FOR OFFICIAL USE ONLY

MIAMI-DADE AVIATION DEPARTMENT

MIAMI-DADE COUNTY

Daniella Levine Cava
Mayor

Board of County Commissioners

Oliver G. Gilbert, III
Chair

Anthony Rodriguez
Vice-Chair

Oliver G. Gilbert, III ***DISTRICT 1***	Kevin M. Cabrera ***DISTRICT 6***	Anthony Rodriguez ***DISTRICT 10***
Marleine Bastien ***DISTRICT 2***	Raquel A. Regalado ***DISTRICT 7***	Roberto Gonzalez ***DISTRICT 11***
Keon Hardemon ***DISTRICT 3***	Danielle Cohen Higgins ***DISTRICT 8***	Juan Carlos Bermudez ***DISTRICT 12***
Micky Steinberg ***DISTRICT 4***	Kionne L. McGhee ***DISTRICT 9***	René Garcia ***DISTRICT 13***
Eileen Higgins ***DISTRICT 5***		

Geri Bonzon-Keenan
County Attorney

Ralph Cutie
Aviation Director

BID No. AB003A

MARCH 2024

MIAMI INTERNATIONAL AIRPORT (MIA)
CONCOURSE E SATELLITE
APM BRIDGE REHABILITATION PROJECT

CONTACT FOR THIS SOLICITATION:

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VOLUME 2
DIVISION 1
AND
COMMISSIONING
STANDARD TECHNICAL SPECIFICATIONS

MIAMI - DADE AVIATION DEPARTMENT

EDITION DATE: ***03/10***

MIAMI INTERNATIONAL AIRPORT

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MDAD STANDARD TECHNICAL SPECIFICATIONS
DIVISION 1

SECTION 01002
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SECTION 01004

LIST OF DRAWINGS

* *

List below drawing No. and description of all the Contract Drawings as they appear in the Plan Sheets.

* *

Drawing Number	Description
G0	COVER AND INDEX
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S10	BEARING DATA TABLE (2 OF 2)
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S12	BEARING DETAILS (2 OF 2)
S13	JACKING DETAILS (1 OF 4)
S14	JACKING DETAILS (2 OF 4)
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S16	JACKING DETAILS (4 OF 4)
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S18	CONSTRUCTION SEQUENCE
S19	DECK REPAIR DETAILS
S20	STEEL REPAIR DETAILS
S21	SUBSTRUCTURE REPAIR DETAILS
BX1-1 Through BX1-50	EXISTING STRUCTURES PLANS

END OF SECTION

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SECTION 01010

SUMMARY OF WORK

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

A. Title of Work, and type of Contract.

B. Work by Others.

C. Work Sequence.

D. Use of Premises.

E. Owner Occupancy.

F. Pre-Ordered Products.

G. Owner-Furnished Items.

1.02 RELATED REQUIREMENTS

A. Advertisement for Bids

B. Instructions to Bidders

C. Bid Form

D. General Conditions

E. Special Provisions

F. Technical Specifications

1.03 WORK COVERED BY CONTRACT DOCUMENTS

A. Work of this Contract comprises renovation of the Satellite Terminal E APM Bridge, located at the Miami International Airport (MIA), for the Miami Dade Aviation Department, the Owner.

1.04 CONTRACT METHOD

A. Construct the Work under lump sum contract.

1.05 WORK BY OTHERS

A. Work of the Project which will be executed by others is designated N.I.C. on the Plans, including:
   1. Conduits, pipes, Glycol Chilling Pipe and related equipment attached to the bridge structure
   2. APM rail expansion joints, APM pulling cable or other APM hardware

1.06 WORK SEQUENCE

A. All work requiring access to the APM guideway shall be completed during a 4-month period when the APM train operations could be suspended. Remaining work shall be constructed such that APM operations will not be impacted.
B. Contractor shall provide a detailed construction schedule, identifying the shutdown period, to MDAD for approval and coordination with other contractors.
C. Contractor shall coordinate with MDAD and Leitner-Poma, the APM operating contractor, for the execution of the work.

1.07 CONTRACTOR USE OF PREMISES

A. The Owner shall have the right of unlimited access to the premises.

B. Contractor shall limit use of premises for Work, or storage, and for access, to allow:
   1. Owner occupancy
   2. Work by other contractors.
   3. Public usage.

C. Coordinate use of premises under direction of Owner

   Assume full responsibility for protection and safekeeping of project under this Contract.

D. Obtain and pay for use of additional storage or work areas needed for operations under this Contract.

1.08 OWNER OCCUPANCY

A. Owner will occupy premises during entire construction period for conduct of its normal operations, except for a 4-month period where the APM train operations could be shutdown. Cooperate with Owner and APM operating contractor in scheduling operations to minimize conflict and to facilitate Owner usage.

1.10 OWNER-FURNISHED DOCUMENTS

A. Owner Responsibilities:
   1. Furnish Contractor with one transparency copy of the Plans (suitable for reproductions), and three copies of the Project Manual. Additional copies will be made available to the Contractor at cost of reproduction.

1.11 REQUIRED PERMITS

Listed below are the permits required under this Contract:

A. Miami-Dade County Planning, Development, and Regulation

B. Miami-Dade County Department of Public Works

C. Miami-Dade County WASA

D. U.S. EPA

E. U.S. COE

F. SFWMD

G. Florida DEP

H. Miami-Dade County DERM

I. MDAD Hot Work Permit

1.12 AUTHORIZATION TO PULL A PERMIT

A. The Owner at its option may authorize the Contractor to pull the Building Permit from the Planning, Development, and Regulation Department, prior to the Notice to Proceed.

B. A copy of the Authorization to Pull a Permit form is appended to this Section.

1.13 MODIFICATIONS TO INSTRUCTIONS TO BIDDERS AND GENERAL CONDITIONS

A. Delete Article 14.04 of the Instructions to Bidders (Re: Preference for local business competing for County Contracts).

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

PART 4 PAYMENT

Unless otherwise specified, the cost of work specified in the various sections of Division 1, will not be paid for separately but the cost therefor shall be considered incidental to and included in the bid prices of the various Contract items.

APPENDIX: Authorization to Pull a Permit Form

END OF SECTION

MIAMI-DADE AVIATION DEPARTMENT

AUTHORIZATION TO PULL A PERMIT

Date: _____

Contract: _____(Title)

Contract No.: _____

To: _____
(Contractor Name)

(Address)

You are hereby authorized to pull the required Building Permit from the Miami-Dade County Planning, Development, and Regulation Department.

Enclosed is a check issued to the Miami-Dade County Planning, Development, and Regulation Department in the amount of

$ _____representing the required permit fee.

NOTE: This Authorization to Pull a Permit IS NOT a Notice-to-Proceed.

Authorized by: _____
(Assistant Director for Facilities)

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SECTION 01027

APPLICATIONS FOR PAYMENT

PART 1 GENERAL

1.01 REQUIREMENT INCLUDED

A. Procedures for preparation and submittal of Application for Payment.

1.02 RELATED REQUIREMENTS

A. General Conditions

1.03 FORMAT

A. Miami-Dade Aviation Department Form

1.04 PREPARATION OF APPLICATION

A. Type required information.

B. Execute certification by signature of authorized officer.

C. Use data on Bid Form and approved Schedule of Values. Provide dollar value in each column for each line item for portion of Work performed.

D. List each authorized Change Order and an extension on continuation sheet, listing Change Order number and dollar amount as for an original item of Work.

E. Prepare Application for Final Payment as required in General Conditions.

1.05 SUBMITTAL PROCEDURES

A. Submit three (3) copies of each Application for Payment at time stipulated in Agreement.

B. Submit under transmittal letter.

1.06 SUBSTANTIATING DATA

A. When Architect/Engineer requires substantiating information, submit data justifying line item amounts in question.

B. Provide one copy of data with cover letter for each copy of submittal. Show Application number and date, and line item by number and description.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

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SECTION 01030

ALTERNATES

PART 1 GENERAL

1.01 REQUIREMENT INCLUDED

A. No alternates included with this Project

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

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SECTION 01040

COORDINATION

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

A. Coordination of Work of Contract.

1.02 RELATED REQUIREMENTS

A. Section 01010 - Summary of Work.
B. Section 01045 - Cutting and Patching.
C. Section 01200 - Project Meetings.
D. Section 01600 - Material and Equipment: Product option and substitutions.
E. Section 01701 - Contract Closeout Procedures: Closeout submittals.

1.03 DESCRIPTION

A. Coordinate scheduling, submittals, and work of the various sections of Specifications to assure efficient and orderly sequence of installation of construction elements, with provisions for accommodating items to be installed later.

B. Coordinate sequence of Work to accommodate Owner occupancy as specified in General Conditions and Section 01010.

1.04 MEETINGS

A. In addition to progress meetings specified in Section 01200 hold coordination meetings and preinstallation conferences with personnel and subcontractors to assure coordination of Work.

1.05 COORDINATION OF SUBMITTALS

A. Schedule and coordinate submittals.

B. Coordinate work of various Sections having interdependent responsibilities for installing, connecting to and placing in service, such equipment.

C. Coordinate requests for substitutions to assure compatibility of space, of operating elements, and effect on work of other Sections.

1.06 COORDINATION OF SPACE

A. Coordinate use of Project space and sequence of installation of work that is indicated diagrammatically on drawings. Utilize space efficiently to maximize accessibility for other installations, for maintenance and for repairs.

1.07 COORDINATION OF CONTRACT CLOSEOUT

A. Coordinate completion and cleanup of work of separate sections in preparation for Substantial Completion.

B. After Owner occupancy of premises, coordinate access to site by various sections for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

C. Assemble and coordinate closeout submittals specified in Section 01701.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

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SECTION 01045

CUTTING AND PATCHING

PART 1 GENERAL

1.01 REQUIREMENT INCLUDED

A. Requirements and limitations for cutting and patching of Work.

1.02 RELATED REQUIREMENTS

A. Section 01010 - Summary of Work.

B. Section 01600 - Material and Equipment: Substitutions

C. Individual Specifications Sections:
1. Cutting and patching incidental to work of the Section.
2. Advance notification to other Sections of openings required in work of these sections.
3. Limitations on cutting structural members.
4. Do not cut or drill into any prestressed concrete member.

1.03 SUBMITTALS

A. Submit written request in advance of cutting or alteration which affects:
1. Structural integrity of any element of Project.
2. Integrity of weather-exposed or moisture-resistant element.
3. Efficiency, maintenance, or safety of any operational element.
4. Visual qualities of sight-exposed elements.
5. Work of Owner or separate contractor.

B. Include in request:
1. Identification of Project.
2. Location and description of affected work.
3. Necessity for cutting or alteration
4. Description of proposed work and products to be used.
5. Alternatives to cutting and patching.
6. Effect on work of Owner or separate contractor.
7. Written permission of affected separate contractor.
8. Date and time work will be executed.

PART 2 PRODUCTS

2.01 MATERIALS

A. Those required for original installation.

B. For any change in material, submit request for substitution under provisions of General Conditions.

PART 3 EXECUTION

3.01 GENERAL

A. Execute cutting, fitting and patching to complete Work, and to:
   1. Fit the several parts together, to integrate with other work.
   2. Uncover work to install ill-timed work.
   3. Remove and replace defective and non-conforming work.
   4. Remove samples of installed work for testing.
   5. Provide openings in elements of Work for penetrations of mechanical and electrical work.

3.02 INSPECTION

A. Inspect existing conditions, including elements subject to damage or movement during cutting and patching.

B. After uncovering, inspect conditions affecting performance of work.

C. Beginning of cutting or patching means acceptance of existing conditions.

3.03 PREPARATION

A. Provide supports to assure structural integrity of surroundings; devices and methods to protect other portions of Project from damage.

B. Provide protection from elements for areas which may be exposed by uncovering work; maintain excavations free of water.

3.04 PERFORMANCE

A. Execute work by methods to avoid damage to other work, and which will provide proper surfaces to receive patching and finishing.

B. Employ original installer to perform cutting and patching for weather-exposed and moisture-resistant elements, and sight-exposed surfaces.

C. Cut rigid materials using masonry saw or core drill. Pneumatic tools are not allowed without prior approval.

D. Restore work with new products in accordance with requirements of Contract Documents.

E. Fit work watertight to pipes, sleeves, ducts, conduit and other penetrations through surfaces.

F. At penetrations of fire-rated wall, ceiling, or floor construction, completely seal voids with fire-rated material, full thickness of the construction element.

G. Refinish surfaces to match adjacent finishes. For continuous surfaces, refinish to nearest intersection; for an assembly, refinish entire unit.

END OF SECTION

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SECTION 01050

SURVEYING AND FIELD ENGINEERING

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

A. Field Engineering services

B. Contractor shall perform a survey of the bridge superstructure and substructure to identify all locations in need of repair.

1.02 RELATED REQUIREMENTS

A. Bidding and Contract Requirements.

B. General Conditions.

C. Section 01010 - Summary of Work.

D. Section 01701 - Contract Closeout Procedures.

1.03 QUALITY CONTROL

A. Professional Engineer: Registered Professional Engineer of the discipline required for specific service on Project, licensed in the State of Florida.

1.04 SUBMITTALS

A. Submit name, address, and telephone number of Engineer before starting work.

B. On request, submit documentation verifying accuracy of work.

C. Submit certificate signed by Engineer certifying that all elevations and locations of improvements are in conformance, or non-conformance, with Contract Documents.

1.05 PROJECT RECORD DOCUMENTS

A. Maintain complete, accurate log of work as it progresses.

B. On completion of work prepare a record document showing dimensions, locations, angles and elevations of construction.

C. Submit Record Documents under provisions of Section 01701.

PART 2 PRODUCTS

Not used

PART 3 EXECUTION

3.01 SURVEY REFERENCE POINTS

A. Not Used

3.02 PREPARATION

A. Not used

3.03 SURVEYS FOR MEASUREMENT AND PAYMENT

A. Not used

END OF SECTION

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SECTION 01061

POSTING OF NOTICES

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

A. Schedule of Wage Rates and Benefits Miami-Dade County or U.S. Department of Labor.

B. Non-Discrimination Clause and Contractor's Commitments under Section 202 of Executive Order No. 11246.

1.02 SCHEDULE OF WAGE RATES AND BENEFITS

The Contractor, and each subcontractor under him, shall post in a conspicuous place on the site (1) the schedule of the specified overall hourly rate for each applicable classification; (2) the amount of liquidated damages for any failure to pay such rates; and (3) the name and address of the responsible official in Miami-Dade County or the U.S. Department of Labor (whichever is applicable) to whom complaints should be given.

Copy of this Notice will be provided to the Contractor by the Owner.

1.03 NON-DISCRIMINATION CLAUSE

The Contractor shall post the non-discrimination clause as required by Executive Order 11246.
The following is a copy of the required notice:

"**Equal Employment Opportunity is the Law--Discrimination is Prohibited by the Civil Rights Act of 1964 and by Executive Order No. 11246**

Title VII of the Civil Rights Act of 1964--Administered by:

The Equal Employment Opportunity Commission

Prohibits discrimination because of Race, Color, Religion, Sex, or National Origin by Employers with 25 or more employees, by Labor Organizations with a hiring hall of 25 or more members, by Employment Agencies, and by Joint Labor-Management Committees for Apprenticeship or Training.

ANY PERSON - Who believes he or she has been discriminated against **SHOULD CONTACT the:**

The Equal Employment Opportunity Commission
2401 E Street, NW
Washington, DC 20506

1.04 Executive Order No. 11246--Administered by:

The Office of Federal Contract Compliance Programs

Prohibits discrimination because of Race, Color, Religion, Sex, or National Origin, and requires affirmative action to ensure equality of opportunity in all aspects of employment.

By all Federal Government Contractors and Subcontractors, and by Contractors Performing Work Under a Federal Assisted Construction Contract, regardless of the number of employees in either case.

ANY PERSON - Who believes he or she has been discriminated against **SHOULD CONTACT:**

The Office of Federal Contract Compliance Programs
U.S. Department of Labor
Washington, DC 20210"

END OF SECTION

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SECTION 01090

REFERENCE STANDARDS

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

A. Applicability of Reference Standards.

B. Provision of Reference Standards at site.

C. Acronyms used in Contract Documents for Reference Standards. Source of Reference Standards.

1.02 QUALITY ASSURANCE

A. For products or workmanship specified by association, trade, or Federal Standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.

B. The date of the standard is that in effect as of the Advertisement date, except when a specific date is specified.

C. When required by individual Specifications section, obtain copy of standard. Maintain copy at jobsite during submittals, planning and progress of the specific work, until Substantial Completion.

1.03 SCHEDULE OF REFERENCES

AA Aluminum Association
818 Connecticut Avenue, N.W.
Washington, DC 20006

AABC Associated Air Balance Council
1518 K Street N.W.
Washington DC 20005
Phone: (202) 737-0202

AASHTO American Association of State Highway
and Transportation Officials
444 North Capital Street, N.W.
Washington, DC 20001

ACI American Concrete Institute
38800 Country Club Dr.
Farmington Hills, MI 48331
Phone: 248-848-3700

ADC	Air Diffusion Council 1901 N. Roselle Road, Suite 800, Schaumberg, IL 60195 Phone: 847-706-6750
AGC	Associated General Contractors of America 2300 Wilson Boulevard, Suite 400 Arlington, VA 22201 Phone: 703.548.3118
AI	Asphalt Institute 2696 Research Park Drive Lexington, KY 40511-8480 Phone: 859-288-4960
AITC	American Institute of Timber Construction 7012 S. Revere Parkway Suite 140 Centennial, CO 80112 Phone: (303) 792-9559
AISC	American Institute of Steel Construction One East Wacker Drive Suite 700, Chicago, IL 60601-1802 Phone: (312) 670-5403
AISI	American Iron and Steel Institute 1140 Connecticut Ave., NW, Suite 705 Washington, D.C. 20036 Phone: 202.452.7100
AMCA	Air Movement and Control Association 30 West University Drive Arlington Heights, IL 60004
ANSI	American National Standards Institute 25 West 43rd Street (between 5th and 6th Avenues), 4 floor, New York, NY 10036 Phone: (212) 642-4900
APA	American Plywood Association 7011 So. 19th, Tacoma, WA 98466 Phone: (253) 565-6600
API	American Petroleum Institute 1220 L. Street, N.W. Washington, D.C. 20005

ARI	Air-Conditioning and Refrigeration Institute 4100 N. Fairfax Drive, Suite 200 Arlington, VA 22203 Phone: (703) 524-8800
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers 1791 Tullie Circle, N.E. Atlanta, GA 30329
ASME	American Society of Mechanical Engineers Three Park Avenue New York, NY 10016-5990 Phone: (800) 843-2763
ASTM	American Society for Testing and Materials 100 Barr Harbor Drive West Conshohocken, PA 19428
AWWA	American Water Works Association 6666 West Quincy Avenue Denver, CO 80235
AWI	Architectural Woodwork Institute 46179 Westlake Drive, Suite 120 Potomac Falls, Virginia 20165 571-323-3636
AWPA	American Wood-Preservers' Association P.O. Box 361784 Birmingham, AL 35236-1784 Phone: (205) 733-4077
AWS	American Welding Society 550 LeJeune Road Miami, FL 33135
CDA	Copper Development Association 260 Madison Avenue, 16th Floor New York, NY 10016 Phone: (212) 251-7200
CLFMI	Chain Link Fence Manufacturers Institute 10015 Old Columbia Road, Suite B-215 Columbia, MD 21046 Phone: (301) 596-2583

CRSI	Concrete Reinforcing Steel Institute 933 Plum Grove Road Schaumberg, IL 60193
EJCDC	Engineers' Joint Contract Documents Committee American Consulting Engineers Council 1050 15th Street, N.W. Washington, DC 20005
EJMA	Expansion Joint Manufacturers Association 25 North Broadway Tarrytown, NY 10591
FAA	Federal Aviation Administration U.S. DOT 800 Independence Avenue, S.W. Washington, D.C. 20591
FGMA	Flat Glass Marketing Association 3310 Harrison White Lakes Professional Building Topeka, KS 66611
FM	Factory Mutual System 1151 Boston-Providence Turnpike Norwood, MA 02062
FS	Federal Specification General Services Administration Specifications and Consumer Information Distribution Section (WFSIS) Washington Navy Yard, Building 197 Washington, DC 20407
GA	Gypsum Association 810 First St., NE #510 Washington DC, 20002 Phone: (202) 289-5440
GANA	Glass Association of North America (The Flat Glass Marketing Association, Glass Tempering Association, and members of the Laminators Safety Glass Association consolidated to form the (GANA) 2945 SW Wanamaker Drive, Suite 4A, Topeka, KS Phone: (785) 271-0208
IEEE	Institute of Electrical and Electronics Engineers 3 Park Avenue, 17th Floor New York, N.Y 10016-5997 Phone: (212) 419-7900

IGMA	Insulating Glass Manufacturers Association (IGMA was incorporated as a not-for profit organization in the state of Illinois on October 2, 2000 as a result of a merger between the Insulating Glass Manufacturers Association of Canada (IGMAC) and the Sealed Insulating Glass Manufacturers Association (SIGMA) 27 Goulburn Avenue, Ottawa, Ontario. CANADA K1N 8C7 Phone: (613) 233-1510
IMIAC	International Masonry Industry All-Weather Council International Masonry Institute The James Brice House 42 East Street Annapolis, MD 21401 Phone: (410) 280-1305
MIL	Military Specification Naval Publications and Forms Center 5801 Tabor Avenue Philadelphia, PA 19120
ML/SFA	Metal Lath/Steel Framing Association 600 South Federal, Suite 400 Chicago, IL 60605 Phone: (312) 922-6222
NAAMM	National Association of Architectural Metal Manufacturers 8 South Michigan Avenue, Suite 1000 Chicago, Illinois 60603 Phone: (312) 332-0405
NEBB	National Environmental Balancing Bureau 8575 Grovemont Circle Gaithersburg, Maryland 20877 Phone: (301) 977-3698
NEMA	National Electrical Manufacturers' Association 1300 North 17th Street, Suite 1752 Rosslyn, Virginia 22209 Phone: (703) 841-3200
NFPA	National Fire Protection Association Battery March Park Quincy, MA 02269
NSWMA	National Solid Wastes Management Association 4301 Connecticut Avenue, NW, Suite 300

Washington, DC 20008-2304
Phone: (202) 244-4700

NTMA — National Terrazzo and Mosiac Association
201 North Maple, Suite 208
Purcellville, VA 20132
Phone: (800) 323-9736

OSHA — Occupational Safety and Health Administration
Government Printing Office
200 Constitution Avenue, NW
Washington DC 20210

PCA — Portland Cement Association
5420 Old Orchard Road
Skokie, IL 60077

PCI — Prestressed Concrete Institute
175 W. Jackson Boulevard
Chicago, IL 60604
Phone: (312) 786-0300

PS — Product Standard
U. S. Department of Commerce
Government Printing Office
Washington, D.C. 20402

SDI — Steel Deck Institute
P.O. Box 25
Fox River Grove, IL 60021
Phone: (847) 458-4647

SDI — Steel Door Institute
30200 Detroit Road
Cleveland, OH 44145-1967
Phone: (440) 899-0010

SJI — Steel Joist Institute
3127 Mr. Joe White Avenue
Myrtle Beach SC 29577-6760
Phone: (843) 626-1995

SMACNA — Sheet Metal and Air-Conditioning Contractors' National Association
4201 Lafayette Center Drive
Chantilly, Virginia 20151-1209
Phone: (703) 803-2980

	SSPC	Steel Structures Painting Council 40 24th Street, Suite 600 Pittsburgh, PA 15213 Phone: (412) 281-2331
	TAS	Technical Aid Series 99 Canal Center Plaza, Suite 300 Alexandria, VA 22301 Phone: (800) 689-2900
	TCNA	Tile Council of North America, Inc. (In 2003, the TCA became the Tile Council of North America (TCNA) to reflect its membership expansion to all of North America - Canada, Mexico and the United States) 100 Clemson Research Center Anderson, SC 29625 Phone: (864) 646-8453
	TPI	Turfgrass Producers International (Founded in 1967 as the American Sod Producers Association - ASPA) 2 E. Main Street East Dundee, IL 60118 Phone: (800)-405-8873
	UL	Underwriters' Laboratories, Inc. 333 Pfingston Road Northbrook, IL 60062 Phone: (877) 854-3577
	WCLIB	West Coast Lumber Inspection Bureau Box 23145 Portland, OR 97281
	WRI	Wire Reinforcement Institute 942 Main Street, Suite 300 Hartford, CT 06103 Phone: (800) 552-4974

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

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SECTION 01100

EXISTING UTILITIES

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

A. Before performing any utility modifications, utility shutdowns, or any hot work on an existing utility within or outside of a building, or performing any excavation, drilling holes, performing any vibroflotation (vibrocompaction) work, hot work on any underground or above-ground utility or other element, or driving piles, the Contractor shall contact MDAD and all concerned utilities and shall comply with the following requirements.

