

The background features abstract, overlapping green geometric shapes, primarily triangles and polygons, in various shades of green, creating a modern and dynamic visual effect.

# How to Use the New CHARM Tools in CPS



## New Icons Appear Across CPS

Each icon indicates vulnerability to a specific hazard:


- 1) Precipitation-induced flooding (heavy rainfall flooding)
- 2) Sea level rise/storm surge (SLR/SS)
- 3) Extreme heat

Emergency Preparedness icon suggests that a topic/component is relevant to emergency preparedness, not a specific hazard

# Facilities Page

**Capital Planning System**  
**Facilities**

[Main Menu](#) [Facilities](#) [Inventory](#) [Projects](#) [Reports](#) [Utilities](#) [Find](#) [Help](#)







LHA:   
Development:   
Facility:

[LHA Info](#) [Development Info](#) [Facility Info](#) [Unit Info](#) [Accessibility Info](#) [HazMat](#) [Resiliency](#)

One or more Developments have Resiliency vulnerabilities

[Edit](#)



LHA:  
  
Address 1:  
  
Address 2:  
  
City:  State:  Zip:   
Executive Director: Phone:  Fax:   
Executive Director e-mail:  
  
LHA Website:  
  
Board of Directors Chairperson: Board Chairperson e-mail:  
   
Executive Summary Narrative:  

The Client, The Commonwealth of Massachusetts Department of Housing & Community Development, contracted with EMG to conduct a Property Condition Assessment (PCA) of its Local Housing Authority facilities, including an inventory consisting of field observations, rating of the conditions, obtaining utility meter numbers, document review and related due diligence tasks of the subject properties. The PCA was performed in August 2, 2006

DHCD contracted with Diversified Intelligence to conduct the PCA for the Program 200 and 667 portfolios. The PCA included an inventory of building and site components, assessments of building and site conditions, and preparation of capital improvement plans. The PCA was conducted from October 8, 2008, to December 2, 2008, with the assistance of the following LHA staff: Roland (Rollie) Demers,

Total Number of Dwelling Units: 716

LHA type: (State assisted portfolio only)  
  
Date:  
  
DHCD Notes:

- LHA Info tab → New icons
- The numbers indicate how many developments at an LHA are vulnerable to each hazard
- No icons = No vulnerabilities

# Facilities Page

**Capital Planning System**

**Facilities**




Main Menu Facilities Inventory Projects Reports Utilities Find Help

LHA ARLINGTON HOUSING AUTHORITY  
Development 010-200-02 -- MENOTOMY MANOR 200-2  
Facility Please select a Facility

LHA Info Development Info Facility Info Unit Info Accessibility Info HazMat Resiliency

This Development has Resiliency vulnerabilities

Edit Delete New



Development No: 010-200-02 Development Name: MENOTOMY MANOR 200-2  
Public Development Name: (Street numbers are not included)  
MENOTOMY MANOR 200-02  
Geo Address: 100A & 100B FREMONT ST  
Lat: 42.410550 Lon: -71.133780  
Management Office Address: 4 Winslow St.  
Address 2:  
City: Arlington State: MA Zip Code: 02474  
# of Buildings: 25 Year Built: 1952 Year Occupied: 1952 Acreage: 4.9000 Units/Acre: 10.82  
Manager: Bob Cronin Manager Phone: (781)858-0050 Manager Fax: (781)646-3400  
Supervisor: Total # of Dwelling Units: 53 # of Accessible Dwelling Units: 2  
General Description: The Menotomy Manor #2 development consists of 25 low-rise, multi-family, 2-story buildings on a site of approximately 5 acres. Construction of the development was completed in 1952. There is a total of 50 dwelling units and a combined residential floor area of 43,166 square feet.

☐ Federal  
☒ State  
☐ Other  
☐ Section 8 NCSR  
☐ Mixed Finance State  
☐ Converted Section 8 NCSR  
☐ Archived

- Development Info tab
- Shows specific icons for a specific development
- No icons = No vulnerabilities

# New Resiliency Tab

Capital Planning System

Facilities

Main Menu

Facilities

Inventory

Projects

Reports

Utilities

Find

Help

LHA

Development

Facility

ARLINGTON HOUSING AUTHORITY

010-200-02 -- MENOTOMY MANOR 200-2

Please select a Facility

LHA Info

Development Info

Facility Info

Unit Info

Accessibility Info

HazMat

Resiliency

Rapid RVA

Risk and Vulnerability Assessment | CHARM

Massachusetts Department of Housing and Community Development

No RVA Yet...

