submitted by **CINNOVAS DEVELOPMENT GROUP, LLC**
1000 Connecticut Avenue NW, Suite 900
Washington, D.C. 20036
Tel. 202-469-3446

Submitted on September 27, 2013

GSA Contract No. GS-11P-11-YA-C-0077



OPERATIONAL REVIEW

INTRODUCTION

The GSA Property Management Planning and Policy Branch has been tasked with performing Operational Reviews to determine if Government owned buildings in the National Capitol Region are being maintained in accordance with GSA and industry standards. The Operational Review (OR) is a primary portion of GSA's quality assurance program for daily operations, maintenance and program activities in the owned buildings. Maintenance activities are covered primarily by the Operations and Maintenance Contractor, by contracted services providers, and services provided by the GSA Special Services Division. In these particular buildings, The GSA Special Services Division is responsible for the fire alarm system and electrical switchgear maintenance. GSA is also responsible for managing building renovations and equipment replacement/system upgrades.

General Information

The Robert C. Weaver building is located at 451 Seventh St. S.W. Washington, DC 20002 (GSA Building Number DC0092ZZ). The building contains 1,372,278 gross square feet and is occupied by the Department of Housing and Urban Development. The building was completed in 1968 with 10 floors, a basement level and an attic/penthouse level.

Objective

CINNOVAS was contracted to provide engineering consulting services to produce an unbiased report determining whether the facility is being properly maintained in accordance with GSA and industry standards. Required tasks included reviewing O&M program documentation, conducting a visual walking inspection in accordance with the GSA In-Depth Operations Review Checklist and then preparing an executive summary to summarize the observations and findings. In particular, this review focused on the building's mechanical and electrical equipment to determine whether it is being properly maintained and in sound working order.

Scope of Operational Review

The review specifically included the examination and evaluation of program documentation and files, mechanical and electrical systems, building structure and fire safety and health at the Robert C. Weaver building.



OPERATIONAL REVIEW

Interviews

An interview with the Property Manager and the O&M Contractor Operations Manager was held on August 8, 2013 and included general discussion of the overall operations and maintenance procedures, work order reviews, preventive maintenance records, tenant satisfaction and quality assurance reviews. Subsequent conversations were also held with various maintenance technicians as part of our general building walkthrough. Building management and O&M personnel provided information on their operating procedures, along with a description of the mechanical plant and equipment. Discussions included: current renovations and how those renovations were causing soot problems with the air handling system; the water treatment program; cooling tower issues; boilers; the schedules for operating the building; work orders and the preventative maintenance process.

GSA Special Services Division Documentation

The facility management team works closely to ensure the comfort of the tenants and excellent condition of the building. The primary tool is the PM database, MAXIMO. MAXIMO is not only used for PM work, but it is also used to manage service tickets that are generated throughout the building. All facility work is regularly reviewed, for Quality Assurance purposes, by the HHS Senior Operations Manager and facility staff. It was noted that all problems are corrected quickly and efficiently.

Site Visit

The site visit was conducted in conjunction with the Consolidated Survey team's visit, starting on August 7, 2013 and commencing on August 8, 2013. The visit began with a general building walkthrough to determine the types of building systems, and their general location, and was completed using the Owner or Delegated In-Depth Operations Review Checklist. Following the general building walkthrough, the team reviewed available operations and maintenance documents.

During the walkthrough, general interior spaces, the building exterior, detached exterior elements and each mechanical room within the building were inspected in order to document the overall condition of spaces and the equipment. Additionally, the internal components of equipment, such as air handling units, were inspected to determine the level of preventative maintenance that had been performed.

Lastly, the Building Manager and O&M Contractor Operations Manager were interviewed to get a better understanding of HUD's operations and maintenance practices and to also discuss general issues noted during the walkthrough.



Observations and Recommendations

1. The Equipment list and preventative maintenance schedule do not match. The likely discrepancy is the equipment list has not been updated. The recommendation is to conduct a review of both, to insure they are correct and current.
2. Diffusers in tenant spaces were covered with filter media to catch soot coming out of the duct work. The cooling coil in the air handler was black to the point it was affecting the discharge air temperature. The air handler and downstream duct work with the dirt problem are likely the result of the construction project. Responsibility for correcting the problem needs to be determined. Correcting the problem will require cleaning the air handler and the associated duct work.
3. The cooling towers are an area of concern. There are clogged nozzles that diminish the water flow through the tower and water was pouring out of the tower. The areas collecting water had algae and this issue could be a result of either not performing regular maintenance or poor water treatment. The O&M contractor believes the problems associated with the cooling tower are the result of fill that needs to be replaced. Survey results show the primary problem being clogged distribution nozzles. Unclog the distribution nozzles and balance the flow to the distribution pans first, then the fill can be evaluated. Furthermore, the water shock treatment may be needed because of the water that is escaping the normal flow path and it could aid in clearing up the algae. The recommendation is for the O&M Operating Engineer to run a weekly test to supplement the water treatment company's monthly testing. This will identify problems sooner and allow quicker action, as well as prevent the need for shock treatments.
4. A potential problem with the buss bar in the basement was noted and an investigation is recommended. There was an evident "buzzing" noise coming from the buss bar chase and this is an indication that the bars are vibrating. Vibrating buss bars are the result of loose connections. Corrosion can build up on the loose connections and there is a potential fire hazard as the area heats up.
5. Water treatment is mentioned above, with the recommendations of weekly Operating Engineer testing to supplement the water treatment company's monthly testing. The building is currently installing boilers that have aluminum in contact with building water. This type of boiler requires very close control of the water treatment to prevent premature failure. It is recommended that the O&M contractor work with the water treatment company closely on a program to insure the new boilers do not prematurely fail. This should include weekly testing by the Operating Engineer and direction from the water treatment company on any needed corrective action. Before the boilers are filled with water, the contractor, the O&M contractor, and the water treatment company should review the current condition of the building loop, if significant amounts of untreated water will be added, or anything that would introduce water not compatible with the new boilers.



EXECUTIVE SUMMARY

In general, the maintenance operations at HUD are in compliance with GSA and industry standards. The O&M contractor is doing a good job communicating with HUD building staff and tenants. For example, as work orders are completed, follow-up satisfaction emails are sent to the reporting tenant. The building staff meets with the maintenance contractor daily to review complaints and work progress and all appropriate record keeping has been reported for filing purposes. The contractor has a best practices level safety training program and in addition to the required personnel training, employees complete tests to ensure they understand important material. Overall, the building tenants are generally satisfied with the contractor's performance; however, there were observations, listed above, that require attention.

In-Depth Operations Review - I.O.R. REVIEW QUESTIONNAIRE

SURVEY DATE
8/7/2013

BRANCH
SECTION
QUESTION

QUESTIONS THAT DO NOT APPLY
INFORMATION TO BE SUPPLIED FROM CS SURVEY TEAM MEMBERS
INFORMATION TO BE SUPPLIED FROM GSA SOURCES

E Energy Program — Critical Operational Review Elements – C. O. R. E.

A ENERGY PROGRAM - GENERAL

Y N N/A

1 Is this portion of the checklist performed by a specified NCR Division/Branch? If so, is a copy of the most recent NCR survey/inspection/report etc. on hand?

Remarks:

2 Is a copy of the latest energy audit on file in the BMO and with the O&M Contractor?

Remarks: They are relying on the performance contractor to identify the opportunities. The obvious items have been done.

3 Have the findings of the last energy audit been resolved effectively?

Remarks: There hasn't been a formal energy audit by an independent company. They are relying on their performance contractor.

B ENERGY AND WATER SAVINGS DEVICES

Y N N/A

1 Are energy and water savings devices being utilized throughout the building? (i.e. T8 fluorescent bulbs, lighting controls, motion sensors, water restrictions, automatic shutoff valves, etc. (if not are they scheduled for upgrade, retrofit or replacement?

Remarks: The upgrades have been made or are being done by the contractor now.

2 Are controls in place to reduce lighting levels in unoccupied space?

Remarks: The upgrades are currently being completed.

3 Is the building being operated so that occupants receive acceptable environmental services such as heating, cooling, ventilation and lighting?

Remarks: In general, the space conditioning is on the low end of acceptable. There is a major issue with dirt in the air handling system that needs to be addressed. This is affecting the humidity and temperature of some air handlers.

4 Does the building envelope include energy saving measures? (i.e. Solar Film, blinds, shades, etc.) If so, are they used? If not are they scheduled for Energy Projects to install?

Remarks: As part of an ongoing project, the windows are being replaced.

5 Does major equipment (chiller, boilers, etc.) have Operation Plans that reflect most efficient operations?

Remarks:

6 Lighting levels are maintained in accordance with the following criteria: 50 foot candles at work station surfaces; 30 foot candles in work areas; 9-5 foot candles in all common areas

Remarks: This is part of an upgrade that is currently taking place.

7 Are vending machines using energy saving devices or controls?

Remarks:

C MEASURES AND REPORTS

Y N N/A

1 On review of the EUAS, is the BTUs/GSF on target with Regional and National goals and if not, is there evidence that a good faith effort has been made to achieve them?

Remarks:

2 Has a detailed Energy Audit been completed within the last ten years? If not, is one scheduled?

Remarks:

In-Depth Operations Review - I.O.R. REVIEW QUESTIONNAIRE

SURVEY DATE
8/7/2013

BRANCH	SECTION	QUESTION	QUESTIONS THAT DO NOT APPLY INFORMATION TO BE SUPPLIED FROM CS SURVEY TEAM MEMBERS	INFORMATION TO BE SUPPLIED FROM GSA SOURCES
		6 Are delegation letters on file from Contracting Officer (CO) designating either COR/COTR/ACO responsibilities? Remarks:		
		7 Are Building Operating Plans current specifying hours of operations based on the seasons and in accordance with the outside temperature condition including start-up and shut down procedures? Remarks: The contractor does not have a written plan, but they are operating the building according to the conditions to maximize energy savings.	X	
		8 Are there Certificates of Pressure Vessel Inspections and are certifications current? Remarks:	X	
		9 Are refrigerant control and inventories documented? Remarks:	X	
		10 Are there reports for roof inspections? Remarks:	X	
		11 Are there written reports of switchgear inspections being performed and are they current? Remarks: GSA Switchgear Dept performs this.		
		12 Are backflow devices certified and current? Remarks:		
B MAINTENANCE PERSONNEL			Y	N
		1 Do all personnel engaged in maintenance activities have certificates of applicable training, license, permits, and bonding as required by Authorities Having Jurisdiction? Remarks:	X	
		2 Are persons who maintain service or repair appliances than contain Class I and II refrigerants certified by an EPA certifying program? CFC Universal Certifications? Are they maintaining CFC Control log / records? Remarks:	X X	
C PREVENTIVE MAINTENANCE (PM)			Y	N
		1 Is there a preventive maintenance program in place? Remarks:	X	
		2 Did the CO / COR approve the preventive maintenance program? Remarks:		
		3 Has an inspection program has been established, implemented, and documented to ensure that preventive maintenance (PM) is accomplished? Remarks: Property management reviews the PM program and the contractors performance regularly.	X	
		4 Does the PM program match equipment inventory? Remarks: Our review identifies discrepancies between the list, including an elevator.		X
		5 Are PM's performed as scheduled with no pattern of unsatisfactory or incomplete work? Remarks:	X	

