APPENDIX A-1
Waterfront Revitalization Program

FOR INTERNAL USE ONLY	WRP No. _____
Date Received: _____	DOS No. _____

NEW YORK CITY WATERFRONT REVITALIZATION PROGRAM
Consistency Assessment Form

Proposed actions that are subject to CEQR, ULURP or other local, state or federal discretionary review procedures, and that are within New York City's Coastal Zone, must be reviewed and assessed for their consistency with the *New York City Waterfront Revitalization Program (WRP)* which has been approved as part of the State's Coastal Management Program.

This form is intended to assist an applicant in certifying that the proposed activity is consistent with the WRP. It should be completed when the local, state, or federal application is prepared. The completed form and accompanying information will be used by the New York State Department of State, the New York City Department of City Planning, or other city or state agencies in their review of the applicant's certification of consistency.

A. APPLICANT INFORMATION

Name of Applicant: 1-10 Bush Terminal Owner LP

Name of Applicant Representative: Ethan Goodman

Address: 101 Park Avenue, New York, NY 10017

Telephone: 212-878-7929 Email: egoodman@foxrothschild.com

Project site owner (if different than above): _____

B. PROPOSED ACTIVITY

If more space is needed, include as an attachment.

1. Brief description of activity

A mixed-use project with manufacturing, commercial, and community facility uses that would establish an "Innovation Economy Hub" in the Sunset Park neighborhood of Brooklyn, NY. The project would redevelop and re-tenant the Industry City Complex. The applicant is requesting Zoning Text and Zoning Map amendments, special permits, and a change to the city map. The project would result in the introduction of commercial and community uses that would increase the non-residential population in the area, including retail, event, sports, hotel, academic, mechanical, storage, and parking facilities.

2. Purpose of activity

The project area's current zoning does not provide the range of uses necessary to support the re-tenanting and development of the Industry City Complex. The Innovation Economy Hub would include a broad range of businesses, from research and development to design and engineering, as well as manufacturing, and would encourage investment, competitiveness, and utilization of the complex over the long term.

C. PROJECT LOCATION

Borough: Brooklyn Tax Block/Lot(s): Block 679, Lot 1; Block 683, Lot 1; Block 687, Lot 1; Block 691, Lots 1 and 44; Block 695, Lots 1, 20, and 43; Block 706, Lots 1, 24, and 101; Block 710, Lot 1; Block 695, Lots 37-42; and Block 706, Lot 20

Street Address: Sunset Park neighborhood, Brooklyn, NY

Name of water body (if located on the waterfront): Upper New York Bay

D. REQUIRED ACTIONS OR APPROVALS

Check all that apply.

City Actions/Approvals/Funding

City Planning Commission ☑ Yes ☐ No

- ☑ City Map Amendment
- ☑ Zoning Map Amendment
- ☑ Zoning Text Amendment
- ☐ Site Selection – Public Facility
- ☐ Housing Plan & Project
- ☑ Special Permit
  (if appropriate, specify type: ☐ Modification ☐ Renewal ☐ other) Expiration Date: _____
- ☐ Zoning Certification
- ☐ Zoning Authorizations
- ☐ Acquisition – Real Property
- ☐ Disposition – Real Property
- ☑ Other, explain: Permits for hotel use, area requirements
- ☐ Concession
- ☐ UDAAP
- ☐ Revocable Consent
- ☐ Franchise

Board of Standards and Appeals ☐ Yes ☑ No

- ☐ Variance (use)
- ☐ Variance (bulk)
- ☐ Special Permit
  (if appropriate, specify type: ☐ Modification ☐ Renewal ☐ other) Expiration Date: _____

Other City Approvals

- ☐ Legislation
- ☐ Rulemaking
- ☐ Construction of Public Facilities
- ☐ 384 (b) (4) Approval
- ☐ Other, explain: _____
- ☐ Funding for Construction, specify: _____
- ☐ Policy or Plan, specify: _____
- ☐ Funding of Program, specify: _____
- ☐ Permits, specify: _____

State Actions/Approvals/Funding

- ☐ State permit or license, specify Agency: _____ Permit type and number: _____
- ☐ Funding for Construction, specify: _____
- ☐ Funding of a Program, specify: _____
- ☐ Other, explain: _____

Federal Actions/Approvals/Funding

- ☐ Federal permit or license, specify Agency: _____ Permit type and number: _____
- ☐ Funding for Construction, specify: _____
- ☐ Funding of a Program, specify: _____
- ☐ Other, explain: _____

Is this being reviewed in conjunction with a Joint Application for Permits? ☐ Yes ☑ No

E. LOCATION QUESTIONS

1.	Does the project require a waterfront site?	☐ Yes	☑ No
2.	Would the action result in a physical alteration to a waterfront site, including land along the shoreline, land under water or coastal waters?	☐ Yes	☑ No
3.	Is the project located on publicly owned land or receiving public assistance?	☐ Yes	☑ No
4.	Is the project located within a FEMA 1% annual chance floodplain? *(6.2)*	☑ Yes	☐ No
5.	Is the project located within a FEMA 0.2% annual chance floodplain? *(6.2)*	☐ Yes	☑ No
6.	Is the project located adjacent to or within a special area designation? *See Maps – Part III of the NYC WRP. If so, check appropriate boxes below and evaluate policies noted in parentheses as part of WRP Policy Assessment (Section F).*	☑ Yes	☐ No

- ☑ Significant Maritime and Industrial Area (SMIA) (*2.1*)
- ☐ Special Natural Waterfront Area (SNWA) (*4.1*)
- ☑ Priority Maritime Activity Zone (PMAZ) (*3.5*)
- ☑ Recognized Ecological Complex (REC) (*4.4*)
- ☐ West Shore Ecologically Sensitive Maritime and Industrial Area (ESMIA) (*2.2, 4.2*)

F. WRP POLICY ASSESSMENT

Review the project or action for consistency with the WRP policies. For each policy, check Promote, Hinder *or* Not Applicable (N/A). *For more information about consistency review process and determination, see* ***Part I*** *of the NYC Waterfront Revitalization Program. When assessing each policy, review the full policy language, including all sub-policies, contained within* ***Part II*** *of the WRP. The relevance of each applicable policy may vary depending upon the project type and where it is located (i.e. if it is located within one of the special area designations).*

For those policies checked Promote *or* Hinder, *provide a written statement on a separate page that assesses the effects of the proposed activity on the relevant policies or standards. If the project or action promotes a policy, explain how the action would be consistent with the goals of the policy. If it hinders a policy, consideration should be given toward any practical means of altering or modifying the project to eliminate the hindrance. Policies that would be advanced by the project should be balanced against those that would be hindered by the project. If reasonable modifications to eliminate the hindrance are not possible, consideration should be given as to whether the hindrance is of such a degree as to be substantial, and if so, those adverse effects should be mitigated to the extent practicable.*

		Promote	Hinder	N/A
1	**Support and facilitate commercial and residential redevelopment in areas well-suited to such development.**	☑	☐	☐
1.1	Encourage commercial and residential redevelopment in appropriate Coastal Zone areas.	☑	☐	☐
1.2	Encourage non-industrial development with uses and design features that enliven the waterfront and attract the public.	☐	☐	☑
1.3	Encourage redevelopment in the Coastal Zone where public facilities and infrastructure are adequate or will be developed.	☑	☐	☐
1.4	In areas adjacent to SMIAs, ensure new residential development maximizes compatibility with existing adjacent maritime and industrial uses.	☐	☐	☑
1.5	Integrate consideration of climate change and sea level rise into the planning and design of waterfront residential and commercial development, pursuant to WRP Policy 6.2.	☑	☐	☐

		Promote	Hinder	N/A
2	**Support water-dependent and industrial uses in New York City coastal areas that are well-suited to their continued operation.**	☑	☐	☐
2.1	Promote water-dependent and industrial uses in Significant Maritime and Industrial Areas.	☑	☐	☐
2.2	Encourage a compatible relationship between working waterfront uses, upland development and natural resources within the Ecologically Sensitive Maritime and Industrial Area.	☐	☐	☑
2.3	Encourage working waterfront uses at appropriate sites outside the Significant Maritime and Industrial Areas or Ecologically Sensitive Maritime Industrial Area.	☐	☐	☑
2.4	Provide infrastructure improvements necessary to support working waterfront uses.	☐	☐	☑
2.5	Incorporate consideration of climate change and sea level rise into the planning and design of waterfront industrial development and infrastructure, pursuant to WRP Policy 6.2.	☑	☐	☐
3	**Promote use of New York City's waterways for commercial and recreational boating and water-dependent transportation.**	☐	☐	☑
3.1.	Support and encourage in-water recreational activities in suitable locations.	☐	☐	☑
3.2	Support and encourage recreational, educational and commercial boating in New York City's maritime centers.	☐	☐	☑
3.3	Minimize conflicts between recreational boating and commercial ship operations.	☐	☐	☑
3.4	Minimize impact of commercial and recreational boating activities on the aquatic environment and surrounding land and water uses.	☐	☐	☑
3.5	In Priority Marine Activity Zones, support the ongoing maintenance of maritime infrastructure for water-dependent uses.	☐	☐	☑
4	**Protect and restore the quality and function of ecological systems within the New York City coastal area.**	☐	☐	☑
4.1	Protect and restore the ecological quality and component habitats and resources within the Special Natural Waterfront Areas.	☐	☐	☑
4.2	Protect and restore the ecological quality and component habitats and resources within the Ecologically Sensitive Maritime and Industrial Area.	☐	☐	☑
4.3	Protect designated Significant Coastal Fish and Wildlife Habitats.	☐	☐	☑
4.4	Identify, remediate and restore ecological functions within Recognized Ecological Complexes.	☐	☐	☑
4.5	Protect and restore tidal and freshwater wetlands.	☐	☐	☑
4.6	In addition to wetlands, seek opportunities to create a mosaic of habitats with high ecological value and function that provide environmental and societal benefits. Restoration should strive to incorporate multiple habitat characteristics to achieve the greatest ecological benefit at a single location.	☐	☐	☑
4.7	Protect vulnerable plant, fish and wildlife species, and rare ecological communities. Design and develop land and water uses to maximize their integration or compatibility with the identified ecological community.	☐	☐	☑
4.8	Maintain and protect living aquatic resources.	☐	☐	☑

		Promote	Hinder	N/A
5	**Protect and improve water quality in the New York City coastal area.**	☐	☐	☑
5.1	Manage direct or indirect discharges to waterbodies.	☐	☐	☑
5.2	Protect the quality of New York City's waters by managing activities that generate nonpoint source pollution.	☐	☐	☑
5.3	Protect water quality when excavating or placing fill in navigable waters and in or near marshes, estuaries, tidal marshes, and wetlands.	☐	☐	☑
5.4	Protect the quality and quantity of groundwater, streams, and the sources of water for wetlands.	☐	☐	☑
5.5	Protect and improve water quality through cost-effective grey-infrastructure and in-water ecological strategies.	☐	☐	☑
6	**Minimize loss of life, structures, infrastructure, and natural resources caused by flooding and erosion, and increase resilience to future conditions created by climate change.**	☑	☐	☐
6.1	Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the site, the use of the property to be protected, and the surrounding area.	☑	☐	☐
6.2	Integrate consideration of the latest New York City projections of climate change and sea level rise (as published in *New York City Panel on Climate Change 2015 Report, Chapter 2: Sea Level Rise and Coastal Storms*) into the planning and design of projects in the city's Coastal Zone.	☑	☐	☐
6.3	Direct public funding for flood prevention or erosion control measures to those locations where the investment will yield significant public benefit.	☐	☐	☑
6.4	Protect and preserve non-renewable sources of sand for beach nourishment.	☐	☐	☑
7	**Minimize environmental degradation and negative impacts on public health from solid waste, toxic pollutants, hazardous materials, and industrial materials that may pose risks to the environment and public health and safety.**	☐	☐	☑
7.1	Manage solid waste material, hazardous wastes, toxic pollutants, substances hazardous to the environment, and the unenclosed storage of industrial materials to protect public health, control pollution and prevent degradation of coastal ecosystems.	☐	☐	☑
7.2	Prevent and remediate discharge of petroleum products.	☐	☐	☑
7.3	Transport solid waste and hazardous materials and site solid and hazardous waste facilities in a manner that minimizes potential degradation of coastal resources.	☐	☐	☑
8	**Provide public access to, from, and along New York City's coastal waters.**	☑	☐	☐
8.1	Preserve, protect, maintain, and enhance physical, visual and recreational access to the waterfront.	☐	☐	☑
8.2	Incorporate public access into new public and private development where compatible with proposed land use and coastal location.	☑	☐	☐
8.3	Provide visual access to the waterfront where physically practical.	☐	☐	☑
8.4	Preserve and develop waterfront open space and recreation on publicly owned land at suitable locations.	☐	☐	☑

		Promote	Hinder	N/A
8.5	Preserve the public interest in and use of lands and waters held in public trust by the State and City.	☐	☐	☑
8.6	Design waterfront public spaces to encourage the waterfront's identity and encourage stewardship.	☐	☐	☑
9	**Protect scenic resources that contribute to the visual quality of the New York City coastal area.**	☑	☐	☐
9.1	Protect and improve visual quality associated with New York City's urban context and the historic and working waterfront.	☑	☐	☐
9.2	Protect and enhance scenic values associated with natural resources.	☐	☐	☑
10	**Protect, preserve, and enhance resources significant to the historical, archaeological, architectural, and cultural legacy of the New York City coastal area.**	☑	☐	☐
10.1	Retain and preserve historic resources, and enhance resources significant to the coastal culture of New York City.	☑	☐	☐
10.2	Protect and preserve archaeological resources and artifacts.	☐	☐	☑

G. CERTIFICATION

The applicant or agent must certify that the proposed activity is consistent with New York City's approved Local Waterfront Revitalization Program, pursuant to New York State's Coastal Management Program. If this certification cannot be made, the proposed activity shall not be undertaken. If this certification can be made, complete this Section.

"The proposed activity complies with New York State's approved Coastal Management Program as expressed in New York City's approved Local Waterfront Revitalization Program, pursuant to New York State's Coastal Management Program, and will be conducted in a manner consistent with such program."

Applicant/Agent's Name: Linh Do

Address: 440 Park Avenue South New York, NY 10016

Telephone: (914) 419-8928 Email: ldo@akrf.com

Applicant/Agent's Signature: 

Date: 9/19/19

Submission Requirements

For all actions requiring City Planning Commission approval, materials should be submitted to the Department of City Planning.

For local actions not requiring City Planning Commission review, the applicant or agent shall submit materials to the Lead Agency responsible for environmental review. A copy should also be sent to the Department of City Planning.

For State actions or funding, the Lead Agency responsible for environmental review should transmit its WRP consistency assessment to the Department of City Planning.

For Federal direct actions, funding, or permits applications, including Joint Applicants for Permits, the applicant or agent shall also submit a copy of this completed form along with his/her application to the NYS Department of State Office of Planning and Development and other relevant state and federal agencies. A copy of the application should be provided to the NYC Department of City Planning.

The Department of City Planning is also available for consultation and advisement regarding WRP consistency procedural matters.

New York City Department of City Planning
Waterfront and Open Space Division
120 Broadway, 31st Floor
New York, New York 10271
212-720-3696
wrp@planning.nyc.gov
www.nyc.gov/wrp

New York State Department of State
Office of Planning and Development
Suite 1010
One Commerce Place, 99 Washington Avenue
Albany, New York 12231-0001
518-474-6000
www.dos.ny.gov/opd/programs/consistency

Applicant Checklist

- ☐ Copy of original signed NYC Consistency Assessment Form
- ☐ Attachment with consistency assessment statements for all relevant policies
- ☐ For Joint Applications for Permits, one (1) copy of the complete application package
- ☐ Environmental Review documents
- ☐ Drawings (plans, sections, elevations), surveys, photographs, maps, or other information or materials which would support the certification of consistency and are not included in other documents submitted. All drawings should be clearly labeled and at a scale that is legible.
- ☐ Policy 6.2 Flood Elevation worksheet, if applicable. For guidance on applicability, refer to the WRP Policy 6.2 Guidance document available at www.nyc.gov/wrp

Appendix A-1: Waterfront Revitalization Program

The Directly Affected Area, as well as parts of the Primary and Secondary Study Areas, are located within the City's Coastal Zone (see Figure 2-3 in Chapter 2, "Land Use, Zoning, and Public Policy"). Therefore, the Proposed Actions are subject to review for consistency with the policies of the WRP.

New York City's WRP includes 10 principal policies designed to maximize the benefits derived from economic development, environmental preservation, and public use of the waterfront, while minimizing conflicts among those objectives. Assessments of the Proposed Project's conformity with the City's WRP policies are provided below for all policy questions answered "Promote" or "Hinder" on the revised 2016 Coastal Assessment Form.

Policy 1: Support and facilitate commercial and residential redevelopment in areas well-suited to such development

Policy 1.1: Encourage commercial and residential redevelopment in appropriate Coastal Zone areas.