New RVA

Download Strategies Legend Report

Download Blank Excel RVA Form

Download Blank PDF RVA Form

Rapid RVA History

Resiliency Reports

No Reports

Resiliency Glossary

Term	Description
1% Annual Chance Flood	Also known as the 100-Year Flood and the Base Flood, this is defined by FEMA as a flood with a 1% annual chance of occurring or being exceeded. FEMA Flood Insurance Rate Maps delineate the extent of the Base Flood, along with its corresponding Base Flood Elevations.
100-Year Floodplain	This is the extent of a flood that has a 1% annual chance of occurring or being exceeded. Also referred to as Special Flood Hazard Areas (SFHA) on FEMA Flood Insurance Rate Maps (FIRM). On Flood Insurance Rate Maps, SFHAs are labeled as Zone A, Zone AO, Zone AH, Zones A1-A30, Zone AE, Zone A99, Zone AR, Zone AR/AE, Zone AR/AO, Zone AR/A1-A30, Zone AR/A, Zone V, Zone VE, and Zones V1-V30. Moderate flood hazard areas, labeled Zone B or Zone X (shaded) are also shown on the FIRM and are the areas between the limits of the base flood and the 0.2-percent-annual-chance (or 500-year) flood. The areas of minimal flood hazard, which are the areas outside the SFHA and higher than the elevation of the 0.2-percent-annual-chance flood, are labeled Zone C or Zone X (unshaded). See more in-depth descriptions of zones below.
Adaptation	Adaptation refers to changes that respond to anticipated environmental risks.
Base Flood Elevation (BFE)	This is defined by FEMA as the top of water elevation projected for the base flood. BFEs listed on FEMA Flood Insurance Rate Maps are based on the 1% Annual Chance Flood.
Boston Harbor Flood Risk Model (BH-FRM)	This is a flood risk model which was created as part of the Massachusetts Department of Transportation (MassDOT) and Federal Highway Administration (FHWA) Resilience Pilot Project. It was developed by UMass Boston, Woods Hole Group, Inc. and the University of New Hampshire. It uses climate projections to simulate flooding from extreme weather and sea level rise, in order to plan for future resilience.
Design Flood Elevation (DFE)	The Design Flood Elevation is the elevation of the highest flood (generally the BFE plus freeboard) that a retrofitting method is designed to protect against. Also referred to as Flood Protection Elevation.
Dry Floodproofing	Dry floodproofing is the practice of sealing a space or a building up to the level of the DFE or higher, in order to keep water from entering. When dry floodproofing, property owners must strengthen structural members in anticipation of the hydrostatic and hydrodynamic pressure caused by floodwaters. In buildings located in areas with FEMA Flood Insurance Rate Maps (FIRMs), dry floodproofing can only be used for non-residential spaces in A Zones.
Federal Emergency Management Agency (FEMA)	FEMA manages the federal government's response to natural and manmade disasters. FEMA also manages the NFIP and produces Flood Insurance Rate Maps (FIRM).
FEMA Flood Zone	This is the geographic area that FEMA has defined according to varying levels of flood risk. These zones are depicted on a community's Flood Insurance Rate Map (FIRM) or Flood Hazard Boundary Map. Each zone reflects the severity or type of flooding in the area. Note that this is different from the Sea Level Rise—Flood Hazard Area (SLR-FHA) which delineates the extent of flooding projected in 2070.
FEMA Zones A, AE	Defined by FEMA as areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage based on Flood Insurance Rate Maps (FIRM). These zones are included in Boston's Article 25. Note that this is different from the Sea Level Rise—Flood Hazard Area (SLR-FHA) which delineates the extent of flooding projected in 2070.
FEMA Zones V, VE	Defined by FEMA as coastal areas with a 1% or greater chance of flooding and an additional hazard associated with storm waves. These zones are included in Boston's Article 25. Note that this is different from the Sea Level Rise—Flood Hazard Area (SLR-FHA) which delineates the extent of flooding projected in 2070.
Flood Insurance Rate Map (FIRM)	Maps produced by FEMA that delineate the borders of the 100-year floodplain and corresponding Base Flood Elevations. The flood projections shown on FIRMs are based on historic data, and do not include factors related to future sea level rise.
Floodproofing	Floodproofing is defined by FEMA as structural or non-structural interventions that reduce flood damage to a space or a building.
Freeboard	Freeboard is defined as the distance between the SLR-BFE and the SLR-DFE. It is defined by FEMA as a factor of safety, or a buffer between predicted flood levels and a building's lowest occupiable floor.
Massachusetts Coast Flood Risk Model (MC-FRM)	This is a flood risk model which is in development by UMass Boston, Woods Hole Group, Inc. and the University of New Hampshire. It uses climate projections to simulate flooding from extreme weather and sea level rise, in order to plan for future resilience like the Boston Harbor Flood Risk Model, but it covers the entire Massachusetts coastline.
Mitigation	The process or result of making something less severe, less dangerous, or less damaging.
Resilience	Resilience is the ability of a system to prepare for, withstand, and recover quickly from a disaster. Ideally, resilient systems should recover from an event by becoming stronger than they were prior to the stress
Wet Floodproofing	Designing for the movement of water through a space or a building, which equalizes hydrostatic pressure and helps prevent structural failure. Wet floodproofing is only allowed for parking, access, crawl space, and storage.