In-Depth Operations Review - I.O.R. REVIEW QUESTIONNAIRE

SURVEY DATE
8/7/2013

BRANCH	SECTION	QUESTION	QUESTIONS THAT DO NOT APPLY	INFORMATION TO BE SUPPLIED FROM CS SURVEY TEAM MEMBERS	INFORMATION TO BE SUPPLIED FROM GSA SOURCES
		6 Does completed PM match actual equipment condition (random check)?		X	
		Remarks: The cooling tower is not receiving very basic maintenance.			
		7 Is there a water (chemical) treatment program for the boilers, chillers and cooling tower?	X		
		Remarks: The water treatment program needs to be inspected closely. The cooling towers have not had the basic service done to them, and the contractor and water treatment company seem to be resorting to short-term fixes as apposed to proper water treatment and good operating procedures.			
D SERVICE CALLS			Y	N	N/A
		1 Is there an effective service call program in place?	X		
		Remarks: The service call procedures seem very good.			
		2 Is time and date of receipt recorded upon receipt of service calls? Is the name of the person/agency making the call recorded also?	X		
		Remarks:			
		3 Is item and date of completion recorded when Service calls are completed?	X		
		Remarks:			
		4 Are service calls completed in a timely manner, in accordance with building operation procedures and/or contract requirements?	X		
		Remarks:			
		5 Is the Field Office/Service Center/Facility Management Office following up on service calls for customer satisfaction?	X		
		Remarks:			
E EQUIPMENT CONDITION			Y	N	N/A
		1 Is there a plan to repair, replace, or dispose of equipment in unsatisfactory condition?	X		
		Remarks:			
F MECHANICAL ROOMS			Y	N	N/A
		1 Are mechanical spaces clean and well maintained?		X	
		Remarks: The penthouse mechanical room is being renovated, but there is an inordinate amount of trash and dirt.			
		2 Rooms are not used as storage (i.e. equipment/materials not part of the rooms are not stored in the rooms)		X	
		Remarks: The ongoing ESPC project has material staged in all of the mechanical spaces.			
		3 Are checks performed to ensure that combustible material is not near equipment such as switchgear or boilers and that storage does not interfere with passage or equipment operation?		X	
		Remarks: The material staged by the ESPC project are blocking access to mechanical and electrical equipment.			
		4 Is piping properly labeled and color coded according to their use, especially in the boiler and chiller rooms?	X		
		Remarks:			
		5 Is pipe lagging in an acceptable condition?	X		
		Remarks:			

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BRANCH	SECTION	QUESTION	Y	N	N/A
		6 Are there any unusual noise and/or leaks within the mechanical spaces?		X	
		Remarks:			
G BOILERS			Y	N	N/A
	1	Is there an approved Building Operating Plan (BOP) for each building specifying hours of operations based on the seasons and in accordance with the outside temperature condition including start-up and shut down procedures?		X	
		Remarks: They do not have a written plan. They do, however, operate the equipment to minimize energy consumption.			
	2	Is there a current annual inspection certificate displayed near boiler? Are (AQMD) Air Quality Management District permits or State or Insurance Inspection Certificates updated?			X
		Remarks: Boilers are being installed currently. The contractor has not turned them over to the Operations staff.			
	3	Are there Operating instructions posted on or near boilers?		X	
		Remarks:			
	4	When was last boiler tuned-up? Efficiency (Flue gas analysis)? (Perform once a year)			X
		Remarks:			
H CHILLERS			Y	N	N/A
	1	Is there a written plan for each building specifying the hours of operations based on the seasons and in accordance with the outside temperature condition?		X	
		Remarks: Again no written plans, but the operations staff implements sound practices.			
	2	Is there a chiller water treatment program?	X		
		Remarks: The contractor's inspections show some problems and their corrective action. A plan with frequent in-house testing needs to be implemented to ensure the water treatment stays in specification.			
	3	Are records being maintained with respect to the management and control of refrigerants?	X		
		Remarks:			
I AIR COMPRESSOR			Y	N	N/A
	1	Is the air dryer operational on the pneumatic system?	X		
		Remarks:			
	2	Are air compressors drained regularly (i.e. the air filters)?	X		
		Remarks:			
	3	Is the oil filter operational on pneumatic system? Visual inspection (red color must replace).	X		
		Remarks:			
	4	Is there an annual inspection certificate for air compressor tanks over 60 psi and 15 gallons?	X		
		Remarks:			
	5	Do unfired pressure vessels have inspection certificates, if applicable. (i.e. the expansion tanks)?	X		

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BRANCH	SECTION	QUESTION							
		Remarks:							
	6	Does a visual inspection of the air system show any obvious leaks or reveal any portion of the air distribution network that may be subject to physical damage? Are problems being documented in writing?	X						
		Remarks: The ongoing ESPC is removing a great deal of pneumatic equipment. Air system is in transition.							
J	AIR HANDLES						Y	N	N/A
		Remarks:							
	2	Has dirt saturated the filters and heating/cooling coils? Are cooling condensate drain pan clean and free of algae or slime?			X				
		Remarks: Coils and filters are clean. Drain pans are free of algae and slime.							
	3	Is belt tension satisfactory? Are belts in good condition?	X						
		Remarks:							
	4	Are fan shaft bearings lubricated?	X						
		Remarks:							
	5	Are belt guards in place?	X						
		Remarks:							
	6	Are belts in good condition?	X						
		Remarks:							
		Remarks:							
K	AIR INTAKE LOUVERS						Y	N	N/A
	1	Is weather stripping intact?	X						
		Remarks:							
	2	Are insect screens intact, and clear of debris?	X						
		Remarks:							
	3	Is automatic damper movement checked for freedom of movement?	X						
		Remarks:							
	4	Are dampers checked for any excessive air leak when closed? Are outside dampers 100 percent closed when return air dampers are 100 percent open and vice versa?	X						
		Remarks:							
	5	Are the actuators working properly?	X						
		Remarks:							
L	COOLING TOWER						Y	N	N/A
	1	Is there a water (chemical) treatment program in place? (Water sample analysis)	X						

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			QUESTIONS THAT DO NOT APPLY INFORMATION TO BE SUPPLIED FROM CS SURVEY TEAM MEMBERS INFORMATION TO BE SUPPLIED FROM GSA SOURCES					
		Remarks: The water treatment program needs review. The bacteria is probably a result of poor maintenance, but the water treatment reports show problems and minor action from the water treatment contractor to correct them.						
		2 Is the cooling tower water treated with biocides, rust inhibitors?				X		
		Remarks: Algae growth noted on fan grilles. Biocide appears ineffective.						
		3 Are the tower/slats/sump clean? Any water leaks within the area of the cooling tower?		X				
		Remarks: Water noted leaking from inlet louvers from scale buildup.						
		4 Are they free of any signs of algae and scaling buildup?				X		
		Remarks: Algae noted on fan grilles. Scale buildup contributing to water not flowing through fill properly.						
		5 Are the louvers aligned and free of defects?		X				
		Remarks:						
M	ROOF			Y	N	N/A		
		1 Are drains clear and free of debris?		X				
		Remarks:						
		2 Are flashings intact, and tight?		X				
		Remarks:						
		3 Is the roof free of any evidence of ponding?		X				
		Remarks: Southeast roof. Large ponding area, roof system is relatively shallow pitch.						
		4, Are there any membrane tears, bubbles, cracks?			X			
		Remarks:						
		5 Are semi-annual roof inspection reports on file?		X				
		Remarks: Currently, there are weekly roof inspections, any problem noted is documented for corrective action.						
N	EMERGENCY GENERATOR			Y	N	N/A		
		1 Is the generator tested weekly? Check running logs for dates.		X				
		Remarks:						
		2 Are tests performed monthly of the transfer switch from normal power to emergency power under building load being conducted?			X			
		Remarks:						
		3 Do mechanics check for corrosion on the battery cable and perform specific battery gravity test? Do visual inspections of equipment show oil in the engine?		X				
		Remarks:						
		4 Are checks performed for any leaks (i.e. water/oil) from the generator and exhaust leaks?		X				
		Remarks:						
		5 Are the operating instructions posted on or near the generator?			X			

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BRANCH	SECTION	QUESTION	Y	N	N/A
		<div style="border: 1px solid black; padding: 2px;">Remarks:</div>			
O	SWITCHGEAR AND ELECTRICAL SYSTEM		Y	N	N/A
	1	Are electrical spaces clean and maintained? <div style="border: 1px solid black; padding: 2px;">Remarks:</div>	X		
	2	Are low voltage power circuit breakers (over 50 amps) and molded case circuit breakers (over 400 amps) tagged with last inspection? <div style="border: 1px solid black; padding: 2px;">Remarks:</div>		X	
	3	Is infrared scans performed every three (3) years to locate problems. I.D. Stickers must show testing firm or agency, date of test and initials of tester? <div style="border: 1px solid black; padding: 2px;">Remarks:</div>	X		
	4	Is equipment properly marked? All main connect and disconnect switches are permanently marked for identification? <div style="border: 1px solid black; padding: 2px;">Remarks: There are a lot of cases where the equipment being served is either hand written or missing. The panels are also missing ID tags.</div>		X	
	5	Are proper voltage rated rubber floor mats in place in front of switchgear? <div style="border: 1px solid black; padding: 2px;">Remarks:</div>		X	
P	ELEVATORS		Y	N	N/A
	1	Is the certificate or equivalent form displayed in the cab or applicable Field Office/Service Center/Property Management Office? <div style="border: 1px solid black; padding: 2px;">Remarks:</div>	X		
	2	Are no-load test and maintenance inspections completed annually? <div style="border: 1px solid black; padding: 2px;">Remarks:</div>	X		
	3	Is the five (5) year load test and maintenance inspection completed and current? <div style="border: 1px solid black; padding: 2px;">Remarks:</div>	X		
	4	Are Elevator Certificates current? Are reports maintained on the annual and five (5) year tests and inspections? <div style="border: 1px solid black; padding: 2px;">Remarks:</div>	X		
	5	Is there correspondence reflecting actions taken from elevator inspection results? <div style="border: 1px solid black; padding: 2px;">Remarks:</div>	X		
	6	Were there any best practices observed or used in the operation or management of this program? <div style="border: 1px solid black; padding: 2px;">Remarks: The cabs are currently being overhauled.</div>		X	
R	Repair & Alteration - Critical Operational Review Elements				
A	SERVICE DELIVERY		Y	N	N/A
	1	Is this portion of the checklist performed by a specified NCR Division/Branch? If so, is a copy of the most recent NCR survey/inspection/report etc. on hand? <div style="border: 1px solid black; padding: 2px;">Remarks:</div>			
	2	Are all necessary recurring repairs (painting of walls, carpet replacement) being accomplished or programmed for accomplishment?	X		

