

## **Appendix C**

### **Tables**

**Table 5.2-1**  
**National Ambient Air Quality Standards (NAAQS)**

Pollutant	Primary		Secondary	
	ppm	µg/m <sup>3</sup>	ppm	µg/m <sup>3</sup>
<b>Carbon Monoxide (CO)</b>				
8-Hour Average <sup>(1)</sup>	9	10,000	None	
1-Hour Average <sup>(1)</sup>	35	40,000		
<b>Lead</b>				
Rolling 3-Month Average <sup>(2)</sup>	NA	0.15	NA	0.15
<b>Nitrogen Dioxide (NO<sub>2</sub>)</b>				
1-Hour Average <sup>(3)</sup>	0.100	189	None	
Annual Average	0.053	100	0.053	100
<b>Ozone (O<sub>3</sub>)</b>				
8-Hour Average <sup>(4,5)</sup>	0.075	150	0.075	150
<b>Respirable Particulate Matter (PM<sub>10</sub>)</b>				
24-Hour Average <sup>(1)</sup>	NA	150	NA	150
<b>Fine Respirable Particulate Matter (PM<sub>2.5</sub>)</b>				
Annual Mean <sup>(6)</sup>	NA	12	NA	15
24-Hour Average <sup>(7)</sup>	NA	35	NA	35
<b>Sulfur Dioxide (SO<sub>2</sub>) <sup>(8)</sup></b>				
1-Hour Average <sup>(9)</sup>	0.075	196	NA	NA
Maximum 3-Hour Average <sup>(1)</sup>	NA	NA	0.50	1,300
<p><b>Notes:</b></p> <p>ppm – parts per million (unit of measure for gases only)</p> <p>µg/m<sup>3</sup> – micrograms per cubic meter (unit of measure for gases and particles, including lead)</p> <p>NA – not applicable</p> <p>All annual periods refer to calendar year.</p> <p>Standards are defined in ppm. Approximately equivalent concentrations in µg/m<sup>3</sup> are presented.</p> <p><sup>(1)</sup> Not to be exceeded more than once a year.</p> <p><sup>(2)</sup> EPA has lowered the NAAQS down from 1.5 µg/m<sup>3</sup>, effective January 12, 2009.</p> <p><sup>(3)</sup> 3-year average of the annual 98th percentile daily maximum 1-hr average concentration. Effective April 12, 2010.</p> <p><sup>(4)</sup> 3-year average of the annual fourth highest daily maximum 8-hr average concentration.</p> <p><sup>(5)</sup> EPA has proposed lowering the primary standard further to within the range 0.060-0.070 ppm, and adding a secondary standard measured as a cumulative concentration within the range of 7 to 15 ppm-hours aimed mainly at protecting sensitive vegetation. A final decision on these standards has been postponed and is currently in review.</p> <p><sup>(6)</sup> 3-year average of annual mean. EPA has lowered the primary standard from 15 µg/m<sup>3</sup>, effective March 2013.</p> <p><sup>(7)</sup> Not to be exceeded by the annual 98th percentile when averaged over 3 years.</p> <p><sup>(8)</sup> EPA revoked the 24-hour and annual primary standards, replacing them with a 1-hour average standard. Effective August 23, 2010.</p> <p><sup>(9)</sup> 3-year average of the annual 99th percentile daily maximum 1-hr average concentration.</p> <p><b>Source:</b> 40 CFR Part 50: National Primary and Secondary Ambient Air Quality Standards.</p>				

**Table 5.2-2**  
**Representative Monitored Ambient Air Quality Data**

<b>Pollutant</b>	<b>Location</b>	<b>Units</b>	<b>Averaging Period</b>	<b>Concentration</b>	<b>NAAQS</b>
CO	CCNY, Manhattan	ppm	8-hour	1.2	9
	CCNY, Manhattan		1-hour	1.8	35
SO <sub>2</sub>	Botanical Garden, Bronx	µg/m <sup>3</sup>	3-hour	67.3	1,300
			1-hour	81.0	196
PM <sub>10</sub>	P.S. 19, Manhattan	µg/m <sup>3</sup>	24-hour	40	150
PM <sub>2.5</sub>	JHS 45, Manhattan	µg/m <sup>3</sup>	Annual	9.5	12
			24-hour	22.2	35
NO <sub>2</sub>	IS 52, Bronx	µg/m <sup>3</sup>	Annual	39	100
	Botanical Garden, Bronx		1-hour	112	189
Lead	IS 52, Bronx	µg/m <sup>3</sup>	3-month	0.005	0.15
Ozone	CCNY, Manhattan	ppm	8-hour	0.072	0.075

**Notes:**

- Based on the NAAQS definitions, the CO and 3-hour SO<sub>2</sub> concentrations for short-term averages are the second-highest from the year; the 3-hour SO<sub>2</sub> concentration is based on 2012 data, which is the most recent available data from DEC.
- SO<sub>2</sub> 1-hour and NO<sub>2</sub> 1-hour concentrations are the average of the 99th percentile and 98th percentile, respectively, of the highest daily 1-hour maximum from 2011 to 2013.
- PM<sub>2.5</sub> annual concentrations are the average of 2011–2013, and the 24-hour concentration is the average of the annual 98th percentiles in 2011- 2013.
- 8-Hour average ozone concentrations are the average of the 4th highest-daily values from 2011 to 2013.

**Source:** DEC, New York State Ambient Air Quality Data.

**Table 5.6-1**  
**Vegetation Identified within the Project Site**

<b>Common Name</b>	<b>Scientific Name</b>	<b>Stratum</b>
Wintercreeper	<i>Euonymus fortunei</i>	Herb
Pin oak	<i>Quercus palustris</i>	Tree
Red maple	<i>Acer rubrum</i>	Tree
Black locust	<i>Robinia psuedoacacia</i>	Tree
European beech	<i>Fagus sylvatica</i>	Tree
Winged euonymus	<i>Euonymus alatus</i>	Shrub
English ivy	<i>Hedera helix</i>	Herb
Norway spruce	<i>Picea abies</i>	Tree
Rhododendron	<i>Rhododendron</i> sp	Shrub
White mulberry	<i>Morus alba</i>	Tree
Common mugwort	<i>Artemisia vulgaris</i>	Herb
Yew	<i>Taxus</i> sp	Shrub