The Project Area comprises approximately 30 acres of existing buildings and proposed buildings and/or building enlargements, and is located in the Sunset Park neighborhood of Brooklyn near the shoreline of the Upper New York Bay. The Project Area is an industrial area along the waterfront containing commercial, manufacturing, storage, and a wide range of Innovation Economy uses as well as vacant land that is separated from residential sections of Sunset Park by the elevated Gowanus Expressway that runs along 3rd Avenue. The Proposed Project would establish the Special Industry City District (SICD), including the redevelopment and re-tenanting of Industry City with a mixed-use project containing manufacturing, commercial (retail and hospitality), academic, and other community facility uses, as described in detail in Chapter 1, "Project Description." The Proposed Project would be appropriate for the location, as it would utilize existing structures and would not introduce out-of-scale development or uses that are not already present in the Directly Affected Area. Therefore, the proposed renovation and development would promote this policy.

Policy 1.3: Encourage redevelopment in the Coastal Zone where public facilities and infrastructure are adequate or will be developed.

The Proposed Project would include renovation and redevelopment of existing structures, and could result in higher occupancy of existing buildings. The Applicant has analyzed a more conservative scenario for density-driven technical areas (the Density-Dependent Scenario), which would include Innovation Economy, academic, and other community facility uses. Under this conservative scenario, as described in Chapter 9, "Water and Sewer Infrastructure," existing infrastructure would be adequate for water supply, sanitary sewage, and stormwater, despite the potential for lower vacancy and incremental increase for services. Therefore, the Proposed Project would promote this policy.

Policy 1.5: Integrate consideration of climate change and sea level rise into the planning and design of waterfront residential and commercial development, pursuant to WRP Policy 6.2.

No residential uses are planned, but the Proposed Project would include commercial uses. As described further below under Policy 6.2, the Proposed Project would minimize the impacts of current and future flooding with sea level rise on the proposed development and would promote Policy 6.2; therefore, the Proposed Project would promote this policy.

Policy 2: Support water-dependent and industrial uses in New York City coastal areas that are well-suited to their continued operation.

Policy 2.1: Promote water-dependent and industrial uses in Significant Maritime and Industrial Areas.

The Project Area is located within the Sunset Park Significant Maritime and Industrial Area, which is characterized by water-dependent facilities, concentrations of industrial activity, manufacturing and commercial districts, and vacant sites. It has limited water frontage and the Proposed Project would not result in modifications to in-water structures, over-water structures, maritime hubs, or maritime infrastructure or affect adjacent existing or future water dependent uses. It would not detract from ongoing maritime and industrial operations in the area. The Proposed Project would renovate existing structures, which are not currently in use, and would include industrial uses for these structures. Through the adaptive reuse of existing structures and provision of community services, the project would also spur investment in waterfront infrastructure outside the Project Area. Because the Proposed Project would not adversely affect industrial and maritime uses near the project site, and it would maintain manufacturing and industrial zoning areas, the Proposed Project would promote this policy.

Policy 2.5: Incorporate consideration of climate change and sea level rise into the planning and design of waterfront industrial development and infrastructure, pursuant to WRP Policy 6.2.

The Proposed Project would not result in new infrastructure development. As described further below under Policy 6.2, the Proposed Project would minimize the impacts of flooding on the proposed industrial uses and would promote Policy 6.2; therefore, the Proposed Project would promote this policy.

Policy 6: Minimize loss of life, structures, infrastructure, and natural resources caused by flooding and erosion, and increase resilience to future conditions created by climate change.

Policy 6.1: Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the site, the use of the property to be protected, and the surrounding area.

Portions of the Finger Buildings and the 39th Street Buildings in the Project Area are within the existing 1 percent annual-chance floodplain, with some individual buildings falling entirely within the floodplain (see Figure 12-1 in Chapter 12, "Natural Resources"). The existing Base Flood Elevation (BFE) for the majority of the Project Area ranges from 11 to 13 feet North American Vertical Datum of 1988 (NAVD88) and falls within Zone AE (an area of high flood risk subject to inundation by the 1 percent annual-chance flood event).[1] Under Policy 6, the primary goal for

[1] NYC Department of City Planning Flood Hazard Mapper, 2015 Preliminary Flood Insurance Rate Map

projects in coastal areas is to reduce risks posed by current and future coastal hazards, particularly major storms that are likely to increase due to climate change and sea level rise. The Proposed Project would comprise the redevelopment and re-tenanting of Industry City with a mixed-use project containing manufacturing, commercial (retail and hospitality), academic, and other community facility uses. The renovated and newly constructed buildings would proactively include flood proofing measures to reduce the risks of current and future flooding. Based on anticipated flood depths, buildings would be either dry or wet flood proofed, as required. Dry flood proofing measures, such as installation of aluminum shielding and flood gates and/or other appropriate methods would be incorporated into buildings upland of 1st Avenue. Such work would be incorporated at the time of construction and in accordance with all applicable codes. The uses proposed for the ground floor of Building 24 would be of temporary nature with the ability to be relocated in the event of flooding. All proposed new mechanical, electrical, and plumbing equipment would be elevated and located out of the floodplain, in compliance with Appendix G of the New York City Building Code. Therefore, the Proposed Project would meet the requirements of applicable regulations intended to reduce risks of damage from current and future coastal hazards, and would promote this policy.

Policy 6.2: Integrate consideration of the latest New York City projections of climate change and sea level rise (as published in New York City Panel on Climate Change 2015 Report, Chapter 2: Sea Level Rise and Coastal Storms) into the planning and design of projects in the city's Coastal Zone.

Guidance provided by DCP[2] recommends a detailed methodology to determine a project's consistency with Policy 6.2. A summary of this process is provided below.

1. Identify vulnerabilities and consequences: assess the project's vulnerabilities to future coastal hazards and identify what the potential consequences may be.

a. Complete the Flood Evaluation Worksheet.

The information in the following subsections is based on the results of the completed worksheets, which are provided in **Attachment 1**.

b. Identify any project features that may be located below the elevation of the 1 percent floodplain over the lifespan of the project under any sea level rise scenario.

The lifespan of buildings (commercial, industrial, etc.) is generally considered to be about 80 years; mechanical, electrical, and plumbing equipment located within the buildings typically have a lifespan of 50 years. The New York City Panel on Climate Change (NPCC) projected that sea levels are likely to increase by up to 10 inches by the 2020s, 30 inches by the 2050s, and up to 75 inches by 2100 under the "High Scenario" projections. Under current conditions, portions of the Project Area containing the Finger Buildings and the 39th Street Buildings are within the existing 1 percent annual-chance floodplain, with some individual buildings falling entirely within the floodplain (see **Figure A-1-1**). The existing BFE for the majority of the Project Area ranges from +11 to 13 feet NAVD88 and falls within Zone AE (an area of high flood risk subject to inundation by the 1 percent annual-chance flood event). NPCC projections for each of the existing BFEs in the Project Area are provided below. **Table A-1-1** presents the ground floor elevations and

[2] NYC Department of City Planning. *The New York City Waterfront Revitalization Program: Climate Change Adaptation Guidance*. March 2017.

projected floodplain elevations relevant to the proposed buildings located in a floodplain (BFE of 11, 12, or 13 feet NAVD88).

Table A-1-1
Proposed Building Elevations, Existing Floodplain Elevations, and Projected Floodplain Elevations (High Scenario)

Proposed Building	Ground Floor Elevation	Existing Floodplain Elevation	Projected Floodplain Elevation: 2020s	Projected Floodplain Elevation: 2050s	Projected Floodplain Elevation: 2080s	Projected Floodplain Elevation: 2100
Finger Building 1 (southeast)	12.76	11.0	11.83	13.50	15.83	17.25
Finger Building 2 (southeast)	12.55	11.0				
Finger Building 3 (southeast)	12.72	11.0				
Finger Building 1 (northwest)	12.02*	12.0	12.83	14.50	16.83	18.25
Finger Building 2 (northwest)	12.70*	12.0				
Finger Building 3 (northwest)	12.74	12.0				
Finger Building 4 (northwest)	11.68	12.0				
Finger Building 5 (northwest)	11.86	12.0				
Finger Building 6 (northwest)	12.08	12.0				
Finger Building 7 (northwest)	11.23	12.0				
Finger Building 8 (northwest)	11.79*	12.0				
Finger Building 9 (northwest)	11.44*	12.0				
Building 11 (northwest)	13.0	12.0				
Building 21	13.0	12.0				
Building 22/23	10.41*	12.0				
Building 25	20.12	12.0				
Building 26	9.99*	12.0				
Building 24	5.97	13.0	13.83	15.50	17.83	19.25

Notes:
Ground floor elevations represent the surveyed "finished floor" elevations for the corresponding building. Those marked with a * represent the "door sill" elevations, and are conservative estimates for the finished floor elevations. All elevations are in + feet NAVD88.

Sources:
NYC Planning. The New York City Waterfront Revitalization Program: Climate Change Adaptation Guidance. March 2017.

With the exception of Building 25, for which the ground floor elevation would remain above all projected floodplain elevations throughout its lifespan, the ground floor elevations of the remaining proposed buildings (new and renovated) would be below projected floodplain elevations by the end of their 80-year lifespan around 2100 (see **Figure A-1-2**), and any critical equipment in these buildings located on the ground floor would be below projected elevations by the end of its 50-year lifespan around 2080 (see **Figure A-1-3**). Similarly, any storage or parking uses on or below the ground floor elevation would also be below projected elevations by the end of the 80-year lifespan of the buildings. The location of these features within the floodplain would result in flooding risks from some storm events, including property damage, loss of commercial and industrial tenant space, and have the potential discharge materials hazardous materials. In the event future floodplain elevations rise to an extent that currently anticipated flood proofing measures are determined to be inadequate, the applicant would likely implement additional flood proofing measures to protect critical building infrastructure and affected floors of affected buildings.

Current BFE: +11 feet NAVD88

The southeastern portion of Finger Building 2 has a ground floor elevation of +12.55 feet NAVD88, which is the lowest elevation of the three buildings in the +11-foot 1 percent annual chance floodplain, and therefore represents the worst case scenario. The ground floor elevations for Finger Buildings 1 and 3 are just slightly higher, at elevations +12.76 and +12.72 feet NAVD88, respectively. Based on the NPCC projections, the 1 percent annual chance flood elevation for this location could increase to 11.83 feet NAVD88 by the 2020s, 13.50 feet by the 2050s, 15.83 feet by the 2080s, and up to 17.25 feet by 2100. Under the high scenario, the ground floor and critical infrastructure of Finger Building 1, 2, and 3 would be below the projected flood elevation sometime between the 2020s and the 2050s.

Current BFE: +12 feet NAVD88

Building 26 has a door sill elevation of approximately +9.99 feet NAVD88; however, the ground floor elevation is likely slightly higher, as most of the doors surveyed for the project open onto a landing with steps leading up to the ground floor. This represents the lowest elevation of the 14 buildings in the 12-foot 1 percent annual chance floodplain, with the finished floor elevations of the remaining buildings ranging from +10.41 to +13.00 feet NAVD88, excluding Building 25 for which the ground floor elevation is above the projected 1 percent annual chance flood elevation throughout its design life. Of the finished floor elevations that were surveyed, the lowest ground floor elevation was 11.23 feet NAVD88 for Finger Building 7. Based on the NPCC projections, the 1 percent annual chance flood elevation for the +12 foot BFE could increase to +12.83 feet NAVD88 by the 2020s, +14.50 feet by the 2050s, +16.83 feet by the 2080s, and +18.25 feet by 2100. Seven of the 14 buildings within the +12 foot BFE are already below the current floodplain elevation (see **Table 1**) and would remain below the projected floodplain elevations under all scenarios. The remainder of the 14 buildings, except Building 25 as noted above, would be below the projected floodplain elevations sometime between the 2020s and 2050s.

Current BFE: +13 feet NAVD88

Building 24 has a ground floor elevation of +5.97 feet NAVD88. Based on the NPCC projections, the 1 percent annual chance flood elevation for this location could increase to +13.83 feet NAVD88 by the 2020s, +15.50 feet by the 2050s, +17.83 feet by the 2080s, and +19.25 feet by 2100. Building 24 is already below the current floodplain elevation (see **Table A-1-1**) and would remain below the projected floodplain elevations under all scenarios.

c. Identify any vulnerable, critical, or potentially hazardous features that may be located below the elevation of Mean Higher High Water (MHHW) over the lifespan of the project under any sea level rise scenario.

Based on the range of sea level rise predictions described above, MHHW at the NOAA Station nearest the Directly Affected Area (currently +2.28 feet NAVD88 at NOAA Station #8518750 at the Battery) could range up to +8.53 feet NAVD88 by the end of the century. Although maps of projected high tide in the future with sea level rise generated by the NYC Flood Hazard Mapper[3] indicate that Building 24 would be below the projected high tide (Low Estimate) by the 2020s (see **Figure A-1-4**) and would remain below projected high tide levels in the 2080s, at the end of the critical equipment lifespan, and by 2100 at the end of the building lifespan (see **Figures A-1-5 and A-1-6**); the ground floor of Building 24 would not actually be below projected high tide levels

[3] https://www1.nyc.gov/site/planning/data-maps/flood-hazard-mapper.page

when considering the actual elevation of the ground floor as indicated on the Flood Evaluation Worksheets (Attachment 1) and surrounding grades. Similarly, while many of the Finger Buildings would also be below high tide (High Estimate) as projected by the Flood Hazard Mapper by the end of their lifespans in 2100 (see **Figure A-1-6**), the ground floor of these buildings would not actually be below the projected high tide levels when considering the actual elevation of the ground floor for these buildings, as indicated in the Flood Evaluation Worksheets (Attachment 1). The maps of projected high tide with sea level rise generated by the NYC Flood Hazard Mapper are not intended to provide detailed site-by-site information, but rather a broader perspective on potential future high tide issues on a neighborhood or citywide scale. The Flood Evaluation Worksheets completed for the Proposed Project and included as Attachment 1 to this appendix provide site-specific evaluations of the vulnerability of critical equipment and buildings based on actual building ground floor and equipment elevations in relation to projections of Mean Higher High Water (MHHW) with sea level rise. As indicated in Attachment 1, with the exception of Building 24, all buildings and critical equipment would remain above the projected high tide through the 2100s under all projection scenarios. Building 24 ground floor elevation and critical equipment would be above the projected high tide until the 2080s, at the end of the critical equipment lifespan, at which time these elements would only be below the high tide level under the High scenario estimate. Considering the potential for the ground floor of Building 24 to be below MHHW under certain sea level rise projections during its lifespan, uses for the ground floor would be restricted at some point within its lifespan to storage and parking in order to minimize risk and losses from flooding. Use restrictions for the ground floor of Building 24 would be implemented upon completion of the renovation.

d. Describe how any additional coastal hazards are likely to affect the project, both currently and in the future, such as waves, high winds, or debris.

Since the Project Area is within Zone AE, it is currently and would continue to be at risk for inundation from 1 percent annual chance flood events. Wave action hazards (i.e., Zone VE) have not been designated for the Project Area. However, the Limit of Moderate Wave Action (LiMWA[4]) does encompass portions of Building 25 and Finger Buildings 3 through 8, and all of Building 24. The area between Zone VE and the LiMWA, or the Coastal A Zone, is subject to flood hazards associated with floating debris and high-velocity flow.

2. Identify adaptive strategies: assess how the vulnerabilities and consequences identified in Step 1 are addressed through the project's design and planning.

a. For any features identified in Step 1(b), describe how any flood damage reduction elements incorporated into the project, or any natural elevation on the site, provide any additional protection. Describe how would any planned adaptive measures protect the feature in the future from flooding?

Aside from Building 25, all of the buildings within the Project Area would be below projected floodplain elevations at some point in their lifespan. To account for current flood conditions, new Buildings 11 and 21, both located in the current +12-foot floodplain, have been designed with a Design Flood Elevation (DFE) of +13.0 feet NAVD88, which is about 1 foot above the current BFE. Existing buildings, including Buildings 22/23 and 26 located in the +12-foot floodplain near the waterfront, would be retrofitted with flood protection features at the time of construction.

[4] Inland limit of the area expected to receive 1.5-foot or greater breaking waves during the 1-percent-annual-chance flood event.

Renovations for the Finger Buildings in the +11-foot and +12-foot BFE floodplains would incorporate dry flood proofing measures in vulnerable locations upland of 1st Avenue. Specific measures may include aluminum shielding and/or flood gates at entryways within the floodplain, and/or other appropriate methods that would be determined at a later point in the design process and incorporated at the time of construction. All proposed new critical infrastructure (i.e., electrical, plumbing, mechanical equipment) would be elevated above the projected flood levels in each building, in compliance with Appendix G of the New York City Building Code, and basement uses would be limited to storage and parking only. Elevators would also be flood-proofed. Building 24 is already within the 1 percent annual chance floodplain; as such, specific wet flood proofing measures would be determined at a later point in the design process and incorporated into the renovation. As the ground floor of Building 24 would periodically be subject to flooding, ground floor uses would be substantially limited. Uses proposed for the ground floor of Building 24 would be of temporary nature with the ability to be relocated in the event of flooding.

