

***Downtown Restoration
Program***

Vesey Street Stair Remnant

LMDC Section 106 Meeting
July 12, 2006



***LMDC Programmatic Agreement
Section 106 Consultation Process***

Stipulation 5- Impacts to Additional Remnants of the WTC

- LMDC (and PA) will seek to minimize or mitigate potentially adverse effects, through:
 - reasonable and practicable steps
 - consistent with the overall Plan
 - sound engineering practice and relevant construction considerations
- LMDC to furnish to SHPO and Consulting Parties
 - preliminary design or illustrative plans
 - summary of proposed mitigation measures



Vesey Street Stair Remnant Introduction

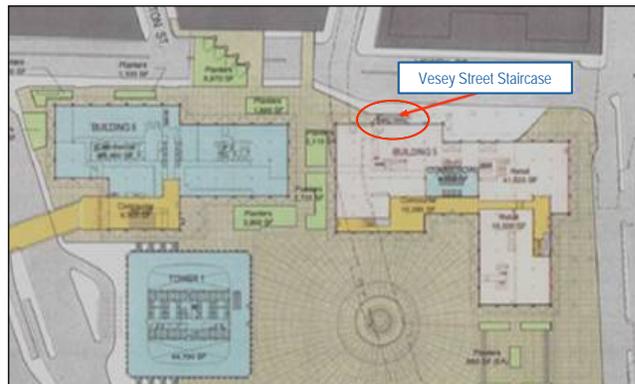
- Background
- Current Condition
- Interim Protection Measures
- Preservation Scenarios
- Section 106 Consultation Process – Next Steps



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Vesey Street Stair Remnant Background – Pre 9/11

- Connection from Plaza Level to Street Level
- Combination Cast-in-Place Concrete, Concrete Block and Steel Frame Construction:
 - Single Concrete Staircase – Granite Stair Treads / Granite Façade
 - Dual Outdoor Escalators



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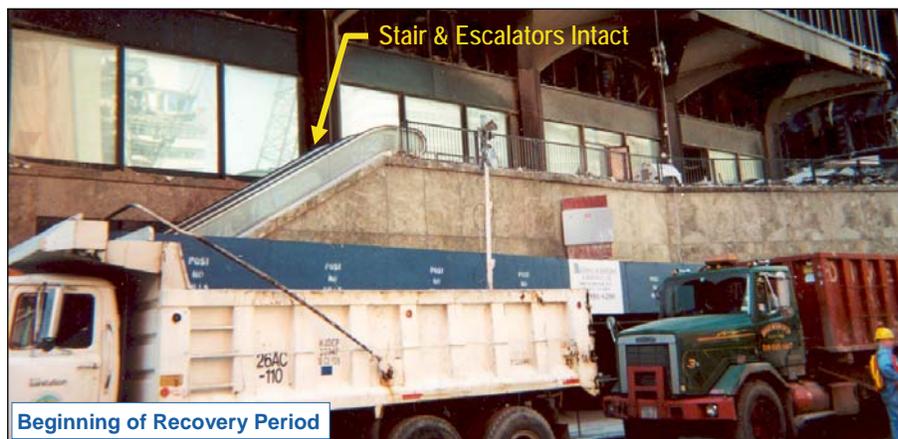
Vesey Street Stair Remnant Background – On 9/11

- Some Evacuees Fleeing WTC Tower 1 and Adjacent WTC Buildings Utilized these Stairs
- Provided an Exit Subsequent to Collapse of WTC Tower 2
- Stair and Escalators Basically Intact after the Collapse



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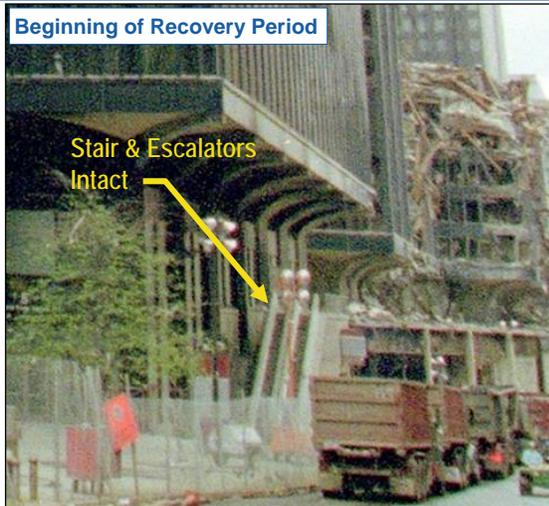
Vesey Street Stair Remnant Background – Post 9/11 (Recovery Period)