Resiliency Acronyms

Acronym	Description
SLR	Sea Level Rise

# Resiliency Tab

- LHAs to complete one Rapid RVA, per development, annually
- To review Rapid RVA information, download excel or PDF versions
- To complete Rapid RVA, click “New RVA”

Capital Planning System

Facilities

Main MenuFacilitiesInventoryProjectsReportsUtilitiesFindHelp

Logged in as: d

LHAARLINGTON HOUSING AUTHORITY

Development010-200-02 -- MENOTOMY MANOR 200-2

FacilityPlease select a Facility

LHA InfoDevelopment InfoFacility InfoUnit InfoAccessibility InfoHazMatResiliency

Rapid RVA

Risk and Vulnerability Assessment | CHARM

Massachusetts Department of Housing and Community Development

No RVA Yet...

New RVA

Download Strategies Legend Report

Download Blank Excel RVA Form

Download Blank PDF RVA Form

Rapid RVA History

Resiliency Reports

No Reports

Resiliency Glossary

Term	Description
1% Annual Chance Flood	Also known as the 100-Year Flood and the Base Flood, this is defined by FEMA as a flood with a 1% annual chance of occurring or being exceeded. FEMA Flood Insurance Rate Maps delineate the extent of the Base Flood, along with its corresponding Base Flood Elevations.
100-Year Floodplain	This is the extent of a flood that has a 1% annual chance of occurring or being exceeded. Also referred to as Special Flood Hazard Areas (SFHA) on FEMA Flood Insurance Rate Maps (FIRM). On Flood Insurance Rate Maps, SFHAs are labeled as Zone A, Zone AO, Zone AH, Zones A1-A30, Zone AE, Zone A99, Zone AR, Zone AR/AE, Zone AR/AO, Zone AR/A1-A30, Zone AR/A, Zone V, Zone VE, and Zones V1-V30. Moderate flood hazard areas, labeled Zone B or Zone X (shaded) are also shown on the FIRM, and are the areas between the limits of the base flood and the 0.2-percent-annual-chance (or 500-year) flood. The areas of minimal flood hazard, which are the areas outside the SFHA and higher than the elevation of the 0.2-percent-annual-chance flood, are labeled Zone C or Zone X (unshaded). See more in-depth descriptions of zones below.
Adaptation	Adaptation refers to changes that respond to anticipated environmental risks.
Base Flood Elevation (BFE)	This is defined by FEMA as the top of water elevation projected for the base flood. BFEs listed on FEMA Flood Insurance Rate Maps are based on the 1% Annual Chance Flood.
Boston Harbor Flood Risk Model (BH-FRM)	This is a flood risk model which was created as part of the Massachusetts Department of Transportation (MassDOT) and Federal Highway Administration (FHWA) Resilience Pilot Project. It was developed by UMass Boston, Woods Hole Group, Inc. and the University of New Hampshire. It uses climate projections to simulate flooding from extreme weather and sea level rise, in order to plan for future resilience.
Design Flood Elevation (DFE)	The Design Flood Elevation is the elevation of the highest flood (generally the BFE plus freeboard) that a retrofitting method is designed to protect against. Also referred to as Flood Protection Elevation.
Dry Floodproofing	Dry floodproofing is the practice of sealing a space or a building up to the level of the DFE or higher, in order to keep water from entering. When dry floodproofing, property owners must strengthen structural members in anticipation of the hydrostatic and hydrodynamic pressure caused by floodwaters. In buildings located in areas with FEMA Flood Insurance Rate Maps (FIRMs), dry floodproofing can only be used for non-residential spaces in A Zones.
Federal Emergency Management Agency (FEMA)	FEMA manages the federal government's response to natural and manmade disasters. FEMA also manages the NFIP and produces Flood Insurance Rate Maps (FIRM).