> *b. For any features identified in Step 1(c), describe how any flood damage reduction elements incorporated into the project, or any natural elevation on the site, provide any additional protection. Describe how would any planned adaptive measures protect the feature in the future from flooding?*

As described above in Step 1(c), the waterfront edge of Building 24 would be below the projected MHHW elevation by the 2080s. In order to safeguard this building against flood conditions, wet flood proofing measures would be incorporated into the renovation at a later point in the design process, as described under Step 2(a).

> *c. Describe any additional measures being taken to protect the project from additional coastal hazards such as waves, high winds, or debris.*

In order to safeguard the portions of the buildings within the Coastal A Zone, wet and dry flood proofing measures would be incorporated into the renovation at a later point in the design process, as described under Step 2(a). The renovations would comply with applicable building codes and would be protective under projected conditions.

> *d. Describe how the project would affect the flood protection of adjacent sites, if relevant.*

Because the floodplain within New York City is controlled by astronomic tide and meteorological forces (e.g., nor'easters and hurricanes) and not by fluvial flooding, the projected development would not have the potential to adversely affect the floodplain or result in increased coastal flooding at adjacent sites or within the Directly Affected Area. The development and/or redevelopment of the buildings within the Project Area would not alter the existing site elevation.

> *3. Assess policy consistency: conclude whether the project is consistent with Policy 6.2 of the Waterfront Revitalization Program.*

Portions of the Project Area are within the 1 percent annual chance floodplain (Zone AE only), and a smaller portion of the Project Area is within a wave impact zone (Coastal A Zone) in the flood hazard area. Proposed new-construction buildings (Buildings 11 and 21) have been designed at an elevation 1 foot above the existing BFE, but would be within the 1 percent annual chance floodplain under projected flood elevations for the "High" scenario by the 2050s. Existing buildings wherein proposed redevelopment would take place would proactively incorporate flood protection measures during the renovation wherever possible to protect against potential flood

hazards within the Coastal A Zone. Dry flood proofing measures may include the installation of aluminum shielding and flood gates upland of 1st Avenue. Wet flood proofing measures that would be incorporated into the renovation of Building 24 would be determined at a later point in the design process. Ground floor uses in Building 24 would be limited to temporary uses with the ability to be relocated in the event of flooding. Critical infrastructure in each building, where appropriate, would be raised approximately 3 feet above the ground floor elevation. Therefore, with these measures in place, the Proposed Project would promote Policy 6.2.

Policy 8: Provide public access to, from, and along New York City's coastal waters.

Policy 8.2: Incorporate public access into new public and private development where compatible with proposed land use and coastal location.

The amount of unbuilt waterfront land in the Project Area is limited to the concrete apron outside Building 24. This would be developed for public access in the event the adjacent industrial land development, as well as the uses within the redeveloped Building 24 were to be compatible with this use. The apron is adjacent to a portion of City-owned land that is currently part of the South Brooklyn Marine Terminal (SBMT), an industrial use. In consideration of this, the Proposed Actions would incorporate waterfront public access only in the event that these two parcels (the Building 24 apron and the adjacent portion of SBMT) were to be combined for such public access use, and the use of Building 24 were to be compatible with public access. Therefore, the Proposed Project would promote this policy.

Policy 9: Protect scenic resources that contribute to the visual quality of the New York City coastal area.

Policy 9.1: Protect and improve visual quality associated with New York City's urban context and the historic and working waterfront.

Under the Baseline Scenario, a contributing structure to the S/NR-eligible Bush Terminal Historic District would be demolished; the three-story factory on Block 706, Lot 20. However, this building is not considered a visual resource and would be replaced with a structure that is more comparable with the scale and massing of the buildings in the Bush Terminal industrial complex. Views to visual resources from the Project Area would remain unchanged, with partial views of the Lower Manhattan and Downtown Brooklyn skylines still visible. Pedestrian views to the Project Area from immediately adjacent sidewalks would be different in certain locations. The existing surface parking lots, stacker parking structures, and low-scale buildings would be replaced by the larger-scale proposed buildings. The proposed developments would be consistent with the surrounding scenery. The east-west streets located between the Finger Buildings would receive elevated sidewalks and improved loading, with new planting and further road improvements along 1st Avenue within the Project Area, improving the visual quality of the area. Therefore, the Proposed Actions would promote this policy.

Policy 10: Protect, preserve, and enhance resources significant to the historical, archaeological, architectural, and cultural legacy of the New York City coastal area.

Policy 10.1: Retain and preserve historic resources, and enhance resources significant to the coastal culture of New York City.

Development in the Project Area pursuant to the Baseline Scenario could have potential adverse impacts on historic resources. The Proposed Project would demolish the three-story factory building on Block 706, Lot 20, which is located within the S/NR Bush Terminal Historic District,

and which is considered a contributing building to the district. Consultation with the New York City Landmarks Preservation Commission (LPC) would be undertaken to develop and implement appropriate mitigation measures to partially mitigate the significant adverse impact that would result from demolition of this building. Mitigation measures are expected to include Historic American Buildings Survey (HABS) documentation of the factory building. The future development of Projected Buildings 11 and 21, as well as the Gateway Building that would be constructed outside of the S/NR-eligible Bush Terminal Historic District boundaries on Block 695, Lots 37–43 could result in construction-related impacts to certain S/NR-eligible Bush Terminal Historic District buildings which are located adjacent to or within 90 feet of the proposed development sites. To avoid inadvertent construction-related impacts to the Bush Terminal buildings that would be modified as part of the Proposed Project and that are located adjacent to or within 90 feet of the proposed development sites, construction protection measures that would be set forth in a Construction Protection Plan (CPP) would be developed and implemented in consultation with LPC and completed in coordination with a licensed professional engineer. The CPP would follow the guidelines set forth in the 2014 *City Environmental Quality Review (CEQR) Technical Manual*, including conforming to LPC's *New York City Landmarks Preservation Commission Guidelines for Construction Adjacent to a Historic Landmark* and *Protection Programs for Landmark Buildings*. The existing Building 24 would be retrofitted with new windows in order to reduce energy needs. The replacement windows would be selected in consultation with LPC and would reflect the historic character of the original windows.

The three new developments that would be constructed in the Baseline Scenario would be similar in scale and massing to those present in the Bush Terminal Historic District. The Baseline Scenario would not alter the relationship of any identified historic resources to the streetscape, since all streets adjacent to historic resources would remain open and each resource's relationship with the street would remain unchanged in the future with the Baseline Scenario. A consistent streetwall would be created along 3rd and 2nd Avenues and 39th Street. Publicly accessible views of the west façades of Buildings 19 and 20 would be partially blocked by Projected Building 21; however, the west façade of Building 19 is presently partially blocked by the existing three-story factory west of the structure and the west façade of Building 20 was historically partially obstructed by Building "W," which has since been demolished. In addition, the primary façades of Buildings 19 and 20 face east onto 2nd Avenue, and their visibility would remain unchanged. With the addition of the Gateway Building, views of the eastern façades of Buildings 1 and 2 would be blocked. However, much like in the case of Buildings 19 and 20, the eastern façades of Buildings 1 and 2 are currently partially obstructed due to the mixed-use and commercial developments along 3rd Avenue (Block 695, Lots 37–43). Also, the western façades of Buildings 9 and 10 are only partially visible due to the existing Bush Terminal steam plant and the one-story structure west of Building 9. With the development of Building 11, views of the western façades of Buildings 9 and 10 would continue to be blocked.

LPC has determined that the scale of the proposed Gateway Building and Building 11 appear out of context with the neighboring Finger Buildings within the Bush Terminal Historic District. In order to conform to the Secretary's Standards and Guidelines for new construction in a historic district, LPC recommended that the maximum building height of the new buildings match or be within 1–2 stories higher than the Finger Buildings. LPC also recommended that the proposed Gateway Building and Building 11 be compatible with the significant design features of the Finger Buildings—flat roofs with pedimented rooflines that produce a regular rhythm along the street—by reducing uneven bulk and massing at the roof levels and introducing some reference to the existing rhythm, size, and shape of the pedimented roofs. The Applicant will consult with LPC to

develop and implement appropriate mitigation measures to mitigate this potential impact. If measures to mitigate the potential impact are not identified, the impact would remain unmitigated.

None of the buildings in the Bush Terminal Historic District have sunlight-dependent features; therefore, the Proposed Project would not cause significant adverse shadow impacts.

With the integration of mitigation measures for the impacts described above, the Baseline Scenario would promote this policy. ✷

Flood Evaluation Worksheet – Industry City

Elevation 11

NYC Waterfront Revitalization Program - Policy 6.2 Flood Elevation Workhsheet

COMPLETE INSTRUCTIONS ON HOW TO USE THIS WORKSHEET ARE PROVIDED IN THE "CLIMATE CHANGE ADAPTATION GUIDANCE" DOCUMENT AVAILABLE AT www.nyc.gov/wrp

Enter information about the project and site in highlighted cells in Tabs 1-3. HighTab 4 contains primary results. Tab 5, "Future Flood Level Projections" contains background computations. The remaining tabs contain additional results, to be used as relevant.Non-highlighted cells have been locked.

Background Information	
Project Name	Industry City
Location	Sunset Park neighborhood, Brooklyn, New York
Type(s)	☑ Residential, Commercial, Community Facility; ☐ Parkland, Open Space, and Natural Areas; ☐ Tidal Wetland Restoration; ☐ Critical Infrastructure or Facility; ☑ Industrial Uses; ☐ Over-water Structures; ☐ Shoreline Structures; ☐ Transportation; ☐ Wastewater Treatment/Drainage; ☐ Coastal Protection
Description	A mixed-use project with manufacturing, commercial, and community uses that would establish an "Innovation Economy Hub" in the Sunset Park neighborhood. The project would redevelop and re-tenant the Industry City Complex. The applicant is requesting Zoning Text and Zoning Map amendments, special permits, and a change to the city map. The project would result in the introduction of commercial and community uses that would increase the non-residential population in the area, including retail, event, sports, hotel, academic, mechanical, storage, and parking facilities.
Planned Completion date	Dec-27

For technical assistance on using this worksheet, email wrp@planning.nyc.gov, using the message subject "Policy 6.2 Worksheet Error."

Last update: June 7, 2017

Establish current tidal and flood heights.

	FT (NAVD88)	Feet	Datum	Source
MHHW	2.28	**2.28**	**NAVD88**	*Datums for the Battery, NOAA Station 8518750*
1% flood height	11.00	**11.00**	**NAVD88**	*NYC Hazard Flood Mapper, 2015 Preliminary FIRMs*
As relevant:				
0.2% flood height	-->		**NAVD88**	
MHW	1.96	1.96	**NAVD88**	*Datums for the Battery, NOAA Station 8518750*
MSL	-0.20	-0.20	**NAVD88**	*Datums for the Battery, NOAA Station 8518750*
MLLW	-2.77	-2.77	**NAVD88**	*Datums for the Battery, NOAA Station 8518750*

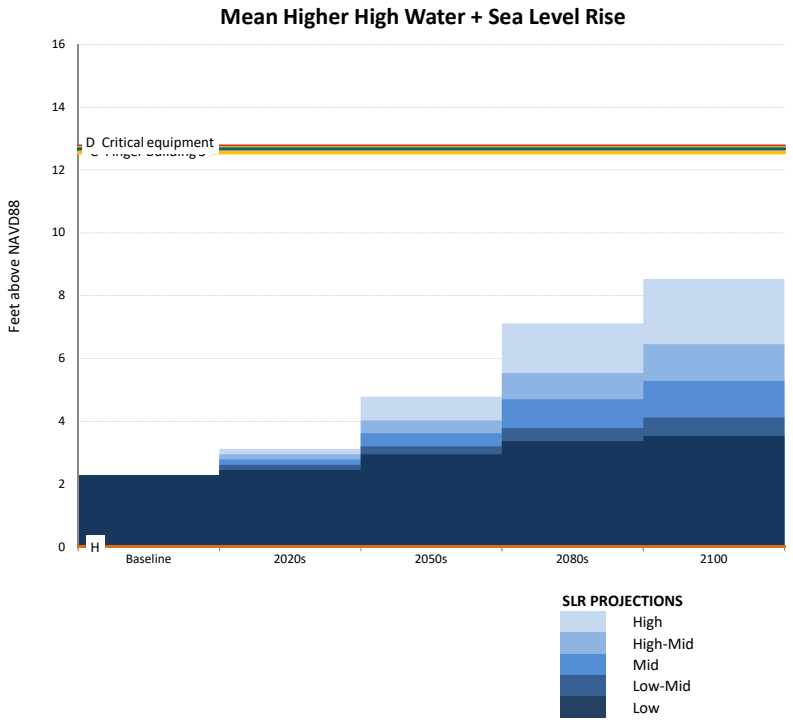
Data will be converted based on the following datums:

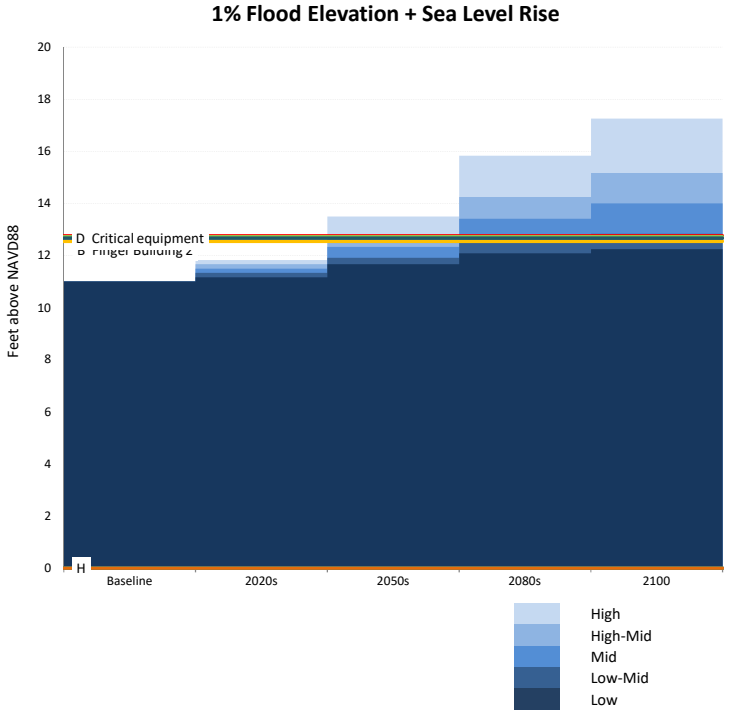
Datum	FT (NAVD88)
NAVD88	*0.00*
NGVD29	*-1.10*
Manhattan Datum	*1.65*
Bronx Datum	*1.51*
Brooklyn Datum (Sewer)	*0.61*
Brooklyn Datum (Highway)	*1.45*
Queens Datum	*1.63*
Richmond Datum	*2.09*
Station	
MLLW	

Describe key physical features of the project.

Feature *(enter name)*	Feature Category	Lifespan	Elevation	Units	Datum	Ft	Ft Above NAVD88	Ft Above MHHW	Ft Above 1% flood height	Ft Above 0.2% flood height
A Finger Building 1	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	12.8	Feet	NAVD88	*12.8*	*12.8*	*10.5*	*1.8*	*#VALUE!*
Ground floor of southeastern portion of building. Small to mid-sized retail uses, Innovation Economy uses. Part of Finger Buildings area.										
B Finger Building 2	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	12.6	Feet	NAVD88	*12.6*	*12.6*	*10.3*	*1.6*	*#VALUE!*
Ground floor of southeastern portion of building. Small to mid-sized retail uses, Innovation Economy uses. Part of Finger Buildings area.										
C Finger Building 3	☐ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	12.7	Feet	NAVD88	*12.7*	*12.7*	*10.4*	*1.7*	*#VALUE!*
Ground floor of southeastern portion of building. Small to mid-sized retail uses, Innovation Economy uses. Part of Finger Buildings area										
D Critical equipment	☐ Vulnerable ☑ Critical ☐ Potentially Hazardous ☐ Other	2080	12.7	Feet	NAVD88	*12.7*	*12.7*	*10.4*	*1.7*	*#VALUE!*
Plumbing, mechanical, and electrical equipment to be installed in each building. Elevation used is the average of the buildings within this floodplain elevation.										
E	☐ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other			Feet	NAVD88					
Description of Planned Uses and Materials										
F	☐ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other			Feet	NAVD88					
Description of Planned Uses and Materials										
G	☐ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other			Feet	NAVD88					
Description of Planned Uses and Materials										
H	☐ Vulnerable ☐ Critical ☑ Potentially Hazardous ☐ Other			Feet	NAVD88					
Description of Planned Uses and Materials										

Assess project vulnerability over a range of sea level rise projections.





