STRUCTURAL INTEGRITY PROGRAM

I. Introduction

This Administrative Instruction applies to the structural integrity of buildings and structures that are operated and maintained by the Port Authority and Port Authority tenants or permittees ("Structural Assets").

II. Definition

"Structural Integrity" is defined as a condition in which a Structural Asset, during the period of its construction and subsequent use, does not present a substantial risk of harm to the public or other users or in the case of an unused structure (such as an unoccupied building or pier), does not pose a substantial risk of structural failure. This condition results from the integration of sound engineering with proper application of construction procedures, materials, and equipment as well as proactive and responsive operation and maintenance programs.

III. Instruction

A. The Chief Engineer, through the Engineering Department, is responsible for ensuring that Structural Assets are structurally sound, safe, and conform with applicable structural codes and Port Authority technical standards; for maintaining an evaluation system to communicate the condition of each asset; and for communicating information regarding Structural Integrity to other government bodies.

B. The Line Department Directors are responsible for:

1. Effectively managing Structural Assets throughout their lifecycle by:

a. Ensuring that Structural Assets are operated and maintained in a manner that will sustain their structural condition as "fair" or better;

b. Ensuring compliance by tenants and permittees with provisions of leases and permits relating to Structural Integrity, structural

repairs, structural maintenance, and operation and maintenance of Structural Assets;

c. Ensuring compliance with Engineering Department recommendations regarding Structural Assets so they sustain a "fair" or better structural condition; and

d. Establishing and maintaining a standard for the operation and maintenance of Structural Assets that meets or exceeds industry standards.

2. All communication with tenants, neighboring entities, and government bodies regarding operation and maintenance or projects involving Structural Assets, the facilitation of Engineering Department inspections, and other activities that may take place on Port Authority property to support this instruction, as well as for designating one or more representatives to act as central point of contact for communication with identified parties.

C. Port Authority tenants and permittees are responsible for managing Structural Assets in accordance with existing lease agreements and permits.

IV. Responsibilities

A. The Engineering Department

1. Establishes and applies an evaluation system that rates the overall condition of Structural Assets insofar as their Structural Integrity. The overall condition of each Structural Asset is determined by the Engineering Department during each structural integrity inspection and posted and updated as necessary on an internal Engineering Department Website. The evaluation system will include the following condition ratings:

a. Excellent	"As New" Condition
b. Good	The structure system is sound and performing its function, although it shows signs of wear and may require some minor repairs, mostly routine.
c. Fair	The structure system is still performing adequately, but needs "priority" and/or "routine" repair to prevent future deterioration and to restore it to Good condition.

d. Poor	The structure system cannot be relied upon to continue to perform its original function without "immediate" and/or "priority" repair.

2. Establishes minimum inspection frequencies and scope for in-depth inspections. Inspection cycles will be posted and updated on the Engineering Department Website.

3. Cyclically inspects and reports on the condition of Structural Assets and:

   a. Recommends items for "immediate repairs," which are defined as conditions which require immediate action including possible closing of the structure or areas affected until remedial measures, such as shoring or removal of potentially unsafe structures (or elements), can be implemented.

   b. Initiates and oversees all "immediate repairs" for Structural Assets for which the Port Authority is responsible for structural repair and/or structural maintenance.

   c. Recommends remedial action as well as a schedule for "priority repairs" which represent conditions for which no immediate action is required but further investigation, design, and implementation of interim or long term repairs should be taken on a priority basis.

   d. Establishes and maintains a list of priority repairs by Line Department with a recommended schedule by which priority repairs should be performed.

   e. Recommends safety repairs as well as routine repairs, as necessary.

   f. Develops and provides cost estimates for inspections to the Line Departments for inclusion in their budget.

4. Investigates reports made by the Line Departments or other staff about the possible existence of conditions in any Structural Asset that may represent a substantial risk of harm to the public or other users. Diagnoses problems, recommends remedial action, and follows up to ensure that remedial action is taken.

5. Follows up with Line Departments in completing recommended repairs according to the schedule provided. In addition, whenever there is risk

that the lack of completing such repairs will result in a degradation in condition of the Structural Asset from a condition of "fair" or better to a condition of "poor" or worse, or the continued rating of a building or structure as "poor" or worse, follows up on repairs not completed and advises the Chief Operating Officer and the Chief, Capital Planning.

6. Provides technical assistance to the Line Departments for development and execution of routine examinations and evaluations of the actual use of all buildings and structures to determine whether they are being used as intended and whether actual use may exceed loading criteria.

B. The Line Departments

1. Effectively manage Structural Assets throughout their lifecycle so as to ensure that the overall condition, as determined by the Engineering Department, is sustained by:

   a. Facilitating the Engineering Department's access to Structural Assets for cyclical inspections through the provision of such things as lane closures, escorts, equipment, and tenant or permittee communication, as required.

   b. Routinely examining and evaluating the actual use of Structural Assets to ascertain whether they are being used as intended and whether actual loadings may exceed expectations for the intended use. For all Structural Assets that are not being used as intended or for which actual loadings may exceed expectations for the intended use, the Line Department immediately notifies the Engineering Department.

   c. Requesting technical assistance from the Engineering Department as required for such things as development and execution of routine usage evaluations for buildings and structures.

   d. Identifying conditions that may represent a substantial risk of harm to the public or other users, or to the Structural Integrity of a Structural Asset, securing the area, and contacting the Engineering Department to evaluate the situation.

   e. For Structural Assets for which the Port Authority is responsible for operation and maintenance, structural repair, and/or structural maintenance:

1. Operating and maintaining Structural Assets in a manner that will not impair Structural Integrity;

2. Making timely determinations on the appropriate mechanisms to effectuate all Engineering Department recommendations for priority, safety, and routine repairs within the timeframe recommended by the Engineering Department; and

3. Creating and carrying out operation and maintenance programs which include structural maintenance practices that meet or exceed industry standards.

f. For Structural Assets for which tenants or permittees are responsible for operation and maintenance, structural repair, and/or structural maintenance:

1. Communicating directly to tenants and permittees repairs and maintenance recommended by the Engineering Department as a result of cyclical inspections;

2. Ensuring compliance with Engineering Department recommendations;

3. Taking appropriate action in response to inaction;

4. Reporting results (both action and inaction) to the Engineering Department;

5. Advocating and providing examples to tenants or permittees of operation and maintenance programs that include structural maintenance practices that meet or exceed industry standards.

V. Inspection Cycles

STRUCTURE	CYCLE
Buildings & Terminals	6 – 10 Years
Building Facades 72 ft or Greater	5 Years
Bridges – Vehicle	2 Years
Bridges – Railroad	6 Years
Tunnels – Vehicle	2 Years
Tunnels – Railroad	3 – 6 Years
Signs & Lighting Structures	4 Years
Piers, Berths & Bulkheads	3 Years

Railroad Stations	7 Years
Railroad Substations	8 years
AirTrain Guideway Structure	3 Years
Bus & Parking Level Slabs	2 Years
Rock Slopes	3 - 4 Years
PATH Open Air Structures	6 Years
Parking Garages	4 Years

Note: This AI combines former PAI 45-1.07, dated 3/4/87 entitled "Structural Integrity" and PAI 45-1.07.1, dated 3/22/88 entitled "Structural Integrity – Tenant Buildings and Structures" and updates the responsibilities of all departments.