# Table of Contents

Chapter I: Introduction  
1. Purpose  
2. Port Authority Airport Service Standards  
3. Revisions  
4. Definitions  
5. General  
6. Failure to Conform  
7. Regulations and Codes  
8. Pre-Construction Meetings  
9. Emergency Contacts  
10. Hours of Work  
11. Contractor Identification Sign  
12. Construction Trailers  
13. Tenant Contractor Staging Area / Storage of Materials  
14. Haul Routes/Material Hauling  
15. Construction Bulletins  

Chapter II: Airport Safety And Security  
1. Security Clearance and Access (Other than Customs)  
2. Customs Security Clearance and Access  
3. Contractor Safety  
4. Patron Safety and Convenience  
5. Operation of a Motor Vehicle on the Job Site  
6. Fire Watch Guidelines  

Chapter III: Work Area Restrictions  
1. Operating Within the Airport Operations Area  
2. Operating Within the Terminal Operations Area  
3. Operating In or Around pedestrian Walkways  
4. Operating In or Around Roadways  
5. Maintenance of Traffic and Work Area Protection  
6. Parking Lots  
7. Work Adjacent to the Monorail  
8. Night Work/Overhead Work  
9. Height Limitations  

Chapter IV: General Construction Standards  
1. Barricades & Barriers  
2. Maintenance of Work and Work Area During Construction  
3. Lighting  
4. Temporary Drainage  
5. Erosion Control  
6. Rodent Control  
7. Sanitary Facilities  
8. Damage to Existing Conditions  
9. Obstruction Marking and Lighting  
10. Temporary Signs  
11. Noise, Odor, Heat & Glare, Vibration Impacts & Radio Communication  

VI-40
12. Explosives VI-64
13. Demolition VI-64
14. Excavations-General VI-64
15. Subsurface Structures VI-64
16. Cutting, Welding, Open Flame and Spark Production Equipment VI-65
17. Environmental Protection VI-66

Chapter V: Working With Utilities VI-66
1. Marking Utility Services VI-66
2. Outages VI-67
3. Co-operating with Public Utility Companies VI-68
4. Permit and Requirements for Electrical Distribution Work VI-68
5. Gas Pipes VI-69
6. Aircraft Hydrant Fueling System and Transmission Pipeline VI-69
7. Fire Alarm Boxes and Fire Hydrants VI-69
CHAPTER I: INTRODUCTION

1. Purpose

This document specifies the Port Authority’s construction standards, which shall be followed by tenants in execution of their respective construction projects at Newark Liberty International Airport. These standards shall also apply to the work performed by Contractors, Sub-contractors, and vendors or material suppliers engaged and authorized by Tenants to perform work at the Airport. These standards are supplementary to the requirements of the project specific contract documents and all applicable Codes and the Port Authority Standards specified herein. If there is a conflict between these standards and tenants obligations under its lease or contract with the Port Authority, the terms of the lease or contract shall control and be determinative.

2. Revisions

This document will be periodically updated, as required. The issuance date is printed on the bottom of every page. Changes since the last issuance will be highlighted. The current revision may be checked with the Resident Engineer.

3. Definitions

As used within this document, the terms used herein shall have the following meaning:

A. “Airside Operations Area (AOA)” means that portion of the Airport designed and used for landing, takeoff, parking or surface maneuvering of aircraft, as well as the Restricted Service Roads (RSR) and aprons.

B. “Tenant Contractor” means the entity engaged and authorized by the Tenant to perform or otherwise engage in any construction activity at the Airport including construction manager, subcontractors, vendors, materials men etc. The term “Contractor” used in this document will also mean Tenant Contractor.

C. “Tenant” means the entity that has leased space at the Airport from the Port Authority and is engaged in conducting business at the Airport.

D. “Tenant Engineer” means the Architect/Engineer (Architect/Engineer of Record) engaged by the Tenant to plan design or supervise construction of projects for the Tenant at the Airport.

E. “Resident Engineer” means the technical representative of the Port Authority assigned with the responsibility of monitoring the Tenant construction work.

4. General

A. These standards shall be used in conjunction with the following documents:
i. Tenant Alteration Procedures and Standards Guide
ii. Tenant Construction Review Manual
iii. Airport Rules and Regulations
iv. Requirements of the Project Specific Technical Specifications

B. The Port Authority reserves the right to enter the Tenant Contractor’s work or storage areas at any time for the purpose of fire protection, emergency and routine security, safety and health inspections.

5. Failure to Conform

Should the Tenant Contractor fail to conform to the requirements specified in this document or should he fail to comply with directive of the Resident Engineer in execution of his work at the Airport, the Port Authority shall have the right to suspend the construction work until the contractor brings his work into full compliance as determined by the Resident Engineer. It shall be Tenant’s legal and financial responsibility to bring his Contractor into such compliance and fully enforce the requirements of this document. The Port Authority shall have the right to take corrective action to repair/return to normal operations any work area not up to standards or to the satisfaction of the RE and shall have no responsibility, financial or otherwise, for any consequent delay caused to the completion of the Tenant’s or Tenant Contractor’s work or any financial loss caused by any such suspension.

6. Regulation and Codes

All tenants and Tenant contractors must adhere to all Federal and State statutes and regulations, Port Authority Rules and Regulations, City ordinances and regulations and the State building codes.

7. Pre-Construction Meetings

The Tenant and his Contractor shall request a pre-construction meeting with the Resident Engineer a minimum of 48 hours prior to the start of the work. The Tenant, his Contractor and other major subcontractors shall attend this meeting to review each party’s responsibilities as these relate to the impact of the Tenant Construction on the airport operations.

8. Emergency Contacts

A. The Tenant Contractor shall submit the name of the person who will be in charge of the construction project to the Port Authority for its record. The Tenant
Contractor shall also specify the name of a person who can be reached by the Port Authority 24 hours a day, 7 days a week including those time when no work is proceeding and a duly authorized Tenant contractor’s representative is not on the job site.

B. This person shall be able to report to the site in less than 1 hour and shall be authorized to call in additional crews and equipment to repair or otherwise address the problem as necessary.

9. **Hours of Work**

A. The Tenant Contractor may perform work within the confines of the site construction fence at any time except as noted below.

B. Coordinate material deliveries and movement of equipment through the Resident Engineer. No deliveries or movement of equipment or materials that impede the normal flow of traffic are permitted between 5:00 A.M. and 11:00 P.M.

C. Areas of work that are available for public use shall be cleared of all debris and shall be returned for full airport facility use from 5:00 A.M. to 11:00 P.M. unless otherwise permitted by the Resident Engineer.

D. Night work is from 11:00 P.M. to 5:00 A.M. No night work shall be performed the night before, during or after any holiday or on the last day of a Holiday weekend.

10. **Contractor Identification Sign**

The Tenant Contractor shall, at his/her own expense, erect and maintain in a prominent position upon the work a suitable sign, plainly lettered with the name, address and emergency contact telephone numbers of the Tenant and the Tenant Contractor performing the work. Other project signing legally required must be maintained. No advertising matter other than the signs above noted shall be displayed on the work site.

11. **Construction Trailers**

Space at the airport for contractor’s construction trailers and other such functions is very limited and may not be available. The contractor may have to locate his construction trailers at an off-airport site at his own cost. In case space is available at the airport, the location for these trailers will be furnished by the Resident Engineer and shall be subject to the following requirements.

A. Installation and construction of the trailers must comply with the requirements as specified under the Tenant Alteration Application for the project.
B. Tenant Contractor shall maintain and keep the trailer and the surrounding areas clean of debris.

C. Trailers shall be constructed and maintained to eliminate harborage and attraction to rodents, insects and other pests. Contractor shall provide pest control by a licensed pest control company if required. For the trailers, which are to be stationed for a period of 3 months or more, the Tenant Contractor shall provide a skirt around them fabricated from fireproofed materials.

D. Contractor’s trailed shall be removed at the completion of the contract.

12. Tenant Contractor Staging Area/Storage of Materials

A. Subject to the availability of space, the Tenant Contractor may be allowed to store and stage his/her materials in a staging area located on Airport property as shown on contract drawings or designated by the Resident Engineer for such purposes. However, it is likely that storage and/or staging space is not available at the airport. It will be Tenant Contractor’s responsibility to arrange an off-airport space for his staging and storage operations at his own expense.

B. Tenant Contractor shall erect and maintain a fence around the staging area perimeter. The Port Authority accepts no responsibility for items stored in this area. The area shall be identified with the name of the contractor responsible for the area, the tenant project identification and contact persons and phone numbers.

   i. The fence shall be 8-foot high chain link covered with fabric, and may be topped with 3 strands of barbed wire at the Tenant Contractor’s option. The fence and fabric shall be maintained in good condition and repaired as needed.

   ii. In areas directly adjacent to roadways, the Tenant Contractor fence shall be a 5-foot high chain link fence constructed on top of concrete barriers, as detailed in Figure 4-1.2.

C. Upon completion of Construction, Tenant Contractor shall remove all temporary staging area facilities and return the areas to their original condition.