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Vesey Street Stair Remnant Background – Post 9/11 (Recovery Period)

Beginning of Recovery Period



Partial Demolition/Removal:

- Escalators
- Lower Stair Treads
- Granite/Marble Façade
- Stone Cladding
- Finishes
- Signs



After Recovery Period



Vesey Street Stair Remnant Current Condition

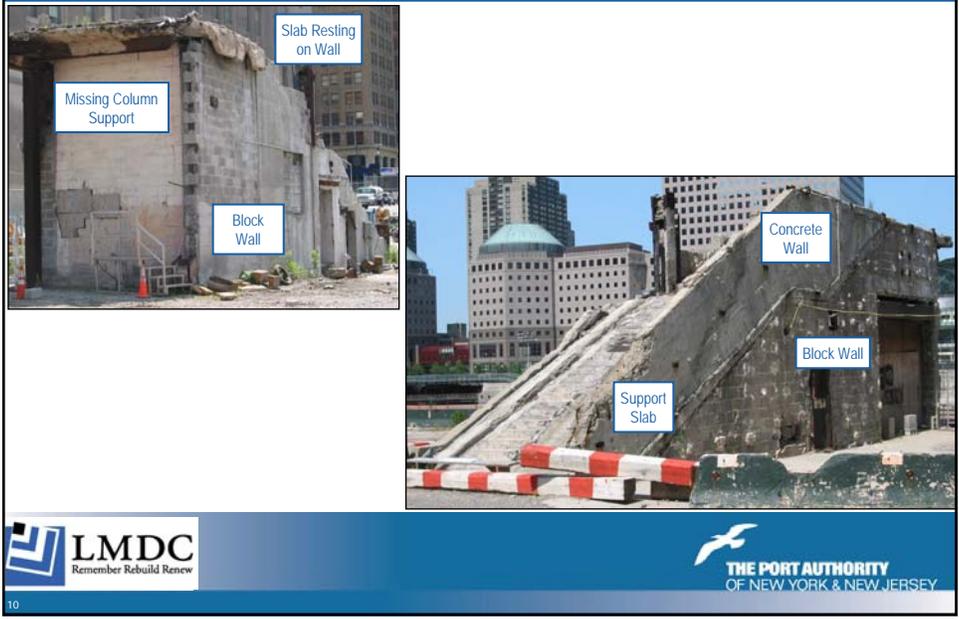
- Structural Condition Assessment
- Remnant Elements
 - Structural Support
 - Masonry Block Walls
 - Staircase/Escalator Area



Vesey Street Stair Remnant Condition of Components



Vesey Street Stair Remnant Condition of Components



Vesey Street Stair Remnant Interim Protection Measures

- Barriers Installed to Prevent Vehicle Access
- Vibration Monitoring as needed



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Vesey Street Stair Remnant Preservation Scenarios

- Leave In Place
- Move Intact
- Disassemble Components



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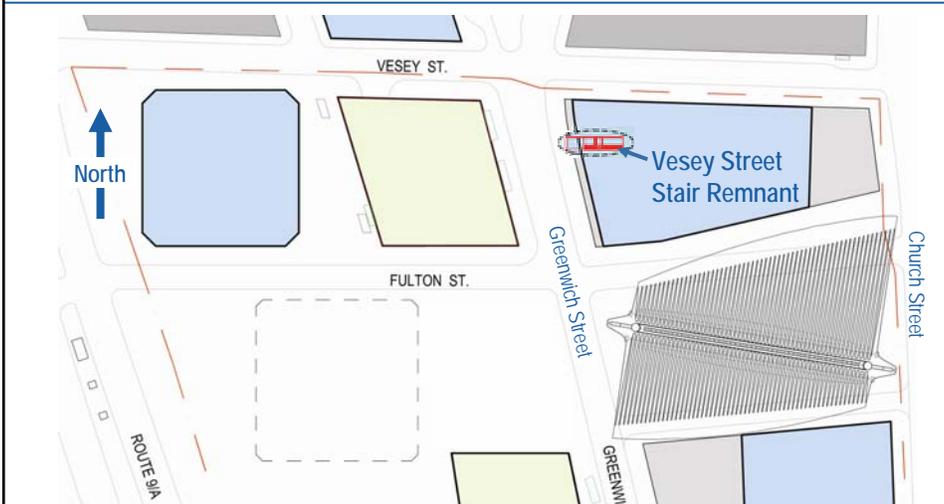
Vesey Street Stair Remnant Preservation Scenarios