**Sources:** Reconnaissance investigation on February 24, 2015

**Table 5.7-1**  
**New York State Breeding Bird Atlas (2000-2005)**  
**Results for Blocks 5850A and 5851C**

<b>Common Name</b>	<b>Scientific Name</b>
Red-winged Blackbird	<i>Agelaius phoeniceus</i>
Mallard	<i>Anas platyrhynchos</i>
Tufted Titmouse	<i>Baeolophus bicolor</i>
Cedar Waxwing	<i>Bombycilla cedrorum</i>
Canada Goose	<i>Branta canadensis</i>
Red-tailed Hawk	<i>Buteo jamaicensis</i>
Green Heron	<i>Butorides virescens</i>
Northern Cardinal	<i>Cardinalis cardinalis</i>
House Finch	<i>Carpodacus mexicanus</i>
Chimney Swift	<i>Chaetura pelagica</i>
Northern Flicker	<i>Colaptes auratus</i>
Rock Pigeon	<i>Columba livia</i>
Eastern Wood-Pewee	<i>Contopus virens</i>
American Crow	<i>Corvus brachyrhynchos</i>
Blue Jay	<i>Cyanocitta cristata</i>
Mute Swan	<i>Cygnus olor</i>
Gray Catbird	<i>Dumetella carolinensis</i>
Peregrine Falcon	<i>Falco peregrinus</i>
American Kestrel	<i>Falco sparverius</i>
Barn Swallow	<i>Hirundo rustica</i>
Wood Thrush	<i>Hylocichla mustelina</i>
Baltimore Oriole	<i>Icterus galbula</i>
Orchard Oriole	<i>Icterus spurius</i>
Herring Gull	<i>Larus argentatus</i>
Eastern Screech-Owl	<i>Megascops asio</i>
Red-bellied Woodpecker	<i>Melanerpes carolinus</i>
Song Sparrow	<i>Melospiza melodia</i>
Northern Mockingbird	<i>Mimus polyglottos</i>
Great Crested Flycatcher	<i>Myiarchus crinitus</i>
House Sparrow	<i>Passer domesticus</i>
Double-crested Cormorant	<i>Phalacrocorax auritus</i>
Downy Woodpecker	<i>Picoides pubescens</i>
Common Grackle	<i>Quiscalus quiscula</i>
White-breasted Nuthatch	<i>Sitta carolinensis</i>
European Starling	<i>Sturnus vulgaris</i>
Tree Swallow	<i>Tachycineta bicolor</i>
Carolina Wren	<i>Thryothorus ludovicianus</i>
House Wren	<i>Troglodytes aedon</i>
American Robin	<i>Turdus migratorius</i>
Eastern Kingbird	<i>Tyrannus tyrannus</i>
Warbling Vireo	<i>Vireo gilvus</i>
Red-eyed Vireo	<i>Vireo olivaceus</i>
Mourning Dove	<i>Zenaida macroura</i>

**Sources:** NYS Breeding Bird Atlas (2000-2005) Blocks 5850A and 5851C

# **Appendix D**

## **Correspondences**

**Appendix D**  
**Correspondence 5.5-1**  
**Coastal Zone Management Act Consultation**



FEMA

U.S. Department of Homeland Security  
FEMA-4085-DR-NY  
Sandy Recovery Field Office, Forest Hills Tower  
118-35 Queens Blvd., 6<sup>th</sup> Floor  
Forest Hills, NY 11375

April 13, 2015

Mr. Jeffrey Zappieri  
Consistency Review, New York Coastal Management Program  
New York Department of State  
One Commerce Place  
99 Washington Avenue, Suite 1010  
Albany, New York 12231-0001

Re: State's Coastal Management Program Consistency Review of FEMA-4085-DR-Hurricane Sandy: New York City Health and Hospitals Corporation - Bellevue Hospital

Dear Mr. Zappieri:

The Federal Emergency Management Agency (FEMA) is proposing to provide federal funding from its Public Assistance (PA) Program to assist New York City Health and Hospitals Corporation (HHC) with a comprehensive flood mitigation project for Bellevue Hospital. A perimeter boundary protection system will be constructed consisting of a series of connected permanent and removable walls with integrated flood gates that form a tight protection around the 7-acre campus (Figure 2). The floodwalls will be designed to the 0.2 percent annual probability flood ("500-year flood") elevation for the campus plus three feet of freeboard to account for sea level rise and one foot for wave action (Elevation 18 feet using the North American Vertical Datum of 1988 [NAVD88]).

In addition to the perimeter boundary protection system, the Proposed Alternative will include the following mitigation measures:

- The roof of the I&K building, which is located below-grade on the northern part of the campus and will be submerged during a flooding event, will be replaced and reinforced to withstand the loads caused by flooding. The configuration and height of the rook would not be substantially altered as a result of its replacement and reinforcement.
- The walls of the north and south vehicular loading dock areas will be strengthened with approximately 336 vertical wide flange steel beams (between 12 and 19 feet long) to handle the loads caused by flooding and new flood gates will be installed at the ramp entrances.
- Two new flood-pumping stations will be installed at the northeast and southeast corners of the campus (Figure 2), to convey sanitary and storm flows to the sewer during a flood event.



- A new bank of exterior elevators will be constructed on the exterior side of the Hospital Building at a location to be determined to provide up to four new service elevators, which will allow for critical operational needs. An emergency power source will be provided for the new bank of exterior elevators and all controls will be placed on the roof of the structure, well above the proposed design elevation. The exterior elevators will also be dry flood proofed, flood planks will be installed in front of the elevators, and sump pumps will be installed in the elevator pits to protect the elevators from flood damage.
- The existing 22 elevators in the Hospital Building will be mitigated by installing sump pumps in the elevator pits, waterproofing walls and floors in each elevator pit, installing flood barriers in the front of each elevator, applying salt water resistant coating to the traveling cables, enclosing hoistway wiring in seal tight conduits, and providing high water level switches in each elevator pit.
- A secondary domestic water pumping system will be installed in the mechanical rooms in the Hospital Building to provide the hospital with continuous domestic water service during a flooding event.
- The oxygen tank vault will be hardened and the medical gas piping system will be reworked in order to provide continuous medical gas and vacuum to the Emergency Department
- A backup heating system will be installed in case utility steam service is cut off, including a series of mobile boilers on the service road outside of the Ambulatory Care Building (Figure 2).
- HVAC equipment, including the air handling units in the cellar of the Hospital Building, will be relocated to new mechanical rooms in the building located above the “500-year” design flood elevation.
- Several improvements will be made to the normal and emergency power systems throughout the campus, including elevating the backup generator located on the loading dock, dry floodproofing the fuel oil pump room, installing a backup fuel oil pumping system for the emergency generators on the 13th floor of the Hospital Building, elevating the exhaust vents and tank fill port for the below-grade fuel oil tank, and relocating and elevating the service switchgears from the basement of the Ambulatory Care Building to the first floor of the building, which is above the design flood elevation.

New York State Coastal Policies 1 through 44 have been reviewed with respect to the proposed project to be performed per FEMA’s disaster recovery operations. Based on this review, FEMA has determined that the above referenced proposed activities are consistent with the policies of the New York State Coastal Management Program (CMP) and will not hinder the achievement of those policies. A summary of the proposed project’s consistency with the State Coastal Policies is included as an attachment.

FEMA is seeking the New York Department of State's (NYDOS) concurrence with FEMA's Coastal Zone Consistency Determination, in accordance with the requirement of the Coastal Zone Management Act of 1972 (15 CFR Part 930), prior to the release of federal funding to the grant recipient. An Environmental Assessment will be available for public comment for the same action and this letter will be incorporated into the appendices.