D. Place “Non-Potable Water” identification signs on all water vehicles or water tanks which are to be used for transportation or storage of water during the course of the Work at the airport.

E. Do not place temporary structures or store materials required in the performance of the Work within any of the buildings on the airport without specific prior approval of the Resident Engineer.
F. Immediately following the initial delivery and storage of any combustible materials at the work site, the Tenant Contractor shall store all chemicals, hazardous materials in compliance with federal, state and local regulations and must supply and maintain suitable means of fire protection. This shall consist of portable extinguishers in numbers and locations approved by the Port Authority, or approved wet fire lines, valves, hoses and nozzles. The protection is to be maintained as long as there are combustible materials at the site.

13. Haul Route/Material Hauling

A. The Tenant Contractor shall restrict deliveries and removal of bulk materials, supplies, waste soils and equipment to and from the Project site to the Authority-designated roads and haul routes as directed by the Resident Engineer.

B. Tenant Contract’s access and egress to and from the Airport for hauling operations shall be through the entrance indicated and approved by the Resident Engineer.

C. Costs associated with establishing, maintaining, signing, lighting and marking haul routes shall be borne by the Tenant Contractor.

D. Maintain haul routes in a satisfactory condition and repair damage to such routes resulting from the Tenant Contractor’s operations. Sweep and clean haul routes at the end of each work period or more frequently if required and remove earth and other materials that fall or are otherwise placed on such routes during the performance of the work.

E. Dump trucks shall use load covers and shall be loaded by the Tenant Contractor so that no spillage occurs during transit on the State, municipal, or Airport roadways, taxiways, and aprons. The Tenant Contractor shall clean wheels of trucks leaving the Project construction site of all soil and rocks. The Resident Engineer may require the Tenant Contractor to provide a truck washing rack to minimize the tracking of soil onto paved surfaces.

F. Tenant Contractor shall be responsible for the cost of the immediate cleaning of earth tracking and spills on paved surfaces resulting from the Tenant Contractor’s operations. Tenant Contractor shall maintain mechanical sweeper/vacuum (wet/dry) equipment complete with operators on the project site during any hauling or other operations involving taxiways, aprons, runways and roadways. The Tenant contractor is responsible for the containment control and cleanup of spills of hazardous materials, deleterious materials and petroleum products on any surface.

G. The Tenant Contractor shall determine the minimum vertical bridge clearance for the permitted haul routes.
H. The Port Authority may escort over-height and over-width equipment to the job site; the Resident Engineer will make the determination.

I. Large construction vehicles and equipment must use Tenant Contractor’s gates or Port Authority emergency gates for parking lot access. Parking lot entrance and exit lanes are not to be used.

14. Construction Bulletins

A. Whenever a construction action is scheduled to occur that affects the patrons or airport tenants; a construction bulletin shall be prepared by the Tenant Contractor. Examples of such actions are temporary or permanent closures of roadways, changes in traffic patterns or opening and closing parking lot toll plazas. Each Tenant project is responsible for originating appropriate bulletins, providing necessary narratives and maps and delivering the preliminary draft of the bulletin to the Port Authority office designated by the Resident Engineer. That office, working with the project, will finalize and distribute the bulletin.

B. Should an unscheduled incident occur which affects the patrons or airport tenants the site shall immediately be secured with the appropriate barriers and/or barricades. It is the Tenant’s responsibility to ensure notifications to the Port Authority Police, Port Authority Operations, and any other affected tenants are made. An emergency Construction Bulletin shall be issued through the Port Authority as above.

CHAPTER II: AIRPORT SAFETY AND SECURITY

1. Security Clearances and Access (Other than Customs)

A. Tenant Contractor personnel passing into the Airside Operations Area (AOA) must possess and display a proper and current Badge. Detailed procedures for badging are supplied through the tenant, and reviewed in the Pre-construction Meeting.

B. Information pertaining to the requirements of the airport security program can be obtained through the Resident Engineer’s office.

C. The Tenant Contractor, his/her sub Contractors, suppliers or vendors and their respective employees must adhere to the Airport Security Program. Failure to do so will result in the rescission of restricted area access authorization.

D. Tenant Contractor is responsible for payment of any fines and penalties, levied by the FAA or other jurisdictional authorities, resulting from security infractions.
perpetrated by or caused by his/her personnel or work forces of his/her sub Contractors or suppliers.

2. Customs Security Clearance and Access

A. The Tenant Contractor shall at his/her own cost provide to each of his/her employees and each employee of his/her sub Contractors, suppliers and others performing services for or on behalf of the Tenant Contractor, who are required to enter a Customs Security Area, a customs identification security card, strip or seal meeting the requirements of the U.S. Customs Service. See 19 Code of Federal Regulation Section 122.14.

B. The Tenant Contractor shall also at his/her own cost post a bond with U.S. Customs in an amount determined by the U.S. Customs Security Area Director assuring compliance with Customs Regulations applicable to Customs Security Areas. See 19 Code of Federal Regulations Part 113, Appendix A.

C. Further information concerning U.S. Customs Security Area Requirements shall be obtained from the Customs Hologram and Security Enforcement Team at 973-645-2236 for New Jersey facilities.

3. Contractor Safety

A. During the Work, the Tenant Contractor shall provide the services of a full-time safety supervisor for the performance of this Project.

B. The Tenant Contractor shall implement and conduct, at a minimum, monthly safety meeting with all sub Contractors on the job site and all sub Contractors anticipated to be on the job site for coming month for the purposes of safety coordination, review of safety procedures, and promoting safety awareness.

C. Tenant Contractor’s personnel who will be assigned flagman duties on the Airport for this project may be required to attend a one-time, no-charge training session as directed by the Port Authority.

D. No requirement of or omission to require any precautions in this document shall be deemed to limit responsibility or obligation assumed by the Tenant Contractor. The Tenant Contractor shall at all times maintain adequate protection to safeguard the public and all persons engaged in the Work and shall take such precautions as will accomplish such end, without undue interference with the patrons or the operations of the Port Authority.

4. Patron Safety and Convenience

A. The Tenant Contractor shall take all precautions necessary for protection of persons, traffic and property during dust or fragment generating operations,
concrete mixing or placing, or other operations which may stain, soil or damage property or injure persons. The Tenant Contractor shall provide dust proof partitions to cover the work area. Refer to Chapter IV: 1 Barricades & Barriers.

B. The Tenant Contractors shall coordinate and conduct their work activities in such fashion that patron circulation within public spaces and access to the tenant spaces will not be impaired in any manner except as detailed on Tenant Contractor’s work plans or approved by the Resident Engineer.

C. The Tenant Contractors shall control their operations and those of their subcontractors and all suppliers, to ensure least inconvenience to the general public and minimum disruption to the airport operations.

D. Particular attention is directed to safety on the project in order that the general public will be adequately protected.

E. No Equipment or materials shall be stored in public areas or any other area where it is likely to cause obstruction to the free circulation of the patrons.

F. Existing operating facilities planned to be removed, but which might be of service to the public during construction are not to be disturbed until other and adequate provisions are made.

G. All footways, gutters, sewer inlets and portions of the project adjoining the work under construction shall not be obstructed more than is absolutely necessary as determined by the Resident Engineer and shall comply with the Newark Liberty International Airport Stormwater Best Management Practices Plan.

H. Work closed down for the winter or at any other times shall be left entirely accessible at all points to fire apparatus.

5. Operations of a Motor Vehicle on the Job Site

A. Any operations occurring within secure areas of the airport shall conform to the provisions of Chapter II: 1 Security Clearance and Access (Other than Customs).

B. Before commencing the use of vehicles on the job site, the Tenant Contractor shall furnish a list of registration numbers of each vehicle that will be used on the site.

C. Vehicle operators shall carry valid driver’s license and vehicle registration at all time.

D. Private auto parking will be permitted only at the places designated on the drawings or by the Resident Engineer.
6. Fire Watch Guidelines

A. Notify the Port Authority Police (973-961-6230) immediately of the current fire suppression system impairment and the temporary precautions to be taken including the provision of a fire watch. All details and projected times necessary for repairs must be provided for each building. The Port Authority Police will make the necessary notifications to the responding Fire Department.

B. The fire watch shall be continuous with no interruptions.

C. A minimum of two qualified fire watches must be provided for each building.

D. Fire Watch personnel shall be English speaking and be familiar with a reliable notification system (i.e. Radio, telephone, pull box). They should be instructed to notify the Port Authority Police (973-961-6666) immediately of a potential fire emergency.

E. Fire watch personnel shall have no duties other than that of fire watch. If security watch is necessary, additional personnel must be provided.

F. Fire watch personnel shall make rounds as designated by the facility management at predetermined intervals, not to exceed thirty minutes apart. Verification that patrols are made of all areas must be recorded in a logbook.

G. Fire watch personnel shall have formal training in the use of portable fire extinguishers. This shall include practical live-fire training.

H. Fire watch personnel shall be familiar with the site, systems, hazards and exposures. Each watch shall be familiarized as shift changes occur.