Leave In Place

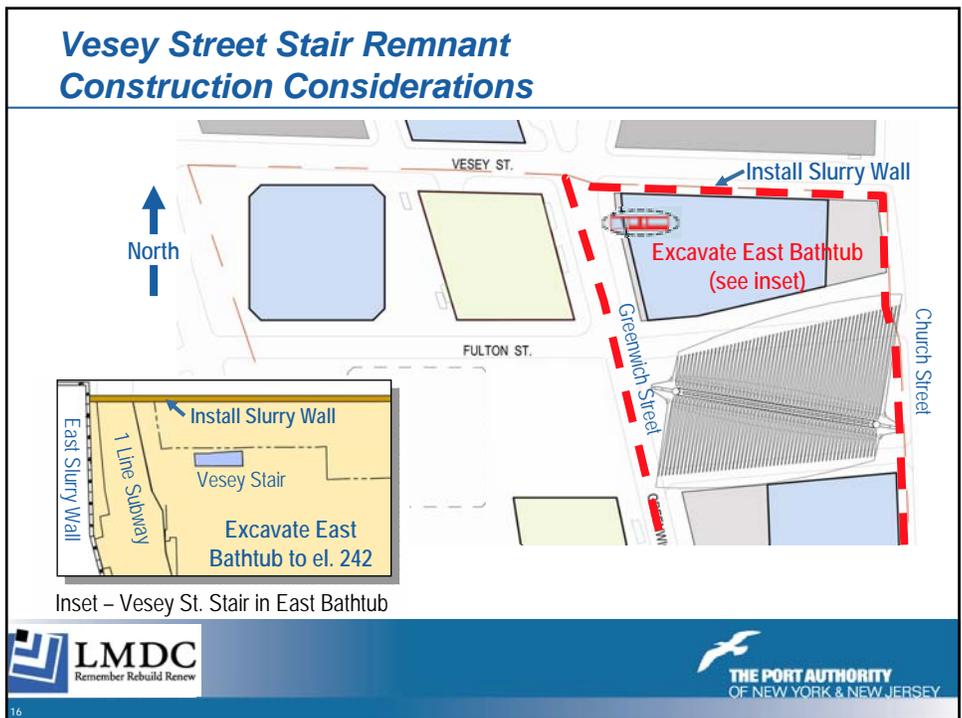
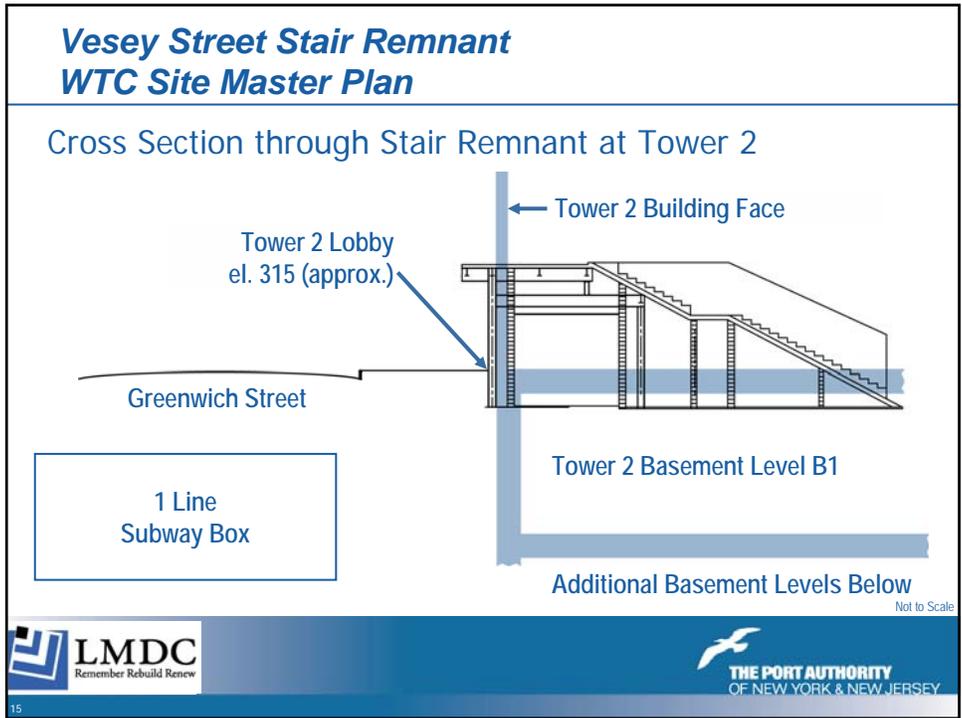