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BRANCH	SECTION	QUESTION		QUESTIONS THAT DO NOT APPLY	INFORMATION TO BE SUPPLIED FROM CS SURVEY TEAM MEMBERS	INFORMATION TO BE SUPPLIED FROM GSA SOURCES
			Remarks:			
	3	Are foreseeable non-recurring repairs being reported to regional PBS in a timely manner?				
		Remarks:				
	4	Are tenant alterations being administered by the facility manager, maintaining the existing building character and use, and matching the existing quality, finish, style, and workmanship?				
		Remarks:				
		Are the required cyclical painting being accomplished and records being maintained?				
		Remarks:				
F Fire Protection & Life Safety Program - Critical Operational Review Elements						
A RISK ABATEMENT PROGRAM				Y	N	N/A
	1	Is this portion of the checklist performed by a specified NCR Division/Branch? If so, is a copy of the most recent NCR survey/inspection/report etc. on hand?			X	
		Remarks: HUD has a risk abatement plan - not sure if GSA is performing this as well.				
	2	Are fire safety conditions documented in the Inventory Reporting Information System (IRIS) Safety Assessment? If so, have they been assigned to the facility manager, been corrected within the specified timeframes or have interim corrective actions been implemented?			X	
		Remarks: There are still open items in IRIS.				
	3	Have the appropriate abatement plans been prepared and implemented for the fire safety conditions documented in the IRIS Safety Assessment that have been assigned to the facility manager?			X	
		Remarks: There are still open items in IRIS - The Building Management has not seen the IRIS safety assessment.				
	4	Have fire safety conditions documented in the IRIS Safety Assessment, Assessment that have been assigned to the facility manager requiring client agency response or lessor response, been forwarded to the appropriate parties and followed-up?			X	
		Remarks: See above				
	5	Do service contracts that involve the installation of fire protection equipment or systems include the appropriate safety clauses?		X		
		Remarks:				
	6	Have designs, space layout modifications, specifications, project plans, RWA's, etc. that impact the overall fire protection and life safety features of a building been submitted to the respective regional fire protection staff for review and approval?			X	
		Remarks:				
B FIRE PROTECTION EQUIPMENT & SYSTEMS INSPECTION, TESTING, AND MAINTENANCE				Y	N	N/A
	1	Is there a copy of each building's inspection, testing, and maintenance contract on file that specifically contains inspection, testing, and maintenance requirements of fire protection equipment and systems and qualifications of individuals performing such activities?		X		
		Remarks:				
	2	Do building equipment inventory lists accurately reflect the fire protection equipment and systems installed in each building?		X		
		Remarks: The inventory lists the quantities of items, but not the types/mfg./model numbers				

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			INFORMATION TO BE SUPPLIED FROM CS SURVEY TEAM MEMBERS		
			INFORMATION TO BE SUPPLIED FROM GSA SOURCES		
		3 Is inspection, testing, and maintenance of fire protection equipment and systems being performed in accordance with the inspection, testing, and maintenance schedules referenced in the respective inspection, testing, and maintenance contract (e.g., fire alarm systems — National Fire Protection Association (NFPA) 72, water-based fire extinguisher systems — NFPA 25, fire doors — NFPA 80, etc.)?		X	
		Remarks: Extinguishers are not being maintained			
		4 Are there operation and maintenance manuals on file for the respective fire protection equipment and systems installed in each building?	X		
		Remarks:			
C	FIRE DRILL PROGRAM		Y	N	N/A
		1 Do occupant agencies participant in at least one fire drill each year	X		
		Remarks:			
		2 Is documentation regarding each fire drill conducted in each building on file?	X		
		Remarks:			
		3 Is a copy of the occupant emergency plan for each building on file and up-to-date	X		
		Remarks:			
		4 Does the occupant emergency plan for each building contain specific information to familiarize building staff and tenants with the plan's details and their respective responsibilities in implementing the plan?	X		
		Remarks:			
D	FIRE INCIDENT REPORTS		Y	N	N/A
		1 Are fire incidents that result in a loss of property reported immediately to the respective regional fire protection staff via telephone or other type of electronic communication?	X		
		Remarks:			
		2 Are fire incident reports completed on a GSA Form 53, and submitted to the respective regional fire protection staff within 10 calendar days following the fire incident? If so, are copies of the completed GSA Form 53, fire incident reports kept on file?	X		
		Remarks:			
E	PRE-FIRE PLANNING		Y	N	N/A
		1 Is the local fire department annually invited to tour Federally-owned buildings for the purpose of pre-fire	X		
		If so, is documentation of the invitation letter to the local fire department or a copy of the planning?		X	
		Is inspection by the local fire department kept on file?			X
		Remarks: The Fire Department is very familiar with the building and has met with the building management staff several times.			
		2 Were there any best practices observed or used in the operation or management of this program?		X	
		Remarks:			

H Environmental, Health, & Safety (EH&S) Management - C.O.R.E.,

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				QUESTIONS THAT DO NOT APPLY		
				INFORMATION TO BE SUPPLIED FROM CS SURVEY TEAM MEMBERS		
				INFORMATION TO BE SUPPLIED FROM GSA SOURCES		
A MANAGEMENT SUPPORT AND PROGRAM PROMOTION				Y	N	N/A
		1	Is this portion of the checklist performed by a specified NCR Division/Branch? If so, is a copy of the most recent NCR survey/inspection/report etc. on hand?		X	
			Remarks:			
		2	Does Property Management policy exist requiring coordination of efforts with the appropriate regional EH&S subject matter experts?	X		
			Remarks:			
		3	If off-sites are held, is EH&S made part of the agenda?	X		
			Remarks:			
		4	Are managers and supervisors aware of the information contained in Environmental Risk Index (ERI)?		X	
			Remarks:			
		5	Are managers aware of their environmental liabilities and of the annual liabilities reporting requirements?	X		
			Remarks:			
		6	Are all managers and supervisors knowledgeable of GSA ADM P 5940.1A, "GSA Occupational Safety and Health Program"?	X		
			Remarks:			
		7	Are managers aware of all significant building hazards and high risk locations?	X		
			Remarks:			
		8	Do managers access the IRIS safety module to track building hazards and non-compliance?	X		
			Remarks:			
		9	Do managers know their employee injury and illness history?	X		
			Remarks:			
		10	Do managers know their employee injury and illness rate, continuation of pay and workers' compensation costs?	X		
			Remarks:			
		11	Are EHS&F elements included in employees' APPAS performance plans?		X	
			Remarks:			
		12	Are employees recognized or awarded for superior EH&S accomplishments or performance?		X	
			Remarks:			
		13	Current GSA rules and regulations are posted in a conspicuous place(s) within the building?	X		
			Remarks:			
B EH&S AWARENESS AND TRAINING				Y	N	N/A
		1	Is EH&S general awareness training provided for all employees?	X		
			Remarks:			
		2	Is specific EH&S training provided to managers and supervisors?	X		
			Remarks:			

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BRANCH	SECTION	QUESTION	QUESTIONS THAT DO NOT APPLY	INFORMATION TO BE SUPPLIED FROM CS SURVEY TEAM MEMBERS	INFORMATION TO BE SUPPLIED FROM GSA SOURCES
		3 Are employees trained on hazards specific to their workplaces or duties? Remarks: The contractor trains their employees and requires the employee pass a test to demonstrate they understand the safety and hazardous material aspects of their job.	X		
		4 Do appropriate personnel (including contractors) receive proper asbestos training? (ERI ASB-7) Remarks:	X		
		5 Are employees trained on environmental requirements specific to their duties? Remarks:	X		
		6 Have personnel involved with the handling, storage, and/or disposal of hazardous waste and/or items with hazardous components received training within the current FY? (ERI HW-3) Remarks::	X		
		7 If waste water treatment plants are operated do managers and operators receive required training or certification? (ERI WW-4) Remarks:			
C PROJECT MANAGEMENT			Y	N	N/A
		1 Do project managers confer with the regional EH&S subject matter experts on plans, projects, designs, proposals, changes in work practices, and other changes to the building configuration, which includes operations for safety, occupational health, and environmental impact? Remarks:	X		
		2 Is there a system for EH&S sign-off on project designs? Remarks:	X		
		3 Do EH&S subject matter experts participate in the development and prioritization of Repair and Alteration (R&A) projects? Remarks:	X		
		4 Does EH&S review the R&A five-year plan? Remarks:	X		
D CONTRACT MANAGEMENT			Y	N	N/A
		1 Are environmentally preferable products specified in building O&M and Custodial contracts? Remarks:	X		
		2 Do permits exist (if required) for high risk activities involving asbestos, lead, electrical work, confined space entry, welding/brazing, and other high-risk operations? Remarks:	X		
E TENANT COMMUNICATION			Y	N	N/A
		1 Are occupants made aware of their EH&S responsibilities as a tenant, e.g. promptly report facility hazards, not to discard regulated and hazardous materials, support recycling, etc? Remarks:	X		
		2 Are building hazards communicated to affected tenants?	X		

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		Remarks;					
		3 Are project activities, i.e. asbestos abatements, water system repair, etc. communicated to tenants?	X				
		Remarks:					
F		SURVEYS AND ASSESSMENTS			Y	N	N/A
		1 Is a comprehensive EFIS&F survey conducted for each facility at least every five (5) years?					
		Remarks:					
		2 Is an Occupational Safety and Health (OSH) survey conducted at least annually for all (GSA-) occupied workplaces					X
		Remarks:					
		3 Has a physical asbestos survey been conducted for all buildings constructed prior to 1981? (ERI ASB-1) If so, are the asbestos surveys updated as abatements are performed?	X				
		Remarks:					
		4 Has a determination of potential asbestos containing material been made for all buildings constructed after 1980? (ERI ASB-1)					X
		Remarks:					
		5 Are asbestos surveys updated as abatements are performed?	X				
		Remarks:					
		6 Does Property Management know whether each building contains lead-based paint? (ERI LBP-1)	X				
		Remarks:					
		7 Is a hazardous material inventory maintained for each facility? (ERI HM-2)	X				
		Remarks:					
		8 Does an up-to-date inventory exist for all storage tanks (above and below ground)? (ERI ST-1)	X				
		Remarks:					
		9 Has an inventory been conducted of all equipment which may contain PCBs? (ERI PCB-1)					X
		Remarks: The building does not have any PCBs. They have been removed.					
G		HAZARD ABATEMENT			Y	N	N/A
		1 Does the Facility Management/Service Center provide timely and accurate input and updates to the ER I?				X	
		Remarks:					
		2 Are EH&S deficiencies abatements prioritized according to risk?	X				
		Remarks:					
		3 Are EH&S deficiencies identified in surveys and inspections corrected in a timely manner?	X				
		Remarks:					
		4 Is an abatement plan with interim controls developed for deficiencies that can not be corrected within 30 days?	X				
		Remarks:					