I. Fire watch personnel shall be aware of the limitations of fixed and portable extinguishing equipment.

J. Fire watch personnel shall be accountable to the building management. The Port Authority Fire Marshall shall reserve the right to disqualify a contracted fire watch if it is felt that the fire watch is not up to standard. In such an event the Tenant Contractor must provide a suitable substitute fire watch.

K. Fire watches and contract services for fire watches shall comply with the applicable section of NFPA 601 – Security Services in Fire Loss Prevention.

L. All hot work or spark-producing operations in the building(s) must be prohibited until all fire protection systems have been restored.
CHAPTER III: WORK AREA RESTRICTIONS

1. Operating Within the Airport Operations Area

   A. The Work or a portion thereof, may be performed in proximity to the Airside Operations Area (AOA); including, active runways, taxiways, and aprons. Normal airport operations will continue adjacent to the Work during all phases of the Project.

   B. The Tenant Contractor shall phase construction activities as necessary to minimize disruptions and conflicts between aircraft operations and construction operations. The Tenant Contractor shall proceed with performance of the work in a safe manner and in accordance with the requirements stipulated in this document or other applicable documents refereed in Chapter I: 7 Regulations and codes, at all times coordinating operations with the Resident Engineer. Aircraft operations shall always have priority over any and all of the Tenant Contractor's operations.

   C. Tenant Contractor’s vehicles utilized within the Airside Operations Area must display signs of commercial design on both sides of the vehicle, which identify said vehicle with the Tenant Contractor. Firm or Tenant Contractor’s name must appear in letter a minimum of two inches high.

   D. Tenant Contractor employees drive unescorted on airside or ramp areas must have a current airside drivers permit based on attendance at and successful completion of a special Airport Security Division driving class. Information on class schedules may be obtained from the Resident Engineer.

   E. Upon the completion of operations on an Airside Operations Area, and at the end of each work period, remove plant, materials, equipment and any other obstructions away from such areas to the area designated by the Resident Engineer.

   F. Do not permit loose material capable of being dislodged by aircraft blast and becoming a hazard anywhere on the airport. Remove or stabilize such loose materials as approved by the Resident Engineer.

2. Operating Within the Terminal Operational Area

   A. The work within existing terminal facilities is likely to be performed in close proximity to other tenant-occupied areas and areas used by general public. The
contractor shall be responsible for properly separating his work areas from the operational areas of the Terminal by providing safe, code conforming and aesthetically pleasing barriers satisfactory to the Resident Engineer. The contractor shall now allow odors, fumes and other bothersome elements to interfere with tenants and patrons.

B. Provide barriers as specified in Chapter IV: 1 Barricades & Barriers herein, from floor to ceiling, from floor to underside of floor deck, or to a height of twelve feel above the floor, to close off portions of the facility from areas of construction. The barriers shall be stable under any loads that might be imposed.

3. Operating In or Around Pedestrian Walkways

A. During all construction work, pedestrian crossings and walkways must be maintained and protected from construction operations or relocated out of the construction area as approved by the Resident Engineer. In the case of overhead work, the walkways must be enclosed with appropriate material and lighted.

B. If a walkway is to be opened prior to the completion of construction, provide appropriate steel plate, wood plank or plywood walkways surfaced with heavy-duty non-skid paint coating containing a grit additive. Walkways shall be a minimum of 7 feet wide, or shall match the width of the permanent walkway whichever is wider. Walkways over excavations shall be designed to carry a live load of 150 pounds per square foot. Railings shall be approximately 3'-6" above the walkway and shall consist of a 2"x4" wood top rail, a 1"x3" intermediate rail and a minimum 5 ½" toe board. They shall be securely fastened to 2"x4" wood posts spaced not more than 8 feet apart. All rails and posts shall be splinter-free and smooth to the touch.

C. All installations shall meet ADA requirements in all respects.

D. Adjacent to roadway crosswalks, where 8-foot plywood fence would normally be installed, construct a 4-foot high plywood barrier erected and painted so that appropriate sight distance is provided.

E. Where appropriate or as determined by Resident Engineer, use pavement markings and signs to guide traffic. Use traffic signals to facilitate the crossing of roadways, etc.

F. Use care to feather temporary walks into existing surfaces to avoid bumps and drainage problems.

G. Large signs shall be erected designating the walkway entrance so passengers approaching it from a distance can see it. Directional signal within the walkway shall be provided as necessary.
H. The Tenant Contractor shall provide, erect and maintain all necessary barricades, suitable and sufficient lights, danger signals, signs and other traffic control devices, and shall take all necessary precautions for the protection of the work and safety of the public.

4. Operating In or Around Roadways

A. The Tenant Contractor shall furnish, erect and maintain warning and direction signs in the number required by the Resident Engineer and at locations designated by the Resident Engineer throughout the limits of the project. For street and highway type traffic, the signs shall conform in every respect to the requirements of the Manual on Uniform Traffic Control Devices for Streets and Highways. Signs must be freshly painted and adequately reflectorized before being placed on any project. No work may be performed or begun unless an adequate number or signs of the proper category are in place.

B. In cases where the Tenant Contractor’s sequence of operations results in grade differentials which would be hazardous to vehicular traffic the Contractor will, at the direction of the Resident Engineer provide suitable substantial traffic barriers to the extent determined by the Resident Engineer. Work activities adjacent to active roadways may require coordination with and accompaniment by the Port Authority Police.

5. Maintenance of Traffic and Work Area Protection

A. The term Maintenance of Traffic, as used herein, shall include all of such facilities, devices and operations as are required for the safety and convenience of the public as well as for minimizing public nuisance.

B. The Tenant Contractor shall maintain the free movement of vehicular traffic with respect to his/her own operations and those of his/her subcontractors and all suppliers.

C. Any roadway, land closures or traffic rerouting by the Tenant Contractor will require a written notice to the Resident Engineer, and his prior approval of such notice, minimum of 1 week in advance of the proposed work.

D. Lane closures and traffic rerouting shall require the review and prior approval of the Resident Engineer.

E. Conduct work area protection operations so that traffic lane ingress and egress to intersection roadways, adjacent structures or property, and bus or taxi stops, if any, can be maintained. In the event that the work area protection operations must obstruct access to these areas, 72-hour notice must be given to the Resident Engineer and permission received before proceeding.
6. Parking Lots

A. Install 2 temporary bollards in the walkway at every parking lot perimeter fence line to keep vehicles from exiting over the walkway.

B. The Resident Engineer shall determine the specific number of parking spaces that may be taken out of service for construction in an individual lot. This will be a limited number at any one time, as accounted by overall available airport public parking supply.

C. Security of parking lot perimeter must be maintained at all times. If the permanent fence is not in place, the Tenant Contractor shall install temporary concrete barrier.

7. Work Adjacent to the AirTrain

A permit is required for all construction or work operation within 20' horizontally from the centerline of each guide way and vertically from the ground up with no limit. Whether a job requires a permit will be determined by the Port Authority Resident Engineer and the AEG supervisor. The permit will be site specific and is normally issued for an 8-hr. shift. Application for such a permit should be submitted to the Resident Engineer no less than 72 hours in advance of the intended work. AEG and/or the Port Authority reserve the right to deny or rescind the permit at their discretion at any time. The procedure for procurement of a permit is as follows:

A. The Tenant Contractor or his/her representative at their own cost must attend the Port Authority’s Safety Training Course of approximately 2-hour duration prior to performing any work.

B. Blank permit requests will be available in the lobby of the MCF building 60.


8. Night Work/Overhead Work

A. All overhead work over uncovered active roadways or pedestrian walkways must be performed at night and the affected roadway or walkway closed and traffic detoured. In the case of covered roadways and walkways, certain construction may take place overhead as approved by the Resident Engineer. The erection of structures over, and all pile driving in or adjacent to, active roadways and walkways shall take place at night with the roadways and walkways closed.

B. When necessary to close a roadway for night work, the Tenant Contractor shall provide and install all required construction, including but not limited to,
regulatory and warning signs, detour signs, variable message signs, flag persons, drums, etc. In the case of major inbound roadway closures, vehicles, concrete barriers or other immovable objects shall be used to prevent unauthorized access to the work area.

C. Paving and surfacing operations conducted at night shall, in addition to the requirements of “Obstruction Marking and Lighting” hereof, conform to the following requirements:

   i. At Airside Operations Areas, locate and shield night illumination to prevent interference with air traffic control or impairment of safe aeronautical operations.
   ii. Outside Airside Operations Area, locate and shield night illumination to prevent interference with motorist and pedestrians or impairment of traffic and pedestrian movement.

9. Height Limitations

A. Limit maximum height of construction equipment to twenty-five (25) feet unless approved by the Resident Engineer.

B. Prior to beginning any work, the Tenant Contractor shall notify the Resident Engineer of the height of all cranes, boom trucks, scaffolds or similar vehicles or construction. All such equipment must be within the limits established by the approved FAA Form 7460-1, Notice of Proposed Construction of Alteration for the project.

C. The Tenant Contractor shall properly mark all construction equipment with safety flags and warning lights in accordance with FAA Advisory Circular 150/5210-5B – Painting, Marking, and Lighting Of Vehicles Used On An Airport, and Airport Operations requirements.