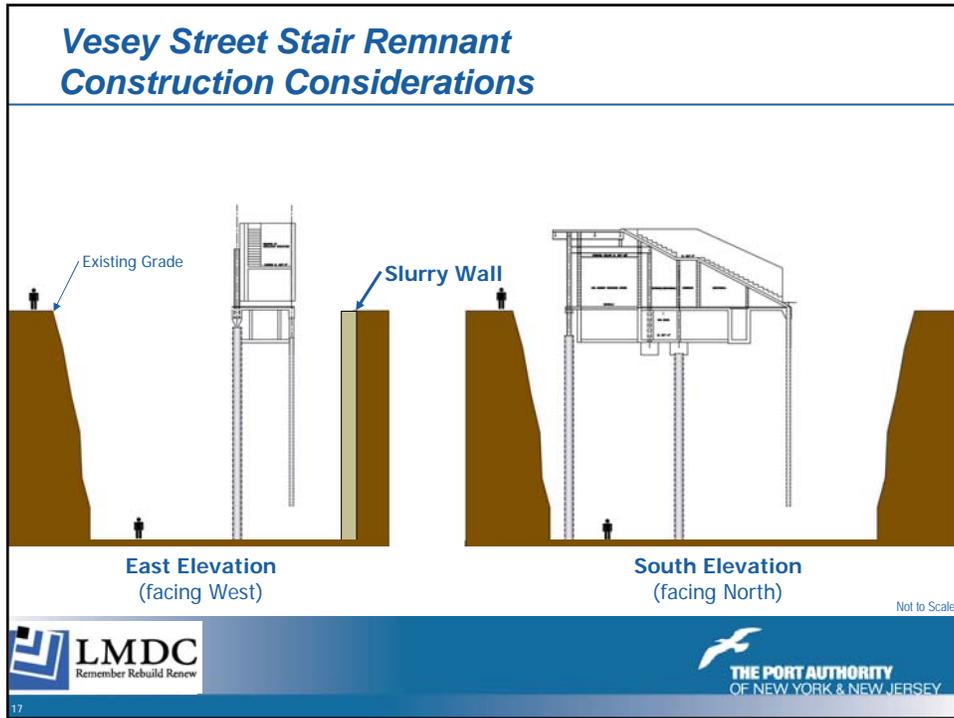
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Vesey Street Stair Remnant WTC Site Master Plan



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Vesey Street Stair Remnant Construction Considerations

Construction Risks:

- Worker Safety Concerns
 - Falling debris
 - Creation of a Safe Zone for operations
- Remnant Concerns
 - Structural encapsulation of remnant
 - Effects on access to remnant
 - Potential for damage during construction period

West Bathtub, SE Corner

LMDC
Remember Rebuild Renew

THE PORT AUTHORITY
OF NEW YORK & NEW JERSEY

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Vesey Street Stair Remnant Construction Considerations

Feasibility:

- Bracing of existing caissons/piles during excavation
- Removal of structures below
- Support of remnant
- Load transfer to permanent structure



West Bathtub, SE Corner



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Vesey Street Stair Remnant Preservation Scenarios

Move Intact



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Vesey Street Stair Remnant Preservation Scenarios