B. In order to locate existing utilities, the Contractor shall complete the UNDERGROUND UTILITIES CLEARANCE SIGN-OFF SHEET appended to this Section and submit it to the Architect/Engineer and to MDAD ***Facilities*** Maintenance ***through the Field Representative*** in accordance with the form's instructions.

C. Before any shut-down of an existing active utility, the Contractor shall complete the SHUT-DOWN REQUEST FORM appended to this Section, as appropriate to the project type, and submit it to MDAD ~~Maintenance Engineering~~ ***Facilities Management through the Field Representative*** in accordance with the form's instructions.

D. Before initiating hot work, the Contractor shall submit the HOT WORK PERMIT application, Division 1 Section 01120-1. Hot Work includes, but is not limited to, brazing, cutting, grinding, soldering, or thawing of utility pipes, torch applied roofing, and welding of any element.

1.02 RELATED REQUIREMENTS

A. Section 01120 - HOT WORK OPERATIONS

B. Section 01120-1 - HOT WORK PERMIT

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.01 The Contractor shall comply with the Provisions of the Underground Facility Damage Prevention and Safety Act - Chapter 556, Florida Statutes.

3.02 Prior to performing any excavation or digging, the Contractor shall give 48 hours notice to each owner of the underground utility facilities. Notifying SUNSHINE STATE ONE CALL OF FLORIDA, INC. does not satisfy this requirement.

3.03 There is a rebuttable presumption of negligence under the above referenced Statutes on the part of the Contractor, if the Contractor fails to call the underground utility owner and receive authorization before digging, or if the Contractor calls but fails to wait the required 48 hours.

3.04 During the 48-hour period, the underground utility owner shall go to the site and flag its facility.

3.05 Violation of the above referenced statute can be cause for civil fines and criminal offenses as delineated in the above referenced statutes.

Appendices: MDAD UNDERGROUND UTILITIES CLEARANCE, Requirements for filling out sign-off sheet and procedures.

MDAD UNDERGROUND UTILITIES CLEARANCE SIGN OFF SHEET.

MDAD SHUT-DOWN REQUESTS

NOTICE TO REQUESTOR/CONTRACTOR

SHUT-DOWN REQUEST FORM.

SHUT-DOWN COORDINATION CONCURRENCE

END OF SECTION

MDAD SHUT-DOWN REQUESTS

Instructions for filling out form

Requestor/Contractor Requirements:

1. The ~~Project Manager~~ ***Requestor***/Contractor of a particular project ***with the assistance of the MDAD Project Manager*** shall contact the MDAD shop supervisor and/or lead worker of each discipline for a kick-off meeting regarding shutting down any equipment or system that may impact the airport.
2. Once the affected areas have been identified with the assistance of MDAD, the ~~Project Manager~~ **Requestor**/Contractor shall complete the ~~request form~~ ***SHUT-DOWN REQUEST FORM*** correctly with all pertinent information ***and obtain MDAD Project Manager's concurrence.***
3. All ~~Contractors/~~Requestors***/Contractors*** shall follow the procedures that are attached to the SHUT-DOWN REQUEST FORM appropriate to the project types, areas and systems that will be affected.

Requirements for filling out the form and procedures:

1. Complete the form properly by making sure ***that*** ~~to attach~~ all necessary documents showing the areas, systems~~,~~ ***and*** devices ***expected to be affected***, permits, certification of licenses from Contractor***s,*** and environmental plans (if required), etc. ***are attached.***

The following are the requirements for each discipline to be attached with the SHUT-DOWN REQUEST FORM:

1. Electrical/Mechanical - site plans or as-built~~s~~ ***plans as required to CLEARLY depict*** ~~showing~~ affected areas, scope of work, etc.
2. Water/Sewer – (water) site plans or as-built~~s~~ ***plans as required to CLEARLY depict*** ~~showing~~ affected areas, scope of work; (sewer) – site plans or as-built~~s~~ ***plans as required to CLEARLY depict*** ~~showing~~ affected area, scope of work, environmental action plan (if required).
3. Fire Sprinkler & Alarm – site plans or as-built~~s~~ ***plans as required to CLEARLY depict*** ~~showing~~ affected areas, scope of work, copies of permits, copies of licenses, copies of Honeywell plans. (Copies of Honeywell Shutdown Notice).
4. Security & Life Safety – site plans or as-built~~s~~ ***plans as required to CLEARLY depict*** ~~showing~~ affected areas, scope of work, copies of permits, licenses and copies of Honeywell Security Plan, Matrix, BlackBox and Honeywell concurrence letters of walk thru involvement.
5. For shut-downs affecting ***critical building systems (defined as those systems connected to Emergency Power and listed under DGM section 16403.b)*** ~~life safety related systems~~ in the MIA Terminal Complex, all plans shall indicate and label the affected "nested" zones of the fire alarm, paging, fire suppression and/or smoke management systems and components, etc., as required by the MIA Terminal Complex Life Safety Master Plan (LSMP), an approved extension of the Building Code
6. ***Submit a PLAN OF ACTION detailing procedures required to isolate system's portions where the work will be performed and minimize interruptions to remaining critical building systems. Provide alternative power to remaining critical building systems during the shutdown procedure; remaining critical systems shall not be interrupted more than 10 minutes as may be required by a change-over to an alternative power source. Any exceptions shall be listed in SHUT-DOWN REQUEST FORM.***

This is to ensure that all shut-downs are approved in a timely manner.

1. ~~Deliver or fax the~~ ***Submit*** completed SHUT-DOWN REQUEST FORM ***and other supporting documents including plans, sketches etc. in electronic PDF format via e-mail*** to the MDAD Shut-down Coordinator ***at shutdowncoordinator@miami-airport.com*****,** ~~**where** it shall be stamped "Received."~~ Incomplete paperwork will not be processed and the requestor shall be contacted.

2. The shutdown coordinator will transmit via e-mail a shutdown notice with PDF drawings depicting areas expected to be affected by the shutdown to required MDAD Divisions and Tenants.

~~3. The MDAD Shut-down Coordinator shall contact the project manager, e.g., MDAD/DAC, when all areas have been cleared and the affected MDAD Divisions & tenants have been notified approved and have the shut-down.~~

3. Following acceptance of the proposed shutdown by all pertinent MDAD Divisions and Tenants, the shutdown coordinator will contact the Requestor/Contractor and inform of either approval or disapproval.

4. Via an e-mail ***notification***, the MDAD Shut-down Coordinator will confirm ~~notifying~~ ***with*** everyone affected by the shut-down of the date ***and time.*** Unless an emergency arises, all shut-downs shall be scheduled no sooner than 14 calendar days after completed paperwork is submitted by the ***Requestor***/Contractor~~/Requestor~~ to the MDAD Shut-down Coordinator , so that there is sufficient time to coordinate with all of the requisite MDAD parties affected before scheduling any requested shutdown.

5. When the Requestor/Contractor has received approval of a scheduled shut-down of any life-safety-related systems or components, he/she shall arrange for and pay for any fire watches that may be required by the Authority Having Jurisdiction (AHJ).

6. MDAD personnel will be scheduled to attend the shutdown and assist the Requestor/Contractor if an emergency occurs; as an alternate emergency contact MAINTENANCE -1 can be contacted 24 hours a day at 305-606-0099

NOTICE TO REQUESTOR/CONTRACTOR

MDAD Shut-down Coordination Group is not a service company for Contractors working for Miami Dade County airports. The Coordination Group provides a free service to Contractors working for MDAD, for the purpose of protecting all utilities, including damage prevention, as well as protecting our business partners from operation interruptions.

The Coordinator is not responsible for delays due to the forms not being properly completed. Contractors are responsible for providing all necessary information before requesting a shutdown. The Coordination Group is available to assist the Contractors, provided they advise in a timely manner. MDAD is not responsible for any and all claims, disputes or other matters arising between Contractors related to the execution or progress of their wok or their interpretation of the available plans and information.

MDAD SHUT-DOWN COORDINATION CONCURRENCE FORM

Project Name: _____

Today's Date: _____ Shut-Down Date Requested: _____

Reason For Shut-Down: _____

JURISDICTION		APPROVED	DATE	COMMENTS
AGENCY	REPRESENTATIVE			
Honeywell (305) 876-8134	Dean Roberts	○Yes ○No ○ N/A		
Dash Door (305) 477-1164	Juan Lizaso	○Yes ○No ○ N/A		
Matrix (305) 869-3692	Lee Levenson	○Yes ○No ○ N/A		
BlackBox (305) 869-5511	Floyd Lindo	○Yes ○No ○ N/A		
MDAD Fire Techs (305) 869-4170	Denes Csajkas	○Yes ○No ○ N/A		

Note 01: *Shut-Dows affecting life safety-related systems or components requiring more than four (4) hours of shut-down shall be reviewed and approved by Aviation Life Safety Bureau (ALSB) before approval and issuance of Shut-Down e-mail notification.*

(No Exceptions)

FIRE/ALSB (305) 876-7904	Captain Adams	○Yes ○No ○ N/A		

Note 02: *Shut-Dows affecting gates shall be reviewed and approved by MDAD Airside Operations before approval and issuance of Shut-Down e-mail notification.*

(No Exceptions)

Airside Operations (305) 876-7838	Karen Wright	○Yes ○No ○ N/A		

SHUT-DOWN REQUEST FORM

PROJECT NAME: _____ **PROJECT NO.:** _____

~~**PROJECT MANAGER**~~
REQUESTOR/CONTRACTOR: _____ **TODAY'S DATE:** _____
For in-house work: Shop Supervisor (single trade) **SHUTDOWN DATE:** _____
Chief (multiple trades)
TELEPHONE NUMBER: _____ **REQUESTED:** _____

NOTE: ~~*Return completed form to MDAD Maintenance Engineering at MIA Building 3030, Fax Number 305-876-0347.*~~
Submit completed SHUT-DOWN REQUEST FORM and other supporting documents including plans, sketches etc. preferably in electronic PDF format via e-mail to the MDAD Shut-down Coordinator at shutdowncoordinator@miami-airport.com. Hand delivered hardcopies will be accepted as an alternate.
Submit not less than 14 calendar days before requested shut-down date.

LOCATION OF WORK / FLOOR: _____

_____

A/E NAME/TELEPHONE/FAX NO. & E-Mail: _____

A/E PROJECT MANAGER: _____

ENGINEERING CONSULT. NAME/TEL./FAX NO. & E-Mail: _____

~~G.C.~~ REQUESTOR/CONTRACTOR

NAME/TELEPHONE/FAX NO. & E-Mail: _____

~~G.C.~~ REQUESTOR/CONTRACTOR PROJECT MANAGER: _____

SUB-CONTRACTOR NAME/TEL./FAX NO & E-Mail: _____

SUB-CONTRACTOR PROJECT MANAGER: _____

SYSTEM TO BE SHUT DOWN: _____

_____

_____

REASON FOR SHUT-DOWN: _____

_____

AREAS AFFECTED BY SHUT-DOWN: _____

_____

_____

OTHER SYSTEMS AFFECTED (E, A/C, P, ETC.): _____

_____

REQUESTED DURATION OF SHUT-DOWN REQUEST: _____

REQUESTED SHUT-DOWN DATE (APPROXIMATE): _____

EXPECTED COMPLETION DATE (APPROXIMATE): _____

DAILY START TIME (FIRE TECHS OPEN F.A. PANELS): _____

DAILY STOP TIME (FIRE TECHS CLOSE F.A. PANELS): _____

MDAD PROJECT MANAGER
CONCURRANCE SIGNATURE: _____ _____
Date

REQUESTOR/CONTRACTOR SIGNATURE: _____ _____
Date

By signing this form, the Requestor/Contractor acknowledges that he/she has read all the SHUT-DOWN procedures and if any exceptions

exist they have been noted on this form. Attach additional sheets if required to document any exceptions.

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SECTION 01120

HOT WORK OPERATIONS

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

A. Before initiating hot work, the Contractor shall submit the Hot Work permit application. Hot Work includes, but is not limited to, work above and below ground, involving open flames or work producing heat and/or sparks (including, but not limited to, brazing, cutting, grinding, soldering or thawing materials, torch applied products, installation and welding).

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.01 All tradesmen operating on airport property whose work entails open flame cutting, welding or similar hot work shall not proceed with such operations until the safety of the work area has been approved by the Airport Fire Division and a "Hot Work Permit" obtained. The provisions of this directive shall apply to any operation involving open flames or producing heat and/or sparks.

3.02 Follow the MDAD Facilities Procedure contained in Procedure FD5-047-P using the Hot Work Permit form FD5-047 current issues. Both are located in the MDAD Local Area Network (LAN), H drive/Facilities/Procedures and Forms. Form FD5-047 is also available in the next Section 01120-01 following this one.

Appendix: Hot Work Procedure FD5-047-P
Hot Work Permit. FD5-047

END OF SECTION

HOT WORK

PURPOSE

To provide direction on obtaining authorization and performing precautionary tasks prior to performance of Hot Work on MDAD facilities.

DEFINITION

Hot Work Work, above and below ground, involving open flames or work producing heat and/or sparks (including, but not limited to, brazing, cutting, grinding, soldering or thawing materials, torch applied products, installation and welding).

INSTRUCTION

1. A Hot Work Permit (Facilities Division Form FD5-047):
   - Must be completed, submitted for approval, and fully executed whenever Hot Work is to be performed at an MDAD site.
   - Satisfies the requirements of the South Florida Fire Prevention Code which is referenced by and included in the General Conditions of the Contract.
   - Requires an individual to perform fire watch activities.
   - Is granted for a maximum period of twenty-four (24) hours. Hot Work in excess of this period shall be reauthorized by applying for a new permit.
   - Is good for one location only.
   - Must be logged and filed by the CIS Consultant as a Hot Work activity record.
2. Project Managers are responsible for advising and directing the A/E Consultant and Contractor on the issuance and use of Hot Work Permits.
3. The General Contractor is responsible for preparing the Hot Work Permit, which includes performing and checking off (or marking as non-applicable) all of the precautionary items on the form and signing it before requesting its authorization.
4. The Project Manager shall notify and coordinate with adjacent airport tenants and MDAD Operations if fumes or other effects of the operation will impact airport operations.
5. The CIS Consultant (or A/E performing work site services) shall be the management representative designated by MDAD to authorize the Hot Work Permit.
6. The CIS Consultant shall fax copies of the executed Hot Work Permit and provide telephone notification of the work to be performed as indicated on the form.
7. The Contractor or subcontractor shall exhibit a copy of the approved Hot Work Permit at the work site in a conspicuous place near to the actual hot work.
8. Where sprinklers and hose streams are not under the control and maintenance of the Contractor, the condition of operability shall be verified with MDAD Maintenance prior to performing the Hot Work.
9. The Contractor or subcontractor shall designate an individual to perform fire watch activities and brief and train him/her on the fire watch responsibility: guarding against fire while actual work is in process and for a minimum of thirty (30) minutes after the completion of the work. Fire watch precautions must be taken on both sides of any penetration which is being worked on or through.

The individual performing fire watch activities may be the helper of the Hot Worker and may be responsible for additional non-conflicting duties as appropriate. Any such additional duties must be in the immediate vicinity and in view of the Hot Work.

10. The individual performing fire watch activities shall sign off on the Hot Work Permit when the period of observation is over.

11. The issuance of a Hot Work Permit does not relieve the Contractor or subcontractor of its responsibility under the Contract for the means, methods, or safety of operations authorized by the permit, nor does it assign any of these responsibilities to MDAD or its consultants.

12. Hot Work Permits may be revoked for any reason at the discretion of the CIS Consultant.

13. The CIS Consultant shall verify, collect, and file the Hot Work Permit after final sign-off by the individual performing fire watch activities.

ASSOCIATED FORM

1. Facilities Division Form FD5-047 Hot Work Permit

MIAMI-DADE AVIATION DEPARTMENT

CONTROL No._____

HOT WORK PERMIT

A Hot Work Permit is required for any operation that involves open flames or produces heat and/or sparks.
This includes, but is not limited to, Brazing, Cutting, Grinding, Flame-Soldering, Pipe Thawing, Torch-Applied Roofing, and Welding.

PROJECT NAME: _____ PROJECT No: _____

MDAD WORK ORDER No: _____ CONTRACTOR JOB No: _____ DATE WORK TO BE DONE: _____

PERFORMING CONTRACTOR: _____ ☐ GC ☐ SUB PHONE No: _____

WORK TO BE DONE BY: EMPLOYEE: _____ SUPERVISOR: _____ FIRE WATCH: _____

HOT WORK is to be performed at one location per permit.

FACILITY, BUILDING, and FLOOR _____

NATURE OF JOB: _____

SPECIAL PRECAUTIONS: _____

REQUIRED PRECAUTIONS CHECKLIST

General Contractor or designee to verify that each precaution has been taken or to indicate that it is Not Applicable (NA).

- ☐ Available sprinklers, hose streams, and extinguishers are in service/operable.
- ☐ Hot Work equipment is in good repair.
- ☐ Entrances to work area have been posted with NO SMOKING signs.
- ☐ No welding or open flames within 100 feet of aircraft or a flammable spill.
- ☐ Work area enclosed to contain sparks and prevent vision flash burn.
- ☐ Ventilation is adequate to remove smoke/vapor from work area.

Requirements within fifty feet (fifteen meters) of work:

- ☐ Flammable liquids, dust, lint, and oily deposits have been removed.
- ☐ Explosive atmosphere in area has been eliminated.
- ☐ Floors have been cleaned of debris.
- ☐ Combustible floors have been wet down, covered with damp sand, or covered with fire-resistive sheets.
- ☐ Other combustibles have been removed, where possible, or protected with fire-resistive tarpaulins or metal shields.
- ☐ All wall and floor openings have been covered.
- ☐ Fire-resistive tarpaulins have been spread beneath work to collect sparks.

For work on walls or ceilings:

- ☐ Construction is noncombustible and without combustible covering or insulation.
- ☐ Combustible materials or items on other side of walls have been moved away.
- ☐ When welding, cutting, or heating is performed on walls, floors, or ceiling, since direct penetration of sparks or heat transfer may introduce a fire hazard to an adjacent area, the same precautions shall be taken on the opposite side as are taken on the side on which the work is being performed.

For work on enclosed equipment (tanks, ducts, etc.):

- ☐ Enclosed equipment has been cleaned of all combustibles.
- ☐ Containers have been purged of flammable liquids/vapors.

Fire Watch / Hot Work area monitoring:

- ☐ Fire Watch will be provided during and for thirty minutes after work, including any coffee or meal breaks.
- ☐ Fire Watch is supplied with suitable extinguishers/a charged small hose.
- ☐ Fire Watch is trained in use of this equipment and in sounding alarm.

I VERIFY that the above named location has been examined, that the precautions checked on the Required Precautions Checklist have been taken to prevent fire, and I request authorization to perform this work.

SIGNED _____

Printed Name _____ Date

General Contractor Firm _____ Phone Number

AUTHORIZATION:

SIGNED _____

Printed Name _____ Date

A/E Consultant/CIS Firm Name _____ Phone Number

WORK PERFORMED:

START: _____ **END:** _____

PERMIT EXPIRES (Good for one day only):

DATE: _____ **TIME:** _____

FINAL CHECK:

The work area and all adjacent areas to which sparks and heat might be spread were inspected during the fire watch period and for at least thirty minutes after the work was completed and no fie conditions were found.

SIGNED _____

Fire Watch _____ Date

Printed Name: _____

NOTIFICATION:

- **Post a copy of approved Permit at the Hot Work site.**
- **Fax a copy of approved permit to:**
  1. **Airside Ops (General Aviation Center) at (305) 869-5858.**
  2. **Risk Management at (305) 876-7162.**
  3. **Life Safety Bureau at (305) 869-1589.**
  4. **Maintenance at (305) 869-1633.**
     On weekends and after hours use (305) 876-0193.
- **A/E Field Rep to log and file copy signed by Fire Watch.**

IN CASE OF FIRE - - - CALL (305) 876-7070

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SECTION 01200

PROJECT MEETINGS

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

A. Contractor participation in pre-construction conferences.

B. Contractor administration of progress meetings and pre-installation conferences.

1.02 RELATED REQUIREMENTS

A. Section 01010 - Summary of Work.

B. Section 01300 - Submittals

C. Section 01310 - Progress Schedules

D. Section 01340 -- Shop Drawings, Product Data and Samples.

E. Section 01701 - Contract Closeout Procedures

F. Section 01720 - Project Record Documents.

1.03 PRE-CONSTRUCTION CONFERENCES

A. Field Representative will hold a pre-construction conference. (See General Conditions.)

1.04 PROGRESS MEETINGS (See General Conditions)

A. Schedule and administer Project meetings throughout progress of the work at weekly intervals as well as any called meeting.