CHAPTER IV: GENERAL CONSTRUCTION STANDARDS

1. Barricades & Barriers

As required in situations described in Chapter III: Work Area Restrictions, the placement of construction barriers and barricades is necessary to protect both the public from construction activities and to protect the construction workers from adjacent activities, especially vehicular traffic. In all cases, the Resident Engineer will determine the minimum requirements for barricades and barriers, approximate to the type of construction, location, and duration. All barriers and barricades will be kept in a clean state, and the Resident Engineer may direct using the public-side face to be utilized as a means of displaying information to the general public.
A. Interior Barriers – Long-term Duration and/or Disruptive Operations

i. Provide interior barriers of adequately braced temporary framework, constructed of metal studs covered with 5/8-inch thick Type Z gypsum board with a 4-foot wainscot constructed of fire retardant plywood. (Figure 4-1.1) Barriers shall be erected from floor to ceiling, from floor to underside of floor deck, or to a height of twelve feet above the floor, as appropriate.
   a. Paint the public side to match adjacent walls.
   b. Provide 4 inch black vinyl wall base.
   c. Protect terrazzo floors from chipping. Do not nail directly into such flooring.

ii. Provide doors in barriers for the access to the work of standard hollow wood door and frame. Doors shall be hinged, braced, and provided with keyed locks.

iii. Remove all barrier bracing, anchors, etc. related thereto, and patch, repair, and replace existing finishes upon completion of work to match existing.

iv. All exposed surfaces of barriers shall be painted every two months or as needed, as directed by the Resident Engineer.

v. For all enclosed circulation spaces inside or outside the Terminal facilities, where protective side and overhead structural enclosure is provided, Contractor shall cover the overhead planks by painted plywood.

vi. In all public spaces, heated air shall be provided in the cold months to match the adjacent public utilized areas. A minimum air temperature of 65 degrees is to be maintained.

B. Interior Barriers – Short-term Duration

i. In areas minor construction, temporary barricades may be used to isolate the work area from the public when specifically authorized by the Resident Engineer.

ii. Barricades to the interlocking metal crowd control barriers, minimum 42 inches high, Fredric’s Custom Mfg., Inc. Model F-2-B or equal.

iii. No work is to be performed neither prior to placing barriers not after their removal.

C. Barriers Exposed to the Outside

i. Whenever a building opening is created in areas that may be exposed to the outside weather, temporary barriers are to be constructed to protect the public from exposure to the elements.

ii. Provide exterior weather tight barriers similar in all respect to the dust interior described above except in addition to the plywood, a layer of 6
mil clear polyethylene shall be attached to the opposite side of the side of the studs from the plywood.

iii. Rooftop cover on the exterior barriers shall also be covered with protective roofing material.

D. Exterior Work Area Barricades

i. The entire perimeter of the work area shall be barricaded to prevent public entry.

ii. Concrete barriers are to be used whenever there is a danger to the public or the workman should the barricade be breached.
   a. Concrete barriers are to be used when there is a crop-off of more than 12 inches from the adjacent public area into the work area.
   b. Concrete barriers are to be used adjacent to any roadways.

iii. Where concrete barriers are not required as determined by the Resident Engineer, the Tenant Contractor shall use timber barriers.

iv. Plastic fence material may be used when temporary barricades are needed for short-term duration as directed by the Resident Engineer. Use dense-weave safety netting material, Strong Man Building Products Corp. #SBN-22, Non-Fire Retardant Black, or equal.

E. Concrete Barriers (Figure 4-1.2)

i. All temporary concrete construction barriers shall be new or approved by the Resident Engineer and made with white cement. Maintenance of the barriers shall be the Tenant Contractor's responsibility. Concrete barriers shall remain property of the Tenant Contractor unless otherwise shown on the Contract Drawings.

ii. Where concrete barriers are adjacent to the construction area, a 5-foot high chain link fence with cloth screening shall be attached to the top of the barrier. Screening shall be deleted where roadway sightlines dictate, as directed by the Resident Engineer.

iii. Barriers shall be repainted every eight weeks or as directed by the Resident Engineer.

iv. Paint every 4th barrier with the EWR logo in blue paint using the stencil provided.

v. Secure barriers to avoid lateral displacement.

vi. Place barriers on wooden pads, a minimum of 2” thick where needed for drainage. Puddles caused by the barriers are unacceptable and must be avoided.

vii. Maintain, clean, and relocate the barriers as required to protect motorists, pedestrians and workers.

viii. At the end of each workday, the Tenant Contractor shall replace all barricades that get damaged during the operations.

F. Temporary Timber Barriers (Figure 4-1.3)
i. Provide new materials, or undamaged previously used materials in serviceable condition as approved by the Resident Engineer.

ii. Barriers are to be repainted every eight weeks or as directed by the Resident Engineer.

iii. The Resident Engineer, in conjunction with the EWR RDV Public Outreach program any dictate special graphics.

iv. Secure barriers to avoid lateral displacement.

v. Maintain, clean, and relocate the barriers as required to protect motorists, pedestrians and workers.

vi. At the end of each workday, the Tenant Contractor shall replace all barricades that get damaged during the operations.

vii. For long-term construction activities, two weeks or more, 8-foot timber barriers are to be constructed per the detail.

viii. For short-term construction activities with duration of fewer than two weeks, temporary 4-foot barricades may be used when approved by the Resident Engineer.

2. Maintenance of Work and Work Area During Construction

A. The Tenant Contractor shall maintain the work during construction and until acceptance. This maintenance shall constitute continuous and effective work executed as required with adequate equipment and forces to the end that all parts of the work be kept in satisfactory conditions at all times.

B. Particular attention shall be given to drainage, both permanent and temporary. The Tenant Contractor shall use all reasonable precautionary measures to avoid damage or loss that might result from accumulations and concentrations of drainage water, and material carried by such water and such drainage shall be diverted or removed when necessary to prevent damage to excavation, embankments, surfacing, structures or property. Suitable measures shall be taken by the Tenant Contractor to prevent the erosion of soil in all construction areas where the existing ground cover has been removed.

C. All cost of maintenance work during construction and before final acceptance shall be responsibility of the Tenant Contractor.

D. In the event that the Tenant Contractor’s work is ordered shut down for failure to comply with there or other contract provisions, the Tenant shall maintain the entire project as provided herein, and provide such ingress and egress for tenants adjacent to the project site, for tenants of the project site, and for the general public as may be necessary during the period of suspended work or until the Tenant Contract has been declared in default.
E. The Tenant Contractor shall be responsible for proper upkeep and maintenance of this storage and staging areas. All construction materials shall be properly and neatly stacked in an orderly manner.

F. Maintain a clean-up crew at the construction site during the performance of any work and daily, or more frequently is required, clean all areas of the site so they are free at all times of refuse, rubbish, scrap material and debris. Pay particular attention to pedestrian crossings and roadways.

G. Dust clouds are unsightly; a hazard to roadway and aircraft traffic and the dust particles can cause significant damage to aircraft. Have a plan in place; approved by the Resident Engineer, to control all dust generated by construction operations. Have a sweeper and water truck available at all times in accordance with the approved dust control plan.

H. It shall be the Tenant Contractor’s responsibility to mow, remove or maintain vegetation within the construction site to present an acceptable appearance.

I. Disposal of Debris and Surplus Material
   
i. Do not burn or bury debris of any type on the airport.
   
ii. Do not wash waste materials down sewers or into waterways.
   
iii. Remove all unsuitable material from the airport.
   
iv. Piles of surplus fill or backfill left on work sites for more than five working days must be removed.
   
v. Spoil storage area on the airport is very limited. It is recommended that areas to be excavated be sampled, tested, and classified for disposal prior to the starting major work efforts.
   
vi. The Tenant Contractor shall provide dumpsters or other containers for the removal of construction trash and debris as directed by the Resident Engineer. The Tenant Contractor is responsible for ensuring that dumpsters or other containers are properly covered at all times to contain trash and debris in windy conditions.
   
vii. The Tenant Contractor shall clean up spillage of earth or other materials on all existing paved surfaces immediately.
   
viii. Provide for the disposal of debris generated by airport patrons that accumulates in and adjacent to the Tenant Contractor’s work area.
   
ix. The Tenant Contractor shall provide covered metal cans in sufficient quantity for accumulation of rubbish and garbage at the site. Tenant Contractor shall instruct his/her employees to deposit their garbage and trash in these containers and not elsewhere about the site; and also not to use the containers for construction scraps, rubbish, trash and surplus materials. The Tenant Contractor shall employ these containers daily and haul the rubbish to a legal disposal site of Airport property.
3. Lighting

A. In areas where the Tenant Contractor’s work creates a shadow or otherwise obstructs the existing light, the Contractor shall provide temporary replacement lighting with the same illuminations level as existing and as required my the Resident Engineer. The light fixtures shall be florescent type or as approved by the Resident Engineer.

B. Temporary lighting shall provide minimum lighting levels of 4-foot candles for parking lots.

C. All enclosed/covered walkways shall have minimum 10-foot candles and shall be lighted 24 hours per day.

D. Non-functioning or malfunctioning lighting devices shall be repaired immediately.

E. The Tenant Contractor shall provide security lighting of the site with minimum of 4-foot candle from dust until dawn or for all hours if necessary for the duration of the Contract.