SLR (ft)	Low	Low-Mid	Mid	High-Mid	High
Baseline	0.00	0.00	0.00	0.00	0.00
2020s	0.17	0.33	0.50	0.67	0.83
2050s	0.67	0.92	1.33	1.75	2.50
2080s	1.08	1.50	2.42	3.25	4.83
2100	1.25	1.83	3.00	4.17	6.25

SLR (in)	Low	Low-Mid	Mid	High-Mid	High
2014	0	0	0	0	0
2020s	2	4	6	8	10
2050s	8	11	16	21	30
2080s	13	18	29	39	58
2100	15	22	36	50	75

MHHW+SLR (ft above NAVD88)	Low	Low-Mid	Mid	High-Mid	High
Baseline	2.28	2.28	2.28	2.28	2.28
2020s	2.45	2.61	2.78	2.95	3.11
2050s	2.95	3.20	3.61	4.03	4.78
2080s	3.36	3.78	4.70	5.53	7.11
2100	3.53	4.11	5.28	6.45	8.53

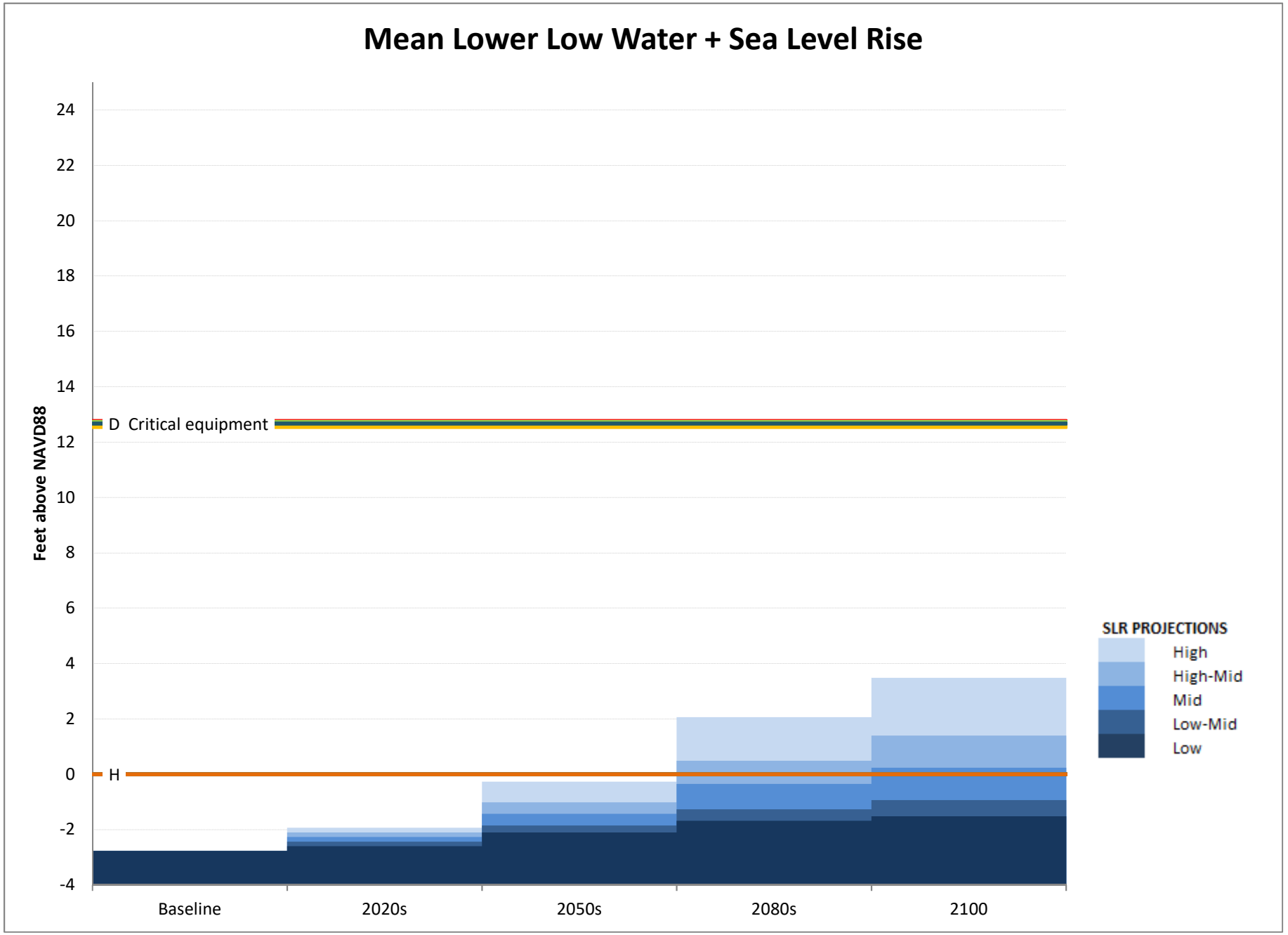
MLLW+SLR (ft above NAVD88)	Low	Low-Mid	Mid	High-Mid	High
Baseline	-2.77	-2.77	-2.77	-2.77	-2.77
2020s	-2.60	-2.44	-2.27	-2.10	-1.94
2050s	-2.10	-1.85	-1.44	-1.02	-0.27
2080s	-1.69	-1.27	-0.35	0.48	2.06
2100	-1.52	-0.94	0.23	1.40	3.48

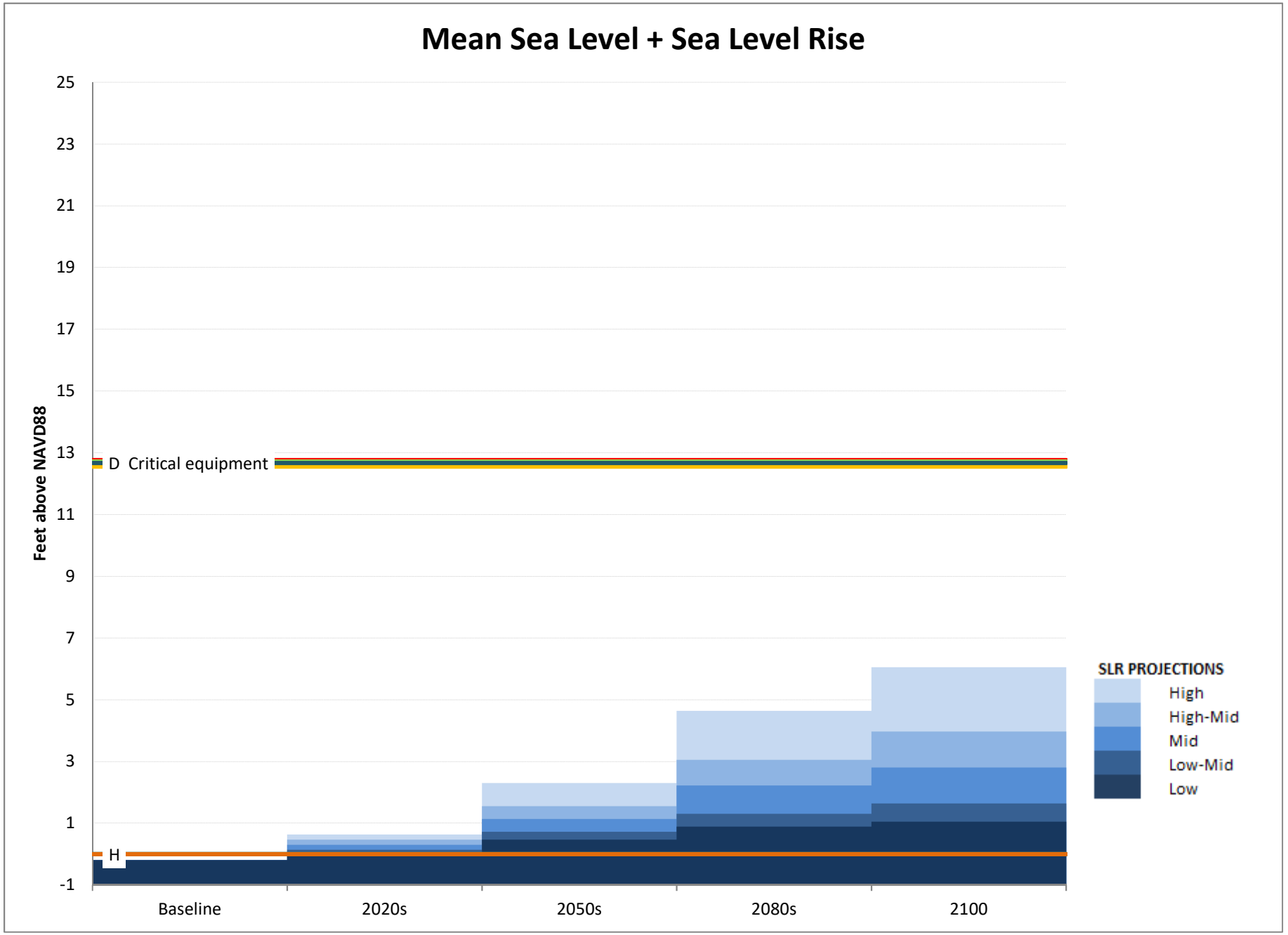
1%+SLR (ft above NAVD88)	Low	Low-Mid	Mid	High-Mid	High
Baseline	11.00	11.00	11.00	11.00	11.00
2020s	11.17	11.33	11.50	11.67	11.83
2050s	11.67	11.92	12.33	12.75	13.50
2080s	12.08	12.50	13.42	14.25	15.83
2100	12.25	12.83	14.00	15.17	17.25

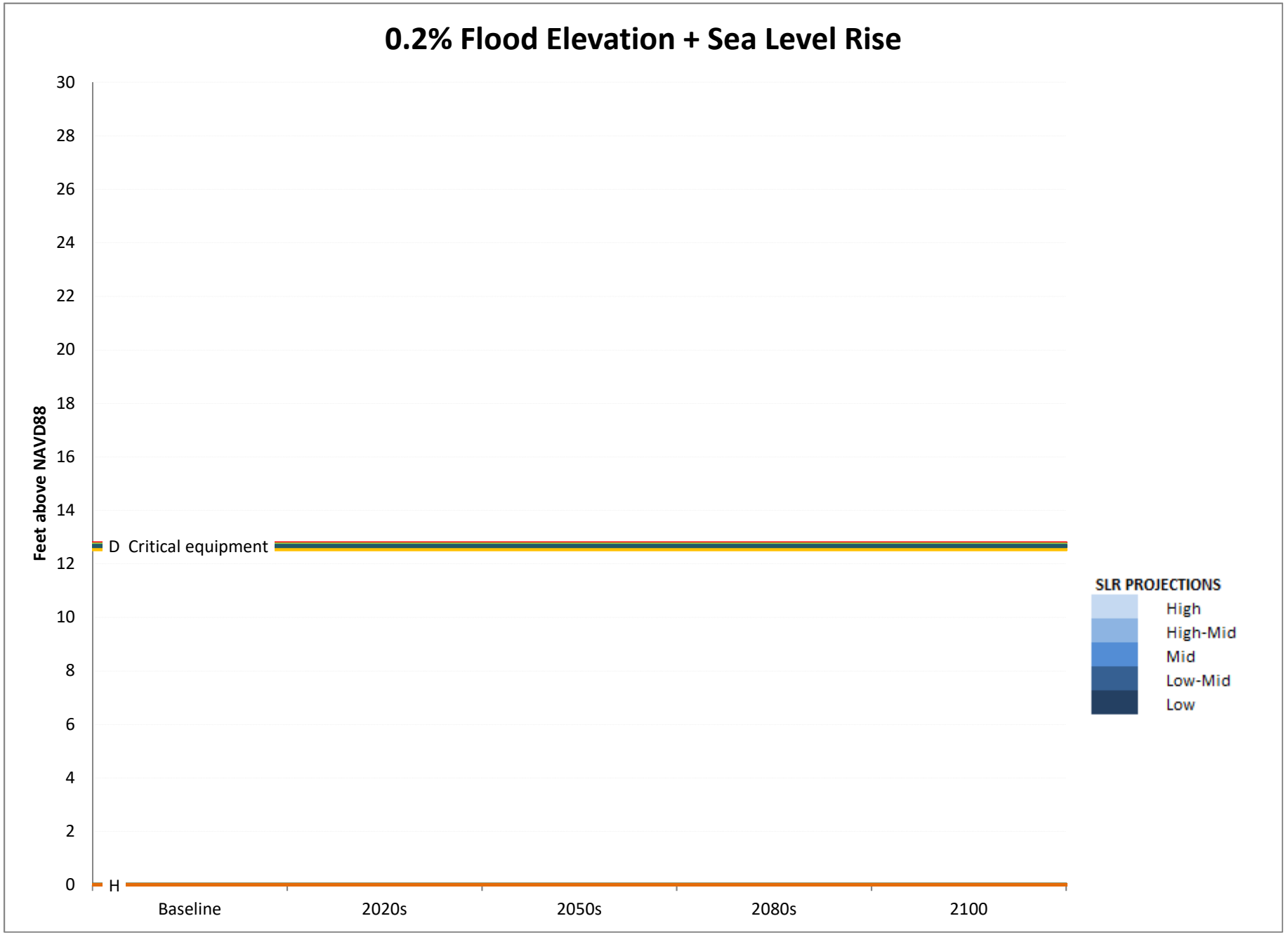
MSL+SLR (ft above NAVD88)	Low	Low-Mid	Mid	High-Mid	High
Baseline	-0.20	-0.20	-0.20	-0.20	-0.20
2020s	-0.03	0.13	0.30	0.47	0.63
2050s	0.47	0.72	1.13	1.55	2.30
2080s	0.88	1.30	2.22	3.05	4.63
2100	1.05	1.63	2.80	3.97	6.05

0.2%+SLR (ft above NAVD88)	Low	Low-Mid	Mid	High-Mid	High
Baseline	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
2020s	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
2050s	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
2080s	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
2100	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!

	0	1
A Finger Building 1	13	12.76
B Finger Building 2	13	12.55
C Finger Building 3	12.72	12.72
D Critical equipment	12.67	12.67
E	0	0
F	0	0
G	0	0
H	0	0


Mean Lower Low Water + Sea Level Rise
Feet above NAVD88
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
D Critical equipment
H
Baseline
2020s
2050s
2080s
2100
SLR PROJECTIONS
High
High-Mid
Mid
Low-Mid
Low


Mean Sea Level + Sea Level Rise
Feet above NAVD88
25
23
21
19
17
15
13
11
9
7
5
3
1
-1
D Critical equipment
H
Baseline
2020s
2050s
2080s
2100
SLR PROJECTIONS
High
High-Mid
Mid
Low-Mid
Low


0.2% Flood Elevation + Sea Level Rise
Feet above NAVD88
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
D Critical equipment
H
Baseline
2020s
2050s
2080s
2100
SLR PROJECTIONS
High
High-Mid
Mid
Low-Mid
Low

Flood Evaluation Worksheet – Industry City

Elevation 12

(1 of 2)

NYC Waterfront Revitalization Program - Policy 6.2 Flood Elevation Workhsheet

COMPLETE INSTRUCTIONS ON HOW TO USE THIS WORKSHEET ARE PROVIDED IN THE "CLIMATE CHANGE ADAPTATION GUIDANCE" DOCUMENT AVAILABLE AT www.nyc.gov/wrp

Enter information about the project and site in highlighted cells in Tabs 1-3. HighTab 4 contains primary results. Tab 5, "Future Flood Level Projections" contains background computations. The remaining tabs contain additional results, to be used as relevant.Non-highlighted cells have been locked.

Background Information	
Project Name	Industry City
Location	Sunset Park neighborhood, Brooklyn, New York
Type(s)	☑ Residential, Commercial, Community Facility ☐ Parkland, Open Space, and Natural Areas ☐ Tidal Wetland Restoration ☐ Critical Infrastructure or Facility ☑ Industrial Uses ☐ Over-water Structures ☐ Shoreline Structures ☐ Transportation ☐ Wastewater Treatment/Drainage ☐ Coastal Protection
Description	A mixed-use project with manufacturing, commercial, and community uses that would establish an "Innovation Economy Hub" in the Sunset Park neighborhood. The project would redevelop and re-tenant the Industry City Complex. The applicant is requesting Zoning Text and Zoning Map amendments, special permits, and a change to the city map. The project would result in the introduction of commercial and community uses that would increase the non-residential population in the area, including retail, event, sports, hotel, academic, mechanical, storage, and parking facilities.
Planned Completion date	Dec-27

For technical assistance on using this worksheet, email wrp@planning.nyc.gov, using the message subject "Policy 6.2 Worksheet Error."

Last update: June 7, 2017

Establish current tidal and flood heights.