FEMA Environment Historic Preservation (EHP) looks forward to your office's feedback within 60 days of receipt of this letter. If you have any questions, please contact me at 202.286.1627 or at [john.dawson@fema.dhs.gov](mailto:john.dawson@fema.dhs.gov).

Sincerely,

John Dawson  
EHP, Branch Director  
New York Sandy Recovery Field Office/4085-DR-NY  
Desk (no voice mail): 718.575.7289  
Cell: 202.286.1627

JD/dr

Encl: Google Earth image  
Site drawings/plans  
Consistencies with Coastal Policies of New York Worksheet

# **ATTACHMENTS**

Figure 1. NYC HHC Bellevue Hospital

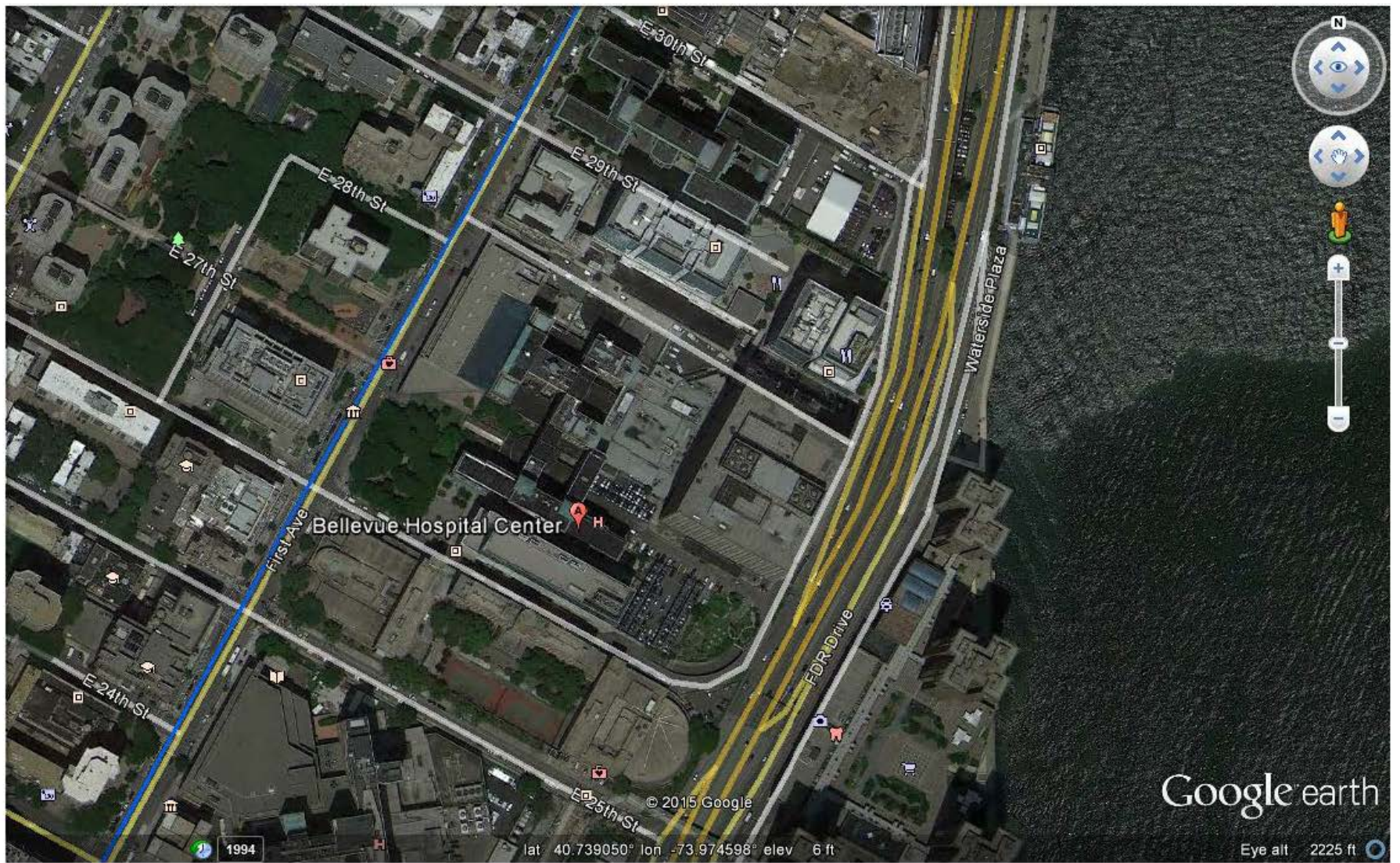
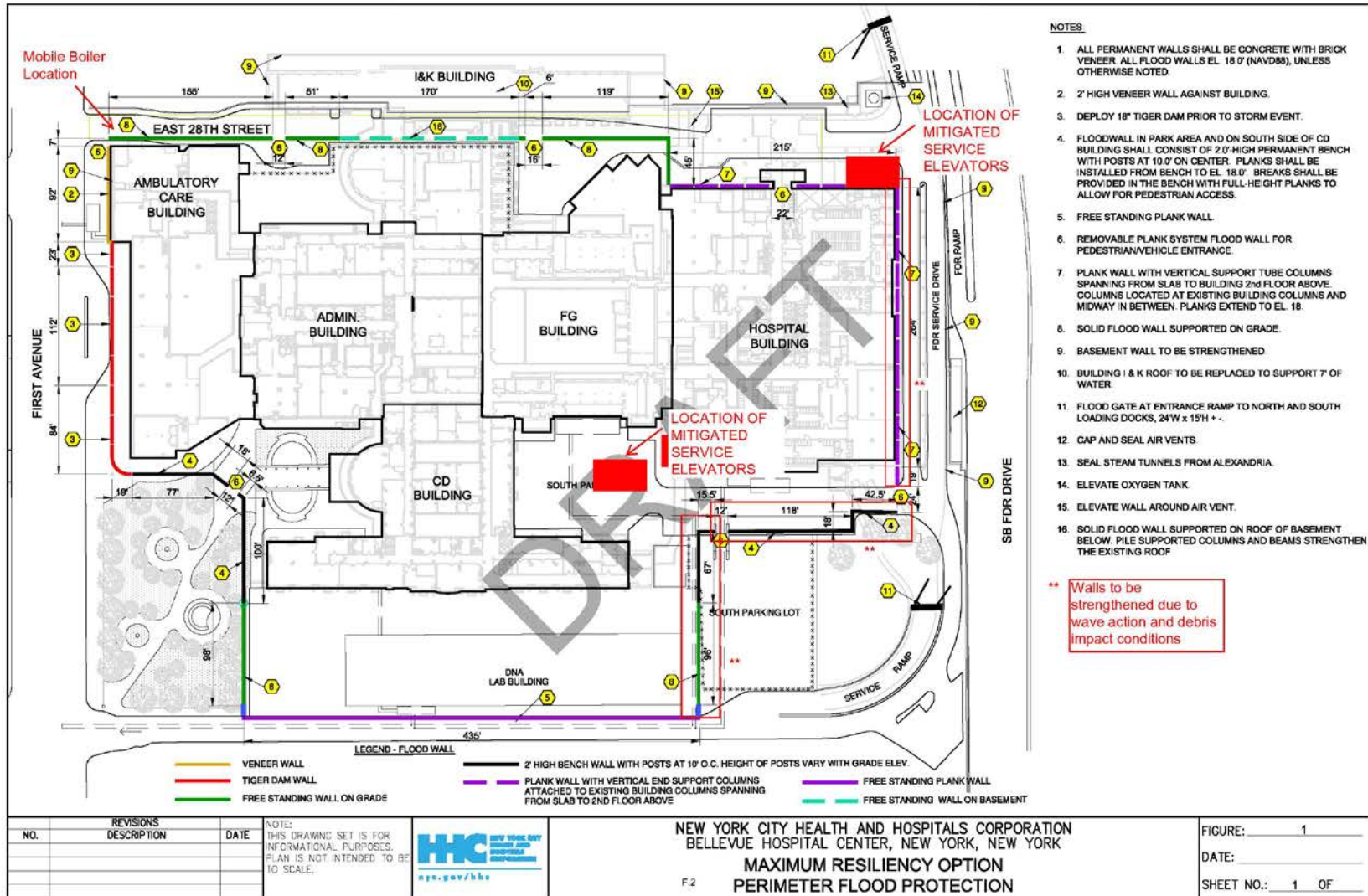