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	H	ACCIDENT AND INCIDENT INVESTIGATION	Y	N	N/A
		1 Are accidents, exposures, releases, and incidents investigated promptly, reported, and corrective action taken to avoid reoccurrences? Remarks:	X		
		2 Are the following forms completed in an accurate and timely manner?			
		A) OSHA Form 300 "Log of Work-Related Injuries and Illnesses"	X		
		B) OSHA Form 301 "Injury and Illness Report"	X		
		C) OSHA Form 300A "Summary of Work Related Injuries and Illnesses"	X		
		D) DOL Form CA-1 "Federal Employees' Notice of Traumatic Injury and Claim for Continuation of Pay/Compensation"	X		
		E) DOL Form CA-2 "Notice of Occupational Disease and Claim for Compensation"	X		
		f) GSA Form 53 "Fire Incident Report"	X		
		G) SF 91 "Motor Vehicle Accident Report"	X		
		Remarks:			
	I	PERMITS AND RECORD KEEPING	Y	N	N/A
		1 Is required EPA documentation including water permits, air permits, asbestos abatement notifications and storage tank registrations obtained and complied with? Remarks:	X		
		2 If the facility is or could be considered an EPA designated hazardous waste "generator" has the appropriate paperwork been filed, (e.g., an EPA facility I.D. number)? (ERI HW-1) Remarks:			X
		3 Are all materials disposed of as hazardous waste properly manifested and transported by licensed operators? Remarks:			X
		4 Are manifest files being maintained for three (3) years? Remarks:			X
	J	PROGRAM-SPECIFIC REQUIREMENTS			
	R.	ENVIRONMENTAL RISK INDEX CHECKLIST QUESTIONS			
		Program-Specific Requirements	Y	N	
		- Asbestos			
		1 Do buildings containing asbestos have an Asbestos Management Plan and is it kept current (ERI ASB-8)? Remarks:	X		
		- Lead-based Paint			
		2 If the building contains lead-based paint are controls in place to prevent exposure (ERI LBP-4)? Remarks:	X		

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		3 If the building contains lead-based paint do procedures exist for maintenance, renovation and abatement activities (ERI LBP-5)?	X		
		Remarks:			
		EH&S Awareness and Training			
		4 Do appropriate personnel (including contractors) receive proper asbestos training (ERI ASB-7)?	X		
		Remarks:			
		5 If waste water treatment plants are operated do managers and operators receive required training or certification (ERI WW-4)?			X
		Remarks:			
		Surveys and Assessments			
		6 Has a Phase I Environmental Site Assessment been conducted for each facility (ERI SSC-1)?		X	
		Remarks:			
		7 Has a random survey been conducted for each facility (ERI RAD-1)?		X	
		Remarks:			
		8 Have comprehensive building-wide indoor air quality surveys been conducted for each occupied facility (ERI IAQ-1)?	X		
		Remarks:			
		9 Has drinking water sampling been conducted for each facility (ERI DW-1)?	X		
		Remarks:			
		Hazard Abatement			
		10 Is there timely and accurate input and updates to the ERI?		X	
		Remarks:			
		- Hazardous Materials			
		11 Does management employ a process to control and reduce the amount of hazardous materials acquired (ERI HM-1, 6)?	X		
		Remarks:			
		Hazardous Waste			
		12 Is the disposal of PCB-containing equipment tracked (ERI PCB-3)?			X
		Remarks:			
		- Indoor Environmental Quality			
		13 Are HVAC systems regularly maintained (ERI IAQ-2)?	X		
		Remarks:			
		14 Does the building maintenance contractor have a program in place to control microbial contamination (ERI IAQ-5)?	X		
		Remarks:			
		15 Does property management respond to and correct all leaks and water intrusions within 72 hours (ERI IAQ-7)?	X		
		Remarks:			

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			INFORMATION TO BE SUPPLIED FROM CS SURVEY TEAM MEMBERS		
			INFORMATION TO BE SUPPLIED FROM GSA SOURCES		
		16 Do buildings containing asbestos have an Asbestos Management Plan and is it kept current (ERI ASB-8)?	X		
		Remarks:			
		Program-Specific Requirements			
		- Drinking Water			
		17 Is there a Standard Operating Procedure (SOP) in place to alert customers when drinking water contamination exceeds established limits (ERI DW-3)?	X		
		Remarks:			
		- Clean Air Act			
		18 Do plans exist to reduce the use of ozone depleting substances (ODS) and/or utilizes ODSs that are less harmful to the ozone layer (ERI CAA-2)?	X		
		Remarks:			
		- Storm Water			
		19 Has each facility implemented storm water best management practices as required by permit or as a precautionary measure (ERI SW-4)?	X		
		Remarks:			
J	PROGRAM-SPECIFIC REQUIREMENTS		Y	N	N/A
	a.	ASBESTOS			
	1	Is an asbestos pre-alteration assessment performed for all projects regardless of the date of building construction?	X		
		Remarks: GSA Safety			
	b.	LEAD-BASED PAINT			
		See the Environmental Risk Index Checklist Questions 2 & 3 above.	X		
	c.	HAZARDOUS MATERIALS			
	1	Is a written hazard communication program established and implemented for each facility?	X		
		Remarks:			
	2	Are chemical inventories properly labeled and current and are material safety data sheets accessible to all employees?	X		
		Remarks:			
	3	Do on-site building O&M and custodial contractors have a hazardous materials program?	X		
		Remarks:			
	4	Is data shared between the contractor programs and the GSA program?			
		Remarks:			
	d.	STORAGE TANKS			
	1	Does a program exist for the inspection and maintenance of all tanks and associated systems (e.g. piping)? (ERI ST-6)	X		
		Remarks:			
	e.	HAZARDOUS WASTE			

In-Depth Operations Review - I.O.R.

REVIEW QUESTIONNAIRE

SURVEY DATE

8/7/2013

BRANCH	SECTION	QUESTION	QUESTIONS THAT DO NOT APPLY		
			INFORMATION TO BE SUPPLIED FROM CS SURVEY TEAM MEMBERS		
			INFORMATION TO BE SUPPLIED FROM GSA SOURCES		
		See the Environmental Risk Index Checklist Question 12 above.			X
	f. INDOOR ENVIRONMENTAL QUALITY				
	1	Is there a plan in place for filter replacement or cleaning?	X		
		Remarks:			
	2	Is adequate outdoor air is provided in accordance with ASHRAE standards? (ERI IAQ-3)	X		
		Remarks:			
	3	Do building managers install the highest efficiency (MERV) filtration feasible?	X		
		Remarks:			
	4	Are low volatile organic compound (VOC) materials used where feasible? (ERI IAQ-4)	X		
		Remarks:			
	5	Are coils and condensate pans cleaned on a regular schedule?	X		
		Remarks:			
	6	Are construction operations properly sequenced and managed to address contaminants? (ERI IAQ-6)	X		
		Remarks:			
	7	Are special contaminate sources identified and controlled, e.g. print shops, garages, etc? (ERI IAQ-8)	X		
		Remarks:			
	8	Are building smoking policies established and enforced?	X		
		Remarks:			
	g. EMPLOYEE OSH PROGRAM				
	1	Are GSA associates exposed to recognized hazards provided with the appropriate protective equipment, (safety shoes, safety helmets, etc)?			X
		Remarks:			
	2	Are Standard Operating Procedures developed where GSA employees perform increased risk tasks requiring special emphasis or precautions?			X
		Remarks:			
		See the Environmental Risk Index Checklist Questions 2 & 3 above.			
	h. QUALITY CONTROL REVIEW				
	1	Goals and objectives -			
		Plan to reduce accidents	X		
		Safety training Plan	X		
		Appointment of ASBESTOS PROGRAM Manager (Facility ASBESTOS CONTROL Manager) - Safety Coordinator and an alternate	X		
		Agency Communication	X		
		Notices to agencies of building activities	X		
		Complaint log with follow up actions	X		

BRANCH	SECTION	QUESTION	In-Depth Operations Review - I.O.R.			SURVEY DATE		
			REVIEW QUESTIONNAIRE			8/7/2013		
			QUESTIONS THAT DO NOT APPLY					
			INFORMATION TO BE SUPPLIED FROM CS SURVEY TEAM MEMBERS					
			INFORMATION TO BE SUPPLIED FROM GSA SOURCES					
		Tenant agencies notified of presence of asbestos and availability of asbestos management plans Conduct interviews with a random sampling of tenants to determine if they are aware of emergency exiting procedures.	X					
		Unsafe conditions are corrected within specified time frame	X					
		Abatement plans are prepared and approved by EH&S subject matter experts	X					
		HAZARDOUS Identification	X					
		All service contracts involving abatement activities have safety clauses Plans and specifications approved by EH&S	X					
		GSA Form 3614 (GSA Notice of Unsafe/Unhealthful Workplace Conditions) is used - Safety training records	X					
		How to look for and recognize hazardous conditions	X					
		Asbestos training for competent person						X
		Respiratory training and fit testing						X
		Accident/Incident Investigation	X					
		OSHA Recordkeeping Forms (300, 300A, and 301)	X					
		CA-1, CA-2, CA-3, and CA-6 are complete, timely and forwarded as applicable GSA Form 3623 (GSA Supervisor's Supplemental Report of GSA Employee Injury/Illness) attached to CA Form (workers compensation form)	X					
		Vehicle accidents reported on SF 91/91 A (Investigation Report of Motor Vehicle Accident) - Confined Spaces Inventory	X					
		Prevention maintenance schedule	X					
		Personal protective equipment list assigned	X					
		ASBESTOS Operations and Management Plan - list of all building containing ASBESTOS	X					
		Semi annual ACM inspections logs/reports - Medical Monitoring Records						X
		- Pre-alte Remarks:						
	2	Were there any best practices observed or used in the operation or management of this program? Written HAZCOM Program?						X
		Remarks:						

APPENDIX - In Depth Operational Review (IDOR)

Operational Review - Action Plan Robert C. Weaver (HUD)

Building Manager: (b)(6)
 Building Name: Robert C. Weaver
 Building Address: 451 Seventh St. S.W.
 Building Number: Washington, DC 20002
 Date of Survey: 8/8/2013

ITEM	CHECKLIST NUMBER	DOCUMENT/EQUIPMENT SURVEY	MAN/TEAM RESPONSIBILITY	SURVEYOR COMMENTS	RECOMMENDED ACTION	(b)(4)	BUILDING AGENCY COMMENT	COMPLETION DATE
1	EB.3	SEP (Statement of Energy Performance)	GSA O&M team	An energy audit was performed, this needs to be used to obtain the Energy Star certification.	A copy of the latest SEP needs to be provided and utilized to obtain the Energy Star label.			
2	LI.1	Life Cycle Costing	GSA O&M team	The building team stated that there is no Building Operation Plan	Implement a Life Cycle Cost system such as the NIST Building Life-Cycle Cost (BLCC) Program.			
3	EB.6	Best Practices	GSA O&M team	There are many pieces of equipment that need to be integrated together. A re-commissioning program could facilitate this.	Implement a re-commissioning program.			
4	MC.4	Equipment list and PM schedule	GSA O&M team	The equipment list does not match the equipment list.	Update and correct differences.			
5	MC.5	Random PM	GSA O&M team	The cooling tower maintenance is not being done.	Clean out the nozzles so the tower will work correctly.			
6	MC.7	Water treatment program	GSA O&M team	The tower has algae and the water treatment reports show this.	The problem may not be the water treatment. It is likely the lack of maintenance. We recommend the building contractor work with the treatment company and do testing between monthly visits.			
7	ML.2	Air Handlers	GSA O&M team	At least one air handler and connected duct work is full of black soot.	Determine the source of the soot. Clean the air handler and connected duct work.			
8	MM.3	Buss Bar	GSA O&M team	In the basement the buss bar was making noise. This is an indication of a loose connection.	Make sure this is included in the infrared scan, and tighten connections.			