4. Temporary Drainage

A. The Tenant Contractor will be required to insure at all times adequate drainage from his/her area of operations include dewatering runoff. He/she will also provide water pollution and erosion control in accordance with the Port Authority’s requirements.

B. All drainage ditches and culverts draining Airport and adjacent property shall be maintained and kept unobstructed at all times. If, in the opinion of the Resident Engineer, the drainage of any area in the vicinity of the site is obstructed or retarded due to the Tenant Contractor's performance or negligence, the Tenant Contractor shall immediately remedy the cause of such obstruction or retardation at not additional cost to the Port Authority.

5. Erosion Control

Soils exposed during construction must be protected against erosion using proper control measures such as those described in Process, Procedures, and Methods to Control Pollution Resulting From All Construction Activity, U.S. Environmental Protection Agency (EPA A30/9-73-007), October 1973. The contractor shall comply with Newark Liberty International Airport Stormwater Best Management Practices Plan.

6. Rodent Control

The Tenant Contractor shall take precautions against the influx of rats, mice and other pests. He/she shall engage a reputable exterminating firm to give regular service; such
extermination shall comply with the regulations of the NJ Department of Environmental Protection and local regulations.

7. Sanitary Facilities

A. The Tenant contractor shall provide and maintain in proper working order and in clean and sanitary conditions adequate sanity facilities which shall include but not be limited to privacy enclosures, toilet tissue, paper towels, waste receptacles and daily janitorial services for these facilities. The Tenant contractor shall enforce use of these facilities by all personnel. Evidence to the contrary will require removal, disinfecting and reconstruction of work defaced.

B. Use of existing public facilities is not allowed.

8. Damage of Existing Conditions.

A. Tenant Contractor shall be responsible for all damages caused by his/her construction activities including but not limited to construction areas, haul routes, lay down areas etc. Tenant Contractor shall at no additional cost to the Port Authority, provide all labor, materials, etc. to return any damaged areas, systems or equipment to their original conditions.

B. Tenant Contractor shall protect against damaging existing lights, pavement, curbs and other construction that is to remain. Such construction, which is damaged, either directly or indirectly, by the Tenant Contractor during the performance of the Contract, whether negligently or not, shall be restored to the condition, which prior to such damage.

C. Tenant Contractor shall perform a survey of existing conditions in the vicinity of his/her construction activities, utilizing photographs and other means as necessary to document existing damage or conditions. Tenant Contractor shall submit two copies of this survey to the Port Authority within 21 days after Notice-to-Proceed. This survey will assist in resolving any damage claims against the Tenant Contractor during and after construction.

D. Tenant Contractor shall preserve all roadways, pedestrian and directional signage. Signs removed and not required for reinstallation shall be delivered to the Port Authority or as directed by the Resident Engineer. Lost or damaged signs will be replaced or repaired at no cost to the Port Authority.

9. Obstruction Marking and Lighting

A. Material, temporary constructions and facilities for obstruction marking and lighting constitute temporary facilities that are and shall remain property of the Tenant Contractor unless otherwise shown on the Contractor Drawings or specifically directed otherwise by the Resident Engineer.
B. Provide new materials, or undamaged previously used materials in serviceable condition conforming to requirements specified herein.

C. At Airside Operations Area provide obstruction marking as required under FAR Part 77 airfield markings.

10. Temporary Signs

A. The Tenant Contractor shall provide all signs required by and conforming to the current AASHTO and Port Authority’s standards or as required by the project specific contract documents.

B. The Tenant Contractor shall maintain all signs so they remain readable and in position.

C. Temporary signs shall be printed on durable permanent or semi-permanent material and shall be aesthetically pleasing. No paper signs will be allowed.

D. Temporary signs shall be promptly removed when no longer requires.

11. Noise, Odor, Heat & Glare, Vibration Impacts & Radio Communication

A. The Tenant Contractor shall not operate ultrasonic, X-ray, radio-type transmitter, and magnetic or similar electro-magnetic devices, which may affect the Air Traffic Control Tower (ATCT) operations during Tenant construction.

B. The Tenant Contractor shall limit all noise and vibration during Tenant construction. Noise and vibration impacts include the use of jack hammers, power driven fasteners, power driven impact devices, electric powered saws when used to cut metal or similar material of any kind or any other noise generating activity which creates similar or greater noise. The Tenant Contractor shall advise the Resident Engineer in writing if any of these activities are necessary for the construction of the Tenant space and shall be scheduled for nighttime work between the hours of 11:00 PM and 5:00 AM.

C. The Port Authority recognizes and can tolerate a normal level of noise created by a majority of construction activity. However, in the interest of the patrons and other tenants the maximum acceptable noise level within Terminal building areas is limited to 72 decibels. During daytime hours of 5:00 AM through 11:00 PM, the maximum acceptable noise level for sustained or repetitive noises is 55 decibels. Noise levels shall be measured using an "A" scale at a point 4'-0" above ground at property line nearest noise source.
D. The Tenant Contractor is required to secure advance written approval from the Resident engineer prior to scheduling any activity that is anticipated to produce a sustained or repetitive noise level higher than the decibel limits indicated above.

E. Provide sound suppression devices on gasoline and diesel powered construction equipment and pneumatic tools as required to maintain noise exposures below the limits specified in the Code of Federal Regulations (CFR) 29 CFR 1926 Occupational Safety and Health Regulations for Construction (DSMA). Maintain such sound suppression devices in proper operating condition throughout the time of their use, and adjust and repair as required to maintain noise within exposure levels stipulated in 29 CFR 1926.52, Table U-2.

F. The Tenant Contractor may not produce odors of such intensity or character as to annoy or to affect the health or welfare of the patrons or other tenants, or to interfere unreasonably with the comfort of the patrons or other tenants.

G. Any operation producing intense glare or heat, whether from reflective surfaces, powerful electric lights, or high temperature processes such as combustions or welding, shall be performed within an enclosed or screened area such manner that the glare or heat emitted will not be perceptible without instruments at or beyond the lease line. The Tenant Contractor may not produce heat or heated air beyond the lease line.

H. Tenant Contractor shall provide, at his/her expense, two-way radio communication between certain of his/her personnel on the job site. Radios shall produce a maximum of 5 watts of transmitting power. The frequency utilized for these transmissions shall be selected by the Tenant Contractor and approved by the Resident Engineer, but shall not conflict with or overlay any of the Airport’s radio frequencies.

I. The Tenant Contractor’s personnel required to be provided with radio equipment shall, at minimum, include the Project Superintendent, Foreman of all work groups physically separated from the general vicinity of the Project Superintendent, gate guards, and others who may be working in a separate and remove area.

12. Explosives
No explosives will be allowed within the limits of the airport.

13. Demolition

A. Demolition methods, techniques, phases, equipment, hauling of material, times of work, dust control, impacts of vibration, safety netting, protection of the patrons, construction fences and barriers, etc. must be approved by the Resident Engineer.
B. Prior to demolition the Tenant contractor shall exterminate rodents and other pests using a licensed pest control company.

14. Excavations - General

A. A minimum of 72 hours prior to performing any excavation, contact Buried Utility Line Information “Call Before You Dig” at 1-800-272-1000 and provide the information required for excavations.

B. Construction barricades with lights shall be required around all open excavations adjacent to any walkways or roadways.

C. Excavations in walkways or roadways which will be put in service before the construction work is completed, shall be covered with steel roadway plates supported on all sides and embedded in a well tamped, premixed cold patch material that is ramped at 1:24 at the edge of the plate. In addition, the plate shall be securely pinned in place. The surface condition of the roadway and roadway plates shall be maintained so that is consistent with the posted speed limit. In the case of pedestrian walks and where required on roadways, the plate shall be painted with a non-skid paint containing a grit additive.

D. During the winter months, November through April, use of steel roadways plates shall be minimized. In cases where they must be used, large orange and black (construction color) signs saying, “Raise Plow” shall be erected and maintained at both sides of the roadway just ahead of the roadway plates.

15. Subsurface Structures

A. Attention is called to the fact that some of the manholes, chambers or other subsurface structures, in which work is to be performed, contain energized high and low voltage cables, and that various insects, snakes, spiders and rodents may be present.

B. Many subsurface structures are OSHA permit required confined spaces…Port Authority Chief Maintenance Supervisors must be notified of entry activities and such activities must be coordinated with the appropriate parties. Apply to the Resident Engineer in writing at least 24 hours in advance of the time of entry into existing manhole, handhold, or other subsurface structure or interruption or disruption of utility services.

C. Perform interruptions of electrical services, and entry into subsurface structures in accordance with the provisions of the Section hereof entitled “Permit and Requirements for Electrical Distribution Work”. Service shall not be cut off on existing installations until all operations have been completed except for connections or re-connections to power source of wiring to be installed under this contract. Notice to the Engineer shall specifically state what utilities will be
affected and the time and the duration of such interruption. Keep all such interruptions to a minimum. No interruption of utility services shall be made without approval of the Resident Engineer whose decision in all cases shall be entry.