Figure 2: NYC HHC Bellevue Hospital Drawings/Plans



## Summary Table for Project's Consistency with Coastal Policies of New York State

### Policy 1

**Restore, revitalize, and redevelop deteriorated and underutilized waterfront areas for commercial, industrial, cultural, recreational, and other compatible uses.**

*N/A: This policy is not applicable to the Proposed Project. The Project Site is an active hospital and is not deteriorated or underutilized. The need for the Proposed Project is to repair, rehabilitate, and increase the resiliency of the hospital, which was severely damaged during Hurricane Sandy. In addition, the Project Site is separated from the waterfront by a major highway (FDR Drive), and other actively used waterfront sites.*

### Policy 2

**Facilitate the siting of water-dependent uses and facilities on or adjacent to coastal waters.**

*N/A: This policy is not applicable to the Proposed Project. The Project Site is an active hospital and is separated from the waterfront by a major highway (FDR Drive), and other actively used waterfront sites. No new uses are proposed as part of the Proposed Project.*

### Policy 3

**Further develop the state's major ports of Albany, Buffalo, New York, Ogdensburg, and Oswego as centers of commerce and industry, and encourage the siting, in these port areas, including those under the jurisdiction of state public authorities, of land use and development which is essential to, or in support of, the waterborne transportation of cargo and people.**

*N/A: This policy is not applicable to the Proposed Project. The Project Site is not adjacent to, or substantially close to, active Port operations for the City of New York.*

### Policy 4

**Strengthen the economic base of smaller harbor areas by encouraging the development and enhancement of those traditional uses and activities which have provided such areas with their unique maritime identity.**

*N/A: This policy is not applicable to the Proposed Project as the Project Site is not located in or near a small harbor area.*

### Policy 5

**Encourage the location of development in areas where public services and facilities essential to such development are adequate.**

*Consistent: The Proposed Project will repair, rehabilitate, and increase the resiliency of the existing Bellevue Hospital. The Project Site is currently served by adequate public services and facilities and is within a densely populated and well-served area of the City of New York.*

### Policy 6

**Expedite permit procedures in order to facilitate the siting of development activities at suitable locations.**

*FEMA will provide a 60-day consistency determination review period to the NYS DOS Coastal Management Program before processing the federal disaster relief grant specifically for declaration of NY-4085.*

### Policy 7

**Significant coastal fish and wildlife habitats will be protected, preserved, and where practical, restored so as to maintain their viability as habitats.**

*N/A: This policy is not applicable to the Proposed Project. There are no areas within the Project Site or surrounding area that have been designated by the New York State Department of State (NYS DOS) as Significant Coastal Fish and Wildlife Habitat (SCFWH).*

### Policy 8

**Protect fish and wildlife resources in the coastal area from the introduction of hazardous wastes and other pollutants which bio-accumulate in the food chain or which cause significant sub lethal or lethal effect on those resources.**

*Consistent: The Proposed Project is not expected to introduce new hazardous waste or pollutants to the environment. The increased flood protection afforded to the Project Site, which does generate and store hazardous wastes, will decrease the potential for flood waters to cause the accidental release of those hazardous materials, thereby increasing the protection afforded to the environment.*

### Policy 9

**Expand recreational use of fish and wildlife resources in coastal areas by increasing access to existing resources, supplementing existing stocks, and developing new resources.**

*N/A: This policy is not applicable to the Proposed Project (an existing hospital) or the Project Site, which is separated from the waterfront by a major highway (FDR Drive), and other actively used waterfront sites.*

### Policy 10

**Further develop commercial finfish, shellfish, and crustacean resources in the coastal area by encouraging the construction of new, or improvement of existing on-shore commercial fishing facilities, increasing marketing of the state's seafood, maintaining adequate stocks, and expanding aquaculture facilities.**

*N/A: This policy is not applicable to the Proposed Project (an existing hospital) or the Project Site, which is separated from the waterfront by a major highway (FDR Drive), and other actively used waterfront sites.*

### Policy 11

**Buildings and other structures will be sited in the coastal area so as to minimize damage to property and the endangering of human lives caused by flooding and erosion.**

*Consistent: The Project Site is located in a densely populated and built area and is currently used as a hospital. Increasing the resiliency of the hospital will, in turn, reduce the danger to human lives caused by future flood events, by allowing the hospital to continue providing its essential core services.*

### Policy 12

**Activities or development in the coastal area will be undertaken so as to minimize damage to natural resources and property from flooding and erosion by protecting natural protective features including beaches, dunes, barrier islands and bluffs.**

*N/A: This policy is not applicable to the Project Site, which is not adjacent to natural protective features or areas on which such features could be built. The Proposed Project would minimize damage to the Project Site from flooding.*

### Policy 13

**The construction or reconstruction of erosion protection structures shall be undertaken only if they have a reasonable probability of controlling erosion for at least thirty years as demonstrated in design and construction standards and/or assured maintenance or replacement programs.**

*N/A: This policy is not applicable to the Proposed Project, which does not include the construction or reconstruction of erosion protection structures.*

### Policy 14

**Activities and development, including the construction or reconstruction of erosion protection structures, shall be undertaken so that there will be no measurable increase in erosion or flooding at the site of such activities or development, or at other locations.**

*Consistent: A primary component of the Proposed Project is a perimeter floodwall, which would reduce the susceptibility of the Project Site to flooding. A Hydrology and Hydraulics study was conducted to model the effects of the Proposed Project on flooding conditions at other locations. This study found that the flood volume displaced by the Bellevue Hospital campus is much less than the storm tide volume of the East River. Therefore, there would be no significant increase in flooding at other properties as a result of the Proposed Project.*