FEMA Flood Zone	This is the geographic area that FEMA has defined according to varying levels of flood risk. These zones are depicted on a community's Flood Insurance Rate Map (FIRM) or Flood Hazard Boundary Map. Each zone reflects the severity or type of flooding in the area. Note that this is different from the Sea Level Rise—Flood Hazard Area (SLR-FHA) which delineates the extent of flooding projected in 2070.
FEMA Zones A, AE	Defined by FEMA as areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage based on Flood Insurance Rate Maps (FIRM). These zones are included in Boston's Article 25. Note that this is different from the Sea Level Rise—Flood Hazard Area (SLR-FHA) which delineates the extent of flooding projected in 2070.
FEMA Zones V, VE	Defined by FEMA as coastal areas with a 1% or greater chance of flooding and an additional hazard associated with storm waves. These zones are included in Boston's Article 25. Note that this is different from the Sea Level Rise—Flood Hazard Area (SLR-FHA) which delineates the extent of flooding projected in 2070.
Flood Insurance Rate Map (FIRM)	Maps produced by FEMA that delineate the borders of the 100-year floodplain and corresponding Base Flood Elevations. The flood projections shown on FIRMs are based on historic data, and do not include factors related to future sea level rise.
Floodproofing	Floodproofing is defined by FEMA as structural or non-structural interventions that reduce flood damage to a space or a building.
Freeboard	Freeboard is defined as the distance between the SLR-BFE and the SLR-DFE. It is defined by FEMA as a factor of safety, or a buffer between predicted flood levels and a building's lowest occupiable floor.
Massachusetts Coast Flood Risk Model (MC-FRM)	This is a flood risk model which is in development by UMass Boston, Woods Hole Group, Inc. and the University of New Hampshire. It uses climate projections to simulate flooding from extreme weather and sea level rise, in order to plan for future resilience like the Boston Harbor Flood Risk Model, but it covers the entire Massachusetts coastline.
Mitigation	The process or result of making something less severe, less dangerous, or less damaging.
Resilience	Resilience is the ability of a system to prepare for, withstand, and recover quickly from a disaster. Ideally, resilient systems should recover from an event by becoming stronger than they were prior to the stress
Wet Floodproofing	Designing for the movement of water through a space or a building, which equalizes hydrostatic pressure and helps prevent structural failure. Wet floodproofing is only allowed for parking, access, crawl space, and storage.

Resiliency Acronyms

Acronym	Description
ASR	Assessment Report Summary

# Rapid RVA

## Rapid RVA

Risk and Vulnerability Assessment | **CHARM**  
Massachusetts Department of Housing and Community Development

[Download Strategies Legend Report](#) [Download Blank Excel RVA Form](#) [Download Blank PDF RVA Form](#)

New RVA

### INSTRUCTIONS

This tool is intended to educate and guide LHA users in planning more resilient developments. Please use the following questions to gather information about a given development by walking the site and in conversation with site managers and staff. For "NO" answers, see applicable resilience strategies to consider in the column to the right. Refer to the Resilience Strategies page to identify and explore potential strategies. Related hazards are identified as follows: "EP" = emergency preparedness, "P/SLRSS" = precipitation/sea level rise and storm surge, "H" = extreme heat, "W" = wind. Each "YES" answer receives a score of 3, each "NO" answer receives a score of 0. Total scores for all questions to derive development Resilience Score.