D. Test each subsurface structure, for combustible, toxic or otherwise harmful, gases or vapors in accordance with NFPA NO. 328 “Recommended Practice for the Control of Flammable and Combustible Liquids and Gases In manholes, Sewers and Similar Underground Structures” before permitting personnel to enter. If such gases or vapors are detected, ventilate the subsurface structure and retest prior to entry.

E. Manholes and other subsurface structures in which Work is to be performed may be filled with water. Remove water encountered in such locations and keep the floors of such locations free of standing water at all times workers are in such locations.

F. Tenant Contractor must comply with OSHA Confined Space Regulations 29 CFR 1910.146 et seq.

16. Cutting, Welding, Open Flame and Spark Producing Equipment

A. Before any welding, open flame or spark producing operations begin, a burning permit must be obtained from the Port Authority Police Fire Marshal’s Office.

B. A Fire Watch may be required in certain operations. Port Authority Fire Marshal’s Office will make that determination.

C. No fumes, odors or particulate matter are to be vented into occupied areas. Venting must be to ambient air.

17. Environmental Protection

A. Comply with all Federal, state and local laws and regulations controlling pollution of the environment. Take necessary precautions to prevent pollution of streams, rivers, lakes, ponds and reservoirs with fuel, oils, bitumens, chemicals, or other harmful materials and to prevent pollution of the atmosphere from particulate and gaseous matter.

B. In the event that abnormalities, discolorations, odors, oil or other signs of potential contamination by hazardous materials are encountered during excavation or other construction activities, notify the Resident Engineer immediately. Follow with written notice within 24 hours, indicating date, time, and location of potential contaminates encountered. The Port Authority will sample and analyze the material. The Resident Engineer will provide further direction to the Tenant Contractor regarding disposition of materials encountered.
C. Release of hazardous materials, petroleum products or deleterious chemicals must be contained, cleaned up and properly disposed of. The name of the HAZMAT emergency response contractor under contract to the Tenant Contractor should be provided. NIA Stormwater Best Management Practices Plan must be complied with.

CHAPTER V: WORKING WITH UTILITIES

1. Marking Utility Services

A. A minimum of 72 hours prior to starting activities or operations that include excavating, boring, pile-driven, blasting, digging or planting, Tenant Contractor shall contact Buried Utility Line Information "Call Before You Dig" at 1-800-272-1000 to arrange for this utility-sponsored service to locate and mark the horizontal locations of the following utilities:

i. Power Company electric lines.
ii. Gas Company’s natural gas lines.
iii. Telephone Company’s telephone and telecommunications lines.
iv. Aviation Fueling and Pipeline Companies transmission pipelines.

B. In addition, Tenant Contractor shall employ its own underground utilities location sub Contractor to locate and mark the horizontal location of all other utility lines, which might be impacted by construction activities.

C. The Tenant Contractor is responsible for determining the type and location of underground utilities, regardless of whether these utilities are documented or otherwise indicated, so as to avoid damage to such utilities.

D. The Tenant Contractor is required to check and verify the horizontal and vertical location (coordinates and elevation) of all utility lines that may exist within the limits of new work, regardless of whether such utilities are indicated or not, by use of a subsurface utility engineering company.

E. Test pits shall be dug by hand shovel in the vicinity of the discovered utilities. Test holes shall be performed though the use of a vacuum excavator.

F. Any damage to discovered utility lines as a result of the construction operation should be promptly repaired by the Tenant Contractor at no expense to the Port Authority. The Resident Engineer will assist the Tenant Contractor by marking available any know information about the utilities in order to expedite repairs of the damage by the Tenant Contractor.

G. The Tenant Contractor is required to submit to the Resident Engineer the name of the independent Subsurface Utility Engineering Company to be used.
H. The utility detection individual, who performs the work, shall have a minimum five (5) years of similar experience in the area of subsurface utility engineering.

I. Within sixty (60) days of Notice-to-Proceed, the Tenant Contractor is required to submit to the Resident Engineer, a survey of all subsurface utility engineering results indicating the horizontal and vertical location (coordinates and elevation) of all utilities.

2. Outages

A. Prior to any utility outage/interruption, Tenant Contractor shall prepare a schedule of such outage. Outage schedule shall include duration, identification of the service affected, temporary utility service to be provided identification of available service alternative, and the action to be taken in the event of any emergency. All outages of utility systems shall be in writing, fully coordinated, and approved by the Resident Engineer. All outages shall be scheduled at least two (2) weeks in advance with a 96-hour notification provided by the Tenant Contractor confirming date, time, and duration.

B. The Tenant Contractor shall provide a suction/pump truck during all sanitary sewer line outages to support the disabled lift stations. Sewage shall be transported to alternate lift stations located on the Airport and disposed of accordingly. The suction/pump truck shall have the capacity of 3,000 gallons or greater. The Port Authority Electrical, Environmental and Mechanical Maintenance units shall be notified when such activities are planned or performed.

3. Co-operating with Public Utility Companies

A. Notice shall be given by the Tenant Contractor to all individuals, companies, and the proper City officials owning or having charge of structures along any part of the work, of his/her intention to commence operations along such part of the route, at least one week in advance, and a copy of such notice shall be filed with the Resident Engineer.

B. The Tenant Contractor shall co-operate with other Tenant Contractors and with representatives of various companies and agencies which own, operate, or have supervision over the structures encountered, and shall conform to the reasonable requirements of the owners of such structures in regard to their safe maintenance.

C. Ventilation openings shall be provided where gas is likely to accumulate.
D. Where structures are to be constructed under the facilities of any public utility the Tenant Contractor shall arrange with the utility company for the removal or support and maintenance of such facilities.

4. Permit and Requirements for Electrical Distribution Work

A. Notify the Resident Engineer at least 24 hours prior to the commencement of operations at the construction site, which in any way may affect existing electrical circuits or requires entry any electrical manhole at the airport, and obtain from the Engineer Port Authority Form PA 2497 A “Electrical Distribution Work Permit”. Execute such form in triplicate each morning prior to commencement of Work on existing electrical circuits or entry to manholes. The Authority will issue this form to the Tenant Contractor without payment of a fee, and ensure that all required circuits are de-energized, locked out, and tagged. The Tenant Contractor maintains responsibility to ensure all lockouts are complete prior to beginning any associated work.

B. Allow sufficient time for loads to be transferred to other circuits from the circuits upon which Work is to be performed and for lock out of circuits, which are within existing load centers. Comply with other requirements contained on the back of the “Electrical Distribution Work Permit” insofar they are applicable to the Work to be performed under this Contract. In any event, reconnect and place back in operation electrical circuits activating parking field, roadway, runway operations, apron and taxiway lights prior to the close of operations on each day, and in any event before sunset of each day. Overtime operations of premium time required to be paid by the Tenant Contractor for or in connection with this numbered Section shall be borne by the Tenant Contractor without separate or additional compensation therefore.

5. Gas Pipes

A. Any necessary alterations to the gas mains and gas service pipes, including temporary or permanent relocations thereof, will be made by the Public Service Electric & Gas without expense to the Tenant Contractor.

B. Owing to the liability of explosion of gas from leaky pipes within a covered excavation, the Company will by-pass the gas service in temporary pipes laid outside such excavation, in advance of the construction work. The mains and services that have been removed may be replaced in their permanent position after the backfilling has been sufficiently compacted.

6. Aircraft Hydrant Fueling system and Transmission Pipeline

A. The Tenant Contractor must notify the operator of the on-airport fueling system, Ogden Aviation, at 973-961-3690 a minimum of 72 hours prior to starting any excavation, which will occur within 20 feet of an underground fuel line.
B. The Tenant Contractor shall obtain a hot work permit from the Airport Fire Marshall whenever construction activities require cutting, welding, or otherwise altering the system. The Fire Marshall requires a minimum 48-hour notice prior to issuing hot work permits. All system testing, flushing, and QA/QC must be coordinated through the system operator.

7. Fire Alarm Boxes and Fire Hydrants

A. Fire alarm boxes shall be supported and protected and maintained so as to be readily accessible and open to view.

B. Fire hydrants shall be left at all times clear of obstructions and readily accessible to fire apparatus and no material or other obstructions shall be placed within ten feet of a fire hydrant. Provide 24-hour notice to the Resident Engineer and obtain his/her permission in the event hydrant obstruction is unavoidable.

C. Excavations shall be decked or bridged, where necessary, to permit the safe passage of fire apparatus and to give access to fire hydrants and to adjacent buildings for the extinguishing of fires.

D. Where necessary, branch pipes shall be extended from the nozzles of the fire hydrants for convenient attachment to the fire engines. The pipes connecting the fire hydrants to the mains shall be protected from freezing, and the fire hydrants (particularly the high pressure type) shall, where necessary, be braced or tied to the connecting pipes to prevent movement under water pressure.