September 27, 2013

Cinnova Development Group, LLC

Page 1 of 1



LEED for Existing Buildings
Operations and Maintenance
for the

Robert C. Weaver Building

451 Seventh Street SW,
Washington, DC 20410
Building Number DC0092ZZ



Submitted to **GENERAL SERVICES ADMINISTRATION**
301 7th Street SW, Washington DC 20407

Submitted by **CINNOVAS DEVELOPMENT GROUP, LLC**
1000 Connecticut Avenue NW, Suite 900
Washington, D.C. 20036
Tel. 202-469-3446

Submitted on September 27, 2013

GSA Contract No. GS-11P-11-YA-C-0077

LEED POTENTIAL

LEED INTRODUCTION

This section of the report is a Leadership in Energy and Environmental Design for Existing Buildings: Operations and Maintenance (LEED-EB: O+M v2009) assessment. The assessment identifies the current status of the Robert C. Weaver Building in relationship to the LEED-EB O&M rating system and outlines recommendations to be considered for implementation.

LEED 2009 for Existing Buildings: Operations and Maintenance is intended to maximize a building's operational efficiency while minimizing environmental impacts. As a consensus-based system for certifying green building performance, operations, and maintenance, LEED-EB: O&M provides a means for property managers, portfolio owners, and service providers to lower operational costs, while increasing occupant productivity in an environmentally responsible manner.

The LEED-EB: O&M Rating System is a set of voluntary performance standards for the upgrades and operation of buildings not undergoing major renovations. It provides sustainable guidelines for building operations, periodic upgrades of building systems, minor space use changes and building processes.

LEED-EB: O&M addresses exterior building and site maintenance programs, efficient and optimized use of water and energy, purchasing of environmentally preferred products, waste stream management, and ongoing indoor environmental quality (IEQ). In addition, LEED-EB: O&M provides sustainable guidelines for whole-building cleaning and maintenance, recycling programs and systems upgrades to improve building energy, water, IEQ and materials use.

The LEED-EB rating system provides well thought-out sustainability criteria as well as a useful framework for implementing and tracking achievements for sustainable practices in buildings. With that in mind, regardless if LEED-EB certification is pursued, the sustainability measures identified in this report will advance the building's sustainability and move the building closer to certification in the future.

BUILDING AND SITE DESCRIPTION

The Robert C. Weaver Building has nine stories above grade and three levels of parking, with approximately 536 spaces below grade. The building is 1,372,278 gross square feet (SF). The building houses about 1,500 occupants and has approximately 1,000 visitors per week. The building operates 60 hours per week.



CURRENT LEED-EB STATUS

- Certification: 40-49
- Silver: 50-59
- Gold: 60-79
- Platinum: 80-100

Table 3 summarizes the LEED-EB O&M prerequisite status based on current operations and performance. All prerequisites must be pursued in order to achieve LEED certification. The table illustrates how many of the prerequisites are met for the Robert C. Weaver Building. A discussion of these can be found further into this section. Please note that the prerequisites do not contribute to the total score since prerequisites are required. Points are earned by achieving credits.

Table 3: Prerequisite Summary of Completion Status

PREREQUISITE	TITLE	STATUS
WEp1	Minimum Indoor Plumbing Fixture and Fitting Efficiency	Complete
EAp1	Energy Efficiency Best Management Practices	Easy
EAp2	Minimum Energy Performance	Complete
EAp3	Refrigerant Management – Ozone Protection	Complete
MRp1	Sustainable Purchasing Policy	Easy
MRp2	Solid Waste Management Policy	Easy
EQp1	Outdoor Air Introduction and Exhaust Systems	Easy
EQp2	Environmental Tobacco Smoke (ETS) Control	Complete
EQp3	Green Cleaning Policy	Easy

Table 4: Summary of Categorized Credits

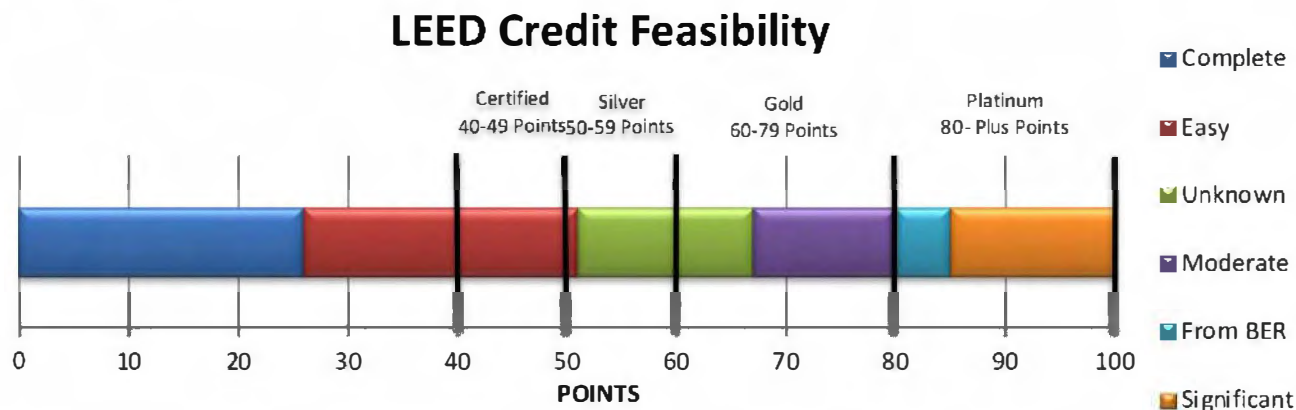


Table 4 illustrates that the building would be able to achieve LEED-EB Silver or possibly Gold certification. There are 26 credits classified as complete, 25 as easy. Achieving these credits would earn Silver Certification. There are 13 credits listed as moderate and 16 as unknown. With a more detailed evaluation of these credits it may be practical for the building to earn Gold Certification.

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THE LEED-EB SCORECARD on the following pages you will find the prerequisites and credits, their corresponding level of difficulty, the total possible points, description of the action necessary to meet compliance, and any building applicable

Sustainable Sites (26 Points Possible)											
Complete	Easy	Moderate	From BER	Significant	Unknown	NP	Prerequisite/ Credit Numbers	Prerequisite/Credit Title	Points	Brief Description of Action	Building and Site Notes
								<i>No Prerequisites in this Section</i>	0		
						4	SS Credit 1	LEED Certified Design and Construction	4	Building is not eligible for this credit.	
		1					SS Credit 2	Building Exterior and Hardscape Management Plan	1	Current use of products (list) may make this credit difficult to achieve. Develop policy, alter current practices, and track.	A contract is in place a formal LEED compliant policy would need to be developed. The credit is not entirely dependent on the BER projects, but purchasing of compliant products for exterior work is. Purchase compliant products for cleaning, paints and sealants and snowmelt. Track current exterior hardscape cleaning practices and adjust as necessary. Further investigation regarding the use of the leaf blower compared to manual methods will be necessary.
		1					SS Credit 3	Integrated Pest Management, Erosion Control, and Landscape Management Plan	1	Would need to alter current pest management practices. Develop a formal policy, alter current practices, and track.	There currently is an exterior pest management plan (contract) and landscape/erosion management plan in place. Standard operating procedures existing that would require adjustments and performance metric tracking to comply with the credit. The most difficult component would be complying with not continuously using rodent bait in bait boxes. Currently there is no erosion on site.
	9				6		SS Credit 4	Alternative Commuting Transportation - 3 - 15 points with 10 - 75% participation	15	Track the alternative transportation participation of the occupants through surveys (telecommuting, compressed workweeks, mass transit, walking, bicycles, carpool, or low-emitting, fuel-efficient vehicles). Develop an incentive program to encourage tenant participation.	The building is very accessible to mass transit. Based on information provided approximately 42.5 percent of the occupants based on the follow breakdown; carpool 6.5%, bus 15.5%, rail 17.5%, walk/bike 3%. Continue a formal tracking program. A survey could be conducted in a LEED performance period which may capture additional information. Based on experience, many downtown buildings can earn all credits.
						1	SS Credit 5	Reduced Site Disturbance - Protect or Restore Open Space	1	Maintain 25% of the site area (excluding the building footprint) or 5% of the total site area, whichever is greater, with native and adapted vegetation or provide twice as much land area off-site in native and adapted vegetation.	The total site area is 239,580 sq. ft (5.5 acres), based on rough calculations using google earth it is estimated that approximately 35,000 square feet of native/adapted vegetation on site would be necessary. This is not practical given the current amount of landscaping (approx. 10,000 sq. ft) and the current use of the site.
				1			SS Credit 6	Stormwater Management	1	Option 1: Utilize a cistern system for collection of non-potable water to reuse by at least 15%. Substitute non-potable water for potable water in cooling towers, landscape irrigation, fire suppression, or toilet and urinal flushing and custodial uses. This strategy can be linked with WEc4. Option 2: Install a green roof that meets credit requirements.	There is no on-site stormwater management system in place.
1							SS Credit 7.1	Heat Island Reduction - Non-Roof	1	Option 1: 50% of the site hardscape must have pervious pavement, SRI rating of 29, shade from trees, or solar panels. Option 2: At least 50% of the parking spaces must be under cover.	Parking is provided below the building. The credit would only require the necessary documentation.
1							SS Credit 7.2	Heat Island Reduction - Roof	1	Option 1: Consider using qualified materials when roofing material is in need of replacement using the appropriate SRI value. Option 2: Have 50% of the roof vegetative. Option 3: Have a combination of Options 1 & 2.	A high reflectance roof is in place. The cleaning of the roof to maintain the reflectance is required at least every two years. Confirm or implement an appropriate cleaning schedule.
	1						SS Credit 8	Light Pollution Reduction	1	Ensure that all non-emergency interior lighting with a direct line of sight to any openings in the envelope be automatically controlled to turn off during all after-hour periods. For exterior lighting - All exterior fixtures of 50 watts or greater must be shielded.	Approximately 90 percent of the rooms are on motion sensors. All perimeter rooms would need to have motion sensors. Additionally, lighting is on a control system. The exterior up lighting is not used and the downward lighting is recessed cans, thus the exterior lighting is compliant. Interior lighting would need to comply.