Property Name:	Menotomy
Assessment Completed By:	Greg
Date:	6/24/2021

### ASSESSMENT QUESTIONS

PROPERTY MANAGEMENT	Yes/No	HAZARD(s)	COMMENTS	APPLICABLE RESILIENCE STRATEGIES	SCORE
Does the development have an emergency management plan covering staff, residents, and business operations continuity?	<input type="checkbox"/>	EP		22	0
Is the emergency management plan referenced by the municipal emergency plan? Check with municipal officials to confirm.	<input type="checkbox"/>	EP		22	0
Are staff familiar with the emergency preparedness plan and aware of their role in it, if identified?	<input type="checkbox"/>	EP		22	0
Is there a nearby public facility where residents can go during power outages, storms or extreme heat or cold?	<input type="checkbox"/>	EP		26	0
Are residents able to evacuate without mobility assistance?	<input type="checkbox"/>	EP		22, 26, 27	0
BUILDING EXTERIOR	Yes/No	HAZARD(s)	COMMENTS	APPLICABLE RESILIENCE STRATEGIES	SCORE
Is the development located outside a FEMA flood zone AE, AO, AH, D, or V? See: <a href="https://msc.fema.gov/portal/search">https://msc.fema.gov/portal/search</a>	<input type="checkbox"/>	P/SLRSS		22, 26	0
Have residents and staff avoided severe weather-related challenges getting to and from the development? Examples include flooding or downed trees.	<input type="checkbox"/>	P/SLRSS		22, 26, 27	0
Is the development free of vents or other penetrations in the outside walls (above or	<input type="checkbox"/>	P/SLRSS		1, 2, 3, 4	0

### RESILIENCE SCORE

Scores are out of 100 points, with 100 being most resilient

0

To complete Rapid RVA:

- Answer yes/no to each question
- Write supporting comments as necessary/prudent
- When finished, click submit!



# Rapid RVA

Risk and Vulnerability Assessment | CHARM  
Massachusetts Department of Housing and Community Development

New RVA

**INSTRUCTIONS**  
This tool is intended to educate and guide LHA users in planning more resilient developments. Please use the following questions to gather information about a given development by walking the site and in conversation with site managers and staff. For "NO" answers, see applicable resilience strategies to consider in the column to the right. Refer to the Resilience Strategies page to identify and explore potential strategies. Related hazards are identified as follows: "EP" = emergency preparedness, "P/SLRSS" = precipitation/sea level rise and storm surge, "H" = extreme heat, "W" = wind. Each "YES" answer receives a score of 3, each "NO" answer receives a score of 0. Total scores for all questions to derive development Resilience Score.

Property Name:	Menotomy
Assessment Completed By:	Greg
Date:	6/24/2021

ASSESSMENT QUESTIONS

PROPERTY MANAGEMENT	Yes/No	HAZARD(s)	COMMENTS	APPLICABLE RESILIENCE STRATEGIES	SCORE
Does the development have an emergency management plan covering staff, residents, and business operations continuity?	No	EP		22	0
Is the emergency management plan referenced by the municipal emergency plan? Check with municipal officials to confirm.	No	EP		22	0
Are staff familiar with the emergency preparedness plan and aware of their role in it, if identified?	No	EP		22	0
Is there a nearby public facility where residents can go during power outages, storms or extreme heat or cold?	Yes	EP		26	3
Are residents able to evacuate without mobility assistance?	Yes	EP		22, 26, 27	3
BUILDING EXTERIOR	Yes/No	HAZARD(s)	COMMENTS	APPLICABLE RESILIENCE STRATEGIES	SCORE
Is the development located outside a FEMA flood zone AE, AO, AH, D, or V? See: <a href="https://msc.fema.gov/portal/search">https://msc.fema.gov/portal/search</a>	Yes	P/SLRSS		22, 26	3
Have residents and staff avoided severe weather-related challenges getting to and from the development? Examples include flooding or downed trees.	Yes	P/SLRSS		22, 26, 27	3
Is the development free of vents or other penetrations in the outside walls (above or below grade) that could let water into the building(s)?	No	P/SLRSS		1, 2, 7, 8	0

[Download Strategies Legend Report](#) [Download Blank Excel RVA Form](#) [Download Blank PDF RVA Form](#)

RESILIENCE SCORE
Scores are out of 100 points, with 100 being most resilient
52

To read each Resiliency Strategy, download the Report above



# After Finishing the Rapid RVA, the History Automatically Updates



You can review and/or edit previous RVAs by clicking Select or Edit

Rapid RVA History					
	Property Name	Completed By	Completed Date	Score	Comment
<a href="#">Delete</a>	Menotomy	Greg	6/24/2021	52	<a href="#">Edit Select</a>

Resiliency Reports		
File	Description	
<input type="button" value="Choose File"/> No file chosen	<input type="text"/>	<input type="button" value="Add"/>