B. Attendance: Job superintendents, major subcontractors and suppliers; Owner, Architect/Engineer and Field Representative as appropriate to agenda topics for each meeting.

C. Agenda will include review of Work progress, status of progress schedule and adjustments thereto, delivery schedules, submittals, maintenance of quality standards, pending changes and substitutions and other items affecting progress or work.

1.05 PRE-INSTALLATION CONFERENCES

A. When required in individual specification Section, Contractor will convene a pre-installation conference prior to commencing work of the Section.

B. Require attendance of entities directly affecting, or affected by, work of the Section.

C. Review conditions of installation, preparation and installation procedures and coordination with related work.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

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SECTION 01300

SUBMITTALS

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

A. Procedures.

B. Construction Progress Schedules.

C. Schedule of Values.

D. Shop Drawings.

E. Product Data.

F. Samples.

G. Manufacturers' Instructions.

H. Manufacturers' Certificates.

I. Progress Photographs

1.02 RELATED REQUIREMENTS

A. General Conditions- Definitions, basic responsibilities of entities, and Article 4.8 Substitution

B. Section 01010 - Summary of work.

C. Section 01027 - Applications for Payment.

D. Section 01310 - Progress Schedules

E. Section 01311 - Progress Schedules (Computerized Project Planner Format)

G. Section 01340 - Shop Drawings, Product Data and Samples.

H. Section 01370 - Schedule of Values.

I. Section 01405 - Contract Quality Control.

J. Section 01600 - Material and Equipment.

K. Section 01701 - Contract Closeout Procedures.

1.03 PROCEDURES

A. Deliver submittals to the Field Representative.

B. Identify Project, Project Number, dates of previous submittals, Contractor, subcontractors, suppliers; identify pertinent drawings by sheet and detail number, and Specification Section number, as appropriate, Identify deviations from Contract Documents. Provide space for Contractor and Architect/Engineer review stamps.

C. Before commencing any work, prepare and submit to the Field Representative the initial Progress Schedule and Schedule of Values in triplicate. After review by Architect/Engineer revise and resubmit as required for approval by the Architect/Engineer and the Owner. Submit revised Progress Schedule with each application for partial payment, reflecting changes since previous submittal.

D. Comply with progress schedule for submittals related to Work progress. Coordinate submittal of related items.

E. After Architect/Engineer review of submittal, revise and resubmit as required, identifying changes made since previous submittal.

F. Distribute copies of reviewed submittals to concerned parties. Instruct recipients to promptly report any inability to comply with provisions.

G. No partial payment will be processed without a current approved Near Term and Overall Progress Schedule and an approved Schedule of Values.

1.04 CONSTRUCTION PROGRESS SCHEDULE

A. Submit progress schedule in the form and procedure specified in Sections 01310 and 01311.

B. Show complete sequence of construction by activity, identifying work of separate stages and other logically grouped activities. This is to include the commissioning activities, such as, but not limited to, prefunctional testing, functional testing, and training. Show projected percentage of completion for each item of work as of time of each Application for Progress Payment.

C. Show submittal dates required for shop drawings, product data and samples and product delivery dates, including those furnished by Owner.

1.05 SCHEDULE OF VALUES

A. Submit typed preliminary Schedule of Values on Owner provided forms or Owner approved forms.

B. Submit typed Schedule of Values on Owner provided forms or Owner approved forms.

C. Format: Identify each line item with number and title of the major Specification Sections or major components of this item.

D. Include specified Allowances, if any, in each line item amount.

E. Include in each line item a directly proportional amount of Contractor's overhead and profit.

F. Provide a sub-schedule for each separate stage of work specified in Section 01010.

G. Revise Schedule of Values to list Change Orders and Work Orders, for each Application of Partial Payment.

1.06 SHOP DRAWINGS

A. Prior to the submission of any shop drawing, but not later than 30 days from the effective date of the Notice to Proceed, the Contractor shall prepare and submit to the Field Representative, a Schedule of Shop Drawing submittals stating when each shop drawing or sample will be provided to the Field Representative for review.

B. The Contractor shall be responsible for the preparation of detailed shop drawings necessary for the fabrication, erection, and construction of all parts of the work in conformity with the requirements of the Contract Documents.

C. Submit shop drawings per the schedule of shop drawing submittals, inserted in one loose leaf binder, with tabs and index to the Field Representative. All individual submittal sheets inserted in said binder must be clearly marked and referenced to proper paragraph and subparagraph of specifications. Cross out any items on sheets which constitute information not pertaining to equipment specified. Clearly mark all components that are provided as "optional" by manufacturer. Shop drawings shall be approved by Contractor prior to submittal to the Field Representative Shop drawings will be reviewed by the Architect/Engineer. After Architect-Engineer approval, reproduce and distribute in accordance with requirements in Section 01340.

D. All submissions of shop drawings, brochures and catalog cuts shall be accompanied by a transmittal letter listing the drawings submitted by number and title.

E. When professional calculations and/or certification of performance criteria of materials, systems, and/or equipment is required, the Architect/Engineer is entitled to rely upon the accuracy and completeness of such calculations and certifications submitted by Contractor. Calculations, when required, shall be submitted in a neat, clear and in an easy to follow format. Such calculations and/or certifications shall be signed and sealed by a Professional Engineer registered in the State of Florida.

F. Failure to comply with any of the above may result in the rejection of shop drawings.

1.07 PRODUCT DATA

A. Submit not less than six copies, as approved by the Field Representative and required in Section 01340. Mark each copy to identify applicable products, models, options and other data; supplement manufacturers' standard data to provide information unique to the work.

1.08 MANUFACTURER'S INSTRUCTIONS

A. When required in individual Specification Section, submit manufacturer's printed instructions for delivery, storage, assembly, installation, start-up, adjusting and finishing, in quantities specified for product data.

1.09 SAMPLES

A. Submit full range of manufacturers' standard colors, textures and patterns for Architect/Engineer's selection. Submit samples for selection of finishes within 45 days after Award of Contract. All color and finish selections must be submitted by the Contractor in a single submission, properly labeled and identified.

B. Submit sample to illustrate functional characteristics of the product, with integral parts and attachment devices. Coordinate submittal of different categories for interfacing work.

C. Include identification on each sample, giving full information.

D. Submit the number specified in respective Specification section; one will be retained by Architect/Engineer. Reviewed samples which may be used in the work are indicated in the Specification Section.

1.10 FIELD SAMPLES

A. Provide field samples of finishes at project as required by individual Specifications section. Install sample complete and finished. Acceptable samples in place may be retained in completed work.

1.11 PROGRESS PHOTOGRAPHS

A. STILL PHOTOGRAPHS (Digital)

1. Before construction operations have started at the site, the Contractor shall take and provide digital color photographs showing the existing conditions and thereafter an average of no less than five (5) views shall be taken each week until completion of the work. The actual number and location of views to be taken each time will be determined by the Field Representative.

A flash storage drive with all views, properly labeled with location and date, shall be submitted to the Field Representative promptly after taking the views.

The Contractor shall notify the Field Representative 24 hours in advance of taking any photographs.

B. VIDEO

1. Before construction begins at any site and at frequent intervals during the construction at any phase or site of the work, the Contractor shall take digital video of the existing condition and of the work as it progresses. Audio description, in the English language, describing the views (location, angle, date, time of day, type of construction, etc.) shall be incorporated into the video.

2. Location and frequency of taking these videos shall be as directed by the Field Representative. Copies of each video, properly identified with a typewritten label properly affixed to the flash drive and accompanied by a typewritten sheet describing the views shall be submitted to the Field Representative, promptly after the recording. The Contractor shall notify the Field Representative 24 hours in advance of making any video of the site or of the work.

3. Videos shall be in digital format on either a USB flash drive or SD card.

C. Any and all pictures or videos taken of the construction area are the Owner's property and shall not be released to any source whatsoever without the prior written permission from the Owner. This provision shall prevail for the duration of the contract and shall indefinitely thereafter.

1.12 SUBMITTAL REQUIREMENTS FOR COMMISSIONING

A. The Contractor shall submit, to the Field Representative, specific additional information needed about each piece of equipment or system to be commissioned that is requested in writing by the Project Manager. The data request(s) may be made prior to normal submittals.

B. The Contractor shall notify the Field Representative of all new design intent or operating parameter changes, added control strategies and sequences of operation, or other changes that may affect commissioned systems.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

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SECTION 01310

CONSTRUCTION SCHEDULES

PART 1 GENERAL

1.01 REQUIREMENT INCLUDED

Procedures for preparation and submittal of Construction Progress Schedules and periodic updating.

1.02 RELATED REQUIREMENTS

A. Section 01010 - Summary of work.

B. Section 01027 - Applications for Payment.

C. Section 01300 - Submittals.

D. Section 01311 - Construction Schedules

E. Section 01340 - Shop Drawings, Product Data and Samples

F. Section 01370 - Schedule of Values

1.03 FORMAT

Prepare the progress schedule in the form of a network analysis system using a computerized critical path method (CPM) format Section 01311.

1.04 CONTENT

A. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction.

B. Identify each item by major Specification section number.

C. Provide activity code identity for each stage of Work identified in Section 01010.

D. Show accumulated percentage of completion of each item, and total percentage of work completed, as of the first day of each month.

E. Provide schedule of Shop Drawings submittals within 30 days from the Notice to Proceed.

F. Provide submittal dates for shop drawings, product data and samples and dates reviewed submittals will be required from Consultant. Show decision dates for selection of finishes.

G. Clearly identify the 4-month period that the APM operations will be suspended so the contractor can perform the work requiring access of the APM guideway. Contractor is required to coordinate with, and obtain approval from, MDAD and the APM operating contractor (Leitner-Poma) prior to defining the 4-month period and finalizing the schedule.

H. Show total monetary value for each work activity by trade. Amounts to be consistent with the unit bid price items and the approved Schedule of Values.

I. Coordinate content with Section 01370 - Schedule of Values.

J. Changes in scope requiring a Change Order or Work Order must be identified in the schedule by an activity code approved by the Owner.

1.05 REVISIONS TO SCHEDULES

A. Indicate schedule and quantity progress of each activity to date of submittal and projected completion date of each activity.

B. Identify activities modified since previous submittal, major changes in scope and other identifiables.

C. Provide narrative report to define problem areas, anticipated delays and impact on schedule. Report corrective action taken or proposed, and its effect including the effect of changes on schedules of separate contracts, if any.

D. Free floats in the approved construction progress schedules are owned by the Owner.

1.06 PROCEDURES

A. Follow procedures outlined in Section 01300.

B. Prepare and submit progress schedules in accordance with the provisions of Section 01311.

C. Contractor is solely responsible for the preparation, revision and updating of the overall project schedule and the near term schedule in the form and content prescribed in Section 01311.

D. The timely execution or performance of all construction related activities and the duration and sequencing of those activities in accordance with the approved project schedule(s) is the Contractor's responsibility.

E. Submit revised progress schedules with each partial payment certificate.

F. Transmit on County approved forms.

G. Submit the number of copies that Contractor requires, plus four (4) copies that will be retained by Architect/Engineer, Field Representative, and Owner.

H. Submit two (2) USB flash drives of the schedule with each schedule submission.

1.07 DISTRIBUTION

A. Distribute copies of reviewed schedules to job site file, APM Operating Contractor, subcontractors, suppliers, and other concerned entities.

B. Instruct recipients to promptly report, in writing, problems anticipated by projections shown in Schedules.

PART 2 PRODUCTS
Not Used

PART 3 EXECUTION
Not Used

END OF SECTION

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SECTION 01311

CONSTRUCTION SCHEDULES (COMPUTERIZED CPM FORMAT)
R. LUMP SUM CONTRACTS

PART 1 GENERAL

1.01 REQUIREMENT INCLUDED

A. Procedures for preparation and submittal of construction progress schedules and periodic updating.

1.02 RELATED REQUIREMENT

A. Section 01010 - Summary of Work.

B. Section 01027 - Applications for Payment

C. Section 01300 - Submittals.

D. Section 01310 - Construction Schedules.

E. Section 01314 - Construction Scheduling Management System

F. Section 01340 - Shop Drawings

G. Section 01370 - Schedule Values

H. Not used

I. Not used

1.03 GENERAL

A. The Contractor's and/or Subcontractor's timely execution or performance of all construction related activities shall be in strict compliance with the approved Overall Project Schedule. Means and methods of construction in accordance with the Contract Documents shall remain the sole responsibility of the Contractor.

B. The construction of the project will be planned and recorded utilizing Primavera Project Planner computer software (Version 5.0 or greater). It shall be used for coordination, monitoring, and payment of all work under the Contract including all activities of the Contractor, subcontractors, vendors, and suppliers.

1.04 OVERALL PROJECT SCHEDULE

The overall project schedule shall be in the form of a time scaled precedence diagram and

associated computer analysis and shall consist of detailed activities and their restraining relationships as required to complete the project from Notice To Proceed through completion of the Work and shall indicate the following:

A. Beginning and end date duration in work days for each activity. (Activities in occupied areas and activities requiring premium time labor rates shall be differentiated from each other and from the balance of project activities).

B. Beginning and end date and total duration in work days for each Area or portion thereof.

C. Significant milestones, including, but not limited to those indicated in Section 01010 "Summary of Work".

D. Identity of each trade, contractor, and subcontractor for each work activity.

E. Specific location of each work activity per the Architect/Engineer's phasing drawings or alternative location drawings approved by the Owner.

F. Total monetary value, including overhead and profit for each activity.

G. Monetary value for permanent materials for each activity.

H. Site Labor man-hours by trade for each Subcontractor and the General Contractor for each activity.

I. Total Site Labor dollars and all Site Labor rates for each trade used in each activity.

J. Equipment or Machinery to be used to perform the activity. Data required includes type of equipment, hours required and hourly rate for each piece of equipment and dollar value per piece of equipment for each activity.

K. Specific phase of the work using activity codes approved by the Owner.

L. Detailed schedule of all "utility shut-downs" which would impact on MDAD, F.I.S, airlines, tenants and other building operations or functions including, but not limited to: power, telephone (BellSouth and Wiltel), airline computers, communication systems, air conditioning systems, fire sprinklers, alarm systems, domestic water systems, and sanitary sewer systems.

M. Sequence and interdependence of all activities required for complete performance of all items of work under this contract.

N. All network restraints (restraining ties between activities which restrict the start or finish of another activity). The use of "negative lags" in the restrictions between activities of the Overall Project Schedule is expressly forbidden

O. Shop drawing submittals by the Contractor, reviews by the Architect/Engineer.

P. Fabrication and delivery activities for all equipment, including that furnished by the Owner, and materials to be installed during the project.

Q. Dates for ordering long lead items (materials, equipment, or specialty shop fabricated work).

R. Notice to tenant(s) prior to start of work in occupied or used tenant spaces.

S. Not used.

T. Not used.

.

The Contractor shall also provide the following information: work days per week, holidays, number of shifts per day, number of hours per shift, number of prime time work hours, proposed schedule of "utility shut-downs", Special Equipment or Machinery to be used, and list of work activities which must be performed during restricted or special working hours.

The precedence diagram shall show the sequence and interdependence of all activities required for complete performance of all items of work under this contract, including shop drawing submittals and approvals and fabrication and delivery activities.

Long-term construction activities shall be broken down into recognizable smaller activities so that no activity will be longer than 15 workdays.

The Owner reserves the right to selectively limit the number of activities in the schedule.

The schedule shall be sufficiently detailed to track the progress of each activity and the project, as a whole, on a daily basis. The activities shall be clearly described so that the work is readily identifiable. The progress of each activity is to be reasonable and based on the amount of labor, materials, and equipment involved. When added together, the dollar value of all activities shall equal the Contract amount less the Allowance Account(s).

The overall project schedule shall be prepared and submitted to the Field Representative within forty-five (45) calendar days from the effective date of the Notice to Proceed.

The precedence diagram submitted by the Contractor shall be drawn in the format approved by the Owner and shall be accompanied by a computer generated and plotted schedule utilizing Primavera Project Planner scheduling software. The Contractor shall exercise sufficient care to produce clear, legible, and accurate diagrams. The Contractor shall group activities related to specific physical areas on the diagram for ease of understanding and simplification.

The Owner will review the overall project schedule for compliance with the Contract requirements as to staging, phasing, and the time of completion. Such review and acceptance of these schedules does not imply either the Architect/Engineer's, the Field

Representative's, or the Owner's endorsement and/or responsibility of each and every activity duration or sequence of activities.

The overall project schedule shall be updated monthly. This monthly update shall generate a report that will indicate the remaining duration along with schedule and resources percent complete for each activity. This report together with the monthly sorts will act as the basis for the Contractor's requests for partial payment and shall be submitted with it.

The duration of the overall project schedule shall be in agreement with the duration of the Contract as stipulated in the Bid Form, or as modified by the Contract provisions described in these Contract Documents.

1.05 NEAR TERM SCHEDULE

The near term project schedule shall delineate, in the same detail as required for the overall project schedule, the work anticipated for the first ninety (90) calendar days after Notice to Proceed (NTP), with the balance of project duration, including all milestones, shown in summary form. The near term project schedule shall be prepared and submitted to the Field Representative prior to the Notice to Proceed.

1.06 CONSTRUCTION PROGRESS REPORT

As part of the monthly updating process, the Contractor shall prepare a construction progress report describing the physical progress during the report period, plans for the forthcoming report period, actions to correct any negative float predictions, and potential delays and problems and their estimated impact on performance and the overall project completion date.

A. Clearly describe all approved revisions to the accepted overall project schedule for that period.

B. Report actual progress by updating the mathematical analysis for the accepted overall project schedule.

C. Show tasks/activities, or portions of activities completed during the reporting period, and their actual value.

D. State the percentage of work actually completed as of the report date, and the progress along the critical path in terms of days ahead of or days behind the allowable dates.

E. Report progress along other paths with negative float, if the work is behind schedule.

F. Include a narrative report that shows, but is not necessarily limited to:

    a. Description of the problem areas, current and anticipated;

b. List of delaying factors and their impact;

c. Explanation of corrective actions taken or proposed.

G. Describe plans/actions for the next report period.

1.07 SCHEDULE REVISIONS

The overall project schedule may be revised from time to time as conditions may require, and as approved by the Owner provided, however, that nothing in this Article shall be construed to authorize or approve any extension of time or increase in Contract price, it being expressly understood and agreed that time extensions or increase in contract price, if any, may only be granted in accordance with the applicable requirements of the Contract Documents. Any further revisions to the overall project schedule durations, restrictions, lags or any other logic or cost related components of the schedule must be accepted, in writing, by the Owner.

The Contractor may make only those revisions to the construction schedule as are accepted in advance by the Owner. In the event of a revision, the Contractor shall make certain that not more than one activity shall have the same activity identification number. The activity numbers of deleted activities shall not be used again.

Changes to the Contract by Work Order or Change Order are to be included in the overall project schedule. The new activities and logic are to be reviewed and accepted by the Owner prior to being incorporated into the accepted overall project schedule.

Once the changes are accepted, the Contractor's schedule revisions shall be incorporated into the previously accepted overall project schedule with the same force as the original schedule. It is understood that should the Contractor fall behind in the schedule and not be entitled to any time extension other than the extension already reflected, the Contractor shall submit his plan for bringing his work back up to schedule and shall implement the plan. If other measures are not sufficient to make up the lag, the Contractor's plan and implementation thereof shall include increasing the number of workers, shifts, days of work, and/or instituting or increasing overtime, all at no additional cost to the Owner.

Failure or refusal by the Contractor to submit a plan or implement the approved plan for bringing the work back into conformity with the accepted schedule may result in withholding payment to the Contractor or termination of this Contract by the Owner.

1.08 DUTIES

The Field Representative or the Owner's scheduling representative will perform those duties assigned by the Owner. They will be available to offer suggestions in regard to the interrelation of project activities, and schedule content and format, help identify predecessor activities which relate to other construction projects and other MDAD, airlines, tenant, building, and inter-project activities.

The Contractor shall perform those respective duties set forth in this Provision and Section 01313 "Construction Scheduling Management System". The Contractor shall make decisions with regard to the interrelation of project activities, and schedule content and format, and shall identify predecessor activities that relate to each activity.

1.09 SCHEDULE SUBMITTALS

To facilitate and enhance the use of Contractor provided scheduling and cost related information required by the Contract Documents, the Contractor shall utilize Primavera Project Planner Software and provide the following:

A. Initial Baseline Schedule Submittals. The near term schedule submittal (activities for first 90 days) shall be submitted prior to the NTP. The overall project schedule submittal (all activities required for the entire contract) shall be submitted within 45 calendar days after NTP. Submit a hard copy of the near term and overall project schedules with detailed predecessor and successor analysis, and cost and resource tabular reports.

B. Monthly Update Submittals. Contractor may use the near term schedule to fulfill the scheduling requirements of the Contract for the initial monthly update. Starting at the second monthly update and continuing for the remainder of the Project, the Contractor shall use the overall project schedule to fulfill the scheduling requirements of the Contract.

C. Submit computer diskettes with each of the above submittals, containing the files used to generate the above reports, the near term schedule and the current overall project schedule.

Contractor shall conform to the standard schedule, cost and resource report formats supplied by the Owner.

1.10 REPORTS, SORTS AND COMPUTER DISKETTES

Unless indicated otherwise, all reports and computer sorts shall depict all activities and their durations required to complete the entire project.

Each budget report shall be accompanied by a separate detailed cost report, which shall break down each activity into total material and labor costs. Labor costs for each activity shall be further broken down into total regular time and total premium time amounts.

The initial, and monthly schedules, reports, and sorts shall be consistent with the accepted overall project schedule.

Each request for payment must be accompanied by the updated report of both time and costs, together with all required sorts and computer diskette copies, based on the monthly update of the approved Overall Project Schedule. Requests for payment will not be processed unless properly submitted as specified.