E. High-pressure fire hydrants shall not be used as a source of water for construction.

F. The Tenant Contractor shall obtain a permit from the Port Authority Watch Engineer before using any low-pressure water system fire hydrant for water for construction. An approved backflow prevention device shall be attached to prevent contamination of the water system.
VII. AIRPORT SPECIFIC INFORMATION
JOHN F. KENNEDY INTERNATIONAL AIRPORT (JFK)

JFK Fire Alarm System
System reliability and our service provider's inability to maintain obsolete equipment, requires us to replace our current fire alarm system. Obsolete McCullough loops, Potter wheel transmitters and point to point dedicated phones lines will be replaced with Centrex lines monitored by an outside service provider.

All new Tenant fire alarm installations will require compatibility with our new system. UDAC's will be required in new tenant fire alarm systems. This will permit our central fire alarm supervisory board to receive, via Centrex telephone lines, all signals being transmitted to the Tenant's fire alarm building panel.

Tenants will be responsible for co-coordination with the Central Station Monitoring Contractor to conduct the required monthly testing of their leasehold Fire Alarm System and to affect such repairs and/or other actions necessary to meet National Fire Code, local, State and Port Authority requirements.

JFK Tenant Alteration Application Process For Security System Requirements
This section of the Tenant Alteration Application (TAA) Process that deals with the Tenant Security System requirements stated herewith was developed to provide design standards for a Tenant Security System as a Region of the Aviation Enterprise system.

The Tenant Security System will be connected to the Enterprise full-time via the Airport's SONET Network. Communication will be in real-time. Data transfer will be bi-directional using network protocols required by the Enterprise system.

One major aspect of the requirements is to restrict the Tenant from issuing Airside access to AOA doors without prior authorization from Aviation.

**Overall Purpose**
The purpose of these requirements is to enhance the overall physical security of the Airport and provide the capability of centralized monitoring, database management, and administration of each Regional system on a global level. Additionally, the regional server will enable the tenant systems to replicate cardholder revoked privileges information across the Enterprise System. The following is a list of benefits the regional system will provide:

- Independent system control at a regional level.
- Independent regional operations
- Capability of Biometric authentication
- Regional Administrator revoke access privileges capability
- Secured communications over SONET.
- Remote access capability with the Cisco switch required for secured SONET network connection.
**System Requirements**

The system requirements are mandatory and shall be followed to ensure that the Tenant Security Systems can be interfaced as a Region of the Aviation Enterprise System.

Depending upon existing Tenant systems, system upgrade may include new servers, network equipment, operating system, anti-virus and security software. The costs of the upgrade shall be the sole responsibility of the Tenant.

The Agency reserves the right to impose fines and penalties, including suspension of user rights to assign AOA access, for Breach of Rules (BOR), violation, deviation or non-compliance to the requirements stated herewith.

As a Region of the Enterprise system, the Tenant Security System shall meet the following requirements:

a. Restrict Tenant from issuing Airside access to AOA doors without prior authorization from the Port Authority.

b. The Tenant system shall be compatible with the Port Authority approved Lenel OnGuard Enterprise system software, Database and Operating System.

c. The Tenant shall arrange to enter into a 'Software Escrow Agreement' with the system manufacturer to ensure that funding is available for independent software support, research, development and changes by another independent company in the event that the system manufacturer go out of business.

d. The system software shall operate on a Port Authority-approved multitasking, multi-threading Operating System (OS) fully compatible with the Aviation's Enterprise system, and a Relational Database Management System (RDBMS), or approved equal.

e. Networking - The operating system shall support various networking protocols including, but not limited to, TCP/IP, IPX/SPX. The Tenant Security System shall be connected to the Enterprise via Aviation's SONET network.

f. Network Security - The Tenant Security System shall incorporate on their system design VPN Routers and Security Firewalls that meet the network security requirements of the Agency. The routers shall be capable of filtering IP and MAC Addresses, including snooping and intrusion detection software that pinpoint and map origin of intruders, and McAfee Anti-Virus software.

g. Remote Access Services - The operating system shall support full remote diagnostics abilities through its remote access services. Full network functionality shall be available over remote links using TCP/IP protocols.
h. **Database Management Systems** - The system shall support industry standard Open Database Connectivity (ODBC) compliant relational database management systems. The relational database management system shall run on Microsoft SQL Server 2000. The databases, through ODBC, shall be true client/server, high performance, and ANSI standard capable of handling high transaction rates and multiple users concurrently accessing and modifying the database.

i. **Open Architecture** - The system shall have an open architecture design. It shall be a true open architecture design that support industry standards for databases, networks and ID-Badge printers. No customized or proprietary PC or credential creation software or hardware shall be required to operate the system. The system shall be both scalable and portable to give the Tenant the ability to increase performance based on the TAA requirements.

j. **Scalability** - The system shall be scalable to support Symmetric Multi-Processing (SMP) machines. The Relational Database Management System (RDBMS) within the system shall use a single-process, multi-threaded architecture known as Symmetric Server Architecture, which provides scalable, high system performance with very efficient use of system resources. The system shall provide Symmetric Multiprocessor Support, allowing it to execute threads in parallel on multiple CPUs. The RDBMS shall use native Windows 2000 threads and it shall automatically scale to multiprocessor hardware with no special configuration or programming required.

k. **Network Support** - The system shall be designed to support any industry standard network protocol and topology listed below:
   1. TCP/IP
   2. Novell Netware (IPX/SPX)
   3. IBM LAN Server
   4. IBM SNA Networks
   5. Microsoft LAN Manager
   6. Ipsec for VPN operation

l. **Advanced Network Architecture** - The system shall be designed to support an advance distributed network architecture, where system multiplexers or controllers do not need to be wired back to the server. The multiplexer/controllers shall be wired to a Windows 2000 server to run the system software. Also, multiplexer/controllers shall be connected to a Local Area Network/Wide Area Network via industry standard TCP/IP communication protocol. Network based multiplexer/controllers shall be able to communicate back with the server through industry standard network switches and routers and shall not have to be on the same subnet. The system shall also support dual path upstream communications between the multiplexer/controller and client workstations/server. Secondary
communications paths shall include direct connection (RS-232/485), network (TCP/IP) or dial up connections. As such, any alarm in the system shall be routed to any client workstation(s) on the network, regardless of the multiplexer/controller that generated the alarm.

m. Multiple Card Formats - The system shall support an unlimited number of card formats and Biometric technology. Magnetic stripe, Smart card and Wiegand card formats shall be supported. The system shall support High-Coercivity magnetic stripe format that uses card number, facility code, and issue code combinations with a maximum of a nine-digit card number and two-digit issue code. The card shall also be compatible with the Dorado 780 Magnetic Stripe reader and keypad. The system shall support industry standard Wiegand card format.

n. Un-interruptible Power Supply (UPS) - The system server(s), controllers (ISC) and other field devices and components shall utilize UPS system that will meet the minimum requirement of the system manufacturer.

Enterprise Region System Requirements
The system shall meet the following mandatory requirements set forth by the Agency for a Region of the Enterprise system:

a. The cardholder database shall be SQL Server 2000, with the latest Microsoft service packs installed,

b. The security system shall interface to the Port Authority Enterprise Master server located in John F. Kennedy Airport.

c. The security system shall be configured by the tenant to replicate cardholders and database information over a dedicated CACS SONET segment provided by the Port Authority,

d. The security system shall be configured so as to prevent other regions from viewing, editing confidential information.

e. The security Operating System shall be Windows Server 2000, with the latest Microsoft service packs installed.

f. The server and workstations operating system shall be protected against viruses.

NEWARK LIBERTY INTERNATIONAL AIRPORT (EWR)

Guideline to Maintenance or Minor Work Applications
This request is used for minor work of minor or maintenance type work (e.g., painting, carpeting, light fixture replacement, low voltage electrical work, replacement in kind (i.e. electrical wiring, etc.). This type of application, made by
letter request, is reviewed locally by the TFO and the airport Operations staff, as required. If a project is approved as a maintenance or minor work program, approval is granted by the Manager of Airport facilities Division, and the REO will monitor the work through completion of the project. Figure V-26 is a sample of a letter application and Figure V-27 is a sample of the PA's approval of a Maintenance or Minor work letter application.

Maintenance and Minor Work Applications shall not be submitted for any work which involves code issues or may impact life safety systems, fire protection system, ventilation, egress changes, the structural integrity of the facility, or any work impacting or involving hazardous materials or any other work that otherwise involves health, safety or structural issues. Projects involving or impacting any of these elements must be submitted via the formal Tenant Construction or Alteration Application. (Form 531) Refer to the following examples:

a). Shutdown of existing electrical panels or installation of transformer.
b). Complete Replacement of electrical wire, not in kind.
c). Attachments to the existing Structure.
d). Full height partition wall construction that impact sprinklers.
e). Modification to existing HVAC systems.
f). Overhead signs or equipment attached to existing structure.

Example of an Approved Maintenance/Minor work request:

a). The project consists of the installation of four self-service ticketing kiosks in front of the XYZ Airlines ticketing counters at the Newark International Airport. As part of this project ten new data cables will be installed in a new conduit to the ticket counters, below the ticketing area, from an existing communications rack in the Tenant office space. These cables will support the kiosks data links and the future conversion of the remaining ticket counters.