North
 Elevation

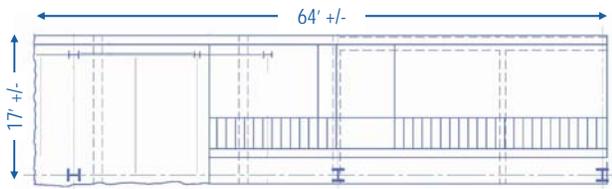


South
 Elevation

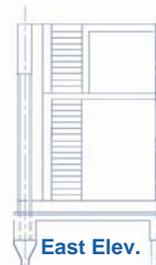
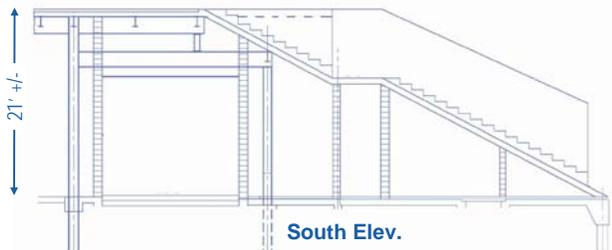


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Vesey Street Stair Remnant Physical Characteristics



- Steel, concrete and masonry block
- Footprint - 1,100 sf.
- 350,000 lbs.
- Foundations



Not to Scale



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Vesey Street Stair Remnant Preservation Scenarios

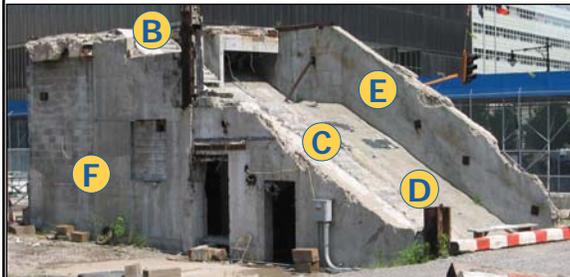
Disassemble Components



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Vesey Street Stair Remnant Preservation Scenarios – Components

- A Plaza and Stair Surfaces
- B Plaza and Upper Stair
- C Lower Stair Slab
- D Escalator Platform Slab
- E Concrete Wall
- F Substructure (block walls)



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Vesey Street Stair Remnant Preservation Scenarios – Components

- Stair Surfaces
- Plaza Surfaces



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Vesey Street Stair Remnant Preservation Scenarios – Components

- Concrete Slabs
- Stair Surfaces
- Plaza Surfaces



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Vesey Street Stair Remnant Preservation Scenarios – Components

- Lower Stair Slab



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Vesey Street Stair Remnant Preservation Scenarios – Components

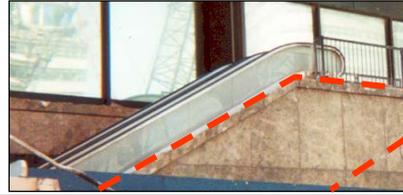
- Escalator Platform Slab



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Vesey Street Stair Remnant Preservation Scenarios – Components

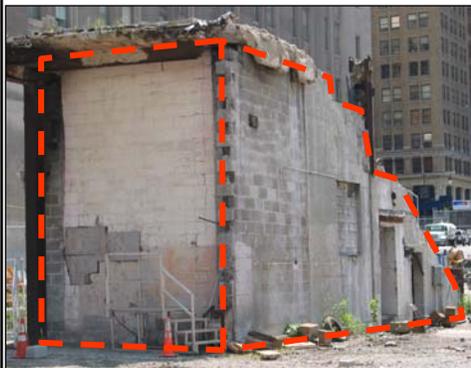
- Concrete Wall



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Vesey Street Stair Remnant Preservation Scenarios – Components

- Substructure – Block Walls



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Vesey Street Stair Remnant Preservation Scenarios – Consultation

- A Plaza and Stair Surfaces
- B Plaza and Upper Stair
- C Lower Stair Slab
- D Escalator Platform Slab
- E Concrete Wall
- F Substructure (block walls)



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Vesey Street Stair Remnant Section 106 Consultation Process – Next Steps

- Identify Preferred Preservation Scenario
- Develop (Permanent) Preservation Plan
 - Consider Preservation Alternatives
 - Furnish Preliminary Designs or Illustrative Plans
 - Furnish Any Proposed Mitigation Measures
- SHPO and Consulting Parties to submit comments for LMDC and PA Consideration



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