All costs and time associated with the preparation and distribution of schedules, reports, sorts, and other supportive information required by this Article for the entire Project shall be deemed incidental to and included in the Contract Bid Price Item(s).

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

PART 4 FORMS

Copies of the time impact analysis form to be filed by the Contractor in submitting a claim involving a request for time extension follow in Section 01311-01 as:

APPENDICES

Section 01311-01-1, Time Impact Analysis Summary Sheet

Section 01311-01-2, Time Impact Detail Sheet

END OF SECTION

TIME IMPACT ANALYSIS SUMMARY SHEET
(TIA)

Contract No: _____ Page ___ of ____

Contract Project Title: _____

_____

Contractor Company Name: _____

_____ Title of Event Delayed: _____

Event Reference Number: _____

Event References (drawings, transmittals, work orders, change orders, correspondence, etc.):

_____

_____

_____

_____

(continue on separate attachment if required)

Date of Approved Updated Schedule Used for Analysis:
Schedule File Name:

Detailed Description of Cause of Delay:

_____

_____

_____

_____

_____

_____

_____

_____

(continue on separate attachment if required)

Detailed Description of Work Delayed:

_____

_____

_____

_____

_____

_____

_____

_____

(continue on separate attachment if required)

TIME IMPACT ANALYSIS DETAIL SHEET
(TIA)

Contract No: _____Page ___ of ____

Title of Event Delayed:
Event Reference Number:

Activity No:	Description	Start	Finish	Duration

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SECTION 01314

CONSTRUCTION SCHEDULING MANAGEMENT SYSTEM

PART 1 GENERAL

1.01 REQUIREMENT INCLUDED

A. Procedures for the construction scheduling Management System.

1.02 RELATED REQUIREMENTS

A. Section 01010 - Summary of Work.

B. Section 01310 - Progress Schedules.

C. Section 01311 - Progress Schedules (Computerized Project Planner Format) Lump Sum Contracts]

1.03 The Contractor and all subcontractors shall participate in the Construction Scheduling Management System as provided for in these Specifications.

1.04 There shall be regular Scheduling Coordination meetings, which will generally be a part of the weekly construction coordination meetings. The first such Scheduling Coordination meeting shall be two weeks after the date of Notice to Proceed and each subsequent Scheduling Coordination meeting shall be every two weeks thereafter. The Field Representative may schedule additional Scheduling Coordination meetings. Unless otherwise directed by the Field Representative, the Scheduling Coordination meetings shall be held at the job site and shall be attended by the Contractor and all subcontractors. The Contractor and subcontractors shall be represented at each Scheduling Coordination meeting by a person or persons authorized to make decisions and commitments regarding schedules, crew sizes, sequence(s) of events and similar scheduling matters on behalf of said Contractor or subcontractor. The Field Representative may authorize specified subcontractors not to attend one or more of the Scheduling Coordination meetings.

1.05 The Scheduling Coordination meeting shall be a forum to establish the true state of completion of the project, to update the status of the delivery of material and equipment items and to prepare or revise the detailed Near Term Progress Schedule.

1.06 After each Scheduling Coordination meeting, the Field Representative or the Owner's scheduling representative will prepare and distribute a report including the following: (A) a copy of the latest approved Near Term Progress Schedule; (B) a status review of the project; (C) a written analysis of problem areas and proposed solutions thereto; (D) the trend chart showing the trends of the completion dates of significant segments of the project; and (E) a listing of the more critical activities on which work should be accomplished before the next Scheduling Coordination meeting.

1.07 The Contractor shall provide all schedules required under this Article. The Field Representative or the Owner's scheduling representative may, from time to time, propose revisions to the Overall Project Schedule and Near Term Schedules to reflect the current status of the project. Draft revisions shall be circulated to all parties for review and comment. When approved the Owner, the revised overall project schedule and the Near Term Schedules shall become effective.

1.08 In the event any activity is behind schedule and, unless a time extension is claimed and granted in accordance with the applicable requirements of the General Conditions, the Contractor shall reschedule each such activity so as not to delay the Contract completion. If such rescheduling is not accomplished within a reasonable time, the Contractor, the Field Representative, and the Owner's scheduling representative (if other than the Field Representative) shall meet to develop a program to bring each such activity back on schedule. Said program may include any or all of the following:

A. Carrying out the activity with the crew size shown on the Overall Project Schedule, using overtime/prime time work to complete or bring current the activity;

B. Increasing the crew size(s) and/or number of shifts to a level sufficient to complete or bring current the activity;

C. Any combination of activities which will complete or bring current the activity.

Unless a claim for time extension, additional compensation or for any other relief under the Contract is processed in accordance with the provisions of applicable requirements of the General Conditions, the Contractor shall perform the work under the aforesaid program at no additional cost to the Owner.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

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SECTION 01340

SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

A. Procedures for submittal.

B. [Schedule of submittals.]

1.02 RELATED REQUIREMENTS

A. General Conditions- Definitions, basic responsibilities of entities, and Article 4.8 Substitution

B. Section 01040 - Coordination.

C. Section 01300 - Submittals.

D. Section 01405 - Contract Quality Control: Mockups and samples for testing.

E. Section 01600 - Material and Equipment: Product options.

F. Section 01720 - Project Record Documents.

1.03 SHOP DRAWINGS

A. "Shop Drawings" are defined as drawings, diagrams, illustrations, schedules, catalog cuts, performance charts, brochures, and other data prepared by the Contractor or any subcontractor, manufacturer, supplier or distributor, which illustrates how specific portions of the work shall be fabricated and/or installed.

C. Each shop drawing shall be clear, thoroughly detailed, and shall have listed on it all Contract references, drawing number(s), specification section number(s), plus shop drawing numbers of related work by subcontractors, if applicable.

D. Identify field dimensions; show relation to adjacent or critical features or work or products.

E. Minimum Sheet Size: 11 x 17 inches.

F. Where it is difficult to provide shop drawing transparencies, such as "catalog cuts", "brochures" or "photographs", the Contractor shall submit a minimum of six (6)

copies of such "cuts", "brochures" or "photographs". Additional copies shall be supplied when required by the Field Representative.

G. Shop drawings shall be complete in every detail, including a location plan relating the work to space identification such as station, offset, and column numbers, floor level, etc. Materials, gauges, method of fastening, size and spacing of fastenings, connections with other work, cutting, fitting, drilling, and any and all other necessary information per usual trade practice or as required for any specific purpose must be clearly shown.

H. Each shop drawing shall contain a title block with the following information provided:

(1) Number and title of drawing, including Contract title and Number;
(2) Date of drawing and revisions;
(3) Name of Contractor and Subcontractor (if any) submitting drawings;
(4) Name of Project, Building or Facility;
(5) Specification Section title and number;
(6) Contractor's Stamp of approval, signed by the Contractor or his checker;
(7) Space above the title block for Architect/Engineer's action stamp;
(8) Submittal or resubmittal number (whether first, second, third, etc.);
(9) Date of submittal.

The Contractor, when requested by the Field Representative in writing, shall submit such additional shop drawings as may be required by the Architect/Engineer.

1.04 PRODUCT DATA

A. Submit only pages that are pertinent; mark each copy of standard printed data to identify pertinent products, referenced to Specification Section and Article number. Show reference standards, performance characteristics and capacities; wiring and piping diagrams and controls; component parts; finishes; dimensions; and required clearances.

B. Modify manufacturer's standard schematic drawings and diagrams to supplement standard information and to provide information specifically applicable to the work. Delete information not applicable.

C. Identify work of separate stages and other logically grouped activities.

1.05 SAMPLES

A. Submit full range of manufacturer's standard finishes except when more restrictive requirements are specified, indicating colors, textures and patterns, for selection.

All color and finish schedules must be submitted by the Contractor in a single submission properly identified and labeled.

B. Submit samples to illustrate functional characteristics of products, including parts and attachments.

C. Approved samples which may be used in the work are indicated in the Specification section.

D. Label each sample with identification required for transmittal letter.

E. Provide field samples of finishes at Project, at location acceptable to the Field Representative, as required by individual Specifications section. Install each sample complete and finished. Acceptable finishes in place may be retained in completed work.

1.06 CONTRACTOR REVIEW

A. The Contractor shall check and approve all shop drawings to make sure that they conform to the Plans, Technical Specifications, and other Contract requirements, and shall correct all shop drawings found to be inaccurate or otherwise in error, prior to submittal to the Field Representative. The Contractor shall verify all field dimensions and criteria and shall be responsible for the coordination of work by all Subcontractors. The Contractor, by approving and submitting shop drawings, represents that he has determined and verified the accuracy of all field measurements and quantities, field construction criteria, materials, catalog numbers, and similar data, and that he has reviewed and coordinated the information in the shop drawings with the requirements of the work and the Contract Documents.

B. Review manufacturer's catalog numbers, and conformance of submittal with requirements of Contract Documents.

C. Coordinate submittals with requirements of work and Contract Documents.

D. The Contractor or the Contractor's checker shall sign, in the proper block, each sheet of shop drawings and data, and each sample label to certify compliance with requirements of Contract Documents. Shop drawings submitted without such stamp and signature of approval will be returned to the Contractor unchecked and will require a re-submission. In such event, it will be deemed that the Contractor has not complied with the requirements of this Section and shall bear the risks of delays as if no drawings or details had been submitted.

E. Notify Architect/Engineer through the Field Representative in writing at time of submittal, of any deviation(s) from requirements of Contract Documents.

F. Do not order material, fabricate products or begin work that requires submittals until return of submittal with Architect/Engineer acceptance.

1.07 SUBMITTAL REQUIREMENTS

A. Transmit submittals in accordance with approved Progress Schedule and in such sequence so as to avoid delay in the work or work of other contracts. Submit copy of shop drawings transmittal letter and requests for substitutions, if any, to the Field Representative.

B. Provide space on each submittal for Contractor and Architect/Engineer action stamps.

C. Apply Contractor's approval stamp, signed or initialed, certifying to review, verification of products, field dimensions and field construction criteria and coordination of information with requirements of work and Contract Documents.

D. Coordinate submittals into logical groupings to facilitate interrelation of the several items:
   (1) Finishes that involve Architect/Engineer's selection of color, textures or patterns.
   (2) Associated items that require correlation for efficient function or for installation.

E. Submit one reproducible transparency and two copies of blue or black line reproductions of shop drawings.

F. Submit number of copies of product data and manufacturer's instructions Contractor requires, plus six (6) copies that will be retained by Architect/Engineer, Field Representative, and Owner.

G. Submit number of samples specified in individual Specification sections.

H. Submit Contractor's approved transmittal letter. Identify project by contract title and number. Identify work and product by Specifications section and Article number.

1.08 RESUBMITTALS

A. Make resubmittals under procedures specified for initial submittals; clearly identify changes made since previous submittal.

1.09 ARCHITECT/ENGINEER AND FIELD REPRESENTATIVE

A. The Architect/Engineer will review shop drawings and samples and indicate whatever action he/she is taking, within 14 calendar days from the date of its receipt at the Architect/Engineer's office, so as to minimize delay. The Architect/Engineer's review will be only for conformance with the design concept of the Contract and with the information given in the Contract Documents. The

Architect/Engineer's approval of a separate item shall not constitute approval of an assembly in which the item functions. The Field Representative will return the transparency shop drawings to the Contractor for his use and distribution.

B. The Architect/Engineer's approval of shop drawings or samples shall not relieve the Contractor of responsibility for any deviation from the requirements of the Contract Documents unless the Contractor has informed the Architect/Engineer through the Field Representative in writing of such deviation at the time of submission and the Architect/Engineer has given written approval to the specific deviation, nor shall the Architect/Engineer's approval relieve the Contractor from responsibility for errors or omissions in the shop drawings, product data sheets or samples.

1.10 DISTRIBUTION

A. Distribute reproductions of shop drawings, copies of product data and samples, which bear Architect/Engineer stamp of approval, to job site file, Record Documents file, sub-contractors, suppliers, and other entities requiring information.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

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SECTION 01370

SCHEDULE OF VALUES

PART 1 GENERAL

1.01 REQUIREMENT INCLUDED

A. Procedures for preparation and submittal of Schedule of Values.

1.02 RELATED REQUIREMENTS

A. General Conditions Article 10 - Partial Payments to Contractor

B. Section 01010 - Summary of Work.

C. Section 01027 - Applications for Payment.

D. Section 01300 - Submittals.

1.03 FORMAT

A. Type Schedule on County provided forms or County approved format.

B. Follow Table of Contents of Project Manual for listing component parts. Identify each line item by number and title of major Specifications section. Field Representative will provide minimum requirements.

C. Follow procedures specified in Sections 01300, 01310 and 01311.

1.04 CONTENT

A. List installed value of each major item of work and each subcontracted item of work as a separate line item to serve as a basis for computing values for Progress Payments. Round off values to nearest dollar.

B. Coordinate listings with Progress Schedule.

C. For items on which payments will be requested for stored products, list sub-values for cost of stored products with taxes paid.

D. Submit a sub-schedule for each separate stage of work specified in Section 01010.

E. The sum of values listed shall equal total Contract or lump sum price items.

1.05 SUBMITTALS

A. Submit Preliminary Schedule of Values within fifteen (15) days after the tentative award of the Contract.

B. Submit finalized Schedule of Values within ten (10) days from the approval date of the Overall Construction Progress Schedule.

C. Submit three copies of Schedule as required by the General Conditions.

D. Transmit under the Field Representative accepted transmittal letter. Identify project by title, and project number.

1.06 SUBSTANTIATING DATA

A. When the Field Representative requires substantiating information, submit data justifying line item amounts in question.

1.07 ACTION

A. No payment will be made for work performed on a lump sum contract or a lump sum item until the appropriate Schedule of Values is approved by the Owner

B. The equitable value of work deleted from a lump sum contract or lump sum item shall be determined from the approved Schedule of Values.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

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SECTION 01405

CONTRACT QUALITY CONTROL

PART 1 GENERAL

1.01 REQUIREMENT INCLUDED

A. Quality control of products and workmanship.

B. Mix design.

C. Manufacturer's instructions.

D. Manufacturer's certificates

E. Equipment operations.

1.02 RELATED REQUIREMENTS

A. Section 01090 - Reference Standards.

B. Section 01300 - Submittals

C. Section 01340 - Shop Drawings, Product Data and Samples

D. Section 01440 - Contractor Quality Control Program

1.03 DESCRIPTION

A. Maintain quality control over supervision, subcontractors, suppliers, manufacturers, products, services, workmanship and site conditions, to produce work in accordance with Contract Documents.

1.04 WORKMANSHIP

A. Comply with industry standards of the region except when more restrictive tolerances or specified requirements indicate more rigid standards or more precise workmanship.

B. Provide suitably qualified personnel to produce work of specified quality.

C. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration and racking.

D. Provide finishes to match approved samples.

1.05 MANUFACTURER'S INSTRUCTIONS

A. Require compliance with instructions in full detail, including each step in sequence.

B. Should instructions conflict with Contract Documents, request written clarification from Architect/Engineer through the Field Representative before proceeding.

1.06 MANUFACTURER'S CERTIFICATES

A. When required in individual Specifications section, submit manufacturer's certificate, in duplicate, certifying that products meet or exceed specified requirements, executed by responsible officer.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

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SECTION 01410

PROJECT TESTING LABORATORY SERVICES

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

A. Owner provided Project Testing Laboratory Services to perform Quality Assurance testing.

1.02 RELATED REQUIREMENTS

A. General Conditions: Inspections, testing and approvals.

B. Section 01720 - Project Record Documents.

C. See Volume 3 MDAD and FDOT Standard Technical Specifications. For applicable specifications, the owner is MDAD in lieu of FDOT.

D. Not used

E. Not used

F. Not used

1.03 REFERENCES

A. ASTM C1077 Standard Practice for Laboratories Testing Concrete and Concrete Aggregates and Criteria for Laboratory Evaluation.

B. ASTM D3666 - Practice for Evaluating and Qualifying Agencies Testing and Inspecting Bituminous Paving Materials.

C. ASTM D3740 - Practice for Evaluation of Agencies Engaged in testing and/or Inspection on Soil and Rock as used in Engineering Design and Construction.

D. ASTM E329 - Standard Recommended Practice for Inspection and Testing Agencies for Concrete, Steel and Bituminous Materials as used in Construction.

1.04 SELECTION AND PAYMENT

A. Owner will employ and pay for services of an independent testing laboratory (Project Testing Laboratory) to perform Quality Assurance testing.

1.05 LABORATORY REPORTS

A. After each inspection and test the Owner's Project Testing Laboratory will forward copies of all reports directly to Owner.

1.06 LIMITS ON PROJECT TESTING LABORATORY AUTHORITY

A. Project Testing Laboratory may not release, revoke, alter or enlarge on requirements of Contract Documents.

B. Project Testing Laboratory may not approve or accept any portion of the work.

C. Project Testing Laboratory may not assume any duties of the Architect/Engineer, the Field Representative or the Contractor.

D. Project Testing Laboratory has no authority to stop work.

1.07 CONTRACTOR RESPONSIBILITIES

A. Make available to Project Testing Laboratory at designated location adequate samples of materials proposed to be used that require testing, together with proposed mix designs.

B. Cooperate with laboratory personnel and provide access to work area and manufacturer's facilities.

C. If required by the Field Representative or the Project Testing Laboratory, the Contractor shall arrange for adequate office or working space that may be reasonably needed for conducting plant inspections. Office or working space should be conveniently located with respect to the plant.

D. Provide incidental labor and facilities to provide access to work to be tested, to obtain and handle samples at the site or at source of products to be tested, to facilitate tests and inspections, and for storage and curing of test samples.

E. Notify the Field Representative, Owner and laboratory 48 hours prior to expected time for operations requiring inspection and testing services.

F. Costs of all testing except for retesting due to failure, will be paid by Owner. Failed tests will be retested at Contractor's expense.

G. Arrange with Project Testing Laboratory and pay for additional samples and tests required by Contractor beyond specified requirements.

1.08 RETESTING

The Owner retains the right to retest any material that has been tested and approved at the source of supply after it has been delivered to the site. Either the Architect/Engineer or the Field Representative shall have the right to reject material which, when retested, does not meet the requirements of the Contract Documents.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

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SECTION 01410

PROJECT TESTING LABORATORY SERVICES

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

A. Owner provided Project Testing Laboratory Services to perform Quality Assurance testing.

1.02 RELATED REQUIREMENTS

A. General Conditions: Inspections, testing and approvals.

B. Section 01720 - Project Record Documents.

C. Volume 3 MDAD and FDOT Standard Technical Specifications. For applicable specifications, the owner is MDAD in lieu of FDOT.

D. Not used

E. Not used

F. Not used

1.03 REFERENCES

A. ASTM C1077 Standard Practice for Laboratories Testing Concrete and Concrete Aggregates and Criteria for Laboratory Evaluation.

B. ASTM D3666 - Practice for Evaluating and Qualifying Agencies Testing and Inspecting Bituminous Paving Materials.

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A. After each inspection and test the Owner's Project Testing Laboratory will forward copies of all reports directly to Owner.

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D. Project Testing Laboratory has no authority to stop work.

1.07 CONTRACTOR RESPONSIBILITIES

A. Make available to Project Testing Laboratory at designated location adequate samples of materials proposed to be used that require testing, together with proposed mix designs.

B. Cooperate with laboratory personnel and provide access to work area and manufacturer's facilities.

C. If required by the Field Representative or the Project Testing Laboratory, the Contractor shall arrange for adequate office or working space that may be reasonably needed for conducting plant inspections. Office or working space should be conveniently located with respect to the plant.

D. Provide incidental labor and facilities to provide access to work to be tested, to obtain and handle samples at the site or at source of products to be tested, to facilitate tests and inspections, and for storage and curing of test samples.

E. Notify the Field Representative, Owner and laboratory 48 hours prior to expected time for operations requiring inspection and testing services.

F. Costs of all testing except for retesting due to failure, will be paid by Owner. Failed tests will be retested at Contractor's expense.

G. Arrange with Project Testing Laboratory and pay for additional samples and tests required by Contractor beyond specified requirements.

1.08 RETESTING

The Owner retains the right to retest any material that has been tested and approved at the source of supply after it has been delivered to the site. Either the Architect/Engineer or the Field Representative shall have the right to reject material which, when retested, does not meet the requirements of the Contract Documents.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 01440

CONTRACTOR QUALITY CONTROL PROGRAM

PART 1 GENERAL

1.01 SCOPE

A. The Contractor shall establish, provide, and maintain an effective Quality Control Program***, conforming to MDAD's Quality Assurance Manual,*** that details the methods and procedures that will be taken to assure that all materials and completed construction required by this Contract conform to the Plans, Technical Specifications and other requirements, whether manufactured by the Contractor, or procured from subcontractors or vendors. Although guidelines are established and certain minimum requirements are specified herein and elsewhere in the Technical Specifications, the Contractor shall assume full responsibility for the quality of all work.

B. The intent of this section is to provide a minimum framework for the Contractor to establish a necessary level of control that will:

1. Adequately provide for the production of acceptable quality materials and workmanship.

2. Provide sufficient information to assure the Architect/Engineer, the Field Representative, and the Owner that the specification requirements will be met.

3. Allow the Contractor as much latitude as possible to develop its own standard of control.

C. The Contractor shall be prepared to discuss and present, at the preconstruction conference, its written Quality Control Program. The Contractor shall not begin any construction or production of materials to be incorporated into the completed work until the Quality Control Program has been reviewed and accepted by both the Architect/Engineer and the Field Representative. The Contractor shall make all all adjustments to the Quality Control Program deemed necessary by either the Architect/Engineer or the Field Representative. No partial payment will be made for materials subject to specific quality control requirements until the Quality Control Program has been reviewed and accepted.

The quality control requirements contained in this section and elsewhere in the Contract Technical Specifications are in addition to and separate from the testing requirements that are the responsibility of the Project Testing laboratory as specified elsewhere in the Contract Documents.

1.02 DESCRIPTION OF PROGRAM.

A. The Contractor shall describe the Quality Control Program in a written document that shall be reviewed prior to the start of any production, construction, or fabrication. The written Quality Control Program shall be submitted to the Field Representative at least ten (10) calendar days before the pre-construction conference

The Quality Control Program shall describe how the Contractor will perform inspection and testing of all items of work required by the Technical Specifications, including those performed by subcontractors and vendors. This Quality Control Program shall ensure conformance to applicable Specifications and Plans with respect to materials, workmanship, construction, finish, and functional performance. The Quality Control Program shall include surveillance and tests required by the Technical Specifications, in addition to other requirements of this section and any other activities deemed necessary by the Contractor to establish an effective level of quality control.