Water Efficiency (14 Points Possible)											
Complete	Easy	Moderate	From BER	Significant	Unknown	NP	Prerequisite/ Credit Numbers	Prerequisite/Credit Title	Points	Brief Description of Action	Building and Site Notes
1							WE Prereq 1	Minimum Indoor Plumbing Fixture and Fitting Efficiency	0	The flush and flow fixtures must meet or exceed the code requirements of the 2006 editions of the Uniform Plumbing Code (UPC) or the International Plumbing Code (IPC).	The information provided indicated the water closets have a flush rate of 1.6 gpf and the urinals have a rate of 1.6 gpf., the lavatory faucet are 0.5 gpm, pantry faucets are 2.2 gpm and showers are 1.25 gpm. No fixtures have been replaced post 1994. Based on this information, it can be assumed that the building would meet the prerequisite. If not, a lavatory area or replacement to a lower flow rate would be sufficient to meet the prerequisite and earn up to five credits.
1							WE Credit 1.1	Water Performance Measurement - whole building metering	1	Permanently install water metering to measure potable water. Record data at least on a weekly basis and compile it into monthly and annual summaries.	A main meter is in place, the meter would need to be ready at least weekly and compiled into a summary report. If the meter is owned by "the building" the meter must be calibrated annually.
2							WE Credit 1.2	Water Performance Measurement - sub metering	2	Ensure that sub metering covers at least 80% of one of the subsystems (i.e. cooling tower water usage). Sub-metering must be continuous and data-logged. Weekly readings at a minimum is needed. Compile monthly and annual summaries.	Currently there are sub-meter for irrigation and cooling tower make up water. These meters would need to be read at least weekly and compiled into a summary report. If the meters are owned by "the building" the meters must be calibrated annually.
1							WE Credit 2.1	Additional Indoor Plumbing Fixture and Fitting Efficiency - 10%	1	See Water Efficiency prereq 1 above.	See Water Efficiency prereq 1 above.
1							WE Credit 2.2	Additional Indoor Plumbing Fixture and Fitting Efficiency - 15%	1	See Water Efficiency prereq 1 above.	See Water Efficiency prereq 1 above.
1							WE Credit 2.3	Additional Indoor Plumbing Fixture and Fitting Efficiency - 20%	1	See Water Efficiency prereq 1 above.	See Water Efficiency prereq 1 above.
1							WE Credit 2.4	Additional Indoor Plumbing Fixture and Fitting Efficiency - 25%	1	See Water Efficiency prereq 1 above.	See Water Efficiency prereq 1 above.
1							WE Credit 2.5	Additional Indoor Plumbing Fixture and Fitting Efficiency - 30%	1	See Water Efficiency prereq 1 above.	See Water Efficiency prereq 1 above.
					1		WE Credit 3.1	Water Efficient Landscaping - Reduce Potable Water Use by 50%	1	To achieve this point at least 5% must be covered with landscaping and a reduction in potable water use for irrigation. Documenting the reduction can be done several ways; 1) calculations with a comparison of the irrigation system installed, 2) calculations using the vegetation planted, and 3) other ranking tools.	No information was provided as to exactly how much of the site area is irrigated, if the site has at least 5% of the area covered this credit could be considered. However, a reduction in irrigation use would be required and based on the turf grass this may be a difficult decision.
					1		WE Credit 3.2	Water Efficient Landscaping - Reduce Potable Water Use by 62.5%	1	See WE Credit 3.1.	
					1		WE Credit 3.3	Water Efficient Landscaping - Reduce Potable Water Use by 75%	1	See WE Credit 3.1.	
					1		WE Credit 3.4	Water Efficient Landscaping - Reduce Potable Water Use by 87.5%	1	See WE Credit 3.1.	
					1		WE Credit 3.5	Water Efficient Landscaping - Reduce Potable Water Use by 100%	1	See WE Credit 3.1.	
	1						WE Credit 4.1	Cooling Tower Water Management - Chemical Management	1	Develop a written cooling tower water management plan that includes the bleed-off rate and how water efficiency will be improved through a conductivity meter or automatic controls. The plan should include training for the staff that work specifically with the cooling tower. This building meets/doesn't meet the LEED criteria for chemical use management.	Conductivity meters would be necessary to earn this credit. There is no management plan in place of if there is, it appears to only address short term fixes. A plan would need to be created and it must meet the LEED requirements.
						1	WE Credit 4.2	Cooling Tower Water Management - Non-Potable Water Source Use	1	This is not practical for this project given that make-up water must be at least 50% nonpotable.	

Energy & Atmosphere (30 Points Possible)												
Complete	Easy	Moderate	From BER	Significant	Unknown	NP	Prerequisite/ Credit Numbers	Prerequisite/Credit Title	Points	Brief Description of Action	Building and Site Notes	
	1						EA Prereq 1	Energy Efficiency Best Management Practices - Planning, Documentation, and Opportunity Assessment	0	Develop a formal building operation and preventative maintenance plan that is in accordance with LEED criteria. Develop a systems narrative and sequence of operations. The Compass Group has plan development tools and templates it will bring to the project. The Compass Group is able to document the ASHRAE Level 1 Audit for most well managed buildings based on existing information from the engineering team. If the building does not have sufficient information on hand, an audit will be required and contracted separately.	Based on the operational review assessment, the operating team has most of this information either in written format or in practices. Currently there is no written Building Operating Plan, this will need to be created. The energy audit may need to be updated if it was conducted more than two years prior to certification. All the information would need to be packaged in a format acceptable to LEED.	
1							EA Prereq 2	Minimum Energy Efficiency Performance	0	The building must meet or exceed an Energy Star Portfolio Manager score of 69 or higher to meet this prerequisite.	The building's Energy Star Portfolio Manager score provided is an 81.	
1							EA Prereq 3	Refrigerant Management - Ozone Protection	0	Zero use of CFCs or have a third-party audit determine that it is not economically feasible to replace the existing chillers.	The building does not contain any CFCs. The building has R-22, R-134a, and R-404a	
10				8			EACredit 1	Optimize Energy Efficiency Performance	18	Energy Star Portfolio Manager score of 81 earns 10 credit points.	Additional energy conservation opportunities most likely exist in the building. Would need to confirm the data entries in portfolio manager.	
		2					EA Credit 2.1	Existing Building Commissioning - Investigation and Analysis	2	Option 1: Develop, plan, and conduct the investigation and analysis phase for commissioning. Any systems not commissioned within the last two years will need to be recommissioned. Option 2: Conduct an ASHRAE Level 2	A new energy audit will be necessary as the last audit was over 10 years ago.	
		2					EA Credit 2.2	Existing Building Commissioning - Implementation	2	Implement no-or low-cost operational improvements and create a capital plan for major retrofits or upgrades. Depending on the timing and list of no-or low-cost operational improvements developed with the ASHRAE Level 1 and 2 Audits, this credit may be implemented. See Credit Challenges & Opportunities section for cost information.		
				2			EA Credit 2.3	Existing Building Commissioning - Ongoing Commissioning	2	Develop, plan, and complete half of the scope of work in the first commissioning cycle. The building needs to be commissioned on a 24-month cycle. Most buildings do not implement 50% of the commissioning work prior to the completion of the performance period. See Credit Challenges & Opportunities section for cost information.		
		1					EACredit 3.1	Performance Measurement - Building Automation System	1	Install a BAS to monitor and control temperature and ventilation at the level of the AHUs as well as VAV temperature and ventilation, space temperature, air speed, humidity, radiant temperature and lighting. Develop a preventive maintenance program for these systems. Based on the data request form, the BAS capabilities will need to be investigated further to determine if this credit is possible.	90 percent of the lighting is on automated controls (motion sensors). Install motion sensors on the remaining 10%.	

Energy & Atmosphere, Continued											
Complete	Easy	Moderate	From BER	Significant	Unknown	NP	Prerequisite/ Credit Numbers	Prerequisite/Credit Title	Points	Brief Description of Action	Building and Site Notes
			x				EA Credit 3.2	Performance Measurement - System-Level Metering, 40%	1	Install a system-level meter to cover at least 40% of the total expected annual energy consumption of the building. Currently there is no system-level metering.	There is no system level metering in the building. Install submeters when implementing the recommendations.
			x				EA Credit 3.3	Performance Measurement - System-Level Metering, 80%	1	Install a system-level meter to cover at least 80% of the total expected annual energy consumption of the building. Currently there is no system-level metering.	There is no system level metering in the building. Install submeters when implementing the recommendations.
			1				EA Credit 4.1	Renewable Energy - On-site 3% / Off-site 25%	1	This credit is obtainable if the project team is willing to spend money. Most federal projects already have at least 20% of the energy offset with REC's but this will be confirmed to better assess the cost. Renewable energy surcharge will vary by market and energy provider.	It was indicated that renewable energy credits (REC's) were being purchased. However, only 5% are currently being purchased. Earning these credits is a matter of determining if the project team wants to allocate resources to purchasing credits.
			1				EA Credit 4.2	Renewable Energy - On-site 4.5% / Off-site 37.5%	1	see EAc4.1 above	
				1			EA Credit 4.3	Renewable Energy - On-site 6% / Off-site 50%	1	see EAc4.1 above	
				1			EA Credit 4.4	Renewable Energy - On-site 7.5% / Off-site 62.5%	1	see EAc4.1 above	
				1			EACredit 4.5	Renewable Energy - On-site 9% / Off-site 75%	1	see EAc4.1 above	
				1			EA Credit 4.6	Renewable Energy - On-site 12% / Off-site 100%	1	see EAc4.1 above	
					1		EA Credit 5	Refrigerant Management	1	The Compass Group will not rule this credit out until we know the amount of refrigerants in the building, determine whether halons are present in the sprinkler systems, and calculate the leakage rate and GWP/ODP of the building.	Refrigerant tracking data was not provided to conduct the calculations. Calculations would need to be conducted to determine credit compliance. However, given the fact that the majority of the refrigerant is r-22 this credit may be not possible, this will be determined following calculations.
1							EA Credit 6	Emissions Reduction Reporting	1	Track and record emissions using ENERGY STAR Portfolio Manager	Currently this credit could be earned using Portfolio Manager.