Resiliency Glossary	
Term	Description
1% Annual Chance Flood	Also known as the 100-Year Flood and the Base Flood, this is defined by FEMA as a flood with a 1% annual chance of occurring or being exceeded. FEMA Flood Insurance Rate Maps delineate the extent of the Base Flood, along with its corresponding Base Flood Elevations.
100-Year Floodplain	This is the extent of a flood that has a 1% annual chance of occurring or being exceeded. Also referred to as Special Flood Hazard Areas (SFHA) on FEMA Flood Insurance Rate Maps (FIRM). On Flood Insurance Rate Maps, SFHAs are labeled as Zone A, Zone AO, Zone AH, Zones A1-A30, Zone AE, Zone A99, Zone AR, Zone AR/AE, Zone AR/AO, Zone AR/A1-A30, Zone AR/A, Zone V, Zone VE, and Zones V1-V30. Moderate flood hazard areas, labeled Zone B or Zone X (shaded) are also shown on the FIRM, and are the areas between the limits of the base flood and the 0.2-percent-annual-chance (or 500-year) flood. The areas of minimal flood hazard, which are the areas outside the SFHA and higher than the elevation of the 0.2-percent-annual-chance flood, are labeled Zone C or Zone X (unshaded). See more in-depth descriptions of zones below.
Adaptation	Adaptation refers to changes that respond to anticipated environmental risks.
Base Flood Elevation (BFE)	This is defined by FEMA as the top of water elevation projected for the base flood. BFEs listed on FEMA Flood Insurance Rate Maps are based on the 1% Annual Chance Flood.
Boston Harbor Flood Risk Model (BH-FRM)	This is a flood risk model which was created as part of the Massachusetts Department of Transportation (MassDOT) and Federal Highway Administration (FHWA) Resilience Pilot Project. It was developed by UMass Boston, Woods Hole Group, Inc. and the University of New Hampshire. It uses climate projections to simulate flooding from extreme weather and sea level rise, in order to plan for future resilience.
Design Flood Elevation (DFE)	The Design Flood Elevation is the elevation of the highest flood (generally the BFE plus freeboard) that a retrofitting method is designed to protect against. Also referred to as Flood Protection Elevation.
Dry Floodproofing	Dry floodproofing is the practice of sealing a space or a building up to the level of the DFE or higher, in order to keep water from entering. When dry floodproofing, property owners must strengthen structural members in anticipation of the hydrostatic and hydrodynamic pressure caused by floodwaters. In buildings located in areas with FEMA Flood Insurance Rate Maps (FIRMs), dry floodproofing can only be used for non-residential spaces in A Zones.
Federal Emergency Management Agency (FEMA)	FEMA manages the federal government's response to natural and manmade disasters. FEMA also manages the NFIP and produces Flood Insurance Rate Maps (FIRM).
FEMA Flood Zone	This is the geographic area that FEMA has defined according to varying levels of flood risk. These zones are depicted on a community's Flood Insurance Rate Map (FIRM) or Flood Hazard Boundary Map. Each zone reflects the severity or type of flooding in the area. Note that this is different from the Sea Level Rise—Flood Hazard Area (SLR-FHA) which delineates the extent of flooding projected in 2070.
FEMA Zones A, AE	Defined by FEMA as areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage based on Flood Insurance Rate Maps (FIRM). These zones are included in Boston's Article 25. Note that this is different from the Sea Level Rise—Flood Hazard Area (SLR-FHA) which delineates the extent of flooding projected in 2070.
FEMA Zones V, VE	Defined by FEMA as coastal areas with a 1% or greater chance of flooding and an additional hazard associated with storm waves. These zones are included in Boston's Article 25. Note that this is different from the Sea Level Rise—Flood Hazard Area (SLR-FHA) which delineates the extent of flooding projected in 2070.
Flood Insurance Rate Map (FIRM)	Maps produced by FEMA that delineate the borders of the 100-year floodplain and corresponding Base Flood Elevations. The flood projections shown on FIRMs are based on historic data, and do not include factors related to future sea level rise.
Floodproofing	Floodproofing is defined by FEMA as structural or non-structural interventions that reduce flood damage to a space or a building.
Freeboard	Freeboard is defined as the distance between the SLR-BFE and the SLR-DFE. It is defined by FEMA as a factor of safety, or a buffer between predicted flood levels and a building's lowest occupiable floor.
Massachusetts Coast Flood Risk Model (MC-FRM)	This is a flood risk model which is in development by UMass Boston, Woods Hole Group, Inc. and the University of New Hampshire. It uses climate projections to simulate flooding from extreme weather and sea level rise, in order to plan for future resilience like the Boston Harbor Flood Risk Model, but it covers the entire Massachusetts coastline.
Mitigation	The process or result of making something less severe, less dangerous, or less damaging.
Resilience	Resilience is the ability of a system to prepare for, withstand, and recover quickly from a disaster. Ideally, resilient systems should recover from an event by becoming stronger than they were prior to the stress.
Wet Floodproofing	Designing for the movement of water through a space or a building, which equalizes hydrostatic pressure and helps prevent structural failure. Wet floodproofing is only allowed for parking, access, crawl space, and storage.