	FT (NAVD88)	Feet	Datum	Source
MHHW	2.28	**2.28**	**NAVD88**	*Datums for the Battery, NOAA Station 8518750*
1% flood height	12.00	**12.00**	**NAVD88**	*NYC Hazard Flood Mapper, 2015 Preliminary FIRMs*
As relevant:				
0.2% flood height	-->		**NAVD88**	*p*
MHW	1.96	1.96	**NAVD88**	*Datums for the Battery, NOAA Station 8518750*
MSL	-0.20	-0.20	**NAVD88**	*Datums for the Battery, NOAA Station 8518750*
MLLW	-2.77	-2.77	**NAVD88**	*Datums for the Battery, NOAA Station 8518750*

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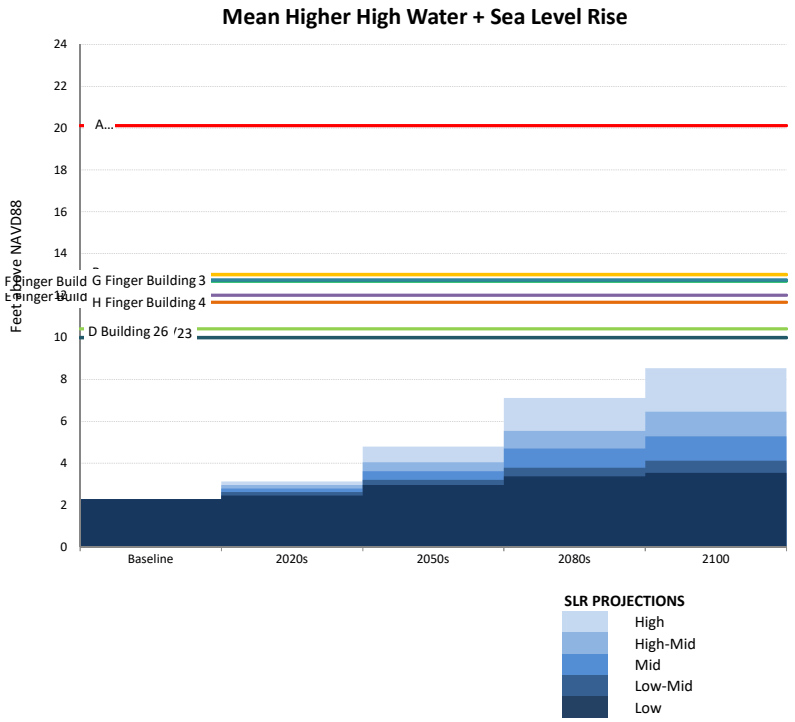
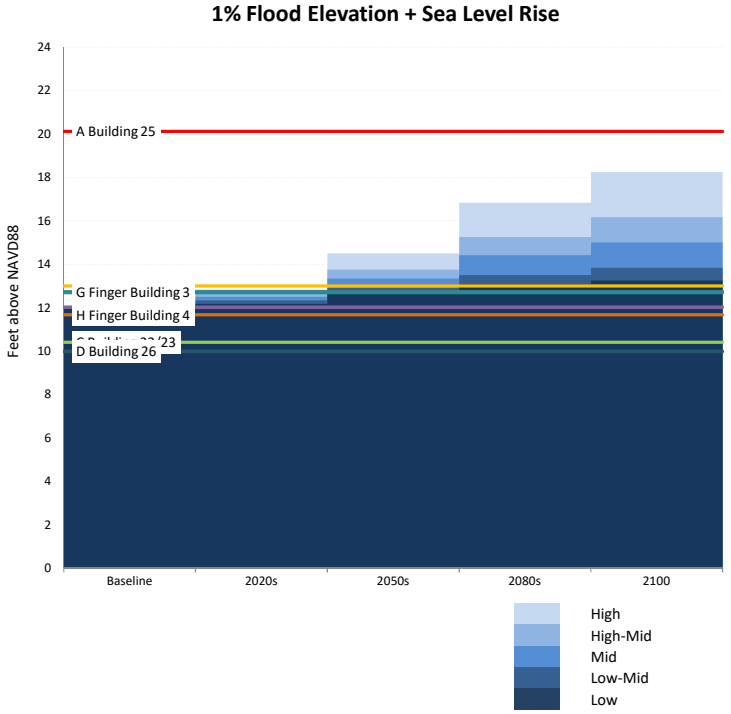
Bronx Datum	*1.51*
Brooklyn Datum (Sewer)	*0.61*
Brooklyn Datum (Highway)	*1.45*
Queens Datum	*1.63*
Richmond Datum	*2.09*
Station	
MLLW	

Describe key physical features of the project.

Feature *(enter name)*	Feature Category	Lifespan	Elevation	Units	Datum	Ft	Ft Above NAVD88	Ft Above MHHW	Ft Above 1% flood height	Ft Above 0.2% flood height
A Building 25	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	20.1	Feet	NAVD88	*20.1*	*20.1*	*17.8*	*8.1*	*#VALUE!*
Ground floor of building. Event space. Part of 39th Street Buildings area.										
B Building 21	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	13.0	Feet	NAVD88	*13.0*	*13.0*	*10.7*	*1.0*	*#VALUE!*
Ground floor of northwestern portion of building. Small and large retail establishments. Part of 39th Street Buildings area.										
C Building 22/23	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	10.4	Feet	NAVD88	*10.4*	*10.4*	*8.1*	*-1.6*	*#VALUE!*
Ground floor of building. Small and large retail establishments. Part of 39th Street Buildings area.										
D Building 26	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	10.0	Feet	NAVD88	*10.0*	*10.0*	*7.7*	*-2.0*	*#VALUE!*
Ground floor of building. Small and large retail establishments. Part of 39th Street Buildings area.										
E Finger Building 1	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	12.0	Feet	NAVD88	*12.0*	*12.0*	*9.7*	*0.0*	*#VALUE!*
Ground floor of northwestern corner of building. Small to mid-sized retail uses, Innovation Economy uses. Part of Finger Buildings area.										
F Finger Building 2	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	12.7	Feet	NAVD88	*12.7*	*12.7*	*10.4*	*0.7*	*#VALUE!*
Ground floor of northwestern portion of building. Small to mid-sized retail uses, Innovation Economy uses. Part of Finger Buildings area.										
G Finger Building 3	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	12.7	Feet	NAVD88	*12.7*	*12.7*	*10.5*	*0.7*	*#VALUE!*
Ground floor of northwestern portion of building. Small to mid-sized retail uses, Innovation Economy uses. Part of Finger Buildings area.										
H Finger Building 4	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	11.7	Feet	NAVD88	*11.7*	*11.7*	*9.4*	*-0.3*	*#VALUE!*
Ground floor of northwestern portion of building. Small to mid-sized retail uses, Innovation Economy uses. Part of Finger Buildings area.										

Assess project vulnerability over a range of sea level rise projections.





SLR (ft)

	Low	Low-Mid	Mid	High-Mid	High
Baseline	0.00	0.00	0.00	0.00	0.00
2020s	0.17	0.33	0.50	0.67	0.83
2050s	0.67	0.92	1.33	1.75	2.50
2080s	1.08	1.50	2.42	3.25	4.83
2100	1.25	1.83	3.00	4.17	6.25

SLR (in)

	Low	Low-Mid	Mid	High-Mid	High
2014	0	0	0	0	0
2020s	2	4	6	8	10
2050s	8	11	16	21	30
2080s	13	18	29	39	58
2100	15	22	36	50	75

MHHW+SLR (ft above NAVD88)

	Low	Low-Mid	Mid	High-Mid	High
Baseline	2.28	2.28	2.28	2.28	2.28
2020s	2.45	2.61	2.78	2.95	3.11
2050s	2.95	3.20	3.61	4.03	4.78
2080s	3.36	3.78	4.70	5.53	7.11
2100	3.53	4.11	5.28	6.45	8.53

MLLW+SLR (ft above NAVD88)

	Low	Low-Mid	Mid	High-Mid	High
Baseline	-2.77	-2.77	-2.77	-2.77	-2.77
2020s	-2.60	-2.44	-2.27	-2.10	-1.94
2050s	-2.10	-1.85	-1.44	-1.02	-0.27
2080s	-1.69	-1.27	-0.35	0.48	2.06
2100	-1.52	-0.94	0.23	1.40	3.48

1%+SLR (ft above NAVD88)

	Low	Low-Mid	Mid	High-Mid	High
Baseline	12.00	12.00	12.00	12.00	12.00
2020s	12.17	12.33	12.50	12.67	12.83
2050s	12.67	12.92	13.33	13.75	14.50
2080s	13.08	13.50	14.42	15.25	16.83
2100	13.25	13.83	15.00	16.17	18.25

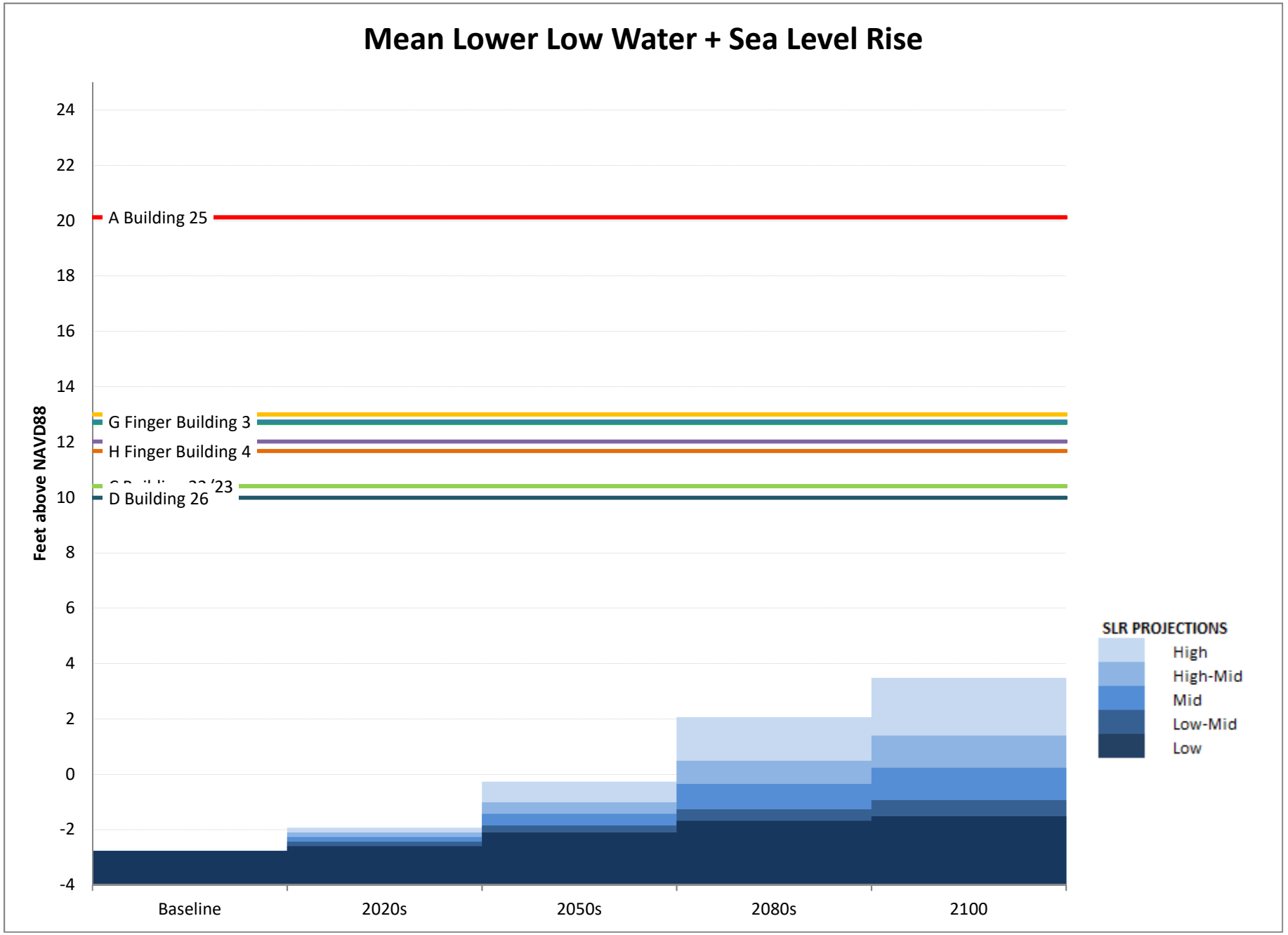
MSL+SLR (ft above NAVD88)

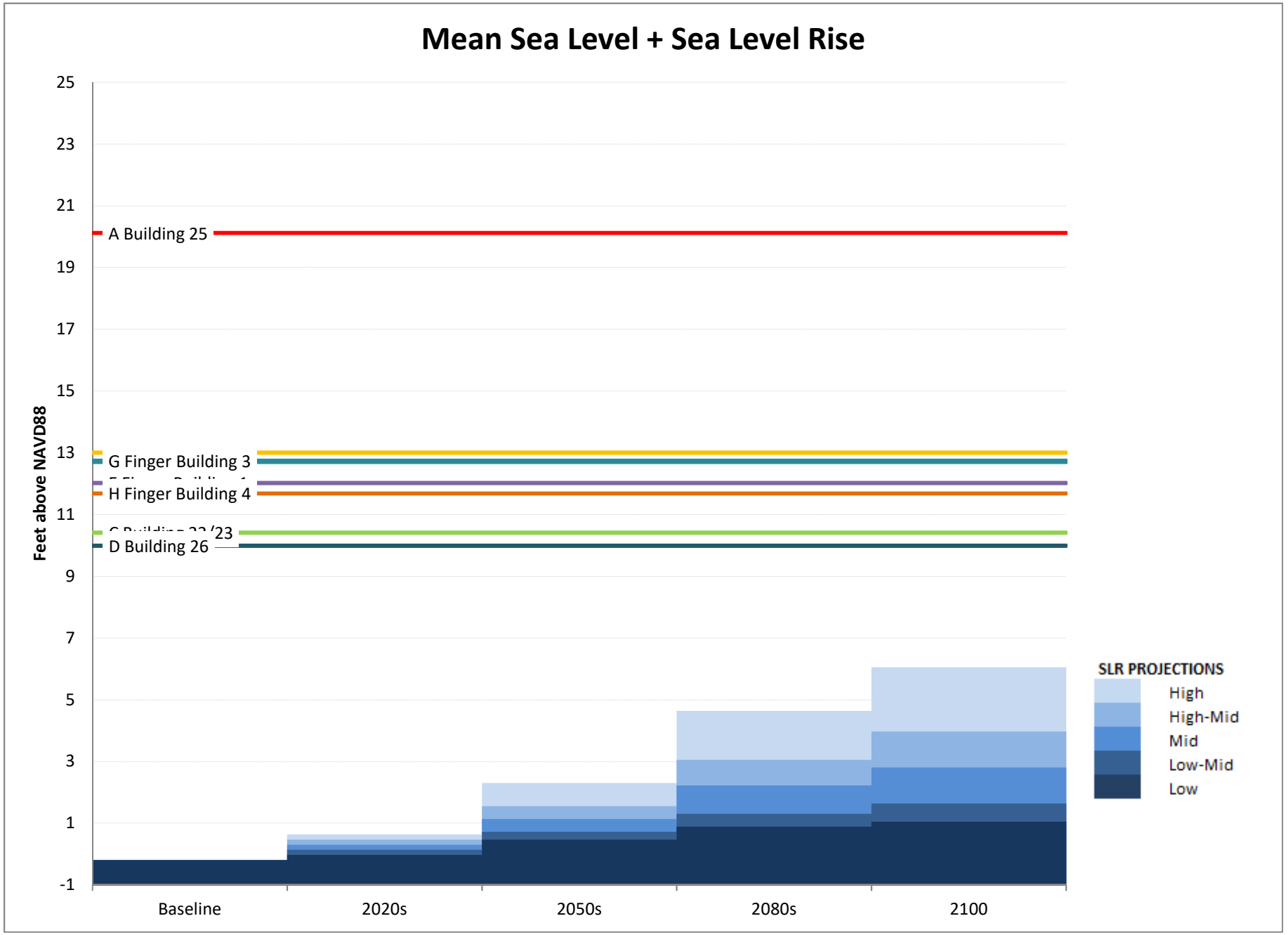
	Low	Low-Mid	Mid	High-Mid	High
Baseline	-0.20	-0.20	-0.20	-0.20	-0.20
2020s	-0.03	0.13	0.30	0.47	0.63
2050s	0.47	0.72	1.13	1.55	2.30
2080s	0.88	1.30	2.22	3.05	4.63
2100	1.05	1.63	2.80	3.97	6.05