Materials & Resources (14 Points Possible)											
Complete	Easy	Moderate	From BER	Significant	Unknown	NP	Prerequisite/ Credit Numbers	Prerequisite/Credit Title	Points	Brief Description of Action	Building and Site Notes
	1						MR Prereq 1	Sustainable Purchasing Policy	0	The Compass Group will provide the building management team a draft Environmentally Preferable Purchasing (EPP) policy meeting the LEED criteria to adjust and implement.	There is a environmentally prefferred purchasing plan in place. This would need to be reviewed and adjsuted to meet the LEED performance criteria and policy format.
	1						MR Prereq 2	Solid Waste Management Policies	0	The Compass Group will provide the building management team a draft Solid Waste management policy meeting the LEED criteria to adjust and implement.	There is a waste and recycling plan in place. This would need to be reviewed and adjsuted to meet the LEED performance criteria and policy format.
						1	MR Credit 1	Sustainable Purchasing - Ongoing Consumables, 60%	1	Based on The Compass Group's experience we could Investigate this credit, but for the initial certification effort this credit is not attempted due to the complexities of procurement. Develop a sustainable purchasing program and encourage staff/tenants to participate. Document results.	
	1						MR Credit 2.1	Sustainable Purchasing - Durable Goods, Electric	1	Develop a sustainable purchasing program and encourage tenants to participate. Achieve at least 40% of sustainable purchases for electric-powered equipment. Document results.	
					1		MR Credit 2.2	Sustainable Purchasing - Durable Goods, Furniture	1	Develop a sustainable purchasing program and encourage tenants to participate. Achieve at least 40% of sustainable purchases for furniture. Document results.	
			1				MR Credit 3	Sustainable Purchasing - Facility Alterations & Additions	1	Develop a sustainable purchasing program and encourage tenants to participate. Maintain the program and document results. Confirm if construction will occur during the performance period.	Purchase LEED compliant products for maintenace and facility improvement projects. Carpet and ceiling tiles are examples of products identified that would easily be LEED compliant.
	1						MR Credit 4.1	Sustainable Purchasing - Reduced Mercury in Lamps, 90 pg/lum-hr	1	A formal sustainable purchasing plan for lamps would need to be developed which specifies that the mercury content of all lamps below 90 picograms/lumen hour. (According to the data request form, the building does not have a current bulb tracking plan. Should this credit be attempted, a complete inventory of existing fixtures and lamps would be required. The Compass Group will direct the building team on conducting this or this can be contracted out. Please refer to Appendix C for current bulb tracking plan.)	The building mainly has T8s. Based on experience, building could earn this credit and exemplarily performane. An inventory of fixture and lamps would need to be conduct and possibly swithc to other lamps depending on the findings. The only challenge is conducting the inventory.
						1	MR Credit 5	Sustainable Purchasing - Food	1	Achieve sustainable purchases of at least 25% of total combined food and beverage purchases during the PP. Due to multi-tenant scenario, this credit would be difficult to achieve. Check into possible sustainable criteria for purchases in the cafeteria.	
	1						MR Credit 6	Solid Waste Management - Waste Stream Audit	1	Conduct a waste audit or contract out. The Compass Group will provide the building management team with the tools to conduct a waste audit or provide a list of possible contractors to conduct the audit.	
							MR Credit 7.1	Solid Waste Management - Ongoing Consumables, 50%	1	Recycle at least 50% of ongoing consumables. The current building recycling program includes paper, cardboard, glass, plastics, metal cans, fluorescent lights, batteries, techno trash, and printer cartridges. Include food waste in the program. The feasibility of this credit will be determined based on performance data.	The current recycling rate is approximately 27%. Based on the experience of other office buildings there is no reason this building can not achieve a recycling rate of 40 to 60 percent. Evaluate current practices, conduct a waste audit (MRC6) to determine the best course of action to improve the performance.
1							MR Credit 8	Solid Waste Management - Durable Goods 75%	1	Energy Star labeled consumer electronic equipment is/isn't currently purchased. Develop a waste program that recycles or reuses at least 75% of durable goods including electronic equipment and furniture. Provide documentation of reuse or recycling of these goods by weight, volume or replacement value. Provide documentation for the amt.	Stated that 100 percent of furniture and electronics are recycled. Documentation will be necessary.
					1		MR Credit 9	Solid Waste Management - Facility Alterations & Additions	1	Develop a construction waste policy that divers at least 70% of waste generated by facility alterations and additions. Confirm if construction will take place during the performance period.	Recycle 70% of all construction and demolition debris.

Indoor Environmental Quality (19 Points Possible)											
Complete	Easy	Moderate	From BER	Significant	Unknown	NP	Prerequisite/ Credit Numbers	Prerequisite/Credit Title	Points	Brief Description of Action	Building and Site Notes
	1						IEQ Prereq 1	Outdoor Air Introduction & Exhaust Systems	0	Outside air calculations using the ASHRAE 62.1 tools will be required and testing of the actual outside air cfm is necessary. The Compass Group can conduct the outside air calculations, but the testing will be contracted by the team. Exhaust testing is also required and generally can be conducted by the management team.	There are 35 AHUs (zones) that would need to be tested under the worst case scenario operating conditions. To date 5 AHUs are controlled by CO2 sensors. The BAS system currently measures OACfm. Screen shots documenting the ASHRAE requirements are being met. Documentation that the sensors are calibrated will be required.
1							IEQ Prereq 2	Environmental Tobacco Smoke (ETS) Control	0	Requires a policy that indicates smoking areas must be at least 25 ft away from entries, outdoor air intakes, and operable windows.	Smoking urns are located at least 25 feet from doors. There are visible no smoking signage near the entryways.
	1						IEQ Prereq 3	Green Cleaning Policy	0	Develop a cleaning policy to adhere to the standards set forth in IEQc3.3 LEED-EB criteria as it relates to products, equipment, training etc.	The current contractor has a green cleaning policy in place. This would need to be reviewed for LEED compliance.
		1					IEQ Credit 1.1	IAQ Best Management Practices - IAQ Management Plan	1	The Compass Group can direct and provide the tools to the building management team to complete an IAQ management program that fulfills EPA's IAQ Building Education and Assessment Model (I-BEAM) requirements. This can be contracted out if desired.	
		1					IEQ Credit 1.2	IAQ Best Management Practices - Outdoor Air Delivery Monitoring	1	For mechanical ventilation systems, provide an outdoor air measurement device capable of measuring and controlling the minimum outdoor airflow rate at all expected system operating conditions within 15% of the design minimum outdoor air rate. Monitoring must be performed for at least 80% of the building's total outdoor air intake flow serving occupied areas. Ensure that systems have continuous monitoring that provide feedback on ventilation system performance. Please refer to LEED-EB O&M Reference Guide for monitoring requirements for mechanical ventilation systems that serve densely occupied spaces.	Based on the information provided this credit has been classified as easy. Confirmation of CO2 sensor locations in the densely occupied spaces will be required.
						1	IEQ Credit 1.3	IAQ Best Management Practices - Increased Ventilation	1	This is uncertain and is based on IEQp1.	
1							IEQ Credit 1.4	IAQ Best Management Practices - Reduce Particulates in Air Distribution	1	Ensure that filters with MERV values greater than or equal to 13 are installed on all outside air intakes and recirculation returns. Investigation is needed to ensure the system is capable and does not experience a dramatic pressure drop.	Currently the outside air and the supply air have MERV 14 filters or higher in place. The return air is MERV 8, however the air cycles through the MERV 14 prior to reaching the occupants. Change filters according to the manufacture's recommendation or more frequently and log maintenance activities.
						1	IEQ Credit 1.5	IAQ Best Management Practices - IAQ Management for Facility Alterations & Additions	1	The Compass Group will help develop and implement an indoor air quality (IAQ) management plan for construction and occupancy phases. During construction, meet or exceed the recommended design approaches of the Sheet Metal and Air Conditioning Contractor's National Association (SMACNA) "IAQ Guidelines for the Occupied Buildings Under Construction," 2nd Edition 2007, ANSI/SMACNA 008-2008 (Chapter 3).	There is the potential to implement this credit. The two week flush out period following construction activity is usually the difficult component to implement. This would need further evaluation at the time of a project.

Indoor Environmental Quality, Continued											
Complete	Easy	Moderate	From BER	Significant	Unknown	NP	Prerequisite/ Credit Numbers	Prerequisite/Credit Title	Points	Brief Description of Action	Building and Site Notes
		1					IEQ Credit 2.1	Occupant Comfort: Occupant Survey	1	Implement an anonymous comfort survey that meets LEED-EB requirements during the performance period. The Compass Group has developed a suitable survey. The Compass Group cannot ascertain if this credit will be earned until we have a response rate of at least 30%. If we reach a response rate of 30%, we will be able to document this	
1							IEQ Credit 2.2	Occupant Comfort - Occupant Controlled Lighting	1	50% of individual and multi-occupant spaces must have control of lighting in their workspace. Document lighting controllability. Current conditions do/ do not comply with this credit.	Individual occupants have control of lighting in their workspaces. Conference rooms either have blinds or multiple light level settings. The credit would only need documentation.
		1					IEQ Credit 2.3	Occupant Comfort - Thermal Comfort Monitoring	1	Install sensors to monitor air temperature, humidity, air speed, and radiant temperature in occupied spaces. Ensure that monitoring is continuous. Meet ASHRAE Standard 55-2004.	Accordingly to the information provided a system is currently being implemented to document compliance is being established. This will need be confirmed upon completion.
		1					IEQ Credit 2.4	Occupant Comfort - Daylight and Views, 50% Daylight/ 45% Views	1	Current conditions appear that there is/is not enough daylight and for the building. More thorough calculations will be required, along with Input on which spaces are regularly occupied. Additional analysis is required to determine if 45% of occupants have access to views.	Based on the data provided, it appears this credit could be earned. Detailed calculations and walking the entire building will be required at certification.
	1						IEQ Credit 3.1	Green Cleaning - High Performance Cleaning Program	1	Develop a high-performance cleaning program that provide necessary products and services supported by the green cleaning policy standards in IEQp1.	A program is in place with the contractor. Confirm that all LEED requirements are met.
		1					IEQ Credit 3.2	Green Cleaning: Custodial Effectiveness Assessment, < 3	1	Conduct formal audit through APPA Leadership in Educational Facilities procedures. Generally, this credit can be earned if sufficient building data is available to set up the audit.	
1							IEQ Credit 3.3	Green Cleaning - Sustainable Cleaning Products and Materials, 30%	1	Collect invoices and product brochures to verify that this credit is being met. If a green cleaning program is implemented, this credit is achievable.	Green Seal products are currently being purchased. Would need to verify percentage of products purchased.
	1						IEQ Credit 3.4	Green Cleaning - Sustainable Cleaning Equipment	1	Collect invoices to verify that the equipment adheres to LEED criteria. Verify that at least 20% of the equipment list meets the sustainability criteria.	
1							IEQ Credit 3.5	Green Cleaning - Entryway Systems	1	Entryway mats meet the 10 ft long requirement. Cleaning logs are required.	A cleaning log would be necessary.
	1						IEQ Credit 3.6	Green Cleaning - Indoor Integrated Pest Management	1	Develop, implement, and maintain an integrated pest management plan meeting LEED criteria.	The integrated pest management plan in place must be reviewed for LEED compliance

Innovation in Upgrades, Operation & Maintenance (6 Points Possible)											
Complete	Easy	Moderate	From BER	Significant	Unknown	NP	Prerequisite/ Credit Numbers	Prerequisite/Credit Title	Points	Brief Description of Action	Building and Site Notes
								No Prerequisites in this Section	0		
1							IO Credit 1.1	Innovation In Upgrades, Operation & Maintenance	1	Achieve additional environmental benefits achieved beyond those already addressed by the LEED 2009 ratings system. Provide an educational program for this building.	Possible action: Earn exemplary performance for SSc7.1 as 100 percent of parking is below the building.
1							IO Credit 1.2	Innovation in Upgrades, Operation & Maintenance	1	Achieve additional environmental benefits achieved beyond those already addressed by the LEED 2009 rating system. Provide an educational program for this building.	Possible action: Earn exemplary performance for WEc2.5 Based on the information provided and having conducted LEED water calculations, all 5 credit points are achievable and the exemplary performance and Regional Priority Credit.
1							IO Credit 1.3	Innovation in Upgrades, Operation & Maintenance	1	Achieve additional environmental benefits achieved beyond those already addressed by the LEED 2009 rating system. Provide an educational program for this building.	Possible action: Earn exemplary performance for IEQc3.3 Green Cleaning purchasing or MRc4.1 Sustainable Purchasing - Reduced Mercury in Lamps
1							IO Credit 1.4	Innovation in Upgrades, Operation & Maintenance	1	Achieve additional environmental benefits achieved beyond those already addressed by the LEED 2009 rating system. Provide an educational program for this building.	Conduct an electronics and furniture recycling event for MRc8 and track items people bring from home.
1							IO Credit 2	LEED™ Accredited Professional	1	All of The Compass Group's team members are LEED Accredited Professionals.	
1							IO Credit 3	Documenting Sustainable Building Cost Impacts	1	High performing buildings generally track the information necessary to meet this credit as part of their general business practices. Document overall building operating costs for the previous 5 years.	