B. The Quality Control Program shall be organized to address, as a minimum, the following items:

1. Quality control organization;

2. Project progress schedule;

3. Submittals schedule;

4. Inspection requirements;

5. Quality control testing plan;

6. Quality control testing laboratory;

7. Documentation of quality control activities; and

8. Requirements for corrective action when quality control and/or acceptance criteria are not met.

C. The Contractor is encouraged to add any additional elements to the Quality Control Program that it deems necessary to adequately control all production and/or construction processes required by this contract.

1.03 QUALITY CONTROL ORGANIZATION.

A. The Contractor's Quality Control Program shall be implemented by the establishment of separate quality control organization. Such organization may be internal to the Contractor’s company, an outside organization contracted by the

Contractor, or a combination of both. An organizational chart shall be developed to show all quality control personnel, including personnel provided by any outide organization, and how these personnel integrate with other management/production and construction functions and personnel.

B. The organizational chart shall identify all quality control staff by name and function, experience qualifications, certifications and shall indicate the total staff required to implement all elements of the Quality Control Program, including inspection and testing for each item of work. If necessary, different technicians can be utilized for specific inspection and testing functions for different items of work. If an outside organization or independent testing laboratory is used for implementation of all or part of the Quality Control Program, the personnel assigned shall be subject to the qualification requirements of paragraph C.1 and C.2 below. The organizational chart shall indicate which personnel are Contractor employees and which are provided by an outside organization.

C. The quality control organization shall consist of the following minimum personnel:

1. Quality Control (QC) Program Administrator. A QC Program Administrator shall be assigned to this project to the extent and in a manner necessary to effectively implement and manage the Contractor's QC Program The QC Program Administrator shall be a full-time employee of the Contractor, or a consultant engaged by the Contractor. The QC Program Administrator shall have a minimum of 5 years of experience in industrial or airport construction and shall have had prior quality control experience on a project of comparable size and scope as the Contract.

In addition, the QC Program Administrator shall have at least 2 years of demonstrable experience in jacking bridge structures to replace steel beam bearings or in the government inspection of bridge rehabilitation and transit systems elevated guideways. The QC Program Administrator shall have full authority to institute any and all actions necessary for the successful implementation of the Quality Control Program to ensure compliance with the Plans and Specifications. The QC Program Administrator shall report directly to an officer of the Contractor having full decision-making authority for the Project.

2. Quality Control Technicians. A sufficient number of quality control technicians necessary to monitor each of the following aspects of construction shall be provided:

a. Structural concrete and masonry
b. Roofing and sheet metal
c. Structural steel
d. Alarm and communications systems, and electrical work
h. Other aspects as selected by Contractor
i. Equipment
j. Finishes

These personnel shall be engineers, engineering technicians, or experienced craftsman with qualifications in the appropriate field equivalent to NICET Level II or higher construction materials technician or highway construction technician and shall have a minimum of 2 years of experience in their area of expertise. Certification at an equivalent level, by a State of Florida or nationally recognized organization will be acceptable in lieu of NICET certification.

The quality control technicians shall report directly to the Program Administrator and shall perform the following functions:

(a) Inspection of all materials, construction, plant, and equipment for conformance to the specifications, and as required by Section 1.06 below.

(b) Performance of all quality control tests as required by the technical specifications and Section 1.07 below.

3. Staffing Levels. The Contractor shall provide sufficient qualified quality control personnel to monitor each work activity at all times. Where material is being produced in a plant for incorporation into the work, separate plant and field technicians shall be provided at each plant and field placement location. The scheduling and coordinating of all inspection and testing must match the type and pace of work activity. The Quality Control Program shall state where different technicians will be required for different work elements.

1.04 PROJECT PROGRESS SCHEDULE.

A. The Contractor shall submit a coordinated construction schedule for all work activities. The schedule shall be prepared as specified in the Contract Documents.

B. The Contractor shall maintain the work schedule and provide an update and analysis of the progress schedule on a weekly basis, or as otherwise specified in the Contract Documents. Submission of the work schedule shall not relieve the Contractor of overall responsibility for scheduling, sequencing, and coordinating all work to comply with the requirements of the Contract.

1.05 SUBMITTALS SCHEDULE.

A. The Contractor shall submit a detailed listing of all submittals (e.g., job mix formula, mix designs, material certifications) and shop drawings required by the Technical Specifications. The listing can be developed in a spreadsheet format and shall include:

1. Specification Section number;
2. Section description;
3. Description of submittal;
4. Specification paragraph requiring submittal; and
5. Scheduled date of submittal.

1.06 INSPECTION REQUIREMENTS.

A. Quality control inspection functions shall be organized to provide inspections for all definable features of work, as detailed below. All inspections shall be documented by the Contractor as specified by Section 1.08 below.

B. Each item of work and its substrate or surroundings shall be inspected preparatory to, during the progress of the work, and afterward to ensure that the Contract Documents are being followed, that the work is good quality, and so that defects are discovered and corrected as the work proceeds. Inspections shall be performed weekly, daily, or continuously, depending on the speed, quantity, and complexity of each aspect of the work, until each aspect of the work is complete.

1.07 QUALITY CONTROL TESTING PLAN.

A. As a part of the overall Quality Control Program, the Contractor shall implement a Quality Control Testing Plan, as required by the Technical Specifications. The testing plan shall include the minimum tests and test frequencies required by each Technical Specification Item, as well as any additional quality control tests that the Contractor deems necessary to adequately control production and/or construction processes.

B. The testing plan can be developed in a spreadsheet fashion and shall, as a minimum, include the following:

1. Specification section number (e.g., P-401);
2. Section description (e.g., Plant Mix Bituminous Pavements);
3. Test type (e.g., gradation, grade, asphalt content);
4. Test standard (e.g., ASTM, AASHTO or USCE, etc., test number, as applicable);
5. Test frequency (e.g., as required by Technical Specifications or minimum frequency when requirements are not stated);
6. Responsibility (e.g., plant technician); and
7. Control requirements (e.g., target, permissible deviations).

C. The testing plan shall contain a statistically-based procedure of random sampling for acquiring test samples in accordance with ASTM D 3665. The Field Representative and/or the Project Testing Laboratory shall be provided the opportunity to witness quality control sampling and testing.

D. All quality control test results shall be documented by the Contractor as required by Section 1.08 below.

1.08 DOCUMENTATION.

A. The Contractor shall maintain current quality control records of all inspections and tests performed. These records shall include factual evidence that the required inspections or tests have been performed, including type and number of inspections or tests involved; results of inspections or tests; nature of defects, deviations, causes for rejection, etc.; proposed remedial action; and corrective actions taken.

B. These records must cover both conforming and defective or deficient features, and must include a statement that all supplies and materials incorporated in the work are in full compliance with the terms of the contract. The records shall cover all work placed subsequent to the previously furnished records and shall be verified and signed by the Contractor's QC Program Administrator. Except as otherwise provided herein, such records shall be made available to the Field Representative upon request.

C. Specific Contractor quality control records required for the Contract shall include, but are not necessarily limited to, the following records:

1. Daily Inspection Reports. Each Contractor quality control technician shall maintain a daily log of all inspections performed for both Contractor and subcontractor operations on a form acceptable to the Field Representative. These technician's daily reports shall provide factual evidence that continuous quality control inspections have been performed and shall, as a minimum, include the following:

   (a) Technical Specification item number and description;
   (b) Compliance with approved submittals;
   (c) Proper storage of materials and equipment;
   (d) Proper operation of all equipment;
   (e) Adherence to Plans and Technical Specifications;
   (f) Review of quality control tests; and
   (g) Safety inspection.

   The daily inspection reports shall identify inspections conducted, results of inspections, location and nature of defects found, causes for rejection, and remedial or corrective actions taken or proposed.

   The daily inspection reports shall be signed by the responsible quality control technician and the Program Administrator. The Field Representative shall be provided at least one copy of each daily inspection report on the work day following the day of record.

2. Daily Test Reports. The Contractor shall be responsible for establishing a system which will record all quality control test results. Daily test reports shall document the following information:
   (a) Technical Specification item number and description;
   (b) Test designation;

(c) Location;
(d) Date of test;
(e) Control requirements;
(f) Test results;
(g) Causes for rejection;
(h) Recommended remedial actions; and
(i) Retests.
(j) Occurrences of interest.

Test results from each day's work period shall be submitted to the Field Representative prior to the start of the next day's work period. When required by the Specifications, the Contractor shall maintain statistical quality control charts. The daily test reports shall be signed by the responsible quality control technician and the Program Administrator.

1.09 CORRECTIVE ACTION REQUIREMENTS.

A. The Quality Control Program shall indicate the appropriate action to be taken when a process is deemed, or believed, to be out of control (out of tolerance) and detail what action will be taken to bring the process into control. The requirements for corrective action shall include both general requirements for operation of the Quality Control Program as a whole, and for individual items of work contained in the Technical Specifications.

B. The Quality Control Program shall detail how the results of quality control inspections and tests will be used for determining the need for corrective action and shall contain clear sets of rules to gauge when a process is out of control and the type of correction to be taken to regain process control.

C. When applicable or required by the Technical Specifications, the Contractor shall establish and utilize statistical quality control charts for individual quality control tests. The requirements for corrective action shall be linked to the control charts.

1.10 OBSERVATION BY THE FIELD REPRESENTATIVE.

A. All items of material and equipment shall be subject to observation by the Field Representative at the point of production, manufacture or shipment to determine if the Contractor, producer, manufacturer or shipper maintains an adequate quality control system in conformance with the requirements detailed herein and the applicable Specifications and Plans. In addition, all items of materials, equipment and work in place shall be subject to observation by the Field Representative and/or the Project Testing Laboratory at the site for the same purpose.

B. Observation by the Field Representative does not relieve the Contractor of performing quality control inspections of either on-site or off-site Contractor's or subcontractor's work.

1.11 NONCOMPLIANCE.

A. The Field Representative will notify the Contractor of any noncompliance with any of the foregoing requirements. The Contractor shall, after receipt of such notice, immediately take corrective action. Any notice, when delivered by the Field Representative or its authorized representative to the Contractor or its authorized representative at the site of the work, shall be considered sufficient notice.

B. In cases where quality control activities do not comply with either the Contractor's Quality Control Program or the contract provisions, or where the Contractor fails to properly operate and maintain an effective Quality Control Program, as determined by the Field Representative, the Field Representative may:

(a) Order the Contractor to replace ineffective or unqualified quality control personnel or subcontractors.

(b) Order the Contractor to stop operations until appropriate corrective actions are taken.

END OF SECTION

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SECTION 01504

CONSTRUCTION IDENTIFICATION SIGNS

PART 1 GENERAL

1.01 REQUIREMENT INCLUDED

A. Furnish, erect and remove construction identification sign(s) in accordance with the contract documents and as directed by the Field Representative.

PART 2 PRODUCTS

2.02 A. Sign Face: 7/8 Inch thick (min.); exterior plywood. All edge sealed.

B. Supports: Pressure treated posts - min. size 4" x 4".

C. Hardware: Galvanized steel.

D. Paint: Background and lettering - Exterior grade, latex, gloss paint. Colors as directed.

PART 3 EXECUTION

3.01 A. Install where shown; minimum post embedment 36".

B. Thoroughly compact backfill in post holes.

C. Legend as per appended sheet.

D. Sign size, lettering types and sizes, colors, etc. as shown. Sign size shall be 8’ x 4 ‘.

E. At substantial completion, remove sign(s) and restore site to original or proposed condition.

AVIATION - THE ECONOMIC FOUNDATION OF MIAMI-DADE COUNTY

CONCOURSE E SATELLITE
APM BRIDGE REHABILITATION PROJECT
MIAMI INTERNATIONAL AIRPORT
MDAD PROJECT NO. _____

Daniella Levine Cava
Mayor

Board of County Commissioners

Oliver G. Gilbert, III
Chair

Anthony Rodriguez
Vice-Chair

Oliver G. Gilbert, III ***DISTRICT 1***	Kevin M. Cabrera ***DISTRICT 6***	Anthony Rodriguez ***DISTRICT 10***
Marleine Bastien ***DISTRICT 2***	Raquel A. Regalado ***DISTRICT 7***	Roberto Gonzalez ***DISTRICT 11***
Keon Hardemon ***DISTRICT 3***	Danielle Cohen Higgins ***DISTRICT 8***	Juan Carlos Bermudez ***DISTRICT 12***
Micky Steinberg ***DISTRICT 4***	Kionne L. McGhee ***DISTRICT 9***	René Garcia ***DISTRICT 13***
Eileen Higgins ***DISTRICT 5***		

Geri Bonzon-Keenan
County Attorney

Ralph Cutie
Aviation Director

MIAMI INTERNATIONAL AIRPORT

END OF SECTION

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SECTION 01505

MOBILIZATION

PART 1 GENERAL

1.01 DESCRIPTION

A. The work specified in this Section shall consist of the preparatory work and operations in mobilizing for beginning work on the Project, including, but not limited to, the following:

(1) The costs of bonds and any required insurance, and any other preconstruction expense necessary for the start of the work, excluding the cost of construction materials;

(2) The costs of operations necessary for the movement of personnel, equipment, supplies and incidentals to the project site; and

(3) The costs for the establishment of temporary offices, shops, buildings, construction identification signs, safety equipment and first aid supplies, sanitary and other facilities, as required by the Contract Documents, and any Federal, State and/or local laws and regulations.

(4) The limitations on the construction schedule and airport APM operations require contractor to ensure that all jacking equipment and material shall be on-site prior to suspending the APM system operations.

B. The Contractor shall prepare and submit to the Field Representative detailed itemized cost breakdown of this item, at the preconstruction conference.

1.02 The Contractor shall include in the Schedule of Values a line item for "Mobilization".

1.03 Not used.

1.04 PARTIAL PAYMENTS

Partial payments for Mobilization will be made in accordance with the following schedule during the progress of construction on this project.

Percent of Original Contract Amount Earned	Allowable Percent of the Lump Sum Price for Mobilization*
5	25
10	50

25	75
50	100

Partial payments for the item "Mobilization" shall be made in accordance with the above schedule and the sum total of all the partial payments for the item Mobilization will be limited to 3% of the original Contract Amount for the Project. Any remaining amount will be paid upon completion of all work under the Project.

The standard retainage, as specified in General Conditions, will be applied to these allowances. Partial payments made on this item shall in no way act to preclude or limit any of the provisions for partial payments otherwise provided for by the Contract.

END OF SECTION

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SECTION 01506

CONTRACTOR OVERHEAD

PART 1 GENERAL

1.01 DESCRIPTION

The work specified in this Section shall consist of all of the Overhead as defined in the General Conditions.

1.02 METHOD OF MEASUREMENT

Measurement of Overhead for payment shall be on a calendar day basis.

1.03 BASIS OF PAYMENT

Payment for Overhead shall be made at the contract unit price.

Payment will be made under:

Item No. 1 Contractor Overhead - Per Calendar Day

1.04 PARTIAL PAYMENTS

Partial payments for Overhead will be made in accordance with the Contract Documents. The standard retainage, as specified in the General Conditions, will be applied.

END OF SECTION

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SECTION 01511

TEMPORARY ELECTRICITY

* *
Notes: This Section is intended to include requirements for temporary electricity.
* *

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

A. Temporary electrical services.

B. Operation and Maintenance.

C. Removal.

1.02 RELATED REQUIREMENTS

A. Section 01010 - Summary of work.

B. Section 01512 - Temporary Lighting.

C. Section 01590 - Field Representative's Office and Testing Laboratories.

1.03 SERVICE REQUIREMENTS

* *
Select Appropriate Paragraph 'A'.
* *

A. Power Source: Owner’s existing service; connect at indicated location or as directed by the Field Representative. Provide sub-metering to record energy consumed.]

B. Service: Provide temporary service compatible with servicing utility company and adequate to accommodate maximum construction and temporary lighting at any time, plus continuous operation of Owner's facilities. Contractor is responsible to make determination prior to submitting bids.

1.04 DISTRIBUTION

A. Weatherproof distribution boxes with 110 volt and 220 volt power outlet consisting of 100 ampere fused switches (or as determined by the contractor) with equipment

ground, spaced so that a 100 foot extension cord will reach all areas of the bridge and building.

B. Wiring, connections and protection for temporary lighting, warning and marker lights.

C. Wiring, connections and protection for temporary and permanent equipment for environmental control, for temporary use of electrically operated equipment and for testing.

1.05 USE OF EXISTING SYSTEM

A. Monitor usage, prevent interference with Owner's normal requirements.

1.07 CONTRACTOR RESPONSIBILITIES

A. Obtain permit and pay for inspections.

B. Obtain and pay for temporary easement across property other than that of County.

C. Pay for installation, operation, maintenance and removal of system and restoration of existing and permanent equipment.

D. Contractor shall pay costs of energy consumed for operation of on or off site batch and mixing plants.

1.08 OWNER RESPONSIBILITIES

A. Owner will pay costs of energy consumed for normal construction operations, except as specified in 1.07 above. Take measures to conserve energy usage.

B. Wastes or failure to conserve energy will be cause for revocation of permit of electrical use from the airport system.

PART 2 PRODUCTS

2.01 MATERIALS

A. May be new or used, adequate to the purpose and meeting the Florida Building Code requirements.

B. Devices and Equipment: Standard devices, meeting UL requirements.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install initial service at time of site mobilization.

B. Comply with requirements of the Contract Documents.

C. Modify and extend system as work progresses.

D. Comply with Florida Building Code.

3.02 OPERATION AND MAINTENANCE

A. Maintain system to provide continuous service including prompt restoration of interruptions to Owner's system when temporary service is connected.

3.03 REMOVAL

A. Remove temporary material and equipment prior to final Completion.

B. Restore existing and permanent facilities used for temporary purposes to original condition.

END OF SECTION

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SECTION 01512

TEMPORARY LIGHTING

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

A. Temporary lighting.

B. Operation and Maintenance.

C. Removal.

D. Cleaning.

1.02 RELATED REQUIREMENTS

A. Section 01010 - Summary of work.

B. Section 01511 - Temporary Electricity.

C. Section 01590 - Field Representative's Office

D. Section 01710 - Final Cleaning.

E. Individual Sections: Lighting required for work.

1.03 SERVICE REQUIREMENTS

* *

Edit to add any specific light levels if required for a specific project.

* *

A. Temporary lighting for field offices, storage, shop, work and other construction areas and circulation areas for personnel.

B. Security lighting during hours of low visibility.

C. Lighting required for maintenance and protection of airside and landside traffic.

1.04 USE OF EXISTING SYSTEM

A. Existing lighting system may be used for temporary purposes. Maintain to prevent interference with Owner's normal operations.

1.05 COSTS

A. Obtain permits and pay for inspections.

B. Pay for installation, operation, maintenance and removal lighting.

C. Costs of Electricity used for lighting: As specified in Section 01511.

PART 2 PRODUCTS

2.01 MATERIALS

A. May be new or used, adequate to the purpose.

B. Receptacles, Fixtures, Controls: Standard products, meeting UL standards.

PART 3 EXECUTION

3.01 INSTALLATION

A. Locate fixtures in areas of work adequate to carry out all tasks in a safe and workmanlike manner and to adequately inspect work effort.

B. Modify, supplement and extend lighting as work progresses.

3.02 OPERATION AND MAINTENANCE

A. Maintain lighting. Promptly replace worn or defective parts.

3.03 REMOVAL

A. Remove temporary material and equipment when permanent system is operational.

B. Restore existing and permanent lighting used during construction to original condition. Replace defective fixtures, bulbs and other component parts.

3.04 CLEANING

A. Clean existing and permanent fixtures used during construction under provisions of Section 01710.

END OF SECTION

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SECTION 01514

TEMPORARY TELEPHONE

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

A. Temporary telephone service.

B. Maintenance.

C. Removal.

1.02 RELATED REQUIREMENTS

A. Section 01010 - Summary of work.

B. Section 01590 - Field Representative's Office and Testing Laboratories.

1.03 SERVICE REQUIREMENTS

A. Telephone Service Company: BellSouth and Wiltel located at Miami International Airport.

B. Minimum: Direct one line service to field office for construction use, plus one private lines to Field Representative's field office.

1.04 USE OF EXISTING SYSTEM

A. Do not use existing telephone system.

1.05 COSTS

A. Pay costs of installation, maintenance and removal of service.

B. Pay charges for basic services; entity incurring toll charges will reimburse Contractor.

PART 2 PRODUCTS

2.01 MATERIALS

A. May be new or used, adequate to the purpose.

2.02 EQUIPMENT

A. Products of local service company or specialty devices compatible with service company requirements.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install service at time of site mobilization.

B. Modify and extend service as work progresses.

3.02 MAINTENANCE

A. Maintain system to provide uninterrupted service.

3.03 REMOVAL

A. Remove temporary system at Final Completion, or when field office is no longer needed.

END OF SECTION

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SECTION 01515

TEMPORARY WATER

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

A. Temporary water service.

B. Maintenance.

C. Removal.

1.02 RELATED REQUIREMENTS

A. Section 01010 - Summary of work.

B. Section 01516 - Temporary Sanitary Facilities.

C. Section 01590 - Field Representative's Office and Testing Laboratories.

1.03 SERVICE REQUIREMENTS

A. Water Quality: Potable.

B. Source: Arrange with authorities and connect to public utility.

1.04 DISTRIBUTION

A. Provide valved outlets located so that water is available under adequate pressure by mean of hoses.

B. Install backflow preventer valves at point(s) of connection(s).

1.05 USE OF EXISTING SYSTEMS

A. Existing system may be used for temporary water. Monitor usage to prevent interference with Owner’s normal requirements.

1.06 COSTS

A. Obtain permits and pay for inspections.

C. Pay costs of installation, operation, maintenance and removal and restoration of existing and permanent equipment.

D. County will pay costs of water consumed for normal construction operations; take measures to conserve usage.

PART 2 PRODUCTS

2.01 MATERIALS

A. May be new or used, adequate to the purpose.

B. Drinking Water Dispensers: Standard products.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install initial service at time of job mobilization.

B. Modify and extend service as work progresses.

C. Size piping to supply construction needs and temporary fire protection.

D. Provide pumps, pressure tanks, automatic controls, and storage tanks as necessary to pressurize system.

E. Disinfect piping used for drinking water.

F. Install backflow preventer valves at all connections to the system.

3.02 MAINTENANCE

A. Maintain system to provide continuous service with adequate pressure to outlets, including County's system when temporary service is connected.