Example of an Disapproved Maintenance/Minor work request:

b). The XYZ Corporation has retained ABC, Inc. To install a 500-gallon above ground storage tank (AST) at the above referenced site. The AST will be used to store windshield washer antifreeze fluid that is currently stored in two 85-gallon plastic portable cylindrical tanks.

Note: Waiver may be addressed on a case-by-case basis. In certain cases, issues may be waived if signed and sealed drawings in accordance to applicable codes are by Engineer or Architect of Record.
EWR Tenant MBE/WBE & Labor Force Program

MBE/WBE Program And Participation Plan Submission

1. All new Tenant Alteration Applications (TAA) must be accompanied by a complete Minority Business Enterprise/Women Business Enterprise (MBE/WBE) Participation Plan. Although not required at the time of initial submission, the completed plan should be submitted to EWR Tenant Facilities Office as soon as practical. Applications will be approved for construction only after the Port Authority has reviewed and accepted the proposed MBE/WBE Participation Plan (See Figure V4 in section V).

2. The Plan should include the following information:
   a). TAA No.
   b). Name of Tenant
   c). Name and telephone number of designated tenant MBE/WBE contact person
   d). Project Title and Location
   e). Name of Prime/General Contractor
   f). Total Construction $ Value
   g). Name, addresses, and telephone #’s for proposed MBE/WBE contractor (s)
   h). Description of work services to be provided by MBE/WBE contractor (s)
   i). Approximated dollar value of work to be performed by each MBE/WBE contractor.
   j). Percent of participation in relationship to the cost of the overall project for each MBE/WBE contractor.

3. Current Port Authority MBE/WBE Program participation goals are 12% MBE and 5% WBE of total A/E and construction project dollars and the submitted participation plan should meet or exceed these goals or good faith efforts need to be demonstrated if these goals are not met.

4. MBE/WBE firms must be Port Authority certified. A list of Port Authority certified MBE/WBE contractors is available from Dolores Pollard, Affirmative Action Coordinator, located at Newark International Airport, Building 70, Brewster Road, Newark, NJ 07114. Phone numbers 973/624-7692 or Barbara Gibson, Affirmative Action Administrator at 973/624-6970.

5. In order to assure that the planned goals are being met, a monthly Statement of MBE/WBE Payments Report (see figure V-21 in section V) must be submitted throughout the construction period.
NOTE: Monthly Statement of M/W/DBE Payments report should be submitted monthly to the EWR Affirmative Action Office throughout the life of the project.

**Labor Force Program and Monthly Employment Utilization Report Submission.**

6. In addition to MBE/WBE Program, it is important that the construction labor force reflect community demographics. Tenants are, therefore, requested to submit a Monthly Employment Utilization Report (see Figure V-19 in section V), which itemizes the minority and female participation in the construction labor force during project construction.

7. The current minority participation goals for the work force - re 30% for skilled trades and 40% for laborers. The current female goals for skilled trades and laborers are 6.9%.

**NOTE:** Monthly Employment Utilization Reports should be submitted by the 15th day of each month for previous months work activity.

**GENERAL:** Both the Statements of MBE/WBE Payments Report and Monthly Employment Utilization Report should be submitted to Dolores Pollard, Affirmative Action Coordinator, Newark International Airport, Building 70, Brewster Road, Newark, NJ 07114. Please remember to identify each submittal with the proper TAA number.

**EWR STANDARD REVIEW SCHEDULE (Approximate)**

<table>
<thead>
<tr>
<th>PROJECT VALUE</th>
<th>COMMENTS BACK TO TENANT</th>
</tr>
</thead>
<tbody>
<tr>
<td>UP TO $3,000,000</td>
<td>15 WORKING DAYS</td>
</tr>
<tr>
<td>$3,000,000 &amp; UP</td>
<td>20 DAYS (1ST REVIEW)</td>
</tr>
<tr>
<td></td>
<td>17 DAYS (ALL OTHER REVIEWS)</td>
</tr>
<tr>
<td>$10,000,000 &amp; UP</td>
<td>25 DAYS (1ST REVIEW)</td>
</tr>
<tr>
<td></td>
<td>19 DAYS (ALL OTHER REVIEWS)</td>
</tr>
</tbody>
</table>

The First Submission must have the following:

**(3) Three** - Signed and sealed Tenant Alteration Applications (please complete Part One and Part Two) signed by authorized airline representative e - the signature of an authorized corporate officer only - President or Vice President. The signature of corporate officers other than those of the President or Vice President of a corporation need evidence of authority of that officer to act on behalf of the corporation. Such evidence of authority should be in the form of corporate by-laws, board resolutions, or an effective power of attorney. Please **PRINT** name of authorized representative, **SIGN** and **DATE** signature. The
Tenant Alteration Applications must also be embossed with seal (raised seal) of architect/engineer of record. Please complete attached Asbestos Certification Form and sign and seal where applicable.

Drawings, Specifications, Calculations and Catalogs:
(17) Seventeen Sets of 24" x 36" size drawings
(One set of the 16 sets must be signed & embossed)

(17) Seventeen Sets of specs, structural calculations, catalog cuts, etc. (if applicable) (One set of calculations must be signed & embossed)

(1) One List of submitted documents

PREPARATION OF TENANT CONSTRUCTION OR ALTERATION APPLICATIONS FOR NEWARK INTERNATIONAL AIRPORT

Tenant Construction or Alteration Applications are prepared as follows:

Prepare (3) three copies (with original signatures and seals) of form PA 531 for all tenant construction or alterations.

Before completing PART ONE of form PA 531, please note the following:

a) Under AT (FACILITY) insert Newark Liberty International Airport.

b) Under PURSUANT TO (LEASE, SPACE PERMIT) NO., insert the number as it appears on your lease or permit.

c) Under APPLICANT’S NAME, insert the name of the tenant as it appears on the lease or permit. Do not insert the name of the individual who is signing the application.

d) Under BY (SIGNATURE OF AUTHORIZED REP.), insert the signature of an authorized Corporate Officer only (i.e., President or Vice President). Signatures of corporate officers other than those of the President or Vice President of a corporation need evidence of authority of that officer to act on behalf of the corporation. Such evidence of authority should be in the form of corporate by-laws, Board resolutions, or an effective Power of Attorney.

Include 17 seventeen copies of plans and specifications for minor alterations such as electric outlets, partitions, cabinets, etc. Include 17 seventeen copies of plans and specifications for all other tenant construction or alterations.

TENANT CONSTRUCTION PLAN AND SPECIFICATION GUIDELINES
The following comments are to assist your Engineer or Architect in preparing drawings of proposed work. Use of the guidelines, where pertinent, will minimize Port Authority review time and resultant comments.

1. Locate area of construction with respect to existing conditions, (i.e., column numbers, coordinates, dimensions to existing structures, etc.), and provide a "Plot Plan."

2. Indicate existing structures and facilities in area affected and adjacent areas; also indicate all demolition and removals.

3. Include on drawings the plans, sections, elevations and details of proposed work.

4. Show arrangement of equipment and furniture, which might constitute an obstruction of passage to exits.

5. Provide floor plans to include that area beyond the limits of proposed work area necessary to show the entire means of ingress and egress.

6. Indicate, where prescribed, occupancy count for all areas.

7. Give location and specifications for all fire protection equipment, i.e., fire doors, fire dampers, smoke detectors, sprinklers, fire alarm systems, hose cabinets, extinguishers, etc.

8. Include a note on the drawings requiring all work to be done in accordance with the National Electrical Code and the applicable code of the City or municipality in which work occurs. F.I.R.O. and Employers Group of Insurance Companies approval is required for sprinkler and fire protection items.

9. Indicate power requirements and source of power. Also indicate size and type of all electrical equipment, i.e., conduit, wire, panels, control devices, etc.

10. Provide details of all built-in equipment.

11. Provide complete specifications for all materials.

12. Show all new and modified ventilating systems including that portion outside the area of proposed work necessary to indicate the complete circulation cycle.

13. Provide design computations for major structural members including all existing members receiving additional loads.
14. All drawings must bear the stamp of a Registered Architect or Professional Engineer licensed in the State of New Jersey.

15. If proposals require resubmission, clearly indicate change from original on the resubmitted drawings.

16. "As Built" Drawings are to be furnished after completion of work.

17. Asbestos Certification Form, Form PA-3677, is to be submitted with Form PA-531.

18. If Form PA-3677, Asbestos Certification Form, indicates that asbestos will be disturbed, Form PA-3678 is to be submitted with Form PA-531.

19. If Form PA-3677, Asbestos Certification Form, indicates that asbestos will be disturbed and the tenant is waiving his/her right to participate in the Port Authority's litigation, Form PA-3679 is to be submitted with Form PA-531.

20. All materials used for the construction of this project, whether building materials or appurtenances, shall be non-asbestos containing materials.

21. Asbestos work must be performed by a contractor approved by the Port Authority.

22. All environmental services required to be performed with respect to tenant construction, including and without limitation, surveys, monitoring, laboratory analysis and waste removal, must be performed by a contractor/consultant, approved in advance by the Port Authority.


24. An MBE/WBE Participation Report must be submitted and accepted by the Port Authority prior to approval of this application.