### Policy 15

**Mining, excavation or dredging in coastal waters shall not significantly interfere with the natural coastal processes which supply beach materials to land adjacent to such waters and shall be undertaken in a manner which will not cause an increase in erosion of such land.**

*N/A: This policy is not applicable to the Proposed Project, which does not propose any dredging of coastal waters.*



### Policy 16

**Public funds shall only be used for erosion protective structures where necessary to protect human life, and new development which requires a location within or adjacent to an erosion hazard area to be able to function, or existing development; and only where the public benefits outweigh the long term monetary and other costs including the potential for increasing erosion and adverse effects on natural protective features.**

*N/A: This policy is not applicable to the Proposed Project, which does not include the construction or reconstruction of erosion protection structures.*

### Policy 17

**Non-structural measures to minimize damage to natural resources and property from flooding and erosion shall be used whenever possible.**

*Consistent: The Proposed Project includes structural and non-structural measures to minimize property damage from flooding. Critical infrastructure, such as emergency power and domestic water pumping systems will be repaired or upgraded and will either be hardened against flooding or elevated. However, in order to provide the level of protection that is necessary to this critical public service facility, structural flood protection measures, such as the proposed floodwall, are required.*

### Policy 18

**To safeguard the vital economic, social and environmental interests of the state and of its citizens, proposed major actions in the coastal area must give full consideration to those interests, and to the safeguards which the state has established to protect valuable coastal resource areas.**

*Consistent: The Proposed Project is the subject of an Environmental Assessment (EA) by FEMA, pursuant to the National Environmental Policy Act (NEPA). The EA will evaluate the social and environmental impacts of the Proposed Project. While the economic impacts of the Proposed Project will not be directly analyzed in the EA, protecting this critical facility from recurring damage and increasing the hospital's ability to continue operating during future disasters will provide economic benefits to the City and State. In addition, the Proposed Project will comply with all permits and regulations necessary for the construction and operation of the Proposed Project, which will help safeguard the State's critical interests.*

### Policy 19

**Protect, maintain, and increase the level and types of access to public water-related recreation resources and facilities.**

*N/A: This policy is not applicable to the Proposed Project, which is a currently operating hospital. In addition, the Project Site is separated from the waterfront by a major highway (FDR Drive), and other actively used waterfront sites.*

### Policy 20

**Access to the publicly-owned foreshore and to lands immediately adjacent to the foreshore or the water's edge that are publicly-owned shall be provided and it shall be provided in a manner compatible with adjoining uses.**

*N/A: This policy is not applicable to the Proposed Project (an existing hospital) or the Project Site, which is separated from the waterfront by a major highway (FDR Drive), and other actively used and privately owned waterfront sites.*

### Policy 21

**Water-dependent and water-enhanced recreation will be encouraged and facilitated, and will be given priority over non-water-related used along the coast.**

*N/A: The Project Site is actively used as a hospital. No change of use is proposed as part of the Proposed Project. In addition, the Project Site is separated from the waterfront by a major highway (FDR Drive), and other actively used waterfront sites.*

### Policy 22

**Development, when located adjacent to the shore, will provide for water-related recreation, whenever such use is compatible with reasonably anticipated demand for such activities, and is compatible with the primary purpose of the development.**

*N/A: This policy is not applicable to the Proposed Project. The Project Site is separated from the waterfront by a major highway (FDR Drive), and other actively used waterfront sites.*

### Policy 23

**Protect, enhance and restore structures, districts, areas or sites that are of significance in the history, architecture, archaeology or culture of the state, its communities, or the nation.**

*Consistent: FEMA will be consulting with the State Historic Preservation Office (SHPO) and Participating Tribes per Section 106 of the National Historic Preservation Act, to address any proposed ground disturbing activities as identified in submitted project plans. Any identified adverse effect(s) for standing structures will be mitigated through the Abbreviated Consultation process outlined in the New York Programmatic Agreement.*

### Policy 24

**Prevent impairment of scenic resources of statewide significance.**

*N/A: The Project Site is not located in a scenic area of statewide significance, nor will it have an effect on any such area.*

### Policy 25

**Protect, restore or enhance natural and man-made resources which are not identified as being of statewide significance, but which contribute to the overall scenic quality of the coastal area.**

*N/A: The Project Site is currently occupied by an existing hospital and is located in a densely populated and developed area within the City of New York. In addition, the Project Site is separated from the waterfront by a major highway (FDR Drive), and other actively used waterfront sites.*

### Policy 26

**Conserve and protect agricultural lands in the state's coastal area.**

*N/A: This policy is not applicable to the Proposed Project as there are no agricultural lands on or adjacent to the Project Site.*

### Policy 27

**Decisions on the siting and construction of major energy facilities in the coastal area will be based on public energy needs, compatibility of such facilities with the environment, and the facility's need for a shorefront location.**

*N/A: This policy is not applicable to the Proposed Project, which does not include the siting or construction of a major energy facility.*

### Policy 28

**Ice management practices shall not interfere with the production of hydroelectric power, damage significant fish and wildlife and their habitats, or increase shoreline erosion or flooding.**

*N/A: This policy is not applicable to the Proposed Project, which will not have any impact on ice management practices.*

### Policy 29

**Encourage the development of energy resources on the outer continental shelf, in Lake Erie and in other water bodies, and ensure the environmental safety of such activities.**

*N/A: This policy is not applicable to the Proposed Project or Project Site.*

### Policy 30

**Municipal, industrial, and commercial discharge of pollutants, including but not limited to, toxic and hazardous substances, into coastal waters will conform to state and national water quality standards.**

*N/A: The Proposed Project does not include any changes to the nature, amount, or location of the discharge of stormwater from the Project Site. The Project Site will continue to conform to all appropriate state and federal permit conditions. As a result of the Proposed Project, the potential for the accidental release of toxic or hazardous substances from the Project Site as a result of flooding will be decreased.*

### Policy 31

**State coastal area policies and management objectives of approved local waterfront revitalization programs will be considered while reviewing coastal water classifications and while modifying water quality standards; however, those waters already overburdened with contaminants will be recognized as being a development constraint.**

*N/A: This policy is not applicable to the Proposed Project, which does not propose changes to water quality standards or coastal management policies and objectives.*

### Policy 32

**Encourage the use of alternative or innovative sanitary waste systems in small communities where the costs of conventional facilities are unreasonably high, given the size of the existing tax base of these communities.**

*N/A: This policy is not applicable to the Proposed Project, which is currently served by an existing public sewer system.*

### Policy 33

**Best management practices will be used to ensure the control of storm water runoff and combined sewer overflows draining into coastal waters.**

*Consistent: The Proposed Project does not include any changes to the nature, amount, or location of the discharge of stormwater from the Project Site. As such, no impacts to stormwater runoff systems are expected as a result of the Proposed Project. Best management practices, including the preparation and execution of a sediment and erosion control plan, will be utilized during construction of the Proposed Project to reduce the potential discharge of soils into coastal waters.*

### Policy 34

**Discharge of waste materials into coastal waters from vessels subject to state jurisdiction will be limited so as to protect significant fish and wildlife habitats, recreational areas and water supply areas.**