Regional Priority (4 Points Possible - Choose 4 of the 6 Regional Priority Credits)											
Complete	Easy	Moderate	From BER	Significant	Unknown	NP	Prerequisite/ Credit Numbers	Prerequisite/Credit Title	Points	Brief Description of Action	Building and Site Notes
								No Prerequisites in this Section	0		
				1			RP Credit 1.1	SSc5	1	See credit above	
				1			RP Credit 1.2	SSc6	1	See credit above.	
1							RP Credit 1.3	WEc2.5	1	See credit above	
						1	RP Credit 1.4	WEc4.2	1	See credit above	
					1		RP Credit 1.5	EAc4.1	1	See credit above	
		1					RP Credit 1.6	EQc2.3	1	See credit above	



DISCUSSION OF LEED-EB SCORECARD

Because the building must meet all prerequisites to achieve LEED Certification, the following discussion first provides a summary of the Robert C. Weaver Building's current status in relationship to prerequisite (and associated credits) achievements. Each prerequisite is described in detail to help the building team identify key actions for implementation.

The subsequent discussion summarizes credit opportunities and challenges. The credit opportunities and challenges section highlights credits that would be opportune for the building and challenges that the building team may encounter. This section does not discuss every credit in detail, thus, the building team should plan to look through each credit in the scorecard above.

STATUS OF PREREQUISITES (AND ASSOCIATED CREDITS)

This analysis illustrates that the Robert C. Weaver Building has sustainable operating procedures currently in place. Thus the prerequisite that are policy based are generally complete and will most likely only require formatting or very modest practice adjustments. The above table 3 provided a summary of the current status of all prerequisites, with four marked completed and five as easy.

Water Efficiency

The Water Efficiency (WE) section contains one prerequisite: WE Prerequisite 1, Minimum Indoor Plumbing Fixture and Fitting Efficiency. The intent of the prerequisite is to reduce the indoor fixture and fitting water consumption, which will conserve water as well as operating expenses.

WE Prerequisite 1: Minimum Indoor Plumbing Fixture and Fitting Efficiency

LEED water calculations were conducted for the building using the following flush and flow rates:

FIXTURE	RATE
Water Closets	1.6 gpf
Urinals	1.6 gpf
Lavatory Faucets	0.5 gpm
Kitchen/Pantry	2.2 gpm
Shower	1.25 gpm

The prerequisite and credit 2.1-2.5 have been classified as "complete". Based on the current fixtures the building earns an exemplary performance credit and a Regional Priority credit. Note that when the fixtures are replaced a different multiplier is used in the calculations. The prerequisite would still be earned with new fixtures that comply with the IPC flush and flow rates.

Energy and Atmosphere

The Energy and Atmosphere (EA) section contains the following three prerequisites: EA Prerequisite 1, Energy Efficiency Best Management Practices, EA Prerequisite 2, Minimum Energy Efficiency Performance, and EA Prerequisite 3, Refrigerant Management. The intent of these prerequisites is



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to monitor and improve energy performance to conserve natural resources and eliminate the use of CFCs to prevent stratospheric ozone depletion.

EA Prerequisite 1: Energy Efficiency Best Management Practices

EA Prerequisite 1 requires the development of several working documents that can help improve the facilities energy efficiency. These documents include a sequence of operations for the building; a building operating plan; a systems narrative describing, at a minimum, the heating cooling ventilation, lighting, and any building control systems; a preventive maintenance plan for equipment in the systems narrative; and a schedule for preventive maintenance. The prerequisite also requires that the building team conduct an energy audit that meets the requirement of the ASHRAE Level I walk-through analysis.

The building has not earned EA prerequisite 1. Although the building implements the majority of the requirements for this credit this is no written documentation. Implementing this prerequisite is often about documenting procedures that are currently in place and does not involve costs beyond those included in staff time. Currently there is no written Building Operating Plan, this will need to be created. The energy audit may need to be updated if it was conducted more than two years prior to certification. All the information would need to be packaged in a format acceptable to LEED.

EA Prerequisite 2: Minimum Energy Efficiency Performance

The second EA prerequisite involves rating the energy efficiency of the building compared to other buildings of a similar type and climate. Buildings that have at least 50% of the floor space designated as one of several building types, such as office, are eligible to use Energy Star Portfolio Manager, a rating system developed by the U.S. EPA. Since this building is office space, it is eligible to earn an Energy Star score, a score of 81 was provided.

EA Prerequisite 3: Refrigerant Management

This prerequisite is dealing with the types of refrigerant used within the subject building, specifically that there are no CFCs in the building. According to the survey, the building does not have CFC-based refrigerants in the building systems thus this prerequisite is complete.

MATERIALS AND RESOURCES

The Materials and Resources (MR) section contains two prerequisites, MR Prerequisite 1, Sustainable Purchasing Policy, and MR Prerequisite 2, Solid Waste Management Policy. The intent of these credits is to select sustainable materials, practice waste reduction strategies, and to reuse and recycle.

MR Prerequisite 1 & 2: Sustainable Purchasing and Solid Waste Management Policies

Both of these prerequisites involve developing policies that meet LEED criteria. Currently the building has purchasing and waste policies in place. Modest tweaks will be necessary, and possible format adjustments, to comply with policy formatting required by LEED.



INDOOR ENVIRONMENTAL QUALITY

The Indoor Environmental Quality (IEQ) section contains the following three prerequisites: IEQ Prerequisite 1, Outdoor Air Introduction & Exhaust Systems, IEQ Prerequisite 2, Environmental Tobacco Smoke Control, and IEQ Prerequisite 3, Green Cleaning Policy. The intent of these credits is to improve air quality for occupant health and comfort.

IEQ prerequisite 1: Outdoor Air Introduction & Exhaust Systems

To achieve IEQ prerequisite 1, each outside air handling unit must supply an outdoor air ventilation rate required by ASHRAE 62.1-2007 Ventilation Rate Procedure. Each air handling unit will require an ASHRAE calculated outside air volume and documentation of actual performance testing illustrating compliance. The BAS system currently measures OA cfm. Screen shots documenting the ASHRAE requirements are being met. Documentation that the sensors are calibrated will be required. If the current operations do not meet the required ventilation rates, modifications would be necessary if no structural constraints are present.

IEQ prerequisite 2: Environmental Tobacco Smoke Control

EQ prerequisite 2 establishes either a no smoking zone within 25 feet of the building or an area located indoors with measures to exhaust the air directly outdoors. Current building standards already prohibit smoking within the building. A formal communication plan will be necessary to document this policy.

IEQ prerequisite 3: Green Cleaning Policy

EQ prerequisite 3's intent is to establish a green cleaning policy for the building. Once the policy is established, this should be easy for the cleaning staff to follow which in turn positively affects human health, building finishes, building systems and the environment. The data request form indicates that a Green Cleaning Policy is already in place. The policy will need to be evaluated to ensure it is adhering to LEED requirements. Since the policy is already in place, any adjustments made to the policy should be easy for the cleaning staff to follow, which in turn positively affects human health, building finishes, building systems and the environment.

CREDIT CHALLENGES AND OPPORTUNITIES

There can be challenges, as well as opportunities associated with certain credits as it relates to the sustainable actions identified in each credit. This section identifies key credits to focus on for LEED implementation.

The single tenant scenario of the building may present several opportunities not always attainable in multitenant office buildings. There is a strong potential for achieving many of the following credits:

- Alternative Commuting Transportation SSc4,
- Sustainable Purchasing Ongoing Consumables MR c1,
- Sustainable Purchasing Durable Goods - Electronics MR c2.1,
- Sustainable Purchasing- Reduced Mercury in Lamps MR c4.1,



- Solid Waste Management Ongoing Consumables MR c7
- Solid Waste Management Durable Goods (office equipment) MR c8, and
- Solid Waste Management – Facility Alterations (C&D recycling) MR c9.

As with most LEED for Existing Building projects, many of the credits do not require a capital improvement. Rather, costs are evident in the staff time necessary to create plans, modify operations and document performance for achieving LEED certification.

Sustainable Site (SS) Credit 4 presents a huge opportunity for achieving the maximum number of credit points, 15. Outside of the prerequisite this credit alone will provide 37% of the credit points required for certification. Based on a survey conducted in 2010 and assuming the commuting behavior has remained consistent the building would earn 14 points.

Material and Resources (MR) Credit 1 is much easier to obtain in a single tenant building as procurement practices can be made uniform throughout the facility.

Material and Resources (MR) Credit 4 requires a mercury reduction in lamps to 90 picograms per lumen-hour for 1 point. An exemplary performance point can be pursued at 70 picograms per lumen-hour or less for an additional point. Calculations were conducted to determine the average mercury content per bulb for bulbs present in the building. Experience has found that both MR credit 4 and the exemplary performance point are easy to earn by paying close attention to the purchasing details when implementing a purchasing plan.

Material and Resources (MR) Credit 6 requires a waste stream audit. If outsourced, the audit would require a cost. The cost listed in the table was based on information provided to Leonardo Academy from past clients.

POTENTIAL CAPITAL PROJECTS

Although the LEED for Existing Buildings rating systems is mainly focused on ongoing building operations, it does require that the building hit certain performance thresholds that may require capital expenditures. Should certain credits be pursued, a capital outlay may be necessary to meet the criteria. There are no building requirements necessary for LEED certification. Many requirements will contribute to LEED certification. The following list outlines possible building infrastructure expenditures to associate consolidated survey requirements that will assist with achieving LEED criteria.

Recommended improvements:

- Install motion sensors for all rooms, particularly any along the perimeter of the building (SSc8)
- Install cooling tower conductivity meters to better manage the cooling tower water use (WEc4.1)
- D2010 – Plumbing fixtures – Replace



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The current flush and flow rates would allow the building to earn all fixture and fittings credit points based on the LEED baseline calculations. When the fixtures are improved, the baseline calculation will change. IPC code compliant fixtures would allow the building to meet the prerequisite. However, would not earn all 5 credit points. When the replacement occurs consider dual flush 1.28 gpf toilets and .13 gpf urinals.

Current BER recommendations that could contribute to the LEED for Existing Buildings certification through increased building performance, purchasing of LEED compliant products and earning credits with LEED compliant operational practices credits. Example of these requirements are as follows:

- Requirement Name B2020 - Windows – Replace
- Requirement Name B3011 - Built-Up Roof System - Replace
- Requirement Name D3041 - HVAC Distribution – Replacement
- Many other BER recommendations could contribute to achieving credits based on:
 - Specification of LEED compliant products for building improvements or operations such as cleaning products on the exterior (B2010, B2011, etc.)
 - The timing to the project in conjunction with other projects and the LEED application development
 - The percent of compliant products purchased, example projects include (B2010, B2011, C3012, C3020, C3025, C3032, etc)
 - Recycling rate of construction debris for all projects that involve more than one trade.
 - Install electric sub-meters when working on the electrical system (D5011, D5012, etc.)

SUMMARY

In summary, this building could achieve LEED-EB Silver or Gold Certification, following a detailed review of the moderate and uncertain credits. The next steps would be to conduct a specific analysis of the building and determine a strategic plan for LEED certification.