B. Maintain connections, pipes, fittings, and fixtures and conserve use of all utilities. Failure to stop leaks or other waste of water will be cause for revocation of permit for the use of said water from the airport system.

3.03 REMOVAL

A. Remove temporary system at Substantial Completion.

B. Restore existing and permanent facilities used for temporary purposes during construction to original condition.

END OF SECTION

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SECTION 01516

TEMPORARY SANITARY FACILITIES

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

A. Temporary Sanitary Facilities.

B. Maintenance, Service.

C. Removal.

D. Cleaning.

1.02 RELATED REQUIREMENTS

A. Section 01010 - Summary of work.

B. Section 01515 - Temporary Water

C. Section 01590 - Field Representative's Offices

D. Section 01710 - Final Cleaning.

1.03 TEMPORARY FACILITIES

A. Do not use existing sanitary facilities.

B. Temporary Sanitary Facilities shall comply with the requirements of the State and County health standards.

C. Permanent sanitary facilities shall not be used for temporary purposes unless specific arrangements are made with the Owner.

1.04 COSTS

A. Obtain permits and pay for inspections.

B. Obtain and pay for temporary easements across property other than that of County.

C. Pay service charges for connection and use of temporary sewerage utilities. Owner will pay charges for permanent utilities upon acceptance of Project.

D. Pay costs of installation, maintenance and removal of service.

E. Cost for Water: Specified in Section 01515.

PART 2 PRODUCTS

2.01 MATERIALS

A. May be new or used as may be dictated by all governing codes, adequate to the purpose, which will not create unsanitary conditions.

2.02 TOILET FACILITIES

A. Enclosed portable self-contained units or temporary water closets and urinals, secluded from public view.

PART 3 EXECUTION

3.01 INSTALLATION

A. Provide facilities at time of site mobilization.

B. Modify and extend service as work progresses.

C. Do not require any worker to work in surroundings or under conditions which are unsanitary, hazardous, or dangerous to his/her health or safety.

3.02 MAINTENANCE, SERVICE

A. Clean areas of facilities daily, maintain in sanitary condition.

B. Provide toilet paper, paper towels and soap in suitable dispensers.

3.03 REMOVAL

A. Remove portable units when other facilities are available.

B. Remove temporary fixtures prior to Final Completion.

3.04 CLEANING

A. Clean areas of use as specified in Section 01710, disinfect fixtures, repair or replace damaged fixtures, accessories and surfaces.

B. Restore existing and permanent area and facilities used to original condition.

END OF SECTION

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SECTION 01530

BARRIERS AND ENCLOSURES

PART 1 GENERAL

1.01 REQUIREMENT INCLUDED

A. Barriers.

B. Protected Walkways.

C. Security Fencing

F. Partition and Ceiling Enclosures.

G. Maintenance.

H. Removal.

I. Site Restoration

1.02 RELATED REQUIREMENTS

A. Section 01010 - Summary of work.

B. Section 01570 - Maintenance of Air Operations Area Traffic.

C. Section 01571 - Maintenance of Airport Landside Traffic.

PART 2 PRODUCTS

2.01 MATERIALS, GENERAL

A. May be new or used as may be dictated by all governing codes, adequate to the purpose, which will not create hazardous conditions.

2.02 FENCING MATERIALS

A. Commercial quality chain link.

2.03 ENCLOSURE MATERIALS

A. For Weather Protection: Optional.

B. For partitions and Ceilings: Framing and rigid sheet materials.

PART 3 EXECUTION

3.01 BARRIERS AND PROTECTED WALKWAYS

A. Provide to prevent public entry, to protect public through construction site, provide for Owner's use of site, and to protect existing facilities and adjacent properties from damage.

B. 8 foot high fence enclosing Project site and construction area.

C. Pay costs of installation, maintenance and removal and restoration to existing condition.

3.04 PARTITIONS AND CEILING ENCLOSURES

A. Provide temporary enclosures to separate work areas from areas occupied by Owner, to prevent penetration of dust, moisture and noise into occupied areas.

B. Construct with closed joints; seal joints, edges and intersections with other surfaces to prevent penetrations of dust and moisture.

3.05 MAINTENANCE

A. Maintain during progress of work.

B. Relocate and extend during successive stages of construction.

3.06 REMOVAL

A. Remove temporary materials, equipment and construction at Final Acceptance; repair damage caused by installation or use of barricades and enclosures. Remove fence post setting to depth of 1 foot below grade.

3.07 SITE RESTORATION

A. Restore site and existing facilities used during construction to original condition.

END OF SECTION

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SECTION 01535

PROTECTION OF WORK AND PROPERTY

PART 1 GENERAL

1.01 REQUIREMENT INCLUDED

A. Protection of products after installation.

B. Protection of existing property and landscape.

1.02 RELATED REQUIREMENTS

A. Section 01010 - Summary of work

B. Section 01530 - Barriers and Enclosures

C. Section 01600 - Material and Equipment: Protection of products in storage.

D. Section 01710 - Final Cleaning: Removal of temporary protection.

E. Individual Sections: Specific protection for installed products.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.01 PROTECTION AFTER INSTALLATION

A. Protect installed products and control traffic in immediate area to prevent damage from subsequent operations.

B. Provide protective coverings at walls, projections, corners and jambs, sills and soffits of openings in and adjacent to traffic areas.

C. Cover walls and floors of elevator cabs and jambs of cab doors with 3/4 inch plywood, when elevators are used by construction personnel.

D. Protect finished floors and stairs from dirt, wear and damage:

(1) Secure heavy sheet goods or similar protective materials in place, in areas subject to foot traffic.

(2) Lay planking or similar rigid materials in place, in areas subject to movement of heavy objects.

(3) Lay planking or similar rigid materials in place, in areas where storage of products will occur.

E. Protect waterproofed and roofed surfaces:

(1) Restrict use of surfaces from traffic of any kind and from storage of products.

(2) When an activity is mandatory, obtain recommendations for protection of surfaces from manufacturer. Install protection and remove on completion of activity. Restrict use of adjacent unprotected areas.

F. Restrict traffic of any kind across planted lawn and landscape areas.

3.02 PROTECTION AND RESTORATION OF PROPERTY AND LANDSCAPE

A. The Contractor shall be responsible for the preservation of all public and private property, and shall protect carefully from disturbance or damage all land monuments and property markers until the Field Representative has witnessed or otherwise referenced their location and shall not move them until directed.

B. The Contractor shall be responsible for all damage or injury to property of any character, during the prosecution of the work, resulting from any act, omission, neglect, or misconduct in its manner or method of executing the work, or at any time due to defective work or materials, and said responsibility will not be released until the work is completed and accepted.

C. When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work, or in consequence of the nonexecution thereof by the Contractor, the Contractor shall restore, at its own expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, or otherwise restoring as may be directed, or it shall make good such damage or injury in an acceptable manner, at no additional cost to the Owner.

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SECTION 01550

CONTRACTOR'S ACCESS AND EMPLOYEES' PARKING

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

A. Contractor's Access

B. Contractor's Employees Parking

1.02 CONTRACTOR'S ACCESS

A. Access to and egress from the Site will be gained only via routes and through gates as shown on the Plans. Access shall be permitted only during periods of time specified in the Contract Documents. Equipment weight and height limits will be strictly enforced.

1.03 CONTRACTOR'S EMPLOYEES' PARKING

A. Automobiles of all construction workers on the project shall be parked in an area designated for this purpose by the Miami-Dade Aviation Department in the location indicated on the Plans. No construction workers' vehicles will be allowed on the construction site. The Contractor shall furnish transportation for construction workers from the designated parking area to the construction site.

B. Maintain areas free of debris and rubbish. Maintain site in a clean and orderly condition.

C. If the Contractor fails to maintain levels of cleanliness satisfactory to the Field Representative, then the Owner shall have the right to cause such areas to be cleaned by others. The costs to the Owner for such cleaning, plus 25% for administration, shall be the obligation of the Contractor and shall be deducted from any money due the Contractor hereunder.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF SECTION

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SECTION 01563

HANDLING OF INCIDENTAL FUEL SPILLAGE DURING CONSTRUCTION

PART 1 GENERAL

1.01 SCOPE

A. This section consists of procedures to be followed in handling material contaminated with petroleum fuel products (hydrocarbons including petroleum, petroleum derivatives, hydraulics and like products) caused by incidental spillage (including leaks) from the Contractor's equipment.

- Incidental spillage shall mean spillage of a quantity not greater than 25 gallons per incident, of vehicular or mechanical equipment fuel products, onto open ground and absorbed or not absorbed by the soils.

- Spillage or leakage of petroleum fuel products in quantities in excess of 25 gallons shall be immediately remediated by the Contractor using procedures as directed by the MDAD's Environmental Engineering. Whenever such spillage or leakage occur, the Contractor shall immediately notify the Field Representative and the MDAD's Environmental Engineering Division and shall employ the appropriate corrective actions as directed.

B. The provisions of this Section are limited to incidental petroleum fuel spillage on ground surfaces and it excludes fuel spillage onto surface waters.

C. Clean-ups are costly and delays progress. They can be avoided if leaks or spillages are eliminated and in case they occur, are managed efficiently and quickly.

1.02 APPLICABLE CODES

A. Chapter 24 of the Metropolitan Miami-Dade County Code addresses the Environmental Protection Ordinance:

1. Section 24-11(3), of the Miami-Dade County Code stipulates in essence that "it is unlawful to discharge industrial or other wastes to the waters of Miami-Dade County as such discharge may cause water pollution, and constitute a nuisance and sanitary nuisance as defined in Sections 24-3(42), 24-3(58), 24-3(74) and/or 24-26 hereof."

2. Section 24-14, of the Miami-Dade County Code, also stipulates that: "No person shall cause, or allow to be caused any nuisance or sanitary nuisance as defined in Sections 24-3(42), 24-3(58) and/or 24-26 hereof".

3. The above rules apply to all discharges intentional or accidental.

B. Leaks and spillages may occur when using mechanical equipment. Equipment generated or lubricated with petroleum products, are prone to leaks or spillages, therefore proper management of "spillage incidents" is essential.

PART 2 PRODUCTS

2.01 ABSORBENT MATERIALS

Equip crews or machinery with the most efficient type of petroleum absorbent materials. These materials are available at petroleum equipment suppliers and must be readily accessible so that spillages can be contained and prevented from becoming greater incidents.

Fiber material, sand or cat litter may be used as an absorbent material. Sufficient quantity of absorbent material capable of absorbing up to 25 gallons of petroleum fuel products shall be stocked at the job site at all times.

PART 3 EXECUTION

3.01 PROCEDURES

A. Personnel handling waste materials must have a minimum of 40 hours training as defined in 29 CFR 1910.120 and in accordance with certified OSHA course.

B. The following steps must be adhered to when handling spillages. They also serve as a guide in preventing a minor incident from turning into a major event.

C. Perform work as specified herein and in accordance with the applicable provisions of MDAD Standard Technical Specifications Section P-160 except that no payment will be made to the Contractor for the cost of handling and disposing of leaks, spillages and materials contaminated by such leaks or spillages.

D. The steps outlined below are minimum requirements and are merely guidance. They do not constitute a complete compliance procedure.

1. STEP 1

If a fuel contamination to open ground has been discovered, check for the origin of that leak or spillage. Then stop the spillage or leak or positively contain it and then use absorbents to collect the discharged liquid.

Immediately notify the Miami-Dade Aviation Department Environmental Engineering at 876-7934

2. STEP 2

Sand may be used to absorb ground surface spills while absorbent

materials may be used to absorb ground spills as well as surface water spills.

Once absorption of spilled fuels is complete, the impacted (contaminated) absorbent materials shall be stored in 55 gallon steel drums (100-150 lbs.).

If leaked or spilled fuel has been absorbed into the soils, excavate and containerize the impacted (contaminated) soils. Soils may be stored in 55-gallon steel drums.

3. STEP 3

The contaminated materials must be collected, containerized and otherwise properly stored and labeled prior to transport to a pre-approved storage, disposal or treatment facility.

All drums used to store impacted (contaminated) absorbent material and/or contaminated soils shall be properly sealed and labeled with the following information:

Name of company (Contractor):
Contract or Project No.:
Location of origin:
Type of contents:
Type of contaminant:
Quantity: (e.g. 1 of 1)
Date:
Containerized by:
Labeled by:

The procedure for the proper handling and disposal of contaminated soils and absorbent materials is readily available through the Florida Department of Transportation (FDOT) and the Miami-Dade County Department of Environmental Resources Management (DERM).

END OF SECTION

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SECTION 01569

CONSTRUCTION CLEANING

PART 1 GENERAL

1.01 REQUIREMENT INCLUDED

A. Cleaning and disposal of waste materials, debris and rubbish during construction.

1.02 RELATED REQUIREMENTS

A. General Conditions: Cleaning Up.

B. Section 01710 - Final Cleaning.

C. Individual Specifications Sections: Specific cleaning for Product or work.

PART 2 PRODUCTS

2.01 EQUIPMENT

A. Provide covered containers for deposit of waste materials, debris and rubbish.

PART 3 EXECUTION

3.01 CLEANING

A. Maintain areas under Contractor's control (including employee parking and Contractor staging areas) free of waste materials, scraps, surplus material, debris and rubbish. Maintain site in a clean and orderly condition.

B. Remove debris and rubbish from pipe chases, plenums attics, crawl spaces and other closed or remote spaces, prior to closing the space.

C. Clean interior areas daily to provide suitable conditions for work, Owner-occupied areas, and to prevent fire or accidents.

D. Use power brooms to clean paved areas daily and immediately prior to opening any paved area to aircraft or vehicular traffic.

E. All combustible waste materials shall be removed from buildings at the end of each working day.

F. Broom clean interior areas prior to start of surface finishing and continue cleaning on a daily basis.

G. Control cleaning operations so that dust and other particulates will not adhere to wet or newly-coated surfaces.

H. Responsibility for construction cleaning shall not be delegated to subcontractors performing construction work under this Contract.

3.02 DISPOSAL

A. Remove waste materials, debris and rubbish from site bi-weekly and legally dispose of off-site in an authorized disposal area.

3.03 CONTRACTOR'S FAILURE TO CLEAN

A. If the Contractor fails to maintain levels of cleanliness in work areas, satisfactory to the Field Representative, then the Owner shall have the right to cause such areas to be cleaned by others. The costs to the Owner for such cleaning, plus 25% for administration, shall be the obligation of the Contractor and shall be deducted from any money due the Contractor hereunder.

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SECTION 01570

AIRFIELD OPERATIONAL SAFETY DURING CONSTRUCTION

1.01 DESCRIPTION

The work under this Section consists of furnishing all measures required to maintain the safe and orderly movement of Aircraft operating Area (AOA) traffic in and around the construction areas as shown on the Plans and as described in these Technical Specifications.

1.02 GENERAL

This Section covers the Contractor's responsibilities for maintaining the optimum level of safety and the operating efficiency of the airport during construction. These responsibilities are based on criteria contained in current edition of Federal Aviation Administration Advisory Circular AC 150/5370-2E, Operation Safety on Airport During Construction, and in The Airport Height Zoning Ordinance (County Code Article XXXVII, Sections 33-330 to 33-345). The Contractor shall be responsible for all activities, under his control, as specified in the above referenced Advisory Circulars, the Zoning Ordinance and in other referenced documents. In certain cases where the obstacle clearance criteria utilized for this project may differ from that described herein, these variances will be depicted on the Plans.

1.03 RELATED SPECIFICATIONS AND PROVISIONS

The Contract Documents contain several other provisions relating to safety for which Contractor adherence is required. The requirements of Chapter 25 of the Miami-Dade County Code and the related Miami-Dade Aviation Department Operational Directive MIA 19 dated June 17, 1980 shall apply to the work under this Contract.

1.04 OBSTACLE CLEARANCE DURING CONSTRUCTION - RUNWAYS

A. Two sets of criteria shall apply to construction activities within the proximity of active runways; one for use in daytime in visual approach conditions, and the other for use at all other times.

B. VISUAL APPROACH CONDITIONS DURING DAYTIME

(1) During the period from 30 minutes after sunrise until 30 minutes before sunset, when the Airport's reported ceiling is at least 3,000 feet and visibility is at least 3 statute miles, the more restrictive dimensional and obstruction clearance criteria of AC 150/5370-2E shall be utilized except as otherwise shown on the Plans and specified herein. The imaginary surfaces for runway approach/departure protection prescribed by AC 150/5370-2E shall be relocated from the landing thresholds to the ends of the full strength pavement (runway ends), unless the work requires threshold displacement or work is required in proximity of existing displaced thresholds.

(2) No construction activity, personnel, equipment or materials shall be permitted within 250 feet of the centerline of any active runway or above the height restrictions described herein at any time. Contours describing allowable heights and distances when construction activities are in proximity to runways during visual approach conditions during daytime (visual approach contours) are shown on the Plans.

(4) Construction may be permitted within the above specified 250 feet of the runway centerline on a case-by-case basis with the written approval of the MDAD.

C. INSTRUMENT APPROACH CONDITIONS AT TIMES OTHER THAN DAYTIME

At all times other than daytime, described in Paragraph 1.04.B above, (i.e. when the reported ceiling is less than 3,000 feet and/or the visibility is less than 3 statute miles and in the period from 30 minutes before sunset until 30 minutes after sunrise), the dimensional and height restriction criteria of the Miami International Airport Height Zoning Ordinance shall apply. No construction activity, personnel, equipment or materials shall penetrate these imaginary surfaces. Contours describing allowable heights and distances when construction activities are in proximity to runways during instrument approach conditions and at nighttime (instrument approach contours) are shown on the Plans.

1.05 OBSTACLE CLEARANCES DURING CONSTRUCTION - TAXIWAYS, TAXILANES AND APRONS

Construction activity, personnel, equipment or materials shall not be permitted within 154 feet of the centerline of an active taxiway and within 131 feet of the centerline of an active taxilane, unless otherwise shown on the Plans.

1.06 TRENCHES, EXCAVATIONS AND STOCKPILED MATERIAL

A. Open trenches or excavations exceeding 3 inches in depth and 3 inches in width shall not be permitted within 250 feet of the centerline of an active runway or within 100 feet of the center line of active taxiways and taxilanes unless otherwise shown on the Plans.

B. Coverings for open trenches or excavations may be utilized by the Contractor to restore operations in the areas prescribed in 1.06.A above. Covering shall be of sufficient strength to support the weight of the heaviest aircraft operating on the runway or taxiway. Each covering shall be installed only as approved by the Architect/Engineer

C. Barricades and/or flagging shall be installed to identify the limits of construction near open trenches or excavations.

D. Stockpiled material shall be secured against displacement by aircraft engine and propeller blast and ambient winds. Stockpiled materials, equipment and personnel shall not be allowed within the runway, taxiway and taxilane obstacle clearance areas as described in this Article.

PART 2 PRODUCTS

2.01 MARKING AND LIGHTING OF CONSTRUCTION AREAS

A. The Contractor shall install lighting, marking, barrel barricades, railroad tie barricades lighted commercial barricades, concrete barriers, plastic barricades, signs and other measures to delineate closed and hazardous areas during construction. The guidance and procedures provided by the current FAA Advisory Circular AC 150/5340-1, including changes, "Marking of Paved Areas on Airports", shall be utilized as depicted on the Plans. Steady burning red obstruction lights may be required in certain instances to supplement lighted barricades or highlight hazardous or potentially dangerous objects. The location of these lights shall be as shown on Plans or as directed by the Field Representative. Obstruction lights and barrel barricades, railroad tie barricades, lighted commercial barricades, plastic barricades, concrete barriers, water filled plastic protective barriers, and signs shall not be located within runway, taxiway and taxilane obstacle clearance areas.

B. TEMPORARY MARKER LIGHTS. The Contractor shall install, operate and maintain temporary marker lights in the locations shown on the Plans. [The Contractor shall furnish portable base mounted light fixtures, red and blue lenses, 30/45 watt 6.6/6.2 ampere transformers, and 30 watt 6.6 ampere lamps. The Contractor shall furnish 5000 volt, #8AWG, Type "C", FAA Specification L824 stranded copper cable; compatible connector kits; FAA Specification L823 tape; compression sleeves and any other materials necessary to install, operate and maintain the temporary marker lights.

C. The Contractor shall also furnish and install the following:

(1) Heat shrinkable sleeves, tape and incidentals,
(2) 15 watt lamps for 120V circuit,
(3) Necessary wiring, power, connections, etc. to operate lights on 120V circuit,
(4) Required staples to keep cable and wire securely fastened to pavement.
(5) Pavement sealant to seal pavements, when wiring is installed recessed in saw kerfs

D. Yellow flashing lights mounted on top of the various types of barricades are not considered marker lights.

2.02 BARREL BARRICADES.

A. The Contractor shall install and maintain barrel barricades in the locations shown on the Plans, in accordance with the approved layout for each construction area, and as directed by the Field Representative. Barrel barricades shall be in

accordance with the details shown on the Plans including barrels, lights, ropes, flags and incidentals. Barrels shall be weighted immediately upon installation, as necessary to prevent displacement by aircraft engine blast and by ambient wind. Barrel barricade lines shall be inspected each day and repaired or replaced as necessary to meet the requirements of the approved layout plan.

2.03 TEMPORARY CONCRETE BARRIERS

A. Temporary concrete barriers for traffic control and protection shall be New Jersey type precast concrete barriers conforming to the requirements of ASTM C825.

B. Temporary concrete barrier sections shall be capable of being interlocked and shall be provided with warning flags, steady burning lights and/or flashing lights as required and shall be provided with grooves to allow flow of surface drainage.

C. The temporary concrete barriers need not be new, but shall be structurally sound, of a quality and type meeting the requirements of these specifications and shall be subject to the Architect/Engineer's approval.

D. Temporary concrete barriers shall, at the conclusion of the construction or when no longer needed, be relocated or removed and disposed of as the case may be.

2.04 RAILROAD TIE BARRICADES

A. The Contractor shall install and maintain Railroad Tie Barricades consisting of standard 6" x 8" x 8' timber railroad ties placed as and where shown on the Plans and as directed by the Field Representative. Railroad ties shall be painted as detailed on the Plans and placed in the location and manner shown on the Plans. A battery operated yellow flashing light shall be installed on each section of the railroad tie barricades; the yellow flashing light shall be continuously (24 hours a day basis) operated. The railroad tie barricades shall be anchored to the subgrade or pavement using two No. 4, 18" long steel pins driven in the subgrade, or flexible pavement or installed through predrilled holes in rigid pavement. At conclusion of work and when the barricades are no longer needed, the Contractor shall remove and dispose of them and restore the pavement to its original condition.