*N/A: This policy is not applicable to the Proposed Project, which will have no impact on vessel discharges.*

### Policy 35

**Dredging and filling in coastal waters and disposal of dredged material will be undertaken in a manner that meets existing State permit requirements, and protects significant fish and wildlife habitats, scenic resources, natural protective features, important agricultural lands, and wetlands.**

*N/A: This policy is not applicable to the Proposed Project, which does not propose dredging or filling of coastal waters.*

### Policy 36

**Activities related to the shipment and storage of petroleum and other hazardous materials will be conducted in a manner that will prevent or at least minimize spills into coastal waters; all practicable efforts will be undertaken to expedite the cleanup of such discharges; and restitution for damages will be required when these spills occur.**

*Consistent: The Proposed Project is not anticipated to have any adverse impact on the shipment or storage of petroleum or other hazardous materials. All material storage (permanent or temporary) and delivery, including during and following construction, will continue to meet or exceed all local, state, and federal requirements. Finally, the Proposed Project will decrease the potential for petroleum and other hazardous materials to be accidentally released during flood events by increasing the ability of the Project Site to withstand future flood events.*

### Policy 37

**Best management practices will be utilized to minimize the non-point discharge of excess nutrients, organics and eroded soils into coastal waters.**

*Consistent: Best management practices, including the preparation and execution of a sediment and erosion control plan, will be utilized during construction of the Proposed Project to reduce the potential discharge of soils into coastal waters. When the Proposed Project is completed, no changes to the nature, amount, or location of the discharge of stormwater from the Project Site are anticipated.*

### Policy 38

**The quality and quantity of surface water and groundwater supplies will be conserved and protected, particularly where such waters constitute the primary or sole source of water supply.**

*Consistent: The Proposed Project will have no impact on the quality or quantity of surface or groundwater supplies.*

### Policy 39

**The transport, storage, treatment and disposal of solid wastes, particularly hazardous wastes, within coastal areas will be conducted in such a manner so as to protect groundwater and surface water supplies, significant fish and wildlife habitats, recreation areas, important agricultural land, and scenic resources.**

*Consistent: The Proposed Project is not anticipated to have any adverse impact on the transport, storage, treatment or disposal of solid wastes, including hazardous wastes. All material storage (permanent or temporary) and delivery, for hazardous wastes and otherwise, will continue to meet or exceed all local, state, and federal requirements during and following construction. Finally, the Proposed Project will decrease the potential for solid and hazardous wastes to be accidentally released during flood events by increasing the ability of the Project Site to withstand future flood events.*

**Policy 40**

**Effluent discharged from major steam electric generating and industrial facilities into coastal waters will not be unduly injurious to fish and wildlife and shall conform to state water quality standards.**

*N/A: This policy is not applicable to the Proposed Project as the Project Site does not currently contain a major steam electric generating or industrial facility, nor is one proposed.*

**Policy 41**

**Land use or development in the coastal area will not cause national or state air quality standards to be violated.**

*Consistent: The Proposed Project, and its construction, will not cause national or state air quality standards to be violated. The Project Site currently holds a State Facility air permit for on-site generators and is currently in compliance with the requirements of that permit. The Subgrantee will apply for, and comply with, all permits required for the changes to on-Site emission sources as part of the Proposed Project. Finally, emissions from equipment and deliveries associated with the construction of the Proposed Project will not cause national or state air quality standards to be violated.*

**Policy 42**

**Coastal management policies will be considered if the state reclassifies land areas pursuant to the prevention of significant deterioration regulations of the federal clean air act.**

*N/A: This policy is not applicable to the Proposed Project as it does not propose reclassifying land areas pursuant to the federal Clean Air Act.*

**Policy 43**

**Land use or development in the coastal area must not cause the generation of significant amounts of acid rain precursors: nitrates and sulfates.**

*Consistent: The Proposed Project is not anticipated to cause the generation of significant amounts of acid rain precursors, including nitrates and sulfates.*

**Policy 44**

**Preserve and protect tidal and freshwater wetlands and preserve the benefits derived from these areas.**

*Consistent: The Proposed Project will not directly or indirectly affect tidal or freshwater wetlands or New York State Department of Environmental Conservation (NYSDEC)-regulated wetland adjacent areas. There are no National Wetland Inventory (NWI) or NYSDEC-mapped wetlands, or regulated wetland adjacent areas on the Project Site. Wetlands off-Site, including the East River, will not be directly or indirectly impacted by the Proposed Project as no changes in the nature, amount, or location of stormwater discharge are anticipated.*



STATE OF NEW YORK  
**DEPARTMENT OF STATE**  
ONE COMMERCE PLAZA  
99 WASHINGTON AVENUE  
ALBANY, NY 12231-0001

ANDREW M. CUOMO  
GOVERNOR

CESAR A. PERALES  
SECRETARY OF STATE

May 21, 2015

Mr. John Dawson  
U.S. Dept. of Homeland Security  
FEMA-4085-DR-NY  
Sandy Recovery Office, Forest Hills Tower  
118-35 Queens Blvd., 5<sup>th</sup> Floor, EHP  
Forest Hills, NY 11375

**Re: F-2015-0341 (FA)**  
*Federal funding – New York City Health and  
Hospitals Corporation (HHC) -  
Comprehensive flood mitigation project for  
Bellevue Hospital  
City of New York, NY*

**Concurrence - No Objection to Funding**

Dear Mr. Dawson:

The Department of State received the information you submitted regarding the above matter. The Department of State has no objection to the use of FEMA Public Assistance Program funds for this financial assistance activity to the New York City Health and Hospitals Corporation (HHC) for the above-listed activities.

This concurrence pertains to the financial assistance for this project only. If a federal permit or other form of federal agency authorization is required for the above activities, the Department of State will conduct a separate review for those permit activities. In such a case, please forward a copy of the federal application for authorization, a completed Federal Consistency Assessment Form, and all supporting information to the Department at the same time it is submitted to the federal agency from which the necessary authorization is requested.

When communicating with us regarding this matter, please contact Jeffrey Zappieri at (518) 474-6000 and refer to our file #F-2015-0341 (FA).

Sincerely,

Jeffrey Zappieri  
Supervisor, Consistency Review Unit  
Office of Planning and Development

JZ/ ts

**Appendix D**  
**Correspondence 5.8-1**  
**State Historic Preservation Office**  
**Consultation**



U.S. Department of Homeland Security  
Federal Emergency Management Agency  
NY Sandy Recovery Field Office DR-4085  
118-35 Queens Boulevard  
Forest Hills, NY 11375



April 22, 2015

Ruth Pierpont  
Deputy State Historic Preservation Officer  
Division for Historic Preservation  
Peebles Island State Park  
P. O. Box 189  
Waterford, NY 12188-0189

**FEMA:** Section 106 Consultation, FEMA-DR-4085-NY, Hurricane Sandy

**Applicant:** New York City Health and Hospital Corporation

**Undertaking:** Repairs and Mitigation Work at Bellevue Hospital complex (PW 03887)

**Address:** 462 First Avenue, New York, New York, 10016

**Block/Lot:** 962/100

**County:** New York County

Dear Ms. Pierpont:

The Federal Emergency Management Agency (FEMA) will be providing funds authorized under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, P.L. 93-288, as amended, in response to the major Disaster Declaration for FEMA-4085-DR-NY, dated October 28, 2012, as amended. FEMA is conducting Section 106 review for the above referenced Undertaking.