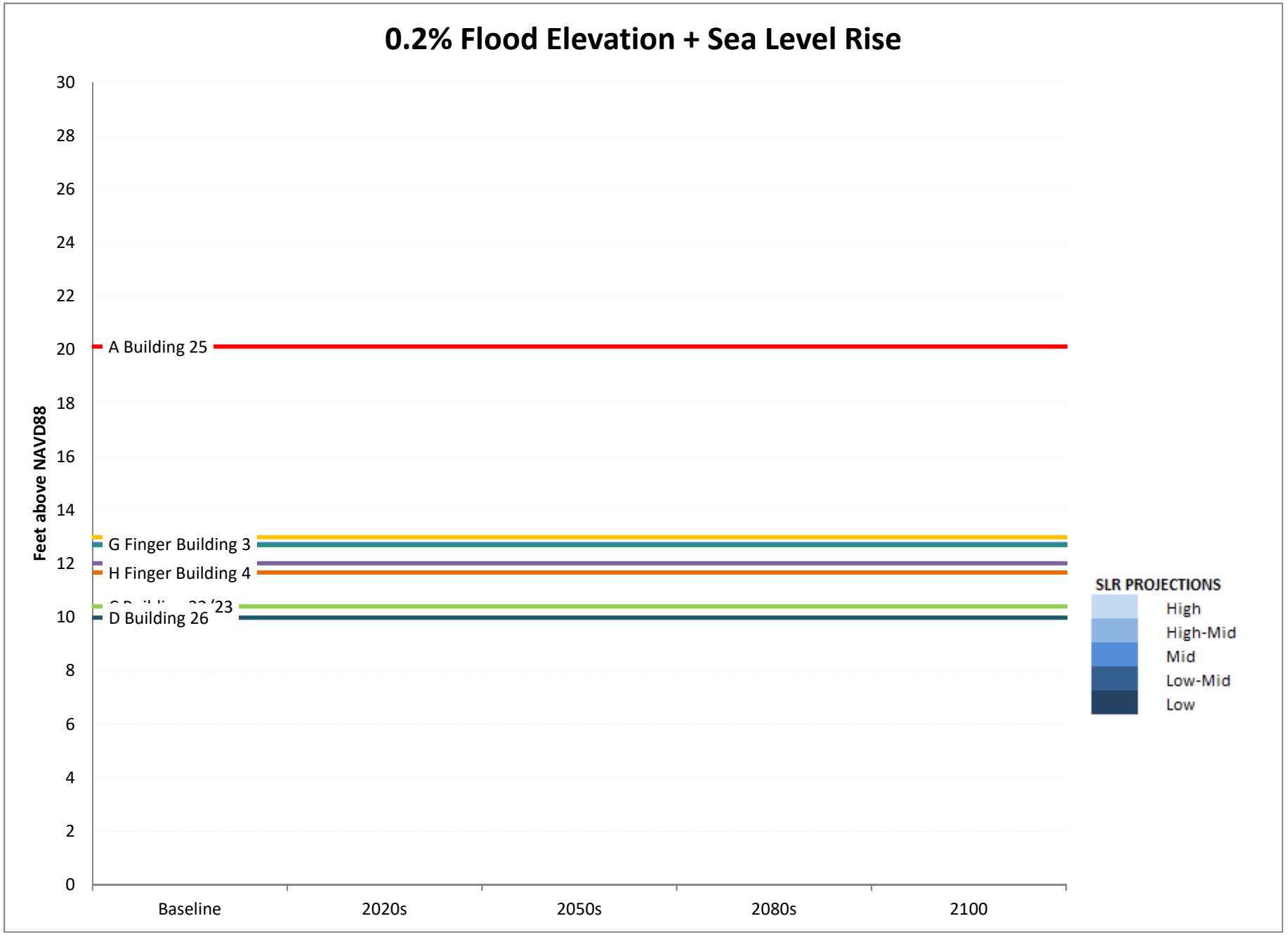
0.2%+SLR (ft above NAVD88)

	Low	Low-Mid	Mid	High-Mid	High
Baseline	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
2020s	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
2050s	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
2080s	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
2100	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!

	0	1
A Building 25	20	20.12
B Building 21	13	13
C Building 22/23	10.41	10.41
D Building 26	9.99	9.99
E Finger Building 1	12.02	12.02
F Finger Building 2	12.7	12.7
G Finger Building 3	12.74	12.74
H Finger Building 4	11.68	11.68


Mean Lower Low Water + Sea Level Rise
Feet above NAVD88
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
A Building 25
G Finger Building 3
H Finger Building 4
D Building 26
Baseline
2020s
2050s
2080s
2100
SLR PROJECTIONS
High
High-Mid
Mid
Low-Mid
Low


Mean Sea Level + Sea Level Rise
Feet above NAVD88
25
23
21
19
17
15
13
11
9
7
5
3
1
-1
A Building 25
G Finger Building 3
H Finger Building 4
D Building 26
Baseline
2020s
2050s
2080s
2100
SLR PROJECTIONS
High
High-Mid
Mid
Low-Mid
Low


0.2% Flood Elevation + Sea Level Rise
Feet above NAVD88
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
A Building 25
G Finger Building 3
H Finger Building 4
D Building 26
Baseline
2020s
2050s
2080s
2100
SLR PROJECTIONS
High
High-Mid
Mid
Low-Mid
Low

Flood Evaluation Worksheet – Industry City

Elevation 12

(2 of 2)

NYC Waterfront Revitalization Program - Policy 6.2 Flood Elevation Workhsheet

COMPLETE INSTRUCTIONS ON HOW TO USE THIS WORKSHEET ARE PROVIDED IN THE "CLIMATE CHANGE ADAPTATION GUIDANCE" DOCUMENT AVAILABLE AT www.nyc.gov/wrp

Enter information about the project and site in highlighted cells in Tabs 1-3. HighTab 4 contains primary results. Tab 5, "Future Flood Level Projections" contains background computations. The remaining tabs contain additional results, to be used as relevant.Non-highlighted cells have been locked.

Background Information	
Project Name	Industry City
Location	Sunset Park neighborhood, Brooklyn, New York
Type(s)	☑ Residential, Commercial, Community Facility ☐ Parkland, Open Space, and Natural Areas ☐ Tidal Wetland Restoration ☐ Critical Infrastructure or Facility ☑ Industrial Uses ☐ Over-water Structures ☐ Shoreline Structures ☐ Transportation ☐ Wastewater Treatment/Drainage ☐ Coastal Protection
Description	A mixed-use project with manufacturing, commercial, and community uses that would establish an "Innovation Economy Hub" in the Sunset Park neighborhood. The project would redevelop and re-tenant the Industry City Complex. The applicant is requesting Zoning Text and Zoning Map amendments, special permits, and a change to the city map. The project would result in the introduction of commercial and community uses that would increase the non-residential population in the area, including retail, event, sports, hotel, academic, mechanical, storage, and parking facilities.
Planned Completion date	Dec-27

For technical assistance on using this worksheet, email wrp@planning.nyc.gov, using the message subject "Policy 6.2 Worksheet Error."

Last update: June 7, 2017

Establish current tidal and flood heights.

	FT (NAVD88)	Feet	Datum	Source
MHHW	2.28	**2.28**	**NAVD88**	*Datums for the Battery, NOAA Station 8518750*
1% flood height	12.00	**12.00**	**NAVD88**	*NYC Hazard Flood Mapper, 2015 Preliminary FIRMs*
As relevant:				
0.2% flood height	-->		**NAVD88**	
MHW	1.96	1.96	**NAVD88**	*Datums for the Battery, NOAA Station 8518750*
MSL	-0.20	-0.20	**NAVD88**	*Datums for the Battery, NOAA Station 8518750*
MLLW	-2.77	-2.77	**NAVD88**	*Datums for the Battery, NOAA Station 8518750*

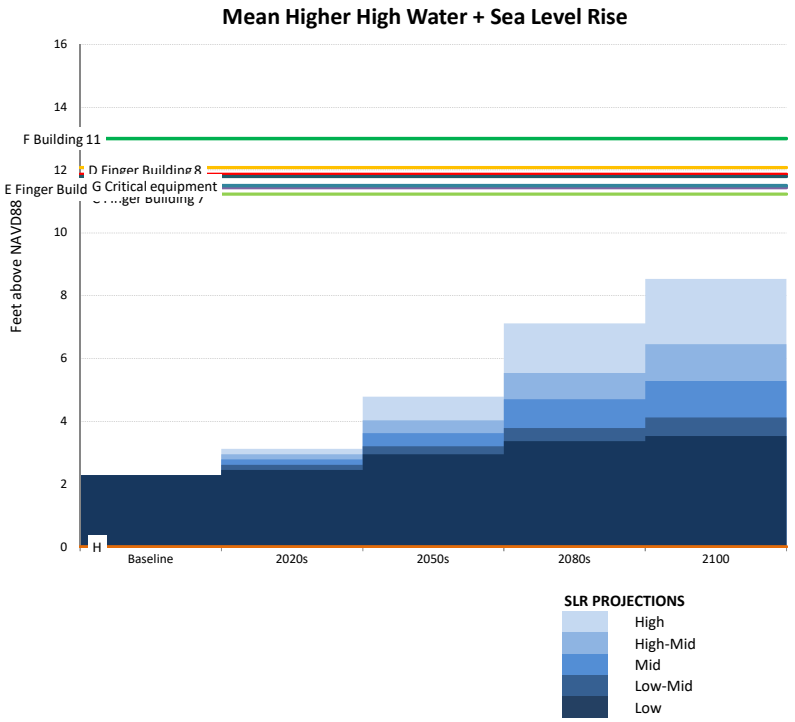
Data will be converted based on the following datums:

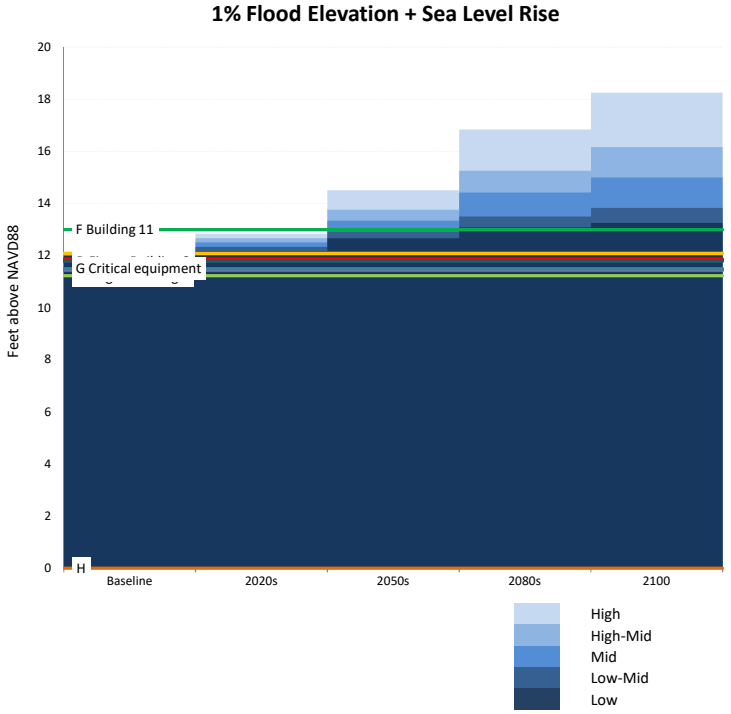
Datum	FT (NAVD88)
NAVD88	*0.00*
NGVD29	*-1.10*
Manhattan Datum	*1.65*
Bronx Datum	*1.51*
Brooklyn Datum (Sewer)	*0.61*
Brooklyn Datum (Highway)	*1.45*
Queens Datum	*1.63*
Richmond Datum	*2.09*
Station	
MLLW	

Describe key physical features of the project.

Feature *(enter name)*	Feature Category	Lifespan	Elevation	Units	Datum	Ft	Ft Above NAVD88	Ft Above MHHW	Ft Above 1% flood height	Ft Above 0.2% flood height
A Finger Building 5	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	11.9	Feet	NAVD88	*11.9*	*11.9*	*9.6*	*-0.1*	*#VALUE!*
Ground floor of northwestern portion of building. Small to mid-sized retail uses, Innovation Economy uses. Part of Finger Buildings area.										
B Finger Building 6	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	12.1	Feet	NAVD88	*12.1*	*12.1*	*9.8*	*0.1*	*#VALUE!*
Ground floor of northwestern portion of building. Small to mid-sized retail uses, Innovation Economy uses. Part of Finger Buildings area.										
C Finger Building 7	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	11.2	Feet	NAVD88	*11.2*	*11.2*	*9.0*	*-0.8*	*#VALUE!*
Ground floor of northwestern portion of building. Small to mid-sized retail uses, Innovation Economy uses. Part of Finger Buildings area.										
D Finger Building 8	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	11.8	Feet	NAVD88	*11.8*	*11.8*	*9.5*	*-0.2*	*#VALUE!*
Ground floor of northwestern portion of building. Small to mid-sized retail uses, Innovation Economy uses. Part of Finger Buildings area.										
E Finger Building 9	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	11.4	Feet	NAVD88	*11.4*	*11.4*	*9.2*	*-0.6*	*#VALUE!*
Ground floor of northwestern portion of building. Small to mid-sized retail uses, Innovation Economy uses. Part of Finger Buildings area.										
F Building 11	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	13.0	Feet	NAVD88	*13.0*	*13.0*	*10.7*	*1.0*	*#VALUE!*
Ground floor of northwestern portion of building. Small to mid-sized retail uses, Innovation Economy uses. Part of Finger Buildings area.										
G Critical equipment	☐ Vulnerable ☑ Critical ☐ Potentially Hazardous ☐ Other	2080	11.5	Feet	NAVD88	*11.5*	*11.5*	*9.2*	*-0.5*	*#VALUE!*
Plumbing, mechanical, and electrical equipment to be installed in each building. Elevation used is the average of the buildings within this floodplain elevation.										
H	☐ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other			Feet	NAVD88					

Assess project vulnerability over a range of sea level rise projections.





SLR (ft)	Low	Low-Mid	Mid	High-Mid	High
Baseline	0.00	0.00	0.00	0.00	0.00
2020s	0.17	0.33	0.50	0.67	0.83
2050s	0.67	0.92	1.33	1.75	2.50
2080s	1.08	1.50	2.42	3.25	4.83
2100	1.25	1.83	3.00	4.17	6.25

SLR (in)	Low	Low-Mid	Mid	High-Mid	High
2014	0	0	0	0	0
2020s	2	4	6	8	10
2050s	8	11	16	21	30
2080s	13	18	29	39	58
2100	15	22	36	50	75

MHHW+SLR (ft above NAVD88)	Low	Low-Mid	Mid	High-Mid	High
Baseline	2.28	2.28	2.28	2.28	2.28
2020s	2.45	2.61	2.78	2.95	3.11
2050s	2.95	3.20	3.61	4.03	4.78
2080s	3.36	3.78	4.70	5.53	7.11
2100	3.53	4.11	5.28	6.45	8.53

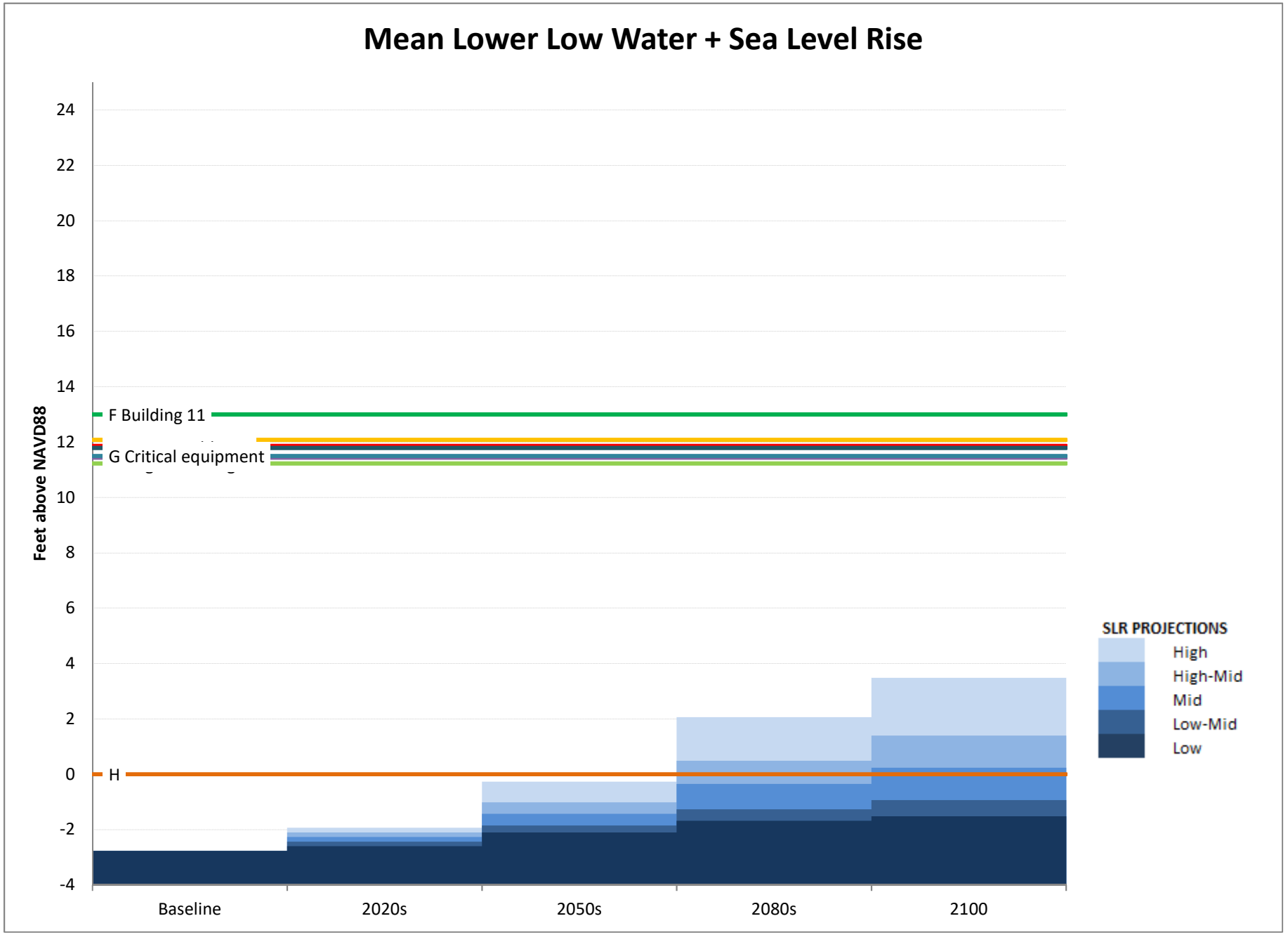
MLLW+SLR (ft above NAVD88)	Low	Low-Mid	Mid	High-Mid	High
Baseline	-2.77	-2.77	-2.77	-2.77	-2.77
2020s	-2.60	-2.44	-2.27	-2.10	-1.94
2050s	-2.10	-1.85	-1.44	-1.02	-0.27
2080s	-1.69	-1.27	-0.35	0.48	2.06
2100	-1.52	-0.94	0.23	1.40	3.48