Resiliency Acronyms	
Acronym	Description
ARC	American Red Cross
BFE	Base Flood Elevation
BH-FRM	Boston Harbor Flood Risk Model
CDBG	Community Development Block Grant
CDO	Community Development Organization
CMHS	Center for Mental Health Services
DFE	Design Flood Elevation
DHCD	MA Department of Housing & Community Development

# Inventory Page

- ▶ New column identifies which components are susceptible to which climate hazards
- ▶ When creating new CPS projects, please remember to add components to the project
  - ▶ Components in the New Project Wizard will have vulnerability icons too!

**Capital Planning System**

Inventory

Main Menu Facilities **Inventory** Projects Reports Utilities Find Help

LHA: SALEM HOUSING AUTHORITY  
 Development: 258-667-01 -- LEE FORT TERRACE  
 Facility: 258-667-01-001 -- 2-12 Even  
 Unit: ALL

Inventory Change Log

New

Resiliency vulnerabilities may apply to this facility

	Class	Subclass	Component Description	Quantity	Unit Cost	Unit	Year Installed	Life Span	Adjust Lifespan	Exp Year	Design & Construction Guidelines & Standards	Unit #	Proj. #	Note	Resiliency
Delete	Exterior Specialties	Ramp, Stair and Railing Assemblies 2	Exterior Railing, Metal	36	\$120.00	LF	1958	30	32	2020	2	ALL			Edit 4 0
Delete	Exterior Specialties	Ramp, Stair and Railing Assemblies 2	Steps, Cast-in-Place Concrete or Masonry	13	\$655.77	STEP	1958	40	24	2022	2	ALL			Edit 4 0
Delete	Structural	Chimney Assemblies 2	Brick Chimney, Single Flue	20	\$221.39	VLF	1958	75	0	2033	2	ALL			Edit
Delete	Structural	Foundations 2	Foundation Walls, Cast-in-Place Concrete	286	\$309.86	LF	1958	100	30	2088	2	ALL			Edit
Delete	Structural	Foundations 2	Slab on Grade	2,950	\$8.14	SF	1958	100	30	2088	2	ALL			Edit
Delete	Structural	Structural Roof Assemblies 2	Pitched Roof	3,540	\$10.04	SF	1958	75	75	2108	2	ALL			Edit
Delete	Building Envelope	Exterior Doors 2	Exterior Single Door, Non-Unit, Other	1	\$2,421.00	EACH	2012	30	0	2042	2	ALL			Edit 4 0
Delete	Building Envelope	Exterior Doors 2	Exterior Single Door, Unit	12	\$2,997.23	EACH	2012	30	0	2042	2	ALL			Edit 4 0
Delete	Building Envelope	Exterior Doors 2	Storm/Screen Door	12	\$594.27	EACH	2012	20	0	2032	2	ALL			Edit 4 0
Delete	Building Envelope	Siding 2	Masonry Mortar (Tuckpointing)	2,860	\$7.54	SF/WALL	1958	40	24	2022	2	ALL			Edit
Delete	Building Envelope	Siding 2	Siding, Brick Veneer	2,860	\$31.66	SF/WALL	1958	100	0	2058	2	ALL			Edit
Delete	Building Envelope	Windows 2	Window, Combination	6	\$1,800.00	EACH	1958	30	32	2020	2	ALL			Edit
Delete	Building Envelope	Windows 2	Window, Double Hung, Medium	13	\$750.00	EACH	1958	30	32	2020	2	ALL			Edit
Delete	Building Envelope	Windows 2	Window, Double Hung, Small	12	\$600.00	EACH	1958	30	32	2020	2	ALL			Edit
Delete	Roofing	Roof Drainage 2	Downspouts, Aluminum	80	\$10.28	VLF	2012	30	0	2042	2	ALL			Edit
Delete	Roofing	Roof	Gutters, Aluminum	286	\$10.97	LF	2012	30	0	2042	2	ALL			Edit

# New Projects

- ▶ When you add components to the project, flags will appear!