### **Project Information**

Bellevue Hospital is the oldest municipal hospital on the North American continent. Its origins date to the seventeenth century and by 1811 the medical facility had moved to its present location. The present-day Bellevue Hospital Complex is a large, multi-structure campus located on the east side of First Avenue between East 26<sup>th</sup> Street and 30<sup>th</sup> Street. The complex consists of the following buildings located within these boundaries. Construction dates and eligibility status for the National Register of Historic Places (NRHP) are listed:

- Administrative Building (also known as Building E)-c.1908-1940–eligible resource (USN#06101.017228)
- C&D Building (also known as Tuberculosis Building) – c. 1908-1938 – eligible resource (USN#06101.012063)
- R&S Building (also known as Pathological Dept. & Male Dormitory)–c.1910– listed resource (93NR00430)
- Bellevue Psychiatric Building – c. 1936 – eligible resource (USN#06101.015797)
- H Building (Hospital Building) – c. 1965-1975 – does not meet age threshold - not an eligible resource
- F&G Building (Emergency Dept. Building) – c.1995 – not an eligible resource
- Ambulatory Care Building – c.1993-1995 – not an eligible resource
- I&K Building – c.1920 - demolished (only the basement remains)
- Office of Chief Medical Examiner – constructed in 2007 – not an eligible resource

FEMA is evaluating the impact of the proposed Undertaking for three (3) buildings (cultural resources) listed above: The Administration Building, the C&D Building and the R&S Building. The R&S Building does not have a scope of work identified in this Undertaking as it is outside the proposed floodwall. This listed resource is being evaluated for potential impact by the adjacent construction work, viewshed concerns due to new floodwall as well as it is a listed resource within the APE.

### **Description of the Undertaking**

This Undertaking is for the mitigation being proposed by the Applicant to prevent future damage by floodwaters for the Bellevue Hospital complex. The intent of the Hazard Mitigation Proposal (HMP) is to provide the hospital with a comprehensive system of mitigation measures that will limit operational impacts and physical damages in the case of a future storm event and allow the hospital to resume services as quickly as possible in the event evacuation is necessary. (For detailed descriptions of the proposed mitigation measures and schematics, please see the supporting documents: Appendix F\_SOW Support 033114 and Bellevue HMP 120414).

The proposed scope of work below meets the following allowances: Tier I: II.A. and Tier II: II.B.1&2, II.E.2., & II.D.8.

- **I&K basement roof reinforcement** – the ‘roof’ is at ground level as this is the original basement of the I&K Building. As portions of the basement are outside of the proposed floodwall perimeter, the Applicant is proposing to strengthen the floodwater loading on the concrete slab by reinforcing and waterproofing the roof against surcharge water pressure. (See Pg.9 of Appendix F)
- **Potable water system** – in northwest and southwest mechanical rooms on mezzanine level of the H Building a secondary pumping system is proposed to create a parallel pumping system for domestic water. (H Building is less than 45 years old)
- **Ventilation and Mechanical Equipment** – Elevate the northwest and southwest mechanical rooms that are currently in the H Building basement above the Designed Flood Elevation (DFE). (H Building is less than 45 years old)
- **1,500-KW generator** – the existing emergency generator, located in the loading dock of H Building, will be elevated above the DFE. Currently the generator is located in the loading dock along FDR Drive. The proposal is to move the generator to the South Parking Lot at the corner of FDR Drive and East 26<sup>th</sup> Street. (H Building is less than 45 years old)
- **Fuel Oil Pumps** – A new backup fuel oil pumping system to be installed on 13<sup>th</sup> floor of H Building. The entire 13<sup>th</sup> floor is the existing mechanical room of the H Building. (H Building is less than 45 years old)
- **Fuel Oil Tanks** – Subgrade fuel oil tank piping and fill port to be moved to higher elevation.
- **Medical Gas and Vacuum Services** – A new design of the gas piping for the Emergency Department for the three compressors on the 13<sup>th</sup> floor of the H Building. (H Building is less than 45 years old)
- **Heat** – A quick connect line to make possible the use of an emergency boiler if needed.
- **Switchgears** – Elevation of service switchgears in Ambulatory Care Building above DFE. (Ambulatory Building is less than 45 years old)
- **F&G Electrical Rooms** – Hardening of the walls, doorways and conduit penetrations are in below grade basement and is to prevent flooding in this one story building. (F&G Building is less than 45 years old)

In addition to the ten (10) work items above, the five (5) work items continued below do not meet allowances from the Programmatic Agreement and is the reason for this consultation.

- **Perimeter Flood Protection** – there are multiple strategies being proposed around the perimeter of the campus such as veneer walls, tiger dam walls, walls spanning between ramp columns, 2-foot high walls with posts at 10-feet on center with height of posts to vary with grade elevation and a plank wall with vertical end support columns attached to existing building columns spanning from slab to the 2<sup>nd</sup> floor above (for specific locations see Bellevue Flood Wall & Exterior Elevator location 11-26-2014). The defined boundaries of the floodwall are as follows: a northern boundary of East 28<sup>th</sup> Street, an eastern boundary of FDR Drive, a southern boundary of East 26<sup>th</sup> Street and the western boundary of First Avenue.
- **Storm Water Management** – construction of two (2) flood pumps, one 7-million gallons a day (MGD) on the north and a 4.5 MGD on the south, each with a 30-foot total head. All ground floor fixtures will be disconnected and reconnected to the new flow diversion chambers. (See Appendix F, Pg.24). These pumps will likely be located in a basement in a centrally located building.
- **Loading Dock Ramp Flood Gates** – strengthen and reinforce the north and south ramp entry ways and install flood gates (24’W x 15’H +/-). (See Appendix F, Pg. 4)
- **Mitigation of Existing Elevators** – thirty (30) interior elevators will employ the following mitigation measures: installation of flood plank barriers, waterproofing of elevator pits, installation of sump pumps and upgraded elevator equipment. (See Bellevue HMP 120414, Pg.4)
- **New Exterior Elevators** – four (4) new elevators are proposed for the north elevation of the H Building near the east corner. (See Bellevue Flood Wall & Exterior Elevator location 11-26-2014 and description in Bellevue HMP 120414, Pg.3-4)

#### **Area of Potential Effects (APE) – Standing Structures**

Pursuant to 36 CFR 800.4(a)(1), the Area of Potential Effects (APE) is defined as the geographic area(s) within which the undertaking may directly or indirectly affect historic resources. The APE for this undertaking is determined to be the seven acres of the Bellevue Hospital Complex as defined by the proposed floodwall and the viewshed from the project site. The impacts on these resources can include both direct physical impacts and indirect impacts. Direct impact includes damage from vibration from adjacent construction machinery that would occur within 90 feet of an architectural resource. Indirect impacts on architectural resources are contextual or visual impacts.