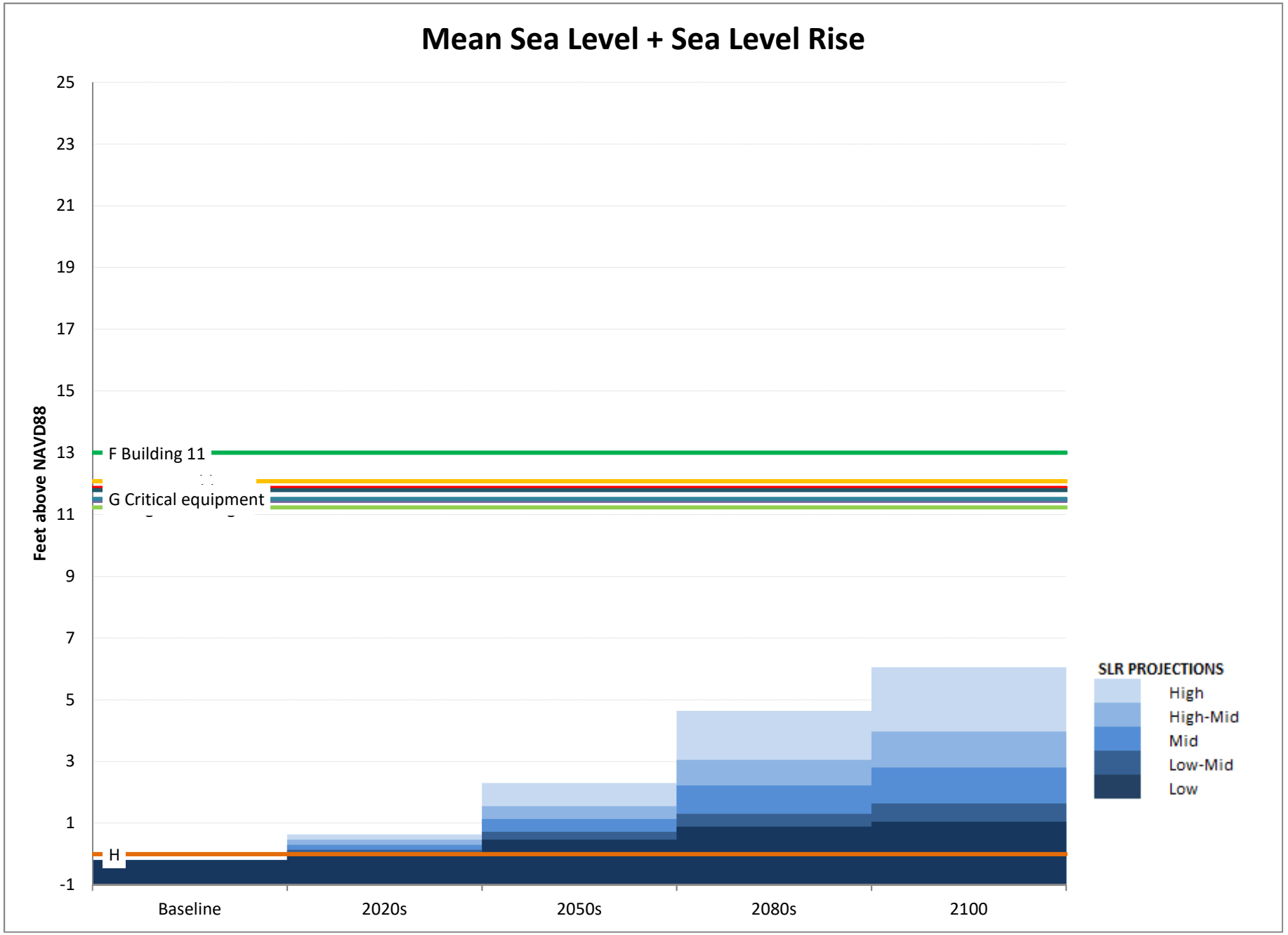
1%+SLR (ft above NAVD88)	Low	Low-Mid	Mid	High-Mid	High
Baseline	12.00	12.00	12.00	12.00	12.00
2020s	12.17	12.33	12.50	12.67	12.83
2050s	12.67	12.92	13.33	13.75	14.50
2080s	13.08	13.50	14.42	15.25	16.83
2100	13.25	13.83	15.00	16.17	18.25

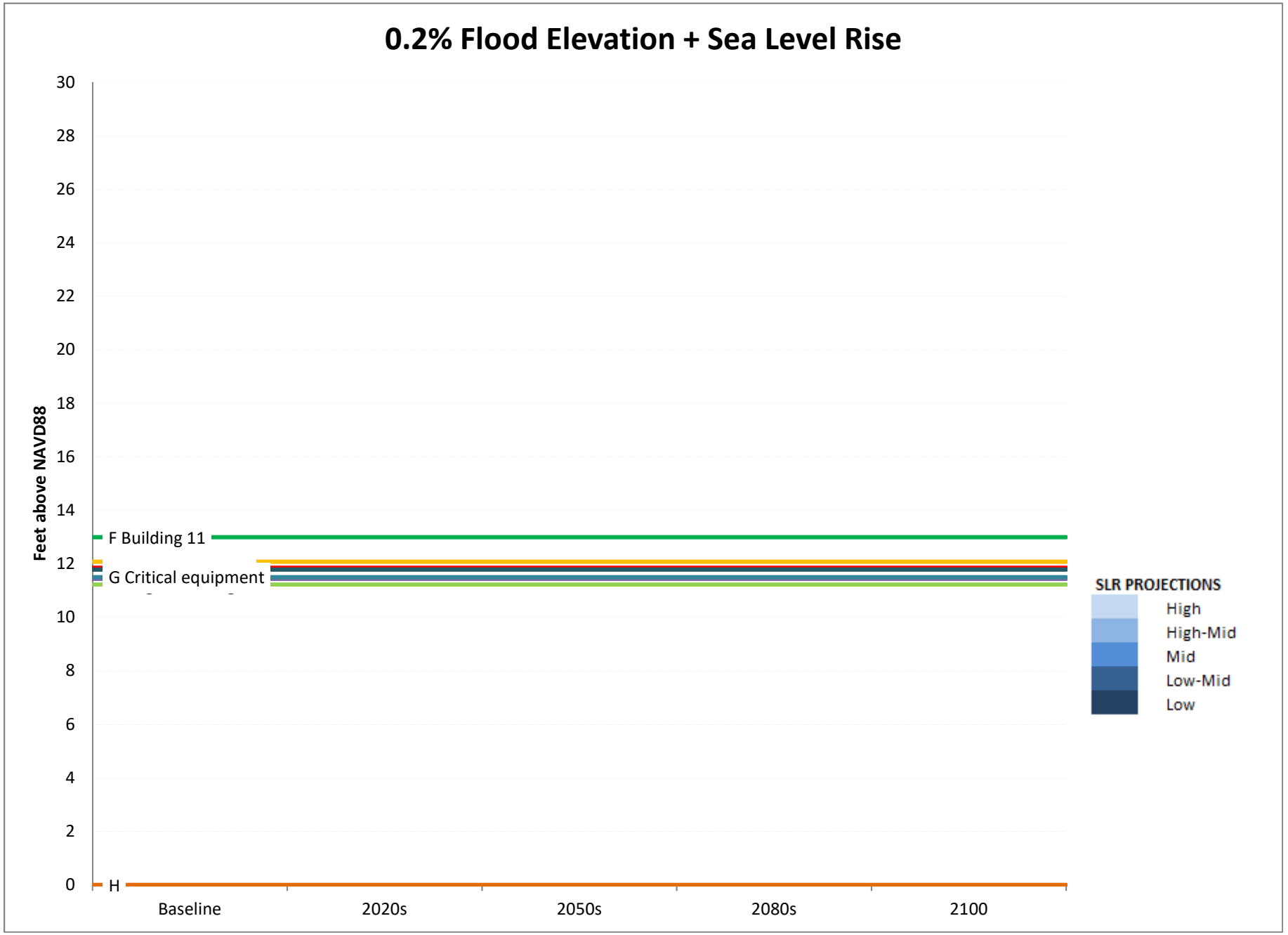
MSL+SLR (ft above NAVD88)	Low	Low-Mid	Mid	High-Mid	High
Baseline	-0.20	-0.20	-0.20	-0.20	-0.20
2020s	-0.03	0.13	0.30	0.47	0.63
2050s	0.47	0.72	1.13	1.55	2.30
2080s	0.88	1.30	2.22	3.05	4.63
2100	1.05	1.63	2.80	3.97	6.05

0.2%+SLR (ft above NAVD88)	Low	Low-Mid	Mid	High-Mid	High
Baseline	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
2020s	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
2050s	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
2080s	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
2100	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!

	0	1
A Finger Building 5	12	11.86
B Finger Building 6	12	12.08
C Finger Building 7	11.23	11.23
D Finger Building 8	11.79	11.79
E Finger Building 9	11.44	11.44
F Building 11	13	13
G Critical equipment	11.5	11.5
H	0	0


Mean Lower Low Water + Sea Level Rise
Feet above NAVD88
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
F Building 11
G Critical equipment
H
Baseline
2020s
2050s
2080s
2100
SLR PROJECTIONS
High
High-Mid
Mid
Low-Mid
Low


Mean Sea Level + Sea Level Rise
Feet above NAVD88
25
23
21
19
17
15
13
11
9
7
5
3
1
-1
F Building 11
G Critical equipment
H
Baseline
2020s
2050s
2080s
2100
SLR PROJECTIONS
High
High-Mid
Mid
Low-Mid
Low


0.2% Flood Elevation + Sea Level Rise
Feet above NAVD88
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
F Building 11
G Critical equipment
H
Baseline
2020s
2050s
2080s
2100
SLR PROJECTIONS
High
High-Mid
Mid
Low-Mid
Low

Flood Evaluation Worksheet – Industry City

Elevation 13

NYC Waterfront Revitalization Program - Policy 6.2 Flood Elevation Workhsheet

COMPLETE INSTRUCTIONS ON HOW TO USE THIS WORKSHEET ARE PROVIDED IN THE "CLIMATE CHANGE ADAPTATION GUIDANCE" DOCUMENT AVAILABLE AT www.nyc.gov/wrp

Enter information about the project and site in highlighted cells in Tabs 1-3. HighTab 4 contains primary results. Tab 5, "Future Flood Level Projections" contains background computations. The remaining tabs contain additional results, to be used as relevant.Non-highlighted cells have been locked.

Background Information	
Project Name	Industry City
Location	Sunset Park neighborhood, Brooklyn, New York
Type(s)	☑ Residential, Commercial, Community Facility; ☐ Parkland, Open Space, and Natural Areas; ☐ Tidal Wetland Restoration; ☐ Critical Infrastructure or Facility; ☑ Industrial Uses; ☐ Over-water Structures; ☐ Shoreline Structures; ☐ Transportation; ☐ Wastewater Treatment/Drainage; ☐ Coastal Protection
Description	A mixed-use project with manufacturing, commercial, and community uses that would establish an "Innovation Economy Hub" in the Sunset Park neighborhood. The project would redevelop and re-tenant the Industry City Complex. The applicant is requesting Zoning Text and Zoning Map amendments, special permits, and a change to the city map. The project would result in the introduction of commercial and community uses that would increase the non-residential population in the area, including retail, event, sports, hotel, academic, mechanical, storage, and parking facilities.
Planned Completion date	Dec-27

For technical assistance on using this worksheet, email wrp@planning.nyc.gov, using the message subject "Policy 6.2 Worksheet Error."

Last update: June 7, 2017

Establish current tidal and flood heights.

	FT (NAVD88)	Feet	Datum	Source
MHHW	2.28	**2.28**	**NAVD88**	*Datums for the Battery, NOAA Station 8518750*
1% flood height	13.00	**13.00**	**NAVD88**	*NYC Hazard Flood Mapper, 2015 Preliminary FIRMs*
As relevant:				
0.2% flood height	-->		**NAVD88**	
MHW	1.96	1.96	**NAVD88**	*Datums for the Battery, NOAA Station 8518750*
MSL	-0.20	-0.20	**NAVD88**	*Datums for the Battery, NOAA Station 8518750*
MLLW	-2.77	-2.77	**NAVD88**	*Datums for the Battery, NOAA Station 8518750*

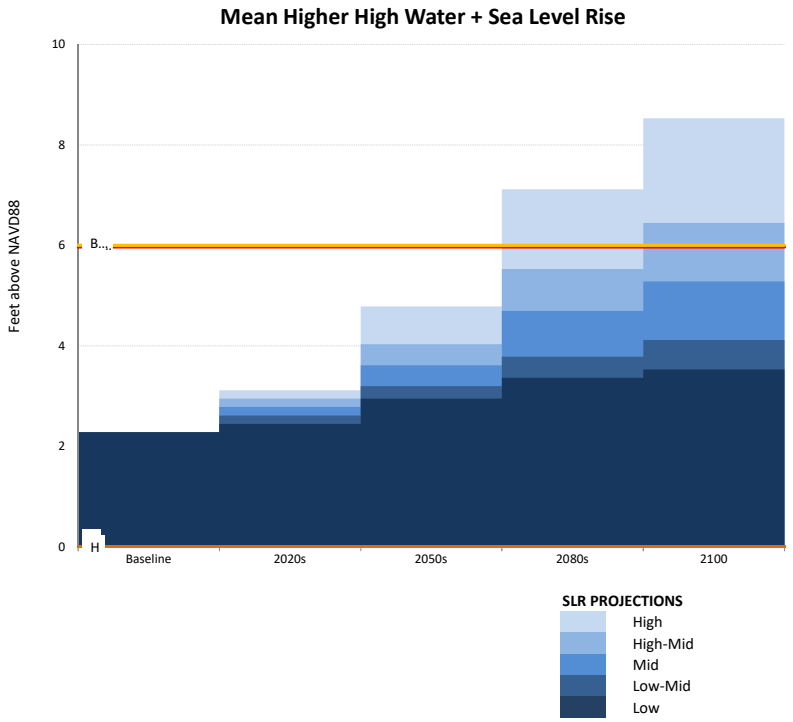
Data will be converted based on the following datums:

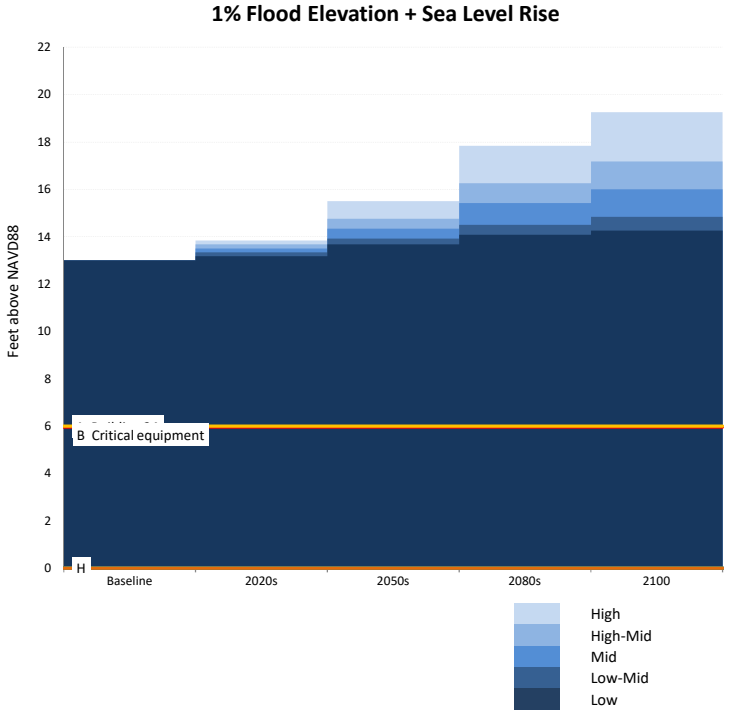
Datum	FT (NAVD88)
NAVD88	*0.00*
NGVD29	*-1.10*
Manhattan Datum	*1.65*
Bronx Datum	*1.51*
Brooklyn Datum (Sewer)	*0.61*
Brooklyn Datum (Highway)	*1.45*
Queens Datum	*1.63*
Richmond Datum	*2.09*
Station	
MLLW	

Describe key physical features of the project.