Main Menu Facilities Inventory Projects Reports Utilities Find Help												
Add Selected to Related Cancel												
Facility #	Class	Subclass	Description	Quantity	Unit	Year Installed	Lifespan	Life Adj	Exp Year	Cond.	Assess.	Resiliency
<input type="checkbox"/> 010-200-02-S01	Site	Gas Service	Piping, Underground Gas	875.00	LF	1952	50	22	2024			
<input type="checkbox"/> 010-200-02-S01	Site	Paving	Curb, Asphalt	400.00	LF	1952	10	54	2016			ⓘ ⓘ ⓧ
<input type="checkbox"/> 010-200-02-S01	Site	Paving	Roadway/Parking Lot Paving, Asphalt	34655.00	SF	1952	20	46	2018			
<input type="checkbox"/> 010-200-02-S01	Site	Paving	Walkway, Asphalt	3200.00	SF	1952	20	46	2018			ⓘ ⓘ ⓧ
<input type="checkbox"/> 010-200-02-S01	Site	Septic, Sewer and Wastewater Systems	Piping, Underground Sewer	875.00	LF	1952	50	22	2024			
<input type="checkbox"/> 010-200-02-S01	Site	Site Drainage Systems	Catch Basin	3.00	EACH	1952	60	13	2025			ⓘ ⓘ ⓧ
<input type="checkbox"/> 010-200-02-S01	Site	Site Drainage Systems	Piping, Stormwater	170.00	LF	1952	60	13	2025			
<input type="checkbox"/> 010-200-02-S01	Site	Water Supply	Piping, Underground Water	875.00	LF	1952	50	22	2024			
<input type="checkbox"/> 010-200-02-001	Exterior Specialties	Equipment	Mail Box, Single (Wall-Mounted)	2.00	EACH	1952	20	46	2018			ⓘ ⓘ ⓧ
<input type="checkbox"/> 010-200-02-002	Exterior Specialties	Equipment	Mail Box, Single (Wall-Mounted)	2.00	EACH	1952	20	46	2018			ⓘ ⓘ ⓧ
<input type="checkbox"/> 010-200-02-003	Exterior Specialties	Equipment	Mail Box, Single (Wall-Mounted)	2.00	EACH	1952	20	46	2018			ⓘ ⓘ ⓧ
<input type="checkbox"/> 010-200-02-004	Exterior Specialties	Equipment	Mail Box, Single (Wall-Mounted)	2.00	EACH	1952	20	46	2018			ⓘ ⓘ ⓧ
<input type="checkbox"/> 010-200-02-005	Exterior Specialties	Equipment	Mail Box, Single (Wall-Mounted)	2.00	EACH	1952	20	46	2018			ⓘ ⓘ ⓧ
<input type="checkbox"/> 010-200-02-006	Exterior Specialties	Equipment	Mail Box, Single (Wall-Mounted)	2.00	EACH	1952	20	46	2018		door-slot, no box	ⓘ ⓘ ⓧ
<input type="checkbox"/> 010-200-02-007	Exterior Specialties	Equipment	Mail Box, Single (Wall-Mounted)	2.00	EACH	1952	20	46	2018			ⓘ ⓘ ⓧ
<input type="checkbox"/> 010-200-02-008	Exterior Specialties	Equipment	Mail Box, Single (Wall-Mounted)	2.00	EACH	1952	20	46	2018			ⓘ ⓘ ⓧ
<input type="checkbox"/> 010-200-02-009	Exterior Specialties	Equipment	Mail Box, Single (Wall-Mounted)	2.00	EACH	1952	20	46	2018			ⓘ ⓘ ⓧ
<input type="checkbox"/> 010-200-02-010	Exterior Specialties	Equipment	Mail Box, Single (Wall-Mounted)	2.00	EACH	1952	20	46	2018			ⓘ ⓘ ⓧ
<input type="checkbox"/> 010-200-02-011	Exterior Specialties	Equipment	Mail Box, Single (Wall-Mounted)	2.00	EACH	1952	20	46	2018			ⓘ ⓘ ⓧ
<input type="checkbox"/> 010-200-02-012	Exterior Specialties	Equipment	Mail Box, Single (Wall-Mounted)	2.00	EACH	1952	20	46	2018			ⓘ ⓘ ⓧ

# Any Questions?

- ▶ Ask Greg Abbe, Sustainability Program Developer
  - ▶ [Gregory.abbe@mass.gov](mailto:Gregory.abbe@mass.gov)