2.05 PLASTIC BARRICADES

Plastic barricades, meeting the following requirements, shall only be used when specifically shown on the Plans or ordered by the Field Representative.

A. Plastic barricades shall consist of a molded plastic I-beam section suspended, by means of a toggle system, from a molded plastic cone.

The assembly shall be designed to remain usable following vehicular impact.

(1) The plastic barricade (I-beam section and cones) shall be manufactured from high density Polyethylene compounded with Ultra Violet Stabilizer to protect it against ultra violet exposure and outdoor weathering.

(2) The cone shall consist of a stem and a base. The base shall be hollow and so manufactured as to allow for external and internal ballasting (using water, sand or other suitable material), to provide a ballast weight of approximately 20 lbs.

(3) The dimensions of the various elements of the plastic barricade system shall be as follows:

Cones

Overall Height	45"
Base Dimension	18" x 18" x 4"
Weight (unballasted)	7 3/4 lbs.
Outside diameter stem	

	Top	3 1/4"
	Bottom	6 □"
Wall Thickness		1/8" +/- 1/32"
I-Beam Section		
Depth (reflective areas)		8"
Lengths (as ordered by the Field Representative)		36" or 48"
Wall Thickness		1/8"
Weight		1.2 lbs. per foot

B. The plastic barricade assembly shall be equal to MAXICADE System as manufactured by Glasdon - Traffic Services Incorporated (distributed locally by Saft T Store, West Palm Beach, Telephone: 1-407-793-5817) or approved equal.

C. The I-beam section shall be capable of being mounted (using a flexible toggle system) on the plastic cones. The cones shall be designed to support the I-beam sections and also to support traffic lights.

D. The plastic barricade assembly shall be impregnated with traffic orange color. White reflective sheeting shall be applied to the I-beam section to form a series of alternating 6 inch wide stripes, traffic orange and reflective white, at 45° angle.

2.06 PLASTIC PROTECTIVE BARRIERS (WATER FILLED)

The water filled plastic protective barriers shall be the Yodock Barrier, the Guardian Safety Barrier, or approved equal.

The plastic protective barrier shall meet the following and shall be:

A. Color impregnated with the colors shown on the plans or as approved by the Architect/Engineer.

B. Resistant to damage caused by ultraviolet rays.

C. Manufactured with internally molded baffles (to maintain its shape), be properly sealed, is leakproof, provided with drain plugs and underside grooves to allow flow of surface drainage.

D. Barrier sections shall, when installed in a row, be interlocked in an approved manner; end-to-end length of each installed section shall be not less than 72 inches; each water filled section shall weigh not less than 1650 pounds.

E. Provided with securely mounted warning flags, steady burning lights and/or flashing lights as required.

The plastic protective barrier shall, at the conclusion of the construction or when no longer needed, be relocated or removed and disposed of as the case may be.

PART 3 EXECUTION

3.01 LOOSE MATERIALS AND DEBRIS

A. Loose materials shall be removed from the active portion of the AOA, placed in protected areas or otherwise secured to prevent dispersal into active portions of the AOA. The AOA is defined as all areas used or intended to be used for aircraft operations including active runways, aprons, taxiways, taxilanes, etc. Debris shall be promptly removed from the AOA. The Contractor shall exercise care in the transportation of materials within the AOA. Materials tracked or spilled in the AOA shall be removed immediately. When hauling, loading, grading, or when

any of the Contractor's activities are likely to cause the deposit of loose materials in the AOA, it shall be immediately removed using powered vacuum sweepers which shall continuously patrol the affected areas. The sweepers shall be supplemented by hand sweepers, loaders, trucks, etc., as necessary.

3.02 VEHICLES AND MOBILE EQUIPMENT

A. All Contractor vehicles and mobile equipment operating in the AOA shall be identified by three foot (3') square orange and white flags whenever such vehicle and equipment is operating on or about the AOA. In addition, such vehicles and equipment shall have the Contractor's name clearly affixed on each side of such vehicles and equipment, all in accordance with current MDAD requirements. During the hours between 30 minutes before sunset and 30 minutes after sunrise and at all times when visibility is impaired, vehicles and mobile equipment shall also be equipped with a revolving yellow beacon light mounted on the top of the vehicle or equipment. Beacon lights shall provide:

(1) Three hundred sixty degree azimuth coverage.

(2) Effective intensity in the horizontal plane not less than 40 or more than 400 candelas.

(3) Beam spread measured to 1/10 peak intensity extending from 10 degrees to 15 degrees above the horizontal.

(4) Sixty to ninety flashes per minute.

B. All Contractor vehicles and mobile equipment not individually authorized by the MDAD for independent operation in the AOA shall be operated under escort while in the AOA. The escort vehicle and its driver must be authorized by the MDAD for escort duty and for operation within the AOA. If access to the construction, staging or storage sites requires the crossing of an active runway or taxiway, all vehicles shall be escorted across said runway or taxiway by either a MDAD escort vehicle or a vehicle equipped with a VHF-AM Transceiver specifically authorized by MDAD to cross these operational pavements. No crossing of active taxiways or runways by vehicles so equipped shall be made without first obtaining specific clearance from the FAA Air Traffic Control Tower.

C. No crane shall be allowed on the work site until the equipment and its intended operation is approved by MDAD Airside Operations, or the Airport Manager, in accordance with the requirements of General Condition Article 4.14. The Contractor shall provide MDAD Airside Operations with not less than 24-hour advance written notice requesting crane access to the AOA. This request shall utilize the standardized MDAD "Request for Crane Clearance to Miami International Airport".

D. When access is approved by MDAD, the tip of the crane boom shall be identified by the orange and white flag mentioned above and, by red obstruction lights if required by FAA.

3.03 CLOSURES

A. Prior to the commencement of any demolition or other work which will cause an interruption or modification to existing aircraft operations, the Contractor shall confer with, and obtain written authorization from the Field Representative.

B. When the Contractor's operations require the closure of any runway, taxiway, apron, roadway, service gate, walkway, etc., the Contractor shall notify the Field Representative not less than 48 hours prior to need. No runway, taxiway, apron, roadway, service gate, walkway, etc., shall be closed without prior written authorization from the Field Representative.

C. If the Contractor requires access to operational areas not delineated on the Construction Safety Plan Drawing(s), the Contractor shall participate in negotiations leading to the imposition of restrictions on airport operations in the affected areas; the Contractor shall strictly abide by all conditions imposed by MDAD relating to its entry and use of such areas and the Contractor shall not enter these areas until granted temporary, conditional entry clearance by MDAD.

D. Trenching, excavation and other work requiring temporary runway or taxiway closure shall be limited by the Contractor to that amount of work that can be completed within the hours of minimal operation. All ditches, excavations, etc., shall be restored prior to the end of the work period and affected pavements returned to service. This work shall be scheduled during hours of minimal operations. Unless otherwise noted in the Contract Documents, hours of minimal operation shall be defined as the hours between 11:00 P.M. and 7:00 A.M. daily. All other hours are considered hours of normal operation.

E. The Contractor may be required to pursue affected portions of the work on a continuous 24 hour per day basis during construction of the various phases and subphases shown on the Plans and described in the Contract Documents (such as when runways or taxiways, aprons, service or access roadways, or service gates are closed for operation or when hazards of any kind arise).

3.04 LIGHTS, LIGHT LINES, SIGNS AND PAVEMENT MARKINGS

A. Red and blue lens, ground-mounted, taxiway marker lights, pavement markings, signs, lighted barricades and other measures shall be installed and maintained (except as provided herein below) on a 24-hour basis by the Contractor to delineate construction areas available to the Contractor and limits of aircraft operational areas. At the conclusion of each working day, the Contractor shall verify that the temporary lighting systems are in proper operation condition. Any necessary maintenance repairs shall be performed by the Contractor prior to leaving the site. The detailed layout of marking, lights, signs and barricades and other measures for each construction area are shown on the Plans. The actual field installation of markings, lighting, barricades, signs, and other measures and attendant operational procedures shall be inspected by MDAD Airside Operations and any necessary changes or modifications will be promptly implemented by the Contractor as directed. The revised installation will be reinspected and approved by the Field Representative and the County before the Contractor may commence any construction or any other work which revises operational procedures in each affected area.

B. The Contractor shall provide all materials for installing pavement marking, marker lights, and lighted barricades. The MDAD Maintenance Division will provide, when so prescribed in the Contract Documents, certain materials to the Contractor for its use in establishing the temporary light lines designated on the Construction Safety Plan Drawings. The Contractor shall be responsible for the installation of these materials and the return to MDAD of all these equipment and materials in good repair and working order, in a condition satisfactory to and acceptable to MDAD.

C. Connections to power supply for all temporary lighting systems shall be performed by the Contractor under the direction of the MDAD Maintenance Division.

D. Maintenance of all temporary lighting systems shall be performed by the Contractor except that nighttime trouble shooting of temporary lighting connected to any airfield lighting system will be provided by the MDAD Maintenance Division.

E. The Contractor shall install the temporary marker lights in the locations shown on the Plans or as directed by the Field Representative; provide cable connections to existing circuits and decommission or mask existing lights as shown on the Plans. If no existing taxiway circuits are available, the Contractor shall provide and install a constant current transformer including connections and cable runs as necessary to energize the temporary light units. All cable runs installed across pavement shall be made along existing pavement joints. Saw kerfs shall be sealed, using approved suitable sealant, after cable installation. The Contractor shall demonstrate the functional integrity of the temporary marker light system by field test before the system is approved by Field Representative for operational use.

F. The Contractor shall maintain the temporary marker light system in full operational capability during the term of use. Each day at the close of the work shift, the Contractor shall test and repair the system as necessary to restore full operational capability. The Contractor shall provide 24-hour, 7 day per week maintenance service. Trained maintenance technicians shall be available and "On Call" at all times; the Contractor shall provide the Field Representative with address and telephone numbers of the technicians so that they may be contacted at any time.

G. The Contractor shall relocate and modify the temporary lighting systems as required to accommodate the progress of the construction.

H. Upon completion of the work within an AOA, and when the temporary marker lights are no longer needed, the Contractor shall remove all such temporary installation and restore the site prior to opening it to aircraft traffic.

3.05 OPERATIONS SAFETY INSPECTION

A. The entire work site shall be inspected daily and more frequently if construction activities are of a nature that debris may be expected to accumulate on AOA pavements. Special inspections shall be conducted for each work area prior to return to service for aircraft operation. The purpose of these inspections is to ascertain that areas returned to aircraft service are in satisfactory condition and that the overall work site and its activities are within the safety criteria set forth in these Contract Documents. Inspections shall be conducted jointly by representatives of the Contractor, the MDAD Airside Operations Division, the Field Representative and the affected airlines. These inspections shall cover the several safety items noted in and referred by this Article. The report of such inspections shall be filed utilizing the Preoperation and Preconstruction checklist forms, a copy of which is appended to this Section.

B. Any violations of the Safety Criteria found during these inspections shall be rectified immediately. If a violation cannot be corrected on an immediate basis by the Contractor, the Contractor shall immediately notify the Field Representative. No area shall be approved for aircraft operations while it is in violation unless specifically authorized by MDAD Airside Operations, the Field Representative and the designated airline representative.

3.06 OPERATIONAL EMERGENCIES

A. During periods of severe weather conditions or other operational emergencies, the Owner may direct the Contractor to relinquish areas under construction and to prepare the areas for aircraft operations. In this event the Field Representative will so direct the Contractor to evacuate the area and the Field Representative will specify the limits of the area to be evacuated, the term of evacuation and the conditions governing the restoration work necessary to prepare the area for aircraft operation. The Contractor shall promptly and fully comply with the Field

Representative's directive. Should the directive entail extra work under the Contract, as determined by the Field Representative, the Contractor will be reimbursed for such extra work in accordance with the provisions of the applicable Allowance Account item. Should the directive entail a delay in the completion of the Contract or any defined subdivision of the contract, as determined by the Field Representative, such delay shall be considered a Non-Compensable Excusable Delay in accordance with the requirements-of the General Conditions.

3.07 FINAL CLEANUP

A. After work in any work area has been completed and before opening it to traffic, the Contractor shall remove all temporary traffic control devices, temporary pavements, and other temporary work and devices installed for traffic control. The Contractor shall restore the site to its original condition or to the revised condition shown on the Plans.

END OF SECTION

PREOPERATION CHECKLIST

[Miami International Airport] [Insert name of Airport]

NOTE: Inspection is to be made and all corrective work completed by Contractor at the completion of each work area. Perform special inspections for work areas to be released before the completion of the work area.

ITEMS	OK (Check)	REMARKS/EXCEPTIONS
Operational pavements sound, to grade & free of dust, dirt & debris.	_____	_____
Operational pavement shoulders graded, lips removed, surface bonded or paved (no potential for blast erosion).	_____	_____
Striping, marking, signs, barriers, and lighting on operational pavements operable and in correct location.	_____	_____
Water filled plastic protective barriers are actually full of water and are sealed and in leakproof condition.	_____	_____
Safety areas and obstacle-free zones cleared and graded. No open trenches or holes.	_____	_____
Construction barricades and barriers secured in correct location and associated warning flags and lighting systems operable and in correct location.	_____	_____
Aircraft parking area cleared.	_____	_____
All equipment, vehicles, materials, etc., removed from areas in service or being returned to service.	_____	_____
All proper Authorities notified of hazards, fire route changes, utilities left inoperable, pavements closed, etc. list.	_____	_____

Work Area Inspected: _____

Remarks: _____

_____

The inspection covered by this report was made on _____ at _____AM/PM

By _____ and by _____
(Contractor) Signature (Operations) Signature

and by _____ and by _____
(Airlines) Signature (Architect/Engineer) Signature

For work involved in the construction of Contract No._____
at _____Airport.
[Name of Airport]

PRECONSTRUCTION CHECKLIST

[ ][Insert name of Airport]

NOTE: Inspection is to be made and all corrective work completed by Contractor before work can begin in any Work Area.

ITEMS	OK (Check)	REMARKS/EXCEPTIONS
Striping, lights, markings, barricades and all other required traffic control devices in proper place, secured against displacement, and operable.	_____	
Obstacle free areas and operational pavements ready for use.	_____	
All equipment, vehicles, materials, etc., in Marked work area	_____	_____
All equipment properly marked and, if necessary, lighted.	_____	
All proper authorities notified of hazards, fire route changes, utilities left inoperable, pavements closed, etc. list.	_____	_____
Work Area Inspected:	_____	_____

Remarks: _____

_____

_____

_____

_____

_____

The inspection covered by this report was made on Date_____Time_____

By _____ , and by _____ ,
(Contractor Signature) (Operations Signature)

and by _____ , and by _____
(Airlines Signature) (Field Representative Signature)

For work involved in the construction of Contract No._____ at _____
[Name of Airport]

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SECTION 01571

MAINTENANCE OF AIRPORT LANDSIDE TRAFFIC

1.01 DESCRIPTION

A. The work to be performed under this Section shall consist of all work and all measures to be employed to maintain the efficient and orderly movement of airport landside traffic in the area of construction as shown on the Plans and as described in this Section.

1.02 GENERAL

A. The Contractor shall provide, install, and maintain the temporary traffic control devices, furnish flaggers, and perform all work required to conform to the provisions of this Section.

B. The Contract Documents show the location of signs, lights, markings, delineators, special lighting, guardrails, barricades, temporary pavements, flagger stations, and other temporary devices and work required to control traffic at each work Sequence area.

C. Before commencing work in any area, the Contractor shall install the temporary traffic control devices, stations, etc., at the work site, and he shall obtain the approval of the Field Representative before commencing any work that affects, in any way, the existing traffic flow. The on-site layout shall consist of a mockup of temporary pavements, covered signs and staked or marked locations of all proposed temporary traffic control devices. After obtaining Field Representative approval of the mockup, the Contractor shall implement the revised traffic movement by installation of the approved temporary traffic control devices, flaggers, etc.

D. The revised traffic movement shall be observed and the layout altered as necessary to achieve the efficient and orderly flow of traffic through the proposed construction area. Only after the layout has been so tested and approved will the Contractor be permitted to commence construction work in the area.

PART 2 PRODUCTS

2.01 Traffic control devices, warning devices and barriers shall be as shown, and meeting the applicable requirements of the current edition of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction and the FHWA Manual or Uniform Traffic Control Devices (MUTCD); subject to the Field Representative's approval.

PART 3 EXECUTION

3.01 MAINTENANCE OF TEMPORARY TRAFFIC CONTROL DEVICES, PAVEMENTS, AND FACILITIES

A. The Contractor shall maintain all traffic control devices in proper repair and working order. The Contractor shall also maintain all pavements constructed or utilized for temporary traffic movement and shall maintain all other traffic service

facilities such as guardrail, area lighting, etc., necessary for the efficient and orderly movement of traffic within the construction area.

B. In the event of the Contractor's failure to properly maintain any of these devices, pavements or facilities, the County may cause such maintenance, as it deems necessary, to be performed by its own or another Contractor's forces and the costs of such maintenance shall be deducted from monies due the Contractor for work performed under this Contract.

3.02 INTERFERENCE WITH AIRPORT LANDSIDE TRAFFIC

A. The Contractor shall conduct his work so as to cause no unnecessary interference with airport landside traffic and it shall comply with all requirements governing its employee parking, areas prohibited to his operation, and access routes to authorized work areas.

B. The Contractor shall not permit its workers and equipment to interfere with the movement of airport landside traffic in those areas adjacent to its work areas. The Contractor shall not obstruct sight lines, create obstructions to lighting nor create hazards or nuisance by allowing spills or wind transported materials to accumulate in traffic areas.

C. The Contractor shall maintain at the work site an approved powered rotary broom sweeper. The Contractor shall promptly remove any spills or wind-transported debris occurring on traveled roadways.

3.03 FINAL CLEANUP

A. After work in any work area has been completed and before moving to a new work construction area, the Contractor shall remove all temporary traffic control devices, temporary pavements and other temporary work and devices installed for traffic control. The Contractor shall restore the site to its original condition or to the revised condition shown on the Plans.

3.04 OPERATIONAL EMERGENCIES

During periods of unusually heavy traffic movement or other traffic emergencies, the County may direct the Contractor to relinquish areas under construction and to restore the construction area to serve airport landside traffic. In this event, the Field Representative will so direct the Contractor to evacuate the area; and the Field Representative will specify the limits of the area to be evacuated, the term of the evacuation and the construction governing the restoration work to be performed. The Contractor shall promptly and fully comply with the Field Representative directive. Should the directive entail extra work under the Contract, and the Field Representative shall so determine, the Contractor will be reimbursed for such extra work in accordance with the applicable provisions of the General Conditions "Allowance Accounts". Should the directive entail a delay in the completion of the Contract or any defined subdivision of the Contract, and the Field Representative shall so determine, the delay will be considered as Non-Compensable Excusable Delay in accordance with the applicable provisions of the General Conditions.

END OF SECTION

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SECTION 01590

FIELD REPRESENTATIVE'S OFFICE AND TESTING LABORATORIES

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

A. Field Representative's Office.

B. Testing Laboratories.

D. Removal.

1.02 RELATED REQUIREMENTS

A.	Section 01010	-	Summary of Work.
B.	Sections 01511 thru 01516	-	Temporary Utilities.
C.	Section 01569	-	Construction Cleaning.
D.	Section 01600	-	Material and Equipment.
E.	Section 01710	-	Final Cleaning.

PART 2 PRODUCTS

2.01 Temporary construction trailers used for office personnel with more than one desk for support staff of designers, auditors, purchasing agents, computer operators etc. shall comply with the Florida Accessibility Code (FAC) for buildings, and associated local permitting and inspection regulations. Evidence that the building itself has been approved by the state and is not subject to the locally adopted building codes must be provided to and approved by Planning Development and Regulation (Planning and Zoning)

PART 3 EXECUTION

3.01 FIELD REPRESENTATIVE'S OFFICE

A. Contractor shall provide adequate field office during construction as necessary to complete day-to-day operations for the field representative.

B. Contractor shall provide an adequate computer during construction as necessary to

complete day-to-day operations for the field representative.

3.02 TESTING LABORATORIES

A. Provide laboratories and laboratory equipment as specified in Technical Specification Section.

3.03 STORAGE AREAS AND SHEDS

A. Size to storage requirements for products of individual Sections, allowing for access and orderly provision for maintenance and for inspection of products under provisions of Section 01600.

3.04 PARKING FACILITIES

A. Provide well drained, graded paved or at least well compacted gravel surface for use by the Field Representative's and Owner's staff. Provide not less than four (4) parking spaces.

3.05 MAINTENANCE AND CLEANING

A. Daily janitorial service for offices; periodic cleaning and maintenance for storage areas. Weekly trash collection.

B. Maintain approach walks free of mud and water.

C. The Contractor assumes full responsibility for all costs associated with equipment and services provided for the Field Representative's office (including costs for equipment and/or services which are provided by the Contractor, but which are not specifically required by this Article).

3.06 REMOVAL

A. At final completion of work or earlier if agreed by Owner and Field Representative, remove buildings, foundations, utility services and debris. Restore area.

END OF SECTION

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SECTION 01600

MATERIAL AND EQUIPMENT

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

A. Products.

B. Transportation and Handling.

C. Storage and Protection.

D. Product Options.

E. Product List.

F. Substitutions.

G. Product Demonstrations

1.02 RELATED REQUIREMENTS

A. General Conditions.

B. Section 01010 - Summary of Work.

C. Section 01090 - Reference Standards.

D. Section 01405 - Contract Quality Control. Submittal of manufacturer's certificates.

E. Section 01740 - Warranties and Guarantees.

1.03 PRODUCTS

A. Products include material, equipment and systems.

B. Comply with Specifications and referenced standards as minimum requirements.

C. Components required to be supplied in quantity within a Specification section shall be the same and shall be inter-changeable.

D. Do not use materials and equipment removed from existing structure, except as specifically required, or allowed, by Contract Documents.

1.04 TRANSPORTATION AND HANDLING

A. Transport products by methods to avoid product damage. Deliver materials to job site in

manufacturer's original unopened containers clearly labeled with manufacturer's name, brand designation and reference specification.

B. Provide equipment and personnel to handle products by methods to prevent soiling or damage. Handle products in such a manner as to prevent breakage of containers and damage of any kind.

C. Promptly inspect shipments to assure that products comply with requirements, quantities are correct, and products are undamaged. Damage sustained by products in transit to job site shall be repaired to the satisfaction of the Field Representative. If damage sustained while transporting products to job site is non-repairable, the products shall be replaced with new ones at no cost to Owner.