Feature *(enter name)*	Feature Category	Lifespan	Elevation	Units	Datum	Ft	Ft Above NAVD88	Ft Above MHHW	Ft Above 1% flood height	Ft Above 0.2% flood height
A Building 24	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	6.0	Feet	NAVD88	*6.0*	*6.0*	*3.7*	*-7.0*	*#VALUE!*
Ground floor of northwestern portion of building (waterfront). Innovation economy and storage space. Part of 39th Street Buildings area.										
B Critical equipment	☐ Vulnerable ☑ Critical ☐ Potentially Hazardous ☐ Other	2080	6.0	Feet	NAVD88	*6.0*	*6.0*	*3.7*	*-7.0*	*#VALUE!*
Plumbing, mechanical, and electrical equipment to be installed in Building 24. Part of 39th Street Buildings area.										
C	☐ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other			Feet	NAVD88					
Description of Planned Uses and Materials										
D	☐ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other			Feet	NAVD88					
Description of Planned Uses and Materials										
E	☐ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other			Feet	NAVD88					
Description of Planned Uses and Materials										
F	☐ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other			Feet	NAVD88					
Description of Planned Uses and Materials										
G	☐ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other			Feet	NAVD88					
Description of Planned Uses and Materials										
H	☐ Vulnerable ☐ Critical ☑ Potentially Hazardous ☐ Other			Feet	NAVD88					
Description of Planned Uses and Materials										

Assess project vulnerability over a range of sea level rise projections.





SLR (ft)

	Low	Low-Mid	Mid	High-Mid	High
Baseline	0.00	0.00	0.00	0.00	0.00
2020s	0.17	0.33	0.50	0.67	0.83
2050s	0.67	0.92	1.33	1.75	2.50
2080s	1.08	1.50	2.42	3.25	4.83
2100	1.25	1.83	3.00	4.17	6.25

SLR (in)

	Low	Low-Mid	Mid	High-Mid	High
2014	0	0	0	0	0
2020s	2	4	6	8	10
2050s	8	11	16	21	30
2080s	13	18	29	39	58
2100	15	22	36	50	75

MHHW+SLR (ft above NAVD88)

	Low	Low-Mid	Mid	High-Mid	High
Baseline	2.28	2.28	2.28	2.28	2.28
2020s	2.45	2.61	2.78	2.95	3.11
2050s	2.95	3.20	3.61	4.03	4.78
2080s	3.36	3.78	4.70	5.53	7.11
2100	3.53	4.11	5.28	6.45	8.53

MLLW+SLR (ft above NAVD88)

	Low	Low-Mid	Mid	High-Mid	High
Baseline	-2.77	-2.77	-2.77	-2.77	-2.77
2020s	-2.60	-2.44	-2.27	-2.10	-1.94
2050s	-2.10	-1.85	-1.44	-1.02	-0.27
2080s	-1.69	-1.27	-0.35	0.48	2.06
2100	-1.52	-0.94	0.23	1.40	3.48

1%+SLR (ft above NAVD88)

	Low	Low-Mid	Mid	High-Mid	High
Baseline	13.00	13.00	13.00	13.00	13.00
2020s	13.17	13.33	13.50	13.67	13.83
2050s	13.67	13.92	14.33	14.75	15.50
2080s	14.08	14.50	15.42	16.25	17.83
2100	14.25	14.83	16.00	17.17	19.25

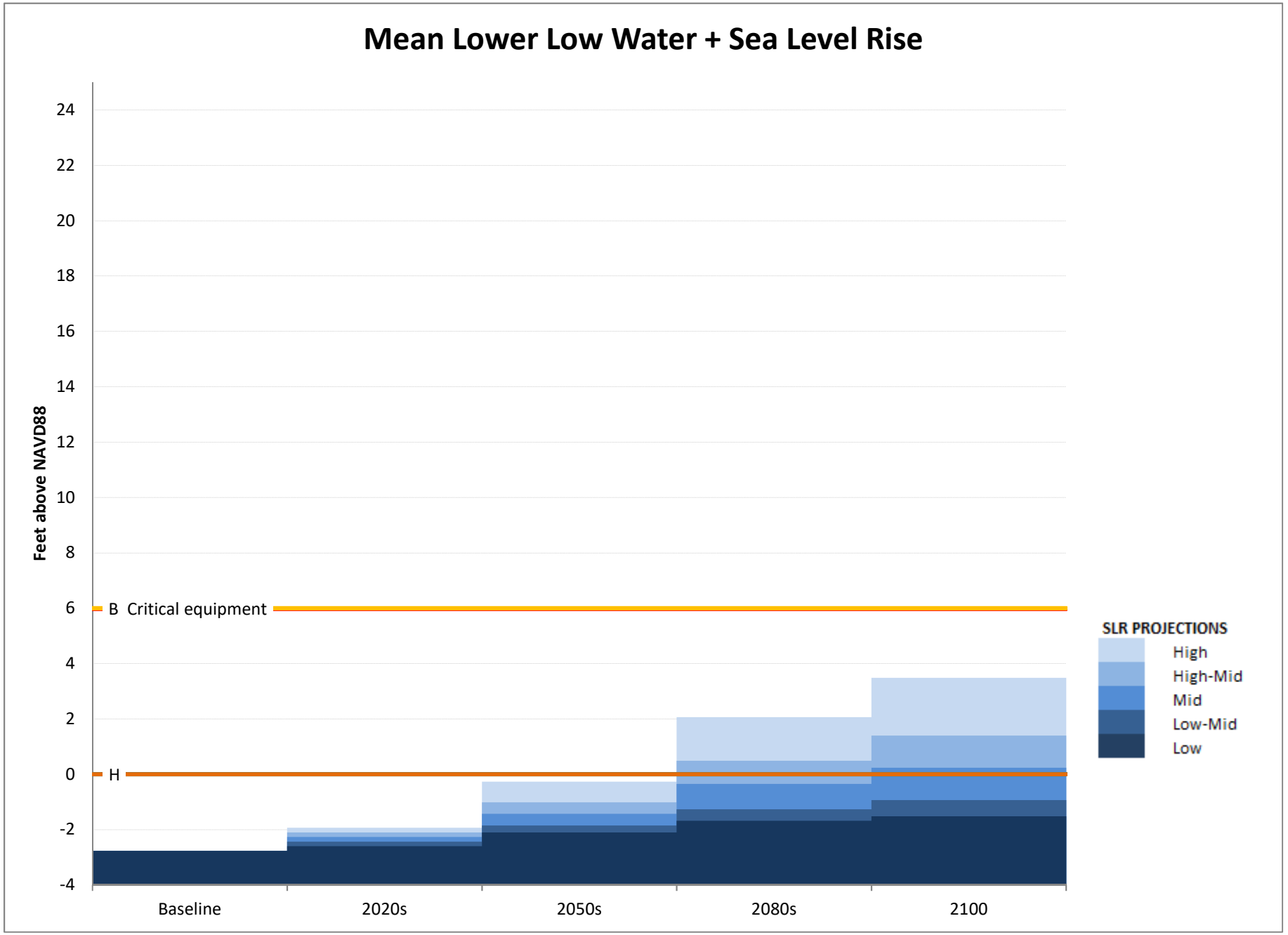
MSL+SLR (ft above NAVD88)

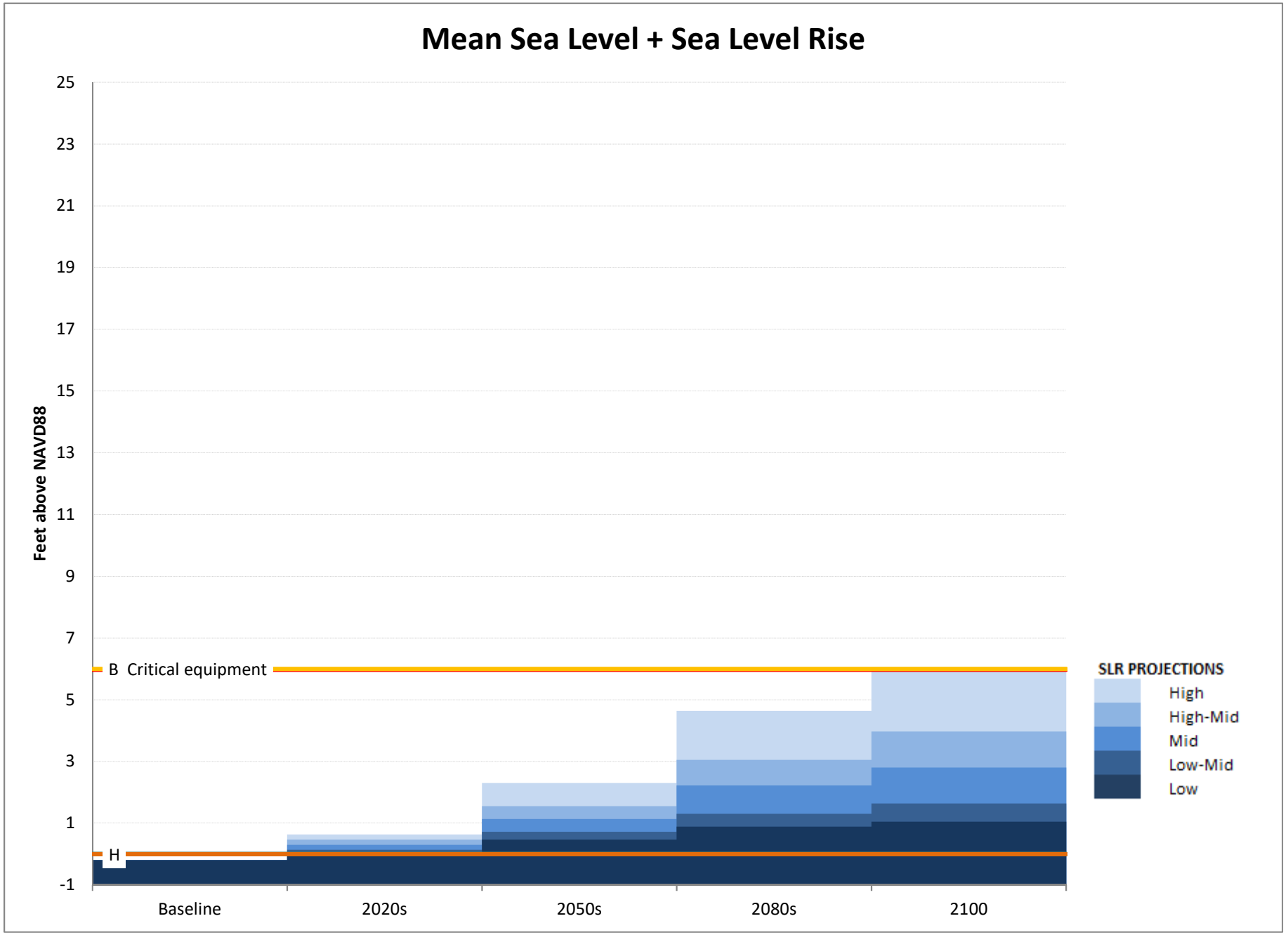
	Low	Low-Mid	Mid	High-Mid	High
Baseline	-0.20	-0.20	-0.20	-0.20	-0.20
2020s	-0.03	0.13	0.30	0.47	0.63
2050s	0.47	0.72	1.13	1.55	2.30
2080s	0.88	1.30	2.22	3.05	4.63
2100	1.05	1.63	2.80	3.97	6.05

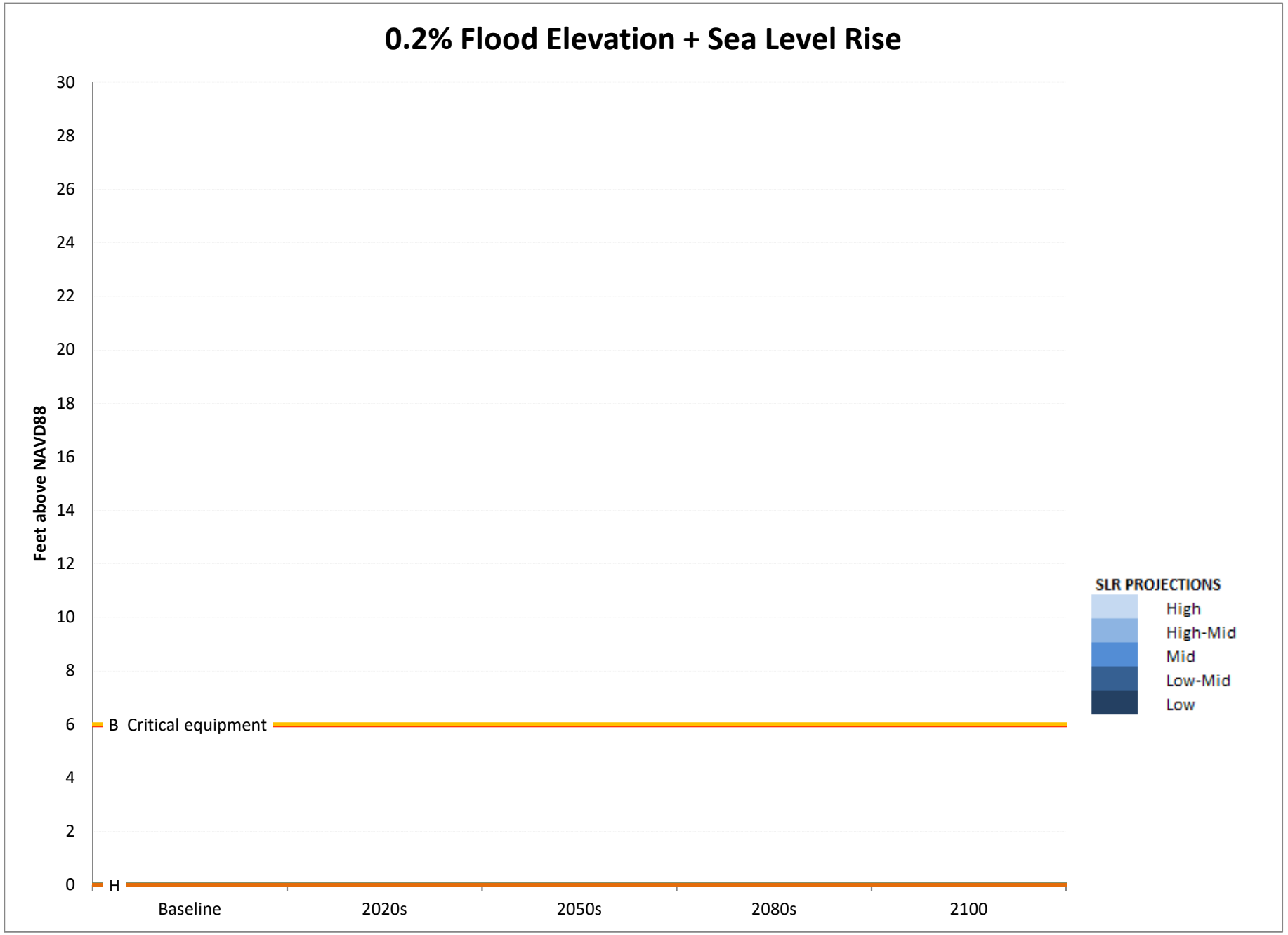
0.2%+SLR (ft above NAVD88)

	Low	Low-Mid	Mid	High-Mid	High
Baseline	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
2020s	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
2050s	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
2080s	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
2100	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!

	0	1
A Building 24	6	5.97
B Critical equipment	6	6
C	0	0
D	0	0
E	0	0
F	0	0
G	0	0
H	0	0


Mean Lower Low Water + Sea Level Rise
Feet above NAVD88
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
B Critical equipment
H
Baseline
2020s
2050s
2080s
2100
SLR PROJECTIONS
High
High-Mid
Mid
Low-Mid
Low


Mean Sea Level + Sea Level Rise
Feet above NAVD88
25
23
21
19
17
15
13
11
9
7
5
3
1
-1
B Critical equipment
H
Baseline
2020s
2050s
2080s
2100
SLR PROJECTIONS
High
High-Mid
Mid
Low-Mid
Low


0.2% Flood Elevation + Sea Level Rise
Feet above NAVD88
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
B Critical equipment
H
Baseline
2020s
2050s
2080s
2100
SLR PROJECTIONS
High
High-Mid
Mid
Low-Mid
Low