#### **Area of Potential Effect (APE) - Archaeology**

The APE for archaeological resources includes any land surface that may be altered during the course of project construction. Such impacts associated with the HMP includes subterranean disturbances most associated with the perimeter flood protection, construction of the flood gates, construction of the new exterior elevators, as well as associated utilities for such improvements. Thus, the APE for archaeological resources is limited to the area of proposed ground disturbance.

#### **Evaluation of Historic Significance**

FEMA Historic Preservation Specialist Tracy Nelson, who meets the Secretary of Interior qualifications for architectural historian, conducted a search for historic properties using: the Cultural Resource Information System (CRIS), the National Register of Historic Places online database, NYCity Map, NYC Buildings, NYC Landmarks Preservation Commission, and NY Public Library Sanborn Fire Insurance Maps. Based on the results of our historic property identification efforts, FEMA has identified two (2) NRHP eligible structures

(Administrative Building & C&D Building) that are within the Bellevue Hospital complex and one (1) NRHP listed structure (R&S Building) that is adjacent to the complex. The hospital complex site is not within an historic district either locally or nationally nor is any structure on the site designated or calendared by the NY Landmarks Preservation Commission.

For the C&D Building and the Administration Building, the identified work proposed for these structures is flood proof mitigation for the existing elevators. It is understood that the flood plank barriers (identified in the scope of work description above) will be installed in the basement access.

The R&S Building is located directly across from the Bellevue Hospital complex, approximately 70 feet from the Ambulatory Building and the floodwall's proposed site. The current proposal is to construct a free standing wall on grade along the entire length of East 28<sup>th</sup> Street from First Avenue to the beginning of the Hospital Building (see Bellevue Flood Wall & Exterior Elevator location 11-26-2014). The grade of the floodwall ranges from approximately 3 feet at the corner of First Avenue/East 28<sup>th</sup> Street and rising to approximately 6-8 feet at the Hospital Building. FEMA evaluated the potential viewshed issue and finds that due to the narrowness of East 28<sup>th</sup> Street and the low height of the wall, the proposed perimeter protection will not impact the R&S Building viewshed. FEMA has also determined that the potential direct impact would be mitigated by the preparation and implementation of a Construction Protection Plan as required by the New York Department of Buildings (NYDOB) *Technical Policy and Procedure Notice #10/88*, for this architectural resource.

### **Evaluation of Archaeological Impact**

FEMA Archaeologist, Brock Giordano, RPA, who meets the Secretary of Interior qualifications for archaeologist, conducted a search (via CRIS) for areas of archaeological sensitivity as well as known archaeological sites. The search determined that there are no known archaeological sites eligible or listed in the NRHP within, and/or adjacent to, the APE. Two historic-period archaeological sites are located within one-half mile of the APE; however, they are site-specific and not associated with the historical development within the APE. In addition, the project area is not located within an archaeologically sensitive area. Soils within the hospital complex consist of a variety Urban land including: (UtA) Urban land, till substratum, 0 to 3 percent slopes; (UGA) Urban land-Greenbelt complex, 0 to 3 percent slopes; (ULA) Urban land-Laguardia complex, 0 to 3 percent slopes; and (UrA) Urban land, reclaimed substratum, 0 to 3 percent slopes. Soils within these areas are generally covered in pavement, concrete, buildings, and other structures underlain by disturbed and natural soil. The so-called Urban Land category includes most of what normally would be considered developed land. Residential areas, commercial areas, services and institutions, industrial areas, and those developed for transportation and utilities are the primary land uses included in the Urban category.

Areas of proposed ground disturbance include perimeter flood protection, construction of the flood gates, construction of the new exterior elevators, as well as associated utilities for such improvements. Overall, the vertical and horizontal limits of disturbance will be limited to areas that have been previously disturbed by the construction of the existing structures. Thus, all improvements will be located within the limits of previously disturbed urban soils. Based on the environmental and topographic conditions, as well as the limited number of prehistoric and historic-period archaeological sites recorded within the vicinity of the subject property, the potential for encountering in situ prehistoric and historic-period archaeological resources is considered low. The work is unlikely to encounter archaeological artifacts or features within their original depositional contexts; therefore FEMA has determined that the undertaking is **unlikely to encounter archaeological sites eligible** for NRHP.


## Determination of Effect

Based on the information presented above, FEMA has determined that the Undertaking's determination of effect is **No Adverse Effect to Historic Properties** that are either in, or eligible for inclusion in, the State or National Register of Historic Places. If the scope of work identified in this consultation substantially changes in the future, FEMA will initiate continuing consultation for this hospital complex.

We request concurrence with this determination of effect within thirty (30) calendar days. Should you need additional information please contact Tracy Nelson, SHPO Liaison, at (504) 430-9041 or by email at [tracy.nelson@associates.fema.dhs.gov](mailto:tracy.nelson@associates.fema.dhs.gov).

Sincerely,

**BROCK A  
GIORDANO**

 Digitally signed by BROCK A GIORDANO  
DN: c=US, o=U.S. Government, ou=Department  
of Homeland Security, ou=FEMA, ou=People,  
cn=BROCK A GIORDANO,  
0.9.2342.19200300.100.1.1=0296759531.FEMA  
Date: 2015.04.22 11:57:25 -04'00'

For,

John Dawson  
EHP Branch Director  
4085-DR-NY

JD/tn

CC: Rick Lord, NYS Division of Homeland Security & Emergency Services  
Gina Santucci, Landmark Preservation Commission

Enclosures: Bellevue Flood Wall & Exterior Elevator location 11-26-2014  
Appendix F\_SOW Support 033114  
Bellevue HMP 120414  
Bellevue Map Sheet  
Bellevue Photo Sheet



## Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO  
Governor

ROSE HARVEY  
Commissioner

May 19, 2015

John Dawson, EHP Branch Director  
Department of Homeland Security/ FEMA/ Sandy Recovery Office  
118-35 Queens Boulevard  
Forest Hills, NY 11375

Re: FEMA, DHSES  
Bellevue Hospital Repairs & Mitigation (PW 3887)  
462 First Ave, Manhattan/ New York County

15PR01897

Dear Mr. Dawson:

Thank you for requesting the comments of the New York State Historic Preservation Office (SHPO). We have reviewed the submitted materials in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to Historic/Cultural resources. They do not include other environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the National Environmental Policy Act and/or the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8).

Based on this review, the SHPO concurs with your agency's determination that the proposed undertaking will have No Adverse Effect to Historic Properties in or eligible for inclusion in the State or National Register of Historic Places.

If further correspondence is required regarding this project, please refer to the SHPO Project Review (PR) number noted above. If I can be of further assistance, please contact me at (518) 268-2187.

Sincerely,

Larry K Moss  
Historic Preservation Technical Specialist

CC:  
Rick Lord, DHSES  
Tracy Nelson