1.05 STORAGE AND PROTECTION

A. Store products in accordance with manufacturer's instructions, with seals and labels intact and legible. Exposed metal surfaces, not provided with manufacturer specific storage instructions, shall be protected with a light oil or silicone coating to prevent rust while in storage. Store sensitive products in weather tight enclosures; maintain within temperature and humidity ranges required by manufacturer's instructions.

B. For exterior storage of fabricated products, place on sloped supports above ground. Cover products subject to deterioration with impervious sheet covering; provide ventilation to avoid condensation.

C. Store loose granular materials on solid surfaces in a well-drained area; prevent mixing with foreign matter.

D. Arrange storage to provide access for inspection. Periodically inspect to assure products are undamaged, and are maintained under required conditions.

1.06 ENCLOSED STORAGE

A. Store products, subject to damage by the elements, in substantial weather tight enclosures.

B. Maintain temperature and humidity within ranges stated in manufacturer's instructions.

C. Provide humidity control and ventilation for sensitive products as required by manufacturer's instructions.

D. Store unpacked and loose products on shelves, in bins, or in neat groups of like items.

1.07 EXTERIOR STORAGE

A. Provide substantial platforms, blocking, or skids, to support fabricated products above ground; slope to provide drainage. Protect products from soiling, staining, and corrosion.

B. For products subject to discoloration or deterioration from exposure to the elements, cover with impervious sheet material. Provide ventilation to avoid condensation.

C. Store loose granular materials on clean, solid surfaces such as pavement, or on rigid sheet materials, to prevent mixing with foreign matter.

D. Provide surface drainage to prevent erosion and ponding of water.

E. Prevent mixing of refuse or chemically injurious materials or liquids.

1.08 MAINTENANCE OF STORAGE

A. Periodically inspect stored products on a scheduled basis. Maintain a log of inspections, make available to Field Representative on request.

B. Verify that storage facilities comply with manufacturer's product storage requirements.

C. Verify that stored products exposed to the elements are not adversely affected; that any weathering of finishes is acceptable under requirements of Contract Documents.

1.09 MAINTENANCE OF EQUIPMENT STORAGE

A. For mechanical and electrical equipment in long-term storage, provide manufacturer's service instructions to accompany each item, with notice of enclosed instructions shown on exterior of package.

B. Service equipment on a regularly scheduled basis, maintaining a log of services; submit as a record document.

1.10 PRODUCT OPTIONS/SUBSTITUTIONS

A. Product Options/Substitutions shall be in accordance with the requirements of the General Conditions.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

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SECTION 01701

CONTRACT CLOSEOUT PROCEDURES

PART 1 GENERAL

1.01 REQUIREMENT INCLUDED

A. Administrative provisions for Substantial completion and for Final Acceptance.

1.02 RELATED REQUIREMENTS

A. Section 01010 - Summary of work.

B. Section 01710 - Final Cleaning.

C. Section 01720 - Project Record Documents.

D. Section 01740 - Warranties and Guarantees.

F. Respective Technical/Specification Sections of Project Manual.

1.03 SUBSTANTIAL COMPLETION

A. See General Conditions

B. Commissioning must be complete, prior to Substantial Completion, unless otherwise approved.

1.04 COMMISSIONING COMPLETION

A. Commissioning Completion is when all testing, adjusting, balancing ,and commissioning responsibilities of the Contractor (except for seasonal or approved deferred testing and controls training) are completed. This includes for all systems, but is not limited to:

1. Start-up and pre-functional checklist documentation completed and signed.
2. Final approved Testing Adjusting and Balancing report submitted to FR.
3. Completion of all functional testing, except as noted above.
4. Required training of Owner personnel completed and approved, except as noted above.
5. Approved O&M manuals submitted to FR.
6. All identified deficiencies have been corrected or are approved by the Owner to be excepted from this milestone.

B. The CA will determine when commissioning, as described above, is complete and

so advise the PM.

1.05 FINAL COMPLETION - See General Conditions

1.06 REINSPECTION FEES

A. Should status of completion of work require reinspection by the Architect/Engineer and/or the Project Testing Laboratory, due to failure of work to comply with Contractor's claims on initial inspection, the Owner will deduct the amount of the Architect/Engineer and/or the Project Testing Laboratory compensation for reinspection services from final payment to Contractor.

1.07 CLOSEOUT SUBMITTALS

A. Evidence of Compliance with Requirements of Governing Authorities:
   1. Certificate of Occupancy or Temporary Certificate of Occupancy at Substantial Completion.

   2. Certificates of Final Inspection required for structural steel, guideway concrete improvements, expansion joints, mechanical, and electrical systems required at Substantial Completion.

B. Project Record Documents: Under provisions of Section 01720 by Substantial Completion.

C. Warranties and Guarantees: Under provisions of Section 01740 by Final Acceptance.

D. The Contractor shall prepare and submit a final actual cost breakdown based on the following category descriptions:

(2.) BUILDINGS

All costs incident to construction of new buildings and improvements to existing structures. Component items such as electrical wiring, plumbing and sewerage fixtures, central heating/ventilating/air conditioning system, fire sprinkler system, elevators and escalators, and any other improvements/additions that are a permanent part of the structure are also included in this category.

(3). (INTEGRATED) BUILDING EQUIPMENT

The costs of building systems or components which by their nature can not be classified as building or equipment. Some examples of items in this classification are loading bridges, chiller plant equipment, tram shuttle cars, baggage sortation equipment, conveyor equipment, preconditioned air systems, 400 hertz systems, and incinerator equipment.

(9.) DEMOLITION/DECOMMISSIONING

Costs associated with partial or complete demolition of above listed items.

List demolition cost of each building, by building number.

List decommissioning costs by Building Equipment, and Integrated Building Equipment.

(10.) ENVIRONMENTAL CLEAN-UP

Costs associated with the removal, containment, and remuneration of contaminated soil, etc.

E. Itemized List for Spare Parts and Extra Stock, Keys and Keying Schedule: Under provisions of Technical Specifications Section for finish hardware by Substantial Completion.

F. Evidence of Payment and Release of Claims: In accordance with the General Conditions and Subcontractor's Affidavit(s) of Satisfaction and/or Consent of Surety to Final Payment.

1.08 STATEMENT OF ADJUSTMENT OF ACCOUNTS - CERTIFICATE OF FINAL ACCEPTANCE

A. Owner will prepare Final Payment Certificate reflecting adjustment to Contract Amount indicating:

(1) Original Contract Amount.
(2) Change Orders.
(3) Work Orders [Charges against Allowance Accounts.]
(4) Deductions for uncorrected or deficient work.
(5) Deductions for liquidated damages.
(6) Additions for compensable excusable delays.
(7) Deductions for reinspection fees.
(8) Other adjustments to Contract Amount.
(9) Total Contract Amount as adjusted.

B. The Architect/Engineer will issue a final Change Order, if required, reflecting approved adjustments to Contract Amount not previously made by Change Orders.

1.09 BACKFLOW PREVENTER INSTALLATION REPORT

A. Certify that the backflow prevention devices were installed by certified technicians and they are properly working.

B. Copy of the backflow prevention device installers certifications from the University of Florida Center for Training, Research and Education for Environmental Occupations (TREEO).

C. Completed Backflow Preventer Installation Report (a copy of which is appended to this Section) shall be submitted prior to Substantial Completion. Originals are to be given to MDAD Environmental Department

1.10 APPLICATION FOR FINAL PAYMENT CERTIFICATE

A. Submit application for final Payment Certificate in accordance with provisions of General Conditions.

B. Final Payment will not be made until the Contract Closeout Procedures have been completed and executed as specified above.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

APPENDIX: Backflow Preventer Installation Report

END OF SECTION

MIAMI-DADE AVIATION DEPARTMENT
BACKFLOW PREVENTER INSTALLATION REPORT

INSTALLED BY (FIRM NAME): _____
ADDRESS:

CONTACT PERSON: _____PHONE:___
DEVICE ADDRESS;

(1) index no.	size & (2) type of device	manufacturer	model no. / serial no.	location of device	date installed

NAME OF PERSON CERTIFYING WORK: ___

(attach a copy of certification statement indicating that each device is operating with required parameters and a copy of technician's certification from TREEO)

signature date

REMARKS: ___

(1) TO BE ASSIGNED BY MDAD
(2) REDUCE PRESSURE ZONE ASSEMBLY (RPZA); DOUBLE CHECK VALVE ASSEMBLY (DCVA);DOUBLE CHECK DETECTOR ASSEMBLY (DCDA); PRESSURE VACUUM BREAKER ASSEMBLY (PVSA)

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SECTION 01710

FINAL CLEANING

PART 1 GENERAL

1.01 REQUIREMENT INCLUDED

A. Final cleaning of [exterior of] project.

1.02 RELATED REQUIREMENTS

A. Section 01569 - Construction Cleaning: Cleaning during construction.

B. Section 01701 - Contract Closeout Procedures.

C. Individual Specifications Sections: Specific cleaning for product or work.

1.03 DESCRIPTION

A. Execute cleaning prior to inspection for Beneficial Occupancy or Substantial Completion of each designated portion of the Work.

PART 2 PRODUCTS

2.01 CLEANING MATERIALS

A. Use materials which will not create hazards to health or property and which will not damage surfaces.

B. Use only material and methods recommended by manufacturer of material being cleaned.

PART 3 EXECUTION

3.01 CLEANING

A. Upon completion of the work and before acceptance and final payment is made, remove from the Site all machinery, equipment, surplus and discarded materials, rubbish, temporary structures, etc. Repair or replace, in an acceptable manner, private or public property which may have been damaged or destroyed due to the Contractor's operations, except when such property is required to be altered or demolished under the Contract, and leave the Site in a clean and orderly condition. Material cleared from the Site and deposited on adjacent property will not be considered as having been disposed of satisfactorily.

B. All areas within and contiguous to the work under the Contract, including all exterior and interior surfaces and items where work has been performed, as well as all areas having been used for ingress and egress of materials and personnel or storage of materials, shall be turned over to the Owner in a neat and "polished" home-clean condition. "Broom-clean", as used in the construction industry, will not suffice.

C. All roof areas where work is performed shall be cleaned of all debris and excess materials. Particular attention shall be given to gutters, downspouts, leader heads, and scuppers to assure there is no blockage of any kind. Roof areas shall be inspected to ensure that no damage to roof membranes has occurred. Any damage so discovered caused by the Contractor's operations shall be repaired by a licensed roofer at no additional cost to the Owner.

D. All wall areas shall be free from extraneous paint, splatter or spillage of roofing materials, adhesion of asphaltic paving materials or any other defacement. Walls so defaced shall be cleaned and/or painted in an approved manner at no additional cost to the Owner.

E. All concrete walks, aprons, etc., including adjacent pavement shall be cleaned and free from building materials, containers, dust, dirt, sand, chips of roofing gravel, roofing materials, and all other incidental debris. Areas shall be well swept and, if directed by the Field Representative, shall be hosed down with clean water.

F. All barricades, fences, ~~'s~~ Field Representative's office, construction offices, etc., field testing laboratories and all Contractor's tools, equipment, etc., shall be removed from the Airport Property.

G. All glass shall be thoroughly cleaned and polished on both sides.

H. The paint line for glass in painted surroundings, whether wood, metal, putty or other glazing compounds, shall be neat, clean and straight.

I. Vacuum all carpets; and polish and wax all resilient flooring.

J. Power-scrub and detergent clean all ceramic tile floors. Wash all ceramic tile walls with detergent and clean all wall surfaces. All plastic laminate and hardware surfaces shall be cleaned and polished.

END OF SECTION

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SECTION 01720

PROJECT RECORD DOCUMENTS

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

A. Maintenance of Record Documents and Samples.

B. Submittal of Record Documents and Samples.

1.02 RELATED REQUIREMENTS

A. Section 01050 - Surveying and Field Engineering.

B. Section 01340 - Shop Drawings, Product Data and Samples.

C. Section 01701 - Contract Closeout Procedures.

D. Individual Technical Specifications Sections: Manufacturer's certificates and certificates of inspection.

1.03 MAINTENANCE OF DOCUMENTS AND SAMPLES

A. Follow requirements of project General Conditions for Contract Documents at the Site.

B. Store Record Documents and samples in Field Office apart from documents used for construction. Provide files, racks and secure storage for Record Documents and Samples.

C. Label and file Record Documents and samples in accordance with Section number listings in Table of Contents of this Project Manual. Label each document `PROJECT RECORD' in neat, large printed letters.

D. Maintain Record Documents in clean, dry and legible conditions. Do not use Record Documents for construction purposes.

E. Keep Record Documents and Samples available for inspection by Owner and Consultant.

1.04 AS-BUILT INFORMATION

A. Record information on a set of blue line opaque drawings and in a copy of a Project Manual, provided by Owner, as specified in the General Conditions.

B. Provide felt tip marking pens, maintaining separate colors for each major system, for recording information.

C. Record information concurrently with construction progress. Do not conceal any work until required information is recorded.

D. Contract Drawings and approved Shop Drawings: Legibly mark each item to record actual construction, including:

(1) Measured depths of elements of foundation in relation to finish grade or first floor datum.

(2) Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.

(3) Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of construction.

(4) Field changes of dimensions and details.

(5) Changes made by Addenda, Change Order(s) (if any) and Work Order(s) (if any).

(6) Details not on original Contract Drawings.

(7) References to related Shop Drawings and Modifications.

E. Specifications: Legibly mark each item to record actual construction, including changes made by Addenda and Change Order.

F. Other Documents: Maintain manufacturer's certification, inspection certifications, field test records, and any other documentation required by individual Specification Sections.

G. MDAD Maintenance Data Sheets: Complete the database sheets forms in the following sections and as otherwise available from MDAD, for the equipment installed under the Contract. Completed, typed forms shall be included in the appropriate O & M Manuals.

1.05 SUBMITTALS

A. At Substantial Completion, deliver Record Documents and samples under provision of Section 01701, excluding as-built drawings/specifications as stated below.

B. Transmit with cover letter in duplicate, listing: (1) Date; (2) Project Title and Number; (3) Contractor's name, address and telephone number; (4) Number and Title of each Record Document; (5) One transparency and two black or blue line

copies of all approved shop drawings; (6) copy of approved shop drawing log; (7) Copy of the Field Representative review log attesting to its review of the As-Built Documents.

C Submittal of as-built drawings/specifications shall be after resolution of the punch list items are complete. One original marked up set and one complete copy of each shall be provided.

PART 2 PRODUCTS
Not Used

PART 3 EXECUTION
Not Used

END OF SECTION

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SECTION 01740

WARRANTIES AND GUARANTEES

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

A. Preparation and submittal of warranties and guarantees.

B. Schedule of submittals.

1.02 RELATED REQUIREMENTS

A. Instruction to Bidders: Bid Bonds.

B. Contractor's Performance and Payment Bonds.

C. Section 01701 - Contract Closeout Procedures.

D. Individual Technical Specifications Sections: Warranties and Guarantees required for specific products or work.

1.03 FORM OF SUBMITTALS

A. Bind in commercial quality 8 ½ x 11 inch three-ring side binders, with hardback, cleanable, plastic covers.

B. Label cover of each binder with typed or printed title `WARRANTIES AND GUARANTEES', with Contract No. and Project Title; name, address and telephone number of Contractor.

C. Table of Contents: Neatly typed, in the sequence of the Table of Contents of the Project Manual, with each item identified with the number and title of the specification section in which specified and the name of the product or work item.

D. Separate each warranty or guaranty with index tab sheets keyed to the Table of Contents listing. Provide full information, using separate typed sheet as necessary. List subcontractor, supplier and manufacturer, with name, address and telephone number of responsible principal.

E. Include a copy of the applicable warranty/guaranty in O & M manuals.

1.04 WARRANTY PERIOD AND PREPARATION OF SUBMITTALS

A. Obtain warranties and guarantees, executed in duplicate by responsible subcontractors, suppliers, and manufacturers, within ten (10) days after completion of the applicable item of work. Date of beginning of time of warranty will be the date of Substantial Completion, or date of Beneficial Occupancy if equipment is put to use by the Owner at date of Beneficial Occupancy. No warranty shall start prior to equipment being put into operation. It is not necessary that all warranties shall start at the same time.

B. Equipment warranty period: Manufacturer's standard warranty, minimum one year from above date of beginning of warranty, except as stated elsewhere.

C. Full service period: Installing contractor shall provide for full service and maintenance for a period of one year for the equipment/systems, except as stated elsewhere. If, within this period, any equipment proves defective, it shall be repaired or replaced at no additional cost to MDAD.

(1) The service and maintenance shall include monthly inspections and adjustments, based on an Owner approved monthly service schedule.
(2) Each service and maintenance trip to the project shall be coordinated and reported to MDAD Maintenance and have a separate written report so an accurate log can be kept on the operation and problems of the installation.
(3) Monthly service schedule, showing tasks and service timetable, shall be submitted to MDAD Maintenance (through the FR), for review and approval prior to substantial completion.
(4) Coordination with MDAD and distribution of monthly maintenance/service reports to PM, CA, and MDAD Maintenance shall be the responsibility of the General Contractor.

D. Co-execute submittals when required.

E. Retain warranties and guarantees until time specified for submittal.

1.05 TIME OF SUBMITTALS

A. Make submittals per Section 01701 and General Conditions.

B. For items of work when acceptance is delayed beyond date of Substantial Completion, as stated in Section 01701, submit within ten (10) days after acceptance, listing the date of acceptance as the beginning of the warranty or guaranty period.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

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SECTION 01750

MEASUREMENT OF QUANTITIES

PART 1 GENERAL

1.01 All work completed under the Contract will be measured by the Field Representative, using United States Customary Units of Measurement. The Field Representative shall afford the Contractor an opportunity to witness or participate in the measurements and to review all calculations relating to final measurements.

1.02 The method of measurement and computations to be used in the determination of quantities of material furnished and of work performed under the Contract will be those methods generally recognized as conforming to good engineering practice.

A. Unless otherwise specified, longitudinal measurements for area computations will be made horizontally, and no deductions will be made for individual fixtures (or leave-outs). Unless otherwise specified, transverse measurements for area computations will be the neat dimensions shown on the Plans or ordered in writing by the Field Representative.

B. Structures will be measured according to neat lines shown on the plans or as altered to fit field conditions.

1.03 The thickness of plates and galvanized sheet used in the manufacture of corrugated metal pipe, metal plate pipe culverts and arches, and metal cribbing will be specified and measured in decimal fraction of inches.

1.04 The term "ton" will mean the short ton consisting of 2,000 pounds avoirdupois. All materials which are measured or proportioned by weights shall be weighed on accurate, approved scales by competent, qualified personnel at locations designated by the Field Representative. If material is shipped by rail, the car weight may be accepted provided that only the actual weight of material be paid for. However, car weights will not be acceptable for material to be passed through mixing plants. Trucks used to haul material being paid for by weight shall be weighed empty daily at such times as the Field Representative directs, and each truck shall bear a plainly legible identification mark.

1.05 Materials to be measured by volume in the hauling vehicle shall be hauled in approved vehicles and measured therein at the point of delivery. Vehicles for this purpose may be of any size or type acceptable to the Field Representative, provided that the body is of such shape that the actual contents may be readily and accurately determined. All vehicles shall be loaded to at least their water level capacity, and all loads shall be leveled when the vehicles arrive at the point of delivery.

1.06 Bituminous materials will be measured by the gallon, at 60 F or it will be measured at other temperatures and corrected to the volume at 60 F using ASTM D 1250 for cut-back asphalts, or the Asphalt Institute Manual MS-6, Table IV-3 for emulsified asphalts.

1.07 Net certified scale weights or weights based on certified volumes in the case of rail shipments will be used as a basis of measurement, subject to correction when bituminous material has been lost from the car or the distributor, wasted, or otherwise not incorporated in the work.

1.08 METHOD OF MEASUREMENT

A. When bituminous materials are shipped by truck or transport, net certified weights by volume, subject to correction for loss or foaming, may be used for computing quantities.

B. Cement will be measured by the ton or hundredweight.

C. Timber will be measured by the thousand feet board measure (M.F.B.M.) actually incorporated in the structure. Measurement will be based on nominal widths and thicknesses and the extreme length of each piece.

1.09 SCALES

A. Scales for weighing materials which are required to be proportioned or measured and paid for by weight shall be furnished, erected, and maintained by the Contractor, or be certified permanently installed commercial scales.

B. Scales shall be accurate within one-half percent of the correct weight throughout the range of use. The Contractor shall have the scales checked under the observation of a Florida State certified scale technician before beginning work and at such other times as requested by the Field Representative. Scale weight unit intervals shall be uniform in spacing throughout the graduated or marked length of the beam or dial and shall not exceed one-tenth of 1 percent of the nominal rated capacity of the scale, but not less than 1 pound. The use of spring balances will not be permitted.

C. Beams, dials, platforms, and other scale equipment shall be so arranged that the operator and the inspector can safely and conveniently view them.

D. Scale installations shall have available ten standard 50-pound weights for testing the weighing equipment.

E. Scales must be tested for accuracy, adjusted, sealed and serviced by an approved Florida State certified scale technician, as often as the Field Representative deems necessary, before use at a new site. Platform scales shall be installed and maintained with the platform level and rigid bulkheads at each end.

F. Scales shall be State certified and shall meet the requirements of Article 7-18 of the ~~1991~~ ***current edition of*** FDOT Standard Specifications for Road and Bridge Construction.

G. Scales "overweighing" (indicating more than correct weight) will not be permitted to operate, and all materials received subsequent to the last previous correct weighing-accuracy test will be reduced by the percentage of error in excess of one-half of 1 percent.

H. In the event inspection reveals the scales have been "underweighing" (indicating less than correct weight), they shall be adjusted, and no additional payment to the Contractor will be allowed for materials previously weighed and recorded.

I. All costs in connection with furnishing, installing, certifying, testing, and maintaining scales; for furnishing check weights and scale house; and for all other items specified in this Section, for the weighing of materials for proportioning or payment, shall be included in the contract unit prices for the various items of work in the Contract.

1.10 The term "lump sum" when used as an item of payment will mean complete payment for the work described for the item of work.

When a complete structure or structural unit (in effect, "lump sum" work) is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories.

1.11 When standard manufactured items are specified such as fence, wire, plates, rolled shapes, pipe, conduit, etc., and these items are identified by gage, unit weight, section dimensions, etc., such identification will be considered to be nominal weights or dimensions. Unless more stringently controlled by tolerances in cited specifications, manufacturing tolerances established by the industries involved will be accepted.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION